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www.microplastics.com is your complete source to our fastener line. Here you will be able to explore our entire catalog online, get precise facts and dimensions about our parts and materials, learn more about what is happening in our company, and much much more. Once you've found exactly what you need, simply place your order online - 24 hours a day, 7 days a week, from anywhere in the world (registration and login required).



## FREE SAMPLES:

We're always happy to provide you with samples of

fasteners you are interested in. Online it's as simple as can be - simply enter the part numbers along with your contact information (sample requests can also be added to a shopping cart as you are browsing the website,) and your request will be processed immediately.



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Our online cross reference feature is a fantastic way to locate a comparable item that you would normally order from another source. Just enter the source's item number (or even part of it) and we will tell you if we have a comparable item available. Chances are it will be of higher quality and more reasonably priced. There may be slight variances between our parts and our competitors, and samples are **HIGHLY** recommended before placing an order.

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our online search feature is a fast and simple way to locate the Micro Plastics fastener information you are looking for. Simply enter a complete or partial part number into the search bar and our Micro Plastics search engine will deliver the information to you immediately. We also have a search by dimension feature. Two quick and painless ways to find what you need, when you need it.





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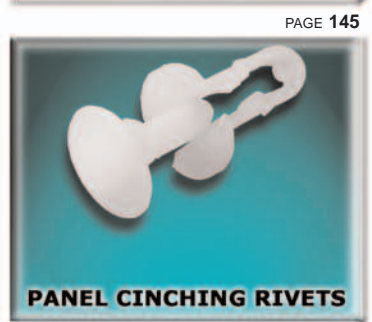
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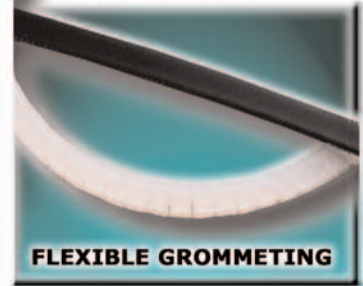
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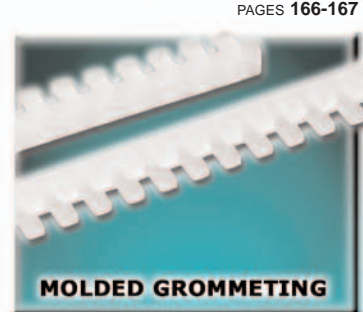
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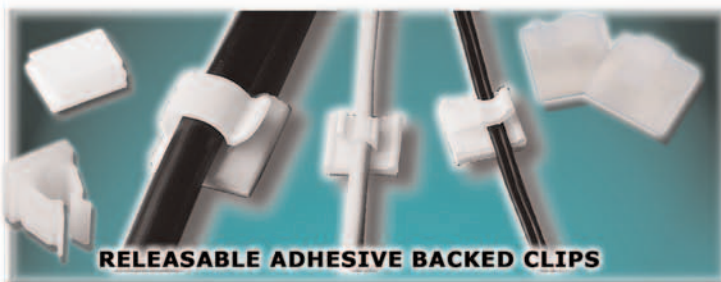
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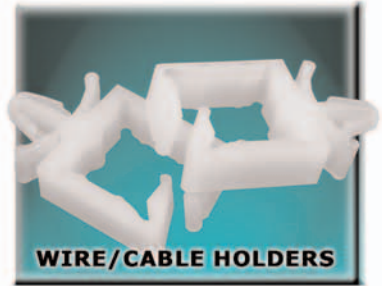
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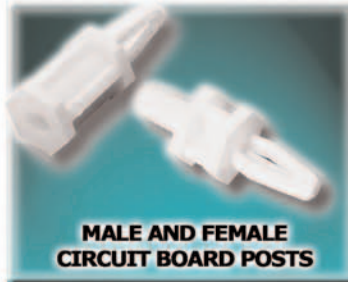
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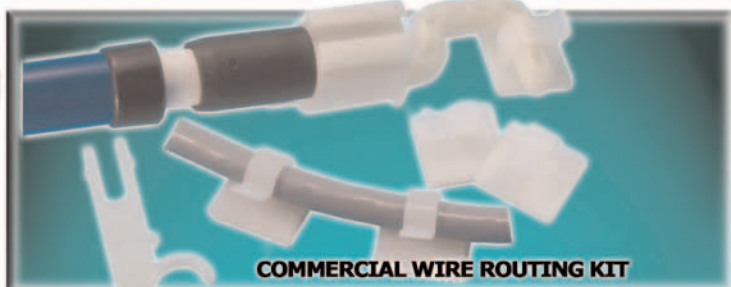
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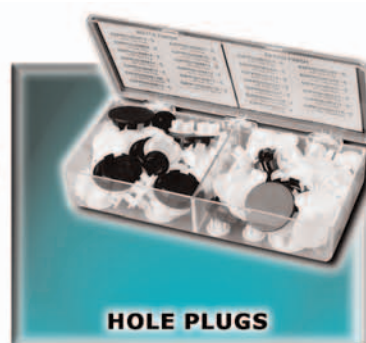
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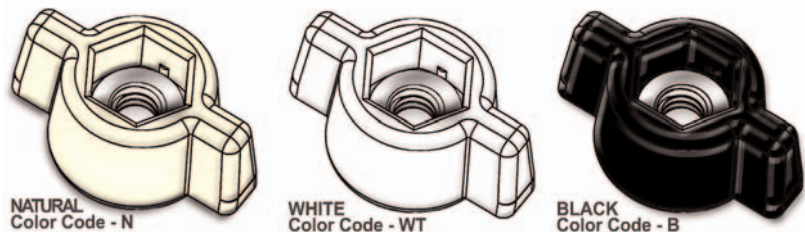
# PRESS-LOC THUMB SCREW KNOBS

## HEX PRESS-LOC WING THUMB SCREW KNOBS

**NOTE:** 29RN and WN fit hex nuts and hex head cap screws.  
TO IFI TOLERANCES

### NOTE

IF SCREW OR NUT IS PLATED, PAINTED OR NOT TO IFI STANDARD TOLERANCES, WE STRONGLY RECOMMEND SAMPLES FOR FIT BEFORE ORDERING LARGE QUANTITIES.



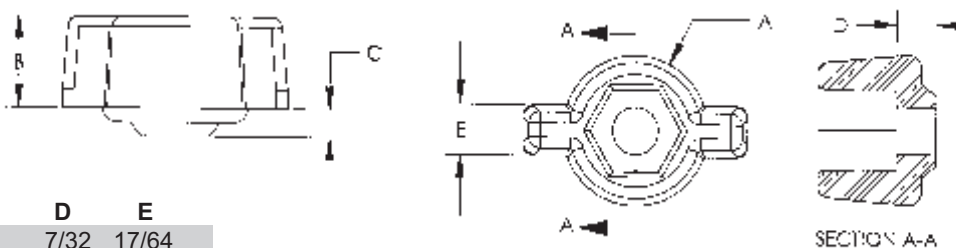
NATURAL  
Color Code - N

WHITE  
Color Code - WT

BLACK  
Color Code - B

**DOES NOT INCLUDE STEEL NUT**

PART NUMBER	COLOR
29WN014N	NATURAL
29WN014B	BLACK
29WN014WT	WHITE



PART NUMBER	SIZE	A	B	C	D	E
29WN014	1/4	13/16	1/2	5/32	7/32	17/64

## HEX PRESS-LOC ROUND THUMB SCREW KNOBS

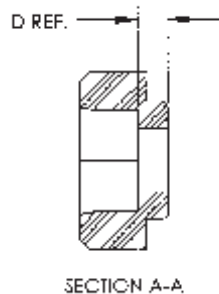
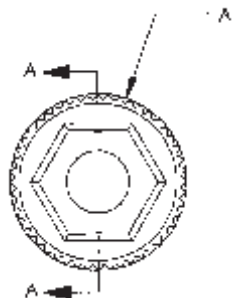
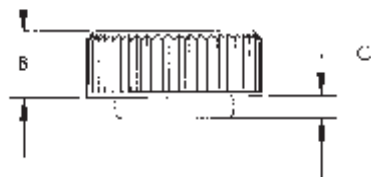
Micro Plastics' nylon Press-Loc Knobs are designed to press onto standard steel hex head cap screws and hex nuts. Knobs are easily assembled by pressing the steel nut or screw into the plastic knob.

**NOTE:** 29RN and WN fit hex nuts and hex head cap screws.

TO IFI TOLERANCES.

### NOTE

IF SCREW OR NUT IS PLATED, PAINTED OR NOT TO IFI STANDARD TOLERANCES, WE STRONGLY RECOMMEND SAMPLES FOR FIT BEFORE ORDERING LARGE QUANTITIES



NATURAL  
Color Code - N



BLACK  
Color Code - B



WHITE  
Color Code - WT

PART NUMBER	COLOR
29RN147N	NATURAL
29RN147B	BLACK
29RN147WT	WHITE

PART NUMBER	SIZE	A	B	C	D
29RN147	1/4	3/4	9/32	3/32	1/8

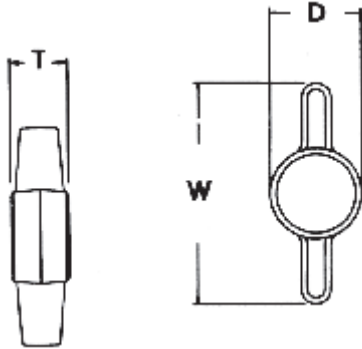
**DOES NOT INCLUDE STEEL SCREW**

# PRESS-LOC THUMB SCREW KNOBS

SECTION

I

PLASTIC HEADS ARE MOLDED ONTO ZINC PLATED STEEL ALLOY SOCKET HEAD CAP SCREWS.



TOLERANCES +/- .031



COLOR CODES MUST BE INCLUDED WITH THE ITEM NUMBER WHEN ORDERING!

**B** - BLACK **RD** - RED **WT** - WHITE  
**BL** - BLUE **GR** - GREEN

## WING HEAD - KNOBS

MATERIAL - ACETAL

ITEM NUMBER	FITS SCREW	SPECIFICATIONS		
		W	T	D
29W010	#10	1"	1/4"	7/16"
29W014	1/4	1-17/64"	11/32"	17/32"
29W516	5/16	1-1/2"	13/32"	5/8"
29W038	3/8	1-25/32"	31/64"	47/64"

## WING HEAD - SCREW

MOLDED ONTO ZINC PLATED STEEL ALLOY SOCKET HEAD CAP SCREW.

GENERAL PURPOSE NYLON

ITEM NUMBER	SCREW SIZE	SCREW LENGTH	HEAD DIA.
29W010S037	10-32	3/8"	1"
29W010S050	10-32	1/2"	1"
29W010S075	10-32	3/4"	1"
29W010S100	10-32	1"	1"
29W010S150	10-32	1-1/2"	1"
29W014S050	1/4-20	1/2"	1-17/64"
29W014S075	1/4-20	3/4"	1-17/64"
29W014S100	1/4-20	1"	1-17/64"
29W014S125	1/4-20	1-1/4"	1-17/64"
29W014S150	1/4-20	1-1/2"	1-17/64"
29W516S050	5/16-18	1/2"	1-1/2"
29W516S075	5/16-18	3/4"	1-1/2"
29W516S100	5/16-18	1"	1-1/2"
29W516S150	5/16-18	1-1/2"	1-1/2"
29W038S075	3/8-16	3/4"	1-3/4"
29W038S100	3/8-16	1"	1-3/4"
29W038S150	3/8-16	1-1/2"	1-3/4"

ALL PARTS UP TO 1" LONG ARE FULLY THREADED.

TOLERANCES +/- .031

## FLOWERETTE - KNOBS

PRESSES ONTO ANY STD. SOCKET HEX CAP SCREW.

MATERIAL - ACETAL

ITEM NUMBER	FITS SCREW	SPECIFICATIONS	
		T	D
29F014	1/4	3/8"	1/2"
29F516	5/16	3/8"	19/32"
29F038	3/8	3/8"	45/64"

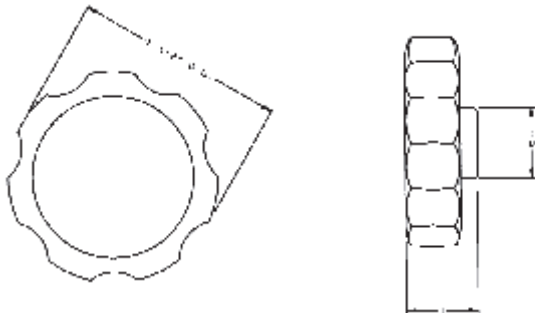
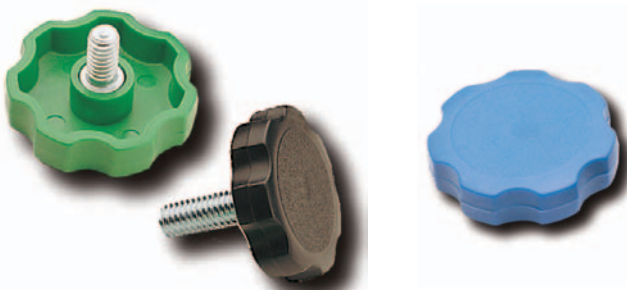
## FLOWERETTE - SCREW

MOLDED ONTO ZINC PLATED STEEL ALLOY SOCKET HEAD CAP SCREW.

GENERAL PURPOSE NYLON

ITEM NUMBER	SCREW SIZE	SCREW LENGTH	HEAD DIA.
29F014S050	1/4-20	1/2"	1-1/2"
29F014S075	1/4-20	3/4"	1-1/2"
29F014S100	1/4-20	1"	1-1/2"
29F014S150	1/4-20	1-1/2"	1-1/2"
29F516S050	5/16-18	1/2"	1-1/2"
29F516S075	5/16-18	3/4"	1-1/2"
29F516S100	5/16-18	1"	1-1/2"
29F516S150	5/16-18	1-1/2"	1-1/2"
29F038S075	3/8-16	3/4"	1-1/2"
29F038S100	3/8-16	1"	1-1/2"
29F038S150	3/8-16	1-1/2"	1-1/2"

ALL PARTS UP TO 1" LONG ARE FULLY THREADED.





# PRESS-LOC THUMB SCREW KNOBS

SECTION  
I

## STANDARD - ROUND HEAD - KNOB

PRESSES ONTO ANY STD. SOCKET HEX CAP SCREW

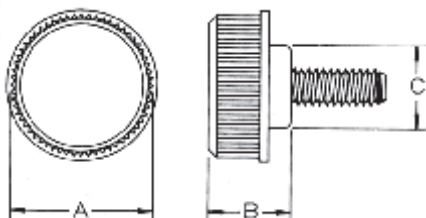
ITEM NUMBER	Material: ACETAL		SPECIFICATIONS		
	FITS SCREW	A	B	C	
29R004	#4	5/16"	11/64"	9/32"	
29R006	#6	3/8"	13/64"	21/64"	
29R008	#8	1/2"	7/32"	3/8"	
29R010	#10	21/32"	1/4"	27/64"	
29R147	1/4	3/4"	5/16"	1/2"	
29R141	1/4	1"	21/64"	1/2"	
29R516	5/16	1"	25/64"	19/32"	

## METRIC - ROUND HEAD - KNOB

PRESSES ONTO ANY STD. SOCKET HEX CAP SCREW.

ITEM NUMBER	Material: ACETAL		SPECIFICATIONS		
	FITS SCREW	A	B	C	
29M300R	M 3	9,53	5,16	8,33	
29M400R	M 4	12,70	5,56	9,53	
29M500R	M 5	16,60	6,35	10,72	
29M600R	M 6	19,05	7,93	12,70	
29M601R	M 6	25,40	8,33	12,70	
29M801R	M 8	25,40	9,92	15,08	

TOLERANCES +/- .031

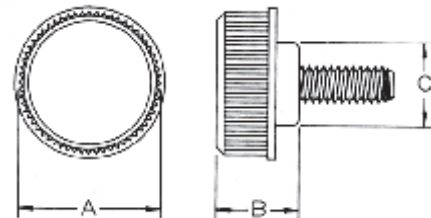


ROUND HEAD DRAWING FOR:  
STANDARD HEAD DIA.  
5/16" THROUGH 1"

NOTE: PRESS LOC THUMB SCREWS ARE DESIGNED TO BE HAND TIGHTENED.



TOLERANCES +/- .79 mm



ROUND HEAD DRAWING FOR:  
METRIC HEAD DIA.  
9,53 THROUGH 25,40

ALL PARTS UP TO 1" LONG ARE FULLY THREADED.

## STANDARD - ROUND HEAD - SCREW

GENERAL PURPOSE NYLON 6

MOLDED ONTO ZINC PLATED STEEL ALLOY SOCKET HEAD CAP SCREW.

ITEM NUMBER	SCREW SIZE	SCREW LENGTH	HEAD DIA.
29R004S025	4-40	1/4"	5/16"
29R004S037	4-40	3/8"	5/16"
29R004S050	4-40	1/2"	5/16"
29R004S075	4-40	3/4"	5/16"
29R006S025	6-32	1/4"	3/8"
29R006S037	6-32	3/8"	3/8"
29R006S050	6-32	1/2"	3/8"
29R006S062	6-32	5/8"	3/8"
29R006S075	6-32	3/4"	3/8"
29R008S037	8-32	3/8"	1/2"
29R008S050	8-32	1/2"	1/2"
29R008S075	8-32	3/4"	1/2"
29R008S100	8-32	1"	1/2"
29R010S037	10-32	3/8"	21/32"
29R010S050	10-32	1/2"	21/32"
29R010S075	10-32	3/4"	21/32"
29R010S100	10-32	1"	21/32"
29R010S150	10-32	1-1/2"	21/32"
29R147S050	1/4-20	1/2"	3/4"
29R147S075	1/4-20	3/4"	3/4"
29R147S100	1/4-20	1"	3/4"
29R147S125	1/4-20	1-1/4"	3/4"
29R147S150	1/4-20	1-1/2"	3/4"
29R141S050	1/4-20	1/2"	1"
29R141S075	1/4-20	3/4"	1"
29R141S100	1/4-20	1"	1"
29R141S125	1/4-20	1-1/4"	1"
29R141S150	1/4-20	1-1/2"	1"
29R516S050	5/16-18	1/2"	1"
29R516S075	5/16-18	3/4"	1"
29R516S100	5/16-18	1"	1"
29R516S150	5/16-18	1-1/2"	1"

## METRIC - ROUND HEAD - SCREW

GENERAL PURPOSE NYLON 6

MOLDED ONTO ZINC PLATED STEEL ALLOY SOCKET HEAD CAP SCREW.

ITEM NUMBER	SCREW SIZE	SCREW LENGTH	HEAD DIA.
29M30050R008	M 3	M 8	9,53
29M30050R010	M 3	M 10	9,53
29M30050R012	M 3	M 12	9,53
29M30050R016	M 3	M 16	9,53
29M40070R010	M 4	M 10	12,70
29M40070R012	M 4	M 12	12,70
29M40070R016	M 4	M 16	12,70
29M40070R020	M 4	M 20	12,70
29M40070R025	M 4	M 25	12,70
29M50080R012	M 5	M 12	16,60
29M50080R016	M 5	M 16	16,60
29M50080R020	M 5	M 20	16,60
29M50080R025	M 5	M 25	16,60
29M50080R040	M 5	M 40	16,60
29M60100R012	M 6	M 12	19,05
29M60100R016	M 6	M 16	19,05
29M60100R020	M 6	M 20	19,05
29M60100R025	M 6	M 25	19,05
29M60100R040	M 6	M 40	19,05
29M61100R012	M 6	M 12	25,40
29M61100R016	M 6	M 16	25,40
29M61100R020	M 6	M 20	25,40
29M61100R025	M 6	M 25	25,40
29M61100R040	M 6	M 40	25,40
29M80125R012	M 8	M 12	25,40
29M80125R016	M 8	M 16	25,40
29M80125R020	M 8	M 20	25,40
29M80125R025	M 8	M 25	25,40
* 29M80125R040	M 8	M 40	25,40

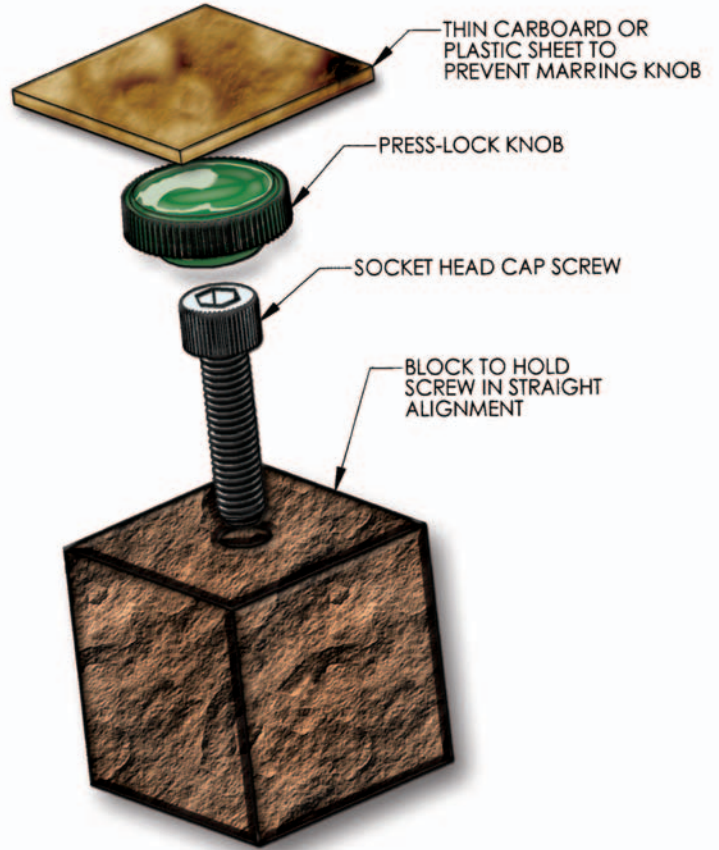
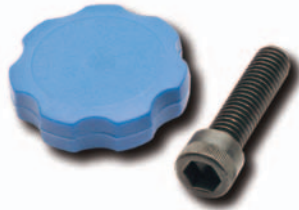
\* NOT FULLY THREADED

# PRESS-LOC THUMB SCREW KNOBS

SECTION  
**I**

## EASY TO ASSEMBLE INSTANT THUMB SCREWS . . . .

Micro Plastics' Press-Loc Thumb Screw Knobs can be assembled to the appropriate size hexagon socket head cap screw in various ways. Any device that provides a positive clamping force, such as a bench vise or arbor press will perform the assembly. The socket head cap screw must be aligned with the matching counterbore provided in the Press-Loc knob, place the assembly between the clamping jaws of the assembly device and provide enough force to press the knob completely over the head of the screw. A small section of thin cardboard or smooth plastic placed between the surface of the Press-Loc knob and the clamping jaw is recommended to prevent marring of the knob surface.



## PRESS-LOC ASSORTMENT KITS

### FLOWERETTE 144 PIECE

ASSORTMENT CONSISTS OF APPROX:  
48 - 1/4"  
48 - 5/16"  
48 - 3/8"

Assorted Colors . . . . .

**O4ASO144FPL**

### WING 312 PIECE

ASSORTMENT CONSISTS OF APPROX:  
72 - 1/4"  
78 - 5/16"  
72 - 3/8"  
90 - #10

Assorted Colors . . . . .

**O4ASO312WPL**

### ROUND 704 PIECE

ASSORTMENT CONSISTS OF APPROX:  
102 - 5/16"  
102 - 1/4 X 1"  
100 - 1/4 X 3/4"  
100 - #10  
100 - # 8  
100 - # 6  
100 - # 4

Assorted Colors . . . . .

**O4ASO704RPL**

### ROUND 380 PIECE

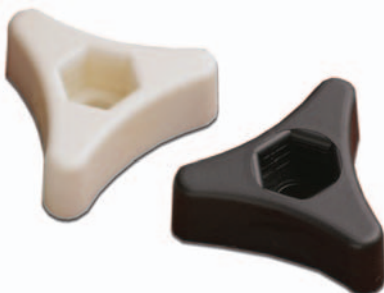
ASSORTMENT CONSISTS OF APPROX:  
40 - 5/16"  
40 - 1/4 X 1"  
75 - 1/4 X 3/4"  
75 - #10  
50 - # 8  
50 - # 6  
50 - # 4

Assorted Colors . . . . .

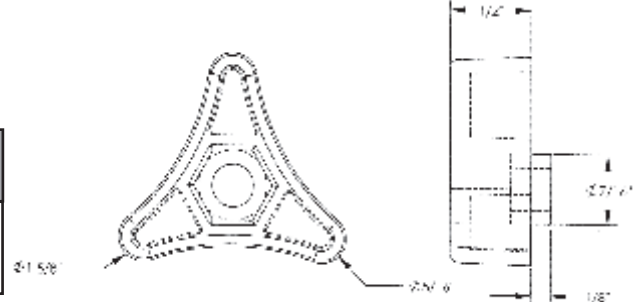
**O4ASO380RPL**

## HEX PRESS-LOC TRI KNOB

Micro Plastics' nylon press-loc tri knobs are designed to press on to 1/4" standard steel hex nuts and 1/4" hex head cap screws. Knobs are easily assembled by pressing the steel nut or screw into the plastic tri knob. Available in natural and black nylon 6/6.



PART NUMBER	SIZE	COLOR
29TL250N	1/4	NATURAL
29TL250B	1/4	BLACK
29TL250WT	1/4	WHITE

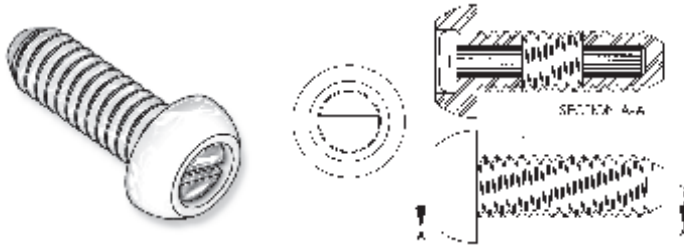




# SCREWS, BOLTS, AND THREADED ROD

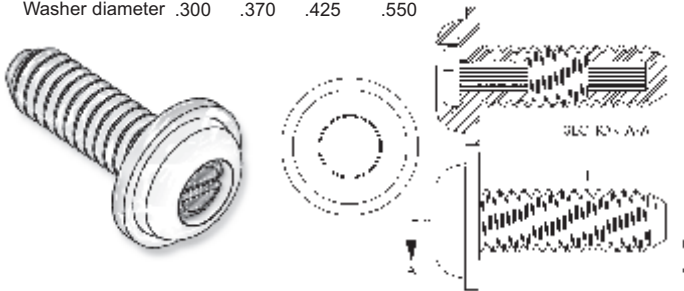
## ROUND - CODE "R"

Thread Size	632	832	1032	1/4-20
Head diameter	.255	.300	.340	.450
Head height	.095	.120	.130	.165



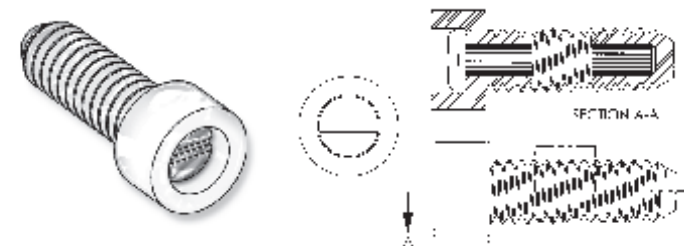
## ROUND WASHER - CODE "W"

Thread Size	632	832	1032	1/4-20
Head diameter	.230	.265	.315	.460
Head height	.100	.110	.130	.175
Washer thickness	.025	.032	.036	.056
Washer diameter	.300	.370	.425	.550



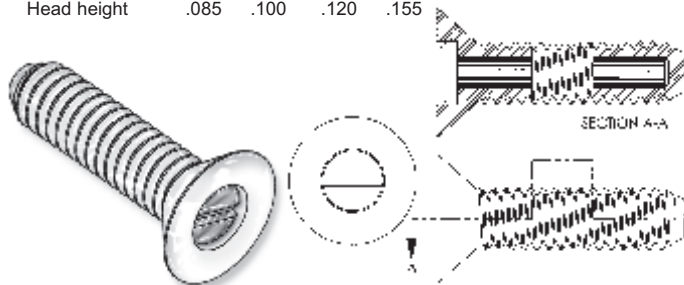
## FILLISTER - CODE "F"

Thread Size	632	832	1032	1/4-20
Head diameter	.225	.260	.300	.400
Head height	.135	.140	.160	.220



## 82° FLAT - CODE "A"

Thread Size	632	832	1032	1/4-20
Head diameter	.265	.305	.365	.510
Head height	.085	.100	.120	.155



Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

PROTECT      INSULATE      ISOLATE

The **shear strength of heat-treated steel.**  
The **Dielectric insulation, corrosion resistance**  
and **vibration resistance of nylon.**

A perfect combination to replace:

- \*costly brass and stainless steel fasteners.
- \*costly multiple component insulated screw assemblies.
- \*costly sleeved and clad screws.
- \*marginal standard nylon fastener applications.

Metal Core Screws are recommended in applications requiring electrical, thermal and vibration insulation in shear or double shear connections.

These reinforced screws will provide up to 4 times strength of standard nylon fasteners.

### NYLON SHELL

Nylon 66 Natural  
High dielectric resistance  
Corrosion resistant  
Vibration, abrasion resistant

### REINFORCING CORE

\*High strength, high carbon C.H.Q. steel.  
\*Precision cold formed and knurled.  
\*Electro zinc or cadmium plated.

The reinforcing core incorporates a recessed metal head that permits tightening with high speed, high torque automatic drives.

Due to the corrosion resistant nature of the nylon, the Metal core Screws can, in certain applications, replace expensive stainless steel, brass and Monel fasteners at a substantial cost savings.

The insulating quality of the nylon shell makes the Metal Core Screws an ideal choice for areas where cathodic or thermal transfer is a problem.

ITEM NUMBER	SIZE	DESCRIPTION
390632 025	632 1/4	Metal Core
390632 037	632 3/8	Metal Core
390632 050	632 1/2	Metal Core
390832 037	832 3/8	Metal Core
390832 050	832 1/2	Metal Core
391032 037	1032 3/8	Metal Core
391032 050	1032 1/2	Metal Core
391032 075	1032 3/4	Metal Core
391032 100	1032 1	Metal Core
392520 037	1/4-20 3/8	Metal Core
392520 050	1/4-20 1/2	Metal Core
392520 062	1/4-20 5/8	Metal Core
392520 075	1/4-20 3/4	Metal Core
392520 100	1/4-20 1	Metal Core

METRIC SIZES AVAILABLE ON APPLICATION

NOTE: SPECIFY HEAD STYLE CODE LETTER.

EXAMPLE: 632 X 1/2"  
ROUND HEAD=390632R050

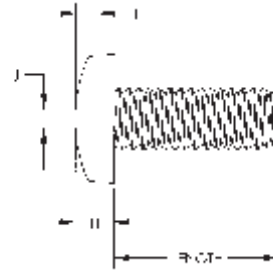
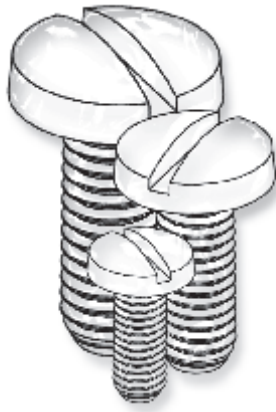


SIZE	MAX TORQUE		TENSILE TEST		DOUBLE SHEAR	
	BEFORE DEFORMATION	ULTIMATE TORQUE	YIELD LBS.	BREAK LBS.	YIELD LBS.	BREAK LBS.
632	1 In. Lbs.	1.5 In. Lbs.	24	32	200	240
832	3 In. Lbs.	4 In. Lbs.	66	72	300	360
1032	5 In. Lbs.	6 In. Lbs.	96	104	600	640
1/4-20	12 In. Lbs.	13 In. Lbs.	120	174	1400	1600

# SCREWS, BOLTS, AND THREADED ROD

SECTION

II



THREAD SIZE	A	H	J	T
2	.171-.181	.043-.050	.023-.031	.020-.030
4	.223-.235	.061-.068	.031-.039	.030-.042
6	.275-.290	.078-.087	.039-.048	.040-.053
8	.326-.344	.095-.105	.045-.054	.050-.065
10	.378-.399	.112-.123	.050-.060	.060-.077
12	.430-.454	.130-.141	.056-.067	.070-.089
1/4	.498-.525	.152-.165	.064-.075	.084-.105

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

## BINDER SLOTTED HEADSTYLE

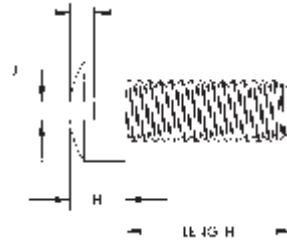
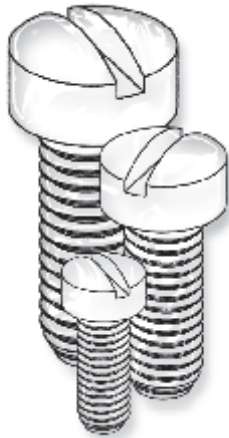
PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010256B009	256	3/32	010440B137	440	1 3/8	010832B050	832	1/2	011032B200	1032	2
010256B012	256	1/8	010440B150	440	1 1/2	010832B062	832	5/8	012520B025	1/4-20	1/4
010256B015	256	5/32	010440B162	440	1 5/8	010832B075	832	3/4	012520B031	1/4-20	5/16
010256B018	256	3/16	010440B175	440	1 3/4	010832B087	832	7/8	012520B037	1/4-20	3/8
010256B025	256	1/4	010448B025	448	1/4	010832B100	832	1	012520B050	1/4-20	1/2
010256B028	256	9/32	010632B009	632	3/32	010832B112	832	1 1/8	012520B062	1/4-20	5/8
010256B031	256	5/16	010632B012	632	1/8	010832B125	832	1 1/4	012520B075	1/4-20	3/4
010256B037	256	3/8	010632B015	632	5/32	010832B137	832	1 3/8	012520B087	1/4-20	7/8
010256B039	256	25/64	010632B018	632	3/16	010832B150	832	1 1/2	012520B100	1/4-20	1
010256B043	256	7/16	010632B025	632	1/4	010832B175	832	1 3/4	012520B125	1/4-20	1 1/4
010256B050	256	1/2	010632B031	632	5/16	010832B187	832	1 7/8	012520B150	1/4-20	1 1/2
010256B056	256	9/16	010632B037	632	3/8	010832B200	832	2	012520B175	1/4-20	1 3/4
010256B062	256	5/8	010632B043	632	7/16	011024B012	1024	1/8	012520B200	1/4-20	2
010256B075	256	3/4	010632B050	632	1/2	011024B018	1024	3/16	012520B250	1/4-20	2 1/2
010256B087	256	7/8	010632B056	632	9/16	011024B025	1024	1/4	012528B018	1/4-28	3/16
010256B100	256	1	010632B062	632	5/8	011024B031	1024	5/16	012528B025	1/4-28	1/4
010256B112	256	1 1/8	010632B068	632	11/16	011024B037	1024	3/8	012528B037	1/4-28	3/8
010264B018	264	3/16	010632B075	632	3/4	011024B050	1024	1/2	012528B062	1/4-28	5/8
010264B037	264	3/8	010632B087	632	7/8	011024B062	1024	5/8	012528B075	1/4-28	3/4
010436B050	436	1/2	010632B100	632	1	011024B075	1024	3/4	012528B100	1/4-28	1
010440B009	440	3/32	010632B112	632	1 1/8	011024B100	1024	1			
010440B012	440	1/8	010632B125	632	1 1/4	011024B125	1024	1 1/4			
010440B014	440	9/64	010632B150	632	1 1/2	011024B150	1024	1 1/2			
010440B018	440	3/16	010632B162	632	1 5/8	011032B012	1032	1/8			
010440B025	440	1/4	010632B175	632	1 3/4	011032B018	1032	3/16			
010440B028	440	9/32	010632B187	632	1 7/8	011032B025	1032	1/4			
010440B031	440	5/16	010632B200	632	2	011032B031	1032	5/16			
010440B037	440	3/8	010632B225	632	2 1/4	011032B037	1032	3/8			
010440B043	440	7/16	010640B025	640	1/4	011032B043	1032	7/16			
010440B050	440	1/2	010640B037	640	3/8	011032B050	1032	1/2			
010440B056	440	9/16	010640B075	640	3/4	011032B062	1032	5/8			
010440B062	440	5/8	010640B100	640	1	011032B075	1032	3/4			
010440B068	440	11/16	010832B012	832	1/8	011032B081	1032	13/16			
010440B075	440	3/4	010832B018	832	3/16	011032B087	1032	7/8			
010440B087	440	7/8	010832B025	832	1/4	011032B100	1032	1			
010440B100	440	1	010832B028	832	9/32	011032B106	1032	1-1/16			
010440B112	440	1 1/8	010832B031	832	5/16	011032B125	1032	1 1/4			
010440B118	440	1 3/16	010832B037	832	3/8	011032B150	1032	1 1/2			
010440B125	440	1 1/4	010832B043	832	7/16	011032B175	1032	1 3/4			





# SCREWS, BOLTS, AND THREADED ROD

**METRIC Sizes  
Also Available**  
Page 229



THREAD SIZE	A	H	J	T
2	.124-.140	.066-.083	.023-.031	.025-.037
3	.145-.161	.077-.095	.027-.035	.030-.043
4	.166-.183	.088-.107	.031-.039	.035-.048
6	.208-.226	.111-.132	.039-.048	.045-.060
8	.250-.270	.133-.156	.045-.054	.054-.071
10	.292-.313	.156-.180	.050-.060	.064-.083
12	.334-.357	.134-.148	.056-.067	.074-.094
1/4	.389-.414	.207-.237	.064-.075	.087-.109

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

## FILLISTER SLOTTED HEADSTYLE

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010256F009	256	3/32	010440F056	440	9/16	010640F037	640	3/8	011032F050	1032	1/2
010256F012	256	1/8	010440F062	440	5/8	010640F075	640	3/4	011032F062	1032	5/8
010256F015	256	5/32	010440F068	440	11/16	010640F100	640	1	011032F075	1032	3/4
010256F018	256	3/16	010440F075	440	3/4	010832F012	832	1/8	011032F081	1032	13/16
010256F025	256	1/4	010440F087	440	7/8	010832F018	832	3/16	011032F087	1032	7/8
010256F028	256	9/32	010440F100	440	1	010832F025	832	1/4	011032F100	1032	1
010256F031	256	5/16	010440F112	440	1 1/8	010832F028	832	9/32	011032F106	1032	1 1/16
010256F037	256	3/8	010440F118	440	1 3/16	010832F031	832	5/16	011032F125	1032	1 1/4
010256F039	256	25/64	010440F125	440	1 1/4	010832F037	832	3/8	011032F150	1032	1 1/2
010256F043	256	7/16	010440F137	440	1 3/8	010832F043	832	7/16	011032F175	1032	1 3/4
010256F050	256	1/2	010440F150	440	1 1/2	010832F050	832	1/2	011032F200	1032	2
010256F056	256	9/16	010440F162	440	1 5/8	010832F062	832	5/8	012520F025	1/4-20	1/4
010256F062	256	5/8	010440F175	440	1 3/4	010832F075	832	3/4	012520F031	1/4-20	5/16
010256F075	256	3/4	010448F025	448	1/4	010832F087	832	7/8	012520F037	1/4-20	3/8
010256F087	256	7/8	010540F037	540	3/8	010832F100	832	1	012520F050	1/4-20	1/2
010256F100	256	1	010632F009	632	3/32	010832F112	832	1 1/8	012520F062	1/4-20	5/8
010256F112	256	1 1/8	010632F012	632	1/8	010832F125	832	1 1/4	012520F075	1/4-20	3/4
010264F018	264	3/16	010632F015	632	5/32	010832F137	832	1 3/8	012520F087	1/4-20	7/8
010264F037	264	3/8	010632F018	632	3/16	010832F150	832	1 1/2	012520F100	1/4-20	1
010348F012	348	1/8	010632F025	632	1/4	010832F175	832	1 3/4	012520F125	1/4-20	1 1/4
010348F018	348	3/16	010632F031	632	5/16	010832F187	832	1 7/8	012520F150	1/4-20	1 1/2
010348F025	348	1/4	010632F037	632	3/8	010832F200	832	2	012520F175	1/4-20	1 3/4
010348F031	348	5/16	010632F043	632	7/16	011024F012	1024	1/8	012520F200	1/4-20	2
010348F037	348	3/8	010632F050	632	1/2	011024F018	1024	3/16	012520F250	1/4-20	2 1/2
010348F043	348	7/16	010632F056	632	9/16	011024F025	1024	1/4	012528F018	1/4-28	3/16
010348F050	348	1/2	010632F062	632	5/8	011024F031	1024	5/16	012528F025	1/4-28	1/4
010348F075	348	3/4	010632F068	632	11/16	011024F037	1024	3/8	012528F037	1/4-28	3/8
010356F031	356	5/16	010632F075	632	3/4	011024F050	1024	1/2	012528F062	1/4-28	5/8
010436F050	436	1/2	010632F087	632	7/8	011024F062	1024	5/8	012528F075	1/4-28	3/4
010440F009	440	3/32	010632F100	632	1	011024F075	1024	3/4	012528F100	1/4-28	1
010440F012	440	1/8	010632F112	632	1 1/8	011024F100	1024	1	0137524F100	3/8-24	1
010440F014	440	9/64	010632F125	632	1 1/4	011024F125	1024	1 1/4			
010440F018	440	3/16	010632F150	632	1 1/2	011024F150	1024	1 1/2			
010440F025	440	1/4	010632F162	632	1 5/8	011032F012	1032	1/8			
010440F028	440	9/32	010632F175	632	1 3/4	011032F018	1032	3/16			
010440F031	440	5/16	010632F187	632	1 7/8	011032F025	1032	1/4			
010440F037	440	3/8	010632F200	632	2	011032F031	1032	5/16			
010440F043	440	7/16	010632F225	632	2 1/4	011032F037	1032	3/8			
010440F050	440	1/2	010640F025	640	1/4	011032F043	1032	7/16			

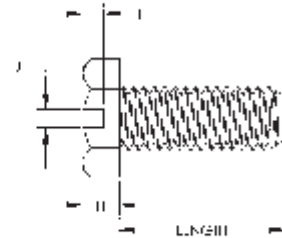
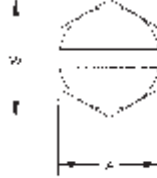


# SCREWS, BOLTS, AND THREADED ROD

SECTION  
II

**METRIC Sizes  
Also Available**

Page 222



THREAD SIZE	A	W	H	J	T
2	.120-.125	.134 MIN	.040-.050	.024-.032	.021-.029
4	.181-.188	.202 MIN	.049-.060	.031-.039	.025-.036
6	.244-.250	.272 MIN	.080-.093	.039-.048	.033-.046
8	.244-.250	.272 MIN	.096-.110	.045-.054	.052-.066
10	.305-.312	.340 MIN	.105-.120	.050-.060	.057-.072
12	.305-.312	.340 MIN	.139-.155	.056-.067	.077-.093
1/4	.367-.375	.409 MIN	.172-.190	.064-.075	.083-.101

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
<b>Nominal Screw Length</b>		<b>Tolerance on Length</b>	
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

## HEX SLOTTED HEADSTYLE

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010256X009	256	3/32	010440X137	440	1 3/8	010832X050	832	1/2	011032X200	1032	2
010256X012	256	1/8	010440X150	440	1 1/2	010832X062	832	5/8	012520X025	1/4-20	1/4
010256X015	256	5/32	010440X162	440	1 5/8	010832X075	832	3/4	012520X031	1/4-20	5/16
010256X018	256	3/16	010440X175	440	1 3/4	010832X087	832	7/8	012520X037	1/4-20	3/8
010256X025	256	1/4	010448X025	448	1/4	010832X100	832	1	012520X050	1/4-20	1/2
010256X028	256	9/32	010632X009	632	3/32	010832X112	832	1 1/8	012520X062	1/4-20	5/8
010256X031	256	5/16	010632X012	632	1/8	010832X125	832	1 1/4	012520X075	1/4-20	3/4
010256X037	256	3/8	010632X015	632	5/32	010832X137	832	1 3/8	012520X087	1/4-20	7/8
010256X039	256	25/64	010632X018	632	3/16	010832X150	832	1 1/2	012520X100	1/4-20	1
010256X043	256	7/16	010632X025	632	1/4	010832X175	832	1 3/4	012520X125	1/4-20	1 1/4
010256X050	256	1/2	010632X031	632	5/16	010832X187	832	1 7/8	012520X150	1/4-20	1 1/2
010256X056	256	9/16	010632X037	632	3/8	010832X200	832	2	012520X175	1/4-20	1 3/4
010256X062	256	5/8	010632X043	632	7/16	011024X012	1024	1/8	012520X200	1/4-20	2
010256X075	256	3/4	010632X050	632	1/2	011024X018	1024	3/16	012520X250	1/4-20	2 1/2
010256X087	256	7/8	010632X056	632	9/16	011024X025	1024	1/4	012528X018	1/4-28	3/16
010256X100	256	1	010632X062	632	5/8	011024X031	1024	5/16	012528X025	1/4-28	1/4
010256X112	256	1 1/8	010632X068	632	11/16	011024X037	1024	3/8	012528X037	1/4-28	3/8
010264X018	264	3/16	010632X075	632	3/4	011024X050	1024	1/2	012528X050	1/4-28	1/2
010264X037	264	3/8	010632X087	632	7/8	011024X062	1024	5/8	012528X062	1/4-28	5/8
010436X050	436	1/2	010632X100	632	1	011024X075	1024	3/4	012528X075	1/4-28	3/4
010440X009	440	3/32	010632X112	632	1 1/8	011024X100	1024	1	012528X100	1/4-28	1
010440X012	440	1/8	010632X125	632	1 1/4	011024X125	1024	1 1/4			
010440X014	440	9/64	010632X150	632	1 1/2	011024X150	1024	1 1/2			
010440X018	440	3/16	010632X162	632	1 5/8	011032X012	1032	1/8			
010440X025	440	1/4	010632X175	632	1 3/4	011032X018	1032	3/16			
010440X028	440	9/32	010632X187	632	1 7/8	011032X025	1032	1/4			
010440X031	440	5/16	010632X200	632	2	011032X031	1032	5/16			
010440X037	440	3/8	010632X225	632	2 1/4	011032X037	1032	3/8			
010440X043	440	7/16	010640X025	640	1/4	011032X043	1032	7/16			
010440X050	440	1/2	010640X037	640	3/8	011032X050	1032	1/2			
010440X056	440	9/16	010640X075	640	3/4	011032X062	1032	5/8			
010440X062	440	5/8	010640X100	640	1	011032X075	1032	3/4			
010440X068	440	11/16	010832X012	832	1/8	011032X081	1032	13/16			
010440X075	440	3/4	010832X018	832	3/16	011032X087	1032	7/8			
010440X087	440	7/8	010832X025	832	1/4	011032X100	1032	1			
010440X100	440	1	010832X028	832	9/32	011032X106	1032	1 1/16			
010440X112	440	1 1/8	010832X031	832	5/16	011032X125	1032	1 1/4			
010440X118	440	1 3/16	010832X037	832	3/8	011032X150	1032	1 1/2			
010440X125	440	1 1/4	010832X043	832	7/16	011032X175	1032	1 3/4			

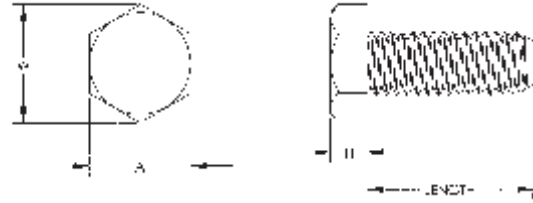




# SCREWS, BOLTS, AND THREADED ROD

**METRIC Sizes  
Also Available**

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**HEX  
UNSLOTTED  
HEADSTYLE**

THREAD SIZE	A	W	H
2	.120-.125	.134 min.	.040-.050
3	.181-.188	.202 min.	.044-.055
4	.181-.188	.202 min.	.049-.060
6	.244-.250	.272 min.	.080-.093
8	.244-.250	.272 min.	.096-.110
10	.305-.312	.340 min.	.105-.120
12	.305-.312	.340 min.	.139-.155
1/4	.367-.375	.409 min.	.172-.190

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010256H009	256	3/32	010440H056	440	9/16	010640H075	640	3/4	011032H062	1032	5/8
010256H012	256	1/8	010440H062	440	5/8	010640H100	640	1	011032H075	1032	3/4
010256H015	256	5/32	010440H068	440	11/16	010832H012	832	1/8	011032H081	1032	13/16
010256H018	256	3/16	010440H075	440	3/4	010832H018	832	3/16	011032H087	1032	7/8
010256H025	256	1/4	010440H087	440	7/8	010832H025	832	1/4	011032H100	1032	1
010256H028	256	9/32	010440H100	440	1	010832H028	832	9/32	011032H106	1032	1 1/16
010256H031	256	5/16	010440H112	440	1 1/8	010832H031	832	5/16	011032H125	1032	1 1/4
010256H037	256	3/8	010440H118	440	1 3/16	010832H037	832	3/8	011032H150	1032	1 1/2
010256H039	256	25/64	010440H125	440	1 1/4	010832H043	832	7/16	011032H175	1032	1 3/4
010256H043	256	7/16	010440H137	440	1 3/8	010832H050	832	1/2	011032H200	1032	2
010256H050	256	1/2	010440H150	440	1 1/2	010832H062	832	5/8	012520H025	1/4-20	1/4
010256H056	256	9/16	010440H162	440	1 5/8	010832H075	832	3/4	012520H031	1/4-20	5/16
010256H062	256	5/8	010440H175	440	1 3/4	010832H087	832	7/8	012520H037	1/4-20	3/8
010256H075	256	3/4	010448H025	448	1/4	010832H100	832	1	012520H050	1/4-20	1/2
010256H087	256	7/8	010632H009	632	3/32	010832H112	832	1 1/8	012520H062	1/4-20	5/8
010256H100	256	1	010632H012	632	1/8	010832H125	832	1 1/4	012520H075	1/4-20	3/4
010256H112	256	1 1/8	010632H015	632	5/32	010832H137	832	1 3/8	012520H087	1/4-20	7/8
010264H018	264	3/16	010632H018	632	3/16	010832H150	832	1 1/2	012520H100	1/4-20	1
010264H037	264	3/8	010632H025	632	1/4	010832H175	832	1 3/4	012520H125	1/4-20	1 1/4
010348H012	348	1/8	010632H031	632	5/16	010832H187	832	1 7/8	012520H150	1/4-20	1 1/2
010348H018	348	3/16	010632H037	632	3/8	010832H200	832	2	012520H175	1/4-20	1 3/4
010348H025	348	1/4	010632H043	632	7/16	011024H012	1024	1/8	012520H200	1/4-20	2
010348H031	348	5/16	010632H050	632	1/2	011024H018	1024	3/16	012520H250	1/4-20	2 1/2
010348H037	348	3/8	010632H056	632	9/16	011024H025	1024	1/4	012528H018	1/4-28	3/16
010348H043	348	7/16	010632H062	632	5/8	011024H031	1024	5/16	012528H025	1/4-28	1/4
010348H050	348	1/2	010632H068	632	11/16	011024H037	1024	3/8	012528H037	1/4-28	3/8
010348H075	348	3/4	010632H075	632	3/4	011024H050	1024	1/2	012528H062	1/4-28	5/8
010356H031	356	5/16	010632H087	632	7/8	011024H062	1024	5/8	012528H075	1/4-28	3/4
010436H050	436	1/2	010632H100	632	1	011024H075	1024	3/4	012528H100	1/4-28	1
010440H009	440	3/32	010632H112	632	1 1/8	011024H100	1024	1			
010440H012	440	1/8	010632H125	632	1 1/4	011024H125	1024	1 1/4			
010440H014	440	9/64	010632H150	632	1 1/2	011024H150	1024	1 1/2			
010440H018	440	3/16	010632H162	632	1 5/8	011032H012	1032	1/8			
010440H025	440	1/4	010632H175	632	1 3/4	011032H018	1032	3/16			
010440H028	440	9/32	010632H187	632	1 7/8	011032H025	1032	1/4			
010440H031	440	5/16	010632H200	632	2	011032H031	1032	5/16			
010440H037	440	3/8	010632H225	632	2 1/4	011032H037	1032	3/8			
010440H043	440	7/16	010640H025	640	1/4	011032H043	1032	7/16			
010440H050	440	1/2	010640H037	640	3/8	011032H050	1032	1/2			



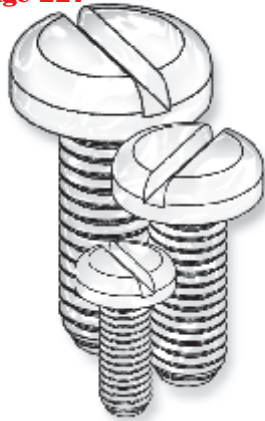
# SCREWS, BOLTS, AND THREADED ROD

SECTION

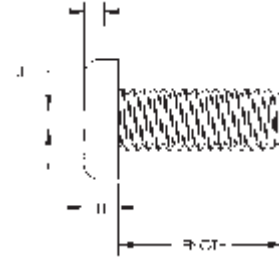
II

**METRIC Sizes  
Also Available**

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**New Sizes**



THREAD SIZE	A	H	J	T
1	.130-.142	.038-.046	.019-.026	.018-.027
2	.155-.167	.045-.053	.023-.031	.022-.031
4	.205-.219	.058-.068	.031-.039	.030-.040
6	.256-.270	.072-.082	.039-.048	.037-.050
8	.306-.322	.085-.096	.045-.054	.045-.058
10	.357-.373	.099-.110	.050-.060	.053-.068
12	.407-.425	.112-.125	.056-.067	.061-.077
1/4	.473-.492	.130-.144	.064-.075	.070-.087
5/16	.594-.615	.162-.178	.072-.084	.085-.106
1/2	.958-.987	.260-.281	.091-.106	.131-.161

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

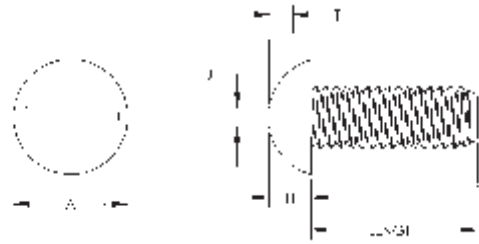
## PAN SLOTTED HEADSTYLE

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010164P025	164	1/4	010440P075	440	3/4	010832P018	832	3/16	011032P081	1032	13/16
010164P075	164	3/4	010440P087	440	7/8	010832P025	832	1/4	011032P087	1032	7/8
010172P025	172	1/4	010440P100	440	1	010832P028	832	9/32	011032P100	1032	1
010172P037	172	3/8	010440P112	440	1 1/8	010832P031	832	5/16	011032P106	1032	1 1/16
010172P050	172	1/2	010440P118	440	1 3/16	010832P037	832	3/8	011032P125	1032	1 1/4
010256P006	256	1/16	010440P125	440	1 1/4	010832P043	832	7/16	011032P150	1032	1 1/2
010256P009	256	3/32	010440P137	440	1 3/8	010832P050	832	1/2	011032P175	1032	1 3/4
010256P012	256	1/8	010440P150	440	1 1/2	010832P062	832	5/8	011032P200	1032	2
010256P015	256	5/32	010440P162	440	1 5/8	010832P075	832	3/4	011024P225	1024	2 1/2
010256P018	256	3/16	010440P175	440	1 3/4	010832P087	832	7/8	012520P025	1/4-20	1/4
010256P025	256	1/4	010448P025	448	1/4	010832P100	832	1	012520P031	1/4-20	5/16
010256P028	256	9/32	010632P009	632	3/32	010832P112	832	1 1/8	012520P037	1/4-20	3/8
010256P031	256	5/16	010632P012	632	1/8	010832P125	832	1 1/4	012520P050	1/4-20	1/2
010256P037	256	3/8	010632P015	632	5/32	010832P137	832	1 3/8	012520P062	1/4-20	5/8
010256P039	256	25/64	010632P018	632	3/16	010832P150	832	1 1/2	012520P075	1/4-20	3/4
010256P043	256	7/16	010632P025	632	1/4	010832P175	832	1 3/4	012520P087	1/4-20	7/8
010256P050	256	1/2	010632P031	632	5/16	010832P187	832	1 7/8	012520P100	1/4-20	1
010256P056	256	9/16	010632P037	632	3/8	010832P200	832	2	012520P125	1/4-20	1 1/4
010256P062	256	5/8	010632P043	632	7/16	011024P012	1024	1/8	012520P150	1/4-20	1 1/2
010256P075	256	3/4	010632P050	632	1/2	011024P018	1024	3/16	012520P175	1/4-20	1 3/4
010256P087	256	7/8	010632P056	632	9/16	011024P025	1024	1/4	012520P200	1/4-20	2
010256P100	256	1	010632P062	632	5/8	011024P031	1024	5/16	012520P250	1/4-20	2 1/2
010256P112	256	1 1/8	010632P068	632	11/16	011024P037	1024	3/8	012528P018	1/4-28	3/16
010264P018	264	3/16	010632P075	632	3/4	011024P050	1024	1/2	012528P025	1/4-28	1/4
010264P037	264	3/8	010632P087	632	7/8	011024P062	1024	5/8	012528P037	1/4-28	3/8
010436P050	436	1/2	010632P100	632	1	011024P075	1024	3/4	012528P062	1/4-28	5/8
010440P009	440	3/32	010632P112	632	1 1/8	011024P100	1024	1	012528P075	1/4-28	3/4
010440P012	440	1/8	010632P125	632	1 1/4	011024P125	1024	1 1/4	012528P100	1/4-28	1
010440P014	440	9/64	010632P150	632	1 1/2	011024P150	1024	1 1/2	0131218P087	5/16-18	7/8
010440P018	440	3/16	010632P162	632	1 5/8	011024P225	1024	2 1/4	0150013P075	1/2-13	3/4
010440P025	440	1/4	010632P175	632	1 3/4	011032P012	1032	1/8	0150013P100	1/2-13	1
010440P028	440	9/32	010632P187	632	1 7/8	011032P018	1032	3/16			
010440P031	440	5/16	010632P200	632	2	011032P025	1032	1/4			
010440P037	440	3/8	010632P225	632	2 1/4	011032P031	1032	5/16			
010440P043	440	7/16	010640P025	640	1/4	011032P037	1032	3/8			
010440P050	440	1/2	010640P037	640	3/8	011032P043	1032	7/16			
010440P056	440	9/16	010640P075	640	3/4	011032P050	1032	1/2			
010440P062	440	5/8	010640P100	640	1	011032P062	1032	5/8			
010440P068	440	11/16	010832P012	832	1/8	011032P075	1032	3/4			





# SCREWS, BOLTS, AND THREADED ROD



## ROUND SLOTTED HEADSTYLE

THREAD SIZE	A	H	J	T
1	.122-.138	.051-.061	.019-.026	.033-.044
2	.146-.162	.059-.069	.023-.031	.037-.048
3	.169-.187	.067-.078	.027-.035	.040-.053
4	.193-.211	.075-.086	.031-.039	.044-.058
5	.217-.236	.083-.095	.035-.043	.047-.063
6	.240-.260	.091-.103	.039-.048	.051-.068
8	.287-.309	.107-.120	.045-.054	.058-.077
10	.334-.359	.123-.137	.050-.060	.065-.087
12	.382-.408	.139-.153	.056-.067	.073-.096
1/4	.443-.472	.160-.175	.064-.075	.082-.109

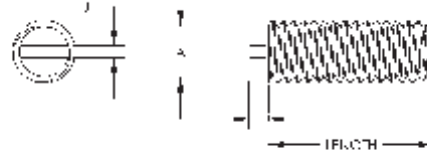
Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010164R025	164	1/4	010440R031	440	5/16	010632R187	632	1 7/8	011032R025	1032	1/4
010164R075	164	3/4	010440R037	440	3/8	010632R200	632	2	011032R031	1032	5/16
010172R025	172	1/4	010440R043	440	7/16	010632R225	632	2 1/4	011032R037	1032	3/8
010172R050	172	1/2	010440R050	440	1/2	010640R025	640	1/4	011032R043	1032	7/16
010256R006	256	1/16	010440R056	440	9/16	010640R037	640	3/8	011032R050	1032	1/2
010256R009	256	3/32	010440R062	440	5/8	010640R075	640	3/4	011032R062	1032	5/8
010256R012	256	1/8	010440R068	440	11/16	010640R100	640	1	011032R075	1032	3/4
010256R015	256	5/32	010440R075	440	3/4	010832R012	832	1/8	011032R081	1032	13/16
010256R018	256	3/16	010440R087	440	7/8	010832R018	832	3/16	011032R087	1032	7/8
010256R025	256	1/4	010440R100	440	1	010832R025	832	1/4	011032R100	1032	1
010256R028	256	9/32	010440R112	440	1 1/8	010832R028	832	9/32	011032R106	1032	1 1/16
010256R031	256	5/16	010440R118	440	1 3/16	010832R031	832	5/16	011032R125	1032	1 1/4
010256R037	256	3/8	010440R125	440	1 1/4	010832R037	832	3/8	011032R150	1032	1 1/2
010256R043	256	7/16	010440R137	440	1 3/8	010832R043	832	7/16	011032R162	1032	1 5/8
010256R050	256	1/2	010440R150	440	1 1/2	010832R050	832	1/2	011032R175	1032	1 3/4
010256R056	256	9/16	010440R162	440	1 5/8	010832R062	832	5/8	011032R200	1032	2
010256R062	256	5/8	010440R175	440	1 3/4	010832R075	832	3/4	012520R025	1/4-20	1/4
010256R075	256	3/4	010448R025	448	1/4	010832R087	832	7/8	012520R031	1/4-20	5/16
010256R087	256	7/8	010540R050	540	1/2	010832R100	832	1	012520R037	1/4-20	3/8
010256R100	256	1	010632R009	632	3/32	010832R112	832	1 1/8	012520R050	1/4-20	1/2
010256R112	256	1 1/8	010632R012	632	1/8	010832R125	832	1 1/4	012520R062	1/4-20	5/8
010264R018	264	3/16	010632R015	632	5/32	010832R137	832	1 3/8	012520R075	1/4-20	3/4
010264R037	264	3/8	010632R018	632	3/16	010832R150	832	1 1/2	012520R087	1/4-20	7/8
010348R012	348	1/8	010632R025	632	1/4	010832R175	832	1 3/4	012520R100	1/4-20	1
010348R018	348	3/16	010632R031	632	5/16	010832R187	832	1 7/8	012520R125	1/4-20	1 1/4
010348R025	348	1/4	010632R037	632	3/8	010832R200	832	2	012520R150	1/4-20	1 1/2
010348R031	348	5/16	010632R043	632	7/16	011024R012	1024	1/8	012520R175	1/4-20	1 3/4
010348R037	348	3/8	010632R050	632	1/2	011024R018	1024	3/16	012520R200	1/4-20	2
010348R043	348	7/16	010632R056	632	9/16	011024R025	1024	1/4	012520R250	1/4-20	2 1/2
010348R050	348	1/2	010632R062	632	5/8	011024R031	1024	5/16	012520R300	1/4-20	3
010348R075	348	3/4	010632R068	632	11/16	011024R037	1024	3/8	012528R018	1/4-28	3/16
010356R031	356	5/16	010632R075	632	3/4	011024R050	1024	1/2	012528R025	1/4-28	1/4
010436R050	436	1/2	010632R087	632	7/8	011024R062	1024	5/8	012528R037	1/4-28	3/8
010440R009	440	3/32	010632R100	632	1	011024R075	1024	3/4	012528R062	1/4-28	5/8
010440R012	440	1/8	010632R112	632	1 1/8	011024R100	1024	1	012528R075	1/4-28	3/4
010440R014	440	9/64	010632R125	632	1 1/4	011024R125	1024	1 1/4	012528R100	1/4-28	1
010440R018	440	3/16	010632R150	632	1 1/2	011024R150	1024	1 1/2			
010440R025	440	1/4	010632R162	632	1 5/8	011032R012	1032	1/8			
010440R028	440	9/32	010632R175	632	1 3/4	011032R018	1032	3/16			

# SCREWS, BOLTS, AND THREADED ROD

SECTION

II



## SET SLOTTED HEADSTYLE

THREAD SIZE	A	H	J	T
2	.055	.035	.018	.020
4	.075	.045	.020	.025
6	.100	.055	.025	.030
8	.120	.055	.028	.035
10	.150	.060	.035	.050
1/4	.175	.080	.040	.060
5/16	.246	.078	.051	.078

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010256S006	256	1/16	010440S125	440	1 1/4	010832S043	832	7/16	011032S200	1032	2
010256S009	256	3/32	010440S137	440	1 3/8	010832S050	832	1/2	012520S025	1/4-20	1/4
010256S012	256	1/8	010440S150	440	1 1/2	010832S062	832	5/8	012520S031	1/4-20	5/16
010256S015	256	5/32	010440S162	440	1 5/8	010832S075	832	3/4	012520S037	1/4-20	3/8
010256S018	256	3/16	010440S175	440	1 3/4	010832S087	832	7/8	012520S050	1/4-20	1/2
010256S025	256	1/4	010448S025	448	1/4	010832S100	832	1	012520S062	1/4-20	5/8
010256S028	256	9/32	010632S009	632	3/32	010832S112	832	1 1/8	012520S075	1/4-20	3/4
010256S031	256	5/16	010632S012	632	1/8	010832S125	832	1 1/4	012520S087	1/4-20	7/8
010256S037	256	3/8	010632S015	632	5/32	010832S137	832	1 3/8	012520S100	1/4-20	1
010256S043	256	7/16	010632S018	632	3/16	010832S150	832	1 1/2	012520S125	1/4-20	1 1/4
010256S050	256	1/2	010632S025	632	1/4	010832S175	832	1 3/4	012520S150	1/4-20	1 1/2
010256S056	256	9/16	010632S031	632	5/16	010832S187	832	1 7/8	012520S175	1/4-20	1 3/4
010256S062	256	5/8	010632S037	632	3/8	010832S200	832	2	012520S200	1/4-20	2
010256S075	256	3/4	010632S043	632	7/16	011024S012	1024	1/8	012520S250	1/4-20	2 1/2
010256S087	256	7/8	010632S050	632	1/2	011024S018	1024	3/16	012528S018	1/4-28	3/16
010256S100	256	1	010632S056	632	9/16	011024S025	1024	1/4	012528S025	1/4-28	1/4
010256S112	256	1 1/8	010632S062	632	5/8	011024S031	1024	5/16	012528S037	1/4-28	3/8
010264S018	264	3/16	010632S068	632	11/16	011024S037	1024	3/8	012528S062	1/4-28	5/8
010264S037	264	3/8	010632S075	632	3/4	011024S050	1024	1/2	012528S075	1/4-28	3/4
010436B050	436	1/2	010632S087	632	7/8	011024S062	1024	5/8	012528S100	1/4-28	1
010440S009	440	3/32	010632S100	632	1	011024S075	1024	3/4	0137524S031*	3/8-24	5/16
010440S012	440	1/8	010632S112	632	1 1/8	011024S100	1024	1	0131224S081	5/16-24	13/16
010440S014	440	9/64	010632S125	632	1 1/4	011024S125	1024	1 1/4	*SLOT IS IN THREADS		
010440S015	440	5/32	010632S150	632	1 1/2	011024S150	1024	1 1/2			
010440S018	440	3/16	010632S162	632	1 5/8	011032S012	1032	1/8			
010440S025	440	1/4	010632S175	632	1 3/4	011032S018	1032	3/16			
010440S028	440	9/32	010632S187	632	1 7/8	011032S025	1032	1/4			
010440S031	440	5/16	010632S200	632	2	011032S031	1032	5/16			
010440S038	440	3/8	010632S225	632	2 1/4	011032S037	1032	3/8			
010440S043	440	7/16	010640S025	640	1/4	011032S050	1032	1/2			
010440S050	440	1/2	010640S037	640	3/8	011032S062	1032	5/8			
010440S056	440	9/16	010640S075	640	3/4	011032S075	1032	3/4			
010440S062	440	5/8	010640S100	640	1	011032S081	1032	13/16			
010440S068	440	11/16	010832S012	832	1/8	011032S087	1032	7/8			
010440S075	440	3/4	010832S018	832	3/16	011032S100	1032	1			
010440S087	440	7/8	010832S025	832	1/4	011032S106	1032	1 1/16			
010440S100	440	1	010832S028	832	9/32	011032S125	1032	1 1/4			
010440S112	440	1 1/8	010832S031	832	5/16	011032S150	1032	1 1/2			
010440S118	440	1 3/16	010832S037	832	3/8	011032S175	1032	1 3/4			





# SCREWS, BOLTS, AND THREADED ROD



## SOCKET SET

## HEADSTYLE

THREAD SIZE	J	T	THREAD SIZE	J	T
4	.050	.070	5/16	.156	.156
6	.062	.080	3/8	.188	.188
8	.078	.090	1/2	.250	.250
10	.094	.100	5/8	.312	.312
1/4	.125	.125	3/4	.370	.185

Nominal Screw Length, in.	Tolerance on Length
Up to 0.63, incl	+/- 0.01
Over 0.63 to 2.00, incl	+/- 0.02
Over 2.00 to 6.00, incl	+/- 0.03
Over 6.00	+/- 0.06

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010436T050	436	1/2	010632T087	632	7/8	011024T062	1024	5/8	012528T075	1/4-28	3/4
010440T009	440	3/32	010632T100	632	1	011024T075	1024	3/4	012528T100	1/4-28	1
010440T012	440	1/8	010632T112	632	1 1/8	011024T100	1024	1	0131218T037	5/16-18	3/8
010440T014	440	9/64	010632T125	632	1 1/4	011024T125	1024	1 1/4	0131218T050	5/16-18	1/2
010440T015	440	5/32	010632T150	632	1 1/2	011024T150	1024	1 1/2	0131218T075	5/16-18	3/4
010440T018	440	3/16	010632T162	632	1 5/8	011032T012	1032	1/8	0131218T100	5/16-18	1
010440T025	440	1/4	010632T175	632	1 3/4	011032T018	1032	3/16	0137516T050	3/8-16	1/2
010440T028	440	9/32	010632T187	632	1 7/8	011032T025	1032	1/4	0137516T075	3/8-16	3/4
010440T031	440	5/16	010632T200	632	2	011032T031	1032	5/16	0137516T100	3/8-16	1
010440T037	440	3/8	010632T225	632	2 1/4	011032T037	1032	3/8	0150013T050	1/2-13	1/2
010440T043	440	7/16	010640T025	640	1/4	011032T043	1032	7/16	0150013T075	1/2-13	3/4
010440T050	440	1/2	010640T037	640	3/8	011032T050	1032	1/2	0150013T100	1/2-13	1
010440T056	440	9/16	010640T075	640	3/4	011032T062	1032	5/8	0150013T125	1/2-13	1 1/4
010440T062	440	5/8	010640T100	640	1	011032T075	1032	3/4	0162511T050	5/8-11	1/2
010440T068	440	11/16	010832T012	832	1/8	011032T081	1032	13/16	0162511T075	5/8-11	3/4
010440T075	440	3/4	010832T018	832	3/16	011032T087	1032	7/8	0162511T100	5/8-11	1
010440T087	440	7/8	010832T025	832	1/4	011032T100	1032	1	0162511T150	5/8-11	1 1/2
010440T100	440	1	010832T028	832	9/32	011032T106	1032	1 1/16	0175010T025	3/4-10	1/4
010440T112	440	1 1/8	010832T031	832	5/16	011032T125	1032	1 1/4			
010440T118	440	1 3/16	010832T037	832	3/8	011032T150	1032	1 1/2			
010440T125	440	1 1/4	010832T043	832	7/16	011032T175	1032	1 3/4			
010440T137	440	1 3/8	010832T050	832	1/2	011032T200	1032	2			
010440T150	440	1 1/2	010832T062	832	5/8	012520T025	1/4-20	1/4			
010440T162	440	1 5/8	010832T075	832	3/4	012520T031	1/4-20	5/16			
010440T175	440	1 3/4	010832T087	832	7/8	012520T037	1/4-20	3/8			
010448T025	448	1/4	010832T100	832	1	012520T050	1/4-20	1/2			
010632T009	632	3/32	010832T112	832	1 1/8	012520T062	1/4-20	5/8			
010632T012	632	1/8	010832T125	832	1 1/4	012520T075	1/4-20	3/4			
010632T015	632	5/32	010832T137	832	1 3/8	012520T087	1/4-20	7/8			
010632T018	632	3/16	010832T150	832	1/2	012520T100	1/4-20	1			
010632T025	632	1/4	010832T175	832	1 3/4	012520T125	1/4-20	1 1/4			
010632T031	632	5/16	010832T187	832	1 7/8	012520T150	1/4-20	1 1/2			
010632T037	632	3/8	010832T200	832	2	012520T175	1/4-20	1 3/4			
010632T043	632	7/16	011024T012	1024	1/8	012520T200	1/4-20	2			
010632T050	632	1/2	011024T018	1024	3/16	012520T250	1/4-20	2 1/2			
010632T056	632	9/16	011024T025	1024	1/4	012528T018	1/4-28	3/16			
010632T062	632	5/8	011024T031	1024	5/16	012528T025	1/4-28	1/4			
010632T068	632	11/16	011024T037	1024	3/8	012528T037	1/4-28	3/8			
010632T075	632	3/4	011024T050	1024	1/2	012528T062	1/4-28	5/8			

Due to the small delicate drive on this style set screw we recommend that you test samples prior to ordering production quantities of this style part. The drive on this style screw can be damaged very easily if the tapped hole is small or the thread is longer than a hex nut. An alternative would be the grub style screw.

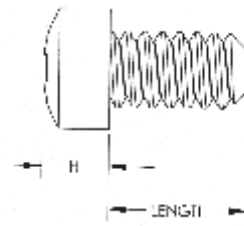


# SCREWS, BOLTS, AND THREADED ROD

SECTION

II

## New Product Line



## FILLISTER PHILLIPS HEADSTYLE

THREAD SIZE	A	H
6	.208/.226	.111/.132
8	.250/.270	.133/.156
10	.292/.313	.156/.180
1/4	.378/.403	.189/.219

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.06

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010632WF009	632	3/32	010640WF025	640	1/4	011024WF012	1024	1/8	011032WF106	1032	1 1/16
010632WF012	632	1/8	010640WF037	640	3/8	011024WF018	1024	3/16	011032WF125	1032	1 1/4
010632WF015	632	5/32	010640WF075	640	3/4	011024WF025	1024	1/4	011032WF150	1032	1 1/2
010632WF018	632	3/16	010640WF100	640	1	011024WF031	1024	5/16	011032WF175	1032	1 3/4
010632WF025	632	1/4	010832WF012	832	1/8	011024WF037	1024	3/8	011032WF200	1032	2
010632WF031	632	5/16	010832WF018	832	3/16	011024WF050	1024	1/2	012520WF025	1/4-20	1/4
010632WF037	632	3/8	010832WF025	832	1/4	011024WF062	1024	5/8	012520WF031	1/4-20	5/16
010632WF043	632	7/16	010832WF028	832	9/32	011024WF075	1024	3/4	012520WF037	1/4-20	3/8
010632WF050	632	1/2	010832WF031	832	5/16	011024WF100	1024	1	012520WF050	1/4-20	1/2
010632WF056	632	9/16	010832WF037	832	3/8	011024WF125	1024	1 1/4	012520WF062	1/4-20	5/8
010632WF062	632	5/8	010832WF043	832	7/16	011024WF150	1024	1 1/2	012520WF075	1/4-20	3/4
010632WF068	632	11/16	010832WF050	832	1/2	011032WF012	1032	1/8	012520WF087	1/4-20	7/8
010632WF075	632	3/4	010832WF062	832	5/8	011032WF018	1032	3/16	012520WF100	1/4-20	1
010632WF087	632	7/8	010832WF075	832	3/4	011032WF025	1032	1/4	012520WF125	1/4-20	1 1/4
010632WF100	632	1	010832WF087	832	7/8	011032WF031	1032	5/16	012520WF150	1/4-20	1 1/2
010632WF112	632	1 1/8	010832WF100	832	1	011032WF037	1032	3/8	012520WF175	1/4-20	1 3/4
010632WF125	632	1 1/4	010832WF112	832	1 1/8	011032WF043	1032	7/16	012520WF200	1/4-20	2
010632WF150	632	1 1/2	010832WF125	832	1 1/4	011032WF050	1032	1/2	012520WF250	1/4-20	2 1/2
010632WF162	632	1 5/8	010832WF137	832	1 3/8	011032WF062	1032	5/8	012528WF018	1/4-28	3/16
010632WF175	632	1 3/4	010832WF150	832	1 1/2	011032WF075	1032	3/4	012528WF025	1/4-28	1/4
010632WF187	632	1 7/8	010832WF175	832	1 3/4	011032WF081	1032	13/16	012528WF037	1/4-28	3/8
010632WF200	632	2	010832WF187	832	1 7/8	011032WF087	1032	7/8	012528WF062	1/4-28	5/8
010632WF225	632	2 1/4	010832WF200	832	2	011032WF100	1032	1	012528WF075	1/4-28	3/4
									012528WF100	1/4-28	1



Machine Screws & Nut Assortment

ITEM NUMBER - 04AS0750MSN



Metal Core Screw Assortment

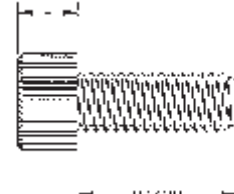
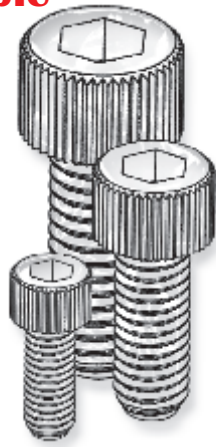
ITEM NUMBER - 04AS0305MCS



# SCREWS, BOLTS, AND THREADED ROD

**METRIC Sizes  
Also Available**

Page 232



**HEX  
SOCKET  
CAP**

THREAD SIZE	A	H	J	Key Engagement Min.
2	.134-.140	.083-.086	5/64"	.038
4	.176-.183	.108-.112	3/32"	.051
6	.218-.226	.134-.138	7/64"	.064
8	.262-.270	.159-.164	9/64"	.077
10	.303-.312	.185-.190	5/32"	.090
1/4	.365-.375	.244-.250	3/16"	.120
5/16	.457-.469	.306-.312	1/4"	.151
3/8	.550-.562	.368-.375	5/16"	.182
1/2	.735-.750	.492-.500	3/8"	.245
5/8	.921-.938	.616-.625	1/2"	.307

Nominal Screw Size	0 thru 3/8 incl	7/16 thru 3/4	7/8 thru 1 1/2 incl	Over 1 1/2
	Tolerance on Length			
Up to 1.00, incl	-0.03	-0.03	-0.05	. . .
Over 1.00 to 2.50, incl	-0.04	-0.06	-0.10	-0.18
Over 2.50 to 6.00, incl	-0.06	-0.08	-0.14	-0.20
Over 6.00	-0.12	-0.12	-0.20	-0.24

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
3404360050	436	1/2	3406320187	632	1 7/8	3410320037	1032	3/8	3431218150	5/16-18	1 1/2 *
3404400009	440	3/32	3406320225	632	2 1/4	3410320050	1032	1/2	3431218200	5/16-18	2 *
3404400012	440	1/8	3406400025	640	1/4	3410320062	1032	5/8	3431218250	5/16-18	2 1/2 *
3404400014	440	9/64	3406400037	640	3/8	3410320075	1032	3/4	3431218300	5/16-18	3 *
3404400018	440	3/16	3406400075	640	3/4	3410320081	1032	13/16	3437516050	3/8-16	1/2
3404400025	440	1/4	3406400100	640	1	3410320087	1032	7/8	3437516075	3/8-16	3/4
3404400028	440	9/32	3408320012	832	1/8	3410320100	1032	1	3437516100	3/8-16	1
3404400031	440	5/16	3408320018	832	3/16	3410320106	1032	1 1/16	3437516125	3/8-16	1 1/4 *
3404400037	440	3/8	3408320028	832	9/32	3410320125	1032	1 1/4	3437516150	3/8-16	1 1/2 *
3404400043	440	7/16	3408320025	832	1/4	3410320150	1032	1 1/2	3437516200	3/8-16	2 *
3404400050	440	1/2	3408320031	832	5/16	3410320200	1032	2	3437516250	3/8-16	2 1/2 *
3404400056	440	9/16	3408320037	832	3/8	3425200018	1/4-20	3/16	3437516300	3/8-16	3 *
3404400062	440	5/8	3408320043	832	7/16	3425200025	1/4-20	1/4	3450013050	1/2-13	1/2
3404400068	440	11/16	3408320050	832	1/2	3425200037	1/4-20	3/8	3450013075	1/2-13	3/4
3404400075	440	3/4	3408320062	832	5/8	3425200031	1/4-20	5/16	3450013100	1/2-13	1
3404400087	440	7/8	3408320075	832	3/4	3425200037	1/4-20	3/8	3450013125	1/2-13	1 1/4 *
3404400100	440	1	3408320087	832	7/8	3425200050	1/4-20	1/2	3450013150	1/2-13	1 1/2 *
3404400112	440	1 1/8	3408320100	832	1	3425200062	1/4-20	5/8	3450013200	1/2-13	2 *
3404400125	440	1 1/4	3408320112	832	1 1/8	3425200075	1/4-20	3/4	3450013250	1/2-13	2 1/2 *
3404400137	440	1 3/8	3408320125	832	1 1/4	3425200087	1/4-20	7/8	3450013300	1/2-13	3 *
3404400150	440	1 1/2	3408320137	832	1 3/8	3425200100	1/4-20	1	3462511050	5/8-11	1/2
3406320009	632	3/32	3408320150	832	1 1/2	3425200112	1/4-20	1 1/8	3462511075	5/8-11	3/4
3406320012	632	1/8	3408320175	832	1 3/4	3425200125	1/4-20	1 1/4	3462511100	5/8-11	1
3406320015	632	5/32	3408320200	832	2	3425200150	1/4-20	1 1/2	3462511150	5/8-11	1 1/2
3406320018	632	3/16	3410240012	1024	1/8	3425200175	1/4-20	1 3/4	3462511200	5/8-11	2
3406320025	632	1/4	3410240018	1024	3/16	3425200200	1/4-20	2 *			
3406320031	632	5/16	3410240025	1024	1/4	3425200225	1/4-20	2 1/4 *			
3406320037	632	3/8	3410240031	1024	5/16	3425200250	1/4-20	2 1/2 *			
3406320043	632	7/16	3410240037	1024	3/8	3425200250FT	1/4-20	2 1/2			
3406320050	632	1/2	3410240050	1024	1/2	3425200300FT	1/4-20	3			
3406320062	632	5/8	3410240062	1024	5/8	3425280018	1/4-28	3/16			
3406320068	632	11/16	3410240075	1024	3/4	3425280025	1/4-28	1/4			
3406320075	632	3/4	3410240100	1024	1	3425280037	1/4-28	3/8			
3406320087	632	7/8	3410240125	1024	1 1/4	3425280075	1/4-28	3/4			
3406320100	632	1	3410240150	1024	1 1/2	3425280100	1/4-28	1			
3406320112	632	1 1/8	3410320012	1032	1/8	3431218050	5/16-18	1/2			
3406320125	632	1 1/4	3410320018	1032	3/16	3431218075	5/16-18	3/4			
3406320150	632	1 1/2	3410320025	1032	1/4	3431218100	5/16-18	1			
3406320175	632	1 3/4	3410320031	1032	5/16	3431218125	5/16-18	1 1/4 *			

\*NOT FULL THREAD

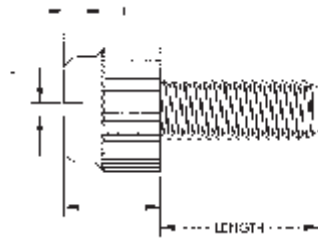
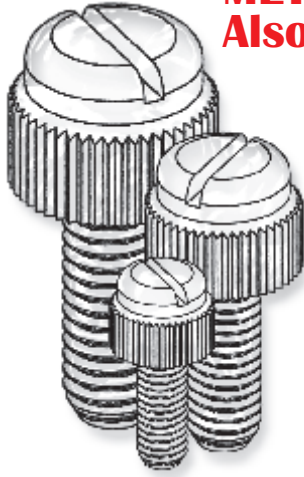


# SCREWS, BOLTS, AND THREADED ROD

SECTION

II

**METRIC Sizes  
Also Available**  
Page 233



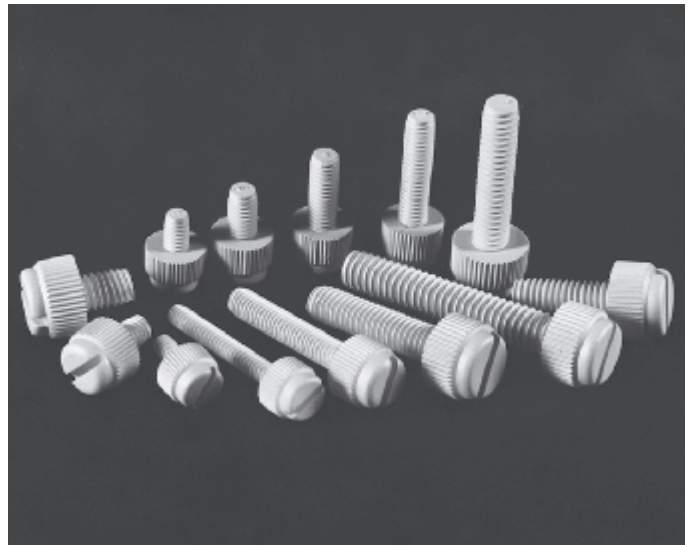
## ECONOMY GRADE THUMB SCREWS

THREAD SIZE	A*	H	J	T
4	.317	.216	.030	.040
6	.336	.243	.030	.040
8	.381	.280	.035	.045
10	.395	.305	.040	.065
1/4	.480	.305	.045	.065

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 TO 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

\*A +/- .010 TOLERANCE

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
090440009TEG	440	3/32	090632125TEG	632	1 1/4	091024150TEG	1024	1 1/2	092520031TEG	1/4-20	5/16
090440012TEG	440	1/8	090632150TEG	632	1 1/2	091032012TEG	1032	1/8	092520037TEG	1/4-20	3/8
090440014TEG	440	9/64	090632162TEG	632	1 5/8	091032018TEG	1032	3/16	092520050TEG	1/4-20	1/2
090440018TEG	440	3/16	090632175TEG	632	1 3/4	091032025TEG	1032	1/4	092520062TEG	1/4-20	5/8
090440025TEG	440	1/4	090632187TEG	632	1 7/8	091032031TEG	1032	5/16	092520075TEG	1/4-20	3/4
090440028TEG	440	9/32	090632225TEG	632	2 1/4	091032037TEG	1032	3/8	092520087TEG	1/4-20	7/8
090440031TEG	440	5/16	090640025TEG	640	1/4	091032043TEG	1032	7/16	092520100TEG	1/4-20	1
090440037TEG	440	3/8	090640037TEG	640	3/8	091032050TEG	1032	1/2	092520125TEG	1/4-20	1 1/4
090440043TEG	440	7/16	090640075TEG	640	3/4	091032062TEG	1032	5/8	092520150TEG	1/4-20	1 1/2
090440050TEG	440	1/2	090640100TEG	640	1	091032075TEG	1032	3/4	092520175TEG	1/4-20	1 3/4
090440056TEG	440	9/16	090832012TEG	832	1/8	091032081TEG	1032	13/16	092520200TEG	1/4-20	2
090440062TEG	440	5/8	090832018TEG	832	3/16	091032087TEG	1032	7/8	092520250TEG	1/4-20	2 1/2
090440068TEG	440	11/16	090832025TEG	832	1/4	091032100TEG	1032	1	092528018TEG	1/4-28	3/16
090440075TEG	440	3/4	090832028TEG	832	9/32	091032106TEG	1032	1 1/16	092528025TEG	1/4-28	1/4
090440087TEG	440	7/8	090832031TEG	832	5/16	091032112TEG	1032	1 1/4	092528037TEG	1/4-28	3/8
090440100TEG	440	1	090832037TEG	832	3/8	091032150TEG	1032	1 1/2	092528050TEG	1/4-28	1/2
090440112TEG	440	1 1/8	090832043TEG	832	7/16	091032175TEG	1032	1 3/4	092528075TEG	1/4-28	3/4
090440118TEG	440	1 3/16	090832050TEG	832	1/2	091032200TEG	1032	2	092528100TEG	1/4-28	1
090440125TEG	440	1 1/4	090832062TEG	832	5/8	092520025TEG	1/4-20	1/4			
090440137TEG	440	1 3/8	090832075TEG	832	3/4						
090440150TEG	440	1 1/2	090832087TEG	832	7/8						
090440175TEG	440	1 3/4	090832100TEG	832	1						
090448025TEG	448	1/4	090832112TEG	832	1 1/8						
090632009TEG	632	3/32	090832125TEG	832	1 1/4						
090632012TEG	632	1/8	090832137TEG	832	1 3/8						
090632015TEG	632	5/32	090832150TEG	832	1 1/2						
090632018TEG	632	3/16	090832175TEG	832	1 3/4						
090632025TEG	632	1/4	090832187TEG	832	1 7/8						
090632031TEG	632	5/16	090832200TEG	832	2						
090632037TEG	632	3/8	091024012TEG	1024	1/8						
090632043TEG	632	7/16	091024018TEG	1024	3/16						
090632050TEG	632	1/2	091024025TEG	1024	1/4						
090632056TEG	632	9/16	091024031TEG	1024	5/16						
090632062TEG	632	5/8	091024037TEG	1024	3/8						
090632068TEG	632	11/16	091024050TEG	1024	1/2						
090632075TEG	632	3/4	091024062TEG	1024	5/8						
090632087TEG	632	7/8	091024075TEG	1024	3/4						
090632100TEG	632	1	091024100TEG	1024	1						
090632112TEG	632	1 1/8	091024125TEG	1024	1 1/4						

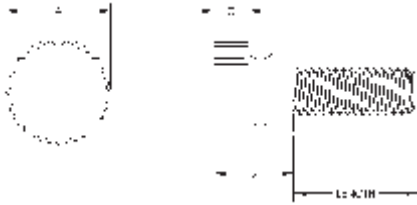




# SCREWS, BOLTS, AND THREADED ROD

SECTION

II



## KNURLED HEAD THUMB SCREWS

PART NUMBER	THREAD	LENGTH
090440018T	440	3/16
090440025T	440	1 / 4
090440037T	440	3 / 8
090440050T	440	1 / 2
090440075T	440	3 / 4
090632025T	632	1 / 4
090632037T	632	3 / 8
090632050T	632	1 / 2
090632075T	632	3 / 4
090632100T	632	1
090832018T	832	3/16
090832025T	832	1 / 4
090832037T	832	3 / 8
090832050T	832	1 / 2
090832075T	832	3 / 4
090832100T	832	1
091024050T	1024	1 / 2
091024075T	1024	3/4
091024100T	1024	1
091024125T	1024	1 1/4
091024200T	1024	2
091032037T	1032	3 / 8
091032050T	1032	1 / 2
091032075T	1032	3 / 4
091032100T	1032	1
091032106T	1032	1 1/16
091032150T	1032	1 1/2
091032200T	1032	2
092520050T	1/4-20	1 / 2
092520075T	1/4-20	3 / 4
092520100T	1/4-20	1
092520125T	1/4-20	1 1/4
092520150T	1/4-20	1 1/2
0931218050T	5/16-18	1 / 2
0931218100T	5/16-18	1
0931218150T	5/16-18	1 1/2
0931218200T	5/16-18	2
0937516050T	3/8-16	1 / 2
0937516100T	3/8-16	1
0937516150T	3/8-16	1 1/2
0937516200T	3/8-16	2
0950013050T	1/2-13	1 / 2
0950013100T	1/2-13	1
0950013150T	1/2-13	1 1/2
0950013200T	1/2-13	2



THREAD SIZE	A *	B *	C
4	.300 (7,62)	.280 (7,11)	.125 (3,17)
6	.360 (9,14)	.275 (6,99)	.125 (3,18)
8	.425 (10,80)	.305 (7,75)	.140 (3,56)
10	.425 (10,80)	.325 (8,26)	.140 (3,56)
1/4	.540 (13,72)	.365 (9,27)	.155 (3,94)
5/16	.615 (15,62)	.385 (9,78)	.171 (4,34)
3/8	.687 (17,45)	.430 (10,92)	.187 (4,75)
1/2	.750 (19,05)	.468 (11,89)	.203 (5,16)

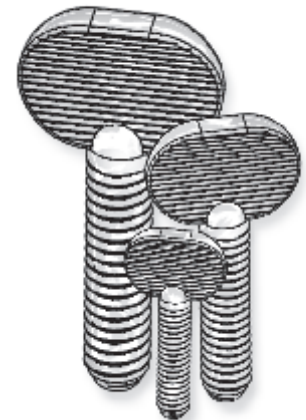
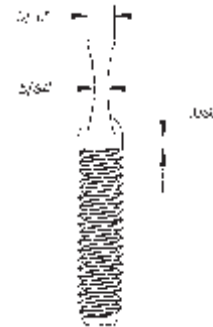
\* +/- .010 on A and B Dimensions

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 TO 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09



## OVAL HEAD THUMB SCREWS

PART NUMBER	THREAD	LENGTH
092520037V	1/4-20	3/8
092520050V	1/4-20	1/2
092520062V	1/4-20	5/8
092520100V	1/4-20	1
092520150V	1/4-20	1 1/2
092520175V	1/4-20	1 3/4
092520200V	1/4-20	2
092520250V	1/4-20	2 1/2



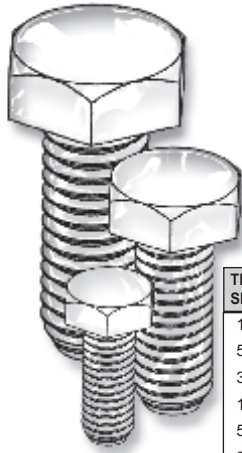
THREAD SIZE	HD WIDTH	HD HEIGHT	HD THICKNESS
1/4	.780	.550	5/32

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

# SCREWS, BOLTS, AND THREADED ROD

SECTION

II



New Sizes



ALL PARTS UP TO 1" LONG ARE FULLY THREADED

THREAD SIZE	A	W	H
1/4	.425-.438	.484-.505	.150-.188
5/16	.484-.500	.552-.577	.195-.235
3/8	.544-.562	.620-.650	.226-.268
1/2	.725-.750	.826-.866	.302-.364
5/8	.906-.938	1.033-1.083	.378-.444
3/4	1.088-1.125	1.240-1.299	.455-.524
7/8	1.269-1.312	1.447-1.516	.531-.604

Nominal Length	1/4 to 3/8	7/16 to 1/2	9/16 to 3/4	7/8 to 1	1-1/8 to 1-1/2	over 1-1/2
Up to 1 in., incl.	+0.02 -0.03	+0.02 -0.03	+0.02 -0.03	----	----	----
Over 1 in. to 2 1/2 in., incl.	+0.02 -0.04	+0.04 -0.06	+0.06 -0.08	+0.08 -0.10	+0.12 -0.12	+0.18 -0.18
Over 2-1/2 in. to 4 in., incl.	+0.04 -0.06	+0.06 -0.08	+0.08 -0.10	+0.10 -0.14	+0.16 -0.16	+0.20 -0.20
Over 4 in. to 6 in., incl.	+0.06 -0.10	+0.08 -0.10	+0.10 -0.10	+0.12 -0.16	+0.18 -0.18	+0.22 -0.22
Longer than 6 in.	+0.10 -0.18	+0.12 -0.18	+0.14 -0.18	+0.16 -0.20	+0.22 -0.22	+0.24 -0.24

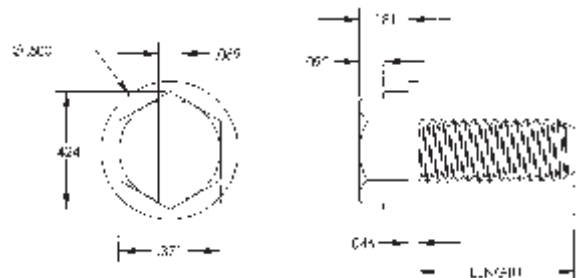
## HEX CAP SCREWS

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
0325020037	1/4-20	3/8	0331218100	5/16-18	1	0337516250	3/8-16	2	0350013450	1/2-13	4 1/2
0325020050	1/4-20	1/2	0331218125	5/16-18	1 1/4	0337516300	3/8-16	1/2 3	0350013500	1/2-13	5
0325020062	1/4-20	5/8	0331218137	5/16-18	1 3/8	0337516350	3/8-16	3 1/2	0350013550	1/2-13	5 1/2
0325020075	1/4-20	3/4	0331218150	5/16-18	1 1/2	0337516400	3/8-16	4	0350013600	1/2-13	6
0325020100	1/4-20	1	0331218200	5/16-18	2	0337516450	3/8-16	4 1/2	0362511050	5/8-11	1/2
0325020125	1/4-20	1 1/4	0331218250	5/16-18	2 1/2	0337516500	3/8-16	5	0362511075	5/8-11	3/4
0325020150	1/4-20	1 1/2	0331218300	5/16-18	3	0337516550	3/8-16	5 1/2	0362511100	5/8-11	1
0325020175FT	1/4-20	1 3/4	0331218350	5/16-18	3 1/2	0337516600	3/8-16	6	0362511150	5/8-11	1 1/2
0325020200	1/4-20	2	0331218400	5/16-18	4	0337524050	3/8-24	1/2	0362511200	5/8-11	2
0325020212	1/4-20	2 1/8	0331218450	5/16-18	4 1/2	0337524150	3/8-24	1 1/2	0362511250	5/8-11	2 1/2
0325020225	1/4-20	2 1/4	0331218500	5/16-18	5	0337524150FT	3/8-24	1 1/2	0362511300	5/8-11	3
0325020250	1/4-20	2 1/2	0331218550	5/16-18	5 1/2	0350013050	1/2-13	1/2	0362511350	5/8-11	3 1/2
0325020250FT	1/4-20	2 1/2	0331218600	5/16-18	6	0350013075	1/2-13	3/4	0362511400	5/8-11	4
0325020275	1/4-20	2 3/4	0331224050	5/16-24	1/2	0350013087	1/2-13	7/8	0362511400FT	5/8-11	4
0325020300	1/4-20	3	0331224150	5/16-24	1 1/2	0350013100	1/2-13	1	0362511450	5/8-11	4 1/2
0325020350	1/4-20	3 1/2	0331224150FT	5/16-24	1 1/2	0350013125	1/2-13	1 1/4	0362511500	5/8-11	5
0325020400	1/4-20	4	0337516050	3/8-16	1/2	0350013150	1/2-13	1 1/2	0362511550	5/8-11	5 1/2
0325020450	1/4-20	4 1/2	0337516075	3/8-16	3/4	0350013175	1/2-13	1 3/4	0362511600	5/8-11	6
0325020500	1/4-20	5	0337516100	3/8-16	1	0350013200	1/2-13	2	0375010075	3/4-10	3/4
0325020550	1/4-20	5 1/2	0337516125	3/8-16	1 1/4	0350013250	1/2-13	2 1/2	0375010400FT	3/4-10	4
0325020600	1/4-20	6	0337516150	3/8-16	1 1/2	0350013300	1/2-13	3	0375010550	3/4-10	5 1/2
0331218050	5/16-18	1/2	0337516200	3/8-16	2	0350013350	1/2-13	3 1/2	0387509075	7/8-9	3/4
0331218075	5/16-18	3/4	0337516200FT	3/8-16	2	0350013400	1/2-13	4	0387509450FT	7/8-9	4 1/2

FT = Full Threaded

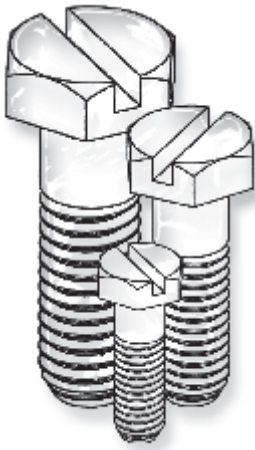
## "SPECIAL ITEM" SLOTTED HEX WASHER CAP

ITEM NUMBER	DESCRIPTION
401017	1/4-20 3/8 Slotted Hex Washer Cap
401016	1/4-20 5/8 Slotted Hex Washer Cap

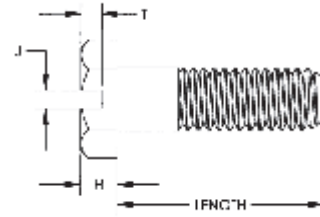
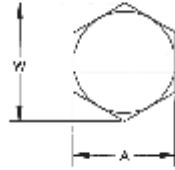




# SCREWS, BOLTS, AND THREADED ROD



New Sizes



## SLOTTED HEX CAP SCREWS

THREAD SIZE	A	W	H	J	T
1/4	.425-.438	.484-.505	.150-.188	.070	.090
5/16	.484-.500	.552-.577	.195-.235	.080	.110
3/8	.544-.562	.620-.650	.226-.268	.090	.140
1/2	.725-.750	.826-.866	.302-.364	.075	.163
5/8	.906-.938	1.033-1.083	.378-.444	.110	.170

Nominal Length	1/4 to 3/8	7/16 to 1/2	9/16 to 3/4	7/8 to 1	1-1/8 to 1-1/2	over 1-1/2
Up to 1 in., incl.	+0.02 -0.03	+0.02 -0.03	+0.02 -0.03	---	---	---
Over 1 in. to 2 1/2 in., incl.	+0.02 -0.04	+0.04 -0.06	+0.06 -0.08	+0.08 -0.10	+0.12 -0.12	+0.18 -0.18
Over 2-1/2 in. to 4 in., incl.	+0.04 -0.06	+0.06 -0.08	+0.08 -0.10	+0.10 -0.14	+0.16 -0.16	+0.20 -0.20
Over 4 in. to 6 in., incl.	+0.06 -0.10	+0.08 -0.10	+0.10 -0.10	+0.12 -0.16	+0.18 -0.18	+0.22 -0.22
Longer than 6 in.	+0.10 -0.18	+0.12 -0.18	+0.14 -0.18	+0.16 -0.20	+0.22 -0.22	+0.24 -0.24

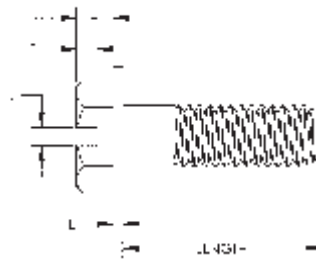
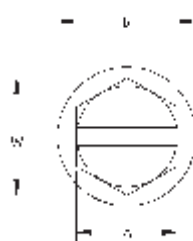
PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
3225020037	1/4-20	3/8	3231218125	5/16-18	1 1/4	3237516250	3/8-16	2 1/2	3250013500	1/2-13	5
3225020050	1/4-20	1/2	3231218137	5/16-18	1 3/8	3237516300	3/8-16	3	3250013550	1/2-13	5 1/2
3225020062	1/4-20	5/8	3231218150	5/16-18	1 1/2	3237516350	3/8-16	3 1/2	3250013600	1/2-13	6
3225020075	1/4-20	3/4	3231218175	5/16-18	1 3/4	3237516400	3/8-16	4	3262511050	5/8-11	1/2
3225020100	1/4-20	1	3231218200	5/16-18	2	3237516450	3/8-16	4 1/2	3262511075	5/8-11	3/4
3225020125	1/4-20	1 1/4	3231218200FT	5/16-18	2	3237516500	3/8-16	5	3262511100	5/8-11	1
3225020150	1/4-20	1 1/2	3231218250	5/16-18	2 1/2	3237516550	3/8-16	5 1/2	3262511150	5/8-11	1 1/2
3225020200	1/4-20	2	3231218300	5/16-18	3	3237516600	3/8-16	6	3262511200	5/8-11	2
3225020212	1/4-20	2 1/8	3231218350	5/16-18	3 1/2	3237524050	3/8-24	1/2	3262511250	5/8-11	2 1/2
3225020225	1/4-20	2 1/4	3231218400	5/16-18	4	3250013050	1/2-13	1/2	3262511300	5/8-11	3
3225020250	1/4-20	2 1/2	3231218450	5/16-18	4 1/2	3250013075	1/2-13	3/4	3262511350	5/8-11	3 1/2
3225020300	1/4-20	3	3231218500	5/16-18	5	3250013087	1/2-13	7/8	3262511400	5/8-11	4
3225020350	1/4-20	3 1/2	3231218550	5/16-18	5 1/2	3250013100	1/2-13	1	3262511400FT	5/8-11	4
3225020400	1/4-20	4	3231218600	5/16-18	6	3250013125	1/2-13	1 1/4	3262511450	5/8-11	4 1/2
3225020450	1/4-20	4 1/2	3231224050	5/16-24	1/2	3250013150	1/2-13	1 1/2	3262511500	5/8-11	5
3225020500	1/4-20	5	3237516050	3/8-16	1/2	3250013200	1/2-13	2	3262511550	5/8-11	5 1/2
3225020550	1/4-20	5 1/2	3237516075	3/8-16	3/4	3250013250	1/2-13	2 1/2	3262511600	5/8-11	6
3225020600	1/4-20	6	3237516100	3/8-16	1	3250013300	1/2-13	3			
3231218050	5/16-18	1/2	3237516125	3/8-16	1 1/4	3250013350	1/2-13	3 1/2			
3231218075	5/16-18	3/4	3237516150	3/8-16	1 1/2	3250013400	1/2-13	4			
3231218100	5/16-18	1	3237516200	3/8-16	2	3250013450	1/2-13	4 1/2			

FT = FULL THREAD

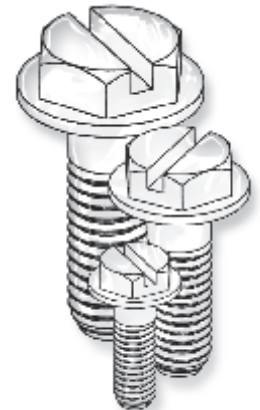
ALL PARTS UP TO 1" LONG ARE FULLY THREADED

## SLOTTED HEX WASHER CAP

PART NUMBER	THREAD	LENGTH
32W37516050	3/8-16	1/2
32W37516075	3/8-16	3/4
32W37516100	3/8-16	1
32W37516125	3/8-16	1 1/4
32W37516150	3/8-16	1 1/2
32W37516200	3/8-16	2
32W37516250	3/8-16	2 1/2
32W37516300	3/8-16	3



A	B	H	U	J	T	W
.558	.745	.282	.050	.087	.149	.620-.650

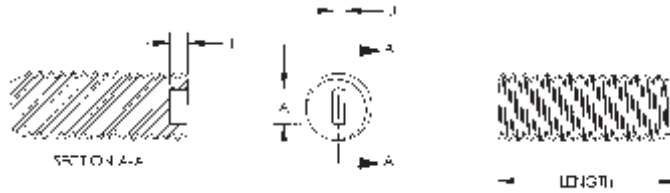


# SCREWS, BOLTS, AND THREADED ROD

SECTION  
II

**METRIC Sizes  
Also Available**

Page 232



**New Sizes**



**GRUB  
SLOTTED  
HEADSTYLE**

Nominal Screw Length, in.	Tolerance on Length
Up to 0.63, incl	+/- 0.01
Over 0.63 to 2.00, incl	+/- 0.02
Over 2.00 to 6.00, incl	+/- 0.03
Over 6.00	+/- 0.06

THREAD SIZE	T	A	J
6	.030	.080	.025
8	.035	.080	.028
10	.050	.130	.035
1/4	.060	.160	.040
3/8	.100	.264	.064
1/2	.130	.350	.075
1	.178	.516	.115

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010632G009	632	3/32	010832G100	832	1	012520G025	1/4-20	1/4	012528G018	1/4-28	3/16
010632G012	632	1/8	010832G112	832	1 1/8	012520G031	1/4-20	5/16	012528G025	1/4-28	1/4
010632G015	632	5/32	010832G125	832	1 1/4	012520G037	1/4-20	3/8	012528G037	1/4-28	3/8
010632G018	632	3/16	010832G137	832	1 3/8	012520G050	1/4-20	1/2	012528G062	1/4-28	5/8
010632G025	632	1/4	010832G150	832	1 1/2	012520G062	1/4-20	5/8	012528G075	1/4-28	3/4
010632G031	632	5/16	010832G175	832	1 3/4	012520G075	1/4-20	3/4	012528G100	1/4-28	1
010632G037	632	3/8	010832G187	832	1 7/8	012520G087	1/4-20	7/8	0137516G050	3/8-16	1/2
010632G043	632	7/16	010832G200	832	2	012520G100	1/4-20	1	0137516G075	3/8-16	3/4
010632G050	632	1/2	011024G012	1024	1/8	012520G125	1/4-20	1 1/4	0137516G100	3/8-16	1
010632G056	632	9/16	011024G018	1024	3/16	012520G150	1/4-20	1 1/2	0150013G050	1/2-13	1/2
010632G062	632	5/8	011024G025	1024	1/4	012520G175	1/4-20	1 3/4	0150013G075	1/2-13	3/4
010632G068	632	11/16	011024G031	1024	5/16	012520G200	1/4-20	2	0150013G100	1/2-13	1
010632G075	632	3/4	011024G037	1024	3/8	012520G250	1/4-20	2 1/2	011008G062	1 - 8	5/8
010632G087	632	7/8	011024G050	1024	1/2						
010632G100	632	1	011024G062	1024	5/8						
010632G112	632	1 1/8	011024G075	1024	3/4						
010632G125	632	1 1/4	011024G100	1024	1						
010632G150	632	1 1/2	011024G125	1024	1 1/4						
010632G162	632	1 5/8	011024G150	1024	1 1/2						
010632G175	632	1 3/4	011032G012	1032	1/8						
010632G187	632	1 7/8	011032G018	1032	3/16						
010640G025	640	1/4	011032G025	1032	1/4						
010640G037	640	3/8	011032G031	1032	5/16						
010640G075	640	3/4	011032G037	1032	3/8						
010640G100	640	1	011032G043	1032	7/16						
010832G012	832	1/8	011032G050	1032	1/2						
010832G018	832	3/16	011032G062	1032	5/8						
010832G025	832	1/4	011032G075	1032	3/4						
010832G028	832	9/32	011032G081	1032	13/16						
010832G031	832	5/16	011032G087	1032	7/8						
010832G037	832	3/8	011032G100	1032	1						
010832G043	832	7/16	011032G106	1032	1 1/16						
010832G050	832	1/2	011032G125	1032	1 1/4						
010832G062	832	5/8	011032G150	1032	1 1/2						
010832G075	832	3/4	011032G175	1032	1 3/4						
010832G087	832	7/8	011032G200	1032	2						

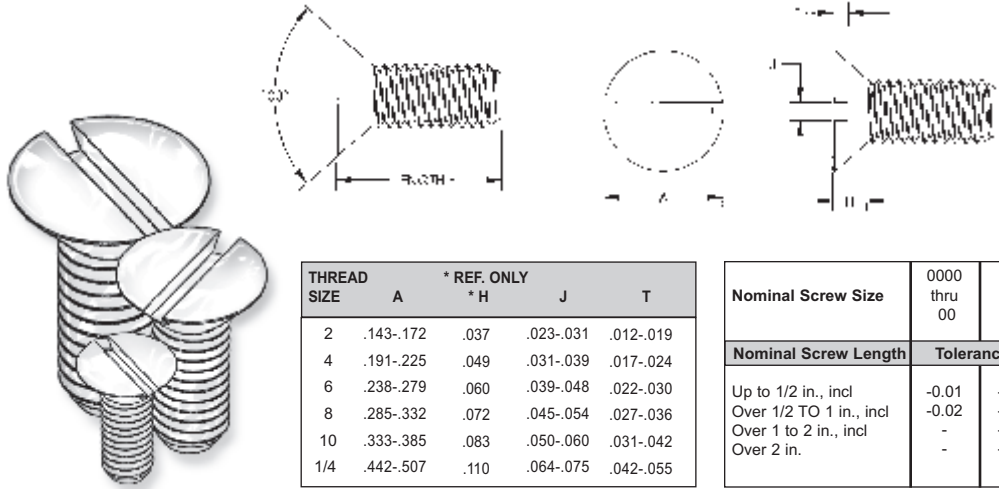


# SCREWS, BOLTS, AND THREADED ROD

SECTION

II

## New Sizes



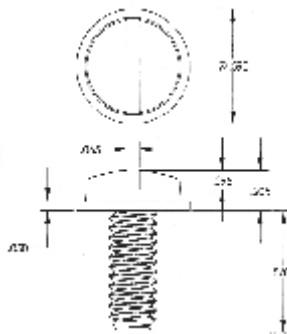
## 100° FLAT HEADSTYLE

THREAD SIZE	* REF. ONLY			
	A	* H	J	T
2	.143-.172	.037	.023-.031	.012-.019
4	.191-.225	.049	.031-.039	.017-.024
6	.238-.279	.060	.039-.048	.022-.030
8	.285-.332	.072	.045-.054	.027-.036
10	.333-.385	.083	.050-.060	.031-.042
1/4	.442-.507	.110	.064-.075	.042-.055

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
	<b>Nominal Screw Length</b>		
<b>Tolerance on Length</b>			
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 TO 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

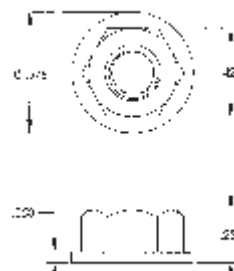
PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
020256B012	256	1/8	020440B037	440	3/8	020632B050	632	1/2	021024B081	1024	13/16
020256B018	256	3/16	020440B050	440	1/2	020632B062	632	5/8	021032B050	1032	1/2
020256B031	256	5/16	020440B053	440	17/32	020632B100	632	1	021032B068	1032	11/16
020256B050	256	1/2	020440B062	440	5/8	020632B112	632	1 1/8	022520B037	1/4-20	3/8
020256B062	256	5/8	020440B100	440	1	020632B150	632	1 1/2	022520B075	1/4-20	3/4
020440B018	440	3/16	020632B018	632	3/16	020832B037	832	3/8	022520B087	1/4-20	7/8
020440B025	440	1/4	020632B025	632	1/4	020832B053	832	17/32	022520B100	1/4-20	1
020440B031	440	5/16	020632B037	632	3/8	020832B100	832	1	022520B106	1/4-20	1-1/16
									022520B112	1/4-20	1-1/8

## LICENSE PLATE FASTENERS STANDARD



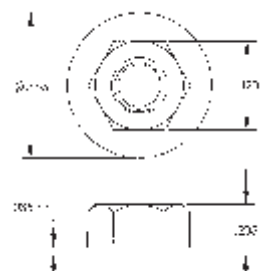
ITEM NUMBER

012520LP062



ITEM NUMBER

042520LPN



ITEM NUMBER

042520LPNS

STANDARD BOLT

STANDARD NUT

SPEC. STANDARD NUT

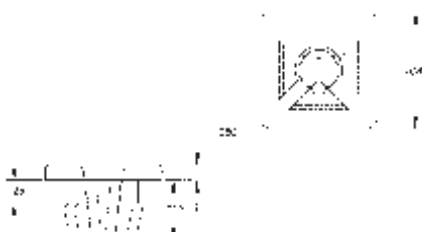
## DELUXE



ITEM NUMBER

011032W062ZP

METAL SCREW  
#10 X 5/8" PHIL PAN



ITEM NUMBER

60SGN01010

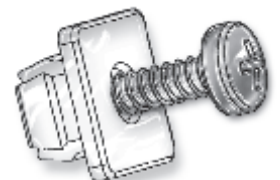
GROMMET



ITEM NUMBER

60SGN01010LPS

FOUR PIECE SET



Part Number 60SGN01010LPS is a set of deluxe license plate fasteners packaged in a clear poly bag. Set includes two each of part number 60SGN01010 (grommet) and 011032W062ZP (zinc plated screw).



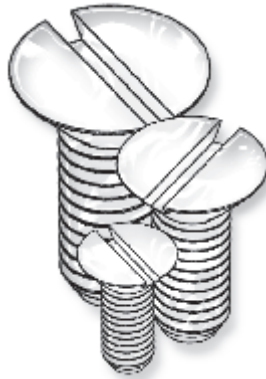
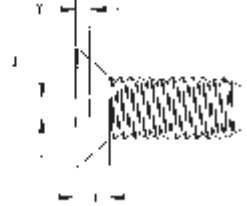
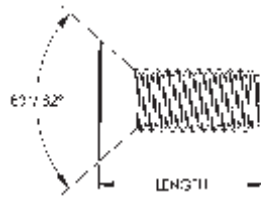
# SCREWS, BOLTS, AND THREADED ROD

SECTION

II

**METRIC Sizes**  
Also Available

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**New Sizes**

**82° FLAT HEADSTYLE**

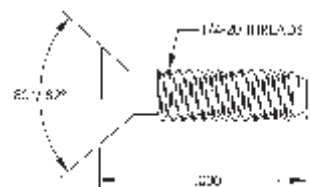
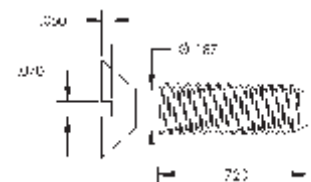
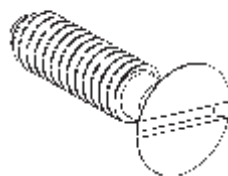
THREAD SIZE	A	H *Ref. Only	J	T
1	.126-.146	.043	.019-.026	.012-.019
2	.147-.172	.051	.023-.031	.015-.023
4	.195-.225	.067	.031-.039	.020-.030
6	.244-.279	.083	.039-.048	.024-.038
8	.292-.332	.100	.045-.054	.029-.045
10	.340-.385	.116	.050-.060	.034-.053
12	.389-.438	.132	.056-.067	.039-.060
1/4	.452-.507	.153	.064-.075	.046-.070
5/16	.568-.635	.191	.072-.084	.058-.088
3/8	.685-.762	.230	.081-.094	.070-.106

Nominal Screw Size	0000	0	1/4
	thru 00	thru 12	thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 TO 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
020172A025	172	1/4	020440A150	440	1 1/2	021024A075	1024	3/4
020172A031	172	5/16	020440A175	440	1 3/4	021024A100	1024	1
020172A050	172	1/2	020448A015	448	5/32	021032A025	1032	1/4
020256A018	256	3/16	020448A025	448	1/4	021032A031	1032	5/16
020256A025	256	1/4	020632A018	632	3/16	021032A037	1032	3/8
020256A031	256	5/16	020632A025	632	1/4	021032A050	1032	1/2
020256A037	256	3/8	020632A031	632	5/16	021032A075	1032	3/4
020256A043	256	7/16	020632A037	632	3/8	021032A087	1032	7/8
020256A050	256	1/2	020632A050	632	1/2	021032A100	1032	1
020256A056	256	9/16	020632A062	632	5/8	021032A125	1032	1 1/4
020256A062	256	5/8	020632A075	632	3/4	021032A150	1032	1 1/2
020256A075	256	3/4	020632A100	632	1	022520A025	1/4-20	1/4
020440A012	440	1/8	020632A112	632	1 1/8	022520A050	1/4-20	1/2
020440A015	440	5/32	020632A125	632	1 1/4	022520A062	1/4-20	5/8
020440A018	440	3/16	020832A012	832	1/8	022520A075	1/4-20	3/4
020440A025	440	1/4	020832A025	832	1/4	022520A087	1/4-20	7/8
020440A031	440	5/16	020832A031	832	5/16	022520A100	1/4-20	1
020440A037	440	3/8	020832A037	832	3/8	022520A125	1/4-20	1 1/4
020440A050	440	1/2	020832A043	832	7/16	022520A150	1/4-20	1 1/2
020440A056	440	9/16	020832A050	832	1/2	022520A175	1/4-20	1 3/4
020440A062	440	5/8	020832A056	832	9/16	022520A200	1/4-20	2
020440A075	440	3/4	020832A062	832	5/8	022520A250	1/4-20	2 1/2
020440A100	440	1	020832A075	832	3/4	0231218A100	5/16-18	1
020440A112	440	1 1/8	020832A100	832	1	0237516A175	3/8-16	1 3/4
020440A118	440	1 3/16	020832A125	832	1 1/4			
020440A125	440	1 1/4	020832A150	832	1 1/2			
020440A137	440	1 3/8	021024A050	1024	1/2			



**SPECIAL ITEM 82° FLAT HEADSTYLE**



ITEM NUMBER 401004

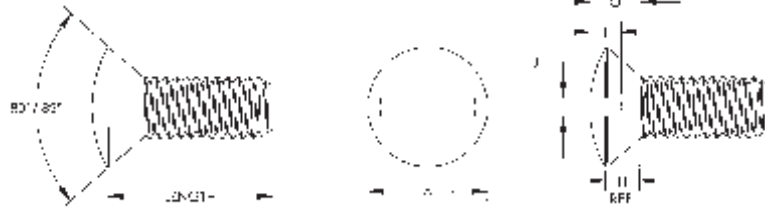
# SCREWS, BOLTS, AND THREADED ROD

**METRIC Sizes**  
Also Available

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SECTION

II



THREAD SIZE	* REF. ONLY				
	A	* H	O	J	T
2	.147-.172	.051	.063-.080	.023-.031	.037-.045
4	.195-.225	.067	.084-.104	.031-.039	.049-.059
6	.244-.279	.083	.105-.128	.039-.048	.060-.074
8	.292-.332	.100	.126-.152	.045-.054	.072-.088
10	.340-.385	.116	.148-.176	.050-.060	.084-.103
12	.389-.438	.132	.169-.200	.056-.067	.096-.117
1/4	.452-.507	.153	.197-.232	.064-.075	.112-.136

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
	<b>Nominal Screw Length</b>		
<b>Tolerance on Length</b>			
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 TO 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

## 82° OVAL HEADSTYLE

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
330256A018	256	3/16	330448A025	448	1/4	331032A031	1032	5/16	332520A050	1/4-20	1/2
330256A025	256	1/4	330632A025	632	1/4	331032A037	1032	3/8	332520A062	1/4-20	5/8
330256A031	256	5/16	330632A031	632	5/16	331032A050	1032	1/2	332520A075	1/4-20	3/4
330256A037	256	3/8	330632A037	632	3/8	331032A075	1032	3/4	332520A087	1/4-20	7/8
330256A043	256	7/16	330632A050	632	1/2	331032A087	1032	7/8	332520A100	1/4-20	1
330256A050	256	1/2	330632A062	632	5/8	331032A100	1032	1	332520A125	1/4-20	1 1/4
330256A056	256	9/16	330632A075	632	3/4	331032A125	1032	1 1/4	332520A150	1/4-20	1 1/2
330256A062	256	5/8	330632A100	632	1	331032A150	1032	1 1/2	332520A175	1/4-20	1 3/4
330256A075	256	3/4	330632A112	632	1 1/8	332520A025	1/4-20	1/4	332520A200	1/4-20	2
330440A012	440	1/8	330632A125	632	1 1/4				332520A250	1/4-20	2 1/2
330440A015	440	5/32	330632A175	632	1 3/4						
330440A018	440	3/16	330832A012	832	1/8						
330440A025	440	1/4	330832A025	832	1/4						
330440A031	440	5/16	330832A031	832	5/16						
330440A037	440	3/8	330832A037	832	3/8						
330440A050	440	1/2	330832A043	832	7/16						
330440A056	440	9/16	330832A050	832	1/2						
330440A062	440	5/8	330832A056	832	9/16						
330440A075	440	3/4	330832A062	832	5/8						
330440A100	440	1	330832A075	832	3/4						
330440A112	440	1 1/8	330832A100	832	1						
330440A118	440	1 3/16	330832A125	832	1 1/4						
330440A125	440	1 1/4	331024A050	1024	1/2						
330440A137	440	1 3/8	331024A075	1024	3/4						
330440A150	440	1 1/2	331024A100	1024	1						
330440A175	440	1 3/4	331024A125	1024	1 1/4						
330448A015	448	5/32	331032A025	1032	1/4						



# SCREWS, BOLTS, AND THREADED ROD

SECTION

II

This versatile threaded rod stock is easily cut to size, resistant to most chemicals, electrically insulating, non-magnetic, lightweight, low thermal conductivity, vibration and abrasion resistant. Stock length is 2 feet. Longer lengths up to 8 feet available on special order. We can furnish cut to your length with a nominal cutting charge. Other plastic materials can be furnished on special order. Request quote.

## THREADED RODS



**METRIC Sizes  
Also Available**  
Page 236

ITEM NUMBER	DESCRIPTION	
3800440TR	440	Threaded Rod
3800632TR	632	Threaded Rod
3800832TR	832	Threaded Rod
3801024TR	1024	Threaded Rod
* 3801032TR	1032	Threaded Rod
* 3825020TR	1/4-20	Threaded Rod
* 3831218TR	5/16-18	Threaded Rod
* 3837516TR	3/8-16	Threaded Rod
* 3850013TR	1/2-13	Threaded Rod
3862511TR	5/8-11	Threaded Rod
3875010TR	3/4-10	Threaded Rod
3887509TR	7/8-9	Threaded Rod
3810008TR	1-8	Threaded Rod

\* These sizes are available in natural Acetal material, contact sales for price.

## THREADED STUDS

Injection molded threaded studs with chamfer on both ends are available in several of the most popular sizes and lengths. Threaded studs are molded in natural Nylon 6/6 UL 94V2. These studs are resistant to most chemicals, electrically insulating, non magnetic, lightweight, low thermal conductivity, vibration and abrasion resistant.

LENGTH	TOLERANCE
3/4 " to 1"	+0/- .03
1-1/2" to 2"	+0/- .06
2 1/2" to 5"	+0/- .09

ITEM NUMBER	DESCRIPTION		
3801032075SD	10-32	3/4	Threaded Stud
3801032100SD	10-32	1	Threaded Stud
3801032150SD	10-32	1 1/2	Threaded Stud
3801032200SD	10-32	2	Threaded Stud
3801032250SD	10-32	2 1/2	Threaded Stud
3825020075SD	1/4-20	3/4	Threaded Stud
3825020100SD	1/4-20	1	Threaded Stud
3825020150SD	1/4-20	1 1/2	Threaded Stud
3825020200SD	1/4-20	2	Threaded Stud
3825020250SD	1/4-20	2 1/2	Threaded Stud
3825020300SD	1/4-20	3	Threaded Stud
3831218100SD	5/16-18	1	Threaded Stud
3831218150SD	5/16-18	1 1/2	Threaded Stud
3831218200SD	5/16-18	2	Threaded Stud
3831218250SD	5/16-18	2 1/2	Threaded Stud
3831218300SD	5/16-18	3	Threaded Stud
3837516100SD	3/8-16	1	Threaded Stud
3837516150SD	3/8-16	1 1/2	Threaded Stud
3837516200SD	3/8-16	2	Threaded Stud
3837516250SD	3/8-16	2 1/2	Threaded Stud
3837516300SD	3/8-16	3	Threaded Stud
3837516400SD	3/8-16	4	Threaded Stud
3850013150SD	1/2-13	1 1/2	Threaded Stud
3850013200SD	1/2-13	2	Threaded Stud
3850013250SD	1/2-13	2 1/2	Threaded Stud
3850013300SD	1/2-13	3	Threaded Stud
3850013400SD	1/2-13	4	Threaded Stud
3850013500SD	1/2-13	5	Threaded Stud





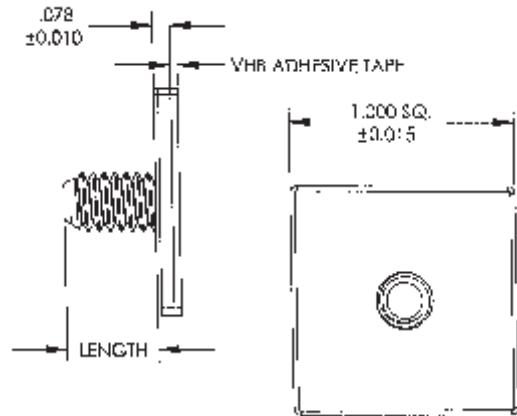
# SCREWS, BOLTS, AND THREADED ROD

SECTION

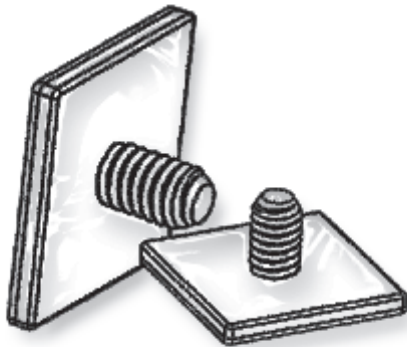
II

Micro Plastics' nylon base with threaded stud has very high bond (VHB) white closed cell acrylic foam carrier with all purpose acrylic adhesive. Shear and peel strength is very high and material has very good solvent resistance. Acrylic adhesive has fair initial adhesion with gradual adhesion build up over 72 hours. Surface must be unified, dry, and free of contamination. Firm pressure must be applied to increase the cold flow and contact of the adhesive with the substrate.

Parts can be purchased **without VHB adhesive foam**, just add **WOAF** to the end of part number.

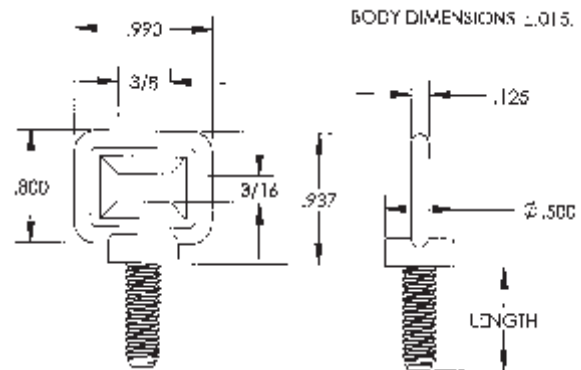
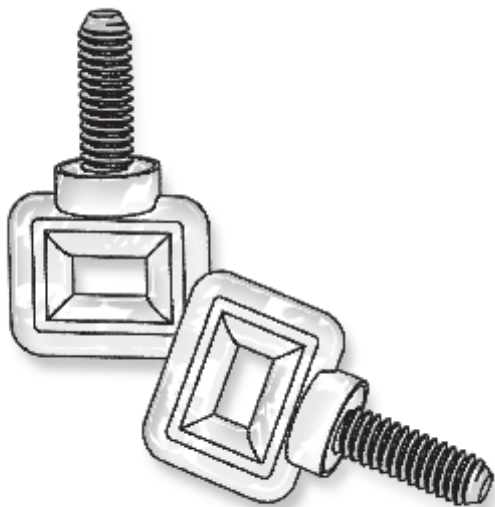


## SQUARE BASE WITH THREADED STUD



ITEM NUMBER	THREAD	LENGTH	TOLERANCE
011032ABTS050	1032	1/2	+0.000/-0.020
011032ABTS075	1032	3/4	+0.000/-0.030
011032ABTS100	1032	1	+0.000/-0.030
012520ABTS050	1/4	1/2	+0.000/-0.030
012520ABTS075	1/4	3/4	+0.000/-0.030
012520ABTS100	1/4	1	+0.000/-0.030
013118ABTS050	5/16	1/2	+0.000/-0.030
013118ABTS075	5/16	3/4	+0.000/-0.030
013118ABTS100	5/16	1	+0.000/-0.030

## FLAT HEAD WING SCREW



ITEM NUMBER	THREAD	LENGTH	TOLERANCE
0101032FHWS050	1032	1/2	+0.000/-0.020
0101032FHWS075	1032	3/4	+0.000/-0.030
0101032FHWS100	1032	1	+0.000/-0.030
0125020FHWS050	1/4	1/2	+0.000/-0.030
0125020FHWS075	1/4	3/4	+0.000/-0.030
0125020FHWS100	1/4	1	+0.000/-0.030
0131218FHWS050	5/16	1/2	+0.000/-0.030
0131218FHWS075	5/16	3/4	+0.000/-0.030
0131218FHWS100	5/16	1	+0.000/-0.030

# SCREWS, BOLTS, AND THREADED ROD

SECTION

II

**Polycarbonate** is one of the toughest, most dimensionally stable thermoplastics over a wide temperature range. It has an exceptionally high impact strength and is unaffected by water below 140° F. **Polycarbonate** is unaffected by greases, oils, detergents, aliphatic hydrocarbons, most mineral acids, and the higher alcohols. It is attacked by chlorinated hydrocarbons and most aromatic solvents, ester, and ketone. **Polycarbonate** has white water transparency with a 90° light transmission. Melting Point 309 °F per ASTM D789. Underwriters Lab rating UL94V2

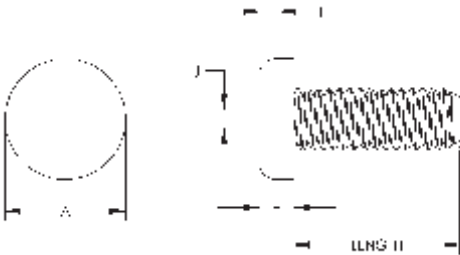
## PAN SLOTTED HEADSTYLE - POLYCARBONATE

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

THREAD SIZE	A	H	J	T
4	.205-.219	.058-.068	.031-.039	.030-.040
6	.256-.270	.072-.082	.039-.048	.037-.050
8	.306-.322	.085-.096	.045-.054	.045-.058
10	.357-.373	.099-.110	.050-.060	.053-.068



*Transparent*



PART NUMBER	THREAD	LENGTH	MATERIAL
010440P025PC	440	1/4	POLYCARBONATE
010440P028PC	440	9/32	POLYCARBONATE
010440P037PC	440	3/8	POLYCARBONATE
010440P050PC	440	1/2	POLYCARBONATE
010632P025PC	632	1/4	POLYCARBONATE
010632P037PC	632	3/8	POLYCARBONATE
010632P050PC	632	1/2	POLYCARBONATE
010632P062PC	632	5/8	POLYCARBONATE
010632P075PC	632	3/4	POLYCARBONATE
010832P012PC	832	1/8	POLYCARBONATE
010832P025PC	832	1/4	POLYCARBONATE
010832P037PC	832	3/8	POLYCARBONATE
010832P050PC	832	1/2	POLYCARBONATE
010832P062PC	832	5/8	POLYCARBONATE
010832P075PC	832	3/4	POLYCARBONATE
011032P025PC	1032	1/4	POLYCARBONATE
011032P037PC	1032	3/8	POLYCARBONATE
011032P050PC	1032	1/2	POLYCARBONATE
011032P062PC	1032	5/8	POLYCARBONATE
011032P075PC	1032	3/4	POLYCARBONATE
011032P100PC	1032	1	POLYCARBONATE

## PAN PHILLIPS HEADSTYLE - POLYCARBONATE

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Nominal Screw Length	Tolerance on Length		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

THREAD SIZE	A	H
4	.205 - .219	.070 - .080
6	.256 - .270	.087 - .097
8	.306 - .322	.105 - .115
10	.357 - .373	.122 - .133



*Transparent*



PART NUMBER	THREAD	LENGTH	MATERIAL
010440W025PC	440	1/4	POLYCARBONATE
010440W028PC	440	9/32	POLYCARBONATE
010440W037PC	440	3/8	POLYCARBONATE
010440W050PC	440	1/2	POLYCARBONATE
010632W025PC	632	1/4	POLYCARBONATE
010632W037PC	632	3/8	POLYCARBONATE
010632W050PC	632	1/2	POLYCARBONATE
010632W062PC	632	5/8	POLYCARBONATE
010632W075PC	632	3/4	POLYCARBONATE
010832W012PC	832	1/8	POLYCARBONATE
010832W025PC	832	1/4	POLYCARBONATE
010832W037PC	832	3/8	POLYCARBONATE
010832W050PC	832	1/2	POLYCARBONATE
010832W062PC	832	5/8	POLYCARBONATE
010832W075PC	832	3/4	POLYCARBONATE
011032W025PC	1032	1/4	POLYCARBONATE
011032W037PC	1032	3/8	POLYCARBONATE
011032W050PC	1032	1/2	POLYCARBONATE
011032W062PC	1032	5/8	POLYCARBONATE
011032W075PC	1032	3/4	POLYCARBONATE
011032W100PC	1032	1	POLYCARBONATE

# SCREWS, BOLTS, AND THREADED ROD

**Polycarbonate** is one of the toughest, most dimensionally stable thermoplastics over a wide temperature range. It has an exceptionally high impact strength and is unaffected by water below 140° F. **Polycarbonate** is unaffected by greases, oils, detergents, aliphatic hydrocarbons, most mineral acids, and the higher alcohols. It is attacked by chlorinated hydrocarbons and most aromatic solvents, ester, and ketone. **Polycarbonate** has white water transparency with a 90° light transmission. Melting Point 309 °F per ASTM D789. Underwriters Lab rating UL94V2

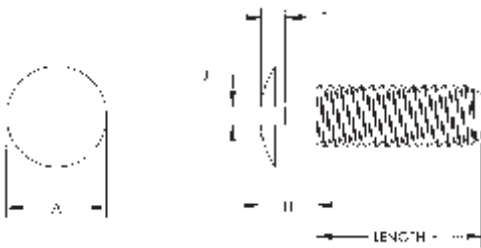
## FILLISTER SLOTTED HEADSTYLE - POLYCARBONATE

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

THREAD SIZE	A	H	J	T
4	.166-.183	.088-.107	.031-.039	.035-.048
6	.208-.226	.111-.132	.039-.048	.045-.060
8	.250-.270	.133-.156	.045-.054	.054-.071
10	.292-.313	.156-.180	.050-.060	.064-.083



*Transparent*



PART NUMBER	THREAD	LENGTH	MATERIAL
010440F025PC	440	1/4	POLYCARBONATE
010440F028PC	440	9/32	POLYCARBONATE
010440F037PC	440	3/8	POLYCARBONATE
010440F050PC	440	1/2	POLYCARBONATE
010632F025PC	632	1/4	POLYCARBONATE
010632F037PC	632	3/8	POLYCARBONATE
010632F050PC	632	1/2	POLYCARBONATE
010632F062PC	632	5/8	POLYCARBONATE
010632F075PC	632	3/4	POLYCARBONATE
010832F012PC	832	1/8	POLYCARBONATE
010832F025PC	832	1/4	POLYCARBONATE
010832F037PC	832	3/8	POLYCARBONATE
010832F050PC	832	1/2	POLYCARBONATE
010832F062PC	832	5/8	POLYCARBONATE
010832F075PC	832	3/4	POLYCARBONATE
011032F025PC	1032	1/4	POLYCARBONATE
011032F037PC	1032	3/8	POLYCARBONATE
011032F050PC	1032	1/2	POLYCARBONATE
011032F062PC	1032	5/8	POLYCARBONATE
011032F075PC	1032	3/4	POLYCARBONATE
011032F100PC	1032	1	POLYCARBONATE

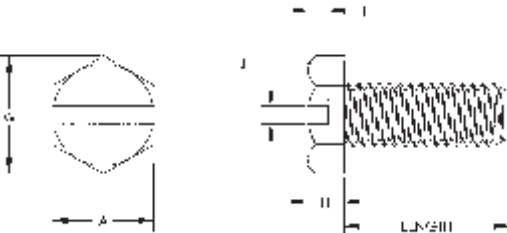
## HEX SLOTTED HEADSTYLE - POLYCARBONATE

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

THREAD SIZE	A	W	H	J	T
4	.181-.188	.202 MIN	.049/.060	.031/.039	.025-.036
6	.244-.250	.272 MIN	.080-.093	.039-.048	.033-.046
8	.244-.250	.272 MIN	.096-.110	.045-.054	.052-.066
10	.305-.312	.340 MIN	.105-.120	.050-.060	.057-.072



*Transparent*



PART NUMBER	THREAD	LENGTH	MATERIAL
010440X025PC	440	1/4	POLYCARBONATE
010440X028PC	440	9/32	POLYCARBONATE
010440X037PC	440	3/8	POLYCARBONATE
010440X050PC	440	1/2	POLYCARBONATE
010632X025PC	632	1/4	POLYCARBONATE
010632X037PC	632	3/8	POLYCARBONATE
010632X050PC	632	1/2	POLYCARBONATE
010632X062PC	632	5/8	POLYCARBONATE
010632X075PC	632	3/4	POLYCARBONATE
010832X012PC	832	1/8	POLYCARBONATE
010832X025PC	832	1/4	POLYCARBONATE
010832X037PC	832	3/8	POLYCARBONATE
010832X050PC	832	1/2	POLYCARBONATE
010832X062PC	832	5/8	POLYCARBONATE
010832X075PC	832	3/4	POLYCARBONATE
011032X025PC	1032	1/4	POLYCARBONATE
011032X037PC	1032	3/8	POLYCARBONATE
011032X050PC	1032	1/2	POLYCARBONATE
011032X062PC	1032	5/8	POLYCARBONATE
011032X075PC	1032	3/4	POLYCARBONATE
011032X100PC	1032	1	POLYCARBONATE

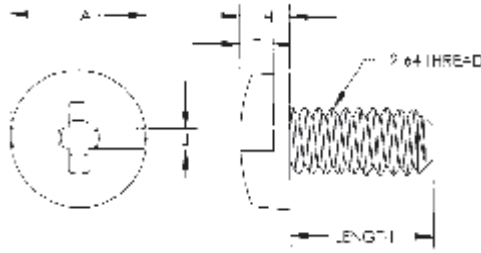


# SCREWS, BOLTS, AND THREADED ROD

SECTION

II

**NOTE:** Head Height may be larger than standard binder headstyle.



THREAD SIZE	A	H	J	T	DRIVE SIZE
2	.171-.181	.066-.072	.023-.031	.040-.046	#0
4	.223-.235	.071-.077	.031-.039	.042-.048	#1
6	.275-.290	.091-.097	.039-.048	.052-.059	#2
8	.326-.344	.095-.105	.045-.054	.050-.065	#2
10	.378-.399	.112-.123	.050-.060	.060-.077	#2
1/4	.498-.525	.152-.165	.064-.075	.084-.105	#3

Nominal Screw Size	0000 thru 00	0 thru 12	1/4 thru 3/4
<b>Nominal Screw Length</b>	<b>Tolerance on Length</b>		
Up to 1/2 in., incl	-0.01	-0.02	-0.03
Over 1/2 to 1 in., incl	-0.02	-0.03	-0.03
Over 1 to 2 in., incl	-	-0.06	-0.06
Over 2 in.	-	-0.09	-0.09

## BINDER COMBINATION HEADSTYLE

PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH	PART NUMBER	THREAD	LENGTH
010256CD009	256	3/32	010440CD150	440	1 1/2	010832CD125	832	1 1/4	012520CD075	1/4-20	3/4
010256CD012	256	1/8	010440CD162	440	1 5/8	010832CD137	832	1 3/8	012520CD087	1/4-20	7/8
010256CD015	256	5/32	010440CD175	440	1 3/4	010832CD150	832	1 1/2	012520CD100	1/4-20	1
010256CD018	256	3/16	010632CD009	632	3/32	010832CD175	832	1 3/4	012520CD125	1/4-20	1 1/4
010256CD025	256	1/4	010632CD012	632	1/8	010832CD187	832	1 7/8	012520CD150	1/4-20	1 1/2
010256CD028	256	9/32	010632CD015	632	5/32	010832CD200	832	2	012520CD175	1/4-20	1 3/4
010256CD031	256	5/16	010632CD018	632	3/16	011024CD012	1024	1/8	012520CD200	1/4-20	2
010256CD037	256	3/8	010632CD025	632	1/4	011024CD018	1024	3/16	012520CD250	1/4-20	2 1/2
010256CD039	256	25/64	010632CD031	632	5/16	011024CD025	1024	1/4	012528CD018	1/4-28	3/16
010256CD043	256	7/16	010632CD037	632	3/8	011024CD031	1024	5/16	012528CD025	1/4-28	1/4
010256CD050	256	1/2	010632CD043	632	7/16	011024CD037	1024	3/8	012528CD037	1/4-28	3/8
010256CD056	256	9/16	010632CD050	632	1/2	011024CD050	1024	1/2	012528CD062	1/4-28	5/8
010256CD062	256	5/8	010632CD056	632	9/16	011024CD062	1024	5/8	012528CD075	1/4-28	3/4
010256CD075	256	3/4	010632CD062	632	5/8	011024CD075	1024	3/4	012528CD100	1/4-28	1
010256CD087	256	7/8	010632CD068	632	11/16	011024CD100	1024	1			
010256CD100	256	1	010632CD075	632	3/4	011024CD125	1024	1 1/4			
010256CD112	256	1 1/8	010632CD087	632	7/8	011024CD150	1024	1 1/2			
010264CD018	264	3/16	010632CD100	632	1	011032CD012	1032	1/8			
010264CD037	264	3/8	010632CD112	632	1 1/8	011032CD018	1032	3/16			
010440CD009	440	3/32	010632CD125	632	1 1/4	011032CD025	1032	1/4			
010440CD012	440	1/8	010632CD150	632	1 1/2	011032CD031	1032	5/16			
010440CD014	440	9/64	010632CD162	632	1 5/8	011032CD037	1032	3/8			
010440CD018	440	3/16	010632CD175	632	1 3/4	011032CD043	1032	7/16			
010440CD025	440	1/4	010632CD187	632	1 7/8	011032CD050	1032	1/2			
010440CD028	440	9/32	010632CD200	632	2	011032CD062	1032	5/8			
010440CD031	440	5/16	010632CD225	632	2 1/4	011032CD075	1032	3/4			
010440CD037	440	3/8	010832CD012	832	1/8	011032CD081	1032	13/16			
010440CD043	440	7/16	010832CD018	832	3/16	011032CD087	1032	7/8			
010440CD050	440	1/2	010832CD025	832	1/4	011032CD100	1032	1			
010440CD056	440	9/16	010832CD028	832	9/32	011032CD106	1032	1-1/16			
010440CD062	440	5/8	010832CD031	832	5/16	011032CD125	1032	1 1/4			
010440CD068	440	11/16	010832CD037	832	3/8	011032CD150	1032	1 1/2			
010440CD075	440	3/4	010832CD043	832	7/16	011032CD175	1032	1 3/4			
010440CD087	440	7/8	010832CD050	832	1/2	011032CD200	1032	2			
010440CD100	440	1	010832CD062	832	5/8	012520CD025	1/4-20	1/4			
010440CD112	440	1 1/8	010832CD075	832	3/4	012520CD031	1/4-20	5/16			
010440CD118	440	1 3/16	010832CD087	832	7/8	012520CD037	1/4-20	3/8			
010440CD125	440	1 1/4	010832CD100	832	1	012520CD050	1/4-20	1/2			
010440CD137	440	1 3/8	010832CD112	832	1 1/8	012520CD062	1/4-20	5/8			



# UNIVERSAL NUTS

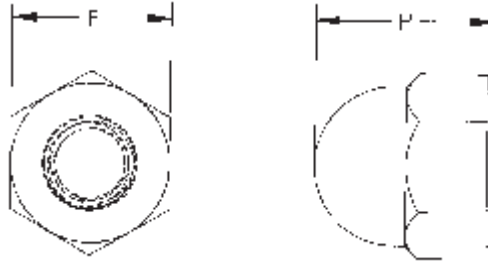
STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL

SECTION

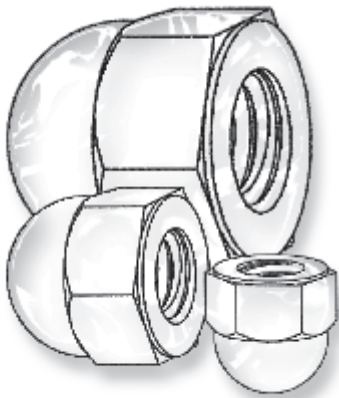


New Sizes

**METRIC Sizes**  
Also Available  
Page 235



## NYLON CAP NUTS

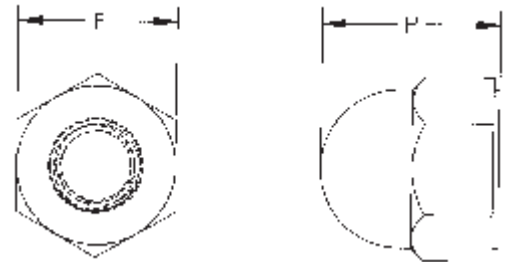


"F" TOLERANCES +/- .010

ITEM NUMBER	DESCRIPTION	F	H * REF.
0500440CN	440 CAP NUT	.250 (6,35)	.280 (7,11)
0500632CN	632 CAP NUT	.305 (7,75)	.345 (8,76)
0500832CN	832 CAP NUT	.330 (8,38)	.375 (9,53)
0501024CN	1024 CAP NUT	.365 (9,27)	.400 (10,16)
0501032CN	1032 CAP NUT	.365 (9,27)	.400 (10,16)
0525020CN	1/4-20 CAP NUT	.425 (10,80)	.475 (12,07)
0525028CN	1/4-28 CAP NUT	.425 (10,80)	.475 (12,07)
0531218CN	5/16-18 CAP NUT	.500 (12,70)	.530 (13,46)
0531224CN	5/16-24 CAP NUT	.500 (12,70)	.530 (13,46)
0537516CN	3/8-16 CAP NUT	.560 (14,22)	.620 (15,75)
0537524CN	3/8-24 CAP NUT	.560 (14,22)	.620 (15,75)
0550013CN	1/2-13 CAP NUT	.750 (19,05)	.810 (20,57)
0550020CN	1/2-20 CAP NUT	.750 (19,05)	.810 (20,57)
0562511CN	5/8-11 CAP NUT	.935 (23,75)	.970 (24,64)

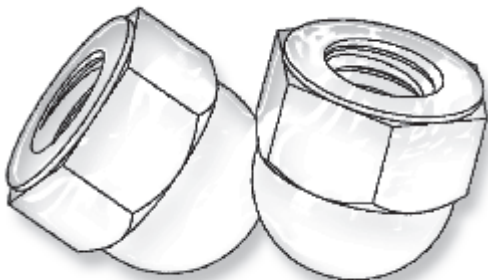
Similar to our standard cap nut, except with a molded-in locking thread. Use for applications which require higher torque, vibration resistance or a more secure assembly.

**METRIC Sizes**  
Also Available  
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## NYLON LOCKING CAP NUTS

"F" TOLERANCES +/- .010



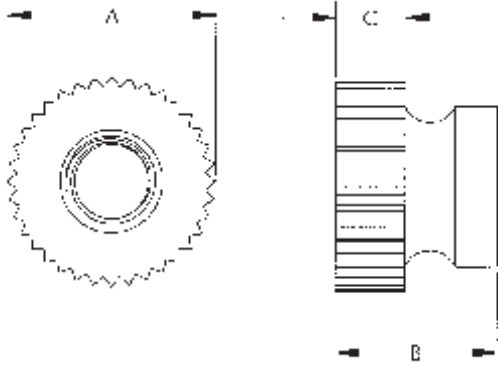
ITEM NUMBER	DESCRIPTION	F	H * REF.
0500440LCN	440 LOCKING CAP NUT	.250 (6,35)	.280 (7,11)
0500632LCN	632 LOCKING CAP NUT	.305 (7,75)	.345 (8,76)
0500832LCN	832 LOCKING CAP NUT	.330 (8,38)	.375 (9,53)
0501024LCN	1024 LOCKING CAP NUT	.365 (9,27)	.400 (10,16)
0501032LCN	1032 LOCKING CAP NUT	.365 (9,27)	.400 (10,16)
0525020LCN	1/4-20 LOCKING CAP NUT	.425 (10,80)	.475 (12,07)
0531218LCN	5/16-18 LOCKING CAP NUT	.500 (12,70)	.530 (13,46)

# UNIVERSAL NUTS

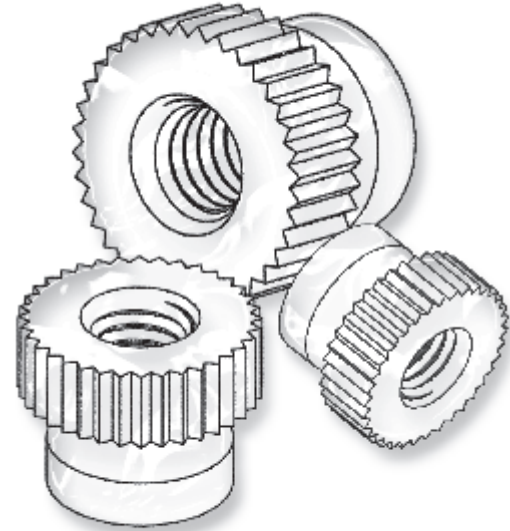
SECTION

III

STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL



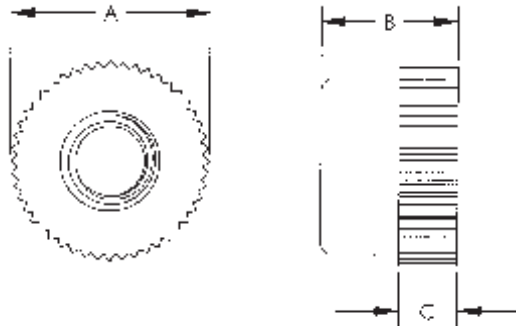
New Sizes



## NYLON KNURLED THUMB NUTS

"A" AND "B" TOLERANCES +/- .010

ITEM NUMBER	DESCRIPTION	A	B	C
0800440TN	440 THUMB NUT	.300 (7,62)	.280 (7,11)	.125 (3,18)
0800632TN	632 THUMB NUT	.360 (9,14)	.275 (6,99)	.125 (3,18)
0800832TN	832 THUMB NUT	.425 (10,80)	.305 (7,75)	.140 (3,56)
0801024TN	1024 THUMB NUT	.425 (10,80)	.325 (8,26)	.140 (3,56)
0801032TN	1032 THUMB NUT	.425 (10,80)	.325 (8,26)	.140 (3,56)
0825020TN	1/4-20 THUMB NUT	.540 (13,72)	.365 (9,27)	.155 (3,94)
0831218TN	5/16-18 THUMB NUT	.612 (15,54)	.400 (10,16)	.170 (4,33)
0831224TN	5/16-24 THUMB NUT	.612 (15,54)	.400 (10,16)	.170 (4,33)



METRIC Sizes  
Also Available  
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## NYLON KNURLED THUMB NUTS "A"

"A" AND "B" TOLERANCES +/- .010

ITEM NUMBER	DESCRIPTION	A	B	C
0800440TNA	440 THUMB NUT "A"	.300 (7,62)	.280 (7,11)	.120 (3,05)
0800632TNA	632 THUMB NUT "A"	.360 (9,14)	.275 (6,99)	.125 (3,18)
0800832TNA	832 THUMB NUT "A"	.425 (10,80)	.305 (7,75)	.140 (3,56)
0801024TNA	1024 THUMB NUT "A"	.425 (10,80)	.325 (8,26)	.140 (3,56)
0801032TNA	1032 THUMB NUT "A"	.425 (10,80)	.325 (8,26)	.140 (3,56)
0825020TNA	1/4-20 THUMB NUT "A"	.540 (13,72)	.365 (9,27)	.155 (3,94)
0831218TNA	5/16-18 THUMB NUT "A"	.615 (15,62)	.385 (9,78)	.171 (4,34)
0837516TNA	3/8-16 THUMB NUT "A"	.687 (17,45)	.430 (10,92)	.187 (4,75)
0850013TNA	1/2-13 THUMB NUT "A"	.750 (19,05)	.468 (11,89)	.203 (5,16)

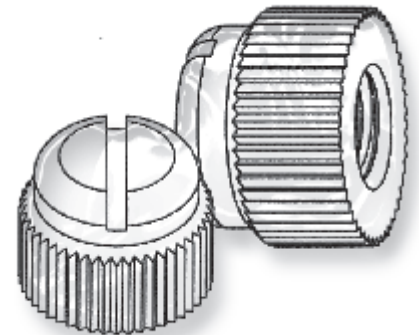
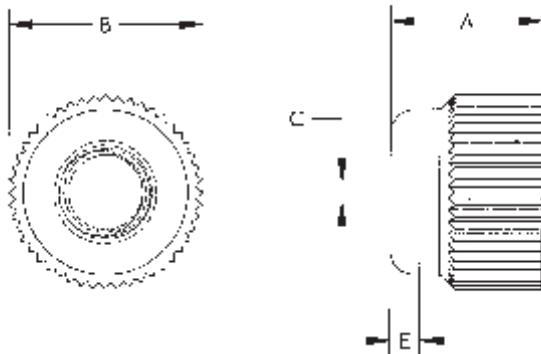




# UNIVERSAL NUTS

STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL

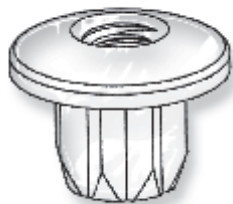
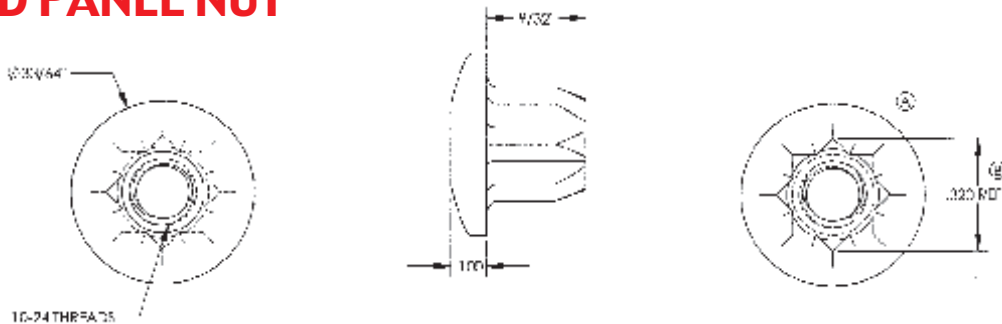
SECTION



## NYLON SLOTTED THUMB NUTS

ITEM NUMBER	DESCRIPTION	A Ref.	* B TOLERANCE +/- .010		
			* B	C	E
0500440SCN	440 SLOTTED THUMB NUT	.295 (7,49)	.317 (8,05)	.039 (9,91)	.070 (1,78)
0500632SCN	632 SLOTTED THUMB NUT	.334 (8,48)	.348 (8,84)	.044 (1,12)	.051 (1,30)
0500832SCN	832 SLOTTED THUMB NUT	.378 (9,60)	.381 (9,68)	.049 (1,25)	.059 (1,50)
0501024SCN	1024 SLOTTED THUMB NUT	23/64 (9,12)	.400 (10,16)	.056 (1,43)	.068 (1,73)
0501032SCN	1032 SLOTTED THUMB NUT	23/64 (9,12)	.400 (10,16)	.056 (1,43)	.068 (1,73)
0525020SCN	1/4-20 SLOTTED THUMB NUT	.370 (9,40)	.478 (12,14)	.070 (1,78)	.088 (2,24)

## SPLINED PANEL NUT



### Watch Instructional Video

[mms://www.microplastics.com/productvideos/SplinedPanelNut.asf](https://www.microplastics.com/productvideos/SplinedPanelNut.asf)



*Transparent*

## NYLON

ITEM NUMBER	DESCRIPTION
091024SPNN	1024 SPLINED PANEL NUT Nylon

## POLYCARBONATE

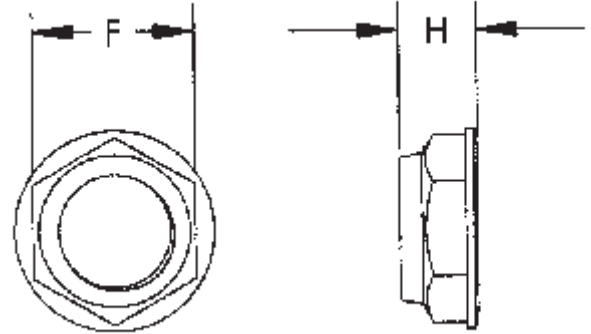
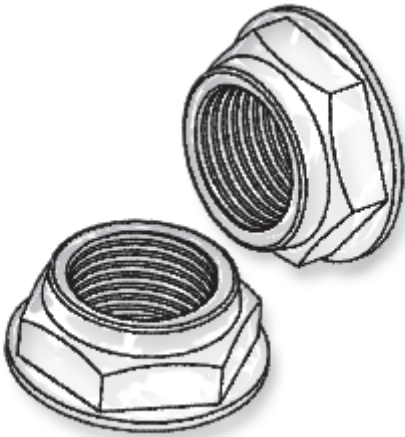
ITEM NUMBER	DESCRIPTION
091024SPNP	1024 SPLINED PANEL NUT Polycarbonate

# UNIVERSAL NUTS

SECTION



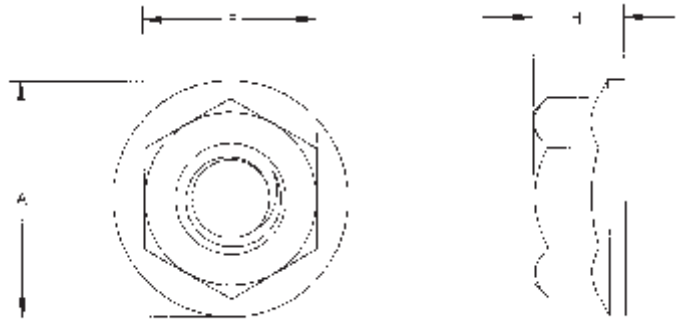
STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL



## NYLON DRESS NUT

Micro Plastics' Dress Nut is molded in non-conductive and chemical resistant Nylon 6/6. The aesthetic contour of the nut includes a washer base that gives a finished look to panel fronts.

ITEM NUMBER	DESCRIPTION	F	H
0437532HDN	3/8-32 DRESS NUT	.500 (12,70)	.245 (6,22) +/- .015



Nylon Hex Flange nuts can be used where additional contact area is required. Eliminates the use of a washer in some applications.

## HEX FLANGE NUT

TOLERANCES ARE +/- .010 ON ALL DIMENSIONS

ITEM NUMBER	DESCRIPTION	A	F	H
0401032HFN	1032 HEX FLANGE NUT	.492 (12,50)	.364 (9,27)	.208 (5,28)
0425020HFN	1/4-20 HEX FLANGE NUT	.582 (14,78)	.428 (10,87)	.226 (5,74)

# UNIVERSAL NUTS

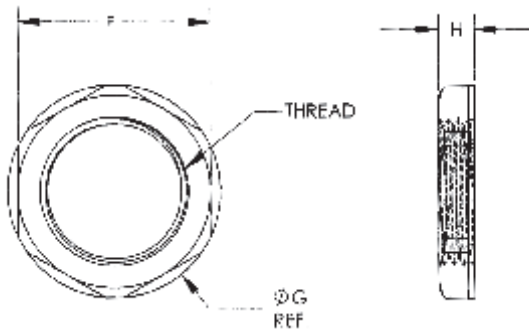
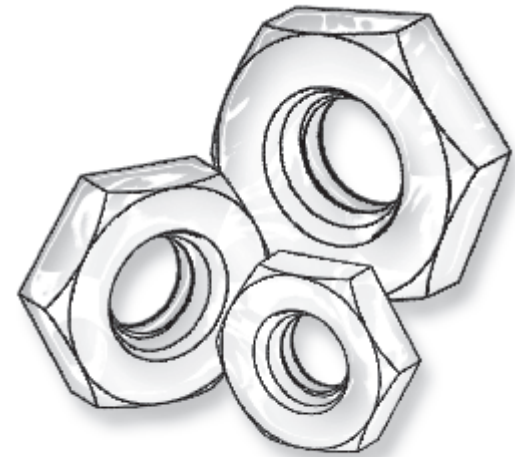
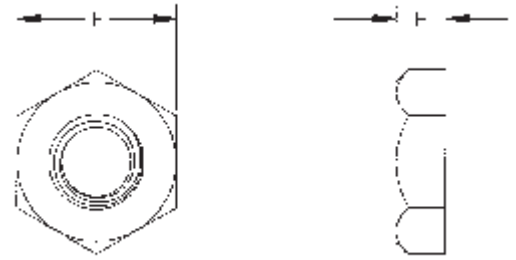
STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL

SECTION

III

## NYLON HEX JAM NUTS

ITEM NUMBER	DESCRIPTION	F	H
0431218HJN	5/16-18 HEX JAM NUT	.500 (12,70)	.190 (4,83)
0431224HJN	5/16-24 HEX JAM NUT	.500 (12,70)	.190 (4,83)
0437516HJN	3/8-16 HEX JAM NUT	.500 (12,70)	.125 (3,18)
0437524HJN	3/8-24 HEX JAM NUT	.500 (12,70)	.125 (3,18)
0437532HJN	3/8-32 HEX JAM NUT	.500 (12,70)	.125 (3,18)
0437516HHJN	3/8-16 HEX JAM NUT SPEC.	.670 (17,02)	7/32 (5,56)
0443714HJN	7/16-14 HEX JAM NUT	.687 (17,45)	.375 (9,53)
0443720HJN	7/16-20 HEX JAM NUT	.687 (17,45)	.250 (6,35)
0446832HJN	15/32-32 HEX JAM NUT	.625 (15,88)	.125 (3,18)
0450013HJN	1/2-13 HEX JAM NUT	.687 (17,45)	.220 (5,59)
0450024HJN	1/2-24 HEX JAM NUT	.687 (17,45)	.220 (5,59)
0450028HJN	1/2-28 HEX JAM NUT	.660 (16,76)	.125 (3,18)
0456218HJN	9/16-18 HEX JAM NUT	.750 (19,05)	.250 (6,35)
0456224HJN	9/16-24 HEX JAM NUT	.750 (19,05)	.250 (6,35)
0462511HJN	5/8-11 HEX JAM NUT	.937 (23,80)	.375 (9,53)
0462518HJN	5/8-18 HEX JAM NUT	.937 (23,80)	.375 (9,53)
0475010HJN	3/4-10 HEX JAM NUT	1.12 (28,50)	.250 (6,35)
0475016HJN	3/4-16 HEX JAM NUT	1.12 (28,50)	.250 (6,35)
0475027HJN	3/4-27 HEX JAM NUT	1.00 (25,40)	.125 (3,18)
0487514HJN	7/8-14 HEX JAM NUT	1.25 (31,75)	.340 (8,64)
0487520HJN	7/8-20 HEX JAM NUT	1.000 (25,40)	.125 (3,18)
0410008HJN	1-8 HEX JAM NUT	1.48 (37,59)	.410 (10,41)
0412527PJN	1/8-27 HEX JAM NUT	.56 (14,22)	.11 (2,79)
0425018PJN	1/4-18 HEX JAM NUT NPT	.740 (18,80)	.187 (4,75)
0437518PJN	3/8-18 HEX JAM NUT NPT	1.00 (25,40)	.280 (7,11)
0450014PJN	1/2-14 HEX JAM NUT NPT	1.25 (31,75)	.340 (8,64)
0475014PJN	3/4-14 HEX JAM NUT NPT	1.48 (37,59)	.410 (10,41)
0475014SJN	3/4-14 HEX JAM NUT NPS	1.48 (37,59)	.410 (10,41)
0425018SJN	1/4-18 HEX JAM NUT NPS	.687 (17,45)	.225 (5,72)
0437518SJN	3/8-18 HEX JAM NUT NPS	1.00 (25,40)	.280 (7,11)
0450014SJN	1/2-14 HEX JAM NUT NPS	1.25 (31,75)	.340 (8,64)
0475014SJN	3/4-14 HEX JAM NUT NPS	1.48 (37,59)	.410 (10,41)



## NYLON HEX JAM NUTS WITH WASHER FACE

ITEM NUMBER	DESCRIPTION	F	G	H
0410011PJN	1-11-1/2 HEX JAM NUT NPT	1 21/32 (42,06)	1 27/32 (46,84)	5/16 (7,94)
0412511PJN	1 1/4-11-1/2 HEX JAM NUT NPT	2 1/8 (53,98)	2 11/32 (59,54)	3/8 (9,53)





# UNIVERSAL NUTS

SECTION

III

STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL

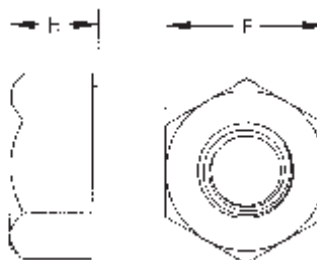
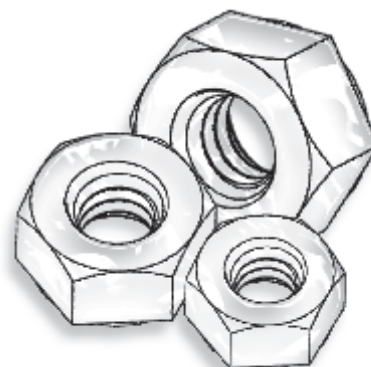
**METRIC Sizes  
Also Available**

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## NYLON HEX

TOLERANCES ARE +/- .010

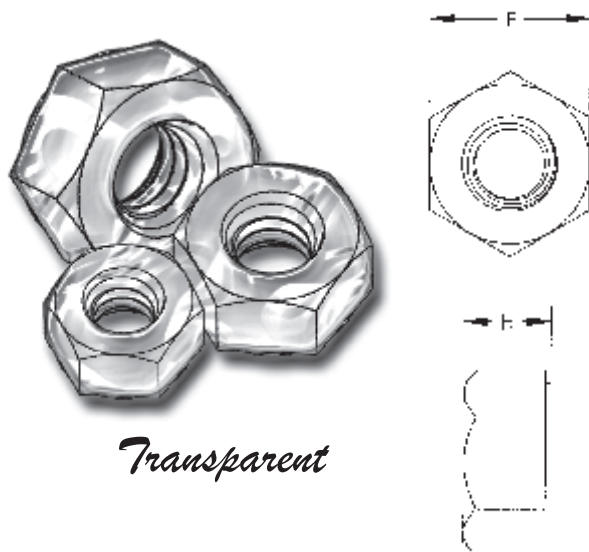
ITEM NUMBER	DESCRIPTION	F	H
0400256HN	256 HEX NUT	.180 (4,57)	.070 (1,78)
0400348HN	348 HEX NUT	.180 (4,57)	.070 (1,78)
0400440HN	440 HEX NUT	.250 (6,35)	.100 (2,54)
0400632HN	632 HEX NUT	.305 (7,75)	.120 (3,05)
0400640HN	640 HEX NUT	.305 (7,75)	.120 (3,05)
0400832HN	832 HEX NUT	.335 (8,51)	.130 (3,30)
0401024HN	1024 HEX NUT	.365 (9,27)	.135 (3,43)
0401032HN	1032 HEX NUT	.365 (9,27)	.135 (3,43)
0401224HN	1224 HEX NUT	.425 (10,80)	.207 (5,26)
0425020HN	1/4-20 HEX NUT	.425 (10,80)	.235 (5,97)
0425028HN	1/4-28 HEX NUT	.425 (10,80)	.235 (5,97)
0431218HN	5/16-18 HEX NUT	.500 (12,70)	.270 (6,86)
0431224HN	5/16-24 HEX NUT	.500 (12,70)	.270 (6,86)
0437516HN	3/8-16 HEX NUT	.560 (14,22)	.330 (8,38)
0437524HN	3/8-24 HEX NUT	.560 (14,22)	.330 (8,38)
0437532HN	3/8-32 HEX NUT	.560 (14,22)	.330 (8,38)
0443714HN	7/16-14 HEX NUT	.685 (17,40)	.380 (9,65)
0443720HN	7/16-20 HEX NUT	.685 (17,40)	.380 (9,65)
0450013HN	1/2-13 HEX NUT	.750 (19,05)	.430 (10,92)
0450020HN	1/2-20 HEX NUT	.750 (19,05)	.430 (10,92)
0462511HN	5/8-11 HEX NUT	.925 (23,40)	.550 (13,97)
0462518HN	5/8-18 HEX NUT	.925 (23,50)	.550 (13,97)
0468727HN	11/16-27 HEX NUT	1.00 (25,40)	.250 (6,35)
0475010HN	3/4-10 HEX NUT	1.10 (27,94)	.640 (16,26)
0487509HN	7/8-9 HEX NUT	1.28 (32,51)	.750 (19,05)
0410008HN	1-8 HEX NUT	1.47 (37,34)	.870 (22,10)



## NYLON SPECIAL HEX NUTS

ALL TOLERANCES ARE +/- .010

ITEM NUMBER	DESCRIPTION	F	H
0400256HNS	256 SPECIAL HEX NUT	.180 (4,57)	.090 (2,29)
0400440HNS	440 SPECIAL HEX NUT	.250 (6,35)	.124 (3,15)
0400632HNS	632 SPECIAL HEX NUT	.305 (7,75)	.146 (3,71)
0400832HNS	832 SPECIAL HEX NUT	.340 (8,64)	.170 (4,32)
0401024HNS	1024 SPECIAL HEX NUT	.365 (9,27)	.196 (4,98)
0401032HNS	1032 SPECIAL HEX NUT	.365 (9,37)	.196 (4,98)
0425020HNS	1/4-20 SPECIAL HEX NUT	.425 (10,80)	.258 (6,55)



## POLYCARBONATE HEX NUTS

Micro Plastics' Polycarbonate Hex Nuts can be used with our Polycarbonate Screws to produce a transparent fastening. Polycarbonate properties are not affected by water absorption and have better impact and deflection temperature than Nylon.

\* +/- .010

ITEM NUMBER	DESCRIPTION	F*	H*
0400440HNPC	440 HEX NUT	.250 (6,35)	.100 (2,54)
0400632HNPC	632 HEX NUT	.305 (7,75)	.120 (3,05)
0400832HNPC	832 HEX NUT	.335 (8,51)	.130 (3,30)
0401032HNPC	1032 HEX NUT	.365 (9,27)	.135 (3,43)

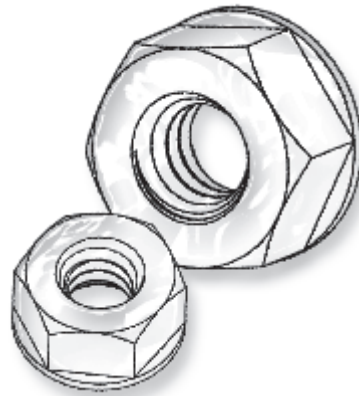
# UNIVERSAL NUTS

STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL

SECTION



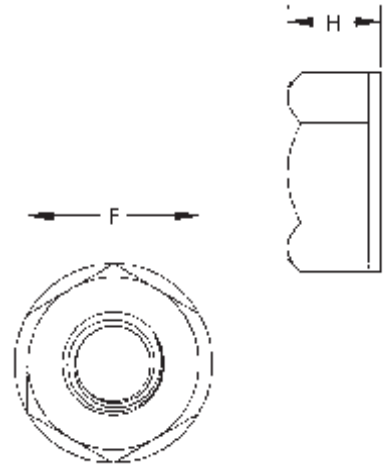
**METRIC Sizes**  
**Also Available**  
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## NYLON LOCK NUTS

DESIGNED FOR STEEL SCREWS

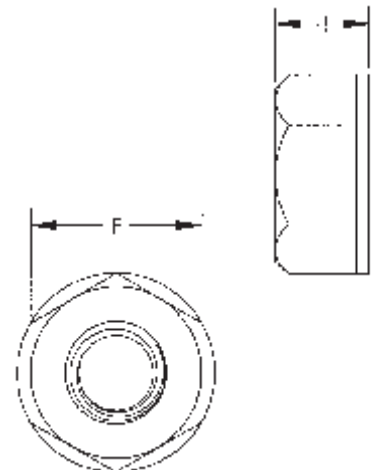
ITEM NUMBER	DESCRIPTION	TOLERANCES +/- .010			
		F		H	
0700256LN	256 LOCK NUT	.180	(4,57)	.140	(3,56)
0700440LN	440 LOCK NUT	.250	(6,35)	.180	(4,57)
0700632LN	632 LOCK NUT	.305	(7,75)	.200	(5,08)
0700832LN	832 LOCK NUT	.335	(8,51)	.230	(5,84)
0701024LN	1024 LOCK NUT	.365	(9,27)	.250	(6,35)
0701032LN	1032 LOCK NUT	.365	(9,27)	.250	(6,35)
0725020LN	1/4-20 LOCK NUT	.425	(10,80)	.275	(6,99)



## NYLON SELF - THREADING LOCK NUTS

DESIGNED FOR STEEL SCREWS

ITEM NUMBER	DESCRIPTION	TOLERANCES +/- .010			
		F		H	
0700256SLN	256 SELF - THREAD	.180	(4,57)	.140	(3,56)
0700440SLN	440 SELF - THREAD	.250	(6,35)	.200	(5,08)
0700632SLN	632 SELF - THREAD	.305	(7,75)	.200	(5,08)
0700832SLN	832 SELF - THREAD	.335	(8,51)	.230	(5,84)
0701024SLN	1024 SELF - THREAD	.365	(9,27)	.250	(6,35)
0701032SLN	1032 SELF - THREAD	.365	(9,27)	.250	(6,35)
0725020SLN	1/4-20 SELF - THREAD	.425	(10,80)	.275	(6,99)



# UNIVERSAL NUTS

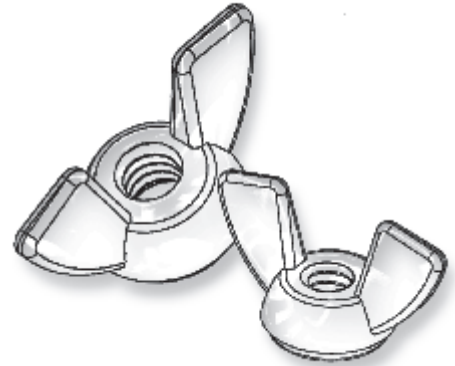
SECTION

III

STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL

**METRIC Sizes  
Also Available**

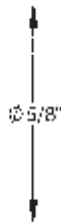
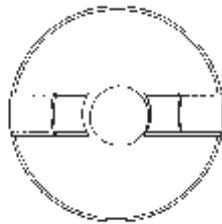
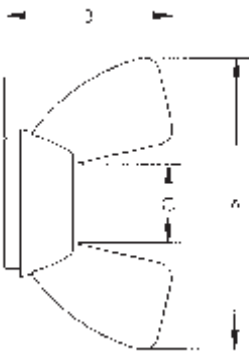
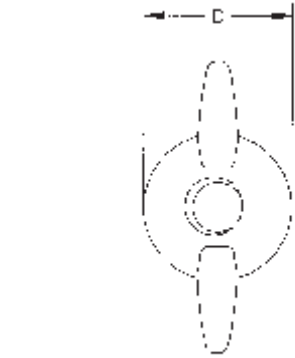
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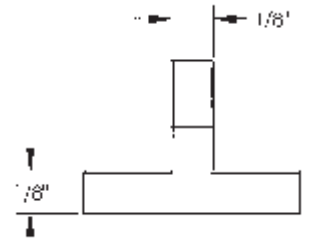
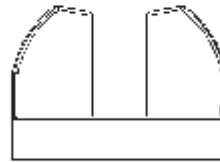
## NYLON WING NUTS

TOLERANCES +/- .010

ITEM NUMBER	DESCRIPTION	A	B	C	D
0600440WN	440 WING NUT	.90 (22,86)	.48 (12,19)	.23 (5,84)	.40 (10,16)
0600632WN	632 WING NUT	.90 (22,86)	.48 (12,19)	.23 (5,84)	.40 (10,16)
0600832WN	832 WING NUT	.90 (22,86)	.48 (12,19)	.23 (5,84)	.40 (10,16)
0601024WN	1024 WING NUT	.90 (22,86)	.48 (12,19)	.23 (5,84)	.40 (10,16)
0601032WN	1032 WING NUT	.90 (22,86)	.48 (12,19)	.23 (5,84)	.40 (10,16)
0601024WNA	1024 WING NUT-A	1.10 (27,94)	.63 (16,00)	.30 (7,62)	.56 (14,22)
0601032WNA	1032 WING NUT-A	1.10 (27,94)	.63 (16,00)	.30 (7,62)	.56 (14,22)
0625020WNA	1/4-20 WING NUT-A	1.090 (27,69)	.63 (16,00)	.30 (7,62)	.56 (14,22)
0625028WNA	1/4-28 WING NUT-A	1.10 (27,94)	.63 (16,00)	.30 (7,62)	.56 (14,22)
0625020WN	1/4-20 WING NUT	1.36 (34,54)	.71 (18,03)	.36 (9,14)	.65 (16,51)
0625028WN	1/4-28 WING NUT	1.36 (34,54)	.71 (18,03)	.36 (9,14)	.65 (16,51)
0631218WN	5/16-18 WING NUT	1.37 (34,80)	.72 (18,29)	.38 (9,65)	.64 (16,26)
0637516WN	3/8-16 WING NUT	1.37 (34,80)	.72 (18,29)	.38 (9,65)	.64 (16,26)
0637524WN	3/8-24 WING NUT	1.37 (34,80)	.72 (18,29)	.38 (9,65)	.64 (16,26)
0643714WN	7/16-14 WING NUT	1.76 (44,70)	.90 (22,86)	.56 (14,22)	.85 (21,59)
0650013WN	1/2-13 WING NUT	1.76 (44,70)	.90 (22,86)	.56 (14,22)	.85 (21,59)
0656212WN	9/16-12 WING NUT	1.76 (44,70)	.90 (22,86)	.56 (14,22)	.85 (21,59)



5/16" REF.



MATERIAL: CLEAR COPOLYESTER

CAN BE USED WITH TRANSPARENT POLYCARBONATE SCREWS

## CLEAR DECORATIVE WING NUT



*Transparent*

ITEM NUMBER	DESCRIPTION	THREAD
0600832WNC	DECORATIVE WING NUT	832
0601024WNC	DECORATIVE WING NUT	1024
0601032WNC	DECORATIVE WING NUT	1032
0625020WNC	DECORATIVE WING NUT	1/4-20



# UNIVERSAL NUTS

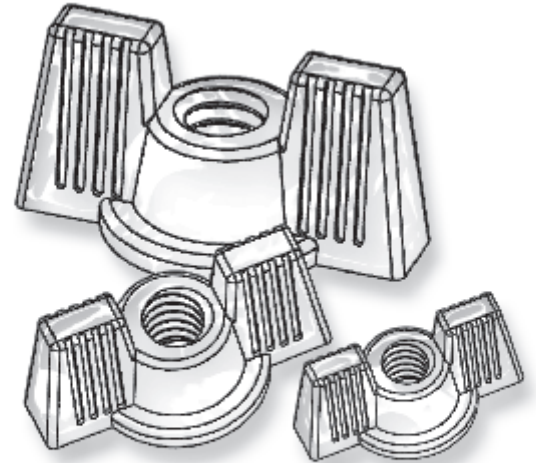
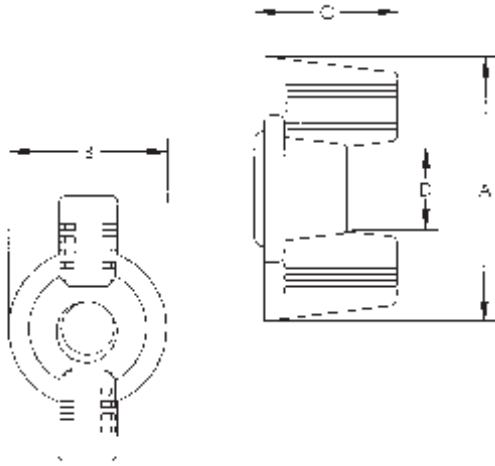
STOCKED IN NYLON 6/6 UL 94V2 - CAN BE FURNISHED IN ACETAL

SECTION

III

**METRIC Sizes  
Also Available**

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## NYLON DECO WING NUTS

ITEM NUMBER	DESCRIPTION	A	B	C	D
0600440DECOWN	440 DECO WING NUT	5/8" (15,88)	3/8" (9,53)	5/16" (7,94)	15/64" (5,94)
0600632DECOWN	632 DECO WING NUT	5/8" (15,88)	3/8" (9,53)	5/16" (7,94)	15/64" (5,94)
0600832DECOWN	832 DECO WING NUT	5/8" (15,88)	3/8" (9,53)	5/16" (7,94)	15/64" (5,94)
0601024DECOWN	1024 DECO WING NUT	7/8" (22,23)	1/2" (12,70)	7/16" (11,10)	5/16" (7,93)
0601032DECOWN	1032 DECO WING NUT	7/8" (22,23)	1/2" (12,70)	7/16" (11,10)	5/16" (7,93)
0625020DECOWN	1/4-20 DECO WING NUT	1-11/64" (29,74)	5/8" (15,88)	17/32" (13,49)	3/8" (9,53)
0631218DECOWN *	5/16-18 DECO WING NUT	1-9/16" (39,69)	63/64" (25,0)	29/64" (11,51)	39/64" (15,47)
0637516DECOWN *	3/8-16 DECO WING NUT	1-9/16" (39,69)	63/64" (25,0)	29/64" (11,51)	21/32" (16,66)
0637524DECOWN *	3/8-24 DECO WING NUT	1-9/16" (39,67)	63/64" (25,0)	29/64" (11,51)	21/32" (16,66)

\* PART IS FLUSH ACROSS WINGS

## NYLON LOCKING DECO WING NUTS

Similar to our standard wing nut, except with a molded-in locking thread. Use for applications which require higher torque, vibration resistance or a more secure assembly.

**METRIC Sizes  
Also Available**

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ITEM NUMBER	DESCRIPTION	A	B	C	D
0600440DLWN	440 L DECO WING NUT	5/8" (15,88)	3/8" (9,53)	5/16" (7,94)	15/64" (5,94)
0600632DLWN	632 L DECO WING NUT	5/8" (15,88)	3/8" (9,53)	5/16" (7,94)	15/64" (5,94)
0600832DLWN	832 L DECO WING NUT	5/8" (15,88)	3/8" (9,53)	5/16" (7,94)	15/64" (5,94)
0601024DLWN	1024 L DECO WING NUT	7/8" (22,23)	1/2" (12,70)	7/16" (11,10)	5/16" (7,93)
0601032DLWN	1032 L DECO WING NUT	7/8" (22,23)	1/2" (12,70)	7/16" (11,10)	5/16" (7,93)
0625020DLWN	1/4-20 L DECO WING NUT	1-11/64" (29,74)	5/8" (15,88)	17/32" (13,49)	3/8" (9,53)
*0631218DLWN	5/16-18 L DECO WING NUT	1-9/16" (39,69)	63/64" (25,00)	29/64" (11,51)	39/64" (15,48)

\*PART IS FLUSH ACROSS THE WINGS

# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

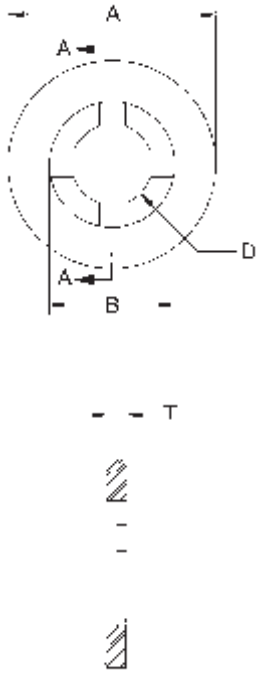
## SECTION IV



Similar to our standard flat washers, but with a specially configured I.D. designed to grip the outside of the screw shank. The washer slides on the screw easily, but is retained on the screw. For use in applications requiring pre-assembly of the screw and washer, to reduce final assembly cost. Other sizes will be tooled on request.

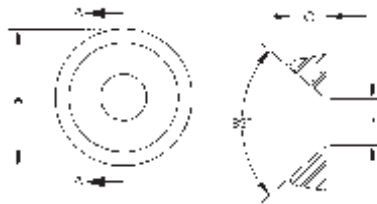
### New Sizes

## NYLON RETAINING WASHERS



ITEM NUMBER	DESCRIPTION	A	B	D	T
16FWRT002032	FWRT 2-032 13/64	(5,16)	.115 (2,92)	.078 (1,98)	.032 (0,81)
16FWRT002062	FWRT 2-062 13/64	(5,16)	.115 (2,92)	.078 (1,98)	.062 (1,58)
16FWRT004032	FWRT 4-032 17/64	(6,75)	.156 (3,96)	.102 (2,59)	.032 (0,81)
16FWRT004062	FWRT 4-062 17/64	(6,75)	.156 (3,96)	.102 (2,59)	.062 (1,58)
16FWRT004125	FWRT 4-125 17/64	(6,75)	.156 (3,96)	.102 (2,59)	.125 (3,18)
16FWRT006032	FWRT 6-032 21/64	(8,33)	.198 (5,03)	.128 (3,25)	.032 (0,81)
16FWRT006062	FWRT 6-062 21/64	(8,33)	.198 (5,03)	.128 (3,25)	.062 (1,58)
16FWRT008032	FWRT 8-032 25/64	(9,92)	.235 (5,97)	.152 (3,86)	.032 (0,81)
16FWRT008062	FWRT 8-062 25/64	(9,92)	.235 (5,97)	.152 (3,86)	.062 (1,58)
16FWRT010032	FWRT 10-032 29/64	(11,51)	.277 (7,04)	.177 (4,50)	.032 (0,81)
16FWRT010062	FWRT 10-062 29/64	(11,51)	.277 (7,04)	.177 (4,50)	.062 (1,58)
16FWRT010062A	FWRT 10-062A 1/2	(12,70)	.277 (7,04)	.177 (4,50)	.062 (1,58)
16FWRT250032	FWRT 250-032 19/32	(15,08)	.375 (9,53)	.234 (5,94)	.032 (0,81)
16FWRT250032A	FWRT 250-032A .500	(12,70)	.344 (8,74)	.234 (5,94)	.032 (0,81)
16FWRT250062	FWRT 250-062 19/32	(15,08)	.375 (9,53)	.234 (5,94)	.062 (1,58)
16FWRT312032	FWRT 312-032 47/64	(18,65)	.470 (11,94)	.292 (7,42)	.032 (0,81)
16FWRT312062	FWRT 312-062 47/64	(18,65)	.470 (11,94)	.292 (7,42)	.062 (1,58)
16FWRT375032	FWRT 375-032 57/64	(22,62)	.564 (14,33)	.350 (8,89)	.032 (0,81)
16FWRT375062	FWRT 375-062 57/64	(22,62)	.564 (14,33)	.350 (8,89)	.062 (1,58)
16FWRT375062A	FWRT 375-062A 1.260	(32,00)	.563 (14,30)	.350 (8,89)	.062 (1,57)
16FWRT437032	FWRT 437-032 1-1/32	(26,19)	.570 (14,48)	.410 (10,41)	.032 (0,81)
16FWRT437062	FWRT 437-062 1-1/32	(26,19)	.570 (14,48)	.410 (10,41)	.062 (1,58)
16FWRT500032	FWRT 500-032 1-1/8	(28,58)	.690 (17,53)	.468 (11,89)	.032 (0,81)
16FWRT500062	FWRT 500-062 1-1/8	(28,58)	.690 (17,53)	.468 (11,89)	.062 (1,58)
16FWRT875062	FWRT 875-062 1-11/32	(34,14)	.940 (23,88)	.825 (20,96)	.062 (1,58)
16FWRT999062	FWRT 999-062 1.385	(35,18)	1.070 (27,18)	.970 (24,64)	.062 (1,57)

## NYLON FINISHING WASHERS



Available in natural or black nylon, these molded washers protect cabinets from scratching, cover misaligned holes, etc. May also be used as glides, bumpers, feet, and spacers.

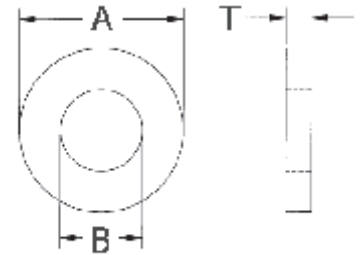
ITEM NUMBER	DESCRIPTION	A	B	C
11SFW0006	SFW 6	.437 (11,10)	.143 (3,63)	.100 (2,54)
11SFW0008	SFW 8	.510 (12,95)	.171 (4,34)	.115 (2,92)
11SFW0010	SFW 10	.575 (14,61)	.196 (4,98)	.152 (3,86)
11SFW0012	SFW 12	.609 (15,47)	.225 (5,75)	.160 (4,06)
11SFW0025	SFW 25	.683 (17,35)	.260 (6,61)	.180 (4,57)

We will also tool custom flatwashers for a nominal engineering charge .  
Size range up to 3" O.D. Minimum thickness 1/32"

**METRIC Sizes**  
**Also Available**  
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## NYLON STANDARD FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
16FW002032	FW 2-032	1/4 (6,35)	.090 (2,29)	.032 (0,81)
16FW002062	FW 2-062	1/4 (6,35)	.090 (2,29)	.062 (1,58)
16FW002093	FW 2-093	1/4 (6,35)	.090 (2,29)	.093 (2,36)
16FW002125	FW 2-125	1/4 (6,35)	.090 (2,29)	.125 (3,18)
16FW004032	FW 4-032	1/4 (6,35)	.115 (2,92)	.032 (0,81)
16FW004062	FW 4-062	1/4 (6,35)	.115 (2,92)	.062 (1,58)
16FW004093	FW 4-093	1/4 (6,35)	.115 (2,92)	.093 (2,36)
16FW004125	FW 4-125	1/4 (6,35)	.115 (2,92)	.125 (3,18)
16FW006032	FW 6-032	5/16 (7,94)	.140 (3,56)	.032 (0,81)
16FW006062	FW 6-062	5/16 (7,94)	.140 (3,56)	.062 (1,58)
16FW006093	FW 6-093	5/16 (7,94)	.140 (3,56)	.093 (2,36)
16FW006125	FW 6-125	5/16 (7,94)	.140 (3,56)	.125 (3,18)
16FW008032	FW 8-032	3/8 (9,53)	.171 (4,34)	.032 (0,81)
16FW008062	FW 8-062	3/8 (9,53)	.171 (4,34)	.062 (1,58)
16FW008093	FW 8-093	3/8 (9,53)	.171 (4,34)	.093 (2,36)
16FW008125	FW 8-125	3/8 (9,53)	.171 (4,34)	.125 (3,18)
16FW010032	FW 10-032	3/8 (9,53)	.194 (4,93)	.032 (0,81)
16FW010062	FW 10-062	3/8 (9,53)	.194 (4,93)	.062 (1,58)
16FW010093	FW 10-093	3/8 (9,53)	.194 (4,93)	.093 (2,36)
16FW010125	FW 10-125	3/8 (9,53)	.194 (4,93)	.125 (3,18)
16FW250032	FW 250-032	1/2 (12,70)	.257 (6,53)	.032 (0,81)
16FW250062	FW 250-062	1/2 (12,70)	.257 (6,53)	.062 (1,58)
16FW250093	FW 250-093	1/2 (12,70)	.257 (6,53)	.093 (2,36)
16FW250125	FW 250-125	1/2 (12,70)	.257 (6,53)	.125 (3,18)
16FW312032	FW 312-032	1/2 (12,70)	.317 (8,05)	.032 (0,81)
16FW312062	FW 312-062	1/2 (12,70)	.317 (8,05)	.062 (1,58)
16FW312093	FW 312-093	1/2 (12,70)	.317 (8,05)	.093 (2,36)
16FW312125	FW 312-125	1/2 (12,70)	.317 (8,05)	.125 (3,18)
16FW375032	FW 375-032	5/8 (15,88)	.375 (9,53)	.032 (0,81)
16FW375062	FW 375-062	5/8 (15,88)	.380 (9,65)	.062 (1,58)
16FW375093	FW 375-093	5/8 (15,88)	.380 (9,65)	.093 (2,36)
16FW375125	FW 375-125	5/8 (15,88)	.380 (9,65)	.125 (3,18)
16FW437032	FW 437-032	3/4 (19,05)	.443 (11,25)	.032 (0,81)
16FW437062	FW 437-062	3/4 (19,05)	.443 (11,25)	.062 (1,58)
16FW437093	FW 437-093	3/4 (19,05)	.443 (11,25)	.093 (2,36)
16FW437125	FW 437-125	3/4 (19,05)	.443 (11,25)	.125 (3,18)
16FW500032	FW 500-032	3/4 (19,05)	.505 (12,83)	.032 (0,81)
16FW500062	FW 500-062	3/4 (19,05)	.505 (12,83)	.062 (1,58)
16FW500093	FW 500-093	3/4 (19,05)	.505 (12,83)	.093 (2,36)
16FW500125	FW 500-125	3/4 (19,05)	.505 (12,83)	.125 (3,18)



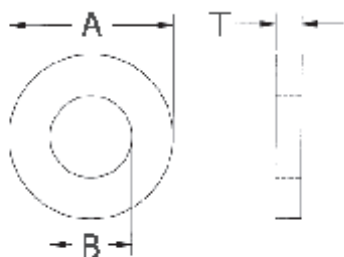


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

### New Sizes

### NYLON SPECIAL FLAT WASHERS



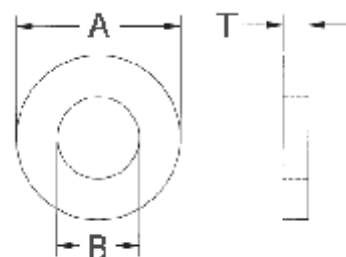
ITEM NUMBER	DESCRIPTION	A	B	T
17W00850	W 850	.085 (2,16)	.032 (0,81)	.062 (1,57)
17W00901	W 901	.090 (2,29)	.031 (0,79)	.031 (0,79)
17W01001	W 1001	.100 (2,54)	.035 (0,89)	.020 (0,51)
17W01011	W 1011	.125 (3,18)	.032 (0,81)	.060 (1,57)
17W01012	W 1012	.120 (3,05)	.063 (1,60)	.180 (4,57)
17W01013	W 1013	.120 (3,05)	.045 (1,14)	.130 (3,30)
17W01014	W 1014	.120 (3,05)	.055 (1,40)	.080 (2,03)
17W01045	W 1045	.156 (3,96)	.031 (0,79)	.062 (1,57)
17W01381	W 1381	.138 (3,51)	.040 (1,02)	.033 (0,84)
17W01560	W 1560	.156 (3,96)	.050 (2,00)	.200 (5,08)
17W01566	W 1566	.156 (3,96)	.076 (1,93)	.062 (1,57)
17W01581	W 1581	.158 (4,01)	.110 (2,79)	.070 (1,79)
17W01701	W 1701	.170 (4,32)	.038 (0,97)	.060 (1,52)
17W01702	W 1702	.182 (4,62)	.120 (3,05)	.125 (3,17)
17W01784	W 1784	.178 (4,52)	.098 (2,49)	.045 (1,14)
17W01791	W 1791	.179 (4,55)	.065 (1,65)	.078 (1,98)
17W01802	W 1802	.180 (4,57)	.139 (3,53)	.064 (1,63)
17W01803	W 1803	.186 (4,72)	.098 (2,49)	.030 (1,02)
17W01804	W 1804	.187 (4,75)	.120 (3,05)	.060 (1,52)
17W01805	W 1805	.187 (4,75)	.086 (2,18)	.130 (3,30)
17W01806	W 1806	.187 (4,75)	.145 (3,68)	.050 (1,27)
17W01807	W 1807	.187 (4,75)	.120 (3,05)	.032 (0,81)
17W01809	W 1809	.187 (4,75)	.141 (3,58)	.125 (3,18)
17W01811	W 1811	.187 (4,75)	.115 (2,92)	.165 (4,19)
17W01815	W 1815	.188 (4,78)	.094 (2,39)	.020 (0,51)
17W01825	W 1825	.196 (4,98)	.085 (2,16)	.031 (0,79)
17W01870	W 1870	.187 (4,75)	.120 (3,05)	.062 (1,57)
17W01871	W 1871	.185 (4,70)	.051 (1,30)	.132 (3,35)
17W01872	W 1872	.187 (4,75)	.091 (2,31)	.080 (2,03)
17W01875	W 1875	.187 (4,75)	.130 (3,30)	.150 (3,81)
17W01900	W 1900	.199 (5,05)	.115 (2,95)	.050 (1,27)
17W01906	W 1906	.206 (5,23)	.112 (2,84)	.053 (1,35)
17W01910	W 1910	.190 (4,83)	.120 (3,05)	.100 (2,54)
17W01950	W 1950	.197 (5,00)	.115 (2,92)	.030 (0,76)
17W01970	W 1970	.197 (5,00)	.100 (2,54)	.156 (3,96)
17W01971	W 1971	.197 (5,00)	.067 (1,70)	.154 (3,91)
17W01994	W 1994	.199 (5,05)	.125 (3,18)	.045 (1,14)
17W02181	W 2181	.218 (5,54)	.120 (3,05)	.037 (0,94)
17W02190	W 2190	.220 (5,59)	.104 (2,64)	.031 (0,79)
17W02191	W 2191	.219 (5,56)	.094 (2,39)	.100 (2,54)
17W02192	W 2192	.228 (5,79)	.122 (3,10)	.093 (2,36)
17W02245	W 2245	.225 (5,72)	.150 (3,81)	.045 (1,14)
17W02251	W 2251	.225 (5,72)	.125 (3,18)	.100 (2,54)
17W02252	W 2252	.225 (5,72)	.150 (3,81)	.090 (2,29)
17W02349	W 2349	.234 (5,94)	.141 (3,58)	.090 (2,29)
17W02350	W 2350	.235 (5,97)	.125 (3,18)	.040 (1,02)
17W02401	W 2401	.240 (6,10)	.113 (2,87)	.040 (1,02)



## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W02450	W 2450	.245 (6,22)	.195 (4,95)	.125 (3,18)
17W02451	W 2451	.245 (6,22)	.128 (3,25)	.093 (2,36)
17W02460	W 2460	.246 (6,25)	.171 (4,34)	.100 (2,54)
17W02500	W 2500	.250 (6,35)	.120 (3,05)	.140 (3,56)
17W02501	W 2501	.250 (6,35)	.160 (4,07)	.062 (1,57)
17W02502	W 2502	.250 (6,35)	.126 (3,20)	.025 (0,64)
17W02503	W 2503	.250 (6,35)	.090 (2,29)	.055 (1,40)
17W02504	W 2504	.250 (6,35)	.141 (3,58)	.062 (1,57)
17W02505	W 2505	.260 (6,60)	.140 (3,56)	.080 (2,03)
17W02506	W 2506	.250 (6,35)	.125 (3,18)	.095 (2,41)
17W02507	W 2507	.250 (6,35)	.140 (3,56)	.094 (2,39)
17W02508	W 2508	.250 (6,35)	.125 (3,18)	.062 (1,57)
17W02509	W 2509	.250 (6,35)	.171 (4,34)	.100 (2,54)
17W02510	W 2510	.250 (6,35)	.187 (4,75)	.130 (3,30)
17W02511	W 2511	.250 (6,35)	.142 (3,61)	.110 (2,79)
17W02512	W 2512	.250 (6,35)	.147 (3,73)	.125 (3,18)
17W02513	W 2513	.250 (6,35)	.143 (3,63)	.082 (2,08)
17W02514	W 2514	.250 (6,35)	.166 (4,22)	.082 (2,08)
17W02515	W 2515	.250 (6,35)	.140 (3,56)	.150 (3,81)
17W02516	W 2516	.251 (6,38)	.151 (3,84)	.035 (0,88)
17W02517	W 2517	.250 (6,35)	.156 (3,96)	.100 (2,54)
17W02518	W 2518	.250 (6,35)	.125 (3,18)	.150 (3,81)
17W02519	W 2519	.251 (6,38)	.155 (3,94)	.077 (1,96)
17W02520	W 2520	.250 (6,35)	.166 (4,22)	.061 (1,55)
17W02564	W 2564	.256 (6,50)	.187 (4,75)	.045 (1,14)
17W02591	W 2591	.259 (6,58)	.081 (2,06)	.062 (1,57)
17W02595	W 2595	.295 (7,49)	.135 (3,43)	.127 (3,23)
17W02751	W 2751	.275 (6,99)	.120 (3,05)	.062 (1,57)
17W02752	W 2752	.270 (6,86)	.207 (5,26)	.05 (1,27)
17W02781	W 2781	.280 (7,11)	.210 (5,33)	.125 (3,18)
17W02801	W 2801	.280 (7,11)	.120 (3,05)	.145 (3,68)
17W02810	W 2810	.280 (7,11)	.150 (3,81)	.108 (2,74)
17W02811	W 2811	.288 (7,32)	.120 (3,05)	.040 (1,02)
17W02812	W 2812	.290 (7,38)	.115 (2,92)	.047 (1,19)
17W02813	W 2813	.280 (7,11)	.120 (3,05)	.030 (0,76)
17W02814	W 2814	.281 (7,14)	.120 (3,05)	.020 (0,51)
17W02815	W 2815	.281 (7,14)	.120 (3,05)	.040 (1,02)
17W02816	W 2816	.281 (7,14)	.120 (3,05)	.060 (1,52)
17W02817	W 2817	.280 (7,11)	.155 (3,94)	.160 (4,06)
17W02818	W 2818	.281 (7,14)	.140 (3,56)	.020 (0,51)
17W02819	W 2819	.281 (7,14)	.107 (2,71)	.020 (0,51)
17W02851	W 2851	.285 (7,24)	.130 (3,30)	.060 (1,52)
17W02852	W 2852	.285 (7,24)	.160 (4,06)	.032 (0,81)
17W02853	W 2853	.280 (7,11)	.200 (5,08)	.093 (2,36)
17W02862	W 2862	.282 (7,16)	.190 (4,83)	.065 (1,65)
17W02951	W 2951	.295 (7,49)	.220 (5,59)	.127 (3,23)
17W02952	W 2952	.310 (7,87)	.138 (3,50)	.030 (0,76)

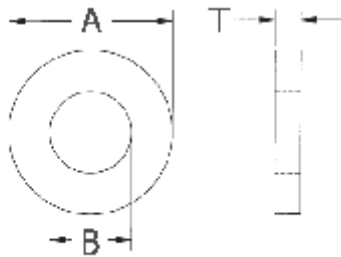


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

### New Sizes

### NYLON SPECIAL FLAT WASHERS



ITEM NUMBER	DESCRIPTION	A	B	T
17W02953	W 2953	.310 (7,87)	.190 (4,83)	.032 (0,81)
17W02954	W 2954	.310 (7,87)	.185 (4,70)	.032 (0,81)
17W03070	W 3070	.307 (7,80)	.210 (5,33)	.125 (3,18)
17W03071	W 3071	.307 (7,80)	.144 (3,66)	.059 (1,50)
17W03101	W 3101	.310 (7,87)	.160 (4,06)	.060 (1,52)
17W03121	W 3121	.312 (7,92)	.187 (4,75)	.050 (1,27)
17W03122	W 3122	.312 (7,92)	.095 (2,41)	.062 (1,57)
17W03123	W 3123	.318 (8,08)	.130 (3,30)	.062 (1,57)
17W03124	W 3124	.312 (7,92)	.110 (2,79)	.125 (3,18)
17W03125	W 3125	.312 (7,92)	.062 (1,57)	.125 (3,18)
17W03126	W 3126	.312 (7,92)	.115 (2,92)	.140 (3,56)
17W03127	W 3127	.312 (7,92)	.140 (3,56)	.047 (1,19)
17W03128	W 3128	.320 (8,13)	.156 (3,96)	.031 (0,79)
17W03129	W 3129	.312 (7,92)	.228 (5,79)	.250 (6,35)
17W03130	W 3130	.312 (7,92)	.162 (4,11)	.062 (1,57)
17W03131	W 3131	.312 (7,92)	.150 (3,81)	.020 (0,51)
17W03132	W 3132	.312 (7,92)	.125 (3,18)	.032 (0,81)
17W03133	W 3133	.312 (7,92)	.262 (6,65)	.127 (3,23)
17W03134	W 3134	.312 (7,92)	.150 (3,81)	.030 (0,76)
17W03135	W 3135	.312 (7,92)	.192 (4,88)	.110 (2,79)
17W03136	W 3136	.313 (7,95)	.217 (5,51)	.125 (3,18)
17W03137	W 3137	.312 (7,92)	.150 (3,81)	.040 (1,02)
17W03138	W 3138	.312 (7,92)	.150 (3,81)	.050 (1,27)
17W03139	W 3139	.312 (7,92)	.150 (3,81)	.060 (1,52)
17W03140	W 3140	5/16 (7,94)	5/32 (3,96)	1/8 (3,18)
17W03141	W 3141	.314 (7,98)	.110 (2,79)	.062 (1,57)
17W03142	W 3142	.312 (7,92)	.260 (6,60)	.070 (0,78)
17W03143	W 3143	.316 (8,03)	.100 (2,54)	.033 (0,84)
17W03145	W 3145	.312 (7,92)	.063 (1,60)	.090 (2,29)
17W03146	W 3146	.312 (7,92)	.140 (3,56)	.020 (0,51)
17W03148	W 3148	.315 (8,00)	.125 (3,18)	.031 (0,79)
17W03150	W 3150	.315 (8,00)	.157 (3,98)	.197 (5,00)
17W03151	W 3151	.312 (7,92)	.260 (6,60)	.109 (2,77)
17W03221	W 3221	.322 (8,18)	.128 (3,25)	.062 (1,57)
17W03223	W 3223	.330 (8,38)	.189 (4,80)	.080 (2,03)
17W03280	W 3280	.329 (8,36)	.150 (3,81)	.060 (1,52)
17W03281	W 3281	.335 (8,51)	.280 (7,11)	.195 (4,95)
17W03351	W 3351	.335 (8,51)	.190 (4,83)	.032 (0,81)
17W03412	W 3412	.434 (11,02)	.190 (4,83)	1/8 (3,18)
17W03450	W 3450	.345 (8,76)	.218 (5,54)	.032 (0,81)
17W03480	W 3480	.348 (8,84)	.222 (5,64)	.081 (2,06)
17W03501	W 3501	.350 (8,89)	.240 (6,10)	.040 (1,02)
17W03505	W 3505	.355 (9,02)	.130 (3,30)	.062 (1,57)
17W03506	W 3506	.356 (9,04)	.179 (4,55)	.118 (3,00)
17W03510	W 3510	.350 (8,89)	.260 (6,60)	.062 (1,57)
17W03540	W 3540	.354 (8,99)	.169 (4,29)	.031 (0,79)
17W03541	W 3541	.353 (8,97)	.197 (5,00)	.157 (3,99)

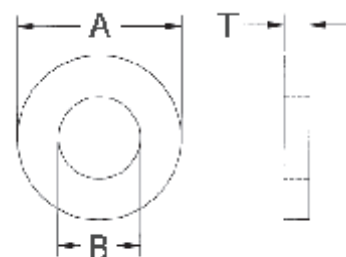




## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W03542	W 3542	.370 (9,40)	.192 (4,88)	.080 (2,03)
17W03601	W 3601	.374 (9,50)	.220 (5,59)	.062 (1,57)
17W03602	W 3602	.375 (9,53)	.173 (4,39)	.093 (2,36)
17W03630	W 3630	.370 (9,40)	.184 (4,67)	.047 (1,19)
17W03749	W 3749	.370 (9,40)	.192 (4,88)	.125 (3,18)
17W03750	W 3750	.375 (9,53)	.150 (3,81)	.030 (0,76)
17W03751	W 3751	.375 (9,53)	.172 (4,37)	.060 (1,52)
17W03752	W 3752	.375 (9,53)	.190 (4,83)	.065 (1,65)
17W03753	W 3753	.375 (9,53)	.131 (3,33)	.093 (2,36)
17W03754	W 3754	.375 (9,53)	.250 (6,35)	.093 (2,36)
17W03755	W 3755	.375 (9,53)	.218 (5,54)	.032 (0,81)
17W03756	W 3756	.375 (9,53)	.253 (6,43)	.084 (2,13)
17W03757	W 3757	.375 (9,53)	.141 (3,58)	.031 (0,79)
17W03758	W 3758	.375 (9,53)	.125 (3,18)	.040 (1,02)
17W03759	W 3759	.375 (9,53)	.094 (2,39)	.281 (7,14)
17W03760	W 3760	.375 (9,53)	.242 (6,15)	.062 (1,57)
17W03761	W 3761	.375 (9,53)	.210 (5,33)	.160 (4,06)
17W03762	W 3762	.375 (9,53)	.170 (4,32)	.040 (1,02)
17W03763	W 3763	.375 (9,53)	.170 (4,32)	.050 (1,27)
17W03764	W 3764	.375 (9,53)	.189 (4,80)	.031 (0,79)
17W03765	W 3765	.375 (9,53)	.140 (3,56)	.080 (2,03)
17W03766	W 3766	.375 (9,53)	.153 (3,89)	.063 (1,60)
17W03767	W 3767	.377 (9,58)	.221 (5,61)	.095 (2,41)
17W03768	W 3768	.375 (9,53)	.250 (6,35)	.150 (3,81)
17W03769	W 3769	.375 (9,53)	.210 (5,33)	.152 (3,86)
17W03770	W 3770	.375 (9,53)	.130 (3,30)	.030 (0,76)
17W03771	W 3771	.375 (9,53)	.255 (6,48)	.093 (2,36)
17W03772	W 3772	.375 (9,53)	.125 (3,18)	.072 (1,83)
17W03773	W 3773	1.000 (25,40)	.375 (9,53)	.312 (7,92)
17W03801	W 3801	.380 (9,65)	.200 (5,08)	.030 (0,76)
17W03802	W 3802	.380 (9,65)	.187 (4,75)	.155 (3,94)
17W03820	W 3820	.382 (9,70)	.255 (6,48)	.195 (4,95)
17W03901	W 3901	.390 (9,91)	.200 (5,08)	.031 (0,79)
17W03902	W 3902	.389 (9,88)	.251 (6,37)	.125 (3,17)
17W03903	W 3903	.390 (9,91)	.328 (8,33)	.079 (2,01)
17W03904	W 3904	.400 (10,16)	.140 (3,56)	.062 (1,57)
17W04000	W 4000	.400 (10,16)	.200 (5,08)	.093 (2,36)
17W04060	W 4060	.405 (10,29)	.265 (6,73)	.125 (3,18)
17W04061	W 4061	.406 (10,31)	.234 (5,94)	.062 (1,57)
17W04062	W 4062	.406 (10,31)	.192 (4,88)	.062 (1,57)
17W04081	W 4081	.408 (10,36)	.177 (4,50)	.062 (1,57)
17W04150	W 4150	.415 (10,54)	.229 (5,82)	.102 (2,59)
17W04160	W 4160	.416 (10,57)	.272 (6,91)	.120 (3,05)
17W04250	W 4250	.425 (10,79)	.235 (5,97)	.130 (3,30)
17W04330	W 4330	.435 (11,05)	.209 (5,31)	.039 (0,99)
17W04331	W 4331	.433 (11,00)	.262 (6,65)	.126 (3,20)
17W04332	W 4332	.433 (11,00)	.275 (6,99)	.075 (1,91)

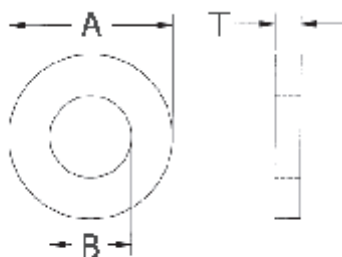


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

SECTION  
IV

New Sizes

## NYLON SPECIAL FLAT WASHERS



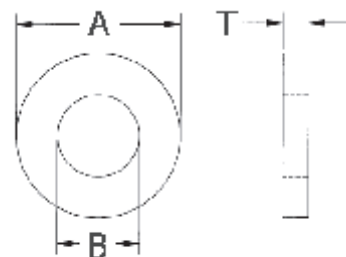
ITEM NUMBER	DESCRIPTION	A	B	T
17W04333	W 4333	.433 (11,00)	.244 (6,20)	.054 (1,37)
17W04350	W 4350	.435 (11,05)	.202 (5,13)	.187 (4,75)
17W04351	W 4351	.435 (11,05)	.250 (6,35)	.094 (2,39)
17W04352	W 4352	.435 (11,05)	.196 (4,98)	.046 (1,17)
17W04353	W 4353	.438 (11,13)	.218 (5,54)	.156 (3,96)
17W04371	W 4371	.437 (11,10)	.200 (5,08)	.062 (1,57)
17W04372	W 4372	.437 (11,10)	.260 (6,60)	.047 (1,19)
17W04373	W 4373	.437 (11,10)	.195 (4,95)	.031 (0,79)
17W04374	W 4374	.437 (11,10)	.200 (5,08)	.115 (2,92)
17W04375	W 4375	.437 (11,10)	.200 (5,08)	.090 (2,29)
17W04376	W 4376	.437 (11,10)	.195 (4,95)	.020 (0,51)
17W04377	W 4377	.437 (11,10)	.195 (4,95)	.040 (1,02)
17W04378	W 4378	.437 (11,10)	.195 (4,95)	.050 (1,27)
17W04379	W 4379	.437 (11,10)	.195 (4,95)	.060 (1,27)
17W04380	W 4380	7/16 (11,10)	11/32 (8,74)	1/16 (0,81)
17W04386	W 4386	.438 (11,13)	.156 (3,96)	.062 (1,57)
17W04400	W 4400	.440 (11,18)	.156 (3,96)	.032 (0,81)
17W04401	W 4401	.445 (11,30)	.290 (7,37)	.033 (0,84)
17W04402	W 4402	.440 (11,18)	.187 (4,75)	.093 (2,36)
17W04403	W 4403	.440 (11,18)	.318 (8,08)	.031 (0,79)
17W04430	W 4430	.443 (11,25)	.253 (6,43)	.125 (3,18)
17W04450	W 4450	.450 (11,43)	.225 (5,72)	.048 (1,22)
17W04451	W 4451	.453 (11,51)	.375 (9,52)	.062 (1,57)
17W04452	W 4452	.453 (11,51)	.280 (7,11)	.030 (0,76)
17W04501	W 4501	.450 (11,43)	.200 (5,08)	.048 (1,22)
17W04502	W 4502	.465 (11,81)	.250 (6,35)	.015 (0,38)
17W04520	W 4520	.452 (11,48)	.349 (8,86)	.075 (1,91)
17W04601	W 4601	.460 (11,68)	.204 (5,18)	.031 (0,79)
17W04650	W 4650	.465 (11,81)	.330 (8,38)	.031 (0,79)
17W04651	W 4651	.486 (12,34)	.252 (6,40)	.069 (1,75)
17W04719	W 4719	.492 (12,50)	.209 (5,31)	.020 (0,51)
17W04720	W 4720	.472 (11,99)	.252 (6,40)	.059 (1,50)
17W04721	W 4721	.505 (12,83)	.375 (9,53)	.050 (1,27)
17W04722	W 4722	.472 (11,99)	.350 (8,89)	.110 (2,79)
17W04725	W 4725	.495 (12,57)	.310 (7,87)	.095 (2,41)
17W04900	W 4900	.490 (12,45)	.136 (3,45)	.055 (1,40)
17W04901	W 4901	.490 (12,45)	.375 (9,53)	.087 (2,21)
17W04950	W 4950	.490 (12,45)	.260 (6,60)	.245 (6,22)
17W04951	W 4951	.500 (12,70)	.205 (5,21)	.125 (3,18)
17W04952	W 4952	.502 (12,72)	.101 (2,57)	.040 (1,02)
17W04953	W 4953	.500 (12,70)	.375 (9,53)	.032 (0,81)
17W05000	W 5000	.500 (12,70)	.165 (4,19)	.075 (1,91)
17W05001	W 5001	.500 (12,70)	.343 (8,71)	.109 (2,77)
17W05002	W 5002	.500 (12,70)	.385 (9,78)	.160 (4,06)
17W05003	W 5003	.490 (12,45)	.281 (7,14)	.030 (0,76)
17W05004	W 5004	.500 (12,70)	.317 (8,05)	.032 (0,81)
17W05005	W 5005	.500 (12,70)	.375 (9,53)	.087 (2,21)



## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W05006	W 5006	.500 (12,70)	.312 (7,92)	.156 (3,96)
17W05007	W 5007	.500 (12,70)	.250 (6,35)	.150 (3,81)
17W05008	W 5008	.505 (12,83)	.188 (4,78)	.032 (0,81)
17W05009	W 5009	.500 (12,70)	.255 (6,48)	.075 (1,91)
17W05010	W 5010	.500 (12,70)	.312 (7,92)	.125 (3,18)
17W05012	W 5012	.50 (12,70)	.125 (3,18)	.125 (3,18)
17W05013	W 5013	.500 (12,70)	.320 (8,13)	.170 (4,32)
17W05014	W 5014	.500 (12,70)	.140 (3,56)	.062 (1,57)
17W05015	W 5015	.500 (12,70)	.144 (3,66)	.125 (3,18)
17W05016	W 5016	.500 (12,70)	.219 (5,54)	.156 (3,90)
17W05017	W 5017	.50 (12,70)	.262 (6,65)	.15 (3,81)
17W05018	W 5018	.500 (12,70)	.187 (4,75)	.062 (1,57)
17W05019	W 5019	.500 (12,70)	.175 (4,45)	.062 (1,57)
17W05020	W 5020	.500 (12,70)	.320 (8,13)	.200 (5,08)
17W05021	W 5021	.505 (12,83)	.138 (3,51)	.080 (2,03)
17W05022	W 5022	.495 (12,57)	.147 (3,73)	.298 (7,57)
17W05023	W 5023	.500 (12,70)	.188 (4,78)	.062 (1,57)
17W05027	W 5027	1/2 (12,70)	.320 (8,13)	.250 (6,35)
17W05028	W 5028	.500 (12,70)	.320 (8,13)	.281 (7,14)
17W05081	W 5081	.500 (12,70)	.312 (7,92)	.096 (2,44)
17W05120	W 5120	.510 (12,95)	.193 (4,90)	.050 (1,27)
17W05121	W 5121	.512 (13,00)	.406 (10,31)	.089 (2,26)
17W05230	W 5230	.523 (13,28)	.463 (11,76)	.060 (1,52)
17W05231	W 5231	.538 (13,67)	.272 (6,91)	.047 (1,19)
17W05251	W 5251	.530 (13,46)	.375 (9,53)	.093 (2,36)
17W05252	W 5252	.528 (13,41)	.402 (10,21)	.039 (0,99)
17W05253	W 5253	.525 (13,34)	.475 (12,07)	.070 (1,78)
17W05254	W 5254	.525 (13,34)	.194 (4,93)	.032 (0,81)
17W05310	W 5310	.531 (13,49)	.313 (7,95)	.031 (0,79)
17W05400	W 5400	.540 (13,72)	.405 (10,29)	.112 (2,84)
17W05401	W 5401	.540 (13,72)	.382 (9,70)	.096 (2,44)
17W05421	W 5421	.542 (13,77)	.388 (9,86)	.220 (5,59)
17W05422	W 5422	.542 (13,77)	.404 (10,26)	.097 (2,46)
17W05423	W 5423	.542 (13,77)	.404 (10,26)	.110 (2,79)
17W05451	W 5451	.547 (13,89)	.363 (9,22)	.062 (1,57)
17W05461	W 5461	.554 (14,07)	.481 (12,22)	.030 (0,76)
17W05510	W 5510	.551 (14,00)	.378 (9,60)	.063 (1,60)
17W05552	W 5552	.555 (14,10)	.255 (6,48)	.047 (1,19)
17W05553	W 5553	.555 (14,10)	.415 (10,54)	.060 (1,52)
17W05601	W 5601	.560 (14,22)	.265 (6,73)	.030 (0,76)
17W05602	W 5602	.560 (14,22)	.260 (6,60)	.125 (3,18)
17W05603	W 5603	.560 (14,22)	.320 (8,13)	.187 (4,75)
17W05605	W 5605	.560 (14,22)	.373 (9,47)	.031 (0,79)
17W05606	W 5606	.562 (14,27)	.265 (6,73)	.187 (4,75)
17W05607	W 5607	.560 (14,22)	.290 (7,37)	.062 (1,57)
17W05608	W 5608	.560 (14,22)	.315 (8,00)	.062 (1,57)
17W05620	W 5620	.562 (14,27)	.141 (3,58)	.062 (1,57)



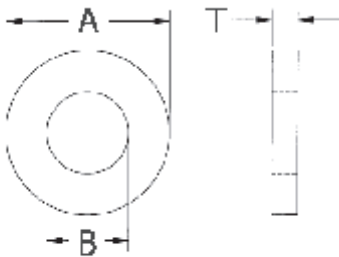


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

SECTION  
IV

New Sizes

## NYLON SPECIAL FLAT WASHERS



ITEM NUMBER	DESCRIPTION	A	B	T
17W05621	W 5621	.562 (14,27)	.250 (6,35)	.031 (0,79)
17W05622	W 5622	.562 (14,27)	.260 (6,60)	.062 (1,57)
17W05623	W 5623	.565 (14,35)	.203 (5,16)	.062 (1,57)
17W05624	W 5624	.562 (14,27)	.320 (8,13)	.020 (0,51)
17W05629	W 5629	.562 (14,27)	.328 (8,33)	.095 (2,41)
17W05630	W 5630	.565 (14,35)	.317 (8,05)	.095 (2,41)
17W05631	W 5631	.568 (14,43)	.253 (6,43)	.093 (2,36)
17W05650	W 5650	.565 (14,35)	.254 (6,45)	.094 (2,39)
17W05700	W 5700	.578 (14,68)	.307 (7,80)	.125 (3,18)
17W05751	W 5751	.575 (14,61)	.467 (11,86)	.090 (2,29)
17W05910	W 5910	.591 (15,01)	.256 (6,50)	.087 (2,21)
17W05980	W 5980	.598 (15,19)	.396 (10,03)	.175 (4,45)
17W05981	W 5981	.562 (14,27)	.320 (8,13)	.125 (3,18)
17W05982	W 5982	.590 (14,99)	.328 (8,33)	.147 (3,73)
17W05983	W 5983	.591 (15,01)	.374 (9,50)	.118 (3,00)
17W06001	W 6001	.600 (15,24)	.500 (12,70)	.120 (3,05)
17W06101	W 6101	.615 (15,62)	.406 (10,31)	.042 (1,07)
17W06140	W 6140	.614 (15,60)	.464 (11,79)	.110 (2,79)
17W06150	W 6150	.615 (15,62)	.260 (6,60)	.100 (2,54)
17W06151	W 6151	.625 (15,88)	.500 (12,70)	.132 (3,35)
17W06152	W 6152	.615 (15,62)	.340 (8,64)	.125 (3,18)
17W06153	W 6153	.625 (15,88)	.406 (10,31)	.120 (3,05)
17W06154	W 6154	.753 (19,13)	.605 (15,37)	.067 (1,70)
17W06155	W 6155	.615 (15,62)	.380 (9,65)	.122 (3,10)
17W06201	W 6201	.620 (15,75)	.265 (6,73)	.192 (4,89)
17W06203	W 6203	.620 (15,75)	.209 (5,31)	.187 (4,75)
17W06204	W 6204	.620 (15,75)	.350 (8,89)	.188 (4,78)
17W06205	W 6205	.625 (15,88)	.410 (10,41)	.033 (8,38)
17W06206	W 6206	.625 (15,88)	.260 (6,60)	.140 (3,56)
17W06221	W 6221	.622 (15,80)	.252 (6,40)	.060 (1,52)
17W06222	W 6222	.625 (15,88)	.250 (6,35)	.190 (4,83)
17W06240	W 6240	.625 (15,88)	.505 (12,83)	.092 (2,34)
17W06248	W 6248	.625 (15,88)	.330 (8,38)	.064 (1,63)
17W06249	W 6249	.625 (15,88)	.260 (6,60)	.180 (4,57)
17W06250	W 6250	.620 (15,75)	.165 (4,19)	.250 (6,35)
17W06251*	W 6251	.620 (15,87)	.301 (7,64)	.039 (0,99)
17W06252	W 6252	.625 (15,88)	.194 (4,93)	.125 (3,18)
17W06253	W 6253	.625 (15,88)	.187 (4,75)	.062 (1,57)
17W06254	W 6254	.625 (15,88)	.218 (5,54)	.062 (1,57)
17W06255	W 6255	.625 (15,88)	.250 (6,35)	.062 (1,57)
17W06256	W 6256	.625 (15,88)	.437 (11,10)	.093 (2,36)
17W06257	W 6257	.625 (15,88)	.125 (3,18)	.062 (1,57)
17W06258	W 6258	.625 (15,88)	.218 (5,54)	.125 (3,18)
17W06259	W 6259	.625 (15,88)	.218 (5,54)	.500 (12,70)
17W06260	W 6260	.625 (15,88)	.218 (5,54)	.250 (6,35)
17W06261	W 6261	.625 (15,88)	.390 (9,91)	.265 (6,73)
17W06262	W 6262	.625 (15,88)	.257 (6,53)	.020 (0,51)

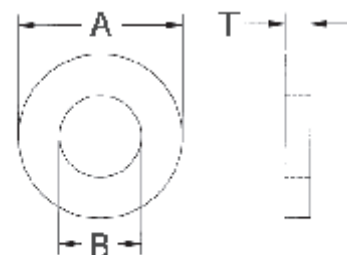
\* ID IS CHAMFERED



## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W06263	W 6263	.625 (15,88)	.281 (7,14)	.110 (2,79)
17W06264	W 6264	.625 (15,88)	.315 (8,00)	.031 (0,79)
17W06265	W 6265	.625 (15,88)	.422 (10,72)	.203 (5,16)
17W06266	W 6266	.625 (15,88)	.321 (8,15)	.125 (3,18)
17W06267	W 6267	.625 (15,88)	.218 (5,54)	.031 (0,79)
17W06268	W 6268	.625 (15,88)	.437 (11,10)	.250 (6,35)
17W06269	W 6269	5/8 (15,87)	.281 (7,14)	.210 (5,33)
17W06270	W 6270	.618 (15,70)	.270 (6,86)	.220 (5,59)
17W06271	W 6271	.630 (16,00)	.327 (8,31)	.071 (1,80)
17W06272	W 6272	.625 (15,88)	.385 (9,78)	.185 (4,70)
17W06273	W 6273	.625 (15,88)	.312 (7,92)	.250 (6,35)
17W06274	W 6274	.625 (15,88)	.284 (7,21)	.062 (1,57)
17W06275	W 6275	.625 (15,88)	.292 (7,42)	.040 (1,02)
17W06289	W 6289	.625 (15,88)	.265 (6,73)	.093 (2,36)
17W06302	W 6302	.630 (16,00)	.171 (4,34)	.060 (1,52)
17W06303	W 6303	.638 (16,20)	.283 (7,19)	.077 (1,96)
17W06304	W 6304	.629 (15,98)	.437 (11,10)	.125 (3,18)
17W06310	W 6310	.630 (16,00)	.280 (7,11)	.030 (0,76)
17W06365	W 6365	.636 (16,15)	.526 (13,36)	.098 (2,49)
17W06439	W 6439	.643 (16,33)	.510 (12,95)	.090 (2,29)
17W06440	W 6440	1.122 (28,50)	.644 (16,36)	.217 (5,51)
17W06500	W 6500	.650 (16,51)	.440 (11,18)	.125 (3,18)
17W06501	W 6501	1.190 (30,23)	.650 (16,51)	.090 (2,29)
17W06591	W 6591	.659 (16,74)	.468 (11,89)	.119 (3,02)
17W06620	W 6620	.662 (16,81)	.440 (11,18)	.122 (3,10)
17W06701	W 6701	.670 (17,02)	.448 (11,38)	.120 (3,05)
17W06711	W 6711	.671 (17,04)	.481 (12,22)	.031 (0,79)
17W06820	W 6820	.682 (17,32)	.170 (4,32)	.062 (1,57)
17W06830	W 6830	.683 (17,35)	.337 (8,56)	.063 (1,60)
17W06851	W 6851	.685 (17,40)	.260 (6,60)	.032 (0,81)
17W06855	W 6855	.685 (17,40)	.295 (7,49)	.062 (1,57)
17W06856	W 6856	.695 (17,65)	.388 (9,85)	.059 (1,50)
17W06867	W 6867	.687 (17,45)	.343 (8,71)	.031 (0,79)
17W06868	W 6868	.687 (17,45)	.260 (6,60)	.020 (0,51)
17W06869	W 6869	.687 (17,45)	.260 (6,60)	.050 (1,27)
17W06870	W 6870	.687 (17,45)	.344 (8,79)	.064 (1,63)
17W06871	W 6871	.687 (17,45)	.260 (6,60)	.060 (1,52)
17W06872	W 6872	.687 (17,45)	.260 (6,60)	.040 (1,02)
17W06873	W 6873	.692 (17,58)	.421 (10,69)	.031 (0,79)
17W06874	W 6874	.687 (17,45)	.421 (10,69)	.062 (1,57)
17W06875	W 6875	.692 (17,58)	.507 (12,88)	.042 (1,07)
17W06876	W 6876	.687 (17,45)	.568 (14,43)	.062 (1,57)
17W06877	W 6877	.680 (17,27)	.390 (9,91)	.125 (3,18)
17W06878	W 6878	.687 (17,45)	.156 (3,96)	.135 (3,43)
17W06879	W 6879	.687 (17,45)	.280 (7,11)	.031 (0,79)
17W06880	W 6880	.680 (17,27)	.318 (8,08)	.187 (4,75)
17W06881	W 6881	.688 (17,48)	.390 (9,91)	.031 (0,79)

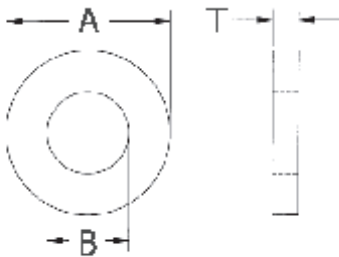


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

SECTION  
IV

New Sizes

## NYLON SPECIAL FLAT WASHERS



ITEM NUMBER	DESCRIPTION	A	B	T
17W06882	W 6882	.688 (17,48)	.318 (8,08)	.190 (4,83)
17W06883	W 6883	.689 (17,50)	.244 (6,20)	.236 (5,99)
17W06934	W 6934	.695 (17,65)	.082 (2,08)	.184 (4,67)
17W06935	W 6935	.690 (17,53)	.525 (13,34)	.250 (6,35)
17W07001	W 7001	.700 (17,78)	.565 (14,35)	.062 (1,57)
17W07002	W 7002	.700 (17,78)	.531 (13,49)	.093 (2,36)
17W07051	W 7051	.715 (18,16)	.570 (14,48)	.100 (2,54)
17W07090	W 7090	.709 (18,01)	.336 (8,53)	.079 (2,01)
17W07091	W 7091	.709 (18,01)	.461 (11,71)	.110 (2,79)
17W07092	W 7092	.697 (17,70)	.531 (13,49)	.158 (4,01)
17W07093	W 7093	.71 (18,03)	.49 (12,45)	.125 (3,17)
17W07120	W 7120	.712 (18,08)	.522 (13,30)	.062 (1,57)
17W07121	W 7121	.712 (18,08)	.312 (7,92)	.081 (2,06)
17W07130	W 7130	.713 (18,11)	.463 (11,76)	.065 (1,65)
17W07181	W 7181	.718 (18,24)	.526 (13,36)	.219 (5,56)
17W07182	W 7182	.718 (18,24)	.526 (13,36)	.281 (7,14)
17W07191	W 7191	.719 (18,26)	.250 (6,35)	.062 (1,57)
17W07192	W 7192	.719 (18,26)	.281 (7,14)	.062 (1,57)
17W07301	W 7301	.720 (18,29)	.390 (9,91)	.300 (7,62)
17W07302	W 7302	.731 (18,57)	.266 (6,76)	.118 (3,00)
17W07381	W 7381	.740 (18,80)	.220 (5,59)	.120 (3,05)
17W07382	W 7382	.738 (18,75)	.522 (13,26)	.120 (3,05)
17W07401	W 7401	.740 (18,80)	.340 (8,64)	.062 (1,57)
17W07402	W 7402	.750 (19,05)	.375 (9,53)	.062 (1,57)
17W07403	W 7403	.748 (19,00)	.395 (10,03)	.093 (2,36)
17W07404	W 7404	.750 (19,05)	.440 (11,18)	.093 (2,36)
17W07405	W 7405	.750 (19,05)	.385 (9,78)	.045 (1,14)
17W07406	W 7406	.740 (18,80)	.516 (13,11)	.125 (3,18)
17W07420	W 7420	.742 (18,85)	.498 (12,65)	.119 (3,02)
17W07480	W 7480	.748 (19,00)	.403 (10,24)	.059 (1,50)
17W07491	W 7491	.750 (19,05)	.191 (4,85)	.100 (2,54)
17W07493	W 7493	.738 (18,75)	.220 (5,59)	.155 (3,94)
17W07494	W 7494	.750 (19,05)	.257 (6,53)	.030 (0,76)
17W07500	W 7500	.750 (19,05)	.261 (6,63)	.095 (2,41)
17W07501	W 7501	.750 (19,05)	.187 (4,75)	.156 (3,96)
17W07502	W 7502	.735 (18,67)	.360 (9,14)	.160 (4,06)
17W07503	W 7503	.750 (19,05)	.323 (8,20)	.125 (3,18)
17W07504	W 7504	.738 (18,75)	.382 (9,70)	.160 (4,06)
17W07505	W 7505	.740 (18,79)	.531 (13,49)	.187 (4,75)
17W07506	W 7506	.750 (19,05)	.390 (9,91)	.062 (1,57)
17W07507	W 7507	.750 (19,05)	.352 (8,94)	.031 (0,79)
17W07508	W 7508	.750 (19,05)	.390 (9,91)	.050 (1,27)
17W07509	W 7509	.750 (19,05)	.390 (9,91)	.140 (3,56)
17W07510	W 7510	.750 (19,05)	.530 (13,46)	.230 (5,84)
17W07511	W 7511	.750 (19,05)	.625 (15,88)	.170 (4,32)
17W07512	W 7512	.750 (19,05)	.385 (9,78)	.200 (5,08)

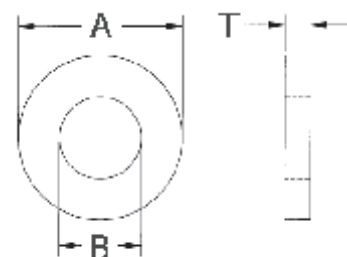




## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W07513	W 7513	.750 (19,05)	.317 (8,05)	.062 (1,57)
17W07514	W 7514	.750 (19,05)	.193 (4,90)	.040 (1,02)
17W07516	W 7516	.750 (19,05)	.382 (9,70)	.066 (1,68)
17W07517	W 7517	.750 (19,05)	.406 (10,31)	.032 (0,81)
17W07518	W 7518	.745 (18,92)	.443 (11,25)	.095 (2,41)
17W07519	W 7519	.750 (19,05)	.218 (5,54)	.187 (4,75)
17W07520	W 7520	.745 (18,92)	.260 (6,60)	.066 (1,68)
17W07521	W 7521	.750 (19,05)	.320 (8,13)	.250 (6,35)
17W07522	W 7522	.750 (19,05)	.406 (10,31)	.060 (1,52)
17W07523	W 7523	.745 (18,92)	.260 (6,60)	.125 (3,18)
17W07524	W 7524	.743 (18,87)	.516 (13,11)	.093 (2,36)
17W07525	W 7525	.750 (19,05)	.406 (10,31)	.200 (5,08)
17W07527	W 7527	.750 (19,05)	.375 (9,53)	.125 (3,18)
17W07528	W 7528	.750 (19,05)	.385 (9,78)	.020 (0,51)
17W07529	W 7529	.75 (19,05)	.31 (7,87)	.375 (9,53)
17W07530	W 7530	.750 (19,05)	.257 (6,53)	.062 (1,57)
17W07531	W 7531	.755 (19,18)	.558 (14,17)	.030 (0,76)
17W07532	W 7532	.750 (19,05)	.150 (3,81)	.055 (1,40)
17W07533	W 7533	.750 (19,05)	.47 (11,94)	.200 (5,08)
17W07534	W 7534	.685 (17,40)	.473 (12,01)	.190 (4,83)
17W07535	W 7535	.75 (19,05)	.30 (7,62)	.125 (3,17)
17W07536	W 7536	.754 (19,15)	.389 (9,88)	.075 (1,91)
17W07537	W 7537	.750 (19,05)	.437 (11,10)	.036 (0,91)
17W07539	W 7539	.962 (24,43)	.755 (19,18)	.101 (2,57)
17W07540	W 7540	.753 (19,13)	.605 (15,37)	.055 (1,40)
17W07541	W 7541	3/4" (19,05)	.257 (6,53)	.109 (2,77)
17W07542	W 7542	.755 (19,18)	.318 (8,08)	.100 (2,54)
17W07559	W 7559	.750 (19,05)	.380 (9,65)	.187 (4,75)
17W07560	W 7560	.756 (19,20)	.578 (14,68)	.110 (2,79)
17W07565	W 7565	.745 (18,92)	.509 (12,93)	.150 (3,81)
17W07566	W 7566	.750 (19,05)	.310 (7,87)	.170 (4,32)
17W07625	W 7625	.75 (19,05)	.274 (6,96)	.25 (6,35)
17W07714	W 7714	3/4" (19,05)	.317 (8,05)	.040 (1,02)
17W07716	W 7716	.750 (19,05)	.296 (7,52)	.032 (0,81)
17W07717	W 7717	.750 (19,05)	.328 (8,33)	.032 (0,81)
17W07718	W 7718	.757 (19,23)	.394 (10,01)	.125 (3,18)
17W07719	W 7719	.748 (19,00)	.400 (10,16)	.089 (2,26)
17W07720	W 7720	.753 (19,13)	.282 (7,16)	.123 (3,12)
17W07721	W 7721	.740 (18,80)	.215 (5,46)	.095 (2,41)
17W07722	W 7722	.750 (19,05)	.565 (14,35)	.125 (3,18)
17W07750	W 7750	.775 (19,69)	.515 (13,08)	.250 (6,35)
17W07751	W 7751	.775 (19,69)	.500 (12,70)	.120 (3,05)
17W07752	W 7752	.775 (19,69)	.485 (12,32)	.150 (3,81)
17W07811	W 7811	.781 (19,84)	.640 (16,26)	.031 (0,79)
17W07820	W 7820	.782 (19,86)	.633 (16,08)	.125 (3,18)
17W07821	W 7821	.778 (19,76)	.590 (14,99)	.032 (0,81)

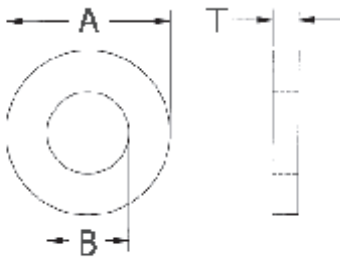


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

### New Sizes

### NYLON SPECIAL FLAT WASHERS



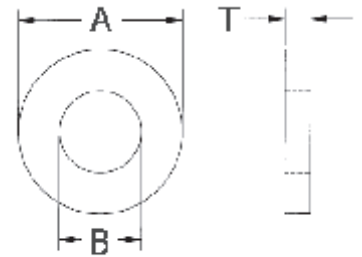
ITEM NUMBER	DESCRIPTION	A	B	T
17W07850	W 7850 .785 (19,94)	.394 (10,01)	.080 (2,03)	
17W08049	W 8049 .805 (20,45)	.418 (10,62)	.062 (1,57)	
17W08050	W 8050 .805 (20,45)	.510 (12,95)	.220 (5,59)	
17W08051	W 8051 .805 (20,45)	.621 (15,77)	.125 (3,18)	
17W08070	W 8070 .807 (20,50)	.402 (10,21)	.065 (1,65)	
17W08090	W 8090 .809 (20,55)	.495 (12,57)	.059 (1,50)	
17W08100	W 8100 .810 (20,57)	.435 (11,05)	.060 (1,52)	
17W08110	W 8110 .817 (20,75)	.544 (13,82)	.140 (3,56)	
17W08121	W 8121 .812 (20,67)	.695 (17,65)	.093 (2,36)	
17W08122	W 8122 .812 (20,62)	.630 (16,00)	.100 (2,56)	
17W08123	W 8123 .812 (20,62)	.312 (7,92)	.125 (3,18)	
17W08125	W 8125 .812 (20,62)	.630 (16,00)	.220 (5,59)	
17W08126	W 8126 .812 (20,62)	.386 (9,80)	.187 (4,75)	
17W08251	W 8251 .825 (20,96)	.480 (12,19)	.100 (2,54)	
17W08252	W 8252 .825 (20,96)	.561 (14,25)	.145 (3,68)	
17W08400	W 8400 .840 (21,34)	.730 (18,54)	.125 (3,18)	
17W08430	W 8430 .844 (21,44)	.656 (16,66)	.060 (1,52)	
17W08431	W 8431 .845 (21,46)	.621 (15,77)	.101 (2,57)	
17W08452	W 8452 .825 (20,96)	.375 (9,53)	.100 (2,54)	
17W08650	W 8650 .865 (21,97)	.531 (13,49)	.200 (5,08)	
17W08651	W 8651 .865 (21,97)	.688 (17,48)	.155 (3,94)	
17W08652	W 8652 .875 (22,23)	.755 (19,18)	.125 (3,18)	
17W08660	W 8660 .866 (21,97)	.413 (10,49)	.098 (2,49)	
17W08661	W 8661 .876 (22,25)	.437 (11,10)	.502 (12,75)	
17W08711	W 8711 .871 (22,12)	.706 (17,93)	.111 (2,82)	
17W08751	W 8751 .875 (22,23)	.312 (7,92)	.125 (3,18)	
17W08752	W 8752 .875 (22,23)	.408 (10,36)	.060 (1,52)	
17W08753	W 8753 .875 (22,23)	.257 (6,53)	.031 (0,79)	
17W08754	W 8754 .885 (22,48)	.343 (8,71)	.062 (1,57)	
17W08755	W 8755 .855 (21,72)	.312 (7,92)	.125 (3,18)	
17W08756	W 8756 .875 (22,23)	.500 (12,70)	.125 (3,18)	
17W08757	W 8757 .875 (22,23)	.312 (7,92)	.187 (4,75)	
17W08758	W 8758 .865 (21,97)	.340 (8,64)	.187 (4,75)	
17W08759	W 8759 .875 (22,23)	.377 (9,58)	.062 (1,57)	
17W08760	W 8760 .875 (22,23)	.380 (9,65)	.093 (2,36)	
17W08761	W 8761 .875 (22,23)	.390 (9,91)	.093 (2,36)	
17W08762	W 8762 .875 (22,23)	.257 (6,53)	.062 (1,57)	
17W08763	W 8763 .875 (22,23)	.627 (15,93)	.114 (2,90)	
17W08764	W 8764 7/8 (22,23)	.265 (6,73)	.093 (2,36)	
17W08765	W 8765 .870 (22,10)	.531 (13,49)	.187 (4,75)	
17W08767	W 8767 .860 (21,84)	.397 (10,08)	.165 (4,19)	
17W08768	W 8768 .885 (22,48)	.390 (9,91)	.094 (2,39)	
17W08769	W 8769 .875 (22,23)	.750 (19,05)	.160 (4,06)	
17W08800	W 8800 .880 (22,35)	.390 (9,91)	.062 (1,57)	
17W08801	W 8801 .872 (22,15)	.315 (8,00)	.062 (1,57)	
17W08803	W 8803 .882 (22,40)	.589 (14,96)	.085 (2,16)	
17W08806	W 8806 .885 (22,48)	.385 (9,78)	.062 (1,57)	



## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W08810	W 8810	.880 (22,35)	.500 (12,70)	.065 (1,65)
17W08812	W 8812	.880 (22,86)	.385 (9,78)	.125 (3,18)
17W08901	W 8901	.890 (22,61)	.315 (8,00)	.215 (5,46)
17W08950	W 8950	.900 (22,86)	.255 (6,48)	.125 (3,18)
17W08951	W 8951	.890 (22,61)	.317 (8,05)	.245 (6,22)
17W09000	W 9000	.900 (22,86)	.375 (9,53)	.055 (1,40)
17W09001	W 9001	.900 (22,86)	.500 (12,70)	.075 (1,91)
17W09002	W 9002	.900 (22,86)	.515 (13,08)	.060 (1,52)
17W09260	W 9260	.926 (23,52)	.705 (17,91)	.124 (3,15)
17W09282	W 9282	.970 (24,64)	.230 (5,84)	.125 (3,18)
17W09283	W 9283	1.005 (25,53)	.406 (10,31)	.080 (2,03)
17W09290	W 9290	.929 (23,60)	.472 (11,99)	.126 (3,20)
17W09320	W 9320	.932 (23,67)	.381 (9,68)	.031 (0,79)
17W09350	W 9350	15/16 (23,81)	.380 (9,65)	.062 (1,57)
17W09371	W 9371	.937 (23,80)	.625 (15,88)	.093 (2,36)
17W09376	W 9376	.937 (23,80)	.583 (14,81)	.062 (1,57)
17W09378	W 9378	.937 (23,80)	.580 (14,73)	.082 (2,08)
17W09381	W 9381	.938 (23,83)	.453 (11,51)	.155 (3,94)
17W09400	W 9400	.944 (23,98)	.331 (8,41)	.098 (2,49)
17W09406	W 9406	.940 (23,88)	.506 (12,85)	.064 (1,63)
17W09571	W 9571	.957 (24,31)	.666 (16,92)	.139 (3,53)
17W09600	W 9600	.960 (24,38)	.692 (17,58)	.126 (3,20)
17W09806	W 9806	.980 (24,89)	.343 (8,71)	.065 (1,65)
17W09841	W 9841	.984 (24,99)	.406 (10,31)	.125 (3,18)
17W09851	W 9851	.983 (24,97)	.360 (9,14)	.120 (3,05)
17W09852	W 9852	.990 (25,15)	.416 (10,57)	.060 (1,52)
17W09853	W 9853	1.000 (25,40)	.781 (19,84)	.075 (1,91)
17W09854	W 9854	1.000 (25,40)	.333 (8,46)	.385 (9,78)
17W09855	W 9855	.990 (25,15)	.337 (8,56)	.292 (7,42)
17W09856	W 9856	1.000 (25,40)	.339 (8,61)	.154 (3,91)
17W09900	W 9900	1.000 (25,40)	.375 (9,53)	.062 (1,57)
17W09901	W 9901	1 (25,40)	.76 (19,30)	.062 (1,57)
17W09902	W 9902	1.003 (25,48)	.485 (12,32)	.173 (4,39)
17W09903	W 9903	1.006 (25,55)	.189 (4,80)	.040 (1,02)
17W09904	W 9904	1.030 (26,16)	.550 (13,97)	.062 (1,57)
17W09930	W 9930	.993 (25,22)	.771 (19,58)	.124 (3,15)
17W09931	W 9931	1.000 (25,40)	.390 (9,91)	.250 (6,35)
17W09932	W 9932	1.000 (25,40)	.390 (9,91)	.175 (4,45)
17W09934	W 9934	1.000 (25,40)	.297 (7,54)	.063 (1,60)
17W10000	W 10000	1.000 (25,40)	.156 (3,96)	.062 (1,57)
17W10001	W 10001	1.000 (25,40)	.450 (11,43)	.125 (3,18)
17W10002	W 10002	1.000 (25,40)	.406 (10,31)	.062 (1,57)
17W10003	W 10003	1.00 (25,40)	.562 (14,27)	.125 (3,18)
17W10005	W 10005	1.000 (25,40)	.632 (16,05)	.185 (4,70)
17W10006	W 10006	1.000 (25,40)	.518 (13,16)	.080 (2,03)
17W10007	W 10007	1.000 (25,40)	.730 (18,54)	.062 (1,57)
17W10008	W 10008	1.000 (25,40)	.631 (16,03)	.128 (3,25)



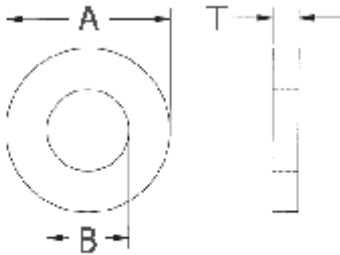


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

SECTION  
IV

New Sizes

## NYLON SPECIAL FLAT WASHERS



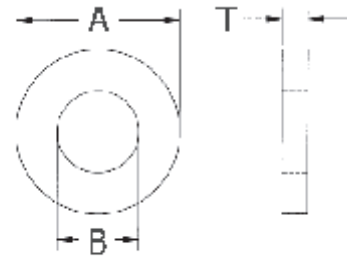
ITEM NUMBER	DESCRIPTION	A	B	T
17W10009	W 10009	1.000 (25,40)	.320 (8,13)	.375 (9,53)
17W10010	W 10010	1.000 (25,40)	.505 (12,83)	.125 (3,18)
17W10011	W 10011	1.004 (25,40)	.631 (16,03)	.065 (1,65)
17W10012	W 10012	1.000 (25,40)	.254 (6,45)	.325 (8,26)
17W10013	W 10013	1 (25,40)	.312 (7,92)	.032 (0,81)
17W10014	W 10014	1 (25,40)	5/16 (7,94)	3/16 (4,76)
17W10015	W 10015	1 (25,40)	17/64 (6,74)	5/16 (7,94)
17W10016	W 10016	1.000 (25,40)	.500 (12,70)	.100 (2,54)
17W10017	W 10017	1.000 (25,40)	.755 (19,18)	.175 (4,45)
17W10018	W 10018	1.500 (38,10)	1.015 (25,78)	.250 (6,35)
17W10019	W 10019	1" (25,40)	.665 (16,89)	.125 (3,18)
17W10020	W 10020	1.000 (25,40)	.326 (8,28)	.125 (3,18)
17W10021	W 10021	1.000 (25,40)	.194 (4,93)	.160 (4,06)
17W10022	W 10022	1.024 (26,01)	.563 (14,30)	.220 (5,59)
17W10023	W 10023	1" (25,40)	1/2" (12,70)	1/16" (1,59)
17W10024	W 10024	1.000 (25,40)	.093 (2,36)	.125 (3,18)
17W10025	W 10025	.995 (25,27)	.635 (16,13)	.250 (6,35)
17W10041	W 10041	1.000 (25,40)	.264 (6,71)	.070 (1,78)
17W10042	W 10042	.750 (19,05)	.515 (13,08)	.250 (6,35)
17W10043	W 10043	1.000 (25,40)	.265 (6,73)	.262 (6,65)
17W10060	W 10060	1.006 (25,52)	.189 (4,80)	.064 (1,63)
17W10100	W 10100	1.010 (25,65)	.410 (10,41)	.100 (2,54)
17W10311	W 10311	1.031 (26,19)	.844 (21,44)	.040 (1,02)
17W10570	W 10570	1.057 (26,85)	.812 (20,62)	.125 (3,18)
17W10571	W 10571	1 (25,40)	.844 (21,44)	.125 (3,18)
17W10620	W 10620	1.060 (26,92)	.740 (18,80)	.10 (2,54)
17W10622	W 10622	1.062 (26,97)	.740 (18,80)	.225 (5,72)
17W10625	W 10625	1.055 (26,80)	.406 (10,31)	1/4 (6,35)
17W10626	W 10626	1.102 (28,00)	.728 (18,49)	.039 (0,99)
17W10627	W 10627	1.135 (28,83)	1.022 (25,96)	.500 (12,70)
17W11000	W 11000	1.128 (28,65)	.605 (15,37)	.239 (6,07)
17W11001	W 11001	1.181 (30,00)	.413 (10,49)	.098 (2,49)
17W11002	W 11002	1.117 (28,37)	.875 (22,23)	.195 (4,95)
17W11140	W 11140	1.114 (28,30)	.840 (21,34)	.127 (3,23)
17W11202	W 11202	1.120 (28,45)	.390 (9,91)	.125 (3,18)
17W11203	W 11203	1.120 (28,45)	.503 (12,78)	.033 (0,84)
17W11204	W 11204	1.120 (28,45)	.635 (16,13)	.140 (3,56)
17W11210	W 11210	1-1/8 (28,58)	.320 (8,13)	.062 (1,57)
17W11211	W 11211	1.121 (28,47)	.316 (8,03)	.034 (0,86)
17W11212	W 11212	1.13 (28,70)	.63 (16,00)	1/16 (1,59)
17W11251	W 11251	1.120 (28,45)	.540 (13,72)	.125 (3,18)
17W11256	W 11256	1.125 (28,58)	.889 (22,58)	.060 (1,52)
17W11257	W 11257	1.125 (28,58)	.500 (12,70)	.062 (1,57)
17W11258	W 11258	1.125 (28,58)	.763 (19,38)	.125 (3,18)
17W11259	W 11259	1.125 (28,58)	.920 (23,37)	.126 (3,20)
17W11320	W 11320	1.132 (28,75)	.942 (23,93)	.130 (3,30)
17W11720	W 11720	1.17 (29,72)	.377 (9,58)	.125 (3,18)



## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W11750	W 11750	1.175 (29,85)	.310 (7,87)	.125 (3,18)
17W11800	W 11800	1.184 (30,07)	.477 (12,12)	.079 (2,01)
17W12030	W 12030	1.220 (30,99)	.502 (12,75)	.150 (3,81)
17W12031	W 12031	1.203 (30,56)	.984 (24,99)	.050 (1,27)
17W12032	W 12032	1.28 (32,57)	.88 (22,35)	.062 (1,57)
17W12181	W 12181	1.218 (30,94)	1.031 (26,19)	.040 (1,02)
17W12250	W 12250	1.225 (31,12)	.643 (16,33)	.100 (2,54)
17W12251	W 12251	1.245 (31,62)	1.001 (25,43)	.031 (0,79)
17W12501	W 12501	1.235 (31,37)	.365 (9,27)	.110 (2,79)
17W12502	W 12502	1.250 (31,75)	.875 (22,23)	.125 (3,18)
17W12503	W 12503	1.250 (31,75)	.765 (19,43)	.080 (2,03)
17W12504	W 12504	1.250 (31,75)	.516 (13,11)	.062 (1,57)
17W12505	W 12505	1.267 (32,18)	.390 (9,91)	.045 (1,14)
17W12506	W 12506	1.250 (31,75)	.250 (6,35)	.255 (6,48)
17W12507	W 12507	1.250 (31,75)	.805 (20,45)	.060 (1,52)
17W12508	W 12508	1.250 (31,75)	.281 (7,14)	.063 (1,60)
17W12509	W 12509	1 1/4 (31,75)	9/16 (14,29)	1/32 (0,79)
17W12510	W 12510	1.250 (31,75)	.812 (20,62)	.080 (2,03)
17W12511	W 12511	1 17/64 (32,13)	.390 (9,90)	.156 (3,96)
17W12512	W 12512	1.250 (31,75)	.380 (9,66)	.125 (3,18)
17W12513	W 12513	1.250 (31,75)	.310 (7,87)	.120 (3,05)
17W12515	W 12515	1.250 (31,75)	.226 (5,74)	.125 (3,18)
17W12516	W 12516	1 1/4" (31,75)	.260 (6,60)	.060 (1,52)
17W12517	W 12517	1.250 (31,75)	.839 (21,31)	.040 (1,02)
17W12518	W 12518	1.250 (31,75)	.437 (11,10)	.125 (3,18)
17W12525	W 12525	1.260 (32,00)	.340 (8,64)	.250 (6,35)
17W12527	W 12527	1.250 (31,75)	.257 (6,53)	.255 (6,48)
17W12528	W 12528	1.250 (31,75)	.270 (6,86)	.080 (2,03)
17W12562	W 12562	1 1/4 (31,75)	.250 (6,35)	.062 (1,57)
17W12580	W 12580	1.258 (31,95)	.226 (5,74)	.065 (1,65)
17W12593	W 12593	1.250 (31,75)	.100 (2,54)	.060 (1,52)
17W12604	W 12604	1.27 (32,36)	.400 (10,16)	.062 (1,57)
17W13101	W 13101	1.310 (33,27)	.645 (16,38)	.120 (3,05)
17W13119	W 13119	1.312 (33,32)	.510 (12,95)	.400 (10,16)
17W13120	W 13120	1.312 (33,32)	1.000 (25,40)	.191 (4,85)
17W13121	W 13121	1.312 (33,32)	1.088 (27,36)	.062 (1,57)
17W13122	W 13122	1.312 (33,32)	1.000 (25,40)	.125 (3,18)
17W13123	W 13123	1.375 (34,93)	.640 (16,26)	.090 (2,29)
17W13125	W 13125	1.312 (33,32)	1.026 (26,06)	.191 (4,85)
17W13126	W 13126	1.312 (33,32)	.625 (15,88)	.050 (1,27)
17W13748	W 13748	1.375 (34,93)	.250 (6,35)	.750 (19,05)
17W13749	W 13749	1.370 (24,80)	.380 (7,65)	.125 (3,18)
17W13750	W 13750	1.375 (34,93)	.250 (6,35)	.064 (7,63)
17W13751	W 13751	1.375 (34,93)	.525 (13,34)	.125 (3,18)
17W13752	W 13752	1.375 (34,93)	.510 (12,95)	.062 (1,57)
17W13753	W 13753	1.375 (34,93)	.656 (16,66)	.125 (3,18)
17W13754	W 13754	1.375 (34,93)	.330 (8,32)	.125 (3,18)

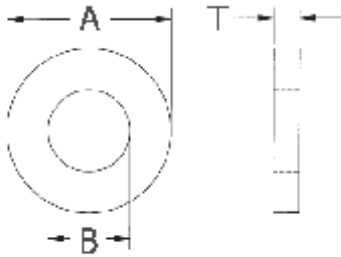


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

SECTION  
IV

New Sizes

## NYLON SPECIAL FLAT WASHERS



ITEM NUMBER	DESCRIPTION	A		B		T	
17W13755	W 13755	1.31	(33,27)	.938	(23,82)	.040	(1,02)
17W13756	W 13756	1.363	(34,62)	.523	(13,28)	.051	(1,30)
17W13757	W 13757	1.375	(34,93)	.450	(11,43)	.090	(2,29)
17W13758	W 13758	1.375	(34,93)	.530	(13,46)	.173	(4,39)
17W13759	W 13759	1.375	(34,93)	1.015	(25,78)	.125	(3,18)
17W14250	W 14250	1.420	(36,07)	.760	(19,30)	.100	(1,54)
17W14251	W 14251	1.395	(35,43)	.250	(6,35)	.118	(3,00)
17W14371	W 14371	1.437	(36,50)	1.000	(25,40)	.069	(1,75)
17W14501	W 14501	1.450	(36,83)	1.000	(25,40)	.063	(1,65)
17W14502	W 14502	1.450	(36,83)	.990	(25,15)	.120	(3,05)
17W14610	W 14610	1.460	(37,08)	1.180	(29,97)	.100	(2,54)
17W14681	W 14681	1.468	(37,29)	.515	(13,08)	.050	(1,27)
17W14930	W 14930	1.500	(38,10)	.437	(11,10)	.130	(3,30)
17W14931	W 14931	1.500	(38,10)	.505	(12,83)	.125	(3,18)
17W14932	W 14932	1.500	(38,10)	.265	(6,73)	.375	(9,53)
17W14933	W 14933	1 1/2	(38,10)	5/16	(7,94)	1/16	(1,59)
17W15000	W 15000	1.500	(38,10)	.188	(4,75)	.068	(1,72)
17W15001	W 15001	1.500	(38,10)	.665	(16,89)	.094	(2,39)
17W15002	W 15002	1.500	(38,10)	.500	(12,70)	.125	(3,18)
17W15003	W 15003	1.500	(38,10)	.375	(9,53)	.375	(9,53)
17W15004	W 15004	1.500	(38,10)	.755	(19,18)	.125	(3,18)
17W15005	W 15005	1.500	(38,10)	.696	(17,68)	.120	(3,05)
17W15006	W 15006	1.490	(37,85)	.521	(13,23)	.120	(3,05)
17W15007	W 15007	1.575	(40,01)	.659	(16,74)	.118	(3,00)
17W15008	W 15008	1.500	(38,10)	1.015	(25,78)	.080	(2,03)
17W15009	W 15009	1 1/2	(38,10)	1 1/4	(31,75)	1/8	(3,18)
17W15010	W 15010	1.493	(37,92)	.604	(15,34)	.220	(5,59)
17W15011	W 15011	1 1/2	(38,10)	.335	(8,51)	.125	(3,18)
17W15012	W 15012	1.500	(38,10)	.505	(12,83)	.130	(3,30)
17W15013	W 15013	1.500	(38,10)	.507	(12,88)	.250	(6,35)
17W15014	W 15014	1.468	(37,29)	1.010	(25,65)	.112	(2,84)
17W15031	W 15031	1.500	(38,10)	.515	(13,08)	.7/16	(11,11)
17W15050	W 15050	1.505	(38,23)	.750	(19,05)	.053	(1,35)
17W15051	W 15051	1.49	(37,85)	.81	(20,57)	.062	(1,57)
17W15052	W 15052	1.57	(39,87)	.512	(13,00)	.118	(3,00)
17W15053	W 15053	1.575	(40,01)	.795	(20,19)	.039	(0,99)
17W15400	W 15400	1.540	(39,12)	1.164	(29,57)	.192	(4,88)
17W15620	W 15620	1.563	(39,70)	1"	(25,40)	.062	(1,57)
17W15625	W 15625	1-9/16	(39,70)	.630	(16,00)	.062	(1,57)
17W16240	W 16240	1.619	(41,12)	1.495	(37,97)	.245	(6,22)
17W16250	W 16250	1.625	(41,28)	.531	(13,49)	.312	(7,92)
17W16251	W 16251	1.625	(41,28)	1.375	(34,93)	.110	(2,79)
17W16252	W 16252	1.625	(41,28)	1.0	(25,40)	.187	(4,75)
17W16253	W 16253	1.625	(41,28)	.940	(23,88)	.060	(1,52)
17W16300	W 16300	1.635	(41,53)	1.405	(35,69)	.093	(2,36)
17W16514	W 16514	1.650	(41,91)	1.395	(35,43)	.140	(3,56)
17W16900	W 16900	1.695	(43,05)	1.255	(31,88)	.065	(1,65)

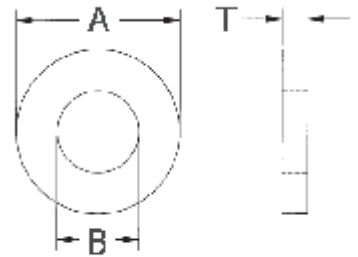




## New Sizes

### NYLON SPECIAL FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
17W17181	W 17181	1.718 (43,64)	.625 (15,88)	.050 (1,27)
17W17241	W 17241	1.724 (43,79)	1.500 (38,10)	.032 (0,81)
17W17242	W 17242	1.750 (44,45)	.812 (20,62)	.125 (3,18)
17W17251	W 17251	1.425 (36,90)	.697 (17,70)	.100 (2,54)
17W17252	W 17252	1.490 (37,85)	.765 (19,43)	.100 (2,54)
17W17500	W 17500	1.750 (44,45)	.928 (23,57)	.275 (6,99)
17W18001	W 18001	1.800 (45,72)	.948 (24,08)	.057 (1,45)
17W18500	W 18500	1.850 (46,99)	1.028 (26,11)	.120 (3,05)
17W19060	W 19060	1.906 (48,41)	1.500 (38,10)	.093 (2,36)
17W20001	W 20001	2.01 (51,05)	1.28 (32,51)	.135 (3,43)
17W20002	W 20002	2.000 (50,80)	.510 (12,95)	.060 (1,52)
17W20003	W 20003	2.000 (50,80)	1.525 (38,75)	.060 (1,52)
17W20004	W 20004	2.000 (50,80)	1.080 (27,43)	.160 (4,06)
17W20006	W 20006	2.000 (50,80)	.630 (16,00)	.125 (3,18)
17W20007	W 20007	2.000 (50,80)	.390 (9,91)	.062 (1,57)
17W20012	W 20012	1.985 (50,42)	1.525 (38,75)	.125 (3,18)
17W20013	W 20013	2.000 (50,80)	1.325 (33,66)	.310 (7,87)
17W20014	W 20014	2.250 (57,15)	1.410 (35,81)	.130 (3,30)
17W20015	W 20015	2.150 (54,61)	.275 (6,99)	.125 (3,18)
17W20062	W 20062	2 (50,80)	.805 (20,45)	.062 (1,57)
17W20600	W 20600	2.060 (52,32)	1.800 (45,72)	.055 (1,40)
17W21350	W 21350	2 9/64 (54,38)	1.760 (44,70)	.130 (3,30)
17W21850	W 21850	2.180 (55,37)	1.420 (36,07)	.050 (1,27)
17W22005	W 22005	2.205 (56,01)	1.720 (43,69)	.050 (1,27)
17W22500	W 22500	2 1/4 (57,15)	1 (25,40)	.075 (1,91)
17W22800	W 22800	2.275 (57,79)	1.275 (32,39)	.120 (3,05)
17W25001	W 25001	2.500 (63,50)	1.075 (27,31)	.125 (3,18)
17W25003	W 25003	2.500 (63,50)	1.750 (44,45)	.125 (3,18)
17W20007	W 20007	2.000 (50,80)	.390 (9,91)	.062 (1,57)
17W26802	W 26802	2.69 (68,33)	1.93 (49,02)	.125 (3,18)
17W29300	W 29300	2.930 (74,42)	.632 (16,05)	.150 (3,81)
17W29503	W 29503	2.935 (74,93)	1.125 (28,60)	.093 (2,54)
17W30000	W 30000	3.000 (76,20)	1.270 (32,26)	.093 (2,36)
17W30002	W 30002	2.970 (75,44)	1.490 (37,85)	.125 (3,18)
17W30003	W 30003	3.016 (76,61)	2.800 (71,12)	.122 (3,10)
17W30300	W 30300	3.600 (91,44)	3.030 (76,96)	.075 (1,91)
17W30062	W 30062	2-31/32 (75,41)	.805 (20,45)	1/16 (1,59)
17W30073	W 30073	3.016 (76,61)	2.80 (71,12)	.072 (1,83)
17W30093	W 30093	2.995 (76,07)	1.625 (41,28)	.093 (2,36)
17W31250	W 31250	3.132 (79,55)	.812 (20,62)	.125 (3,18)
17W32600	W 32600	3.260 (82,80)	2.620 (66,55)	.062 (1,57)
17W37500	W 37500	3.750 (95,25)	.375 (9,53)	.062 (1,57)

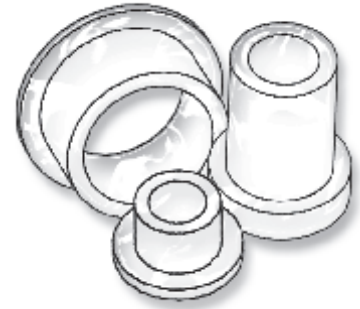


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

### NYLON SHOULDER WASHERS

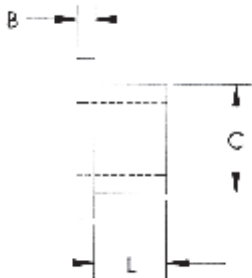
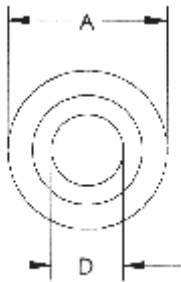
Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.



**New Sizes**

- ▶ THEY SEAL
- ▶ REDUCE VIBRATION
- ▶ ACT AS SPACERS AND GUIDES
- ▶ STRONG AND CORROSION RESISTANT

ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0152	SWS 152	3/64 (1,19)	.105 (2,67)	3/64 (1,19)	.084 (2,13)	.061 (1,55)
12SWS0155	SWS 155	.060 (1,52)	.125 (3,18)	.030 (0,76)	.080 (2,03)	.055 (1,40)
12SWS0156	SWS 156	1/32 (0,79)	.228 (5,79)	1/32 (0,79)	.122 (3,10)	.093 (2,36)
12SWS0157	SWS 157	.035 (0,89)	.235 (5,97)	.095 (2,41)	.147 (3,73)	.115 (2,92)
12SWS0158	SWS 158	.250 (6,35)	.187 (4,75)	.047 (1,19)	.120 (3,05)	.090 (2,29)
12SWS0159	SWS 159	.206 (5,28)	.187 (4,75)	.156 (3,96)	.156 (3,96)	.096 (2,44)
12SWS0180	SWS 180	.075 (1,91)	.181 (4,60)	3/64 (1,19)	.120 (3,05)	.045 (1,14)
12SWS0183	SWS 183	1/32 (0,79)	.182 (4,62)	5/64 (1,98)	.125 (3,18)	.085 (2,16)
12SWS0184	SWS 184	1/32 (0,79)	.189 (4,80)	1/16 (1,59)	.119 (3,02)	.095 (2,41)
12SWS0185	SWS 185	.106 (2,69)	.433 (10,10)	.161 (4,09)	.259 (6,58)	.197 (5,00)
12SWS0186	SWS 186	.088 (2,24)	.228 (5,79)	.039 (0,99)	.140 (3,56)	.098 (2,49)
12SWS0187	SWS 187	1/64 (0,41)	.187 (4,75)	1/32 (0,79)	.119 (3,02)	.089 (2,26)
12SWS0188	SWS 188	.030 (0,76)	.187 (4,75)	.030 (0,76)	.131 (3,33)	.090 (2,29)
12SWS0189	SWS 189	.020 (0,51)	.187 (4,75)	.030 (0,76)	.119 (3,02)	.090 (2,29)
12SWS0190	SWS 190	9/32 (7,14)	.197 (5,00)	1/32 (0,79)	.118 (3,00)	.075 (1,91)
12SWS0191	SWS 191	.100 (2,54)	.350 (8,89)	.090 (2,29)	.200 (5,08)	.140 (3,56)
12SWS0192	SWS 192	.052 (1,32)	.253 (6,43)	.047 (1,19)	.136 (3,45)	.120 (3,05)
12SWS0193	SWS 193	.040 (1,02)	.250 (6,35)	.031 (0,79)	.140 (3,56)	.093 (2,36)
12SWS0194	SWS 194	.046 (1,17)	.197 (5,00)	.027 (0,69)	.144 (3,66)	.118 (3,00)
12SWS0195	SWS 195	1/16 (1,59)	.195 (4,95)	1/32 (0,79)	.120 (3,05)	.093 (2,36)
12SWS0196	SWS 196	3/64 (1,19)	.240 (6,09)	1/16 (1,59)	.135 (3,42)	.114 (2,89)
12SWS0197	SWS 197	1/32 (0,79)	.216 (5,48)	3/64 (1,19)	.135 (3,42)	.115 (2,92)
12SWS0198	SWS 198	1/32 (0,79)	.200 (5,08)	1/32 (0,79)	.140 (3,56)	.115 (2,92)
12SWS0199	SWS 199	5/64 (1,98)	.187 (4,75)	1/32 (0,79)	.119 (3,02)	.063 (1,60)
12SWS0200	SWS 200	1/32 (0,79)	.200 (5,08)	5/64 (1,98)	.135 (3,43)	.116 (2,95)
12SWS0201	SWS 201	3/16 (4,76)	.187 (4,75)	1/32 (0,79)	.119 (3,02)	.063 (1,60)
12SWS0202	SWS 202	5/64 (1,98)	.205 (5,21)	1/32 (0,79)	.125 (3,18)	.093 (2,36)
12SWS0203	SWS 203	7/64 (2,77)	.205 (5,21)	1/32 (0,79)	.125 (3,18)	.093 (2,36)
12SWS0204	SWS 204	3/16 (4,76)	.205 (5,21)	1/32 (0,79)	.125 (3,18)	.093 (2,36)
12SWS0205	SWS 205	3/64 (1,19)	.202 (5,13)	1/64 (0,41)	.145 (3,68)	.120 (3,05)
12SWS0206	SWS 206	1/16 (1,59)	.224 (5,69)	1/32 (0,79)	.154 (3,91)	.120 (3,05)
12SWS0207	SWS 207	5/32 (3,97)	.242 (6,15)	3/64 (1,19)	.135 (3,43)	.110 (2,79)
12SWS0208	SWS 208	1/16 (1,59)	.200 (5,08)	1/32 (0,79)	.120 (3,05)	.093 (2,36)
12SWS0209	SWS 209	3/64 (1,19)	.210 (5,33)	1/64 (0,41)	.145 (3,68)	.120 (3,05)
12SWS0210	SWS 210	3/64 (1,19)	.230 (5,84)	1/64 (0,41)	.142 (3,61)	.122 (3,10)
12SWS0211	SWS 211	1/32 (0,79)	.218 (5,54)	3/64 (1,19)	.135 (3,43)	.115 (2,92)
12SWS0212	SWS 212	7/16 (11,11)	.224 (5,69)	1/32 (0,79)	.154 (3,91)	.120 (3,05)
12SWS0213	SWS 213	3/64 (1,19)	.200 (5,08)	1/32 (0,79)	.138 (3,51)	.109 (2,77)
12SWS0214	SWS 214	1/32 (0,79)	.235 (5,97)	3/64 (1,19)	.137 (3,48)	.115 (2,77)
12SWS0215	SWS 215	7/32 (5,55)	.250 (6,35)	11/64 (4,37)	.150 (3,81)	.115 (2,92)
12SWS0216	SWS 216	1/32 (0,79)	.240 (6,10)	1/32 (0,79)	.150 (3,81)	.098 (2,49)
12SWS0217	SWS 217	1/32 (0,79)	.228 (5,79)	3/64 (1,19)	.138 (3,51)	.100 (2,54)
12SWS0218	SWS 218	1/8 (3,18)	.242 (6,15)	3/64 (1,19)	.140 (3,56)	.115 (2,92)
12SWS0219	SWS 219	1/8 (3,18)	.290 (7,37)	1/64 (0,41)	.250 (6,35)	.193 (4,90)
12SWS0220	SWS 220	3/64 (1,19)	.234 (5,94)	3/64 (1,19)	.147 (3,73)	.115 (2,92)

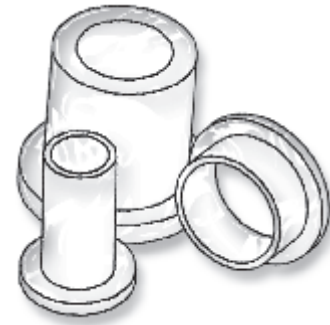


## NYLON SHOULDER WASHERS

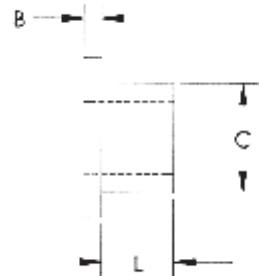
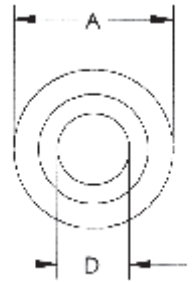
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- ▶ STRONG AND CORROSION RESISTANT

**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0221	SWS 221	3/32 (2,38)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
12SWS0222	SWS 222	1/8 (3,18)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
12SWS0223	SWS 223	1/32 (0,79)	.250 (6,35)	1/16 (1,59)	.187 (4,75)	.140 (3,56)
12SWS0224	SWS 224	3/64 (1,19)	.260 (6,60)	1/16 (1,59)	.190 (4,83)	.140 (3,56)
12SWS0225	SWS 225	43/64 (17,02)	.250 (6,35)	3/64 (1,19)	.187 (4,75)	.095 (2,41)
12SWS0226	SWS 226	1/16 (1,59)	.250 (6,35)	1/32 (0,79)	.143 (3,63)	.118 (3,00)
12SWS0227	SWS 227	1/32 (0,79)	.257 (6,53)	1/16 (1,59)	.187 (4,75)	.141 (3,58)
12SWS0228	SWS 228	1/64 (0,41)	.260 (6,60)	1/64 (0,41)	.154 (3,91)	.095 (2,41)
12SWS0229	SWS 229	1/8 (3,18)	.250 (6,35)	3/64 (1,19)	.139 (3,53)	.118 (3,00)
12SWS0230	SWS 230	5/32 (3,97)	.265 (6,73)	1/32 (0,79)	.205 (5,21)	.142 (3,61)
12SWS0232	SWS 232	5/64 (1,98)	.253 (6,42)	3/64 (1,19)	.136 (3,45)	.120 (3,05)
12SWS0233	SWS 233	1/32 (0,79)	.203 (5,16)	3/64 (1,19)	.140 (3,56)	.115 (2,92)
12SWS0234	SWS 234	.050 (1,40)	.239 (6,07)	.020 (0,51)	.139 (3,53)	.116 (2,95)
12SWS0235	SWS 235	.033 (0,84)	.210 (5,33)	.042 (1,07)	.143 (3,63)	.116 (2,95)
12SWS0236	SWS 236	.020 (0,51)	.250 (6,35)	.030 (0,76)	.150 (3,81)	.116 (2,96)
12SWS0237	SWS 237	.040 (1,02)	.235 (5,97)	.047 (1,19)	.147 (3,73)	.115 (2,92)
12SWS0238	SWS 238	.030 (0,76)	.230 (5,84)	.040 (1,02)	.150 (3,81)	.125 (3,18)
12SWS0239	SWS 239	.090 (2,29)	.224 (5,69)	.028 (0,71)	.154 (3,91)	.120 (3,05)
12SWS0240	SWS 240	.100 (2,54)	.230 (5,84)	.025 (0,64)	.190 (4,83)	.150 (3,81)
12SWS0241	SWS 241	.155 (3,94)	.224 (5,69)	.028 (0,71)	.154 (3,91)	.120 (3,05)
12SWS0242	SWS 242	3/32 (2,38)	.635 (16,13)	9/64 (3,57)	.425 (10,80)	.201 (5,11)
12SWS0243	SWS 243	.063 (1,60)	15/64 (5,94)	.025 (0,64)	.164 (4,17)	.130 (3,30)
12SWS0244	SWS 244	.031 (0,79)	.234 (5,94)	.025 (0,64)	.145 (3,68)	.115 (2,92)
12SWS0245	SWS 245	.093 (2,36)	.235 (5,97)	.250 (6,35)	.145 (3,68)	.115 (2,92)
12SWS0246	SWS 246	.027 (0,69)	.240 (6,10)	.047 (1,19)	.134 (3,40)	.115 (2,92)
12SWS0247	SWS 247	3/64 (1,19)	.252 (6,40)	3/64 (1,19)	.140 (3,56)	.115 (2,92)
12SWS0248	SWS 248	.090 (2,29)	.290 (7,37)	.060 (1,52)	.205 (5,21)	.125 (3,18)
12SWS0249	SWS 249	.177 (4,50)	.244 (6,20)	.040 (1,02)	.157 (3,99)	.118 (3,00)
12SWS0250	SWS 250	.156 (3,96)	.265 (6,73)	.118 (3,00)	.205 (5,21)	.142 (3,61)
12SWS0251	SWS 251	.031 (0,79)	.250 (6,35)	.031 (0,79)	.154 (3,91)	.093 (2,36)
12SWS0252	SWS 252	3/64 (1,19)	.240 (6,10)	.130 (3,30)	.138 (3,51)	.114 (2,90)
12SWS0253	SWS 253	.052 (1,32)	.200 (5,08)	.078 (1,98)	.135 (3,43)	.120 (3,05)
12SWS0254	SWS 254	.281 (7,13)	.203 (5,16)	.040 (1,02)	.156 (3,96)	.100 (2,54)
12SWS0255	SWS 255	1/8 (2,94)	.500 (12,70)	1/8 (2,94)	.375 (9,53)	.285 (7,14)
12SWS0256	SWS 256	.100 (2,54)	.243 (6,17)	.060 (1,52)	.199 (5,05)	.125 (3,18)
12SWS0280	SWS 280	.185 (4,70)	.280 (7,11)	.042 (1,07)	.150 (3,81)	.112 (2,84)
12SWS0290	SWS 290	1/32 (0,79)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
12SWS0291	SWS 291	.375 (9,53)	.290 (7,37)	.234 (5,94)	.170 (4,32)	.140 (3,56)
12SWS0296	SWS 296	.375 (9,53)	.499 (12,67)	.125 (3,18)	.295 (7,49)	.187 (4,75)
12SWS0300	SWS 300	.090 (2,29)	.250 (6,35)	.050 (1,27)	.150 (3,81)	.120 (3,05)
12SWS0301	SWS 301	.065 (1,65)	.250 (6,35)	.030 (0,76)	.140 (3,56)	.098 (2,49)
12SWS0302	SWS 302	.039 (0,99)	.210 (5,33)	.032 (0,81)	.141 (3,58)	.118 (3,00)
12SWS0304	SWS 304	.453 (11,51)	.256 (6,50)	.055 (1,40)	.173 (4,39)	.118 (3,00)
12SWS0305	SWS 305	.120 (3,05)	.250 (6,35)	.050 (1,27)	.135 (3,43)	.118 (3,00)
12SWS0306	SWS 306	.062 (1,57)	.250 (6,35)	.031 (0,79)	.150 (3,81)	.116 (2,95)



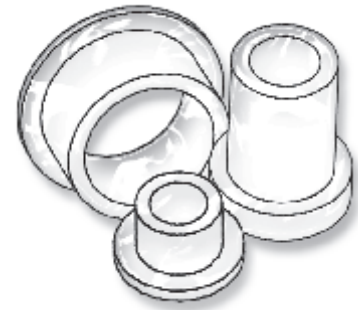


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

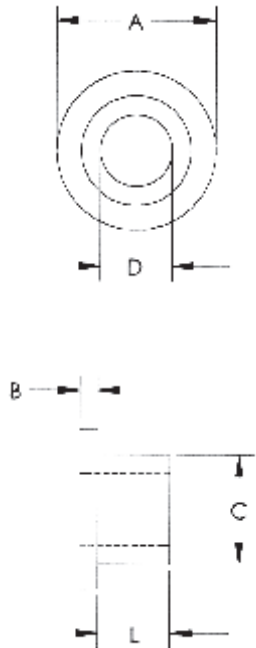
### NYLON SHOULDER WASHERS

Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.



- ▶ THEY SEAL
- ▶ REDUCE VIBRATION
- ▶ ACT AS SPACERS AND GUIDES
- ▶ STRONG AND CORROSION RESISTANT

### New Sizes



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0310	SWS 310	.250 (6,35)	.250 (6,35)	.047 (1,19)	.156 (3,96)	.125 (3,18)
12SWS0311	SWS 311	.437 (11,10)	.260 (6,60)	.032 (0,81)	.158 (4,01)	.125 (3,18)
12SWS0312	SWS 312	.190 (4,83)	.575 (14,61)	.030 (0,76)	.365 (9,27)	.312 (7,92)
12SWS0364	SWS 364	.453 (11,51)	.364 (9,24)	.055 (1,40)	.244 (6,20)	.197 (5,00)
12SWS0380	SWS 380	.070 (1,78)	.255 (6,48)	.040 (1,02)	.145 (3,68)	.120 (3,05)
12SWS0393	SWS 393	.380 (9,65)	.400 (10,16)	.032 (0,81)	.200 (5,08)	.132 (3,35)
12SWS0394	SWS 394	.226 (5,74)	.276 (7,01)	.030 (0,76)	.236 (5,99)	.177 (4,50)
12SWS0395	SWS 395	.025 (0,64)	.250 (6,35)	.031 (0,79)	.122 (3,10)	.093 (2,36)
12SWS0396	SWS 396	.040 (1,02)	.250 (6,35)	.047 (1,19)	.140 (3,56)	.102 (2,59)
12SWS0397	SWS 397	.032 (0,81)	.250 (6,35)	.063 (1,60)	.150 (3,81)	.116 (2,95)
12SWS0398	SWS 398	.296 (7,52)	.290 (7,37)	.047 (1,19)	.170 (4,32)	.140 (3,56)
12SWS0399	SWS 399	.050 (1,27)	.250 (6,35)	.031 (0,79)	.185 (4,70)	.120 (3,02)
12SWS0400	SWS 400	3/32 (2,38)	.235 (5,97)	3/64 (1,19)	.140 (3,56)	.115 (2,92)
12SWS0401	SWS 401	1/4 (6,35)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
12SWS0402	SWS 402	3/64 (1,19)	.240 (6,09)	1/16 (1,59)	.138 (3,50)	.114 (2,89)
12SWS0403	SWS 403	1/16 (1,59)	.312 (7,93)	1/16 (1,59)	.149 (3,79)	.115 (2,92)
12SWS0404	SWS 404	3/32 (2,38)	.312 (7,93)	1/16 (1,59)	.149 (3,79)	.115 (2,92)
12SWS0405	SWS 405	1/64 (0,41)	.250 (6,35)	3/64 (1,19)	.124 (3,15)	.111 (2,82)
12SWS0406	SWS 406	1/32 (0,79)	.252 (6,40)	1/32 (0,79)	.186 (4,72)	.140 (3,56)
12SWS0407	SWS 407	1/32 (0,79)	.250 (6,35)	1/32 (0,79)	.186 (4,72)	.139 (3,53)
12SWS0408	SWS 408	.250 (6,35)	.235 (5,97)	.032 (0,81)	.120 (3,05)	.090 (2,29)
12SWS0409	SWS 409	1/8 (3,18)	.250 (6,35)	1/32 (0,79)	.195 (4,95)	.130 (3,30)
12SWS0410	SWS 410	1/32 (0,79)	.250 (6,35)	3/64 (1,19)	.114 (2,90)	.100 (2,54)
12SWS0411	SWS 411	1/16 (1,59)	.250 (6,35)	1/32 (0,79)	.143 (3,63)	.115 (2,92)
12SWS0412	SWS 412	1/16 (1,59)	.250 (6,35)	1/32 (0,79)	.169 (4,29)	.102 (2,59)
12SWS0413	SWS 413	3/32 (2,38)	.250 (6,35)	3/64 (1,19)	.114 (2,90)	.100 (2,54)
12SWS0414	SWS 414	1/8 (3,18)	.281 (7,14)	3/32 (2,38)	.158 (4,01)	.093 (2,36)
12SWS0415	SWS 415	3/16 (4,76)	.293 (7,44)	3/64 (1,19)	.218 (5,53)	.138 (3,51)
12SWS0416	SWS 416	11/64 (4,37)	.250 (6,35)	3/64 (1,19)	.186 (4,72)	.126 (3,20)
12SWS0417	SWS 417	1/64 (0,41)	.310 (7,87)	1/16 (1,59)	.183 (4,65)	.139 (3,53)
12SWS0418	SWS 418	1/64 (0,41)	.312 (7,93)	1/16 (1,59)	.187 (4,75)	.115 (2,92)
12SWS0419	SWS 419	1/32 (0,79)	.312 (7,93)	1/32 (0,79)	.185 (4,70)	.140 (3,56)
12SWS0420	SWS 420	1/16 (1,59)	.312 (7,93)	1/16 (1,59)	.170 (4,32)	.120 (3,05)
12SWS0421	SWS 421	3/64 (1,19)	.312 (7,93)	1/16 (1,59)	.170 (4,32)	.127 (3,23)
12SWS0422	SWS 422	1/8 (3,18)	.312 (7,93)	3/64 (1,19)	.234 (5,94)	.144 (3,66)
12SWS0423	SWS 423	1/64 (0,41)	.250 (6,35)	1/32 (0,79)	.150 (3,81)	.116 (2,95)
12SWS0424	SWS 424	7/32 (5,55)	.295 (7,49)	1/32 (0,79)	.234 (5,94)	.140 (3,56)
12SWS0425	SWS 425	1/32 (0,79)	.312 (7,93)	1/16 (1,59)	.250 (6,35)	.196 (4,98)
12SWS0426	SWS 426	11/64 (4,37)	.250 (6,35)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
12SWS0427	SWS 427	3/64 (1,19)	.250 (6,35)	1/32 (0,79)	.185 (4,70)	.116 (2,95)
12SWS0428	SWS 428	7/64 (2,77)	.242 (6,15)	3/64 (1,19)	.140 (3,56)	.115 (2,92)
12SWS0429	SWS 429	9/64 (3,58)	.250 (6,35)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
12SWS0430	SWS 430	3/16 (4,76)	.312 (7,93)	1/16 (1,59)	.250 (6,35)	.156 (3,96)
12SWS0431	SWS 431	3/32 (2,38)	.240 (6,10)	1/32 (0,79)	.185 (4,70)	.125 (3,18)
12SWS0432	SWS 432	3/64 (1,19)	.250 (6,35)	3/64 (1,19)	.143 (3,63)	.113 (2,87)

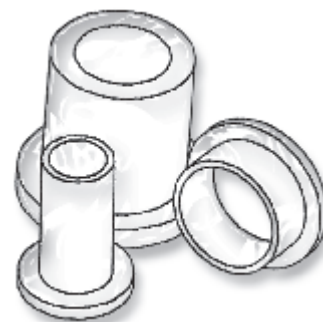


## NYLON SHOULDER WASHERS

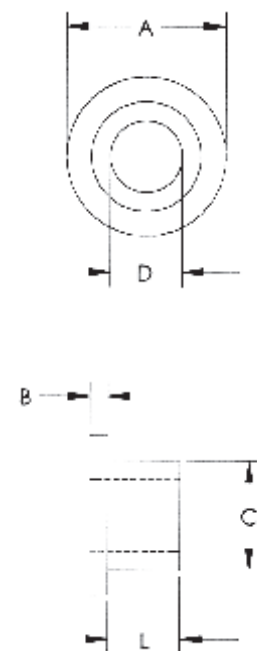
Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.

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- ▶ STRONG AND CORROSION RESISTANT

**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0433	SWS 433	7/64 (2,77)	.250 (6,35)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
12SWS0434	SWS 434	1/16 (1,59)	.312 (7,93)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
12SWS0435	SWS 435	3/64 (1,19)	.250 (6,35)	1/16 (1,59)	.185 (4,70)	.116 (2,95)
12SWS0436	SWS 436	1/32 (0,79)	.240 (6,10)	3/64 (1,19)	.139 (3,53)	.115 (2,92)
12SWS0437	SWS 437	1/32 (0,79)	.265 (6,73)	1/32 (0,79)	.157 (3,99)	.126 (3,20)
12SWS0438	SWS 438	1/32 (0,79)	.312 (7,93)	1/16 (1,59)	.187 (4,75)	.141 (3,58)
12SWS0439	SWS 439	1/16 (1,59)	.250 (6,35)	3/64 (1,19)	.138 (3,50)	.120 (3,05)
12SWS0440	SWS 440	5/16 (7,94)	.312 (7,93)	1/32 (0,79)	.154 (3,91)	.130 (3,30)
12SWS0441	SWS 441	3/16 (4,76)	.312 (7,93)	1/32 (0,79)	.234 (5,94)	.184 (4,67)
12SWS0442	SWS 442	7/32 (5,54)	.296 (7,52)	1/32 (0,79)	.235 (5,97)	.135 (3,43)
12SWS0443	SWS 443	.156 (3,96)	.252 (6,40)	.047 (1,19)	.140 (3,56)	.115 (2,92)
12SWS0444	SWS 444	1/16 (1,59)	.300 (7,62)	3/64 (1,19)	.194 (4,93)	.160 (4,06)
12SWS0445	SWS 445	1/32 (0,79)	.313 (7,95)	1/32 (0,79)	.175 (4,45)	.143 (3,63)
12SWS0446	SWS 446	1/64 (0,41)	.312 (7,93)	3/64 (1,19)	.160 (4,06)	.097 (2,46)
12SWS0448	SWS 448	3/32 (2,38)	.312 (7,93)	3/64 (1,19)	.187 (4,75)	.128 (3,25)
12SWS0449	SWS 449	1/32 (0,79)	.313 (7,95)	1/32 (0,79)	.219 (5,56)	.124 (3,15)
12SWS0450	SWS 450	1/16 (1,59)	.312 (7,93)	3/64 (1,19)	.234 (5,94)	.144 (3,66)
12SWS0451	SWS 451	1/32 (0,79)	.315 (8,00)	.030 (0,76)	.150 (3,81)	.115 (2,92)
12SWS0452	SWS 452	1/32 (0,79)	.312 (7,93)	3/64 (1,19)	.203 (5,16)	.120 (3,05)
12SWS0453	SWS 453	.027 (0,69)	.312 (7,93)	.035 (0,89)	.187 (4,75)	.140 (3,56)
12SWS0454	SWS 454	1/32 (0,79)	.313 (7,95)	1/32 (0,79)	.219 (5,56)	.136 (3,45)
12SWS0455	SWS 455	3/64 (1,19)	.315 (8,00)	1/32 (0,79)	.185 (4,70)	.126 (3,20)
12SWS0456	SWS 456	3/64 (1,19)	.250 (6,35)	3/64 (1,19)	.156 (3,96)	.115 (2,92)
12SWS0457	SWS 457	.031 (0,79)	.250 (6,35)	.031 (0,79)	.187 (4,75)	.120 (3,05)
12SWS0458	SWS 458	.078 (1,98)	.312 (7,92)	.031 (0,79)	.185 (4,70)	.128 (3,25)
12SWS0459	SWS 459	15/64 (5,94)	.291 (7,39)	1/16 (1,59)	.154 (3,91)	.120 (3,05)
12SWS0460	SWS 460	.125 (3,18)	.290 (7,37)	.047 (1,19)	.170 (4,32)	.140 (3,56)
12SWS0462	SWS 462	.031 (0,79)	.312 (7,93)	.063 (1,60)	.187 (4,75)	.123 (3,12)
12SWS0463	SWS 463	.050 (1,27)	.312 (7,93)	.046 (1,17)	.229 (5,82)	.163 (4,13)
12SWS0464	SWS 464	19/64 (7,52)	.250 (6,35)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
12SWS0465	SWS 465	.060 (1,52)	.312 (7,93)	.030 (0,76)	.189 (4,80)	.144 (3,66)
12SWS0466	SWS 466	.025 (0,64)	.307 (7,80)	.065 (0,89)	.154 (3,91)	.093 (2,36)
12SWS0467	SWS 467	.062 (1,57)	.312 (7,93)	.063 (1,60)	.126 (3,20)	.091 (0,23)
12SWS0468	SWS 468	.250 (6,35)	.312 (7,93)	.060 (1,52)	.210 (5,33)	.142 (3,61)
12SWS0469	SWS 469	.122 (3,10)	.388 (9,85)	.187 (4,75)	.207 (5,26)	.160 (4,06)
12SWS0470	SWS 470	.165 (4,19)	.290 (7,37)	.047 (1,19)	.200 (5,08)	.145 (3,68)
12SWS0472	SWS 472	.027 (0,69)	.316 (8,03)	.096 (2,44)	.181 (4,60)	.150 (3,81)
12SWS0473	SWS 473	.600 (15,24)	.290 (7,39)	.047 (1,19)	.210 (5,33)	.140 (3,56)
12SWS0474	SWS 474	.312 (7,92)	.312 (7,92)	.058 (1,47)	.185 (4,70)	.125 (3,18)
12SWS0475	SWS 475	.100 (2,54)	.312 (7,93)	.045 (1,14)	.150 (3,81)	.114 (2,90)
12SWS0476	SWS 476	.052 (1,32)	.300 (7,62)	.035 (0,89)	.087 (2,21)	.055 (1,40)
12SWS0477	SWS 477	.067 (1,70)	.308 (7,82)	.045 (1,14)	.183 (4,65)	.132 (3,35)
12SWS0478	SWS 478	.750 (19,05)	.325 (8,26)	.047 (1,19)	.220 (5,59)	.140 (3,56)
12SWS0479	SWS 479	.187 (4,75)	5/16 (7,94)	.062 (1,58)	.172 (4,37)	.147 (3,73)
12SWS0480	SWS 480	.100 (2,54)	.310 (7,87)	.037 (0,94)	.242 (6,15)	.164 (4,17)



# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

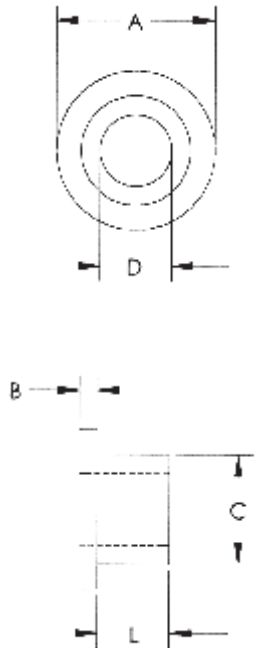
### NYLON SHOULDER WASHERS

Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.



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**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0601	SWS 601	1/4 (6,35)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
12SWS0602	SWS 602	1/32 (0,79)	.330 (8,38)	1/16 (1,59)	.206 (5,23)	.141 (3,58)
12SWS0603	SWS 603	.062 (1,57)	.300 (7,62)	.050 (1,27)	.180 (4,57)	.150 (3,81)
12SWS0604	SWS 604	.125 (3,18)	.300 (7,62)	.047 (1,19)	.194 (4,93)	.160 (4,06)
12SWS0605	SWS 605	3/64 (1,19)	.328 (8,33)	3/64 (1,19)	.218 (5,54)	.146 (3,71)
12SWS0606	SWS 606	3/64 (1,19)	.340 (8,64)	5/64 (1,98)	.250 (6,35)	.140 (3,56)
12SWS0607	SWS 607	1/16 (1,59)	.289 (7,34)	1/16 (1,59)	.215 (5,46)	.093 (2,36)
12SWS0608	SWS 608	3/64 (1,19)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
12SWS0609	SWS 609	3/64 (1,19)	.312 (7,93)	1/32 (0,79)	.185 (4,70)	.116 (2,95)
12SWS0610	SWS 610	1/16 (1,59)	.348 (8,83)	1/32 (0,79)	.290 (7,36)	.256 (6,50)
12SWS0612	SWS 612	3/32 (2,38)	.316 (8,03)	3/64 (1,19)	.158 (4,01)	.116 (2,95)
12SWS0614	SWS 614	1/32 (0,79)	.324 (8,23)	1/16 (1,59)	.204 (5,18)	.140 (3,56)
12SWS0615	SWS 615	.065 (1,65)	.320 (8,13)	.050 (1,27)	.182 (4,62)	.141 (3,58)
12SWS0616	SWS 616	.126 (3,20)	.320 (8,13)	.039 (0,99)	.250 (6,35)	.218 (5,54)
12SWS0621	SWS 621	3/32 (2,38)	.340 (8,64)	1/16 (1,59)	.220 (5,59)	.175 (4,45)
12SWS0622	SWS 622	.387 (9,83)	.372 (9,45)	.062 (1,57)	.201 (5,11)	.176 (4,47)
12SWS0628	SWS 628	3/8 (9,53)	.345 (8,76)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
12SWS0629	SWS 629	3/64 (1,19)	.345 (8,76)	1/16 (1,59)	.209 (5,30)	.171 (4,34)
12SWS0630	SWS 630	13/64 (5,16)	.368 (9,34)	5/64 (1,98)	.146 (3,70)	.115 (2,92)
12SWS0632	SWS 632	1/16 (1,59)	.349 (8,87)	3/64 (1,19)	.248 (6,30)	.140 (3,56)
12SWS0633	SWS 633	.060 (1,52)	.349 (8,87)	.050 (1,27)	.260 (6,60)	.133 (3,38)
12SWS0634	SWS 634	11/64 (4,37)	.350 (8,89)	1/64 (0,41)	.300 (7,62)	.112 (2,84)
12SWS0635	SWS 635	.070 (1,78)	.375 (9,53)	.04 (1,02)	.190 (4,83)	.125 (3,18)
12SWS0636	SWS 636	.120 (3,05)	.344 (8,74)	.063 (1,60)	.235 (5,97)	.175 (4,45)
12SWS0798	SWS 798	.085 (2,16)	.344 (8,74)	.063 (1,60)	.235 (5,97)	.175 (4,45)
12SWS0799	SWS 799	3/64 (1,19)	.344 (8,74)	7/64 (2,77)	.189 (4,80)	.141 (3,58)
12SWS0800	SWS 800	9/64 (3,58)	.344 (8,74)	1/16 (1,59)	.210 (5,33)	.170 (4,32)
12SWS0801	SWS 801	3/8 (9,53)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
12SWS0802	SWS 802	1/16 (1,59)	.375 (9,53)	1/32 (0,79)	.195 (4,95)	.171 (4,34)
12SWS0803	SWS 803	13/32 (10,32)	.510 (12,95)	1/16 (1,59)	.250 (6,35)	.171 (4,34)
12SWS0804	SWS 804	.177 (4,50)	.355 (9,02)	.020 (0,51)	.315 (8,00)	.236 (5,99)
12SWS0805	SWS 805	.283 (7,19)	.370 (9,40)	.067 (1,70)	.242 (6,15)	.195 (4,95)
12SWS0806	SWS 806	.250 (6,35)	.344 (8,74)	.032 (0,81)	.205 (5,21)	.173 (4,39)
12SWS0807	SWS 807	.046 (1,17)	.359 (9,12)	.060 (1,52)	.300 (7,62)	.227 (5,77)
12SWS0808	SWS 808	1/8 (3,18)	.375 (9,53)	1/16 (1,59)	.280 (7,11)	.201 (5,10)
12SWS0809	SWS 809	5/32 (3,97)	.378 (9,60)	5/64 (1,98)	.194 (4,92)	.116 (2,94)
12SWS0810	SWS 810	1/32 (0,79)	.375 (9,53)	1/16 (1,59)	.250 (6,35)	.171 (4,34)
12SWS0811	SWS 811	3/64 (1,19)	.375 (9,53)	3/64 (1,19)	.245 (6,22)	.192 (4,88)
12SWS0812	SWS 812	3/32 (2,38)	.375 (9,53)	1/32 (0,79)	.260 (6,60)	.220 (5,59)
12SWS0813	SWS 813	7/64 (2,77)	.375 (9,53)	3/64 (1,19)	.195 (4,95)	.136 (3,45)
12SWS0814	SWS 814	3/64 (1,19)	.375 (9,53)	5/64 (1,98)	.244 (6,20)	.150 (3,81)
12SWS0815	SWS 815	3/32 (2,38)	.375 (9,53)	1/32 (0,79)	.185 (4,70)	.140 (3,56)
12SWS0816	SWS 816	1/32 (0,79)	.375 (9,53)	1/32 (0,79)	.250 (6,35)	.169 (4,29)
12SWS0817	SWS 817	3/64 (1,19)	.375 (9,53)	1/16 (1,59)	.218 (5,54)	.140 (3,56)
12SWS0818	SWS 818	1/32 (0,79)	.375 (9,53)	1/16 (1,59)	.246 (6,25)	.167 (4,24)



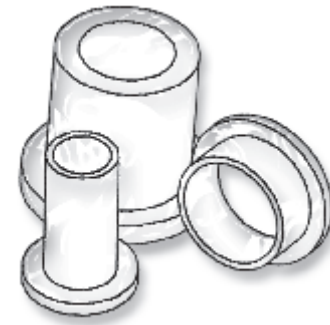


## NYLON SHOULDER WASHERS

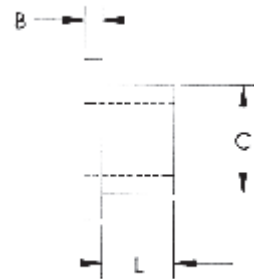
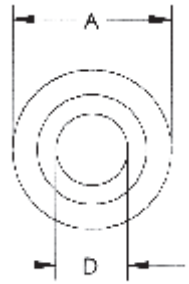
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**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0819	SWS 819	1/16 (1,59)	.437 (11,10)	1/16 (1,59)	.313 (7,95)	.188 (4,78)
12SWS0820	SWS 820	1/32 (0,79)	.375 (9,53)	1/16 (1,59)	.185 (4,70)	.140 (3,56)
12SWS0821	SWS 821	1/32 (0,79)	.381 (9,68)	1/16 (1,59)	.308 (7,82)	.196 (4,98)
12SWS0822	SWS 822	1/32 (0,79)	.374 (9,50)	1/32 (0,79)	.246 (6,24)	.141 (3,58)
12SWS0823	SWS 823	.099 (2,51)	.375 (9,53)	.040 (1,02)	.250 (6,35)	.171 (4,34)
12SWS0824	SWS 824	.05 (1,27)	3/8 (9,53)	.06 (1,52)	.245 (6,22)	.140 (3,56)
12SWS0825	SWS 825	.060 (1,52)	.375 (9,53)	.030 (0,76)	.245 (6,22)	.145 (3,68)
12SWS0826	SWS 826	.062 (1,57)	.500 (12,70)	1/16 (1,59)	.308 (7,82)	.196 (4,98)
12SWS0827	SWS 827	.046 (1,17)	.375 (9,53)	.040 (1,02)	.250 (6,35)	.171 (4,34)
12SWS0828	SWS 828	.125 (3,18)	.380 (9,65)	.065 (1,65)	.254 (6,45)	.196 (4,98)
12SWS0829	SWS 829	1/8 (3,18)	.370 (9,40)	.110 (2,79)	.307 (7,80)	.255 (6,48)
12SWS0830	SWS 830	.032 (0,81)	.375 (9,53)	.062 (1,57)	.187 (4,75)	.147 (3,73)
12SWS0831	SWS 831	.250 (6,35)	.375 (9,53)	.040 (1,02)	.250 (6,35)	.171 (4,34)
12SWS0832	SWS 832	.043 (1,09)	.375 (9,53)	.035 (0,76)	.257 (6,53)	.193 (4,90)
12SWS0833	SWS 833	.050 (1,27)	.375 (9,53)	.031 (0,79)	.243 (6,17)	.199 (5,05)
12SWS0834	SWS 834	.015 (0,38)	.375 (9,53)	.057 (1,45)	.304 (7,72)	.200 (5,08)
12SWS0835	SWS 835	.050 (1,27)	.377 (9,58)	.050 (1,27)	.245 (6,22)	.155 (3,94)
12SWS0836	SWS 836	.030 (0,76)	.375 (9,53)	.063 (1,60)	.250 (6,35)	.174 (4,42)
12SWS0837	SWS 837	.031 (0,79)	.375 (9,53)	.062 (1,57)	.187 (4,75)	.093 (2,36)
12SWS0838	SWS 838	.180 (4,57)	.350 (8,89)	.067 (1,70)	.240 (6,10)	.188 (4,78)
12SWS0839	SWS 839	.050 (1,27)	.385 (9,78)	.030 (0,76)	.250 (6,35)	.169 (4,29)
12SWS0840	SWS 840	13/64 (5,16)	.370 (9,40)	5/64 (1,98)	.145 (3,68)	.115 (2,92)
12SWS0841	SWS 841	1/8" (3,17)	3/8" (9,52)	.035 (0,89)	.242 (6,15)	.185 (4,70)
12SWS0842	SWS 842	5/64 (1,98)	.375 (9,53)	7/32 (5,55)	.199 (5,05)	.140 (3,56)
12SWS0843	SWS 843	.072 (1,83)	.385 (9,78)	.051 (1,30)	.250 (6,35)	.137 (3,48)
12SWS0844	SWS 844	3/64 (1,19)	.381 (9,68)	1/16 (1,59)	.185 (4,70)	.140 (3,56)
12SWS0845	SWS 845	.346 (8,79)	.370 (9,40)	.031 (0,79)	.242 (6,15)	.180 (4,57)
12SWS0846	SWS 846	1/16 (1,59)	.375 (9,53)	3/32 (2,38)	.250 (6,35)	.140 (3,56)
12SWS0847	SWS 847	.213 (5,14)	.375 (9,53)	1/16 (1,59)	.250 (6,35)	.197 (5,00)
12SWS0848	SWS 848	1/32 (0,79)	.385 (9,78)	1/16 (1,59)	.240 (6,10)	.145 (3,68)
12SWS0849	SWS 849	.060 (1,52)	.375 (9,53)	.030 (0,76)	.312 (7,92)	.253 (6,43)
12SWS0850	SWS 850	1/16 (1,59)	.375 (9,53)	3/32 (2,38)	.250 (6,35)	.138 (3,51)
12SWS0852	SWS 852	3/32 (2,38)	.375 (9,53)	1/16 (1,59)	.248 (6,30)	.136 (3,45)
12SWS0853	SWS 853	.030 (0,76)	.380 (9,65)	.066 (1,68)	.250 (6,35)	.190 (4,83)
12SWS0854	SWS 854	3/64 (1,19)	.375 (9,53)	1/16 (1,59)	.240 (6,10)	.194 (4,93)
12SWS0855	SWS 855	7/64 (2,77)	.375 (9,53)	1/16 (1,59)	.240 (6,10)	.138 (3,51)
12SWS0856	SWS 856	3/32 (2,38)	.375 (9,53)	1/64 (0,41)	.185 (4,70)	.140 (3,56)
12SWS0857	SWS 857	5/32 (3,97)	.375 (9,53)	5/64 (1,98)	.193 (4,90)	.116 (2,95)
12SWS0858	SWS 858	1/16 (1,59)	.375 (9,53)	1/16 (1,59)	.250 (6,35)	.145 (3,68)
12SWS0859	SWS 859	9/64 (3,58)	.375 (9,53)	1/32 (0,79)	.245 (6,22)	.187 (4,75)
12SWS0860	SWS 860	13/64 (5,16)	.380 (9,65)	1/16 (1,59)	.220 (5,59)	.148 (3,76)
12SWS0861	SWS 861	1/8 (3,18)	.378 (9,60)	1/32 (0,79)	.255 (6,48)	.116 (2,94)
12SWS0862	SWS 862	3/16 (4,76)	.390 (9,91)	5/64 (1,98)	.287 (7,29)	.196 (4,98)
12SWS0863	SWS 863	5/64 (1,98)	.390 (9,91)	5/64 (1,98)	.313 (7,95)	.203 (5,16)
12SWS0864	SWS 864	7/64 (2,77)	.395 (10,03)	5/64 (1,98)	.299 (7,59)	.230 (5,84)

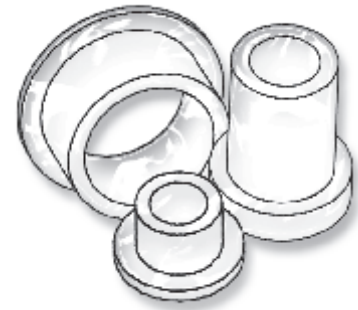


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

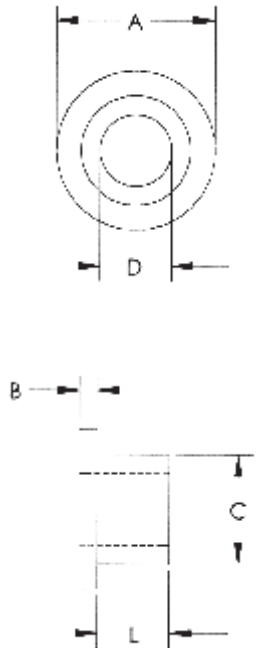
### NYLON SHOULDER WASHERS

Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.



- ▶ THEY SEAL
- ▶ REDUCE VIBRATION
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- ▶ STRONG AND CORROSION RESISTANT

### New Sizes



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0865	SWS 865	.055 (1,44)	.380 (9,65)	.065 (1,65)	.254 (6,45)	.196 (4,98)
12SWS0867	SWS 867	.046 (1,17)	.375 (9,53)	.040 (1,02)	.214 (5,44)	.141 (3,58)
12SWS0868	SWS 868	.031 (0,79)	.375 (9,53)	.062 (1,57)	.312 (7,92)	.253 (6,43)
12SWS0869	SWS 869	.207 (5,26)	.390 (9,91)	.062 (1,57)	.348 (8,84)	.312 (7,92)
12SWS0870	SWS 870	1/8 (3,18)	.433 (10,99)	1/16 (1,59)	.312 (7,92)	.199 (5,05)
12SWS0871	SWS 871	.130 (3,30)	.390 (9,91)	.062 (1,57)	.260 (6,60)	.200 (5,08)
12SWS0872	SWS 872	.160 (4,06)	27/64(10,72)	.050 (1,27)	9/32 (7,15)	.200 (5,08)
12SWS0873	SWS 873	.126 (3,20)	.394 (10,01)	.039 (0,99)	.256 (6,50)	.221 (5,61)
12SWS0874	SWS 874	.139 (3,53)	.390 (9,91)	.025 (0,63)	.303 (7,70)	.223 (5,66)
12SWS0875	SWS 875	.300 (7,62)	.375 (9,53)	.050 (1,27)	.253 (6,43)	.125 (3,18)
12SWS0876	SWS 876	.075 (1,91)	.390 (9,91)	.062 (1,57)	.260 (6,60)	.200 (5,08)
12SWS0877	SWS 877	.312 (7,92)	.390 (9,91)	.055 (1,40)	.281 (7,14)	.171 (4,34)
12SWS0878	SWS 878	.126 (3,20)	.394 (10,01)	.030 (0,76)	.256 (6,50)	.221 (5,61)
12SWS0879	SWS 879	.380 (9,65)	.385 (9,78)	.060 (1,52)	.236 (5,99)	.195 (4,95)
12SWS0880	SWS 880	1/8 (3,18)	.400 (10,16)	1/8 (3,18)	.275 (6,99)	.140 (3,56)
12SWS0881	SWS 881	.187 (4,75)	.312 (7,92)	.125 (3,18)	.250 (6,35)	.115 (2,92)
12SWS0882	SWS 882	9/32 (7,14)	.470 (11,93)	5/64 (1,98)	.312 (7,92)	.140 (3,56)
12SWS0885	SWS 885	.100 (1,54)	.400 (10,16)	1/8 (3,18)	.275 (6,99)	.140 (3,56)
12SWS0887	SWS 887	.187 (4,75)	.408 (10,36)	.062 (1,57)	.240 (6,10)	.197 (5,00)
12SWS0888	SWS 888	3/64 (1,19)	.400 (10,16)	3/64 (1,19)	.243 (6,17)	.156 (3,96)
12SWS0890	SWS 890	3/64 (1,19)	.415 (10,54)	5/32 (3,97)	.243 (6,17)	.141 (3,58)
12SWS0891	SWS 891	.058 (1,47)	.445 (11,30)	.077 (1,96)	.343 (8,71)	.308 (7,82)
12SWS0894	SWS 894	1/16 (1,59)	.418 (10,62)	7/64 (2,77)	.243 (6,17)	.141 (3,58)
12SWS0895	SWS 895	.050 (1,27)	.437 (11,10)	.062 (1,57)	.274 (6,96)	.199 (5,05)
12SWS0896	SWS 896	3/16 (4,76)	.408 (10,36)	1/16 (1,59)	.240 (6,10)	.220 (5,59)
12SWS0897	SWS 897	.315 (8,00)	.433 (11,00)	.079 (2,01)	.310 (7,87)	.202 (5,13)
12SWS0898	SWS 898	.050 (1,27)	.438 (11,13)	.062 (1,57)	.350 (8,89)	.125 (3,18)
12SWS0900	SWS 900	1/32 (0,79)	.428 (10,87)	1/16 (1,59)	.245 (6,22)	.156 (3,96)
12SWS0901	SWS 901	.093 (2,36)	.437 (11,10)	.040 (1,02)	.375 (9,53)	.194 (4,93)
12SWS0902	SWS 902	1/32 (0,79)	.437 (11,10)	1/16 (1,59)	.245 (6,22)	.156 (3,96)
12SWS0903	SWS 903	.115 (2,92)	.432 (10,97)	.065 (1,65)	.256 (6,50)	.196 (4,98)
12SWS0904	SWS 904	3/8 (9,53)	.437 (11,10)	1/16 (1,59)	.282 (7,16)	.225 (5,72)
12SWS0905	SWS 905	1/16 (1,59)	.425 (10,78)	1/16 (1,59)	.310 (7,87)	.250 (6,35)
12SWS0906	SWS 906	.035 (0,89)	.625 (15,87)	.050 (1,27)	.427 (10,84)	.170 (4,32)
12SWS0907	SWS 907	.026 (0,66)	.438 (11,13)	.094 (2,39)	.307 (7,80)	.253 (6,43)
12SWS0908	SWS 908	3/32 (2,38)	.438 (11,13)	1/32 (0,79)	.267 (6,78)	.203 (5,16)
12SWS0909	SWS 909	13/32 (10,32)	.493 (12,52)	3/32 (2,38)	.376 (9,55)	.176 (4,47)
12SWS0910	SWS 910	.070 (1,78)	.443 (11,25)	.048 (1,22)	.285 (7,24)	.191 (4,85)
12SWS0911	SWS 911	.048 (1,22)	.428 (10,87)	.155 (3,94)	.261 (6,63)	.163 (4,14)
12SWS0912	SWS 912	9/64 (3,58)	.432 (10,97)	1/32 (0,79)	.303 (7,70)	.196 (4,98)
12SWS0914	SWS 914	.043 (1,09)	.440 (11,18)	.094 (2,39)	.312 (7,92)	.193 (4,90)
12SWS0915	SWS 915	.138 (3,51)	.413 (10,49)	.315 (8,00)	.244 (6,20)	.217 (5,51)
12SWS0916	SWS 916	3/16 (4,76)	.743 (18,87)	1/16 (1,59)	.437 (11,10)	.376 (9,55)
12SWS0917	SWS 917	3/64 (1,19)	.428 (10,87)	1/8 (3,18)	.350 (8,89)	.308 (7,82)
12SWS0918	SWS 918	3/64 (1,19)	.450 (11,43)	1/64 (0,41)	.310 (7,87)	.230 (5,84)

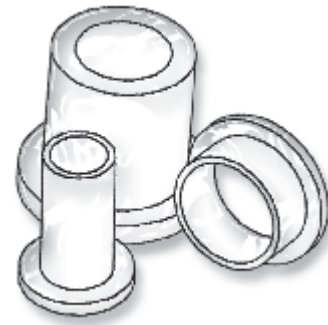


## NYLON SHOULDER WASHERS

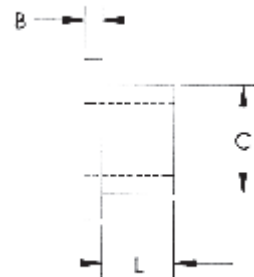
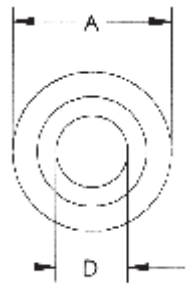
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**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS0919	SWS 919	.060 (1,52)	.460 (11,68)	.030 (0,76)	.370 (9,40)	.260 (6,60)
12SWS0920	SWS 920	.138 (3,51)	.413 (10,61)	.118 (3,00)	.244 (6,20)	.217 (5,51)
12SWS0921	SWS 921	.236 (5,99)	.480 (12,19)	.079 (2,01)	.315 (8,00)	.240 (6,10)
12SWS0922	SWS 922	.280 (7,11)	.450 (11,43)	.047 (1,19)	.170 (4,32)	.140 (3,56)
12SWS0925	SWS 925	3/64 (1,19)	.468 (11,89)	1/16 (1,59)	.248 (6,30)	.140 (3,56)
12SWS0926	SWS 926	11/16 (17,53)	.498 (12,64)	1/16 (1,59)	.375 (9,53)	.254 (6,45)
12SWS0930	SWS 930	7/32 (5,55)	.468 (11,89)	3/64 (1,19)	.375 (9,53)	.325 (8,26)
12SWS0935	SWS 935	.187 (4,75)	.495 (12,57)	.065 (1,65)	.312 (7,92)	.200 (5,08)
12SWS0940	SWS 940	.157 (3,99)	.483 (12,27)	.059 (1,50)	.315 (8,00)	.240 (6,10)
12SWS0950	SWS 950	.157 (3,99)	.472 (11,99)	.181 (4,60)	.315 (8,00)	.205 (5,21)
12SWS0951	SWS 951	.031 (0,79)	.500 (12,70)	.031 (0,79)	.243 (6,17)	.171 (4,34)
12SWS0952	SWS 952	.099 (2,51)	.500 (12,70)	.096 (2,44)	.373 (9,47)	.194 (4,93)
12SWS0953	SWS 953	.187 (4,75)	.500 (12,70)	.062 (1,57)	.307 (7,80)	.265 (6,73)
12SWS0954	SWS 954	.085 (2,16)	.500 (12,70)	.039 (0,99)	.234 (5,94)	.195 (4,95)
12SWS0968	SWS 968	.748 (19,00)	.698 (17,73)	.065 (1,65)	.400 (10,16)	.316 (8,03)
12SWS0969	SWS 969	.335 (8,51)	.551 (14,00)	.059 (1,50)	.413 (10,49)	.335 (8,51)
12SWS0970	SWS 970	.200 (5,08)	.500 (12,70)	.105 (2,67)	.245 (6,22)	.171 (4,34)
12SWS1000	SWS 1000	.240 (6,10)	.563 (14,30)	.068 (1,73)	.443 (11,25)	.320 (8,13)
12SWS1001	SWS 1001	3/8 (9,53)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
12SWS1002	SWS 1002	3/32 (2,38)	.438 (11,13)	1/16 (1,59)	.267 (6,78)	.203 (5,16)
12SWS1003	SWS 1003	3/16 (4,76)	.745 (18,92)	1/32 (0,79)	.282 (7,16)	.234 (5,94)
12SWS1004	SWS 1004	9/64 (3,58)	.438 (11,13)	1/32 (0,79)	.250 (6,35)	.135 (3,43)
12SWS1005	SWS 1005	5/64 (1,98)	.464 (11,79)	1/64 (0,41)	.312 (7,92)	.255 (6,48)
12SWS1006	SWS 1006	11/64 (4,37)	.425 (10,80)	1/16 (1,59)	.377 (9,58)	.260 (6,60)
12SWS1007	SWS 1007	3/64 (1,19)	.437 (11,10)	3/64 (1,19)	.281 (7,14)	.201 (5,11)
12SWS1008	SWS 1008	3/64 (1,19)	.620 (15,75)	3/64 (1,19)	.312 (7,92)	.205 (5,21)
12SWS1009	SWS 1009	1/16 (1,59)	.740 (18,80)	1/32 (0,79)	.368 (9,53)	.320 (8,13)
12SWS1010	SWS 1010	3/64 (1,19)	.625 (15,88)	7/64 (2,77)	.375 (9,53)	.250 (6,35)
12SWS1011	SWS 1011	1/16 (1,59)	.675 (17,14)	3/32 (2,38)	.480 (12,19)	.257 (6,53)
12SWS1012	SWS 1012	1/8 (3,18)	.697 (17,70)	1/16 (1,59)	.359 (9,12)	.266 (6,76)
12SWS1013	SWS 1013	3/64 (1,19)	.688 (17,48)	1/32 (0,79)	.543 (13,79)	.508 (12,90)
12SWS1014	SWS 1014	1/32 (0,79)	.437 (11,10)	1/32 (0,79)	.310 (7,87)	.253 (6,43)
12SWS1015	SWS 1015	3/64 (1,19)	.500 (12,70)	3/32 (2,38)	.275 (6,99)	.145 (3,68)
12SWS1016	SWS 1016	7/16 (11,11)	.500 (12,70)	1/8 (3,18)	.250 (6,35)	.167 (4,24)
12SWS1017	SWS 1017	1/16 (1,59)	.562 (14,27)	3/32 (2,38)	.375 (9,53)	.260 (6,60)
12SWS1018	SWS 1018	3/16 (4,76)	.625 (15,88)	1/16 (1,59)	.322 (8,18)	.255 (6,48)
12SWS1019	SWS 1019	3/64 (1,19)	.615 (15,62)	1/32 (0,79)	.310 (7,87)	.253 (6,43)
12SWS1020	SWS 1020	1/16 (1,59)	.640 (16,26)	1/16 (1,59)	.380 (9,65)	.195 (4,95)
12SWS1021	SWS 1021	3/64 (1,19)	.630 (16,00)	1/32 (0,79)	.248 (6,30)	.171 (4,34)
12SWS1022	SWS 1022	3/64 (1,19)	.625 (15,88)	1/16 (1,59)	.375 (9,53)	.190 (4,83)
12SWS1023	SWS 1023	3/64 (1,19)	.555 (14,10)	5/64 (1,98)	.300 (7,62)	.260 (6,60)
12SWS1024	SWS 1024	1/2 (12,70)	.620 (15,75)	.031 (0,79)	.370 (9,40)	.316 (8,03)
12SWS1025	SWS 1025	7/16 (11,11)	9/16 (14,28)	1/16 (1,59)	.375 (9,53)	.255 (6,48)
12SWS1026	SWS 1026	1/32 (0,79)	.588 (14,93)	1/32 (0,79)	.253 (6,43)	.198 (5,02)
12SWS1027	SWS 1027	1/2 (12,70)	.500 (12,70)	1/16 (1,59)	.365 (9,27)	.312 (7,92)



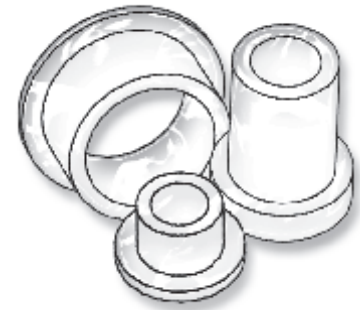


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

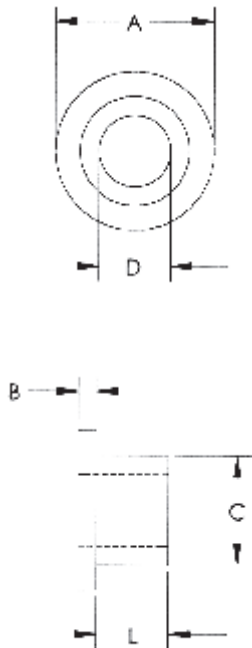
### NYLON SHOULDER WASHERS

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### New Sizes

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ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS1028	SWS 1028	.249 (6,32)	.500 (12,70)	.062 (1,57)	.250 (6,35)	.189 (4,80)
12SWS1029	SWS 1029	.158 (4,01)	.500 (12,70)	.120 (3,05)	.300 (7,62)	.196 (4,98)
12SWS1030	SWS 1030	3/32 (2,38)	.490 (12,45)	1/16 (1,59)	.281 (7,14)	.200 (5,08)
12SWS1031	SWS 1031	.050 (1,27)	.500 (12,70)	.062 (1,57)	.248 (6,30)	.194 (4,93)
12SWS1032	SWS 1032	1/32 (0,79)	.500 (12,70)	3/32 (2,38)	.250 (6,35)	.156 (3,96)
12SWS1033	SWS 1033	5/16 (7,94)	.500 (12,70)	1/16 (1,59)	.312 (7,92)	.200 (5,08)
12SWS1034	SWS 1034	1/32 (0,79)	.500 (12,70)	1/32 (0,79)	.312 (7,92)	.252 (6,40)
12SWS1035	SWS 1035	1/32 (0,79)	.500 (12,70)	1/16 (1,59)	.230 (5,84)	.147 (3,73)
12SWS1036	SWS 1036	1/64 (0,41)	.500 (12,70)	5/64 (1,98)	.250 (6,35)	.165 (4,19)
12SWS1037	SWS 1037	.047 (1,19)	.500 (12,70)	.125 (3,17)	.281 (7,14)	.219 (5,56)
12SWS1038	SWS 1038	1.000 (25,40)	.875 (22,23)	.062 (1,57)	.500 (12,70)	.390 (9,91)
12SWS1039	SWS 1039	.310 (7,87)	.630 (16,0)	.070 (1,78)	.265 (6,73)	.184 (4,67)
12SWS1040	SWS 1040	3/32 (2,38)	.505 (12,83)	1/16 (1,59)	.343 (8,71)	.257 (6,53)
12SWS1041	SWS 1041	.335 (8,51)	.495 (12,57)	.050 (1,27)	.346 (8,79)	.260 (6,60)
12SWS1042	SWS 1042	.027 (0,69)	.500 (12,70)	.031 (0,79)	.248 (6,30)	.199 (5,05)
12SWS1044	SWS 1044	.080 (2,03)	.500 (12,70)	.078 (1,98)	.213 (5,41)	.145 (3,68)
12SWS1045	SWS 1045	3/16 (4,76)	.498 (12,65)	1/4 (6,35)	.310 (7,87)	.195 (4,95)
12SWS1046	SWS 1046	.150 (3,81)	.504 (12,80)	.160 (4,06)	.312 (7,92)	.265 (6,73)
12SWS1047	SWS 1047	1.250 (31,75)	.500 (12,70)	.125 (3,18)	.375 (9,53)	.250 (6,35)
12SWS1048	SWS 1048	7/16 (11,11)	.500 (12,70)	1/16 (1,59)	.375 (9,53)	.250 (6,35)
12SWS1049	SWS 1049	.076 (1,93)	.500 (12,70)	.040 (1,02)	.345 (8,76)	.265 (6,73)
12SWS1050	SWS 1050	5/32 (3,97)	.490 (12,45)	1/16 (1,59)	.250 (6,35)	.190 (4,83)
12SWS1051	SWS 1051	3/64 (1,19)	.441 (11,20)	1/16 (1,59)	.248 (6,30)	.194 (4,92)
12SWS1052	SWS 1052	5/32 (3,97)	.488 (12,39)	1/8 (3,18)	.250 (6,35)	.190 (4,83)
12SWS1053	SWS 1053	.170 (4,32)	.500 (12,70)	.125 (3,17)	.375 (9,52)	.257 (6,53)
12SWS1054	SWS 1054	9/64 (3,58)	.500 (12,70)	1/16 (1,59)	.345 (8,76)	.285 (7,34)
12SWS1055	SWS 1055	1/32 (0,79)	.495 (12,57)	1/32 (0,79)	.312 (7,92)	.260 (6,60)
12SWS1057	SWS 1057	3/32 (2,38)	.505 (12,83)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
12SWS1058	SWS 1058	1/32 (0,79)	.490 (12,45)	1/32 (0,79)	.310 (7,87)	.193 (4,90)
12SWS1059	SWS 1059	.060 (1,52)	.500 (12,70)	.030 (0,76)	.365 (9,27)	.260 (6,60)
12SWS1060	SWS 1060	5/64 (1,98)	.492 (12,50)	1/32 (0,79)	.318 (8,08)	.265 (6,73)
12SWS1061	SWS 1061	5/32 (3,97)	.488 (12,39)	1/8 (3,18)	.250 (6,35)	.215 (5,46)
12SWS1065	SWS 1065	3/16 (4,76)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.175 (4,45)
12SWS1069	SWS 1069	.630 (16,00)	.492 (12,50)	.055 (1,40)	.370 (9,40)	.315 (8,00)
12SWS1070	SWS 1070	5/64 (1,98)	.495 (12,57)	1/32 (0,79)	.318 (8,08)	.193 (4,90)
12SWS1071	SWS 1071	.253 (6,43)	.502 (12,75)	.187 (4,75)	.374 (9,50)	.318 (8,08)
12SWS1075	SWS 1075	1/4 (6,35)	.513 (13,03)	1/16 (1,59)	.370 (9,40)	.260 (6,60)
12SWS1079	SWS 1079	.122 (3,10)	.500 (12,70)	.167 (4,24)	.270 (6,86)	.222 (5,64)
12SWS1080	SWS 1080	1/64 (0,41)	.500 (12,70)	1/32 (0,79)	.318 (8,08)	.141 (3,58)
12SWS1081	SWS 1081	.375 (9,53)	.500 (12,70)	.093 (2,36)	.411 (10,44)	.380 (9,65)
12SWS1082	SWS 1082	3/64 (1,19)	.500 (12,70)	1/32 (0,79)	.318 (8,08)	.193 (4,90)
12SWS1083	SWS 1083	.160 (4,06)	1/2 (12,70)	.062 (1,57)	.360 (9,14)	.260 (6,60)
12SWS1084	SWS 1084	3/64 (1,19)	.500 (12,70)	1/32 (0,79)	.318 (8,08)	.141 (3,58)
12SWS1086	SWS 1086	1/16 (1,59)	.500 (12,70)	1/16 (1,59)	.330 (8,38)	.150 (3,81)
12SWS1088	SWS 1088	.109 (2,77)	.500 (12,70)	1/16 (1,59)	.240 (6,10)	.138 (3,51)

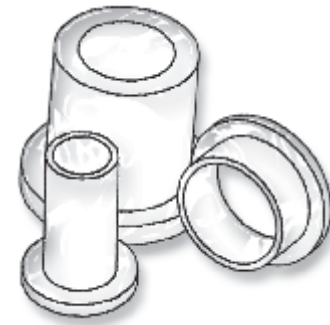


## NYLON SHOULDER WASHERS

Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.

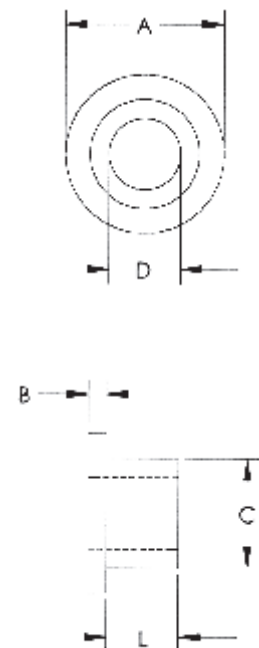
- ▶ THEY SEAL
- ▶ REDUCE VIBRATION
- ▶ ACT AS SPACERS AND GUIDES
- ▶ STRONG AND CORROSION RESISTANT

**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS1090	SWS 1090	3/64 (1,19)	.518 (13,16)	1/32 (0,79)	.305 (7,75)	.080 (2,03)
12SWS1092	SWS 1092	.075 (1,91)	.500 (12,70)	.175 (4,45)	.300 (7,62)	.195 (4,95)
12SWS1095	SWS 1095	1/8 (3,18)	.502 (12,75)	1/32 (0,79)	.399 (10,13)	.349 (8,86)
12SWS1096	SWS 1096	*.375 (9,53)	*.437 (11,10)	.055 (1,40)	*.310 (7,87)	*.196 (4,98)
12SWS1098	SWS 1098	9/64 (3,58)	.515 (13,08)	1/16 (1,59)	.312 (7,93)	.260 (6,60)
12SWS1100	SWS 1100	15/16 (23,81)	.540 (13,72)	.065 (1,65)	.370 (9,40)	.260 (6,60)
12SWS1101	SWS 1101	3/32 (2,38)	.500 (12,70)	1/32 (0,79)	.282 (7,16)	.234 (5,94)
12SWS1115	SWS 1115	.500 (12,70)	.525 (15,88)	.063 (1,60)	.370 (9,40)	.267 (6,78)
12SWS1145	SWS 1145	.030 (0,76)	.562 (14,28)	.030 (0,76)	.400 (10,16)	.318 (8,08)
12SWS1150	SWS 1150	3/64 (1,19)	.562 (14,28)	3/64 (1,19)	.300 (7,62)	.260 (6,60)
12SWS1151	SWS 1151	.104 (2,64)	.562 (14,28)	.046 (1,17)	.300 (7,62)	.260 (6,60)
12SWS1152	SWS 1152	.500 (12,70)	.525 (13,33)	.063 (1,60)	.370 (9,40)	.265 (6,73)
12SWS1153	SWS 1153	.040 (1,02)	.560 (14,22)	.060 (1,52)	.312 (7,92)	.257 (6,53)
12SWS1154	SWS 1154	.050 (1,27)	.516 (13,11)	.060 (1,52)	.345 (8,76)	.260 (6,60)
12SWS1155	SWS 1155	3/64 (1,19)	.562 (14,28)	.024 (0,61)	.370 (9,40)	.335 (8,51)
12SWS1159	SWS 1159	9/16 (14,29)	.550 (13,97)	1/16 (1,59)	.375 (9,53)	.255 (6,48)
12SWS1160	SWS 1160	1/16 (1,59)	.562 (14,28)	7/64 (2,77)	.365 (9,27)	.215 (5,46)
12SWS1161	SWS 1161	.620 (15,75)	9/16 (14,27)	1/16 (1,57)	.395 (10,03)	.355 (9,02)
12SWS1162	SWS 1162	27/64 (10,72)	.560 (14,22)	1/16 (1,59)	.375 (9,53)	.255 (6,48)
12SWS1163	SWS 1163	15/32 (11,91)	.550 (13,97)	1/16 (1,59)	.380 (9,65)	.247 (6,27)
12SWS1164	SWS 1164	1/32 (0,79)	.562 (14,28)	1/8 (3,18)	.312 (7,93)	.169 (4,29)
12SWS1165	SWS 1165	1/4 (6,35)	.551 (13,99)	1/16 (1,59)	.380 (9,65)	.248 (6,30)
12SWS1167	SWS 1167	.128 (3,25)	.591 (15,01)	.197 (5,00)	.394 (10,01)	.157 (3,99)
12SWS1170	SWS 1170	3/8 (9,53)	.570 (14,48)	1/16 (1,59)	.470 (11,94)	.385 (9,78)
12SWS1175	SWS 1175	.783 (19,89)	.570 (14,48)	.039 (0,99)	.491 (12,47)	.413 (10,49)
12SWS1176	SWS 1176	.335 (8,51)	.545 (13,84)	.075 (1,91)	.316 (8,03)	.166 (4,22)
12SWS1180	SWS 1180	3/64 (1,19)	.578 (14,68)	1/16 (1,59)	.185 (4,70)	.140 (3,56)
12SWS1197	SWS 1197	.342 (8,69)	.625 (15,88)	.125 (3,18)	.485 (12,32)	.390 (9,91)
12SWS1198	SWS 1198	.093 (2,36)	.620 (15,75)	.063 (1,60)	.360 (9,14)	.320 (8,13)
12SWS1199	SWS 1199	.100 (2,54)	.620 (15,75)	.062 (1,57)	.400 (10,16)	.260 (6,60)
12SWS1200	SWS 1200	3/64 (1,19)	.615 (15,62)	3/64 (1,19)	.315 (8,00)	.208 (5,28)
12SWS1201	SWS 1201	1/8 (3,18)	.620 (15,75)	3/8 (9,53)	.360 (9,14)	.320 (8,13)
12SWS1204	SWS 1204	.500 (12,70)	.600 (15,24)	.025 (0,64)	.485 (12,32)	.324 (8,23)
12SWS1205	SWS 1205	1/32 (0,79)	.620 (15,75)	3/64 (1,19)	.434 (11,02)	.383 (9,73)
12SWS1207	SWS 1207	.163 (4,14)	.625 (15,88)	.040 (1,02)	.281 (7,14)	.219 (5,56)
12SWS1208	SWS 1208	.100 (2,54)	.620 (15,75)	.060 (1,52)	.502 (12,75)	.316 (8,03)
12SWS1210	SWS 1210	1/32 (0,79)	.625 (15,88)	1/16 (1,59)	.495 (12,57)	.378 (9,60)
12SWS1211	SWS 1211	.139 (3,53)	.625 (15,88)	.066 (1,68)	.405 (10,29)	.320 (8,13)
12SWS1212	SWS 1212	.025 (0,64)	.625 (15,88)	.062 (1,57)	.375 (9,53)	.200 (5,08)
12SWS1213	SWS 1213	.031 (0,79)	.625 (15,88)	.031 (0,79)	.437 (11,10)	.380 (9,65)
12SWS1214	SWS 1214	.150 (3,81)	.630 (16,00)	.050 (1,27)	.375 (9,53)	.280 (7,11)
12SWS1215	SWS 1215	.062 (1,57)	.625 (15,88)	1/32 (0,79)	.310 (7,87)	.195 (4,95)
12SWS1217	SWS 1217	.030 (0,76)	.625 (15,88)	.030 (0,76)	.447 (12,12)	.378 (9,60)
12SWS1219	SWS 1219	3/64 (1,19)	.625 (15,88)	1/16 (1,59)	.310 (7,87)	.172 (4,37)
12SWS1220	SWS 1220	3/4 (19,05)	.620 (15,75)	1/8 (3,18)	.400 (10,60)	.260 (6,60)

\* +/- .010

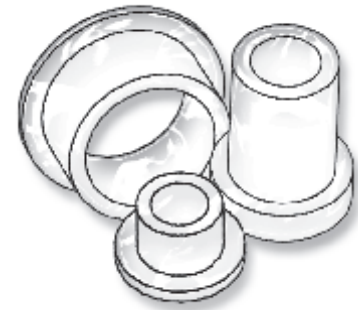


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

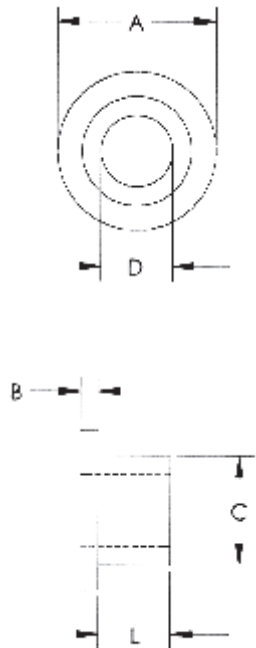
### NYLON SHOULDER WASHERS

Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.



### New Sizes

- ▶ THEY SEAL
- ▶ REDUCE VIBRATION
- ▶ ACT AS SPACERS AND GUIDES
- ▶ STRONG AND CORROSION RESISTANT



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS1221	SWS 1221	1/8 (3,18)	.630 (16,00)	1/16 (1,59)	.327 (8,31)	.260 (6,60)
12SWS1222	SWS 1222	1/32 (0,79)	.625 (15,88)	1/32 (0,79)	.448 (11,37)	.378 (9,60)
12SWS1225	SWS 1225	.027 (0,69)	.625 (15,88)	.062 (1,57)	.248 (6,30)	.120 (3,05)
12SWS1227	SWS 1227	.210 (5,33)	.625 (15,88)	.058 (1,47)	.379 (9,63)	.263 (6,68)
12SWS1228	SWS 1228	.025 (0,64)	.625 (15,88)	.060 (1,52)	.219 (5,56)	.140 (3,56)
12SWS1230	SWS 1230	3/64 (1,19)	.550 (13,97)	5/64 (1,98)	.305 (7,75)	.260 (6,60)
12SWS1232	SWS 1232	1/2 (12,70)	.620 (15,75)	1/16 (1,59)	.370 (9,40)	.316 (8,03)
12SWS1233	SWS 1233	.090 (2,29)	.625 (15,88)	.062 (1,57)	.311 (7,90)	.253 (6,43)
12SWS1235	SWS 1235	.150 (3,81)	.620 (15,75)	.060 (1,52)	.502 (12,75)	.316 (8,03)
12SWS1239	SWS 1239	.188 (4,78)	.625 (15,88)	.032 (0,81)	.260 (6,60)	.200 (5,08)
12SWS1240	SWS 1240	3/16 (4,76)	.630 (16,00)	1/16 (1,59)	.375 (9,53)	.254 (6,45)
12SWS1241	SWS 1241	.175 (4,45)	.650 (16,51)	.125 (3,18)	.490 (12,45)	.385 (9,78)
12SWS1242	SWS 1242	.563 (14,30)	.625 (15,88)	.125 (3,18)	.485 (12,32)	.390 (9,91)
12SWS1243	SWS 1243	.748 (19,00)	.630 (16,00)	.055 (1,40)	.500 (12,70)	.437 (11,10)
12SWS1244	SWS 1244	.090 (2,29)	.635 (16,13)	.042 (1,07)	.380 (9,65)	.216 (5,49)
12SWS2102	SWS 2102	.220 (5,59)	.620 (15,75)	.057 (1,45)	.366 (9,30)	.310 (7,87)
12SWS2498	SWS 2498	.513 (13,03)	.687 (17,44)	.263 (6,68)	.412 (10,46)	.325 (8,26)
12SWS2499	SWS 2499	3/8 (9,53)	.513 (13,03)	1/16 (1,59)	.312 (7,93)	.191 (4,85)
12SWS2500	SWS 2500	1/32 (7,94)	.500 (12,70)	3/32 (2,38)	.250 (6,35)	.156 (3,96)
12SWS2501	SWS 2501	3/8 (9,53)	.513 (13,03)	1/16 (1,59)	.312 (7,93)	.261 (6,63)
12SWS2502	SWS 2502	1/8 (3,18)	.467 (11,86)	3/64 (1,19)	.312 (7,93)	.255 (6,48)
12SWS2503	SWS 2503	1/32 (0,79)	.625 (15,88)	1/16 (1,59)	.375 (9,53)	.295 (7,49)
12SWS2504	SWS 2504	1/8 (3,18)	.687 (17,45)	1/8 (3,18)	.437 (11,10)	.328 (8,33)
12SWS2505	SWS 2505	1/32 (0,79)	.500 (12,70)	1/16 (1,59)	.312 (7,93)	.252 (6,40)
12SWS2506	SWS 2506	5/16 (7,94)	.625 (15,88)	1/16 (1,59)	.500 (12,70)	.380 (9,65)
12SWS2507	SWS 2507	1/8 (3,18)	.600 (15,24)	1/8 (3,18)	.370 (7,93)	.250 (6,35)
12SWS2508	SWS 2508	3/16 (4,76)	.674 (17,12)	3/32 (2,38)	.500 (12,70)	.290 (7,36)
12SWS2509	SWS 2509	1-7/64 (28,17)	.635 (16,13)	9/64 (3,58)	.425 (10,80)	.201 (5,11)
12SWS2510	SWS 2510	3/8 (9,53)	.687 (17,45)	3/8 (9,53)	.359 (9,12)	.263 (6,68)
12SWS2511	SWS 2511	5/16 (7,94)	.625 (15,88)	1/16 (1,59)	.500 (12,70)	.395 (10,03)
12SWS2512	SWS 2512	.334 (8,48)	.687 (17,45)	.046 (1,17)	.348 (8,84)	.263 (6,68)
12SWS2513	SWS 2513	1/8 (3,18)	.703 (17,86)	1/16 (1,59)	.437 (11,10)	.335 (8,51)
12SWS2515	SWS 2515	.420 (10,67)	.710 (18,03)	.075 (1,90)	.470 (11,94)	.420 (10,67)
12SWS2516	SWS 2516	.280 (7,11)	.701 (17,80)	.062 (1,57)	.305 (7,75)	.258 (6,55)
12SWS2517	SWS 2517	.110 (2,79)	.710 (18,03)	.190 (4,83)	.338 (8,59)	.255 (6,48)
12SWS2518	SWS 2518	.146 (3,71)	.692 (17,58)	.051 (1,30)	.417 (10,59)	.249 (6,32)
12SWS2519	SWS 2519	.145 (3,68)	.736 (18,69)	.125 (3,18)	.371 (9,42)	.168 (4,27)
12SWS2520	SWS 2520	5/32 (3,97)	.725 (18,41)	5/32 (3,97)	.445 (11,30)	.375 (9,53)
12SWS2521	SWS 2521	5/32 (3,97)	.720 (18,29)	1/16 (1,59)	.485 (12,32)	.270 (6,86)
12SWS2522	SWS 2522	.187 (4,75)	.700 (17,78)	.225 (5,72)	.375 (9,53)	.268 (6,81)
12SWS2524	SWS 2524	.150 (3,81)	.730 (18,54)	.125 (3,18)	.500 (12,70)	.315 (8,00)
12SWS2525	SWS 2525	11/32 (3,43)	.730 (18,54)	1/4 (6,35)	.375 (9,53)	.257 (6,52)
12SWS2526	SWS 2526	.500 (12,70)	.688 (17,48)	.062 (1,58)	.562 (14,27)	.437 (11,10)
12SWS2528	SWS 2528	3/16 (4,76)	.743 (18,87)	1/16 (1,59)	.443 (11,25)	.375 (9,53)
12SWS2529	SWS 2529	19/32 (15,08)	.750 (19,05)	.060 (1,52)	.528 (13,41)	.385 (9,78)



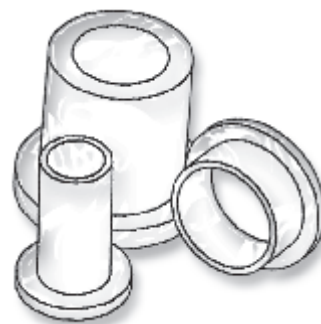


## NYLON SHOULDER WASHERS

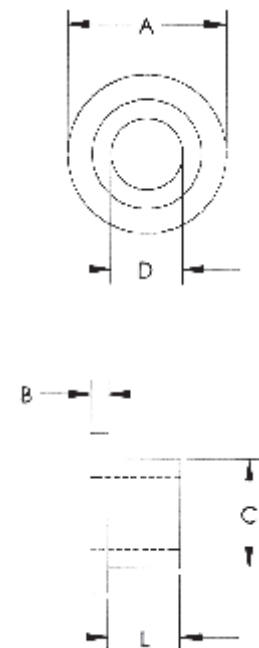
Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.

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**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS2531	SWS 2531	5/16 (7,94)	.743 (18,87)	5/64 (1,98)	.502 (12,75)	.383 (9,72)
12SWS2532	SWS 2532	.155 (3,94)	.745 (18,92)	.100 (2,54)	.545 (13,84)	.391 (9,93)
12SWS2533	SWS 2533	.375 (9,52)	3/4 (19,05)	.375 (9,52)	.594 (15,09)	.380 (9,65)
12SWS2534	SWS 2534	.187 (4,75)	.745 (18,92)	.031 (0,79)	.282 (7,16)	.234 (5,94)
12SWS2535	SWS 2535	.118 (3,00)	.750 (19,05)	.032 (0,81)	.688 (17,48)	.569 (14,45)
12SWS2536	SWS 2536	.031 (0,79)	.750 (19,05)	.062 (1,58)	.500 (12,70)	.375 (9,53)
12SWS2538	SWS 2538	1/8 (3,18)	3/4 (19,05)	1/16 (1,59)	.469 (11,91)	.344 (8,74)
12SWS2539	SWS 2539	11/32 (8,73)	.740 (18,80)	3/32 (2,38)	.375 (9,53)	.266 (6,76)
12SWS2540	SWS 2540	1/8 (3,18)	.740 (18,80)	3/32 (2,38)	.371 (9,42)	.266 (6,76)
12SWS2541	SWS 2541	5/64 (1,98)	.750 (19,05)	3/32 (2,38)	.380 (9,65)	.266 (6,76)
12SWS2542	SWS 2542	3/64 (1,19)	.750 (19,05)	3/16 (4,76)	.500 (12,70)	.430 (10,92)
12SWS2543	SWS 2543	.779 (19,79)	.750 (19,05)	.095 (2,41)	.490 (12,45)	.189 (4,80)
12SWS2544	SWS 2544	1.00 (25,40)	.75 (19,05)	.095 (2,41)	.375 (9,53)	.265 (6,73)
12SWS2545	SWS 2545	.100 (2,54)	3/4 (19,05)	.086 (2,18)	.500 (12,70)	.250 (6,35)
12SWS2546	SWS 2546	.125 (3,18)	.750 (19,05)	.187 (4,75)	.500 (12,70)	.344 (8,74)
12SWS2547	SWS 2547	.250 (6,35)	.750 (19,05)	.062 (1,57)	.617 (15,67)	.509 (12,93)
12SWS2548	SWS 2548	.425 (10,80)	.750 (19,05)	1/16" (1,59)	.590 (14,99)	.375 (9,53)
12SWS2549	SWS 2549	.140 (3,56)	.750 (19,05)	.031 (0,79)	.708 (17,98)	.630 (16,00)
12SWS2550	SWS 2550	1/16 (1,59)	.734 (18,64)	1/8" (3,18)	.488 (12,40)	.250 (6,35)
12SWS2551	SWS 2551	3/64 (1,19)	.753 (19,12)	5/64 (1,98)	.409 (10,38)	.258 (6,55)
12SWS2552	SWS 2552	7/64 (2,77)	.743 (18,87)	3/32 (2,38)	.500 (12,70)	.375 (9,53)
12SWS2553	SWS 2553	5/16 (7,94)	.750 (19,05)	5/64 (1,98)	.500 (12,70)	.370 (9,39)
12SWS2554	SWS 2554	3/64 (1,19)	.735 (18,67)	3/16 (4,76)	.490 (12,45)	.435 (11,05)
12SWS2555	SWS 2555	.098 (2,49)	.747 (18,87)	.079 (2,01)	.482 (12,24)	.358 (9,09)
12SWS2556	SWS 2556	3/16 (4,76)	.750 (19,05)	1/16 (1,59)	.500 (12,70)	.375 (9,53)
12SWS2557	SWS 2557	23/64 (10,00)	.748 (18,99)	1/8 (3,18)	.504 (12,80)	.384 (9,75)
12SWS2558	SWS 2558	1/8 (3,18)	.750 (19,05)	1/16 (1,59)	.500 (12,70)	.375 (9,53)
12SWS2559	SWS 2559	.020 (0,51)	.750 (19,05)	.074 (1,88)	.495 (12,57)	.385 (9,78)
12SWS2560	SWS 2560	3/64 (1,19)	.750 (19,05)	1/32 (0,79)	.371 (9,42)	.253 (6,43)
12SWS2561	SWS 2561	27/64 (10,72)	.750 (19,05)	11/64 (4,37)	.434 (11,02)	.312 (7,93)
12SWS2562	SWS 2562	1/4 (3,38)	.755 (19,17)	5/64 (1,98)	.505 (12,83)	.378 (9,60)
12SWS2563	SWS 2563	3/32 (1,19)	.750 (19,05)	1/8 (3,18)	.375 (9,53)	.265 (6,73)
12SWS2564	SWS 2564	1/4 (6,35)	.750 (19,05)	1/16 (1,59)	.250 (6,35)	.150 (3,81)
12SWS2565	SWS 2565	.250 (6,35)	.750 (19,05)	.190 (4,83)	.500 (12,70)	.310 (7,87)
12SWS2566	SWS 2566	15/32 (11,90)	.740 (18,80)	5/32 (3,97)	.375 (9,53)	.250 (6,35)
12SWS2567	SWS 2567	.174 (4,42)	.750 (19,05)	.066 (1,68)	.625 (15,88)	.470 (11,94)
12SWS2568	SWS 2568	3/64 (1,19)	.750 (19,05)	1/32 (0,79)	.341 (8,66)	.253 (6,43)
12SWS2569	SWS 2569	.420 (10,67)	.550 (13,97)	.172 (4,37)	.436 (11,07)	.307 (7,80)
12SWS2570	SWS 2570	11/16 (17,46)	.740 (18,80)	9/64 (3,58)	.385 (9,78)	.260 (6,60)
12SWS2571	SWS 2571	.320 (8,13)	.750 (19,05)	.030 (0,76)	.580 (14,73)	.517 (13,13)
12SWS2572	SWS 2572	1/2 (12,70)	.750 (19,05)	1/16 (1,59)	.375 (9,53)	.125 (3,18)
12SWS2573	SWS 2573	.125 (3,18)	.750 (19,05)	.093 (2,36)	.375 (9,53)	.172 (4,37)
12SWS2574	SWS 2574	.360 (9,14)	.750 (19,05)	.062 (1,57)	.506 (12,85)	.380 (9,65)
12SWS2575	SWS 2575	51/64 (20,24)	.750 (19,06)	3/32 (2,38)	.315 (8,01)	.190 (4,83)
12SWS2576	SWS 2576	1/32 (0,76)	.750 (19,05)	1/32 (0,79)	.500 (12,70)	.219 (5,56)

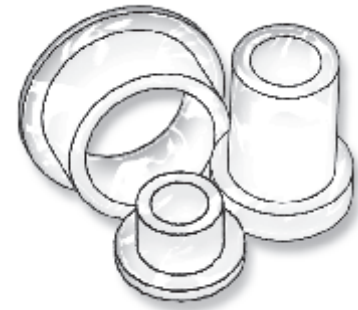


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

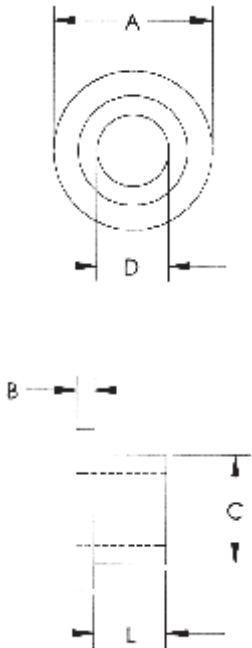
### NYLON SHOULDER WASHERS

Nylon Shoulder Washers are suitable for a large variety of insulation and mechanical applications.



**New Sizes**

- ▶ THEY SEAL
- ▶ REDUCE VIBRATION
- ▶ ACT AS SPACERS AND GUIDES
- ▶ STRONG AND CORROSION RESISTANT



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS2577	SWS 2577 .250 (6,35)	.750 (19,05)	.065 (1,65)	.320 (8,13)	.170 (4,32)	
12SWS2578	SWS 2578 3/16 (4,76)	.750 (19,06)	1/16 (1,59)	.625 (15,88)	.510 (12,95)	
12SWS2579	SWS 2579 .180 (4,57)	.750 (19,05)	.240 (6,10)	.500 (12,70)	.370 (9,40)	
12SWS2580	SWS 2580 5/16 (7,94)	.745 (18,92)	1/32 (0,79)	.560 (14,22)	.500 (12,70)	
12SWS2581	SWS 2581 1/4 (6,35)	.750 (19,05)	5/64 (1,98)	.505 (12,83)	.315 (8,00)	
12SWS2584	SWS 2584 .050 (1,27)	.735 (18,67)	.050 (1,27)	.710 (18,03)	.640 (16,26)	
12SWS2585	SWS 2585 1/4 (6,35)	.740 (18,80)	1/2 (12,70)	.605 (15,37)	.380 (9,65)	
12SWS2586	SWS 2586 1/4 (6,35)	.750 (19,05)	1/8 (3,18)	.500 (12,70)	.281 (7,14)	
12SWS2587	SWS 2587 7/16 (11,11)	3/4 (19,05)	1/16 (1,59)	5/8 (15,88)	1/2 (12,70)	
12SWS2590	SWS 2590 .018 (0,46)	.745 (18,92)	.085 (2,16)	.305 (7,75)	.200 (5,08)	
12SWS3001	SWS 3001 1/8 (3,18)	.693 (17,60)	1/16 (1,59)	.437 (11,10)	.328 (8,33)	
12SWS3002	SWS 3002 3/64 (1,19)	.750 (19,05)	3/64 (1,19)	.375 (9,53)	.323 (8,20)	
12SWS3003	SWS 3003 7/32 (5,55)	.750 (19,05)	3/32 (2,38)	.380 (9,65)	.266 (6,76)	
12SWS3004	SWS 3004 1/16 (1,59)	.750 (19,05)	3/32 (2,38)	.359 (9,12)	.152 (3,86)	
12SWS3005	SWS 3005 5/32 (3,97)	.750 (19,05)	1/32 (0,79)	.498 (12,64)	.378 (9,60)	
12SWS3006	SWS 3006 1/32 (0,79)	.750 (19,05)	1/8 (3,18)	.500 (12,70)	.375 (9,53)	
12SWS3007	SWS 3007 1/16 (1,59)	.750 (19,05)	1/8 (3,18)	.500 (12,70)	.375 (9,53)	
12SWS3008	SWS 3008 1/16 (1,59)	.745 (18,92)	1/32 (0,79)	.375 (9,53)	.320 (8,13)	
12SWS3009	SWS 3009 3/64 (1,19)	.760 (19,30)	5/64 (1,98)	.410 (10,41)	.258 (6,55)	
12SWS3010	SWS 3010 .027 (0,68)	.750 (19,05)	.031 (0,79)	.310 (7,87)	.257 (6,53)	
12SWS3011	SWS 3011 .196 (4,98)	.763 (19,38)	.026 (0,66)	.562 (14,27)	.394 (10,01)	
12SWS3012	SWS 3012 .395 (10,03)	.740 (18,80)	.065 (1,65)	.430 (10,92)	.322 (8,18)	
12SWS3015	SWS 3015 1.005 (25,53)	.752 (19,10)	.060 (1,52)	.505 (12,83)	.320 (8,13)	
12SWS3016	SWS 3016 .050 (1,27)	.745 (18,82)	1/16 (1,59)	.556 (14,12)	.515 (13,08)	
12SWS3017	SWS 3017 5/32 (3,97)	.755 (19,18)	1/2 (12,70)	.510 (12,95)	.385 (9,78)	
12SWS3020	SWS 3020 .305 (7,75)	.740 (18,80)	.130 (3,30)	.495 (12,57)	.219 (5,56)	
12SWS3021	SWS 3021 .440 (11,18)	.745 (18,92)	1/16 (1,59)	.495 (12,57)	.390 (9,91)	
12SWS3022	SWS 3022 .188 (4,78)	.750 (19,05)	.092 (2,34)	.627 (15,93)	.506 (12,85)	
12SWS3023	SWS 3023 .216 (5,49)	.765 (19,43)	.126 (3,20)	.481 (12,22)	.250 (6,35)	
12SWS3030	SWS 3030 .252 (6,40)	.780 (19,81)	.079 (2,01)	.392 (9,96)	.250 (6,35)	
12SWS3031	SWS 3031 .110 (2,79)	.810 (20,57)	.130 (3,30)	.498 (12,65)	.388 (9,86)	
12SWS3032	SWS 3032 .108 (2,74)	.805 (20,45)	.132 (3,35)	.502 (12,75)	.324 (8,23)	
12SWS3100	SWS 3100 .325 (8,26)	.825 (20,96)	.060 (1,52)	.435 (11,05)	.310 (7,87)	
12SWS3101	SWS 3101 1/32 (0,79)	.750 (19,05)	1/16 (1,59)	.375 (9,53)	.260 (6,60)	
12SWS3102	SWS 3102 1/2 (12,70)	.825 (20,96)	1/16 (1,59)	.620 (15,75)	.520 (13,21)	
12SWS3103	SWS 3103 1/2 (12,70)	.872 (22,14)	1/8 (3,18)	.617 (15,67)	.335 (8,51)	
12SWS3104	SWS 3104 .125 (3,18)	.750 (19,05)	.075 (1,91)	.437 (11,10)	.265 (6,73)	
12SWS3105	SWS 3105 .190 (4,83)	.825 (20,96)	.060 (1,52)	.435 (11,05)	.310 (7,87)	
12SWS3106	SWS 3106 .204 (5,18)	.875 (22,23)	.062 (1,57)	.626 (15,90)	.379 (9,63)	
12SWS3149	SWS 3149 .455 (11,56)	.865 (21,97)	.045 (1,14)	.600 (15,24)	.510 (12,95)	
12SWS3150	SWS 3150 1 (25,40)	.875 (22,23)	1/16 (1,59)	.500 (12,70)	.375 (9,53)	
12SWS3151	SWS 3151 3/8 (9,53)	7/8 (22,22)	1/8 (3,17)	.633 (16,08)	.510 (12,95)	
12SWS3155	SWS 3155 3/8 (9,53)	.875 (22,23)	1/8 (3,18)	.630 (16,00)	.440 (11,18)	
12SWS3156	SWS 3156 .689 (17,50)	.874 (22,20)	.063 (1,60)	.634 (16,10)	.507 (12,88)	
12SWS3160	SWS 3160 1/2 (12,70)	.875 (22,23)	1/16 (1,59)	.750 (19,05)	.635 (16,13)	

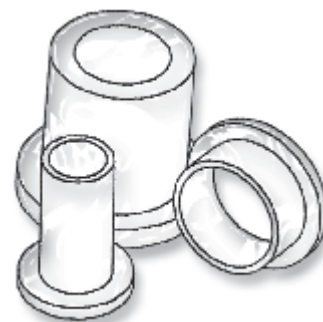


## NYLON SHOULDER WASHERS

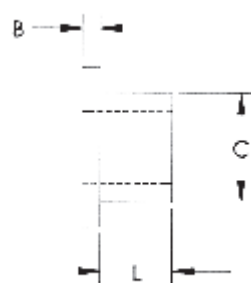
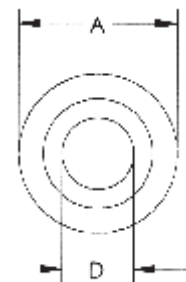
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**New Sizes**



ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS3165	SWS 3165	3/8 (9,53)	.875 (22,23)	1/8 (3,18)	.620 (15,75)	.250 (6,35)
12SWS3200	SWS 3200	3/16 (4,76)	.995 (25,27)	1/8 (3,18)	.792 (20,12)	.695 (17,65)
12SWS3205	SWS 3205	5/8 (15,88)	.995 (25,27)	1/8 (3,18)	.787 (19,99)	.695 (17,65)
12SWS3210	SWS 3210	1 (25,40)	.995 (25,27)	1/8 (3,18)	.787 (19,99)	.695 (17,65)
12SWS3500	SWS 3500	3/16 (4,76)	.750 (19,05)	1/16 (1,59)	.498 (12,64)	.378 (9,60)
12SWS3501	SWS 3501	7/64 (2,77)	.750 (19,05)	3/32 (2,38)	.577 (14,66)	.390 (9,91)
12SWS3502	SWS 3502	27/64 (10,72)	.790 (20,07)	3/64 (1,19)	.625 (15,88)	.550 (13,97)
12SWS3503	SWS 3503	13/16 (20,64)	.625 (15,88)	1/8 (3,18)	.375 (9,53)	.255 (6,47)
12SWS3504	SWS 3504	13/16 (20,64)	.625 (15,88)	1/8 (3,18)	.375 (9,53)	.260 (6,60)
12SWS3505	SWS 3505	.100 (2,54)	.800 (20,32)	.055 (1,40)	.655 (16,64)	.563 (14,30)
12SWS3507	SWS 3507	.250 (6,35)	.830 (21,08)	.100 (2,54)	.452 (11,18)	.253 (6,43)
12SWS3510	SWS 3510	13/32 (10,32)	.825 (20,96)	3/32 (2,38)	.445 (11,30)	.306 (7,77)
12SWS3511	SWS 3511	13/64 (5,16)	.880 (22,35)	3/64 (1,19)	.750 (19,05)	.617 (15,67)
12SWS3512	SWS 3512	.935 (23,75)	.872 (22,15)	.110 (2,79)	.497 (12,62)	.385 (9,78)
12SWS3513	SWS 3513	.250 (6,35)	.875 (22,22)	.125 (3,17)	.617 (15,67)	.335 (8,51)
12SWS3514	SWS 3514	3/8 (9,53)	7/8 (22,23)	1/16 (1,57)	31/64 (12,29)	.386 (9,80)
12SWS3515	SWS 3515	3/8 (9,53)	7/8 (22,23)	1/16 (1,57)	17/32 (13,49)	.438 (11,13)
12SWS3520	SWS 3520	17/32 (13,49)	.945 (24,03)	5/64 (1,98)	.470 (11,93)	.406 (10,31)
12SWS3521	SWS 3521	.060 (1,52)	.940 (23,88)	.090 (2,29)	.560 (14,22)	.257 (6,53)
12SWS3562	SWS 3562	1/4 (6,35)	.980 (24,89)	1/8 (3,18)	.556 (14,12)	.380 (9,65)
12SWS3563	SWS 3563	.080 (2,03)	1.000 (25,40)	.125 (3,18)	.306 (7,77)	.205 (5,21)
12SWS3564	SWS 3564	.250 (6,35)	.980 (24,89)	.125 (3,18)	.546 (13,87)	.406 (10,31)
12SWS3580	SWS 3580	9/16 (14,29)	1.25 (31,75)	3/64 (1,19)	1.00 (25,40)	.559 (14,20)
12SWS3598	SWS 3598	.200 (5,08)	1.000 (25,40)	.050 (1,27)	.750 (19,05)	.630 (16,00)
12SWS3599	SWS 3599	5/8 (15,88)	1" (25,40)	1/8 (3,18)	.666 (16,92)	.520 (13,21)
12SWS3600	SWS 3600	.660 (16,76)	1.010 (25,65)	.160 (4,06)	.600 (15,24)	.260 (6,60)
12SWS3601	SWS 3601	3/16 (4,76)	1.000 (25,40)	1/4 (6,35)	.435 (11,05)	.325 (8,26)
12SWS3602	SWS 3602	1/32 (0,79)	1.000 (25,40)	3/32 (2,38)	.616 (15,65)	.515 (13,08)
12SWS3603	SWS 3603	.050 (1,27)	1.005 (25,53)	.070 (1,78)	.500 (12,70)	.453 (11,51)
12SWS3604	SWS 3604	.243 (6,17)	1.006 (25,55)	.078 (1,98)	.504 (12,80)	.376 (9,55)
12SWS3605	SWS 3605	5/16 (7,94)	1.005 (25,53)	1/16 (1,59)	.500 (12,70)	.375 (9,53)
12SWS3606	SWS 3606	.33 (8,38)	1.00 (25,40)	.04 (1,02)	.625 (15,87)	.515 (13,08)
12SWS3607	SWS 3607	.521 (13,23)	1.068 (27,13)	.062 (1,57)	.896 (22,76)	.630 (16,00)
12SWS3608	SWS 3608	.500 (12,70)	1.000 (25,40)	.125 (3,18)	.687 (17,45)	.510 (12,95)
12SWS3609	SWS 3609	.120 (3,05)	1.000 (25,40)	.130 (3,30)	.745 (18,92)	.645 (16,38)
12SWS3610	SWS 3610	9/16 (14,29)	1.000 (25,40)	1/16 (1,59)	.500 (12,70)	.382 (9,70)
12SWS3612	SWS 3612	.085 (2,16)	1.000 (25,40)	.075 (1,91)	.562 (14,27)	.190 (4,83)
12SWS3615	SWS 3615	3/4 (19,05)	1.000 (25,40)	1/8 (3,18)	.500 (12,70)	3/8 (9,53)
12SWS3650	SWS 3650	7/64 (2,77)	1.000 (25,40)	5/64 (1,98)	.770 (19,56)	.508 (12,90)
12SWS3680	SWS 3680	1/16 (1,59)	1.000 (25,40)	1/16 (1,59)	.298 (7,57)	.203 (5,16)
12SWS3685	SWS 3685	1/16 (1,59)	1.064 (27,02)	1/16 (1,59)	.787 (19,99)	.612 (15,54)
12SWS3686	SWS 3686	9/32 (7,14)	1.105 (28,07)	.092 (2,34)	.718 (18,24)	.515 (13,08)
12SWS3687	SWS 3687	.118 (3,00)	1.102 (27,99)	.039 (0,99)	.906 (23,01)	.827 (21,01)
12SWS3688	SWS 3688	.313 (7,95)	1.130 (28,70)	.062 (1,57)	.880 (22,35)	.750 (19,05)
12SWS3689	SWS 3689	.313 (7,95)	1.130 (28,70)	.062 (1,57)	.880 (22,35)	.758 (19,25)



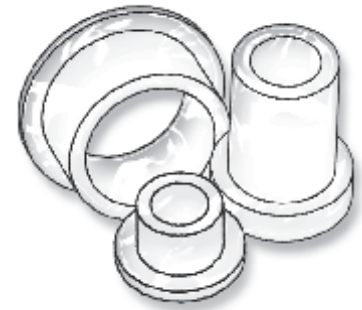


# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

## SECTION IV

### NYLON SHOULDER WASHERS

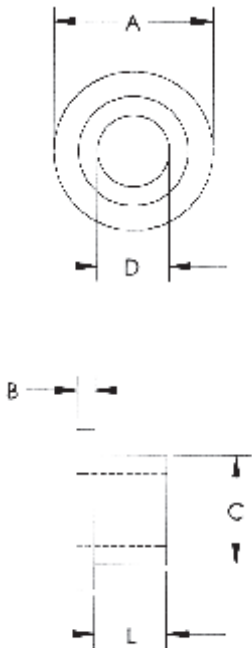
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**New Sizes**

ITEM NUMBER	DESCRIPTION	L	A	B	C	D
12SWS3690	SWS 3690	7/16 (11,11)	1.125 (28,58)	3/32 (2,38)	.700 (17,78)	.510 (12,95)
12SWS3691	SWS 3691	.060 (1,52)	1.160 (29,46)	.128 (3,25)	.495 (12,57)	.377 (9,58)
12SWS3693	SWS 3693	.422 (10,72)	1.250 (31,75)	.156 (3,96)	1.002 (25,45)	.818 (20,78)
12SWS3694	SWS 3694	.250 (6,35)	1.125 (28,58)	.187 (4,75)	.718 (18,24)	.515 (13,08)
12SWS3695	SWS 3695	.125 (3,18)	1.250 (31,75)	.045 (1,14)	.480 (12,19)	.380 (9,65)
12SWS3696	SWS 3696	.100 (2,54)	1.250 (31,75)	.150 (3,81)	1.000 (25,40)	.340 (8,64)
12SWS3697	SWS 3697	.100 (2,54)	1.250 (31,75)	.212 (5,38)	1.000 (25,40)	.340 (8,64)
12SWS4001	SWS 4001	3/32 (2,38)	1.125 (28,58)	1/16 (1,59)	.740 (18,80)	.515 (13,08)
12SWS4002	SWS 4002	3/32 (2,38)	1.230 (31,24)	1/16 (1,59)	.980 (24,89)	.510 (12,95)
12SWS4003	SWS 4003	9/32 (7,14)	1.105 (28,07)	1/8 (3,18)	.752 (19,10)	.515 (13,08)
12SWS4004	SWS 4004	1/2 (12,70)	1.245 (31,69)	1/8 (3,18)	.875 (22,23)	.627 (15,92)
12SWS4005	SWS 4005	13/32 (10,32)	1.252 (31,80)	1/16 (1,59)	.600 (15,24)	.538 (13,66)
12SWS4006	SWS 4006	13/32 (10,32)	1.251 (31,77)	1/16 (1,59)	.528 (13,41)	.471 (11,96)
12SWS4007	SWS 4007	13/64 (5,16)	1.739 (44,17)	13/64 (5,16)	1.095 (27,81)	.435 (11,04)
12SWS4008	SWS 4008	11/32 (8,71)	1.250 (31,75)	5/32 (3,97)	.995 (25,27)	.885 (22,48)
12SWS4009	SWS 4009	3/4 (19,05)	1 1/8 (28,57)	1/16 (1,59)	7/16 (11,11)	5/16 (7,94)
12SWS4010	SWS 4010	3/32 (2,38)	1.250 (31,75)	1/16 (1,59)	.930 (23,62)	.562 (14,27)
12SWS4011	SWS 4011	.094 (2,39)	1.250 (31,75)	.062 (1,57)	.989 (25,12)	.562 (14,27)
12SWS4012	SWS 4012	.060 (1,52)	1.650 (41,91)	.060 (1,52)	1.380 (35,05)	1.125 (28,58)
12SWS4013	SWS 4013	5/8 (15,88)	1-3/4 (44,45)	1/8 (3,18)	1-3/8 (34,93)	1.015 (25,78)
12SWS4014	SWS 4014	.238 (6,04)	1.501 (38,12)	.133 (3,38)	1.248 (31,70)	.942 (23,92)
12SWS4016	SWS 4016	.100 (2,54)	1.250 (31,75)	.250 (6,35)	.419 (10,64)	.254 (6,45)
12SWS4017	SWS 4017	.170 (4,32)	1.570 (39,88)	.175 (4,45)	1.055 (26,80)	.887 (22,53)
12SWS4018	SWS 4018	.250 (6,35)	1.500 (38,10)	.120 (3,05)	.615 (15,62)	.265 (6,73)
12SWS4019	SWS 4019	.309 (7,85)	1.365 (34,67)	.128 (3,25)	1.120 (28,45)	.870 (22,10)
12SWS5000	SWS 5000	5/8 (15,88)	1.952 (49,58)	.125 (3,18)	31/64 (12,29)	.380 (9,65)
12SWS5001	SWS 5001	1/2 (12,70)	2.065 (52,45)	1/8 (3,18)	1.050 (26,67)	.806 (20,42)
12SWS5002	SWS 5002	.500 (12,70)	2.065 (52,45)	.125 (3,18)	1.050 (26,67)	.783 (19,89)
12SWS5003	SWS 5003	.305 (7,75)	1.989 (50,52)	.129 (3,28)	1.743 (44,27)	1.326 (33,68)
12SWS5009	SWS 5009	45/64 (17,85)	2.111 (53,62)	1/8 (3,18)	.603 (15,31)	.270 (6,85)



### SHOULDER WASHER ASSORTMENT KIT page 216



# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

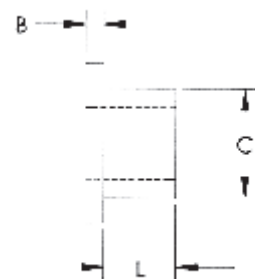
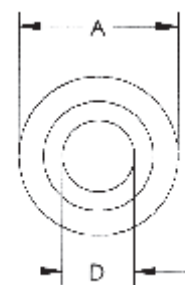
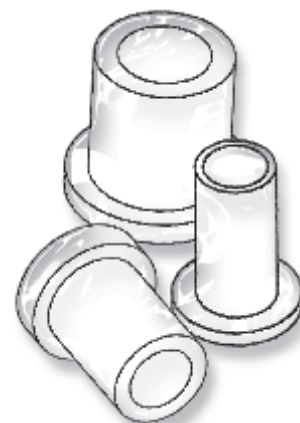
## NYLON SCREW INSULATORS

**METRIC Sizes**  
Also Available  
Page 238

SECTION  
**IV**

Screw Insulators may also be used as light load bearings in many applications.

ITEM NUMBER	DESCRIPTION	L	A	B	C	D
10SC002012	SC 2	1/8 (3,18)	.181 (4,60)	3/64 (1,19)	.120 (3,05)	.090 (2,29)
10SC002018	SC 2	3/16 (4,76)	.181 (4,60)	3/64 (1,19)	.120 (3,05)	.090 (2,29)
10SC002025	SC 2	1/4 (6,35)	.181 (4,60)	3/64 (1,19)	.120 (3,05)	.090 (2,29)
10SC002037	SC 2	3/8 (9,53)	.181 (4,60)	3/64 (1,19)	.120 (3,05)	.090 (2,29)
10SC004003	SC 4	1/32 (0,79)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004004	SC 4	3/64 (1,19)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004006	SC 4	1/16 (1,59)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004009	SC 4	3/32 (2,38)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004012	SC 4	1/8 (3,18)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004015	SC 4	5/32 (3,97)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004018	SC 4	3/16 (4,76)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004025	SC 4	1/4 (6,35)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004037	SC 4	3/8 (9,53)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC004050	SC 4	1/2 (12,70)	.235 (5,97)	3/64 (1,19)	.145 (3,68)	.115 (2,92)
10SC006004	SC 6	3/64 (1,19)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006006	SC 6	1/16 (1,59)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006009	SC 6	3/32 (2,38)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006012	SC 6	1/8 (3,18)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006015	SC 6	5/32 (3,97)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006018	SC 6	3/16 (4,76)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006025	SC 6	1/4 (6,35)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006037	SC 6	3/8 (9,53)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC006050	SC 6	1/2 (12,70)	.290 (7,37)	3/64 (1,19)	.170 (4,32)	.140 (3,56)
10SC008012	SC 8	1/8 (3,18)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
10SC008014	SC 8	9/64 (3,58)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
10SC008025	SC 8	1/4 (6,35)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
10SC008037	SC 8	3/8 (9,53)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
10SC008050	SC 8	1/2 (12,70)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
10SC008062	SC 8	5/8 (15,88)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
10SC008075	SC 8	3/4 (19,05)	.344 (8,74)	1/16 (1,59)	.205 (5,21)	.173 (4,39)
10SC010006	SC 10	1/16 (1,59)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010014	SC 10	9/64 (3,58)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010018	SC 10	3/16 (4,76)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010025	SC 10	1/4 (6,35)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010037	SC 10	3/8 (9,53)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010050	SC 10	1/2 (12,70)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010056	SC 10	9/16 (14,29)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010062	SC 10	5/8 (15,88)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC010075	SC 10	3/4 (19,05)	.399 (10,13)	1/16 (1,59)	.260 (6,60)	.200 (5,08)
10SC250012	SC 250	1/8 (3,18)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC250014	SC 250	9/64 (3,58)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC250018	SC 250	3/16 (4,76)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC250025	SC 250	1/4 (6,35)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC250037	SC 250	3/8 (9,53)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC250050	SC 250	1/2 (12,70)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC250062	SC 250	5/8 (15,88)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC250075	SC 250	3/4 (19,05)	.513 (13,03)	1/16 (1,59)	.312 (7,92)	.260 (6,60)
10SC312012	SC 312	1/8 (3,18)	.620 (15,75)	1/16 (1,59)	.360 (9,14)	.320 (8,13)
10SC312025	SC 312	1/4 (6,35)	.620 (15,75)	1/16 (1,59)	.360 (9,14)	.320 (8,13)
10SC312037	SC 312	3/8 (9,53)	.620 (15,75)	1/16 (1,59)	.360 (9,14)	.320 (8,13)
10SC312050	SC 312	1/2 (12,70)	.620 (15,75)	1/16 (1,59)	.360 (9,14)	.320 (8,13)
10SC312062	SC 312	5/8 (15,88)	.620 (15,75)	1/16 (1,59)	.360 (9,14)	.320 (8,13)



Specify screw size and length when ordering. Specials can be made to order for a small tooling charge.



# WASHERS, SHOULDER WASHERS & SCREW INSULATORS

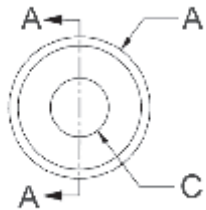
## SECTION IV

Nylon Cup Washers are designed to :

- Protect the head of a metal screw from electrical contact.  
Accommodate the most common screw head-styles including:
- Cheese, Pan and Fillister, in sizes from #4 TO 1/4".

Cup Washers are molded from tough, electrically insulating Nylon 6/6.

**New Sizes**

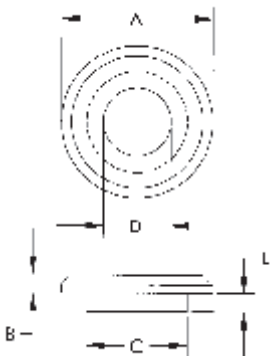


## NYLON CUP WASHERS

ITEM NUMBER	A	B	C	D	E
16CW004040	.305 (7,76)	.245 (6,22)	.115 (2,92)	.117 (2,97)	.157 (3,99)
16CW006040	.360 (9,14)	.300 (7,62)	.140 (3,56)	.142 (3,61)	.182 (4,62)
16CW008040	.414 (10,52)	.354 (8,99)	.171 (4,34)	.166 (4,22)	.206 (5,23)
16CW008042	.497 (12,62)	.389 (9,88)	.187 (4,75)	.093 (2,36)	.139 (3,53)
16CW008041	.414 (10,52)	.354 (8,99)	.171 (4,34)	.130 (3,30)	.170 (4,32)
16CW010030	.568 (14,43)	.375 (9,53)	.201 (5,11)	.127 (3,23)	.157 (3,99)
16CW010040	.470 (11,94)	.410 (10,41)	.194 (4,93)	.190 (4,83)	.230 (5,85)
16CW250040	.595 (15,11)	.535 (13,59)	.257 (6,53)	.247 (6,27)	.287 (7,29)
16CW312375	.875 (22,23)	.625 (15,88)	.344 (8,74)	.250 (6,35)	.375 (9,53)
16CW312500	.875 (22,23)	.625 (15,88)	.344 (8,74)	.375 (9,53)	.500 (12,70)



## NYLON STANDARD SHOULDER WASHERS



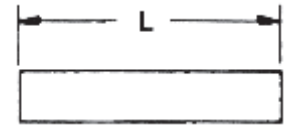
ITEM NUMBER	DESCRIPTION	L	A	B	C	D
24SW0002	SW 2	.040 (1,02)	.250 (6,35)	.040 (1,02)	.156 (3,96)	.093 (2,36)
24SW0004	SW 4	.040 (1,02)	.281 (7,14)	.040 (1,02)	.187 (4,75)	.122 (3,09)
24SW0006	SW 6	.040 (1,02)	.328 (8,33)	.040 (1,02)	.218 (5,54)	.146 (3,71)
24SW0008	SW 8	.050 (1,27)	.375 (9,53)	.050 (1,27)	.250 (6,35)	.174 (4,42)
24SW0010	SW 10	.050 (1,27)	.437 (11,10)	.050 (1,27)	.281 (7,14)	.201 (5,11)
24SW0250	SW1/4	.060 (1,52)	.562 (14,27)	.060 (1,52)	.375 (9,53)	.260 (6,60)
24SW0375	SW3/8	.060 (1,52)	.750 (19,05)	.060 (1,52)	.500 (12,70)	.385 (9,78)



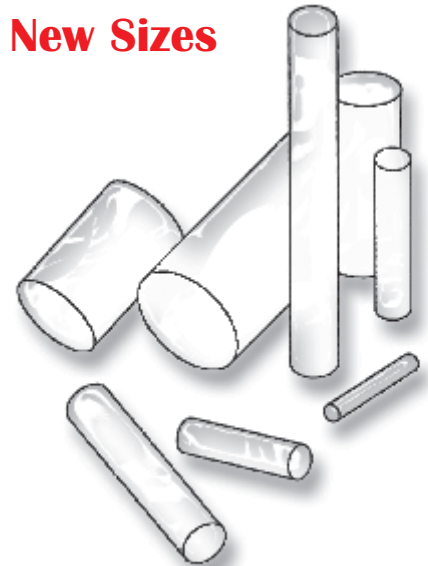
## MOLDED PLASTIC DOWELS

ITEM NUMBER	DESCRIPTION	O.D.	LENGTH
2500470125	047125	.047 (1,19)	1/8 (3,18)
2500470250	047250	.047 (1,19)	1/4 (6,35)
2500470375	047375	.047 (1,19)	3/8 (9,53)
2500470500	047500	.047 (1,19)	1/2 (12,70)
2500620125	062125	.062 (1,57)	1/8 (3,18)
2500620250	062250	.062 (1,57)	1/4 (6,35)
2500620375	062375	.062 (1,57)	3/8 (9,53)
2500620500	062500	.062 (1,57)	1/2 (12,70)
2500930125	093125	.093 (2,36)	1/8 (3,18)
2500930250	093250	.093 (2,36)	1/4 (6,35)
2500930375	093375	.093 (2,36)	3/8 (9,53)
2500930500	093500	.093 (2,36)	1/2 (12,70)
2501221125	122125	.122 (3,10)	1-1/8 (28,58)
2501250125	125125	.125 (3,18)	1/8 (3,18)
2501250187	125187	.125 (3,18)	3/16 (4,76)
2501250250	125250	.125 (3,18)	1/4 (6,35)
2501250375	125375	.125 (3,18)	3/8 (9,53)
2501250500	125500	.125 (3,18)	1/2 (12,70)
2501870125	187125	.187 (4,75)	1/8 (3,18)
2501870250	187250	.187 (4,75)	1/4 (6,35)
2501870375	187375	.187 (4,75)	3/8 (9,53)
2501870500	187500	.187 (4,75)	1/2 (12,70)
2501870625	187625	.187 (4,75)	5/8 (15,88)
2501870750	187750	.187 (4,75)	3/4 (19,05)
2502451250	245250	.245 (6,22)	1-1/4 (31,75)
2502100500	210500	.210 (5,33)	1/2 (12,70)
2502500125	250125	.250 (6,35)	1/8 (3,18)
2502500250	250250	.250 (6,35)	1/4 (6,35)
2502500375	250375	.250 (6,35)	3/8 (9,53)
2502500500	250500	.250 (6,35)	1/2 (12,70)
2502500750	250750	.250 (6,35)	3/4 (19,05)
2503120125	312125	.312 (7,92)	1/8 (3,18)
2503120250	312250	.312 (7,92)	1/4 (6,35)
2503120375	312375	.312 (7,92)	3/8 (9,53)
2503120500	312500	.312 (7,92)	1/2 (12,70)
2503120625	312625	.312 (7,92)	5/8 (15,88)
2503120750	312750	.312 (7,92)	3/4 (19,05)
2504370250	437250	.437 (11,10)	1/4 (6,35)

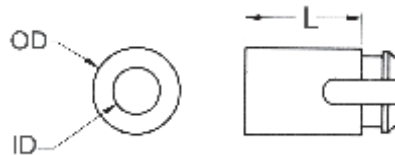
Uses include dowel pins, stop pins, insulating spacers, switch actuators, and keys. Natural color acetal plastic is standard though they may be molded of other materials. Other lengths are available.



### New Sizes



## NYLON SPECIAL SNAP-IN STANDOFF

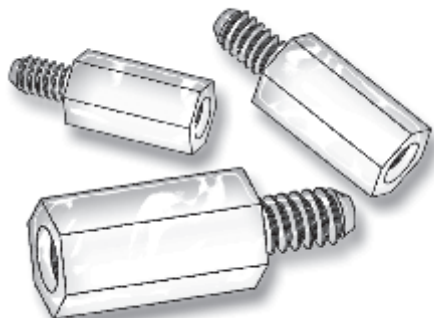


ITEM NUMBER	PANEL THICKNESS	HOLE SIZE	L	OD	ID
13SS003094	1/16" (1,58)	.187 (4,75)	.945 (24,0)	1/4" (6,35)	.106 (2,69)
13SS004018	.062 (1,57)	.187 (4,75)	.187 (4,75)	.250 (6,35)	.125 (3,18)
13SS006025	1/16" (1,58)	.234 (5,95)	1/4" (6,35)	9/32" (7,14)	.153 (3,89)
13SS006037	1/16" (1,58)	.234 (5,95)	3/8" (9,53)	9/32" (7,14)	.153 (3,89)
13SS008037	1/16" (1,58)	.234 (5,95)	3/8" (9,53)	9/32" (7,14)	.169 (4,29)
13SS008050	1/16" (1,58)	.234 (5,95)	1/2" (12,70)	9/32" (7,14)	.169 (4,29)

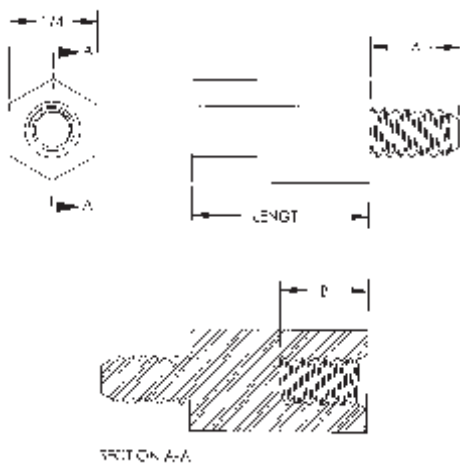


## New Sizes

## MALE-FEMALE NYLON THREADED STANDOFFS



DEPTH OF THREAD IN 1/4" BODY LENGTHS IS 3/16" MINIMUM



THREAD SIZE	A	B
440	3/16 (4,76)	3/16 (4,76) Minimum
632	1/4 (6,35)	1/4 (6,35) Minimum
832	3/8 (9,53)	3/8 (9,53) Minimum

- \* B = 7/32
- \*\* B = 13/64
- \*\*\* B = .200
- \*\*\*\* B = .270



ITEM NUMBER	DESCRIPTION	THREAD	L
36440MF025	Standoff	440	1/4 (6,35)
36440MF031	Standoff	440	5/16 (7,94)
36440MF037	Standoff	440	3/8 (9,53)
36440MF050	Standoff	440	1/2 (12,70)
36440MF060	Standoff	440	.600 (15,24)
36440MF062	Standoff	440	5/8 (15,88)
36440MF075	Standoff	440	3/4 (19,05)
36440MF087	Standoff	440	7/8 (22,22)
36440MF100	Standoff	440	1 (25,40)
36440MF112	Standoff	440	1 1/8 (28,58)
36440MF125	Standoff	440	1 1/4 (31,75)
36440MF137	Standoff	440	1 3/8 (34,93)
36440MF150	Standoff	440	1 1/2 (38,10)
36440MF162	Standoff	440	1 5/8 (38,28)
36440MF175	Standoff	440	1 3/4 (44,45)
36440MF200	Standoff	440	2 (50,80)
* 36632MF025	Standoff	632	1/4 (6,35)
** 36632MF026	Standoff	632	17/64 (6,75)
36632MF037	Standoff	632	3/8 (9,53)
36632MF050	Standoff	632	1/2 (12,70)
36632MF056	Standoff	632	9/16 (14,27)
36632MF062	Standoff	632	5/8 (15,88)
36632MF075	Standoff	632	3/4 (19,05)
36632MF087	Standoff	632	7/8 (22,22)
36632MF093	Standoff	632	15/16 (23,81)
36632MF100	Standoff	632	1 (25,40)
36632MF112	Standoff	632	1 1/8 (28,58)
36632MF125	Standoff	632	1 1/4 (31,75)
36632MF131	Standoff	632	1 5/16 (33,32)
36632MF137	Standoff	632	1 3/8 (34,93)
36632MF150	Standoff	632	1 1/2 (38,10)
36632MF162	Standoff	632	1 5/8 (41,28)
36632MF175	Standoff	632	1 3/4 (44,45)
*** 36632MF200	Standoff	632	2 (50,80)
**** 36832MF025	Standoff	832	1/4 (6,35)
36832MF037	Standoff	832	3/8 (9,53)
36832MF050	Standoff	832	1/2 (12,70)
36832MF062	Standoff	832	5/8 (15,88)
36832MF075	Standoff	832	3/4 (19,05)
36832MF087	Standoff	832	7/8 (22,22)
36832MF100	Standoff	832	1 (25,40)
36832MF112	Standoff	832	1 1/8 (28,58)
36832MF125	Standoff	832	1 1/4 (31,75)
36832MF137	Standoff	832	1 3/8 (34,93)
36832MF150	Standoff	832	1 1/2 (38,10)
36832MF162	Standoff	832	1 5/8 (41,28)
36832MF175	Standoff	832	1 3/4 (44,45)
36832MF200	Standoff	832	2 (50,80)

# SPACERS

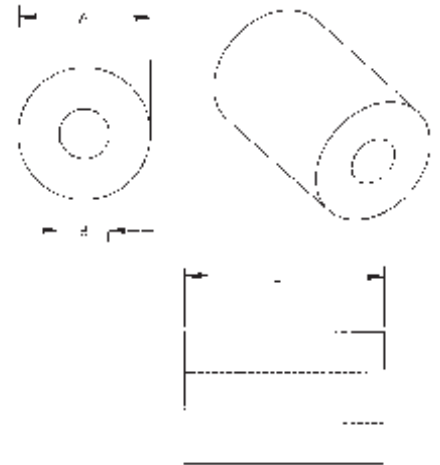
SECTION  
**V**

ITEM NUMBER	DESCRIPTION	A	B	L	SCREW
13SP000	SP 0	1/8 (3,18)	.063 (1,60)	3/16 (4,76)	0
13SP001	SP 1	3/16 (4,76)	.091 (2,31)	1/8 (3,18)	2
13SP002	SP 2	3/16 (4,76)	.115 (2,92)	1/8 (3,18)	4
13SP003	SP 3	3/16 (4,76)	.091 (2,31)	3/16 (4,76)	2
13SP004	SP 4	3/16 (4,76)	.115 (2,92)	3/16 (4,76)	4
13SP005	SP 5	3/16 (4,76)	.091 (2,31)	1/4 (6,35)	2
13SP006	SP 6	3/16 (4,76)	.115 (2,92)	1/4 (6,35)	4
13SP007	SP 7	3/16 (4,76)	.091 (2,31)	5/16 (7,94)	2
13SP008	SP 8	3/16 (4,76)	.115 (2,92)	5/16 (7,94)	4
13SP009	SP 9	3/16 (4,76)	.091 (2,31)	3/8 (9,53)	2
13SP010	SP 10	3/16 (4,76)	.115 (2,92)	3/8 (9,53)	4
13SP011	SP 11	3/16 (4,76)	.091 (2,31)	7/16 (11,11)	2
13SP012	SP 12	3/16 (4,76)	.115 (2,92)	7/16 (11,11)	4
13SP013	SP 13	3/16 (4,76)	.091 (2,31)	1/2 (12,70)	2
13SP014	SP 14	3/16 (4,76)	.115 (2,92)	1/2 (12,70)	4
13SP015	SP 15	3/16 (4,76)	.091 (2,31)	9/16 (14,29)	2
13SP016	SP 16	3/16 (4,76)	.115 (2,92)	9/16 (14,29)	4
13SP017	SP 17	3/16 (4,76)	.091 (2,31)	5/8 (15,88)	2
13SP018	SP 18	3/16 (4,76)	.115 (2,92)	5/8 (15,88)	4
13SP019	SP 19	3/16 (4,76)	.091 (2,31)	11/16 (17,46)	2
13SP020	SP 20	3/16 (4,76)	.115 (2,92)	11/16 (17,46)	4
13SP021	SP 21	3/16 (4,76)	.091 (2,31)	3/4 (19,05)	2
13SP022	SP 22	3/16 (4,76)	.115 (2,92)	3/4 (19,05)	4
13SP023	SP 23	3/16 (4,76)	.091 (2,31)	13/16 (20,64)	2
13SP024	SP 24	3/16 (4,76)	.115 (2,92)	13/16 (20,64)	4
13SP025	SP 25	3/16 (4,76)	.091 (2,31)	7/8 (22,22)	2
13SP026	SP 26	3/16 (4,76)	.115 (2,92)	7/8 (22,22)	4
13SP027	SP 27	3/16 (4,76)	.091 (2,31)	15/16 (23,81)	2
13SP028	SP 28	3/16 (4,76)	.115 (2,92)	15/16 (23,81)	4
13SP029	SP 29	3/16 (4,76)	.091 (2,31)	1 (25,40)	2
13SP030	SP 30	3/16 (4,76)	.115 (2,92)	1 (25,40)	4
13SP031	SP 31	1/4 (6,35)	.091 (2,31)	1/8 (3,18)	2
13SP032	SP 32	1/4 (6,35)	.115 (2,92)	1/8 (3,18)	4
13SP033	SP 33	1/4 (6,35)	.140 (3,56)	1/8 (3,18)	6
13SP034	SP 34	1/4 (6,35)	.171 (4,34)	1/8 (3,18)	8
13SP035	SP 35	1/4 (6,35)	.091 (2,31)	3/16 (4,76)	2
13SP036	SP 36	1/4 (6,35)	.115 (2,92)	3/16 (4,76)	4
13SP037	SP 37	1/4 (6,35)	.140 (3,56)	3/16 (4,76)	6
13SP038	SP 38	1/4 (6,35)	.171 (4,34)	3/16 (4,76)	8
13SP039	SP 39	1/4 (6,35)	.091 (2,31)	1/4 (6,35)	2
13SP040	SP 40	1/4 (6,35)	.115 (2,92)	1/4 (6,35)	4
13SP041	SP 41	1/4 (6,35)	.140 (3,56)	1/4 (6,35)	6
13SP042	SP 42	1/4 (6,35)	.171 (4,34)	1/4 (6,35)	8
13SP043	SP 43	1/4 (6,35)	.091 (2,31)	5/16 (7,94)	2
13SP044	SP 44	1/4 (6,35)	.115 (2,92)	5/16 (7,94)	4
13SP045	SP 45	1/4 (6,35)	.140 (3,56)	5/16 (7,94)	6
13SP046	SP 46	1/4 (6,35)	.171 (4,34)	5/16 (7,94)	8
13SP047	SP 47	1/4 (6,35)	.091 (2,31)	3/8 (9,53)	2
13SP048	SP 48	1/4 (6,35)	.115 (2,92)	3/8 (9,53)	4
13SP049	SP 49	1/4 (6,35)	.140 (3,56)	3/8 (9,53)	6
13SP050	SP 50	1/4 (6,35)	.171 (4,34)	3/8 (9,53)	8
13SP051	SP 51	1/4 (6,35)	.091 (2,31)	7/16 (11,11)	2
13SP052	SP 52	1/4 (6,35)	.115 (2,92)	7/16 (11,11)	4
13SP053	SP 53	1/4 (6,35)	.140 (3,56)	7/16 (11,11)	6
13SP054	SP 54	1/4 (6,35)	.171 (4,34)	7/16 (11,11)	8

## STANDARD NYLON SPACERS



**METRIC Sizes  
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ALL STANDARD NYLON SPACERS CAN BE TAPPED TWO THREAD SIZES LARGER THAN THE SCREW SIZE LISTED.

FOR EXAMPLE:

13SP023 WITH A SCREW SIZE OF 2 CAN BE TAPPED 440 THREAD.

TO ORDER A TAPPED SPACER, SIMPLY ADD A "T" TO THE PART NUMBER.

FOR EXAMPLE:

13SP101 BECOMES 13TSP101





# SPACERS

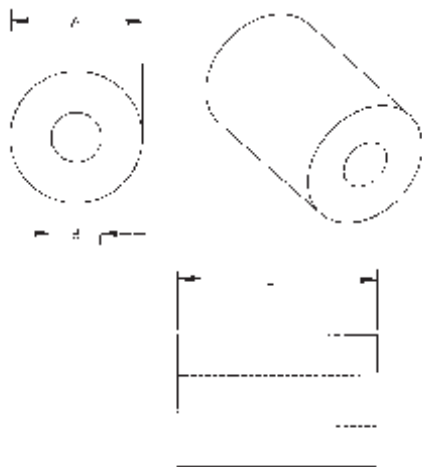
SECTION

V

## STANDARD NYLON SPACERS



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ALL STANDARD NYLON SPACERS CAN BE TAPPED TWO THREAD SIZES LARGER THAN THE SCREW SIZE LISTED.

FOR EXAMPLE:

13SP023 WITH A SCREW SIZE OF 2 CAN BE TAPPED 440 THREAD.

TO ORDER A TAPPED SPACER, SIMPLY ADD A "T" TO THE PART NUMBER.

FOR EXAMPLE:

13SP101 BECOMES 13TSP101



ITEM NUMBER	DESCRIPTION	A	B	L	SCREW
13SP055	SP 55	1/4 (6,35)	.091 (2,31)	1/2 (12,70)	2
13SP056	SP 56	1/4 (6,35)	.115 (2,92)	1/2 (12,70)	4
13SP057	SP 57	1/4 (6,35)	.140 (3,56)	1/2 (12,70)	6
13SP058	SP 58	1/4 (6,35)	.171 (4,34)	1/2 (12,70)	8
13SP059	SP 59	1/4 (6,35)	.091 (2,31)	9/16 (14,29)	2
13SP060	SP 60	1/4 (6,35)	.115 (2,92)	9/16 (14,29)	4
13SP061	SP 61	1/4 (6,35)	.140 (3,56)	9/16 (14,29)	6
13SP062	SP 62	1/4 (6,35)	.171 (4,34)	9/16 (14,29)	8
13SP063	SP 63	1/4 (6,35)	.091 (2,31)	5/8 (15,88)	2
13SP064	SP 64	1/4 (6,35)	.115 (2,92)	5/8 (15,88)	4
13SP065	SP 65	1/4 (6,35)	.140 (3,56)	5/8 (15,88)	6
13SP066	SP 66	1/4 (6,35)	.171 (4,34)	5/8 (15,88)	8
13SP067	SP 67	1/4 (6,35)	.091 (2,31)	11/16 (17,46)	2
13SP068	SP 68	1/4 (6,35)	.115 (2,92)	11/16 (17,46)	4
13SP069	SP 69	1/4 (6,35)	.140 (3,56)	11/16 (17,46)	6
13SP070	SP 70	1/4 (6,35)	.171 (4,34)	11/16 (17,46)	8
13SP071	SP 71	1/4 (6,35)	.091 (2,31)	3/4 (19,05)	2
13SP072	SP 72	1/4 (6,35)	.115 (2,92)	3/4 (19,05)	4
13SP073	SP 73	1/4 (6,35)	.140 (3,56)	3/4 (19,05)	6
13SP074	SP 74	1/4 (6,35)	.171 (4,34)	3/4 (19,05)	8
13SP075	SP 75	1/4 (6,35)	.091 (2,31)	13/16 (20,64)	2
13SP076	SP 76	1/4 (6,35)	.115 (2,92)	13/16 (20,64)	4
13SP077	SP 77	1/4 (6,35)	.140 (3,56)	13/16 (20,64)	6
13SP078	SP 78	1/4 (6,35)	.171 (4,34)	13/16 (20,64)	8
13SP079	SP 79	1/4 (6,35)	.091 (2,31)	7/8 (22,22)	2
13SP080	SP 80	1/4 (6,35)	.115 (2,92)	7/8 (22,22)	4
13SP081	SP 81	1/4 (6,35)	.140 (3,56)	7/8 (22,22)	6
13SP082	SP 82	1/4 (6,35)	.171 (4,34)	7/8 (22,22)	8
13SP083	SP 83	1/4 (6,35)	.091 (2,31)	15/16 (23,81)	2
13SP084	SP 84	1/4 (6,35)	.115 (2,92)	15/16 (23,81)	4
13SP085	SP 85	1/4 (6,35)	.140 (3,56)	15/16 (23,81)	6
13SP086	SP 86	1/4 (6,35)	.171 (4,34)	15/16 (23,81)	8
13SP087	SP 87	1/4 (6,35)	.091 (2,31)	1 (25,40)	2
13SP088	SP 88	1/4 (6,35)	.115 (2,92)	1 (25,40)	4
13SP089	SP 89	1/4 (6,35)	.140 (3,56)	1 (25,40)	6
13SP090	SP 90	1/4 (6,35)	.171 (4,34)	1 (25,40)	8
13SP091	SP 91	5/16 (7,94)	.115 (2,92)	1/8 (3,18)	4
13SP092	SP 92	5/16 (7,94)	.140 (3,56)	1/8 (3,18)	6
13SP093	SP 93	5/16 (7,94)	.171 (4,34)	1/8 (3,18)	8
13SP094	SP 94	5/16 (7,94)	.194 (4,93)	1/8 (3,18)	10
13SP095	SP 95	5/16 (7,94)	.115 (2,92)	3/16 (4,76)	4
13SP096	SP 96	5/16 (7,94)	.140 (3,56)	3/16 (4,76)	6
13SP097	SP 97	5/16 (7,94)	.171 (4,34)	3/16 (4,76)	8
13SP098	SP 98	5/16 (7,94)	.194 (4,93)	3/16 (4,76)	10
13SP099	SP 99	5/16 (7,94)	.115 (2,92)	1/4 (6,35)	4
13SP100	SP100	5/16 (7,94)	.140 (3,56)	1/4 (6,35)	6
13SP101	SP101	5/16 (7,94)	.171 (4,34)	1/4 (6,35)	8
13SP102	SP102	5/16 (7,94)	.194 (4,93)	1/4 (6,35)	10
13SP103	SP103	5/16 (7,94)	.115 (2,92)	5/16 (7,94)	4
13SP104	SP104	5/16 (7,94)	.140 (3,56)	5/16 (7,94)	6
13SP105	SP105	5/16 (7,94)	.171 (4,34)	5/16 (7,94)	8
13SP106	SP106	5/16 (7,94)	.194 (4,93)	5/16 (7,94)	10
13SP107	SP107	5/16 (7,94)	.115 (2,92)	3/8 (9,53)	4
13SP108	SP108	5/16 (7,94)	.140 (3,56)	3/8 (9,53)	6
13SP109	SP109	5/16 (7,94)	.171 (4,34)	3/8 (9,53)	8

# SPACERS

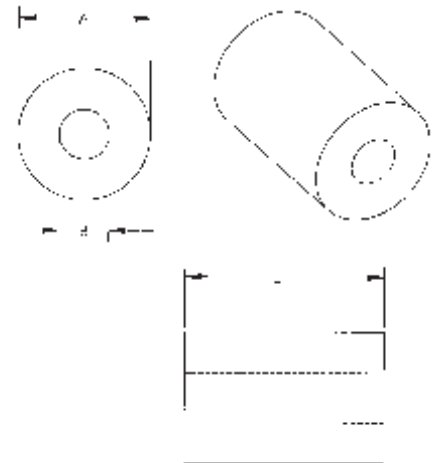
SECTION  
**V**

ITEM NUMBER	DESCRIPTION	A	B	L	SCREW
13SP110	SP110	5/16 (7,94)	.194 (4,93)	3/8 (9,53)	10
13SP111	SP111	5/16 (7,94)	.115 (2,92)	7/16 (11,11)	4
13SP112	SP112	5/16 (7,94)	.140 (3,56)	7/16 (11,11)	6
13SP113	SP113	5/16 (7,94)	.171 (4,34)	7/16 (11,11)	8
13SP114	SP114	5/16 (7,94)	.194 (4,93)	7/16 (11,11)	10
13SP115	SP115	5/16 (7,94)	.115 (2,92)	1/2 (12,70)	4
13SP116	SP116	5/16 (7,94)	.140 (3,56)	1/2 (12,70)	6
13SP117	SP117	5/16 (7,94)	.171 (4,34)	1/2 (12,70)	8
13SP118	SP118	5/16 (7,94)	.194 (4,93)	1/2 (12,70)	10
13SP119	SP119	5/16 (7,94)	.115 (2,92)	9/16 (14,29)	4
13SP120	SP120	5/16 (7,94)	.140 (3,56)	9/16 (14,29)	6
13SP121	SP121	5/16 (7,94)	.171 (4,34)	9/16 (14,29)	8
13SP122	SP122	5/16 (7,94)	.194 (4,93)	9/16 (14,29)	10
13SP123	SP123	5/16 (7,94)	.115 (2,92)	5/8 (15,88)	4
13SP124	SP124	5/16 (7,94)	.140 (3,56)	5/8 (15,88)	6
13SP125	SP125	5/16 (7,94)	.171 (4,34)	5/8 (15,88)	8
13SP126	SP126	5/16 (7,94)	.194 (4,93)	5/8 (15,88)	10
13SP127	SP127	5/16 (7,94)	.115 (2,92)	11/16 (17,46)	4
13SP128	SP128	5/16 (7,94)	.140 (3,56)	11/16 (17,46)	6
13SP129	SP129	5/16 (7,94)	.171 (4,34)	11/16 (17,46)	8
13SP130	SP130	5/16 (7,94)	.194 (4,93)	11/16 (17,46)	10
13SP131	SP131	5/16 (7,94)	.115 (2,92)	3/4 (19,05)	4
13SP132	SP132	5/16 (7,94)	.140 (3,56)	3/4 (19,05)	6
13SP133	SP133	5/16 (7,94)	.171 (4,34)	3/4 (19,05)	8
13SP134	SP134	5/16 (7,94)	.194 (4,93)	3/4 (19,05)	10
13SP135	SP135	5/16 (7,94)	.115 (2,92)	13/16 (20,63)	4
13SP136	SP136	5/16 (7,94)	.140 (3,56)	13/16 (20,63)	6
13SP137	SP137	5/16 (7,94)	.171 (4,34)	13/16 (20,63)	8
13SP138	SP138	5/16 (7,94)	.194 (4,93)	13/16 (20,63)	10
13SP139	SP139	5/16 (7,94)	.115 (2,92)	7/8 (22,22)	4
13SP140	SP140	5/16 (7,94)	.140 (3,56)	7/8 (22,22)	6
13SP141	SP141	5/16 (7,94)	.171 (4,34)	7/8 (22,22)	8
13SP142	SP142	5/16 (7,94)	.194 (4,93)	7/8 (22,22)	10
13SP143	SP143	5/16 (7,94)	.115 (2,92)	15/16 (23,81)	4
13SP144	SP144	5/16 (7,94)	.140 (3,56)	15/16 (23,81)	6
13SP145	SP145	5/16 (7,94)	.171 (4,34)	15/16 (23,81)	8
13SP146	SP146	5/16 (7,94)	.194 (4,93)	15/16 (23,81)	10
13SP147	SP147	5/16 (7,94)	.115 (2,92)	1 (25,40)	4
13SP148	SP148	5/16 (7,94)	.140 (3,56)	1 (25,40)	6
13SP149	SP149	5/16 (7,94)	.171 (4,34)	1 (25,40)	8
13SP150	SP150	5/16 (7,94)	.194 (4,93)	1 (25,40)	10
13SP158	SP158	3/8 (9,53)	.140 (3,56)	1/8 (3,18)	6
13SP159	SP159	3/8 (9,53)	.171 (4,34)	1/8 (3,18)	8
13SP160	SP160	3/8 (9,53)	.194 (4,93)	1/8 (3,18)	10
13SP161	SP161	3/8 (9,53)	.140 (3,56)	3/16 (4,76)	6
13SP162	SP162	3/8 (9,53)	.171 (4,34)	3/16 (4,76)	8
13SP163	SP163	3/8 (9,53)	.194 (4,93)	3/16 (4,76)	10
13SP164	SP164	3/8 (9,53)	.140 (3,56)	1/4 (6,35)	6
13SP165	SP165	3/8 (9,53)	.171 (4,34)	1/4 (6,35)	8
13SP166	SP166	3/8 (9,53)	.194 (4,93)	1/4 (6,35)	10
13SP167	SP167	3/8 (9,53)	.140 (3,56)	5/16 (7,94)	6
13SP168	SP168	3/8 (9,53)	.171 (4,34)	5/16 (7,94)	8
13SP169	SP169	3/8 (9,53)	.194 (4,93)	5/16 (7,94)	10
13SP170	SP170	3/8 (9,53)	.140 (3,56)	3/8 (9,53)	6
13SP171	SP171	3/8 (9,53)	.171 (4,34)	3/8 (9,53)	8

## STANDARD NYLON SPACERS



**METRIC Sizes  
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ALL STANDARD NYLON SPACERS CAN BE TAPPED TWO THREAD SIZES LARGER THAN THE SCREW SIZE LISTED.

FOR EXAMPLE:

13SP023 WITH A SCREW SIZE OF 2 CAN BE TAPPED 440 THREAD.

TO ORDER A TAPPED SPACER, SIMPLY ADD A "T" TO THE PART NUMBER.

FOR EXAMPLE:

13SP101 BECOMES 13TSP101



# SPACERS

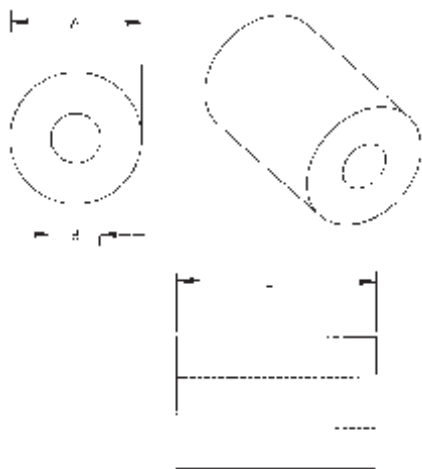
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## STANDARD NYLON SPACERS



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ALL STANDARD NYLON SPACERS CAN BE TAPPED TWO THREAD SIZES LARGER THAN THE SCREW SIZE LISTED.

FOR EXAMPLE:

13SP023 WITH A SCREW SIZE OF 2 CAN BE TAPPED 440 THREAD.

TO ORDER A TAPPED SPACER, SIMPLY ADD A "T" TO THE PART NUMBER.

FOR EXAMPLE:

13SP101 BECOMES 13TSP101



ITEM NUMBER	DESCRIPTION	A	B	L	SCREW
13SP172	SP172	3/8 (9,53)	.194 (4,93)	3/8 (9,53)	10
13SP173	SP173	3/8 (9,53)	.140 (3,56)	7/16 (11,11)	6
13SP174	SP174	3/8 (9,53)	.171 (4,34)	7/16 (11,11)	8
13SP175	SP175	3/8 (9,53)	.194 (4,93)	7/16 (11,11)	10
13SP176	SP176	3/8 (9,53)	.140 (3,56)	1/2 (12,70)	6
13SP177	SP177	3/8 (9,53)	.171 (4,34)	1/2 (12,70)	8
13SP178	SP178	3/8 (9,53)	.194 (4,93)	1/2 (12,70)	10
13SP179	SP179	3/8 (9,53)	.140 (3,56)	9/16 (14,29)	6
13SP180	SP180	3/8 (9,53)	.171 (4,34)	9/16 (14,29)	8
13SP181	SP181	3/8 (9,53)	.194 (4,93)	9/16 (14,29)	10
13SP182	SP182	3/8 (9,53)	.140 (3,56)	5/8 (15,88)	6
13SP183	SP183	3/8 (9,53)	.171 (4,34)	5/8 (15,88)	8
13SP184	SP184	3/8 (9,53)	.194 (4,93)	5/8 (15,88)	10
13SP185	SP185	3/8 (9,53)	.140 (3,56)	11/16 (17,46)	6
13SP186	SP186	3/8 (9,53)	.171 (4,34)	11/16 (17,46)	8
13SP187	SP187	3/8 (9,53)	.194 (4,93)	11/16 (17,46)	10
13SP188	SP188	3/8 (9,53)	.140 (3,56)	3/4 (19,05)	6
13SP189	SP189	3/8 (9,53)	.171 (4,34)	3/4 (19,05)	8
13SP190	SP190	3/8 (9,53)	.194 (4,93)	3/4 (19,05)	10
13SP191	SP191	3/8 (9,53)	.140 (3,56)	13/16 (20,64)	6
13SP192	SP192	3/8 (9,53)	.171 (4,34)	13/16 (20,64)	8
13SP193	SP193	3/8 (9,53)	.194 (4,93)	13/16 (20,64)	10
13SP194	SP194	3/8 (9,53)	.140 (3,56)	7/8 (22,22)	6
13SP195	SP195	3/8 (9,53)	.171 (4,34)	7/8 (22,22)	8
13SP196	SP196	3/8 (9,53)	.194 (4,93)	7/8 (22,22)	10
13SP197	SP197	3/8 (9,53)	.140 (3,56)	15/16 (23,81)	6
13SP198	SP198	3/8 (9,53)	.171 (4,34)	15/16 (23,81)	8
13SP199	SP199	3/8 (9,53)	.194 (4,93)	15/16 (23,81)	10
13SP200	SP200	3/8 (9,53)	.140 (3,56)	1 (25,40)	6
13SP201	SP201	3/8 (9,53)	.171 (4,34)	1 (25,40)	8
13SP202	SP202	3/8 (9,53)	.194 (4,93)	1 (25,40)	10
13SP203	SP203	1/2 (12,70)	.140 (3,56)	1/8 (3,18)	6
13SP204	SP204	1/2 (12,70)	.171 (4,34)	1/8 (3,18)	8
13SP205	SP205	1/2 (12,70)	.194 (4,93)	1/8 (3,18)	10
13SP206	SP206	1/2 (12,70)	.219 (5,56)	1/8 (3,18)	12
13SP207	SP207	1/2 (12,70)	.260 (6,60)	1/8 (3,18)	1/4
13SP208	SP208	1/2 (12,70)	.140 (3,56)	3/16 (4,76)	6
13SP209	SP209	1/2 (12,70)	.171 (4,34)	3/16 (4,76)	8
13SP210	SP210	1/2 (12,70)	.194 (4,93)	3/16 (4,76)	10
13SP211	SP211	1/2 (12,70)	.219 (5,56)	3/16 (4,76)	12
13SP212	SP212	1/2 (12,70)	.260 (6,60)	3/16 (4,76)	1/4
13SP213	SP213	1/2 (12,70)	.140 (3,56)	1/4 (6,35)	6
13SP214	SP214	1/2 (12,70)	.171 (4,34)	1/4 (6,35)	8
13SP215	SP215	1/2 (12,70)	.194 (4,93)	1/4 (6,35)	10
13SP216	SP216	1/2 (12,70)	.219 (5,56)	1/4 (6,35)	12
13SP217	SP217	1/2 (12,70)	.260 (6,60)	1/4 (6,35)	1/4
13SP218	SP218	1/2 (12,70)	.140 (3,56)	5/16 (7,94)	6
13SP219	SP219	1/2 (12,70)	.171 (4,34)	5/16 (7,94)	8
13SP220	SP220	1/2 (12,70)	.194 (4,93)	5/16 (7,94)	10
13SP221	SP221	1/2 (12,70)	.219 (5,56)	5/16 (7,94)	12
13SP222	SP222	1/2 (12,70)	.257 (6,53)	5/16 (7,94)	1/4
13SP223	SP223	1/2 (12,70)	.140 (3,56)	3/8 (9,53)	6
13SP224	SP224	1/2 (12,70)	.171 (4,34)	3/8 (9,53)	8

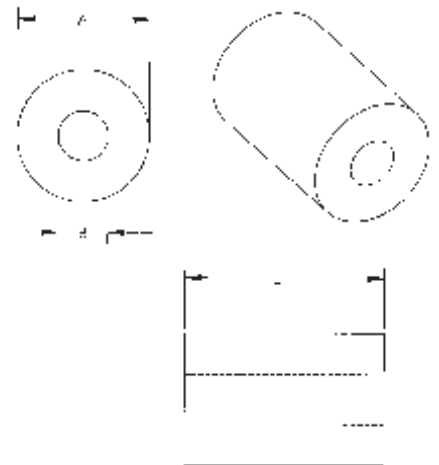


ITEM NUMBER	DESCRIPTION	A	B	L	SCREW
13SP225	SP225	1/2 (12,70)	.194 (4,93)	3/8 (9,53)	10
13SP226	SP226	1/2 (12,70)	.219 (5,56)	3/8 (9,53)	12
13SP227	SP227	1/2 (12,70)	.257 (6,53)	3/8 (9,53)	1/4
13SP228	SP228	1/2 (12,70)	.140 (3,56)	7/16 (11,11)	6
13SP229	SP229	1/2 (12,70)	.171 (4,34)	7/16 (11,11)	8
13SP230	SP230	1/2 (12,70)	.194 (4,93)	7/16 (11,11)	10
13SP231	SP231	1/2 (12,70)	.219 (5,56)	7/16 (11,11)	12
13SP232	SP232	1/2 (12,70)	.257 (6,53)	7/16 (11,11)	1/4
13SP233	SP233	1/2 (12,70)	.140 (3,56)	1/2 (12,70)	6
13SP234	SP234	1/2 (12,70)	.171 (4,34)	1/2 (12,70)	8
13SP235	SP235	1/2 (12,70)	.194 (4,93)	1/2 (12,70)	10
13SP236	SP236	1/2 (12,70)	.219 (5,56)	1/2 (12,70)	12
13SP237	SP237	1/2 (12,70)	.257 (6,53)	1/2 (12,70)	1/4
13SP238	SP238	1/2 (12,70)	.140 (3,56)	9/16 (14,29)	6
13SP239	SP239	1/2 (12,70)	.171 (4,34)	9/16 (14,29)	8
13SP240	SP240	1/2 (12,70)	.194 (4,93)	9/16 (14,29)	10
13SP241	SP241	1/2 (12,70)	.219 (5,56)	9/16 (14,29)	12
13SP242	SP242	1/2 (12,70)	.257 (6,53)	9/16 (14,29)	1/4
13SP243	SP243	1/2 (12,70)	.140 (3,56)	5/8 (15,88)	6
13SP244	SP244	1/2 (12,70)	.171 (4,34)	5/8 (15,88)	8
13SP245	SP245	1/2 (12,70)	.194 (4,93)	5/8 (15,88)	10
13SP246	SP246	1/2 (12,70)	.219 (5,56)	5/8 (15,88)	12
13SP247	SP247	1/2 (12,70)	.257 (6,53)	5/8 (15,88)	1/4
13SP248	SP248	1/2 (12,70)	.140 (3,56)	11/16 (17,46)	6
13SP249	SP249	1/2 (12,70)	.171 (4,34)	11/16 (17,46)	8
13SP250	SP250	1/2 (12,70)	.194 (4,93)	11/16 (17,46)	10
13SP251	SP251	1/2 (12,70)	.219 (5,56)	11/16 (17,46)	12
13SP252	SP252	1/2 (12,70)	.257 (6,53)	11/16 (17,46)	1/4
13SP253	SP253	1/2 (12,70)	.140 (3,56)	3/4 (19,05)	6
13SP254	SP254	1/2 (12,70)	.171 (4,34)	3/4 (19,05)	8
13SP255	SP255	1/2 (12,70)	.194 (4,93)	3/4 (19,05)	10
13SP256	SP256	1/2 (12,70)	.219 (5,56)	3/4 (19,05)	12
13SP257	SP257	1/2 (12,70)	.260 (6,60)	3/4 (19,05)	1/4
13SP258	SP258	1/2 (12,70)	.140 (3,56)	13/16 (20,64)	6
13SP259	SP259	1/2 (12,70)	.171 (4,34)	13/16 (20,64)	8
13SP260	SP260	1/2 (12,70)	.194 (4,93)	13/16 (20,64)	10
13SP261	SP261	1/2 (12,70)	.219 (5,56)	13/16 (20,64)	12
13SP262	SP262	1/2 (12,70)	.260 (6,60)	13/16 (20,64)	1/4
13SP263	SP263	1/2 (12,70)	.140 (3,56)	7/8 (22,22)	6
13SP264	SP264	1/2 (12,70)	.171 (4,34)	7/8 (22,22)	8
13SP265	SP265	1/2 (12,70)	.194 (4,93)	7/8 (22,22)	10
13SP266	SP266	1/2 (12,70)	.219 (5,56)	7/8 (22,22)	12
13SP267	SP267	1/2 (12,70)	.260 (6,60)	7/8 (22,22)	1/4
13SP268	SP268	1/2 (12,70)	.140 (3,56)	15/16 (23,81)	6
13SP269	SP269	1/2 (12,70)	.171 (4,34)	15/16 (23,81)	8
13SP270	SP270	1/2 (12,70)	.194 (4,93)	15/16 (23,81)	10
13SP271	SP271	1/2 (12,70)	.219 (5,56)	15/16 (23,81)	12
13SP272	SP272	1/2 (12,70)	.257 (6,53)	15/16 (23,81)	1/4
13SP273	SP273	1/2 (12,70)	.140 (3,56)	1 (25,40)	6
13SP274	SP274	1/2 (12,70)	.171 (4,34)	1 (25,40)	8
13SP275	SP275	1/2 (12,70)	.194 (4,93)	1 (25,40)	10
13SP276	SP276	1/2 (12,70)	.219 (5,56)	1 (25,40)	12
13SP277	SP277	1/2 (12,70)	.257 (6,53)	1 (25,40)	1/4

## STANDARD NYLON SPACERS



**METRIC Sizes  
Also Available**  
Page 239



ALL STANDARD NYLON SPACERS CAN BE TAPPED TWO THREAD SIZES LARGER THAN THE SCREW SIZE LISTED.

FOR EXAMPLE:

13SP023 WITH A SCREW SIZE OF 2 CAN BE TAPPED 440 THREAD.

TO ORDER A TAPPED SPACER, SIMPLY ADD A "T" TO THE PART NUMBER.

FOR EXAMPLE:

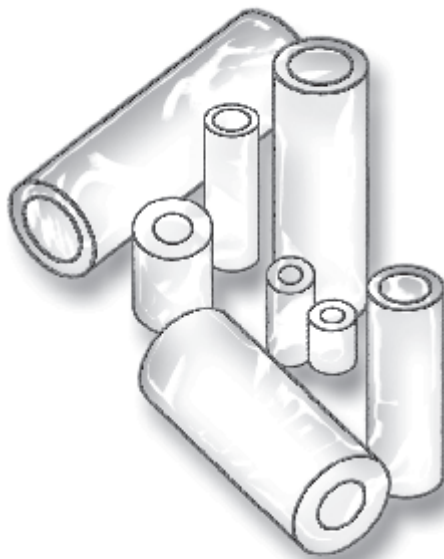
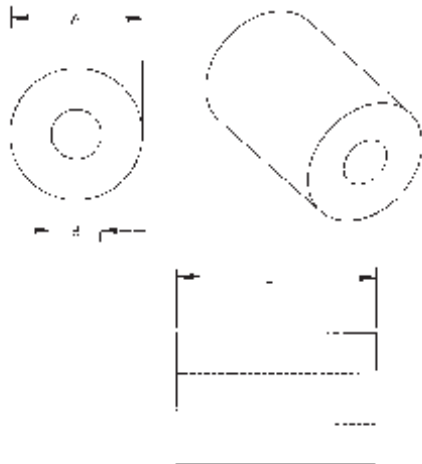
13SP101 BECOMES 13TSP101



## STANDARD LONG NYLON SPACERS

Tough and resilient, nylon spacers are useful for many applications. Ideal for use in electrical and electronic assemblies, they also can be used as bushings, bearings, rollers, and glides. Molded from corrosion resistant Type 66 Nylon, all parts are available on short delivery from standard tooling. Samples for testing are available but NOT ALL SIZES are in stock. Special sizes and lengths at a slight extra tooling charge. Parts are stocked in Nylon 6/6 UL 94V2 Parts can be furnished in: Acetal, Resin TICONA Celcon M-90 UL 94HB

**Tolerances: O.D. +/- .015; I.D. +/- .005; Length +/- .015**



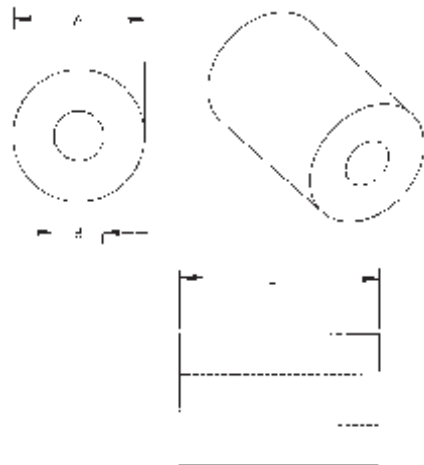
ITEM NUMBER	DESCRIPTION	A	B	L
13SP300	SP 300	1/4 (6,35)	.115 (2,92)	1 -1/16 (27,00)
13SP301	SP 301	1/4 (6,35)	.140 (3,56)	1 -1/16 (27,00)
13SP304	SP 304	1/4 (6,35)	.115 (2,92)	1-1/8 (28,58)
13SP305	SP 305	1/4 (6,35)	.140 (3,56)	1-1/8 (28,58)
13SP308	SP 308	1/4 (6,35)	.115 (2,92)	1-3/16 (30,18)
13SP309	SP 309	1/4 (6,35)	.140 (3,56)	1-3/16 (30,18)
13SP312	SP 312	1/4 (6,35)	.115 (2,92)	1-1/4 (31,75)
13SP313	SP 313	1/4 (6,35)	.140 (3,56)	1-1/4 (31,75)
13SP316	SP 316	1/4 (6,35)	.115 (2,92)	1-5/16 (33,35)
13SP317	SP 317	1/4 (6,35)	.140 (3,56)	1-5/16 (33,35)
13SP320	SP 320	1/4 (6,35)	.115 (2,92)	1-3/8 (34,93)
13SP321	SP 321	1/4 (6,35)	.140 (3,56)	1-3/8 (34,93)
13SP324	SP 324	1/4 (6,35)	.115 (2,92)	1-7/16 (36,53)
13SP325	SP 325	1/4 (6,35)	.140 (3,56)	1-7/16 (36,53)
13SP328	SP 328	1/4 (6,35)	.115 (2,92)	1-1/2 (38,10)
13SP329	SP 329	1/4 (6,35)	.140 (3,56)	1-1/2 (38,10)
13SP335	SP 335	5/16 (7,94)	.115 (2,92)	1-1/16 (27,00)
13SP336	SP 336	5/16 (7,94)	.140 (3,56)	1-1/16 (27,00)
13SP337	SP 337	5/16 (7,94)	.171 (4,34)	1-1/16 (27,00)
13SP338	SP 338	5/16 (7,94)	.194 (4,93)	1-1/16 (27,00)
13SP339	SP 339	5/16 (7,94)	.115 (2,92)	1-1/8 (28,58)
13SP340	SP 340	5/16 (7,94)	.140 (3,56)	1-1/8 (28,58)
13SP341	SP 341	5/16 (7,94)	.171 (4,34)	1-1/8 (28,58)
13SP342	SP 342	5/16 (7,94)	.194 (4,93)	1-1/8 (28,58)
13SP343	SP 343	5/16 (7,94)	.115 (2,92)	1-3/16 (30,18)
13SP344	SP 344	5/16 (7,94)	.140 (3,56)	1-3/16 (30,18)
13SP345	SP 345	5/16 (7,94)	.171 (4,34)	1-3/16 (30,18)
13SP346	SP 346	5/16 (7,94)	.194 (4,93)	1-3/16 (30,18)
13SP347	SP 347	5/16 (7,94)	.115 (2,92)	1-1/4 (31,75)
13SP348	SP 348	5/16 (7,94)	.140 (3,56)	1-1/4 (31,75)
13SP349	SP 349	5/16 (7,94)	.171 (4,34)	1-1/4 (31,75)
13SP350	SP 350	5/16 (7,94)	.194 (4,93)	1-1/4 (31,75)
13SP351	SP 351	5/16 (7,94)	.115 (2,92)	1-5/16 (33,35)
13SP352	SP 352	5/16 (7,94)	.140 (3,56)	1-5/16 (33,35)
13SP353	SP 353	5/16 (7,94)	.171 (4,34)	1-5/16 (33,35)
13SP354	SP 354	5/16 (7,94)	.194 (4,93)	1-5/16 (33,35)



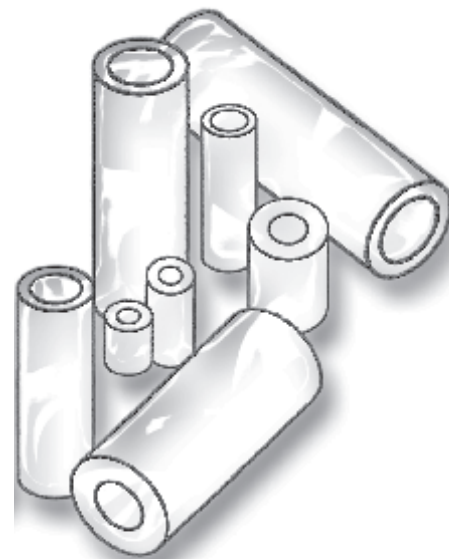
## STANDARD LONG NYLON SPACERS

Tough and resilient, nylon spacers are useful for many applications. Ideal for use in electrical and electronic assemblies, they also can be used as bushings, bearings, rollers, and glides. Molded from corrosion resistant Type 66 Nylon, all parts are available on short delivery from standard tooling. Samples for testing are available but NOT ALL SIZES are in stock. Special sizes and lengths at a slight extra tooling charge. Parts are stocked in Nylon 6/6 UL 94V2 Parts can be furnished in: Acetal, Resin TICONA Celcon M-90 UL 94HB

**Tolerances: O.D. +/-0.015; I.D. +/-0.005; Length +/-0.015**



ITEM NUMBER	DESCRIPTION	A	B	L
13SP355	SP 355	5/16 (7,94)	.115 (2,92)	1-3/8 (34,93)
13SP356	SP 356	5/16 (7,94)	.140 (3,56)	1-3/8 (34,93)
13SP357	SP 357	5/16 (7,94)	.171 (4,34)	1-3/8 (34,93)
13SP358	SP 358	5/16 (7,94)	.194 (4,93)	1-3/8 (34,93)
13SP359	SP 359	5/16 (7,94)	.115 (2,92)	1-7/16 (36,53)
13SP360	SP 360	5/16 (7,94)	.140 (3,56)	1-7/16 (36,53)
13SP361	SP 361	5/16 (7,94)	.171 (4,34)	1-7/16 (36,53)
13SP362	SP 362	5/16 (7,94)	.194 (4,93)	1-7/16 (36,53)
13SP363	SP 363	5/16 (7,94)	.115 (2,92)	1-1/2 (38,10)
13SP364	SP 364	5/16 (7,94)	.140 (3,56)	1-1/2 (38,10)
13SP365	SP 365	5/16 (7,94)	.171 (4,34)	1-1/2 (38,10)
13SP366	SP 366	5/16 (7,94)	.194 (4,93)	1-1/2 (38,10)
13SP372	SP 372	3/8 (9,53)	.140 (3,56)	1-1/16 (27,00)
13SP373	SP 373	3/8 (9,53)	.171 (4,34)	1-1/16 (27,00)
13SP374	SP 374	3/8 (9,53)	.194 (4,93)	1-1/16 (27,00)
13SP375	SP 375	3/8 (9,53)	.140 (3,56)	1-1/8 (28,58)
13SP376	SP 376	3/8 (9,53)	.171 (4,34)	1-1/8 (28,58)
13SP377	SP 377	3/8 (9,53)	.194 (4,93)	1-1/8 (28,58)
13SP378	SP 378	3/8 (9,53)	.140 (3,56)	1-3/16 (30,18)
13SP379	SP 379	3/8 (9,53)	.171 (4,34)	1-3/16 (30,18)
13SP380	SP 380	3/8 (9,53)	.194 (4,93)	1-3/16 (30,18)
13SP381	SP 381	3/8 (9,53)	.140 (3,56)	1-1/4 (31,75)
13SP382	SP 382	3/8 (9,53)	.171 (4,34)	1-1/4 (31,75)
13SP383	SP 383	3/8 (9,53)	.194 (4,93)	1-1/4 (31,75)
13SP384	SP 384	3/8 (9,53)	.140 (3,56)	1-5/16 (33,35)
13SP385	SP 385	3/8 (9,53)	.171 (4,34)	1-5/16 (33,35)
13SP386	SP 386	3/8 (9,53)	.194 (4,93)	1-5/16 (33,35)
13SP387	SP 387	3/8 (9,53)	.140 (3,56)	1-3/8 (34,93)
13SP388	SP 388	3/8 (9,53)	.171 (4,34)	1-3/8 (34,93)
13SP389	SP 389	3/8 (9,53)	.194 (4,93)	1-3/8 (34,93)
13SP390	SP 390	3/8 (9,53)	.140 (3,56)	1-7/16 (36,53)
13SP391	SP 391	3/8 (9,53)	.171 (4,34)	1-7/16 (36,53)
13SP392	SP 392	3/8 (9,53)	.194 (4,93)	1-7/16 (36,53)
13SP393	SP 393	3/8 (9,53)	.140 (3,56)	1-1/2 (38,10)
13SP394	SP 394	3/8 (9,53)	.171 (4,34)	1-1/2 (38,10)
13SP395	SP 395	3/8 (9,53)	.194 (4,93)	1-1/2 (38,10)





# SPACERS

SECTION

V

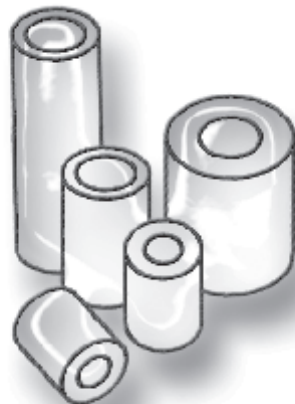
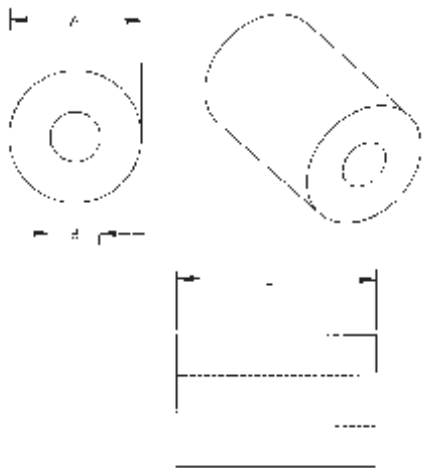
SPACERS ARE NOT STOCKED - They are molded to your order requirements - NO SAMPLES AVAILABLE.

- Order quantities are subject to - 10% + 20% variation.
- Tolerances OD +/- .015 - ID +/- .005 - LENGTH +/- .005
- Available in natural Nylon 66 only.
- Parts can be dyed Black at no additional cost, dyed parts may be out of tolerance.
- Minimum order quantity 1000 pieces.

O.D. - I.D. COMBINATIONS AVAILABLE

LENGTHS AVAILABLE 0.125 THRU 1.000 +/- .005 IN .001 INCH INCREMENTS

LAST 4 DIGITS OF PART NUMBER



Micro Plastics' length to specification spacers are molded in corrosion resistant, electrical insulating Nylon 6/6.

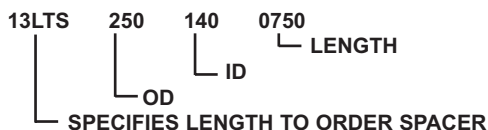
Available in standard O.D. -- I.D. combinations to your specified length. -- Length specified in .001 increments +/- .005

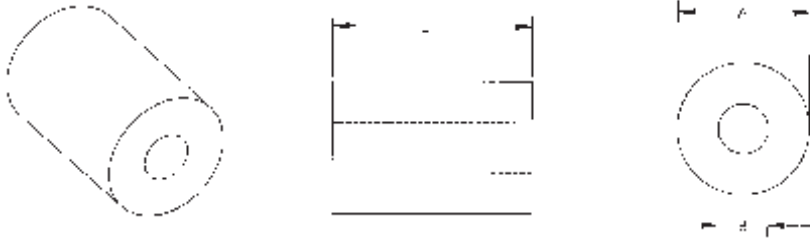
## LENGTH TO SPECIFICATION SPACERS

ITEM NUMBER	A	B
<b>3/16 O.D. SPACERS</b>		
13LTS188091 _____	3/16 (4,76)	.091 (2,31)
13LTS188115 _____	3/16 (4,76)	.115 (2,92)
<b>1/4 O.D. SPACERS</b>		
13LTS250091 _____	1/4 (6,35)	.091 (2,31)
13LTS250115 _____	1/4 (6,35)	.115 (2,92)
13LTS250140 _____	1/4 (6,35)	.140 (3,56)
13LTS250171 _____	1/4 (6,35)	.171 (4,34)
<b>5/16 O.D. SPACERS</b>		
13LTS312115 _____	5/16 (7,94)	.115 (2,92)
13LTS312140 _____	5/16 (7,94)	.140 (3,56)
13LTS312171 _____	5/16 (7,94)	.171 (4,34)
13LTS312194 _____	5/16 (7,94)	.194 (4,67)
<b>3/8 O.D. SPACERS</b>		
13LTS375140 _____	3/8 (9,53)	.140 (3,56)
13LTS375171 _____	3/8 (9,53)	.171 (4,34)
13LTS375194 _____	3/8 (9,53)	.194 (4,67)
<b>1/2 O.D. SPACERS</b>		
13LTS500140 _____	1/2 (12,70)	.140 (3,56)
13LTS500171 _____	1/2 (12,70)	.171 (4,34)
13LTS500194 _____	1/2 (12,70)	.194 (4,67)
13LTS500219 _____	1/2 (12,70)	.219 (5,56)
13LTS500257 _____	1/2 (12,70)	.257 (6,53)

To order this item, add the desired length to the last four digits of the item number.

**PART NUMBER EXAMPLE** 1/4 O.D. X .140 I.D. X 3/4 LONG

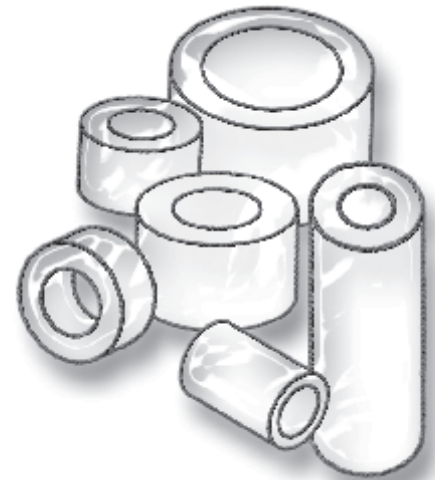




**New Sizes**

## SPECIAL NYLON SPACERS

ITEM NUMBER	DESCRIPTION	A	B	L
13RS012504	RS 12504	.125 (3,18)	.047 (1,19)	3/8 (9,53)
13RS014528	RS 14528	.148 (3,76)	.085 (2,16)	.280 (7,11)
13RS014529	RS 14529	.125 (3,18)	.047 (1,19)	.187 (4,75)
13RS014530	RS 14530	.150 (3,81)	.078 (1,98)	5/16 (7,94)
13RS014531	RS 14531	.138 (3,50)	.038 (0,97)	.125 (3,17)
13RS014532	RS 14532	.156 (3,96)	.063 (1,60)	.120 (3,05)
13RS014533	RS 14533	.138 (3,51)	.038 (0,97)	.065 (1,65)
13RS015721	RS 15721	.157 (3,99)	.102 (2,59)	.217 (5,51)
13RS016040	RS 16040	.160 (4,06)	.100 (2,54)	13/32 (10,32)
13RS018020	RS 18020	.192 (4,89)	.093 (2,36)	13/64 (5,16)
13RS018713	RS 18713	.188 (4,77)	.091 (2,31)	.275 (6,99)
13RS018714	RS 18714	.188 (4,77)	.09 (2,29)	.52 (13,21)
13RS018715	RS 18715	.187 (4,75)	.067 (1,70)	9/64 (3,58)
13RS018720	RS 18720	.187 (4,75)	.096 (2,44)	5/32 (3,97)
13RS018721	RS 18721	.187 (4,75)	.063 (1,60)	.200 (5,08)
13RS018722	RS 18722	3/16 (4,76)	.115 (2,92)	9/32 (7,14)
13RS018725	RS 18725	.187 (4,75)	.120 (3,05)	5/16 (7,94)
13RS018726	RS 18726	.187 (4,75)	.135 (3,43)	1/4 (6,35)
13RS018727	RS 18727	.197 (5,00)	.118 (3,00)	.108 (2,74)
13RS018730	RS 18730	.187 (4,75)	.120 (3,05)	11/32 (8,71)
13RS018735	RS 18735	.187 (4,75)	.120 (3,05)	7/16 (11,11)
13RS018785	RS 18785	.187 (4,75)	.091 (2,31)	27/32 (21,41)
13RS018790	RS 18790	.187 (4,75)	.091 (2,31)	13/64 (13,87)
13RS019330	RS 19330	.193 (4,90)	.125 (3,18)	1/4 (6,35)
13RS020030	RS 20030	.200 (5,08)	.145 (3,68)	11/64 (4,37)
13RS020031	RS 20031	.200 (5,08)	.145 (3,68)	.110 (2,79)
13RS020032	RS 20032	.198 (5,03)	.109 (2,77)	.345 (8,76)
13RS020313	RS 20313	.203 (5,16)	.130 (3,30)	9/32 (7,14)
13RS021025	RS 21025	.210 (5,33)	.156 (3,96)	.250 (6,35)
13RS021337	RS 21337	.218 (5,54)	.125 (3,18)	.385 (9,78)
13RS021535	RS 21535	.215 (5,46)	.145 (3,68)	21/64 (8,33)
13RS021830	RS 21830	.218 (5,54)	.140 (3,56)	5/32 (3,97)
13RS022013	RS 22013	.220 (5,59)	.138 (3,50)	21/32 (16,66)
13RS024014	RS 24014	.245 (6,22)	.175 (4,45)	5/32 (3,97)
13RS024015	RS 24015	.245 (6,22)	.175 (4,45)	.166 (4,22)
13RS025009	RS 25009	.250 (6,35)	.195 (4,95)	.195 (4,95)
13RS025010	RS 25010	.250 (6,35)	.153 (3,89)	.250 (6,35)
13RS025011	RS 25011	.250 (6,35)	.171 (4,34)	.413 (10,49)
13RS025012	RS 25012	.250 (6,35)	.126 (3,20)	51/64 (20,22)
13RS025013	RS 25013	.250 (6,35)	.171 (4,34)	.355 (9,02)
13RS025014	RS 25014	.250 (6,35)	.125 (3,18)	.823 (20,90)

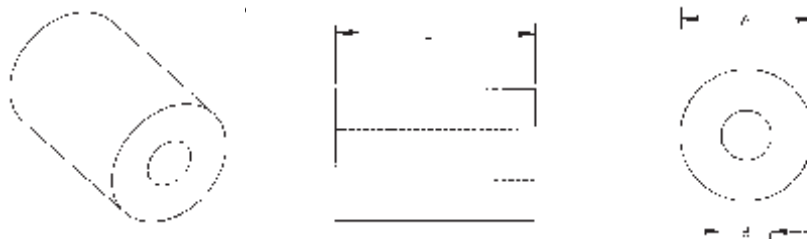


# SPACERS

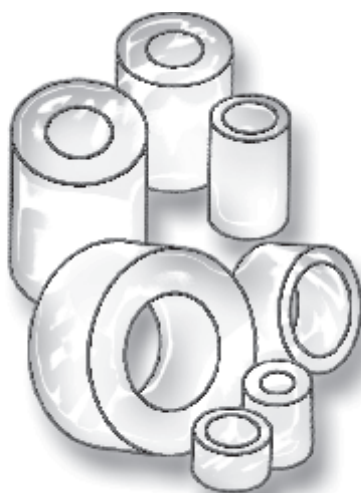
SECTION

V

New Sizes



## SPECIAL NYLON SPACERS



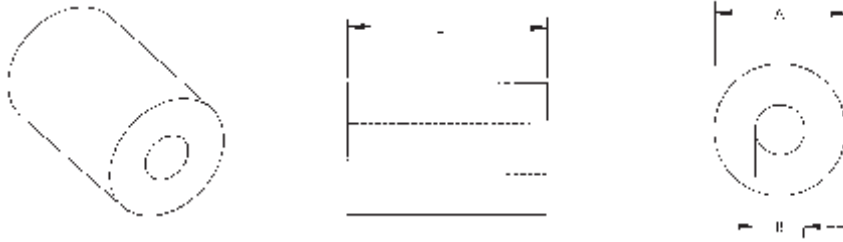
ITEM NUMBER	DESCRIPTION	A		B		L	
13RS025015	RS 25015	.250	(6,35)	.166	(4,22)	1/2	(12,70)
13RS025016	RS 25016	.250	(6,35)	.188	(4,78)	.188	(4,78)
13RS025017	RS 25017	.254	(6,45)	.150	(3,81)	.166	(4,26)
13RS025018	RS 25018	.250	(6,35)	.171	(4,34)	.575	(14,61)
13RS025019	RS 25019	.250	(6,35)	.171	(4,34)	.475	(12,07)
13RS025020	RS 25020	.250	(6,35)	.205	(5,21)	.230	(5,84)
13RS025021	RS 25021	.250	(6,35)	.125	(3,18)	.375	(9,53)
13RS025041	RS 25041	.250	(6,35)	.120	(3,05)	.389	(9,88)
13RS025042	RS 25042	.250	(6,35)	.125	(3,18)	.420	(10,67)
13RS025048	RS 25048	.250	(6,35)	.115	(2,92)	7/32	(5,55)
13RS025050	RS 25050	.250	(6,35)	.147	(3,73)	19/64	(7,52)
13RS025053	RS 25053	.250	(6,35)	.140	(3,56)	17/32	(13,49)
13RS025055	RS 25055	.250	(6,35)	.140	(3,56)	35/64	(13,87)
13RS025056	RS 25056	.250	(6,35)	.140	(3,56)	.640	(16,26)
13RS025057	RS 25057	.250	(6,35)	.171	(4,34)	.375	(9,53)
13RS025058	RS 25058	.250	(6,35)	.140	(3,56)	.220	(5,59)
13RS025062	RS 25062	.260	(6,60)	.200	(5,08)	19/32	(15,08)
13RS025065	RS 25065	.250	(6,35)	.160	(4,06)	.750	(19,05)
13RS025070	RS 25070	.250	(6,35)	.141	(3,58)	9/32	(7,14)
13RS025075	RS 25075	.250	(6,35)	.115	(2,92)	.207	(5,26)
13RS025090	RS 25090	.250	(6,35)	.115	(2,92)	1-5/16	(33,32)
13RS025091	RS 25091	.251	(6,38)	.152	(3,86)	5/32	(3,97)
13RS025095	RS 25095	.251	(6,38)	.115	(2,92)	17/32	(13,49)
13RS027540	RS 27540	.275	(6,99)	.195	(4,95)	.40	(10,16)
13RS027541	RS 27541	.275	(6,99)	.185	(4,70)	.090	(2,29)
13RS028030	RS 28030	.280	(7,11)	.170	(4,32)	.300	(7,62)
13RS028038	RS 28038	.280	(7,11)	.125	(3,18)	19/64	(7,54)
13RS028440	RS 28440	.284	(7,21)	.224	(5,69)	.400	(10,16)
13RS029618	RS 29618	.296	(7,52)	.125	(3,18)	3/32	(2,38)
13RS031210	RS 31210	.312	(7,93)	.095	(2,41)	1/4	(6,35)
13RS030500	RS 30500	.305	(7,75)	.260	(6,60)	.179	(4,55)
13RS031211	RS 31211	.312	(7,93)	.194	(4,93)	1.405	(35,68)
13RS031212	RS 31212	.312	(7,93)	.194	(4,93)	.530	(13,46)
13RS031213	RS 31213	.312	(7,93)	.205	(5,21)	.160	(4,06)
13RS031214	RS 31214	.312	(7,93)	.140	(3,56)	9/32	(7,14)
13RS031221	RS 31221	.312	(7,93)	.195	(4,95)	.214	(5,44)
13RS031225	RS 31225	.312	(7,93)	.156	(3,96)	.256	(6,50)
13RS031226	RS 31226	5/16	(7,94)	.228	(5,79)	.260	(6,60)
13RS031230	RS 31230	.312	(7,93)	.246	(6,25)	1/4	(6,35)
13RS031243	RS 31243	5/16	(7,94)	.171	(4,34)	2-7/16	(61,93)
13RS031244	RS 31244	.312	(7,93)	.194	(4,93)	1.155	(29,33)





# SPACERS

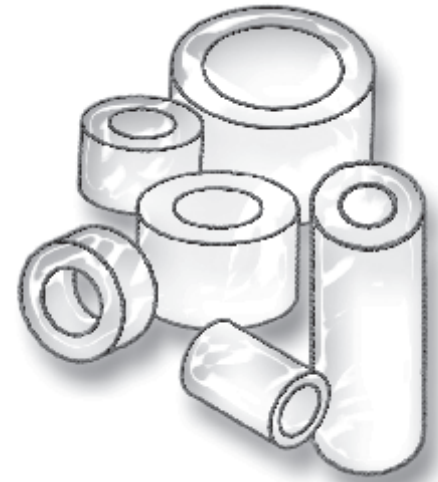
SECTION  
V



**New Sizes**

## SPECIAL NYLON SPACERS

ITEM NUMBER	DESCRIPTION	A		B		L	
13RS031245	RS 31245	.312	(7,93)	.195	(4,95)	.355	(9,02)
13RS031246	RS 31246	.312	(7,93)	.140	(3,56)	.200	(5,08)
13RS031247	RS 31247	5/16	(7,94)	7/32	(5,54)	13/16	(20,64)
13RS031250	RS 31250	.312	(7,93)	.246	(6,25)	.495	(12,57)
13RS031251	RS 31251	.312	(7,93)	.171	(4,34)	1-7/8	(47,63)
13RS031252	RS 31252	.480	(12,19)	.345	(8,76)	3/16	(4,75)
13RS031253	RS 31253	.313	(7,95)	.187	(4,75)	.171	(4,34)
13RS031254	RS 31254	5/16	(7,94)	.171	(4,34)	.671	(17,04)
13RS031255	RS 31255	.320	(8,13)	.215	(5,46)	.220	(5,59)
13RS031256	RS 31256	.325	(8,26)	.125	(3,18)	.360	(9,14)
13RS031257	RS 31257	5/16	(7,94)	.175	(4,45)	.154	(3,91)
13RS031258	RS 31258	.312	(7,93)	.225	(5,72)	7/16	(11,11)
13RS031339	RS 31339	.313	(7,95)	.195	(4,95)	.385	(9,78)
13RS031640	RS 31640	.316	(8,03)	.188	(4,78)	13/64	(5,16)
13RS031641	RS 31641	.250	(6,35)	.120	(3,05)	.200	(5,08)
13RS031830	RS 31830	.313	(7,95)	.189	(4,80)	19/64	(7,54)
13RS034001	RS 34001	.340	(8,64)	.280	(7,11)	.310	(7,87)
13RS034002	RS 34002	11/32	(8,74)	.198	(5,03)	*.281	(7,14)
13RS034003	RS 34003	.340	(8,64)	.280	(7,11)	1/2	(12,70)
13RS034004	RS 34004	.355	(9,02)	.255	(6,48)	.130	(3,30)
13RS035453	RS 35453	.354	(8,99)	.172	(4,37)	.531	(13,49)
13RS036031	RS 36031	.360	(9,14)	.316	(8,03)	1/4	(6,35)
13RS036032	RS 36032	.360	(9,14)	.252	(6,40)	.425	(10,80)
13RS037030	RS 37030	.370	(9,40)	.265	(6,73)	5/32	(3,96)
13RS037031	RS 37031	.375	(9,53)	.254	(6,45)	.453	(11,51)
13RS037032	RS 37032	.372	(9,45)	.288	(7,32)	.969	(24,61)
13RS037041	RS 37041	.370	(9,40)	.194	(4,93)	.418	(10,62)
13RS037441	RS 37441	.374	(9,50)	.248	(6,30)	13/32	(10,32)
13RS037514	RS 37514	.376	(9,55)	.175	(4,45)	.150	(3,81)
13RS037515	RS 37515	.375	(9,53)	.219	(5,56)	5/32	(3,96)
13RS037516	RS 37516	.375	(9,53)	.252	(6,40)	.820	(20,83)
13RS037517	RS 37517	.375	(9,53)	.219	(5,56)	11/64	(4,36)
13RS037518	RS 37518	.375	(9,53)	.252	(6,40)	3/16	(4,75)
13RS037520	RS 37520	.375	(9,53)	.219	(5,56)	13/64	(5,16)
13RS037521	RS 37521	.375	(9,53)	.218	(5,54)	7/16	(11,11)
13RS037522	RS 37522	.375	(9,53)	.220	(5,59)	3/8	(9,53)
13RS037523	RS 37523	3/8	(9,53)	.257	(6,53)	1/4	(6,35)
13RS037525	RS 37525	.375	(9,53)	.225	(5,72)	.250	(6,35)
13RS037534	RS 37534	.375	(9,53)	.140	(3,56)	11/32	(8,73)
13RS037538	RS 37538	.375	(9,53)	.255	(6,48)	.380	(9,65)
13RS037542	RS 37542	.375	(9,53)	.265	(6,73)	1/4	(6,35)



\* L Dimension +/- .015

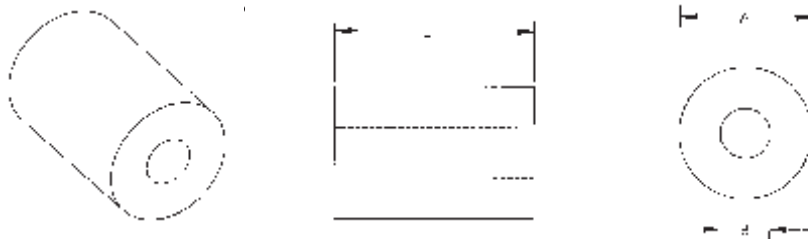


# SPACERS

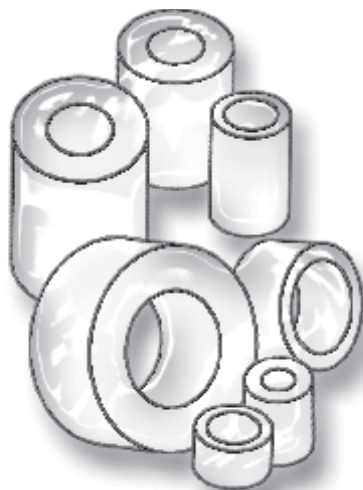
SECTION

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New Sizes

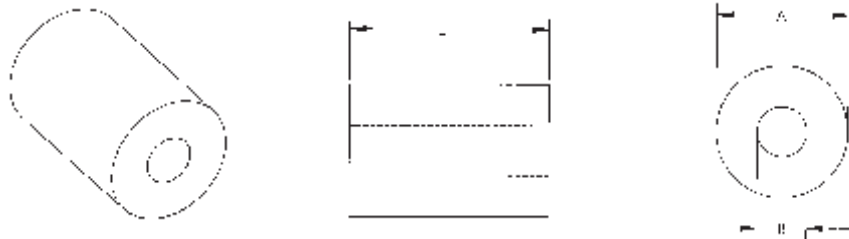


## SPECIAL NYLON SPACERS



ITEM NUMBER	DESCRIPTION	A	B	L
13RS037546	RS 37546	.375 (9,53)	.094 (2,39)	9/32 (7,14)
13RS037547	RS 37547	.375 (9,53)	.203 (5,16)	17/64 (6,74)
13RS037548	RS 37548	.375 (9,53)	.203 (5,16)	7/64 (2,78)
13RS037550	RS 37550	.375 (9,53)	.252 (6,40)	3/8 (9,53)
13RS037552	RS 37552	.375 (9,53)	.265 (6,73)	3/8 (9,53)
13RS037559	RS 37559	.375 (9,53)	.250 (6,35)	.593 (15,06)
13RS037565	RS 37565	.375 (9,53)	.265 (6,73)	1/2 (12,70)
13RS037570	RS 37570	.375 (9,53)	.140 (3,56)	.700 (17,78)
13RS037571	RS 37571	.375 (9,53)	.255 (6,48)	.700 (17,78)
13RS037575	RS 37575	.375 (9,53)	.265 (6,73)	7/8 (22,22)
13RS037580	RS 37580	.375 (9,53)	.265 (6,73)	1 (25,40)
13RS037585	RS 37585	.375 (9,53)	.257 (6,53)	1-1/4 (31,75)
13RS037590	RS 37590	.375 (9,53)	.265 (6,73)	3/4 (19,05)
13RS037591	RS 37591	.375 (9,53)	.140 (3,56)	.725 (18,42)
13RS037598	RS 37598	.375 (9,53)	.115 (2,92)	1-1/16 (27,00)
13RS037599	RS 37599	.375 (9,53)	.230 (5,84)	.925 (23,50)
13RS038037	RS 38037	.380 (9,65)	.250 (6,35)	.440 (11,18)
13RS038038	RS 38038	.380 (9,65)	.320 (8,13)	.382 (9,70)
13RS038039	RS 38039	.385 (9,78)	.254 (6,45)	.240 (6,10)
13RS038518	RS 38518	5/8 (15,88)	.385 (9,78)	.187 (4,75)
13RS038930	RS 38930	.389 (9,88)	.251 (6,38)	1/8 (3,18)
13RS039315	RS 39315	.393 (9,98)	.151 (3,83)	1/4 (6,35)
13RS039342	RS 39342	.393 (9,98)	.169 (4,29)	15/64 (5,94)
13RS039459	RS 39459	.395 (10,03)	.320 (8,13)	.591 (15,01)
13RS040080	RS 40080	.400 (10,16)	.140 (3,56)	23/32 (18,25)
13RS040082	RS 40082	.430 (10,92)	.285 (7,24)	.400 (10,16)
13RS040085	RS 40085	.400 (10,16)	.140 (3,56)	25/32 (19,84)
13RS040630	RS 40630	.406 (10,31)	.269 (6,83)	1/4 (6,35)
13RS040636	RS 40636	.406 (10,31)	.265 (6,73)	.562 (14,27)
13RS040637	RS 40637	.406 (10,31)	.265 (6,73)	.625 (15,88)
13RS040660	RS 40660	.406 (10,31)	.267 (6,78)	1/2 (12,70)
13RS040670	RS 40670	.406 (10,31)	.265 (6,73)	3/4 (19,05)
13RS040671	RS 40671	.406 (10,31)	.311 (7,90)	.591 (15,01)
13RS040675	RS 40675	.406 (10,31)	.280 (7,11)	3/8 (9,53)
13RS040685	RS 40685	.406 (10,31)	.265 (6,73)	1 (25,40)
13RS041500	RS 41500	.415 (10,54)	.320 (8,13)	.640 (16,26)
13RS042700	RS 42700	.427 (10,85)	.182 (4,62)	47/64 (18,64)
13RS042701	RS 42701	.433 (10,10)	.256 (6,50)	.220 (5,59)
13RS043724	RS 43724	7/16 (11,11)	1/4 (6,35)	3.94 (10,01)
13RS043725	RS 43725	7/16 (11,11)	1/4 (6,35)	.591 (15,01)
13RS043726	RS 43726	.437 (11,10)	.312 (7,92)	.350 (8,89)

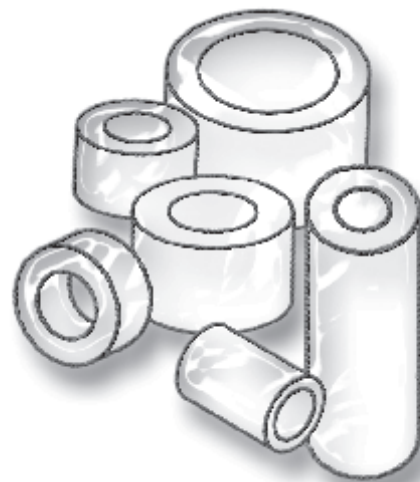




**New Sizes**

## SPECIAL NYLON SPACERS

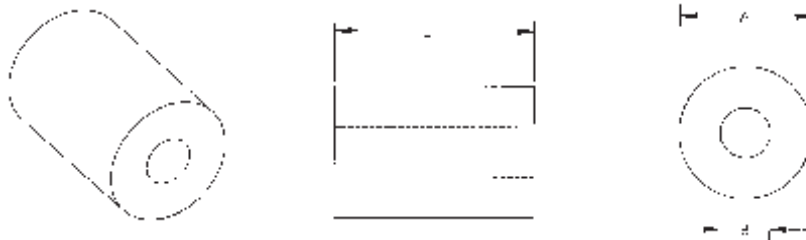
ITEM NUMBER	DESCRIPTION	A	B	L
13RS043727	RS 43727	.438 (11,13)	.325 (8,26)	.422 (10,72)
13RS043728	RS 43728	.437 (11,10)	.318 (8,08)	.281 (7,14)
13RS043729	RS 43729	7/16 (11,11)	.171 (4,34)	.655 (16,64)
13RS043730	RS 43730	.437 (11,10)	.318 (8,08)	.150 (3,81)
13RS045040	RS 45040	.450 (11,43)	.325 (8,26)	27/64 (10,72)
13RS046060	RS 46060	.460 (11,68)	.252 (6,40)	9/16 (14,29)
13RS046061	RS 46061	.460 (11,68)	.400 (10,16)	.440 (11,18)
13RS046319	RS 46319	.463 (11,76)	.190 (4,83)	5/16 (7,92)
13RS046500	RS 46500	.465 (11,81)	.382 (9,70)	.282 (7,16)
13RS046823	RS 46823	.468 (11,89)	.314 (7,98)	.230 (5,84)
13RS048012	RS 48012	.470 (11,94)	.120 (3,05)	23/64 (9,12)
13RS048013	RS 48013	.472 (11,99)	.394 (10,01)	.787 (19,99)
13RS048015	RS 48015	.475 (12,06)	.191 (4,85)	21/64 (8,33)
13RS048016	RS 48016	.480 (12,19)	.257 (6,53)	3/16 (4,76)
13RS048420	RS 48420	.484 (12,29)	.343 (8,71)	3/16 (4,76)
13RS048421	RS 48421	.486 (12,34)	.320 (8,13)	.375 (9,53)
13RS050009	RS 50009	.500 (12,70)	.219 (5,56)	.649 (16,48)
13RS050010	RS 50010	.500 (12,70)	.320 (8,13)	.270 (6,86)
13RS050011	RS 50011	.500 (12,70)	.244 (6,20)	.295 (7,49)
13RS050014	RS 50014	.501 (12,72)	.249 (6,32)	.390 (9,91)
13RS050015	RS 50015	.500 (12,70)	.194 (4,93)	13/32 (10,31)
13RS050016	RS 50016	.500 (12,70)	.265 (6,73)	.156 (3,96)
13RS050017	RS 50017	.500 (12,70)	.265 (6,73)	.200 (5,08)
13RS050018	RS 50018	1/2 (12,70)	.257 (6,53)	15/64 (5,94)
13RS050019	RS 50019	.500 (12,70)	.195 (4,95)	.451 (13,74)
13RS050020	RS 50020	.500 (12,70)	.213 (5,41)	.250 (6,35)
13RS050021	RS 50021	1/2 (12,70)	.382 (9,70)	.625 (15,88)
13RS050022	RS 50022	.500 (12,70)	.260 (6,60)	1/4 (6,35)
13RS050023	RS 50023	.500 (12,70)	.281 (7,14)	13/16 (20,64)
13RS050024	RS 50024	.500 (12,70)	.220 (5,59)	.135 (3,43)
13RS050025	RS 50025	.500 (12,70)	.170 (4,32)	.255 (6,48)
13RS050027	RS 50027	.500 (12,70)	.170 (4,32)	.270 (6,86)
13RS050028	RS 50028	.500 (12,70)	.312 (7,93)	5/32 (3,97)
13RS050031	RS 50031	.500 (12,70)	.382 (9,70)	.312 (7,92)
13RS050040	RS 50040	.500 (12,70)	.344 (8,74)	13/16 (20,64)
13RS050041	RS 50041	.500 (12,70)	.375 (9,53)	.225 (5,72)
13RS050045	RS 50045	.500 (12,70)	.257 (6,53)	13/32 (10,31)
13RS050046	RS 50046	1/2 (12,70)	.312 (7,93)	1-5/16 (33,33)
13RS050047	RS 50047	.500 (12,70)	.368 (9,34)	.470 (11,94)
13RS050050	RS 50050	.500 (12,70)	.328 (8,33)	1 (25,40)
13RS050055	RS 50055	.500 (12,70)	.383 (9,73)	1/2 (12,70)



# SPACERS

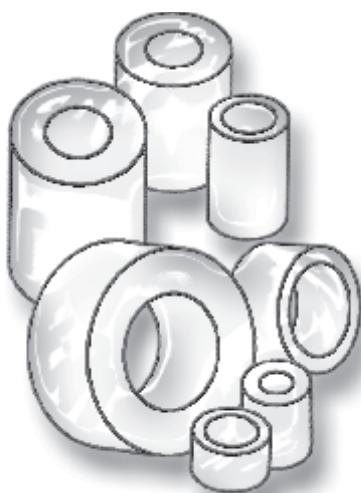
SECTION

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New Sizes

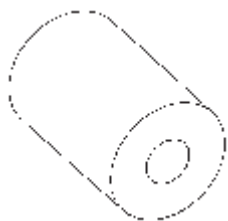
## SPECIAL NYLON SPACERS



ITEM NUMBER	DESCRIPTION	A	B	L
13RS050060	RS 50060	.490 (12,47)	.257 (6,53)	3/8 (9,53)
13RS050061	RS 50061	.500 (12,70)	.335 (8,51)	.209 (5,31)
13RS050062	RS 50062	.505 (12,83)	.385 (9,78)	5/32 (3,97)
13RS050063	RS 50063	.500 (12,70)	.285 (7,24)	.630 (16,00)
13RS050064	RS 50064	.683 (17,35)	.505 (12,83)	.500 (12,70)
13RS050070	RS 50070	.500 (12,70)	.316 (8,03)	1/2 (12,70)
13RS050071	RS 50071	.500 (12,70)	.316 (8,03)	15/64 (5,95)
13RS050080	RS 50080	.500 (12,70)	.380 (9,65)	27/64 (10,72)
13RS050082	RS 50082	.500 (12,70)	.375 (9,53)	7/16 (11,11)
13RS050085	RS 50085	.500 (12,70)	.281 (7,14)	3/8 (9,53)
13RS050088	RS 50088	.500 (12,70)	.260 (6,60)	1-5/8 (41,28)
13RS050089	RS 50089	.500 (12,70)	.375 (9,53)	.380 (9,65)
13RS050090	RS 50090	.500 (12,70)	.375 (9,53)	5/8 (15,88)
13RS050091	RS 50091	.500 (12,70)	.375 (9,53)	.635 (16,13)
13RS050093	RS 50093	.500 (12,70)	.285 (7,24)	.930 (23,62)
13RS050094	RS 50094	.500 (12,70)	.375 (9,53)	11/16 (17,46)
13RS050095	RS 50095	.500 (12,70)	.385 (9,78)	1 (25,40)
13RS050096	RS 50096	.500 (12,70)	.260 (6,60)	1-3/8 (34,93)
13RS050097	RS 50097	.515 (13,08)	.445 (11,30)	.380 (9,65)
13RS050099	RS 50099	1/2 (12,70)	.250 (6,35)	2.125 (53,98)
13RS051001	RS 51001	.510 (12,95)	.390 (9,91)	1/4 (6,35)
13RS051062	RS 51062	.510 (12,95)	.320 (8,13)	7/8 (22,22)
13RS052001	RS 52001	.518 (13,16)	.382 (9,70)	.280 (7,11)
13RS052002	RS 52002	.533 (13,54)	.219 (5,56)	.360 (9,14)
13RS053546	RS 53546	.535 (13,59)	.250 (6,35)	.610 (15,49)
13RS056030	RS 56030	.560 (14,22)	.379 (9,63)	3/8 (9,53)
13RS056031	RS 56031	.562 (14,27)	.375 (9,53)	1/2 (12,70)
13RS056032	RS 56032	.563 (14,30)	.453 (11,51)	.281 (7,14)
13RS056033	RS 56033	.560 (14,22)	.280 (7,11)	.500 (12,70)
13RS056256	RS 56256	.555 (13,97)	.245 (6,22)	9/16 (14,29)
13RS056337	RS 56337	.563 (14,30)	.281 (7,14)	3/8 (9,53)
13RS056656	RS 56656	.565 (14,35)	.33 (8,38)	.56 (14,22)
13RS056718	RS 56718	.567 (14,40)	.318 (8,08)	35/64 (13,87)
13RS056740	RS 56740	.567 (14,40)	.437 (11,10)	.406 (10,31)
13RS057032	RS 57032	.570 (14,48)	.320 (8,13)	35/64 (13,87)
13RS057033	RS 57033	.589 (14,96)	.312 (7,92)	.310 (7,87)
13RS059031	RS 59031	.590 (14,99)	.314 (7,98)	23/64 (9,12)
13RS059032	RS 59032	.590 (14,99)	.319 (8,10)	.655 (16,64)
13RS060550	RS 60550	.606 (15,39)	.203 (5,16)	5/8 (15,88)
13RS060551	RS 60551	.602 (15,29)	.250 (6,35)	.622 (15,80)
13RS061018	RS 61018	.615 (15,62)	.385 (9,78)	3/16 (4,76)



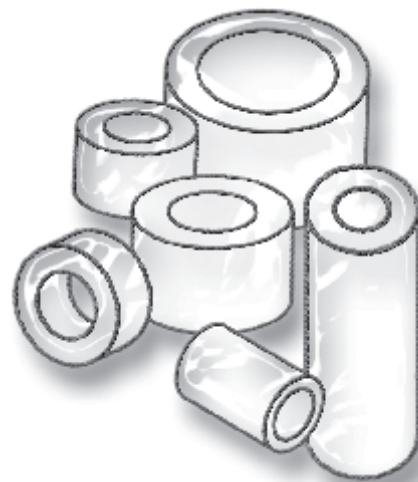




## SPECIAL NYLON SPACERS

## New Sizes

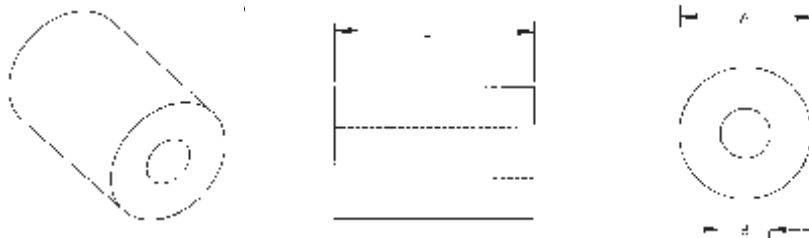
ITEM NUMBER	DESCRIPTION	A	B	L
13RS061019	RS 61019	.615 (15,62)	.325 (8,26)	.813 (20,65)
13RS061020	RS 61020	.615 (15,62)	.328 (8,33)	.438 (11,13)
13RS061731	RS 61731	.617 (15,67)	.313 (7,95)	11/16 (17,46)
13RS062012	RS 62012	.620 (15,75)	.350 (8,89)	3/16 (4,76)
13RS062035	RS 62035	.620 (15,75)	.507 (12,89)	1-11/16 (42,85)
13RS062040	RS 62040	.620 (15,75)	.504 (12,80)	13/16 (20,64)
13RS062062	RS 62062	.620 (15,75)	.504 (12,80)	.625 (15,88)
13RS062331	RS 62331	.623 (15,82)	.311 (7,90)	13/16 (20,64)
13RS062514	RS 62514	.625 (15,88)	.160 (4,06)	.312 (7,92)
13RS062515	RS 62515	.620 (15,75)	.323 (8,20)	5/32 (3,96)
13RS062516	RS 62516	5/8 (15,88)	.312 (7,92)	3/4 (19,05)
13RS062517	RS 62517	.621 (15,77)	.254 (6,45)	.652 (16,56)
13RS062519	RS 62519	.625 (15,88)	.191 (4,85)	1/4 (6,35)
13RS062520	RS 62520	.63 (16,00)	.50 (12,70)	1-1/4 (31,75)
13RS062521	RS 62521	.625 (15,88)	.140 (3,56)	.375 (9,53)
13RS062522	RS 62522	.625 (15,88)	.435 (11,10)	1/4 (6,35)
13RS062523	RS 62523	.635 (16,13)	.385 (9,78)	.230 (5,84)
13RS062524	RS 62524	.625 (15,88)	.412 (10,46)	.155 (3,94)
13RS062525	RS 62525	.625 (15,88)	.390 (9,91)	1/4 (6,35)
13RS062526	RS 62526	.625 (15,88)	.380 (9,65)	.750 (19,05)
13RS062527	RS 62527	.625 (15,88)	.328 (8,33)	.250 (6,35)
13RS062528	RS 62528	.625 (15,88)	.280 (7,11)	7/16 (11,10)
13RS062530	RS 62530	.610 (15,49)	.250 (6,35)	3/8 (9,53)
13RS062531	RS 62531	.625 (15,88)	.260 (6,60)	1/4 (6,35)
13RS062535	RS 62535	.625 (15,88)	.500 (12,70)	5/16 (7,94)
13RS062537	RS 62537	.625 (15,88)	.342 (8,69)	3/8 (9,53)
13RS062538	RS 62538	.627 (15,93)	.484 (12,29)	.467 (11,86)
13RS062540	RS 62540	.625 (15,88)	.375 (9,53)	3/8 (9,53)
13RS062541	RS 62541	.625 (15,88)	.312 (7,92)	.500 (12,70)
13RS062546	RS 62546	.625 (15,88)	.375 (9,53)	.462 (11,73)
13RS062547	RS 62547	.625 (15,88)	.315 (8,00)	.312 (7,92)
13RS062550	RS 62550	.613 (15,57)	.281 (7,14)	1/2 (12,70)
13RS062560	RS 62560	.615 (15,62)	.281 (7,14)	13/16 (20,64)
13RS062561	RS 62561	.625 (15,88)	.386 (9,80)	5/8 (15,88)
13RS062565	RS 62565	.625 (15,88)	.450 (11,43)	5/8 (15,88)
13RS062570	RS 62570	.635 (16,13)	.425 (10,80)	7/8 (22,22)
13RS062571	RS 62571	.625 (15,88)	.450 (11,43)	7/8 (22,22)
13RS062572	RS 62572	.618 (15,70)	.500 (12,70)	31/64 (12,29)
13RS062573	RS 62573	.625 (15,88)	.386 (9,80)	.738 (18,75)
13RS062575	RS 62575	.625 (15,88)	.500 (12,70)	1.000 (25,40)
13RS062580	RS 62580	.625 (15,88)	.257 (6,53)	1/8 (3,18)



# SPACERS

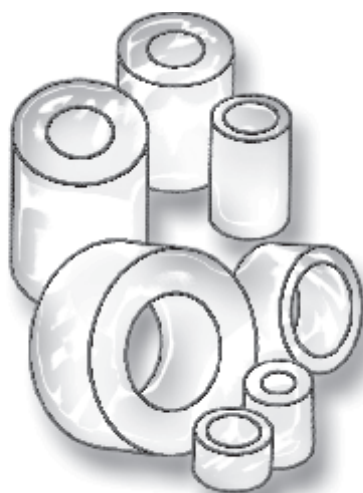
SECTION

V



New Sizes

## SPECIAL NYLON SPACERS

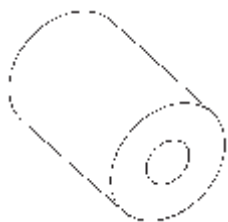


ITEM NUMBER	DESCRIPTION	A	B	L
13RS062582	RS 62582	.625 (15,88)	.375 (9,53)	.082 (2,08)
13RS062583	RS 62583	.634 (16,10)	.434 (11,02)	.380 (9,65)
13RS062584	RS 62584	5/8 (15,88)	.380 (9,65)	1 1/4 (31,75)
13RS062591	RS 62591	.630 (16,00)	.350 (8,89)	.200 (5,08)
13RS062650	RS 62650	.620 (15,75)	.507 (12,89)	1/2 (12,70)
13RS063050	RS 63050	.630 (16,00)	.378 (9,60)	.50 (12,70)
13RS063550	RS 63550	.635 (16,13)	.520 (13,21)	.500 (12,70)
13RS063564	RS 63564	.913 (23,19)	.635 (16,13)	.641 (16,28)
13RS064057	RS 64057	.640 (16,26)	.327 (8,31)	.560 (14,22)
13RS065650	RS 65650	.656 (16,66)	.516 (13,11)	1/2 (12,70)
13RS065830	RS 65830	.648 (16,50)	.280 (7,11)	23/64 (9,12)
13RS066850	RS 66850	.668 (16,97)	.506 (12,85)	15/16 (23,81)
13RS066851	RS 66851	.670 (17,02)	.350 (8,90)	.200 (5,08)
13RS068711	RS 68711	.687 (17,45)	.260 (6,60)	.457 (11,61)
13RS068712	RS 68712	.687 (17,45)	.156 (3,96)	1/8 (3,18)
13RS069038	RS 69038	.680 (17,27)	.600 (15,24)	.56 (14,22)
13RS069039	RS 69039	.680 (17,27)	.390 (9,91)	5/8 (15,88)
13RS070086	RS 70086	.700 (17,78)	.335 (8,51)	.866 (22,00)
13RS071820	RS 71820	.718 (18,24)	.526 (13,36)	7/32 (5,55)
13RS071821	RS 71821	.720 (18,29)	.392 (9,96)	.230 (5,84)
13RS071828	RS 71828	.718 (18,24)	.526 (13,36)	9/32 (7,14)
13RS072050	RS 72050	.720 (18,29)	.515 (13,08)	.49 (12,45)
13RS073030	RS 73030	.730 (18,54)	.265 (6,73)	.295 (7,49)
13RS075009	RS 75009	.750 (19,05)	.320 (8,13)	.500 (12,70)
13RS075010	RS 75010	.750 (19,05)	.280 (7,11)	.440 (11,18)
13RS075011	RS 75011	.754 (19,15)	.531 (13,49)	.451 (11,46)
13RS075012	RS 75012	3/4 (19,05)	.260 (6,60)	3/4 (19,05)
13RS075013	RS 75013	.750 (19,05)	.255 (6,48)	.290 (7,37)
13RS075020	RS 75020	.740 (18,80)	.250 (6,35)	1/4 (6,35)
13RS075021	RS 75021	.744 (18,90)	.397 (10,08)	.371 (9,42)
13RS075022	RS 75022	.745 (18,92)	.387 (9,83)	.187 (4,75)
13RS075023	RS 75023	.752 (19,10)	.480 (12,19)	.226 (5,74)
13RS075024	RS 75024	3/4 (19,05)	.315 (8,00)	5/16 (7,94)
13RS075025	RS 75025	.750 (19,05)	.258 (6,55)	7/16 (11,10)
13RS075026	RS 75026	.750 (19,05)	.260 (6,60)	.375 (9,53)
13RS075027	RS 75027	3/4 (19,05)	5/16 (7,94)	9/16 (14,29)
13RS075028	RS 75028	3/4 (19,05)	.266 (6,76)	5/16 (7,94)
13RS075029	RS 75029	.750 (19,05)	.370 (9,40)	11/32 (8,71)
13RS075030	RS 75030	.750 (19,05)	.406 (10,32)	.562 (14,27)
13RS075031	RS 75031	.750 (19,05)	.315 (8,00)	.187 (4,75)
13RS075032	RS 75032	.750 (19,05)	.385 (9,78)	13/64 (5,16)
13RS075033	RS 75033	3/4 (19,05)	1/4 (6,35)	3/16 (4,76)
13RS075034	RS 75034	.750 (19,05)	.515 (13,08)	.340 (8,64)



# SPACERS

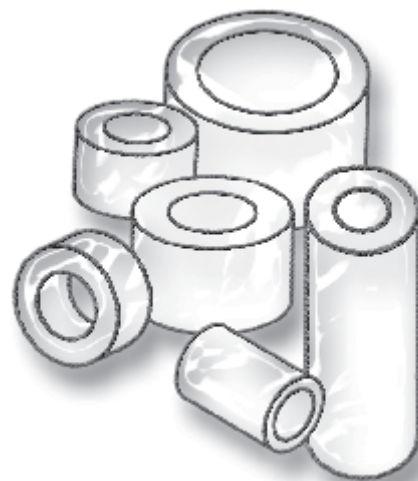
SECTION  
**V**



## SPECIAL NYLON SPACERS

New Sizes

ITEM NUMBER	DESCRIPTION	A	B	L
13RS075035	RS 75035	.750 (19,05)	.245 (6,25)	.361 (9,17)
13RS075036	RS 75036	.750 (19,05)	.312 (7,92)	.938 (23,82)
13RS075037	RS 75037	.745 (18,92)	.250 (6,35)	3/8 (9,53)
13RS075039	RS 75039	.750 (19,05)	.490 (12,45)	3/8 (9,53)
13RS075040	RS 75040	.750 (19,05)	.323 (8,20)	.250 (6,35)
13RS075041	RS 75041	.740 (18,80)	.390 (9,91)	1 (25,40)
13RS075042	RS 75042	.750 (19,05)	.260 (6,60)	.625 (15,88)
13RS075043	RS 75043	.740 (18,80)	.310 (7,87)	.437 (11,10)
13RS075044	RS 75044	1-3/4 (44,45)	5/8 (15,88)	1/4 (6,35)
13RS075045	RS 75045	.745 (18,92)	.385 (9,78)	5/16 (7,92)
13RS075046	RS 75046	.750 (19,05)	.460 (11,68)	1/4 (6,35)
13RS075047	RS 75047	3/4 (19,05)	.380 (9,65)	.472 (11,99)
13RS075048	RS 75048	.750 (19,05)	.250 (6,35)	.500 (12,70)
13RS075049	RS 75049	.750 (19,05)	.312 (7,92)	.250 (6,35)
13RS075050	RS 75050	.750 (19,05)	.344 (8,74)	.500 (12,70)
13RS075051	RS 75051	3/4 (19,05)	.260 (6,60)	1 (25,40)
13RS075052	RS 75052	.750 (19,05)	.250 (6,35)	.878 (22,30)
13RS075065	RS 75065	3/4 (19,05)	.260 (6,60)	9/16 (14,29)
13RS075070	RS 75070	.750 (19,05)	.510 (12,95)	.700 (17,78)
13RS075071	RS 75071	.750 (19,05)	.510 (12,95)	.375 (9,53)
13RS075075	RS 75075	3/4 (19,05)	.320 (8,13)	3/4 (19,05)
13RS075076	RS 75076	.750 (19,05)	.320 (8,13)	1 (25,40)
13RS075077	RS 75077	.755 (19,18)	.400 (10,16)	.290 (7,33)
13RS075078	RS 75078	.750 (19,05)	.344 (8,74)	.250 (6,35)
13RS075079	RS 75079	.750 (19,05)	.200 (5,08)	1.000 (25,40)
13RS075080	RS 75080	.750 (19,05)	.260 (6,60)	.500 (12,70)
13RS075081	RS 75081	3/4 (19,05)	3/8 (9,53)	3/8 (9,53)
13RS075086	RS 75086	.760 (19,30)	.401 (10,19)	.600 (15,24)
13RS075087	RS 75087	.750 (19,05)	.327 (8,31)	.188 (4,78)
13RS075088	RS 75088	.750 (19,05)	.187 (4,75)	.500 (12,70)
13RS075990	RS 75990	.760 (19,30)	.394 (10,01)	.910 (23,11)
13RS075991	RS 75991	.780 (19,81)	.501 (12,73)	.205 (5,21)
13RS077530	RS 77530	.775 (19,69)	.507 (12,89)	1/4 (6,35)
13RS077531	RS 77531	.770 (19,56)	.434 (11,02)	.377 (9,58)
13RS081045	RS 81045	.803 (20,40)	.520 (13,21)	1/2 (12,70)
13RS081222	RS 81222	.812 (20,63)	.312 (7,93)	1/8 (3,18)
13RS081223	RS 81223	.812 (20,63)	.403 (10,24)	.250 (6,35)
13RS081224	RS 81224	.812 (20,63)	.403 (10,24)	.710 (18,03)
13RS081262	RS 81262	.825 (20,95)	.203 (5,16)	5/8 (15,88)
13RS081263	RS 81263	.825 (20,95)	.257 (6,53)	.370 (9,40)
13RS083531	RS 83531	.835 (21,21)	.540 (13,72)	.188 (4,78)
13RS084101	RS 84101	.841 (21,36)	.605 (15,37)	.600 (15,24)
13RS087045	RS 87045	.870 (22,10)	.531 (13,49)	25/64 (9,91)



# SPACERS

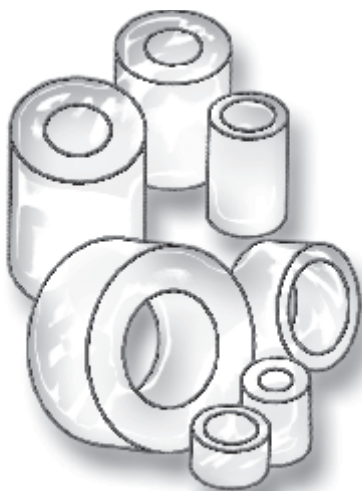
SECTION

V



New Sizes

## SPECIAL NYLON SPACERS



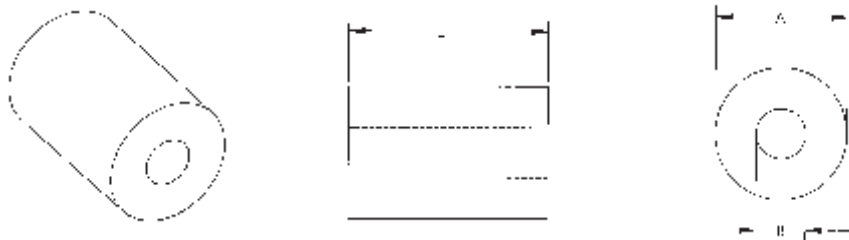
ITEM NUMBER	DESCRIPTION	A	B	L
13RS087046	RS 87046	.866 (22,00)	1/4 (6,35)	.394 (10,01)
13RS087047	RS 87047	.870 (22,10)	.610 (15,49)	.500 (12,70)
13RS087536	RS 87536	.870 (22,10)	.527 (13,39)	.875 (22,23)
13RS087537	RS 87537	.875 (22,23)	.330 (8,38)	.375 (9,53)
13RS087539	RS 87539	.875 (22,23)	.375 (9,53)	.312 (7,92)
13RS087540	RS 87540	.875 (22,23)	.265 (6,73)	.375 (9,53)
13RS087541	RS 87541	.875 (22,23)	.325 (8,26)	.250 (6,35)
13RS087542	RS 87542	.875 (22,23)	.265 (6,73)	.250 (6,35)
13RS087550	RS 87550	.875 (22,23)	.251 (6,38)	.625 (15,88)
13RS087551	RS 87551	.875 (22,23)	.265 (6,73)	.156 (3,96)
13RS087555	RS 87555	.875 (22,23)	.280 (7,11)	.500 (12,70)
13RS087556	RS 87556	.875 (22,23)	.265 (6,73)	3/4 (19,05)
13RS087557	RS 87557	7/8 (22,23)	27/64 (10,72)	3/8 (9,53)
13RS089037	RS 89037	.885 (22,48)	.438 (11,13)	.370 (9,40)
13RS089038	RS 89038	.907 (23,04)	.780 (19,81)	.315 (8,00)
13RS091775	RS 91775	.917 (23,29)	.785 (19,94)	.750 (19,05)
13RS094550	RS 94550	.946 (24,03)	.248 (6,30)	.500 (12,70)
13RS094551	RS 94551	.984 (24,99)	.509 (12,93)	.984 (24,99)
13RS097518	RS 97518	.975 (24,76)	.390 (9,91)	1.180 (29,97)
13RS098528	RS 98528	.985 (25,02)	.285 (7,24)	1/4 (6,35)
13RS098550	RS 98550	.980 (24,89)	.352 (8,84)	1/2 (12,70)
13RS098552	RS 98552	1.000 (25,40)	.328 (8,33)	1.000 (25,40)
13RS098551	RS 98551	1" (25,40)	5/16 (7,94)	1/4 (6,35)
13RS100008	RS 100008	1" (25,40)	.450 (11,43)	.219 (5,56)
13RS100009	RS 100009	1" (25,40)	.530 (13,46)	.500 (12,70)
13RS100010	RS 100010	1.000 (25,40)	.650 (16,51)	.373 (9,47)
13RS100011	RS 100011	.998 (23,35)	.523 (13,28)	.453 (11,51)
13RS100012	RS 100012	1.00 (25,40)	.250 (6,35)	1/8 (3,18)
13RS100013	RS 100013	.990 (25,15)	.344 (8,74)	5/16 (7,92)
13RS100014	RS 100014	1.00 (25,40)	.260 (6,60)	3/8 (9,53)
13RS100015	RS 100015	1.000 (25,40)	.344 (8,74)	.435 (11,05)
13RS100018	RS 100018	1.00 (25,40)	.250 (6,35)	3/16 (4,76)
13RS100020	RS 100020	.990 (25,15)	.187 (4,75)	1/4 (6,35)
13RS100021	RS 100021	1" (25,40)	.250 (6,35)	1/4 (6,35)
13RS100022	RS 100022	1.00 (25,40)	.375 (9,53)	.800 (20,32)
13RS100025	RS 100025	1.00 (25,40)	.915 (23,24)	1/4 (6,35)
13RS100026	RS 100026	1.00 (25,40)	.250 (6,35)	7/16 (11,10)
13RS100030	RS 100030	1.00 (25,40)	.250 (6,35)	.225 (5,72)
13RS100031	RS 100031	1.00 (25,40)	.517 (13,13)	.375 (9,52)
13RS100036	RS 100036	1.000 (25,40)	.385 (9,78)	.340 (8,64)
13RS100037	RS 100037	1.00 (25,40)	.385 (9,78)	3/8 (9,53)
13RS100038	RS 100038	1.00 (25,40)	.200 (5,08)	3/8 (9,53)
13RS100043	RS 100043	1.00 (25,40)	.406 (10,31)	7/16 (11,10)
13RS100050	RS 100050	1.00 (25,40)	.755 (19,18)	13/64 (5,16)
13RS100051	RS 100051	1.00 (25,40)	.643 (16,33)	.500 (12,70)





# SPACERS

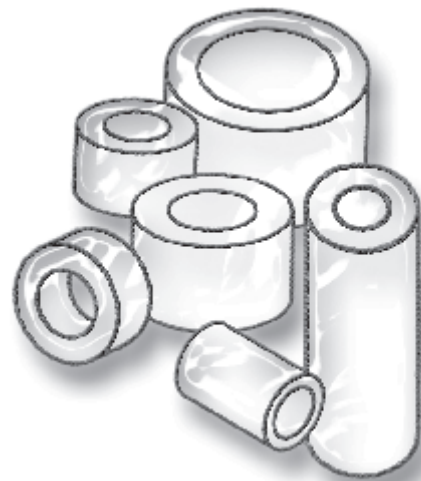
SECTION  
V



## SPECIAL NYLON SPACERS

New Sizes

ITEM NUMBER	DESCRIPTION	A	B	L
13RS100054	RS 100054	1.00 (25,40)	.375 (9,53)	.50 (12,70)
13RS100055	RS 100055	1.080 (27,43)	.950 (24,13)	.875 (22,23)
13RS100056	RS 100056	1.00 (25,40)	.765 (19,43)	9/16 (14,29)
13RS100057	RS 100057	1.18 (29,97)	.250 (6,35)	.217 (5,51)
13RS100058	RS 100058	.984 (24,99)	.366 (9,29)	3/8 (9,53)
13RS100059	RS 100059	1.000 (25,40)	.517 (13,13)	.687 (17,45)
13RS100060	RS 100060	.987 (25,07)	.500 (12,70)	3/8 (9,53)
13RS100061	RS 100061	1.000 (25,40)	.517 (13,13)	.312 (7,92)
13RS100555	RS 100555	.986 (25,04)	.375 (9,53)	1/4 (6,35)
13RS105720	RS 105720	1.057 (26,85)	.812 (20,63)	1/8 (3,18)
13RS106212	RS 106212	1.055 (26,80)	.740 (18,80)	3/16 (4,76)
13RS112027	RS 112027	1.120 (28,45)	1.015 (25,78)	.375 (9,53)
13RS112028	RS 112028	1.120 (28,45)	.281 (7,14)	7/16 (11,10)
13RS112030	RS 112030	1.240 (31,50)	.505 (12,83)	.500 (12,70)
13RS125075	RS 125075	1-1/4 (31,75)	.177 (4,50)	5/8 (15,88)
13RS125080	RS 125080	1.250 (31,75)	.642 (16,31)	.082 (12,08)
13RS125081	RS 125081	1.250 (31,75)	.875 (22,22)	9/16 (14,29)
13RS125082	RS 125082	1.25 (31,75)	.255 (6,48)	.531 (13,49)
13RS125250	RS 125250	1.240 (31,50)	.312 (7,93)	1/4 (7,92)
13RS125311	RS 125311	1-1/4 (31,75)	.177 (4,50)	9/16 (14,29)
13RS125312	RS 125312	1.250 (31,75)	.510 (12,95)	5/16 (6,35)
13RS125313	RS 125313	1.239 (31,47)	.761 (19,33)	9/16 (14,29)
13RS125387	RS 125387	1.25 (31,75)	.380 (9,65)	.38 (9,65)
13RS125500	RS 125500	1.24 (31,50)	.307 (7,80)	1/2 (12,70)
13RS125501	RS 125501	1.250 (31,75)	.400 (10,16)	5/8 (15,88)
13RS125750	RS 125750	1 1/4 (31,75)	17/64 (6,76)	.750 (19,05)
13RS126210	RS 126210	1.262 (32,05)	1.043 (26,49)	.950 (24,13)
13RS132056	RS 132056	1.320 (33,53)	1.031 (26,19)	.562 (14,27)
13RS131255	RS 131255	1.312 (33,33)	1.078 (27,38)	3/4 (19,05)
13RS131256	RS 131256	1-5/16 (33,33)	.385 (9,78)	.100 (2,54)
13RS137520	RS 137520	1.375 (34,93)	.656 (16,66)	1/8 (3,18)
13RS146050	RS 146050	1.460 (37,08)	.521 (13,23)	.500 (12,70)
13RS150011	RS 150011	1.500 (38,10)	1.187 (30,15)	23/64 (9,13)
13RS150050	RS 150050	1.50 (38,10)	1.02 (25,91)	.50 (12,70)
13RS162590	RS 162590	1.625 (41,28)	1.388 (35,26)	3/32 (2,38)
13RS162591	RS 162591	1 1/16 (26,99)	.680 (17,27)	.200 (5,08)
13RS175032	RS 175032	1.750 (44,45)	.928 (23,57)	9/32 (7,14)
13RS187509	RS 187509	1.188 (30,18)	.813 (20,65)	.250 (6,35)
13RS187510	RS 187510	1.860 (47,24)	.250 (6,35)	1 (25,40)
13RS231251	RS 231251	2 1/32 (70,97)	1.420 (36,07)	.350 (8,89)
13RS213580	RS 213580	2.135 (54,23)	1.760 (44,70)	1/8 (3,18)
13RS213581	RS 213581	2.13 (54,10)	1.63 (41,40)	.130 (3,30)



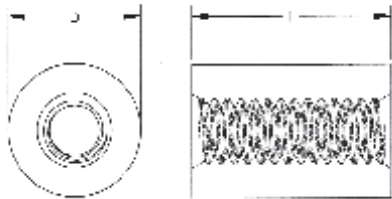
# SPACERS

SECTION

V

Molded from Type 66 Nylon and then machine tapped, these spacers are low cost insulators that can be used in many electrical applications.

Special sizes can be made to order from our large untapped spacer inventory.



**NOTE:**  
ON THREADED SPACERS 3/4" AND LONGER, THE TAP IS 3/8" FROM EACH END AND NOT CONTINUOUS THROUGH.

## TAPPED NYLON SPACERS



ITEM NUMBER	DESCRIPTION	D	L	TAPPED
15TSP055	TSP 55	3/16 (4,76)	7/16 (11,11)	2-56
15TSP056	TSP 56	3/16 (4,76)	1/2 (12,70)	2-56
15TSP106	TSP 106	3/16 (4,76)	17/64 (6,73)	4-40*
15TSP057	TSP 57	1/4 (6,35)	1/4 (6,35)	2-56
15TSP001	TSP 1	1/4 (6,35)	1/4 (6,35)	4-40*
15TSP050	TSP 50	1/4 (6,35)	5/16 (7,94)	4-40*
15TSP002	TSP 2	1/4 (6,35)	3/8 (9,53)	4-40*
15TSP003	TSP 3	1/4 (6,35)	1/2 (12,70)	4-40*
15TSP036	TSP 36	1/4 (6,35)	5/8 (15,88)	4-40*
15TSP004	TSP 4	1/4 (6,35)	3/4 (19,05)	4-40*
15TSP037	TSP 37	1/4 (6,35)	7/8 (22,22)	4-40*
15TSP005	TSP 5	1/4 (6,35)	1 (25,40)	4-40*
15TSP006	TSP 6	1/4 (6,35)	1/4 (6,35)	6-32**
15TSP054	TSP 54	1/4 (6,35)	5/16 (7,94)	6-32**
15TSP007	TSP 7	1/4 (6,35)	3/8 (9,53)	6-32**
15TSP008	TSP 8	1/4 (6,35)	1/2 (12,70)	6-32**
15TSP051	TSP 51	1/4 (6,35)	9/16 (14,29)	6-32**
15TSP038	TSP 38	1/4 (6,35)	5/8 (15,88)	6-32**
15TSP009	TSP 9	1/4 (6,35)	3/4 (19,05)	6-32**
15TSP052	TSP 52	1/4 (6,35)	15/16 (23,81)	6-32**
15TSP039	TSP 39	1/4 (6,35)	7/8 (22,22)	6-32**
15TSP010	TSP 10	1/4 (6,35)	1 (25,40)	6-32**
15TSP053	TSP 53	1/4 (6,35)	1 1/2 (38,10)	6-32**
15TSP011	TSP 11	1/4 (6,35)	1/4 (6,35)	8-32***
15TSP012	TSP 12	1/4 (6,35)	3/8 (9,53)	8-32***
15TSP013	TSP 13	1/4 (6,35)	1/2 (12,70)	8-32***
15TSP040	TSP 40	1/4 (6,35)	5/8 (15,88)	8-32***
15TSP014	TSP 14	1/4 (6,35)	3/4 (19,05)	8-32***
15TSP041	TSP 41	1/4 (6,35)	7/8 (22,22)	8-32***
15TSP015	TSP 15	1/4 (6,35)	1 (25,40)	8-32***
15TSP016	TSP 16	5/16 (7,94)	1/4 (6,35)	8-32***
15TSP017	TSP 17	5/16 (7,94)	3/8 (9,53)	8-32***
15TSP018	TSP 18	5/16 (7,94)	1/2 (12,70)	8-32***
15TSP042	TSP 42	5/16 (7,94)	5/8 (15,88)	8-32***
15TSP019	TSP 19	5/16 (7,94)	3/4 (19,05)	8-32***
15TSP043	TSP 43	5/16 (7,94)	7/8 (22,22)	8-32***
15TSP020	TSP 20	5/16 (7,94)	1 (25,40)	8-32***
15TSP021	TSP 21	3/8 (9,53)	1/4 (6,35)	10-32****
15TSP022	TSP 22	3/8 (9,53)	3/8 (9,53)	10-32****
15TSP023	TSP 23	3/8 (9,53)	1/2 (12,70)	10-32****

\*NOTE THESE ITEMS ARE AVAILABLE IN METRIC THREADS.

4-40\* Available in M3 Thread  
6-32\*\* Available in M3.5 Thread

8-32\*\*\* Available in M4 Thread  
10-32\*\*\*\* Available in M5 Thread



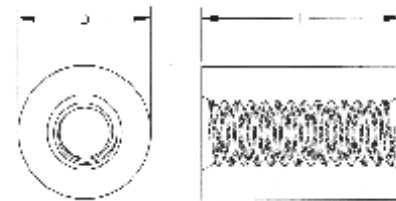
# SPACERS

SECTION  
V

To order metric threads, simply add an **M** to the Part Number.

**EXAMPLE:** 15TSP006 with a 6-32 Thread,

Becomes 15MTSP006 with a M3.5 Thread



## TAPPED NYLON SPACERS

ITEM NUMBER	DESCRIPTION	D	L	TAPPED
15TSP044	TSP 44	3/8 (9,53)	5/8 (15,88)	10-32****
15TSP024	TSP 24	3/8 (9,53)	3/4 (19,05)	10-32****
15TSP045	TSP 45	3/8 (9,53)	7/8 (22,22)	10-32****
15TSP025	TSP 25	3/8 (9,53)	1 (25,40)	10-32****
15TSP026	TSP 26	1/2 (12,70)	1/4 (6,35)	10-32****
15TSP027	TSP 27	1/2 (12,70)	3/8 (9,53)	10-32****
15TSP028	TSP 28	1/2 (12,70)	1/2 (12,70)	10-32****
15TSP046	TSP 46	1/2 (12,70)	5/8 (15,88)	10-32****
15TSP029	TSP 29	1/2 (12,70)	3/4 (19,05)	10-32****
15TSP047	TSP 47	1/2 (12,70)	7/8 (22,22)	10-32****
15TSP030	TSP 30	1/2 (12,70)	1 (25,40)	10-32****
15TSP031	TSP 31	1/2 (12,70)	1/4 (6,35)	1/4-20
15TSP032	TSP 32	1/2 (12,70)	3/8 (9,53)	1/4-20
15TSP033	TSP 33	1/2 (12,70)	1/2 (12,70)	1/4-20
15TSP048	TSP 48	1/2 (12,70)	5/8 (15,88)	1/4-20
15TSP034	TSP 34	1/2 (12,70)	3/4 (19,05)	1/4-20
15TSP049	TSP 49	1/2 (12,70)	7/8 (22,22)	1/4-20
15TSP035	TSP 35	1/2 (12,70)	1 (25,40)	1/4-20
15TSP058	TSP 58	3/16 (4,76)	3/8 (9,53)	2-56
15TSP099	TSP 99	3/16 (4,76)	5/32 (3,97)	4-40
15TSP100	TSP 100	3/16 (4,76)	3/16 (4,76)	4-40
15TSP101	TSP 101	3/16 (4,76)	1/4 (6,35)	4-40
15TSP102	TSP 102	3/16 (4,76)	5/16 (7,94)	4-40
15TSP103	TSP 103	3/16 (4,76)	3/8 (9,53)	4-40
15TSP104	TSP 104	3/16 (4,76)	7/16 (11,11)	4-40
15TSP105	TSP 105	3/16 (4,76)	1/2 (12,70)	4-40
15TSP107	TSP 107	3/16 (4,76)	5/8 (15,88)	4-40
15TSP109	TSP 109	3/16 (4,76)	3/4 (19,05)	4-40
15TSP111	TSP 111	3/16 (4,76)	7/8 (22,22)	4-40
15TSP115	TSP 115	3/16 (4,76)	1	4-40
15TSP140	TSP 140	3/16 (4,76)	3/16 (25,40)	6-32
15TSP141	TSP 141	3/16 (4,76)	1/4 (4,76)	6-32
15TSP142	TSP 142	3/16 (4,76)	5/16 (6,35)	6-32
15TSP143	TSP 143	3/16 (4,76)	3/8 (7,94)	6-32
15TSP144	TSP 144	3/16 (4,76)	7/16 (9,53)	6-32
15TSP145	TSP 145	3/16 (4,76)	1/2 (11,11)	6-32
15TSP147	TSP 147	3/16 (4,76)	5/8 (12,70)	6-32
15TSP149	TSP 149	3/16 (4,76)	3/4 (15,88)	6-32
15TSP151	TSP 151	3/16 (4,76)	7/8 (19,05)	6-32
15TSP155	TSP 155	3/16 (4,76)	1 (22,22)	6-32
			(25,40)	

**NOTE:**  
ON THREADED SPACERS 3/4" AND LONGER, THE TAP IS 3/8" FROM EACH END AND NOT CONTINUOUS THROUGH.



\*NOTE THESE ITEMS ARE AVAILABLE IN METRIC THREADS.

4-40\* Available in M3 Thread  
6-32\*\* Available in M3.5 Thread

8-32\*\*\* Available in M4 Thread  
10-32\*\*\*\* Available in M5 Thread

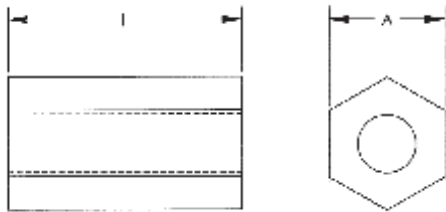


# SPACERS

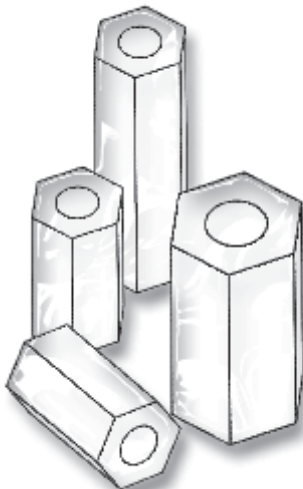
SECTION

V

## HEX NYLON SPACERS



**New Sizes**



Self-threading, use with tapping screws designed for plastics.

ITEM NUMBER	DESCRIPTION	ID	SELF TAPPING SCREW	L	A
35HSP112	HSP 112	.072 (1,83)	2	7/16 (11,11)	3/16
35HSP115	HSP 115	.072 (1,83)	2	5/16 (7,93)	3/16
35HSP114	HSP 114	.072 (1,83)	2	3/8 (9,53)	3/16
35HSP113	HSP 113	.075 (1,91)	2	9/16 (14,28)	3/16
35HSP101	HSP 101	.091 (2,31)	4	1/4 (6,35)	3/16
35HSP102	HSP 102	.091 (2,31)	4	3/8 (9,53)	3/16
35HSP124	HSP 124	.091 (2,31)	4	3/4 (19,05)	3/16
35HSP103	HSP 103	.091 (2,31)	4	1/2 (12,70)	3/16
35HSP111	HSP 111	.091 (2,31)	4	9/16 (14,27)	3/16
35HSP119	HSP 119	.091 (2,31)	4	5/8 (15,88)	3/16
35HSP104	HSP 104	.091 (2,31)	4	7/16 (11,10)	3/16
35HSP116	HSP 116	.091 (2,31)	4	7/8 (22,22)	3/16
35HSP106	HSP 106	.115 (2,92)	6	1/4 (6,35)	3/16
35HSP107	HSP 107	.115 (2,92)	6	3/8 (9,53)	3/16
35HSP108	HSP 108	.115 (2,92)	6	1/2 (12,70)	3/16
35HSP120	HSP 120	.115 (2,92)	6	5/8 (15,88)	3/16
35HSP109	HSP 109	.115 (2,92)	6	3/4 (19,05)	3/16
35HSP001	HSP 1	.091 (2,31)	4	1/4 (6,35)	1/4
35HSP022	HSP 22	.091 (2,31)	4	5/16 (7,92)	1/4
35HSP002	HSP 2	.091 (2,31)	4	3/8 (9,53)	1/4
35HSP029	HSP 29	.091 (2,31)	4	7/16 (11,10)	1/4
35HSP003	HSP 3	.091 (2,31)	4	1/2 (12,70)	1/4
35HSP024	HSP 24	.091 (2,31)	4	9/16 (14,27)	1/4
35HSP019	HSP 19	.091 (2,31)	4	5/8 (15,88)	1/4
35HSP004	HSP 4	.091 (2,31)	4	3/4 (19,05)	1/4
35HSP016	HSP 16	.091 (2,31)	4	7/8 (22,22)	1/4
35HSP005	HSP 5	.091 (2,31)	4	1 (25,40)	1/4
35HSP037	HSP 37	.094 (2,39)	4	.826 (20,98)	1/4
35HSP032	HSP 32	.091 (2,31)	4	1-1/2 (38,10)	1/4
35HSP038	HSP 38	.111 (2,82)	6	9/16 (14,29)	1/4
35HSP035	HSP 35	.115 (2,92)	6	3/16 (4,75)	1/4
35HSP006	HSP 6	.115 (2,92)	6	1/4 (6,35)	1/4
35HSP007	HSP 7	.115 (2,92)	6	3/8 (9,53)	1/4
35HSP040	HSP 40	.111 (2,82)	6	7/16 (11,11)	1/4
35HSP008	HSP 8	.115 (2,92)	6	1/2 (12,70)	1/4
35HSP020	HSP 20	.115 (2,92)	6	5/8 (15,88)	1/4
35HSP009	HSP 9	.115 (2,92)	6	3/4 (19,05)	1/4
35HSP017	HSP 17	.115 (2,92)	6	7/8 (22,22)	1/4
35HSP010	HSP 10	.115 (2,92)	6	1 (25,40)	1/4
35HSP023	HSP 23	.115 (2,92)	6	1-1/4 (31,75)	1/4
35HSP011	HSP 11	.140 (3,56)	8	1/4 (6,35)	1/4
35HSP012	HSP 12	.140 (3,56)	8	3/8 (9,53)	1/4
35HSP013	HSP 13	.140 (3,56)	8	1/2 (12,70)	1/4
35HSP021	HSP 21	.140 (3,56)	8	5/8 (15,88)	1/4
35HSP014	HSP 14	.140 (3,56)	8	3/4 (19,05)	1/4
35HSP018	HSP 18	.140 (3,56)	8	7/8 (22,22)	1/4
35HSP015	HSP 15	.140 (3,56)	8	1 (25,40)	1/4
35HSP208	HSP 208	.115 (2,92)	6	1/2 (12,70)	5/16
35HSP220	HSP 220	.115 (2,92)	6	7/8 (22,23)	5/16
35HSP225	HSP 225	.115 (2,92)	6	1-1/8 (28,58)	5/16
35HSP309	HSP 309	.110 (2,74)	6	3/4 (19,05)	3/8
35HSP207	HSP 207	.225 (5,72)	1/4	7/32 (5,56)	5/16
35HSP400	HSP 400	.195 (4,95)	1/4-20	1/2 (12,70)	3/8



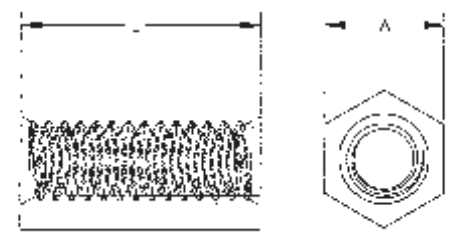


# SPACERS

\*NOTE THESE ITEMS ARE AVAILABLE IN METRIC THREADS.  
4-40\* Available in M3 Thread  
6-32\*\* Available in M3.5 Thread  
8-32\*\*\* Available in M 4 Thread

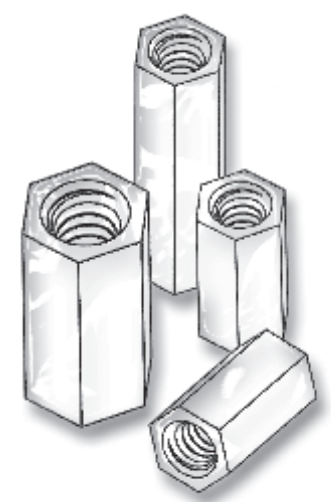
ITEM NUMBER	DESCRIPTION	TAPPED	L	A
14HTSP112	HTSP 112	2-56	7/16 (11,11)	3/16
14HTSP115	HTSP 115	2-56	5/16 (7,94)	3/16
14HTSP114	HTSP 114	2-56	3/8 (9,53)	3/16
14HTSP113	HTSP 113	2-56	9/16 (14,28)	3/16
14HTSP101	HTSP 101	4-40*	1/4 (6,35)	3/16
14HTSP102	HTSP 102	4-40*	3/8 (9,53)	3/16
14HTSP124	HTSP 124	4-40*	3/4 (19,05)	3/16
14HTSP103	HTSP 103	4-40*	1/2 (12,70)	3/16
14HTSP111	HTSP 111	4-40*	9/16 (14,27)	3/16
14HTSP119	HTSP 119	4-40*	5/8 (15,88)	3/16
14HTSP104	HTSP 104	4-40*	7/16 (11,10)	3/16
14HTSP116	HTSP 116	4-40*	7/8 (22,22)	3/16
14HTSP106	HTSP 106	6-32**	1/4 (6,35)	3/16
14HTSP107	HTSP 107	6-32**	3/8 (9,53)	3/16
14HTSP108	HTSP 108	6-32**	1/2 (12,70)	3/16
14HTSP120	HTSP 120	6-32**	5/8 (15,88)	3/16
14HTSP109	HTSP 109	6-32**	3/4 (19,05)	3/16
14HTSP036	HTSP 36	6-32**	1-1/2 (38,10)	1/4
14HTSP001	HTSP 1	4-40*	1/4 (6,35)	1/4
14HTSP022	HTSP 22	4-40*	5/16 (7,92)	1/4
14HTSP002	HTSP 2	4-40*	3/8 (9,53)	1/4
14HTSP029	HTSP 29	4-40*	7/16 (11,10)	1/4
14HTSP003	HTSP 3	4-40*	1/2 (12,70)	1/4
14HTSP024	HTSP 24	4-40*	9/16 (14,27)	1/4
14HTSP019	HTSP 19	4-40*	5/8 (15,88)	1/4
14HTSP004	HTSP 4	4-40*	3/4 (19,05)	1/4
14HTSP016	HTSP 16	4-40*	7/8 (22,22)	1/4
14HTSP037	HTSP 37	4-40*	.826 (20,98)	1/4
14HTSP005	HTSP 5	4-40*	1 (25,40)	1/4
14HTSP032	HTSP 32	4-40*	1-1/2 (38,10)	1/4
14HTSP038	HTSP 38	6-32**	9/16(14,29)	1/4
14HTSP039	HTSP 39	4-40*	1-3/8 (34,93)	1/4
14HTSP035	HTSP 35	6-32**	3/16 (4,75)	1/4
14HTSP006	HTSP 6	6-32**	1/4 (6,35)	1/4
14HTSP007	HTSP 7	6-32**	3/8 (9,53)	1/4
14HTSP040	HTSP 40	6-32**	7/16 (11,11)	1/4
14HTSP008	HTSP 8	6-32**	1/2 (12,70)	1/4
14HTSP020	HTSP 20	6-32**	5/8 (15,88)	1/4
14HTSP009	HTSP 9	6-32**	3/4 (19,05)	1/4
14HTSP017	HTSP 17	6-32**	7/8 (22,22)	1/4
14HTSP010	HTSP 10	6-32**	1 (25,40)	1/4
14HTSP023	HTSP 23	6-32**	1-1/4 (31,75)	1/4
14HTSP011	HTSP 11	8-32***	1/4 (6,35)	1/4
14HTSP012	HTSP 12	8-32***	3/8 (9,53)	1/4
14HTSP013	HTSP 13	8-32***	1/2 (12,70)	1/4
14HTSP021	HTSP 21	8-32***	5/8 (15,88)	1/4
14HTSP014	HTSP 14	8-32***	3/4 (19,05)	1/4
14HTSP018	HTSP 18	8-32***	7/8 (22,22)	1/4
14HTSP015	HTSP 15	8-32***	1 (25,40)	1/4
14HTSP208	HTSP 208	6-32**	1/2 (12,70)	5/16
14HTSP220	HTSP 220	6-32**	7/8 (22,22)	5/16
14HTSP225	HTSP 225	6-32**	1-1/8 (28,58)	5/16
14HTSP309	HTSP 309	6-32**	3/4 (19,05)	3/8
14HTSP207	HTSP 207	1/4-20	7/32 (5,56)	5/16
14HTSP400	HTSP 400	1/4-20	1/2 (12,70)	3/8

## HEX NYLON TAPPED SPACERS



**NOTE:**  
ON THREADED SPACERS 3/4" AND LONGER, THE TAP IS 3/8" MINIMUM FROM EACH END AND NOT CONTINUOUS THROUGH.

### New Sizes



To order metric threads, simply add an M to the Part Number.

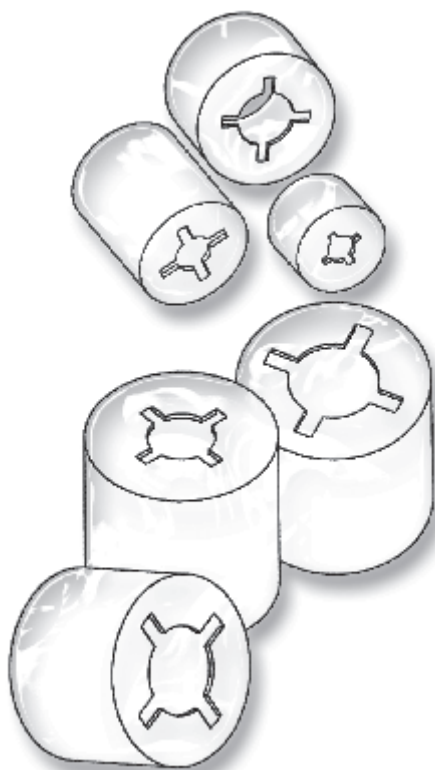
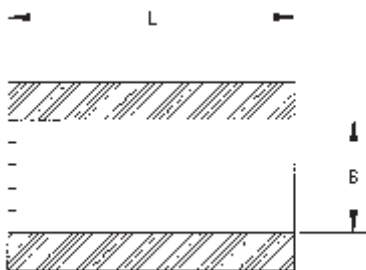
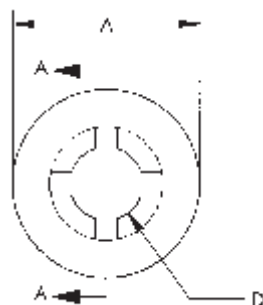
**EXAMPLE:** 14HTSP106 with a 6-32 Thread, Becomes 14MHTSP106 with a M3.5 Thread



# SPACERS

SECTION

V



## NYLON RETAINING SPACERS

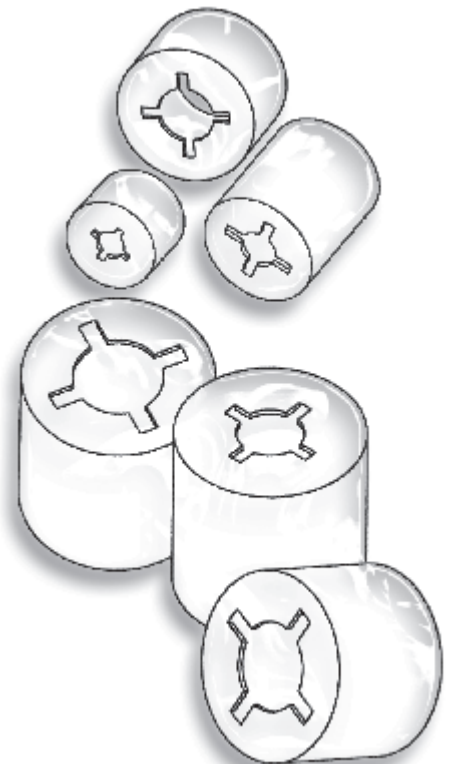
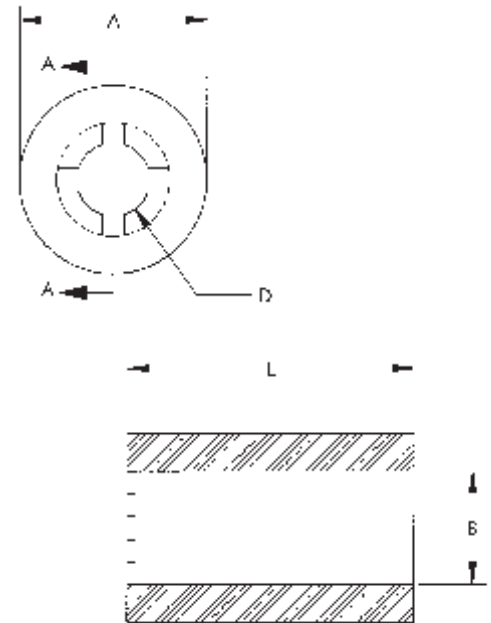
Similar to our standard spacers, but with a specially configured ID designed to grip the screw shank. The spacer remains attached to the screw, for quick, easy assembly.

ITEM NUMBER	A	B	D	L
13SPRT031	1/4 (6,35)	.115 (2,92)	.078 (1,98)	1/8 (3,18)
13SPRT032	1/4 (6,35)	.115 (2,92)	.078 (1,98)	3/16 (4,76)
13SPRT033	1/4 (6,35)	.115 (2,92)	.078 (1,98)	1/4 (6,35)
13SPRT034	1/4 (6,35)	.115 (2,92)	.078 (1,98)	5/16 (7,94)
13SPRT035	1/4 (6,35)	.115 (2,92)	.078 (1,98)	3/8 (9,53)
13SPRT036	1/4 (6,35)	.115 (2,92)	.078 (1,98)	7/16 (11,11)
13SPRT037	1/4 (6,35)	.115 (2,92)	.078 (1,98)	1/2 (12,70)
13SPRT038	1/4 (6,35)	.115 (2,92)	.078 (1,98)	9/16 (14,29)
13SPRT039	1/4 (6,35)	.115 (2,92)	.078 (1,98)	5/8 (15,88)
13SPRT040	1/4 (6,35)	.115 (2,92)	.078 (1,98)	11/16 (17,46)
13SPRT041	1/4 (6,35)	.115 (2,92)	.078 (1,98)	3/4 (19,05)
13SPRT042	1/4 (6,35)	.115 (2,92)	.078 (1,98)	13/16 (20,64)
13SPRT043	1/4 (6,35)	.115 (2,92)	.078 (1,98)	7/8 (22,23)
13SPRT044	1/4 (6,35)	.115 (2,92)	.078 (1,98)	15/16 (23,81)
13SPRT045	1/4 (6,35)	.115 (2,92)	.078 (1,98)	1 (25,40)
13SPRT046	1/4 (6,35)	.156 (3,96)	.102 (2,59)	1/8 (3,18)
13SPRT047	1/4 (6,35)	.156 (3,96)	.102 (2,59)	3/16 (4,76)
13SPRT048	1/4 (6,35)	.156 (3,96)	.102 (2,59)	1/4 (6,35)
13SPRT049	1/4 (6,35)	.156 (3,96)	.102 (2,59)	5/16 (7,94)
13SPRT050	1/4 (6,35)	.156 (3,96)	.102 (2,59)	3/8 (9,53)
13SPRT051	1/4 (6,35)	.156 (3,96)	.102 (2,59)	7/16 (11,11)
13SPRT052	1/4 (6,35)	.156 (3,96)	.102 (2,59)	1/2 (12,70)
13SPRT053	1/4 (6,35)	.156 (3,96)	.102 (2,59)	9/16 (14,29)
13SPRT054	1/4 (6,35)	.156 (3,96)	.102 (2,59)	5/8 (15,88)
13SPRT055	1/4 (6,35)	.156 (3,96)	.102 (2,59)	11/16 (17,46)
13SPRT056	1/4 (6,35)	.156 (3,96)	.102 (2,59)	3/4 (19,05)
13SPRT057	1/4 (6,35)	.156 (3,96)	.102 (2,59)	13/16 (20,64)
13SPRT058	1/4 (6,35)	.156 (3,96)	.102 (2,59)	7/8 (22,23)
13SPRT059	1/4 (6,35)	.156 (3,96)	.102 (2,59)	15/16 (23,81)
13SPRT060	1/4 (6,35)	.156 (3,96)	.102 (2,59)	1 (25,40)
13SPRT061	5/16 (7,94)	.198 (5,03)	.128 (3,25)	1/8 (3,18)
13SPRT062	5/16 (7,94)	.198 (5,03)	.128 (3,25)	3/16 (4,76)
13SPRT063	5/16 (7,94)	.198 (5,03)	.128 (3,25)	1/4 (6,35)
13SPRT064	5/16 (7,94)	.198 (5,03)	.128 (3,25)	5/16 (7,94)
13SPRT065	5/16 (7,94)	.198 (5,03)	.128 (3,25)	3/8 (9,53)
13SPRT066	5/16 (7,94)	.198 (5,03)	.128 (3,25)	7/16 (11,11)
13SPRT067	5/16 (7,94)	.198 (5,03)	.128 (3,25)	1/2 (12,70)
13SPRT068	5/16 (7,94)	.198 (5,03)	.128 (3,25)	9/16 (14,29)
13SPRT069	5/16 (7,94)	.198 (5,03)	.128 (3,25)	5/8 (15,88)
13SPRT070	5/16 (7,94)	.198 (5,03)	.128 (3,25)	11/16 (17,46)
13SPRT071	5/16 (7,94)	.198 (5,03)	.128 (3,25)	3/4 (19,05)
13SPRT072	5/16 (7,94)	.198 (5,03)	.128 (3,25)	13/16 (20,64)
13SPRT073	5/16 (7,94)	.198 (5,03)	.128 (3,25)	7/8 (22,23)
13SPRT074	5/16 (7,94)	.198 (5,03)	.128 (3,25)	15/16 (23,81)
13SPRT075	5/16 (7,94)	.198 (5,03)	.128 (3,25)	1 (25,40)

## NYLON RETAINING SPACERS

Similar to our standard spacers, but with a specially configured ID designed to grip the screw shank. The spacer remains attached to the screw, for quick, easy assembly.

ITEM NUMBER	A	B	D	L
13SPRT076	3/8 (9,53)	.240 (6,10)	.152 (3,86)	1/8 (3,18)
13SPRT077	3/8 (9,53)	.240 (6,10)	.152 (3,86)	3/16 (4,76)
13SPRT078	3/8 (9,53)	.240 (6,10)	.152 (3,86)	1/4 (6,35)
13SPRT079	3/8 (9,53)	.240 (6,10)	.152 (3,86)	5/16 (7,94)
13SPRT080	3/8 (9,53)	.240 (6,10)	.152 (3,86)	3/8 (9,53)
13SPRT081	3/8 (9,53)	.240 (6,10)	.152 (3,86)	7/16 (11,11)
13SPRT082	3/8 (9,53)	.240 (6,10)	.152 (3,86)	1/2 (12,70)
13SPRT083	3/8 (9,53)	.240 (6,10)	.152 (3,86)	9/16 (14,29)
13SPRT084	3/8 (9,53)	.240 (6,10)	.152 (3,86)	5/8 (15,88)
13SPRT085	3/8 (9,53)	.240 (6,10)	.152 (3,86)	11/16 (17,46)
13SPRT086	3/8 (9,53)	.240 (6,10)	.152 (3,86)	3/4 (19,05)
13SPRT087	3/8 (9,53)	.240 (6,10)	.152 (3,86)	13/16 (20,64)
13SPRT088	3/8 (9,53)	.240 (6,10)	.152 (3,86)	7/8 (22,23)
13SPRT089	3/8 (9,53)	.240 (6,10)	.152 (3,86)	15/16 (23,81)
13SPRT090	3/8 (9,53)	.240 (6,10)	.152 (3,86)	1 (25,40)
13SPRT091	1/2 (12,70)	.277 (7,04)	.177 (4,50)	1/8 (3,18)
13SPRT092	1/2 (12,70)	.277 (7,04)	.177 (4,50)	3/16 (4,76)
13SPRT093	1/2 (12,70)	.277 (7,04)	.177 (4,50)	1/4 (6,35)
13SPRT094	1/2 (12,70)	.277 (7,04)	.177 (4,50)	5/16 (7,94)
13SPRT095	1/2 (12,70)	.277 (7,04)	.177 (4,50)	3/8 (9,53)
13SPRT096	1/2 (12,70)	.277 (7,04)	.177 (4,50)	7/16 (11,11)
13SPRT097	1/2 (12,70)	.277 (7,04)	.177 (4,50)	1/2 (12,70)
13SPRT098	1/2 (12,70)	.277 (7,04)	.177 (4,50)	9/16 (14,29)
13SPRT099	1/2 (12,70)	.277 (7,04)	.177 (4,50)	5/8 (15,88)
13SPRT100	1/2 (12,70)	.277 (7,04)	.177 (4,50)	11/16 (17,46)
13SPRT101	1/2 (12,70)	.277 (7,04)	.177 (4,50)	3/4 (19,05)
13SPRT102	1/2 (12,70)	.277 (7,04)	.177 (4,50)	13/16 (20,64)
13SPRT103	1/2 (12,70)	.277 (7,04)	.177 (4,50)	7/8 (22,23)
13SPRT104	1/2 (12,70)	.277 (7,04)	.177 (4,50)	15/16 (23,81)
13SPRT105	1/2 (12,70)	.277 (7,04)	.177 (4,50)	1 (25,40)
13SPRT106	1/2 (12,70)	.375 (9,53)	.234 (5,94)	1/8 (3,18)
13SPRT107	1/2 (12,70)	.375 (9,53)	.234 (5,94)	3/16 (4,76)
13SPRT108	1/2 (12,70)	.375 (9,53)	.234 (5,94)	1/4 (6,35)
13SPRT109	1/2 (12,70)	.375 (9,53)	.234 (5,94)	5/16 (7,94)
13SPRT110	1/2 (12,70)	.375 (9,53)	.234 (5,94)	3/8 (9,53)
13SPRT111	1/2 (12,70)	.375 (9,53)	.234 (5,94)	7/16 (11,11)
13SPRT112	1/2 (12,70)	.375 (9,53)	.234 (5,94)	1/2 (12,70)
13SPRT113	1/2 (12,70)	.375 (9,53)	.234 (5,94)	9/16 (14,29)
13SPRT114	1/2 (12,70)	.375 (9,53)	.234 (5,94)	5/8 (15,88)
13SPRT115	1/2 (12,70)	.375 (9,53)	.234 (5,94)	11/16 (17,46)
13SPRT116	1/2 (12,70)	.375 (9,53)	.234 (5,94)	3/4 (19,05)
13SPRT117	1/2 (12,70)	.375 (9,53)	.234 (5,94)	13/16 (20,64)
13SPRT118	1/2 (12,70)	.375 (9,53)	.234 (5,94)	7/8 (22,23)
13SPRT119	1/2 (12,70)	.375 (9,53)	.234 (5,94)	15/16 (23,81)
13SPRT120	1/2 (12,70)	.375 (9,53)	.234 (5,94)	1 (25,40)



# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

### SNAP TACKS

### Watch Instructional Video

[mms://www.microplastics.com/productvideos/SnapTacks.asf](https://www.microplastics.com/productvideos/SnapTacks.asf)

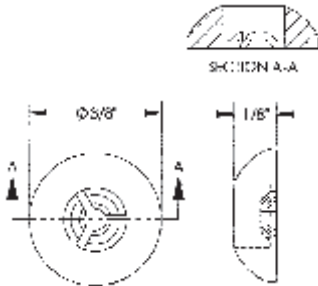
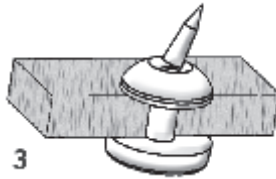
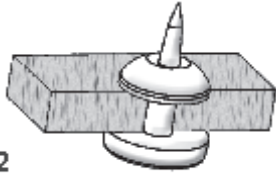
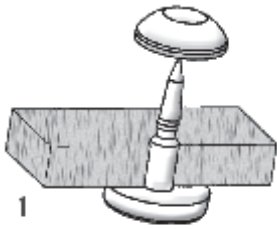
Micro Plastics' 2 piece snap tack consists of a male acetal tack and a female nylon button retainer. The tack has a sharp point for piercing soft materials that will not require a pre-punched hole.

Easily assembled by pushing the tack through the front of the soft material and pushing the retainer to the **second** detent - no tools required.

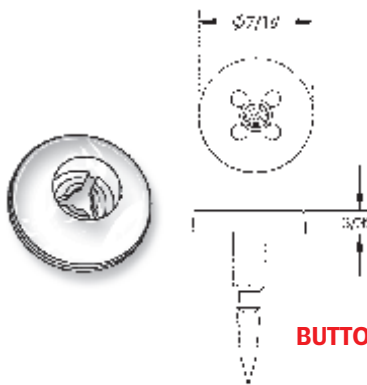
After assembly simply break off the pointed end and the remaining end is shielded by the retainer.

**CAUTION** the point is very sharp and can pierce your skin.

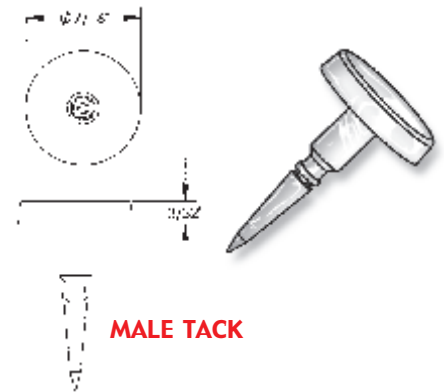
Can be used as an emergency button - no sewing expertise, thread, or needle required.



FEMALE BUTTON



BUTTON MALE TACK



MALE TACK

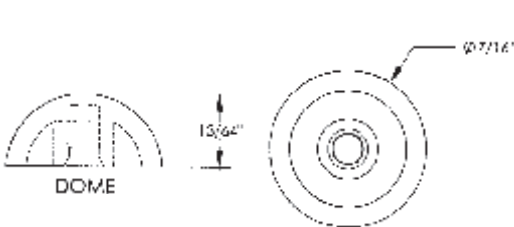
ITEM NUMBER	DESCRIPTION	ITEM NUMBER	DESCRIPTION	ITEM NUMBER	DESCRIPTION
27STF375	3/8" Female Button	27STMB430188	3/16" Button Male Tack	27STM430062	1/16" Male Tack
				27STM430125	1/8" Male Tack
				27STM430188	3/16" Male Tack

### DOMES AND TACK

### Watch Instructional Video

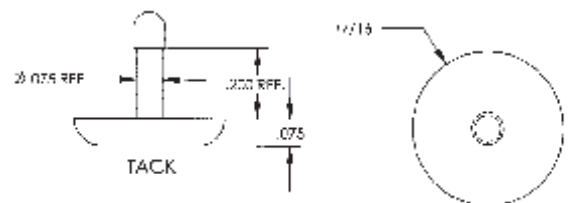
[mms://www.microplastics.com/productvideos/DomeAndTack](https://www.microplastics.com/productvideos/DomeAndTack)

Micro Plastics' two piece dome and tack molded nylon fastener has the locking mechanism totally enclosed to prevent tampering. No exterior sharp edges after part is assembled.



ITEM NUMBER DESCRIPTION  
27DM070 DOME

PANEL THICKNESS - 3/16"



ITEM NUMBER DESCRIPTION  
27TM070188 TACK



# PANEL FASTENERS AND HOLE PLUGS

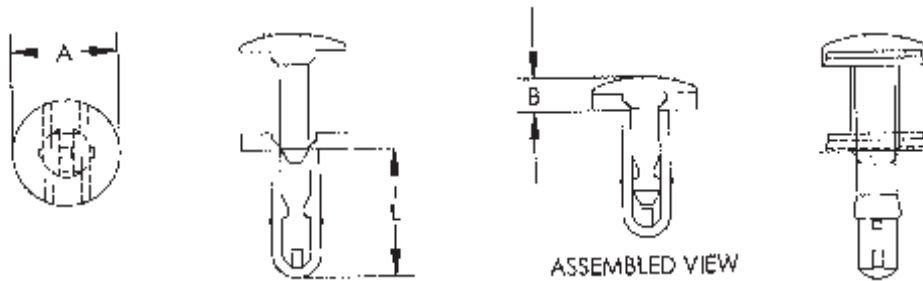
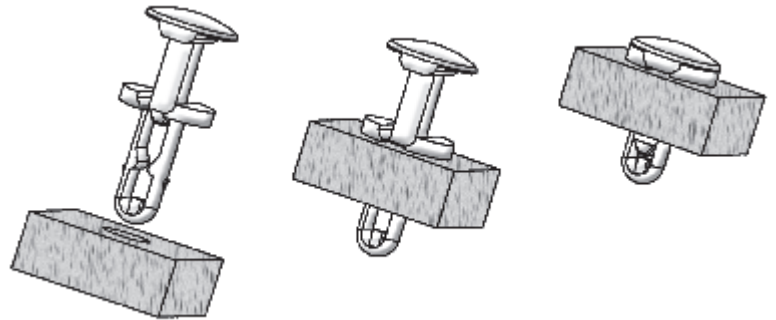
SECTION  
**VI**

## PANEL CINCHING RIVETS

**Watch Instructional Video**

[mms://www.microplastics.com/productvideos/PanelCinchingRivet.asf](https://www.microplastics.com/productvideos/PanelCinchingRivet.asf)

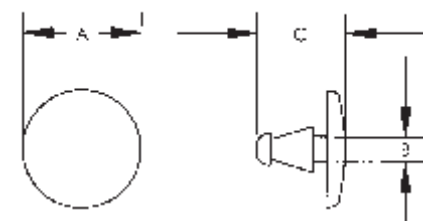
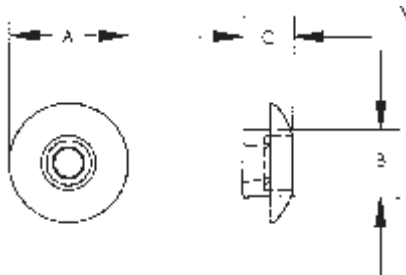
Micro Plastics' one-piece molded nylon panel cinching rivet consisting of two elements, the "T" shaped drive pin and "U" shaped body which are joined by thin webs. To install the fastener, insert the "U" shaped body into the panel hole and rap the head of the "T" shaped pin with a hammer or impact tool.



PART NUMBER	HOLE SIZE	MAX. PANEL THICKNESS	"A" HEAD DIA.	"L" LENGTH *	"B" ASSEMBLED HEAD HEIGHT +/- .015
27CINCH01	.125 (3,18)	0.020-0.109 (0,51-2,77)	1/4" (6,35)	.357 (9,07)	.080 (2,03)
27CINCH02	.187 (4,75)	0.020-0.174 (0,51-4,42)	3/8" (9,53)	.450 (11,08)	.120 (3,38)
27CINCH03	.250 (6,35)	0.020-0.109 (0,51-2,77)	3/8" (9,53)	.475 (12,07)	.115 (2,92)
27CINCH04	.250 (6,35)	0.020-0.174 (0,51-4,42)	5/8" (15,88)	.555 (14,10)	.117 (2,97)

## FEMALE & MALE RIVET

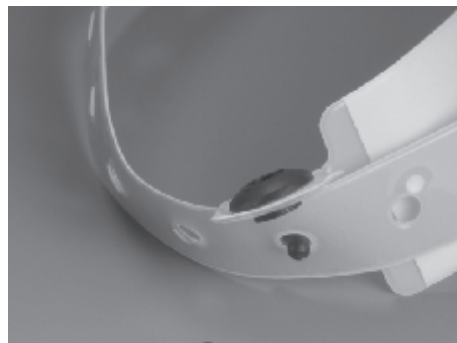
Two piece Nylon 6/6 rivet for flexible plastic I.D. or security bracelet. Male and female rivets snap into pre-punched holes in plastic bracelet and then snap together. Very difficult to remove without damaging. Parts are molded in natural Nylon 6/6, black is also available upon request.



### FEMALE RIVET



### MALE RIVET



ITEM NUMBER	A	B	C
27MRF22	.380 (9,65)	.213 (5,41)	.160 (4,06)

ITEM NUMBER	A	POST DIAMETER B	C
27MRM218125	.375 (9,53)	.081 (2,06)	.283 (7,19)

# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

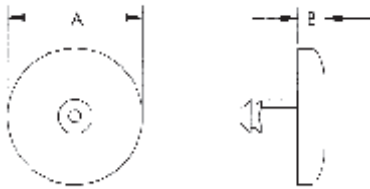
## NYLON MINI RIVETS

Micro Plastics' Mini Rivets consist of a male and female component. Mini Rivets are used to fasten a variety of materials. Simply press together for fast, easy assembly. Male and female rivets are packaged and sold separately. Mini Rivets are molded in natural Nylon 6/6 but are available in black upon request.

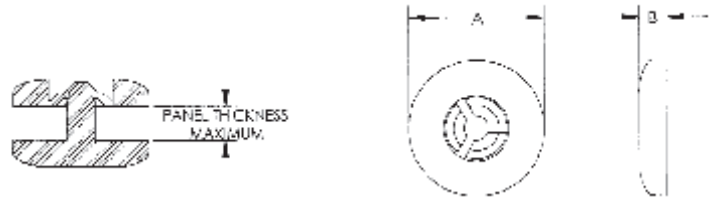


### New Sizes

#### MALE MINI RIVET



#### FEMALE MINI RIVET



PART NUMBER	DESCRIPTION	PANEL THICKNESS	A	B	POST DIAMETER
27MRM060010	MALE MINI RIVET	.010 (0,25)	1/4" (6,35)	.050 (1,27)	.060 (1,52)
27MRM060020	MALE MINI RIVET	.020 (0,51)	1/4" (6,35)	.050 (1,27)	.060 (1,52)
27MRM060030	MALE MINI RIVET	.030 (0,76)	1/4" (6,35)	.050 (1,27)	.060 (1,52)
27MRM060045	MALE MINI RIVET	.045 (1,14)	1/4" (6,35)	.050 (1,27)	.060 (1,52)
27MRM060062	MALE MINI RIVET	.062 (1,57)	1/4" (6,35)	.050 (1,27)	.060 (1,52)
27MRM060075	MALE MINI RIVET	.075 (1,91)	1/4" (6,35)	.050 (1,27)	.060 (1,52)
*27MRF06	FEMALE MINI RIVET		1/4" (6,35)	.050 (1,27)	.060 (1,52)

\* FOR USE WITH ALL .060 MALE RIVETS

PART NUMBER	DESCRIPTION	PANEL THICKNESS	A	B	POST DIAMETER
27MRM090020	MALE MINI RIVET	.020 (0,51)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
27MRM090032	MALE MINI RIVET	.032 (0,81)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
27MRM090045	MALE MINI RIVET	.045 (1,14)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
27MRM090062	MALE MINI RIVET	.062 (1,57)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
27MRM090075	MALE MINI RIVET	.075 (1,91)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
27MRM090090	MALE MINI RIVET	.090 (2,29)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
27MPM090112	MALE MINI RIVET	.125 (3,18)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
27MRM090312	MALE MINI RIVET	.312 (7,92)	3/8" (9,53)	.075 (1,91)	.094 (2,39)
*27MRF09	FEMALE MINI RIVET		3/8" (9,53)	.075 (1,91)	.094 (2,39)

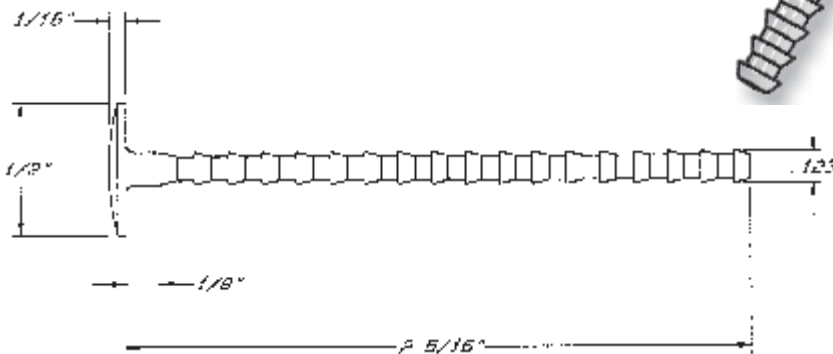
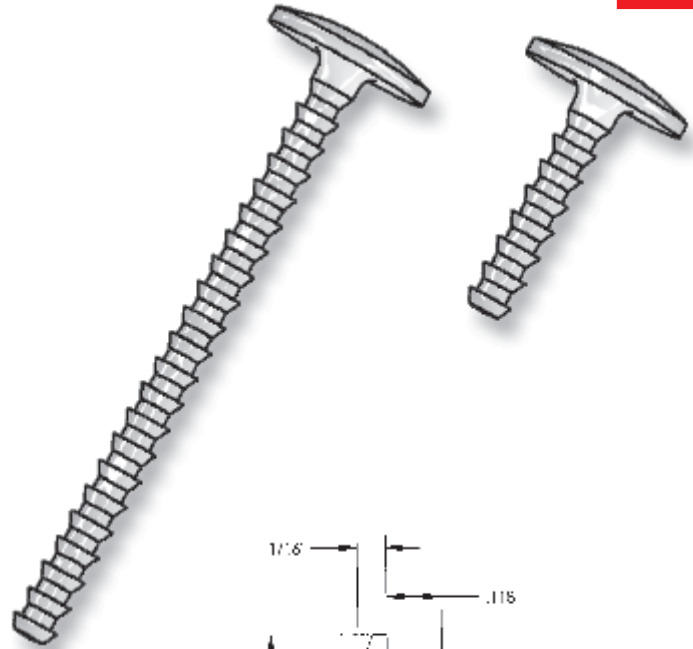
\* FOR USE WITH ALL .090 MALE RIVETS

PART NUMBER	DESCRIPTION	PANEL THICKNESS	A	B	POST DIAMETER
27MRM125032	MALE MINI RIVET	.032 (0,81)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
27MRM125045	MALE MINI RIVET	.045 (1,14)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
27MRM125062	MALE MINI RIVET	.062 (1,57)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
27MRM125093	MALE MINI RIVET	.093 (2,36)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
27MRM125125	MALE MINI RIVET	.125 (3,18)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
27MRM125143	MALE MINI RIVET	.143 (1,09)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
27MRM125187	MALE MINI RIVET	.187 (4,75)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
27MRM125325	MALE MINI RIVET	.325 (8,26)	1/2" (12,70)	.100 (2,54)	.125 (3,18)
*27MRF12	FEMALE MINI RIVET		1/2" (12,70)	.100 (2,54)	.125 (3,18)

\* FOR USE WITH ALL .125 MALE RIVETS

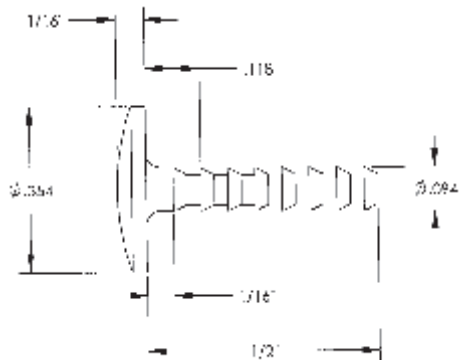
## ADJUSTABLE MALE MINI RIVETS

Adjustable male mini rivets are designed to be used with Micro Plastics' female mini rivets. Rivets are molded in tough, resilient, corrosion and chemical resistant Nylon 6/6 material. Variable length rivets can be used to fasten and control computer sheets, catalogs, samples and many other objects. Simply push the adjustable rivet through pre-punched holes, secure with a female mini rivet and clip to desired length.



\* FOR USE WITH 27MRF12 FEMALE MINI RIVET

PART NUMBER	LENGTH
27AMR1252187	2 5/16" (58,72)



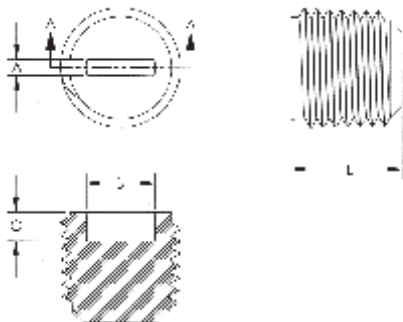
\* FOR USE WITH 27MRF09 FEMALE MINI RIVET

PART NUMBER	LENGTH
27AMRO940500	1/2" (12,70)

## PIPE PLUG

### New Product Line

Nylon Pipe Plugs with NPT threads are used to protect valves, hydraulic and pneumatic devices from contamination. Grub style drive allows installation and removal with a common screw driver. Available in 5 NPT sizes from 1/8-27 to 3/4-14.

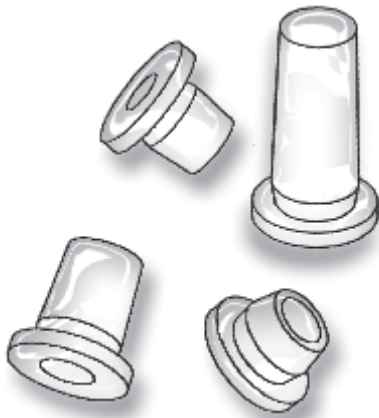


PART NUMBER	DESCRIPTION	A	B	C	L
62NPT01227	1/8-27 NPT Pipe Thread Plug	.072 (1,83)	.240 (6,10)	.130 (3,30)	.390 (9,91)
62NPT02518	1/4-18 NPT Pipe Thread Plug	.150 (3,81)	.312 (7,92)	.130 (3,30)	.500 (12,70)
62NPT03718	3/8-18 NPT Pipe Thread Plug	.150 (3,81)	.380 (9,10)	.358 (9,65)	.550 (13,97)
62NPT07514	3/4-14 NPT Pipe Thread Plug	.175 (4,44)	.550 (13,97)	.435 (11,05)	.610 (15,49)

# PANEL FASTENERS AND HOLE PLUGS

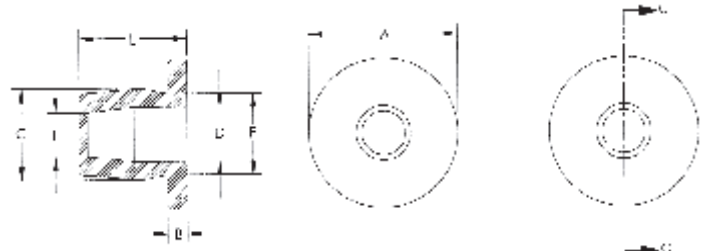
## SECTION VI

### TUBULAR EMBLEM CLIPS



Micro Plastic's Tubular Emblem Clips or Speed Nut Clips

Nut Clips offer a low substitute to the expensive all metal or metal/rubber clips. These easily installed molded low density polyethylene clips eliminate paint and surface damage. The inevitable rust associated with the sharp metal parts they replace is also eliminated by the electrically insulating, non-cathodic plastic clip.

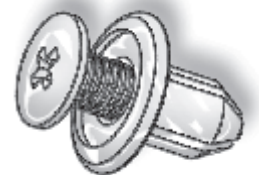
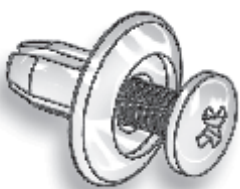
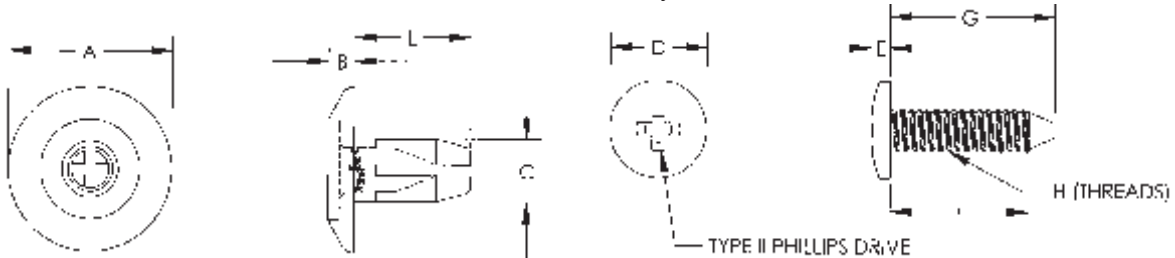


ITEM NUMBER	DESCRIPTION	A	B	C	D	E	F	L
60TC125250	1/8 X .250 TUBE CLIP	11/32 (8,73)	.046 (1,17)	.209 (5,31)	.125 (3,17)	.187 (4,76)	.100 (2,54)	.250 (6,35)
60TC155200 *	5/32 X .200 TUBE CLIP	11/32 (8,73)	.046 (1,17)	.239 (6,07)	.155 (3,94)	.220 (5,59)	.145 (3,68)	.200 (5,08)
60TC155360	5/32 X .360 TUBE CLIP	11/32 (8,73)	.046 (1,17)	.239 (6,07)	.155 (3,94)	.220 (5,59)	.125 (3,18)	.360 (9,13)
60TC155600	5/32 X .600 TUBE CLIP	11/32 (8,73)	.046 (1,17)	.239 (6,07)	.155 (3,94)	.220 (5,59)	.125 (3,18)	.600 (15,24)

\* I.D. HAS A THRU HOLE

### "SPECIAL ITEM" TWO PIECE SCREW RIVETS

Micro Plastics' two-piece screw rivets are designed to fasten larger components or small assemblies to their mating panels. Pressing or tapping the screw through the body creates a secure insulated connection. In addition the screw may be removed with a phillips screw driver and the fastener re-used. Rivets are molded from Nylon 6/6.



ITEM NUMBER	HOLE SIZE	PANEL THK.	ITEM NUMBER	HOLE SIZE	PANEL THK.	ITEM NUMBER	HOLE SIZE	PANEL THK.
401007	1/4 (6,35)	3/16 (4,76)	401008	1/4 (6,35)	5/32 (3,97)	401009	9/32 (7,14)	1/8 (3,18)

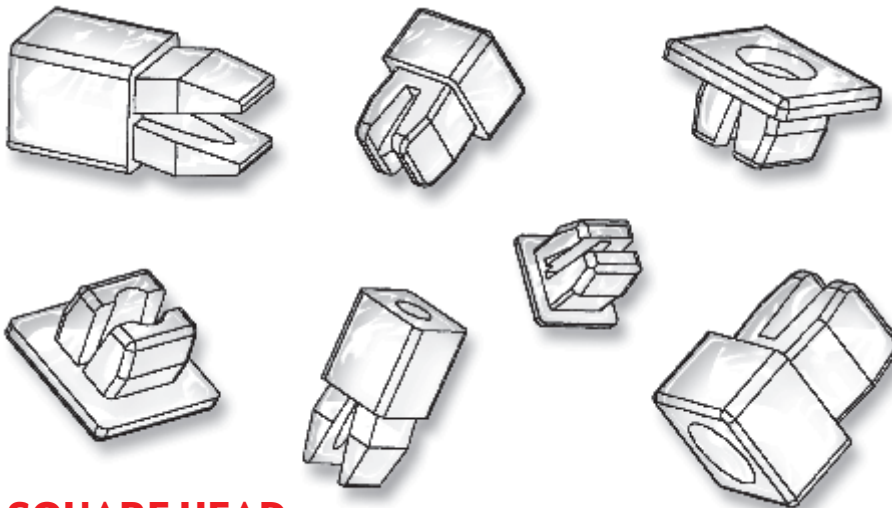
ITEM NUMBER	A	B	C	L	D	E	F	G	H
401007	19/32 (15,08)	3/32 (2,38)	.230 (5,84)	27/64 (10,72)	.350 (8,89)	.070 (1,78)	1/2 (12,70)	19/32 (15,08)	8-32
401008	45/64 (17,86)	3/32 (2,38)	.235 (5,97)	29/64 (11,51)	5/16 (7,94)	.040 (1,02)	27/64 (10,72)	33/64 (13,10)	8-32
401009	.555 (14,10)	.065 (1,65)	.270 (6,86)	7/16 (11,11)	25/64 (9,72)	.050 (1,27)	21/64 (8,33)	1/2 (12,70)	10-32



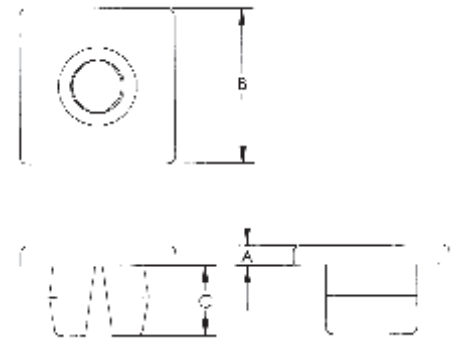
## NYLON GROMMET NUTS

Micro Plastics' Open Poly Grommet Nuts provide a low cost, positive connection of thin gauge materials while they eliminate cross thread-

ing. The specially designed locks snap into a pre-punched square hole. As the self-threading sheet metal screw is tightened, the Poly Grommet expands and securely locks the screw and assembled parts in place. The Grommet will provide a corrosion and vibration resistant connection and can be used to insulate areas of an assembly from electrical and thermal transfer. Some of the more common sizes that we have initially tooled are shown below. Because of unique tooling approach, we can vary this design over a wide range. Request the size you need. Poly Grommets are molded in Nylon 6/6 and can be dyed or molded in various colors. Different plastic materials can be substituted. Naturally, changes in our standard product will involve additional costs. Let us know what you need.



**New Sizes**



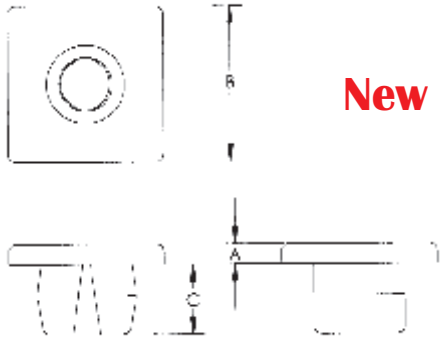
## SQUARE HEAD

PART NUMBER	HOLE SIZE	THICKNESS RANGE	SCREW	HEAD SIZE "B"	HEIGHT "A"	LENGTH "C" +/- .015
60SGN00001	.275/.290 (6,99/7,37)	.031/.125 (0,79/3,18)	8-10	3/8 (9,53)	.031 (0,79)	.320 (8,13)
60SGN00002	.275/.290 (6,99/7,37)	.031/.125 (0,79/3,18)	8-10	.375 (9,53)	.062 (1,57)	.320 (8,13)
60SGN00003	.275/.290 (6,99/7,37)	.031/.125 (0,79/3,18)	8-10	.375 (9,53)	.125 (3,18)	.320 (8,13)
60SGN00004	.275/.290 (6,99/7,37)	.031/.125 (0,79/3,18)	8-10	3/8 (9,53)	.250 (6,35)	.320 (8,13)
60SGN00005	.375 (9,53)	.031/.125 (0,79/3,18)	1/4	5/8 (15,88)	1-1/16 (27,0)	9/32 (7,14)
60SGN00006	.250/.260 (6,35/6,61)	.031/.115 (0,79/2,92)	6	.435 (11,05)	.094 (2,39)	.220 (5,59)
60SGN00007	.270/.270 (6,86/6,86)	.062/.275 (1,57/6,99)	6	.375/.500 (9,53/12,70)	.031 (0,79)	.435 (11,05)
60SGN00912	.225/.255 (5,71/6,48)	.031/.125 (0,79/3,18)	8	.375 (9,53)	.187 (4,75)	.300 (7,62)
60SGN00913	.250 (6,35)	.031/.060 (0,79/1,52)	8-10	13/32 (10,31)	.030 (0,76)	9/32 (7,14)
60SGN00915	.245/.255 (6,22/6,48)	.031/.125 (0,79/3,18)	6-8	3/8 (9,53)	1/32 (0,79)	9/32 (7,14)
60SGN01000	.250/.255 (6,35/6,48)	.110/.125 (2,79/3,18)	6	.375 (9,53)	.031 (0,79)	.265 (6,73)
60SGN01012	.173/.178 (4,39/4,52)	.031/.078 (0,79/1,98)	4	.218 (5,54)	.250 (6,35)	.218 (5,54)
60SGN01014	.250/.270 (6,35/6,86)	.062/.155 (1,57/3,94)	6	.375 (9,53)	.032 (0,81)	.312 (7,92)
60SGN01016	.285 (7,24)	.078/.175 (1,98/4,45)	8	.380 (9,65)	.045 (1,14)	.340 (8,64)
60SGN01020	.275/.280 (6,99/7,11)	.040/.045 (1,02/1,14)	8-10	.370 (9,40)	.032 (0,81)	.330 (8,38)
60SGN01122	.350/.355 (8,89/9,02)	.218/.230 (5,54/5,84)	8-10	.475 (12,07)	.062 (1,57)	.421 (10,69)
60SGN01125	.370/.390 (9,40/9,91)	.064/.187 (1,57/4,75)	10	39/64 (15,47)	.085 (2,16)	.290 (7,37)
60SGN01126	.305/.315 (7,75/8,00)	.031/.175 (0,79/4,44)	8	.470 (11,94)	.060 (1,52)	.300 (7,62)
60SGN01130	.370/.375 (9,40/9,52)	.031/.100 (0,79/2,54)	12	.620 (15,75)	.080 (2,03)	.275 (6,98)
60SGN01135	.173/.178 (4,39/4,52)	.031/.078 (0,79/1,98)	4	.218 (5,54)	.050 (1,27)	.218 (5,54)
60SGN01145	.270/.310 (6,85/7,87)	.031/.170 (0,79/4,32)	8	.405 (10,29)	.062 (1,57)	.312 (7,92)
60SGN01150	.310/.310 (7,87/7,87)	.031/.170 (0,79/4,32)	10	.465 (11,81)	.062 (1,57)	.295 (7,49)
60SGN01154	.320/.320 (8,13/8,13)	.031/.155 (0,79/3,94)	10	.650 (16,51)	.072 (1,83)	.305 (7,75)
60SGN01155	.245/.250 (6,22/6,35)	.047/.095 (1,19/2,41)	2	.375 (9,52)	.032 (0,81)	.240 (6,07)
60SGN01160	.335/.340 (8,52/8,64)	.062/.125 (1,58/3,17)	8	.512 (12,96)	.075 (1,90)	.315 (8,00)
60SGN01165	.270/.270 (6,86/6,86)	.062/.125 (1,58/3,17)	6	.390 (9,90)	.050 (1,27)	.275 (6,99)
60SGN01170	.275/.285 (6,90/7,24)	.031/.125 (0,79/3,17)	4	.375 (9,53)	.050 (1,27)	.218 (5,54)

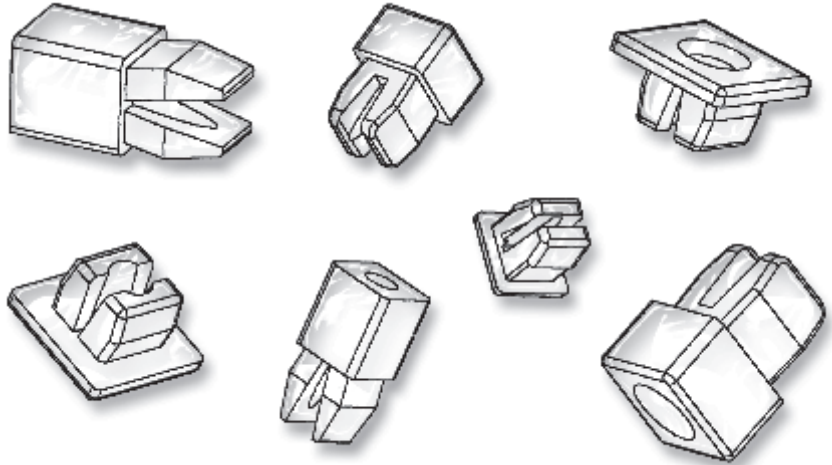
# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

### NYLON GROMMET NUTS

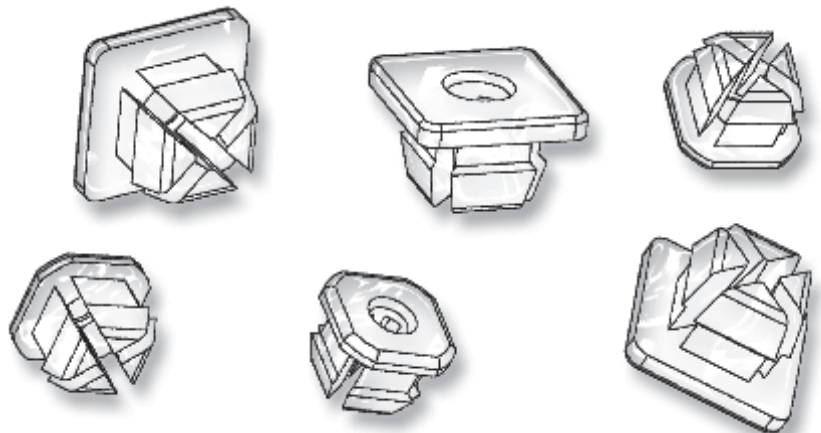
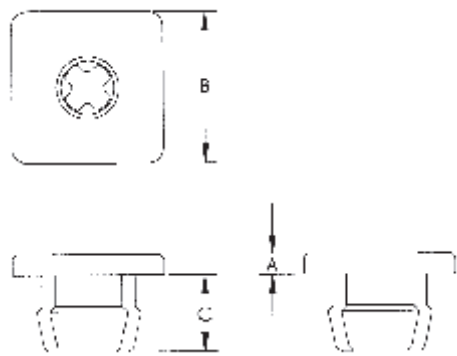


**New Sizes**



### SQUARE HEAD

PART NUMBER	HOLE SIZE	THICKNESS RANGE	SCREW	HEAD SIZE "B"	HEIGHT "A"	LENGTH "C" +/- .015
60SGN00914	.270/.275 (6,86/6,99)	.031/.109 (0,79/2,77)	6 3/8	(9,53)	.305 (7,75)	9/32 (7,14)
60SGN01171	.200/.270 (5,08/6,86)	.032/.156 (0,81/3,96)	6	.312/.437 (7,93/11,1)	.035 (0,89)	.312 (7,93)
60SGN01175	.275/.280 (6,99/7,11)	.062/.120 (1,60/3,05)	6	.390 (9,90)	.055 (1,40)	.281 (7,14)
60SGN01176	.260/.270 (6,61/6,86)	.093/.187 (2,36/4,75)	6	.410 (10,41)	.040 (1,02)	.310 (7,87)
60SGN01178	.275 (6,99)	.047/.180 (1,19/4,57)	8	.375 (9,53)	.032 (0,81)	.327 (8,31)
60SGN01179	.370/.445 (9,40)/(11,30)	.062/.120 (1,19/4,57)	1/4 5/8	(15,88)	.080 (2,04)	9/32 (7,14)
60SGN01180	.370/.375 (9,40/9,50)	.062/.120 (1,60/3,05)	1/4	.625 (15,90)	.080 (2,04)	.281 (7,14)
60SGN01185	.320/.335 (8,08/8,51)	.032/.234 (0,81/5,94)	10	.470 (11,94)	.055 (1,40)	.420 (10,67)
60SGN01190	.335/.345 (8,51/8,76)	.062/.171 (1,58/4,35)	10	.468 (11,88)	.095 (2,42)	.400 (10,16)
60SGN01195	.330/.365 (8,38/9,28)	.032/.095 (0,81/2,41)	10	.500 (12,70)	.094 (2,39)	.295 (7,50)
60SGN01200	.250/.260 (6,35/6,61)	.062/.125 (1,58/3,18)	6	.375 (9,53)	.140 (3,56)	.265 (6,73)



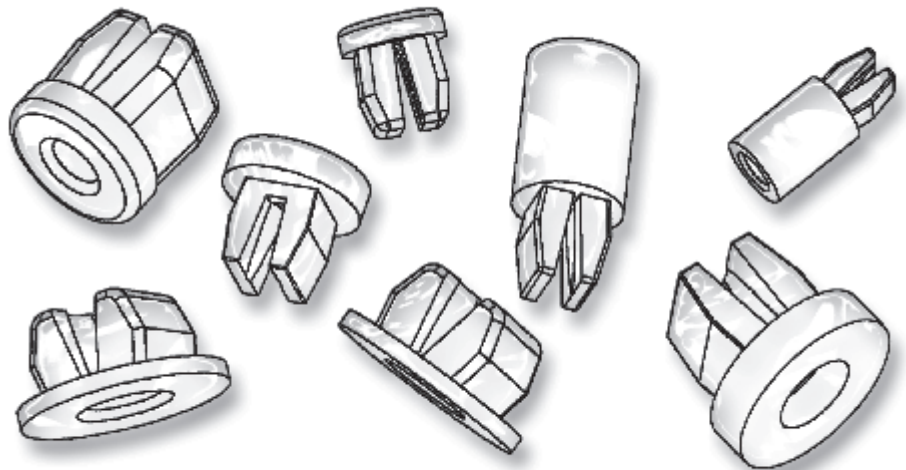
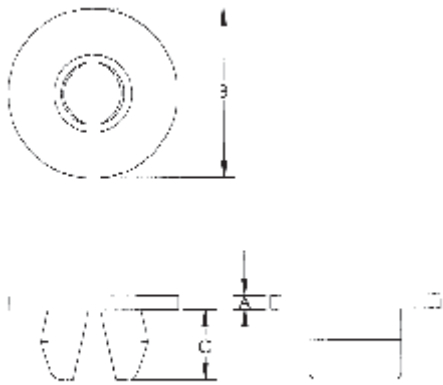
### DOUBLE SPLIT SQUARE HEAD

PART NUMBER	HOLE SIZE	THICKNESS RANGE	SCREW	HEAD SIZE "B"	HEIGHT "A"	LENGTH "C" +/- .015
60SGN01010	.377/.382 (9,58/9,70)	.125/.130 (3,18/3,30)	10	39/64 (15,48)	.082 (2,08)	.308 (7,82)
60SGN01015	.228/.233 (5,79/5,92)	.250/.271 (6,35/6,88)	8	.375 (9,53)	.031 (0,79)	.406 (10,31)
60SGN01018	.310/.315 (7,87/8,00)	.110/.115 (2,79/2,92)	8	.437 (11,10)	.078 (1,98)	.281 (7,14)
60SGN01019	.305/.310 (7,75/7,87)	.125/.135 (3,18/3,43)	8	.437 (11,10)	.062 (1,57)	.281 (7,14)
60SGN01021	.375/.390 (9,53/9,91)	.230 (5,48)	1/4 5/8	(15,88)	.080 (2,03)	.438 (11,13)
60SGN01025	.250/.250 (6,35/6,35)	.093/.275 (0,91/6,99)	8	.375 (9,53)	.047 (1,19)	.420 (10,67)
60SGN01128	.330/.330 (8,38/8,38)	.031/.125 (0,79/3,18)	8	.505 (12,83)	.032 (0,81)	.275 (6,98)
60SGN01030	.303 (7,70)	.031/.145 (0,79/3,68)	8-10	.435 (11,05)	.062 (1,57)	.270 (6,86)
60SGN01181	.410/.410 (10,42/10,42)	.031/.062 (0,79/1,58)	1/4	.630 (16,00)	.140 (3,56)	.280 (7,12)

## NYLON GROMMET NUTS

Micro Plastics' Open Poly Grommet Nuts provide a low cost, positive connection of thin gauge materials while they eliminate cross threading. The specially designed locks snap into a pre-punched square hole. As the self-threading sheet metal screw is tightened, the Poly Grommet expands and securely locks the screw and assembled parts in place. The Grommet will provide a corrosion and vibration resistant connection and can be used to insulate areas of an assembly from electrical and thermal transfer. Some of the more common sizes that we have initially tooled are shown below. Because of unique tooling approach, we can vary this design over a wide range. Request the size you need. Poly Grommets are molded in Nylon 6/6 and can be dyed or molded in various colors. Different plastic materials can be substituted. Naturally, changes in our standard product will involve additional costs. Let us know what you need.

### New Sizes



### ROUND HEAD

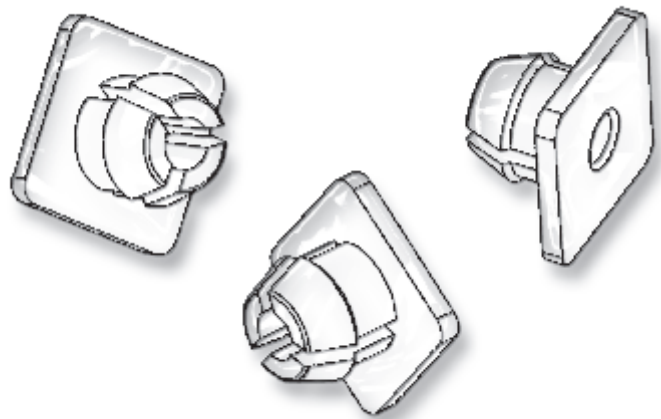
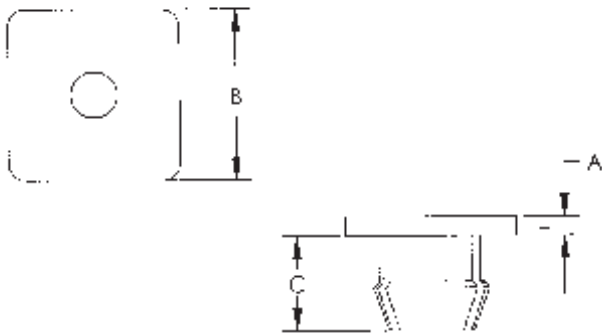
PART NUMBER	HOLE SIZE	THICKNESS RANGE	SCREW	HEAD SIZE "B"	HEIGHT "A"	LENGTH "C" +/- .015
60SGN00009	.270/.280 (6,86/7,11)	.062/.165 (1,57/4,19)	6	.375 (9,53)	.093 (2,36)	.300 (7,62)
60SGN00008	.267/.272 (6,78/6,91)	.031/.109 (0,79/2,77)	8-10	9/16 (14,29)	9/16 (14,29)	9/32 (7,14)
60SGN00010	.275/.290 (6,99/7,37)	.031/.125 (0,79/3,18)	8-10	.500 (12,70)	.031 (0,79)	.320 (8,13)
60SGN00011	.271/.290 (6,88/7,37)	.031/.125 (0,79/3,18)	8-10	.500 (12,70)	.062 (1,57)	.320 (8,13)
60SGN00012	.271/.290 (6,88/7,37)	.031/.125 (0,79/3,18)	8-10	.500 (12,70)	.125 (3,18)	.320 (8,13)
60SGN00013	.275/.290 (6,99/7,37)	.031/.125 (0,79/3,18)	8-10	.500 (12,70)	.250 (6,35)	.320 (8,13)
60SGN00014	.169/.177 (4,29/4,50)	.063 (1,60)	4	.264 (6,71)	.374 (9,50)	.217 (5,51)
60SGN00038	.275/.290 (6,99/7,37)	.031/.156 (0,79/3,96)	8	.500 (12,70)	.375 (9,53)	.320 (8,13)
60SGN00072	.275/.290 (6,99/7,37)	.031/.156 (0,79/3,96)	8-10	.500 (12,70)	.708 (17,98)	.315 (8,00)
60SGN00073	.280/.285 (7,11/7,24)	.032/.150 (0,81/3,81)	6	1/2 (12,70)	23/32 (18,26)	11/32 (8,73)
60SGN00100	.275/.290 (6,99/7,37)	.031/.156 (0,79/3,96)	8-10	.437 (11,10)	.032 (0,81)	.325 (8,26)
60SGN00818	.275/.290 (6,99/7,37)	.031/.109 (0,79/2,77)	8-10	.547 (13,89)	1.062 (26,97)	.281 (7,14)
60SGN00910	.281/.286 (7,14/7,26)	.031/.109 (0,79/2,77)	8-10	.492 (12,50)	.693 (17,60)	.281 (7,14)
60SGN01121	.350/.355 (8,89/9,02)	.032/.125 (0,81/3,18)	12	.531 (13,31)	.125 (3,18)	.281 (7,14)
60SGN01124	.350/.355 (8,89/9,02)	.032/.125 (0,81/3,18)	10	9/16" (14,29)	1/4" (6,35)	.320 (8,13)
60SGN01140	.310/.310 (7,87/7,87)	.031/.160 (0,79/4,06)	10	.500 (12,70)	.035 (0,89)	.292 (7,42)
60SGN02200	.425/.429 (10,80/10,90)	.031/.110 (0,79/2,79)	5/16	.740 (18,80)	.190 (4,83)	.312 (7,92)
60SGN02300	.415/.430 (10,54/10,92)	.032/.135 (0,81/3,43)	5/16	.750 (19,05)	.062 (1,57)	.310 (7,87)
60SGN02400	.325/.330 (8,26/8,38)	.031/.156 (0,79/3,96)	10	.565 (14,35)	.062 (1,57)	.320 (8,13)
60SGN02500	.275 (6,99)	.062/.170 (1,57/4,32)	8	.495 (12,57)	.312 (7,92)	.325 (8,26)

# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

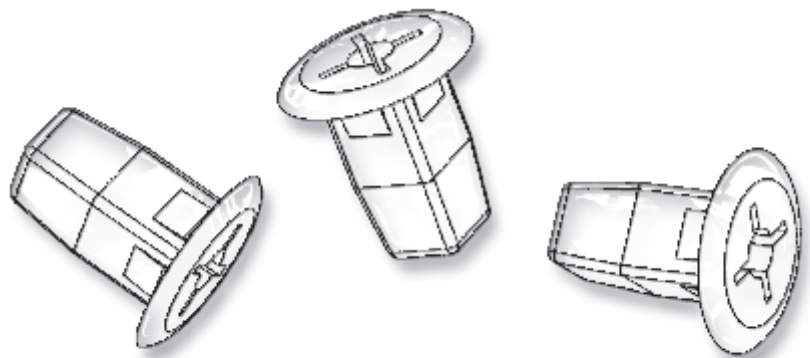
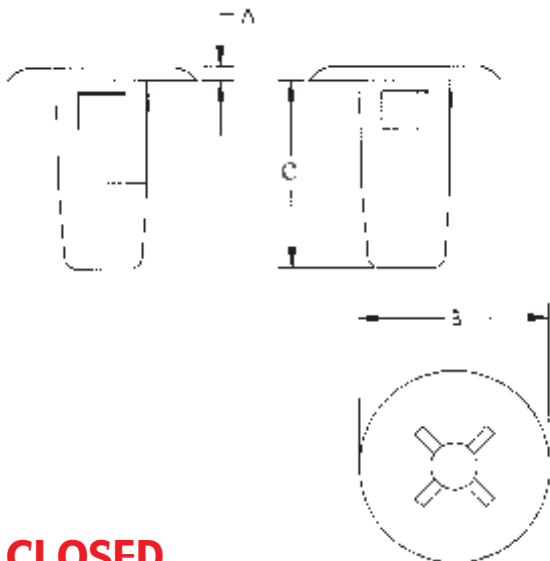
### NYLON GROMMET NUTS

Micro Plastics' Open Poly Grommet Nuts provide a low cost, positive connection of thin gauge materials while they eliminate cross threading. The specially designed locks snap into a pre-punched square hole. As the self-threading sheet metal screw is tightened, the Poly Grommet expands and securely locks the screw and assembled parts in place. The Grommet will provide a corrosion and vibration resistant connection and can be used to insulate areas of an assembly from electrical and thermal transfer. Some of the more common sizes that we have initially tooled are shown below. Because of unique tooling approach, we can vary this design over a wide range. Request the size you need. Poly Grommets are molded in Nylon 6/6 and can be dyed or molded in various colors. Different plastic materials can be substituted. Naturally, changes in our standard product will involve additional costs. Let us know what you need.



### THREE LEGGED SQUARE HEAD (Fits Round Hole)

PART NUMBER	HOLE SIZE	THICKNESS RANGE	SCREW	HEAD SIZE "B"	HEIGHT "A"	LENGTH "C" +/- .015
60SGN03300	.300/.300 (7,62/7,62)	.031/.135 (0,78/3,43)	6	485 (12,32)	.055 (1,40)	.265 (6,73)



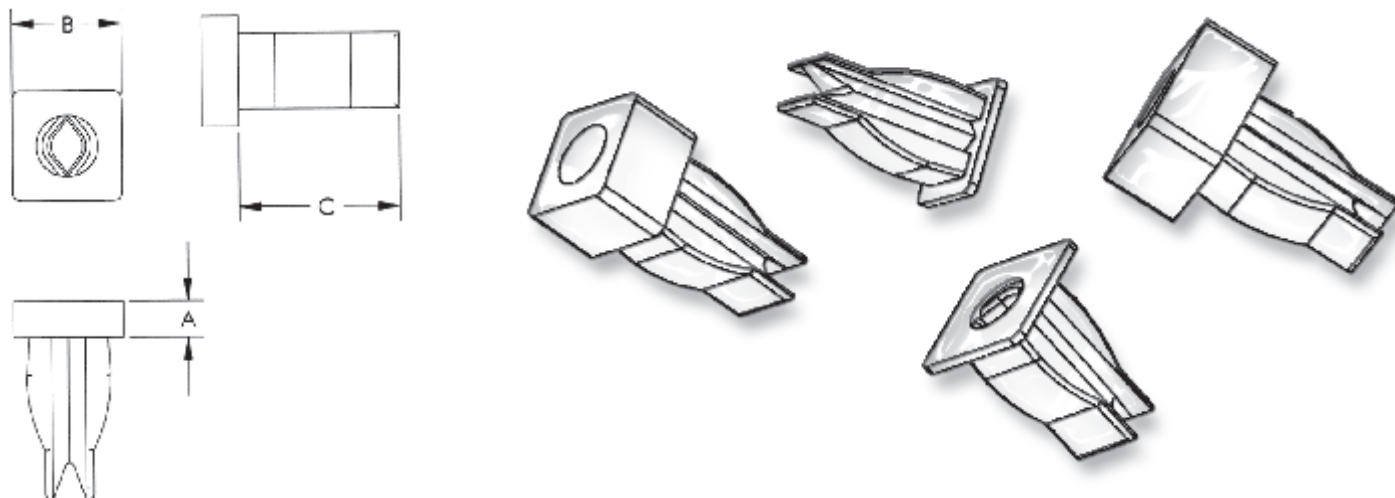
### CLOSED

PART NUMBER	HOLE SIZE	THICKNESS RANGE	SCREW	HEAD SIZE "B"	HEIGHT "A"	LENGTH "C" +/- .015
60SGN01402*	.355/.355 (9,02/9,02)	.062/.350 (1,57/8,81)	10	.700 (17,78)	.050 (1,27)	.685 (17,40)

\*ROUND HEAD

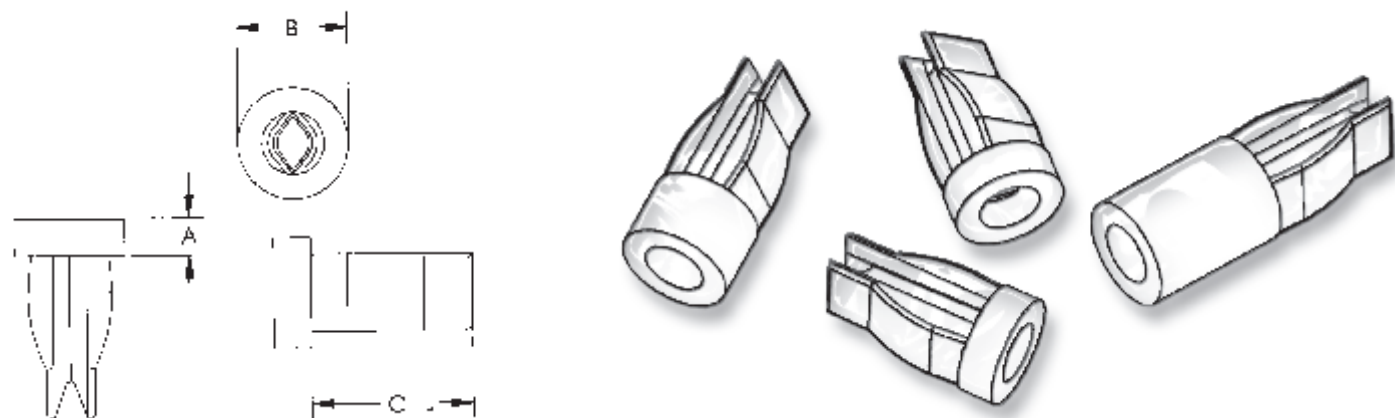


## NYLON GROMMET NUTS



## NYLON CLOSED SCREW STANDARD GROMMET NUTS

PART NUMBER	HOLE SIZE	PANEL THK. RANGE	SCREW SIZE	HEAD SIZE "B"	HEIGHT "A"	LENGTH "C" (+/- .015)
60SGC00001	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.375 (9,53)	.031 (0,79)	.540 (13,7)
60SGC00002	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.375 (9,53)	.062 (1,57)	.540 (13,7)
60SGC00003	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.375 (9,53)	.125 (3,18)	.540 (13,7)
60SGC00004	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.375 (9,53)	.250 (6,35)	.540 (13,7)
60SGC00005	.309-.315 (7,85/8,00)	.020-.140 (0,51/3,56)	8-10	.437 (11,1)	.031 (0,79)	.540 (13,7)
60SGC00006	.309-.315 (7,85/8,00)	.020-.140 (0,51/3,56)	8-10	.437 (11,1)	.062 (1,57)	.540 (13,7)
60SGC00007	.309-.315 (7,85/8,00)	.020-.140 (0,51/3,56)	8-10	.437 (11,1)	.125 (3,18)	.540 (13,7)
60SGC00008	.309-.315 (7,85/8,00)	.020-.140 (0,51/3,56)	8-10	.437 (11,1)	.250 (6,35)	.540 (13,7)
60SGC00010	.250-.281 (6,35/7,14)	.020/.140 (0,51/3,56)	8-10	.375 (9,53)	.125 (3,18)	.438 (11,1)



## NYLON CLOSED SCREW SPACER GROMMET NUTS

PART NUMBER	SPACER LENGTH	SPACER OD	HOLE SIZE	PANEL THK. RANGE	SCREW SIZE	LENGTH "C" (+/- .015)
60SPG00001	.125 (3,18)	3/8" (9,53)	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.548 (13,9)
60SPG00002	.187 (4,75)	3/8" (9,53)	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.548 (13,9)
60SPG00003	.250 (6,35)	3/8" (9,53)	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.548 (13,9)
60SPG00004	.312 (7,92)	3/8" (9,53)	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.548 (13,9)
60SPG00005	.375 (9,53)	3/8" (9,53)	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.548 (13,9)
60SPG00006	.500 (12,7)	3/8" (9,53)	.270-.290 (6,86/7,37)	.020-.140 (0,51/3,56)	8-10	.548 (13,9)

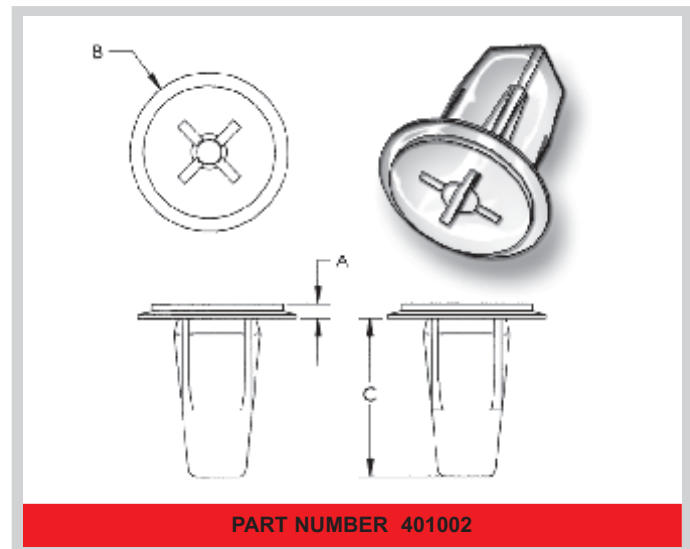
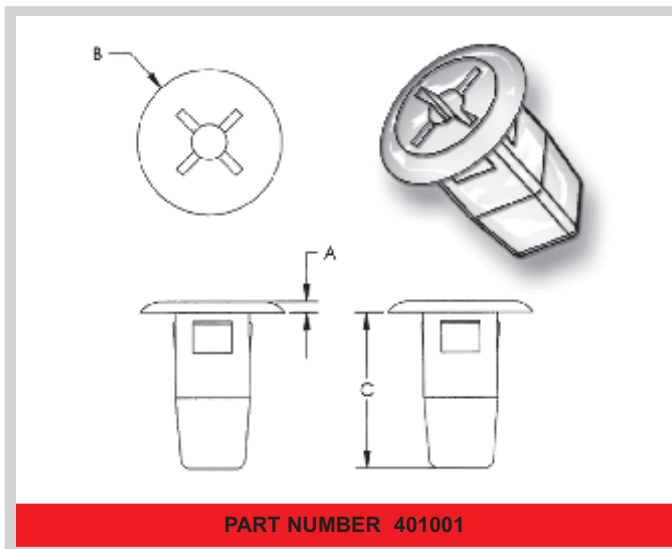
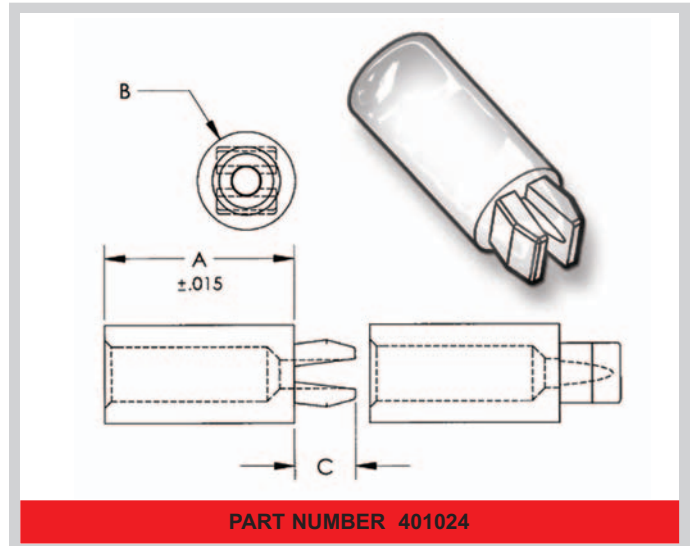
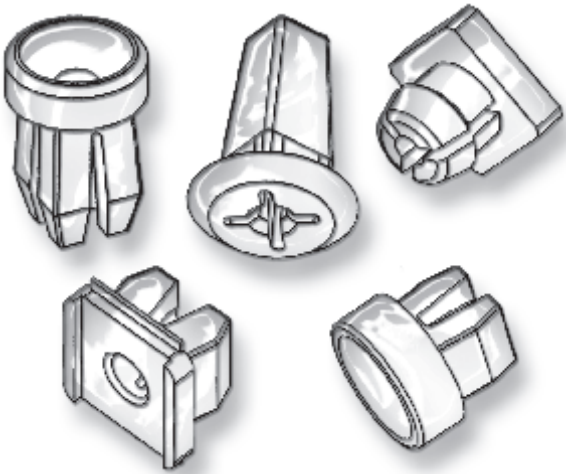
# PANEL FASTENERS AND HOLE PLUGS

SECTION  
VI

## NYLON "SPECIAL ITEM "GROMMET NUTS

New Sizes

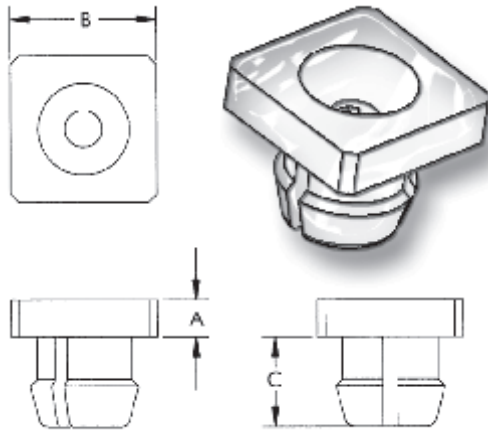
PART NUMBER	HOLE SIZE		PANEL THK. RANGE		SCREW SIZE	HEAD SIZE "B"		HEAD HEIGHT "A"		LOCK LENGTH "C" +/-0.15	
401001	.355	(9,02)	.125-.275	(3,17-6,98)	10	.641	(16,3)	.048	(1,22)	.680	(17,3)
401002	.260-.265	(6,60-6,73)	.062-.437	(1,57-11,1)	8	.562	(14,3)	.050	(1,27)	.562	(14,3)
401003	.310	(7,87)	.031-.135	(0,79-3,43)	6	.465	(11,8)	.120	(3,05)	.286	(7,26)
401012	.230-.235	(5,84-5,97)	.125-.275	(3,17-6,98)	8	.375	(9,53)	.125	(3,18)	.406	(10,3)
401018	.280	(7,11)	.056-.235	(1,42-5,99)	4	.531	(13,5)	.062	(1,57)	.640	(16,3)
401021	.275-.290	(6,98-7,37)	.093-.145	(2,36-3,68)	8	1/2	(12,7)	.187	(4,75)	.280	(7,11)
401025	.275-.290	(6,98-7,37)	.062-.125	(1,57-3,17)	6	.405/.430	(10,3/10,9)	.073	(1,85)	.213	(5,41)
401034	.285-.290	(7,24-7,37)	.031-.094	(0,79-2,39)	8	.455	(11,6)	2.000	(50,8)	.275	(6,98)
401024	.275-.290	(6,98-7,37)	.031-.140	(0,79-3,56)	10	.450	(25,4)	7/8	(22,2)	.280	(7,11)



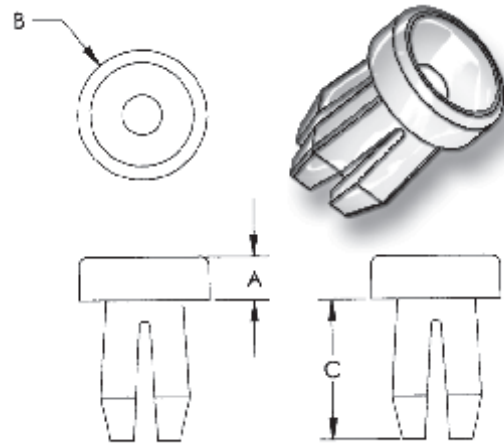
# PANEL FASTENERS AND HOLE PLUGS

## NYLON "SPECIAL ITEM "GROMMET NUTS

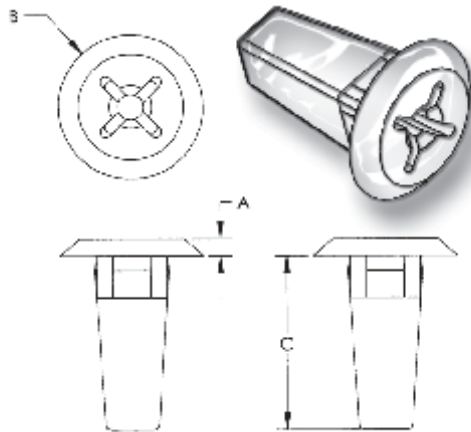
SECTION  
VI



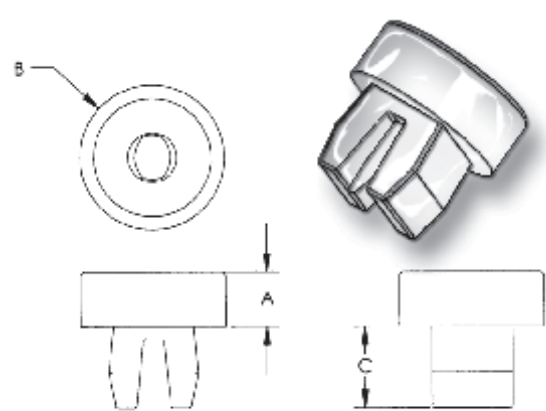
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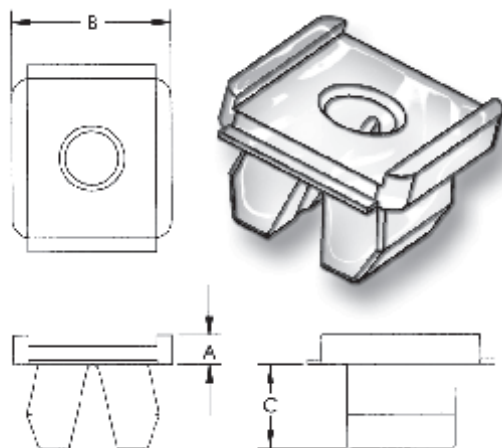
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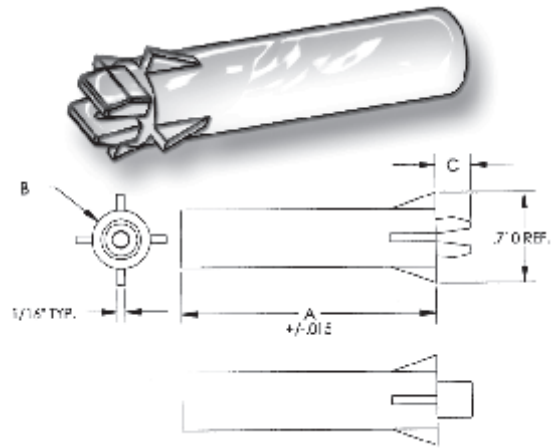
PART NUMBER 401018



PART NUMBER 401021



PART NUMBER 401025

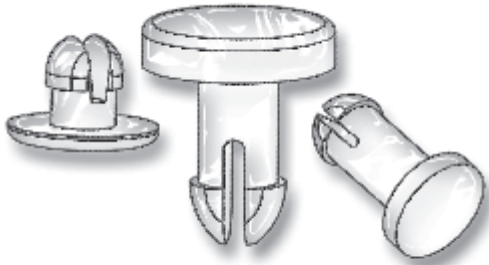


PART NUMBER 401034

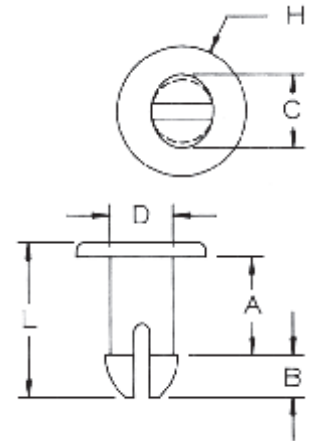
# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

### NYLON PUSH-IN-FASTENERS



Micro Plastics' Push-in Fasteners provide an inexpensive, fast, convenient method to join plastic, light sheet metal, insulating materials, circuit boards, or any other thin, light-weight material. They can also be used as push-in glides or as bumpers. Special designed legs provide compression and expansion to lock fastener into pre-punched holes. These fasteners are vibration, abrasion and corrosion resistant, and feature large heads for easier assembly, and can be used over and over.

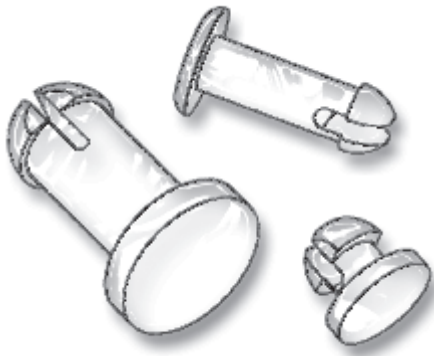


PART NUMBER	DESCRIPTION	H	A	B	C	D	L +/- .015
27PIF0010	PIF 10	.500 (12,70)	.220 (5,59)	.110 (12,79)	.200 (5,08)	.148 (3,76)	.400 (10,16)
27PIF0011	PIF 11	13/64 (5,16)	.208 (5,28)	.083 (2,11)	.140 (3,56)	.115 (2,92)	.320 (8,13)
27PIF0012	PIF 12	.175 (4,45)	.268 (6,81)	.090 (2,29)	.140 (3,56)	.096 (2,44)	.400 (10,16)
27PIF0013	PIF 13	3/16 (4,75)	.533 (13,54)	.087 (2,21)	.130 (3,30)	.095 (2,41)	.675 (17,15)
27PIF0014	PIF 14	.248 (6,30)	.813 (20,65)	.140 (3,56)	.144 (3,66)	.110 (2,79)	1.017 (25,83)
27PIF0015	PIF 15	21/64 (8,33)	.030 (0,76)	.130 (3,30)	.162 (4,12)	.152 (3,86)	.200 (5,08)
27PIF0017	PIF 17	11/32 (8,73)	.130 (3,30)	.110 (2,80)	.200 (5,08)	.160 (4,06)	.270 (6,86)
27PIF0018	PIF 18	13/64 (5,16)	.230 (5,84)	.098 (2,49)	.156 (3,96)	.128 (3,25)	.370 (9,40)
27PIF0019	PIF 19	1/4 (6,35)	.445 (11,30)	.085 (2,16)	.145 (3,68)	.095 (2,41)	.590 (14,99)
27PIF0020	PIF 20	15/64 (5,95)	.080 (2,03)	.080 (2,03)	.180 (4,57)	.124 (3,15)	.200 (5,08)
27PIF0021	PIF 21	.186 (4,72)	.200 (5,08)	.065 (1,65)	.104 (2,64)	.080 (2,03)	.297 (7,54)
27PIF0022	PIF 22	1/2 (12,70)	.064 (1,63)	.185 (4,70)	.280 (7,11)	.243 (6,17)	.370 (9,40)
27PIF0023	PIF 23	3/16 (4,75)	.075 (1,91)	.060 (1,52)	.150 (3,81)	.120 (3,05)	.190 (4,83)
27PIF0024	PIF 24	19/32 (15,08)	.365 (9,27)	.187 (4,75)	.295 (7,49)	.245 (6,22)	.685 (17,40)
27PIF0025	PIF 25	15/64 (5,95)	1.010 (25,65)	.082 (2,08)	.164 (4,17)	.124 (3,15)	1.13 (28,70)
27PIF0026	PIF 26	15/64 (5,95)	.080 (2,03)	.070 (1,78)	.180 (4,57)	.124 (3,15)	.205 (5,21)
27PIF0027	PIF 27	3/8 (9,52)	1.062 (26,97)	.177 (4,50)	.202 (5,13)	.165 (4,19)	1.303 (28,32)
27PIF0028	PIF 28	11/32 (8,73)	.875 (22,23)	.174 (4,42)	.224 (5,69)	.175 (4,45)	1.115 (28,32)
27PIF0029	PIF 29	13/64 (5,16)	.210 (5,33)	.091 (2,31)	.179 (4,55)	.130 (3,30)	.342 (8,69)
27PIF0030	PIF 30	.135 (3,43)	.125 (3,18)	.070 (1,78)	.110 (2,79)	.089 (2,26)	.235 (5,97)
27PIF0031	PIF 31	25/64 (9,93)	.503 (12,78)	.210 (5,33)	.295 (7,49)	.230 (5,84)	1.083 (27,51)
27PIF0032	PIF 32	13/64 (5,16)	.235 (5,97)	.066 (1,68)	.145 (3,68)	.115 (2,92)	.341 (8,66)
27PIF0033	PIF 33	3/8 (9,52)	.505 (12,83)	.130 (3,30)	.200 (5,08)	.160 (4,06)	.705 (17,91)
27PIF0034	PIF 34	3/4 (19,05)	.636 (16,15)	.180 (4,57)	.220 (5,59)	.180 (4,57)	.875 (22,23)
27PIF0035	PIF 35	5/16 (7,94)	.125 (3,18)	.070 (1,78)	.110 (2,80)	.089 (2,26)	.235 (5,96)
27PIF0036	PIF 36	3/16 (4,75)	.066 (1,68)	.075 (1,91)	.100 (2,54)	.090 (2,29)	.179 (4,55)
27PIF0037	PIF 37	3/8 (9,52)	.636 (16,15)	.180 (4,57)	.220 (5,59)	.180 (4,57)	.875 (22,22)
27PIF0038*	PIF 38*	9/32 (7,14)	.063 (1,60)	.078 (1,98)	.100 (2,54)	.093 (2,36)	.165 (4,19)
27PIF0039	PIF 39	1/4 (6,35)	.115 (2,92)	.085 (2,16)	.145 (3,68)	.093 (2,36)	.240 (6,10)
27PIF0040*	PIF 40*	9/32 (7,14)	.093 (2,36)	.078 (1,98)	.105 (2,67)	.093 (2,36)	.200 (5,08)
27PIF0041*	PIF 41*	5/16 (7,94)	.121 (3,07)	.085 (2,16)	.145 (3,68)	.089 (2,26)	.246 (6,25)
27PIF0042	PIF 42	13/64 (5,16)	.190 (4,83)	.090 (2,29)	.180 (4,57)	.130 (3,30)	.320 (8,13)
27PIF0043	PIF 43	13/64 (5,16)	.156 (3,96)	.135 (3,43)	.140 (3,56)	.115 (2,92)	.320 (8,13)
27PIF0044	PIF 44	13/64 (5,16)	.135 (3,43)	.135 (3,43)	.140 (3,56)	.115 (2,92)	.295 (7,49)
27PIF0045	PIF 45	13/64 (5,16)	.235 (5,97)	.070 (1,79)	.137 (3,48)	.115 (2,92)	.345 (8,76)
27PIF0046	PIF 46	13/64 (5,16)	.250 (6,35)	.106 (2,69)	.145 (3,68)	.115 (2,92)	.395 (10,03)

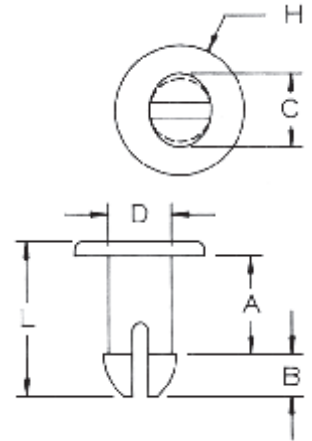
PARTS WITH \* HAVE NO SLOT -----"L" DIM. (TOTAL LENGTH = +/- .015"



# PANEL FASTENERS AND HOLE PLUGS



Micro Plastics' Push-in Fasteners provide an inexpensive, fast, convenient method to join plastic, light sheet metal, insulating materials, circuit boards, or any other thin, light-weight material. They can also be used as push-in glides or as bumpers. Special designed legs provide compression and expansion to lock fastener into pre-punched holes. These fasteners are vibration, abrasion and corrosion resistant, and feature large heads for easier assembly, and can be used over and over.

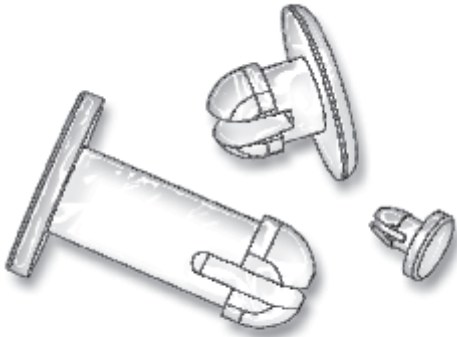


PART NUMBER	DESCRIPTION	H	A	B	C	D	L	+/- .015
27PIF0047	PIF 47	13/64 (5,16)	.121 (3,07)	.105 (2,67)	.145 (3,68)	.115 (2,92)	.260 (6,60)	
27PIF0048	PIF 48	25/64 (9,93)	.315 (8,00)	.113 (2,87)	.208 (5,28)	.157 (3,99)	.488 (12,40)	
27PIF0049	PIF 49	11/32 (8,73)	.450 (11,43)	.160 (4,06)	.200 (5,08)	.160 (4,06)	.680 (17,27)	
27PIF0050	PIF 50	11/32 (8,73)	.125 (3,18)	.137 (3,48)	.202 (5,13)	.165 (4,19)	.305 (7,75)	
27PIF0051	PIF 51	11/32 (8,73)	.065 (1,65)	.137 (3,48)	.202 (5,13)	.165 (4,19)	.325 (8,26)	
27PIF0052	PIF 52	11/32 (8,73)	.556 (14,12)	.153 (3,89)	.225 (5,72)	.180 (4,57)	.780 (19,81)	
27PIF0053	PIF 53	11/32 (8,73)	.242 (6,15)	.174 (4,42)	.224 (5,69)	.175 (4,45)	.490 (12,45)	
27PIF0054	PIF 54	11/32 (8,73)	.197 (5,00)	.185 (4,70)	.295 (7,49)	.255 (6,48)	.415 (10,54)	
27PIF0055	PIF 55	11/32 (8,73)	.555 (14,08)	.145 (3,68)	.225 (5,71)	.180 (4,57)	.770 (19,56)	
27PIF0056	PIF 56	9/64 (3,56)	.315 (8,00)	.075 (1,91)	.135 (3,43)	.095 (2,41)	.450 (11,43)	
27PIF0057	PIF 57	7/16 (11,10)	.120 (3,05)	.255 (6,48)	.380 (9,65)	.305 (7,74)	.445 (11,43)	
27PIF0058	PIF 58	15/32 (11,90)	.121 (3,07)	.153 (3,86)	.238 (6,05)	.200 (5,08)	.324 (8,24)	
27PIF0059	PIF 59	3/16 (4,75)	.145 (3,69)	.065 (1,65)	.105 (2,66)	.090 (2,29)	.255 (6,48)	
27PIF0060	PIF 60	15/32 (11,90)	.156 (3,89)	.125 (3,18)	.228 (5,79)	.200 (5,05)	.333 (8,46)	
27PIF0061	PIF 61	11/32 (8,73)	.370 (9,40)	.105 (2,67)	.236 (5,99)	.203 (5,16)	.540 (13,72)	
27PIF0062	PIF 62	25/64 (9,93)	1.730 (43,94)	.210 (5,33)	.295 (7,49)	.230 (5,84)	2.010 (51,05)	
27PIF0063	PIF 63	29/64 (11,51)	.276 (7,01)	.142 (3,61)	.295 (7,49)	.240 (6,10)	.460 (11,68)	
27PIF0064	PIF 64	29/64 (11,51)	.300 (7,62)	.170 (4,32)	.295 (7,49)	.240 (6,10)	.535 (13,59)	
27PIF0065	PIF 65	19/32 (15,08)	.480 (12,19)	.187 (4,75)	.293 (7,44)	.245 (6,22)	.715 (18,16)	
27PIF0066	PIF 66	29/64 (11,51)	.330 (8,38)	.187 (4,75)	.295 (7,49)	.240 (6,10)	.555 (14,10)	
27PIF0067	PIF 67	1/2 (12,70)	.171 (4,34)	.187 (4,75)	.295 (7,49)	.260 (6,60)	.405 (10,29)	
27PIF0068	PIF 68	11/16 (17,45)	.140 (3,56)	.255 (6,48)	.360 (9,14)	.290 (7,37)	.468 (11,89)	
27PIF0069*	PIF 69	.312 (7,92)	.095 (2,41)	.075 (1,91)	.145 (3,68)	.095 (2,41)	.218 (5,54)	
27PIF0070	PIF 70	19/32 (15,08)	.171 (4,34)	.187 (4,75)	.295 (7,49)	.260 (6,60)	.418 (10,62)	
27PIF0071	PIF 71	19/32 (15,08)	.250 (6,35)	.187 (4,75)	.300 (7,62)	.245 (6,22)	.497 (12,62)	
27PIF0072	PIF 72	19/32 (15,08)	.365 (9,27)	.187 (4,75)	.290 (7,37)	.245 (6,22)	.622 (15,80)	
27PIF0073	PIF 73	11/32 (8,73)	.171 (4,34)	.187 (4,75)	.295 (7,49)	.260 (6,60)	.380 (9,65)	
27PIF0074	PIF 74	19/32 (15,08)	.405 (10,29)	.160 (4,06)	.315 (8,00)	.275 (6,99)	.620 (15,75)	
27PIF0075	PIF 75	1/4 (6,35)	.550 (13,97)	.135 (3,43)	.145 (3,68)	.112 (2,84)	.745 (18,92)	
27PIF0076	PIF 76	15/32 (11,90)	.129 (3,28)	.148 (3,76)	.238 (6,05)	.197 (5,00)	.399 (10,13)	
27PIF0077	PIF 77	15/64 (5,95)	.320 (8,13)	.084 (2,13)	.145 (3,68)	.118 (3,00)	.437 (11,10)	
27PIF0078	PIF 78	13/32 (10,32)	.250 (6,35)	.100 (2,54)	.278 (7,06)	.217 (5,51)	.395 (10,03)	
27PIF0079	PIF 79	9/16 (14,29)	.950 (24,13)	.174 (4,42)	.228 (5,79)	.172 (4,37)	1.20 (30,48)	
27PIF0080	PIF 80	3/8 (9,53)	1.125 (28,58)	.17 (4,32)	.202 (5,13)	.165 (4,19)	1.365 (34,67)	
27PIF0081	PIF 81	.343 (8,71)	.125 (3,18)	.137 (3,48)	.202 (5,13)	.165 (4,19)	.31 (7,87)	
27PIF0082	PIF 82	11/16 (17,45)	.250 (6,35)	.255 (6,48)	.360 (9,14)	.290 (7,37)	.585 (14,86)	

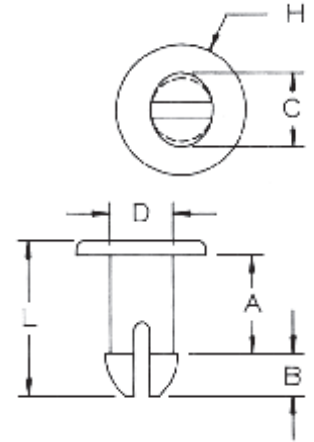
# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

### NYLON PUSH-IN-FASTENERS



Micro Plastics' Push-in Fasteners provide an inexpensive, fast, convenient method to join plastic, light sheet metal, insulating materials, circuit boards, or any other thin, light-weight material. They can also be used as push-in glides or as bumpers. Special designed legs provide compression and expansion to lock fastener into pre-punched holes. These fasteners are vibration, abrasion and corrosion resistant, and feature large heads for easier assembly, and can be used over and over.

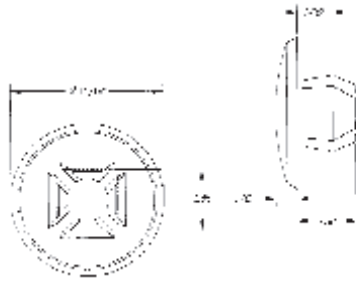


PART NUMBER	DESCRIPTION	H	A	B	C	D	L +/- .015
27PIF0083	PIF 83	1/2 (12,70)	.064 (1,63)	.138 (3,51)	.280 (7,11)	.243 (6,17)	.262 (6,65)
27PIF0084	PIF 84	1/2 (12,70)	.099 (2,51)	.168 (4,27)	.280 (7,11)	.245 (6,22)	.324 (8,23)
27PIF0085	PIF 85	1/2 (12,70)	.127 (3,23)	.177 (4,50)	.281 (7,14)	.241 (6,12)	.361 (9,17)
27PIF0086	PIF 86	1/2 (12,70)	.156 (3,96)	.170 (4,32)	.281 (7,14)	.242 (6,15)	.380 (9,65)
27PIF0087	PIF 87	1/2 (12,70)	.189 (4,80)	.151 (3,84)	.278 (7,06)	.241 (6,12)	.395 (10,03)
27PIF0088	PIF 88	1/2 (12,70)	.219 (5,56)	.178 (4,52)	.277 (7,04)	.239 (6,07)	.445 (11,30)
27PIF0089	PIF 89	1/2 (12,70)	.250 (6,35)	.175 (4,45)	.283 (7,19)	.241 (6,12)	.487 (12,37)
27PIF0090	PIF 90	1/2 (12,70)	.281 (7,14)	.176 (4,47)	.280 (7,11)	.240 (6,10)	.513 (13,03)
27PIF0091	PIF 91	1/2 (12,70)	.314 (7,98)	.152 (3,86)	.281 (7,14)	.241 (6,12)	.520 (13,21)
27PIF0092	PIF 92	1/2 (12,70)	.345 (8,76)	.177 (4,50)	.281 (7,14)	.240 (6,10)	.578 (14,68)
27PIF0093	PIF 93	1/2 (12,70)	.375 (9,53)	.166 (4,22)	.281 (7,14)	.242 (6,15)	.609 (15,47)
27PIF0094	PIF 94	1/2 (12,70)	.405 (10,29)	.175 (4,45)	.282 (7,16)	.243 (6,17)	.638 (16,21)
27PIF0095	PIF 95	19/32 (15,08)	.130 (3,30)	.125 (3,18)	.205 (5,21)	.145 (3,68)	.305 (7,75)
27PIF0096	PIF 96	1/2 (12,70)	.466 (11,84)	.178 (4,52)	.280 (7,11)	.240 (6,10)	.701 (17,81)
27PIF0097	PIF 97	1/2 (12,70)	.498 (12,65)	.176 (4,47)	.283 (7,19)	.240 (6,10)	.734 (18,64)
27PIF0098	PIF 98	1/2 (12,70)	.438 (11,13)	.176 (4,47)	.281 (7,14)	.240 (6,10)	.672 (17,07)
27PIF0099	PIF 99	1/2 (12,70)	1.020 (25,91)	.380 (9,65)	.475 (12,07)	.350 (8,89)	1.460 (37,08)
27PIF0100	PIF 100	3/8 (9,53)	1.543 (39,19)	.205 (5,21)	.295 (7,49)	.250 (6,35)	1.875 (47,63)
27PIF0101	PIF 101	.680 (17,28)	.154 (3,91)	.255 (6,48)	.347 (8,81)	.285 (7,24)	.473 (12,01)
27PIF0102	PIF 102	.300 (7,62)	.050 (1,27)	.137 (3,48)	.202 (5,13)	.165 (4,19)	.337 (8,56)
27PIF0104	PIF 104	15/64 (0,23)	.750 (19,05)	.082 (2,08)	.164 (4,17)	.120 (3,05)	.875 (22,23)
27PIF0105	PIF 105	5/8 (15,88)	1.065 (27,05)	.360 (9,14)	.360 (9,14)	.270 (6,86)	1.50 (38,10)
27PIF0106	PIF 106	.380 (9,65)	.340 (8,64)	.180 (4,57)	.220 (5,59)	.180 (4,57)	.580 (14,73)
27PIF0107	PIF 107	.310 (7,87)	.195 (4,95)	.200 (5,08)	.200 (5,08)	.160 (4,06)	.450 (11,43)
27PIF0108	PIF 108	.155 (3,94)	.460 (11,68)	.085 (2,16)	.135 (3,43)	.093 (2,36)	.595 (15,11)
27PIF0109	PIF 109	15/64 (5,94)	.080 (2,03)	.060 (1,52)	.200 (5,08)	.160 (4,06)	.180 (4,57)
27PIF0110	PIF 110	3/16 (4,76)	.145 (3,68)	.090 (2,29)	.135 (3,43)	.090 (2,29)	.300 (7,62)
27PIF0111	PIF 111	.320 (8,13)	.130 (3,30)	.110 (2,79)	.220 (5,59)	.195 (4,95)	.290 (7,37)
27PIF0112	PIF 112	.320 (8,13)	.180 (4,57)	.110 (2,79)	.220 (5,59)	.195 (4,95)	.340 (8,64)
27PIF0113	PIF 113	.344 (8,74)	.560 (14,22)	.145 (3,68)	.224 (5,69)	.175 (4,45)	.765 (19,43)

# PANEL FASTENERS AND HOLE PLUGS

SECTION  
VI

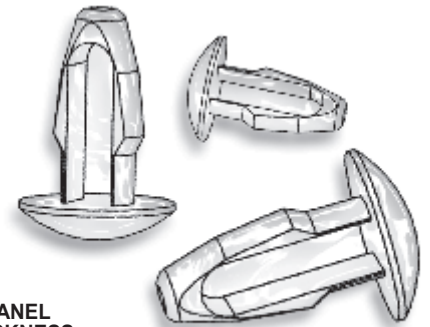
## NYLON "SPECIAL ITEM" PUSH-IN-FASTENERS



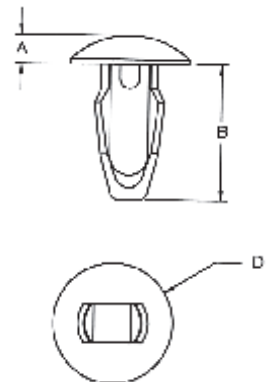
PART NUMBER	HOLE SIZE/TYPE	PANEL THICKNESS
401005	.276/.286 (7,01/7,26) SQUARE HOLE	.156" (3,96)

## SNAP CLIPS

A combination of Celcon Acetal material, and a resilient body design, give these parts a positive "snap" and more definite grip when assembled into place. Designed for other hole sizes from 1/8" to 1/4" and panel thicknesses from 1/32" to 3/16".



PART NUMBER	A	B	D	HOLE SIZE	PANEL THICKNESS
27SNC1250032	.060 (1,52)	1/4 (6,35)	1/4 (6,35)	.125 (3,18)	.032 (0,81)
27SNC1250062	.060 (1,52)	9/32 (7,14)	1/4 (6,35)	.125 (3,18)	.062 (1,57)
27SNC1250093	.060 (1,52)	5/16 (7,94)	1/4 (6,35)	.125 (3,18)	.093 (2,36)
27SNC1250125	.060 (1,52)	11/32 (8,73)	1/4 (6,35)	.125 (3,18)	.125 (3,18)
27SNC1560032	.060 (1,52)	9/32 (7,14)	5/16 (7,94)	.156 (3,96)	.032 (0,81)
27SNC1560062	.060 (1,52)	5/16 (7,94)	5/16 (7,94)	.156 (3,96)	.062 (1,57)
27SNC1560093	.060 (1,52)	11/32 (8,73)	5/16 (7,94)	.156 (3,96)	.093 (2,36)
27SNC1560125	.060 (1,52)	3/8 (9,53)	5/16 (7,94)	.156 (3,96)	.125 (3,18)
27SNC1560156	.060 (1,52)	13/32 (10,32)	5/16 (7,94)	.156 (3,96)	.156 (3,96)
27SNC1870032	.060 (1,52)	5/16 (7,94)	5/16 (7,94)	.187 (4,75)	.032 (0,81)
27SNC1870062	.060 (1,52)	11/32 (8,73)	5/16 (7,94)	.187 (4,75)	.062 (1,57)
27SNC1870093	.060 (1,52)	3/8 (9,53)	5/16 (7,94)	.187 (4,75)	.093 (2,36)
27SNC1870125	.060 (1,52)	13/32 (10,32)	5/16 (7,94)	.187 (4,75)	.125 (3,18)
27SNC1870156	.060 (1,52)	7/16 (11,11)	5/16 (7,94)	.187 (4,75)	.156 (3,96)
27SNC1870187	.060 (1,52)	15/32 (11,91)	5/16 (7,94)	.187 (4,75)	.187 (4,75)
27SNC2190032	.060 (1,52)	25/64 (9,93)	11/32 (8,73)	.219 (5,56)	.032 (0,81)
27SNC2190062	.060 (1,52)	27/64 (10,72)	11/32 (8,73)	.219 (5,56)	.062 (1,57)
27SNC2190093	.060 (1,52)	29/64 (11,51)	11/32 (8,73)	.219 (5,56)	.093 (2,36)
27SNC2190125	.060 (1,52)	31/64 (12,30)	11/32 (8,73)	.219 (5,56)	.125 (3,18)
27SNC2190156	.060 (1,52)	33/64 (13,11)	11/32 (8,73)	.219 (5,56)	.156 (3,96)
27SNC2190187	.060 (1,52)	35/64 (13,89)	11/32 (8,73)	.219 (5,56)	.187 (4,75)
27SNC2500032	.060 (1,52)	13/32 (10,32)	1/2 (12,70)	.250 (6,35)	.032 (0,81)
27SNC2500062	.060 (1,52)	27/64 (10,72)	1/2 (12,70)	.250 (6,35)	.062 (1,57)
27SNC2500093	.060 (1,52)	29/64 (11,51)	1/2 (12,70)	.250 (6,35)	.093 (2,36)
27SNC2500125	.060 (1,52)	31/64 (12,30)	1/2 (12,70)	.250 (6,35)	.125 (3,18)
27SNC2500156	.060 (1,52)	33/64 (13,11)	1/2 (12,70)	.250 (6,35)	.156 (3,96)
27SNC2500187	.060 (1,52)	35/64 (13,89)	1/2 (12,70)	.250 (6,35)	.187 (4,75)

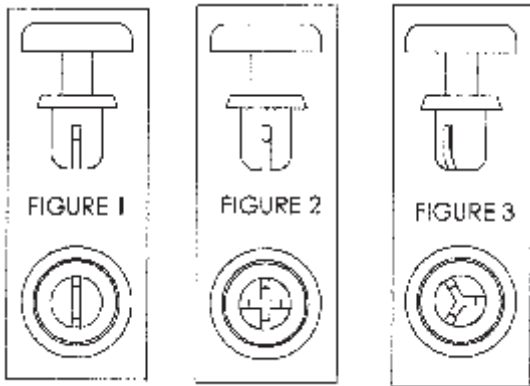


# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

## NYLON SNAP RIVETS

### New Sizes



Micro Plastics' Nylon Snap Rivet is designed for assemblies requiring fast and economical fasteners that can be installed without tools. The two piece molded fastener comes assembled ready for use. The Rivet is placed in the hole and the smooth, oversized head is pressed. The specially designed legs expand and firmly lock the components permanently in place. Snap Rivets are molded in high dielectric (UL 94V2) Nylon 6/6 making them ideal for electronic applications.

- The following standard sizes are available from stock, other sizes will be tooled on request.
- Parts are stocked in black, other colors available upon request.

ITEM NUMBER	PANEL THICKNESS	HOLE SIZE	A	* B	HEAD HEIGHT C	HEAD DIA. D	FIG. NO.
27SR079090	.024/.047 (0,6/1,2)	.083/.087 (2,1/2,2)	.076 (1,9)	.090 (2,3)	.047 (1,2)	.165 (4,2)	1
27SR079130	.051/.079 (1,3/2,0)	.083/.087 (2,1/2,2)	.076 (1,9)	.130 (3,3)	.047 (1,2)	.165 (4,2)	1
27SR079160	.083/.110 (2,1/2,8)	.083/.087 (2,1/2,2)	.076 (1,9)	.160 (4,0)	.025 (0,6)	.123 (3,1)	1
27SR079190	.114/.142 (2,9/3,6)	.083/.087 (2,1/2,2)	.076 (1,9)	.190 (4,8)	.047 (1,2)	.165 (4,2)	1
27SR079220	.148/.170 (3,8/4,3)	.083/.087 (2,1/2,2)	.076 (1,9)	.220 (5,6)	.047 (1,2)	.165 (4,2)	1
27SR079250	.173/.197 (4,4/5,0)	.083/.087 (2,1/2,2)	.076 (1,9)	.250 (6,3)	.047 (1,2)	.165 (4,2)	1
27SR102125	.035/.080 (0,9/2,0)	.105/.109 (2,6/2,7)	.100 (2,5)	.125 (3,1)	.062 (1,5)	.203 (5,1)	2
27SR102130	.039/.079 (0,9/2,0)	.102/.106 (2,6/2,7)	.100 (2,5)	.130 (3,3)	.055 (1,4)	.197 (5,0)	1
27SR102190	.106/.142 (2,6/3,6)	.102/.106 (2,6/2,7)	.100 (2,5)	.190 (4,8)	.055 (1,4)	.197 (5,0)	1
27SR106220	.134/.169 (3,4/4,3)	.102/.106 (2,6/2,7)	.100 (2,5)	.220 (5,6)	.027 (0,7)	.147 (3,7)	1
27SR102250	.142/.198 (3,6/5,0)	.102/.106 (2,6/2,7)	.100 (2,5)	.250 (6,3)	.055 (1,4)	.197 (5,0)	1
27SR102280	.170/.229 (4,3/5,8)	.102/.106 (2,6/2,7)	.100 (2,5)	.281 (7,1)	.055 (1,4)	.197 (5,0)	1
27SR102170	.078/.118 (2,0/3,0)	.107/.111 (2,7/2,8)	.102 (2,6)	.170 (4,3)	.067 (1,7)	.203 (5,1)	2
27SR102220	.125/.156 (3,1/3,9)	.107/.111 (2,7/2,8)	.102 (2,6)	.200 (5,0)	.064 (1,9)	.201 (5,1)	2
27SR0010	.050/.100 (1,3/2,5)	.123/.127 (3,1/3,2)	.118 (3,0)	.140 (3,5)	.065 (1,6)	.254 (6,4)	2
27SR122180	.079/.118 (2,0/3,0)	.122/.126 (3,0/3,2)	.118 (3,0)	.180 (4,5)	.063 (1,6)	.252 (6,4)	1
27SR118180	.075/.120 (1,9/3,0)	.123/.127 (3,1/3,2)	.118 (3,0)	.183 (4,6)	.062 (1,5)	.245 (6,2)	1
27SR118260	.157/.197 (4,0/5,0)	.122/.126 (3,0/3,2)	.118 (3,0)	.260 (6,6)	.063 (1,6)	.252 (6,4)	1
27SR118300	.197/.236 (5,0/6,0)	.122/.126 (3,0/3,2)	.118 (3,0)	.300 (7,6)	.063 (1,6)	.252 (6,4)	1
27SR118310	.217/.256 (5,5/6,5)	.122/.126 (3,0/3,2)	.118 (3,0)	.310 (7,9)	.063 (1,6)	.252 (6,4)	1
27SR118350	.256/.295 (6,5/7,5)	.122/.126 (3,0/3,2)	.118 (3,0)	.350 (8,9)	.063 (1,6)	.252 (6,4)	1
27SR118390	.295/.335 (7,5/8,5)	.122/.126 (3,0/3,2)	.118 (3,0)	.390 (9,9)	.063 (1,6)	.252 (6,4)	1
27SR1180515	.400/.440 (10,2/11,2)	.123/.127 (3,1/3,2)	.118 (3,0)	.520 (13,2)	.068 (1,7)	.253 (6,4)	3
27SR0012	.122/.160 (3,0/4,0)	.127/.131 (3,2/3,3)	.122 (3,0)	.220 (5,6)	.065 (1,6)	.249 (6,3)	1
27SR138140	.047/.083 (1,9/2,1)	.142/.146 (3,6/3,7)	.135 (3,4)	.140 (3,5)	.063 (1,6)	.252 (6,4)	2
27SR138180	.083/.118 (2,1/3,0)	.142/.146 (3,6/3,7)	.135 (3,4)	.170 (4,3)	.063 (1,6)	.252 (6,4)	2
27SR135180	.060/.120 (1,5/3,0)	.140/.144 (3,5/3,6)	.135 (3,4)	.180 (4,6)	.061 (1,5)	.253 (6,4)	2
27SR138200	.106/.142 (2,7/3,6)	.142/.146 (3,6/3,7)	.135 (3,4)	.200 (5,0)	.063 (1,6)	.252 (6,4)	2
27SR135220	.118/.157 (3,0/4,0)	.140/.144 (3,5/3,6)	.135 (3,4)	.220 (5,6)	.060 (1,5)	.252 (6,4)	2
27SR138240	.146/.181 (3,7/4,6)	.142/.146 (3,6/3,7)	.135 (3,4)	.240 (6,1)	.063 (1,6)	.252 (6,4)	2
27SR138280	.177/.217 (4,5/5,5)	.142/.146 (3,6/3,7)	.135 (3,4)	.280 (7,1)	.063 (1,6)	.252 (6,4)	2
27SR138310	.217/.256 (5,5/6,5)	.142/.146 (3,6/3,7)	.135 (3,4)	.310 (7,9)	.063 (1,6)	.252 (6,4)	2
27SR0018	.100/.140 (2,5/3,5)	.160/.164 (4,0/4,1)	.155 (3,9)	.200 (5,0)	.082 (2,0)	.316 (8,0)	1
27SR0020	.144/.188 (3,5/4,5)	.160/.164 (4,0/4,1)	.155 (3,9)	.240 (6,0)	.078 (1,9)	.317 (8,0)	1

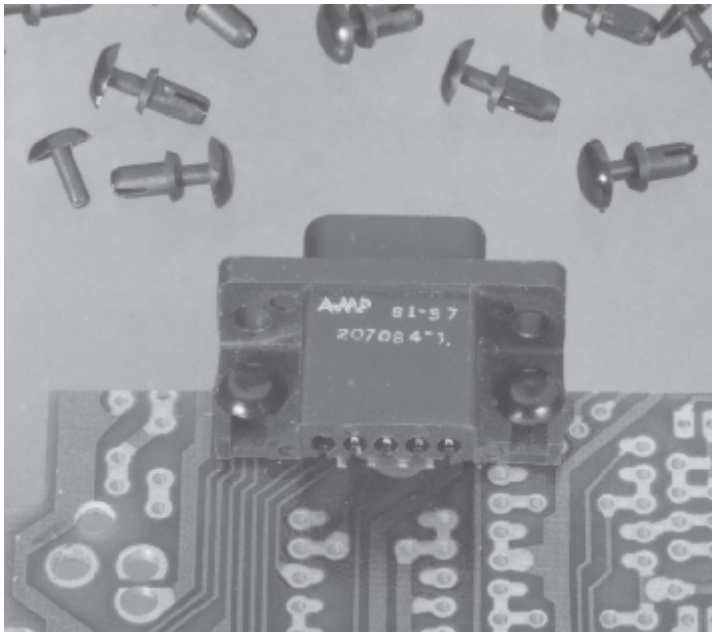
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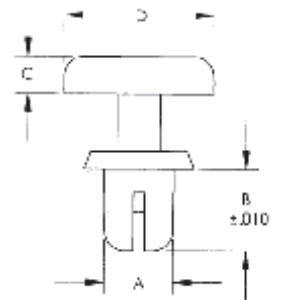
# PANEL FASTENERS AND HOLE PLUGS

SECTION  
VI

## NYLON SNAP RIVETS



New Sizes

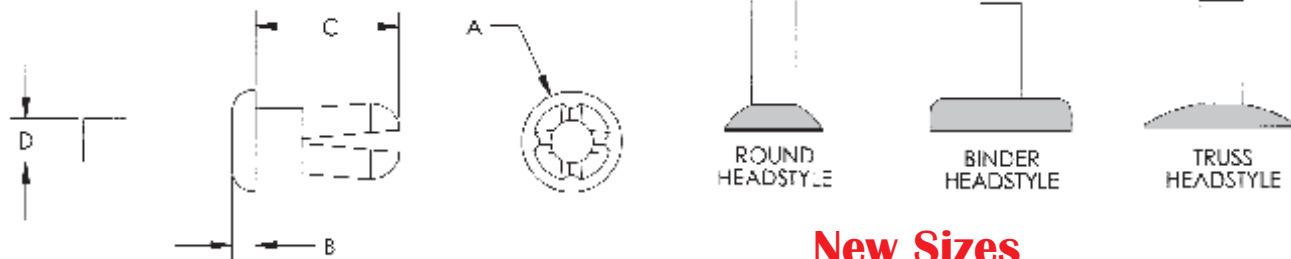


ITEM NUMBER	PANEL THICKNESS	HOLE SIZE	A	* B	HEAD HEIGHT C	HEAD DIA. D	FIG. NO.
27SR157475	.335/.408 (8,5/10,4)	.161/.165 (4,1/4,2)	.156 (4,0)	.475 (12,1)	.071 (1,8)	.315 (8,0)	2
27SR1660240	.050/.180 (1,2/4,5)	.162/.166 (4,1/4,2)	.157 (4,0)	.236 (5,9)	.081 (2,0)	.375 (9,5)	1
27SR157275	.175/.215 (4,5/5,5)	.162/.166 (4,1/4,2)	.157 (4,0)	.284 (7,2)	.084 (2,1)	.318 (8,0)	2
27SR157315	.148/.188 (3,8/4,8)	.162/.166 (4,1/4,2)	.157 (4,0)	.315 (8,0)	.083 (2,1)	.315 (8,0)	2
27SR157350	.256/.295 (6,5/7,5)	.161/.165 (4,1/4,2)	.157 (4,0)	.350 (8,9)	.071 (1,8)	.317 (8,1)	2
27SR157390	.295/.335 (7,5/8,5)	.161/.165 (4,1/4,2)	.157 (4,0)	.390 (9,9)	.071 (1,8)	.317 (8,7)	2
27SR157290	.290/.330 (7,4/8,4)	.162/.166 (4,1/4,2)	.157 (4,0)	.395 (10,0)	.083 (2,1)	.317 (8,0)	2
27SR1600315	.100/.250 (2,5/6,4)	.165/.169 (4,2/4,3)	.160 (4,0)	.315 (8,0)	.034 (0,8)	.278 (7,0)	2
27SR1660400	.250/.265 (6,3/6,7)	.170 (4,3)	.165 (4,2)	.410 (10,4)	.079 (2,0)	.370 (9,4)	2
27SR1660265	.170/.210 (4,3/5,3)	.171/.175 (4,3/4,4)	.166 (4,2)	.265 (6,7)	.084 (2,1)	.315 (8,0)	1
27SR180530	.250/.437 (6,3/11,1)	.187/.191 (4,7/4,8)	.182 (4,6)	.530 (13,4)	.098 (2,4)	.356 (9,0)	2
27SR197180	.059/.098 (1,5/2,5)	.201/.205 (5,1/5,2)	.195 (4,9)	.180 (4,5)	.087 (2,2)	.350 (8,9)	2
27SR197220	.098/.138 (2,5/3,5)	.201/.205 (5,1/5,2)	.195 (4,9)	.220 (5,6)	.087 (2,2)	.350 (8,9)	2
27SR197260	.105/.170 (2,7/4,3)	.201/.205 (5,1/5,2)	.195 (4,9)	.260 (6,6)	.038 (0,9)	.264 (6,7)	2
27SR200300	.138/.177 (3,5/4,5)	.201/.205 (5,1/5,2)	.195 (4,9)	.330 (8,4)	.087 (2,2)	.350 (8,9)	2
27SR197410	.295/.335 (7,5/8,5)	.201/.205 (5,1/5,2)	.195 (4,9)	.410 (10,4)	.087 (2,2)	.350 (8,9)	2
27SR1970330	.217/.256 (5,5/6,5)	.202/.206 (5,1/5,2)	.197 (5,0)	.330 (8,4)	.085 (2,1)	.356 (9,0)	2
27SR2000370	.230/.300 (5,8/7,6)	.203/.207 (5,1/5,2)	.198 (5,0)	.368 (9,4)	.095 (2,4)	.352 (8,9)	2
27SR0030	.160/.200 (4,0/5,0)	.205/.209 (5,2/5,3)	.200 (5,0)	.280 (7,0)	.064 (1,9)	.350 (8,0)	2
27SR236240	.098/.157 (2,4/4,0)	.240/.244 (6,1/6,2)	.236 (5,9)	.240 (6,1)	.098 (2,4)	.475 (12,1)	2
27SR236310	.138/.217 (3,5/5,5)	.240/.244 (6,1/6,2)	.236 (6,0)	.310 (7,9)	.118 (3,0)	.472 (12,0)	2
27SR2400187	.031/.062 (0,7/1,5)	.248/.252 (6,3/6,4)	.240 (6,1)	.187 (5,0)	.120 (3,0)	.440 (11,1)	2
27SR2400250	.062/.125 (1,5/3,1)	.248/.252 (6,3/6,4)	.240 (6,1)	.250 (6,3)	.120 (3,0)	.440 (11,1)	2
27SR2400312	.125/.187 (3,1/4,7)	.248/.252 (6,3/6,4)	.240 (6,1)	.312 (7,9)	.120 (3,0)	.440 (11,1)	2
27SR2400375	.187/.250 (4,7/6,3)	.248/.252 (6,3/6,4)	.240 (6,1)	.375 (9,5)	.120 (3,0)	.440 (11,1)	2
27SR2400500	.250/.375 (6,3/9,5)	.248/.252 (6,3/6,4)	.240 (6,1)	.500 (12,7)	.120 (3,0)	.440 (11,1)	2

\* +/- .010" on B DIMENSION

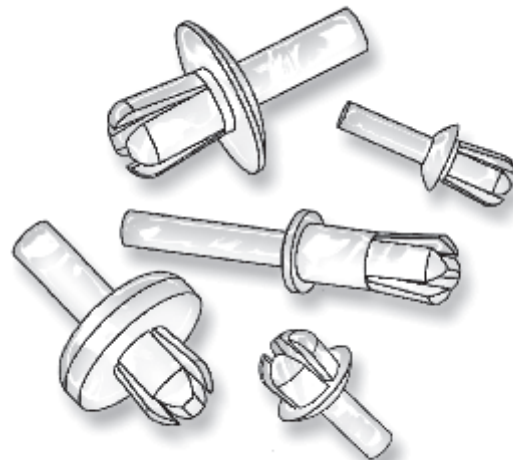
# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI



Micro Plastics' Poly Rivets are one-piece nylon blind rivets that offer a fast economical, permanent, fastener that can be used in a wide variety of materials including sheet metal, plastic sheets, fiberglass, P.C. boards and composites. Fast, easy installation can be made without tools from one side of the work piece. The rivet is inserted in a pre-punched hole and the drive pin is forced into the specially designed legs, with a drive rivet tool, which expand and securely locks the assembled components in place. The versatile Poly Rivet provides a secure joint even under extreme vibration conditions while it electrically insulates and resists corrosion and cathodic transfer. The following are some of the more common sizes available. Because of Micro Plastics' unique tooling approach, designs can be varied over a wide range: diameter, head style and lengths can be adjusted to meet your requirements. Let us know what you need.

## New Sizes



\*61PR300800 WILL NOT WORK WITH DRIVE RIVET INSERTION TOOLS.

## NYLON POLY DRIVE RIVETS

PART NUMBER	NOMINAL HOLE	PANEL THICKNESS RANGE	HEAD STYLE	HEAD DIA. "A"	HEAD HEIGHT "B"	LOCK LENGTH "C"	PIN DIA. "D"
61PR100000	.218 (5,54)	.093/.350 (2,36/9,53)	Round	.375 (9,53)	.080 (2,03)	.450 (11,43)	.120 (3,05)
61PR100100	.156 (3,96)	.187/.250 (4,75/6,35)	Binder	.218 (5,54)	.050 (1,27)	.312 (7,92)	.093 (2,36)
61PR100200	.218 (5,54)	.094/.312 (2,39/7,92)	Binder	.437 (11,10)	.100 (2,54)	.464 (11,79)	.125 (3,18)
61PR100300	.156 (3,96)	.218/.312 (5,54/7,92)	Binder	.218 (5,54)	.050 (1,27)	.359 (9,12)	.093 (2,36)
61PR100400	.187 (4,75)	.062/.187 (1,57/4,75)	Truss	.281 (7,14)	.050 (1,27)	.296 (7,52)	.125 (3,18)
61PR100500	.226 (5,74)	.125/.312 (3,18/7,92)	Truss	.376 (9,55)	.080 (2,03)	.467 (11,86)	.120 (3,05)
61PR100800	.156 (3,96)	.218/.383 (5,54/9,73)	Binder	.218 (5,54)	.050 (1,27)	.421 (10,69)	.093 (2,36)
61PR200000	.187 (4,75)	.156/.281 (3,96/7,14)	Truss	.433 (11,00)	.075 (1,91)	.380 (9,65)	.125 (3,18)
61PR200100	.187 (4,75)	.062/.125 (1,57/3,18)	Binder	.430 (10,92)	.120 (3,05)	.216 (5,49)	.125 (3,18)
61PR200200	.187 (4,75)	.125/.187 (3,18/4,75)	Truss	.430 (10,92)	.075 (1,91)	.281 (7,14)	.125 (3,18)
61PR200300	.187 (4,75)	.062/.187 (1,57/4,75)	Truss	.430 (10,92)	.075 (1,91)	.285 (7,24)	.125 (3,18)
61PR200800	.187 (4,75)	.031/.200 (0,79/5,08)	Round	.275 (6,98)	.075 (1,91)	.295 (7,49)	.125 (3,18)
61PR300000	.187 (4,75)	.312/.440 (7,92/11,18)	Binder	.281 (7,14)	.075 (1,91)	.535 (13,59)	.125 (3,18)
61PR300100	.187 (4,75)	.062/.187 (1,57/4,75)	Round	.281 (7,14)	.075 (1,91)	.295 (7,49)	.125 (3,18)
61PR300200	.187 (4,75)	.062/.125 (1,57/3,18)	Round	.281 (7,14)	.075 (1,91)	.230 (5,84)	.125 (3,18)
61PR300300	.187 (4,75)	.078/.375 (1,98/9,53)	Round	.281 (7,14)	.047 (1,19)	.450 (11,43)	.125 (3,18)
61PR300400	.187 (4,75)	.312/.440 (7,92/11,18)	Round	.320 (8,13)	.109 (2,77)	.535 (13,59)	.125 (3,18)
61PR300500	.187 (4,75)	.375/.500 (9,53/12,70)	Binder	.281 (7,14)	.080 (2,03)	.625 (15,88)	.125 (3,18)
61PR300600	.187 (4,75)	.078/.375 (1,98/9,50)	Round	.320 (8,13)	.109 (2,77)	.455 (11,56)	.125 (3,18)
61PR300900	.275 (6,99)	.062/.600 (1,57/15,24)	Round	.370 (9,40)	.080 (2,03)	.640 (16,26)	.150 (3,81)
61PR300700	.187 (4,75)	.375/.500 (9,53/12,70)	Round	.320 (8,13)	.109 (2,77)	.609 (15,47)	.125 (3,18)
61PR300800*	.187 (4,75)	.375/.750 (9,53/19,05)	Round	.320 (8,13)	.109 (2,77)	.850 (21,59)	.125 (3,18)
61PR400000	.250 (6,35)	.350/.500 (8,89/12,70)	Binder	.468 (11,89)	.080 (2,03)	.620 (15,75)	.150 (3,81)
61PR400100	.250 (6,35)	.350/.500 (8,89/12,70)	Round	.370 (9,40)	.080 (2,03)	.620 (15,75)	.150 (3,81)
61PR400200	.250 (6,35)	.156/.330 (3,96/8,38)	Binder	.468 (11,89)	.080 (2,03)	.375 (9,53)	.155 (3,94)
61PR400300	.250 (6,35)	.093/.312 (2,36/7,92)	Binder	.468 (11,89)	.080 (2,03)	.500 (12,70)	.150 (3,81)
61PR400400	.187 (4,75)	.312/.440 (7,92/11,18)	Binder	.312 (7,92)	.062 (1,57)	.535 (13,59)	.125 (3,18)
61PR400500	.187 (4,75)	.375/.500 (9,53/12,70)	Binder	.315 (8,00)	.062 (1,57)	.609 (15,47)	.125 (3,18)

+0.005/-0.015 FOR LOCK LENGTH "C"

# PANEL FASTENERS AND HOLE PLUGS

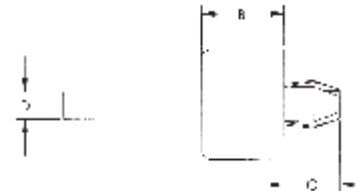
SECTION  
**VI**

## NYLON POLY DRIVE RIVETS

New Sizes

PART NUMBER	NOMINAL HOLE	PANEL THICKNESS RANGE	HEAD STYLE	HEAD DIA. "A"	HEAD HEIGHT "B"	LOCK LENGTH "C"	PIN DIA. "D"
61PR400600	.187 (4,75)	.078/.375 (1,98/9,53)	Binder	.312 (7,92)	.062 (1,57)	.445 (11,30)	.125 (3,18)
61PR400700	.245 (6,22)	.140/.550 (3,56/13,99)	Round	.375 (9,53)	.100 (2,54)	.625 (15,88)	.150 (3,81)
61PR400800	.250 (6,35)	.125/.437 (3,18/11,10)	Binder	.468 (11,89)	.080 (2,03)	.585 (14,86)	.150 (3,81)
61PR400900	.250 (6,35)	.078/.275 (1,98/6,99)	Button	.494 (12,55)	.305 (7,75)	.375 (9,53)	.155 (3,94)
61PR500500	.218 (5,54)	.031/.062 (0,79/1,57)	Button	.375 (9,53)	.223 (5,66)	.170 (4,32)	.125 (3,18)
61PR600000	.182 (4,62)	.130/.290 (3,30/7,37)	Truss	.280 (7,11)	.050 (1,27)	.380 (9,65)	.120 (3,05)
61PR600100	.160 (4,06)	.062/.180 (1,57/4,57)	Round	.295 (7,49)	.050 (1,27)	.230 (5,84)	.093 (2,36)
61PR700100	.187 (4,75)	.156/.281 (3,96/7,14)	Truss	.437 (11,10)	.075 (1,91)	.380 (9,65)	.125 (3,18)
61PR700200	.187 (4,75)	.062/.187 (1,57/4,75)	Truss	.437 (11,10)	.075 (1,91)	.295 (7,49)	.125 (3,18)
61PR700300	.226 (5,74)	.125/.312 (3,18/7,92)	Truss	.437 (11,10)	.075 (1,91)	.468 (11,43)	.125 (3,18)
61PR700900	.250 (6,35)	.062/.125 (1,57/3,18)	Round	.370 (9,40)	.080 (2,03)	.218 (5,54)	.125 (3,18)
61PR800000	.250 (6,35)	.093/.312 (2,36/7,92)	Truss	.468 (11,89)	.080 (2,03)	.500 (12,70)	.150 (3,81)
61PR800100	.250 (6,35)	.281/.500 (7,14/12,70)	Truss	.468 (11,89)	.080 (2,03)	.620 (15,75)	.150 (3,81)
61PR800300	.250 (6,35)	.109/.156 (2,77/3,96)	Round	1/2 (12,70)	5/16 (7,94)	3/8 (9,53)	.155 (3,94)
61PR900000	.125 (3,18)	.031/.140 (0,79/3,56)	Round	.187 (4,75)	.047 (1,19)	.190 (4,83)	.075 (1,91)
61PR900100	.125 (3,18)	.031/.140 (0,79/3,56)	Round	.218 (5,54)	.060 (1,52)	.225 (5,72)	.075 (1,91)
61PR010000	.218 (5,54)	.187/.250 (4,75/6,35)	Truss	.375 (9,53)	.080 (2,03)	.343 (8,71)	.120 (3,05)
61PR010100	.275 (6,99)	.093/.350 (2,36/8,89)	Binder	.620 (15,75)	.109 (2,77)	.480 (12,19)	.150 (3,81)
61PR010200	.280 (7,11)	.062/.350 (1,57/8,89)	Truss	.485 (12,32)	.075 (1,91)	.468 (11,89)	.187 (4,75)
61PR010300	.250 (6,35)	.093/.312 (2,36/7,92)	Binder	.625 (15,88)	.109 (2,77)	.500 (12,70)	.150 (3,81)
61PR010400	.250 (6,35)	.281/.500 (7,14/12,70)	Binder	.615 (15,62)	.109 (2,77)	.620 (15,75)	.150 (3,81)
61PR010500	.290 (7,37)	.093/.187 (2,37/4,75)	Binder	.620 (15,75)	.109 (2,77)	.300 (7,62)	.150 (3,81)
61PR010600	.160 (4,06)	.218/.312 (5,54/7,92)	Round	.375 (9,53)	.050 (1,27)	.355 (8,89)	.093 (2,36)
61PR010110	.226 (5,74)	.125/.312 (3,18/7,92)	Round	.375 (9,53)	.080 (2,03)	.468 (11,43)	.120 (3,05)
61PR010210	.187 (4,75)	.062/.187 (1,57/4,75)	Round	.375 (9,53)	.080 (2,03)	.295 (7,49)	.125 (3,18)
61PR010310	.187 (4,75)	.156/.281 (3,96/7,14)	Round	.375 (9,53)	.080 (2,03)	.380 (9,65)	.125 (3,18)
61PR010410	.187 (4,75)	.062/.187 (1,57/4,75)	Round	.375 (9,53)	.080 (2,03)	.281 (7,14)	.125 (3,18)
61PR010510	.215 (5,46)	.078/.300 (1,98/7,62)	Truss	.630 (16,00)	.080 (2,03)	.430 (10,92)	.120 (3,05)

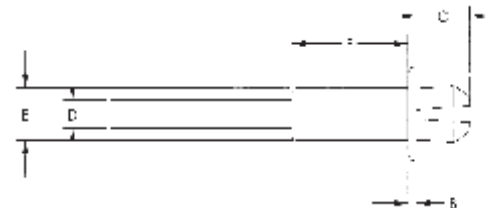
+ .005/- .015 FOR LOCK LENGTH "C"



## NYLON POLY DRIVE RIVET MOUNTING FEET

PART NUMBER	NOMINAL HOLE	PANEL THK. RANGE	HEAD STYLE	HEAD DIA. "A"	HEAD HEIGHT "B"	LOCK LENGTH "C"	PIN DIA. "D"
61PMF10000*	.280 (7,11)	.061/.187 (1,55/4,75)	Foot	.760 (19,30)	.570 (14,48)	.385 (9,78)	.187 (4,75)
61PSS40000	.250 (6,35)	.030/.125 (0,76/3,18)	Foot	.375 (9,53)	.500 (12,70)	.238 (6,05)	.150 (3,81)

\* Low Density Polyethylene Material.



## NYLON POLY DRIVE RIVET SUPPORTS

PART NUMBER	NOMINAL HOLE	PANEL THK. RANGE	HEAD STYLE	HEAD DIA. "A"	HEAD HT. "B"	LOCK LENGTH "C"	PIN DIA. "D"	SUP. LENGTH "F"	SUPPORT DIA. "E"
61PSS10000	.187 (4,75)	.030/.125 (0,76/3,18)	Support	.325 (8,26)	.030 (0,76)	.200 (5,08)	.097 (2,46)	.400 (10,16)	.180 (4,57)
61PSS20000	.250 (6,35)	.030/.125 (0,76/3,18)	Support	13/32 (10,31)	.047 (1,19)	.187 (4,75)	.125 (3,18)	.703 (17,86)	.240 (6,10)

# PANEL FASTENERS AND HOLE PLUGS

SECTION

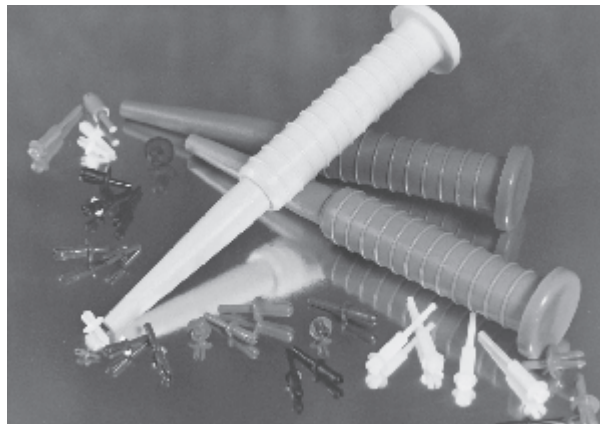
VI

## DRIVE RIVET INSERTION TOOLS

Micro Plastics' tough, lightweight drive rivet insertion tool makes the assembly of our polyrivets even more economical. This tool provides a faster assembly, more accurate placement and positions in hard to reach areas. Large plunger head and easy-grip handle reduce operator fatigue. Rivets do not have to be predriven. In use, the rivet is loaded in tool and inserted in prepared hole, pressure on the plunger frees the pin and expands the rivet in the assembly. Three sizes are available to cover all standard drive rivets.

- **TOOLS ARE COLOR CODED FOR IDENTIFICATION**

ITEM NUMBER	RIVET PIN SIZE	COLOR
61PRT0075	.075 (1,91)	RED
61PRT0093	.093 (2,36)	BLACK
61PRT0125	.125 (3,18)	YELLOW
61PRT0150	.150 (3,81)	GREEN



## PNEUMATIC DRIVE RIVET INSERTION TOOL

- **BOOST PRODUCTIVITY**
- **IMPROVE QUALITY**
- **INCREASE COST CONTROL ON YOUR ASSEMBLY OPERATIONS**

The Pneumatic Drive Rivet Tool is especially suited for hard to reach or delicate assemblies encountered on all kinds of mechanical and electrical components, appliances, P.C. board assemblies, relays, switches, controls, etc.

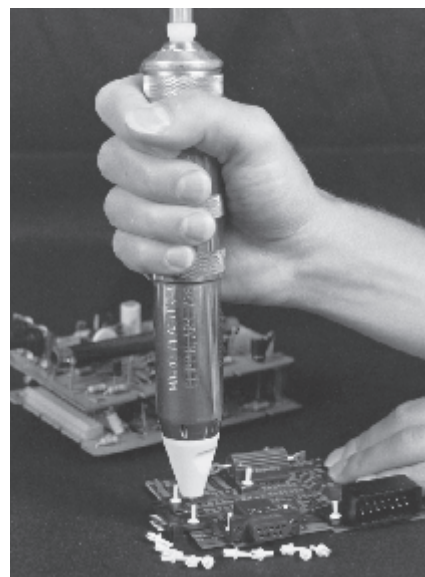
The durable, lightweight alloy insert tool weighs only 22 ounces and features an easy-grip, non-slip, straight case for single hand fatigue free operation and is equipped with a suspension bail for overhead connections on bench type precision assemblies. The insert tool can be safely used in all positions.

In operation the rivet is loaded in the tool and inserted in the prepared hole, slight pressure activates the pneumatic switch and the rivet is driven into the assembly effortlessly.

### RIVETS NEED NOT BE PREDRIVEN.

Tool is designed to use standard shop air, operating pressure range is 50 to 70 PSI with instant cycling time. One tool will drive all standard rivet sizes, three interchangeable driver attachments are included. Mandrel sizes are .075, .125 and .150

UNIQUE, PRECISION TOOL DESIGNED TO EFFICIENTLY ASSEMBLE ALL NYLON DRIVE RIVETS AND MOST ONE-PIECE METAL EXPANSION RIVETS.

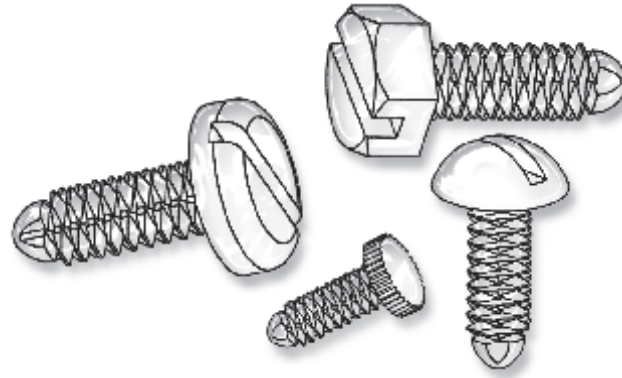


**COVERED BY U.S. / FOREIGN PATENTS**

ITEM NUMBER	DESCRIPTION
61PPRT100	PNEUMATIC RIVET INSERT TOOL (WITH 3 DRIVER ATTACHMENTS)



## NYLON SPIN CLIPS



This design combines the advantages of a push-in type fastener with a screw. For fast assembly, the part can be pushed into a 1/4-20 threaded hole, and then screwed in for a tighter fit, or screwed out for disassembly.

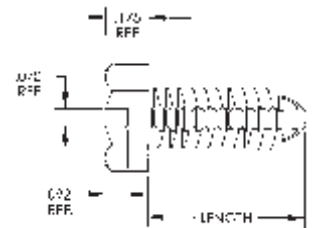
This part will also function as a standard Fin Clip for use in a unthreaded hole with a diameter of approximately 13/64"

### Slotted HEX Head



**Slotted HEX**

PART NUMBER	DESCRIPTION
27SC2520H037	1/4-20 X 3/8"
27SC2520H050	1/4-20 X 1/2"
27SC2520H062	1/4-20 X 5/8"
27SC2520H075	1/4-20 X 3/4"
27SC2520H100	1/4-20 X 1"

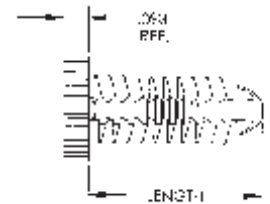
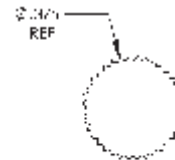


### Unslotted KNURLED Head



**Unslotted KNURLED**

PART NUMBER	DESCRIPTION
27SC2520K037	1/4-20 X 3/8"
27SC2520K050	1/4-20 X 1/2"
27SC2520K062	1/4-20 X 5/8"
27SC2520K075	1/4-20 X 3/4"
27SC2520K100	1/4-20 X 1"

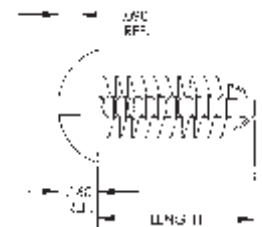


### Slotted ROUND Head



**Slotted ROUND**

PART NUMBER	DESCRIPTION
27SC2520R037	1/4-20 X 3/8"
27SC2520R050	1/4-20 X 1/2"
27SC2520R062	1/4-20 X 5/8"
27SC2520R075	1/4-20 X 3/4"
27SC2520R100	1/4-20 X 1"

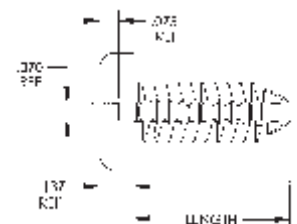
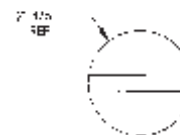


### Slotted PAN Head



**Slotted PAN**

PART NUMBER	DESCRIPTION
27SC2520P037	1/4-20 X 3/8"
27SC2520P050	1/4-20 X 1/2"
27SC2520P062	1/4-20 X 5/8"
27SC2520P075	1/4-20 X 3/4"
27SC2520P100	1/4-20 X 1"

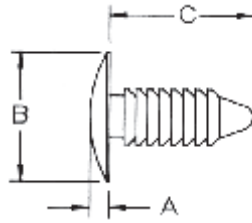


# PANEL FASTENERS AND HOLE PLUGS

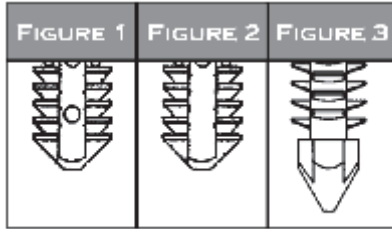
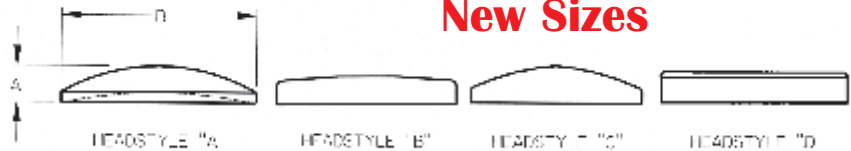
## SECTION VI

### RACHET FASTENERS

Micro Plastics' Ratchet Fasteners are designed to provide an economical fastening method over a wide range of panel thicknesses and materials. The easy hand installation assures a quick assembly and a strong and reliable finished product. Parts are molded in Black Nylon 6/6



**New Sizes**



**RACHET FASTENERS ARE PACKAGED 1000 PIECES PER BAG --- PARTS MUST BE PURCHASED IN PACKAGED QUANTITIES.**

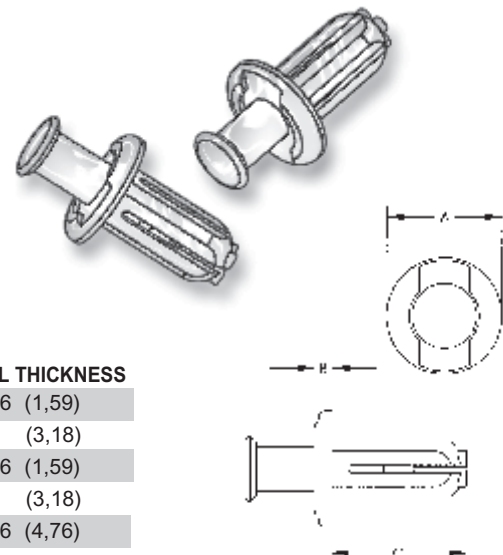
PART NUMBER	HOLE SIZE	PANEL THK. RANGE	HEADSTYLE	HEAD SIZE "B"	HEAD HEIGHT "A"	* LOCK LENGTH "C"		FIGURE
						* +/- .015 Tolerance		
27RT187675	.187 (4,75)	.030/.512 (0,76/13,00)	"B"	7/16 (11,11)	.070 (1,78)	.680 (17,27)	1	
27RT187500	.187 (4,75)	.025/.365 (0,64/9,27)	"A"	.375 (9,53)	.070 (1,78)	.500 (12,70)	1	
27RT187550	.187 (4,75)	.030/.330 (0,76/8,38)	"B"	.442 (11,23)	.068 (1,73)	.562 (14,27)	2	
27RT187640	.187 (4,75)	.125/.365 (3,18/9,27)	"D"	7/16 (11,11)	.070 (1,78)	.640 (16,26)	3	
*27RT187700PPB	.187 (4,75)	.125/.450 (3,18/11,43)	"C"	.300 (7,22)	.065 (1,65)	.700 (17,78)	2	
27RT250425	.250 (6,35)	.020/.218 (5,08/5,54)	"A"	.720 (18,29)	.098 (2,26)	.425 (10,80)	1	
27RT250440	.250 (6,35)	.105/.300 (2,67/7,62)	"A"	.700 (17,78)	.100 (2,54)	.437 (11,10)	1	
27RT250800	.250 (6,35)	.150/.535 (3,81/13,59)	"A"	.700 (17,78)	.107 (2,71)	.783 (18,88)	2	
27RT250810	.250 (6,35)	.150/.535 (3,81/13,59)	"A"	.495 (12,57)	.074 (1,88)	.783 (19,89)	1	
27RT250900	.250 (6,35)	.062/.480 (1,57/12,19)	"B"	.492 (12,50)	.070 (1,78)	.787 (19,99)	1	
27RT2811000	.281 (7,13)	.093/.500 (2,36/12,70)	"A"	.625 (15,87)	.110 (2,79)	.890 (22,61)	2	

\* PART MOLDED IN BLACK POLYPROPYLENE \* HEAD WILL HAVE A TEXTURED FINISH \* BULK PACKAGING

### NYLON TWO-PIECE REMOVABLE RIVETS

Removable rivets are two-piece nylon rivets which can be removed by retracting the pin, and then the body. The body incorporates a slot in line with the pin so that the pin can be removed by inserting a small screw driver, other sharp edge, or even a fingernail underneath the head of the pin.

\* In addition to working in a .250 round hole, part number 61RR250500, will also fit the .210" x .218" square hole found in the "darling" type shelf commonly used in retail stores.

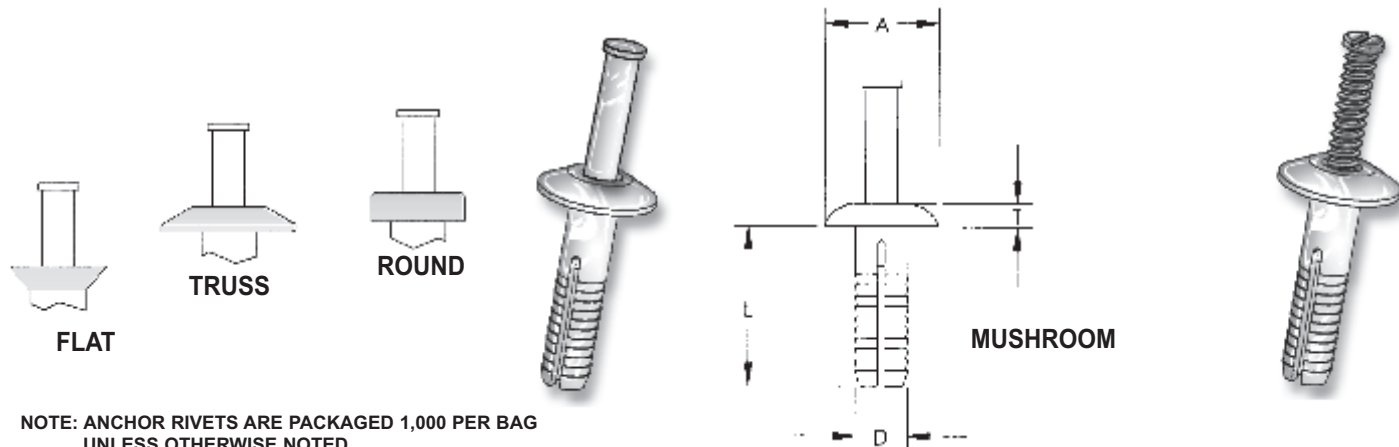


PART NUMBER	A	B	* C	HOLE SIZE	PANEL THICKNESS
61RR188062	3/8 (9,53)	.07 (1,78)	1/2 (12,70)	.188 (4,78)	1/16 (1,59)
61RR188125	3/8 (9,53)	.07 (1,78)	1/2 (12,70)	.188 (4,78)	1/8 (3,18)
* 61RR250500	7/16 (11,11)	.07 (1,78)	1/2 (12,70)	.250 (6,35)	1/16 (1,59)
61RR250125	7/16 (11,11)	.07 (1,78)	1/2 (12,70)	.250 (6,35)	1/8 (3,18)
61RR250188	7/16 (11,11)	.07 (1,78)	1/2 (12,70)	.250 (6,35)	3/16 (4,76)

\* TOLERANCE FOR "C" DIMENSION IS +/- 1/32"

## TWO PIECE ANCHOR RIVETS WITH PLASTIC & STEEL DRIVE PINS

Micro Plastics' two piece Anchor Rivets provide versatile, inexpensive, vibration-resistant blind fasteners for solid or hollow materials including wood, concrete, plaster, metal, plastic, tile block or mortar. Installation is fast, rivet is inserted in predrilled hole and tapped with a hammer. The drive pin expands and seats the rivet securely in place. The Hi-Impact nylon anchor body provides high thermal, electrical, corrosion and vibration resistance. Typical uses for Micro Plastics' anchor are semi-trailer construction, liner panels, rails, scuff boards, floor plates, electrical fixtures, signs, plumbing fixtures, piping and conduit strap hangers, window and drapery hardware, railings, storage shelves and other assemblies requiring a positive, durable fastener. The following are the standard sizes available. Micro Plastics' will tool non-standards in suitable quantities.



NOTE: ANCHOR RIVETS ARE PACKAGED 1,000 PER BAG UNLESS OTHERWISE NOTED

### PLASTIC DRIVE PIN

- THERMAL AND ELECTRICAL INSULATING.
- CORROSION AND VIBRATION RESISTANT.

PART NUMBER	D	X	L	DESCRIPTION	TYPE
61APM18075	3/16 (4,76)	X	3/4 (19,05)	Mushroom, Plastic	
61APM25075	1/4 (6,35)	X	3/4 (19,05)	Mushroom, Plastic	
61APM25100	1/4 (6,35)	X	1 (25,40)	Mushroom, Plastic	
61APM25150	1/4 (6,35)	X	1-1/2 (38,10)	Mushroom, Plastic	

61APR18075	3/16 (4,76)	X	3/4 (19,05)	Round, Plastic	
61APR25075	1/4 (6,35)	X	3/4 (19,05)	Round, Plastic	
61APR25100	1/4 (6,35)	X	1 (25,40)	Round, Plastic	
61APR25150	1/4 (6,35)	X	1-1/2 (38,10)	Round, Plastic	

61APT18075	3/16 (4,76)	X	3/4 (19,05)	Truss, Plastic	
61APT25075	1/4 (6,35)	X	3/4 (19,05)	Truss, Plastic	
61APT25100	1/4 (6,35)	X	1 (25,40)	Truss, Plastic	
61APT25150	1/4 (6,35)	X	1-1/2 (38,10)	Truss, Plastic	
61APT25200	1/4 (6,35)	X	2 (50,80)	Truss, Plastic	
61APT25300*	1/4 (6,35)	X	3 (76,20)	Truss, Plastic	
61APT25400*	1/4 (6,35)	X	4 (101,6)	Truss, Plastic	
61APT25500**	1/4 (6,35)	X	5 (127,0)	Truss, Plastic	
61APT25600**	1/4 (6,35)	X	6 (152,4)	Truss, Plastic	

61APF25056	1/4 (6,35)	X	9/16 (14,29)	Flat, Plastic	
61APF25075	1/4 (6,35)	X	3/4 (19,05)	Flat, Plastic	

\* PARTS ARE PACKAGED 500 PIECES PER BAG

\*\*PARTS ARE PACKAGED 250 PIECES PER BAG

\* L DIMENSIONS +/- .062 TOLERANCE

### STEEL DRIVE PIN

- HIGH STRENGTH.
- ZINC PLATED.
- DEVELOPS HIGH PULL-OUT FORCE.

PART NUMBER	D	X	L	DESCRIPTION	TYPE
61ASM18075	3/16 (4,76)	X	3/4 (19,05)	Mushroom, Steel	
61ASM18100	3/16 (4,76)	X	1 (25,40)	Mushroom, Steel	
61ASM25075	1/4 (6,35)	X	3/4 (19,05)	Mushroom, Steel	
61ASM25100	1/4 (6,35)	X	1 (25,40)	Mushroom, Steel	
61ASM25150	1/4 (6,35)	X	1-1/2 (38,10)	Mushroom, Steel	

61ASR18075	3/16 (4,76)	X	3/4 (19,05)	Round, Steel	
61ASR18100	3/16 (4,76)	X	1 (25,40)	Round, Steel	
61ASR25075	1/4 (6,35)	X	3/4 (19,05)	Round, Steel	
61ASR25100	1/4 (6,35)	X	1 (25,40)	Round, Steel	
61ASR25150	1/4 (6,35)	X	1-1/2 (38,10)	Round, Steel	

61AST18075	3/16 (4,76)	X	3/4 (19,05)	Truss, Steel	
61AST18100	3/16 (4,76)	X	1 (25,40)	Truss, Steel	
61AST25075	1/4 (6,35)	X	3/4 (19,05)	Truss, Steel	
61AST25100	1/4 (6,35)	X	1 (25,40)	Truss, Steel	
61AST25150	1/4 (6,35)	X	1-1/2 (38,10)	Truss, Steel	

TYPE	A*	T
Mushroom	5/8 (15,88)	.110 (2,79)
Round	7/16 (11,11)	.125 (3,18)
Truss	5/8 (15,88)	.110 (2,79)
Flat	7/16 (11,11)	.108 (2,74)

A\* REF. DIM.

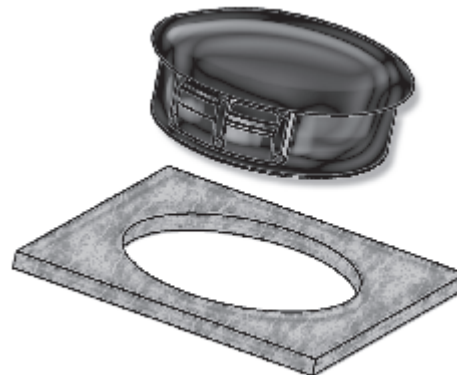
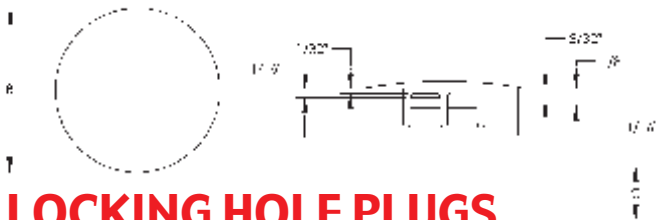
# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

Nylon Locking Hole Plugs are available in a large selection of sizes from 3/16" to 2 1/2". Designed with multiple locks to positively snap in panel thicknesses ranging from 1/64" to 1/8". Locking Hole Plugs are used to close excess chassis holes, wiring outlets, and production access holes.

- MOLDED OF HEAT STABILIZED NYLON (UL94V2) BLACK
- SUITABLE FOR CRITICAL OR ELEVATED TEMPERATURE APPLICATIONS.
- WHITE PARTS ADD "W" TO THE END OF PART NUMBER.

**New Sizes**



## LOCKING HOLE PLUGS

ITEM NUMBER	HOLE DIAMETER	MAXIMUM THICKNESS	HEAD DIAMETER B	THICKNESS C
* 62MP0187	.187 (4,8)	.062 (1,6)	.250 (6,4)	.234 (5,9)
* 62MP0250	.250 (6,4)	.062 (1,6)	.312 (8,0)	.312 (8,0)
* 62MP0312	.312 (8,0)	.062 (1,6)	.375 (9,5)	.312 (8,0)
* 62MP0375	.375 (9,5)	.125 (3,2)	.468 (12,0)	.406 (10,3)
* 62MP0437	.437 (11,0)	.125 (3,2)	.531 (13,5)	.406 (10,3)
* 62MP0500	.500 (12,7)	.125 (3,2)	.578 (14,6)	.406 (10,3)
* 62MP0562	.562 (14,3)	.125 (3,2)	.656 (16,7)	.406 (10,3)
* 62MP0625	.625 (15,9)	.125 (3,2)	.718 (18,2)	.406 (10,3)
* 62MP0687	.687 (17,5)	.125 (3,2)	.781 (20,0)	.406 (10,3)
* 62MP0750	.750 (19,0)	.125 (3,2)	.922 (23,2)	.406 (10,3)
* 62MP0812	.812 (20,6)	.125 (3,2)	.890 (22,6)	.406 (10,3)
* 62MP0875	.875 (22,2)	.125 (3,2)	1.016 (25,8)	.453 (11,5)
** 62MP1000	1.000 (25,5)	.125 (3,2)	1.203 (30,5)	.453 (11,5)
** 62MP1093	1.093 (27,8)	.125 (3,2)	1.218 (31,0)	.453 (11,5)
** 62MP1187	1.187 (30,1)	.125 (3,2)	1.312 (33,3)	.453 (11,5)
** 62MP1250	1.250 (32,0)	.125 (3,2)	1.375 (34,9)	.453 (11,5)
** 62MP1250A	1.250 (32,0)	.125 (3,2)	1.500 (38,0)	.453 (11,5)
** 62MP1375	1.375 (35,0)	.125 (3,2)	1.500 (38,0)	.453 (11,5)
** 62MP1500	1.500 (38,0)	.125 (3,2)	1.672 (42,7)	.453 (11,5)
** 62MP1750	1.750 (45,0)	.125 (3,2)	1.925 (48,9)	.453 (11,5)
**** 62MP2000	2.000 (51,0)	.125 (3,2)	2.140 (55,0)	.453 (11,5)
**** 62MP2500	2.500 (63,5)	.250 (6,4)	2.775 (70,5)*	.750 (19,1)

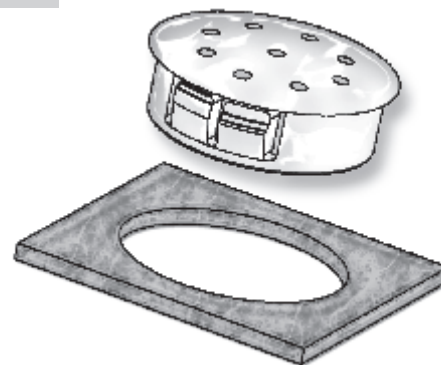
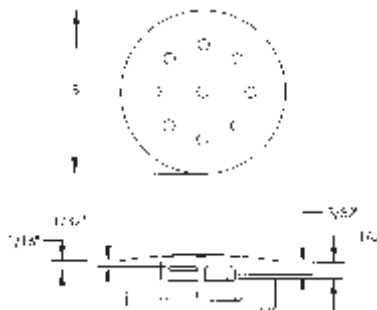
\* +/- 1/32"

NOTE: +/- .015" ON ALL DIMENSIONS

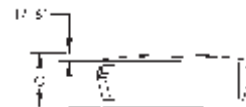
- \* MINIMUM ORDER QUANTITY 1,000 PIECES
- \*\* MINIMUM ORDER QUANTITY 500 PIECES
- \*\*\* MINIMUM ORDER QUANTITY 250 PIECES
- \*\*\*\* MINIMUM ORDER QUANTITY 100 PIECES

## LOCKING VENT PLUGS

LOCKING VENT PLUGS ARE AVAILABLE IN 3/4" TO 7/8" AND 1" DIAMETERS.



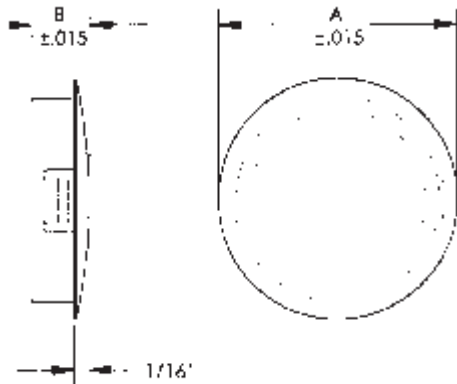
ITEM NUMBER	HOLE DIAMETER	MAXIMUM THICKNESS	HEAD DIAMETER B	THICKNESS C
* 62MP0750V	.750 (19,1)	.125 (3,2)	.906 (23,0)	.406 (10,3)
* 62MP0875V	.875 (22,5)	.125 (3,2)	1.016 (25,8)	.453 (11,5)
** 62MP1000V	1.000 (25,5)	.125 (3,2)	1.203 (30,5)	.453 (11,5)





## MINIATURE LOCKING HOLE PLUGS

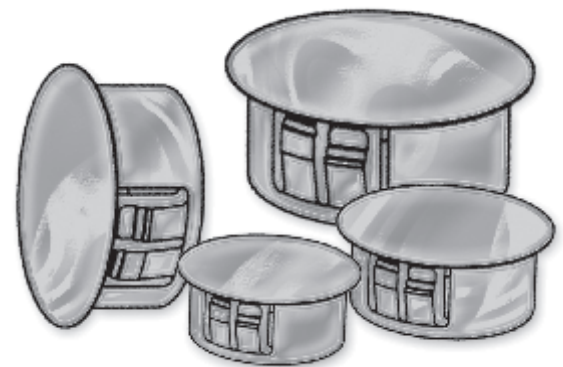
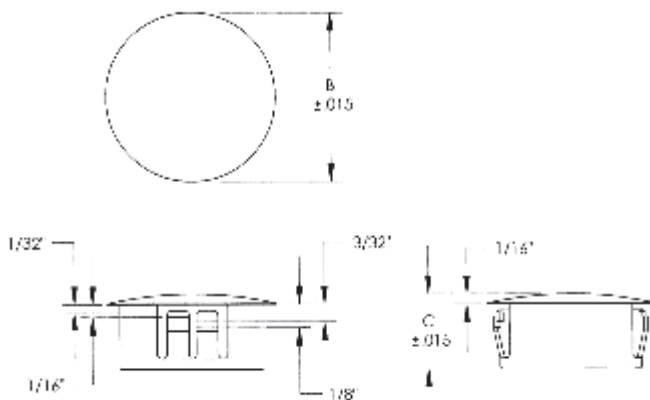
Nylon Miniature Locking Hole Plugs are available in sizes from 3/16" to 7/8". Designed with multiple locks to positively snap in panel thickness of 1/16". Locking Hole Plugs are used to close excess chassis holes, wiring outlets, and production access holes.



ITEM NUMBER	DESCRIPTION	HOLE DIAMETER	A	B
62MPS0187	3/16" Miniature Locking Hole Plug	0.187 (4,75)	0.250 (6,35)	0.234 (5,94)
62MPS0250	1/4" Miniature Locking Hole Plug	0.250 (6,35)	0.312 (7,93)	0.312 (7,93)
62MPS0312	5/16" Miniature Locking Hole Plug	0.312 (7,93)	0.375 (9,53)	0.234 (5,94)
62MPS0500	1/2" Miniature Locking Hole Plug	0.500 (12,7)	0.578 (14,7)	0.250 (6,35)
62MPS0625	5/8" Miniature Locking Hole Plug	0.625 (15,9)	0.718 (18,2)	0.250 (6,35)
62MPS0750	3/4" Miniature Locking Hole Plug	0.750 (19,1)	0.922 (23,4)	0.250 (6,35)
62MPS0875	7/8" Miniature Locking Hole Plug	0.875 (22,2)	1.016 (25,8)	0.250 (6,35)

## heat stabilized KNOCK OUT PLUGS

**KNOCK OUT PLUGS** are molded in Grey Nylon to blend in with galvanized steel. Economical plugs that lock firmly into 5 trade size holes with panel thickness up to 1/8". Installs with fingertip pressure - no tools required.



ITEM NUMBER	DESCRIPTION	MAXIMUM HOLE DIA.	HEAD THICKNESS	DIAMETER B	THICKNESS C
62MP0875KOP	7/8" Knock Out Plug	0.875 (22,2)	0.125 (3,18)	1.016 (25,8)	.453 (11,5)
62MP1093KOP	1 1/8" Knock Out Plug	1.093 (27,8)	0.125 (3,18)	1.218 (30,9)	.453 (11,5)
62MP1375KOP	1 3/8" Knock Out Plug	1.375 (34,9)	0.125 (3,18)	1.500 (38,1)	.453 (11,5)
62MP1750KOP	1 3/4" Knock Out Plug	1.750 (44,5)	0.125 (3,18)	1.925 (48,9)	.453 (11,5)
62MP2000KOP	2" Knock Out Plug	2.000 (58,8)	0.125 (3,18)	2.140 (54,4)	.453 (11,5)

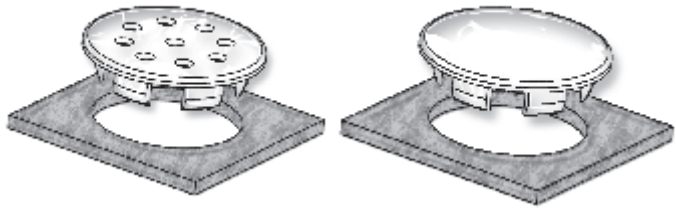
# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

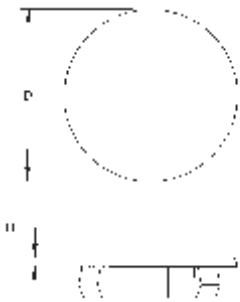
Economical snap-in Poly-Plugs will close unneeded chassis holes, wiring outlets, fill unused accessory openings, cover inspection and production access holes. They can be used

as tube end caps and protective bumpers. Poly Plugs are molded in Nylon 6/6 which is abrasion and vibration resistant

making them ideal for drawer glides and small appliance feet. Poly Plugs are designed with special flexible and tapered prongs which snugly lock in place with finger pressure but can be removed and reused when necessary.



## HOLE PLUGS



**METRIC Sizes**  
Also Available  
Page 240

ITEM NUMBER	HEAD STYLE	FINISH	HOLE SIZE	PANEL THICKNESS	HEAD HEIGHT +/- .010 TOLERANCE		
					HEAD SIZE D	HEAD HEIGHT H	
62PP018BG14	Binder	Smooth	.187 (4,75)	.031/.140 (0,79/3,56)	11/32 (8,74)	.040 (1,02)	
62PP018BM14	Binder	Matte	.187 (4,75)	.031/.140 (0,79/3,56)	11/32 (8,74)	.040 (1,02)	
62PP022RG06	Dome	Smooth	.218 (5,54)	.031/.062 (0,79/1,58)	3/8 (9,53)	.250 (6,35)	
62PP022RG09	Dome	Smooth	.218 (5,54)	.031/.094 (0,79/2,39)	3/8 (9,53)	.250 (6,35)	
62PP025BG06	Binder	Smooth	.250 (6,35)	.031/.062 (0,79/1,58)	27/64 (10,72)	.040 (1,02)	
62PP025BM06	Binder	Matte	.250 (6,35)	.031/.062 (0,79/1,58)	27/64 (10,72)	.040 (1,02)	
62PP031BG14	Binder	Smooth	.312 (7,93)	.031/.140 (0,79/3,56)	29/64 (11,51)	.055 (1,40)	
62PP031BM14	Binder	Matte	.312 (7,93)	.031/.140 (0,79/3,56)	29/64 (11,51)	.055 (1,40)	
62PP012BG09	Binder	Smooth	.125 (3,18)	.031/.094 (0,79/2,39)	13/64 (5,16)	.040 (1,02)	
62PP015BG09	Binder	Smooth	.150 (3,81)	.031/.094 (0,79/2,39)	1/4 (6,35)	.040 (1,02)	
62PP037BG14	Binder	Smooth	.375 (9,53)	.031/.140 (0,79/3,56)	43/64 (17,07)	.062 (1,58)	
62PP037BG31	Binder	Smooth	.375 (9,53)	.031/.140 (0,79/3,56)	37/64 (14,68)	.055 (1,40)	
62PP037BM31	Binder	Matte	.375 (9,53)	.031/.140 (0,79/3,56)	37/64 (14,68)	.055 (1,40)	
62PP043BG17	Binder	Smooth	.437(11,10)	.031/.171 (0,79/4,34)	39/64 (15,47)	.055 (1,40)	
62PP043BM17	Binder	Matte	.437(11,10)	.031/.171 (0,79/4,34)	39/64 (15,47)	.055 (1,40)	
62PP048BM12	Binder	Matte	.480(12,19)	.031/.039 (0,79/0,99)	37/64 (14,68)	.055 (1,40)	
62PP050BG14	Binder	Smooth	.500(12,70)	.031/.140 (0,79/3,56)	43/64 (17,07)	.062 (1,58)	
62PP050BM14	Binder	Matte	.500(12,70)	.031/.140 (0,79/3,56)	43/64 (17,07)	.062 (1,58)	
62PP056BG14	Binder	Smooth	.562(14,28)	.031/.140 (0,79/3,56)	47/64 (18,64)	.062 (1,58)	
62PP056BM14	Binder	Matte	.562(14,28)	.031/.140 (0,79/3,56)	47/64 (18,64)	.062 (1,58)	
62PP062BG07	Binder	Smooth	.625(15,88)	.031/.072 (0,79/1,83)	51/64 (20,24)	.062 (1,58)	
62PP062BM07	Binder	Matte	.625(15,88)	.031/.072 (0,79/1,83)	51/64 (20,24)	.062 (1,58)	
62PP068BG10	Binder	Smooth	.687(17,45)	.031/.109 (0,79/2,77)	57/64 (22,63)	.062 (1,58)	
62PP068BM10	Binder	Matte	.687(17,45)	.031/.109 (0,79/2,77)	57/64 (22,63)	.062 (1,58)	
62PP075BG11	Binder	Smooth	.750(19,05)	.031/.109 (0,79/2,77)	63/64 (25,00)	.062 (1,58)	
62PP075BM11	Binder	Matte	.750(19,05)	.031/.109 (0,79/2,77)	63/64 (25,00)	.062 (1,58)	
62PP078BG09	Binder	Smooth	.787(20,00)	.059/.080 (1,50/2,03)	63/64 (25,00)	.062 (1,58)	
62PP078BM09	Binder	Matte	.787(20,00)	.059/.080 (1,50/2,03)	63/64 (25,00)	.062 (1,58)	
62PP081BG11	Binder	Smooth	.812(20,63)	.031/.109 (0,79/2,77)	1 1/32 (26,19)	.062 (1,58)	
62PP081BM11	Binder	Matte	.812(20,63)	.031/.109 (0,79/2,77)	1 1/32 (26,19)	.062 (1,58)	
62PP087BG11	Binder	Smooth	.875(22,23)	.031/.109 (0,79/2,77)	1 5/64 (27,38)	.062 (1,58)	
62PP087BM11	Binder	Matte	.875(22,23)	.031/.109 (0,79/2,77)	1 5/64 (27,38)	.062 (1,58)	
62PP100BG11	Binder	Smooth	1.000(25,40)	.031/.109 (0,79/2,77)	1 7/32 (30,96)	.062 (1,58)	
62PP100BM11	Binder	Matte	1.000(25,40)	.031/.109 (0,79/2,77)	1 7/32 (30,96)	.062 (1,58)	

## VENT PLUGS



ITEM NUMBER	HEAD STYLE	FINISH	HOLE SIZE A	PANEL THICKNESS B	HEAD HEIGHT +/- .010 TOLERANCE	
					HEAD SIZE D	HEAD HEIGHT H
62VP087BM11	Binder	Matte	.875(22,23)	.031/.109 (0,79/2,77)	1 5/64 (27,38)	.062 (1,58)
62VP100BM11	Binder	Matte	1.000(25,40)	.031/.109 (0,79/2,77)	1 7/32 (30,96)	.062 (1,58)

# PANEL FASTENERS AND HOLE PLUGS

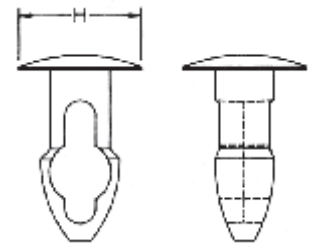
## NYLON KEY-HOLE CLIPS

SECTION  
VI

PART NUMBER	"H" HEAD DIAMETER	HOLE SIZE	PANEL THICKNESS
27KY1250093	1/4" (6,35)	.125 (3,18)	.093 (2,36)
27KY1250125	1/4" (6,35)	.125 (3,18)	.125 (3,18)
27KY1250156	1/4" (6,35)	.125 (3,18)	.156 (3,96)
27KY1250187	1/4" (6,35)	.125 (3,18)	.188 (4,78)
27KY1250219	1/4" (6,35)	.125 (3,18)	.219 (5,56)
27KY1250250	1/4" (6,35)	.125 (3,18)	.250 (6,35)
27KY1560093	5/16" (7,94)	.156 (3,96)	.093 (2,36)
27KY1560125	5/16" (7,94)	.156 (3,96)	.125 (3,18)
27KY1560156	5/16" (7,94)	.156 (3,96)	.156 (3,96)
27KY1560187	5/16" (7,94)	.156 (3,96)	.187 (4,75)
27KY1560218	5/16" (7,94)	.156 (3,96)	.218 (5,54)
27KY1560250	5/16" (7,94)	.156 (3,96)	.250 (6,35)
27KY1560281	5/16" (7,94)	.156 (3,96)	.281 (7,14)
27KY1560312	5/16" (7,94)	.156 (3,96)	.312 (7,92)
27KY1560343	5/16" (7,94)	.156 (3,96)	.343 (8,71)
27KY1560375	5/16" (7,94)	.156 (3,96)	.375 (9,53)
27KY1870093	5/16" (7,94)	.187 (4,75)	.093 (2,36)
27KY1870125	5/16" (7,94)	.187 (4,75)	.125 (3,18)
27KY1870156	5/16" (7,94)	.187 (4,75)	.156 (3,96)
27KY1870187	5/16" (7,94)	.187 (4,75)	.187 (4,75)
27KY1870219	5/16" (7,94)	.187 (4,75)	.219 (5,56)
27KY1870250	5/16" (7,94)	.187 (4,75)	.250 (6,35)
27KY18702507	15/32" (11,89)	.187 (4,75)	.250 (6,35)
27KY1870281	5/16" (7,94)	.187 (4,75)	.281 (7,14)
27KY1870312	5/16" (7,94)	.187 (4,75)	.312 (7,92)
27KY1870343	5/16" (7,94)	.187 (4,75)	.344 (8,74)
27KY1870375	5/16" (7,94)	.187 (4,75)	.375 (9,53)
27KY2190093	11/32" (8,73)	.219 (5,56)	.093 (2,36)
27KY2190343	11/32" (8,74)	.219 (5,56)	.343 (8,71)
27KY2190375	11/32" (8,74)	.219 (5,56)	.375 (9,53)
27KY2190125	11/32" (8,73)	.219 (5,56)	.125 (3,18)
27KY2190156	11/32" (8,73)	.219 (5,56)	.156 (3,96)
27KY2190187	11/32" (8,73)	.219 (5,56)	.187 (4,78)
27KY2190219	11/32" (8,73)	.219 (5,56)	.219 (5,56)
27KY2190250	11/32" (8,73)	.219 (5,56)	.250 (6,35)
27KY2190281	11/32" (8,73)	.219 (5,56)	.281 (7,14)
27KY2190312	11/32" (8,73)	.219 (5,56)	.312 (7,92)
27KY2500093	1/2" (12,70)	.250 (6,35)	.093 (2,36)
27KY2500125	1/2" (12,70)	.250 (6,35)	.125 (3,18)
27KY2500156	1/2" (12,70)	.250 (6,35)	.156 (3,96)
27KY2500187	1/2" (12,70)	.250 (6,35)	.187 (4,75)
27KY2500219	1/2" (12,70)	.250 (6,35)	.219 (5,56)
27KY2500250	1/2" (12,70)	.250 (6,35)	.250 (6,35)
27KY2500281	1/2" (12,70)	.250 (6,35)	.281 (7,14)
27KY2500312	1/2" (12,70)	.250 (6,35)	.312 (7,92)
27KY2500343	1/2" (12,70)	.250 (6,35)	.343 (8,71)
27KY2500375	1/2" (12,70)	.250 (6,35)	.375 (9,53)
27KY2500406	1/2" (12,70)	.250 (6,35)	.406 (10,31)
27KY2500437	1/2" (12,70)	.250 (6,35)	.437 (11,10)
27KY2500468	1/2" (12,70)	.250 (6,35)	.468 (11,89)
27KY2500500	1/2" (12,70)	.250 (6,35)	.500 (12,70)



### New Sizes



This panel fastener incorporates a new design. The key-hole shaped interior allows the part to collapse more completely for easy assembly with finger pressure. Tapered, bullet-style point slides into hole easily. Angled panel lock section takes up slack in panels to provide for a tight assembly. The design allows for a relatively large clip diameter to hole size ratio, resulting in higher retention force. Parts can be tooled for a large variety of hole and panel variations.

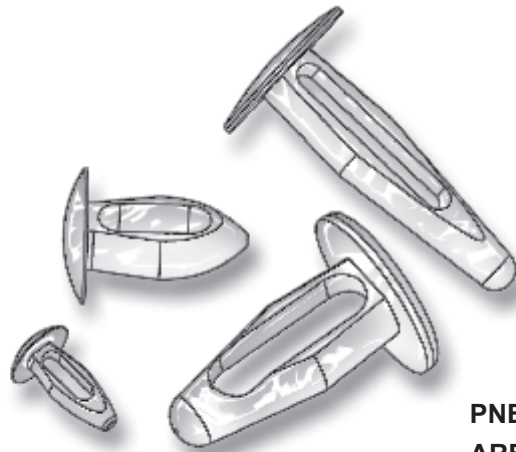


# PANEL FASTENERS AND HOLE PLUGS

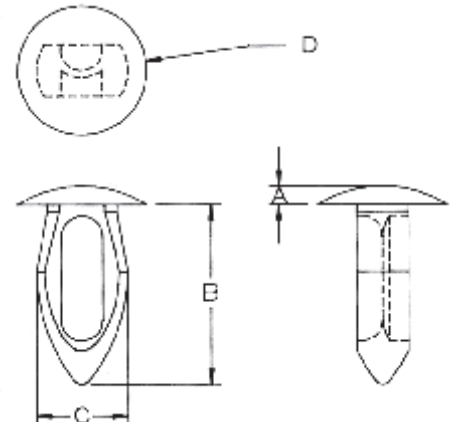
## SECTION VI

### NYLON ARROW CLIPS

Micro Plastics' Arrow Clips are reusable, molded nylon fasteners that feature an inexpensive fast method to hand assemble metal, wood, plastic, composition or other thin-gauge materials. The specially designed body compresses as it is forced through a prepunched hole and springs back to its original shape to lock the assembled parts securely. The versatile clips can be disassembled and reused again and again. They provide an economical, electrical insulating, vibration, abrasion, and corrosion resistant connection. The following are some of the more common sizes. Because of Micro Plastics' unique tooling approach, designs can be varied over a wide range. Request the size you need.



### New Sizes



**PNEUMATIC POWER TOOLS  
ARE AVAILABLE FOR VOLUME USERS.**

\*  $\pm .010$  Tolerance

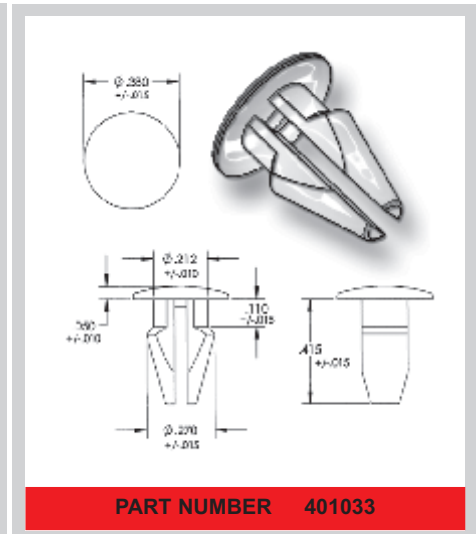
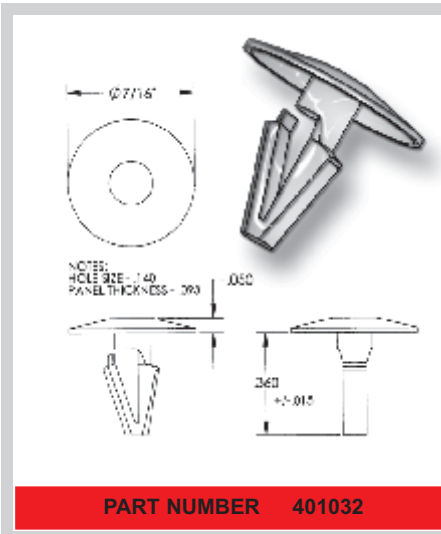
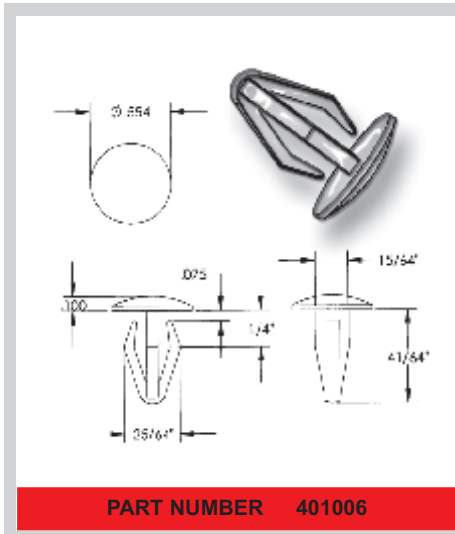
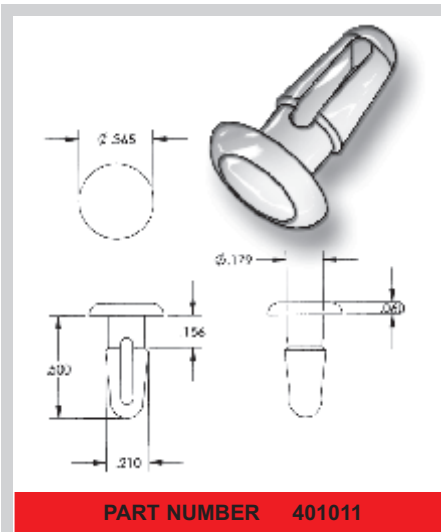
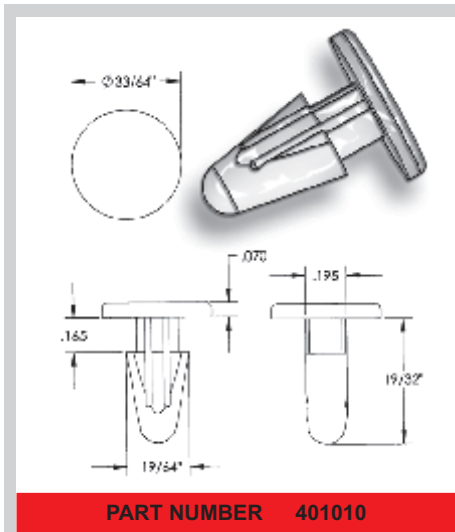
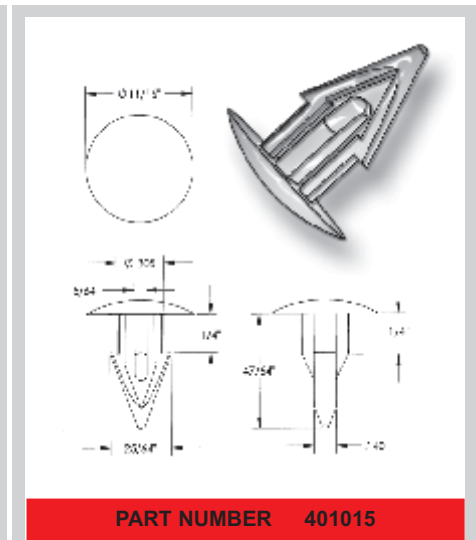
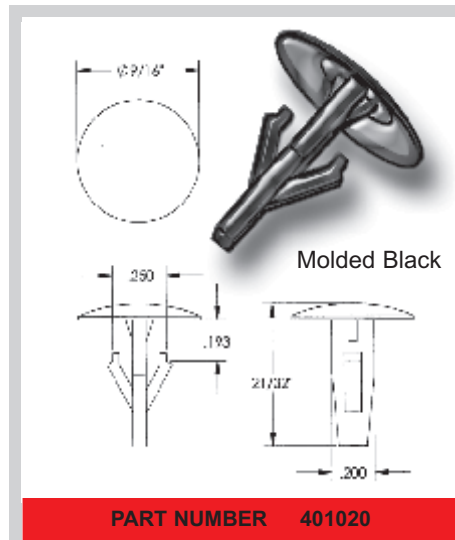
PART NUMBER	DESCRIPTION	HOLE SIZE	PANEL THK. RANGE	HEAD DIA. D	HEAD HEIGHT A	LENGTH B*	CLIP DIA. C
27AC0001	AC 1	.182/.192 (4,62/4,88)	.062/.125 (1,57/3,18)	.360 (9,14)	.060 (1,52)	.400 (10,16)	.225 (5,72)
27AC0002	AC 2	.131/.135 (3,33/3,43)	.062/.125 (1,57/3,18)	.270 (6,86)	.060 (1,52)	.395 (10,03)	.160 (4,06)
27AC0003	AC 3	.151/.161 (3,84/4,09)	.062/.125 (1,57/3,18)	.280 (7,11)	.040 (1,02)	.390 (9,91)	.196 (4,98)
27AC0004	AC 4	.151/.161 (3,84/4,09)	.062/.145 (1,57/3,68)	.280 (7,11)	.080 (2,03)	.400 (10,16)	.180 (4,57)
27AC0005	AC 5	.213/.223 (5,41/5,66)	.125/.187 (3,18/4,75)	.370 (9,40)	.060 (1,52)	.540 (13,72)	.248 (6,30)
27AC0006	AC 6	.182/.192 (4,62/4,88)	.310/.330 (7,87/8,38)	.370 (9,40)	.060 (1,52)	.540 (13,72)	.225 (5,72)
27AC0007	AC 7	.213/.223 (5,41/5,66)	.062/.125 (1,57/3,18)	.370 (9,40)	.060 (1,52)	.450 (11,43)	.225 (5,72)
27AC0009	AC 9	.250/.260 (6,39/6,60)	.125/.187 (3,18/4,75)	.484 (12,29)	.060 (1,52)	.575 (14,61)	.290 (7,37)
27AC0010	AC 10	.062/.065 (1,57/1,65)	.010/.031 (0,25/0,79)	.100 (2,54)	.020 (0,51)	.125 (3,18)	.068 (1,73)
27AC0011	AC 11	.182/.192 (4,62/4,88)	.165/.185 (4,19/4,70)	.375 (9,53)	.060 (1,52)	.525 (13,33)	.206 (5,23)
27AC0012	AC 12	.195/.200 (4,95/5,08)	.035/.065 (0,89/1,65)	.370 (9,40)	.060 (1,52)	.350 (8,89)	.225 (5,72)
27AC0013	AC 13	.130/.132 (3,30/3,35)	.125/.140 (3,18/3,56)	.270 (6,86)	.070 (1,78)	.310 (7,87)	.162 (4,11)
27AC0014	AC 14	.145/.150 (3,68/3,71)	.290/.300 (7,37/7,62)	.270 (6,86)	.070 (1,78)	.530 (13,46)	.196 (4,98)
27AC0015	AC 15	.118/.122 (3,00/3,10)	.062/.125 (1,57/3,18)	.280 (7,11)	.060 (1,52)	.390 (9,91)	.150 (3,71)
27AC0016	AC 16	.250/.260 (6,35/6,60)	.360/.380 (9,14/9,65)	.615 (15,62)	.065 (1,65)	.810 (20,57)	.286 (7,26)
27AC0017	AC 17	.320/.335 (8,38/8,50)	.062/.340 (1,57/8,63)	.683 (17,35)	.070 (1,78)	.900 (22,86)	.375 (9,52)
27AC0018	AC 18	.160/.165 (4,06/4,19)	.032/.125 (0,81/3,18)	.280 (7,11)	.080 (2,03)	.400 (10,16)	.186 (4,72)
27AC0019	AC 19	.330/.340 (8,38/8,64)	.125/.350 (3,18/8,88)	.685 (17,45)	.070 (0,75)	.895 (22,74)	.370 (9,40)
27AC0020	AC 20	.120/.135 (3,02/3,43)	.062/.125 (1,58/3,18)	.270 (6,86)	.040 (1,01)	.330 (8,38)	.140 (3,56)
27AC0021	AC 21	.250/.260 (6,35/6,57)	.125/.250 (3,18/6,35)	.500 (12,70)	.050 (1,27)	.630 (16,0)	.280 (7,12)
27AC0022	AC 22	.085/.090 (2,16/2,29)	.032/.107 (0,81/2,72)	.125 (3,18)	.030 (0,76)	.187 (4,75)	.107 (2,72)
27AC0023	AC 23	.335/.345 (8,51/8,76)	.062/.140 (1,57/3,56)	.866 (22,00)	.050 (1,27)	.450 (11,43)	.363 (9,22)
27AC0024	AC 24	.250/.260 (6,25/6,60)	.500/.750 (12,7/19,1)	.610 (15,49)	.068 (1,73)	1.135 (28,83)	.287 (7,29)
27AC0026	AC 26	.240/.260 (6,10/6,60)	.095/.218 (2,41/5,54)	.750 (19,05)	.055 (1,40)	.632 (16,05)	.281 (7,14)
27AC0027	AC 27	.062/.065 (1,57/1,65)	.010/.031 (0,25/0,79)	.100 (2,54)	.020 (0,51)	.187 (4,75)	.068 (1,73)
27AC0028*	AC 28	.192/.212 (4,88/5,38)	.062/.125 (1,57/3,17)	.375 (9,53)	.060 (1,52)	.450 (11,43)	.235 (5,97)
27AC0029	AC 29	.330/.340 (8,38/8,64)	.125/.350 (3,18/8,89)	.475 (12,07)	.070 (1,78)	.895 (22,73)	.370 (9,40)
27AC0030	AC 30	.160/.165 (4,06/4,19)	.032/.125 (8,81/3,18)	.300 (7,62)	.110 (2,79)	.400 (10,16)	.186 (4,72)

\* PART HAS NO WEBBING



## NYLON "SPECIAL ITEMS" ARROW CLIPS

Micro Plastics' Special Item Arrow Clips are designed to provide unique fasteners for assembly applications where larger panel thicknesses and or mounting diameters combined with increased fastening strength is required. Molded from UL 94V-2 Nylon 66 for corrosion, abrasion and vibration resistance.

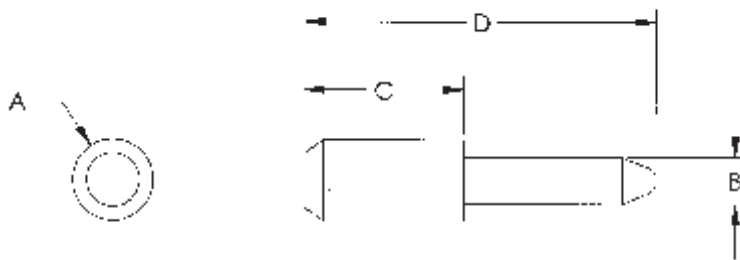
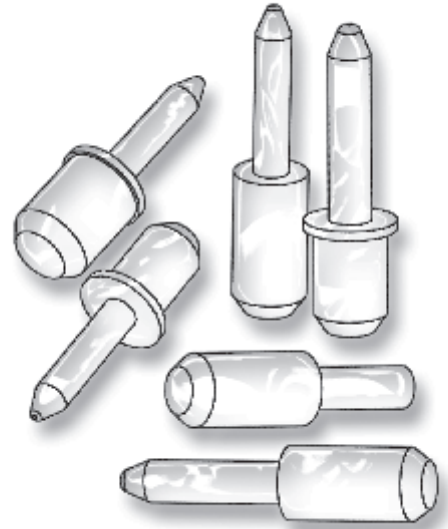
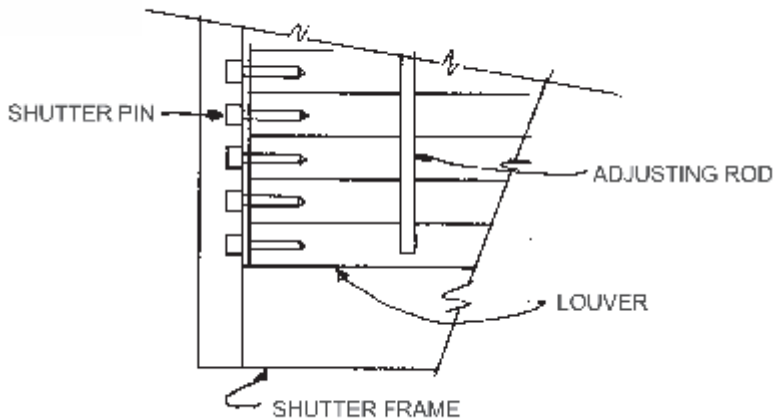


# PANEL FASTENERS AND HOLE PLUGS

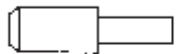
## SECTION VI

### SHUTTER PINS

Micro Plastics' SHUTTER PINS are used in the assembly of shutters. Molded in a Nylon 6/6 translucent off white color. Nylon 6/6 is a material which has excellent wear properties, low coefficient of friction, good chemical resistance and will not rust.



PART NUMBER	A	B	C	D
25WSP100	.243 (6,17)	.140 (3,56)	31/64 (12,29)	1 1/16 (26,98)



25WSP101	.243 (6,17)	.140 (3,56)	31/64 (12,29)	7/8 (22,23)
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25WSP102	.243 (6,17)	.117 (2,97)	31/64 (12,29)	1 1/16 (26,98)
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25SSP100	.215 (5,46)	.117 (2,97)	3/8 (9,53)	29/32 (23,01)
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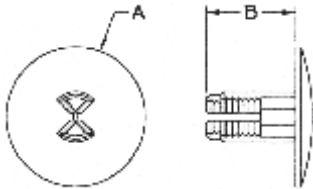
25SSP101	.280 (7,11)	.117 (2,97)	3/8 (9,53)	29/32 (23,01)
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25LSP100	.240 (6,10)	.140 (3,56)	3/8 (9,53)	1 1/32 (26,19)
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## RATCHETING ACTION RIVETS

Ratcheting action rivets feature a rigid design which provides an outstanding bond created by the action of the interlocking gripper teeth. With the larger head diameter, Ratcheting action rivets make binding of soft materials a simple application.



- RATCHETING ACTION RIVETS ARE MOLDED IN NYLON 6/6 AND AVAILABLE IN BLACK OR NATURAL.
- PLEASE ADD A COLOR CODE TO THE END OF EACH PART NUMBER IDENTIFYING YOUR COLOR CHOICE.
- CODE **B** = BLACK    CODE **N** = NATURAL

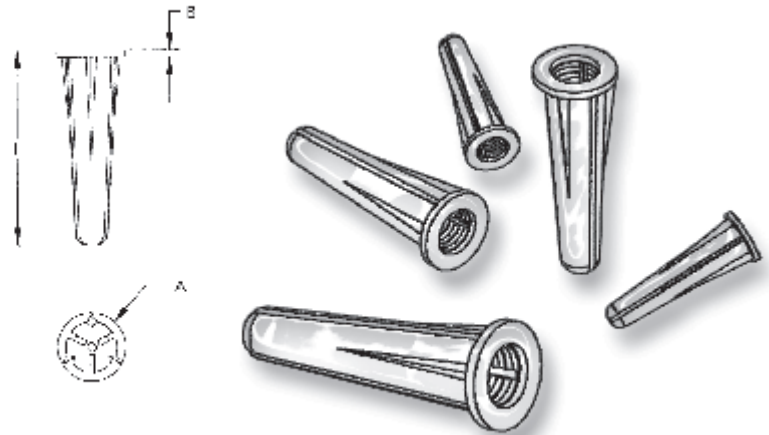


### New Sizes

ITEM NUMBER	*REF. DIM. HEAD DIA. A	*REF. DIM SHANK LENGTH B	HOLE DIA.	GRIP RANGE
27QB375250	3/8" (9,53)	7/32" (5,5)	1/4" (6,35)	.235/.297 (5,97/7,54)
27QB375375	3/8" (9,53)	11/32" (8,73)	1/4" (6,35)	.346/.500 (8,79/12,70)
27QB375750	3/8" (9,53)	1/2" (12,70)	1/4" (6,35)	.500/.812 (12,70/20,62)
27QB371000	3/8" (9,53)	3/4" (19,05)	1/4" (6,35)	.780/1.375 (19,81/34,93)
27QB400250	.406 (10,31)	7/32" (5,5)	9/32" (7,14)	.235/.297 (5,97/7,54)
27QB400375	.406 (10,31)	11/32" (8,73)	9/32" (7,14)	.346/.500 (8,79/12,70)
27QB400750	.406 (10,31)	1/2" (12,70)	9/32" (7,14)	.500/.812 (12,70/20,62)
27QB401000	.406 (10,31)	3/4" (19,05)	9/32" (7,14)	.780/1.375 (19,81/34,93)
27QB625250	5/8" (15,88)	7/32" (5,5)	1/4" (6,35)	.235/.297 (5,97/7,54)
27QB625375	5/8" (15,88)	11/32" (8,73)	1/4" (6,35)	.346/.500 (8,79/12,70)
27QB625750	5/8" (15,88)	1/2" (12,70)	1/4" (6,35)	.500/.812 (12,70/20,62)
27QB621000	5/8" (15,88)	3/4" (19,05)	1/4" (6,35)	.780/1.375 (19,81/34,93)
27QB700250	3/4" (19,05)	7/32" (5,5)	9/32" (7,14)	.235/.297 (5,97/7,54)
27QB700375	3/4" (19,05)	11/32" (8,73)	9/32" (7,14)	.346/.500 (8,79/12,70)
27QB700750	3/4" (19,05)	1/2" (12,70)	9/32" (7,14)	.500/.812 (12,70/20,62)
27QB701000	3/4" (19,05)	3/4" (19,05)	9/32" (7,14)	.780/1.375 (19,81/34,93)

## NYLON SCREW ANCHORS

Multi-use, light duty Nylon Anchor for use with sheet metal or wood screws. Nylon Anchors can be used in wood, masonry block, concrete, tile, brick or sheet metal. Anchor has twist resisting flange for use in thin wall and hollow materials. Anchors can be color coded for size identification. Metal screw not included.



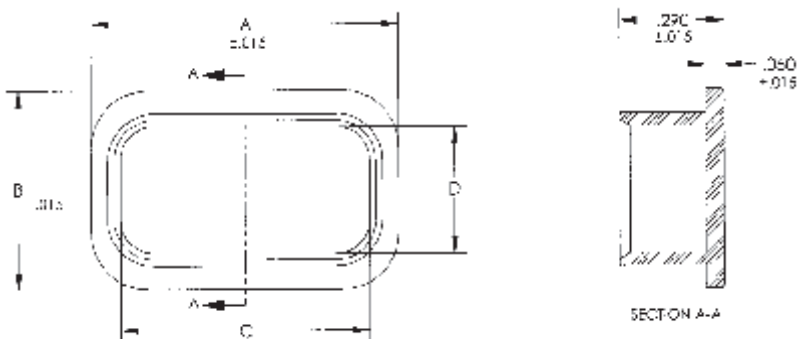
ITEM NUMBER	SCREW SIZE	DRILL SIZE	A	B	L
61WA210875	#6-8	3/16 (4,76)	5/16 (7,94)	.037 (0,94)	7/8 (22,22)
61WA281700	#10-12	1/4 (6,35)	3/8 (9,53)	.037 (0,94)	1-5/64 (27,38)
61WA351385	#14-16	5/16 (7,94)	7/16 (11,11)	.037 (0,94)	1 3/8 (31,93)

# PANEL FASTENERS AND HOLE PLUGS

## SECTION VI

### PORT COVER

Micro Plastics port covers are available in black Polyethylene. Used to cover 15 pin female or 9 pin male comm and video ports to prevent damage from foreign materials. Parts do not have to be oriented to angled side of wall of port.



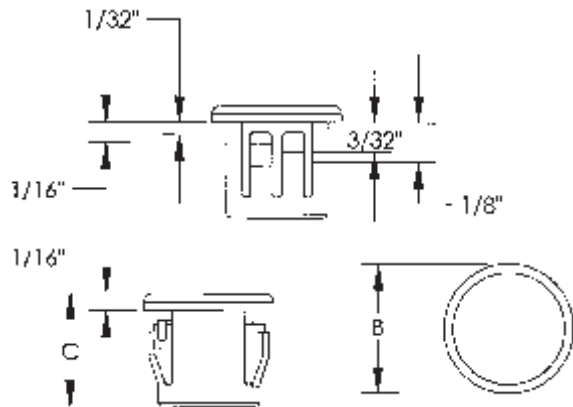
**Watch Instructional Video**  
<https://www.microplastics.com/productvideos/PortCover.asf>



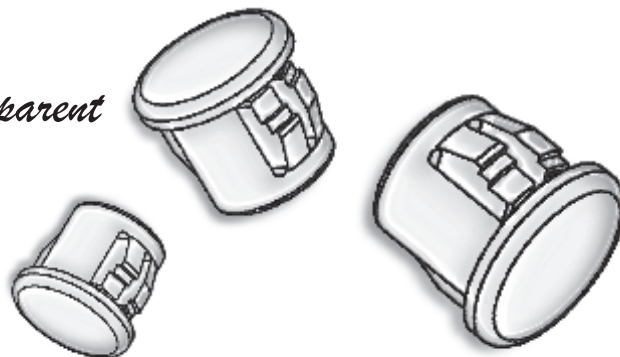
PART NUMBER	DESCRIPTION	A	B	C	D
62PC0009	9 PIN <u>Male</u> Port Cover BLACK	.850 (2,16)	.550 (14,0)	.690 (17,5)	.350 (8,89)
62PC0015	15 PIN <u>Female</u> Port Cover BLACK	.825 (21,0)	.488 (12,4)	.632 (16,1)	.297 (7,54)

### copolyester WINDOW PLUGS

WINDOW PLUGS are molded in Clear Copolyester material. The headstyle is flat to minimize distortion



*Transparent*



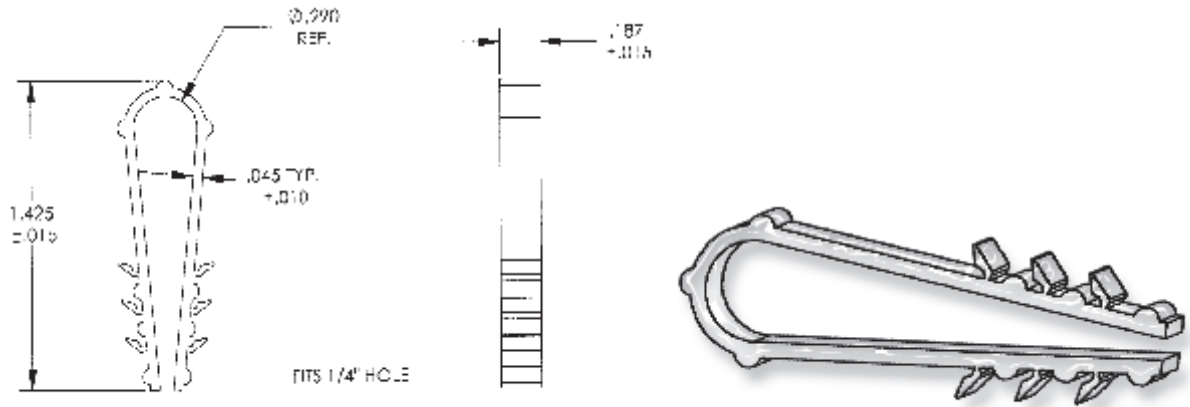
\* MINIMUM ORDER QUANTITY 1,000 PIECES

ITEM NUMBER	DESCRIPTION	HOLE DIAMETER	MAXIMUM PANEL THICKNESS	DIA. B +/- .015"	THICKNESS C +/- .015"
* 62WP0187	3/16" Window Plug	.187 (4,8)	.062 (1,6)	.250 (6,4)	.234 (5,9)
* 62WP0250	1/4" Window Plug	.250 (6,4)	.062 (1,6)	.312 (8,0)	.312 (8,0)
* 62WP0312	5/16" Window Plug	.312 (8,0)	.062 (1,6)	.375 (9,5)	.312 (8,0)
* 62WP0375	3/8" Window Plug	.375 (9,5)	.125 (3,2)	.468 (12,0)	.406 (10,3)
* 62WP0437	7/16" Window Plug	.437 (11,0)	.125 (3,2)	.531 (13,5)	.406 (10,3)
* 62WP0500	1/2" Window Plug	.500 (12,7)	.125 (3,2)	.578 (14,6)	.406 (10,3)
62WP0625	5/8" Window Plug	.625 (15,9)	.125 (3,2)	.718 (18,2)	.406 (10,3)



## LOOP FASTENER

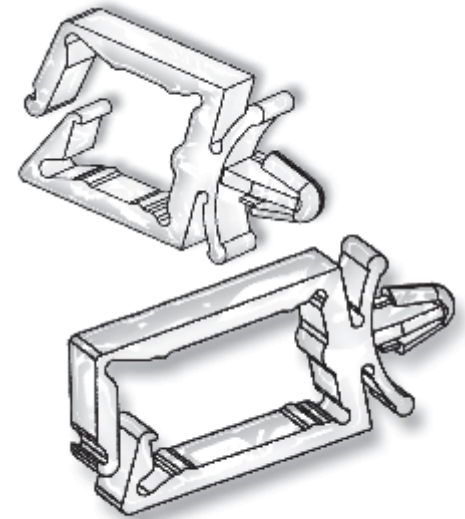
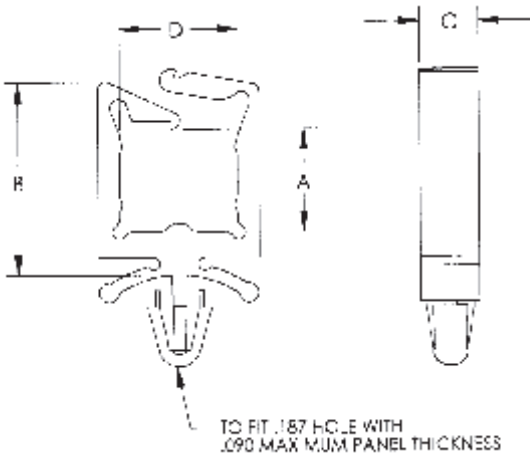
“U” shaped blind fastener for installation of pipes or cables on a wall or ceiling. Drill 1/4” diameter hole. Slip “U” shaped fastener over wire or tube and push into drilled hole. Fastener is molded in natural colored high density Polyethylene.



ITEM NUMBER	DESCRIPTION
22LF1425250	LOOP FASTENER

## LOCKING WIRE/ CABLE HOLDER

Micro Plastics' Locking Wire and Cable Holder is molded in UL recognized Nylon 6/6. Used for routing wires and cables. Designed to fit a 3/16” diameter hole and variable panel thickness up to .090 inches. Lock is releasable by twisting open.



ITEM NUMBER	DESCRIPTION	A (REF.)	B (REF.)	C	D
22LGWH4500360	LOCKING WIRE CABLE HOLDER	.378 (9,60)	.711 (18,06)	7/32" (5,56)	7/16" (11,11)
22LGWH4500718	LOCKING WIRE CABLE HOLDER	.660 (16,76)	1.000 (25,40)	7/32" (5,56)	7/16" (11,11)

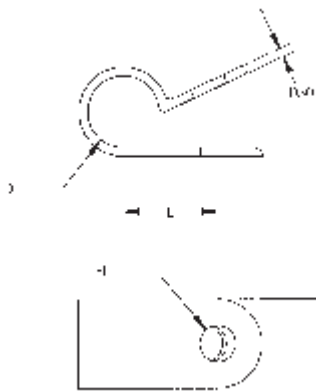
# WIRE HANDLING HARDWARE

## SECTION VII

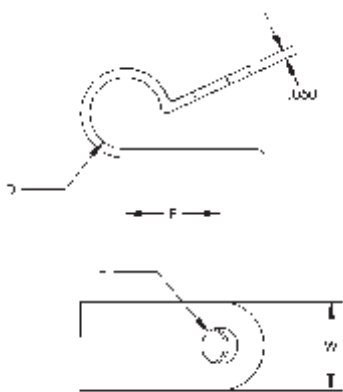
### CABLE CLAMPS

#### Materials Available on Special Order

- Flame retardant Nylon 6/6
- 2% carbon black Nylon 6/6 (U.V. Resistant)
- Polypropylene



NOTE: H AND E DIMENSIONS ARE +/- .015" TOLERANCE.



Micro Plastics' molded nylon cable clamps secure, insulate and route cable, wiring, tubing, piping and fibre optics. These tough, durable chemical resistant nylon 6/6 cable clamps are perfect for applications in electronics, automotive, aircraft, appliance and many other industries. The *Heavy Duty Series* provides a full 1/2" wide contact area for all critical and heavy duty industrial and commercial applications, while the economical *Standard Series* has a 3/8" wide contact area and is designed for medium to lightweight applications. All contact edges have a full radius for product protection. Sizes are clearly marked on each clamp. The following are standard sizes available. Micro Plastics will tool non-standard sizes in suitable quantities.

### MINIATURE



Assigned Code 1058

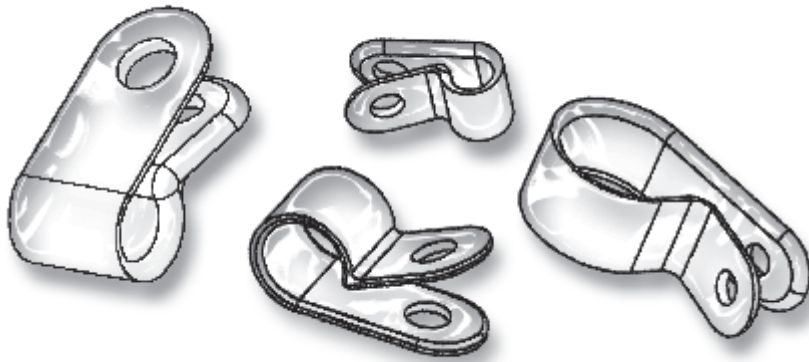
ITEM NUMBER	D	W	H +/- .010	E +/- .010
22CC16A0062	1/16 (0,79)	5/32 (3,97)	.096 (2,44)	.187 (4,75)
22CC16A0093	3/32 (2,38)	5/32 (3,97)	.096 (2,44)	.203 (5,16)
22CC16A0125	1/8 (3,18)	5/32 (3,97)	.096 (2,44)	.217 (5,51)
22CC16A0156	5/32 (3,97)	5/32 (3,97)	.096 (2,44)	.233 (5,92)
22CC16A0187	3/16 (4,76)	5/32 (3,97)	.096 (2,44)	.250 (6,35)
22CC28E0250	1/4 (6,35)	9/32 (7,14)	.128 (3,25)	.337 (8,56)
22CC28E0375	3/8 (9,52)	9/32 (7,14)	.128 (3,25)	.400 (10,16)

### STANDARD

ITEM NUMBER	D	W	H	E
22CC37B0125	1/8 (3,18)	3/8 (9,53)	.140 (3,56)	.329 (8,36)
22CC37C0125	1/8 (3,18)	3/8 (9,53)	.167 (4,24)	.329 (8,36)
22CC37D0125	1/8 (3,18)	3/8 (9,53)	.203 (5,16)	.329 (8,36)
22CC37B0187	3/16 (4,76)	3/8 (9,53)	.140 (3,56)	.430 (10,92)
22CC37C0187	3/16 (4,76)	3/8 (9,53)	.167 (4,24)	.430 (10,92)
22CC37D0187	3/16 (4,76)	3/8 (9,53)	.203 (5,16)	.430 (10,92)
22CC37B0187E	3/16 (4,76)	3/8 (9,53)	.140 (3,56)	.378 (9,60)
22CC37C0187E	3/16 (4,76)	3/8 (9,53)	.167 (4,24)	.378 (9,60)
22CC37D0187E	3/16 (4,76)	3/8 (9,53)	.203 (5,16)	.378 (9,60)
22CC37B0250	1/4 (6,35)	3/8 (9,53)	.140 (3,56)	.410 (10,41)
22CC37C0250	1/4 (6,35)	3/8 (9,53)	.167 (4,24)	.410 (10,41)
22CC37D0250	1/4 (6,35)	3/8 (9,53)	.203 (5,16)	.410 (10,41)
22CC37B0312	5/16 (7,94)	3/8 (9,53)	.140 (3,56)	.495 (12,57)
22CC37C0312	5/16 (7,94)	3/8 (9,53)	.167 (4,24)	.495 (12,57)
22CC37D0312	5/16 (7,94)	3/8 (9,53)	.203 (5,16)	.495 (12,57)
22CC37B0375	3/8 (9,53)	3/8 (9,53)	.140 (3,56)	.595 (15,11)
22CC37C0375	3/8 (9,53)	3/8 (9,53)	.167 (4,24)	.595 (15,11)
22CC37D0375	3/8 (9,53)	3/8 (9,53)	.203 (5,16)	.595 (15,11)
22CC37B0437	7/16 (11,11)	3/8 (9,53)	.140 (3,56)	.574 (14,58)
22CC37C0437	7/16 (11,11)	3/8 (9,53)	.167 (4,24)	.574 (14,58)
22CC37D0437	7/16 (11,11)	3/8 (9,53)	.203 (5,16)	.574 (14,58)
22CC37B0500	1/2 (12,70)	3/8 (9,53)	.140 (3,56)	.605 (15,37)
22CC37C0500	1/2 (12,70)	3/8 (9,53)	.167 (4,24)	.605 (15,37)
22CC37D0500	1/2 (12,70)	3/8 (9,53)	.203 (5,16)	.605 (15,37)
22CC37D0562	9/16 (14,29)	3/8 (9,53)	.203 (5,16)	.606 (15,39)
22CC37D0625	5/8 (15,88)	3/8 (9,53)	.203 (5,16)	.678 (17,22)

# WIRE HANDLING HARDWARE

SECTION  
VII



### Materials Available on Special Order

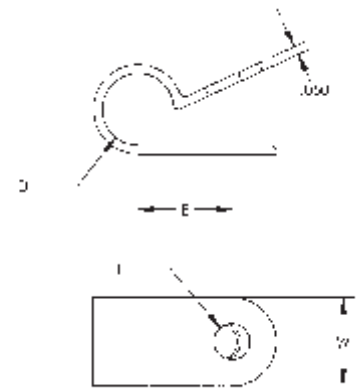
- Flame retardant Nylon 6/6
- 2% carbon black Nylon 6/6 (U.V. Resistant)
- Polypropylene

## HEAVY DUTY

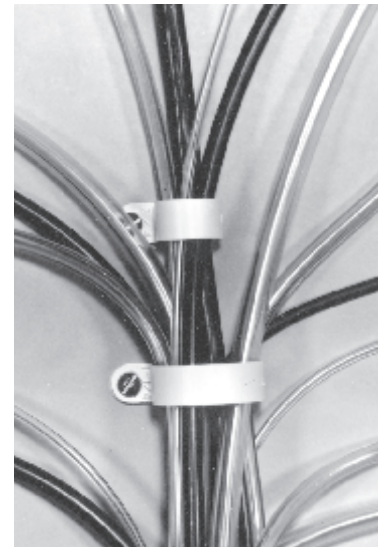


Assigned Code 1058

ITEM NUMBER	D	W	H	E
22CC50C0125	1/8 (3,18)	1/2 (12,70)	.167 (4,24)	.315 (8,00)
22CC50D0125	1/8 (3,18)	1/2 (12,70)	.203 (5,16)	.315 (8,00)
22CC50C0187	3/16 (4,76)	1/2 (12,70)	.167 (4,24)	.425 (10,80)
22CC50D0187	3/16 (4,76)	1/2 (12,70)	.203 (5,16)	.425 (10,80)
22CC50C0250	1/4 (6,35)	1/2 (12,70)	.167 (4,24)	.410 (10,41)
22CC50D0250	1/4 (6,35)	1/2 (12,70)	.203 (5,16)	.410 (10,41)
22CC50C0312	5/16 (7,94)	1/2 (12,70)	.167 (4,24)	.500 (12,70)
22CC50D0312	5/16 (7,94)	1/2 (12,70)	.203 (5,16)	.500 (12,70)
22CC50C0375	3/8 (9,53)	1/2 (12,70)	.167 (4,24)	.530 (13,46)
22CC50D0375	3/8 (9,53)	1/2 (12,70)	.203 (5,16)	.530 (13,46)
22CC50G0375	3/8 (9,53)	1/2 (12,70)	.250 (6,35)	.585 (14,86)
22CC50C0437	7/16 (11,11)	1/2 (12,70)	.167 (4,24)	.560 (14,22)
22CC50D0437	7/16 (11,11)	1/2 (12,70)	.203 (5,16)	.560 (14,22)
22CC50C0500	1/2 (12,70)	1/2 (12,70)	.167 (4,24)	.595 (15,11)
22CC50D0500	1/2 (12,70)	1/2 (12,70)	.203 (5,16)	.595 (15,11)
22CC50C0562	9/16 (14,29)	1/2 (12,70)	.167 (4,24)	.606 (15,39)
22CC50D0562	9/16 (14,29)	1/2 (12,70)	.203 (5,16)	.606 (15,39)
22CC50C0625	5/8 (15,88)	1/2 (12,70)	.167 (4,24)	.655 (16,64)
22CC50D0625	5/8 (15,88)	1/2 (12,70)	.203 (5,16)	.655 (16,64)
22CC50C0687	11/16 (17,46)	1/2 (12,70)	.167 (4,24)	.755 (19,18)
22CC50D0687	11/16 (17,46)	1/2 (12,70)	.203 (5,16)	.755 (19,18)
22CC50C0750	3/4 (19,05)	1/2 (12,70)	.167 (4,24)	.780 (19,81)
22CC50D0750	3/4 (19,05)	1/2 (12,70)	.203 (5,16)	.780 (19,81)
22CC50C0812	13/16 (20,64)	1/2 (12,70)	.167 (4,24)	.815 (20,70)
22CC50D0812	13/16 (20,64)	1/2 (12,70)	.203 (5,16)	.815 (20,70)
22CC50C0875	7/8 (22,22)	1/2 (12,70)	.167 (4,24)	.845 (21,46)
22CC50D0875	7/8 (22,22)	1/2 (12,70)	.203 (5,16)	.845 (21,46)
22CC50D1000	1 (25,40)	1/2 (12,70)	.203 (5,16)	.910 (23,11)
22CC50D1125	1 1/8 (28,58)	1/2 (12,70)	.203 (5,16)	.970 (24,64)
22CC50D1187	1 3/16 (30,16)	1/2 (12,70)	.203 (5,16)	1.000 (25,40)
22CC50D1250	1 1/4 (31,75)	1/2 (12,70)	.203 (5,16)	1.060 (26,92)
22CC50D1375	1 3/8 (34,93)	1/2 (12,70)	.203 (5,16)	1.125 (28,58)
22CC50D1500	1 1/2 (38,10)	1/2 (12,70)	.203 (5,16)	1.190 (30,23)



NOTE: H AND E DIMENSIONS ARE + / - .015" TOLERANCE.



## EXTRA HEAVY DUTY

ITEM NUMBER	D	W	H	E
22CC87F0750	3/4 (19,05)	7/8 (22,22)	.387 (9,83)	1.000 (25,40)
22CC87D1003	1 1/32 (26,19)	7/8 (22,22)	.203 (5,16)	1.125 (28,58)
22CC87F1003	1 1/32 (26,19)	7/8 (22,22)	.387 (9,83)	1.125 (28,58)

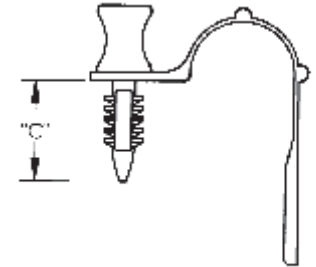
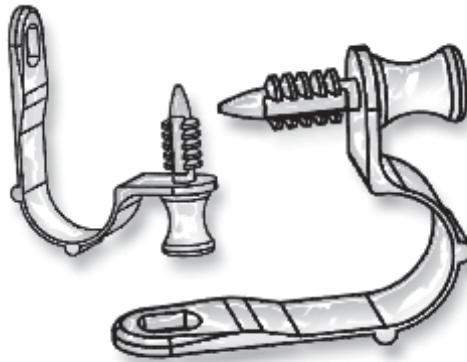
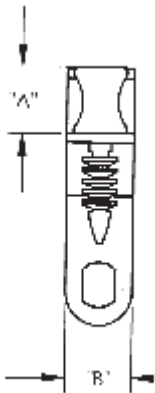


# WIRE HANDLING HARDWARE

## SECTION VII

### QUICK CABLE CLAMPS

Quick cable clamps are designed for one-handed installation. The design features an integrated ratchet fastener which eliminates the need for a screw or other fastener. Quick cable clamps are self-aligning, and the built-in handle allows for quick and easy installation without tools. The parts are molded from Nylon 6/6 and are suitable for many different wire, cable, or tubing routing applications. Parts are designed to fit a 3/16" diameter hole.



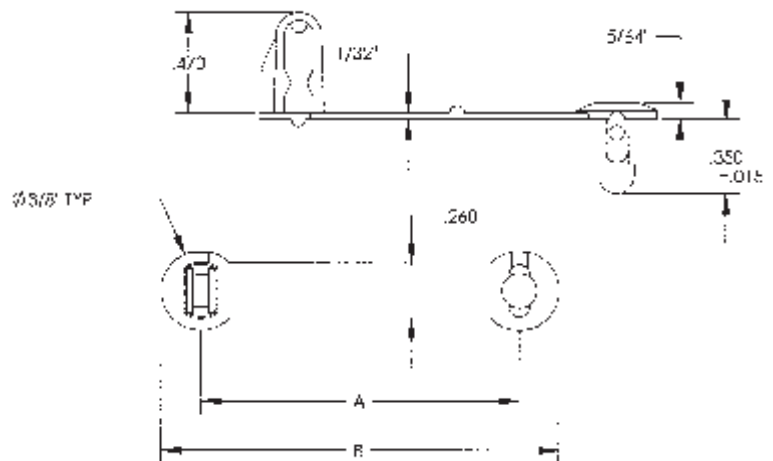
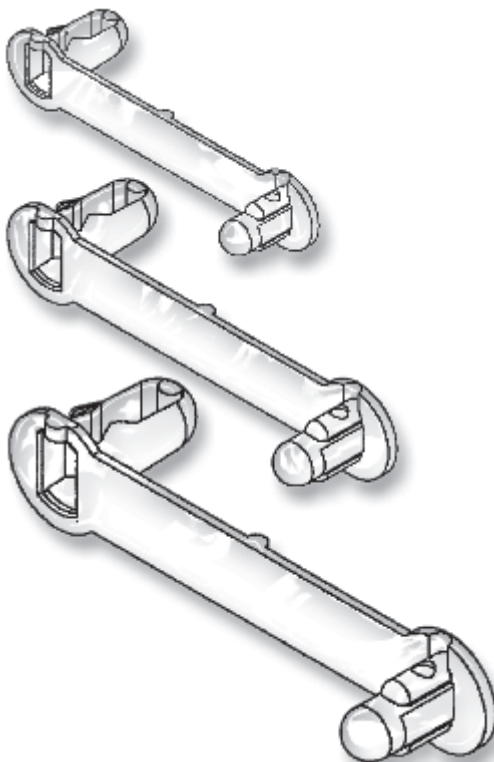
ALL DIMENSIONS +/- .015

ITEM NUMBER	BUNDLE DIAMETER	KNOB LENGTH	WIDTH "B"	"C" CLIP LENGTH
22QCC187250	1/4" (6,35)	.375 (9,53)	.375 (9,53)	.528 (13,41)
22QCC187312	5/16" (7,94)	.375 (9,53)	.375 (9,53)	.528 (13,41)
22QCC187375	3/8" (9,53)	.375 (9,53)	.375 (9,53)	.528 (13,41)
22QCC187437	7/16" (11,1)	.375 (9,53)	.375 (9,53)	.528 (13,41)



### WIRE AND TUBE RETAINING STRAPS

Wire and tube retaining straps are designed to be pushed into a .250 dia. hole, the wire or tube can then be placed on the the strap, simply push the pin end into the receiver end and the wire or tube is secured in place. Part is molded in electrically insulating Nylon 6/6.



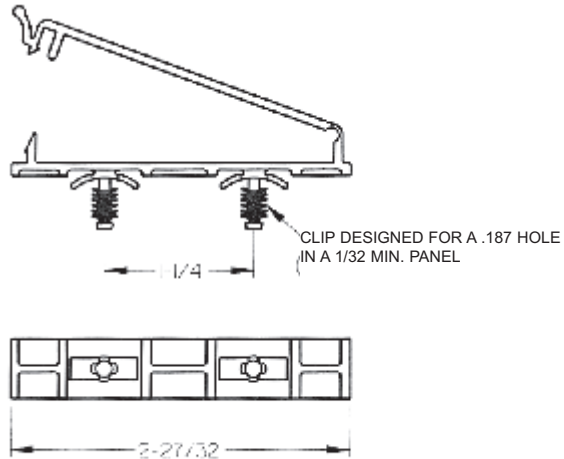
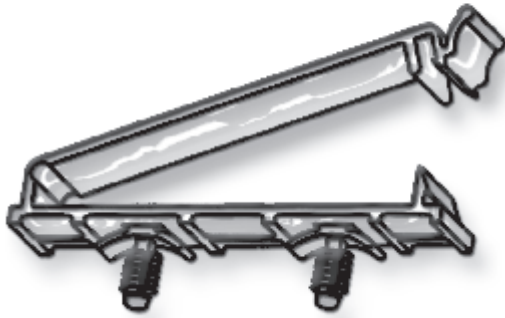
ITEM NUMBER	BUNDLE DIAMETER	"A" REFERENCE	"B" REFERENCE
22WTR2500312	.312 (7,93)	1.530 (38,86)	1.905 (48,39)
22WTR2500375	.375 (9,52)	1.730 (43,94)	2.105 (53,47)
22WTR2500437	.437 (11,10)	1.930 (49,02)	2.305 (58,55)
22WTR2500500	.500 (12,70)	2.130 (54,10)	2.528 (64,21)
22WTR2500562	.562 (14,28)	2.360 (59,94)	2.735 (69,47)



## RIBBON CLIP – fin clip base

ITEM NUMBER

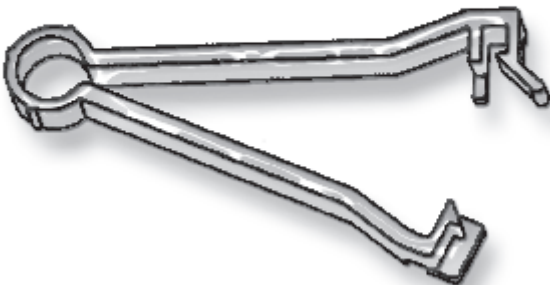
22FCC250237



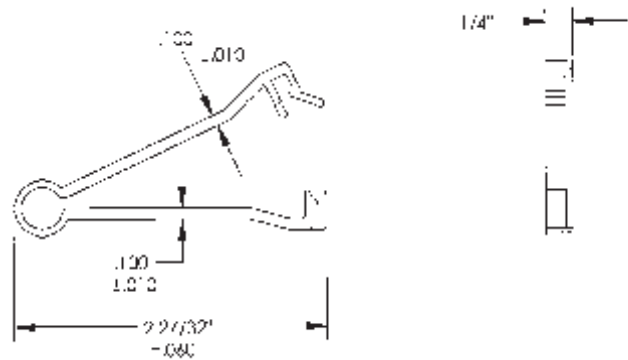
## RIBBON CLIP – quick move

ITEM NUMBER

22RC200



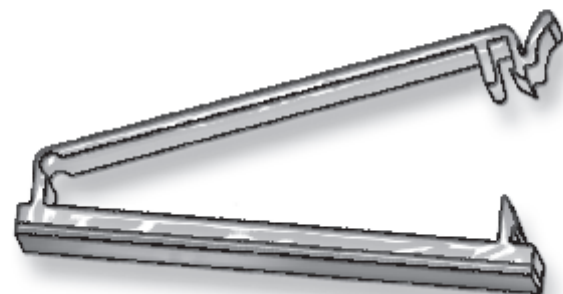
One Piece Ribbon Clip is molded in tough non-conductive nylon. This design allows for quick positive clamping of flat cable up to 50 conductors wide, without the need for securing the clip to a board or chassis. Ribbon Clips are releasable and reusable, and will not cut or abrade cable.



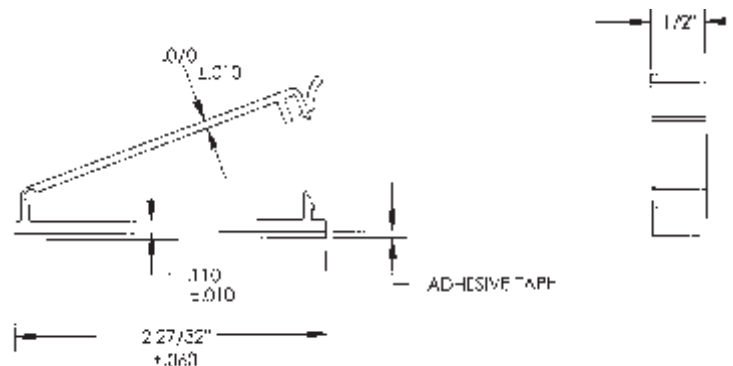
## RIBBON CLIP – adhesive base

ITEM NUMBER

22ABC250237



Adhesive Base Ribbon Clip is molded in tough non-conductive nylon. Ribbon Clips are designed to hold flat cable up to 50 conductors wide. Ribbon Clips will not cut or abrade cable and are releasable. Easy mounting with peel and stick adhesive backing.



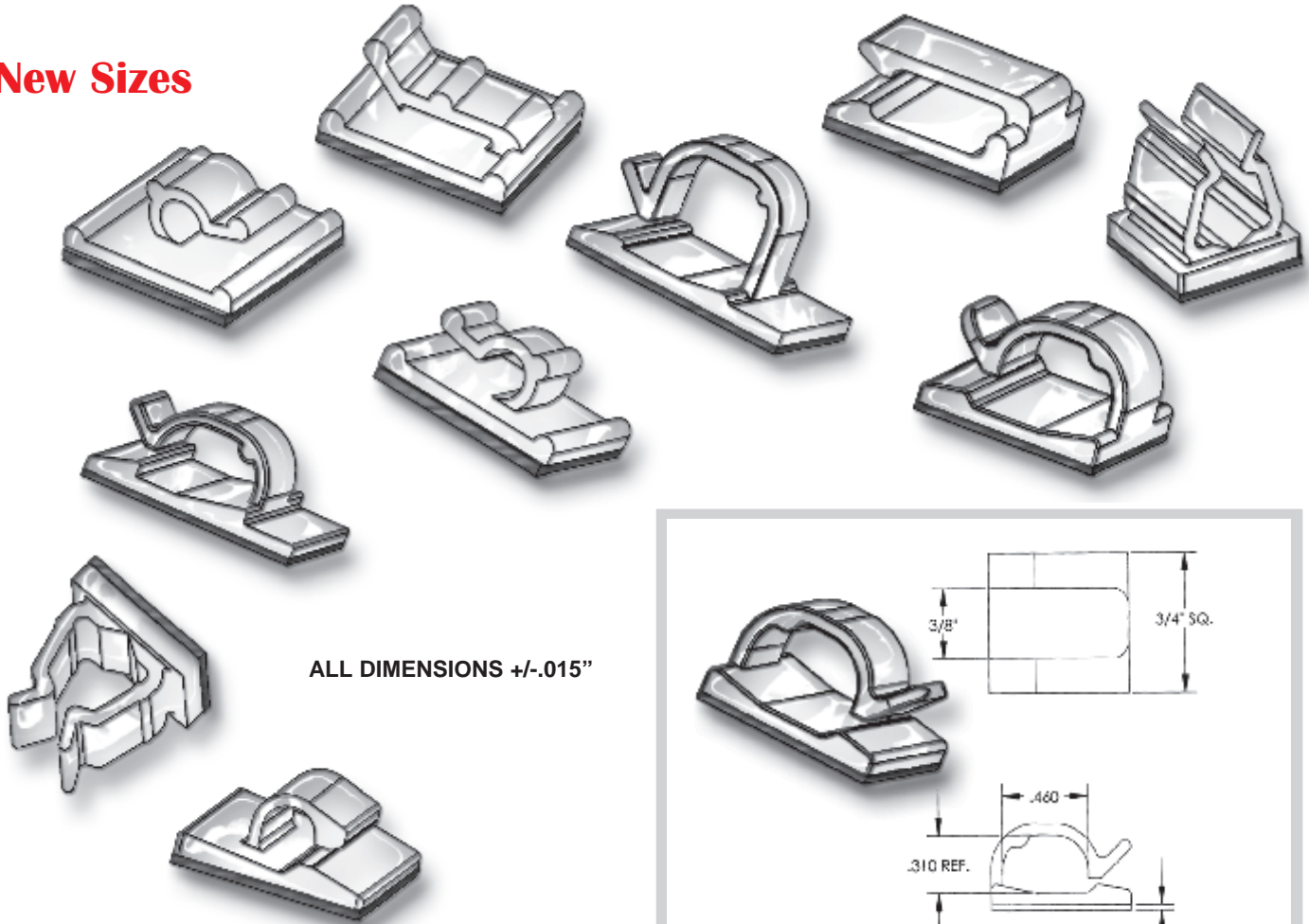
# WIRE HANDLING HARDWARE

## SECTION VII

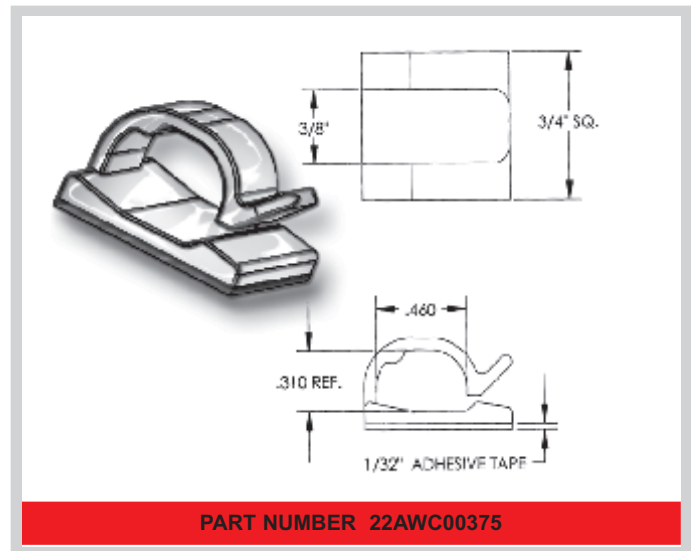
### RELEASABLE ADHESIVE BACKED WIRE CLIPS

Micro Plastics' Adhesive Backed Nylon Wire and Cable Clips are used to route wires and cables. The parts are backed with Polyethylene foam tape, and feature a releasable clip so wires can be removed after assembly if desired. Parts are stocked in natural, when ordering black parts add the letter "B" to the end of the part number.

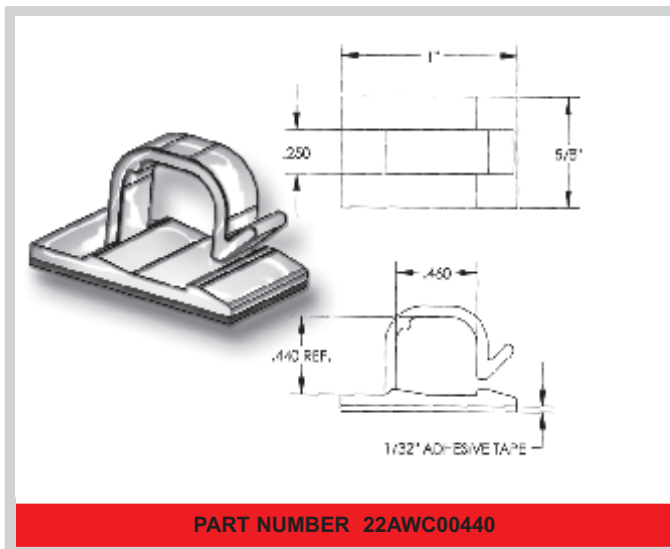
#### New Sizes



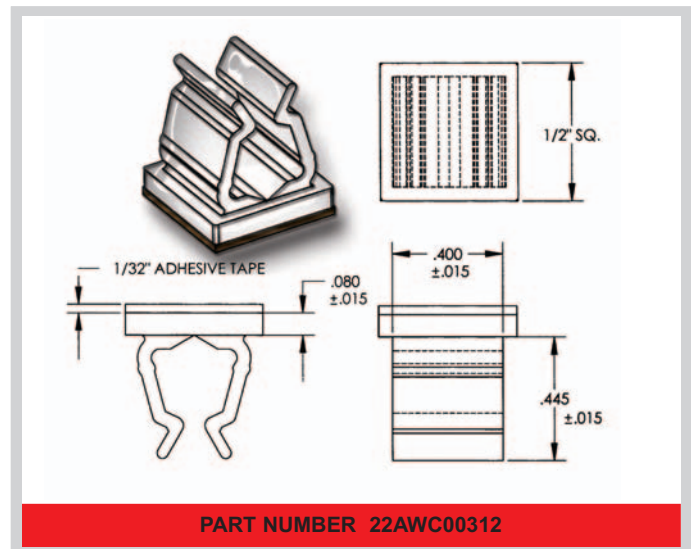
ALL DIMENSIONS +/- .015"



PART NUMBER 22AWC00375



PART NUMBER 22AWC00440

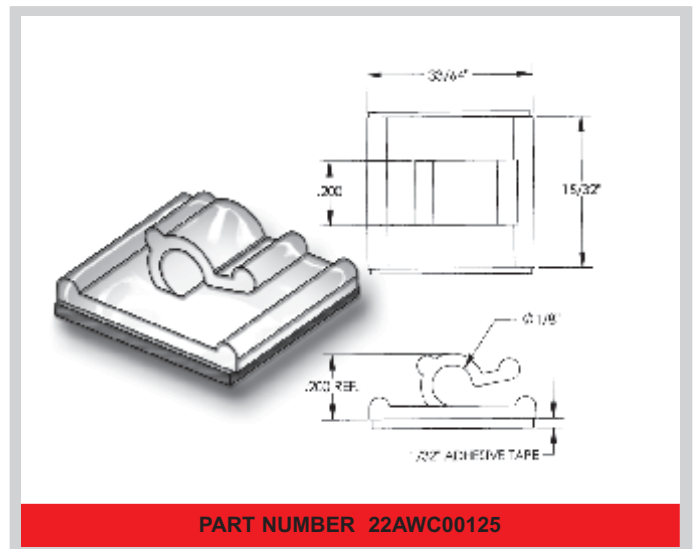
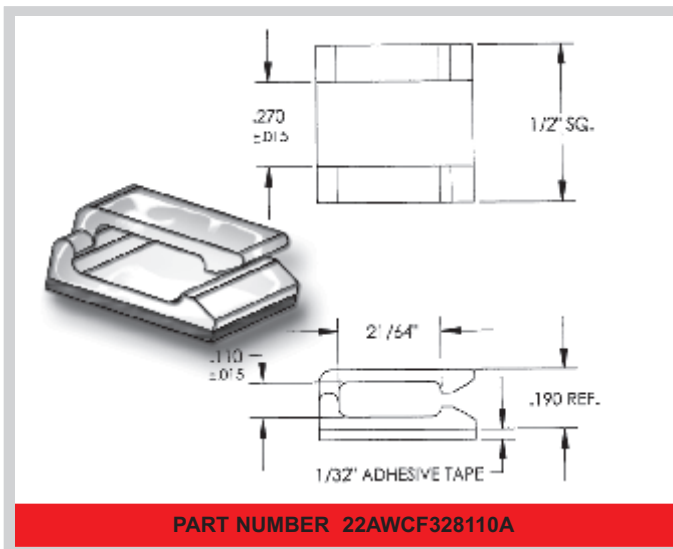
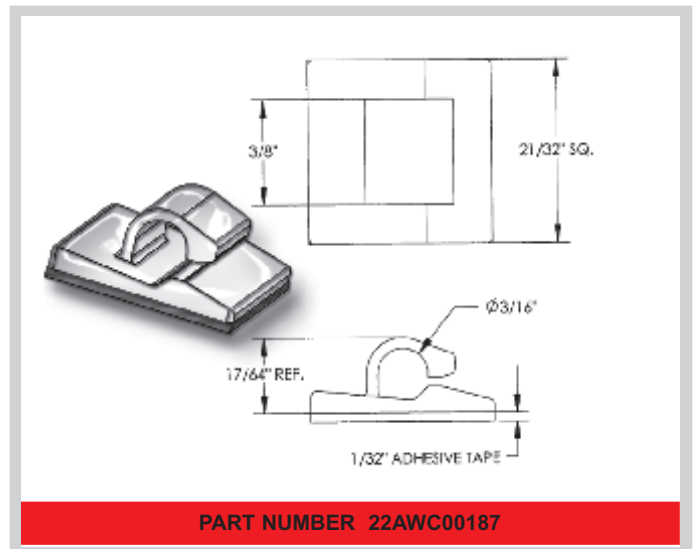
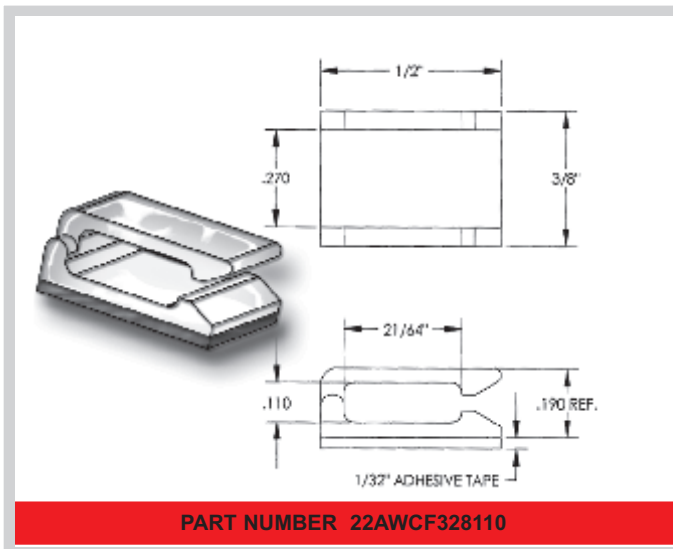
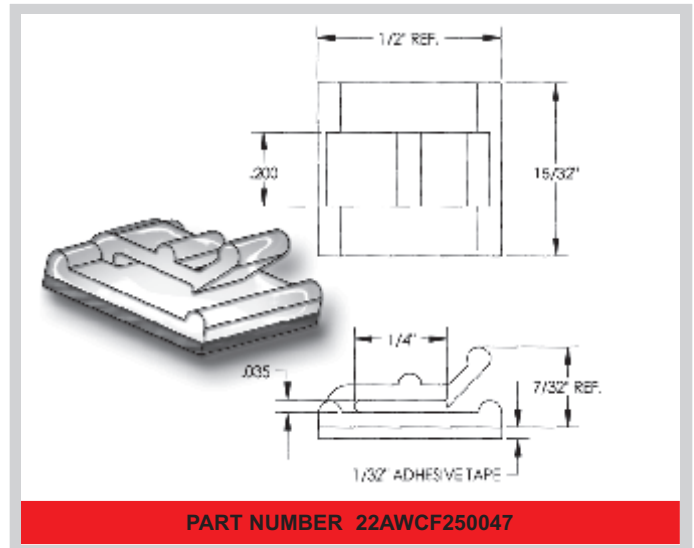
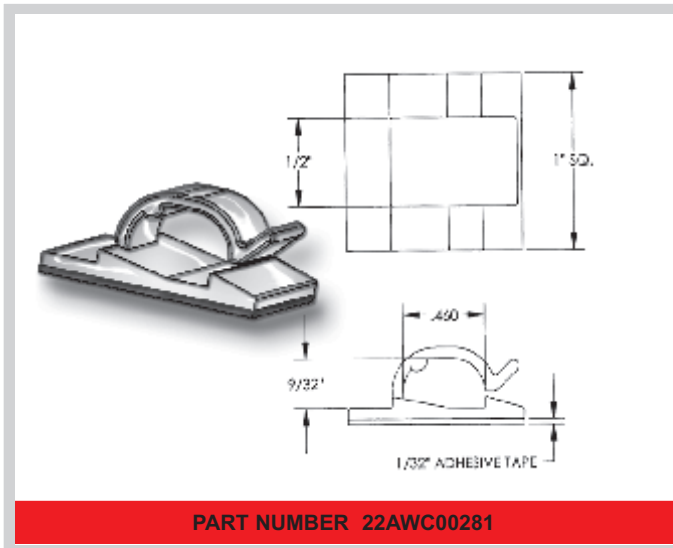


PART NUMBER 22AWC00312

# WIRE HANDLING HARDWARE

## RELEASABLE ADHESIVE BACKED WIRE CLIPS

SECTION  
VII

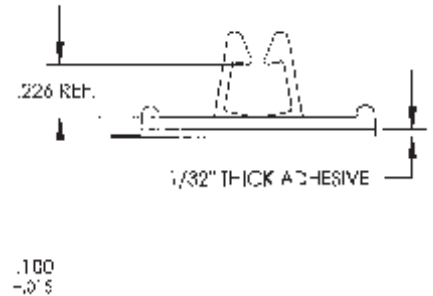
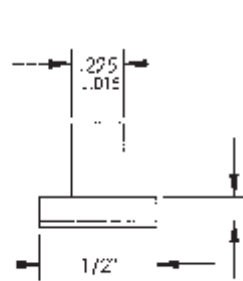
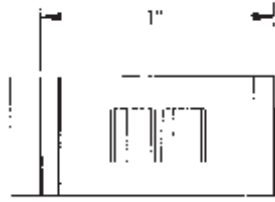
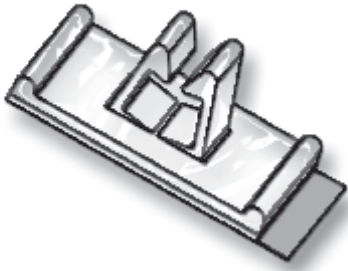


# WIRE HANDLING HARDWARE

## SECTION VII

### WIRE CLIP WITH TAB ADHESIVE BACKED

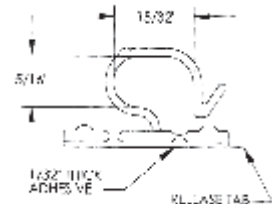
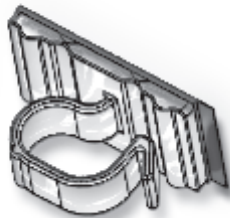
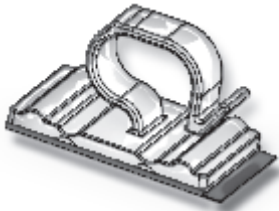
Micro Plastics' Adhesive Backed Wire Clip with handy release tab. Molded in natural colored Nylon 6/6 material. Clip is backed with double coated Polyethylene foam tape. Foam tape uses a strong and durable acrylic adhesive. Wire clip features a releasable clip design so wires can be removed after assembly.



ITEM NUMBER	LENGTH	CLIP THICKNESS	MOUNTING THICKNESS WITHOUT ADHESIVE	WIDTH	ADHESIVE WITH TAB
22AWC250220TAB	1" (25,40)	.225 (5,72)	.100 (2,54)	1/2" (12,70)	1/32" (7,94)

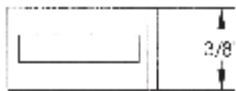
### CONTOUR CLIP

Micro Plastics announces the "Contour Clip." The adhesive-backed part incorporates new design consisting of a hinge type movement in the base which flexes to fit convex or concave surfaces. This flexible base allows the part to be used on cylindrical surfaces such as pipes or tubing, and on irregular surfaces - even around corners. The part is molded from nylon and is applied with our standard adhesive-backed tape with an extended paper liner for easy removal of the liner. The part is also available with 3m's VHB (very high bond) tape which develops a high-strength, epoxy type bonding. Simply add "VHB" to the end of the part number.

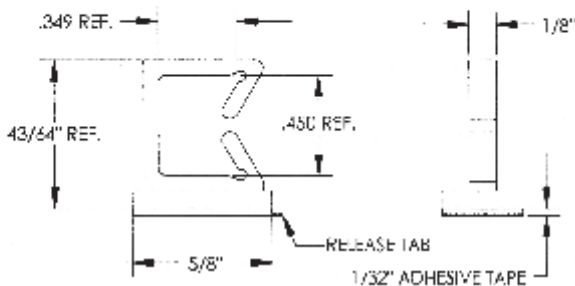


ITEM NUMBER	DESCRIPTION
22CAWC00440TAB	Contour Clip

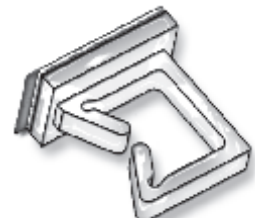
### RELEASABLE ADHESIVE BACKED WIRE CLIPS



#### New Product Line



Micro Plastics Releasable Adhesive Backed Wire Clip with handy release tab is used to route wires and cables. Molded in UL recognized Nylon 6/6 with double coated Polyethylene foam tape. Clip has side entry for ease of wire installation.

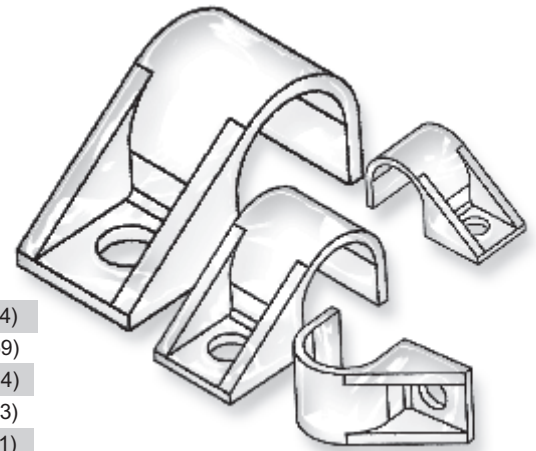
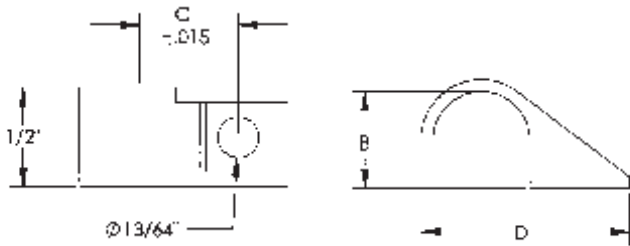


ITEM NUMBER	DESCRIPTION
22AWC350450TAB	Releasable Adhesive Clip



## HEAVY DUTY CABLE CLIPS

Micro Plastics' Nylon Heavy Duty Cable Clips are designed for cable and wire applications involving greater than usual loads or connections of critical nature. The rugged clip has reinforced side flanges for additional strength and rigidity. Compact design allows this clip to be used on corners, edges or where space is limited. Clip has hole for screw mounting. Available in size range for 1/8" to 1/2" diameter cable.



ITEM NUMBER	DESCRIPTION	"B"	"C"	"D" REF.
22HDCC1250	1/8" Hvy. dty. Clip	.115 (2,92)	.307 (7,80)	.675 (17,14)
22HDCC1720	3/16" Hvy. dty. Clip	.172 (4,37)	.328 (8,33)	.732 (18,59)
22HDCC2340	1/4" Hvy. dty. Clip	.234 (5,95)	.366 (9,30)	.793 (20,14)
22HDCC2970	5/16" Hvy. dty. Clip	.297 (7,54)	.400 (10,16)	.859 (21,83)
22HDCC3590	3/8" Hvy. dty. Clip	.359 (9,13)	.430 (10,92)	.910 (23,11)
22HDCC4220	7/16" Hvy. dty. Clip	.422 (10,72)	.460 (11,68)	.980 (24,89)
22HDCC4840	1/2" Hvy. dty. Clip	.484 (12,30)	.492 (12,50)	1.044 (26,52)

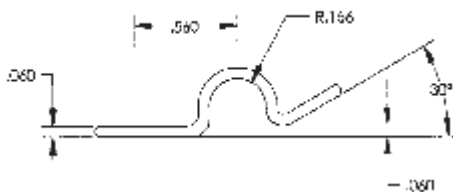
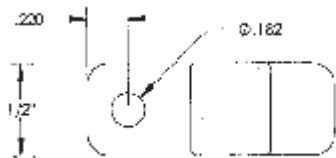


**WIRE CLIP**

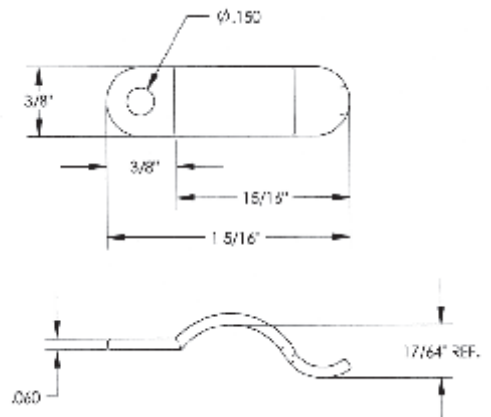
Micro Plastics' Nylon Wire Clip provide fast, secure assembly and routing of wires, standard round cable, flat cable and tubing. Micro Plastics' Nylon Spring Clips provide fast, secure assembly and routing of wires, standard round cable, flat cable and tubing. The Spring Clip can also be used to mount panels, glass, displays, or signs. To inspect, add or replace wires, simply pull back clip to allow placement. The tough, flexible nylon clip will spring back to hold the material securely. All contact edges are rounded for product protection.



**SPRING CLIP**



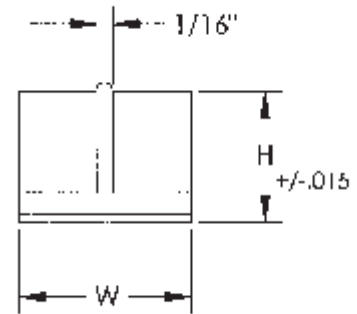
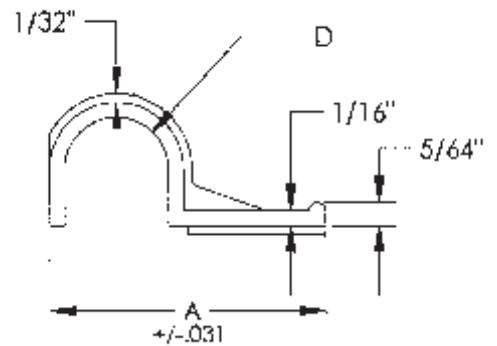
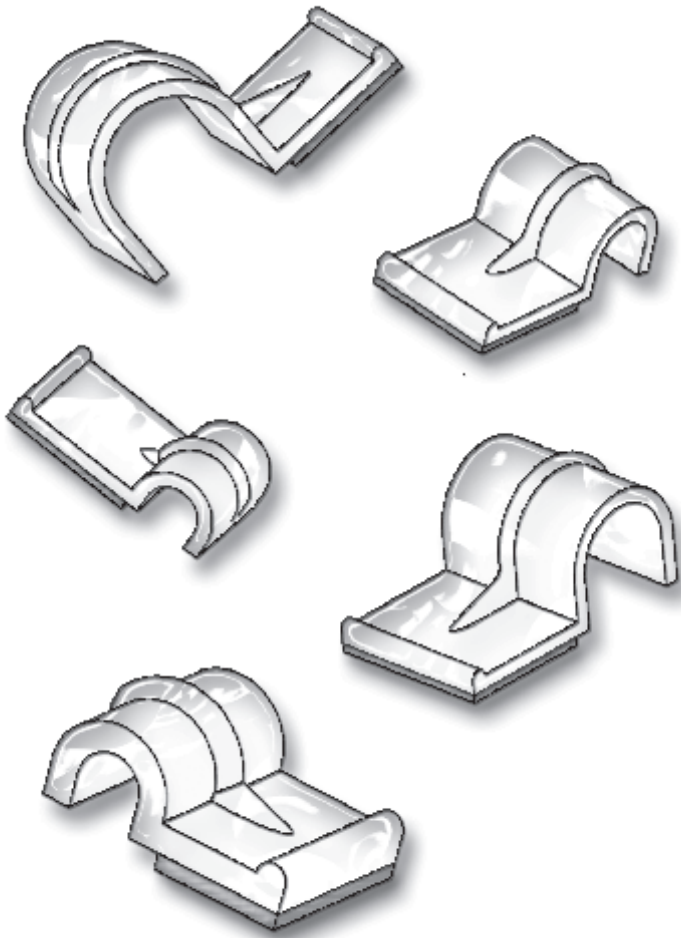
ITEM NUMBER	DESCRIPTION
22WC500312	1/2 (12,70) X .312 (7,94)



ITEM NUMBER	DESCRIPTION
22SCP375132	3/8 (9,53) X .132 (3,35)

## SINGLE ADHESIVE BACKED NYLON CABLE CLIPS

Micro Plastics' nylon Single press clips are the convenient and fast way to install wires and cable to almost any surface. Tough, corrosion resistant nylon 6/6 clip is backed with a quality foam adhesive tape. The single clip is designed to be used in areas where space is limited or in corners or edges and are supplied on easy-to-use perforated liner strips in sets of 6 to 10 pieces. To install, simply pull the clip off of the liner strip and press into place. No holes to drill or screw to turn. Nylon press clips provide a low in-place assembly that is quick and permanent. Polyethylene foam tape has excellent conformability, high temperature and solvent resistance and high ultimate bond strength.

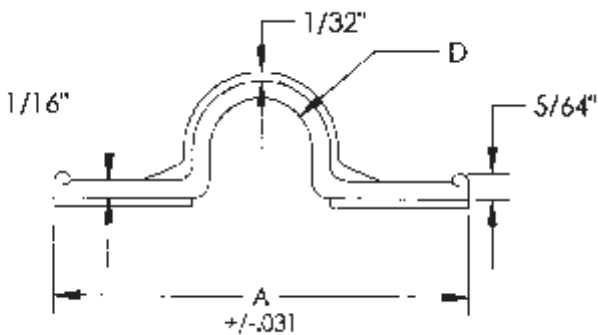
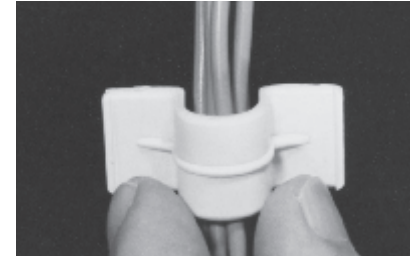


\*Packaged 50 pcs. per roll  
\*\*Packaged 100 pcs. per roll

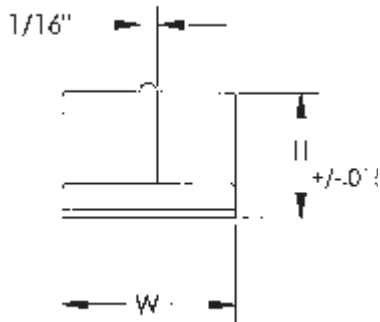
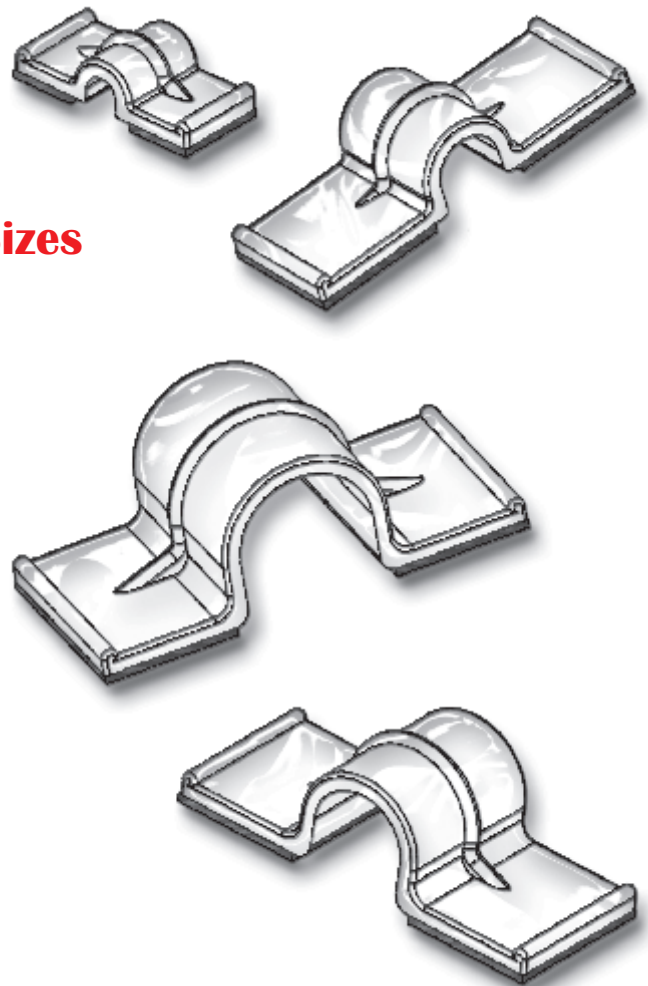
ITEM NUMBER	DESCRIPTION	"D"	"A" *	"H"	"W"
** 22SPC13037	1/8" SNGL CLIP	1/8" (3,18)	.493 (12,52)	.217 (5,51)	3/8" (9,53)
** 22SPC20000	13/64" SNGL CLIP	13/64" (5,16)	.808 (20,53)	.255 (6,48)	1/2" (12,70)
** 22SPC25550	1/4" SNGL CLIP	1/4" (6,35)	.865 (21,97)	.343 (8,71)	1/2" (12,70)
** 22SPC38562	3/8" SNGL CLIP	3/8" (9,53)	1.000 (25,40)	.475 (12,07)	5/8" (15,88)
* 22SPC50575	1/2" SNGL CLIP	1/2" (12,70)	1.125 (28,58)	.593 (15,06)	3/4" (19,05)

## DOUBLE ADHESIVE BACKED NYLON CABLE CLIPS

Micro Plastics' nylon double press clips are the convenient and fast way to install wires and cable to almost any surface. Tough, corrosion resistant nylon 6/6 clip is backed with a quality foam adhesive tape. The double clip design develops greater shear loads and holding power and are supplied on easy-to-use perforated liner strips in sets of 6 to 10 pieces. To install, simply pull the clip off of the liner strip and press into place. No holes to drill or screw to turn. Nylon press clips provide a low in-place assembly that is quick and permanent. Polyethylene foam tape has excellent conformability, high temperature and solvent resistance and high ultimate bond strength.



**New Sizes**



\*Packaged 50 pcs. per roll  
\*\*Packaged 100 pcs. per roll

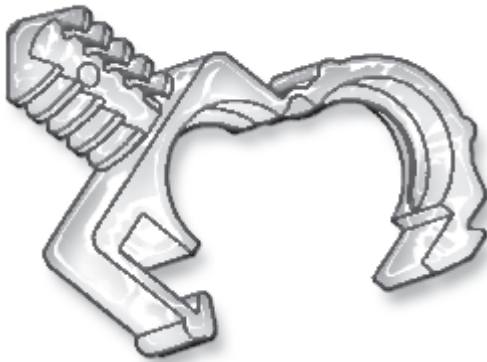
\* "A" DIM. +/- .031

ITEM NUMBER	DESCRIPTION	"D"	"A" *	"H"	"W"
** 22DPC13037	1/8" DBLE CLIP	1/8" (3,18)	.760 (19,30)	.216 (5,49)	3/8" (9,53)
** 22DPC15637	5/32" DBLE CLIP	5/32" (3,96)	1.281 (32,54)	.248 (6,30)	3/8" (9,53)
** 22DPC25550	1/4" DBLE CLIP	1/4" (6,35)	1.380 (35,05)	.326 (8,28)	1/2" (12,70)
* 22DPC38062	3/8" DBLE CLIP	3/8" (9,53)	1.505 (38,23)	.455 (11,56)	5/8" (15,88)
* 22DPC50575	1/2" DBLE CLIP	1/2" (12,70)	1.600 (40,64)	.580 (14,73)	3/4" (19,05)

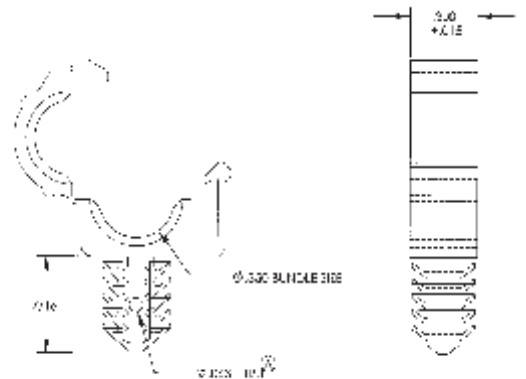
# WIRE HANDLING HARDWARE

SECTION  
**VII**

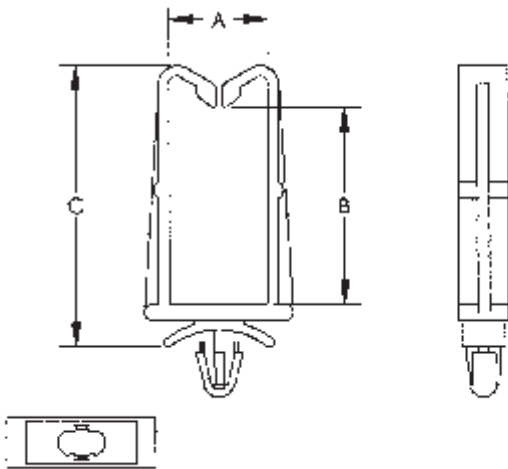
## "SPECIAL ITEM" RELEASABLE CLAMP ON FIN CLIP BASE



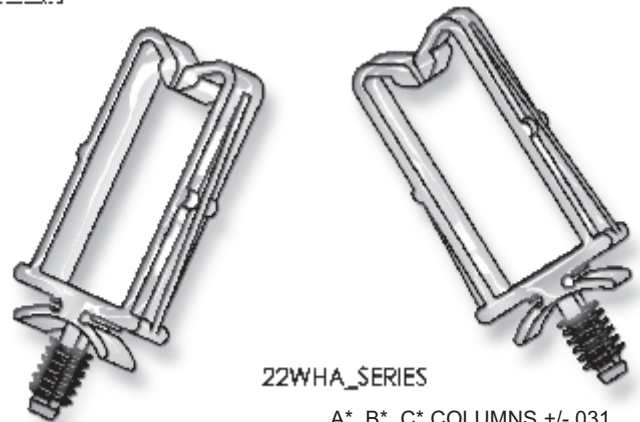
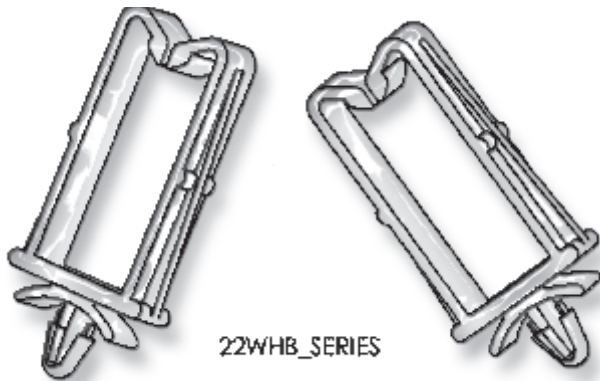
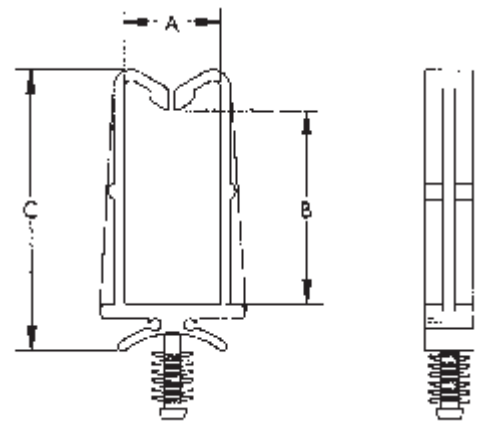
ITEM NUMBER  
**23RCFB035C**



## WIRE/CABLE HOLDERS



**METRIC Sizes  
Also Available**  
Page 240



A\* ,B\* , C\* COLUMNS +/- .031

Micro Plastics' Wire/Cable Holders are designed to mount into 3/16 hole diameters. Wire/Cable Holders can be used in a variety of panel thicknesses and materials. Sizes are available to handle wire bundle diameters from .375" to .500".

ITEM NUMBER	A*	B*	C*	HOLE DIA.	PANEL RANGE
<b>22WHA375050</b>	.375 (9,53)	.500 (12,70)	.922 (23,42)	.187 (4,76)	VARIABLE
<b>22WHA375075</b>	.375 (9,53)	.750 (19,05)	1.172 (25,40)	.187 (4,76)	VARIABLE
<b>22WHA500075</b>	.500 (12,70)	.750 (19,05)	1.219 (30,46)	.187 (4,76)	VARIABLE
<b>22WHA500100</b>	.500 (12,70)	1 (25,40)	1.469 (37,31)	.187 (4,76)	VARIABLE
<b>22WHB375050</b>	.375 (9,53)	.500 (12,70)	.922 (23,42)	.187 (4,76)	.030 (0,76)/.040 (1,02)
<b>22WHB375075</b>	.375 (9,53)	.750 (19,05)	1.172 (25,40)	.187 (4,76)	.030 (0,76)/.040 (1,02)
<b>22WHB500075</b>	.500 (12,70)	.750 (19,05)	1.219 (30,96)	.187 (4,76)	.030 (0,76)/.040 (1,02)
<b>22WHB500100</b>	.500 (12,70)	1 (25,40)	1.500 (38,10)	.187 (4,76)	.030 (0,76)/.040 (1,02)

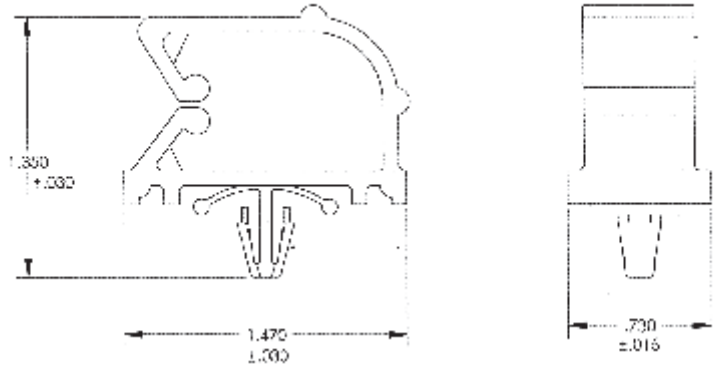
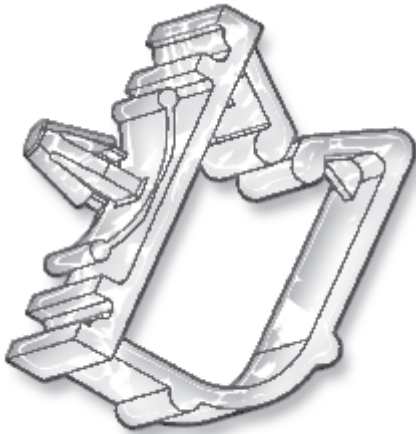


# WIRE HANDLING HARDWARE

SECTION  
VII

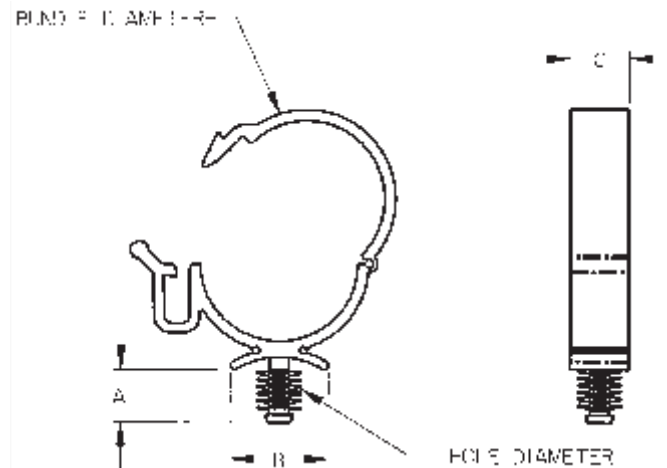
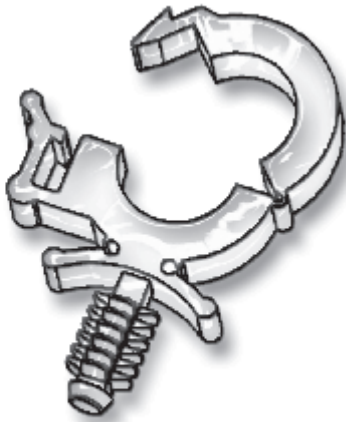
## WIRE CLIP WITH PUSH-IN MOUNT

Micro Plastics side entry wire routing clip with push-in mount.



ITEM NUMBER  
22SEWC750100

## RELEASABLE CLAMP ON FIN CLIP BASE

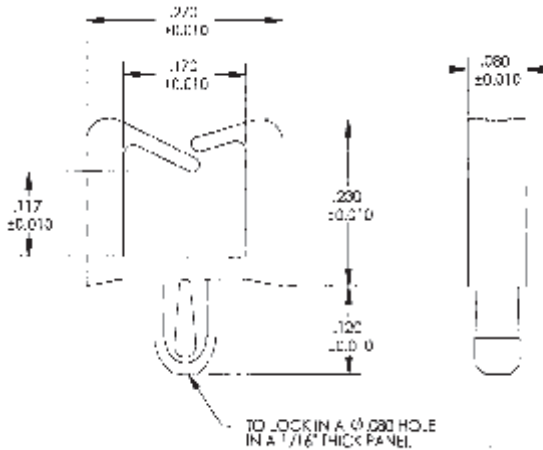


TOLERANCES +/- .015

ITEM NUMBER	A	B	C	BUNDLE DIA.	HOLE DIA.	PANEL RANGE
23RCFB037	.344 (8,74)	.562 (14,27)	.187 (4,75)	.375 (9,53)	.187 (4,75)	VARIABLE
23RCFB050	.344 (8,74)	.562 (14,27)	.187 (4,75)	.500 (12,70)	.187 (4,75)	VARIABLE
23RCFB05025	.344 (8,74)	.562 (14,27)	.187 (4,75)	.500 (12,70)	.250 (6,35)	VARIABLE
23RCFB100	.344 (8,74)	.625 (15,88)	.375 (9,53)	1 (25,40)	.250 (6,35)	VARIABLE

## MICRO WIRE CLIP

Micro Plastics micro wire clips are molded in Nylon 6/6 material. They can be used on densely packed PC boards or any other limited space applications. Holds up to ten 25 gauge wires (1/32 outside diameter). Wires install easily by pressing down on retaining arms which flex to accept wire then spring back into place.



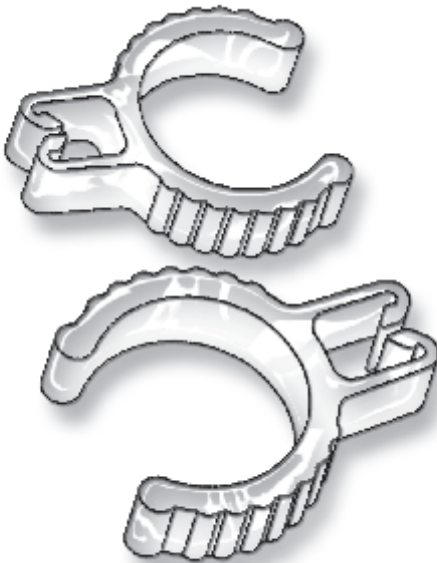
**Watch Instructional Video**  
[mms://www.microplastics.com/productvideos/MicroWireClip.asf](https://www.microplastics.com/productvideos/MicroWireClip.asf)

**ITEM NUMBER**

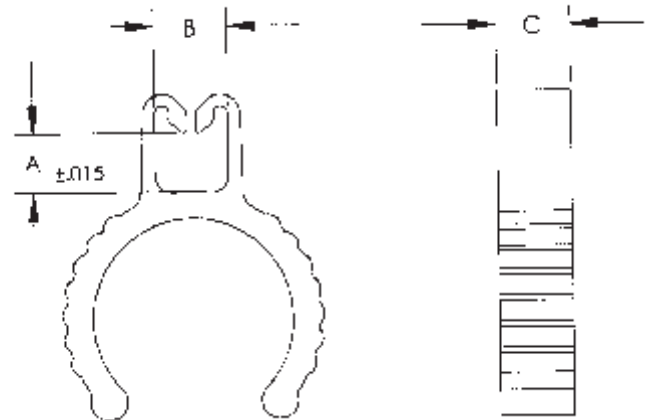
22MWC170120

## CONDUIT CLIPS

Various wiring, such as telephone wire, is often routed with electrical conduit. "Conduit clips" are designed to snap onto electrical conduit. The integrated wire-holder on the clip allows wiring to be secured to the conduit. Installation is faster and easier than with a wire tie, which is often used for this purpose. The clip can be easily removed if necessary. Two sizes are available for 1/2" and 3/4" ID conduit, which will accommodate various wire sizes up to 5/16" diameter. Parts are molded in light weight, chemical and corrosion resistant nylon 6/6.



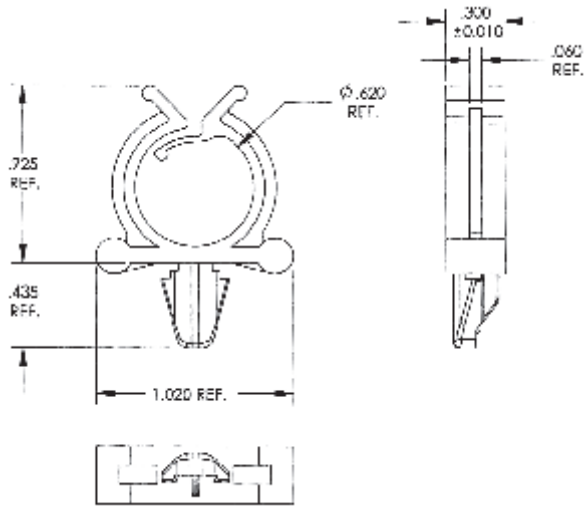
**PATENTED**



ITEM NUMBER	DESCRIPTION	A	B	C	CONDUIT SIZE
23CDC05025	1/2" CONDUIT CLIP	.200 (5,08)	.250 (6,35)	.250 (6,35)	1/2" (12,70)
23CDC07531	3/4" CONDUIT CLIP	.312 (7,92)	.312 (7,92)	.250 (6,35)	3/4" (19,05)

## CORD CLIP WITH PUSH MOUNT

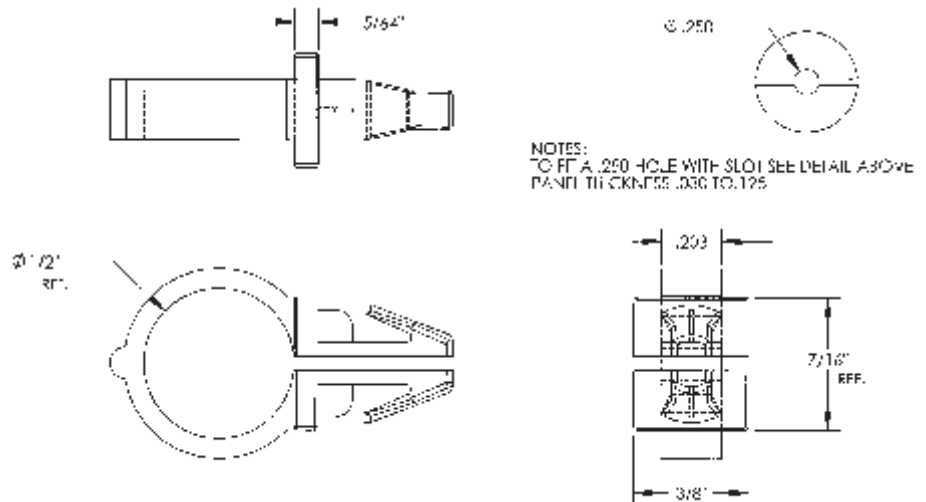
Micro Plastics cord clip is designed with a 5/8" (15,88) bundle diameter. To mount into a 1/4 (6,35) diameter hole. Cord clip is used to organize wires, cords and cables. Parts are molded in UL Recognized Nylon 6/6.



PART NUMBER	DESCRIPTION
22WCMP062250	CORD CLIP WITH PUSH MOUNT

## SPLIT WIRE ROUTING CLIP

The split wire routing design allows loading of wires by separating the cup at the split and then inserting the prongs of the clip into a hole in the panel.



PART NUMBER	DESCRIPTION
23SWRC250500	SPLIT WIRE ROUTING CLIP

# WIRE HANDLING HARDWARE

## SECTION VII

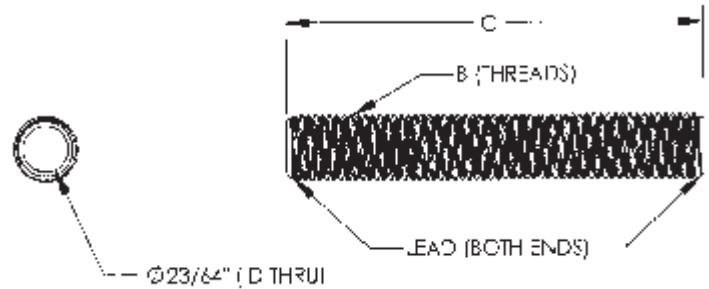
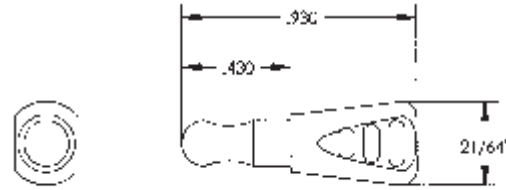
### DUMMY PLUGS



ITEM NUMBER

DP401030

Micro Plastics' Dummy Plugs are designed to electrically isolate unused bullet type "female" terminals in wiring harnesses, to prevent short circuits due to harness movement. Molded of tough electrically insulating black Nylon, these plugs are easily inserted with normal hand pressure and removable for addition of electrical accessories.



PARTS ARE MOLDED IN WHITE NYLON

### NYLON THREADED TUBING

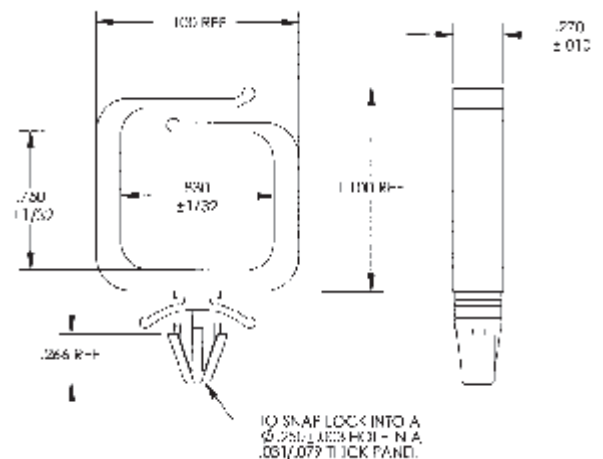
ITEM NUMBER	ID	B	C
04MP3500TT	23/64"	1/4-18 NPS	3 1/2" +/- 1/16"
04MP3250TT	23/64"	1/4-18 NPS	3 1/4" +/- 1/16"

### NYLON FUEL LINE CLIP

Micro Plastics' Fuel line Clip is molded Nylon 6/6 material that is resistant to oil and gasoline. Part snaps into a .031" to .079" panel thickness. Clip can be used for routing tubes and cables. Material is rated UL94-V2



**New Product Line**

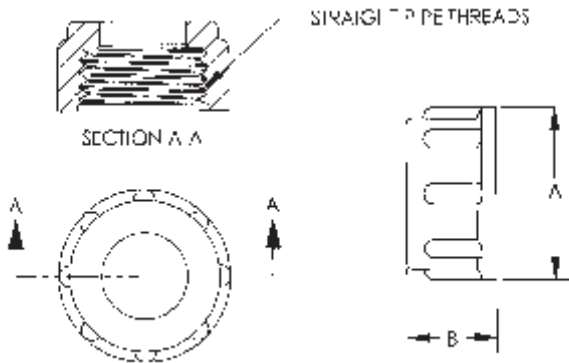


ITEM NUMBER

22FLC750830



Micro Plastics Threaded Lampcord Bushings are molded in tough Black Heat Stabilized Nylon (Underwriters Laboratories Rated 94V2, Temperature Index 105°C). Micro Plastics has available from stock the most popular sizes of Threaded Lampcord Bushings. These bushings are designed to protect the electrical lampcord from the knife-edge of the threaded pipe used in light fixtures. They will easily thread onto standard lamp fixture 1/8 NPS and 1/4 NPS threaded ends. Micro Plastics bushings will provide reliable, safe and insulated connections. Micro Plastics has available from stock the most popular sizes of Threaded Lampcord Bushings.



## THREADED LAMPCORD BUSHINGS

ITEM NUMBER	DESCRIPTION	A	B
04MP0125TLB	1/8 NPS	19/32" (15,08)	9/32" (7,14)
04MP0250TLB	1/4 NPS	23/32" (18,26)	3/8" (9,53)
04MP0375TLB	3/8 NPS	7/8" (22,23)	7/16" (11,11)
04MP0500TLB	1/2 NPS	1 1/16" (27,00)	3/8" (9,53)

04MP0500TLB



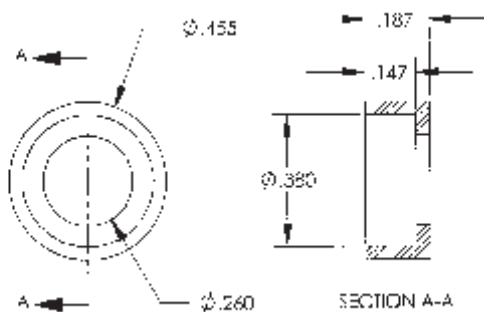
04MP0375TLB



04MP0250TLB



04MP0125TLB



Micro Plastics external lamp snap bushings are an economical approach to the protection of lampcord insulation, from the sharp and often burred ends of the standard threaded pipe used in lamp manufacture. Bushings are molded of Black Hi-density Polyethylene to allow flexibility for easy installation and durability for long lasting cord protection.



## LAMP SNAP BUSHING "external" MINIMUM ORDER QUANTITY 1000 PCS.

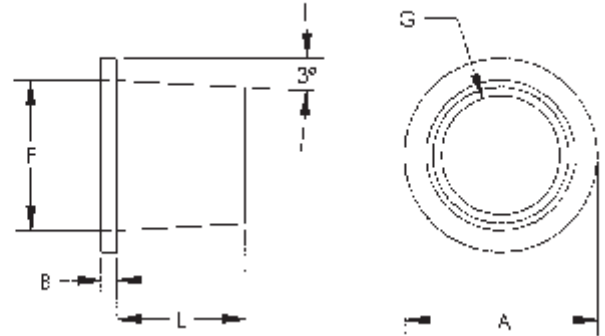
ITEM NUMBER	OD	ID	THICKNESS	COUNTER BORE DIAMETER	COUNTER BORE DEPTH
04MP0125SBOD	.455 (11,56)	.260 (6,60)	.187 (4,75)	.380 (9,65)	.147 (3,73)

# WIRE HANDLING HARDWARE

## SECTION VII

Micro Plastics Lamp Snap Bushings are an economical approach to the protection of lamp-cord insulation, from the sharp and often burred ends of the standard threaded pipe used in lamp manufacture. Bushings are molded of black Hi-density Polyethylene, to allow flexibility for easy installation, and durability for long lasting cord protection.

Minimum order quantity 1,000 pieces.

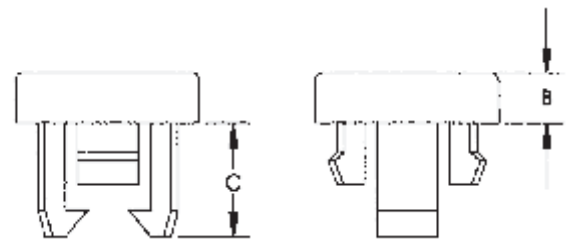
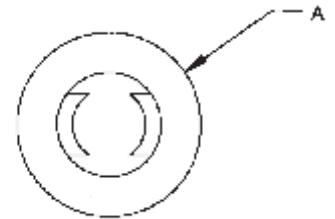


## LAMP SNAP BUSHINGS "internal"

ITEM NUMBER	DESCRIPTION	L	A	B	F	G
04MP0125SB	1/8" SNAP	1/4" (6,35)	3/8" (9,53)	1/32" (0,79)	.290 (7,37)	.230 (5,84)
04MP0250SB	1/4" SNAP	15/32" (11,9)	27/64" (10,72)	1/32" (0,79)	.375 (9,53)	.312 (7,94)



Micro Plastics' LED Holders have been designed for standard T-1 3/4" LEDs. Snap LED Holder into the panel, then snap the LED into the holder. LED Holders are molded of black heat stabilized Nylon.

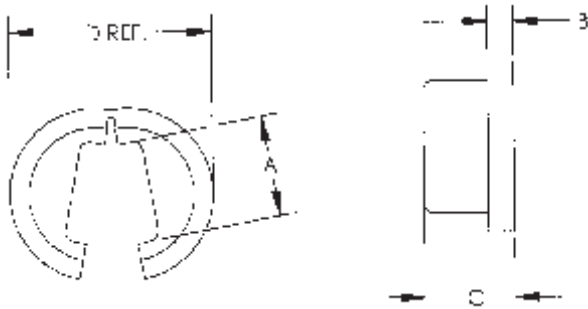


## LED HOLDERS

FOR STANDARD LED T - 1 3/4

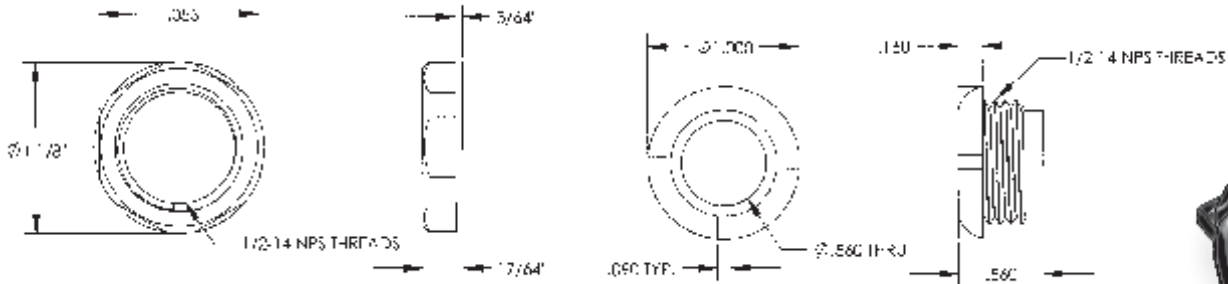
ITEM NUMBER	A	B	C	HOLE SIZE	PANEL RANGE
27LEDH01	.317 (8,05)	.025 (0,64)	.250 (6,35)	.240 / .247 (6,10) / (6,27)	.070 (1,78)
27LEDH02	.357 (9,07)	.098 (2,49)	.220 (5,59)	.281 / .287 (7,14) / (7,29)	.046 (1,17)

Micro Plastics' exclusive anti-twist design was developed to eliminate the electrical cord from twisting inside the lamp. Anti-Twist Bushings' convenient opening allows it to slip easily around the cord. When the Lampcord Bushing is threaded over the cord the two bushings slip together allowing for easy installation onto any standard lamp fixture. Anti-Twist Bushing fits a 1/8" pipe thread and accommodates a standard cord size of SPT-1, 18,2. The bushing was designed to be used with Micro Plastics' standard 1/8" Lamp Cord Bushing. Other sizes will be tooled upon request.



## ANTI-TWIST BUSHING

ITEM NUMBER	DESCRIPTION	A	B	C	D Ref.
04MP0125ATB	1/8" ANTI-TWIST	.195 (4,95)	.050 (1,27)	.175 (4,44)	.390 (9,91)
04MP0250ATB	1/4" ANTI-TWIST	.195 (4,95)	.050 (1,27)	.175 (4,44)	.500 (12,70)



Micro Plastics' two piece Nylon threaded bushings are designed to protect wiring, cables, or hoses from sharp or raw edges in a panel. Two piece Nylon threaded bushings are molded of black Nylon 6/6.

## 2 PC. NYLON THREADED BUSHING

ITEM NUMBER	THICKNESS	NUT DIMENSIONS	
		WRENCHING FLATS	THREAD
04MP0500TB	17/64" (6,75)	1-1/16" (27,00)	1/2 NPS



# WIRE HANDLING HARDWARE

## SECTION VII

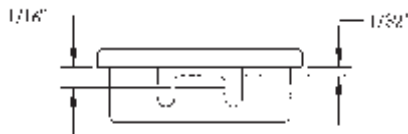
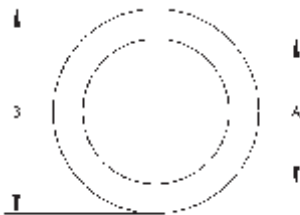
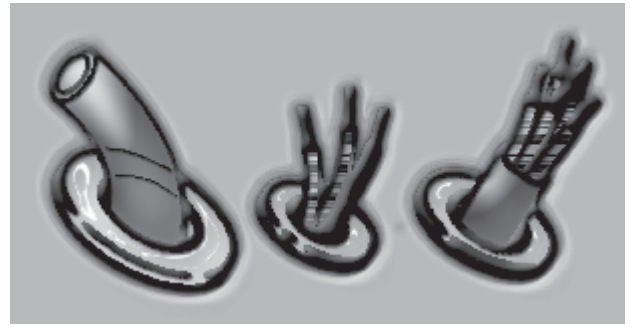
Micro Plastics bushings provide economical protection for wire, cable tubing, and hose from sharp, uneven drilled or punched holes in sheet metal.

The tough, resilient heat stabilized nylon bushings are easily and positively snapped into position without tools.

The bushings are the economical solution to insulate wire, cables, etc. from raw edges in compact designs where internal clearances are critical. Miniature bushings accommodate panels up to 1/16" thickness and require only 1/8" clearance.

- \* MATERIAL HEAT STABILIZED NYLON UL 94V2
- \* TEMPERATURE INDEX 105 ° C
- \* STOCKED IN STANDARD BLACK
- \* COLORS AVAILABLE ON REQUEST

**NOTE: +/- .015" TOLERANCES on A, B and C DIMENSIONS.**

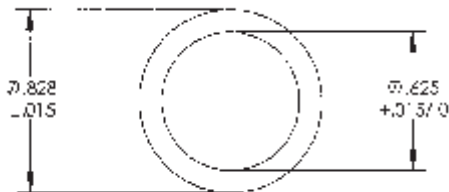


## MINIATURE INSULATING BUSHINGS

PART NUMBER	INSIDE DIA. * "A"	HEAD DIA. * "B"	THICKNESS * "C"	HOLE DIA. (PANEL)
22MP01010	.125 (3,2)	.250 (6,4)	.234 (6,2)	.187 (4,8)
22MP01015	.250 (6,4)	.375 (9,5)	.234 (6,2)	.312 (8,0)
22MP01020	.343 (8,8)	.531 (13,5)	.250 (6,4)	.468 (11,9)
22MP01030	.375 (9,5)	.562 (14,3)	.250 (6,4)	.500 (12,7)
22MP01040	.406 (10,3)	.593 (15,2)	.250 (6,4)	.531 (13,5)
22MP01050	.500 (12,7)	.703 (17,9)	.250 (6,4)	.625 (15,9)
22MP01060	.625 (16,0)	.828 (21,0)	.250 (6,4)	.750 (19,0)
22MP01070	.625 (16,0)	.859 (21,5)	.250 (6,4)	.781 (19,9)
22MP01080	.750 (19,0)	.937 (23,8)	.250 (6,4)	.875 (22,2)

ALL ITEMS PACKAGED 1,000 PER BAG

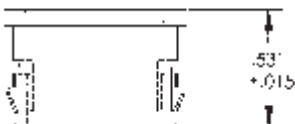
## STANDARD INSULATING BUSHING



NOTE:  
HOLE DIAMETER - .750  
MAXIMUM THICKNESS - .250



## New Product Line



PART NUMBER  
22MP07525



# WIRE HANDLING HARDWARE

SECTION  
VII

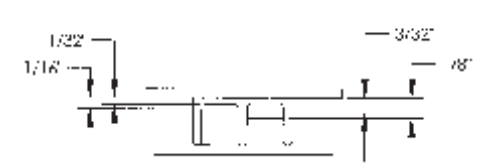
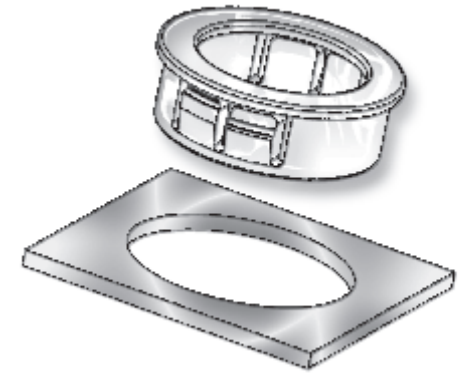
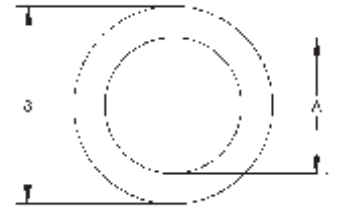
These bushings are available in a large selection of sizes from 1/4" to 2" in various inside diameter openings. Standard bushings are designed with multiple locks to positively snap in panels ranging from 1/32" to 1/8" thickness.

Standard bushings meet Underwriters Laboratories and Canadian Standards Association temperature and pull-out tests.

**NOTE: +/- .015" TOLERANCES on A,B and C DIMENSIONS.**

## STANDARD INSULATING BUSHINGS

DESCRIPTION ITEM NUMBER	PART DIMENSIONS			CHASSIS DIMENSIONS	
	INSIDE DIA. "A"	HEAD DIA. "B"	THICKNESS "C"	HOLE DIA.	MAXIMUM THICKNESS
*22MP02502	.125 (3,2)	.312 (8,0)	.312 (8,0)	.250 (6,6)	.062 (1,6)
*22MP03123	.187 (4,8)	.375 (9,5)	.312 (8,0)	.312 (8,0)	.062 (1,6)
*22MP03753	.187 (4,8)	.468 (11,9)	.406 (10,3)	.375 (9,5)	.125 (3,2)
*22MP03754	.250 (6,4)	.468 (11,9)	.406 (10,3)	.375 (9,5)	.125 (3,2)
*22MP04374	.250 (6,4)	.531 (13,5)	.406 (10,3)	.437 (11,1)	.125 (3,2)
*22MP04375	.312 (8,0)	.531 (13,5)	.406 (10,3)	.437 (11,1)	.125 (3,2)
*22MP04376	.243 (6,2)	.531 (13,5)	.406 (10,3)	.437 (11,1)	.125 (3,2)
*22MP05004	.250 (6,4)	.578 (14,7)	.406 (10,3)	.500 (12,7)	.125 (3,2)
*22MP05005	.312 (8,0)	.578 (14,7)	.406 (10,3)	.500 (12,7)	.125 (3,2)
*22MP05006	.375 (9,5)	.578 (14,7)	.406 (10,3)	.500 (12,7)	.125 (3,2)
*22MP05625	.312 (8,0)	.656 (16,7)	.406 (10,3)	.562 (14,3)	.125 (3,2)
*22MP05626	.375 (9,5)	.656 (16,7)	.406 (10,3)	.562 (14,3)	.125 (3,2)
*22MP05627	.437 (11,1)	.656 (16,7)	.406 (10,3)	.562 (14,3)	.125 (3,2)
*22MP06254	.250 (6,4)	.718 (18,2)	.406 (10,3)	.625 (15,9)	.125 (3,2)
*22MP06257	.437 (11,1)	.718 (18,2)	.406 (10,3)	.625 (15,9)	.125 (3,2)
*22MP06258	.500 (12,7)	.718 (18,2)	.406 (10,3)	.625 (15,9)	.125 (3,2)
*22MP06878	.500 (12,7)	.781 (19,8)	.406 (10,3)	.687 (17,5)	.125 (3,2)
*22MP06879	.562 (14,3)	.781 (19,8)	.406 (10,3)	.687 (17,5)	.125 (3,2)
*22MP07506	.375 (9,5)	.843 (21,4)	.406 (10,3)	.750 (19,1)	.125 (3,2)
*22MP07508	.500 (12,7)	.843 (21,4)	.406 (10,3)	.750 (19,1)	.125 (3,2)
*22MP07509	.562 (14,3)	.843 (21,4)	.406 (10,3)	.750 (19,1)	.125 (3,2)
*22MP07510	.625 (15,9)	.843 (21,4)	.406 (10,3)	.750 (19,1)	.125 (3,2)
*22MP08109	.562 (14,3)	.890 (22,6)	.406 (10,3)	.812 (20,6)	.125 (3,2)
*22MP08110	.625 (15,9)	.890 (22,6)	.406 (10,3)	.812 (20,6)	.125 (3,2)
**22MP08706	.375 (9,5)	.953 (24,2)	.453 (11,5)	.875 (22,2)	.125 (3,2)
**22MP08707	.437 (11,1)	.953 (24,2)	.453 (11,5)	.875 (22,2)	.125 (3,2)
**22MP08708	.500 (12,7)	.953 (24,2)	.453 (11,5)	.875 (22,2)	.125 (3,2)
**22MP08709	.562 (14,3)	.953 (24,2)	.453 (11,5)	.875 (22,2)	.125 (3,2)
**22MP08710	.625 (15,9)	.953 (24,2)	.453 (11,5)	.875 (22,2)	.125 (3,2)
**22MP08711	.687 (17,4)	.953 (24,2)	.453 (11,5)	.875 (22,2)	.125 (3,2)
**22MP10012	.750 (19,0)	1.125 (28,6)	.453 (11,5)	1.000 (25,4)	.125 (3,2)
**22MP10913	.812 (20,6)	1.218 (30,9)	.453 (11,5)	1.093 (27,8)	.125 (3,2)
**22MP10914	.875 (22,2)	1.218 (30,9)	.453 (11,5)	1.093 (27,8)	.125 (3,2)
**22MP10915	.937 (23,8)	1.218 (30,9)	.453 (11,5)	1.093 (27,8)	.125 (3,2)
***22MP11815	.937 (23,8)	1.312 (33,3)	.453 (11,5)	1.187 (30,2)	.125 (3,2)
***22MP12515	.937 (23,8)	1.359 (34,5)	.453 (11,5)	1.250 (31,7)	.125 (3,2)
***22MP13716	1.000 (25,4)	1.468 (37,3)	.453 (11,5)	1.375 (34,9)	.125 (3,2)
***22MP15017	1.062 (27,0)	1.609 (40,9)	.453 (11,5)	1.500 (38,1)	.125 (3,2)
***22MP15018	1.125 (28,5)	1.609 (40,9)	.453 (11,5)	1.500 (38,1)	.125 (3,2)
***22MP15021	1.312 (33,3)	1.609 (40,9)	.453 (11,5)	1.500 (38,1)	.125 (3,2)
***22MP17522	1.375 (34,9)	1.875 (47,6)	.453 (11,5)	1.750 (44,4)	.125 (3,2)
***22MP20026	1.625 (41,2)	2.125 (54,0)	.453 (11,5)	2.000 (50,8)	.125 (3,2)

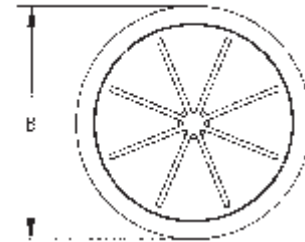


\* Minimum order quantity 1,000 pieces.  
 \*\* Minimum order quantity 500 pieces.  
 \*\*\* Minimum order quantity 250 pieces.

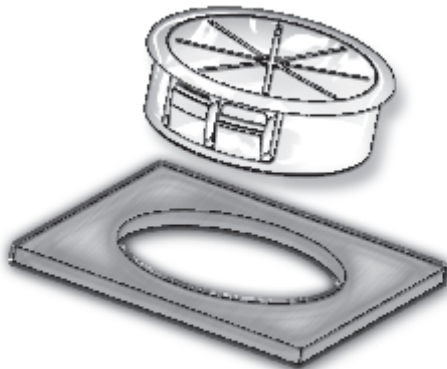
# WIRE HANDLING HARDWARE

## SECTION VII

Micro Plastics Nylon "ALL-FIT" Adjustable Bushings are designed to protect wire, cable, tubing or irregular shaped items from sharp, unfinished edges. The specially designed, resilient multiple supports absorb shock and vibration, and adjust to accept various diameters and shapes. The All-Fit Bushing is equipped with multiple locks to positively snap in panel thicknesses ranging from 1/32" to 1/8".



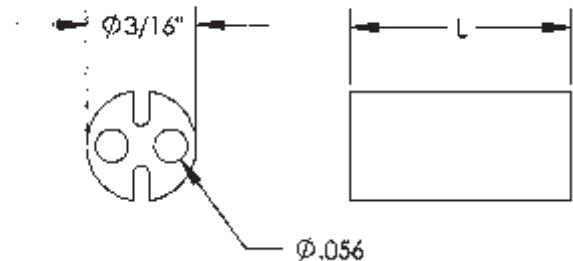
- \* MATERIAL HEAT STABILIZED NYLON UL 94V2
- \* TEMPERATURE INDEX 105 ° C
- \* STOCKED IN STANDARD BLACK
- \* WHITE AVAILABLE ON REQUEST



## ALL-FIT ADJUSTABLE BUSHINGS

DESCRIPTION ITEM NUMBER	CHASSIS HOLE DIA.	DIMENSIONS MAXIMUM THICKNESS		HEAD DIA. *B	PART DIMENSIONS THICKNESS *C	MAXIMUM I.D.
22AF0625	.625 (15,9)	.125 (3,2)	.718 (18,2)	.406 (10,3)	.437 (11,1)	
22AF0750	.750 (19,0)	.125 (3,2)	.859 (21,8)	.390 (9,9)	.500 (12,7)	
22AF0812	.812 (20,6)	.125 (3,2)	.890 (22,6)	.390 (9,9)	.500 (12,7)	
22AF0875	.875 (22,2)	.125 (3,2)	.937 (23,8)	.453 (11,5)	.562 (14,2)	
22AF1000	1.000 (25,4)	.125 (3,2)	1.062 (26,9)	.453 (11,5)	.750 (19,0)	
22AF1093	1.093 (27,8)	.125 (3,2)	1.156 (29,3)	.453 (11,5)	.812 (20,6)	
22AF1250	1.250 (31,75)	.125 (3,1)	1.360 (34,5)	.453 (11,5)	.875 (22,2)	

MINIMUM ORDER QUANTITY 1,000 PIECES. \* +/- .015 TOLERANCE



## LED SPACER

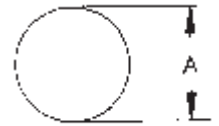
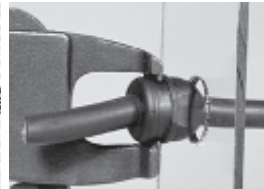
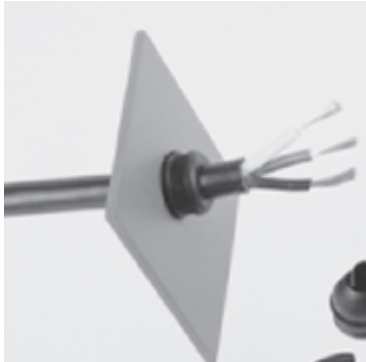
ITEM NUMBER	OD	ID	LENGTH
27LED2SP0250	3/16" (4,76)	.056" (1,42)	1/4" (6,35)
27LED2SP0375	3/16" (4,76)	.056" (1,42)	3/8" (9,53)
27LED2SP0500	3/16" (4,76)	.056" (1,42)	1/2" (12,70)

# WIRE HANDLING HARDWARE

SECTION  
VII

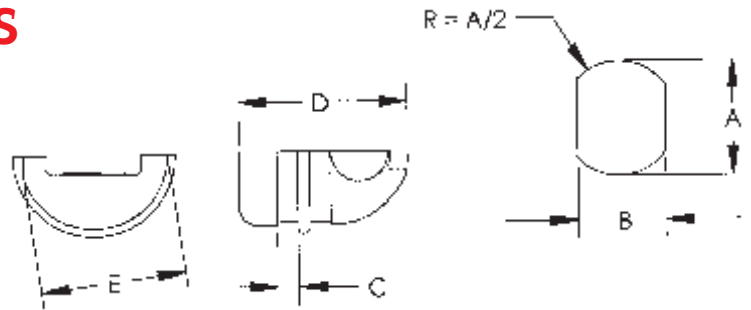
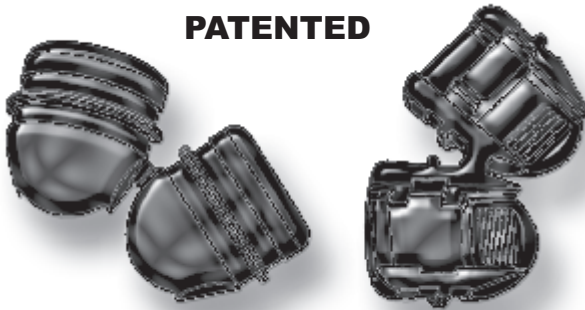
Micro Plastics New (**Patented**) "EZ" Strain Relief Bushing is designed to save money. This Strain Relief Bushing eliminates several costly and fatigue prone assembly steps. To install, the

"EZ" Bushing hinged halves are simply folded over the wire or cable. No special orientation or alignment is necessary! Conventional Strain Relief Pliers are applied to the specially designed gripped grooves and the bushing is inserted and locked in place in one smooth motion. The "EZ" Strain Relief Bushing design incorporates a bullet shaped, streamlined nose and does away with the large cumbersome straps that complicate the assembly of the conventional style bushing in confined areas. Micro Plastics "EZ" Strain Relief Bushings securely anchor, absorb and protect cables and wires from push/pull and twist forces and insulate them from irregular or sharp panel edges. These tough nylon bushings meet all Underwriters Laboratories stringent pull-out and temperature specifications. Stock sizes in black H.S. Nylon, temperature index 105° Centigrade (U.L. rated 94V2). Micro Plastics can tool other sizes upon request.



## "EZ" STRAIN RELIEF BUSHINGS

**PATENTED**



**\*EASILY INSTALLED**  
**\*SECURE IN USE**

**\*COMPETITIVELY PRICED**  
**\*FULLY APPROVED**

### DIMENSIONS

#### MOUNTING HOLE

#### BUSHINGS

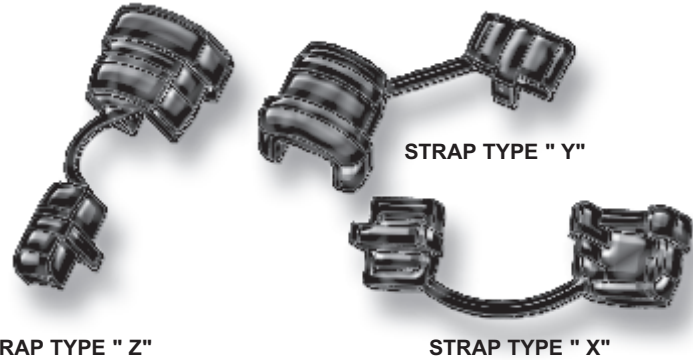
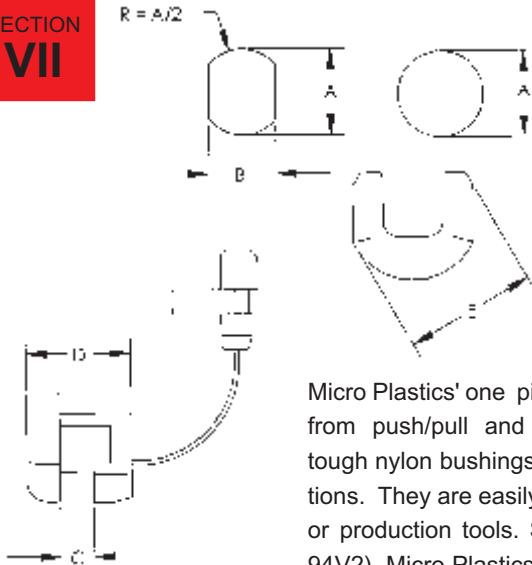
ITEM NUMBER	UL/CSA DESCRIPTION	CROSS SECTION	CABLE SIZE	CABLE TYPE	GAUGE (AWG)	DIAMETER A	FLATS B	MAX PANEL THICKNESS C	LENGTH D	WIDTH E
23MP04KEZS*	MP4KEZS	Flat	0.150 X 0.280 (3,8 X 7,1)	SPT	18/2	0.500 (12,7)	0.465 (11,8)	0.100 (2,5)	0.580 (14,7)	0.510 (12,9)
			0.150 X 0.280 (3,8 X 7,1)	SPT	16/2	0.500 (12,7)	0.465 (11,8)	0.100 (2,5)		
23MP04NEZH*	MP4NEZH	Flat	0.150 X 0.280 (3,8 X 7,1)	HPN	18/2	0.500 (12,7)	0.465 (11,8)	0.062 (1,6)	0.550 (14,0)	0.505 (12,8)
23MP04NEZS*	MP4NEZS	Flat	0.150 X .280 (3,8 X 7,1)	SPT	18/2	0.500 (12,7)	0.465 (11,8)	0.062 (1,6)	0.570 (14,4)	0.500 (12,7)
			0.160 X 0.300 (4,1 X 7,6)	SPT	16/2	0.500 (12,7)	0.465 (11,8)	0.062 (1,6)		
23MP06N34EZ*	MP6N34EZ	Round	0.300 (7,2)	SJT	16/3	0.625 (15,9)	0.550 (14,0)	0.062 (1,6)	0.655 (16,6)	0.585 (14,9)
			0.355 (9,0)	SJ	16/3	0.625 (15,9)	0.550 (14,0)	0.062 (1,6)		
			0.405 (10,2)	SJT	18/3	0.625 (15,9)	0.550 (14,0)	0.062 (1,6)		

\*MINIMUM ORDER QUANTITY 1,000 PIECES. \*\*MINIMUM ORDER QUANTITY 500 PIECES. \*\*\*MINIMUM ORDER QUANTITY 250 PIECES. \*\*\*\*MINIMUM ORDER QUANTITY 100



# WIRE HANDLING HARDWARE

## SECTION VII



Micro Plastics' one piece Strain Relief Bushings securely anchor, absorb and protect cables and wires from push/pull and twist forces and insulate them from irregular or sharp panel edges. These tough nylon bushings meet all Underwriters Laboratories' stringent pull-out and temperature specifications. They are easily and quickly installed with Micro Plastics special installation pliers or other hand or production tools. Stock sizes in black H.S. Nylon, temperature index 105° Centigrade (U.L. rated 94V2). Micro Plastics can tool other sizes upon request.

## STRAIN RELIEF BUSHINGS

DESCRIPTION	DIMENSIONS										
	MOUNTING HOLE						BUSHINGS				
ITEM NUMBER	UL/CSA DESCRIPTION	CROSS SECTION	CABLE SIZE	CABLE TYPE	GAUGE (AWG)	STRAP TYPE	DIAMETER A	FLATS B	MAX PANEL THICKNESS C	LENGTH D	WIDTH E
23MP02M40*	MP2M4	Round	0.156 X 0.187 (3,9 X 4,7)	AWN	14	"Y"	0.375 (9,5)	.0330 (8,4)	0.062 (1,6)	0.410 (10,4)	0.391 (9,9)
23MP02M50*	MP2M5	Round	0.125 X 0.156 (3,2 X 3,9)	AWN	16	"Y"	0.375 (9,5)	0.330 (8,4)	0.062 (1,6)	0.410 (10,4)	0.391 (9,9)
23MP02L10*	MP2L1	Flat	0.120 X 0.220 (3,0 X 3,9)	SPT-1	18/2	"Y"	0.375 (9,5)	0.330 (8,4)	0.125 (3,2)	0.410 (10,4)	0.420 (10,7)
23MP02P40*	MP2P4	Flat	0.120X0.220 (3,0 X 5,6)	SPT-1	18/2	"Y"	.0375 (9,5)	0.330 (8,4)	0.062 (1,6)	0.410 (10,4)	0.420 (10,7)
23MP03P40*	MP3P4	Flat	0.120 X 0.220 (3,0 X 5,6)	SP-1 SPT-1	18/2 18/2	"Y"	0.437 (11,1)	0.390 (9,9)	0.062 (1,6)	0.410 (10,4)	0.484 (12,3)
23MP04K10*	MP4K1	Flat	0.150 X 0.400 (3,8 X 10,1) 0.160 X 0.300 (4,1 X 7,6) 0.160 X 0.300 (4,1 X 7,6) 0.150 X 0.280 (3,8 X 7,1) 0.150 X 0.280 (3,8 X 7,1)	SPT-2 HPN SPT-2 HPN SPT-2	18/3 16/2 16/2 18/2 18/2	"Y"	0.500 (12,7)	0.460 (11,7)	0.095 (2,4)	0.495 (12,6)	0.565 (14,4)
23MP04K1Z*	MP4K1Z	Flat	0.150 X 0.400 (3,8 X 10,1) 0.160 X 0.300 (4,1 X 7,6) 0.160 X 0.300 (4,1 X 7,6) 0.150 X 0.280 (3,8 X 7,1) 0.150 X 0.280 (3,8 X 7,1)	SPT-2 HPN SPT-2 HPN SPT-2	18/3 16/2 16/2 18/2 18/2	"Z"	0.500 (12,7)	0.460 (11,7)	0.095 (2,4)	0.495 (12,6)	0.565 (14,4)
23MP04L10	MP4L10	Flat	0.150 X 0.400 (3,8 X 10,1) 0.160 X 0.300 (4,1 X 7,6) 0.160 X 0.300 (4,1 X 7,6) 0.150 X 0.280 (3,8 X 7,1) 0.150 X 0.280 (3,8 X 7,1)	SPT-1 HPN SPT-2 HPN SPT-2	18/3 16/2 16/2 18/2 18/2	"Z"	0.500 (12,7)	0.460 (11,7)	0.187 (4,7)	0.495 (12,6)	0.565 (14,4)

\*MINIMUM ORDER QUANTITY 1,000 PIECES. \*\*MINIMUM ORDER QUANTITY 500 PIECES. \*\*\*MINIMUM ORDER QUANTITY 250 PIECES. \*\*\*\*MINIMUM ORDER QUANTITY 100 PIECES.





# WIRE HANDLING HARDWARE

SECTION  
**VII**

## STRAIN RELIEF BUSHINGS

ITEM NUMBER	UL/CSA DESCRIPTION	CROSS SECTION	CABLE SIZE	CABLE TYPE	GAUGE (AWG)	STRAP TYPE	MOUNTING HOLE		MAX PANEL THICKNESS C	LENGTH D	WIDTH E
							DIAMETER A	FLATS B			
23MP04K40*	MP4K4	Flat	0.120 X 0.300 (3,0 X 7,6)	SPT-1 SPT-2 HPN	18/3 18/2 18/2	"Y"	0.500 (12,7)	0.465 (11,8)	0.100 (2,5)	0.406 (10,3)	0.578 (14,7)
23MP04L40*	MP4L4	Flat	0.120 X 0.300 (3,0 X 7,6)	SPT-1 SPT-2 HPN	18/3 18/2 18/2	"Y"	0.500 (12,7)	0.465 (11,8)	0.156 (3,9)	0.406 (10,3)	0.578 (14,7)
23MP04N40*	MP4N4	Flat	0.120 X 0.300 (3,0 X 7,6)	SPT-1 SPT-2 HPN	18/3 18/2 18/2	"Y"	0.500 (12,7)	0.465 (11,8)	0.062 (1,6)	0.406 (10,3)	0.578 (14,7)
23MP04J40*	MP4J4	Flat	0.120 X 0.300 (3,0 X 7,6)	SPT-1 SPT-2 HPN	18/3 18/2 18/2	"Y"	0.500 (12,7)	0.465 (11,8)	0.032 (0,8)	0.406 (10,3)	0.578 (14,7)
23MP05K40*	MP5K4	Flat	0.150 x .400 (3,8 x 10,1)	SPT-2	16/2	"Y"	0.562 (14,3)	0.530 (13,5)	0.125 (3,2)	0.609 (15,5)	0.625 (15,9)
23MP05KN4*	MP5KN4	Flat	0.150 x 0.400 (3,8 x 10,1) 0.160 x 0.300 (4,1 x 7,6)	SPT-2 SPT-2	18/3 16/2	"Y" "Y"	0.562 (14,3)	0.530 (13,5)	0.062 (1,6)	0.609 (15,5)	0.625 (15,9)
23MP05N40*	MP5N4	Round	0.250 (6,4) 0.255 (6,5) 0.290 (7,4)	SV SVT SV HPD	18/2 18/2 18/3 16/2	"Y"	0.500 (12,7) 0.500 X 0.515 (12,7 X 13,1) 0.500 X 0.515 (12,7 X 13,1)	0.450 (11,4)	0.062 (1,6)	0.438 (11,1)	0.578 (14,7)
23MP05P40*	MP5P4	Round	0.250 (6,4) 0.255 (6,5) 0.290 (7,4)	SV SVT SV HPD	18/2 18/2 18/3 16/2	"Y"	0.500 (12,7) 0.500 X 0.515 (12,7 X 13,1) 0.500 X 0.515 (12,7 X 13,1)	0.450 (11,4)	0.100 (2,5)	0.438 (11,1)	0.578 (14,7)
23MP05W10*	MP5W1	Flat	0.120 x 0.300 (3,0 x 7,6) 0.160 x 0.300 (4,1 x 7,6) 0.160 x 0.410 (4,1 x 10,4) 0.160 x 0.370 (4,1 x 9,4)	SPT-2 SPT-2 SPT-2 HPN	18/3 16/2 16/3 16/3	"Y"	0.562 (14,3)	0.530 (13,5)	0.125 (3,2)	0.609 (15,5)	0.625 (15,9)
23MP06N34*	MP6N34	Round	0.355 (9,0) 0.405 (10,2) 0.430 (10,9)	SJ SJT SJT	16/3 18/3 16/3	"Y"	0.625 (15,9)	0.550 (14,0)	0.062 (1,6)	0.580 (14,7)	0.703 (17,9)
23MP06N35*	MP6N35	Round	0.390 (9,9) 0.390 (9,9) 0.405 (10,3) .405 (10,3) 0.390 (9,9)	SJO SJ SJT SJO SJT	18/2 18/2 16/2 18/2 18/2	"Y"	0.625 (15,9)	0.550 (14,0)	0.062 (1,6)	0.580 (14,7)	0.703 (17,9)
23MP06N40**	MP6N4	Round	0.300 (7,2)	SJT SJO	18/2 18/2	"Y"	0.625 (15,9)	0.550 (14,0)	0.062 (1,6)	0.580 (14,7)	0.703 (17,9)
23MP06N44**	MP6N44	Flat	0.120 X 0.300 (3,0 X 7,6)	SPT-1	18/3	"Y"	0.625 (15,9)	0.570 (14,4)	0.062 (1,6)	0.600 (15,2)	0.690 (17,5)

\*MINIMUM ORDER QUANTITY 1,000 PIECES. \*\*MINIMUM ORDER QUANTITY 500 PIECES. \*\*\*MINIMUM ORDER QUANTITY 250 PIECES. \*\*\*\*MINIMUM ORDER QUANTITY 100 PIECES.



# WIRE HANDLING HARDWARE

## SECTION VII

### STRAIN RELIEF BUSHINGS

DESCRIPTION -----DIMENSIONS-----  
 MOUNTING HOLE -----BUSHINGS---

ITEM NUMBER	UL/CSA DESCRIPTION	CROSS SECTION	CABLE SIZE	CABLE TYPE	GAUGE (AWG)	STRAP TYPE	DIAMETER A	FLATS B	MAX PANEL THICKNESS C	LENGTH D	WIDTH E
<b>23MP06N45</b> **	MP6N45	Flat	0.120 X 0.300 (3,0 X 7,6)	SPT-1	18/3	"Y"	0.625 (15,9)	0.545 (13,8)	0.062 (1,6)	0.600 (15,2)	0.690 (17,5)
<b>23MP06P34</b> **	MP6P34	Round	0.325 - 0.360 (8,3 - 9,1)	SJ SJT SJO	18/3 16/3, 18/3 18/3	"Y"	0.625 (15,9)	0.550 (14,0)	0.125 (3,2)	0.580 (14,7)	0.703 (17,9)
<b>23MP06P35</b> **	MP6P35	Round	0.325 - 0.360 (8,3 - 9,1)	SJ SJT SJO	18/2, 18/3, 16/2 16/2, 18/2 18/2, 16,2, 18/3	"Y"	0.625 (15,9)	0.550 (14,0)	0.125 (3,2)	0.580 (14,7)	0.703 (17,9)
<b>23MP06L10</b> **	MP6L1	Round	0.325 - 0.430 (8,3 - 10,9)	SJ SJT SJO	18/2, 18/3 16/2, 16/3	"Z"	0.625 (15,9)	0.550 (14,0)	0.125 (3,2)	0.666 (16,9)	0.725 (18,4)
<b>23MP06P40</b> **	MP6P4	Round	0.300 (7,6)	SJ SJT SJO	18/2 18/2 18/2	"Y"	0.625 (15,9)	0.550 (14,0)	0.125 (3,2)	0.580 (14,7)	0.703 (17,9)
<b>23MP06W10</b> *	MP6W1	Round	0.300 (7,6)	SJ SJT SJO	18/2 18/2 18/2	"Y"	0.500 (12,7)	0.465 (11,8)	0.090 (2,3)	0.437 (11,1)	0.563 (14,3)
<b>23MP07K20</b> ***	MP7K2	Round	0.325 X 0.360 (8,3 X 9,1)	SJ SJT SJO	18/4, 16/2, 16/3, 14/2, 18/3, 16/3 14/2, 16/3, 18/4	"Z"	0.875 (22,2)	0.770 (19,6)	0.125 (3,2)	0.750 (19,1)	0.922 (23,4)
<b>23MP07P20</b> **	MP7P2	Round	0.360 (9,1) 0.370 (9,4) 0.405 (10,3) 0.430 (10,9) 0.405 (10,3) 0.430 (10,9) 0.405 (10,3) 0.390 (9,9) 0.390 (9,9) 0.405 (10,3)	SJTO SJT S S STO STO S S STO STO	18/4 14/3 18/3 16/3 18/3 16/3 16/2 18/2 18/2 16/2	"X"	0.750 (19,0)	0.660 (16,8)	0.125 (3,2)	0.745 (18,9)	0.830 (21,0)
<b>23MP07K30</b> ***	MP7K3	Round	0.325 - 0.360 (8,3 - 9,1)	SJ SJT SJO	18/3, 16/2 16/2 18/3, 16/2	"Z"	0.875 (22,2)	0.770 (19,6)	0.125 (3,2)	0.750 (19,1)	0.922 (23,4)
<b>23MP07P30</b> **	MP7P3	Flat	0.160 X 0.410 (4,1 X 10,4)	SPT-2	16/3	"Z"	0.736 (18,7)	0.657 (16,7)	0.125 (3,2)	0.590 (14,9)	0.785 (19,9)
<b>23MP07W20</b> ***	MP7W2	Round	0.370 - 0.425 (9,4 - 10,8) 0.390 - 0.430 (9,9 - 10,9)	SJT S STO	14/3 12/3 18/3, 16/3 16/2, 16,3, 18/3	"Z"	0.875 (22,2)	0.770 (19,6)	0.125 (3,2)	0.750 (19,1)	0.922 (23,4)
<b>23MP08P20</b> ***	MP8P2	Round	0.530 - 0.600 (13,5 - 15,2)	S ST	14/2, 14/3 12/2	"Z"	0.875 (22,2)	0.840 (21,3)	0.125 (3,2)	0.812 (20,6)	0.922 (23,4)
<b>23MP09P20</b> ****	MP9P2	Round	0.570 (14,4) 0.640 (16,3) 0.650 (16,5) 0.700 (17,7)	S S S S	12/2 12/3 10/2 10/3	"Y"	1.093 (27,7) 1.125 (28,5) 1.093 (27,7) 1.187 (30,1)	1.000 (25,4) 1.000 (25,4) 1.000 (25,4) 1.000 (25,4)	0.281 (7,1) 0.281 (7,1) 0.281 (7,1) 0.281 (7,1)	0.990 (25,1) 0.990 (25,1) 0.990 (25,1) 0.990 (25,1)	1.215 (30,8) 1.215 (30,8) 1.215 (30,8) 1.215 (30,8)

\*MINIMUM ORDER QUANTITY 1,000 PIECES. \*\*MINIMUM ORDER QUANTITY 500 PIECES. \*\*\*MINIMUM ORDER QUANTITY 250 PIECES. \*\*\*\*MINIMUM ORDER QUANTITY 100 PIECES.



## STRAIN RELIEF BUSHINGS

DESCRIPTION -----							DIMENSIONS -----				
ITEM NUMBER	UL/CSA DESCRIPTION	CROSS SECTION	CABLE SIZE	CABLE TYPE	GAUGE (AWG)	STRAP TYPE	MOUNTING HOLE -----			BUSHINGS -----	
							DIAMETER A	FLATS B	MAX PANEL THICKNESS C	LENGTH D	WIDTH E
23MP30-10 ***	MP30-1	Flat	0.160 X 0.410 (4,1 X 10,4)	SPT-2	16/3	"Z"	0.730 (18,5)	0.560 (14,2)	0.125 (3,2)	0.670 (17,0)	0.750 (19,6)
			0.120 X 0.300 (3,0 X 7,6)	SPT-1							
23MP03020 *	MP302	Flat	0.150 X 0.400 (32,8 X 10,1)	SPT-2	18/3	"Z"	0.625 X 0.375 (15,9 X 9,5)	0.625 (15,9)	0.100 (2,5)	0.460 (11,6)	0.660 (16,7)
			0.160 X 0.410 (4,1 X 10,4)	SPT-2			0.625 X 0.375 (15,9 X 9,5)	0.625 (15,9)	0.100 (2,5)	0.460 (11,6)	0.660 (16,7)
			0.320 X 0.650 (8,1 X 16,5)	SPT-3	16/3	0.625 X 0.375 (15,9 X 9,5)	0.625 (15,9)	0.100 (2,5)	0.460 (11,6)	0.660 (16,7)	
23MP31-20 ***	MP31-2	Flat	0.425 - 0.475 (10,8 - 12,1)	SJT	12/3	"Z"	0.875 (22,2)	0.840 (21,3)	0.125 (3,2)	0.812 (20,6)	0.922 (23,4)
		Round	0.180 X 0.425 (4,5 X 10,8)	SPT-3	12/3						
23MP33-10 **	MP33-10	Flat	0.245 X 0.425 (6,2 X 10,8)	SPT-3	16/3	"Z"	0.750 X 0.875 (19,1 X 22,2)	0.875 (22,2)	0.125 (3,2)	0.770 (19,5)	0.895 (22,7)
			0.240 X 0.420 (6,1 X 10,6)	SPT-3	14/2		0.750 X 0.875 (19,1 X 22,2)	0.875 (22,2)	0.125 (3,2)	0.770 (19,5)	0.895 (22,7)
			0.240 X 0.525 (6,1 X 13,3)	HPN	14/3		0.750 X 0.875 (19,1 X 22,2)	0.875 (22,2)	0.125 (3,2)	0.770 (19,5)	0.895 (22,7)
23MP34-2X ***	MP34-2X	Flat	0.240 X 0.420 (6,1 X 10,7)	SPT-3	14/3	"X"	0.875 (22,2)	0.840 (21,3)	0.125 (3,2)	0.812 (20,6)	0.922 (23,4)
			0.290 X 0.650 (7,4 X 16,5)		12/3						

## 90° ANGLE STRAIN RELIEF BUSHINGS

23MP13L10 *	MP13L1	Flat	0.120 X 0.220 (3,0 X 5,6)	SPT-1	18/2	"Z"	0.437 (11,1)	0.390 (9,9)	0.062 (1,6)	0.500 (12,7)	0.510 (12,9)
23MP14L10	MP14L1	Flat	0.150 X 0.280 (3,8 X 7,1)	SPT-2	18/2,16/2	"Z"	0.500 (12,7)	0.450 (11,4)	0.100 (2,5)	0.687 (17,5)	0.563 (14,3)
			0.160 X 0.300 (4,1 X 7,6)	HPN	16/2						
23MP15L10 *	MP15L1	Round	0.250 X 0.265 (6,4 X 6,7)	SV	8/2,18/3	"Z"	0.500 (12,7)	0.450 (11,4)	0.100 (2,5)	0.687 (17,5)	0.562 (14,3)
23MP16L10 **	MP16L1	Flat	.150 X .400 (3/8) X (10,2)	SP-2	18/3	"Z"	0.562 (14,3)	0.525 (13,3)	.125 (3,2)	7/8 (22,2)	5/8 (15,9)
			.160 X .370 (4,1) X (9,4)	HPN	16/3						
			.190 X .350 (4,8) X (8,9)	SPT-3	18/2						
			.200 X .370 (5,1) X (9,4)		16/2						

\*MINIMUM ORDER QUANTITY 1,000 PIECES. \*\*MINIMUM ORDER QUANTITY 500 PIECES. \*\*\*MINIMUM ORDER QUANTITY 250 PIECES. \*\*\*\*MINIMUM ORDER QUANTITY 100 PIECES.

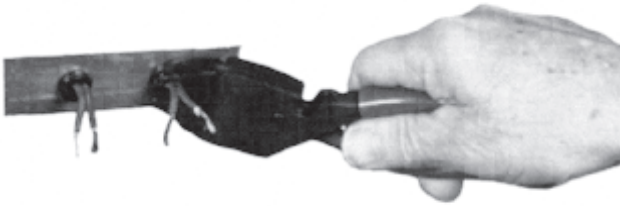


## STRAIN RELIEF INSTALLATION TOOLS

### STANDARD

ITEM NUMBER  
23MPT0100

Micro Plastics' Standard adjustable Strain Relief Assembly Pliers. An indispensable tool for fast, accurate assembly of bushings.



### ERGONOMIC

ITEM NUMBER  
23MPET0100

Micro Plastics' Adjustable **Ergonomic** Strain Relief Tool has been carefully designed to help reduce the wrist fatigue associated with bushing installation. The handles are preset to a specified angle, allowing the hand and wrist of the operator to naturally align during normal use. This tool is fully adjustable and will install all sizes of Micro Plastics' strain relief bushings.



### PNEUMATIC

ITEM NUMBER  
23PMPT0100

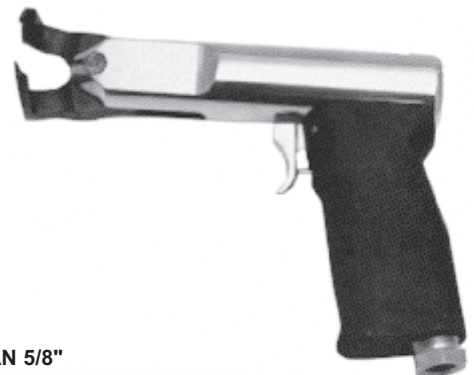
Micro Plastics' **Pneumatic** Strain Relief Installation Tool is designed to aid in rapid assembly of strain relief bushings. The easy finger tip actuation of this air tool greatly lessens the gripping power necessary to install bushings and reduces the hand and wrist fatigue generated during moderate to high volume manufacturing. The tool operates on standard shop air from 50 to 90 PSI. Low weight, only 24 ounces. Tools are configured prior to shipping. For specific sizes, please specify strain relief bushing sizes to be installed when ordering.



### PNEUMATIC ERGONOMIC

ITEM NUMBER  
23PMPET0100

Micro Plastics' **Pneumatic-Ergonomic** Strain Relief Installation Tool has been carefully designed to help reduce the wrist fatigue associated with the rapid assembly of strain relief bushings. The easy trigger-type actuation of this air tool, in combination with the ergonomic angle of the hand grip, allow natural alignment of the wrist and hand during normal bushing installation. The tool operates on standard shop air from 50-90 PSI. Lightweight, only 18 ounces. Tools are configured prior to shipping. Please specify strain relief bushing sizes to be installed when ordering.



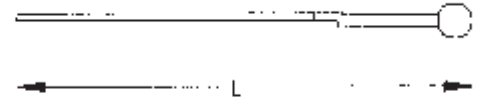
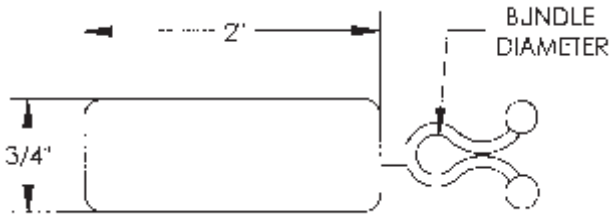
NOT AVAILABLE FOR  
HOLE SIZES LARGER THAN 5/8"



# WIRE HANDLING HARDWARE

SECTION  
VII

Nylon "EZ" twist lock with integral label area for writing. Permanent ink pens, felt tip pens, pressure-sensitive adhesive labels, or even Post-it® notes can be used on polished label area.

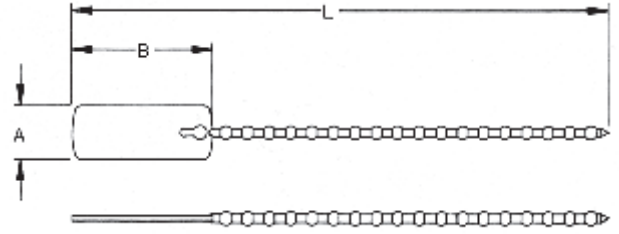
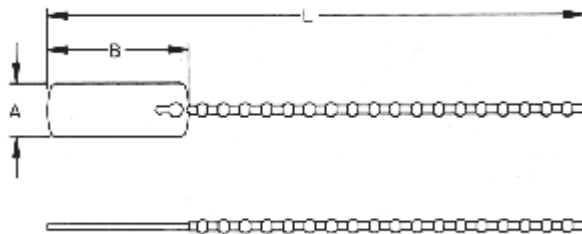
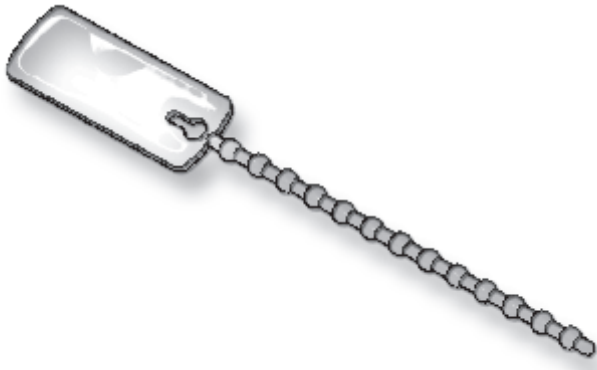


## LABEL TWIST LOCK

ITEM NUMBER	BUNDLE DIAMETER	L
23EZLB0250	1/4" (6,35)	3-3/32 (78,59)
23EZLB0375	3/8" (9,53)	3-9/32 (83,34)

## LABEL BEADED TIE

Nylon beaded tie with integral label area for writing. Permanent ink pens, felt tip pens, pressure-sensitive adhesive labels, or even Post-it® notes can be used on polished label area. The "LP" pointed version can be used to pierce thin materials. The "LB" version has a blunt tip for general use.



### "LB" VERSION

ITEM NUMBER	A- WIDTH +/- 1/32"	B-LENGTH +/- 1/32"	L-OVERALL LENGTH +/- 1/8"
23LB0400N	1/2" (12,7)	1-5/16" (33,32)	4"
23LB0600N	1/2" (12,7)	1-5/16" (33,32)	6"

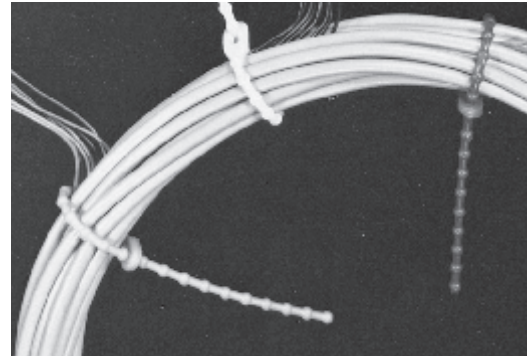
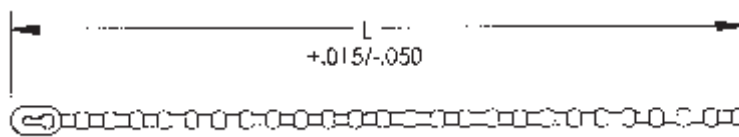
### "LP" VERSION

ITEM NUMBER	A- WIDTH +/- 1/32"	B-LENGTH +/- 1/32"	L-OVERALL LENGTH +/- 1/8"
23LP0400N	1/2" (12,7)	1-5/16" (33,32)	4"
23LP0600N	1/2" (12,7)	1-5/16" (33,32)	6"

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# WIRE HANDLING HARDWARE

## SECTION VII



Micro Plastics Beaded Ties provide economical temporary or permanent bundling, harnessing, tagging and identification marking. Beaded Ties smooth, rounded configuration eliminates damage to wire and cable insulation. No tools are necessary. Ties can be disassembled and reused. Beaded Ties are available in Nylon and Polyethylene. Special colors are available upon request.

### BEADED TIES

TOLERANCES  $+.015$   $-.050$

### HEAVY DUTY POLYETHYLENE BEADED TIES

ITEM NUMBER	DESCRIPTION	LENGTH
230425N	425 N	4 1/4 (108)
230600N	600 N	6 (152)
230800N	800 N	8 (203)
231000N	1000 N	10 (254)

ITEM NUMBER	DESCRIPTION	LENGTH
230425P	425 P	4 1/4 (108)
230600P	600 P	6 (152)
230800P	800 P	8 (203)
231000P	1000 P	10 (254)

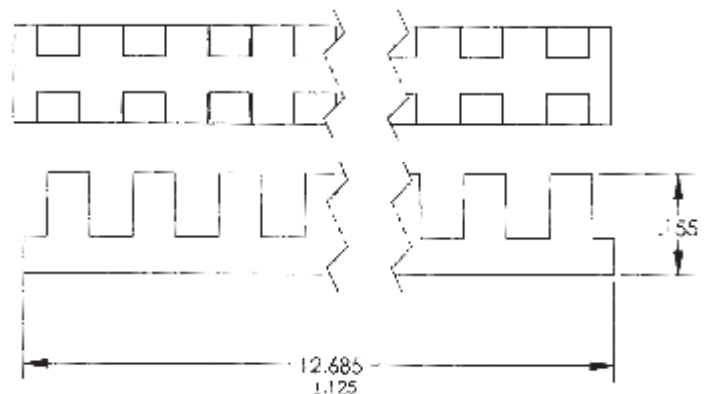
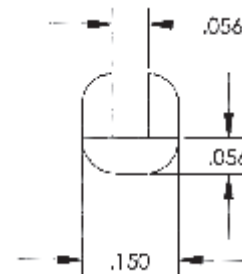
10" HEAVY DUTY POLYETHYLENE BEADED TIES ARE MOLDED IN UV RESISTANT YELLOW.

### MOLDED GROMMETING



Molded Grommeting is used to protect wires and tubing from sharp panel edges and knock outs. The flexible grommeting can be used for round, square or irregular shaped panel holes.

Available in natural colored Nylon 6/6



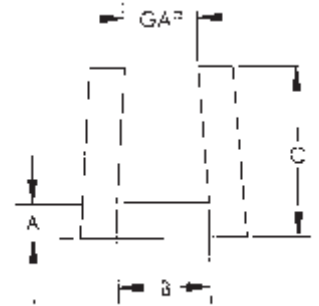
ITEM NUMBER	OA WIDTH	SLOT WIDTH	OA HEIGHT	WALL THK.	PANEL THICKNESS	LENGTH
22MG052155	.150 (3,81) +.015 -.005	.056 (1,42) +.015 -.005	.155 (3,94) +/- .015	.056 (1,42)	.015 - .052 (0,38-1,32)	12.685 (322,20)

- CONTINUOUS, SOLID OR SERRATED.
- COLORS: NATURAL OR BLACK, CUSTOM COLORS AVAILABLE.
- CUSTOM LENGTHS AVAILABLE FOR VOLUME APPLICATIONS.
- FLEXIBILITY, FITS HOLES OF ANY SHAPE OR SIZE.
- AVAILABLE FROM STOCK IN COILS OF 100 FEET.
- MATERIAL: POLYETHYLENE.



## PROTECT WIRES, CABLES, TUBING AND OTHER OBJECTS FROM SHARP PANEL EDGES.

Continuous Flexible Grommeting can be used for round, square and irregular shaped panels. Flexible grommeting is attached quickly and easily using no special tools. In addition to protecting routed cables, wires, tubing and other objects from chafing or unnecessary cuts, the installed grommeting also puts an attractive finished touch to a product. Continuous flexible grommeting is manufactured to fit over a range of panel thicknesses from .040" to .187". Sheet form materials can include glass, sheet metal and wood. In many cases flexible grommeting will grip the panel tightly and remain in place. Should the panel thickness vary to a point that the grommeting will not adhere tightly by itself, the problem can usually be corrected by a touch of epoxy to keep the grommeting tightly in place. Continuous flexible grommeting comes from the factory in polybagged rolls of 100 feet. Longer lengths can be made available by using bulk spools. Flexible grommeting can also be cut to lengths to meet customer needs.



ADD COLOR CODE TO THE END OF EACH PART NUMBER TO SPECIFY COLOR SELECTION: **BK** = BLACK **NA** = NATURAL

MINIMUM ORDER 100'  
SOLD IN MULTIPLES OF 100'

## POLYETHYLENE MATERIAL INFORMATION

POLYETHYLENE grommeting is a lightweight low cost material good for general indoor applications. Polyethylene is not affected by ordinary solvents and resistant to abrasion.

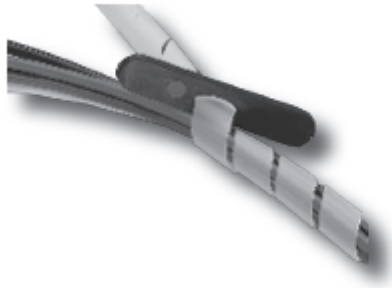
## CONTINUOUS FLEXIBLE GROMMETING – NATURAL OR BLACK

ITEM NUMBER	MAX PANEL THICKNESS	GAP REF.	A REF.	B REF.	C REF.
22FGU0400P__	.040/.070 (1,02)/(1,78)	.035 (0,89)	.028 (0,71)	.072 (1,83)	.190 (4,83) UNCUT
22FGS0400P__	.040/.070 (1,02)/(1,78)	.035 (0,89)	.028 (0,71)	.072 (1,83)	.190 (4,83) SERRATED
22FGU0520P__	.045/.070 (1,14)/(1,78)	.040 (1,02)	.028 (0,71)	.072 (1,83)	.190 (4,83) UNCUT
22FGS0520P__	.045/.070 (1,14)/(1,78)	.040 (1,02)	.028 (0,71)	.072 (1,83)	.190 (4,83) SERRATED
22FGU0620P__	.055/.075 (1,40)/(1,91)	.050 (1,27)	.040 (1,02)	.080 (2,03)	.200 (5,08) UNCUT
22FGS0620P__	.055/.075 (1,40)/(1,91)	.050 (1,27)	.040 (1,02)	.080 (2,03)	.200 (5,08) SERRATED
22FGU0850P__	.080/.085 (2,03)/(2,16)	.075 (1,91)	.040 (1,02)	.085 (2,16)	.190 (4,83) UNCUT
22FGS0850P__	.080/.085 (2,03)/(2,16)	.075 (1,91)	.040 (1,02)	.085 (2,16)	.190 (4,83) SERRATED
22FGU100P__	.100/.120 (2,54)/(3,05)	.095 (2,41)	.045 (1,14)	.120 (3,05)	.220 (5,59) UNCUT
22FGS100P__	.100/.120 (2,54)/(3,05)	.095 (2,41)	.045 (1,14)	.120 (3,05)	.220 (5,59) SERRATED
22FGU125P__	.115/.125 (2,92)/(3,18)	.112 (2,84)	.040 (1,02)	.125 (3,18)	.220 (5,59) UNCUT
22FGS125P__	.115/.125 (2,92)/(3,18)	.112 (2,84)	.040 (1,02)	.125 (3,18)	.220 (5,59) SERRATED
22FGU187P__	.182/.187 (4,62)/(4,75)	.180 (4,57)	.050 (1,27)	.187 (4,75)	.275 (6,99) UNCUT
22FGS187P__	.182/.187 (4,62)/(4,75)	.180 (4,57)	.050 (1,27)	.187 (4,75)	.275 (6,99) SERRATED

# WIRE HANDLING HARDWARE

## SECTION VII

Spiral Wrap is an ideal covering used to bundle and protect tubing, wires and other types of conductors. Spiral wrap can be used on virtually any item with a diameter of 1/16" to 7". Polyethylene Natural Spiral Wrap is a lightweight low cost material that is good for general indoor applications. Polyethylene is not affected by ordinary solvents and is resistant to abrasion.



Polyethylene spiral wrap is easy to install, either during production or after final assembly. Ultra Violet UV Resistant Black Spiral Wrap is designed for outdoor use. Black UV Resistant Spiral Wrap has all of the fine qualities of Natural Spiral Wrap with the additional advantage of containing an ultraviolet absorber. Black UV Resistant Spiral Wrap will withstand direct sunlight for long periods of time.



FOUR PACKAGING METHODS ARE AVAILABLE FOR SPIRAL WRAP. REFER TO THE CHART ON THE OPPOSITE PAGE.

**MINIMUM ORDER 100'  
SOLD IN MULTIPLES OF 100'**

## NATURAL SPIRAL WRAP

ITEM NUMBER	O.D.	WALL THICKNESS	BUNDLE RANGE
22SPW12NA	1/8"	.032	1/16" to 1/4"
22SPW24NA	1/4"	.035	3/16" to 2"
22SPW25NA	1/4"	.040	3/16" to 2"
22SPW36NA	3/8"	.040	3/16" to 2"
22SPW37NA	3/8"	.052	5/16" to 3"
22SPW38NA	3/8"	.062	5/16" to 3"
22SPW48NA	1/2"	.030	3/8" to 3"
22SPW49NA	1/2"	.040	3/8" to 4"
22SPW50NA	1/2"	.062	3/8" to 4"
22SPW51NA	1/2"	.072	3/8" to 4"
22SPW62NA	5/8"	.062	5/8" to 4 1/2"
22SPW75NA	3/4"	.065	3/4" to 5"
22SPW10NA	1"	.070	1" to 7"
22SPW11NA	1"	.095	1" to 7"

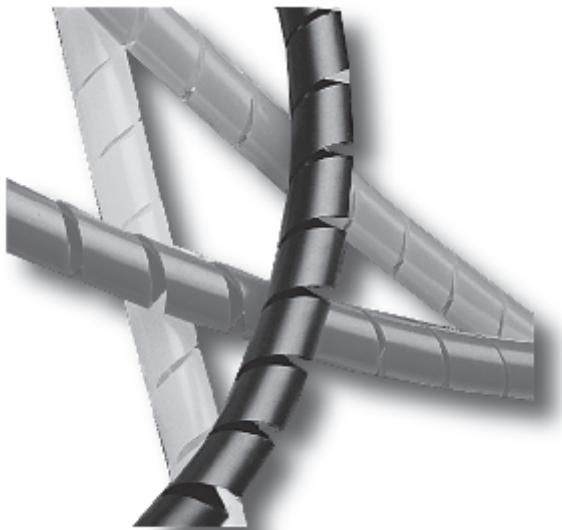
## BLACK UV RESISTANT SPIRAL WRAP

ITEM NUMBER	O.D.	WALL THICKNESS	BUNDLE RANGE
22SPW12BK	1/8"	.032	1/16" to 1/4"
22SPW24BK	1/4"	.035	1/16" to 2"
22SPW25BK	1/4"	.040	3/16" to 2"
22SPW36BK	3/8"	.040	5/16" to 3"
22SPW37BK	3/8"	.052	5/16" to 3"
22SPW38BK	3/8"	.062	5/16" to 3"
22SPW48BK	1/2"	.030	3/8" to 3"
22SPW49BK	1/2"	.040	3/8" to 4"
22SPW50BK	1/2"	.062	3/8" to 4"
22SPW51BK	1/2"	.072	3/8" to 4"
22SPW62BK	5/8"	.062	5/8" to 4 1/2"
22SPW75BK	3/4"	.065	3/4" to 5"
22SPW10BK	1"	.070	1" to 7"
22SPW11BK	1"	.095	1" to 7"



# WIRE HANDLING HARDWARE

SECTION  
**VII**



Fluorescent Safety Wrap is an expandable plastic cable harness that can be used like tape. Designed with potentially hazardous situations in mind, Fluorescent Safety Wrap will help make loose wires, hanging cables, hoses and tubing more easily seen.

**MINIMUM ORDER 100'**  
**SOLD IN MULTIPLES OF 100'**

*IMPROVES APPEARANCE, SAFETY AND DURABILITY  
OF YOUR PRODUCTS.*

**COLOR CODES:**  
ADD COLOR CODES TO THE END OF EACH ITEM  
NUMBER TO SPECIFY COLOR SELECTION.

RD = FLUORESCENT RED \* GR = FLUORESCENT GREEN \*  
YW = FLUORESCENT YELLOW

## FLUORESCENT SAFETY WRAP

ITEM NUMBER	O.D.	WALL THK.	BUNDLE RANGE
22SPW12S__	1/8"	.032	1/16" to 1/4"
22SPW24S__	1/4"	.035	3/16" to 2"
22SPW25S__	1/4"	.040	3/16" to 2"
22SPW36S__	3/8"	.040	5/16" to 3"
22SPW37S__	3/8"	.052	5/16" to 3"
22SPW49S__	1/2"	.040	3/8" to 4"
22SPW50S__	1/2"	.062	3/8" to 4"
22SPW62S__	5/8"	.062	5/8" to 4-1/2"
22SPW75S__	3/4"	.065	3/4" to 5"
22SPW10S__	1"	.070	1" to 7"

FOUR PACKAGING METHODS ARE  
AVAILABLE FOR SPIRAL WRAP.  
REFER TO THE CHART BELOW.

FOR LARGE QUANTITY BULK SPOOL  
ORDERS, ADD THE LETTERS SPL TO  
THE END OF THE PART NUMBER.

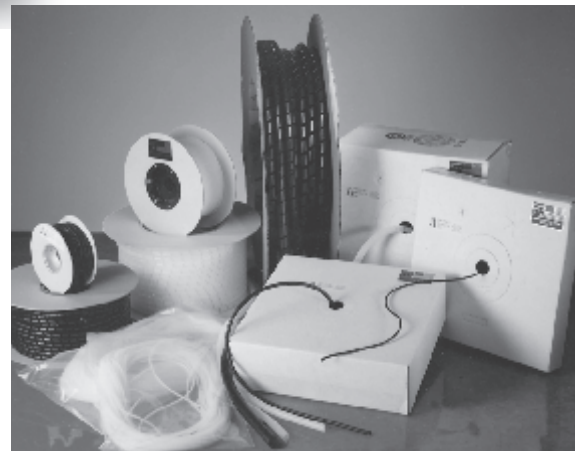
## SPIRAL WRAP/FLUORESCENT SAFETY WRAP, STANDARD PACKAGING OPTIONS



**MINIMUM ORDER 100'**  
**SOLD IN MULTIPLES OF 100'**

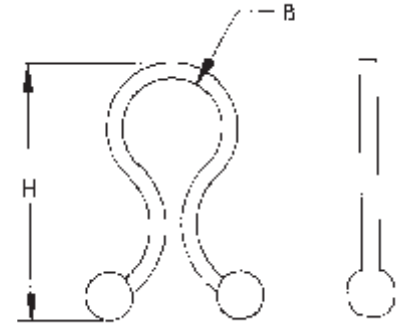
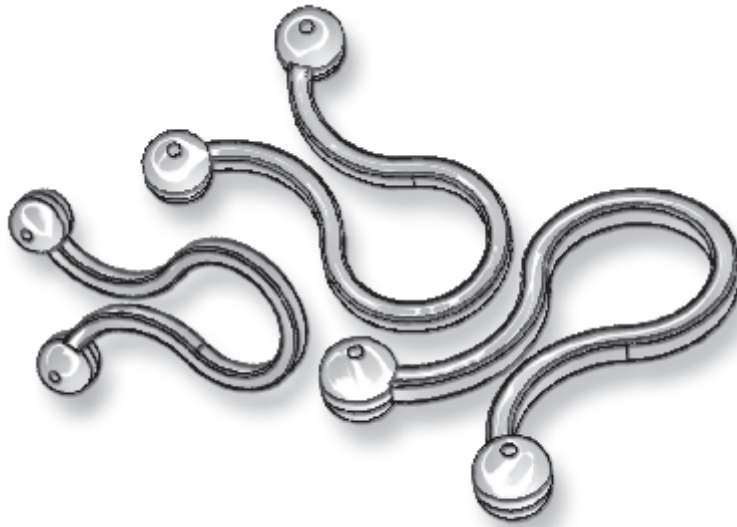
SPIRAL WRAP CAN BE CUT TO MEET SPECIAL  
LENGTH REQUIREMENTS, CALL FOR DETAILS.

OUTSIDE DIAMETER	FEET PER PAYOUT BOX	FEET PER POLYETHYLENE BAG	(Best Pricing For Volume Users)	
			FEET PER SPOOL	FEET PER BULK SPOOL
1/8'	100'	100'	100'	2500'
1/4"	100'	100'	100'	1,000'
3/8"	100' OR 200'	100'	100'	500'
1/2"	100'	100'	100'	250'
5/8"	25'	100'	100'	250'
3/4"	25'	100'		100'
1"		100'		100'



# WIRE HANDLING HARDWARE

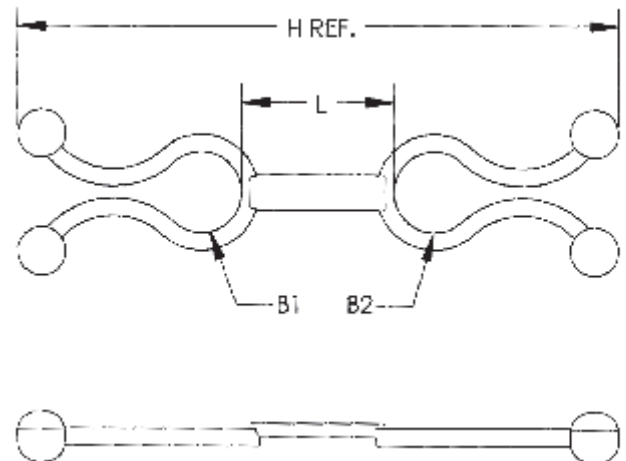
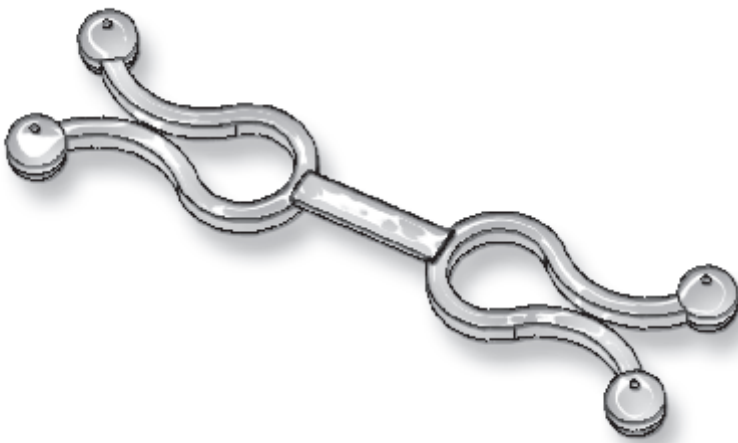
## SECTION VII



Micro Plastics "EZ" Twist Lock Bundling Ties offers a fast, economical way to securely position and hold wire, cable or tubing. A single twist of the finger locks the bundle together. Another twist will open the lock to add or remove wire to the bundle. The reusable "EZ" Twist Lock is molded of tough, resilient Nylon 6/6 (UL 94V2). The following standard sizes are available from stock in natural nylon. Dyed colors can be furnished with a slight extra charge. Other sizes will be tooled on request.

## "EZ" TWIST LOCKS

ITEM NUMBER	DESCRIPTION	H	B
23EZ0125N	1/8" LOCK	.715 (18,1)	.11 / .14 (2,80 / 3,56)
23EZ0250N	1/4" LOCK	.875 (22,2)	.20 / .27 (5,08 / 6,86)
23EZ0375N	3/8" LOCK	1.08 (27,4)	.30 / .40 (7,62 / 10,2)
23EZ0500N	1/2" LOCK	1.20 (30,5)	.40 / .50 (10,2 / 12,7)
23EZ0600N	5/8" LOCK	1.26 (32,0)	.55 / .65 (13,9 / 16,5)
23EZ0750N	3/4" LOCK	1.55 (39,4)	.70 / .80 (17,8 / 20,3)
23EZ0950N	15/16" LOCK	1.87 (47,5)	.90 / 1.00 (22,8 / 25,4)
23EZ1125N	1 1/8" LOCK	2.17 (55,1)	1.20/1.30 (30,5 / 33,0)
23EZ1375N	1 3/8" LOCK	2.67 (67,8)	1.45/1.55 (36,8 / 39,4)
23EZ1500N	1 1/2" LOCK	2.93 (74,4)	1.55/1.65 (39,4 / 41,9)
23EZ1750N	1 3/4" LOCK	3.46 (87,9)	1.90/2.00 (48,3 / 50,8)



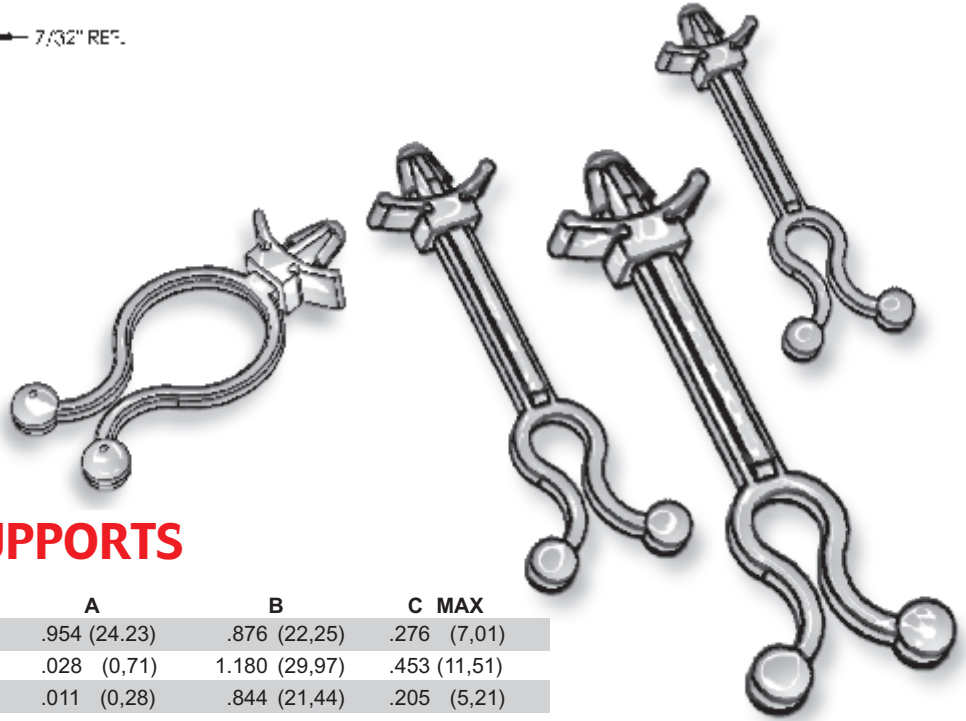
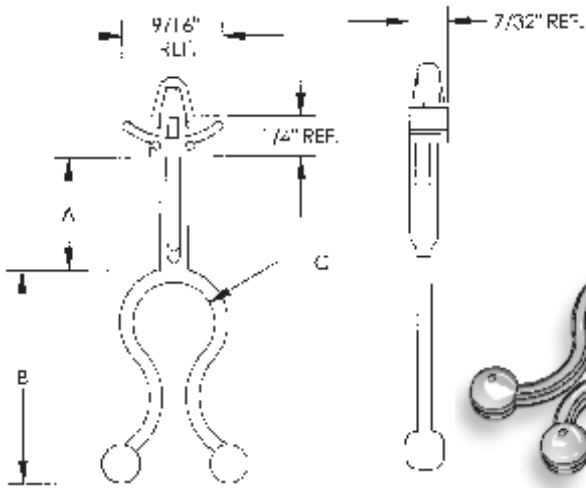
## DOUBLE "EZ" TWIST LOCKS

ITEM NUMBER	H	L	B1 AND B2
23DBEZ001	2-3/4 (69,8)	11/16" (17,46)	.30/.40 (7,62) / (10,16)
23DBEZ002	2-31/32 (74,4)	11/16" (17,46)	.40/.50 (10,16) / (12,70)

# WIRE HANDLING HARDWARE

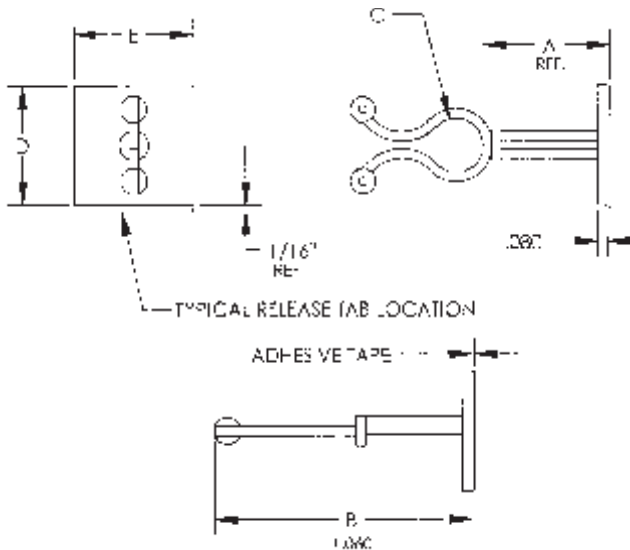
Micro Plastics "EZ" Twist Lock Printed Circuit Board Supports feature a uniquely designed locking base which is easily snapped into the chassis by hand. Cables and wires can be loaded and unloaded with a simple twist of the fingers, and are supported above the board eliminating possible contact with hot components. Parts are stocked in natural Nylon 6/6. Other colors can be furnished with a slight extra charge.

HOLE SIZE .187" • PANEL THICKNESS .030"/.078"

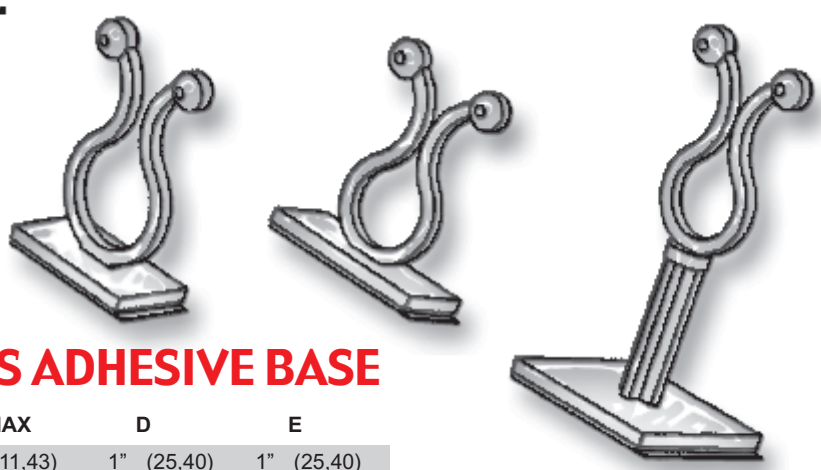


## "EZ" TWIST LOCK SUPPORTS

ITEM NUMBER	DESCRIPTION	A	B	C MAX
23EZO250N0954	.250 BUNDLE DIA.	.954 (24,23)	.876 (22,25)	.276 (7,01)
23EZO450N0030	.450 BUNDLE DIA.	.028 (0,71)	1.180 (29,97)	.453 (11,51)
23EZO200N0030	.200 BUNDLE DIA.	.011 (0,28)	.844 (21,44)	.205 (5,21)
23EZO375N0030	.375 BUNDLE DIA.	.050 (1,27)	1.066 (27,08)	.350 (8,89)
23EZO450N0625	.450 BUNDLE DIA.	.625 (15,88)	1.184 (30,07)	.453 (11,51)
23EZO625N0028	.625 BUNDLE DIA.	.028 (0,71)	1.270 (32,26)	.620 (15,75)



Micro Plastics "EZ" Twist Lock Supports on Adhesive Base offer an economical way of routing wires with out the need for mounting holes or screws. Cables and wires can be loaded & unloaded with a simple twist of the fingers. Also includes a release tab for easy quick installation.

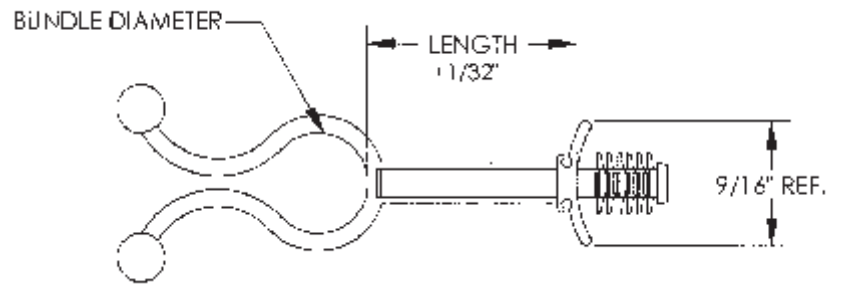
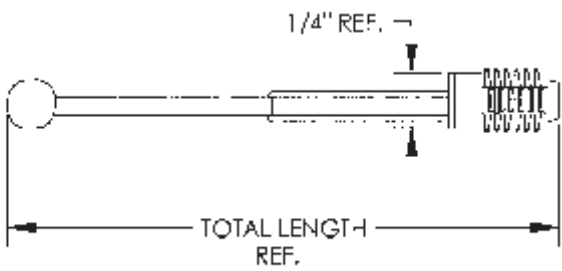
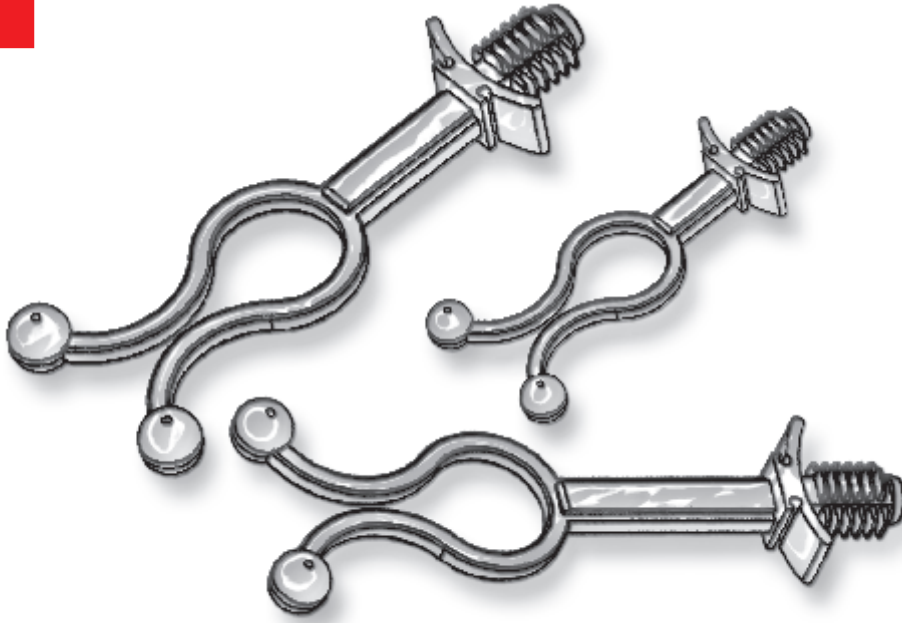


## "EZ" TWIST LOCK SUPPORTS ADHESIVE BASE

ITEM NUMBER	A	B	C MAX	D	E
23EZABS450TAB	1.070 (27,18)	2.149 (54,58)	.450 (11,43)	1" (25,40)	1" (25,40)
23EZAB450TAB	.190 (4,83)	1.230 (31,24)	.450 (11,43)	1" (25,40)	.520 (13,21)
23EZAB580TAB	.190 (4,83)	1.400 (35,56)	.580 (14,73)	.870 (22,10)	.520 (13,21)

# WIRE HANDLING HARDWARE

## SECTION VII

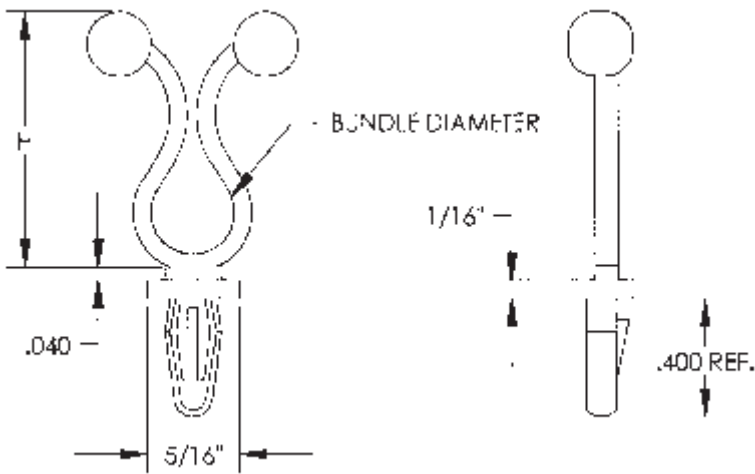


### "EZ" TWIST LOCK FIN CLIP BASE

STANDARD LENGTH IS FROM BUNDLE DIAMETER TO TOP OF 1/32" PANEL

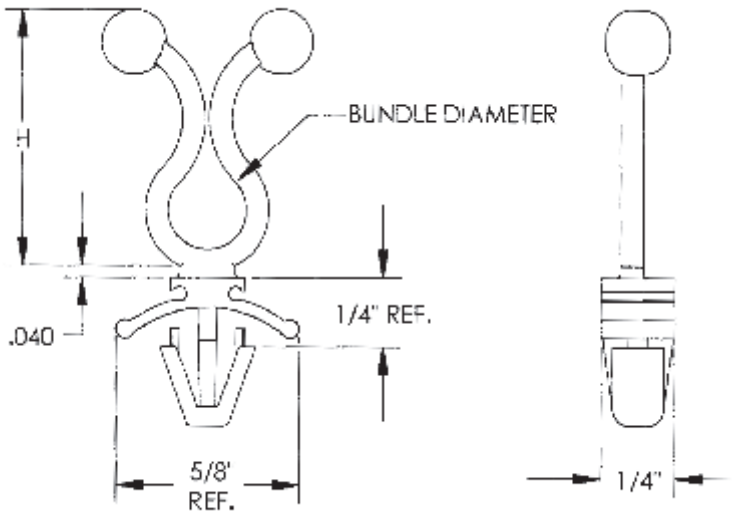
ITEM NUMBER	BUNDLE DIAMETER	LENGTH	TOTAL LENGTH	MOUNTING HOLE	PANEL RANGE
23EZF037B025	3/8" (9,53)	.200 (5,08)	1-21/32 (42,06)	.187 (4,75)	1/32 (0,79) - 1/4 (6,35)
23EZF037B037	3/8" (9,53)	.315 (8,00)	1-25/32 (45,24)	.187 (4,75)	1/32 (0,79) - 1/4 (6,35)
23EZF037B050	3/8" (9,53)	.437 (11,10)	1-29/32 (48,41)	.187 (4,75)	1/32 (0,79) - 1/4 (6,35)
23EZF037B062	3/8" (9,53)	.555 (14,10)	2-1/32" (51,59)	.187 (4,75)	1/32 (0,79) - 1/4 (6,35)
23EZF050C037	1/2" (12,70)	.318 (8,08)	1-27/32 (46,81)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)
23EZF050C050	1/2" (12,70)	.447 (11,35)	1-63/64 (50,39)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)
23EZF050C062	1/2" (12,70)	.596 (15,14)	2-1/8 (53,98)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)
23EZF050C100	1/2" (12,70)	.942 (23,93)	2-15/32 (62,71)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)
23EZF062C037	5/8" (15,88)	.319 (8,10)	1-15/16 (49,21)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)
23EZF062C050	5/8" (15,88)	.442 (11,23)	2-3/64 (51,99)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)
23EZF062C062	5/8" (15,88)	.595 (15,11)	2-3/16 (55,56)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)
23EZF062C100	5/8" (15,88)	.935 (23,75)	2-35/64 (64,69)	.250 (6,35)	1/32 (0,79) - 1/4 (6,35)





## "EZ" TWIST LOCK SUPPORTS

ITEM NUMBER	DESCRIPTION	PANEL THICKNESS	H	* REF. W
23EZO250C0040	.250 BUNDLE DIA.	1/16" (1,57)	7/8" (22,23)	23/32" (18,24)
23EZO375C0040	.375 BUNDLE DIA.	1/16" (1,57)	1-5/64" (27,37)	3/4" (19,08)
23EZO500C0040	.500 BUNDLE DIA.	1/16" (1,57)	1-13/64" (30,56)	7/8" (15,88)



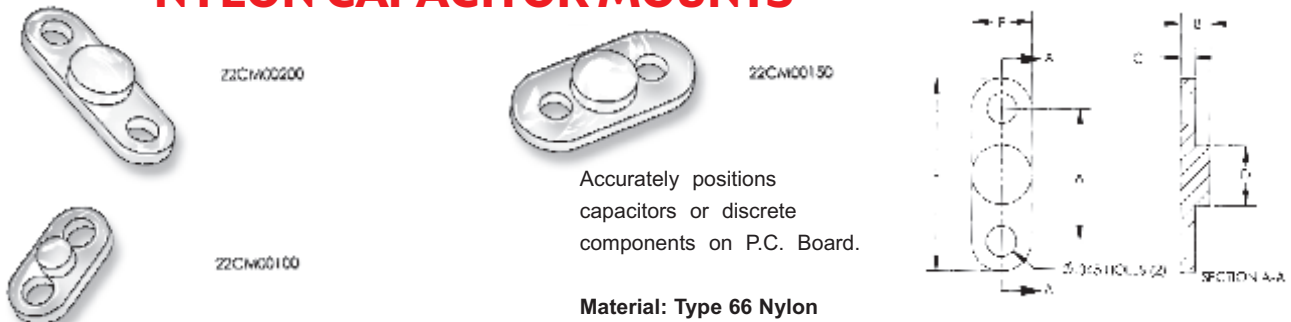
## "EZ" TWIST LOCK SUPPORTS

ITEM NUMBER	DESCRIPTION	PANEL THICKNESS	H	* REF. W
23EZO250B0040	.250 BUNDLE DIA.	.047 (1,19 / .109 (2,77)	7/8" (22,23)	23/32"(18,24)
23EZO375B0040	.375 BUNDLE DIA.	.047 (1,19 / .109 (2,77)	1-5/64" (27,37)	3/4" (19,08)
23EZO500B0040	.500 BUNDLE DIA.	.047 (1,19 / .109 (2,77)	1-13/64" (30,56)	7/8" (15,88)

# CIRCUIT BOARD HARDWARE

## SECTION VIII

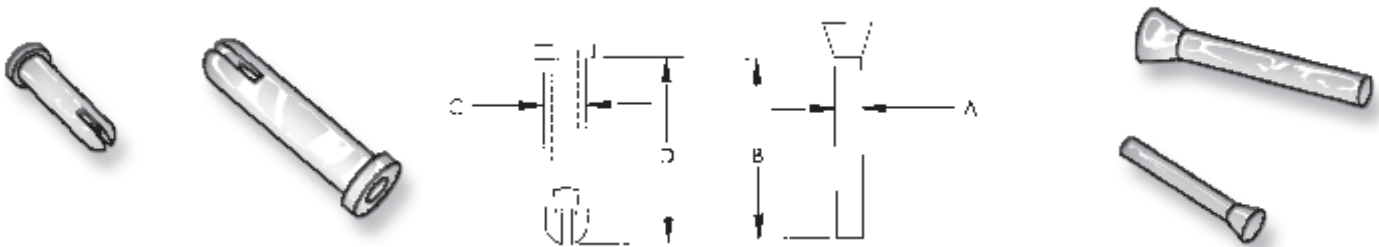
### NYLON CAPACITOR MOUNTS



ITEM NUMBER	DESCRIPTION	A	B	C	D	E	F
22CM0100	CM-100	.100 (2,54)	.045 (1,14)	.022 (0,56)	.050/.070 (1,27)/(1,78)	.180 (4,57)	.090 (2,29)
22CM0150	CM-150	.150 (3,81)	.045 (1,14)	.022 (0,56)	.090/.125 (2,29)/(3,18)	.270 (6,86)	.125 (3,18)
22CM0200	CM-200	.200 (5,08)	.045 (1,14)	.022 (0,56)	.090 (2,29)	.290 (7,37)	.090 (2,29)

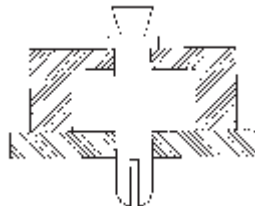
### TWO - PIECE NYLON FASTENER FOR USE WITH EDGE CONNECTOR ASSEMBLY

Body Item "A" is inserted through the connector and through the chassis. Pin Item "B" then is pushed or tapped into the body to secure the connector to the chassis. Head design of the pin permits easy removal, connector then can be easily replaced.



#### BODY ITEM "A"

ITEM NUMBER	C	D
27TPF0001A	.109 (2,76)	.305 (7,74)
27TPF0002A	.110 (2,79)	.350 (8,88)
27TPF0003A	.110 (2,79)	.480 (12,19)
27TPF0004A	.096 (2,43)	.340 (8,63)



#### PIN ITEM "B"

ITEM NUMBER	B	A
27TPF0001B	.330 (8,38)	.069 (1,75)
27TPF0002B	.360 (9,14)	.069 (1,75)
27TPF0003B	.455 (11,55)	.069 (1,75)
27TPF0004B	.340 (8,63)	.062 (1,57)

### TRANSISTOR INSULATORS

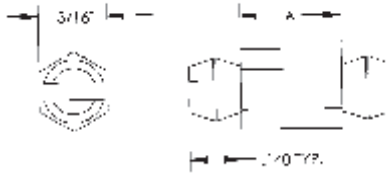
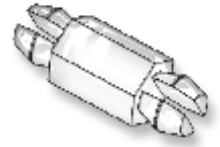
Transistor insulators are molded in Nylon 6/6 material. The insulators are designed to separate the mounting screw from the transistor. Parts are also available in black glassfilled nylon upon request.



ITEM NUMBER	DESCRIPTION	LENGTH	WIDTH	HEIGHT
21TI001	TRANSISTOR INSULATOR	.680 (17,27)	.476 (12,09)	.219 (5,56)
21TI002	TRANSISTOR INSULATOR	.735 (18,67)	.590 (14,99)	.240 (6,10)

## NYLON LOCKING HEX SPACERS

Economical Locking Spacers eliminate screws, nuts and lock washers in mounting P.C. boards on metal chassis or stacking in multiple tiers. Unique locking clips provide a mechanically secure, reusable connection in predrilled or punched holes while saving considerable assembly time.



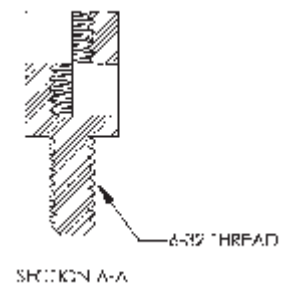
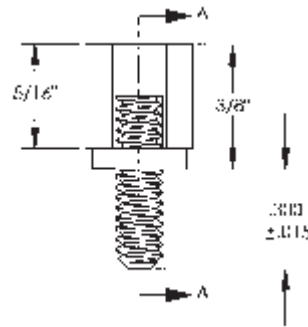
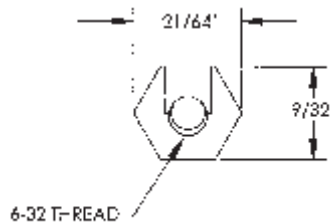
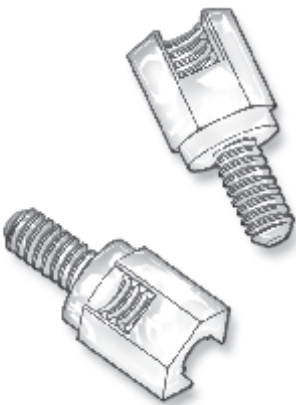
ITEM NUMBER	DESCRIPTION	A
27MPH00276	MPH 276	.276 (7,01)

FITS HOLE SIZE OF  $.152 \pm .002$  BOARD THICKNESS  $1/16$

## MALE-FEMALE CIRCUIT BOARD SUPPORT

Nylon 6/6 rated UL94V2 male/female thread with  $3/8"$  board spacing.

### New Product Line

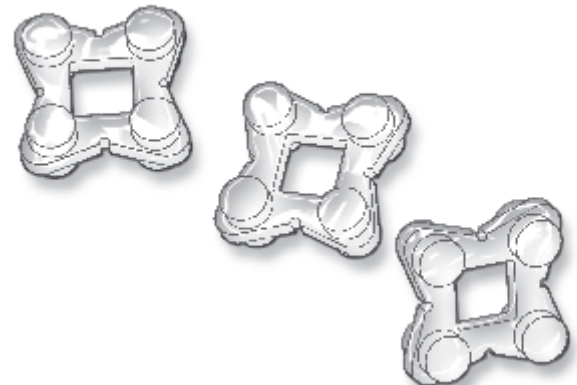
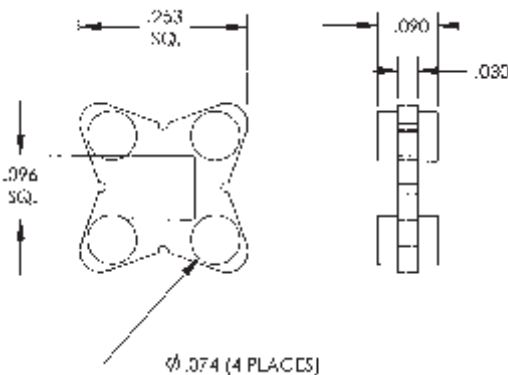


ITEM NUMBER	DESCRIPTION
27TMF0375	$3/8"$ Male-Female Circuit Board Support

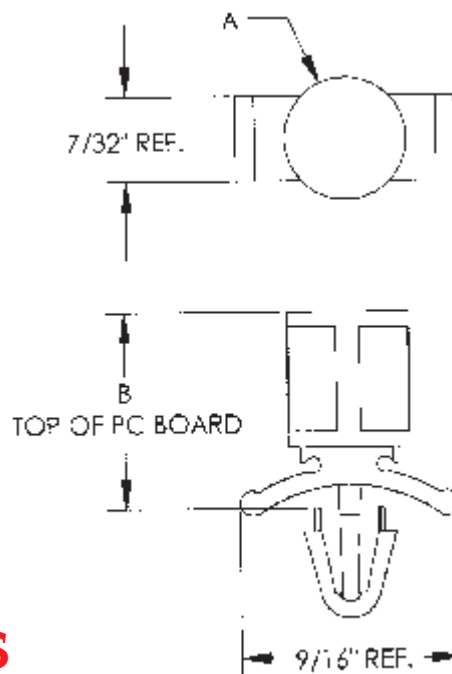
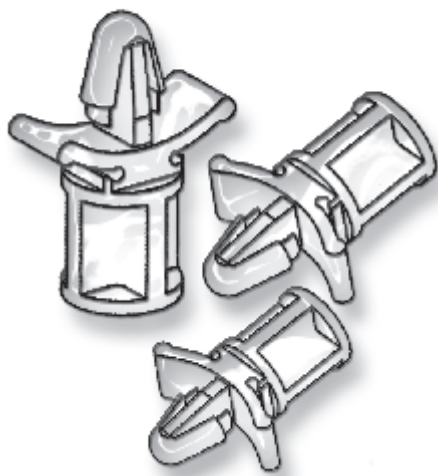
## SQUARE STANDOFF LED MOUNT

LED Mount provides secure mounting of both two and three lead devices. Nylon mount provides protection from heat, shock and vibration. Symmetrical design with feet on both sides eliminating need for specific side rotation.

### New Product Line

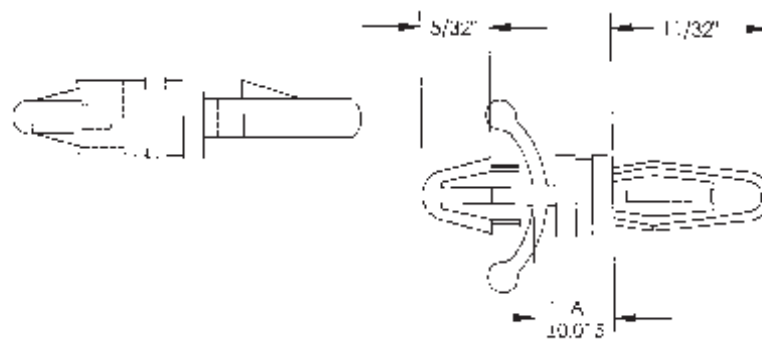


ITEM NUMBER	DESCRIPTION
18TRM001	TRM 001



## PUSH SPACERS

ITEM NUMBER	A	B	PANEL THICKNESS	HOLE SIZE
27PS00250	9/32 (7,14)	5/16 (7,93)	.062 (1,57)	.187 (4,75)
27PS00500	5/16 (7,93)	1/2 (12,70)	.093 (2,29)	.187 (4,75)
27PS00500A	5/16 (7,93)	1/2 (12,70)	.062 (1,57)	.187 (4,75)
27PS00625	9/32 (7,14)	11/16 (17,46)	.062 (1,57)	.187 (4,75)



**BOTH ENDS**  
**HOLE DIAMETER .125**  
**PANEL THICKNESS 1/16"**

## NYLON P.C.B. SUPPORTS

ITEM NUMBER	DESCRIPTION	A* * +/- .015"
27MLLP0187	MLLP 187	.187 (4,75)
27MLLP0250	MLLP 250	.250 (6,35)
27MLLP0375	MLLP 375	.375 (9,53)
27MLLP0437	MLLP 437	.437 (11,10)
27MLLP0500	MLLP 500	.500 (12,70)
27MLLP0562	MLLP 562	.562 (14,27)
27MLLP0625	MLLP 625	.625 (15,88)



## FEMALE NYLON CIRCUIT BOARD POSTS

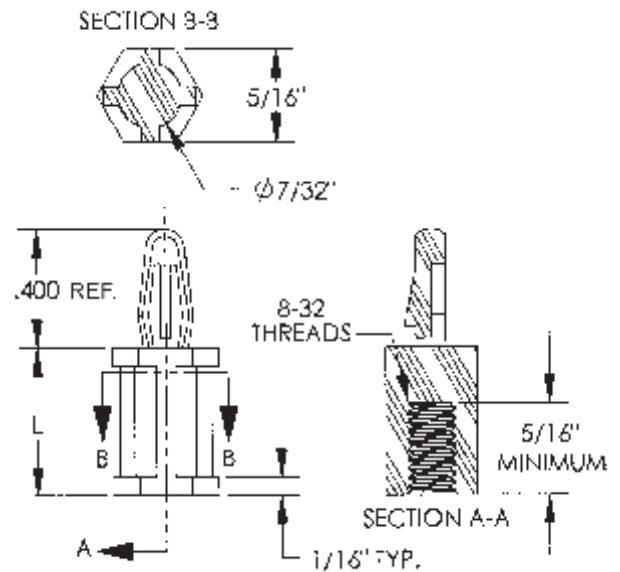
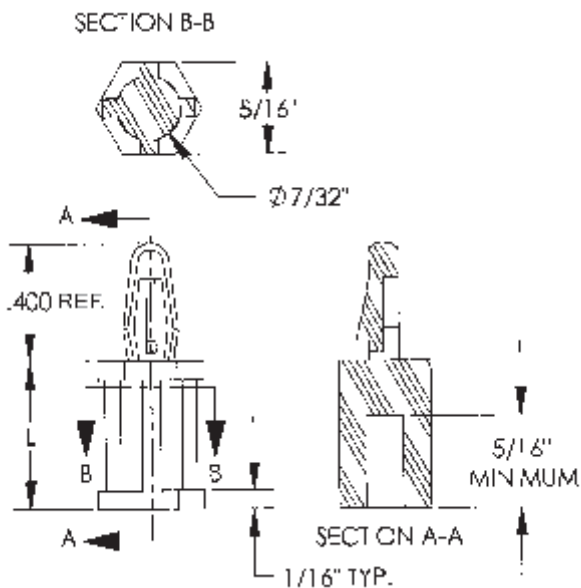


RECOMMENDED HOLE SIZE .156

NOTE: SELF-THREADING  
POSTS ARE DESIGNED  
FOR USE WITH A #6  
SELF-TAPPING SCREW.

PANEL THICKNESS 1/16"

TOLERANCE ON "L" DIMENSION +/- .015



### SELF-THREADING

ITEM NUMBER	DESCRIPTION	"L"
27FSTP00250*	FSTP 250	.250 (6,35)
27FSTP00375	FSTP 375	.375 (9,53)
27FSTP00500	FSTP 500	.500 (12,70)
27FSTP00625	FSTP 625	.625 (15,88)
27FSTP00750	FSTP 750	.750 (19,05)
27FSTP00875	FSTP 875	.875 (22,23)
27FSTP01000	FSTP 1000	1.000 (25,40)
27FSTP01125	FSTP 1125	1.125 (28,58)
27FSTP01250	FSTP 1250	1.250 (31,75)
27FSTP01406	FSTP 1406	1.406 (35,71)

\* 1/4" length

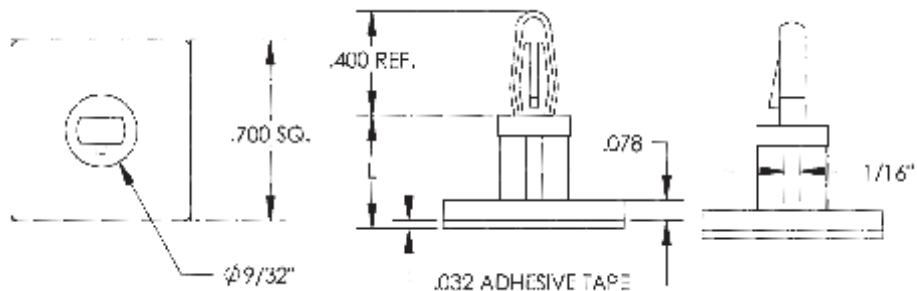
### THREADED

ITEM NUMBER	DESCRIPTION	"L"
27FTP00250*	FTP 250	.250 (6,35)
27FTP00375	FTP 375	.375 (9,53)
27FTP00500	FTP 500	.500 (12,70)
27FTP00625	FTP 625	.625 (15,88)
27FTP00750	FTP 750	.750 (19,05)
27FTP00875	FTP 875	.875 (22,23)
27FTP01000	FTP 1000	1.000 (25,40)
27FTP01125	FTP 1125	1.125 (28,58)
27FTP01250	FTP 1250	1.250 (31,75)
27FTP01406	FTP 1406	1.406 (35,71)

\* 1/4" length

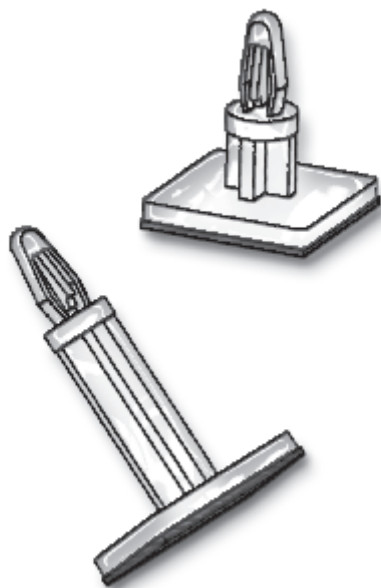
# CIRCUIT BOARD HARDWARE

## SECTION VIII



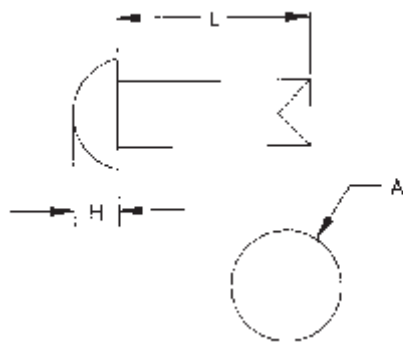
FITS RECOMMENDED HOLE SIZE OF .156 - PANEL THICKNESS 1/16"

## NYLON LOCKING P.C.B. SUPPORT ON ADHESIVE BASE

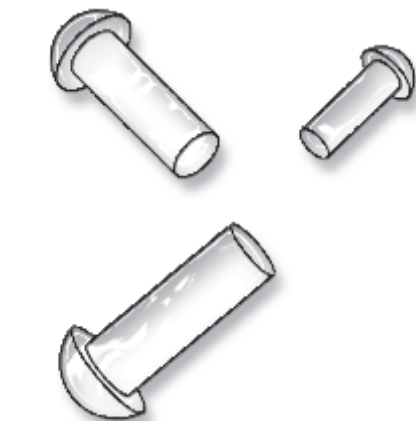


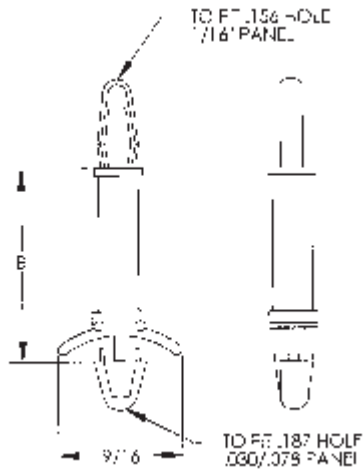
ITEM NUMBER	DESCRIPTION	"L"
27LAD0187	LAD 187	.187 (4,75)
27LAD0250	LAD 250	.250 (6,35)
27LAD0312	LAD 312	.312 (7,92)
27LAD0375	LAD 375	.375 (9,53)
27LAD0500	LAD 500	.500 (12,70)
27LAD0625	LAD 625	.625 (15,88)
27LAD0750	LAD 750	.750 (19,05)
27LAD0875	LAD 875	.875 (22,23)
27LAD1000	LAD 1000	1.000 (25,40)
27LAD1125	LAD 1125	1.125 (28,56)

## MOLDED ACETAL RIVETS

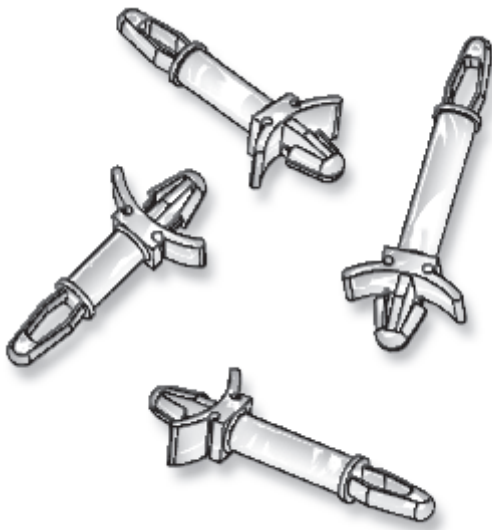
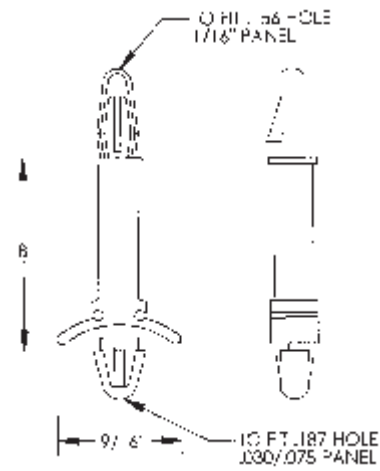


ITEM NUMBER	DESCRIPTION	SHANK	A	H	LENGTH
26RIV001	RIV 1	.085 (2,16)	.143 (3,63)	.058 (1,47)	1/8 (3,18)
26RIV002	RIV 2	.085 (2,16)	.143 (3,63)	.058 (1,47)	3/16 (4,76)
26RIV003	RIV 3	.085 (2,16)	.143 (3,63)	.058 (1,47)	1/4 (6,35)
26RIV004	RIV 4	.085 (2,16)	.143 (3,63)	.058 (1,47)	5/16 (7,94)
26RIV005	RIV 5	.085 (2,16)	.143 (3,63)	.058 (1,47)	3/8 (9,53)
26RIV006	RIV 6	.085 (2,16)	.143 (3,63)	.058 (1,47)	7/16 (11,11)
26RIV007	RIV 7	.085 (2,16)	.143 (3,63)	.058 (1,47)	1/2 (12,70)
26RIV011	RIV11	.125 (3,18)	.250 (6,35)	.068 (1,73)	1/8 (3,18)
26RIV012	RIV12	.125 (3,18)	.250 (6,35)	.068 (1,73)	3/16 (4,76)
26RIV013	RIV13	.125 (3,18)	.250 (6,35)	.068 (1,73)	1/4 (6,35)
26RIV014	RIV14	.125 (3,18)	.250 (6,35)	.068 (1,73)	5/16 (7,94)
26RIV015	RIV15	.125 (3,18)	.250 (6,35)	.068 (1,73)	3/8 (9,53)
26RIV016	RIV16	.125 (3,18)	.250 (6,35)	.068 (1,73)	7/16 (11,11)
26RIV017	RIV17	.125 (3,18)	.250 (6,35)	.068 (1,73)	1/2 (12,70)
26RIV018	RIV18	.125 (3,18)	.250 (6,35)	.068 (1,73)	9/16 (14,29)
26RIV019	RIV19	.125 (3,18)	.250 (6,35)	.068 (1,73)	5/8 (15,88)
26RIV020	RIV20	.125 (3,18)	.250 (6,35)	.068 (1,73)	11/16 (17,46)
26RIV021	RIV21	.125 (3,18)	.218 (5,54)	.090 (2,29)	1/8 (3,18)
26RIV022	RIV22	.125 (3,18)	.218 (5,54)	.090 (2,29)	3/16 (4,76)
26RIV023	RIV23	.125 (3,18)	.218 (5,54)	.090 (2,29)	1/4 (6,35)
26RIV024	RIV24	.125 (3,18)	.218 (5,54)	.090 (2,29)	5/16 (7,94)
26RIV025	RIV25	.125 (3,18)	.218 (5,54)	.090 (2,29)	3/8 (9,53)
26RIV026	RIV26	.125 (3,18)	.218 (5,54)	.090 (2,29)	1/2 (12,70)
26RIV050	RIV50	.125 (3,18)	.255 (6,48)	.051 (1,30)	1/4 (6,35)
26RIV055	RIV55	.125 (3,18)	.255 (6,48)	.051 (1,30)	3/8 (9,53)





Micro Plastics Circuit Board Supports eliminate screws, nuts, and lock-washers in mounting printed circuit boards on metal chassis or stacking in multiple tiers. Unique locking designs provide mechanically secure, reusable connection in pre-drilled or punched holes while saving considerable assembly time and expense.



## NYLON P.C.B. SUPPORTS "LOCK/TENSION" SERIES

THE "LTP" SERIES IS DESIGNED TO SECURELY LOCK TO THE BOTTOM CHASSIS AND SNAP INTO TOP BOARD.

ITEM NUMBER	DESCRIPTION	B
27LTP0187	3/16" LOCK/TENSION	.307 (7,80)
27LTP0250	1/4" LOCK/TENSION	.365 (9,27)
27LTP0375	3/8" LOCK/TENSION	.495 (12,57)
27LTP0437	7/16" LOCK/TENSION	.557 (14,15)
27LTP0500	1/2" LOCK/TENSION	.625 (15,88)
27LTP0625	5/8" LOCK/TENSION	.745 (18,92)
27LTP0750	3/4" LOCK/TENSION	.870 (22,10)
27LTP0875	7/8" LOCK/TENSION	.995 (25,27)
27LTP1000	1" LOCK/TENSION	1.120 (28,45)
27LTP1125	1 1/8" LOCK/TENSION	1.245 (31,62)
27LTP1250	1 1/4" LOCK/TENSION	1.370 (34,80)
27LTP1375	1 3/8" LOCK/TENSION	1.495 (37,97)
27LTP1750	1 3/4" LOCK/TENSION	1.810 (45,97)

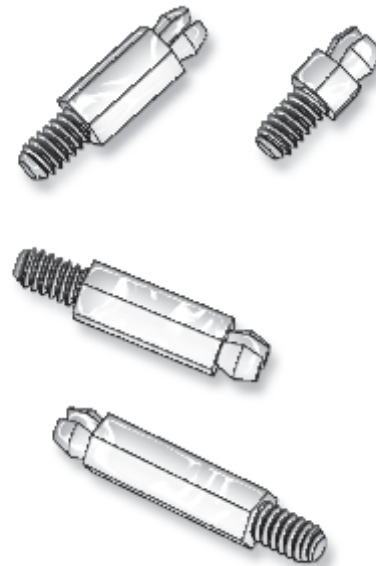
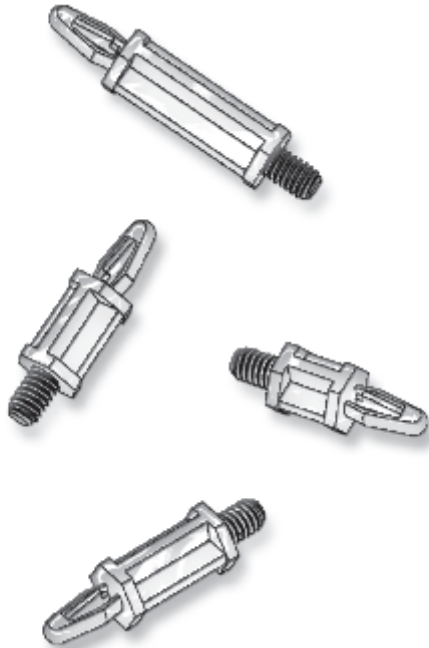
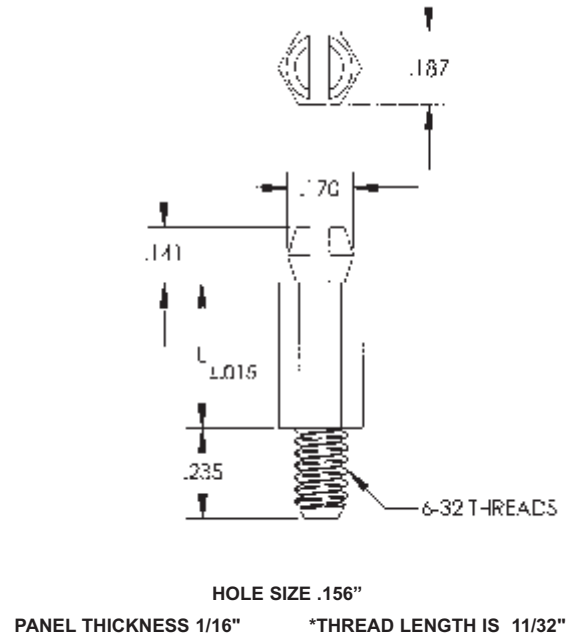
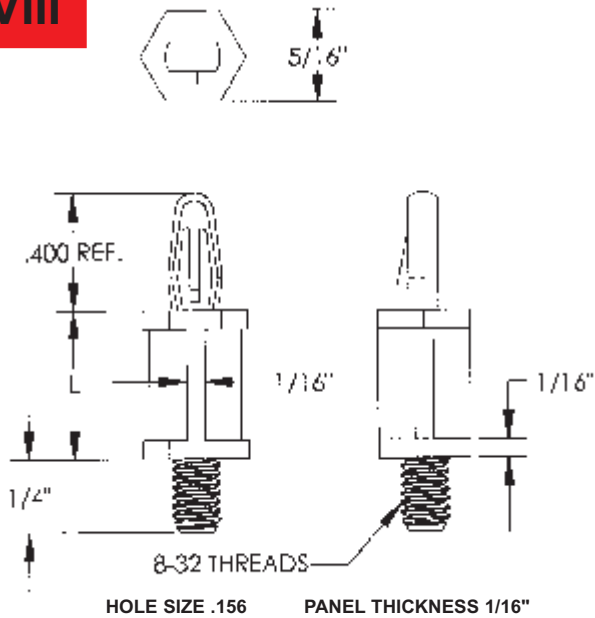
## NYLON P.C.B. SUPPORTS "LOCK/LOCK" SERIES

THE "LLP" SERIES IS DESIGNED TO SECURELY LOCK BOTH THE CHASSIS END AND THE PRINTED CIRCUIT BOARD ON TOP.

ITEM NUMBER	DESCRIPTION	B
27LLP0125	1/8" LOCK/LOCK	.210 (5,33)
27LLP0187	3/16" LOCK/LOCK	.307 (7,80)
27LLP0250	1/4" LOCK/LOCK	.365 (9,27)
27LLP0375	3/8" LOCK/LOCK	.495 (12,57)
27LLP0437	7/16" LOCK/LOCK	.557 (14,15)
27LLP0500	1/2" LOCK/LOCK	.625 (15,88)
27LLP0625	5/8" LOCK/LOCK	.745 (18,92)
27LLP0750	3/4" LOCK/LOCK	.870 (22,10)
27LLP0875	7/8" LOCK/LOCK	.995 (25,27)
27LLP1000	1" LOCK/LOCK	1.120 (28,45)
27LLP1125	1 1/8" LOCK/LOCK	1.245 (31,62)
27LLP1250	1 1/4" LOCK/LOCK	1.370 (34,80)
27LLP1375	1 3/8" LOCK/LOCK	1.495 (37,97)
27LLP1750	1 3/4" LOCK/LOCK	1.810 (45,97)

# CIRCUIT BOARD HARDWARE

## SECTION VIII



## MALE PRINTED CIRCUIT BOARD SUPPORT POSTS "LOCKING LMTM" SERIES

ITEM NUMBER	DESCRIPTION	L
27LMTP00250	LMTM 250	.250 (6,35)
27LMTP00375	LMTM 375	.375 (9,53)
27LMTP00500	LMTM 500	.500 (12,70)
27LMTP00625	LMTM 625	.625 (15,88)
27LMTP00750	LMTM 750	.750 (19,05)
27LMTP00875	LMTM 875	.875 (22,23)
27LMTP01000	LMTM 1000	1.000 (25,40)
27LMTP01125	LMTM 1125	1.125 (28,58)

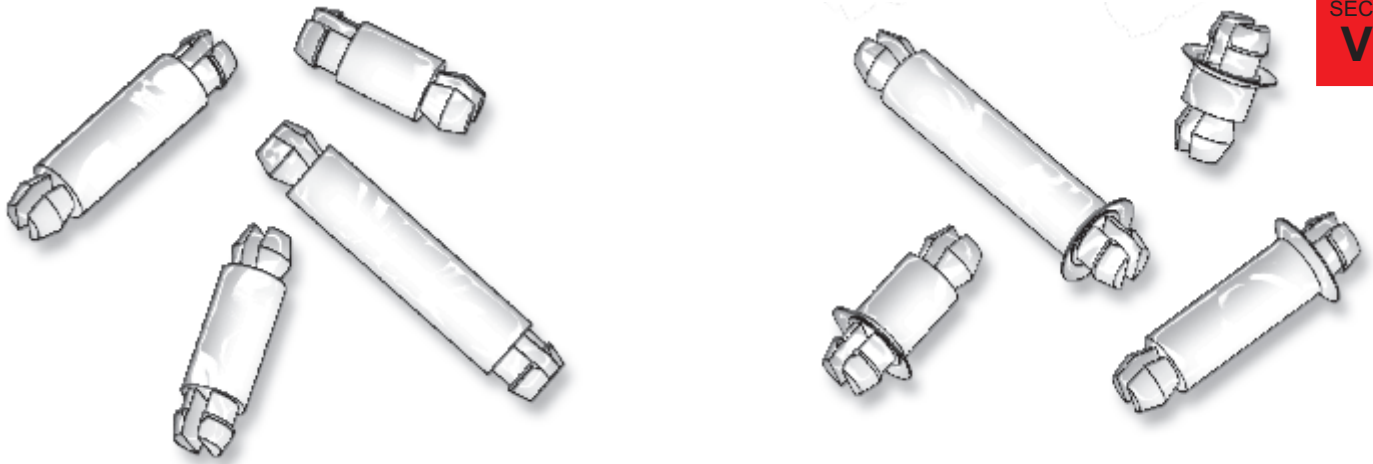
## MALE PRINTED CIRCUIT BOARD SUPPORT POSTS "MTP" SERIES

ITEM NUMBER	DESCRIPTION	L +/- .015
27MTP00125	MTP 125	.125 (3,18)
27MTP00187	MTP 187	.187 (4,75)
27MTP00250	MTP 250	.250 (6,35)
27MTP00375	MTP 375	.375 (9,53)
27MTP00395*	MTP 395	.395 (10,03)
27MTP00500	MTP 500	.500 (12,70)
27MTP00625	MTP 625	.625 (15,88)
27MTP00750	MTP 750	.750 (19,05)
27MTP00875	MTP 875	.875 (22,23)

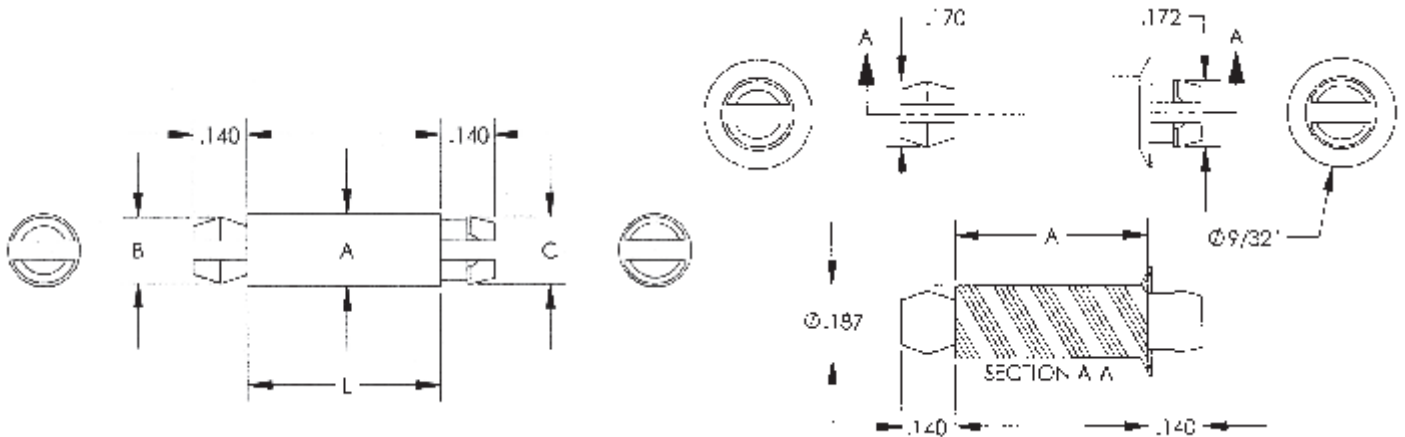


# CIRCUIT BOARD HARDWARE

SECTION  
VIII



Economical locking spacers eliminate screws, nuts and lock washers in mounting P.C. Boards on metal chassis or stacking in multiple tiers. Unique locking clips provide a mechanically secure, reusable connection in predrilled or punched holes while saving considerable assembly time. The new improved "MSP" series greatly increases stability and integrity of the printed circuit board assembly, while improving the pull-out strength of the connection.



RECOMMENDED HOLE SIZE  $.156'' \pm .002''$   
PANEL THICKNESS  $1/16''$

PARTS CAN BE FURNISHED COLOR CODED FOR IDENTIFICATION.

## NYLON P.C.B. POSTS "MP" SERIES

\* FITS HOLE SIZE OF  $.093''$

ITEM NUMBER	DESCRIPTION	"L"	"A"	"B"	"C"
27MP00125	MP 125	.125 (3,18)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00197	MP 197	.197 (5,00)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00250	MP 250	.250 (6,35)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00312	MP 312	.312 (7,92)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00375	MP 375	.375 (9,53)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00437	MP 437	.437 (11,11)	.187 (4,75)	.170 (4,32)	.172 (4,37)
* 27MP00437S	MP 437S	.437 (11,11)	.125 (3,18)	.104 (2,64)	.108 (2,74)
27MP00500	MP 500	.500 (12,70)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00625	MP 625	.625 (15,88)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00750	MP 750	.750 (19,05)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP00875	MP 875	.875 (22,23)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP01000	MP1000	1.00 (25,40)	.187 (4,75)	.170 (4,32)	.172 (4,37)
27MP01950	MP1950	1.95 (49,53)	.187 (4,75)	.170 (4,32)	.172 (4,37)

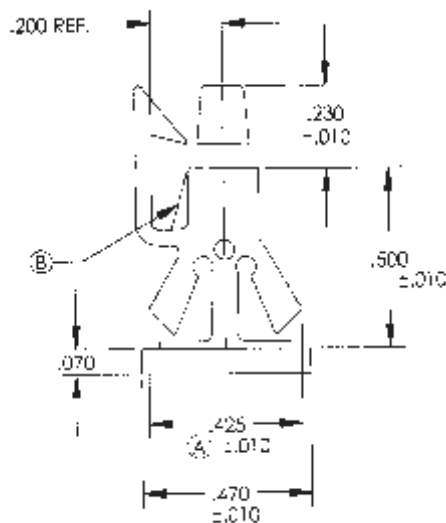
## NYLON P.C.B. POSTS "MSP" SERIES

ITEM NUMBER	DESCRIPTION	"A"
27MSP00125	MSP 125	.125 (3,18)
27MSP00156	MSP 156	.156 (3,96)
27MSP00250	MSP 250	.250 (6,35)
27MSP00276	MSP 276	.276 (7,00)
27MSP00312	MSP 312	.312 (7,92)
27MSP00375	MSP 375	.375 (9,53)
27MSP00437	MSP 437	.437 (11,11)
27MSP00472	MSP 472	.472 (12,00)
27MSP00500	MSP 500	.500 (12,70)
27MSP00625	MSP 625	.625 (15,88)
27MSP00700	MSP 700	.700 (17,78)
27MSP00750	MSP 750	.750 (19,05)
27MSP00875	MSP 875	.875 (22,23)
27MSP01000	MSP1000	1.00 (25,40)
27MSP01800	MSP1800	1.80 (45,72)

# CIRCUIT BOARD HARDWARE

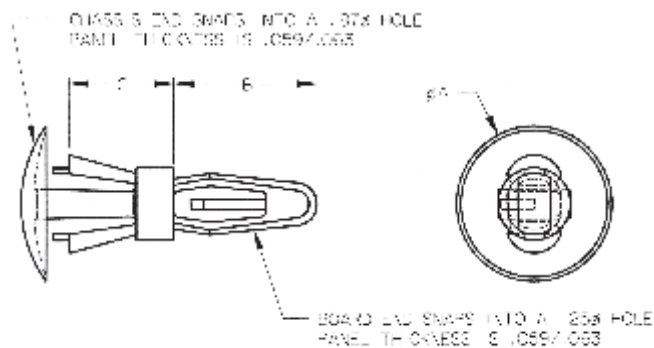
## SECTION VIII

Heavy duty nylon 6/6 support snaps into P.C. board from bottom. Locking arm clips to the side of the pc board making for easy removal and replacement of pc boards. Support does not rotate in chassis or positioning holes. Board clearance may vary depending on chassis thickness. Parts are available in black and natural nylon.

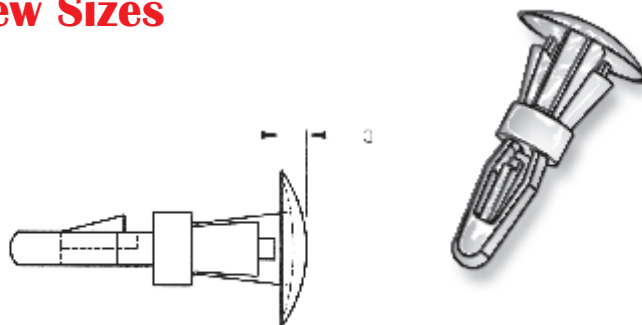


## NYLON HEAVY DUTY P.C.B. SUPPORT

ITEM NUMBER	BOARD CLEARANCE	--- CIRCUIT BOARD ---		-----CHASSIS-----		HOLE SIZE
		THICKNESS	HOLE DIA.	THICKNESS		
27HDEC00500	.430 (10,92) - .460 (11,68)	.062 (1,57)	.157 (3,99)	.050 (1,27) - .060 (1,52)	.312 (7,92 X .375 (9,53)	

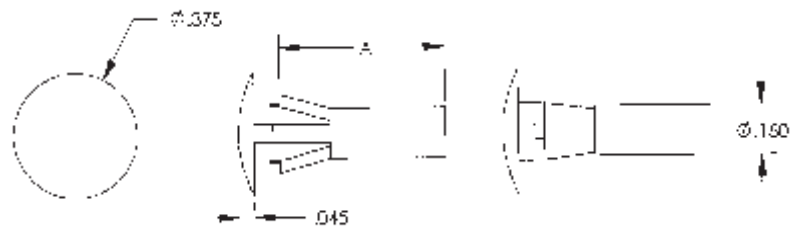


## New Sizes



## REVERSE LOCKING CIRCUIT BOARD SUPPORTS

ITEM NUMBER	DESCRIPTION	A	B	C	D
27RV00250	RV 250	.375 (9,53)	11/32" (8,71)	.250 (6,35)	.060 (1,52)
27RV00375	RV 375	.375 (9,53)	11/32" (8,71)	.375 (9,53)	.060 (1,52)
27RV00625	RV 625	1/2" (12,70)	13/32" (10,31)	5/8" (15,88)	.063 (1,60)

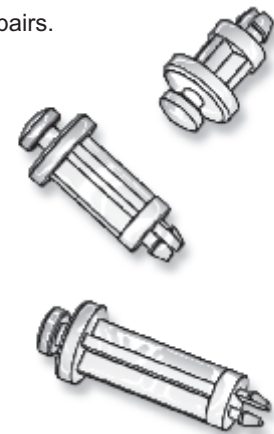
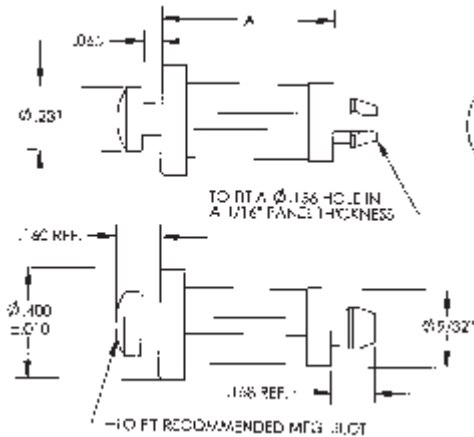


## REVERSE LOCKING CIRCUIT BOARD SUPPORT STANDOFF

ITEM NUMBER	DESCRIPTION	HEAD DIA.	BODY DIA.	HEAD HEIGHT	HOLE SIZE	A
27RVS00500	RVS 500	.375 (9,53)	.150 (3,81)	.045 (1,14)	.178 (4,52)	.500 (12,70)

## NYLON KEY-SLOT P.C.B. POSTS

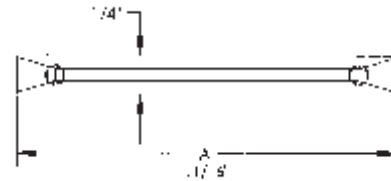
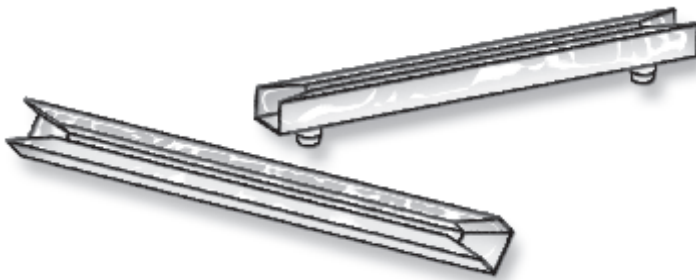
For use in combination with a key-slot hole so that the circuit board may be removed for repairs.



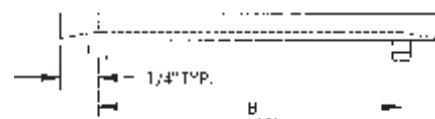
ITEM NUMBER	DESCRIPTION	A
27KYP00187	KYP 187	3/16 (4,8)
27KYP00250	KYP 250	1/4 (6,4)
27KYP00375	KYP 375	3/8 (9,5)
27KYP00500	KYP 500	1/2 (12,7)
27KYP00625	KYP 625	5/8 (15,9)
27KYP00750	KYP 750	3/4 (19,1)
27KYP00875	KYP 875	7/8 (22,2)
27KYP01000	KYP 1000	1 (25,4)

## NYLON P.C. BOARD CARD GUIDES

Micro Plastics' Printed Circuit board Support Guides are an economical and fast solution to mount P.C. Boards. Card insertion is simple and fast. The smooth positive channel guides the P.C. Board and firmly supports and protects the board. Guides are molded of tough, electrically insulating nylon 6/6 and are designed to snap into pre-punched holes in the chassis. Micro Plastics has available the eight most popular sizes. Other sizes will be tooled on request.

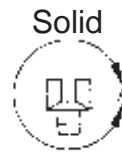


**New Sizes**



The Printed Circuit Board Card Guide is designed to fit a  $.125" +.003"$   $-.001"$  front diameter hole and a  $.120" +/-.005"$  x  $.218"$  slot rear hole.

ITEM NUMBER	DESCRIPTION	A	B	LEG DESIGN
21CGS00250WS	2 1/2" GUIDE	2.5	2.0	Slotted Leg Design
21CGS00250	2 1/2" GUIDE	2.5	2.0	Solid Leg Design
21CGS00300	3" GUIDE	3.0	2.5	Solid Leg Design
21CGS00350	3 1/2" GUIDE	3.5	3.0	Solid Leg Design
21CGS00400	4" GUIDE	4.0	3.5	Solid Leg Design
21CGS00450	4 1/2" GUIDE	4.5	4.0	Solid Leg Design
21CGS00500	5" GUIDE	5.0	4.5	Solid Leg Design
21CGS00550	5 1/2" GUIDE	5.5	5.0	Solid Leg Design
21CGS00600	6" GUIDE	6.0	5.5	Solid Leg Design



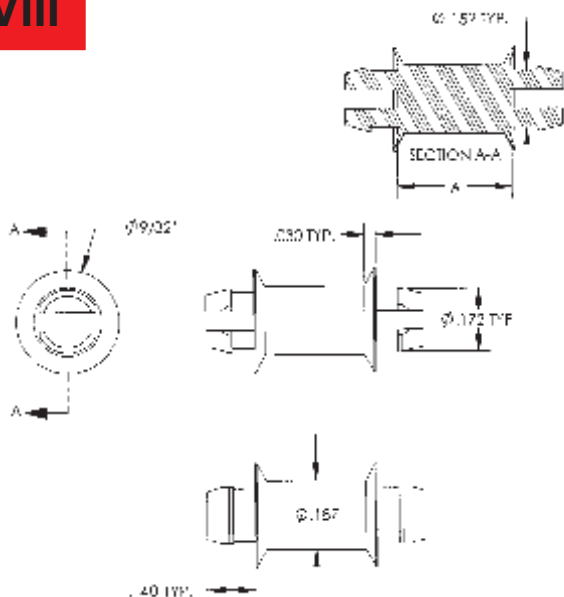
# CIRCUIT BOARD HARDWARE

## SECTION VIII

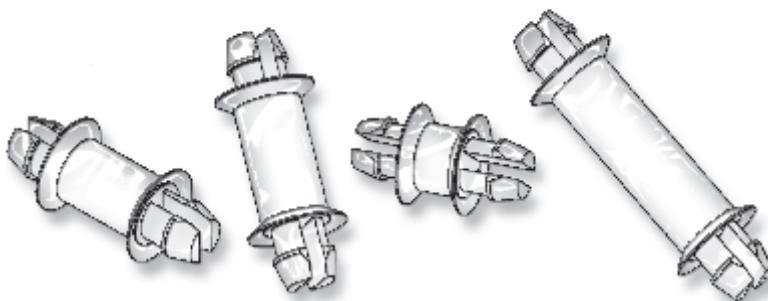
HOLE "DSP" SERIES - BOTH ENDS FITS A .156" HOLE  
PANEL THICKNESS 1/16"

### "DSP" SERIES

ITEM NUMBER	DESCRIPTION	"A" *
27DSP00125	DSP 125	.125 (3,18)
27DSP00250	DSP 250	.250 (6,35)
27DSP00260	DSP 260	.260 (6,60)
27DSP00276	DSP 276	.276 (7,00)
27DSP00312	DSP 312	.312 (7,92)
27DSP00375	DSP 375	.375 (9,53)
27DSP00437	DSP 437	.437 (11,11)
27DSP00472	DSP 472	.472 (12,00)
27DSP00500	DSP 500	.500 (12,70)
27DSP00625	DSP 625	.625 (15,88)
27DSP00750	DSP 750	.750 (19,05)
27DSP00788	DSP 788	.788 (20,02)
27DSP00875	DSP 875	.875 (22,23)
27DSP01000	DSP 1000	1.000 (25,40)
27DSP01250	DSP 1250	1.250 (31,75)



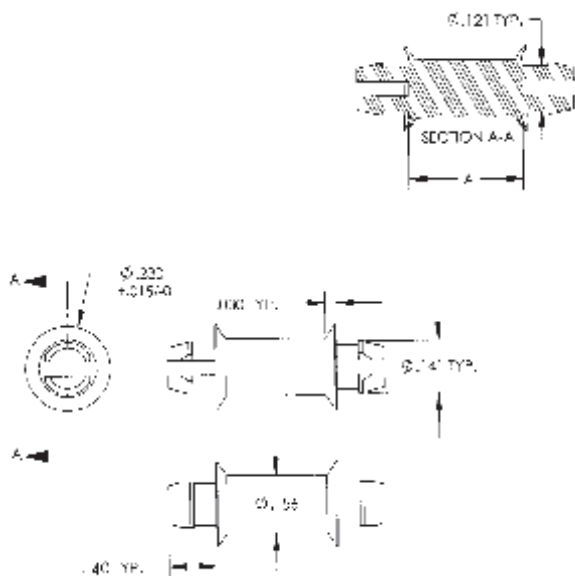
## NYLON CIRCUIT BOARD POSTS



HOLE "DMSP" SERIES - BOTH ENDS FIT A .125" HOLE  
PANEL THICKNESS 1/16"

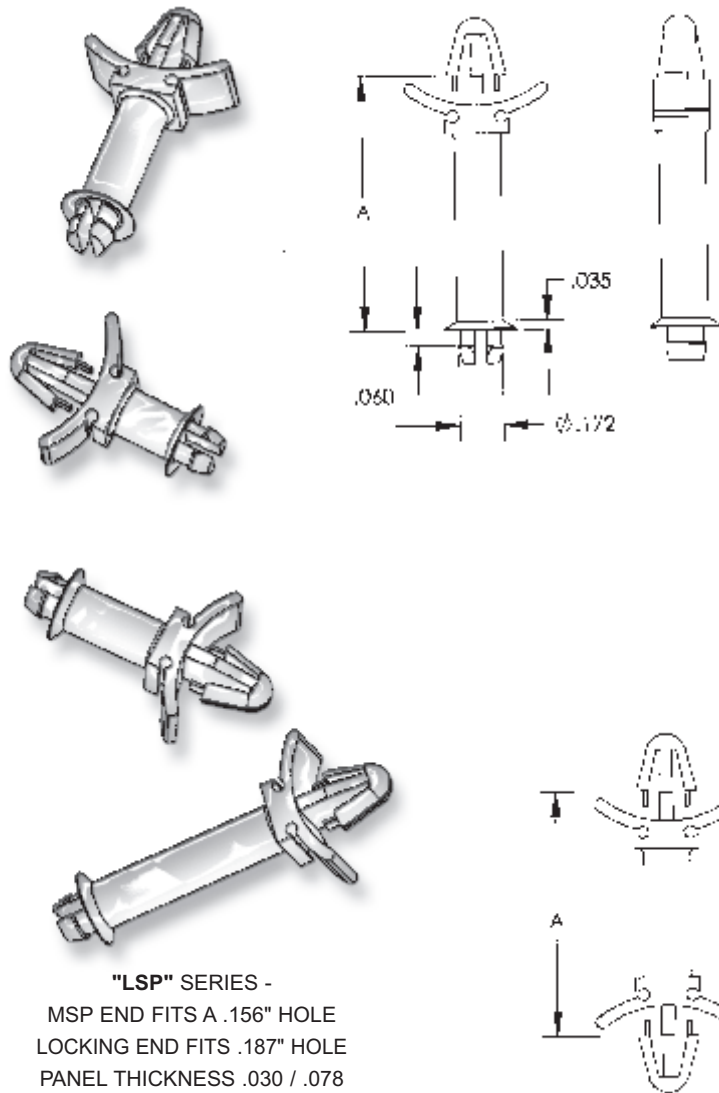
### "DMSP" SERIES

ITEM NUMBER	DESCRIPTION	"A" *
27DMSP00125	DMSP 125	.125 (3,18)
27DMSP00250	DMSP 250	.250 (6,35)
27DMSP00312	DMSP 312	.312 (7,92)
27DMSP00375	DMSP 375	.375 (9,53)
27DMSP00437	DMSP 437	.437 (11,11)
27DMSP00500	DMSP 500	.500 (12,70)
27DMSP00625	DMSP 625	.625 (15,88)
27DMSP00720	DMSP 720	.720 (18,29)
27DMSP00750	DMSP 750	.750 (19,05)
27DMSP00820	DMSP 820	.820 (20,83)
27DMSP00875	DMSP 875	.875 (22,23)
27DMSP00950	DMSP 950	.950 (24,13)
27DMSP01000	DMSP 1000	1.000 (25,40)

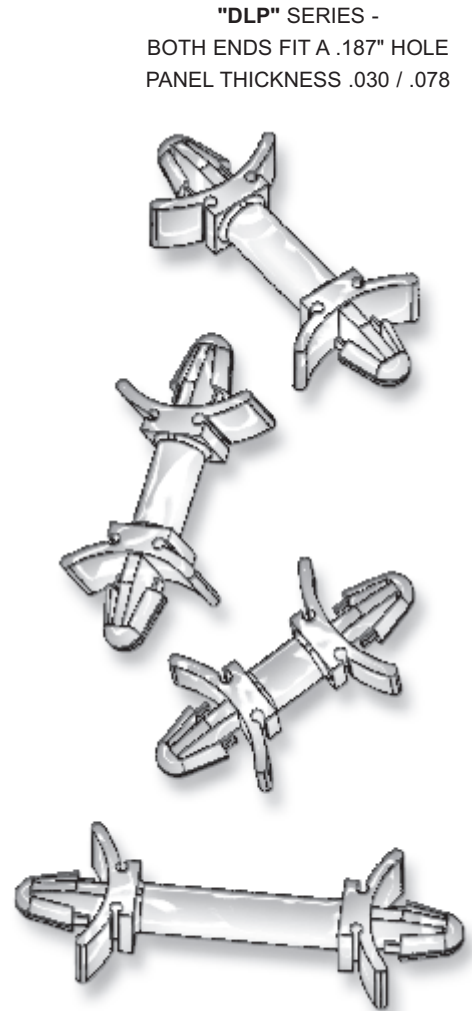




## NYLON P.C.B. SUPPORTS



**"LSP" SERIES -**  
MSP END FITS A .156" HOLE  
LOCKING END FITS .187" HOLE  
PANEL THICKNESS .030 / .078



**"DLP" SERIES -**  
BOTH ENDS FIT A .187" HOLE  
PANEL THICKNESS .030 / .078

### New Sizes

#### "LSP" SERIES

"A" \* EQUAL TO  
THE DISTANCE  
OVER PANELS.

ITEM NUMBER	DESCRIPTION	"A" *
27LSP00187	LSP 187	.307 (7,80)
27LSP00250	LSP 250	.365 (9,27)
27LSP00375	LSP 375	.495 (12,57)
27LSP00437	LSP 437	.557 (14,15)
27LSP00500	LSP 500	.625 (15,88)
27LSP00625	LSP 625	.745 (18,92)
27LSP00750	LSP 750	.870 (22,10)
27LSP00875	LSP 875	.995 (25,27)
27LSP01000	LSP 1000	1.120 (28,45)
27LSP01125	LSP 1125	1.245 (31,62)
27LSP01250	LSP 1250	1.370 (34,80)
27LSP01375	LSP 1375	1.495 (37,97)

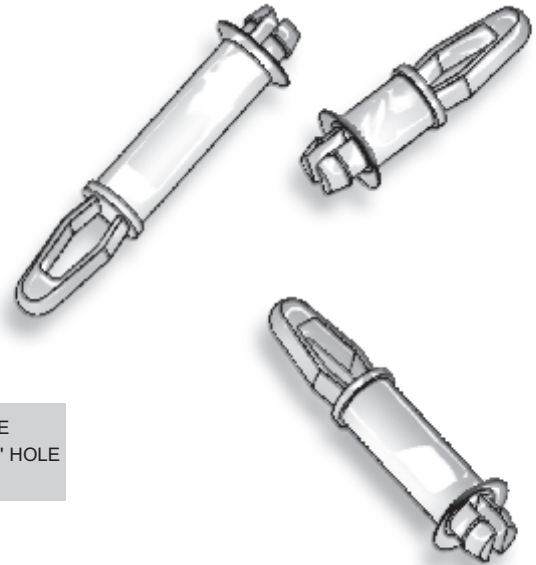
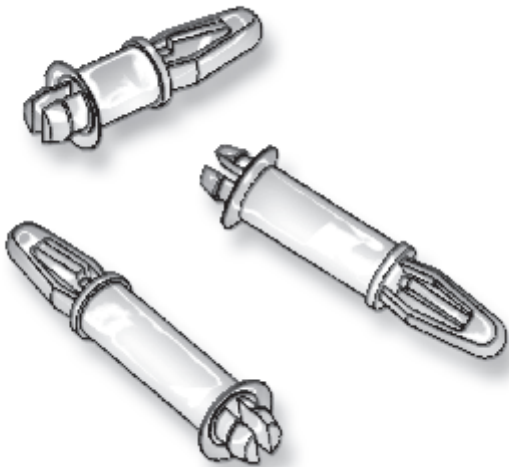
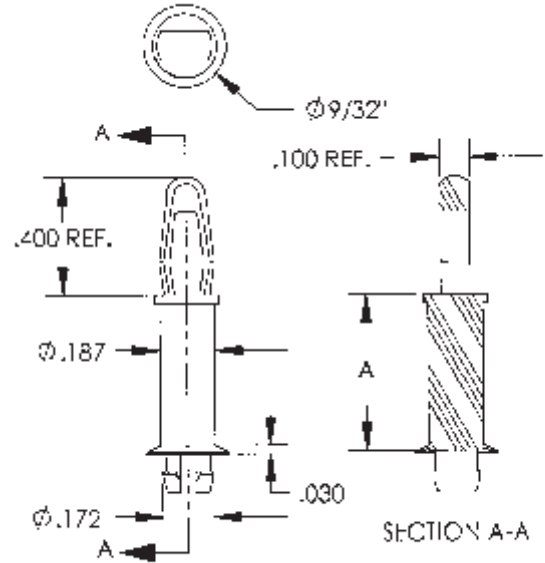
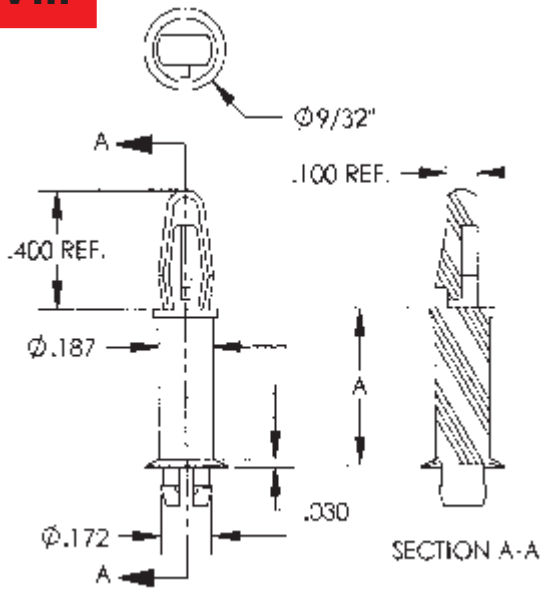
#### "DLP" SERIES

"A" \* EQUAL TO  
THE DISTANCE  
OVER PANELS.

ITEM NUMBER	DESCRIPTION	"A" *
27DLP00187	DLP 187	.307 (7,80)
27DLP00250	DLP 250	.365 (9,27)
27DLP00295	DLP 295	.422 (10,72)
27DLP00375	DLP 375	.495 (12,57)
27DLP00437	DLP 437	.557 (14,15)
27DLP00500	DLP 500	.625 (15,88)
27DLP00625	DLP 625	.745 (18,92)
27DLP00750	DLP 750	.870 (22,10)
27DLP00875	DLP 875	.995 (25,27)
27DLP01000	DLP 1000	1.120 (28,45)
27DLP01125	DLP 1125	1.245 (31,62)
27DLP01250	DLP 1250	1.370 (34,80)
27DLP01375	DLP 1375	1.495 (37,97)

# CIRCUIT BOARD HARDWARE

## SECTION VIII



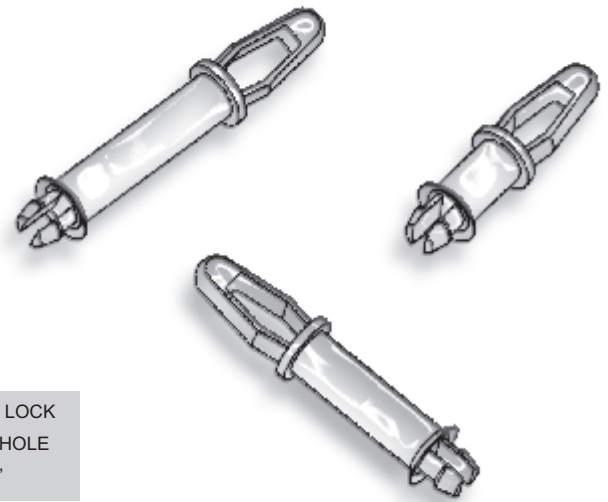
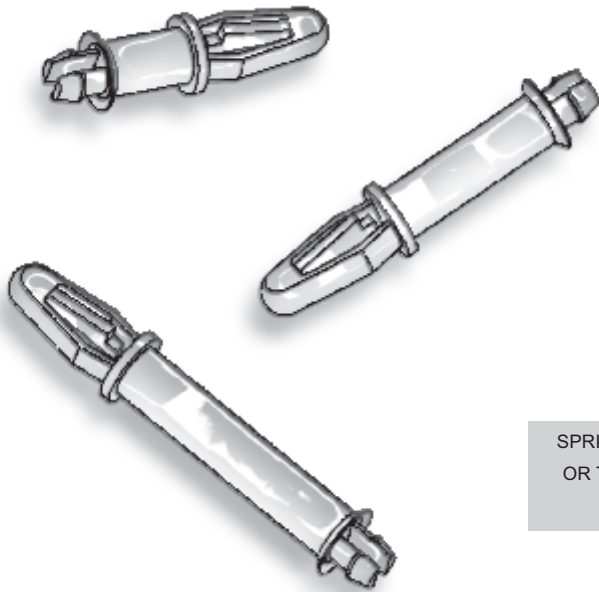
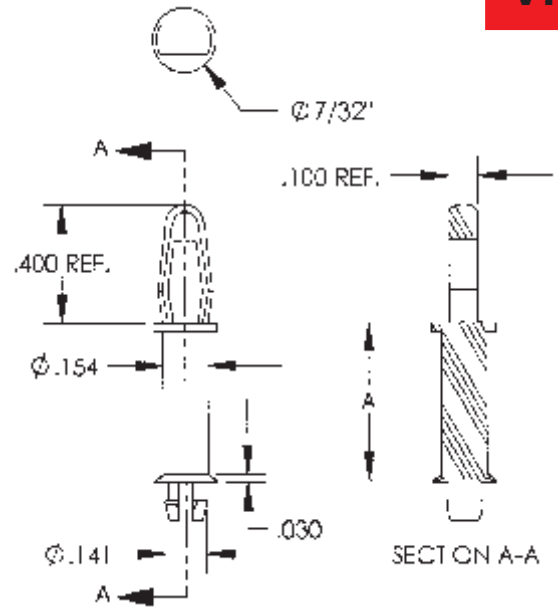
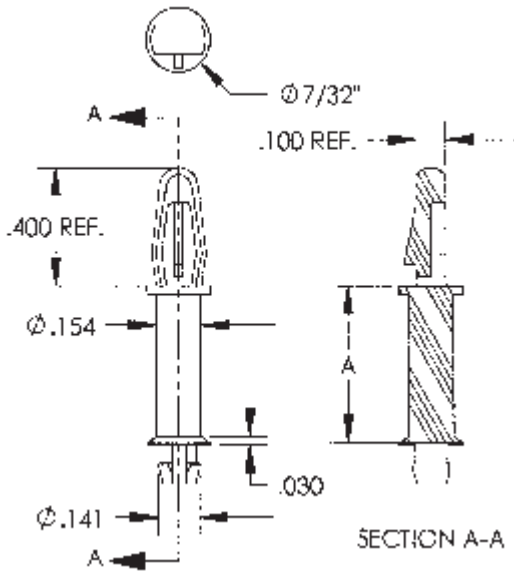
SPRING END FITS .156" HOLE  
 LOCK OR TENSION END FITS .156" HOLE  
 PANEL THICKNESS 1/16"

## NYLON P.C.B. SUPPORTS "LCSP" SERIES

ITEM NUMBER	DESCRIPTION	"A"
27LCSP00125	LCSP 125	.125 (3,18)
27LCSP00250	LCSP 250	.250 (6,35)
27LCSP00312	LCSP 312	.312 (7,92)
27LCSP00375	LCSP 375	.375 (9,53)
27LCSP00437	LCSP 437	.437 (11,11)
27LCSP00500	LCSP 500	.500 (12,70)
27LCSP00625	LCSP 625	.625 (15,88)
27LCSP00750	LCSP 750	.750 (19,05)
27LCSP00875	LCSP 875	.875 (22,23)
27LCSP01000	LCSP 1000	1.000 (25,40)

## NYLON P.C.B. SUPPORTS "TCSP" SERIES

ITEM NUMBER	DESCRIPTION	"A"
27TCSP00125	TCSP 125	.125 (3,18)
27TCSP00250	TCSP 250	.250 (6,35)
27TCSP00312	TCSP 312	.312 (7,92)
27TCSP00375	TCSP 375	.375 (9,53)
27TCSP00437	TCSP 437	.437 (11,11)
27TCSP00500	TCSP 500	.500 (12,70)
27TCSP00625	TCSP 625	.625 (15,88)
27TCSP00750	TCSP 750	.750 (19,05)
27TCSP00875	TCSP 875	.875 (22,23)
27TCSP01000	TCSP 1000	1.000 (25,40)



SPRING END FITS .156" HOLE LOCK  
OR TENSION END FITS .125" HOLE  
PANEL THICKNESS 1/16"

## NYLON P.C.B. SUPPORTS "LMSP" SERIES

ITEM NUMBER	DESCRIPTION	"A"
27LMSP00125	LMSP 125	.125 (3,18)
27LMSP00250	LMSP 250	.250 (6,35)
27LMSP00312	LMSP 312	.312 (7,92)
27LMSP00375	LMSP 375	.375 (9,53)
27LMSP00437	LMSP 437	.437 (11,11)
27LMSP00500	LMSP 500	.500 (12,70)
27LMSP00625	LMSP 625	.625 (15,88)
27LMSP00750	LMSP 750	.750 (19,05)
27LMSP00875	LMSP 875	.875 (22,23)
27LMSP01000	LMSP 1000	1.000 (25,40)

## NYLON P.C.B. SUPPORTS "TMSP" SERIES

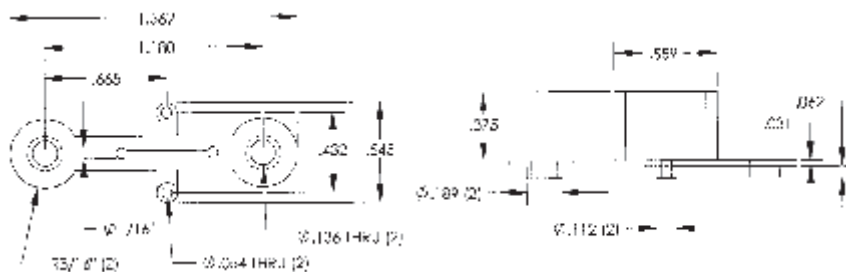
ITEM NUMBER	DESCRIPTION	"A"
27TMSP00125	TMSP 125	.125 (3,18)
27TMSP00250	TMSP 250	.250 (6,35)
27TMSP00312	TMSP 312	.312 (7,92)
27TMSP00375	TMSP 375	.375 (9,53)
27TMSP00437	TMSP 437	.437 (11,11)
27TMSP00500	TMSP 500	.500 (12,70)
27TMSP00625	TMSP 625	.625 (15,88)
27TMSP00750	TMSP 750	.750 (19,05)
27TMSP00875	TMSP 875	.875 (22,23)
27TMSP01000	TMSP 1000	1.000 (25,40)

# CIRCUIT BOARD HARDWARE

## SECTION VIII

### POWER TRANSISTOR MOUNTS

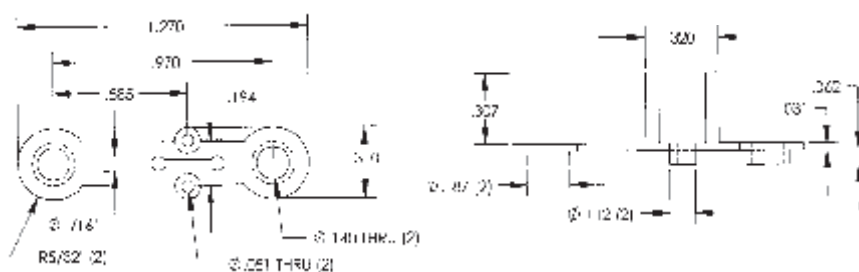
Simplify power transistor mountings and insulation, and improve thermal efficiency with molded insulators. These insulators are molded of Type 66 Nylon for regular applications and of Glass Filled Polyester for heavy-duty uses. They replace up to six pieces of conventional insulation required with previous mountings. They also increase the amount of interface surface between device and sink by minimizing clearance holes required for all feed-thru connectors. They also have a built-in barrier which not only eliminates need for sleeving of base and emitter connections but also serves as an assembly aid during installation.



**PTI-1 for TO-3**

ITEM NUMBER	DESCRIPTION
19PT11	PTI-1
18PT11WOB	PTI-1 W/O BARRIER

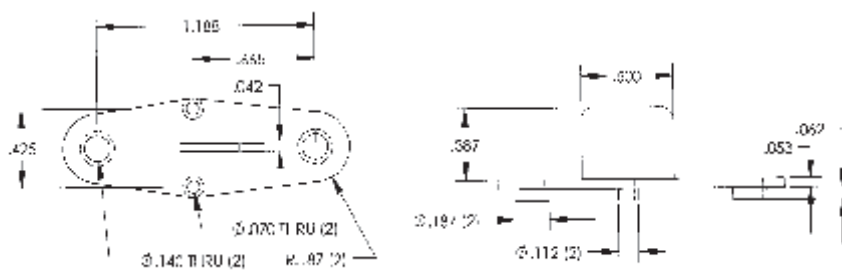
#### STANDARD



**PTI-2 for TO-66**

ITEM NUMBER	DESCRIPTION
19PT12	PTI-2
18PT12WOB	PTI-2 W/O BARRIER

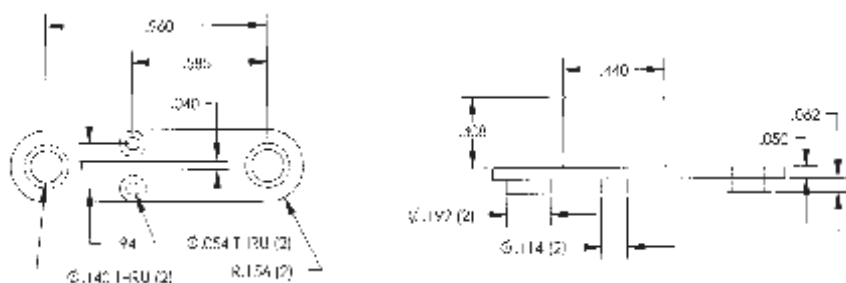
#### STANDARD



**PTI-1-H for TO-3**

ITEM NUMBER	DESCRIPTION
20PT11HD	PTI-1 HD
18PT11HDWOB	PTI-1 HD W/O BARRIER

#### HEAVY DUTY



**PTI-2-H for TO-66**

ITEM NUMBER	DESCRIPTION
20PT12HD	PTI-2 HD
18PT12HDWOB	PTI-2 HD W/O BARRIER

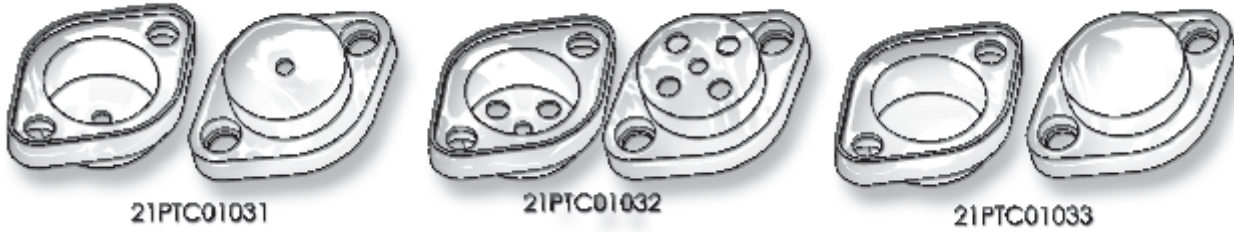
#### HEAVY DUTY



# CIRCUIT BOARD HARDWARE

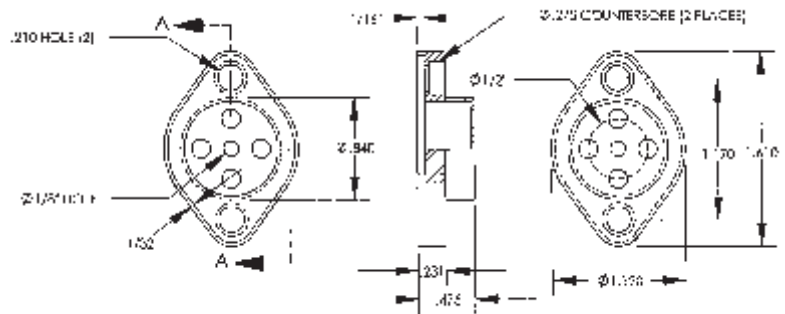
SECTION  
VIII

Micro Plastics' Power Transistor Covers are available in both TO-3 and TO-66 configurations. Both 1 hole, 5 hole and no hole styles are offered. Transistor covers are stocked in Nylon 6/6. Other materials are available upon request.



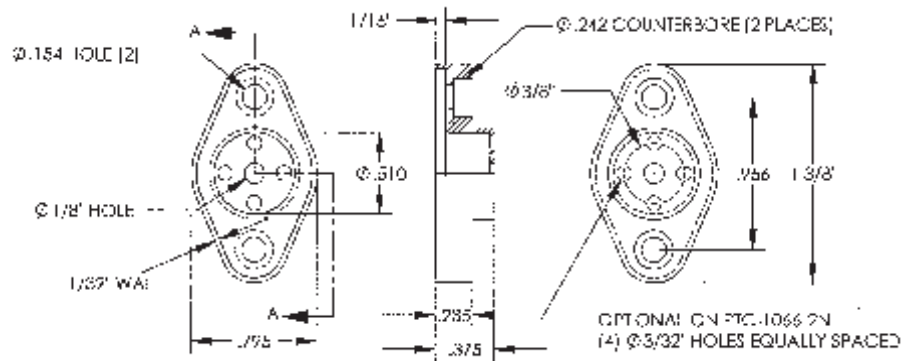
## POWER TRANSISTOR COVERS TO-3

ITEM NUMBER	DESCRIPTION
21PTC01031	PTC 103-1N 1 HOLE
21PTC01032	PTC103-2N 5 HOLE
21PTC01033	PTC 103-ON NO HOLE



## POWER TRANSISTOR COVERS TO-66

ITEM NUMBER	DESCRIPTION
21PTC010661	PTC1066-1N 1-HOLE
21PTC010662	PTC1066-2N 5-HOLE
21PTC010663	PTC1066-ON NO HOLE



# HOSE CLAMPS AND INSTALLATION TOOLS

## SECTION IX

### - APPLIANCE -

Dishwashers, laundry, refrigerators, food preparation equipment.

### - ELECTRICAL/ELECTRONIC -

Positioning and placement of components and wiring.

### - R.V./BOATING -

Plumbing and Accessories.

### - AUTOMOTIVE -

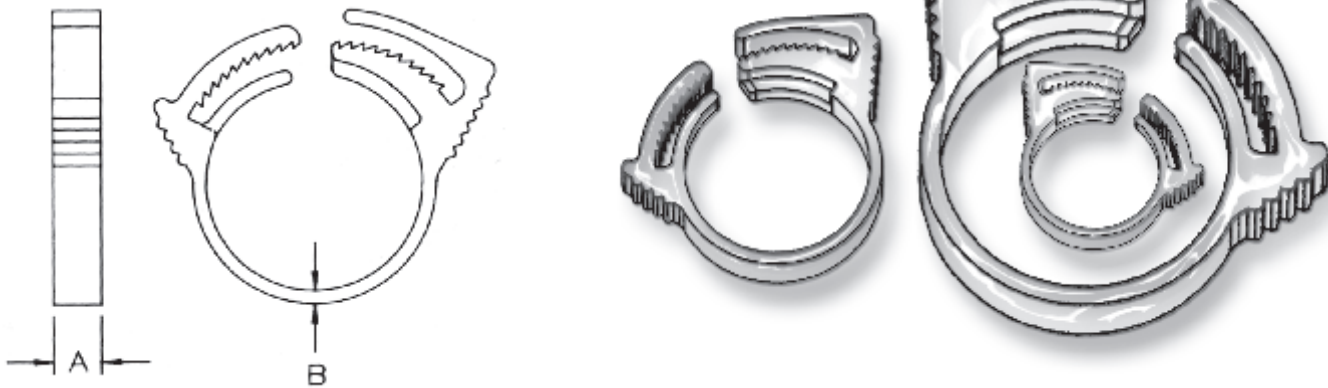
Underhood applications, Heat-Stabilized material is available, call for details.

Micro Plastics' Premium Nylon Hose Clamps provide a superior seal on hose or tubing through their Patented interlocking design by eliminating the leak path created by the overlapping ring design hose clamps. As interlocking grooves are ratcheted together the sealing diameter of the fastener is aligned in parallel, creating a uniform clamping surface. Clamps may be removed by separating the clamping halves in a perpendicular direction at the seal.

Easy installation on most liquid, gas, or vacuum lines.

Nylon clamps are tough, corrosion resistant and resilient.

Parts are removable and reusable.



## PREMIUM NYLON HOSE CLAMPS

### PATENTED INTERLOCKING DESIGN ELIMINATES LEAK

ITEM NUMBER	DESCRIPTION	A	* +/- .015"		CLAMPING RANGE	
			B*	MIN.	MAX	
22HC0250	1/4" Hose Clamp	7/32" (5,56)	3/64" (1,19)	.246 (6,25)	.290 (7,37)	
22HC0312	5/16" Hose Clamp	7/32" (5,56)	1/16" (1,59)	.300 (7,62)	.350 (8,89)	
22HC0344	11/32" Hose Clamp	7/32" (5,56)	1/16" (1,59)	.360 (9,14)	.406 (10,31)	
22HC0406	13/32" Hose Clamp	1/4" (6,35)	1/16" (1,59)	.410 (10,41)	.468 (11,89)	
22HC0468	15/32" Hose Clamp	7/32" (5,56)	1/16" (1,59)	.475 (12,07)	.536 (13,61)	
22HC0531	17/32" Hose Clamp	1/4" (6,35)	1/16" (1,59)	.538 (13,67)	.608 (15,44)	
22HC0593	19/32" Hose Clamp	1/4" (6,35)	1/16" (1,59)	.597 (15,16)	.665 (16,89)	
22HC0672	43/64" Hose Clamp	7/32" (5,56)	1/16" (1,59)	.670 (17,02)	.780 (19,81)	
22HC0750	3/4" Hose Clamp	7/32" (5,56)	1/16" (1,59)	.730 (18,54)	.830 (21,08)	
22HC0813	13/16" Hose Clamp	.216" (5,49)	.062 (1,57)	.750(19,05)	.875 (22,23)	
22HC0875	7/8" Hose Clamp	7/32" (5,56)	1/16" (1,59)	.870 (22,10)	.975 (24,77)	
22HC0953	61/64" Hose Clamp	1/4" (6,35)	1/16" (1,59)	.953 (24,21)	1.093 (27,76)	
22HC1031	1-1/32" Hose Clamp	5/16" (7,94)	1/16" (1,59)	1.031 (26,19)	1.187 (30,15)	
22HC1250	1-1/4" Hose Clamp	5/16" (7,94)	1/16" (1,59)	1.250 (31,75)	1.425 (36,20)	
22HC1406	1-13/32" Hose Clamp	11/32" (8,73)	1/16" (1,59)	1.406 (35,71)	1.610 (40,89)	
22HC1593	1-19/32" Hose Clamp	11/32" (8,73)	1/16" (1,59)	1.593 (40,46)	1.812 (46,02)	
22HC1687	1-11/16" Hose Clamp	11/32" (8,73))	1/16" (1,59)	1.790 (45,47)	2.110 (53,59)	
22HC1875	1-7/8" Hose Clamp	13/32" (10,32)	1/16" (1,59)	1.870 (47,50)	2.125 (53,98)	
22HC2125	2-1/8" Hose Clamp	13/32" (10,32)	1/16" (1,59)	2.120 (53,85)	2.390 (60,71)	

# HOSE CLAMPS AND INSTALLATION TOOLS

**- APPLIANCE -**

Dishwashers, laundry, refrigerators, food preparation equipment.

**- ELECTRICAL/ELECTRONIC -**

Positioning and placement of components and wiring.

**- R.V./BOATING -**

Plumbing and Accessories.

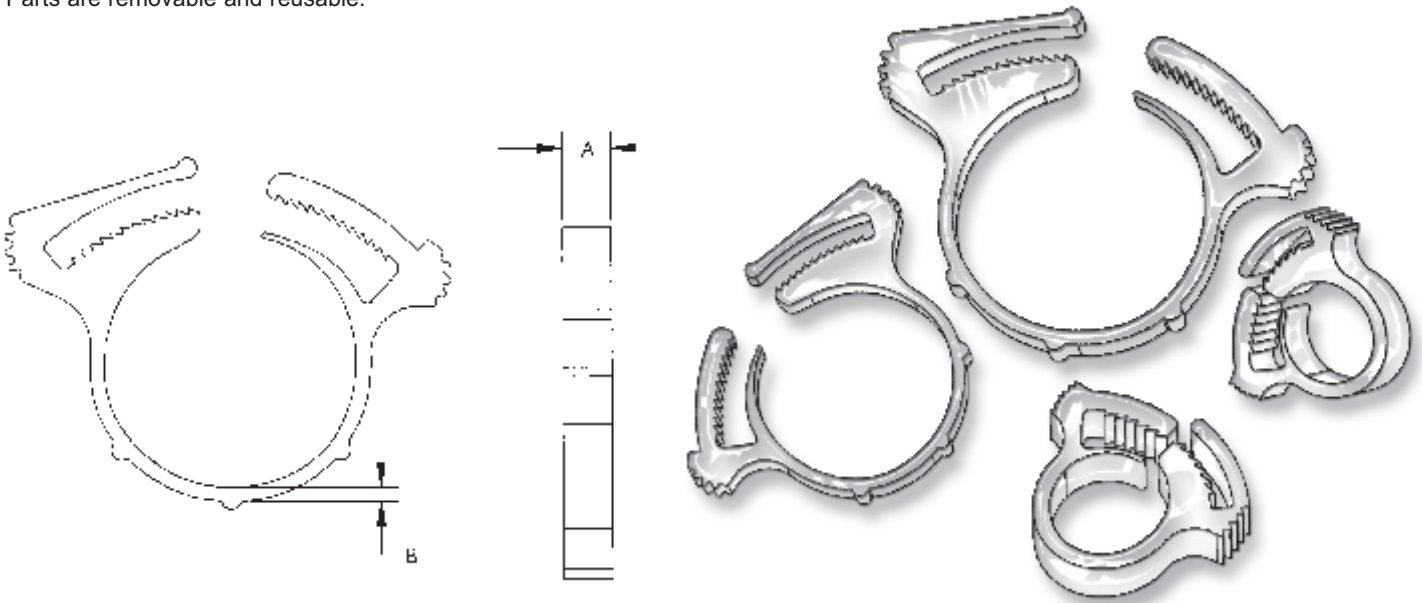
**- AUTOMOTIVE -**

Underhood applications, Heat-Stabilized material is available, call for details.

Micro Plastics' Standard Nylon Hose Clamps are based on the original design for this type of fastener. A overlapping tapered ring of nylon is fastened around the hose or tubing desired and secured to the required tightness by compressing interacting grooves in a ratcheting fashion, creating a tight sealing application. Clamps may be removed by separating the clamping halves in perpendicular direction at the seal.

Nylon clamps are tough, corrosion resistant and resilient.

Parts are removable and reusable.



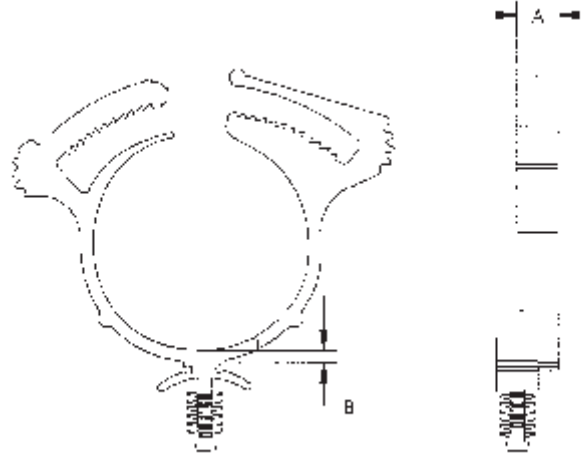
## STANDARD NYLON HOSE CLAMPS

ITEM NUMBER	DESCRIPTION	A	+/- .015"		CLAMPING RANGE	
			B	MIN.	MAX	
22HSC0010	1.0 Hose Clamp	.156 (3,96)	.040 (1,02)	.250 (6,35)	.281 (7,14)	
22HSC0015	1.5 Hose Clamp	.150 (3,81)	.050 (1,27)	.307 (7,80)	.342 (8,69)	
22HSC0020	2 Hose Clamp	.230 (5,84)	.070 (1,78)	.360 (9,14)	.395 (10,03)	
22HSC0040	4 Hose Clamp	.230 (5,84)	.070 (1,78)	.404 (10,26)	.452 (11,48)	
22HSC0060	6 Hose Clamp	.230 (5,84)	.070 (1,78)	.449 (11,70)	.511 (12,98)	
22HSC0080	8 Hose Clamp	.230 (5,84)	.070 (1,78)	.513 (13,03)	.586 (14,88)	
22HSC0100	10 Hose Clamp	.230 (5,84)	.070 (1,78)	.569 (14,45)	.650 (16,51)	
22HSC0120	12 Hose Clamp	.230 (5,84)	.070 (1,78)	.616 (15,65)	.707 (17,96)	
22HSC0140	14 Hose Clamp	.230 (5,84)	.070 (1,78)	.702 (17,83)	.801 (20,35)	
22HSC0180	18 Hose Clamp	.230 (5,84)	.070 (1,78)	.779 (19,79)	.899 (22,83)	
22HSC0190	19 Hose Clamp	.230 (5,84)	.070 (1,78)	.859 (21,82)	.989 (25,12)	
22HSC0220	22 Hose Clamp	.250 (6,35)	.070 (1,78)	.928 (23,57)	1.072 (27,23)	
22HSC0240	24 Hose Clamp	.250 (6,35)	.070 (1,78)	.990 (25,15)	1.135 (28,83)	
22HSC0280	28 Hose Clamp	.280 (7,11)	.070 (1,78)	1.123 (28,52)	1.296 (32,92)	

# HOSE CLAMPS AND INSTALLATION TOOLS

## SECTION IX

### STANDARD HOSE CLAMPS FIN CLIP BASE



ITEM NUMBER	A	B	CLAMPING RANGE		HOLE SIZE	PANEL RANGE
			MIN.	MAX		
22HCFC037188	.230 (5,84)	.070 (1,78)	.360 (9,14)	.395 (10,03)	.187 (4,75)	1/32" (0,79) - 1/4 (6,35)
22HCFC106188	.250 (6,35)	.070 (1,78)	.990 (25,15)	1.135 (28,83)	.187 (4,75)	1/32" (0,79) - 1/4 (6,35)

## HOSE CLAMP INSTALLATION TOOLS

Micro Plastics' Pneumatic -Ergonomic Hose Clamp Installation Tool has been carefully designed to help reduce the wrist fatigue associated with the rapid assembly of Nylon Hose Clamps. The easy trigger-type actuation of this air tool, in combination with the ergonomic angle of the hand grip, allows natural alignment of the wrist and hand during normal clamp installation. The tool operates on standard shop air from 30-100 PSE. Lightweight, only 18 ounces. Tools are configured prior to shipping. Please specify Hose Clamp sizes to be installed when ordering.

NOT AVAILABLE FOR HOSE CLAMP SIZES LARGER THAN .953



**PNEUMATIC ERGONOMIC  
HOSE CLAMP TOOL**  
ITEM NUMBER  
22PHCET0100

**PATENTED**



**PATENTED**

**PNEUMATIC  
HOSE CLAMP TOOL**  
ITEM NUMBER  
22PHCT0100

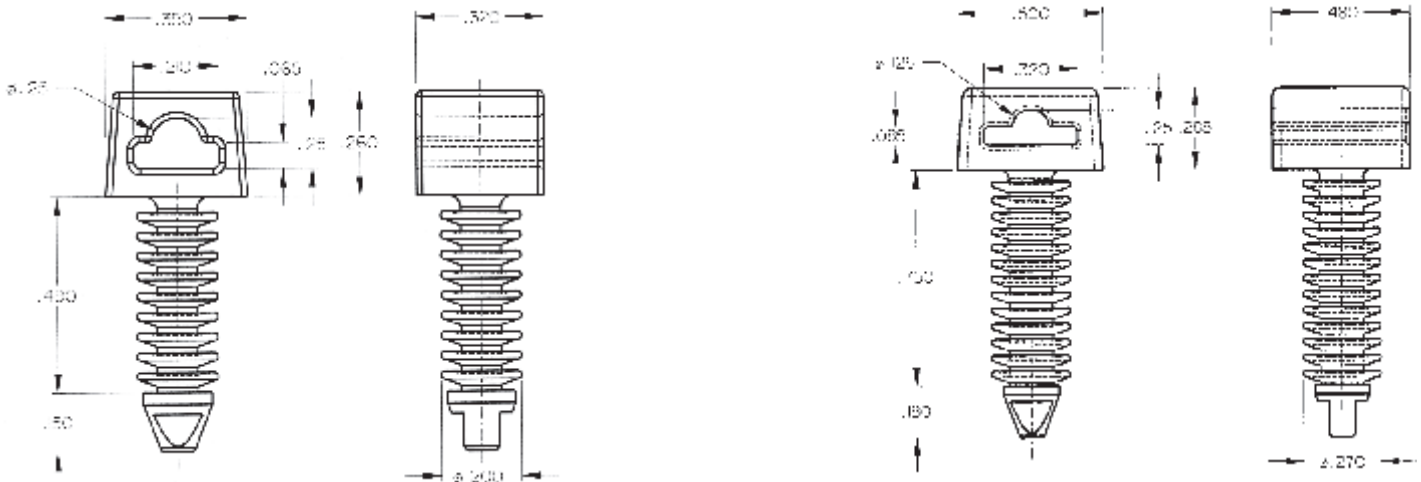


# CABLE TIE MOUNTING HARDWARE

SECTION  
**X**

## FIN CLIP PUSH MOUNTS

"Fin clip push mounts" are available in 2 sizes for 3/16" and 1/4" diameter holes. The special head configuration allows use with beaded ties, as well as conventional cable ties. Parts are molded in black U.V. stabilized high density polyethylene, and are suitable for use in pre-drilled holes in wood, masonry, and a variety of other materials.



TOLERANCE +/- .015"

ITEM NUMBER	DESCRIPTION
23FCPM18765	3/16" (4,76) PUSH MOUNT

ITEM NUMBER	DESCRIPTION
23FCPM25095	1/4" (6,35) PUSH MOUNT

## Watch Instructional Video

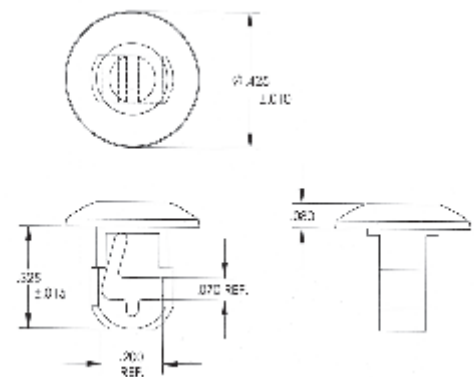
[mms://www.microplastics.com/productvideos/CableTieMount.asf](https://www.microplastics.com/productvideos/CableTieMount.asf)



Cable tie mount for use when both sides of the panel are accessible.

## CABLE TIE MOUNT

ITEM NUMBER	DESCRIPTION
23TA250125	Cable Tie Mount

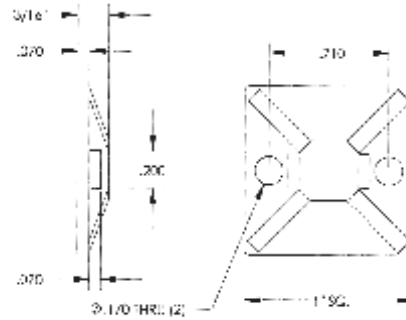
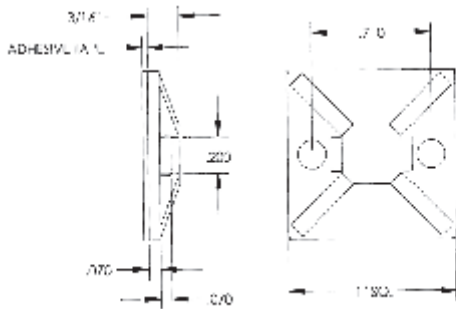
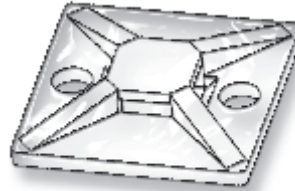
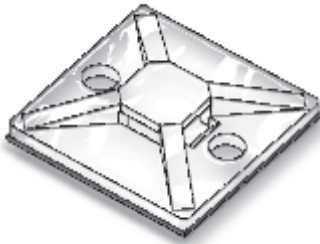


# CABLE TIE MOUNTING HARDWARE

## SECTION X

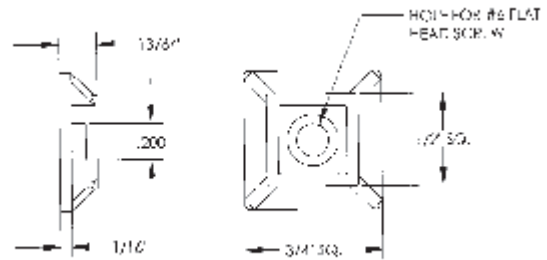
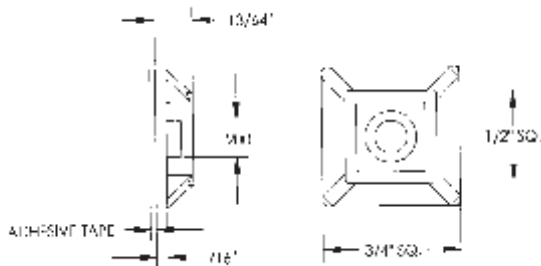
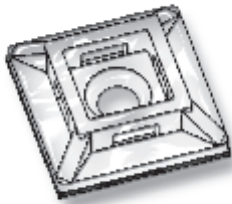
### CRADLE MOUNTS

Cradle Mounts are used in applications where a low profile is necessary. Each mount offers a four way entry and is secured with either a screw or adhesive backing. 23TA00420 is secured with a #2 - #4 or #6 screw, 23TA00495 uses #6 Flat Head Screw. NOTE: the adhesive mounts have an acrylic foam backing that should be used on a smooth, clean, dry surface.



ITEM NUMBER	DESCRIPTION
23TA00400	1" (25,40) CRADLE MOUNT (ADHESIVE)

ITEM NUMBER	DESCRIPTION
23TA00420	1" (25,40) CRADLE MOUNT (SCREW)



ITEM NUMBER	DESCRIPTION
23TA00475	3/4" (19,05) CRADLE MOUNT (ADHESIVE)

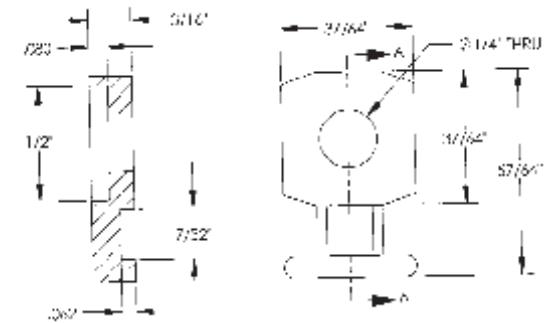
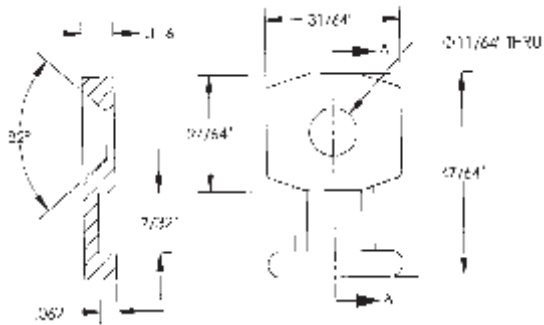
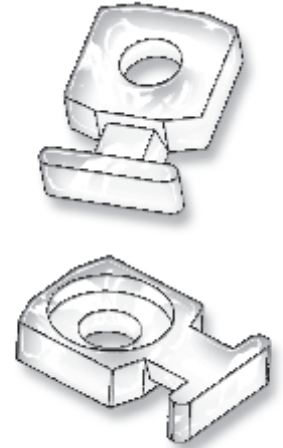
ITEM NUMBER	DESCRIPTION
23TA00495	3/4" (19,05) CRADLE MOUNT (SCREW)

# CABLE TIE MOUNTING HARDWARE

SECTION  
**X**

## SCREW TABS

Screw Tabs are designed for use where space is limited. Tabs are fastened with a screw to provide a low profile assembly.

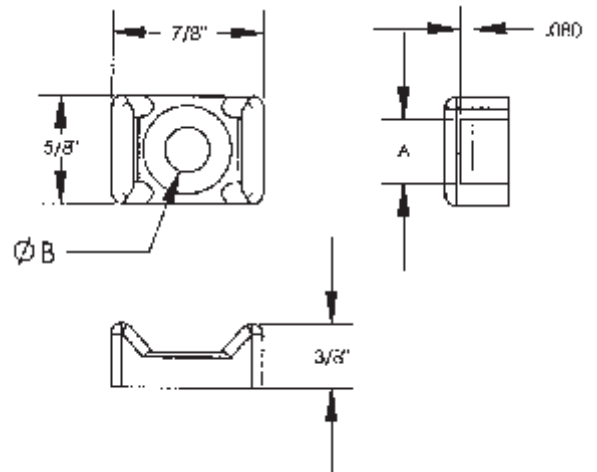
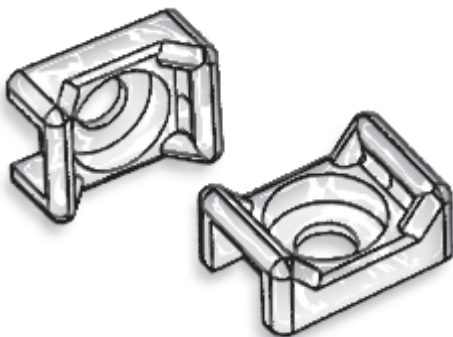


ITEM NUMBER	DESCRIPTION
23TA00200	#8 SCREW TAB

ITEM NUMBER	DESCRIPTION
23TA00250	1/4" (6,35) SCREW TAB

## CABLE TIE HOLDER

Screw mount tie holder offers a two way entry and is secured with a mounting screw. Molded in Nylon 6/6 natural color.



ITEM NUMBER	A	B
23TA00600	.370 (9,40)	.260 (6,60) (1/4-20 SCREW)
23TA00700	.370 (9,40)	.195 (4,95) (10-32 SCREW)

# CABLE TIE MOUNTING HARDWARE

SECTION  
**X**

## CLIP MOUNTS

Clip Mounts are designed to securely connect a tie to a predrilled hole. Clip Mounts can be used in applications where the back of the panel is inaccessible.



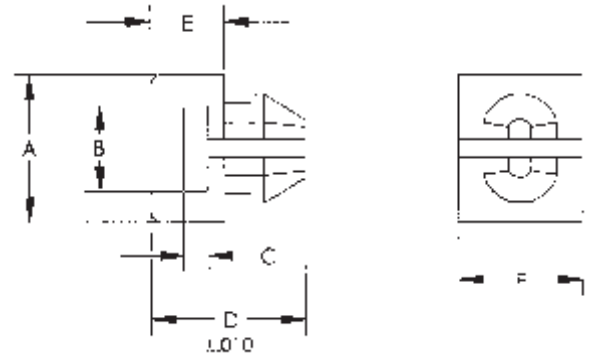
23TA00090



23TA00100



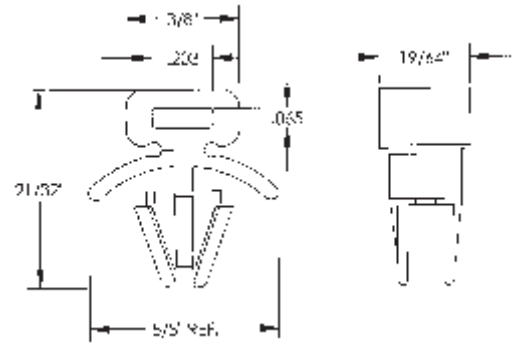
23TA00110



ITEM NUMBER	A	B	C	D	E	F	HOLE SIZE	PANEL THICKNESS
23TA00090	.320 (8,13)	.220 (5,59)	.050 (1,27)	.350 (8,89)	.150 (3,81)	.320 (8,13)	.187 (4,75)	.062 (1,57)
23TA00100	.380 (9,65)	.220 (5,59)	.065 (1,65)	.400 (10,16)	.190 (4,83)	.320 (8,13)	.187 (4,75)	.062 (1,57)
23TA00110	.380 (9,65)	.220 (5,59)	.065 (1,65)	.400 (10,16)	.190 (4,83)	.320 (8,13)	.250 (6,35)	.062 (1,57)



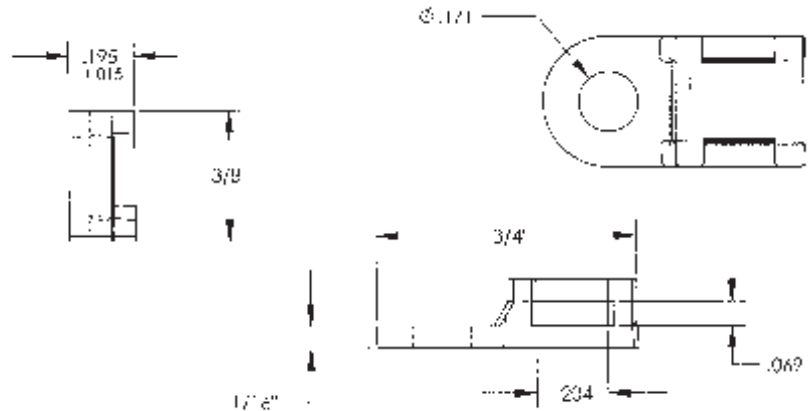
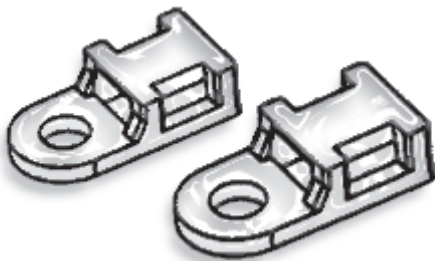
## CLIP MOUNTS



ITEM NUMBER	DESCRIPTION	HOLE SIZE	PANEL THICKNESS
23TA00120	.250 (6,35) CLIP MOUNT	.250 (6,35)	.047-.108 (1,19/2,74)

## CLIP MOUNTS

Screw clip mount tie holder offers a two way entry and is secured with a #8 mounting screw. Molded in Nylon 6/6 natural color.

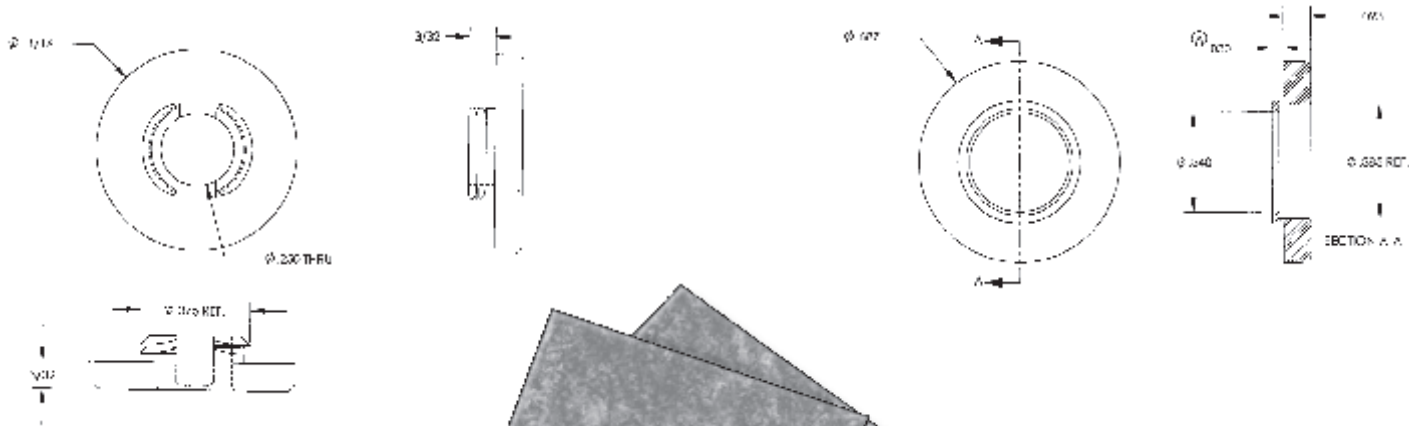


ITEM NUMBER	SCREW SIZE
23TA40170	#8 MOUNTING SCREW



## TWO PIECE GROMMET

Two Piece Grommets are molded in corrosion resistant Nylon 6/6. The male and female parts are designed for easy hand assembly, simply press together. Male half has multiple latching details for approximate panel thickness of 1/32" and 1/16". Grommets can be used for reinforcing through holes and attaching samples of paper or cloth. Recommended hole size 7/16 diameter. Male and female grommets are packaged and sold separately.



ITEM  
NUMBER

45GRMM250

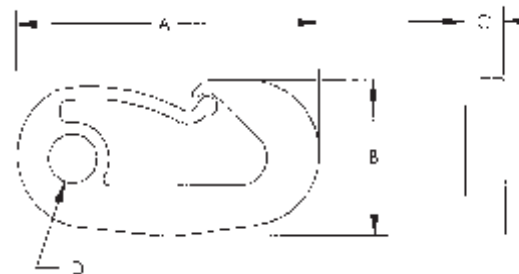
ITEM  
NUMBER

45GRMF250

## SNAP HOOKS



\* +/- 1/16" TOLERANCE



Micro Plastics' Snap Hooks are ideal for light duty marine use, securing cargo to racks, miscellaneous automotive and home uses. The parts are made from UV resistant Nylon, which is perfect for outdoor use. The Snap Hooks will not scratch painted or decorative surfaces. Micro Plastics' design reduces the chance of accidental rope or eye release from snap end of hook.

ITEM NUMBER	A* LENGTH	B* WIDTH	C THICKNESS	D HOLE DIA.	MAX. ROPE DIA.	MAX. LOAD
45SNHK250	1 19/32"	27/32"	5/16"	1/4"	1/4"	5 LBS.
45SNHK375	2 3/8"	1 1/4"	3/8"	3/8"	3/8"	13 LBS.
45SNHK500	3 5/32"	1 21/32"	13/32"	1/2"	1/2"	40 LBS.

# MISCELLANEOUS PRODUCTS

## SECTION XI

### EXTENDIBLE POLE WITH THREADED END



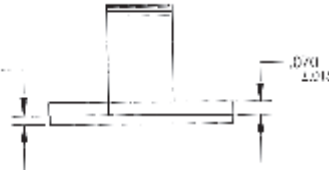
ITEM  
NUMBER

45EXTPOLE

### ADHESIVE CABLE CLIPS



.045 ADHESIVE TAPE  
1mm



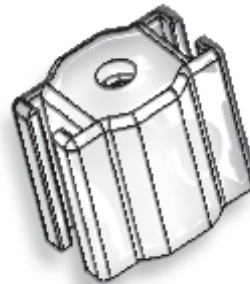
ITEM  
NUMBER

45GUTADHCLIP

NOTE: CLIPS MUST BE PURCHASED IN MULTIPLES OF 25.

### COMMERCIAL WIRE ROUTING KIT

- Elevated routing of wires and tubing without using a ladder.
- All component parts are molded in light weight impact resistant Nylon.



#### COMMERCIAL WIRE ROUTING KIT INCLUDES THE FOLLOWING

- 1 Nut that fits the extendible pole threads.
- 1 Applicator that snap fits into the nut and is used for applying adhesive backed wire clip to elevated surfaces.
- 1 Wiring hook that snaps into the nut for routing wire in elevated clips.
- 1 Instruction sheet.

**NOTE: Adhesive backed clips and extension pole sold separately, (SEE ABOVE)**



ITEM  
NUMBER

DESCRIPTION

45INDWIREKIT Commercial Wiring Kit

## EXPANDED COMMERCIAL WIRE ROUTING KIT

- Elevated routing of wires and tubing without using a ladder.
- Double backed foam adhesive on a Polyethylene clip.
- All component parts are molded in light weight impact resistant Nylon.
- Additional adhesive backed cable clips and extension poles sold separately, see page 210.



### WIRING KIT INCLUDES THE FOLLOWING

- 1 One piece extendible pole with threaded end.
- 1 Nut that fits the extendible pole threads.
- 25 Adhesive backed wire routing cable clips.
- 1 Applicator that snap fits into the nut and is used for applying adhesive backed wire clip to elevated surfaces.
- 1 Wiring hook that snaps into the nut for routing wire in elevated clips.

ITEM NUMBER	DESCRIPTION
45EXPINDWIREKIT	Expanded Commercial Wiring Kit

# MISCELLANEOUS PRODUCTS

## SECTION XI

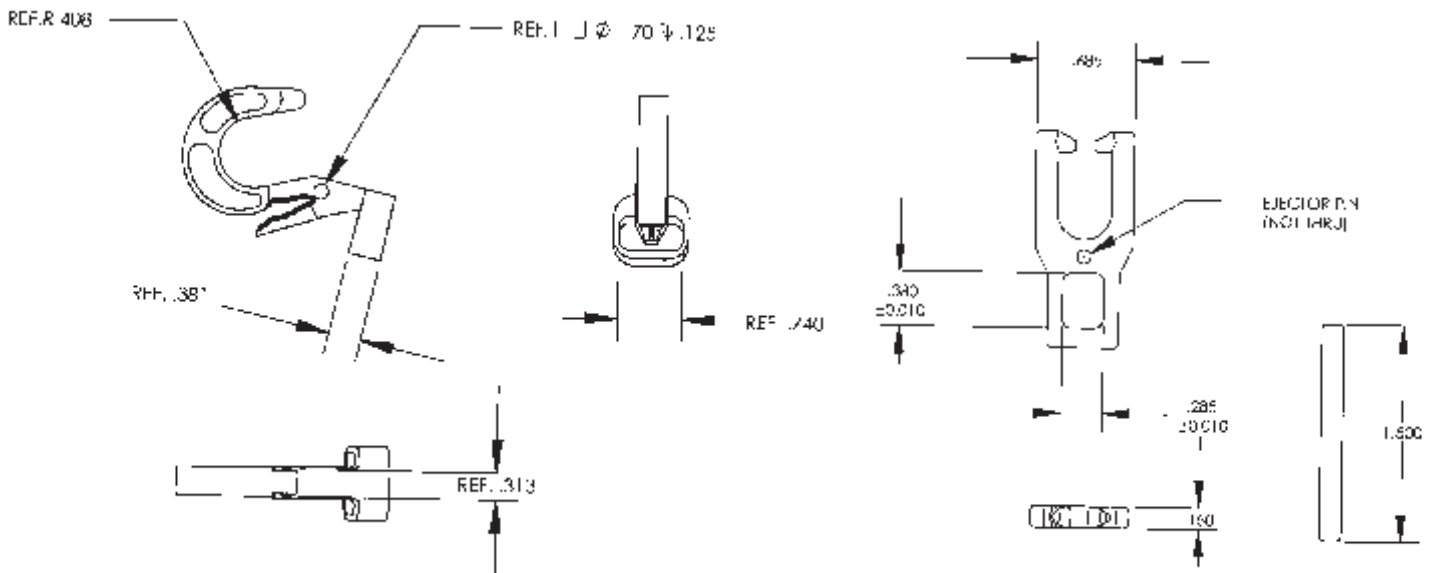
## CORD HOOK AND RETAINER

Micro Plastics' cord hook is molded in U.V. resistant black impact modified nylon. Hook and retainer can be purchased separately or as a set not assembled. Hook is designed for use with 1/4 dia. thru 1/3 diameter cord. Simply loop the cord, insert through the guide area of the hook and pull down into the "V". Always tie a knot in the free end of the shock cord to prevent slippage. Cord assembly can be used for securing light cargo in cars, vans, trucks, and boats. The hooks will not scratch painted or decorative surfaces which makes it great for covers on boats and trailers.

### THE FOLLOWING SAFETY PRECAUTIONS MUST BE FOLLOWED WHEN USING CORD

- Intended for light duty use only.
- Wear eye protection – end of cord could come loose and cause serious eye or bodily injury.
- Always tie a knot in the free end of the cord or rope.
- Do not exceed 20 lbs. total force on hook.
- Not recommended for use with shock cord.

**Watch Instructional Video**  
<https://www.microplastics.com/productvideos/ShockCord.asf>



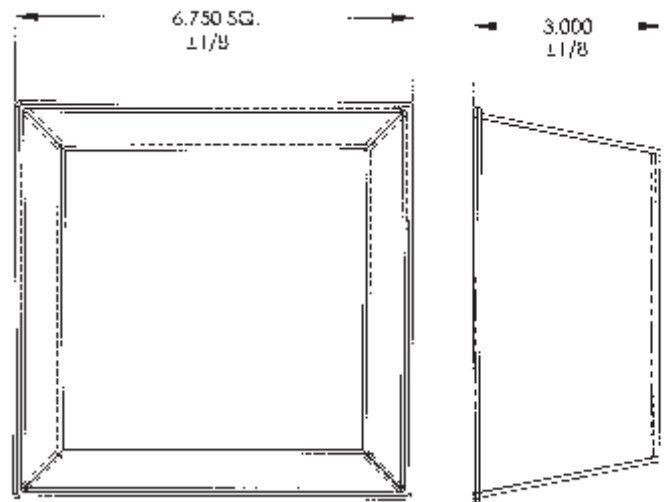
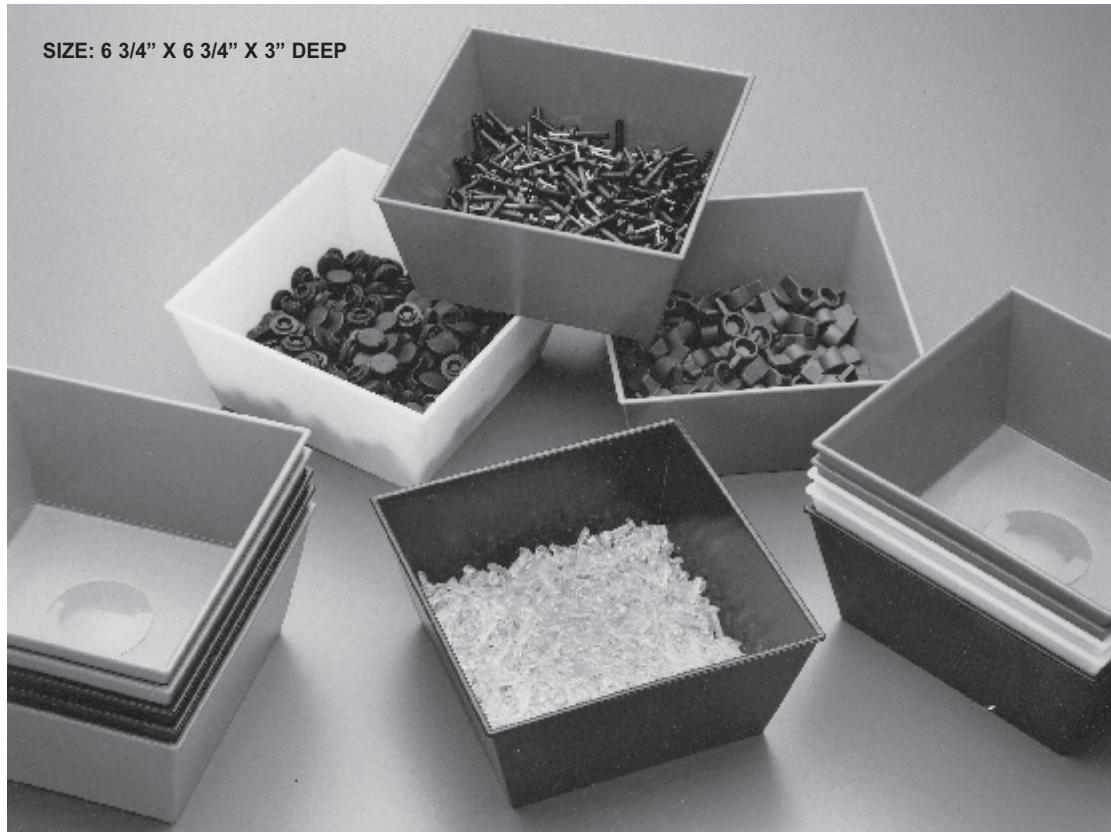
ITEM NUMBER	DESCRIPTION
45SKCDHK750	CORD HOOK

ITEM NUMBER	DESCRIPTION
45SKCDHK750RET	CORD HOOK RETAINER



## NESTING CONTAINERS

- Durable nesting container is molded in impact modified polystyrene.
- Ideal for sorting and storing small parts.
- Useful in industrial applications and a variety of home or office projects.
- Tapered design allows containers to be easily stacked for compact storage.



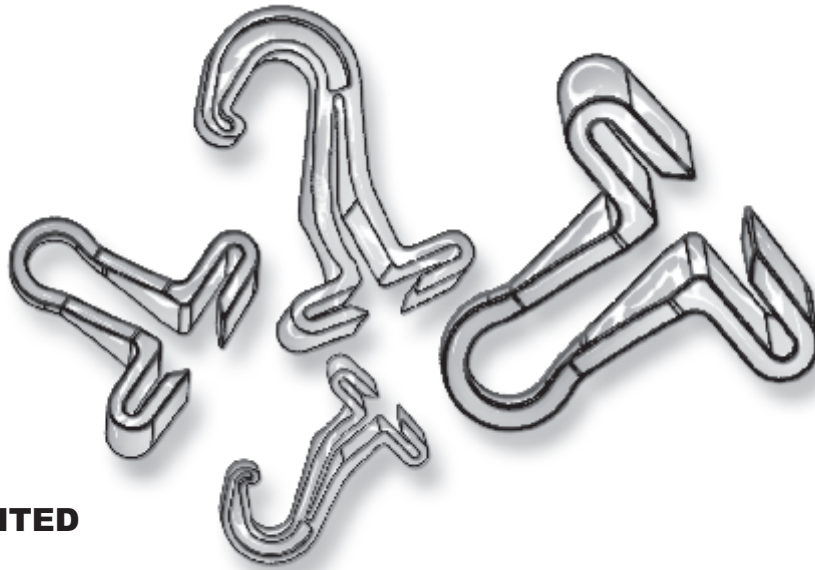
ITEM NUMBER	COLOR
401026	NATURAL
401028	BLACK
401027	FLUORESCENT PINK

## SUSPENDED CEILING HOOKS

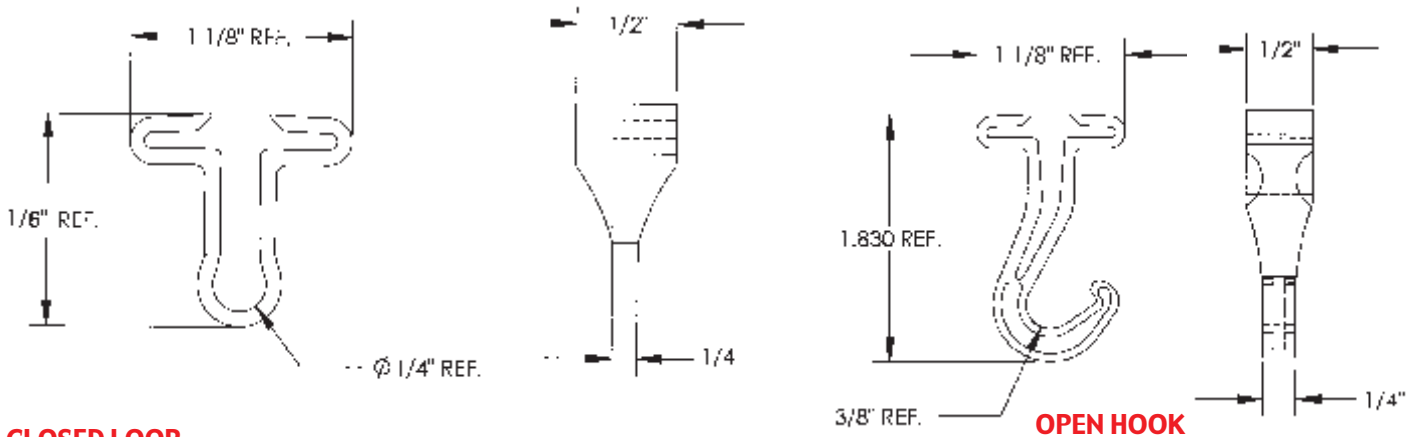
Micro Plastics' suspended ceiling hooks are designed for hanging very light articles from a suspended ceiling. We offer two designs, one with a closed loop, the other with an open hook. Parts can be ordered in natural Nylon (translucent off white) or clear Copolyester.

**NOTE** FOR LIGHT ARTICLES SUCH AS MOBILES, BANNERS & SIGNS. CEILING SUPPORT LOAD MUST BE VERIFIED BY MANUFACTURER OF THE CEILING SUPPORT AND THE INSTALLER.

**NOTE** DO NOT OVERLOAD CEILING SUPPORT.



**PATENTED**



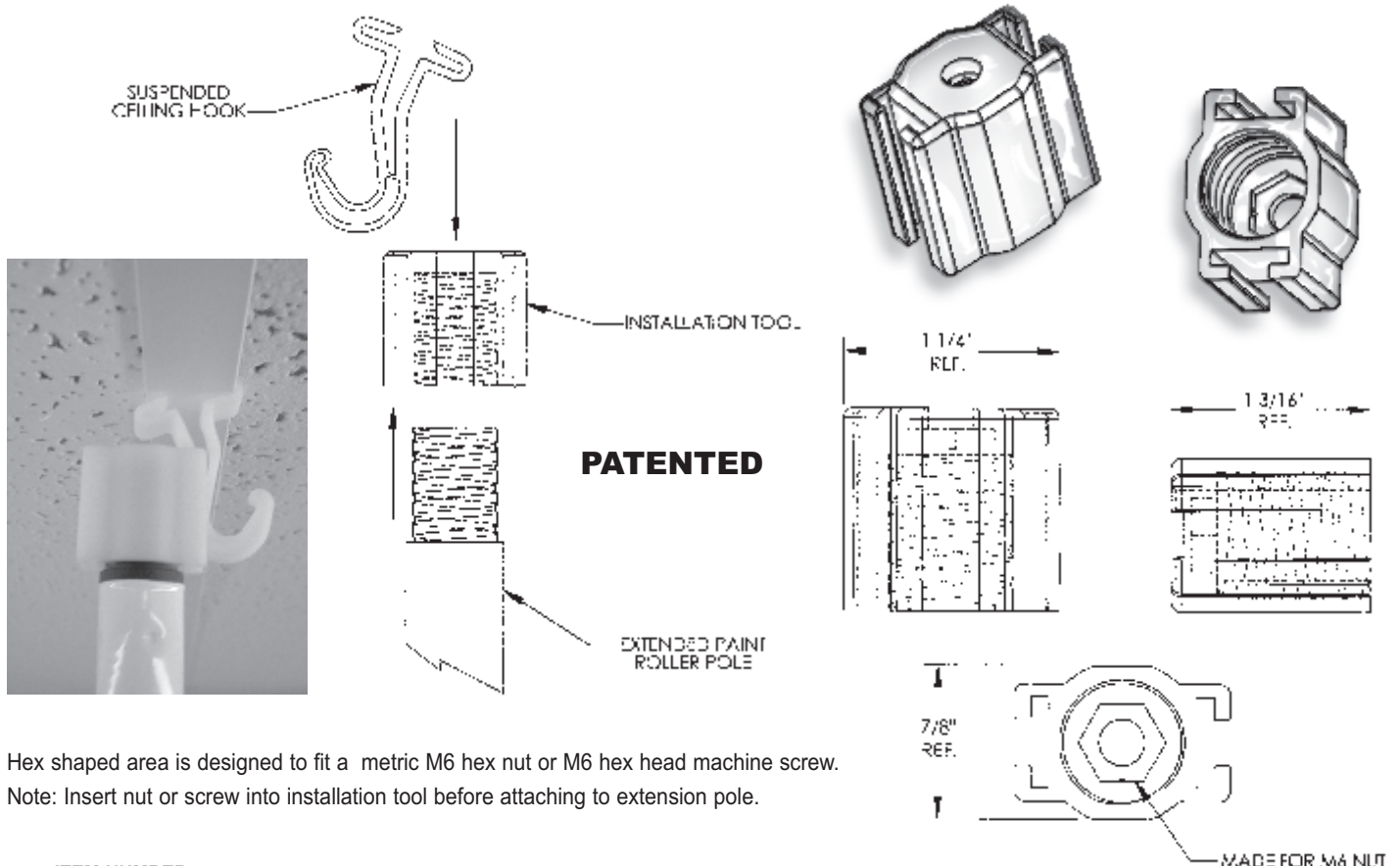
**CLOSED LOOP**

ITEM NUMBER	MATERIAL	STYLE	COLOR
45SCH025CH	NYLON 6/6	CLOSED LOOP	OFF WHITE
45SCH025CHCP	COPOLYESTER	CLOSED LOOP	CLEAR
45SCH037OH	NYLON 6/6	OPEN HOOK	OFF WHITE
45SCH037OHCP	COPOLYESTER	OPEN HOOK	CLEAR

**OPEN HOOK**

## CEILING HOOK INSTALLATION TOOL

Suspended ceiling hook installation tool is designed to install both type hooks without using a ladder. The tool threads on to most standard extended poles for paint rollers. Simply thread the Micro Plastics' tool on to the threaded end of the paint roller extension pole and you are ready to install the ceiling hooks. Tool may also be used for attaching accessories with a male or female M6 thread, (Nut and screw not included). This assembly may also be used to remove hooks.



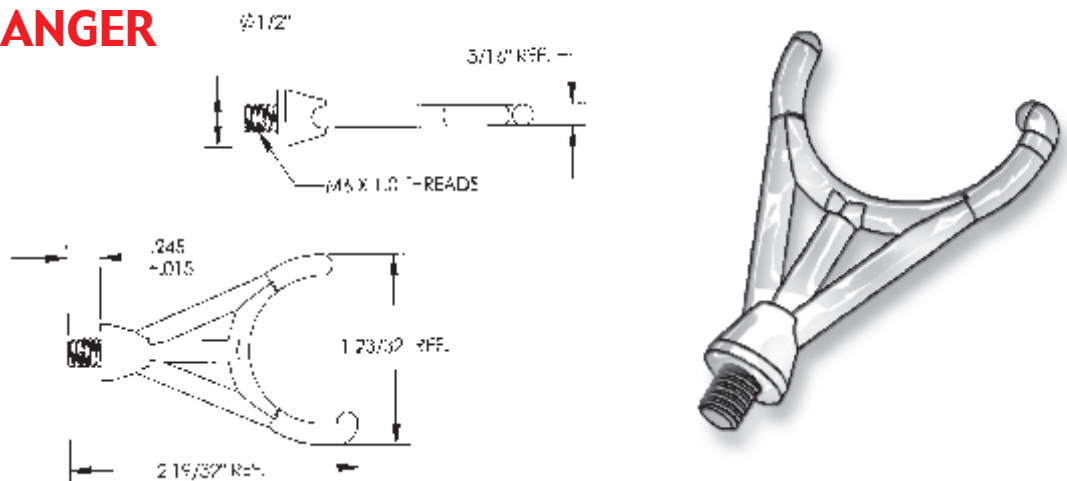
Hex shaped area is designed to fit a metric M6 hex nut or M6 hex head machine screw.  
Note: Insert nut or screw into installation tool before attaching to extension pole.

ITEM NUMBER

45SCHINSTL

## HEAVY DUTY HANGER

The Micro Plastics heavy duty hanger is designed to fit our ceiling hook installation tool (45SCHINSTL) with a M6 X 1.0 hex nut (NOT INCLUDED) installed in the installation tool. Heavy duty hanger is used to hang articles on elevated pegs or hooks without the use of a ladder.



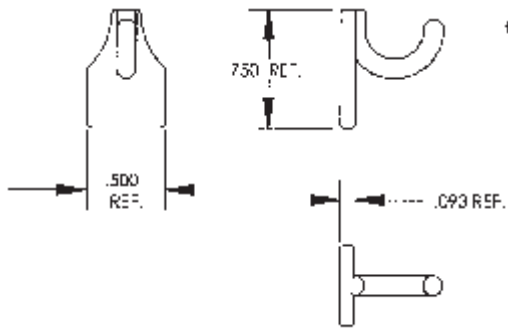
ITEM NUMBER

45HDH01

# MISCELLANEOUS PRODUCTS

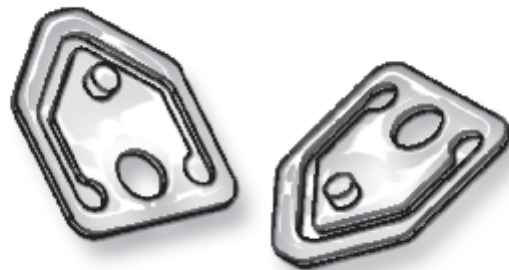
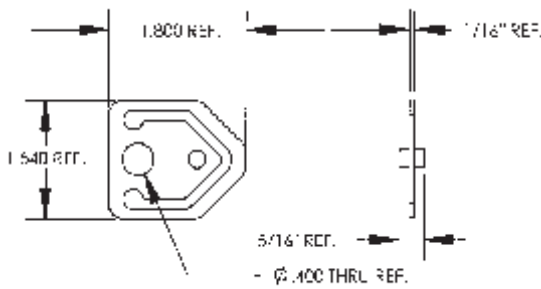
SECTION

## XI SUSPENDED CEILING HANGING ACCESSORIES



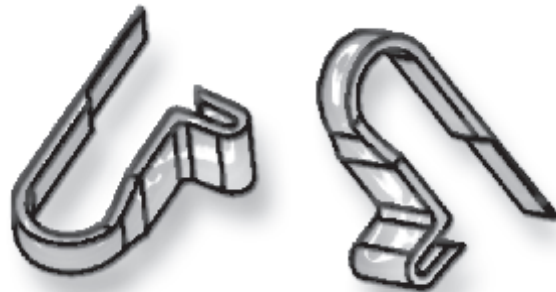
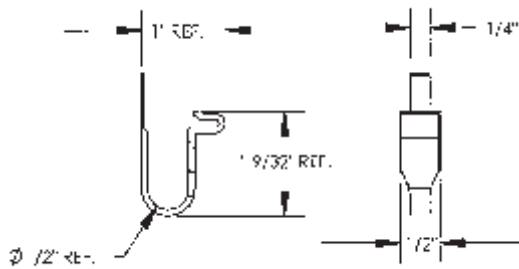
**PATENTED**

ITEM NUMBER	DESCRIPTION
45INSTLHOOK	Ceiling Hanger Hook



**PATENTED**

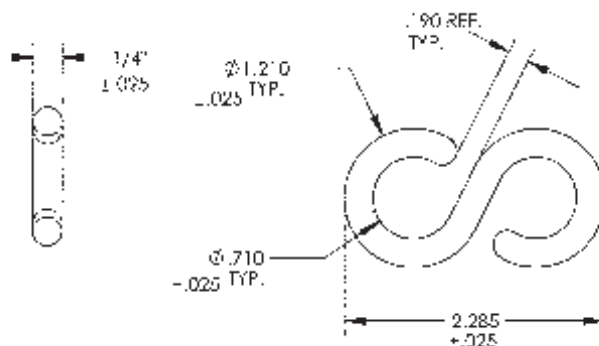
ITEM NUMBER	DESCRIPTION
45SCHCLIP	Ceiling Accessory Clip



**PATENTED**

ITEM NUMBER	DESCRIPTION
45SCH050EH	Ceiling Edge Hook

## “S” HOOKS



ITEM NUMBER
45SHOK



# FASTENER ASSORTMENT KITS

SECTION  
**XII**

MOLDED NYLON FASTENERS PROVIDE ELECTRICAL INSULATION, VIBRATION AND CORROSION RESISTANCE. HAVE A LOW THERMAL CONDUCTIVITY, ARE NON-MAGNETIC AND HAVE A HIGH STRENGTH-TO-WEIGHT RATIO. PACKAGED IN LARGE REUSABLE TRANSPARENT PLASTIC STORAGE BOXES.

**IDEAL FOR:**

- PROTOTYPE WORK** - Large working assortments.
- PRODUCT DESIGN** - Latest designs for increased productivity.
- MODEL MAKING** - Commercially available standard parts.
- SHOP AND MAINTENANCE** - Convenient selection.



## # 04ASO475HC



## PREMIUM HOSE CLAMPS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 50 - 22HC0250
- 45 - 22HC0344
- 40 - 22HC0406
- 40 - 22HC0468
- 40 - 22HC0531
- 40 - 22HC0593
- 35 - 22HC0750
- 30 - 22HC0875
- 30 - 22HC0953
- 25 - 22HC1031
- 20 - 22HC1250
- 15 - 22HC1406
- 20 - 22HC1593
- 15 - 22HC1687
- 15 - 22HC1875
- 10 - 22HC2125

## # 04ASO075SR



## STRAIN RELIEF BUSHINGS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 20 - 23MP02M40
- 16 - 23MP03P40
- 10 - 23MP04K40
- 10 - 23MP04N40
- 10 - 23MP05P40
- 4 - 23MP06N40
- 6 - 23MP06P34
- 12 - 23MP06W10
- 2 - 23MP07W20
- 2 - 23MP03020
- 8 - 23MP14L10
- 8 - 23MP15L10

## # 04ASO180TCH



Over 100 Transistor Covers  
Transistor and Capacitor Mounts in  
17 Different Styles and Configurations

## TRANSISTOR HARDWARE

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 12 - 19PT11
- 12 - 19PT12
- 12 - 19PT11HD
- 12 - 19PT12HD
- 12 - 19PT11WOB
- 12 - 19PT12WOB
- 12 - 19PT11HDWOB
- 12 - 19PT12HDWOB
- 4 - 21PTC01031
- 4 - 21PTC01032
- 4 - 21PTC01033
- 4 - 21PTC010661
- 4 - 21PTC010662
- 2 - 21PTC010663
- 20 - 22CM0100
- 20 - 22CM0150
- 20 - 22CM0200



# FASTENER ASSORTMENT KITS

## SECTION XII

MOLDED NYLON FASTENERS PROVIDE ELECTRICAL INSULATION, VIBRATION AND CORROSION RESISTANCE. HAVE A LOW THERMAL CONDUCTIVITY, ARE

NON-MAGNETIC AND HAVE A HIGH STRENGTH-TO-WEIGHT RATIO. PACKAGED IN LARGE REUSABLE TRANSPARENT PLASTIC STORAGE BOXES.

### IDEAL FOR:

**PROTOTYPE WORK** - Large working assortments.

**PRODUCT DESIGN** - Latest designs for increased productivity.

**MODEL MAKING** - Commercially available standard parts.

**SHOP AND MAINTENANCE** - Convenient selection.

## # 04AS0750MSN



### METRIC KIT page 241

Over 750 Nylon Fasteners  
Over 35 Different Sizes and Types

## SCREWS AND NUTS

ASSORTMENT CONSISTS OF APPROXIMATELY: ROUND, HEX, PAN, BINDER, AND FILLISTER HEADSTYLE MACHINE SCREWS. IN THE FOLLOWING SIZES;

- 100 - 440 X 1/4" to 1" LONG ASSORTED HEADSTYLES
- 100 - 623 X 1/4" to 5/8" LONG ASSORTED HEADSTYLES
- 100 - 832 X 1/4" to 3/4" LONG ASSORTED HEADSTYLES
- 100 - 1032 X 1/4" to 1/2" LONG ASSORTED HEADSTYLES
- 30 - 1/4-20 X 1/4" to 3/4" LONG ROUND and FILLISTER HEAD
- 100 - 440, 632, 832, 1032, & 1/4-20 SOCKET SET SCREWS
- 100 - 440, 632, 832, 1032, & 1/4-20 HEX NUTS
- 125 - #4, #6, #8, #10, & 1/4 FLATWASHERS

## # 04AS0900FAS



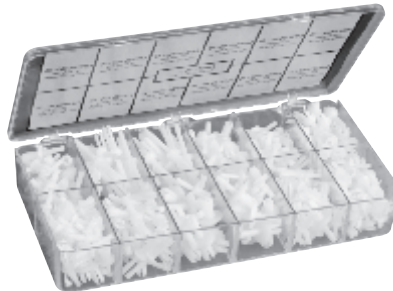
Over 900 Nylon Fasteners  
Over 65 Different Sizes and Types.

## FASTENERS

250 MOLDED NYLON SCREWS Assorted sizes and headstyles; Round, Pan, Fillister, Flat, Binder, Hex and Set.

- 100 - SOCKET SET SCREWS
- 50 - POLY DRIVE RIVETS
- 100 - FLAT WASHERS
- 100 - HEX NUTS
- 50 - LOCK NUTS
- 40 - CAP NUTS
- 10 - WING NUTS
- 50 - PUSH-IN FASTENERS
- 50 - ARROW CLIPS
- 100 - SCREW INSULATORS
- 20 - THUMB SCREWS

## # 04AS0380PRT



Over 380 Assorted Nylon Drive Rivets  
with Insertion Tool

## POLY DRIVE RIVETS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- |  |      |           |
|--|------|-----------|
| 40 - 61PR200000                          | .187 | .156/.281 |
| 40 - 61PR300000                          | .187 | .312/.440 |
| 50 - 61PR300100                          | .187 | .062/.187 |
| 40 - 61PR300300                          | .187 | .078/.375 |
| 40 - 61PR300800                          | .187 | .375/.750 |
| 30 - 61PR400500                          | .187 | .375/.500 |
| 40 - 61PR500500                          | .218 | .031/.062 |
| 40 - 61PR010000                          | .218 | .187/.250 |
| 40 - 61PR100000                          | .218 | .093/.350 |
| 20 - 61PR010100                          | .226 | .125/.312 |
| 1 - 61PRT0125 DRIVE RIVET INSERTION TOOL |      |           |

## # 04AS0320SWS



### METRIC KIT page 241

All in Assorted Lengths and  
Shoulder Height Combinations.

## SHOULDER WASHERS

ASSORTMENT CONSISTS OF APPROXIMATELY:

150 - SHOULDER WASHERS

.093 to 1/4" ID

.125 to .500 OD

30 - #2 SCREW INSULATORS

30 - #4 SCREW INSULATORS

25 - #6 SCREW INSULATORS

25 - #8 SCREW INSULATORS

25 - #10 SCREW INSULATORS

25 - 1/4 SCREW INSULATORS

10 - 5/16 SCREW INSULATORS



## # O4ASO162CA



Over 150 Cable Clips in 12 Popular Sizes Including; Nail-in Clips, Heavy Duty Clips, Wire Clips and Spring Clips.

### CLIPS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 15 - 22NCC0450F
- 10 - 22NCC0900F
- 5 - 22NCC0800R
- 8 - 22NCC0700R
- 15 - 22NCC0400R
- 12 - 22WCO500312
- 25 - 22SPC375132
- 20 - 22HDCC4840
- 12 - 22HDCC4220
- 15 - 22HDCC3590
- 15 - 22HDCC2970
- 10 - 22NCC0500R

## # O4ASO340SP



### METRIC KIT page 241

### SPACERS/STANDOFFS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 100 - ROUND SPACERS - PLAIN 3/16", 1/4", 3/8", 1/2" DIAMETERS, 1/8" to 1" Long.
- 80 - HEX SPACERS - PLAIN 1/4" to 1" Long.
- 35 - ROUND SPACERS - TAPPED 440, 632, 832, 1032, 1/4-20, 1/4", 5/16", 3/8", 1/2" Diameter, 1/4" to 1" Long.
- 30 - HEX SPACERS - TAPPED 440, 632, 832, Diameter, 1/4" to 1" Long.
- 45 - HEX MALE/FEMALE STANDOFFS - THREADED 440, 632, 832 Diameter, 1/4" to 1" Long.

## # O4ASO290CC



Over 290 Cable Clamps in 18 Popular Sizes.

### CABLE CLAMPS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 40 - 1/8" X 1/8" CABLE CLAMPS
- 25 - 3/16" X 1/2" CABLE CLAMPS
- 1/4" X 1/2" CABLE CLAMPS
- 1/4" X 3/8" CABLE CLAMPS
- 20 - 5/16" X 3/8" CABLE CLAMPS
- 3/8" X 3/8" CABLE CLAMPS
- 7/16" X 3/8" CABLE CLAMPS
- 1/2" X 3/8" CABLE CLAMPS
- 15 - 5/16" X 1/2" CABLE CLAMPS
- 3/8" X 1/2" CABLE CLAMPS
- 7/16" X 1/2" CABLE CLAMPS
- 10 - 1/2" X 1/2" CABLE CLAMPS
- 9/16" X 1/2" CABLE CLAMPS
- 5/8" X 1/2" CABLE CLAMPS
- 3/4" X 1/2" CABLE CLAMPS
- 5 - 1" X 1/2" CABLE CLAMPS
- 3 - 1 1/4" X 1/2" CABLE CLAMPS
- 1 1/2" X 1/2" CABLE CLAMPS

## # O4ASO305MCS



Over 300 NYLON METAL CORE SCREWS Over 30 Different Sizes and Headstyles.

### METAL CORE SCREWS

ASSORTMENT CONSISTS OF APPROXIMATELY: ALL IN ASSORTED ROUND, ROUND WASHER, FLAT AND FILLISTER HEADSTYLES.

- 130 - 632 X 1/4" to 1" METAL CORE SCREWS
- 75 - 832 X 3/8" to 1" METAL CORE SCREWS
- 60 - 1032 X 3/8" to 1" METAL CORE SCREWS
- 40 - 1/4-20 X 3/8" to 1 1/2" METAL CORE SCREWS

MOLDED NYLON FASTENERS PROVIDE ELECTRICAL INSULATION, VIBRATION AND CORROSION RESISTANCE. HAVE A LOW THERMAL CONDUCTIVITY, ARE NON-MAGNETIC AND HAVE A HIGH STRENGTH-TO-WEIGHT RATIO. PACKAGED IN LARGE REUSABLE TRANSPARENT PLASTIC STORAGE BOXES.

IDEAL FOR:

- PROTOTYPE WORK** - Large working assortments.
- PRODUCT DESIGN** - Latest designs for increased productivity.
- MODEL MAKING** - Commercially available standard parts.
- SHOP AND MAINTENANCE** - Convenient selection.

## # O4ASO107ABC



Over 100 Adhesive Backed Cable Clips in 10 Sizes including Single, Double and Releasable Styles.

### ADHESIVE BACKED CLIPS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 10 - 22AWC00375
- 20 - 22AWC00125
- 10 - 22DPC25550
- 20 - 22DPC13037
- 4 - 22DPC38062
- 4 - 22SPC38562
- 3 - 22DPC50575
- 6 - 22SPC50575
- 20 - 22SPC13037
- 10 - 22SPC25550





# FASTENER ASSORTMENT KITS

## SECTION XII

MOLDED NYLON FASTENERS PROVIDE ELECTRICAL INSULATION, VIBRATION AND CORROSION RESISTANCE. HAVE A LOW THERMAL CONDUCTIVITY, ARE

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### IDEAL FOR:

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**MODEL MAKING** - Commercially available standard parts.

**SHOP AND MAINTENANCE** - Convenient selection.

## # 04ASO480CBS



### CIRCUIT BOARD SUPPORTS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 25 - 27LTP1375
- 25 - 27LLP1375
- 15 - 27LTP1250
- 15 - 27LLP1250
- 15 - 27LTP1000
- 15 - 27LLP1000
- 25 - 27LTP0500
- 25 - 27LLP0500
- 25 - 27LTP0437
- 25 - 27LLP0437
- 25 - 27LTP0375
- 25 - 27LLP0375
- 25 - 27LTP0250
- 25 - 27LLP0250
- 25 - 27LTP0187
- 25 - 27LLP0187
- 20 - 27LTP0875
- 20 - 27LLP0875
- 20 - 27LTP0750
- 20 - 27LLP0750
- 20 - 27LTP0625
- 20 - 27LLP0625

## # 04ASO140CC



Over 140 Cable Clips  
In 15 Different Styles & Sizes

### CABLE CLIPS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 12 - 22DPC13037
- 10 - 22DPC25550
- 6 - 22DPC38062
- 4 - 22DPC50575
- 12 - 22SPC13037
- 10 - 22SPC25550
- 6 - 22SPC38062
- 4 - 22SPC50575
- 12 - 22HDCC1250
- 12 - 22HDCC1750
- 12 - 22HDCC2340
- 12 - 22HDCC2970
- 12 - 22HDCC3590
- 12 - 22HDCC4240
- 6 - 22HDCC4840

## # 04ASO700ECA



Over 700 Connectors  
3 Different Body and Pin assemblies

### 2PC. EDGE CONNECTORS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 100 - 27TPF0003A
- 100 - 27TPF0003B
- 100 - 27TPF0004A
- 100 - 27TPF0004B
- 75 - 27TPF0002A
- 75 - 27TPF0002B
- 75 - 27TPF0001A
- 75 - 27TPF0001B

## # 04ASO368DHP



### DELUXE HOLE PLUGS

ASSORTMENT CONSISTS OF APPROXIMATELY:

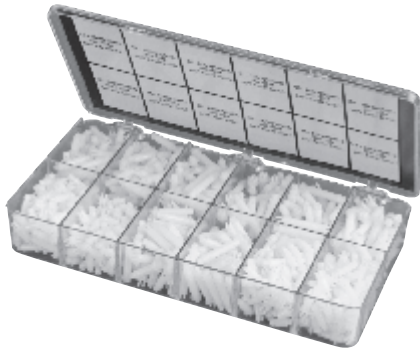
- 2 - 62MP2000
- 2 - 62MP1750
- 2 - 62MP1500
- 2 - 62MP1375
- 2 - 62MP1250
- 2 - 62MP1187
- 3 - 62MP1093
- 5 - 62MP1000
- 40 - 62MP0250
- 50 - 62MP0187
- 25 - 62MP0375
- 20 - 62MP0500
- 8 - 62MP0812
- 10 - 62MP0875
- 10 - 62MP0750
- 5 - 62MP1000V
- 8 - 62MP0875V
- 4 - 62VP100BM11
- 6 - 62PP100BG11
- 6 - 62PP087BG11
- 6 - 62PP087BM11
- 4 - 62PP081BG11
- 4 - 62PP081BM11
- 5 - 62PP075BG11
- 5 - 62PP075BM11
- 5 - 62PP062BG07
- 5 - 62PP062BM07
- 10 - 62PP050BM14
- 10 - 62PPO50BG14
- 10 - 62PP043BM17
- 10 - 62PP043BG17
- 10 - 62PP037BG31
- 10 - 62PP037BM31
- 10 - 62PP025BG06
- 10 - 62PP025BM06
- 15 - 62PP018BG14
- 15 - 62PP018BM14



# FASTENER ASSORTMENT KITS

SECTION  
**XII**

## # 04AS0725MSP



### P.C.B. POSTS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 100 - 27MSP00125
- 100 - 27MSP00250
- 95 - 27MSP00312
- 80 - 27MSP00375
- 70 - 27MSP00437
- 60 - 27MSP00500
- 50 - 27MSP00625
- 40 - 27MSP00750
- 75 - 27MSP00875
- 65 - 27MSP01000

## # 04AS0036CG



### P.C.B. CARD GUIDES

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 4 - 21CG00600 CARD GUIDES
- 4 - 21CG00550 CARD GUIDES
- 4 - 21CG00450 CARD GUIDES
- 6 - 21CG00400 CARD GUIDES
- 6 - 21CG00350 CARD GUIDES
- 6 - 21CG00300 CARD GUIDES
- 6 - 21CG00250 CARD GUIDES

## # 04AS0120WAR



Over 115 Nylon Screw Anchors  
in 12 Different Styles and Sizes.

### WALL ANCHOR / RIVETS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 40 - #6 / #8 SCREW ANCHORS
- 24 - #10 / #12 SCREW ANCHORS
- 20 - #14 / #16 SCREW ANCHORS
- 4 - 3/16" X 3/4" 2 PIECE RIVET, STEEL
- 12 - 1/4" X 1" 2 PIECE RIVET, STEEL
- 4 - 1/4" X 3/4" 2 PIECE RIVET, NYLON
- 8 - 1/4" X 1 1/2" 2 PIECE RIVET, NYLON
- 4 - 1/4" X 1" 2 PIECE RIVET, NYLON

## # 04AS0510FW



### METRIC KIT page 241

All in Assorted Outside Diameters  
and Thickness Ranges.

### FLAT WASHERS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 50 - #2 FLATWASHERS
- 60 - #4 FLATWASHERS
- 60 - #6 FLATWASHERS
- 60 - #8 FLATWASHERS
- 60 - #10 FLATWASHERS
- 60 - 1/4" FLATWASHERS
- 40 - 3/8" FLATWASHERS
- 20 - 1/2" FLATWASHERS
- 100 - 9/16" to 3/4" FLATWASHERS

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**IDEAL FOR:**

**PROTOTYPE WORK** - Large working assortments.

**PRODUCT DESIGN** - Latest designs for increased productivity.

**MODEL MAKING** - Commercially available standard parts.

**SHOP AND MAINTENANCE** - Convenient selection.

## # 04AS0190TLT



Over 180 Assorted Nylon Twist Lock Ties  
in 6 Popular Sizes.

### "EZ" TWIST LOCKS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 50 - 1/4" TWIST LOCK TIES
- 30 - 3/8" TWIST LOCK TIES
- 30 - 1/2" TWIST LOCK TIES
- 20 - 5/8" TWIST LOCK TIES
- 30 - 3/4" TWIST LOCK TIES
- 30 - 15/16" TWIST LOCK TIES

## # 04AS0201AFB



### ALL-FIT BUSHINGS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 15 - 22AF1000
- 15 - 22AF1093
- 30 - 22AF0875
- 36 - 22AF0812
- 45 - 22AFO750
- 60 - 22AF0625

Over 200 Nylon All-Fit Bushings  
in 6 Popular Sizes

# FASTENER ASSORTMENT KITS

## SECTION XII

MOLDED NYLON FASTENERS PROVIDE ELECTRICAL INSULATION, VIBRATION AND CORROSION RESISTANCE. HAVE A LOW THERMAL CONDUCTIVITY, ARE

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### IDEAL FOR:

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**SHOP AND MAINTENANCE** - Convenient selection.

### # 04AS0150SB



### # 04AS0130NHP



### # 04AS0113LCA



Over 100 Lamp Accessories

## LAMP ACCESSORIES

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 10 - 3 1/2" THREADED TUBING
- 25 - 1/8" LAMP SNAP BUSHING
- 8 - 1/8 NPS LAMPCORD BUSHING
- 6 - 1/4 NPS LAMPCORD BUSHING
- 4 - 3/8 NPS LAMPCORD BUSHING
- 3 - 1/2 NPS LAMPCORD BUSHING
- 3 - 1/2 NPS 2 PC. THREADED BUSHING
- 10 - 23MP04K10
- 10 - 23MP04L40
- 10 - 23MPO4N40
- 10 - 22MP05005
- 15 - 22MP01020

### # 04AS0180WT



## WIRE/CABLE TIES

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 144 - WIRE TIES 4" to 6 3/4" Natural & Black
- 40 - BEADED TIES 4 1/4" Long
- 26 - ASSORTED CLIPS, TABS AND MOUNTS

## INSULATING BUSHINGS

ASSORTMENT CONSISTS OF APPROXIMATELY:

- 24 - 22MP01010
- 24 - 22MP01015
- 24 - 22MP01030
- 24 - 22MP01050
- 12 - 22MP01060
- 12 - 22MP01080
- 24 - 22MP03754
- 24 - 22MP05004
- 12 - 22MP05627
- 6 - 22MP06258
- 6 - 22MP07510
- 6 - 22MP10012

## HOLE PLUGS

ASSORTMENT CONSISTS OF THE FOLLOWING HOLE PLUGS IN SMOOTH AND MATTE FINISH. APPROXIMATE COUNTS.

- 10 - 3/16" HOLE PLUGS
- 10 - 1/4" HOLE PLUGS
- 10 - 5/16" HOLE PLUGS
- 10 - 3/8" HOLE PLUGS
- 10 - 7/16" HOLE PLUGS
- 10 - 1/2" HOLE PLUGS
- 10 - 9/16" HOLE PLUGS
- 10 - 5/8" HOLE PLUGS
- 10 - 11/16" HOLE PLUGS
- 10 - 3/4" HOLE PLUGS
- 10 - 13/16" HOLE PLUGS
- 10 - 7/8" HOLE PLUGS
- 10 - 1" HOLE PLUGS

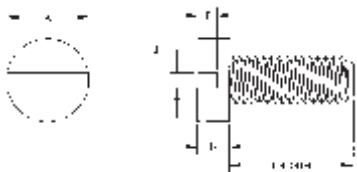
Over 130 Plugs in 13 Different Sizes and Types



# METRIC SCREWS, BOLTS AND THREADED ROD

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
**XIII**



Nominal Screw Length	Tolerance On Length mm
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.

THREAD SIZE	A	H	J	T
M2 X 0.4	3.80	1.30	0.70	0.90
M2.5 X 0.45	4.50	1.60	0.80	1.00
M3 X 0.5	5.50	2.00	1.00	1.30
M3.5 X 0.6	6.00	2.40	1.10	1.40
M4 X 0.7	7.00	2.60	1.20	1.60
M5 X .08	8.50	3.30	1.50	2.00
M6 X 1.0	10.00	3.90	1.90	2.30
M8 X 1.25	13.00	5.00	2.30	2.80
M10 X 1.5	15.63	6.00	2.80	3.20

**CHEESE  
SLOTTED**



**New Sizes**



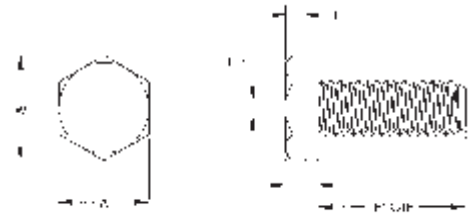
ITEM NUMBER	DESCRIPTION	ITEM NUMBER	DESCRIPTION
50M020040D004	M2 X .4 X 4MM Cheese Slot	50M040070D020	M4 X .7 X 20MM Cheese Slot
50M020040D005	M2 X .4 X 5MM Cheese Slot	50M040070D025	M4 X .7 X 25MM Cheese Slot
50M020040D006	M2 X .4 X 6MM Cheese Slot	50M040070D030	M4 X .7 X 30MM Cheese Slot
50M020040D008	M2 X .4 X 8MM Cheese Slot	50M040070D035	M4 X .7 X 35MM Cheese Slot
50M020040D010	M2 X .4 X 10MM Cheese Slot	50M040070D040	M4 X .7 X 40MM Cheese Slot
50M020040D012	M2 X .4 X 12MM Cheese Slot	50M050080D006	M5 X .8 X 6MM Cheese Slot
50M020040D016	M2 X .4 X 16MM Cheese Slot	50M050080D008	M5 X .8 X 8MM Cheese Slot
50M020040D020	M2 X .4 X 20MM Cheese Slot	50M050080D010	M5 X .8 X 10MM Cheese Slot
50M020040D025	M2 X .4 X 25MM Cheese Slot	50M050080D012	M5 X .8 X 12MM Cheese Slot
50M025045D004	M2.5 X .45 X 4MM Cheese Slot	50M050080D016	M5 X .8 X 16MM Cheese Slot
50M025045D005	M2.5 X .45 X 5MM Cheese Slot	50M050080D020	M5 X .8 X 20MM Cheese Slot
50M025045D006	M2.5 X .45 X 6MM Cheese Slot	50M050080D025	M5 X .8 X 25MM Cheese Slot
50M025045D008	M2.5 X .45 X 8MM Cheese Slot	50M050080D030	M5 X .8 X 30MM Cheese Slot
50M025045D010	M2.5 X .45 X 10MM Cheese Slot	50M050080D035	M5 X .8 X 35MM Cheese Slot
50M025045D012	M2.5 X .45 X 12MM Cheese Slot	50M050080D040	M5 X .8 X 40MM Cheese Slot
50M025045D016	M2.5 X .45 X 16MM Cheese Slot	50M060100D005	M6 X 1.0 X 5MM Cheese Slot
50M025045D020	M2.5 X .45 X 20MM Cheese Slot	50M060100D008	M6 X 1.0 X 8MM Cheese Slot
50M025045D025	M2.5 X .45 X 25MM Cheese Slot	50M060100D010	M6 X 1.0 X 10MM Cheese Slot
50M030050D004	M3 X .5 X 4MM Cheese Slot	50M060100D012	M6 X 1.0 X 12MM Cheese Slot
50M030050D005	M3 X .5 X 5MM Cheese Slot	50M060100D016	M6 X 1.0 X 16MM Cheese Slot
50M030050D006	M3 X .5 X 6MM Cheese Slot	50M060100D020	M6 X 1.0 X 20MM Cheese Slot
50M030050D008	M3 X .5 X 8MM Cheese Slot	50M060100D025	M6 X 1.0 X 25MM Cheese Slot
50M030050D010	M3 X .5 X 10MM Cheese Slot	50M060100D030	M6 X 1.0 X 30MM Cheese Slot
50M030050D012	M3 X .5 X 12MM Cheese Slot	50M060100D035	M6 X 1.0 X 35MM Cheese Slot
50M030050D014	M3 X .5 X 14MM Cheese Slot	50M060100D040	M6 X 1.0 X 40MM Cheese Slot
50M030050D016	M3 X .5 X 16MM Cheese Slot	50M060100D045	M6 X 1.0 X 45MM Cheese Slot
50M030050D020	M3 X .5 X 20MM Cheese Slot	50M060100D050	M6 X 1.0 X 50MM Cheese Slot
50M030050D025	M3 X .5 X 25MM Cheese Slot	50M060100D060	M6 X 1.0 X 60MM Cheese Slot
50M030050D030	M3 X .5 X 30MM Cheese Slot	50M060100D065	M6 X 1.0 X 65MM Cheese Slot
50M030050D035	M3 X .5 X 35MM Cheese Slot	50M060100D070	M6 X 1.0 X 70MM Cheese Slot
50M030050D042	M3 X .5 X 42MM Cheese Slot	50M060100D075	M6 X 1.0 X 75MM Cheese Slot
50M035060D005	M3.5 X .6 X 5MM Cheese Slot	50M080125D010	M8 X 1.25 X 10MM Cheese Slot
50M035060D006	M3.5 X .6 X 6MM Cheese Slot	50M080125D016	M8 X 1.25 X 16MM Cheese Slot
50M035060D008	M3.5 X .6 X 8MM Cheese Slot	50M080125D020	M8 X 1.25 X 20MM Cheese Slot
50M035060D010	M3.5 X .6 X 10MM Cheese Slot	50M080125D025	M8 X 1.25 X 25MM Cheese Slot
50M035060D012	M3.5 X .6 X 12MM Cheese Slot	50M080125D030	M8 X 1.25 X 30MM Cheese Slot
50M035060D016	M3.5 X .6 X 16MM Cheese Slot	50M080125D035	M8 X 1.25 X 35MM Cheese Slot
50M035060D020	M3.5 X .6 X 20MM Cheese Slot	50M080125D050	M8 X 1.25 X 50MM Cheese Slot
50M035060D025	M3.5 X .6 X 25MM Cheese Slot	50M080125D070	M8 X 1.25 X 70MM Cheese Slot
50M035060D035	M3.5 X .6 X 35MM Cheese Slot	50M100150D016	M10 X 1.5 X 16MM Cheese Slot
50M035060D042	M3.5 X .6 X 42MM Cheese Slot	50M100150D020	M10 X 1.5 X 20MM Cheese Slot
50M040070D004	M4 X .7 X 4MM Cheese Slot	50M100150D025	M10 X 1.5 X 25MM Cheese Slot
50M040070D006	M4 X .7 X 6MM Cheese Slot	50M100150D030	M10 X 1.5 X 30MM Cheese Slot
50M040070D008	M4 X .7 X 8MM Cheese Slot	50M100150D035	M10 X 1.5 X 35MM Cheese Slot
50M040070D010	M4 X .7 X 10MM Cheese Slot	50M100150D050	M10 X 1.5 X 50MM Cheese Slot
50M040070D012	M4 X .7 X 12MM Cheese Slot	50M100150D060	M10 X 1.5 X 60MM Cheese Slot
50M040070D016	M4 X .7 X 16MM Cheese Slot		



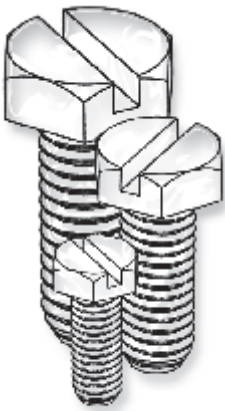
# METRIC SCREWS, BOLTS AND THREADED ROD

## SECTION XIII

THREAD SIZE	A	W	H	J	T
M2	.302 - .320	3.38 min.	1.3 - 1.6	.60	.46
M2.5	3.82 - 4.00	4.28 min.	1.8 - 2.1	.80	.99
M3	4.82 - 5.00	5.40 min.	2.0 - 2.3	.99	1.30
M3.5	5.32 - 5.50	5.96 min.	2.3 - 2.6	1.20	1.28
M4	6.78 - 7.00	7.59 min.	2.6 - 3.0	1.24	1.28
M5	7.78 - 8.00	8.71 min.	3.3 - 3.8	1.30	1.40
M6	9.78 - 10.00	10.95 min.	4.1 - 4.7	1.70	2.24
M8	12.73 - 13.00	14.26 min.	5.2 - 6.0	2.15	2.27
M10	15.73 - 16.00	17.62 min.	6.5 - 7.5	2.38	2.90



## HEX SLOTTED



Nominal Screw Length	Tolerance On Length mm
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.

ITEM NUMBER	DESCRIPTION
50M020040K004	M2 X .4 X 4MM HEX SL
50M020040K005	M2 X .4 X 5MM HEX SL
50M020040K006	M2 X .4 X 6MM HEX SL
50M020040K008	M2 X .4 X 8MM HEX SL
50M020040K010	M2 X .4 X 10MM HEX SL
50M020040K012	M2 X .4 X 12MM HEX SL
50M020040K016	M2 X .4 X 16MM HEX SL
50M020040K020	M2 X .4 X 20MM HEX SL
50M020040K025	M2 X .4 X 25MM HEX SL
50M025045K004	M2.5 X .45 X 4MM HEX SL
50M025045K005	M2.5 X .45 X 5MM HEX SL
50M025045K006	M2.5 X .45 X 6MM HEX SL
50M025045K008	M2.5 X .45 X 8MM HEX SL
50M025045K010	M2.5 X .45 X 10MM HEX SL
50M025045K012	M2.5 X .45 X 12MM HEX SL
50M025045K016	M2.5 X .45 X 16MM HEX SL
50M025045K020	M2.5 X .45 X 20MM HEX SL
50M025045K025	M2.5 X .45 X 25MM HEX SL
50M030050K004	M3 X .5 X 4MM HEX SL
50M030050K005	M3 X .5 X 5MM HEX SL
50M030050K006	M3 X .5 X 6MM HEX SL
50M030050K008	M3 X .5 X 8MM HEX SL
50M030050K010	M3 X .5 X 10MM HEX SL
50M030050K012	M3 X .5 X 12MM HEX SL
50M030050K016	M3 X .5 X 16MM HEX SL
50M030050K020	M3 X .5 X 20MM HEX SL
50M030050K025	M3 X .5 X 25MM HEX SL
50M030050K030	M3 X .5 X 30MM HEX SL
50M030050K035	M3 X .5 X 35MM HEX SL
50M030050K042	M3 X .5 X 42MM HEX SL
50M035060K005	M3.5 X .6 X 5MM HEX SL
50M035060K006	M3.5 X .6 X 6MM HEX SL
50M035060K007	M3.5 X .6 X 7MM HEX SL
50M035060K008	M3.5 X .6 X 8MM HEX SL
50M035060K010	M3.5 X .6 X 10MM HEX SL
50M035060K012	M3.5 X .6 X 12MM HEX SL
50M035060K016	M3.5 X .6 X 16MM HEX SL
50M035060K020	M3.5 X .6 X 20MM HEX SL
50M035060K025	M3.5 X .6 X 25MM HEX SL
50M035060K035	M3.5 X .6 X 35MM HEX SL
50M035060K042	M3.5 X .6 X 42MM HEX SL
50M040070K006	M4 X .7 X 6MM HEX SL
50M040070K008	M4 X .7 X 8MM HEX SL
50M040070K010	M4 X .7 X 10MM HEX SL
50M040070K012	M4 X .7 X 12MM HEX SL
50M040070K016	M4 X .7 X 16MM HEX SL

ITEM NUMBER	DESCRIPTION
50M040070K020	M4 X .7 X 20MM HEX SL
50M040070K025	M4 X .7 X 25MM HEX SL
50M040070K030	M4 X .7 X 30MM HEX SL
50M040070K035	M4 X .7 X 35MM HEX SL
50M040070K040	M4 X .7 X 40MM HEX SL
50M050080K006	M5 X .8 X 6MM HEX SL
50M050080K008	M5 X .8 X 8MM HEX SL
50M050080K010	M5 X .8 X 10MM HEX SL
50M050080K012	M5 X .8 X 12MM HEX SL
50M050080K016	M5 X .8 X 16MM HEX SL
50M050080K020	M5 X .8 X 20MM HEX SL
50M050080K025	M5 X .8 X 25MM HEX SL
50M050080K030	M5 X .8 X 30MM HEX SL
50M050080K035	M5 X .8 X 35MM HEX SL
50M050080K040	M5 X .8 X 40MM HEX SL
50M060100K005	M6 X 1.00 X 5MM HEX SL
50M060100K008	M6 X 1.00 X 8MM HEX SL
50M060100K010	M6 X 1.00 X 10MM HEX SL
50M060100K012	M6 X 1.00 X 12MM HEX SL
50M060100K016	M6 X 1.00 X 16MM HEX SL
50M060100K020	M6 X 1.00 X 20MM HEX SL
50M060100K025	M6 X 1.00 X 25MM HEX SL
50M060100K030	M6 X 1.00 X 30MM HEX SL
50M060100K035	M6 X 1.00 X 35MM HEX SL
50M060100K040	M6 X 1.00 X 40MM HEX SL
50M060100K045	M6 X 1.00 X 45MM HEX SL
50M060100K050	M6 X 1.00 X 50MM HEX SL
50M060100K060	M6 X 1.00 X 60MM HEX SL
50M060100K070	M6 X 1.00 X 70MM HEX SL
50M060100K075	M6 X 1.00 X 75MM HEX SL
50M080125K010	M8 X 1.25 X 10MM HEX SL
50M080125K016	M8 X 1.25 X 16MM HEX SL
50M080125K020	M8 X 1.25 X 20MM HEX SL
50M080125K025	M8 X 1.25 X 25MM HEX SL
50M080125K030	M8 X 1.25 X 30MM HEX SL
50M080125K035	M8 X 1.25 X 35MM HEX SL
50M080125K040	M8 X 1.25 X 40MM HEX SL
50M080125K050	M8 X 1.25 X 50MM HEX SL
50M080125K070	M8 X 1.25 X 70MM HEX SL
50M100150K016	M10 X 1.50 X 16MM HEX SL
50M100150K020	M10 X 1.50 X 20MM HEX SL
50M100150K025	M10 X 1.50 X 25MM HEX SL
50M100150K030	M10 X 1.50 X 30MM HEX SL
50M100150K035	M10 X 1.50 X 35MM HEX SL
50M100150K050	M10 X 1.50 X 50MM HEX SL
50M100150K060	M10 X 1.50 X 60MM HEX SL





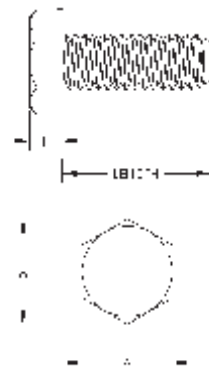
# METRIC SCREWS, BOLTS AND THREADED ROD

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
XIII

ITEM NUMBER	DESCRIPTION
50M020040J004	M2 X .4 X 4MM HEX
50M020040J005	M2 X .4 X 5MM HEX
50M020040J006	M2 X .4 X 6MM HEX
50M020040J008	M2 X .4 X 8MM HEX
50M020040J010	M2 X .4 X 10MM HEX
50M020040J012	M2 X .4 X 12MM HEX
50M020040J016	M2 X .4 X 16MM HEX
50M020040J020	M2 X .4 X 20MM HEX
50M020040J025	M2 X .4 X 25MM HEX
50M025045J004	M2.5 X .45 X 4MM HEX
50M025045J005	M2.5 X .45 X 5MM HEX
50M025045J006	M2.5 X .45 X 6MM HEX
50M025045J008	M2.5 X .45 X 8MM HEX
50M025045J010	M2.5 X .45 X 10MM HEX
50M025045J012	M2.5 X .45 X 12MM HEX
50M025045J016	M2.5 X .45 X 16MM HEX
50M025045J020	M2.5 X .45 X 20MM HEX
50M025045J025	M2.5 X .45 X 25MM HEX
50M030050J004	M3 X .5 X 4MM HEX
50M030050J005	M3 X .5 X 5MM HEX
50M030050J006	M3 X .5 X 6MM HEX
50M030050J008	M3 X .5 X 8MM HEX
50M030050J010	M3 X .5 X 10MM HEX
50M030050J012	M3 X .5 X 12MM HEX
50M030050J016	M3 X .5 X 16MM HEX
50M030050J020	M3 X .5 X 20MM HEX
50M030050J025	M3 X .5 X 25MM HEX
50M030050J030	M3 X .5 X 30MM HEX
50M030050J035	M3 X .5 X 35MM HEX
50M030050J042	M3 X .5 X 42MM HEX
50M035060J005	M3.5 X .6 X 5MM HEX
50M035060J006	M3.5 X .6 X 6MM HEX
50M035060J007	M3.5 X .6 X 7MM HEX
50M035060J008	M3.5 X .6 X 8MM HEX
50M035060J010	M3.5 X .6 X 10MM HEX
50M035060J012	M3.5 X .6 X 12MM HEX
50M035060J016	M3.5 X .6 X 16MM HEX
50M035060J020	M3.5 X .6 X 20MM HEX
50M035060J025	M3.5 X .6 X 25MM HEX
50M035060J035	M3.5 X .6 X 35MM HEX
50M035060J042	M3.5 X .6 X 42MM HEX
50M040070J006	M4 X .7 X 6MM HEX
50M040070J008	M4 X .7 X 8MM HEX
50M040070J010	M4 X .7 X 10MM HEX
50M040070J012	M4 X .7 X 12MM HEX
50M040070J016	M4 X .7 X 16MM HEX
50M040070J020	M4 X .7 X 20MM HEX
50M040070J025	M4 X .7 X 25MM HEX
50M040070J030	M4 X .7 X 30MM HEX
50M040070J035	M4 X .7 X 35MM HEX
50M040070J040	M4 X .7 X 40MM HEX
50M050080J006	M5 X .8 X 6MM HEX

ITEM NUMBER	DESCRIPTION
50M050080J008	M5 X .8 X 8MM HEX
50M050080J010	M5 X .8 X 10MM HEX
50M050080J012	M5 X .8 X 12MM HEX
50M050080J014	M5 X .8 X 14MM HEX
50M050080J016	M5 X .8 X 16MM HEX
50M050080J020	M5 X .8 X 20MM HEX
50M050080J025	M5 X .8 X 25MM HEX
50M050080J030	M5 X .8 X 30MM HEX
50M050080J035	M5 X .8 X 35MM HEX
50M050080J040	M5 X .8 X 40MM HEX
50M050080J070	M5 X .8 X 70MM HEX
50M060100J005	M6 X 1.00 X 5MM HEX
50M060100J008	M6 X 1.00 X 8MM HEX
50M060100J010	M6 X 1.00 X 10MM HEX
50M060100J012	M6 X 1.00 X 12MM HEX
50M060100J016	M6 X 1.00 X 16MM HEX
50M060100J020	M6 X 1.00 X 20MM HEX
50M060100J025	M6 X 1.00 X 25MM HEX
50M060100J030	M6 X 1.00 X 30MM HEX
50M060100J035	M6 X 1.00 X 35MM HEX
50M060100J040	M6 X 1.00 X 40MM HEX
50M060100J045	M6 X 1.00 X 45MM HEX
50M060100J050	M6 X 1.00 X 50MM HEX
50M060100J060	M6 X 1.00 X 60MM HEX
50M060100J070	M6 X 1.00 X 70MM HEX
50M060100J075	M6 X 1.00 X 75MM HEX
50M080125J006	M8 X 1.25 X 6MM HEX
50M080125J010	M8 X 1.25 X 10MM HEX
50M080125J016	M8 X 1.25 X 16MM HEX
50M080125J020	M8 X 1.25 X 20MM HEX
50M080125J025	M8 X 1.25 X 25MM HEX
50M080125J030	M8 X 1.25 X 30MM HEX
50M080125J035	M8 X 1.25 X 35MM HEX
50M080125J040	M8 X 1.25 X 40MM HEX
50M080125J050	M8 X 1.25 X 50MM HEX
50M080125J070	M8 X 1.25 X 70MM HEX
50M100150J016	M10 X 1.50 X 16MM HEX
50M100150J020	M10 X 1.50 X 20MM HEX
50M100150J025	M10 X 1.50 X 25MM HEX
50M100150J030	M10 X 1.50 X 30MM HEX
50M100150J035	M10 X 1.50 X 35MM HEX
50M100150J050	M10 X 1.50 X 50MM HEX
50M100150J060	M10 X 1.50 X 60MM HEX
50M120125J012	M12 X 1.25 X 12MM HEX
50M120175J020	M12 X 1.75 X 20MM HEX
50M120175J025	M12 X 1.75 X 25MM HEX
50M120175J030	M12 X 1.75 X 30MM HEX
50M120175J035	M12 X 1.75 X 35MM HEX
50M120175J040	M12 X 1.75 X 40MM HEX
50M120175J050	M12 X 1.75 X 50MM HEX
50M120175J060	M12 X 1.75 X 60MM HEX



HEX



Nominal Screw Length	Tolerance On Length mm
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.

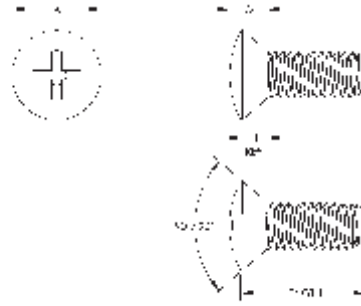
THREAD SIZE	A	H	W
M2	3.02 - 3.20	1.3 - 1.6	3.38 min.
M2.5	3.82 - 4.00	1.8 - 2.1	4.28 min.
M3	4.82 - 5.00	2.0 - 2.3	5.40 min.
M3.5	5.32 - 5.50	2.3 - 2.6	5.96 min.
M4	6.78 - 7.00	2.6 - 3.0	7.59 min.
M5	7.78 - 8.00	3.3 - 3.8	8.71 min.
M6	9.78 - 10.00	4.1 - 4.7	10.95 min.
M8	12.73 - 13.00	5.2 - 6.0	14.26 min.
M10	15.73 - 16.00	6.5 - 7.5	17.62 min.
M12	17.73 - 18.00	7.8 - 9.0	19.86 min.



# METRIC SCREWS, BOLTS AND THREADED ROD

SECTION  
**XIII**

ALL DIMENSIONS ARE IN MILLIMETERS



## OVAL PHILLIPS

ITEM NUMBER	DESCRIPTION			
50M025045M004	M2.5	X .45	X 4MM	Oval Phil
50M025045M005	M2.5	X .45	X 5MM	Oval Phil
50M025045M006	M2.5	X .45	X 6MM	Oval Phil
50M025045M008	M2.5	X .45	X 8MM	Oval Phil
50M025045M010	M2.5	X .45	X 10MM	Oval Phil
50M025045M012	M2.5	X .45	X 12MM	Oval Phil
50M025045M016	M2.5	X .45	X 16MM	Oval Phil
50M025045M020	M2.5	X .45	X 20MM	Oval Phil
50M025045M025	M2.5	X .45	X 25MM	Oval Phil
50M030050M005	M3	X .5	X 5MM	Oval Phil
50M030050M006	M3	X .5	X 6MM	Oval Phil
50M030050M008	M3	X .5	X 8MM	Oval Phil
50M030050M010	M3	X .5	X 10MM	Oval Phil
50M030050M012	M3	X .5	X 12MM	Oval Phil
50M030050M016	M3	X .5	X 16MM	Oval Phil
50M030050M020	M3	X .5	X 20MM	Oval Phil
50M030050M025	M3	X .5	X 25MM	Oval Phil
50M035060M005	M3.5	X .6	X 5MM	Oval Phil
50M035060M006	M3.5	X .6	X 6MM	Oval Phil
50M035060M008	M3.5	X .6	X 8MM	Oval Phil
50M035060M010	M3.5	X .6	X 10MM	Oval Phil
50M035060M012	M3.5	X .6	X 12MM	Oval Phil
50M035060M016	M3.5	X .6	X 16MM	Oval Phil
50M035060M020	M3.5	X .6	X 20MM	Oval Phil
50M035060M025	M3.5	X .6	X 25MM	Oval Phil
50M035060M035	M3.5	X .6	X 35MM	Oval Phil
50M040070M006	M4	X .7	X 6MM	Oval Phil
50M040070M008	M4	X .7	X 8MM	Oval Phil
50M040070M010	M4	X .7	X 10MM	Oval Phil
50M040070M012	M4	X .7	X 12MM	Oval Phil

ITEM NUMBER	DESCRIPTION			
50M040070M016	M4	X .7	X 16MM	Oval Phil
50M040070M020	M4	X .7	X 20MM	Oval Phil
50M040070M025	M4	X .7	X 25MM	Oval Phil
50M050080M006	M5	X .8	X 6MM	Oval Phil
50M050080M008	M5	X .8	X 8MM	Oval Phil
50M050080M010	M5	X .8	X 10MM	Oval Phil
50M050080M012	M5	X .8	X 12MM	Oval Phil
50M050080M016	M5	X .8	X 16MM	Oval Phil
50M050080M020	M5	X .8	X 20MM	Oval Phil
50M050080M025	M5	X .8	X 25MM	Oval Phil
50M050080M030	M5	X .8	X 30MM	Oval Phil
50M050080M040	M5	X .8	X 40MM	Oval Phil
50M060100M008	M6	X 1.00	X 8MM	Oval Phil
50M060100M010	M6	X 1.00	X 10MM	Oval Phil
50M060100M012	M6	X 1.00	X 12MM	Oval Phil
50M060100M016	M6	X 1.00	X 16MM	Oval Phil
50M060100M020	M6	X 1.00	X 20MM	Oval Phil
50M060100M025	M6	X 1.00	X 25MM	Oval Phil
50M060100M035	M6	X 1.00	X 35MM	Oval Phil
50M060100M045	M6	X 1.00	X 45MM	Oval Phil
50M080125M010	M8	X 1.25	X 10MM	Oval Phil
50M080125M016	M8	X 1.25	X 16MM	Oval Phil
50M080125M020	M8	X 1.25	X 20MM	Oval Phil
50M080125M025	M8	X 1.25	X 25MM	Oval Phil
50M080125M030	M8	X 1.25	X 30MM	Oval Phil
50M080125M050	M8	X 1.25	X 50MM	Oval Phil
50M100150M020	M10	X 1.5	X 20MM	Oval Phil
50M100150M025	M10	X 1.5	X 25MM	Oval Phil
50M100150M035	M10	X 1.5	X 35MM	Oval Phil



THREAD SIZE	A	H	O
M2 X 0.4	3.5 - 4.4	1.2 max ref.	1.7 max
M2.5 X 0.45	4.4 - 5.5	1.5 max ref.	2.1 max
M3 X 0.5	5.2 - 6.3	1.7 max ref.	2.4 max
M3.5 X 0.6	6.9 - 8.2	2.3 max ref.	3.1 max
M4 X 0.7	8.0 - 9.4	2.7 max ref.	3.7 max
M5 X 0.8	8.9 - 10.4	2.7 max ref.	3.9 max
M6 X 1	10.9 - 12.6	3.3 max ref.	4.7 max
M8 X 1.25	15.4 - 17.3	4.6 max ref.	6.6 max
M10 X 1.5	17.8 - 20.0	5.0 max ref.	7.3 max

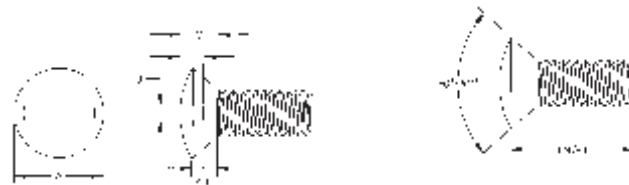
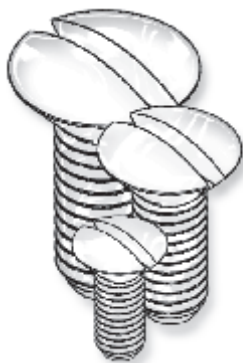
Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.

# METRIC SCREWS, BOLTS AND THREADED ROD

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
**XIII**



## OVAL SLOTTED

Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.

THREAD SIZE	A	H	O	J	T
M2 X 0.4	3.5 - 4.4	1.2 max ref.	1.7 max	0.5 - 0.7	0.8 - 1.0
M2.5 X 0.45	4.4 - 5.5	1.5 max ref.	2.1 max	0.6 - 0.8	1.0 - 1.2
M3 X 0.5	5.2 - 6.3	1.7 max ref.	2.4 max	0.8 - 1.0	1.2 - 1.5
M3.5 X 0.6	6.9 - 8.2	2.3 max ref.	3.1 max	1.0 - 1.2	1.4 - 1.7
M4 X 0.7	8.0 - 9.4	2.7 max ref.	3.7 max	1.2 - 1.5	1.6 - 1.9
M5 X 0.8	8.9 - 10.4	2.7 max ref.	3.9 max	1.2 - 1.5	2.0 - 2.4
M6 X 1	10.9 - 12.6	3.3 max ref.	4.7 max	1.6 - 1.9	2.4 - 2.8
M8 X 1.25	15.4 - 17.3	4.6 max ref.	6.6 max	2.0 - 2.3	3.2 - 3.7
M10 X 1.5	17.8 - 20.0	5.0 max ref.	7.3 max	2.5 - 2.8	3.8 - 4.4

### ITEM NUMBER ----- DESCRIPTION -----

50M020040L004	M2	X .4	X 4MM	Oval Slot
50M020040L005	M2	X .4	X 5MM	Oval Slot
50M020040L006	M2	X .4	X 6MM	Oval Slot
50M020040L008	M2	X .4	X 8MM	Oval Slot
50M020040L010	M2	X .4	X 10MM	Oval Slot
50M020040L011	M2	X .4	X 11MM	Oval Slot
50M020040L012	M2	X .4	X 12MM	Oval Slot
50M020040L016	M2	X .4	X 16MM	Oval Slot
50M020040L025	M2	X .4	X 25MM	Oval Slot
50M025045L004	M2.5	X .45	X 4MM	Oval Slot
50M025045L005	M2.5	X .45	X 5MM	Oval Slot
50M025045L006	M2.5	X .45	X 6MM	Oval Slot
50M025045L008	M2.5	X .45	X 8MM	Oval Slot
50M025045L010	M2.5	X .45	X 10MM	Oval Slot
50M025045L012	M2.5	X .45	X 12MM	Oval Slot
50M025045L016	M2.5	X .45	X 16MM	Oval Slot
50M025045L020	M2.5	X .45	X 20MM	Oval Slot
50M025045L025	M2.5	X .5	X 25MM	Oval Slot
50M030050L005	M3	X .5	X 5MM	Oval Slot
50M030050L006	M3	X .5	X 6MM	Oval Slot
50M030050L008	M3	X .5	X 8MM	Oval Slot
50M030050L010	M3	X .5	X 10MM	Oval Slot
50M030050L012	M3	X .5	X 12MM	Oval Slot
50M030050L015	M3	X .5	X 15MM	Oval Slot
50M030050L016	M3	X .5	X 16MM	Oval Slot
50M030050L020	M3	X .5	X 20MM	Oval Slot
50M030050L025	M3	X .5	X 25MM	Oval Slot
50M030050L030	M3	X .5	X 30MM	Oval Slot
50M030050L042	M3	X .5	X 42MM	Oval Slot
50M035060L005	M3.5	X .6	X 5MM	Oval Slot
50M035060L006	M3.5	X .6	X 6MM	Oval Slot
50M035060L008	M3.5	X .6	X 8MM	Oval Slot
50M035060L010	M3.5	X .6	X 10MM	Oval Slot
50M035060L016	M3.5	X .6	X 16MM	Oval Slot
50M035060L020	M3.5	X .6	X 20MM	Oval Slot
50M035060L025	M3.5	X .6	X 25MM	Oval Slot
50M035060L035	M3.5	X .6	X 35MM	Oval Slot
50M040070L006	M4	X .7	X 6MM	Oval Slot
50M040070L008	M4	X .7	X 8MM	Oval Slot
50M040070L010	M4	X .7	X 10MM	Oval Slot

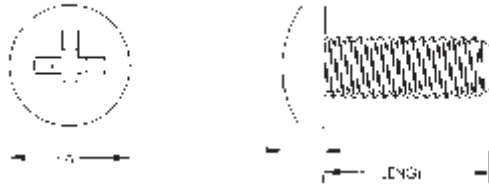
### ITEM NUMBER ----- DESCRIPTION -----

50M040070L012	M4	X .7	X 12MM	Oval Slot
50M040070L015	M4	X .7	X 15MM	Oval Slot
50M040070L016	M4	X .7	X 16MM	Oval Slot
50M040070L020	M4	X .7	X 20MM	Oval Slot
50M040070L025	M4	X .7	X 25MM	Oval Slot
50M040070L030	M4	X .7	X 30MM	Oval Slot
50M040070L035	M4	X .7	X 35MM	Oval Slot
50M050080L006	M5	X .8	X 6MM	Oval Slot
50M050080L008	M5	X .8	X 8MM	Oval Slot
50M050080L010	M5	X .8	X 10MM	Oval Slot
50M050080L012	M5	X .8	X 12MM	Oval Slot
50M050080L015	M5	X .8	X 15MM	Oval Slot
50M050080L016	M5	X .8	X 16MM	Oval Slot
50M050080L020	M5	X .8	X 20MM	Oval Slot
50M050080L025	M5	X .8	X 25MM	Oval Slot
50M050080L030	M5	X .8	X 30MM	Oval Slot
50M050080L035	M5	X .8	X 35MM	Oval Slot
50M050080L040	M5	X .8	X 40MM	Oval Slot
50M060100L008	M6	X 1.00	X 8MM	Oval Slot
50M060100L010	M6	X 1.00	X 10MM	Oval Slot
50M060100L012	M6	X 1.00	X 12MM	Oval Slot
50M060100L016	M6	X 1.00	X 16MM	Oval Slot
50M060100L020	M6	X 1.00	X 20MM	Oval Slot
50M060100L025	M6	X 1.00	X 25MM	Oval Slot
50M060100L035	M6	X 1.00	X 35MM	Oval Slot
50M060100L040	M6	X 1.00	X 40MM	Oval Slot
50M060100L045	M6	X 1.00	X 45MM	Oval Slot
50M060100L050	M6	X 1.00	X 50MM	Oval Slot
50M080125L016	M8	X 1.25	X 16MM	Oval Slot
50M080125L020	M8	X 1.25	X 20MM	Oval Slot
50M080125L025	M8	X 1.25	X 25MM	Oval Slot
50M080125L030	M8	X 1.25	X 30MM	Oval Slot
50M080125L050	M8	X 1.25	X 50MM	Oval Slot
50M100150L020	M10	X 1.50	X 20MM	Oval Slot
50M100150L025	M10	X 1.50	X 25MM	Oval Slot
50M100150L030	M10	X 1.50	X 30MM	Oval Slot
50M100150L035	M10	X 1.50	X 35MM	Oval Slot
50M100150L060	M10	X 1.50	X 60MM	Oval Slot

# METRIC SCREWS, BOLTS AND THREADED ROD

SECTION  
**XIII**

ALL DIMENSIONS ARE IN MILLIMETERS



## PAN PHILLIPS



THREAD SIZE	A	H
M2	3.7 - 4.0	1.4 - 1.6
M2.5	4.7 - 5.0	1.9 - 2.1
M3	5.3 - 5.6	2.2 - 2.4
M3.5	6.6 - 7.0	2.3 - 2.6
M4	7.6 - 8.0	2.8 - 3.1
M5	9.1 - 9.5	3.4 - 3.7
M6	11.5 - 12.0	4.3 - 4.6
M8	15.5 - 16.0	5.6 - 6.0
M10	19.4 - 20.0	7.1 - 7.5

Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.

### ITEM NUMBER ----- DESCRIPTION ----

50M020040P004	M2 X .4 X 4MM	Pan Phil
50M020040P005	M2 X .4 X 5MM	Pan Phil
50M020040P006	M2 X .4 X 6MM	Pan Phil
50M020040P008	M2 X .4 X 8MM	Pan Phil
50M020040P010	M2 X .4 X 10MM	Pan Phil
50M020040P012	M2 X .4 X 12MM	Pan Phil
50M020040P016	M2 X .4 X 16MM	Pan Phil
50M020040P020	M2 X .4 X 20MM	Pan Phil
50M020040P025	M2 X .4 X 25MM	Pan Phil
50M025045P004	M2.5 X .45 X 4MM	Pan Phil
50M025045P005	M2.5 X .45 X 5MM	Pan Phil
50M025045P006	M2.5 X .45 X 6MM	Pan Phil
50M025045P008	M2.5 X .45 X 8MM	Pan Phil
50M025045P010	M2.5 X .45 X 10MM	Pan Phil
50M025045P012	M2.5 X .45 X 12MM	Pan Phil
50M025045P016	M2.5 X .45 X 16MM	Pan Phil
50M025045P020	M2.5 X .45 X 20MM	Pan Phil
50M025045P025	M2.5 X .45 X 25MM	Pan Phil
50M030050 P003	M3 X .5 X 3MM	Pan Phil
50M030050P004	M3 X .5 X 4MM	Pan Phil
50M030050P005	M3 X .5 X 5MM	Pan Phil
50M030050P006	M3 X .5 X 6MM	Pan Phil
50M030050P008	M3 X .5 X 8MM	Pan Phil
50M030050P010	M3 X .5 X 10MM	Pan Phil
50M030050P012	M3 X .5 X 12MM	Pan Phil
50M030050P016	M3 X .5 X 16MM	Pan Phil
50M030050P020	M3 X .5 X 20MM	Pan Phil
50M030050P025	M3 X .5 X 25MM	Pan Phil
50M030050P030	M3 X .5 X 30MM	Pan Phil
50M030050P035	M3 X .5 X 35MM	Pan Phil
50M030050P042	M3 X .5 X 42MM	Pan Phil
50M035060P005	M3.5 X .6 X 5MM	Pan Phil
50M035060P006	M3.5 X .6 X 6MM	Pan Phil
50M035060P007	M3.5 X .6 X 7MM	Pan Phil
50M035060P008	M3.5 X .6 X 8MM	Pan Phil
50M035060P010	M3.5 X .6 X 10MM	Pan Phil
50M035060P012	M3.5 X .6 X 12MM	Pan Phil
50M035060P016	M3.5 X .6 X 16MM	Pan Phil
50M035060P020	M3.5 X .6 X 20MM	Pan Phil
50M035060P025	M3.5 X .6 X 25MM	Pan Phil
50M035060P035	M3.5 X .6 X 35MM	Pan Phil
50M035060P042	M3.5 X .6 X 42MM	Pan Phil
50M040070P003	M4 X .7 X 3MM	Pan Phil
50M040070P006	M4 X .7 X 6MM	Pan Phil
50M040070P008	M4 X .7 X 8MM	Pan Phil
50M040070P010	M4 X .7 X 10MM	Pan Phil
50M040070P012	M4 X .7 X 12MM	Pan Phil
50M040070P016	M4 X .7 X 16MM	Pan Phil
50M040070P020	M4 X .7 X 20MM	Pan Phil

### ITEM NUMBER ----- DESCRIPTION ----

50M040070P025	M4 X .7 X 25MM	Pan Phil
50M040070P030	M4 X .7 X 30MM	Pan Phil
50M040070P035	M4 X .7 X 35MM	Pan Phil
50M040070P040	M4 X .7 X 40MM	Pan Phil
50M050080P006	M5 X .8 X 6MM	Pan Phil
50M050080P008	M5 X .8 X 8MM	Pan Phil
50M050080P010	M5 X .8 X 10MM	Pan Phil
50M050080P012	M5 X .8 X 12MM	Pan Phil
50M050080P015	M5 X .8 X 15MM	Pan Phil
50M050080P016	M5 X .8 X 16MM	Pan Phil
50M050080P020	M5 X .8 X 20MM	Pan Phil
50M050080P025	M5 X .8 X 25MM	Pan Phil
50M050080P030	M5 X .8 X 30MM	Pan Phil
50M050080P035	M5 X .8 X 35MM	Pan Phil
50M050080P040	M5 X .8 X 40MM	Pan Phil
50M060100P005	M6 X 1.00 X 5MM	Pan Phil
50M060100P008	M6 X 1.00 X 8MM	Pan Phil
50M060100P010	M6 X 1.00 X 10MM	Pan Phil
50M060100P012	M6 X 1.00 X 12MM	Pan Phil
50M060100P016	M6 X 1.00 X 16MM	Pan Phil
50M060100P020	M6 X 1.00 X 20MM	Pan Phil
50M060100P022	M6 X 1.00 X 22MM	Pan Phil
50M060100P025	M6 X 1.00 X 25MM	Pan Phil
50M060100P030	M6 X 1.00 X 30MM	Pan Phil
50M060100P035	M6 X 1.00 X 35MM	Pan Phil
50M060100P040	M6 X 1.00 X 40MM	Pan Phil
50M060100P045	M6 X 1.00 X 45MM	Pan Phil
50M060100P050	M6 X 1.00 X 50MM	Pan Phil
50M060100P060	M6 X 1.00 X 60MM	Pan Phil
50M060100P070	M6 X 1.00 X 70MM	Pan Phil
50M060100P075	M6 X 1.00 X 75MM	Pan Phil
50M080125P010	M8 X 1.25 X 10MM	Pan Phil
50M080125P016	M8 X 1.25 X 16MM	Pan Phil
50M080125P020	M8 X 1.25 X 20MM	Pan Phil
50M080125P025	M8 X 1.25 X 25MM	Pan Phil
50M080125P030	M8 X 1.25 X 30MM	Pan Phil
50M080125P035	M8 X 1.25 X 35MM	Pan Phil
50M080125P050	M8 X 1.25 X 50MM	Pan Phil
50M080125P070	M8 X 1.25 X 70MM	Pan Phil
50M100150P013	M10 X 1.50 X 13MM	Pan Phil
50M100150P016	M10 X 1.50 X 16MM	Pan Phil
50M100150P019	M10 X 1.50 X 19MM	Pan Phil
50M100150P020	M10 X 1.50 X 20MM	Pan Phil
50M100150P025	M10 X 1.50 X 25MM	Pan Phil
50M100150P030	M10 X 1.50 X 30MM	Pan Phil
50M100150P035	M10 X 1.50 X 35MM	Pan Phil
50M100150P050	M10 X 1.50 X 50MM	Pan Phil
50M100150P060	M10 X 1.50 X 60MM	Pan Phil



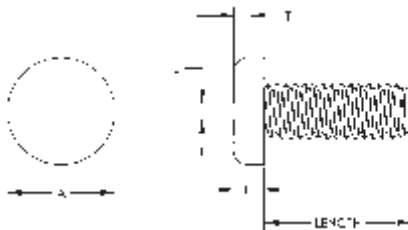


# METRIC SCREWS, BOLTS AND THREADED ROD

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
XIII

New Sizes



PAN SLOTTED



ITEM NUMBER	DESCRIPTION
50M020040N004	M2 X .4 X 4MM Pan Slot
50M020040N003	M2 X .4 X 3MM Pan Slot
50M020040N005	M2 X .4 X 5MM Pan Slot
50M020040N006	M2 X .4 X 6MM Pan Slot
50M020040N008	M2 X .4 X 8MM Pan Slot
50M020040N010	M2 X .4 X 10MM Pan Slot
50M020040N012	M2 X .4 X 12MM Pan Slot
50M020040N016	M2 X .4 X 16MM Pan Slot
50M020040N020	M2 X .4 X 20MM Pan Slot
50M020040N025	M2 X .4 X 25MM Pan Slot
50M025045N004	M2.5 X .45 X 4MM Pan Slot
50M025045N005	M2.5 X .45 X 5MM Pan Slot
50M025045N006	M2.5 X .45 X 6MM Pan Slot
50M025045N008	M2.5 X .45 X 8MM Pan Slot
50M025045N010	M2.5 X .45 X 10MM Pan Slot
50M025045N012	M2.5 X .45 X 12MM Pan Slot
50M025045N016	M2.5 X .45 X 16MM Pan Slot
50M025045N020	M2.5 X .45 X 20MM Pan Slot
50M025045N025	M2.5 X .45 X 25MM Pan Slot
50M030050N004	M3 X .5 X 4MM Pan Slot
50M030050N005	M3 X .5 X 5MM Pan Slot
50M030050N006	M3 X .5 X 6MM Pan Slot
50M030050N008	M3 X .5 X 8MM Pan Slot
50M030050N010	M3 X .5 X 10MM Pan Slot
50M030050N012	M3 X .5 X 12MM Pan Slot
50M030050N016	M3 X .5 X 16MM Pan Slot
50M030050N020	M3 X .5 X 20MM Pan Slot
50M030050N025	M3 X .5 X 25MM Pan Slot
50M030050N030	M3 X .5 X 30MM Pan Slot
50M030050N035	M3 X .5 X 35MM Pan Slot
50M030050N042	M3 X .5 X 42MM Pan Slot
50M035060N005	M3.5 X .6 X 5MM Pan Slot
50M035060N006	M3.5 X .6 X 6MM Pan Slot
50M035060N007	M3.5 X .6 X 7MM Pan Slot
50M035060N008	M3.5 X .6 X 8MM Pan Slot
50M035060N010	M3.5 X .6 X 10MM Pan Slot
50M035060N012	M3.5 X .6 X 12MM Pan Slot
50M035060N016	M3.5 X .6 X 16MM Pan Slot
50M035060N020	M3.5 X .6 X 20MM Pan Slot
50M035060N025	M3.5 X .6 X 25MM Pan Slot
50M035060N035	M3.5 X .6 X 35MM Pan Slot
50M035060N042	M3.5 X .6 X 42MM Pan Slot
50M040070N003	M4 X .7 X 3MM Pan Slot
50M040070N006	M4 X .7 X 6MM Pan Slot
50M040070N008	M4 X .7 X 8MM Pan Slot
50M040070N010	M4 X .7 X 10MM Pan Slot
50M040070N012	M4 X .7 X 12MM Pan Slot
50M040070N016	M4 X .7 X 16MM Pan Slot
50M040070N020	M4 X .7 X 20MM Pan Slot

ITEM NUMBER	DESCRIPTION
50M040070N025	M4 X .7 X 25MM Pan Slot
50M040070N030	M4 X .7 X 30MM Pan Slot
50M040070N035	M4 X .7 X 35MM Pan Slot
50M040070N040	M4 X .7 X 40MM Pan Slot
50M050080N006	M5 X .8 X 6MM Pan Slot
50M050080N008	M5 X .8 X 8MM Pan Slot
50M050080N010	M5 X .8 X 10MM Pan Slot
50M050080N012	M5 X .8 X 12MM Pan Slot
50M050080N015	M5 X .8 X 15MM Pan Slot
50M050080N016	M5 X .8 X 16MM Pan Slot
50M050080N020	M5 X .8 X 20MM Pan Slot
50M050080N025	M5 X .8 X 25MM Pan Slot
50M050080N030	M5 X .8 X 30MM Pan Slot
50M050080N035	M5 X .8 X 35MM Pan Slot
50M050080N040	M5 X .8 X 40MM Pan Slot
50M060100N005	M6 X 1.00 X 5MM Pan Slot
50M060100N008	M6 X 1.00 X 8MM Pan Slot
50M060100N010	M6 X 1.00 X 10MM Pan Slot
50M060100N012	M6 X 1.00 X 12MM Pan Slot
50M060100N016	M6 X 1.00 X 16MM Pan Slot
50M060100N020	M6 X 1.00 X 20MM Pan Slot
50M060100N022	M6 X 1.00 X 22MM Pan Slot
50M060100N025	M6 X 1.00 X 25MM Pan Slot
50M060100N030	M6 X 1.00 X 30MM Pan Slot
50M060100N035	M6 X 1.00 X 35MM Pan Slot
50M060100N040	M6 X 1.00 X 40MM Pan Slot
50M060100N045	M6 X 1.00 X 45MM Pan Slot
50M060100N050	M6 X 1.00 X 50MM Pan Slot
50M060100N060	M6 X 1.00 X 60MM Pan Slot
50M060100N070	M6 X 1.00 X 70MM Pan Slot
50M060100N075	M6 X 1.00 X 75MM Pan Slot
50M080125N010	M8 X 1.25 X 10MM Pan Slot
50M080125N016	M8 X 1.25 X 16MM Pan Slot
50M080125N020	M8 X 1.25 X 20MM Pan Slot
50M080125N025	M8 X 1.25 X 25MM Pan Slot
50M080125N030	M8 X 1.25 X 30MM Pan Slot
50M080125N035	M8 X 1.25 X 35MM Pan Slot
50M080125N050	M8 X 1.25 X 50MM Pan Slot
50M080125N070	M8 X 1.25 X 70MM Pan Slot
50M100150N013	M10 X 1.50 X 13MM Pan Slot
50M100150N016	M10 X 1.50 X 16MM Pan Slot
50M100150N019	M10 X 1.50 X 19MM Pan Slot
50M100150N020	M10 X 1.50 X 20MM Pan Slot
50M100150N025	M10 X 1.50 X 25MM Pan Slot
50M100150N030	M10 X 1.50 X 30MM Pan Slot
50M100150N035	M10 X 1.50 X 35MM Pan Slot
50M100150N050	M10 X 1.50 X 50MM Pan Slot
50M100150N060	M10 X 1.50 X 60MM Pan Slot

THREAD SIZE	A	H	J	T
M2	3.7 - 4.0	1.1 - 1.3	0.5 - 0.7	0.5 min.
M2.5	4.7 - 5.0	1.3 - 1.5	0.6 - 0.8	0.6 min.
M3	5.3 - 5.6	1.6 - 1.8	0.8 - 1.0	0.7 min.
M3.5	6.6 - 7.0	1.9 - 2.1	1.0 - 1.2	0.8 min.
M4	7.6 - 8.0	2.2 - 2.4	1.2 - 1.5	1.0 min.
M5	9.1 - 9.5	2.7 - 3.0	1.2 - 1.5	1.2 min.
M6	11.5 - 12.0	3.3 - 3.6	1.6 - 1.9	1.4 min.
M8	15.5 - 16.0	4.5 - 4.8	2.0 - 2.3	1.9 min.
M10	19.4 - 20.0	5.7 - 6.0	2.5 - 2.8	2.4 min.

Nominal Screw Length	Tolerance On Length mm
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.



# METRIC SCREWS, BOLTS AND THREADED ROD

SECTION  
**XIII**

ALL DIMENSIONS ARE IN MILLIMETERS



## FILLISTER PHILLIPS



THREAD SIZE	A	H
M2 X 0.4	3.8	1.60
M2.5 X 0.45	5.0	2.00
M3 X 0.5	6.0	2.40
M3.5 X 0.6	7.0	2.70
M4 X 0.7	8.0	3.10
M5 X 0.8	10.0	3.80
M6 X 1.0	12.0	4.60
M8 X 1.25	16.0	6.00
M10 X 1.5	18.0	7.00

Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.

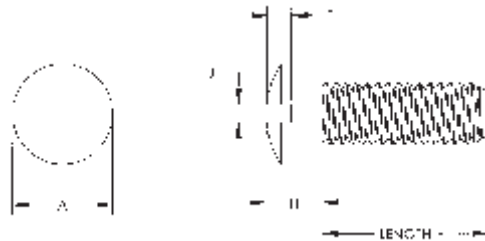


ITEM NUMBER	-----	DESCRIPTION	-----	ITEM NUMBER	-----	DESCRIPTION	-----	
50M020040G004	M2	X .4	X 4MM	Fill Phil	50M040070G025	M4	X .7 X 25MM	Fill Phil
50M020040G005	M2	X .4	X 5MM	Fill Phil	50M040070G030	M4	X .7 X 30MM	Fill Phil
50M020040G006	M2	X .4	X 6MM	Fill Phil	50M040070G035	M4	X .7 X 35MM	Fill Phil
50M020040G008	M2	X .4	X 8MM	Fill Phil	50M040070G040	M4	X .7 X 40MM	Fill Phil
50M020040G010	M2	X .4	X 10MM	Fill Phil	50M050080G006	M5	X .8 X 6MM	Fill Phil
50M020040G012	M2	X .4	X 12MM	Fill Phil	50M050080G008	M5	X .8 X 8MM	Fill Phil
50M020040G016	M2	X .4	X 16MM	Fill Phil	50M050080G010	M5	X .8 X 10MM	Fill Phil
50M020040G020	M2	X .4	X 20MM	Fill Phil	50M050080G012	M5	X .8 X 12MM	Fill Phil
50M020040G025	M2	X .4	X 25MM	Fill Phil	50M050080G015	M5	X .8 X 15MM	Fill Phil
50M025045G004	M2.5	X .45	X 4MM	Fill Phil	50M050080G016	M5	X .8 X 16MM	Fill Phil
50M025045G005	M2.5	X .45	X 5MM	Fill Phil	50M050080G020	M5	X .8 X 20MM	Fill Phil
50M025045G006	M2.5	X .45	X 6MM	Fill Phil	50M050080G025	M5	X .8 X 25MM	Fill Phil
50M025045G008	M2.5	X .45	X 8MM	Fill Phil	50M050080G030	M5	X .8 X 30MM	Fill Phil
50M025045G010	M2.5	X .45	X 10MM	Fill Phil	50M050080G035	M5	X .8 X 35MM	Fill Phil
50M025045G012	M2.5	X .45	X 12MM	Fill Phil	50M050080G040	M5	X .8 X 40MM	Fill Phil
50M025045G016	M2.5	X .45	X 16MM	Fill Phil	50M060100G005	M6	X 1.0 X 5MM	Fill Phil
50M025045G020	M2.5	X .45	X 20MM	Fill Phil	50M060100G008	M6	X 1.00 X 8MM	Fill Phil
50M025045G025	M2.5	X .45	X 25MM	Fill Phil	50M060100G010	M6	X 1.00 X 10MM	Fill Phil
50M030050G004	M3	X .5	X 4MM	Fill Phil	50M060100G012	M6	X 1.00 X 12MM	Fill Phil
50M030050G005	M3	X .5	X 5MM	Fill Phil	50M060100G016	M6	X 1.00 X 16MM	Fill Phil
50M030050G006	M3	X .5	X 6MM	Fill Phil	50M060100G020	M6	X 1.00 X 20MM	Fill Phil
50M030050G008	M3	X .5	X 8MM	Fill Phil	50M060100G022	M6	X 1.00 X 22MM	Fill Phil
50M030050G010	M3	X .5	X 10MM	Fill Phil	50M060100G025	M6	X 1.00 X 25MM	Fill Phil
50M030050G012	M3	X .5	X 12MM	Fill Phil	50M060100G030	M6	X 1.00 X 30MM	Fill Phil
50M030050G016	M3	X .5	X 16MM	Fill Phil	50M060100G035	M6	X 1.00 X 35MM	Fill Phil
50M030050G020	M3	X .5	X 20MM	Fill Phil	50M060100G040	M6	X 1.00 X 40MM	Fill Phil
50M030050G025	M3	X .5	X 25MM	Fill Phil	50M060100G045	M6	X 1.00 X 45MM	Fill Phil
50M030050G030	M3	X .5	X 30MM	Fill Phil	50M060100G050	M6	X 1.00 X 50MM	Fill Phil
50M030050G035	M3	X .5	X 35MM	Fill Phil	50M060100G060	M6	X 1.00 X 60MM	Fill Phil
50M030050G042	M3	X .5	X 42MM	Fill Phil	50M060100G070	M6	X 1.00 X 70MM	Fill Phil
50M035060G005	M3.5	X .6	X 5MM	Fill Phil	50M060100G075	M6	X 1.00 X 75MM	Fill Phil
50M035060G006	M3.5	X .6	X 6MM	Fill Phil	50M080125G010	M8	X 1.25 X 10MM	Fill Phil
50M035060G007	M3.5	X .6	X 7MM	Fill Phil	50M080125G016	M8	X 1.25 X 16MM	Fill Phil
50M035060G008	M3.5	X .6	X 8MM	Fill Phil	50M080125G020	M8	X 1.25 X 20MM	Fill Phil
50M035060G010	M3.5	X .6	X 10MM	Fill Phil	50M080125G025	M8	X 1.25 X 25MM	Fill Phil
50M035060G012	M3.5	X .6	X 12MM	Fill Phil	50M080125G030	M8	X 1.25 X 30MM	Fill Phil
50M035060G016	M3.5	X .6	X 16MM	Fill Phil	50M080125G035	M8	X 1.25 X 35MM	Fill Phil
50M035060G020	M3.5	X .6	X 20MM	Fill Phil	50M080125G050	M8	X 1.25 X 50MM	Fill Phil
50M035060G025	M3.5	X .6	X 25MM	Fill Phil	50M080125G070	M8	X 1.25 X 70MM	Fill Phil
50M035060G035	M3.5	X .6	X 35MM	Fill Phil	50M100150G013	M10	X 1.50 X 13MM	Fill Phil
50M035060G042	M3.5	X .6	X 42MM	Fill Phil	50M100150G016	M10	X 1.50 X 16MM	Fill Phil
50M040070G003	M4	X .7	X 3MM	Fill Phil	50M100150G019	M10	X 1.50 X 19MM	Fill Phil
50M040070G006	M4	X .7	X 6MM	Fill Phil	50M100150G020	M10	X 1.50 X 20MM	Fill Phil
50M040070G008	M4	X .7	X 8MM	Fill Phil	50M100150G025	M10	X 1.50 X 25MM	Fill Phil
50M040070G010	M4	X .7	X 10MM	Fill Phil	50M100150G030	M10	X 1.50 X 30MM	Fill Phil
50M040070G012	M4	X .7	X 12MM	Fill Phil	50M100150G035	M10	X 1.50 X 35MM	Fill Phil
50M040070G016	M4	X .7	X 16MM	Fill Phil	50M100150G050	M10	X 1.50 X 50MM	Fill Phil
50M040070G020	M4	X .7	X 20MM	Fill Phil	50M100150G060	M10	X 1.50 X 60MM	Fill Phil

# METRIC SCREWS, BOLTS AND THREADED ROD

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
XIII



## FILLISTER SLOTTED



ITEM NUMBER	DESCRIPTION
50M020040F004	M2 X .4 X 4MM Fill Slot
50M020040F005	M2 X .4 X 5MM Fill Slot
50M020040F006	M2 X .4 X 6MM Fill Slot
50M020040F008	M2 X .4 X 8MM Fill Slot
50M020040F010	M2 X .4 X 10MM Fill Slot
50M020040F012	M2 X .4 X 12MM Fill Slot
50M020040F016	M2 X .4 X 16MM Fill Slot
50M020040F020	M2 X .4 X 20MM Fill Slot
50M020040F025	M2 X .4 X 25MM Fill Slot
50M025045F004	M2.5 X .45 X 4MM Fill Slot
50M025045F005	M2.5 X .45 X 5MM Fill Slot
50M025045F006	M2.5 X .45 X 6MM Fill Slot
50M025045F008	M2.5 X .45 X 8MM Fill Slot
50M025045F010	M2.5 X .45 X 10MM Fill Slot
50M025045F012	M2.5 X .45 X 12MM Fill Slot
50M025045F016	M2.5 X .45 X 16MM Fill Slot
50M025045F020	M2.5 X .45 X 20MM Fill Slot
50M025045F025	M2.5 X .45 X 25MM Fill Slot
50M030050F004	M3 X .5 X 4MM Fill Slot
50M030050F005	M3 X .5 X 5MM Fill Slot
50M030050F006	M3 X .5 X 6MM Fill Slot
50M030050F008	M3 X .5 X 8MM Fill Slot
50M030050F010	M3 X .5 X 10MM Fill Slot
50M030050F012	M3 X .5 X 12MM Fill Slot
50M030050F016	M3 X .5 X 16MM Fill Slot
50M030050F020	M3 X .5 X 20MM Fill Slot
50M030050F025	M3 X .5 X 25MM Fill Slot
50M030050F030	M3 X .5 X 30MM Fill Slot
50M030050F035	M3 X .5 X 35MM Fill Slot
50M030050F042	M3 X .5 X 42MM Fill Slot
50M035060F005	M3.5 X .6 X 5MM Fill Slot
50M035060F006	M3.5 X .6 X 6MM Fill Slot
50M035060F007	M3.5 X .6 X 7MM Fill Slot
50M035060F008	M3.5 X .6 X 8MM Fill Slot
50M035060F010	M3.5 X .6 X 10MM Fill Slot
50M035060F012	M3.5 X .6 X 12MM Fill Slot
50M035060F016	M3.5 X .6 X 16MM Fill Slot
50M035060F020	M3.5 X .6 X 20MM Fill Slot
50M035060F025	M3.5 X .6 X 25MM Fill Slot
50M035060F035	M3.5 X .6 X 35MM Fill Slot
50M035060F042	M3.5 X .6 X 42MM Fill Slot
50M040070F003	M4 X .7 X 3MM Fill Slot
50M040070F006	M4 X .7 X 6MM Fill Slot
50M040070F008	M4 X .7 X 8MM Fill Slot
50M040070F010	M4 X .7 X 10MM Fill Slot
50M040070F012	M4 X .7 X 12MM Fill Slot
50M040070F016	M4 X .7 X 16MM Fill Slot
50M040070F020	M4 X .7 X 20MM Fill Slot

ITEM NUMBER	DESCRIPTION
50M040070F025	M4 X .7 X 25MM Fill Slot
50M040070F030	M4 X .7 X 30MM Fill Slot
50M040070F035	M4 X .7 X 35MM Fill Slot
50M040070F040	M4 X .7 X 40MM Fill Slot
50M050080F006	M5 X .8 X 6MM Fill Slot
50M050080F008	M5 X .8 X 8MM Fill Slot
50M050080F010	M5 X .8 X 10MM Fill Slot
50M050080F012	M5 X .8 X 12MM Fill Slot
50M050080F015	M5 X .8 X 15MM Fill Slot
50M050080F016	M5 X .8 X 16MM Fill Slot
50M050080F020	M5 X .8 X 20MM Fill Slot
50M050080F025	M5 X .8 X 25MM Fill Slot
50M050080F030	M5 X .8 X 30MM Fill Slot
50M050080F035	M5 X .8 X 35MM Fill Slot
50M050080F040	M5 X .8 X 40MM Fill Slot
50M060100F005	M6 X 1.00 X 5MM Fill Slot
50M060100F008	M6 X 1.00 X 8MM Fill Slot
50M060100F010	M6 X 1.00 X 10MM Fill Slot
50M060100F012	M6 X 1.00 X 12MM Fill Slot
50M060100F016	M6 X 1.00 X 16MM Fill Slot
50M060100F020	M6 X 1.00 X 20MM Fill Slot
50M060100F022	M6 X 1.00 X 22MM Fill Slot
50M060100F025	M6 X 1.00 X 25MM Fill Slot
50M060100F030	M6 X 1.00 X 30MM Fill Slot
50M060100F035	M6 X 1.00 X 35MM Fill Slot
50M060100F040	M6 X 1.00 X 40MM Fill Slot
50M060100F045	M6 X 1.00 X 45MM Fill Slot
50M060100F050	M6 X 1.00 X 50MM Fill Slot
50M060100F060	M6 X 1.00 X 60MM Fill Slot
50M060100F070	M6 X 1.00 X 70MM Fill Slot
50M060100F075	M6 X 1.00 X 75MM Fill Slot
50M080125F010	M8 X 1.25 X 10MM Fill Slot
50M080125F016	M8 X 1.25 X 16MM Fill Slot
50M080125F020	M8 X 1.25 X 20MM Fill Slot
50M080125F025	M8 X 1.25 X 25MM Fill Slot
50M080125F030	M8 X 1.25 X 30MM Fill Slot
50M080125F035	M8 X 1.25 X 35MM Fill Slot
50M080125F050	M8 X 1.25 X 50MM Fill Slot
50M080125F070	M8 X 1.25 X 70MM Fill Slot
50M100150F013	M10 X 1.50 X 13MM Fill Slot
50M100150F016	M10 X 1.50 X 16MM Fill Slot
50M100150F019	M10 X 1.50 X 19MM Fill Slot
50M100150F020	M10 X 1.50 X 20MM Fill Slot
50M100150F025	M10 X 1.50 X 25MM Fill Slot
50M100150F030	M10 X 1.50 X 30MM Fill Slot
50M100150F035	M10 X 1.50 X 35MM Fill Slot
50M100150F050	M10 X 1.50 X 50MM Fill Slot
50M100150F060	M10 X 1.50 X 60MM Fill Slot

THREAD SIZE	A	H	J	T
M2 X 0.4	3.8	1.60	0.60	0.90
M2.5 X 0.45	5.0	2.00	0.70	1.10
M3 X 0.5	6.0	2.40	1.00	1.30
M3.5 X 0.6	7.0	2.70	1.10	1.40
M4 X 0.7	8.0	3.10	1.20	1.60
M5 X 0.8	9.4	3.80	1.50	2.00
M6 X 1.0	12.0	4.60	1.90	2.30
M8 X 1.25	16.0	6.00	2.30	2.80
M10 X 1.5	20.0	7.50	2.80	3.20

Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

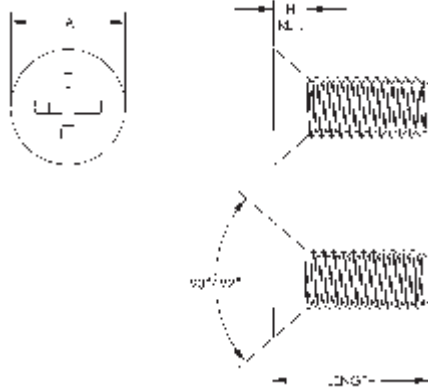
All tolerances are plus and minus.



# METRIC SCREWS, BOLTS AND THREADED ROD

SECTION  
**XIII**

ALL DIMENSIONS ARE IN MILLIMETERS



THREAD SIZE	A	* H
M2 X 0.4	3.5 - 4.4	1.2 max ref.
M2.5 X 0.45	4.4 - 5.5	1.5 max ref.
M3 X 0.5	5.2 - 6.3	1.7 max ref.
M3.5 X 0.6	6.9 - 8.2	2.3 max ref.
M4 X 0.7	8.0 - 9.4	2.7 max ref.
M5 X 0.8	8.9 - 10.4	2.7 max ref.
M6 X 1	10.9 - 12.6	3.3 max ref.
M8 X 1.25	15.4 - 17.3	4.6 max ref.
M10 X 1.5	17.8 - 20.0	5.0 max ref.

\* H Dimension is a reference dimension only.

## FLAT PHILLIPS



### ITEM NUMBER ----- DESCRIPTION -----

50M025045I004	M2.5 X .45 X 4MM	Flat Phil
50M025045I005	M2.5 X .45 X 5MM	Flat Phil
50M025045I006	M2.5 X .45 X 6MM	Flat Phil
50M025045I008	M2.5 X .45 X 8MM	Flat Phil
50M025045I010	M2.5 X .45 X 10MM	Flat Phil
50M025045I012	M2.5 X .45 X 12MM	Flat Phil
50M025045I016	M2.5 X .45 X 16MM	Flat Phil
50M025045I020	M2.5 X .45 X 20MM	Flat Phil
50M025045I025	M2.5 X .45 X 25MM	Flat Phil
50M030050I005	M3 X .5 X 5MM	Flat Phil
50M030050I006	M3 X .5 X 6MM	Flat Phil
50M030050I008	M3 X .5 X 8MM	Flat Phil
50M030050I010	M3 X .5 X 10MM	Flat Phil
50M030050I012	M3 X .5 X 12MM	Flat Phil
50M030050I016	M3 X .5 X 16MM	Flat Phil
50M030050I020	M3 X .5 X 20MM	Flat Phil
50M030050I025	M3 X .5 X 25MM	Flat Phil
50M035060I005	M3.5 X .6 X 5MM	Flat Phil
50M035060I006	M3.5 X .6 X 6MM	Flat Phil
50M035060I008	M3.5 X .6 X 8MM	Flat Phil
50M035060I010	M3.5 X .6 X 10MM	Flat Phil
50M035060I012	M3.5 X .6 X 12MM	Flat Phil
50M035060I016	M3.5 X .6 X 16MM	Flat Phil
50M035060I020	M3.5 X .6 X 20MM	Flat Phil
50M035060I025	M3.5 X .6 X 25MM	Flat Phil
50M035060I035	M3.5 X .6 X 35MM	Flat Phil
50M040070I006	M4 X .7 X 6MM	Flat Phil
50M040070I008	M4 X .7 X 8MM	Flat Phil
50M040070I010	M4 X .7 X 10MM	Flat Phil
50M040070I012	M4 X .7 X 12MM	Flat Phil

### ITEM NUMBER ----- DESCRIPTION -----

50M040070I016	M4 X .7 X 16MM	Flat Phil
50M040070I020	M4 X .7 X 20MM	Flat Phil
50M040070I025	M4 X .7 X 25MM	Flat Phil
50M050080I006	M5 X .8 X 6MM	Flat Phil
50M050080I008	M5 X .8 X 8MM	Flat Phil
50M050080I010	M5 X .8 X 10MM	Flat Phil
50M050080I012	M5 X .8 X 12MM	Flat Phil
50M050080I016	M5 X .8 X 16MM	Flat Phil
50M050080I020	M5 X .8 X 20MM	Flat Phil
50M050080I025	M5 X .8 X 25MM	Flat Phil
50M050080I030	M5 X .8 X 30MM	Flat Phil
50M050080I040	M5 X .8 X 40MM	Flat Phil
50M060100I008	M6 X 1.00 X 8MM	Flat Phil
50M060100I010	M6 X 1.00 X 10MM	Flat Phil
50M060100I012	M6 X 1.00 X 12MM	Flat Phil
50M060100I016	M6 X 1.00 X 16MM	Flat Phil
50M060100I020	M6 X 1.00 X 20MM	Flat Phil
50M060100I025	M6 X 1.00 X 25MM	Flat Phil
50M060100I035	M6 X 1.00 X 35MM	Flat Phil
50M060100I045	M6 X 1.00 X 45MM	Flat Phil
50M080125I010	M8 X 1.25 X 10MM	Flat Phil
50M080125I016	M8 X 1.25 X 16MM	Flat Phil
50M080125I020	M8 X 1.25 X 20MM	Flat Phil
50M080125I025	M8 X 1.25 X 25MM	Flat Phil
50M080125I030	M8 X 1.25 X 30MM	Flat Phil
50M080125I050	M8 X 1.25 X 50MM	Flat Phil
50M100150I020	M10 X 1.50 X 20MM	Flat Phil
50M100150I025	M10 X 1.50 X 25MM	Flat Phil
50M100150I035	M10 X 1.50 X 35MM	Flat Phil

Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

All tolerances are plus and minus.



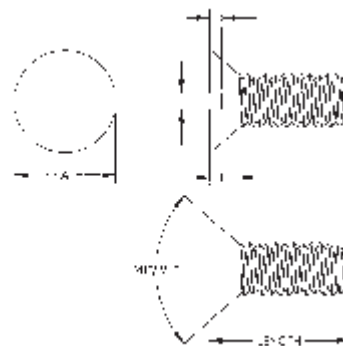


# METRIC SCREWS, BOLTS AND THREADED ROD

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
**XIII**

THREAD SIZE	A	H	J	T
M2 X 0.4	3.5 - 4.4	1.2 max ref.	0.5 - 0.7	0.4 - 0.6
M2.5 X 0.45	4.4 - 5.5	1.5 max ref.	0.6 - 0.8	0.5 - 0.7
M3 X 0.5	5.2 - 6.3	1.7 max ref.	0.8 - 1.0	0.6 - 0.9
M3.5 X 0.6	6.9 - 8.2	2.3 max ref.	1.0 - 1.2	0.9 - 1.2
M4 X 0.7	8.0 - 9.4	2.7 max ref.	1.2 - 1.5	1.0 - 1.3
M5 X 0.8	8.9 - 10.4	2.7 max ref.	1.2 - 1.5	1.1 - 1.4
M6 X 1	10.9 - 12.6	3.3 max ref.	1.6 - 1.9	1.2 - 1.6
M8 X 1.25	15.4 - 17.3	4.6 max ref.	2.0 - 2.3	1.8 - 2.3
M10 X 1.5	17.8 - 20.0	5.0 max ref.	2.5 - 2.8	2.0 - 2.6



ITEM NUMBER	DESCRIPTION
50M020040H004	M2 X .4 X 4MM Flat Slot
50M020040H005	M2 X .4 X 5MM Flat Slot
50M020040H006	M2 X .4 X 6MM Flat Slot
50M020040H008	M2 X .4 X 8MM Flat Slot
50M020040H010	M2 X .4 X 10MM Flat Slot
50M020040H011	M2 X .4 X 11MM Flat Slot
50M020040H012	M2 X .4 X 12MM Flat Slot
50M020040H016	M2 X .4 X 16MM Flat Slot
50M020040H025	M2 X .4 X 25MM Flat Slot
50M025045H004	M2.5 X .45 X 4MM Flat Slot
50M025045H005	M2.5 X .45 X 5MM Flat Slot
50M025045H006	M2.5 X .45 X 6MM Flat Slot
50M025045H008	M2.5 X .45 X 8MM Flat Slot
50M025045H010	M2.5 X .45 X 10MM Flat Slot
50M025045H012	M2.5 X .45 X 12MM Flat Slot
50M025045H016	M2.5 X .45 X 16MM Flat Slot
50M025045H020	M2.5 X .45 X 20MM Flat Slot
50M025045H025	M2.5 X .45 X 25MM Flat Slot
50M030050H005	M3 X .5 X 5MM Flat Slot
50M030050H006	M3 X .5 X 6MM Flat Slot
50M030050H008	M3 X .5 X 8MM Flat Slot
50M030050H010	M3 X .5 X 10MM Flat Slot
50M030050H012	M3 X .5 X 12MM Flat Slot
50M030050H015	M3 X .5 X 15MM Flat Slot
50M030050H016	M3 X .5 X 16MM Flat Slot
50M030050H020	M3 X .5 X 20MM Flat Slot
50M030050H025	M3 X .5 X 25MM Flat Slot
50M030050H030	M3 X .5 X 30MM Flat Slot
50M030050H042	M3 X .5 X 42MM Flat Slot
50M035060H005	M3.5 X .6 X 5MM Flat Slot
50M035060H006	M3.5 X .6 X 6MM Flat Slot
50M035060H008	M3.5 X .6 X 8MM Flat Slot
50M035060H010	M3.5 X .6 X 10MM Flat Slot
50M035060H016	M3.5 X .6 X 16MM Flat Slot
50M035060H025	M3.5 X .6 X 25MM Flat Slot
50M035060H035	M3.5 X .6 X 35MM Flat Slot
50M040070H006	M4 X .7 X 6MM Flat Slot
50M040070H008	M4 X .7 X 8MM Flat Slot

ITEM NUMBER	DESCRIPTION
50M040070H010	M4 X .7 X 10MM Flat Slot
50M040070H012	M4 X .7 X 12MM Flat Slot
50M040070H015	M4 X .7 X 15MM Flat Slot
50M040070H016	M4 X .7 X 16MM Flat Slot
50M040070H020	M4 X .7 X 20MM Flat Slot
50M040070H025	M4 X .7 X 25MM Flat Slot
50M040070H030	M4 X .7 X 30MM Flat Slot
50M040070H035	M4 X .7 X 35MM Flat Slot
50M050080H006	M5 X .8 X 6MM Flat Slot
50M050080H008	M5 X .8 X 8MM Flat Slot
50M050080H010	M5 X .8 X 10MM Flat Slot
50M050080H012	M5 X .8 X 12MM Flat Slot
50M050080H015	M5 X .8 X 15MM Flat Slot
50M050080H016	M5 X .8 X 16MM Flat Slot
50M050080H020	M5 X .8 X 20MM Flat Slot
50M050080H025	M5 X .8 X 25MM Flat Slot
50M050080H030	M5 X .8 X 30MM Flat Slot
50M050080H040	M5 X .8 X 40MM Flat Slot
50M060100H008	M6 X 1.00 X 8MM Flat Slot
50M060100H010	M6 X 1.00 X 10MM Flat Slot
50M060100H012	M6 X 1.00 X 12MM Flat Slot
50M060100H016	M6 X 1.00 X 16MM Flat Slot
50M060100H020	M6 X 1.00 X 20MM Flat Slot
50M060100H025	M6 X 1.00 X 25MM Flat Slot
50M060100H035	M6 X 1.00 X 35MM Flat Slot
50M060100H040	M6 X 1.00 X 40MM Flat Slot
50M060100H045	M6 X 1.00 X 45MM Flat Slot
50M060100H050	M6 X 1.00 X 50MM Flat Slot
50M080125H016	M8 X 1.25 X 16MM Flat Slot
50M080125H020	M8 X 1.25 X 20MM Flat Slot
50M080125H025	M8 X 1.25 X 25MM Flat Slot
50M080125H030	M8 X 1.25 X 30MM Flat Slot
50M080125H050	M8 X 1.25 X 50MM Flat Slot
50M100150H020	M10 X 1.50 X 20MM Flat Slot
50M100150H025	M10 X 1.50 X 25MM Flat Slot
50M100150H030	M10 X 1.50 X 30MM Flat Slot
50M100150H035	M10 X 1.50 X 35MM Flat Slot
50M100150H060	M10 X 1.50 X 60MM Flat Slot

## FLAT SLOTTED



Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

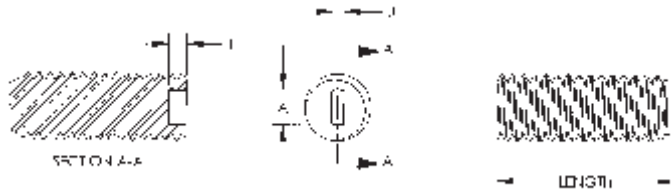
All tolerances are plus and minus.



# METRIC SCREWS, BOLTS AND THREADED ROD

SECTION  
**XIII**

ALL DIMENSIONS ARE IN MILLIMETERS



## GRUB SLOTTED



THREAD SIZE	A	J	T
M4 X 0.7	2.0	.64	.76
M5 X 0.8	3.3	.89	1.3
M6 X 1.0	4.1	1.0	1.5
M8 X 1.25	5.2	1.6	2.4
M10 X 1.5	6.6	1.5	2.5

Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

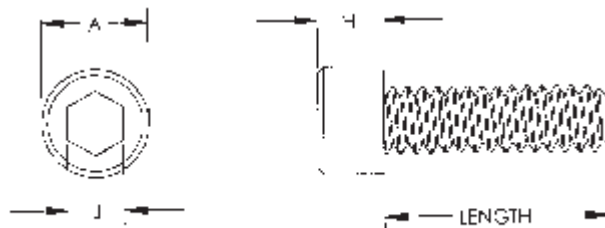
All tolerances are plus and minus.

ITEM NUMBER	DESCRIPTION
50M040070R003	M4 X .7 X 3MM Grub Slot
50M040070R004	M4 X .7 X 4MM Grub Slot
50M040070R006	M4 X .7 X 6MM Grub Slot
50M040070R008	M4 X .7 X 8MM Grub Slot
50M040070R010	M4 X .7 X 10MM Grub Slot
50M040070R012	M4 X .7 X 12MM Grub Slot
50M040070R016	M4 X .7 X 16MM Grub Slot
50M040070R020	M4 X .7 X 20MM Grub Slot
50M040070R025	M4 X .7 X 25MM Grub Slot
50M040070R030	M4 X .7 X 30MM Grub Slot
50M040070R035	M4 X .7 X 35MM Grub Slot
50M040070R040	M4 X .7 X 40MM Grub Slot
50M050080R006	M5 X .8 X 6MM Grub Slot
50M050080R008	M5 X .8 X 8MM Grub Slot
50M050080R010	M5 X .8 X 10MM Grub Slot
50M050080R012	M5 X .8 X 12MM Grub Slot
50M050080R016	M5 X .8 X 16MM Grub Slot
50M050080R020	M5 X .8 X 20MM Grub Slot
50M050080R025	M5 X .8 X 25MM Grub Slot
50M050080R030	M5 X .8 X 30MM Grub Slot
50M050080R040	M5 X .8 X 40MM Grub Slot
50M060100R005	M6 X 1.00 X 5MM Grub Slot
50M060100R008	M6 X 1.00 X 8MM Grub Slot
50M060100R010	M6 X 1.00 X 10MM Grub Slot
50M060100R012	M6 X 1.00 X 12MM Grub Slot
50M060100R016	M6 X 1.00 X 16MM Grub Slot
50M060100R020	M6 X 1.00 X 20MM Grub Slot

## New Sizes

ITEM NUMBER	DESCRIPTION
50M060100R022	M6 X 1.00 X 22MM Grub Slot
50M060100R025	M6 X 1.00 X 25MM Grub Slot
50M060100R030	M6 X 1.00 X 30MM Grub Slot
50M060100R035	M6 X 1.00 X 35MM Grub Slot
50M060100R045	M6 X 1.00 X 45MM Grub Slot
50M060100R050	M6 X 1.00 X 50MM Grub Slot
50M060100R060	M6 X 1.00 X 60MM Grub Slot
50M060100R070	M6 X 1.00 X 70MM Grub Slot
50M060100R075	M6 X 1.00 X 75MM Grub Slot
50M080125R008	M8 X 1.25 X 8MM Grub Slot
50M080125R010	M8 X 1.25 X 10MM Grub Slot
50M080125R016	M8 X 1.25 X 16MM Grub Slot
50M080125R020	M8 X 1.25 X 20MM Grub Slot
50M080125R025	M8 X 1.25 X 25MM Grub Slot
50M080125R030	M8 X 1.25 X 30MM Grub Slot
50M080125R035	M8 X 1.25 X 35MM Grub Slot
50M080125R050	M8 X 1.25 X 50MM Grub Slot
50M100150R013	M10 X 1.50 X 13MM Grub Slot
50M100150R016	M10 X 1.50 X 16MM Grub Slot
50M100150R019	M10 X 1.50 X 19MM Grub Slot
50M100150R020	M10 X 1.50 X 20MM Grub Slot
50M100150R025	M10 X 1.50 X 25MM Grub Slot
50M100150R030	M10 X 1.50 X 30MM Grub Slot
50M100150R035	M10 X 1.50 X 35MM Grub Slot
50M100150R050	M10 X 1.50 X 50MM Grub Slot
50M100150R060	M10 X 1.50 X 60MM Grub Slot

## HEX SOCKET HEAD CAP SCREW



ITEM NUMBER	DESCRIPTION
50M100150S013	M10 X 1.50 X 13MM Hex Soc
50M100150S016	M10 X 1.50 X 16MM Hex Soc
50M100150S019	M10 X 1.50 X 19MM Hex Soc
50M100150S020	M10 X 1.50 X 20MM Hex Soc
50M100150S025	M10 X 1.50 X 25MM Hex Soc
50M100150S030	M10 X 1.50 X 30MM Hex Soc
50M100150S035	M10 X 1.50 X 35MM Hex Soc
50M100150S050	M10 X 1.50 X 50MM Hex Soc
50M100150S060	M10 X 1.50 X 60MM Hex Soc

Nominal Screw Size	M1.6 thru M10	M12 thru M20	Over M20
Nominal Screw Length	Tolerance on Length, mm		
to 16 mm, incl.	0.3	0.3	--
over 16 to 50 mm	0.4	0.4	0.7
over 50 to 120 mm	0.7	1.0	1.5
over 120 to 200mm	1.0	1.5	2.0
over 200 mm	2.0	2.5	3.0

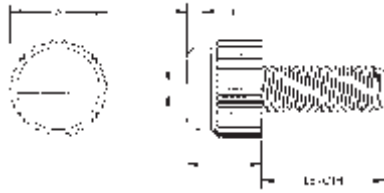
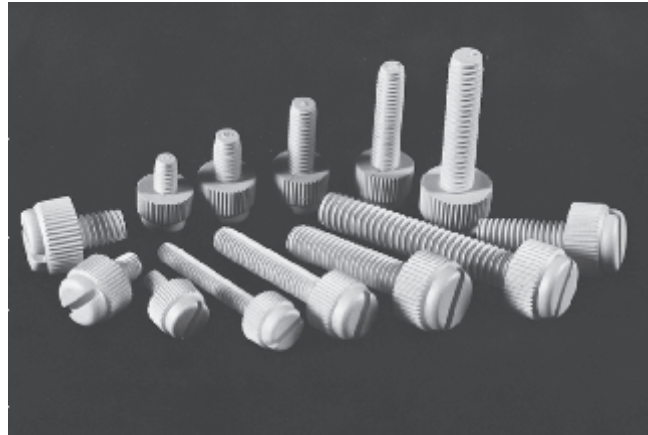
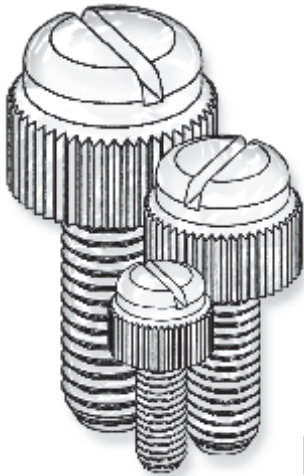
All tolerances are plus and minus.

THREAD SIZE	A	H	J	HEX DEPTH
M 10	15.67 - 16.00	9.81 - 10.00	8.0 nom.	5.00 min.

# METRIC SCREWS, BOLTS AND THREADED ROD

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
**XIII**



## ECONOMY GRADE THUMB SCREW

A\* +/- .26mm TOLERANCE

Nominal Screw Length	Tolerance On Length
to 3 mm incl.	0.2
over 3 to 10 mm	0.3
over 10 to 16 mm	0.4
over 16 to 50 mm	0.5
over 50 mm	1.0

THREAD SIZE	THREAD			
	H	A*	J	T
M3 X .5	5.2	7.6	1.0	1.1
M3.5 X .6	6.1	8.5	1.1	1.3
M4 X .7	7.1	9.70	.90	1.15
M5 X .8	7.75	10.04	1.02	1.52
M6 X 1.0	7.75	12.21	1.14	1.53

All tolerances are plus and minus.

ITEM NUMBER	----- DESCRIPTION -----			
50M030050T004	M3	X .5	X 4MM	Thumb Screw
50M030050T005	M3	X .5	X 5MM	Thumb Screw
50M030050T006	M3	X .5	X 6MM	Thumb Screw
50M030050T008	M3	X .5	X 8MM	Thumb Screw
50M030050T010	M3	X .5	X 10MM	Thumb Screw
50M030050T012	M3	X .5	X 12MM	Thumb Screw
50M030050T016	M3	X .5	X 16MM	Thumb Screw
50M030050T020	M3	X .5	X 20MM	Thumb Screw
50M030050T025	M3	X .5	X 25MM	Thumb Screw
50M030050T030	M3	X .5	X 30MM	Thumb Screw
50M030050T035	M3	X .5	X 35MM	Thumb Screw
50M030050T042	M3	X .5	X 42MM	Thumb Screw
50M035060T005	M3.5	X .6	X 5MM	Thumb Screw
50M035060T006	M3.5	X .6	X 6MM	Thumb Screw
50M035060T008	M3.5	X .6	X 8MM	Thumb Screw
50M035060T010	M3.5	X .6	X 10MM	Thumb Screw
50M035060T012	M3.5	X .6	X 12MM	Thumb Screw
50M035060T016	M3.5	X .6	X 16MM	Thumb Screw
50M035060T020	M3.5	X .6	X 20MM	Thumb Screw
50M035060T025	M3.5	X .6	X 25MM	Thumb Screw
50M035060T035	M3.5	X .6	X 35MM	Thumb Screw
50M035060T042	M3.5	X .6	X 42MM	Thumb Screw
50M040070T003	M4	X .7	X 3MM	Thumb Screw
50M040070T006	M4	X .7	X 6MM	Thumb Screw
50M040070T008	M4	X .7	X 8MM	Thumb Screw
50M040070T010	M4	X .7	X 10MM	Thumb Screw
50M040070T012	M4	X .7	X 12MM	Thumb Screw
50M040070T016	M4	X .7	X 16MM	Thumb Screw

ITEM NUMBER	----- DESCRIPTION -----			
50M040070T020	M4	X .7	X 20MM	Thumb Screw
50M040070T025	M4	X .7	X 25MM	Thumb Screw
50M040070T030	M4	X .7	X 30MM	Thumb Screw
50M040070T035	M4	X .7	X 35MM	Thumb Screw
50M040070T040	M4	X .7	X 40MM	Thumb Screw
50M050080T006	M5	X .8	X 6MM	Thumb Screw
50M050080T008	M5	X .8	X 8MM	Thumb Screw
50M050080T010	M5	X .8	X 10MM	Thumb Screw
50M050080T012	M5	X .8	X 12MM	Thumb Screw
50M050080T016	M5	X .8	X 16MM	Thumb Screw
50M050080T020	M5	X .8	X 20MM	Thumb Screw
50M050080T025	M5	X .8	X 25MM	Thumb Screw
50M050080T030	M5	X .8	X 30MM	Thumb Screw
50M050080T040	M5	X .8	X 40MM	Thumb Screw
50M060100T005	M6	X 1.00	X 5MM	Thumb Screw
50M060100T008	M6	X 1.00	X 8MM	Thumb Screw
50M060100T010	M6	X 1.00	X 10MM	Thumb Screw
50M060100T012	M6	X 1.00	X 12MM	Thumb Screw
50M060100T016	M6	X 1.00	X 16MM	Thumb Screw
50M060100T020	M6	X 1.00	X 20MM	Thumb Screw
50M060100T022	M6	X 1.00	X 22MM	Thumb Screw
50M060100T025	M6	X 1.00	X 25MM	Thumb Screw
50M060100T035	M6	X 1.00	X 35MM	Thumb Screw
50M060100T040	M6	X 1.00	X 40MM	Thumb Screw
50M060100T045	M6	X 1.00	X 45MM	Thumb Screw
50M060100T050	M6	X 1.00	X 50MM	Thumb Screw
50M060100T060	M6	X 1.00	X 60MM	Thumb Screw
50M060100T070	M6	X 1.00	X 70MM	Thumb Screw
50M060100T075	M6	X 1.00	X 75MM	Thumb Screw

# METRIC SCREWS, BOLTS AND THREADED ROD

SECTION  
**XIII**

ALL DIMENSIONS ARE IN MILLIMETERS



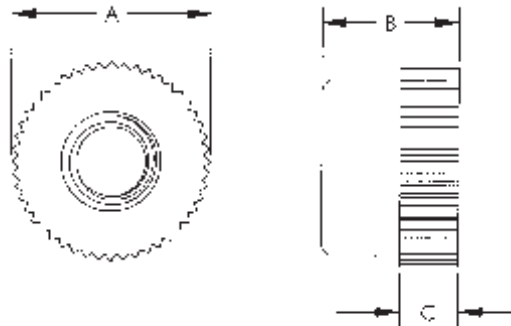
This versatile threaded rod stock is easily cut to size, resistant to most chemicals, electrically insulating, non-magnetic, light-weight, low thermal conductivity, vibration and abrasion resistant. Stock length is 1 meter. We can furnish cut to your length with a nominal cutting charge. Other plastic materials can be furnished on special order.

## NYLON THREADED ROD

ITEM NUMBER	DESCRIPTION
38M030050TR	M 3 X .5 THREADED ROD
38M040070TR	M 4 X .7 THREADED ROD
38M050080TR	M 5 X .8 THREADED ROD
38M060100TR	M 6 X 1.0 THREADED ROD
38M080125TR	M 8 X 1.25 THREADED ROD

# METRIC NUTS

SECTION  
**XIV**



## NYLON THUMB NUTS TOLERANCE +/- .26 mm

ITEM NUMBER	DESCRIPTION	A	B	C
08M040070TN	M4 X 0.7	10.8	7.7	3.5



# METRIC NUTS

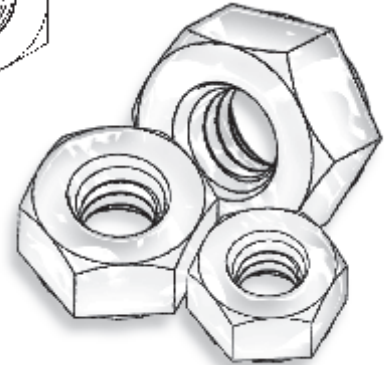
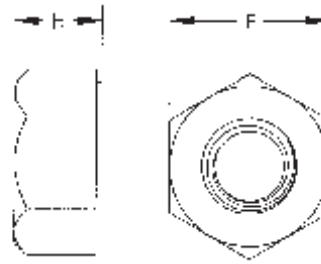
ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
XIV

## NYLON HEX NUTS

TOLERANCE +/- .26 mm

ITEM NUMBER	DESCRIPTION	F	H
04M020040HN	M2 X 0.4	3.9	1.2
04M025045HN	M2.5 X 0.45	4.9	1.8
04M030050HN	M3 X 0.5	5.4	2.2
04M035060HN	M3.5 X 0.6	6.9	2.7
04M040070HN	M4 X 0.7	6.9	3.0
04M050080HN	M5 X 0.8	7.9	4.3
04M060100HN	M6 X 1.0	10.0	5.4
04M080125HN	M8 X 1.25	12.9	6.4
04M100150HN	M10 X 1.50	14.8	9.8
04M120175HN	M12 X 1.75	17.74	10.54

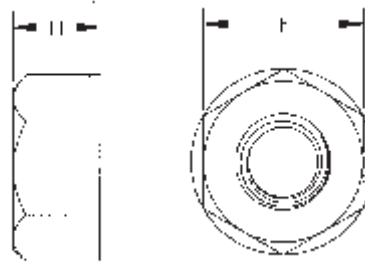


## DESIGNED FOR STEEL SCREWS

## NYLON LOCK NUTS

TOLERANCE +/- .26 mm

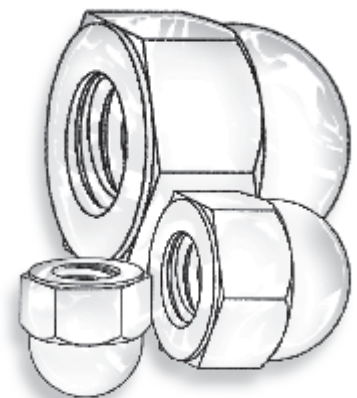
ITEM NUMBER	DESCRIPTION	F	H
07M060100LN	M6 X 1.0	10.9	6.7



## NYLON CAP NUTS

TOLERANCE +/- .26 mm

ITEM NUMBER	DESCRIPTION	F	H * REF.
05M040070CN	M4 X 0.7	7.0	8.0
05M050080CN	M5 X 0.8	8.0	10.0
05M060100CN	M6 X 1.0	10.0	12.0
05M080125CN	M8 X 1.25	13.0	15.0
05M100150CN	M10 X 1.5	17.0	18.0
05M120175CN	M12 X 1.75	18.9	20.5
05M160200CN	M16 X 2.0	23.7	24.8
05M200250CN	M20 X 2.5	26.7	29.1



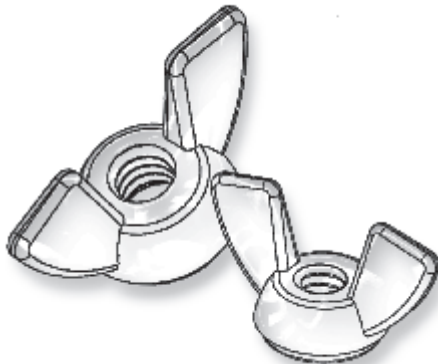
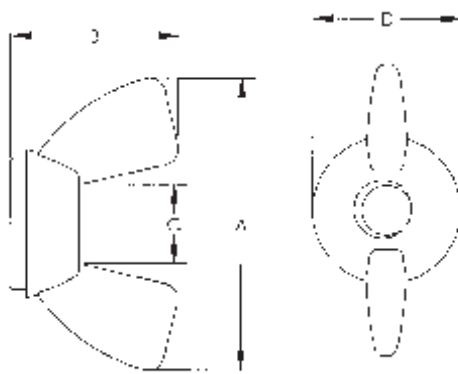
## LOCKING CAP NUTS

05M040070LCN	M4 X 0.7	7.0	8.0
05M050080LCN	M5 X 0.8	8.0	10.0
05M060100LCN	M6 X 1.0	10.0	12.0

# METRIC NUTS

SECTION  
XIV

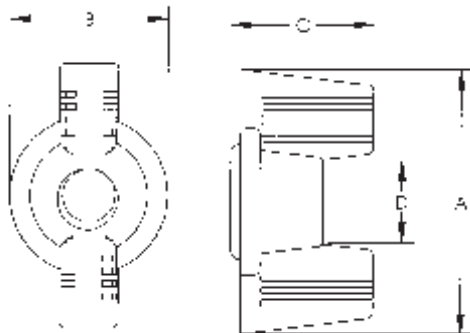
ALL DIMENSIONS ARE IN MILLIMETERS



## NYLON WING NUTS

TOLERANCE +/- .26 mm

ITEM NUMBER	DESCRIPTION	A	B	C	D
06M030050WN	M3 X 0.5	22.9	12.2	5.8	10.2
06M040070WN	M4 X 0.7	22.8	12.2	5.8	10.2
06M050080WN	M5 X 0.8	22.8	12.2	5.8	10.2
06M060100WN	M6 X 1.0	28.0	16.0	7.6	14.2
06M080125WN	M8 X 1.25	34.8	18.3	9.6	16.2
06M100150WN	M10 X 1.5	34.8	18.3	9.6	16.2
06M120175WN	M12 X 1.7	44.7	22.7	15.0	21.1



## DECO WING NUTS

TOLERANCE +/- .26 mm

ITEM NUMBER	DESCRIPTION	A	B	C	D
06M030050DWN	M3 X 0.5	16.0	9.5	8.0	6.0
06M040070DWN	M4 X 0.7	16.0	9.5	8.0	6.0
06M050080DWN	M5 X 0.8	22.2	12.7	11.1	7.9
06M060100DWN	M6 X 1.0	29.7	15.8	13.4	9.5

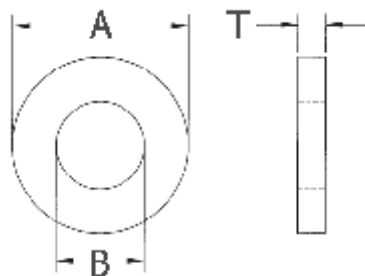
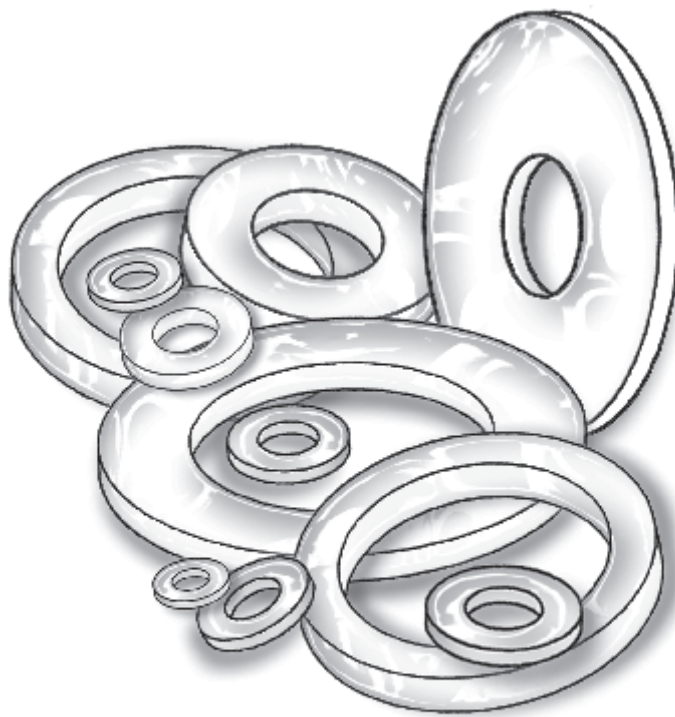
## DECO LOCKING WING NUTS

ITEM NUMBER	DESCRIPTION	A	B	C	D
06M030050DLWN	M3 X 0.5	16.0	9.5	8.0	6.0
06M040070DLWN	M4 X 0.7	16.0	9.5	8.0	6.0
06M050080DLWN	M5 X 0.8	22.2	12.7	11.1	7.9
06M060100DLWN	M6 X 1.0	29.7	15.8	13.4	9.5

# METRIC WASHERS AND SCREW INSULATORS

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
**XV**



TOLERANCE +/- .13 mm

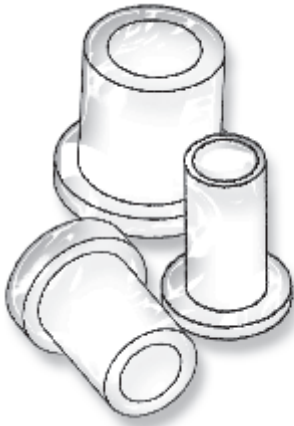
## NYLON FLAT WASHERS

ITEM NUMBER	DESCRIPTION	A	B	T
16M02050080	M2 FLATWASHER	5.00 MM	2.15 MM	0.80 MM
16M02556080	M2.5 FLATWASHER	5.60 MM	2.65 MM	0.80 MM
16M03080080	M3 FLATWASHER	8.00 MM	3.20 MM	0.80 MM
16M03580080	M3.5 FLATWASHER	8.00 MM	3.70 MM	0.80 MM
16M04090080	M4 FLATWASHER	9.00 MM	4.30 MM	0.80 MM
16M05011100	M5 FLATWASHER	11.00 MM	5.30 MM	1.00 MM
16M06012150	M6 FLATWASHER	12.00 MM	6.40 MM	1.50 MM
16M08018200	M8 FLATWASHER	18.00 MM	8.40 MM	2.00 MM
16M08525200	M8.5 FLATWASHER	25.00 MM	8.50 MM	2.00 MM
16M10022250	M10 FLATWASHER	22.00 MM	10.50 MM	2.50 MM
16M12025200	M12 FLATWASHER	25.14 MM	13.43 MM	2.53 MM
16M12034250	M12 FLATWASHER	33.64 MM	13.40 MM	3.06 MM

# METRIC WASHERS AND SCREW INSULATORS

SECTION  
**XV**

ALL DIMENSIONS ARE IN MILLIMETERS

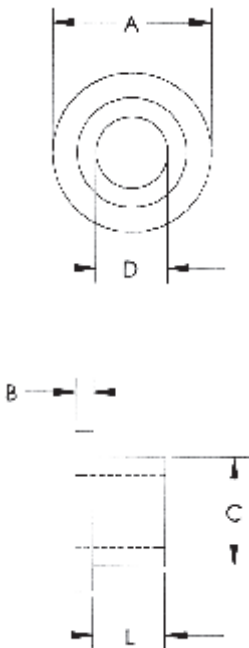


Nylon Screw Insulators are used to isolate metal screws electrically as well as to reduce corrosion. They can be used as light load bearings in many applications. Specials can be made to order for small tool charge. Specify the screw size and length when ordering.

SIZES NOT SHOWN WILL BE TOOLED UPON REQUEST

## NYLON SCREW INSULATORS

ITEM NUMBER	DESCRIPTION	L	A	B	C	D
10SCM002003	SCM 2 X 3	3 MM	4.2 MM	1.0 MM	3.0 MM	2.1 MM
10SCM002004	SCM 2 X 4	4 MM	4.2 MM	1.0 MM	3.0 MM	2.1 MM
10SCM002005	SCM 2 X 5	5 MM	4.2 MM	1.0 MM	3.0 MM	2.1 MM
10SCM002006	SCM 2 X 6	6 MM	4.2 MM	1.0 MM	3.0 MM	2.1 MM
10SCM003002	SCM 3 X 2	2 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003003	SCM 3 X 3	3 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003004	SCM 3 X 4	4 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003005	SCM 3 X 5	5 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003006	SCM 3 X 6	6 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003007	SCM 3 X 7	7 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003008	SCM 3 X 8	8 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003009	SCM 3 X 9	9 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM003010	SCM 3 X 10	10 MM	6.2 MM	1.0 MM	4.0 MM	3.1 MM
10SCM004003	SCM 4 X 3	3 MM	8.4 MM	1.5 MM	6.0 MM	4.1 MM
10SCM004004	SCM 4 X 4	4 MM	8.4 MM	1.5 MM	6.0 MM	4.1 MM
10SCM004005	SCM 4 X 5	5 MM	8.4 MM	1.5 MM	6.0 MM	4.1 MM
10SCM004007	SCM 4 X 7	7 MM	8.4 MM	1.5 MM	6.0 MM	4.1 MM
10SCM004009	SCM 4 X 9	9 MM	8.4 MM	1.5 MM	6.0 MM	4.1 MM
10SCM005003	SCM 5 X 3	3 MM	10.2 MM	2.0 MM	7.0 MM	5.1 MM
10SCM005004	SCM 5 X 4	4 MM	10.2 MM	2.0 MM	7.0 MM	5.1 MM
10SCM005005	SCM 5 X 5	5 MM	10.2 MM	2.0 MM	7.0 MM	5.1 MM
10SCM005007	SCM 5 X 7	7 MM	10.2 MM	2.0 MM	7.0 MM	5.1 MM
10SCM005009	SCM 5 X 9	9 MM	10.2 MM	2.0 MM	7.0 MM	5.1 MM
10SCM006004	SCM 6 X 4	4 MM	12.2 MM	2.0 MM	8.0 MM	6.1 MM
10SCM006006	SCM 6 X 6	6 MM	12.2 MM	2.0 MM	8.0 MM	6.1 MM
10SCM006008	SCM 6 X 8	8 MM	12.2 MM	2.0 MM	8.0 MM	6.1 MM
10SCM006010	SCM 6 X 10	10 MM	12.2 MM	2.0 MM	8.0 MM	6.1 MM
10SCM006012	SCM 6 X 12	12 MM	12.2 MM	2.0 MM	8.0 MM	6.1 MM
10SCM008004	SCM 8 X 4	4 MM	14.2 MM	2.5 MM	10.0 MM	8.1 MM
10SCM008006	SCM 8 X 6	6 MM	14.2 MM	2.5 MM	10.0 MM	8.1 MM
10SCM008008	SCM 8 X 8	8 MM	14.2 MM	2.5 MM	10.0 MM	8.1 MM
10SCM008010	SCM 8 X 10	10 MM	14.2 MM	2.5 MM	10.0 MM	8.1 MM
10SCM008012	SCM 8 X 12	12 MM	14.2 MM	2.5 MM	10.0 MM	8.1 MM



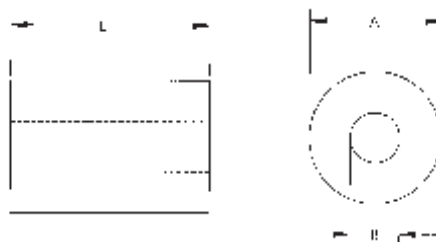
TOLERANCE +/- .26 mm



# METRIC SPACERS

ALL DIMENSIONS ARE IN MILLIMETERS

SECTION  
XVI



## METRIC NYLON SPACERS

**MATERIAL:**  
HEAT STABILIZED  
BLACK NYLON

ITEM NUMBER	DESC.	A	B	L	ITEM NUMBER	DESC.	A	B	L
13ME001	ME 1	4 MM	2.6 MM	2 MM	13ME069	ME 69	10 MM	6.3 MM	5 MM
13ME002	ME 2	4 MM	2.6 MM	3 MM	13ME070	ME 70	10 MM	6.3 MM	7.5 MM
13ME003	ME 3	4 MM	2.6 MM	5 MM	13ME071	ME 71	10 MM	6.3 MM	10 MM
13ME004	ME 4	4 MM	2.6 MM	7.5 MM	13ME072	ME 72	10 MM	6.3 MM	15 MM
13ME005	ME 5	4 MM	2.6 MM	10 MM	13ME073	ME 73	10 MM	6.3 MM	20 MM
13ME006	ME 6	4 MM	2.6 MM	15 MM	13ME074	ME 74	10 MM	6.3 MM	25 MM
13ME007	ME 7	4 MM	2.6 MM	20 MM	13ME075	ME 75	10 MM	6.3 MM	30 MM
13ME010	ME 10	5 MM	2.6 MM	2 MM	13ME076	ME 76	15 MM	6.5 MM	3 MM
13ME011	ME 11	5 MM	2.6 MM	3 MM	13ME077	ME 77	15 MM	6.5 MM	5 MM
13ME012	ME 12	5 MM	2.6 MM	5 MM	13ME078	ME 78	15 MM	6.5 MM	7.5 MM
13ME013	ME 13	5 MM	2.6 MM	7.5 MM	13ME079	ME 79	15 MM	6.5 MM	10 MM
13ME014	ME 14	5 MM	2.6 MM	10 MM	13ME080	ME 80	15 MM	6.5 MM	15 MM
13ME015	ME 15	5 MM	2.6 MM	15 MM	13ME081	ME 81	15 MM	6.5 MM	20 MM
13ME016	ME 16	5 MM	2.6 MM	20 MM	13ME083	ME 83	15 MM	6.5 MM	30 MM
13ME019	ME 19	5 MM	3.2 MM	2 MM	13ME084	ME 84	12 MM	8.3 MM	3 MM
13ME020	ME 20	5 MM	3.2 MM	3 MM	13ME085	ME 85	12 MM	8.3 MM	5 MM
13ME021	ME 21	5 MM	3.2 MM	5 MM	13ME086	ME 86	12 MM	8.3 MM	7.5 MM
13ME022	ME 22	5 MM	3.2 MM	7.5 MM	13ME087	ME 87	12 MM	8.3 MM	10 MM
13ME023	ME 23	5 MM	3.2 MM	10 MM	13ME088	ME 88	12 MM	8.3 MM	15 MM
13ME024	ME 24	5 MM	3.2 MM	15 MM	13ME089	ME 89	12 MM	8.3 MM	20 MM
13ME025	ME 25	5 MM	3.2 MM	20 MM	13ME091	ME 91	12 MM	8.3 MM	30 MM
13ME028	ME 28	6 MM	3.2 MM	3 MM	13ME092	ME 92	18 MM	8.3 MM	3 MM
13ME029	ME 29	6 MM	3.2 MM	5 MM	13ME093	ME 93	18 MM	8.3 MM	5 MM
13ME030	ME 30	6 MM	3.2 MM	7.5 MM	13ME094	ME 94	18 MM	8.3 MM	7.5 MM
13ME031	ME 31	6 MM	3.2 MM	10 MM	13ME095	ME 95	18 MM	8.3 MM	10 MM
13ME032	ME 32	6 MM	3.2 MM	15 MM	13ME096	ME 96	18 MM	8.3 MM	15 MM
13ME033	ME 33	6 MM	3.2 MM	20 MM	13ME097	ME 97	18 MM	8.3 MM	20 MM
13ME036	ME 36	8 MM	3.2 MM	3 MM	13ME098	ME 98	18 MM	8.3 MM	25 MM
13ME037	ME 37	8 MM	3.2 MM	5 MM	13ME099	ME 99	18 MM	8.3 MM	30 MM
13ME038	ME 38	8 MM	3.2 MM	7.5 MM	13ME100	ME100	15 MM	10.4MM	3 MM
13ME039	ME 39	8 MM	3.2 MM	10 MM	13ME101	ME101	15 MM	10.4MM	5 MM
13ME040	ME 40	8 MM	3.2 MM	15 MM	13ME102	ME102	15 MM	10.4MM	7.5 MM
13ME041	ME 41	8 MM	3.2 MM	20 MM	13ME103	ME103	15 MM	10.4MM	10 MM
13ME044	ME 44	6 MM	3.6 MM	3 MM	13ME104	ME104	15 MM	10.4MM	15 MM
13ME045	ME 45	6 MM	3.6 MM	5 MM	13ME105	ME105	15 MM	10.4MM	20 MM
13ME046	ME 46	6 MM	3.6 MM	7.5 MM	13ME108	ME108	22 MM	10.4MM	5 MM
13ME047	ME 47	6 MM	3.6 MM	10 MM	13ME109	ME109	22 MM	10.4MM	10 MM
13ME048	ME 48	6 MM	3.6 MM	15 MM	13ME110	ME110	22 MM	10.4MM	15 MM
13ME049	ME 49	6 MM	3.6 MM	20 MM	13ME111	ME111	22 MM	10.4MM	20 MM
13ME052	ME 52	8 MM	4.3 MM	3 MM	13ME118	ME118	18 MM	13.3MM	3 MM
13ME053	ME 53	8 MM	4.3 MM	5 MM	13ME119	ME119	18 MM	13.3MM	5 MM
13ME054	ME 54	8 MM	4.3 MM	7.5 MM	13ME120	ME120	18 MM	13.3MM	7.5 MM
13ME055	ME 55	8 MM	4.3 MM	10 MM	13ME121	ME121	18 MM	13.3MM	10 MM
13ME056	ME 56	8 MM	4.3 MM	15 MM	13ME122	ME122	18 MM	13.3MM	15 MM
13ME057	ME 57	8 MM	4.3 MM	20 MM	13ME123	ME123	18 MM	13.3MM	20 MM
13ME060	ME 60	10 MM	5.3 MM	3 MM	13ME124	ME124	18 MM	13.3MM	25 MM
13ME061	ME 61	10 MM	5.3 MM	5 MM	13ME126	ME126	25 MM	13.3MM	5 MM
13ME062	ME 62	10 MM	5.3 MM	7.5 MM	13ME127	ME127	25 MM	13.3MM	10 MM
13ME063	ME 63	10 MM	5.3 MM	10 MM	13ME128	ME128	25 MM	13.3MM	15 MM
13ME064	ME 64	10 MM	5.3 MM	15 MM	13ME129	ME129	25 MM	13.3MM	20 MM
13ME065	ME 65	10 MM	5.3 MM	20 MM	13ME132	ME132	10 MM	6.3 MM	28 MM
13ME068	ME 68	10 MM	6.3 MM	3 MM					



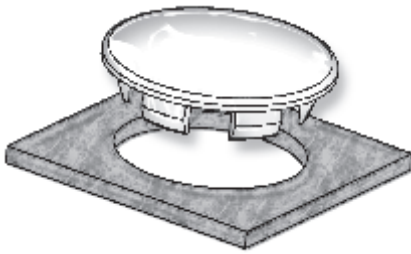
TOLERANCE ON A AND L DIMENSIONS ARE +/- .38 mm • TOLERANCE ON B DIMENSION IS +/- .26 mm

# METRIC HOLE PLUGS

## SECTION XVII

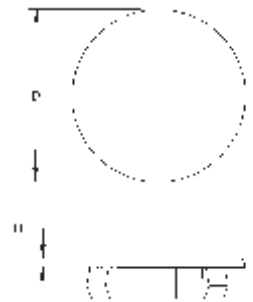
ALL DIMENSIONS ARE IN MILLIMETERS

Micro Plastics economical metric snap-in poly-plugs will close unneeded holes, wiring, outlets, fill unused accessory openings, cover inspection and production access holes. They can be used as tube end caps and protective bumpers. Metric poly plugs are molded in Nylon 6/6 which is corrosion, abrasion and vibration resistant, making them ideal for drawer glides and small appliance feet. Poly plugs are designed with special flexible and tapered prongs which snugly lock in place with finger pressure but can be removed and reused when necessary. Poly plugs have a dull matte finish and are stocked in natural nylon. Dyed and molded colors are available in volume requirements.



## METRIC HOLE PLUGS

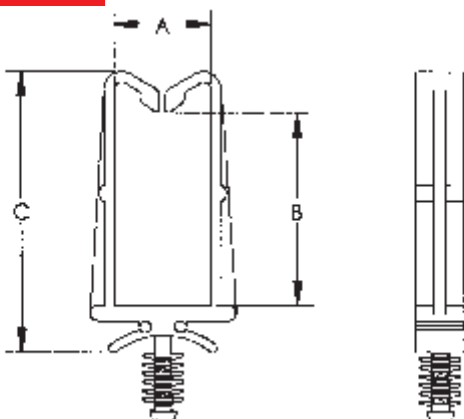
ITEM NUMBER	HEAD STYLE	FINISH	HOLE SIZE	PANEL THICKNESS	HEAD SIZE D	HEAD HEIGHT H	+/- .26MM on H dimension
62PPM06BM16	Binder	Matte	6 MM	0.8-1.6 MM	10.0 MM	2.0 MM	
62PPM08BM35	Binder	Matte	8 MM	0.8-3.5 MM	12.0 MM	2.0 MM	
62PPM10BM35	Binder	Matte	10 MM	0.8-3.5 MM	14.0 MM	2.0 MM	
62PPM12BM35	Binder	Matte	12 MM	0.8-3.5 MM	16.0 MM	2.0 MM	
62PPM14BM35	Binder	Matte	14 MM	0.8-3.5 MM	18.0 MM	2.0 MM	
62PPM16BM35	Binder	Matte	16 MM	0.8-3.5 MM	20.0 MM	2.0 MM	
62PPM18BM40	Binder	Matte	18 MM	0.8-4.0 MM	22.0 MM	2.0 MM	
62PPM20BM40	Binder	Matte	20 MM	0.8-4.0 MM	26.0 MM	2.0 MM	
62PPM22BM40	Binder	Matte	22 MM	0.8-4.0 MM	27.8 MM	2.0 MM	
62PPM24BM40	Binder	Matte	24 MM	0.8-4.0 MM	28.0 MM	2.0 MM	
62PPM26BM40	Binder	Matte	26 MM	0.8-4.0 MM	30.0 MM	2.0 MM	



# METRIC WIRE HANDLING HARDWARE

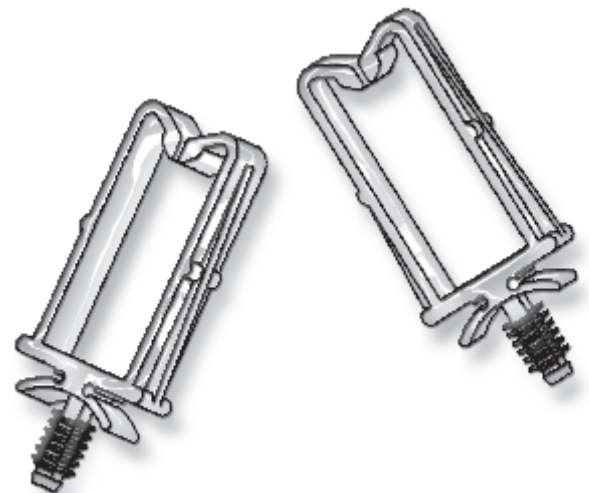
## SECTION XVIII

Micro Plastics' Wire/Cable Holders are designed to mount into 5mm hole diameters. Wire/Cable Holders can be used in a variety of panel thicknesses and materials. Sizes are available to handle wire bundle diameters from 9.5mm to 12.7mm.



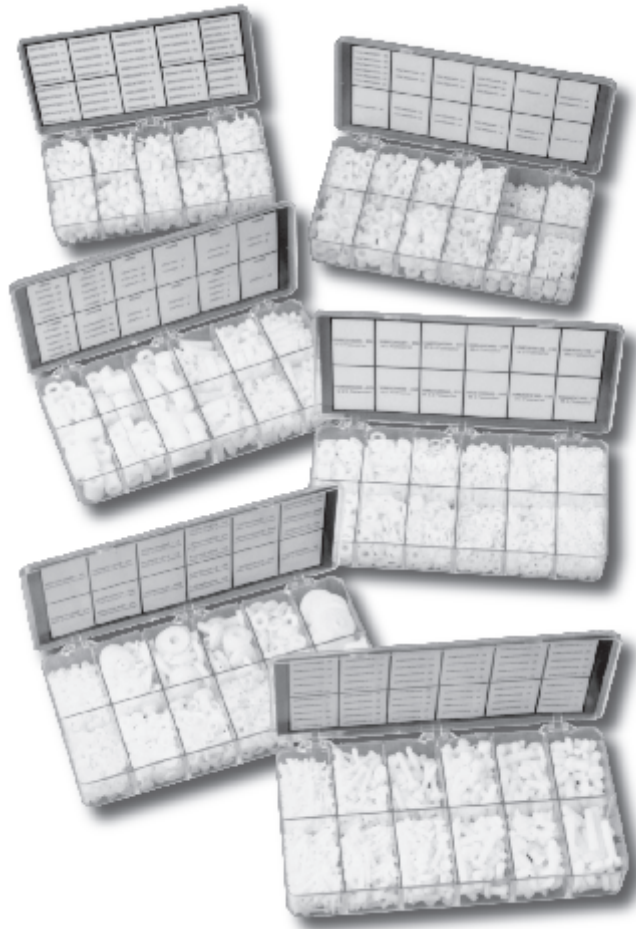
## WIRE/CABLE HOLDERS

ITEM NUMBER	A	B	C	HOLE DIA.	PANEL RANGE
22MWWA095127	9.5	12.7	23.4	5MM	VARIABLE
22MWWA095190	9.5	19.0	29.8	5MM	VARIABLE
22MWWA127190	12.7	19.0	31.0	5MM	VARIABLE
22MWWA127254	12.7	25.4	37.3	5MM	VARIABLE



# METRIC FASTENER ASSORTMENT KITS

## SECTION XIX



MOLDED NYLON FASTENERS PROVIDE ELECTRICAL INSULATION, VIBRATION AND CORROSION RESISTANCE. HAVE A LOW THERMAL CONDUCTIVITY, ARE

NON-MAGNETIC AND HAVE A HIGH STRENGTH-TO-WEIGHT RATIO. PACKAGED IN LARGE REUSABLE TRANSPARENT PLASTIC STORAGE BOXES.

**IDEAL FOR:**

**PROTOTYPE WORK** - Large working assortments.

**PRODUCT DESIGN** - Latest designs for increased productivity.

**MODEL MAKING** - Commercially available standard parts.

**SHOP AND MAINTENANCE** - Convenient selection.

### # O4AS0965MSM MACHINE SCREWS

**OVER 950 NYLON FASTENERS  
OVER 60 DIFFERENT  
SIZES AND TYPES**

Assortment Kit Consists of Approximately:

220	- M2	X 4MM to 25MM Long
170	- M2.5	X 4MM to 25MM Long
115	- M3	X 5MM to 25MM Long
110	- M3.5	X 5MM to 25MM Long
130	- M4	X 6MM to 25MM Long
135	- M4	X 6MM to 25MM Long
85	- M6	X 5MM to 25MM Long

### # O4AS04115FWM FLAT WASHERS

**OVER 700 NYLON FASTENERS**

Assortment Kit Consists of Approximately:

900	- M2	Flat Washers
825	- M2.5	Flat Washers
700	- M3	Flat Washers
650	- M3.5	Flat Washers
570	- M4	Flat Washers
300	- M5	Flat Washers
170	- M6	Flat Washers

### # O4AS0690SPM SPACERS

**OVER 600 NYLON FASTENERS  
OVER 30 DIFFERENT SIZES AND**

Assortment Kit Consists of Approximately:

105	- M2	X 3MM to 25MM Long
95	- M2.5	X 3MM to 25MM Long
80	- M3	X 3MM to 25MM Long
150	- M3.5	X 3MM to 10MM Long
110	- M4	X 3MM to 25MM Long
50	- M5	X 3MM to 25MM Long
55	- M6	X 3MM to 25MM Long

### # O4AS0655MMN MACHINE SCREWS & NUTS

**OVER 655  
NYLON FASTENERS  
OVER 30 DIFFERENT  
SIZES AND TYPES**

Slotted Cheese Head, Hex Head, Fillister Head and 90° Flat Head Styles, MACHINE SCREWS in sizes;

Assortment Kit Consists of Approximately:

100	- M3	X 5	X 6 to 25MM
100	- M3.5	X 6	X 5 to 25MM
100	- M4	X 7	X 6 to 16MM
100	- M5	X 8	X 6 to 16MM
30	- M6	X 1.00	X 8 to 16MM
200	- Metric Nuts & Washers		

### # O4AS0705SCM SCREW INSULATORS

**OVER 700  
NYLON FASTENERS  
OVER 20 DIFFERENT  
SIZES AND TYPES**

Assortment Kit Consists of Approximately:

150	- M2	Screw Insulators
125	- M3	Screw Insulators
200	- M4	Screw Insulators
125	- M5	Screw Insulators
105	- M6	Screw Insulators

### # O4AS0700SWM SHOULDER WASHERS

**OVER 1000  
NYLON FASTENERS  
OVER 20 DIFFERENT  
SIZES AND TYPES**

Assortment Kit Consists of Approximately:

315	- M2	Shoulder Washers
245	- M3	Shoulder Washers
180	- M4	Shoulder Washers
225	- M5	Shoulder Washers
105	- M6	Shoulder Washers



# MICRO PLASTICS' MOLDED NYLON 6/6 FASTENERS

## MECHANICAL TEST DATA - UNC - UNF

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INFORMATION

Nylon 6/6 meets MIL-M20693B "A" Type 1, LP410A, and ASTM D789-66 Type 1, GDE 2  
All test performed per ASTM specifications. Parts molded in Nylon 6/6, dry as molded, unmoisturized, at 73° F/23° C. Results are average of random parts tested. Data listed is for informational purposes only shall not be used to establish specifications limits or used alone as the basis of design.

### MACHINE SCREWS

SIZE	MAX TORQUE		TENSILE TEST		DOUBLE SHEAR	
	ULTIMATE TORQUE	BEFORE DEFORMATION	YIELD LBS.	BREAK LBS.	YIELD LBS.	BREAK
256	---- NO TEST	----- NO TEST ---	16	19	-----NO TEST ----	
440	24 In Oz.	12-16 In Oz.	38	41	45	50
632	30 In Oz.	18-20 In Oz.	65	69	91	97
832	5 In Lbs.	2-3 In Lbs.	99	108	158	164
1024	6 In Lbs.	2-4 In Lbs.	139	149	187	257
1032	7 In Lbs.	3-4 In Lbs.	155	165	234	241
1/4-20	13 In Lbs.	9-10 In Lbs.	296	312	413	432

### HEX NUTS

SIZE	# 1 TENSILE LBS.	# 2 TENSILE TORQUE	RECOMMENDED TORQUE BEFORE DEFORMATION
440	85	2 In Lbs.	1.5 In Lbs.
632	135	5.2 In Lbs.	4 In Lbs.
832	172	6.8 In Lbs.	5 In Lbs.
1024	211	7 In Lbs.	5.5 In Lbs.
1032	276	8 In Lbs.	6.5 In Lbs.
1/4-20	311	19.3 In Lbs.	17 In Lbs.
5/16-18	877	44.3 In Lbs.	42 In Lbs.
3/8-16	994	74 In Lbs.	72 In Lbs.
1/2-13	2,367	15.7 Ft Lbs.	13 Ft Lbs.
5/8-11	3,487	31.7 Ft.Lbs.	30 Ft Lbs.
Test #1 Pull Test -Nylon Nut on Metal Screw		Test #2 Torque on Nylon Nut on Metal Screw	

### CAP SCREWS

SIZE	MAX TORQUE		TENSILE TEST		DOUBLE SHEAR	
	ULTIMATE TORQUE	BEFORE DEFORMATION	YIELD LBS.	BREAK LBS.	YIELD LBS.	BREAK LBS.
1/4-20	19 In Lbs.	15-16 In Lbs.	200	228	413	432
5/16-18	37 In Lbs.	32-34 In Lbs.	403	424	866	880
3/8-16	49 In Lbs.	45-46 In Lbs.	480	513	1108	1173
1/2-13	11 Ft. Lbs.	7-8 Ft. Lbs.	1393	1425	2276	2313
5/8-11	22 Ft. Lbs.	18-19 Ft. Lbs.	2260	2303	3340	3410



# MICRO PLASTICS' MOLDED NYLON 6/6 FASTENERS MECHANICAL TEST DATA - METRIC

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INFORMATION

Data listed is for informational purposes only shall not be used to establish specifications limits or used alone as the basis of design

## MACHINE SCREWS

SIZE	ULTIMATE TORQUE	MAX TORQUE BEFORE DEFORMATION	TENSILE TEST		DOUBLE SHEAR	
			YIELD LBS.	BREAK LBS.	YIELD LBS.	BREAK LBS.
M2 X .4	NO TEST	NO TEST	7.12 N.	N/B	89 N.	116 N.
M2.5 X .45	NO TEST	NO TEST	8.9 N.	N/B	156 N.	169 N.
M3 X .5	.32 Nm.	.2-.26 Nm.	22 N.	N/B	294 N.	329 N.
M3.5 X .6	.43 N.	.28-.34 Nm.	53 N.	N/B	378 N.	405 N.
M4 X .7	.45Nm.	.36-.43 Nm.	214 N.	N/B	600 N.	636 N.
M5 X .8	.93 Nm.	.73-.79 Nm.	271 N.	N/B	1081 N.	1134 N.
M6 X .1	1.83 Nm.	1.41-1.47 Nm.	845 N.	912 N.	1806 N.	1877 N.
M8 X 1.25	3.39 Nm.	2.45-2.82 Nm.	1.677 N.	1744 N.	2980 N.	3034 N.
M10 X 1.50	5.31 Nm.	4.52 - 4.86 Nm.	2749 N.	N/B	5026 N.	5280 N.

## HEX NUTS

SIZE	TENSILE	ULTIMATE TORQUE
M2	NO TEST	NO TEST
M2.5	135.23 N.	NO TEST
M3	142.34 N.	NO TEST
M3.5	369.20 N.	2.3 CM/KG
M4	451.94 N.	4.5 CM/KG
M5	940.35 N.	8.3
M6	1556.65 N.	17.6 CM/KG
M8	2597.76 N.	56.2 CM/KG
M10	6283.11 N.	89.93 CM/KG

# PLASTIC MATERIALS PRINCIPAL PROPERTIES

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FOR ADDITIONAL MATERIAL INFORMATION SEE OUR WEBSITE

<http://www.microplastics.com/Materials/Material%20list.htm>

## NYLON 6/6 POLYAMIDE (PA)

General-purpose nylon 6/6 has good toughness, tensile strength, and resistance to creep, particularly in the high temperature range. Nylon has excellent wear properties, low coefficient of friction, and exceptional chemical resistance particularly to aromatic hydrocarbons, greases, and oils. Nylon is a hygroscopic material. Moisture acts as a plasticizer reducing the tensile strength, stiffness, and increasing elongation, impact strength, and energy absorbing characteristics. Outdoor weathering can be improved by the addition of carbon black. Nylon will perform well in long range service in most applications at temperatures as high as 185° F (85° C). Nylon is a translucent off white color.

### APPLICATIONS

Fasteners - Bearings - Gears - Cams - Gaskets - Printed Circuit Board Hardware - Washers - Spacers - Insulators - Spiral Wrap - Flexible Grommeting - Wire Ties - Electronic Components - Bushings - Wiring Clips - Cable Clamps - Hole Plugs - Hose Clamps

### QUALIFICATIONS

Mil - M20693B "A" Type 1

LP410A

ASTM D4066 Type 1 Grade 2 Per ASTM D789

## NYLON 6/6 HEAT STABILIZED

Nylon 6/6 heat stabilized has the same mechanical properties as general purpose nylon 6/6 with the additional advantage of heat stabilization this material can withstand 250° F (121° C) temperature in long range service in most applications. Heat stabilized nylon is off white in color.

### APPLICATIONS

Fasteners - Bearings - Gears - Cams - Printed Circuit Board Hardware - Washers - Spacers - Insulators - Electronic Components - Bushings - Strain Relief - Hole Plugs - Wiring Clips - Hose Clamps.

## NYLON 6/6 IMPACT MODIFIED

Nylon 6/6 impact modified has the additional advantage of very high impact strength at low temperatures and enhanced resistance to heat distortion over general purpose nylon 6/6. Impact nylon 6/6 is off white in color.

### APPLICATIONS

Fasteners - Bearings - Gears - Cams - Printed Circuit Board Hardware - Washers - Spacers - Insulators - Electronic Components - Bushings - Requiring additional impact resistance.

## NYLON 6/6 33 % GLASSFILLED

Glass-Reinforced nylon has outstanding property improvements over unreinforced compositions. Improvements include greater tensile strength, deflection temperature, shear strength, improved creep resistance, better dimensional stability, and lower moisture absorption and thermal expansion. The good wear resistance, electrical properties and low coefficient of friction of nylon 6/6 un-reinforced are retained. 33% glass-filled nylon is opaque tan in color.

### APPLICATIONS

Fasteners - Washers - Spacers - Insulators - Circuit Board Hardware - Requiring greater stiffness and strength.

## NYLON 46 POLYAMIDE

High temperature nylon, which bridges the price performance gap between traditional nylons and high performance materials. Nylon 46 has excellent short term and long term heat resistance, high stiffness at elevated temperatures, high creep resistance, outstanding toughness, excellent fatigue behavior, good chemical resistance, and higher continuous-use temperature. Nylon 46 is translucent off white in color.

### APPLICATIONS

Fasteners - Bearings - Cams - Gears - Printed Circuit Board Hardware - Washers - Spacers - Insulators - Electronic Components - Bushings - Wiring Clips - Cable Clamps - Hose Clamps.

## NYLATRON GS

Nylon 66 with molybdenum disulphide (MOS2) solid lubricant added. Nylatron GS offers superior tensile and compressive strength, lower surface friction, higher heat resistance and greater dimensional stability than general purpose nylon 6/6. Nylatron is dark charcoal grey in color.

### APPLICATIONS

Bushings - Bearings - Gears - Guides - Rollers - Washers

# PLASTIC MATERIALS PRINCIPAL PROPERTIES

FOR ADDITIONAL MATERIAL INFORMATION SEE OUR WEBSITE

<http://www.microplastics.com/Materials/Material%20list.htm>

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## NYLON 66/6 COPOLYMER FLAME RETARDANT

Flame retardant nylon 66/6 has similar properties to general purpose 66 nylon with flame retardant additives for UL94V0 rating. Flame retardant nylon 6/6 is opaque off white in color.

### APPLICATIONS

Fasteners - Printed Circuit Board Hardware - Washers - Spacers - Insulators - Electric Components - Bushings - Strain Reliefs - Cable Clamps - Wiring Clips.

## ACETAL COPOLYMER (POM)

Acetal resins are characterized by their strength, stiffness, and hardness and are stable over a wide range of temperatures, humidity, environments, and stress. Acetal has high load bearing characteristics, excellent creep resistance, and low coefficient of friction. Acetal absorbs little water, minimizing the effect of moisture on its physical properties. Acetal resists neutral oils, grease, petroleum-based fuels, many organic solvents, and alkalis. Oxidizing agents and acids, organic and inorganic, with PH less than four attack acetals. Compared to nylon acetal has better fatigue resistance, creep resistance, stiffness and water resistance, but lower impact strength and abrasion resistance. Acetal is translucent off white in color. Acetal is widely used in plumbing and irrigation because it resists scale build-up and has excellent thread strength, creep resistance, and torque retention.

### APPLICATIONS

Fasteners - Bearings - Gears - Cams - Washers - Spacers - Dowel Pins - Actuators

### QUALIFICATIONS

NSF and FDA Approved.

## HIGH-DENSITY POLYETHYLENE (HDPE)

Polyethylene is among the lowest density plastics and therefore is one of the lowest cost per cubic measure compared to other plastics. High density polyethylene has good toughness, excellent electrical properties, and chemical resistance, good low temperature brittleness and very low water absorption. Polyethylene is essentially inert, unaffected by strong and weak acids, alkalies, detergents, alcohols, and ketones. Polyethylene has low tensile strength and is subject to considerable creep and stress relaxation under load. Polyethylene will swell with chlorinated and aromatic hydrocarbons including gasoline and oils.

### APPLICATIONS

Washers - Spacers - Beaded Ties - Insulators - Wire Clips - Protective Caps - Plugs - Spiral Wrap Flexible Grommeting

## POLYCARBONATE (PC)

Polycarbonate is one of the toughest, most dimensionally stable thermoplastics over wide temperature range. Polycarbonate has exceptionally high impact strength. PC is unaffected by water below 140°F and can be used in boiling water on a limited basis. PC is unaffected by greases, oils, detergents, aliphatic hydrocarbons, most mineral acids, and the higher alcohols. It is attacked by chlorinated hydrocarbons, and most aromatic solvents, esters, and ketones. PC has white water transparency with a 90% light transmission.

### APPLICATIONS

Fasteners, Washers, Spacers, Lenses, Housings.

## POLYPROPYLENE (PP)

Polypropylene has a good combination of rigidity and toughness, high rigidity at elevated temperatures, can be steam sterilized, good abrasion resistance and low coefficient of friction, nonhygroscopic, excellent electrical properties, unique flex properties, good chemical resistance without stress cracking, one of the lowest densities, and high surface gloss. PP has the highest tensile strength of the olefins, high tensile modulus, and relatively low impact resistance. PP has good fatigue resistance, excellent abrasion resistance and very low coefficient of friction comparable to nylon. However, lubricating nylon surfaces reduces the friction much more than for polypropylene. Polypropylene has excellent chemical resistance to dilute acids, concentrated acids (except oxidizing acids) alkalis, alcohols, detergents, and water. PP resists aromatic hydrocarbons, chlorinated hydrocarbons, greases, and oils at room temperature but is attacked at about 140° F.

### APPLICATIONS

Fasteners-Spacers-Washers-Insulators-Hinge Applications-Containers-Battery Cases-Pump Parts

### IMPORTANT

While the descriptions, applications, data, and information contained in the above specifications are presented in good faith and believed to be accurate, it is provided for guidance only. Because many factors affect application and use we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use.

# PLASTIC MATERIALS PRINCIPAL PROPERTIES

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Nylon 46		Nylon 6/6 Flame Ret.		Nylatron GS		Acetal Copolymer		HDPE		Polycarbonate		Polypropylene	
Dry	Moist	Dry	Moist										
14,400	9,400	11,600	6,500	13,500	8,800	2,470	10,300	4,700					
				110	70		220						
435,000	145,000	520,000	290,000	550,000	410,000		340,000	165,000					
30/25	280/250		10	15	60	700	150	9					
				10,500	7,700		7						
460,000	145,000	250,000		460,000	375,000	146,000	350,000	210,000					
1.8	7.5	1.5		0.7	1.3	2.3	16	0.6					
				0.26									
				0.25	0.15								
		435			316		275	220					
320		195		210	230		260	120					
						256	309	305					
563		470		480	329	270	309	320					
425													
311		220			220								
1.18		1.16		1.16	1.41	0.954	1.2	0.905					
3.7		2.6		0.9	0.22		0.15	0.3					
R123	R107	M52		R119	M80	D62	R118	R95					
94V2		94V0		Self Ext	94HB		94V2						
600		2000			500		420	425/550					
3.8	5	3.6			3.7		2.93						
10 <sup>16</sup>	10 <sup>14</sup>	10 <sup>15</sup>			10 <sup>14</sup>		2X10 <sup>17</sup>						



# PLASTIC MATERIALS PRINCIPAL PROPERTIES

Property	ASTM Method	Units	Nylon 6/6		Nylon 6/6 Impact Modified		Nylon 6/6 33% Glassfilled	
			Dry	Moist	Dry	Moist	Dry	Moist
<b>Mechanical</b>								
Tensile Strength	D638	PSI	12,000	11,000	7,900		28,000	22,000
Tensile Impact Strength	D1822	FT LB/IN <sup>2</sup>						
Tensile Modulus	D638	PSI	232,000		232,000			
Elongation	D638	%						
Break			40-60	300	150	170	4	5
Yield								
Shear Strength	D732	PSI	9,500	8,200	6,900		13,000	10,100
Flexural Modulus	D790	PSI	410,000	185,000	220,000	100,000	1,300,000	900,000
Impact Strength	D256	FT LB/IN	1	2.1	17	NO BRK	2.2	2.6
<b>Thermal</b>								
Coefficient of Friction								
Static			0.31					
Dynamic			0.17					
Deflection Temperature	D648	°F						
66PSI			470		340		495	
264 PSI			170		140		485	
Softening Point	D1525	°F						
Melting Point	D789	°F	500		500		505	
Peak Temperature		°F						
Continuous Use Temperature		°F	185					
<b>Physical</b>								
Specific Gravity	D792		1.14		1.07		1.38	
Water Absorption	D570	%	1.5		2.3		1	
Hardness	D785		M80	M61	M60	M50	M100	M82
Underwriters Lab. Rating	BUL 94		94V2		94HB		94HB	
Dielectric Strength	D149	V/MIL	600		2250	1300		400
Dielectric Constant	D150	1000 HZ	5.3		3.1	3.6	4	
Volume Resistivity	D257	OHM/CM	10 <sup>14</sup>	10 <sup>13</sup>	4X10 <sup>14</sup>	10 <sup>12</sup>	10 <sup>14</sup>	
<b>Electrical</b>								

**Important:** While the descriptions, applications, data, and information contained in the above specifications are presented in good faith and believed to be accurate, it is provided for guidance only. Because many factors affect application and use we recommend that you make tests to determine the suitability of a product for particular purpose prior to use.

## TOLERANCES AND QUALITY OF INJECTION MOLDED NYLON SCREWS

Micro Plastics' molded nylon components are accurately molded of Type 6/6 Nylon. They are tough, resistant to corrosion, light weight and good electrical insulators. Nylon components conform to irregular surfaces, provide vibration dampening, and offer an inexpensive alternative to more expensive metal parts. Molded threads approximate UNC/UNF 2A and 2B. Metric approximate 6g/6H.

Tolerances are generally held to Industrial Fasteners Institute Standards for inch and metric screws. However, it is often more sensible to try samples or small order quantities before changing from one product to another. Plastic molding has varying degrees of quality. It often involves small amounts of flash, knockout pin marks, gates, sinks, and other slight imperfections. Screws and bolts are gated on the threaded end. It is possible for the gate to leave an extra projection of up to .025"

Nylon screws have been available for many years commercially. They are either machined on a screw machine or injection molded. The machined parts are made from extruded nylon rod stock and can be held to relatively close tolerances during the machining process. Nylon, however, has the unfortunate property of absorbing moisture from its environment which causes significant changes in its dimensions. So even though parts may have been accurately machined, a moist atmosphere can cause fit problems. Conversely, parts that have been moisture conditioned can "lose" moisture causing dimensional problems. If the overall length of a screw grows, it obviously affects the threads per inch thus causing a tight fit. Changes in the moisture content can also have an effect on the outside diameter, pitch diameter and the root diameter.

Injection molded nylon screws also suffer from moisture problems but in addition, have inherent tooling problems. All molded nylon screws come from mold cavities parted along the length of the screw. These cavities have two halves that must be matched exactly to produce a perfect part. The cavity halves are doweled together with leader pins when the mold closes to provide the match required. Other locking devices are also employed to hold the halves of the mold in alignment. In the course of molding production quantities, these leader pins and locks suffer some wear. The mold base holding the cavities wears. The molding machine wears causing slight press platen misalignment. Small amounts of dirt on the mold can cause slight mismatch. From the time the tooling begins to run in production, the entire process begins to work against perfect alignment. Mold temperature changes from room temperature to production temperature causes the mismatch condition to worsen. At some point in time, the various factors affecting mismatch reach a condition that causes the molded screw to be unsatisfactory for the user. Then it is necessary to rework the mold to bring it up to its original condition. Since nylon is somewhat flexible, generally molded nylon screws are not held to as quite close tolerances as metal screws. A slight mismatch and minor flash at the parting line is not as serious as it would be in a metal part. End users who submit nylon screws to go-no go gages without trying the fastener in its actual functional application are generally causing unnecessary difficulties for themselves and their supplier. The fact is that because of the many areas of potential process variables, nylon screws made by injection molding are simply not measurable by the same methods as metal screws. They just are not capable of being manufactured to as close tolerances as metal screws.

The development of the tooling for nylon screws, plus the molded conditions, is a carefully kept secret. Tooling such as this is an evolutionary process. The quality of parts being manufactured today with today's tooling is obviously superior to those made in the beginning. Slight improvements have gradually been made over the years. Since we have production tooling for nearly 3,000 sizes, if we make tooling improvements it is not practical to go back and remake 3,000 molds each time we make an improvement. We do, however, rework and replace as we go along any obviously unsatisfactory tooling. This is a continual process with new sizes being added constantly and at the same time remaking tooling whenever the circumstances require it.

Occasionally, a few unacceptable parts may escape our quality control procedures. If you receive unsuitable parts, let us know immediately. We will do whatever we can to correct them.

All nylon screws are molded in a natural color resin. If you require black color, or some other identifying color (not a color match) these parts are made by dyeing the nylon screw with "RIT" dye in a water solution held at about 200 ° F which adds color but also moisture to the nylon. As stated previously, nylon screws change considerably with the loss or gain of moisture. Nylon screw, as they come from the molding machine contain about .5% moisture, After dyeing in a "RIT" dye, the moisture content increases to about 3-4%. Low moisture nylon is more rigid than moisture conditioned material. Impact strength and toughness increases with moisture addition. Flexibility also increases with higher moisture content which causes difficulties for the user on occasion. If you need a solid molded color, a closer than normal tolerance a special grade of nylon or other plastic material, we can furnish whatever variation or specialty using special molds and set up. This, of course, adds considerably to the cost. We are here to serve you, so tell us what you need.

### TOLERANCES OF INJECTION MOLDED NYLON STANDARD COMPONENTS

+/- .005 ON DIMENSIONS THRU .625

+/- .008 ON DIMENSIONS FROM .626 THRU 1.000

+/- .010 ON DIMENSIONS FROM 1.001 THRU 1.500

+/- .015 ON DIMENSIONS LARGER THAN 1.500

+/- .015 ON FRACTIONAL DIMENSIONS

+/- .13MM ON DIMENSIONS THRU 15.88MM

+/- .20MM ON DIMENSIONS FROM 15.89MM THRU 25.41MM

+/- .25MM ON DIMENSIONS FROM 25.42MM THRU 38.10MM

+/- .38MM ON DIMENSIONS LARGER THAN 38.10MM





**MINIMUM ORDER \$50.00**  
**MINIMUM LINE CHARGE \$10.00**

**PLEASE MARK ALL TELEPHONE ORDERS  
"CONFIRMING" TO AVOID POSSIBLE DUPLICATION.**

**General** - 1% 10 net 30. FOB Flippin, Arkansas, No transportation allowed. Shipping method to be at seller's discretion unless buyer specifies routing. Shipments will not be insured unless requested by buyer. Buyer will bear cost of insurance and any other unusual transportation cost. Orders will be acknowledged with our standard terms of sale current at the time order is placed.

**Prices** - Quantity prices apply only to orders for parts which can be produced in one production run and are scheduled for release within a 60 day period from the first scheduled production run.

**Prices** - We reserve the right to increase prices when a careful review of our costs indicates a need for additional revenue.

**Tooling** - We will maintain tooling for a reasonable time in accordance with good industry practice. Molds that will not produce acceptable parts after reasonable maintenance will be subject to negotiation.

Tooling is not insured unless specifically requested. In those cases an additional charge will be made for insurance cost. Delivery - Unless otherwise specifically provided in writing, delivery of the products hereunder shall be FOB point of shipment. In all cases, risk of loss or damage to goods in transit shall fall upon the purchaser, whose responsibility it shall be to file claims with the carrier.

Shipping dates are approximate and are based upon the prompt receipt of all necessary information. We shall not be liable for delay in delivery due to causes beyond our reasonable control.

**Cancellation** - Orders are not subject to cancellation, change, reduction in amount, or suspension of deliveries except with our consent and upon terms which protect us from loss.

**Patents** - The Purchaser shall hold us harmless against any expense or loss resulting from infringement of patents or trademarks arising from compliance with Purchaser's designs or specifications or instructions. Quantity - All parts are accurately counted on sophisticated electronic scales compensated for slight weight variations due to minor mold cavity differentials. Custom part shipments are subject to a +/- 10% order quantity variation.

**Returned Material Authorization** - If parts are found to deviate beyond tolerances, mail samples back to us with your report, we will then, upon our findings issue a RMA number.

**NO MATERIAL** will be accepted for credit without a RMA. Unauthorized returns will be shipped back and invoiced with a minimum handling charge of \$50.00 added.

**Claims** - Inspect all shipments within 15 days of the date of shipment. Failure to advise us of defects on shipments within the 15-day period will constitute acceptance of the shipment.

**Any purchase order with terms or clauses which are in conflict with the terms listed above, and/or any order with terms other than those listed herein is voidable by Micro Plastics, Inc. We reserve the right to discontinue items, change specifications or design at any time without notice and without incurring any obligations.**

**CAUTION: All shipments are moisture packed." Do not open sealed package until use, reseal after opening.**



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Our services and capabilities include:

- ▶ In-house part and tooling design.
- ▶ Over 40 years of experience in molding and mold-making.
- ▶ 3D solid model generation with the ability to share data with your engineering department, and provide interactive views of 3D models through the internet.
- ▶ We work with SolidWorks, MasterCam, and SurfCam and have the capability to translate from almost any file format.
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