

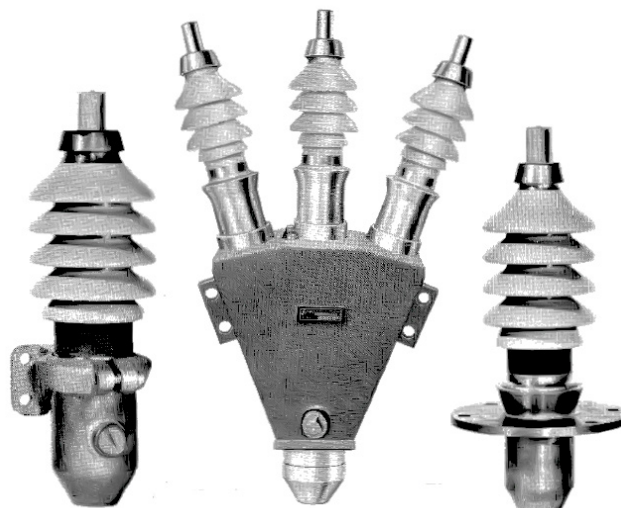


## **Sodertite Terminations**

*For single and three conductor underground cable systems through 46kV*

*G&W Electric's Sodertite terminations are high quality, factory sealed cable terminations designed for maximum reliability. They feature exclusive metal-to-porcelain soldered joints which eliminates the need for gaskets and reduces installation time.*

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Bracket Type

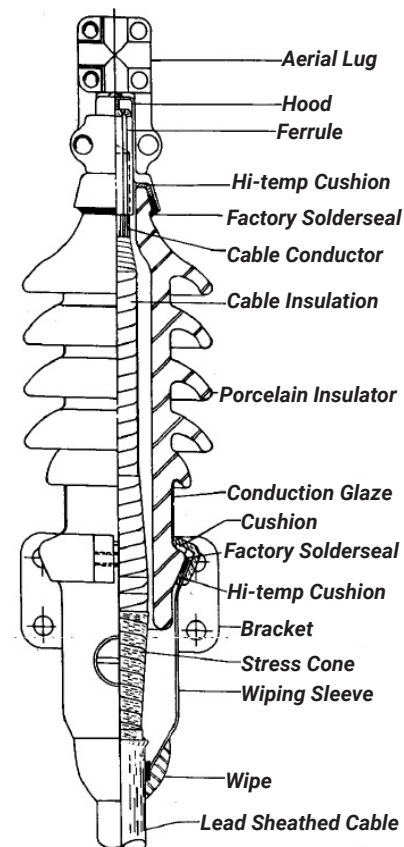
Flange Type

**Features and Benefits:**

- **Maximum external insulation** -The highest grade, wet process porcelain provides excellent mechanical strength and electrical characteristics. The large diameter, petticoat design combined with an external conducting glaze between the bottom petticoat and wiping sleeve greatly increase the electrical strength of the termination. The closed hood and ferrule design provides extra internal creepage.
- **Reliable stress control** - Stress relief cone kits consisting of insulating tapes and shielding braid are available depending upon cable construction. Various compounds or oils are available as an insulating medium depending upon the application.
- **Gasket-less sealing system** - Special metal-to-porcelain soldered joints eliminates the need for gaskets throughout the termination. Spun copper wiping sleeve and hood provide maximum mechanical strength and positive sealing surface.

**Components**

- **External insulation** - High strength, wet process porcelain is used for outdoor and indoor applications. Large diameter petticoats and an external conducting glaze between the bottom petticoat and cable entrance increase the electrical strength of the termination. The porcelain is factory soldered at the hood and cable entrance areas. It is important to select terminations with porcelain bore diameters large enough to accommodate the stress relief cone on the cable. Porcelain bore diameters should be 3/8 inch larger than the stress cone diameter to allow for compound filling or 1/4 inch larger to allow for gas or oil filling when applicable.
- **Bodies** - Three conductor termination bodies are constructed of welded steel with non-magnetic stainless steel top plates. Single conductor units incorporate factory soldered joining of the porcelain and cable entrance. Hoods and wiping sleeve entrances are spun copper for a positive sealing surface. Soldered filling hole plugs in 3/4" pipe sizes are standard. Smaller thread sizes or gasketed plugs are available.



## Components con't:

- **Entrances** - Wiping sleeve and stuffing box entrances with various optional fittings are available.
- **Stress relief** - Hand taped stress relief cones effectively control electrical stresses in the cable. Various kits consisting of insulating tapes and shielding braid are available depending upon the cable construction and voltage rating.
- **Internal insulating material** - Insulating compound, gas or oil, is required for all Sodertite termination installations. Various compound materials are available depending upon the cable type and voltage rating.
- **Connectors** - Copper solder style connectors are standard. Aluminum or copper compression style connectors are available.
- **Aerial lugs** - Various clamp and bus style copper aerial lugs are furnished as standard. Silver or tin plating is optional. Protective rainshields are available for over the aerial lugs to increase insulation between phases if required.
- **Brackets** - Vertical style aluminum or bronze clamped-on brackets are standard for single conductor units rated to 46kV. Three conductor terminations have mounting lugs welded to the body of the termination. Flange style units incorporate either clamped-on or brazed-on mounting flanges.

### Spreader Heads

Various styles of gasketless spreader heads are available for use with single conductor terminations when a greater phase-to-phase aerial spacing is required.

### Ordering Information

The following steps are needed for ordering:

1. Specify system voltage, BIL, and whether 1 /C or 3/C, indoor, outdoor, or equipment application.
2. Provide a complete description of the cable include construction, conductor size, insulation material, diameters over insulation and cable jacket or sheath and cable manufacturer.
3. Specify aerial lug, connector (solder or compression type), cable entrance (WS or RS), stress cone kit and compound required.

## Typical Specifications

- **General** - This specification covers the requirements for a cable termination for (bracket) (flange) mounted installation. The termination shall be as manufactured by G&W Electric Co. per product designation (ST) (STR). (RST) Sodertite termination.
- **Electrical Ratings** - The termination shall be for service on a ( 15kV) ( 25kV) (34.5kV) (46kV) voltage rated, (single) (three) (three single) conductor cable system. The termination shall have a BIL rating of ( 110kV) ( 150kV) (200kV) (250kV). The termination shall meet all the design requirements as specified by IEEE-48, 1975 standards for Class 1 terminations.
- **Construction** - The termination shall use high strength, wet process porcelain for external insulation. The porcelain shall be a petticoat design with skirt diameters sized to provide an extra margin of strike and creepage distance. The porcelain shall be coated with an external conducting glaze between the bottom petticoat and cable entrance for additional electrical strength. The terminations shall utilize factory assembled metal-to-porcelain soldered joints for gasketless sealing. Stress relief cones and insulating material shall be used to effectively control electrical stresses in the cable. Cable entrances and aerial hoods shall be spun copper for high mechanical strength and a positive sealing surface.
- **Accessories** - Connectors shall be (copper solder) (copper compression) (aluminum compression) type. Entrances shall be (wiping sleeve) (stuffing box) style. Aerial lugs shall be (clamp) (bus) type per designation (style 4) (style 8) (style 18).

Electrical Characteristics				
<b>Voltage (kV)</b>	15	25	34.5	46
<b>BIL (kV)</b>	110	150	200	250
<b>Current Rating</b>	Same as cable	Same as cable	Same as cable	Same as cable
<b>1 minute dry, ac (kV)</b>	50	65	90	120
<b>6 hour dry, ac (kV)</b>	35	55	75	100
<b>10 second wet, ac (kV)</b>	45	60	80	100
<b>15 minute dry, de (kV)</b>	75	105	140	170

## 1/C Bracket Mounted

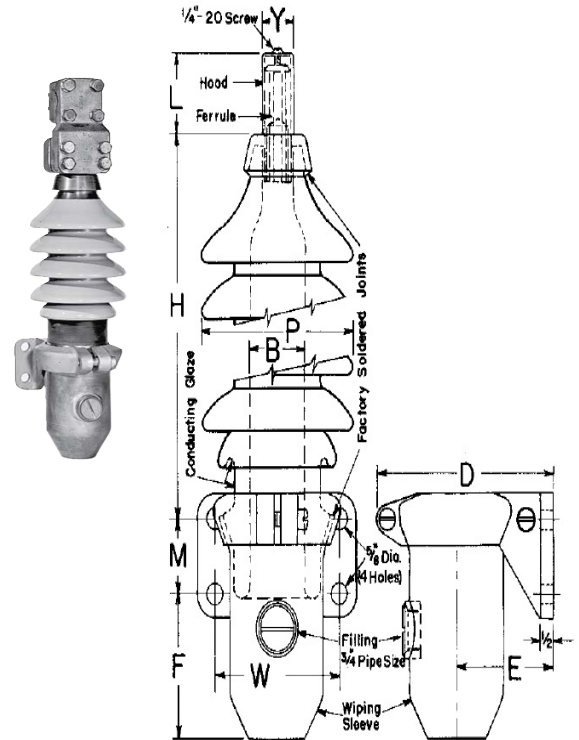
Catalog numbers are for copper, single conductor cable and include porcelain, wiping sleeve entrance fitting and internal solder style connector. Required stress cone kits, insulating compound and aerial lugs are ordered separately. Optional connector styles, stuffing box (RS) entrance fittings are available.

Aluminum conductor cables require compression style connectors.

Note: For aluminum cable over 250 kcmil, use the next larger size termination for correct internal clearances.

Bracket* Size Code	Dimensions in. (mm)				Approx. Shipping wt. lbs. (kg)
	D	E	M	W	
E	6 3/8 (162)	3 1/2 (89)	2 (51)	4 1/2 (114)	4 (1.8)
F	7 1/4 (184)	3 7/8 (98)	2 (51)	4 1/2 (114)	5 (2.3)
G	7 7/8 (200)	4 1/4 (108)	3 (76)	5 1/2 (140)	7 (3.2)
H	9 1/2 (241)	5 (127)	3 (76)	6 (152)	10 (4.5)

\*Code letter appears as last digit in termination part number.  
Cast aluminum alloy brackets are standard. For bronze brackets add suffix "J" to part number.



## Style 'ST'- For Compound, Oil or Gas Filling\*

Max. Conduit Size  KCM (mm²)	Catalog #	Dimensions in. (mm)						Approx. Shpg wt. lbs. (kg)	Approx. Comp'd. Req'd. Gal (L)
		Bore B	O.D. P	F	H	L	Y		
<b>15kV (110kV BIL)</b>									
250 (127)	ST172E	2 (51)	5 1/2 (140)	3 13/16 (97)	11 (279)	1 3/4 (44)	7/8 (22)	22 (10)	1/4 (1)
350 (177)	ST175E	2 (51)	5 1/2 (140)	3 13/16 (97)	11 (279)	2 3/16 (56)	1 1/8 (29)	25 (11)	1/4 (1)
500 (253)	ST175F	2 1/2 (64)	6 (152)	4 5/16 (110)	11 5/16 (287)	2 3/16 (56)	1 1/8 (29)	28 (13)	1/3 (1.2)
1000 (506)	ST177F	2 1/2 (64)	6 (152)	4 5/16 (110)	11 5/16 (287)	2 9/16 (65)	1 1/2 (38)	34 (15)	1/3 (1.2)
2000 (1013)	ST179G	3 (76)	6 1/2 (165)	3 9/16 (90)	11 5/16 (287)	2 11/16 (58)	2 1/8 (54)	48 (22)	1/2 (1.9)
2500 (1267)	ST179H	3 3/4 (95)	7 5/8 (194)	5 1/2 (140)	11 1/2 (292)	3 7/8 (98)	2 3/4 (70)	74 (34)	3/4 (2.8)
<b>25kV (150kV BIL)</b>									
250 (127)	*ST182E	2 (51)	5 1/2 (140)	3 7/8 (98)	13 15/16 (354)	1 3/4 (44)	7/8 (22)	26 (12)	1/3 (1.2)
350 (177)	*ST185E	2 (51)	5 1/2 (140)	3 3/4 (95)	14 1/16 (357)	2 3/16 (56)	1 1/8 (29)	29 (13)	1/3 (1.2)
500 (253)	ST185F	2 1/2 (64)	6 (152)	4 1/4 (108)	14 3/8 (365)	2 3/16 (56)	1 1/8 (29)	35 (16)	1/2 (1.9)
1000 (506)	ST187G	3 (76)	6 1/2 (165)	3 15/16 (100)	14 3/8 (365)	2 9/16 (65)	1 1/2 (38)	50 (23)	2/3 (2.5)
1500 (760)	ST189G	3 (76)	6 1/2 (165)	3 5/8 (92)	14 3/8 (365)	2 11/16 (68)	2 1/8 (54)	59 (27)	2/3 (2.5)
2000 (1013)	ST189H	3 3/4 (95)	7 5/8 (194)	6 1/8 (156)	14 1/8 (359)	2 11/16 (68)	2 1/8 (54)	64 (29)	1 (3.8)
2500 (1267)	ST190H	3 3/4 (95)	7 5/8 (194)	5 9/16 (141)	14 1/16 (357)	3 7/8 (98)	2 3/4 (70)	80 (36)	1 (3.8)
<b>34.5kV (200kV BIL)</b>									
500 (253)	ST195G	3 (76)	6 1/2 (165)	4 (102)	17 3/8 (441)	2 3/16 (56)	1 1/8 (29)	46 (21)	3/4 (2.8)
750 (380)	ST197G	3 (76)	6 1/2 (165)	4 (102)	17 3/8 (441)	2 9/16 (65)	1 1/2 (38)	52 (24)	3/4 (2.8)
1000 (506)	ST197H	3 3/4 (95)	7 5/8 (194)	6 1/4 (159)	17 1/8 (435)	2 9/16 (65)	1 1/2 (38)	62 (28)	1 1/4 (4.7)
2000 (1013)	ST199H	3 3/4 (95)	7 5/8 (194)	6 1/8 (156)	17 1/8 (435)	2 11/16 (68)	2 1/8 (54)	72 (33)	1 1/4 (4.7)
2500 (1267)	ST190J	4 1/2 (114)	8 3/8 (213)	Horizontal Brackets, Drawings on Request				125 (57)	2 (7.6)

Max. Conduit Size	Catalog #	Dimensions in. (mm)						Approx. Shpg wt. lbs. (kg)	Approx. Comp'd. Req'd. Gal (L)
		Bore B	O.D. P	F	H	L	Y		
KCM (mm)									
<b>46kV (250kV BIL)</b>									
500 (253)	ST105H	3 1/2 (89)	7 3/8 (187)	6 3/16 (157)	22 9/16 (573)	2 3/16 (56)	1 1/8 (29)	66 (30)	2 (7.6)
1000 (506)	ST107H	3 1/2 (89)	7 3/8 (187)	6 3/16 (157)	22 9/16 (573)	2 9/16 (65)	1 1/2 (38)	72 (33)	2 (7.6)
1000 (506)	ST107J	4 1/2 (114)	8 3/8 (213)	Horizontal Brackets. Drawings on Request				120 (54)	2 1/2 (9.5)
2000 (1013)	ST109J	4 1/2 (114)	8 3/8 (213)					135 (61)	2 1/2 (9.5)

\*Ordinarily for over insulated 15kV outdoor operation. Next larger bore porcelain (ST185F) recommended for 23kV actual operation for 500 kcm and below.  
 \*For gas filled terminations, use 46kV rating for 34.5kV.

## 1/C Flange Mounted

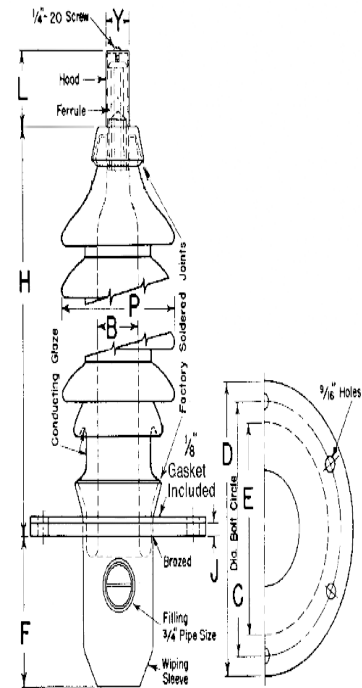
Catalog numbers are for copper, single conductor cable and include porcelain, wiping sleeve entrance fitting and internal solder style connector. Required stress cone kits, insulating compound and aerial lugs are ordered separately. Optional connector styles, stuffing box (RS) entrance fittings are available. The terminations are applicable in oil and air insulated compartments.

Aluminum conductor cables require compression style connectors.

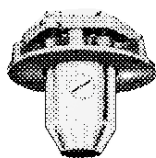
Note: For aluminum cable over 250 kcmil, use the next larger size termination for correct internal clearances.

Flange Size Code*	Dimensions in. (mm)			Number of Holes
	C	D	E	
E (SNTR)	4 1/8 sq. (105)	5 3/8 sq. (137)	4 1/2 (114)	4†
E	7 1/4 (184)	8 1/2 (216)	6 (152)	6†
F	8 3/4 (222)	10 (254)	7 1/2 (191)	8†
G	8 3/4 (222)	10 (254)	7 1/2 (191)	8‡
H	10 (254)	11 (279)	8 3/8 (213)	8‡
J	12 (304)	13 1/2 (342)	10 1/2 (266)	12‡

\*Code letter appears as last digit in termination catalog number.  
 †Flange thickness "J" = 3/8" (9.5 mm)  
 ‡Flange thickness "J" = 1/2" (12.7 mm)



STR



RST

Style "STR'-For Compound, Oil or Gas Filling\*

Max. Conduit Size KCM (mm <sup>2</sup> )	Catalog #**	Dimensions in. (mm)						Approx. Shpg wt. lbs. (kg)	Approx. Comp'd. Req'd. Gal (L)
		Bore "B"	O.D. "P"	F	H	L	Y		
<b>15kV (110kV BIL)</b>									
250 (127)	STR172E	2 (51)	5½ (140)	4¼ (108)	12 9/16 (319)	1¾ (44)	7/8 (22)	26 (12)	¼ (1)
350 (177)	STR175E	2 (51)	5½ (140)	4¼ (108)	12 9/16 (319)	2 <sup>3</sup> / <sub>16</sub> (56)	1½ (29)	29 (13)	¼ (1)
500 (253)	STR175F	2½ (64)	6 (152)	4 <sup>7</sup> / <sub>8</sub> (124)	12 13/16 (325)	2 <sup>3</sup> / <sub>16</sub> (56)	1½ (29)	33 (15)	⅓ (1.2)
1000 (506)	STR177F	2½ (64)	6 (152)	4 <sup>7</sup> / <sub>8</sub> (124)	12 13/16 (325)	2 9/16 (65)	1½ (38)	39 (18)	⅓ (1.2)
2000 (1013)	STR179G	3 (76)	6½ (165)	4 13/16 (122)	13 1/16 (332)	2 11/16 (68)	2½ (54)	55 (25)	½ (1.9)
2500 (1267)	STR170H	3¾ (95)	7 <sup>5</sup> / <sub>8</sub> (194)	6 7/16 (175)	13 <sup>5</sup> / <sub>8</sub> (346)	3 <sup>7</sup> / <sub>8</sub> (98)	2¾ (70)	84 (38)	¾ (2.8)
<b>Alternate: 15kV, corrugated porcelain square flange</b>									
250 (127)	SNTR172E	2 (51)	4¼ (108)	4½ (114)	12½ (318)	1¾ (44)	7/8 (22)	26 (12)	¼ (1)
350 (177)	SNTR175E	2 (51)	4¼ (108)	4½ (114)	12½ (318)	2 <sup>3</sup> / <sub>16</sub> (56)	1½ (29)	29 (13)	¼ (1)
<b>25kV (150kV BIL)</b>									
250 (127)	STR182E	2 (51)	5½ (140)	4¼ (108)	15 9/16 (395)	1¾ (44)	7/8 (22)	30 (14)	⅓ (1.2)
500 (253)	STR185F	2½ (64)	6 (152)	4 <sup>7</sup> / <sub>8</sub> (124)	15¾ (400)	2 3/16 (56)	1½ (29)	40 (18)	½ (1.9)
1000 (506)	STR187G	3 (76)	6½ (165)	5 3/16 (132)	16½ (410)	2 9/16 (65)	1½ (38)	57 (26)	2/3 (2.5)
1500 (760)	STR189G	3 (76)	6½ (165)	4 <sup>7</sup> / <sub>8</sub> (124)	16½ (410)	2 11/16 (68)	2½ (54)	66 (30)	2/3 (2.5)
2000 (1013)	STR189H	3¾ (95)	7 <sup>5</sup> / <sub>8</sub> (194)	7 (178)	16¼ (413)	2 11/16 (68)	2½ (54)	74 (34)	1 (3.8)
2500 (1267)	STR180H	3¾ (95)	7 <sup>5</sup> / <sub>8</sub> (194)	6 <sup>3</sup> / <sub>8</sub> (162)	16¼ (413)	3 <sup>7</sup> / <sub>8</sub> (98)	2¾ (70)	90 (41)	1 (3.8)
<b>34.5kV (200kV BIL)</b>									
500 (253)	STR195G	3 (76)	6½ (165)	5 3/16 (132)	19½ (486)	2 3/16 (56)	1½ (29)	53 (24)	¾ (2.8)
750 (380)	STR197G	3 (76)	6½ (165)	5 3/16 (132)	19½ (486)	2 9/16 (65)	1½ (38)	59 (27)	¾ (2.8)
1000 (506)	STR197H	3¾ (95)	7 <sup>5</sup> / <sub>8</sub> (194)	7 <sup>1</sup> / <sub>8</sub> (181)	19¼ (489)	2 9/16 (65)	1½ (38)	72 (33)	1¼ (4.7)
2000 (1013)	STR199H	3¾ (95)	7 <sup>5</sup> / <sub>8</sub> (194)	7 (178)	19¼ (489)	2 11/16 (68)	2½ (54)	82 (37)	1¼ (4.7)
2500 (1267)	STR190J	4½ (114)	8 <sup>3</sup> / <sub>8</sub> (213)	7 9/16 (192)	19 5/16 (491)	3 <sup>7</sup> / <sub>8</sub> (98)	2¾ (70)	125 (57)	2 (7.6)
<b>46kV (250kV BIL)</b>									
500 (253)	STR105H	3½ (89)	7 <sup>3</sup> / <sub>8</sub> (187)	7 <sup>1</sup> / <sub>8</sub> (181)	24 <sup>5</sup> / <sub>8</sub> (625)	2 3/16 (56)	1½ (29)	76 (35)	2 (7.6)
1000 (506)	STR107H	3½ (89)	7 <sup>3</sup> / <sub>8</sub> (187)	7 <sup>1</sup> / <sub>8</sub> (181)	24 <sup>5</sup> / <sub>8</sub> (625)	2 9/16 (65)	1½ (38)	82 (37)	2 (7.6)
1000 (506)	STR107J	4½ (114)	8 <sup>3</sup> / <sub>8</sub> (213)	7 <sup>7</sup> / <sub>8</sub> (200)	24¾ (629)	2 9/16 (65)	1½ (38)	120 (54)	2½ (9.5)
2000 (1013)	STR109J	4½ (114)	8 <sup>3</sup> / <sub>8</sub> (213)	7 <sup>7</sup> / <sub>8</sub> (200)	24¾ (629)	2 11/16 (68)	2½ (54)	135 (61)	2½ (9.5)

\*For gas filled terminations, use 46kV rating for 34.5kV.

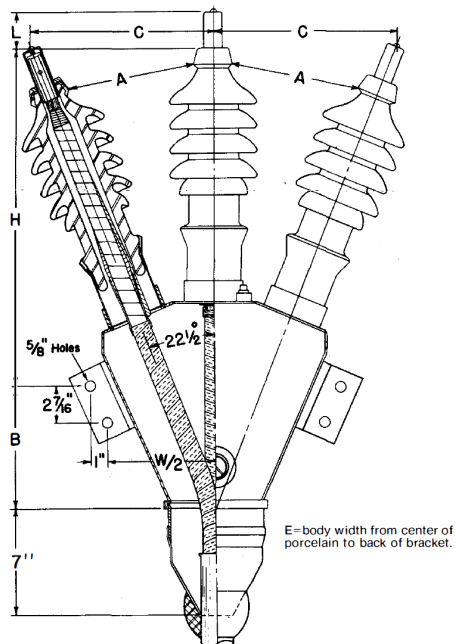
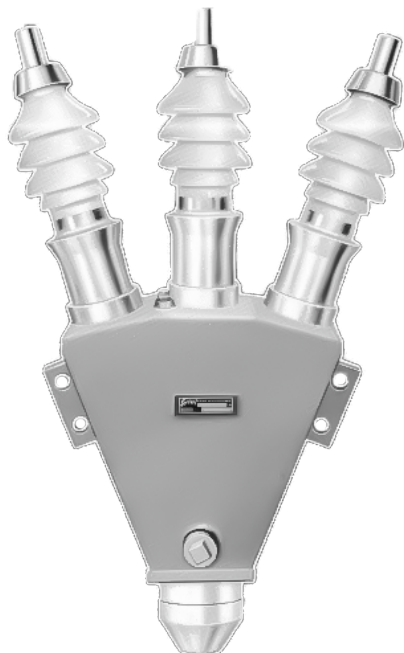
\*\*For clamp style 'RST' flange add prefix 'R' to catalog number.

## 3/C Bracket Mounted

Catalog and numbers include are for copper, three conductor cable, and include diverging porcelain, wiping sleeve entrance fitting stress and internal solder style connector. Required stress cone kits, insulating compound and aerial lugs are ordered separately. Optional connectors styles, stuffing box (RS) entrance fittings and ground lugs are available.

Aluminum conductor cables require compression style connectors.

Note: For aluminum cable over 250 kcmil, use the next larger size termination for correct internal clearances.



## Style 'ST'-For Compound, Oil or Gas Filling\*

Max. Conductor Size		Catalog Number	Dimensions - Inches (mm)								Approx. Shipping Wt. lbs (kg)	Approx. Comp'd Req'd Gal. (L)
KCM	mm <sup>2</sup>		Bore	W	E	B	H	L	A	C		
<b>15kV (110kV BIL)</b>												
250	127	ST372E4B	2 (51)	12 <sup>7</sup> / <sub>8</sub> (327)	3 <sup>3</sup> / <sub>4</sub> (95)	7 <sup>1</sup> / <sub>2</sub> (191)	20 <sup>7</sup> / <sub>8</sub> (530)	1 <sup>3</sup> / <sub>4</sub> (44)	8 <sup>1</sup> / <sub>8</sub> (206)	11 <sup>1</sup> / <sub>2</sub> (292)	140 (64)	3 <sup>1</sup> / <sub>2</sub> (13)
500	253	ST375F5B	2 <sup>1</sup> / <sub>2</sub> (64)	14 <sup>5</sup> / <sub>8</sub> (371)	4 <sup>1</sup> / <sub>2</sub> (114)	7 <sup>1</sup> / <sub>2</sub> (191)	21 (533)	2 <sup>3</sup> / <sub>16</sub> (56)	7 <sup>7</sup> / <sub>8</sub> (194)	11 <sup>3</sup> / <sub>4</sub> (298)	180 (82)	5 (19)
750	380	ST377F5B	2 <sup>1</sup> / <sub>2</sub> (64)	14 <sup>5</sup> / <sub>8</sub> (371)	4 <sup>1</sup> / <sub>2</sub> (114)	7 <sup>1</sup> / <sub>2</sub> (191)	21 (533)	2 <sup>9</sup> / <sub>16</sub> (65)	7 <sup>7</sup> / <sub>8</sub> (194)	11 <sup>7</sup> / <sub>8</sub> (302)	200 (91)	5 (19)
1000	506	ST377G6B	3 (76)	17 <sup>1</sup> / <sub>2</sub> (445)	4 <sup>1</sup> / <sub>2</sub> (114)	11 (279)	21 <sup>3</sup> / <sub>4</sub> (552)	2 <sup>9</sup> / <sub>16</sub> (65)	8 <sup>1</sup> / <sub>2</sub> (216)	13 <sup>1</sup> / <sub>2</sub> (343)	240 (108)	7 <sup>1</sup> / <sub>2</sub> (28)
<b>25kV (150kV BIL)</b>												
250	127	ST382E4B	2 (51)	12 <sup>7</sup> / <sub>8</sub> (327)	3 <sup>3</sup> / <sub>4</sub> (95)	7 <sup>1</sup> / <sub>2</sub> (191)	23 <sup>7</sup> / <sub>8</sub> (606)	1 <sup>3</sup> / <sub>4</sub> (44)	9 <sup>1</sup> / <sub>4</sub> (235)	12 <sup>3</sup> / <sub>4</sub> (324)	153 (69)	4 (15)
500	253	ST385F5B	2 <sup>1</sup> / <sub>2</sub> (64)	14 <sup>5</sup> / <sub>8</sub> (371)	4 <sup>1</sup> / <sub>2</sub> (114)	7 <sup>1</sup> / <sub>2</sub> (191)	24 (610)	2 <sup>3</sup> / <sub>16</sub> (56)	9 <sup>3</sup> / <sub>8</sub> (238)	12 <sup>7</sup> / <sub>8</sub> (327)	210 (95)	5 <sup>1</sup> / <sub>2</sub> (21)
<b>25kV (150kV BIL)</b>												
1/0	53	ST382E6B	2 (51)	17 <sup>1</sup> / <sub>2</sub> (445)	4 <sup>1</sup> / <sub>2</sub> (114)	11 (279)	24 <sup>7</sup> / <sub>8</sub> (632)	1 <sup>3</sup> / <sub>4</sub> (44)	11 (279)	14 <sup>3</sup> / <sub>8</sub> (365)	200 (91)	7 (27)
350	177	ST385F6B	2 <sup>1</sup> / <sub>2</sub> (64)	17 <sup>1</sup> / <sub>2</sub> (445)	4 <sup>1</sup> / <sub>2</sub> (114)	11 (279)	25 (635)	2 <sup>3</sup> / <sub>16</sub> (56)	11 (279)	14 <sup>3</sup> / <sub>8</sub> (365)	225 (102)	7 (27)
500	253	ST385G6B	3 (76)	17 <sup>1</sup> / <sub>2</sub> (445)	4 <sup>1</sup> / <sub>2</sub> (114)	11 (279)	27 (686)	2 <sup>3</sup> / <sub>16</sub> (56)	11 (279)	15 <sup>3</sup> / <sub>4</sub> (400)	250 (114)	8 <sup>1</sup> / <sub>2</sub> (32)
750	380	ST387G6B	3 (76)	17 <sup>1</sup> / <sub>2</sub> (445)	4 <sup>1</sup> / <sub>2</sub> (114)	11 (279)	27 <sup>1</sup> / <sub>2</sub> (699)	2 <sup>9</sup> / <sub>16</sub> (65)	11 (279)	15 <sup>7</sup> / <sub>8</sub> (403)	270 (123)	8 <sup>1</sup> / <sub>2</sub> (32)
<b>34.5kV (200kV BIL)</b>												
500	253	ST395G6B	3 (76)	17 <sup>1</sup> / <sub>2</sub> (445)	4 <sup>1</sup> / <sub>2</sub> (114)	11 (279)	33 <sup>1</sup> / <sub>2</sub> (851)	2 <sup>3</sup> / <sub>16</sub> (56)	14 (356)	18 (457)	260 (118)	8 <sup>1</sup> / <sub>2</sub> (32)

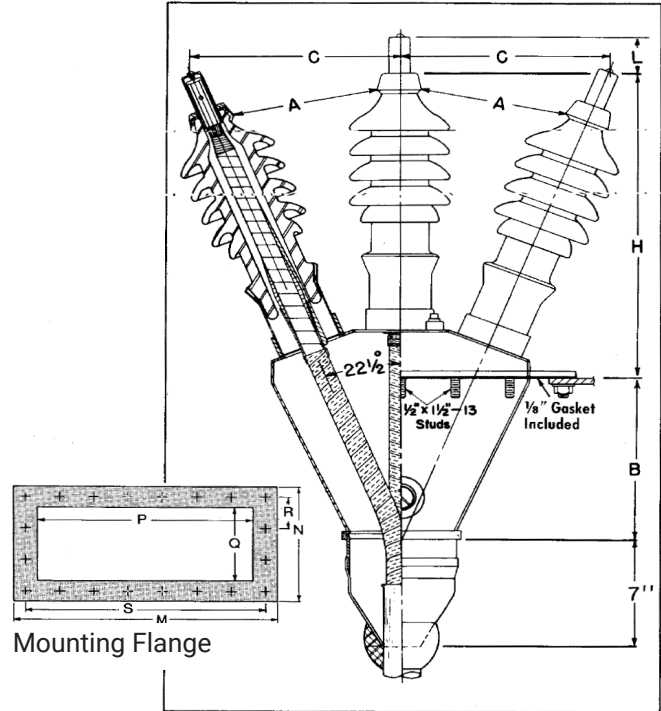
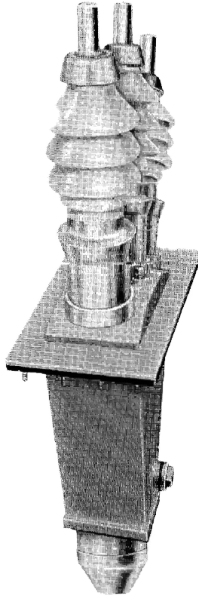
\*For gas filled terminations, use 46kV rating for 34.5kV operation

### 3/C Flange Mounted

Catalog numbers are for copper, three conductor cable and include diverging porcelain, wiping sleeve entrance fitting and internal solder style connector. Required stress cone kits, insulating compound and aerial lugs are ordered separately. Optional connector styles, stuffing box (RS) entrance fittings and ground lugs are available. The terminations are applicable in oil and air insulated compartments.

Aluminum conductor cables require compression style connectors.

Note: For aluminum cable over 250 kcmil, use the next larger size termination for correct internal clearances.



### Style 'RST' -For Compound, Oil or Gas Filling\*

Max. Conductor Size		Catalog Number	Dimensions - Inches (mm)						Approx. Shipping Wt. lbs (kg)	Approx. Comp'd Req'd Gal. (L)
KCM	mm <sup>2</sup>		Bore	B	H	L	A	C		
<b>15kV (110kV BIL)</b>										
250	127	RST372E4B	2 (51)	10 (254)	18 <sup>3</sup> / <sub>8</sub> (467)	1 <sup>3</sup> / <sub>4</sub> (44)	8 <sup>1</sup> / <sub>8</sub> (206)	11 <sup>1</sup> / <sub>2</sub> (292)	150 (68)	3 <sup>1</sup> / <sub>2</sub> (13)
500	253	RST375F5B	2 <sup>1</sup> / <sub>2</sub> (64)	9 <sup>3</sup> / <sub>4</sub> (248)	18 <sup>5</sup> / <sub>8</sub> (473)	2 <sup>3</sup> / <sub>16</sub> (56)	7 <sup>5</sup> / <sub>8</sub> (194)	11 <sup>3</sup> / <sub>4</sub> (298)	185 (84)	5 (19)
750	380	RST377F5B	2 <sup>1</sup> / <sub>2</sub> (64)	9 <sup>3</sup> / <sub>4</sub> (248)	18 <sup>5</sup> / <sub>8</sub> (473)	2 <sup>9</sup> / <sub>16</sub> (65)	7 <sup>5</sup> / <sub>8</sub> (194)	11 <sup>7</sup> / <sub>8</sub> (302)	205 (93)	5 (19)
1000	506	RST377G6B	3 (76)	13 <sup>3</sup> / <sub>8</sub> (340)	19 <sup>1</sup> / <sub>4</sub> (489)	2 <sup>9</sup> / <sub>16</sub> (65)	8 <sup>1</sup> / <sub>2</sub> (216)	13 <sup>1</sup> / <sub>2</sub> (343)	220 (100)	7 <sup>1</sup> / <sub>2</sub> (28)
<b>25kV (150kV BIL)</b>										
1/0	53	RST382E4B	2 (51)	10 (254)	21 <sup>3</sup> / <sub>8</sub> (543)	1 <sup>3</sup> / <sub>4</sub> (44)	9 <sup>1</sup> / <sub>4</sub> (235)	12 <sup>3</sup> / <sub>4</sub> (324)	160 (73)	4 (15)
350	177	RST385F5B	2 <sup>1</sup> / <sub>2</sub> (64)	9 <sup>3</sup> / <sub>4</sub> (248)	21 <sup>5</sup> / <sub>8</sub> (549)	2 <sup>3</sup> / <sub>16</sub> (56)	9 <sup>3</sup> / <sub>8</sub> (238)	12 <sup>7</sup> / <sub>8</sub> (327)	215 (98)	5 <sup>1</sup> / <sub>2</sub> (21)
500	253	RST385G6B	3 (76)	13 <sup>3</sup> / <sub>8</sub> (340)	22 <sup>1</sup> / <sub>4</sub> (565)	2 <sup>3</sup> / <sub>16</sub> (56)	9 <sup>3</sup> / <sub>4</sub> (248)	14 <sup>3</sup> / <sub>8</sub> (365)	260 (118)	7 <sup>1</sup> / <sub>2</sub> (28)
750	380	RST387G6B	3 (76)	13 <sup>3</sup> / <sub>8</sub> (340)	22 <sup>1</sup> / <sub>4</sub> (565)	2 <sup>9</sup> / <sub>16</sub> (65)	9 <sup>3</sup> / <sub>4</sub> (248)	14 <sup>3</sup> / <sub>8</sub> (365)	280 (127)	7 <sup>1</sup> / <sub>2</sub> (28)
<b>34.5kV (200kV BIL)</b>										
500	253	RST395G6B	3 (76)	13 <sup>3</sup> / <sub>8</sub> (340)	25 <sup>1</sup> / <sub>4</sub> (641)	2 <sup>3</sup> / <sub>16</sub> (56)	11 <sup>1</sup> / <sub>2</sub> (292)	15 <sup>5</sup> / <sub>8</sub> (397)	270 (123)	7 <sup>1</sup> / <sub>2</sub> (28)

\*For gas filled terminations, use 46kV rating for 34.5kV operation.



## Flange Size Code Chart

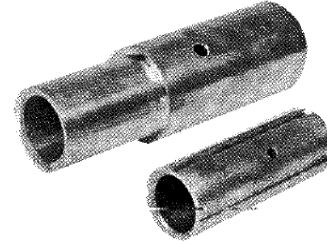
Flange Size Code**	Dimensions inches (mm)						Total number of studs
	M	N	P	Q	R	S	
4B	19½ (495)	10½ (267)	16½ (419)	7½ (191)	3 (76)	7 studs on 3" (76) centers	18
5B	21 (533)	12 (305)	18 (457)	9 (229)	3½ (89)	7 studs on 3¼" (83) centers	18
6B	24½ (622)	12 (305)	21¼ (540)	9 (229)	3½ (89)	8 studs on 3¼" (83) centers	20

\*\*Flange code appears as last digits in termination catalog number.

## Connectors

### Connectors

Hood Size Code†	2	5	7	9	0
Max. Cond -KCM (mm <sup>2</sup> )	250 (127)	500 (253)	1000 (507)	2000 (1013)	2500 (1267)
Connector O.D.-in. (mm)	¾ (19)	1 (25)	1¾ (35)	2 (51)	2½ (68)
Hood O.D.-in. (mm)	7/8 (22)	1½ (30)	1½ (38)	2½ (55)	2¾ (70)
Catalog Number					
Solder Style (Cu)	A1323-46	A1323-29	A1323-32	A1323-37	A1323-39
Compression (Cu)*	A1323-700	A1323-702	A1323-704	A1323-706	–
Compression (AL)*	A1323-701	A1323-703	A1323-705	A1323-707	–



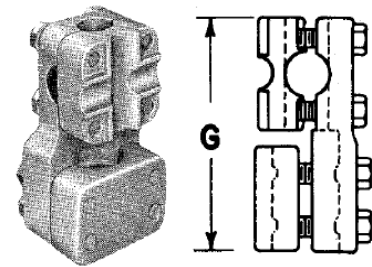
†Connector size can be identified using the 3rd numeral of the termination catalog number.

\*Catalog numbers represent a series. Specify conductor size when ordering.

## Aerial Lugs

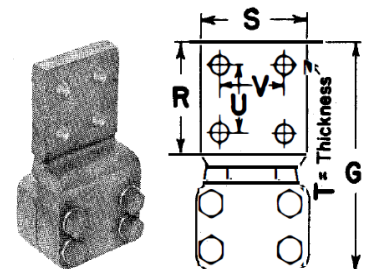
### Style 4 Clamp Style

Max Conductor		Hood O.D (in.)	Part Number	Aerial Conductor Range	Dimension G in.	Approximate Shipping weight lbs.(KG)
KCM	mm <sup>2</sup>					
250	127	7/8	A5076-12	#6 AWG to 250 KCM	3¾	4 (1.8)
500	253	1½	A5076	#2 AWG to 500 KCM	4½	4 (1.8)
1000	507	1½	A5076-1	600 KCM to 1000 KCM	6	4 (1.8)
2000	1013	2½	A5076-13	1000 KCM to 1500 KCM	7	4 (1.8)



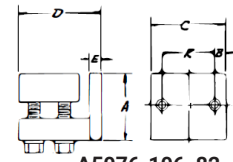
### Style 8 Vertical Flat Bus Type

Max. Conductor Size		Hood O.D (in.)	Part Number	Dimensions inches							Hole Size (No.)	Approx. Shpg wt. lbs.(KG)
KCM	mm <sup>2</sup>			R	S	U	V	T	G			
250	127	7/8	A5076-14	3	1½	1½	–	½	5¾	7/16 (2)	1¾ (.80)	
500	253	1½	A5076-15	3	2	1½	–	5/8	6	7/16 (2)	2½ (1.1)	
1000	507	1½	A5076-16	3	3	1½	1½	5/8	6¾	9/16 (4)	4½ (2.0)	
2000	1013	2½	A5076-11	4	4	2	2	¾	8¼	9/16 (4)	12 (5.4)	
2500	1267	2¾	A5076-17	4	4	2	2	¾	9	9/16 (4)	14 (6.4)	

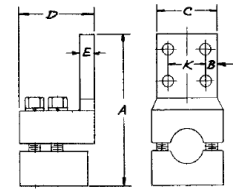


## Style 18 Horizontal Flat Bus Type

Max. Conductor Size		Hood O.D (in.)	Part Number	Dimensions- inches							Approx. Shpg wt. lbs.(KG)
KCM	mm <sup>2</sup>			A	B	C	D	E	K	Hole Size (No.)	
250	127	7/8	A5076-106	1 1/2	5/16	2 1/2	2 3/8	3/8	1 7/8	1/4-20 (2)	1 (.45)
500	253	1 1/8	A5076-82	2 1/16	3/8	2 1/2	2 3/4	3/8	1 3/4	3/8-16 (2)	1 3/4 (.80)
1000	507	1 1/2	A5076-102	6 1/4	5/8	3	2 3/4	1/2	1 3/4	9/16 (4)	3 1/2 (1.6)
2000	1013	2 1/8	A5076-105*	8	1	4	2 3/4	3/4	2	9/16 (4)	5 (2.3)
2500	1267	2 3/4	A5076-140	9 5/16	1	4	4 5/16	7/8	2	9/16 (4)	6 (2.7)



A5076-106, 82



A5076-102, 140

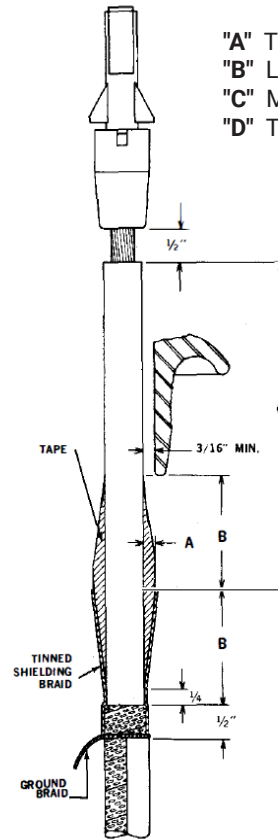
Note: A5076-105 has an offset flat bus pad dimensioned A x C

All copper lugs are standard. Silver or tin plated lugs are available.

## Stress Cone Kits

Stress cone kits listed below are for compound filled terminations unless otherwise specified.

Cable	Conductor Size		kV*		
	AWG/KCM	mm <sup>2</sup>	15	25	34.5
<b>Varnished Cambric or Paper Insulated</b>					
(1) 1/C	1/0	53	1S5	2S10	2S10
	500	253	1S10	2S10	3S15
	1000	507	1S10	2S10	3S15
	2000	1013	12S10	2S15	4S20
(1) 3/C (3) 1/C	1/0	53	2S15	3S20	6S30
	500	253	3S20	4S25	7S35
	1000	507	3S20	5S30	8S40
	2000	1013	4S30	6S40	10S50
<b>Cross Linked Polyethylene or EPR insulated</b>					
1 (1/C)	1/0	53	1D10	2D10	3D15
	500	253	1D10	2D15	3D15
	1000	507	2D10	2D15	4D20
	2000	1013	2D15	3D20	4D25
(1) 3/C (3) 1/C	1/0	53	2D20	4D25	7D35
	500	253	3D25	5D35	9D45
	1000	507	4D30	6D40	10D55
	2000	1013	5D40	8D50	12D65



- "A" Thickness of applied insulation
- "B" Length of cone
- "C" Minimum creepage
- "D" Thickness of cover insulation

EPR AND CROSS LINKED POLYETHYLENE INSULATED

## Varnish Cambric or Paper Insulated Chart

kV	Dimenisons - inches		
	A	B	C min
15	1/4	2 1/4	5
25	5/16	3	8
34.5	3/8	3 1/2	12

## Cross Linked Polyethylene or EPR insulated

kV	Dimenisons - inches		
	A	B	C min
15	1/4	3 1/2	5
25	5/16	4	8
34.5	3/8	4 3/4	12

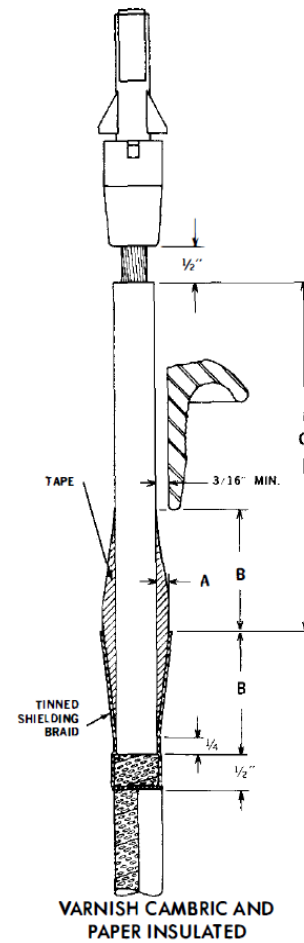
Stress cone kits listed below are for compound filled terminations unless otherwise specified.

Cable	Conductor Size		kV*			
	AWG/KCM	mm <sup>2</sup>	15	25	34.5	46
<b>Varnished Cambric or Paper Insulated-Gas Filled</b>						
<b>(1) 1/C</b>	250	127	10L01	10L01	15L20	15L20
	500	253	10L01	10L01	15L20	15L20
	1000	507	10L01	10L01	15L20	15L20
	2000	1013	10L01	10L01	15L20	20L20
	2500	1267	10L01	10L01	15L20	--
<b>(1) 3/C</b>	1/0	53	15L10	20L20	25L20	--
	500	253	20L10	25L20	25L20	--
	1000	507	25L10	--	--	--

\*Consult factory for stress cone kits for 46kV and 69kV terminations.

### Varnish Cambric or Paper Insulated- Gas Filled

kV	Dimenisons - inches			
	A	B	C min	D
15	¼	3	5	¼
25	5/16	3½	8	5/16
34.5	¾	4	12	¾
46	½	4½	18	½



## Compounds

### Compounds

Compounds are a high dielectric strength filler material used in terminations, cableheads, cable boxes and cable joints. An ideal compound should be chemically inert, adhesive and tacky; have low melting point to permit flow into all unoccupied space before solidifying, low moisture absorption, low dielectric loss, high dielectric strength and high flash and fire point for personnel safety.

The selection of the proper compound for a particular installation depends upon:

1. Cable type and kind of insulation
2. Operating voltage and temperatures
3. Cable system elevation differentials (PILC cable only).

### Types of Compounds

**NOVOID "A"** is a medium soft asphaltic base compound recommended for use in most termination and cablehead (switch or box) installations at 38kV or below.

**NOVOID "X"** is a hard resin-base, oil insoluble compound recommended for use in terminations, cableheads and joints where migration of the cable-tape impregnant may be a problem. There are temperature limitations.

**NOVOID #224** is a heavy polybutene base compound recommended for use in terminations, cableheads and joints for polyethylene and EPR insulated cables.

**NOVOID #219** is a medium viscosity oil recommended for use as a "flushing compound" for building cable splices or terminating where such "flushing" is required. It may also be used as a filling compound in terminations and joints on solid type paper insulated cables where oil filled accessories are desired.

Compound Selection Chart	Compounds		
	NOVOID A	NOVOID X	NOVOID 224
Type of cable insulation			
Paper Insulated, Lead Covered P.I.L.C.	Yes	Yes (Note 1)	No
Varnish Cambric, Lead Covered V.C.L.C.	Yes	Yes	No
Cross Linked Polyethylene XLPE	Yes	No	Yes
Ethylene Propylene Rubber E.P.R.	Yes (Note 2)	No	Yes
Kerite Insulation Permashield Type	Yes	No	No

**Note 1:** Not recommended for terminations and cableheads operating above 15 kV where temperature may fall below -12°C (+ 10°F), or 15 kV and below, where temperature may fall below -24°C (-10°F). No temperature limitation for compound used in joints.

**Note 2:** Maximum pouring temperature 150°C (302°F). Temperature ranges are specified in IEEE 48-1975 standards.

Test	A.S.T.M. Designation	NOVOID A	NOVOID X	NOVOID 219	NOVOID 224	
Flash Point (°C)	D92	320	232	160	221	
Fire Point (°C)	D92	370	269	170	273	
Softening Point (°C)	D36	35	54	-	-	
Pouring Temp (°C) Max	Normal	-	227	177	121	
		-	149	149	110	
Loss on Heating(%)	D6	.26	.12	.40	.30	
Vol. Coef. of Exp. (in <sup>3</sup> /°C)	D1168	.0006	.0006	.00065	.00065	
Specific Gravity	D70	.98	1.14	.86	.90	
Dielectric Str (v/mil) 25°C	D149 & D176	1000	900	400	500	
Power Factor(%)	25°C	D150	1.9	9.0	.001	.015
	50°C		2.5	7.8	.001	.025
	75°C		14.4	19.3	.002	.028
S.I.C	25°C	D150	2.6	4.7	2.4	2.1
	50°C		2.7	6.6	2.3	2.2
	75°C		2.8	7.5	2.2	2.2
Consistency at 25°C	-	Semi-solid	Hard	Fluid	Fluid	
Color	-	Black	Brown	Clear	Clear	
Weight(lbs./gal.)	-	10	11.5	7.2	7.5	

## Spreader Heads

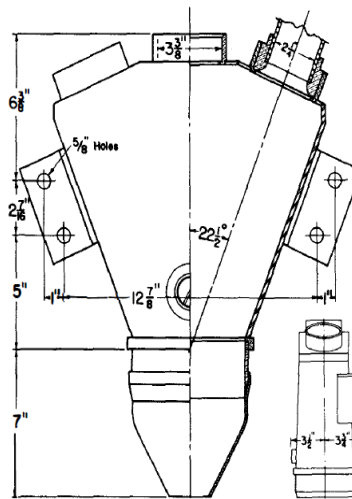
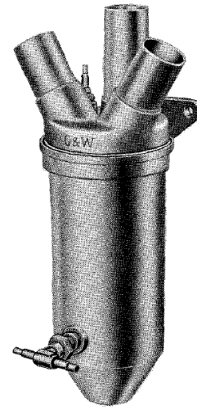
Spreader heads are used in conjunction with single conductor terminations when a greater phase-to-phase aerial spacing is required than provided by multi-conductor terminations. The spreader heads are applicable on three conductor paper or varnished cambric insulated lead covered cables, rubber or polyethylene insulated jacketed cables and low pressure gas or oil insulated cables with a maximum O.D. of 5¼ inches. Two styles of Sodertite spreader heads are available which feature factory soldered joints for gasketless sealing. Spreader heads can be oil, gas or compound filled. In certain applications, a harder compound such as Novoid "X" can be used to form a barrier at the base of the spreader head to reduce the possibility of migration of the soft compound into the cable.

**Type "SH"** Type SH spreader heads consist of a spun copper wiping sleeve with a factory brazed cast bronze lid. Vertical style mounting bracket is included.

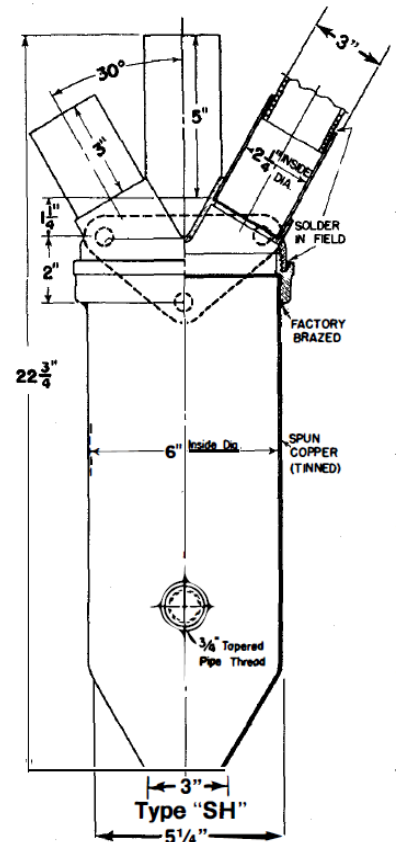
Max. O.D. Cable in. (mm)	Catalog Number	Approx. compound req'd gal. (L)	Approx. Shp'g weight lbs. (kg)
2 (51)	SH6D	2 (7)	30 (14)
3 (76)	SH7D	5 (19)	55 (25)

**Type "SW"** Type SW spreader heads are the same as type "ST" termination bodies and consist of welded steel construction with vertical style mounting brackets.

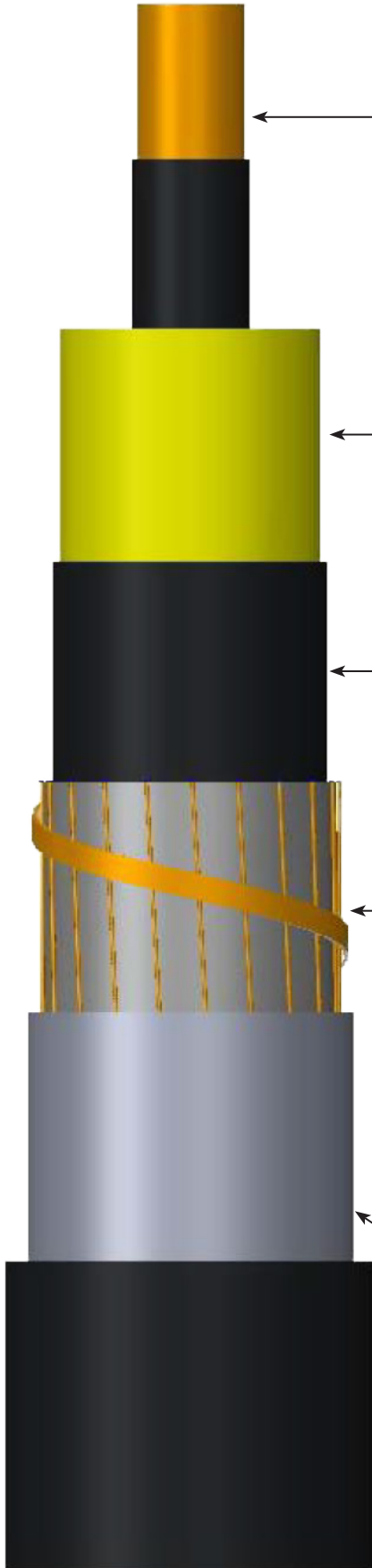
Max. O.D. Cable in. (mm)	Catalog Number	Approx. compound req'd gal. (L)	Approx. Shp'g weight lbs. (kg)
2 (51)	SW4B	3 (11)	75 (34)



Type "SW"



Type "SH"



### Voltages (kV)

Cable voltage rating	
System voltage rating	

### Conductors

	Copper	Aluminum
Material		
Size	kcmil	mm <sup>2</sup>
Diameter	Inches	mm
Tolerance		

### Insulation

	XLPE	EPR
Material		
Diameter	Inches	mm
Tolerance		

### Insulation Screen

	Extruded	Fabric Tape
Material		
Diameter	Inches	mm
Tolerance		

### Metallic Screen

	Copper Tape	Laminated Al Tape
Material		
Copper Wire ( <i>number of copper wires</i> )		
Diameter of copper wires	Inches	mm
Other		
Diameter	Inches	mm

### Metal sheath or armor

		None
Material		
Diameter	inches	mm

### Jacket

Diameter	inches	mm
----------	--------	----

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