

**iwis**  
antriebssysteme  
wir bewegen die welt

**JWTS**® **ELITE**®



**NEW**

## iwis solutions for agricultural machinery



As the market's leading supplier of agricultural drive chains and components, iwis offers not only its proven quality and performance but also top-class, expert consulting services. Specially tailored to meet your needs!

**iwis industry solutions**



[www.iwis.de/industries](http://www.iwis.de/industries)

[www.iwis.com](http://www.iwis.com)



## iwis Group

As a global technology leader in its areas of expertise, iwis has been manufacturing top-quality products in outstanding precision for over 100 years.

Our multifaceted portfolio extends from innovative, high-performance chain drive systems through to electrical plug connector technology. iwis technology is available worldwide and can be found in applications including but not limited to the automotive industry, construction vehicles, medical and healthcare, printing and food industries, conveyor technology, agricultural equipment and many other industries.

## iwis agrisystems

iwis agrisystems is a division of iwis antriebssysteme and is responsible for the iwis portfolio of agricultural technology solutions. The agricultural machinery range includes not only gathering and elevator chains for a wide variety of applications, it also encompasses the associated attachments for all the various chain types.

iwis has developed the **HBC series of roller chains** (Heavy Baler Chain) specifically for use in balers. iwis agrisystems' extensive portfolio also includes accessories such as sprockets, pulleys, roller chains and complete application kits for agricultural machinery production.

## Other corporate divisions in the iwis Group



### iwis motorsysteme

Timing drives, camshaft drives, mass balancing and oil pump drives for the automotive industry



### iwis antriebssysteme

Precision chains, sprockets and chain tensioners for drive and conveyor technology, together with the provision of technical services for industrial drive technology



### iwis smart connect

High-precision metalworking, stamping and bending technology, in particular in the area of electrical connection technology, press-fit technology, IDC insulation displacement connectors and MCS contact technology



## iwis solutions for agricultural machinery technology



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### ELITE engineering

#### Outstanding quality and a robust contribution to our customers' successful harvesting operations

All agricultural chains from iwis agrisystems are subjected to rigorous laboratory testing, test rigs and simulation facilities at iwis's production plants to guarantee the same reliability and quality no matter how extreme the working environment. Together with OEM manufacturers, we create tailor-made drive solutions in our agricultural centre in Sontra and, after extensive testing, put them into series production.





## Feederhouse chains

Based on our experience in the development and testing of chain drives, **ELITE feederhouse chains** combine a proven chain design with optimised technical characteristics and are unparalleled on the market.

### Highlights

- Extended service life due to optimized materials and high-precision stamping of the link plates
- Fully harmonised and compatible materials and dimensions in the chain link joint
- Optionally pair-matched
- Special high strength alloy attachments available (HFA)
- Chains supplied individually or with slat as fully assembled set
- **elidur+** high-performance lubricant

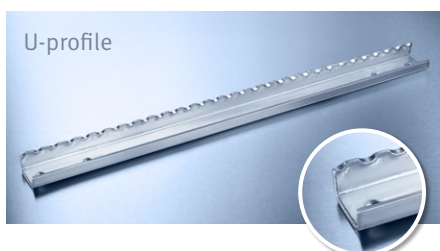
### Available accessories

iwis supplies slats to match every type of feederhouse chain. Slats can have T-profiles, U-profiles or can be made from cast materials according to customer requirements.

#### In passing: Testing facilities

iwis operates the **world's largest testing facilities** for conveyor and drive chains at its headquarters in Munich. In addition to fundamental research, iwis also conducts customer-specific wear, strength or corrosion investigations – both on existing standard test rigs and on custom testing equipment for special applications.

**Feasibility studies** conducted in collaboration with customers, the design of components and the **conduct of deformation** and **stress analyses** allow us to adapt existing designs to customers' individual requirements or develop entirely new chain drives. At iwis, delivering solutions is our speciality and a part of our corporate philosophy.

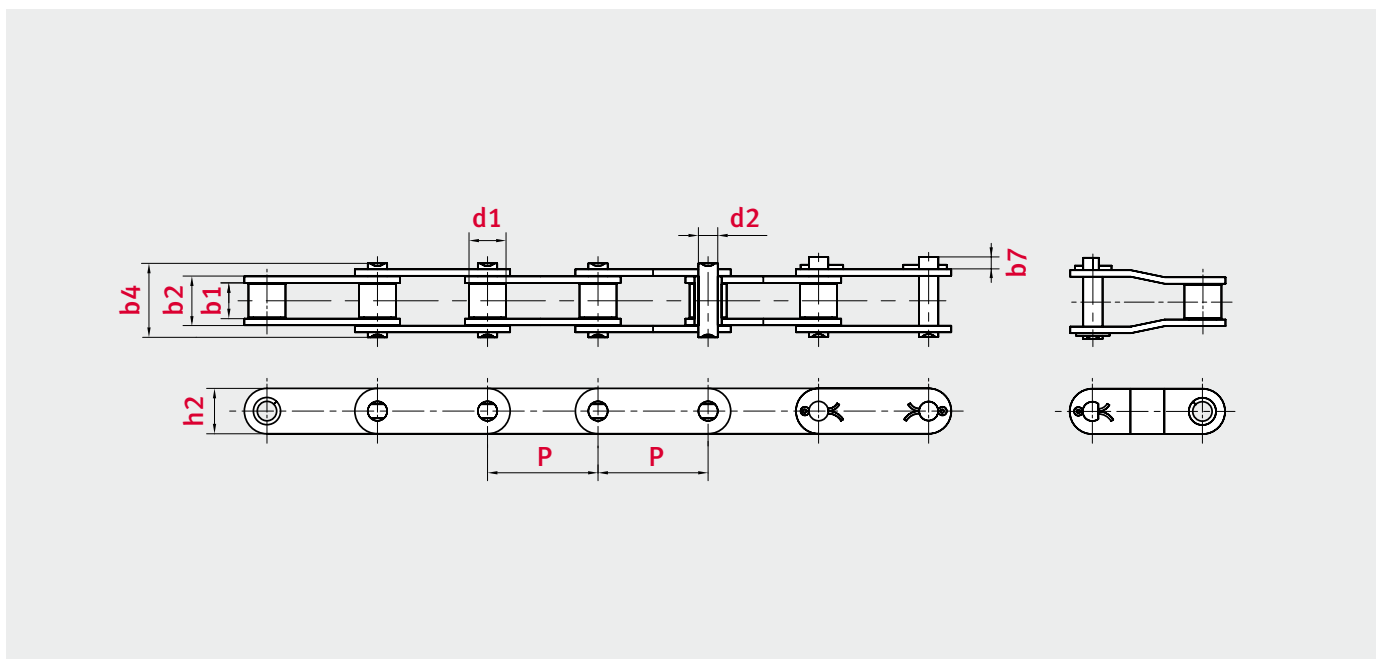




## Feederhouse chains

iwis Chain Type	Pitch	Roller Ø	Width between inner plates	Pin Ø	Pin Length	Max. add. length of connecting link	Total width inner link	Height inner plate	Min. tensile strength
	<b>p</b> mm	<b>d1 max.</b> mm	<b>b1 min.</b> mm	<b>d2 max.</b> mm	<b>b4 max.</b> mm	<b>b7 max.</b> mm	<b>b2 max.</b> mm	<b>h2 max.</b> mm	<b>F min.</b> KN
<b>CA550V</b>	41.40	16.80	19.05	7.19	35.60	4.10	26.04	20.20	58.00
<b>CA557</b>	41.40	17.78	20.24	8.00	37.50	8.90	26.60	23.20	58.00
<b>38,4 VB</b>	38.40	15.88	19.05	8.28	36.10	3.30	25.10	17.30	52.00

Additional versions are available. Please contact us for further information.





## Elevator chains

**ELITE Elevator chains** transport the crop gently and safely inside the harvester. The result: safe and loss-free transport in the elevator channel.

### Highlights

- Extended service life due to optimized materials and high-precision stamping of the link plates
- Fully harmonised and compatible materials and dimensions in the chain link joint
- Special high strength attachments available (HFA)
- Chains available assembled with paddles
- Optionally supplied with reinforcing plates
- Paddles can optionally be bolted or riveted, available manufactured from rubber, plastic or an alternative material

### Paddles for elevator chains

iwis offers a wide range of different paddles to meet all requirements. Rubber tire material as well as belted material and plastic injected molded paddles are available.

#### In passing: HFA technology

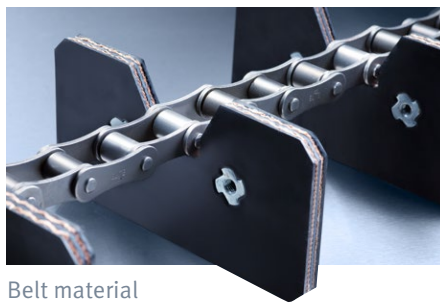
##### HFA technology increases endurance

The High Fatigue Alloy (HFA) technology developed and patented by iwis consists of a combination of **enhanced alloys** and **innovative heat treatment** methods that increase the endurance of roller chains.

As a result, angled HFA chain links have greater endurance than ordinary basic chains. Alongside increased endurance, this technology offers farmers **greater throughput in corn elevators** without having to increase the size or thickness of the chain's reinforcing links. The HFA attachments have the same dimensions as standard agricultural or roller chains.



Rubber tire material



Belt material



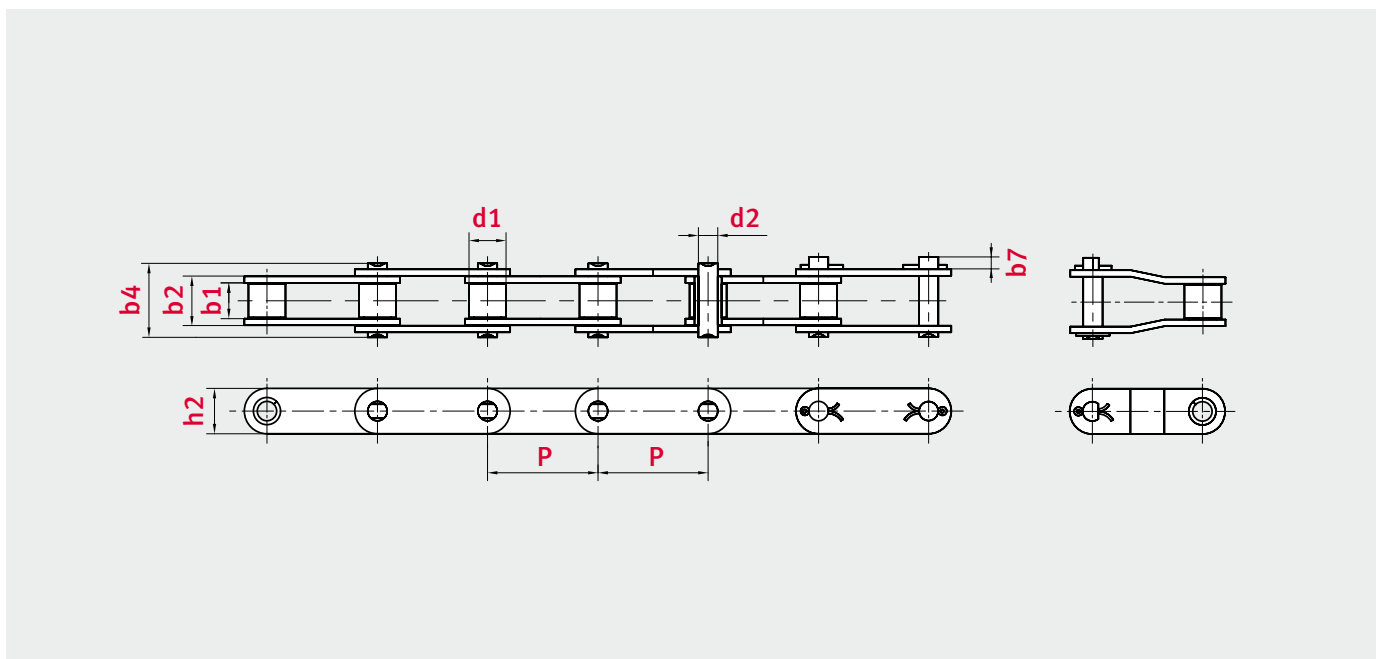
Injection-moulded



## Elevator chains

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	<b>p</b> mm	<b>d1 max.</b> mm	<b>b1 min.</b> mm	<b>d2 max.</b> mm	<b>b4 max.</b> mm	<b>b7 max.</b> mm	<b>b2 max.</b> mm	<b>h2 max.</b> mm	<b>F min.</b> KN
<b>38,4R</b>	38.40	15.88	19.05	6.92	33.80	2.60	24.10	17.30	33.00
<b>38,4 VB</b>	38.40	15.88	19.05	8.28	36.10	3.30	25.10	17.30	52.00
<b>38,4 VH</b>	38.40	19.05	19.56	10.19	40.80	3.90	28.95	22.00	65.00

Additional versions are available. Please contact us for further information.





## Gathering chains

Modern maize attachments have to operate under tough harvesting conditions. The employed **ELITE Gathering chains** are rigorously tested by the high harvesting speeds, changing environments and the challenging ambient conditions.

### Highlights

- Extended service life due to optimized materials and high-precision stamping of the link plates
- Fully harmonised and compatible materials and dimensions in the chain link joint
- For increased wear resistance, special surface coatings and material pairing for pins and bushes are available
- ELITE Gathering chains are optionally available in an **anti-backbend version** – an innovative alternative for demanding applications in the field of agricultural machinery technology

### Highlights of the anti-backbend version

- Reduced vibration during chain operation
- Less weight in the cutting unit due to the omission of chain guide elements
- The position of the drive and deflector can be adjusted as required
- Very wide range of material specifications possible
- Compact design for extremely extensive functionality
- Can be used for other applications

### In passing: New coating protects against corrosion

#### Tests prove outstanding effectiveness

To combat the corrosion and wear that can occur under tough outdoor operating conditions, iwis can apply a **zinc flake coating** to drive chains for agricultural technology on request. At only 8-12  $\mu\text{m}$ , this coating is thinner than a human hair and can be thought of as a type of paint that consists of numerous tiny flakes.

Salt mist spray tests performed with zinc flake-coated ELITE chains have revealed a protective effect against corrosion of the basic metal of up to 1,000 hours. The coating is also **temperature-resistant** and **resistant against** many aggressive media.

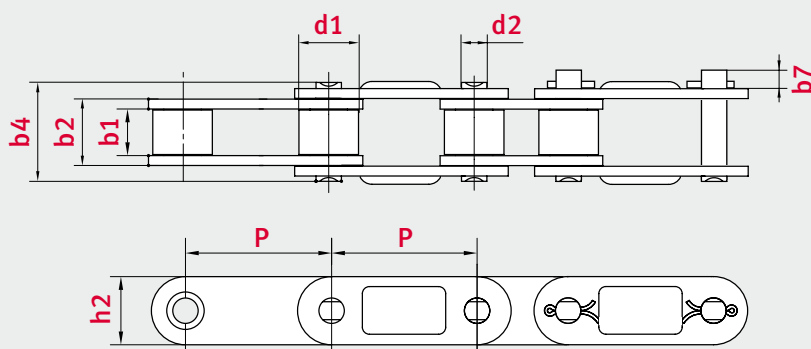


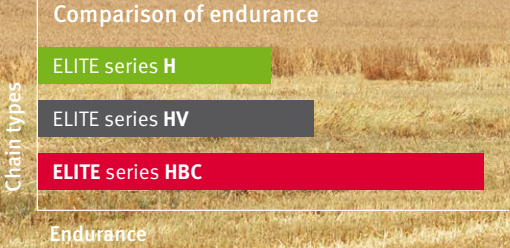


## Gathering chains

iwis Chain Type	Pitch	Roller Ø	Width between inner plates	Pin Ø	Pin Length	Max. add. length of connecting link	Total width inner link	Height inner plate	Min. tensile strength
	<b>p</b> mm	<b>d1 max.</b> mm	<b>b1 min.</b> mm	<b>d2 max.</b> mm	<b>b4 max.</b> mm	<b>b7 max.</b> mm	<b>b2 max.</b> mm	<b>h2 max.</b> mm	<b>F min.</b> KN
<b>CA620</b>	42.01	17.91	24.51	7.19	42.20	4.60	31.60	20.20	39.10
<b>CA627</b>	30.00	15.88	19.05	8.28	36.00	3.20	25.10	20.65	48.00

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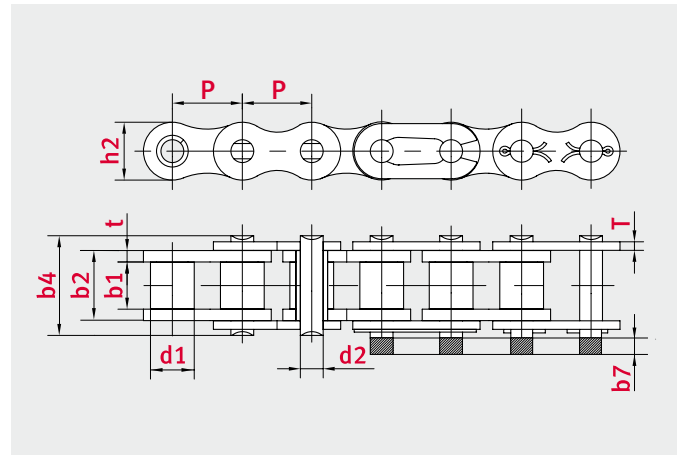


## Baler chains

The **ELITE HBC (Heavy Baler Chain) series of roller chains** was developed specially for demanding applications in balers. HBC roller chains excel through their **outstanding endurance** and **extremely high wear resistance**. And they take up no more assembly space than traditional standard roller chains of the same size.

### Highlights

- The increased smooth cut proportion of all the plates gives the chains a longer lifetime and greater stability through higher press-out forces
- Special materials and heat treatment reduce the amount of wear
- The optimised plate contour, combined with special materials, offer increased endurance in an unchanged installation space
- Longer maintenance/chain replacement intervals in agricultural technology
- The premium lubricant applied to the chain is designed to meet the requirements of balers



iwis Chain Type	Pitch	Width between inner plates	Roller Ø	Pin Ø	Total width inner link	Pin length	Max. add. length of connecting link	Plate thickness	Height inner plate	Bearing area	Min. tensile strength
	<b>p</b> mm	<b>b1 min.</b> mm	<b>d1 max.</b> mm	<b>d2 max.</b> mm	<b>b2 max.</b> mm	<b>b4 max.</b> mm	<b>b7 max.</b> mm	<b>t / T ~</b> mm	<b>h2 max.</b> mm	<b>cm²</b>	<b>F min.</b> KN
<b>ANSI 60 HBC</b>	19.05	12.57	11.91	5.96	19.43	30.20	4.60	3.20	18.10	1.16	40.00
<b>ANSI 80 HBC</b>	25.40	15.75	15.88	7.94	24.28	37.40	5.40	4.00	24.13	1.93	65.00
<b>ANSI 100 HBC</b>	31.75	18.90	19.05	9.54	29.10	44.50	6.10	4.80	30.17	2.78	100.00

Additional versions are available. Please contact us for further information.  
All HBC chains are also available in accordance with ISO 606 (DIN 8187) | British Standard.



## Baler chain CA650

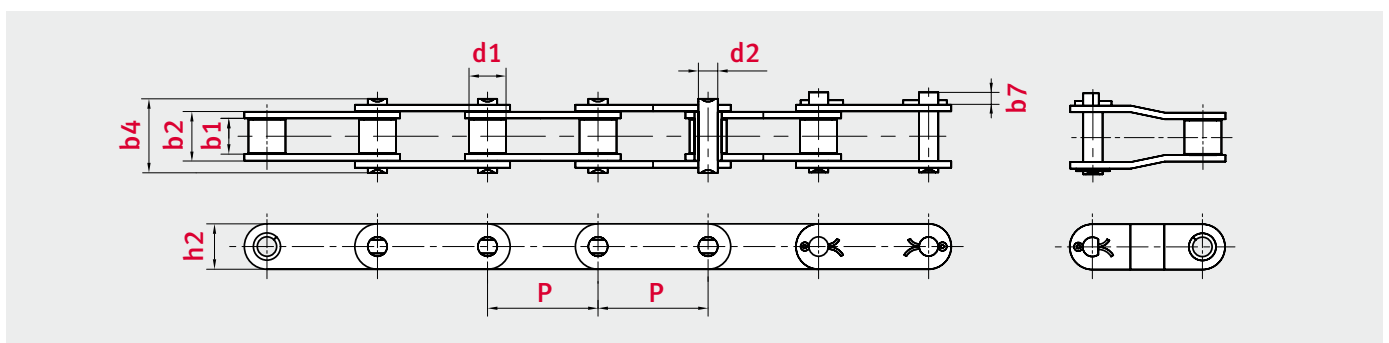
The **ELITE CA650 chain** is used as a bar chain feeder in the bale chamber. Due to the high compacted densities, the chain is subject to very high stresses in this application. ELITE chains in bar feeders have proven themselves in harvesting applications worldwide.

### Highlights

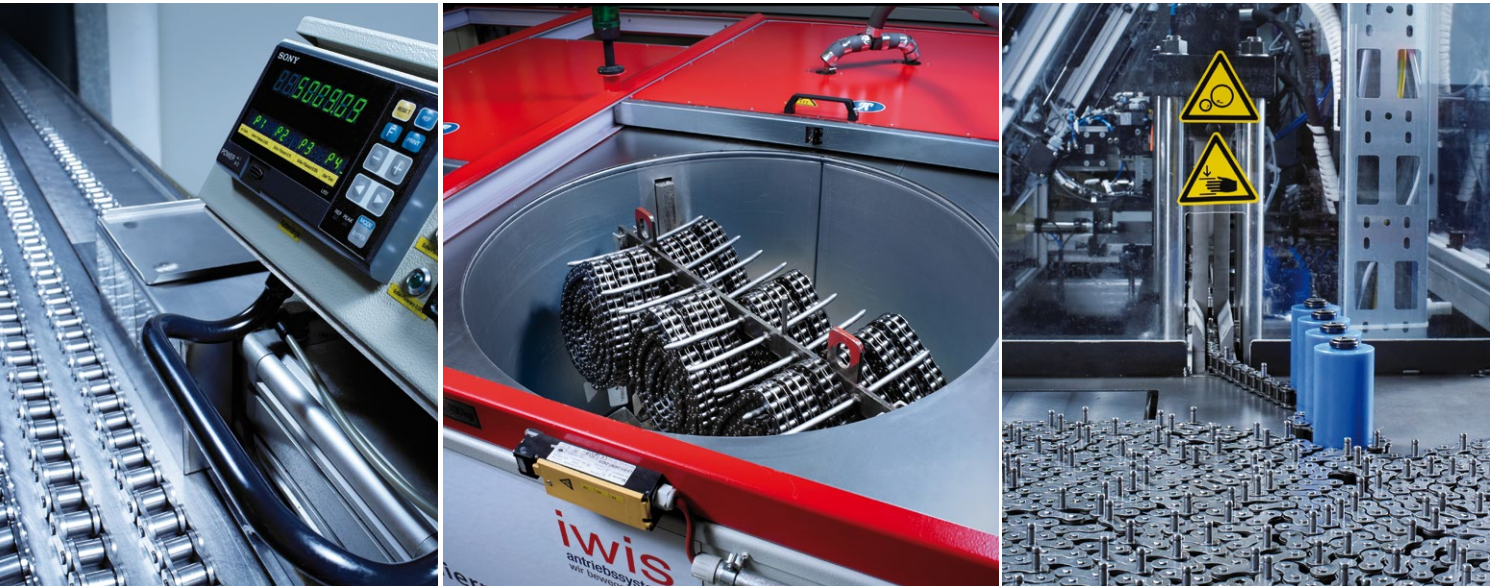
- Extended service life due to optimized materials and high-precision stamping of the link plates
- Fully harmonised and compatible materials and dimensions in the chain link joint
- Pair-matched
- Chains can be supplied individually or as a complete set with traverses



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	<b>p</b> mm	<b>d1 max.</b> mm	<b>b1 min.</b> mm	<b>d2 max.</b> mm	<b>b4 max.</b> mm	<b>b7 max.</b> mm	<b>b2 max.</b> mm	<b>h2 max.</b> mm	<b>F min.</b> KN
<b>CA650</b>	50.80	19.05	19.05	9.53	40.50	6.30	27.46	25.50	83.00



Additional versions are available. Please contact us for further information.



## Roller chains with attachments

ELITE offers an extensive product portfolio of roller chains for conveyor applications that meet the requirements of a variety of different tasks. At iwis' production facility in Wilnsdorf, Germany, we are able to quickly and efficiently adapt a large number of **special chains** to meet customer requests.

### Highlights

- Our focus: chain sizes 08B-1 to 16B-2
- A very wide range of standard market dimensions from bent K1 and K2 and flat M1 and M2 attachment plates (special geometries on request)
- Various special lubricants available
- High level of flexibility, including for small quantities and special versions
- The standard delivery time is two weeks – in urgent cases, iwis can dispatch products in 48 hours via express service
- Sale by the meter or in pre-cut lengths as required
- Pair-matching and measurement facility
- Coated chains (stainless steel) available
- Chain manufacture of German origin

### Highlights – chain manufacture with extended pins

- Whether one-sided, two-sided symmetrical or two-sided asymmetrical: iwis can manufacture all types – fully automatically
- All pin cycle configurations are available

#### In passing: Chain tensioning

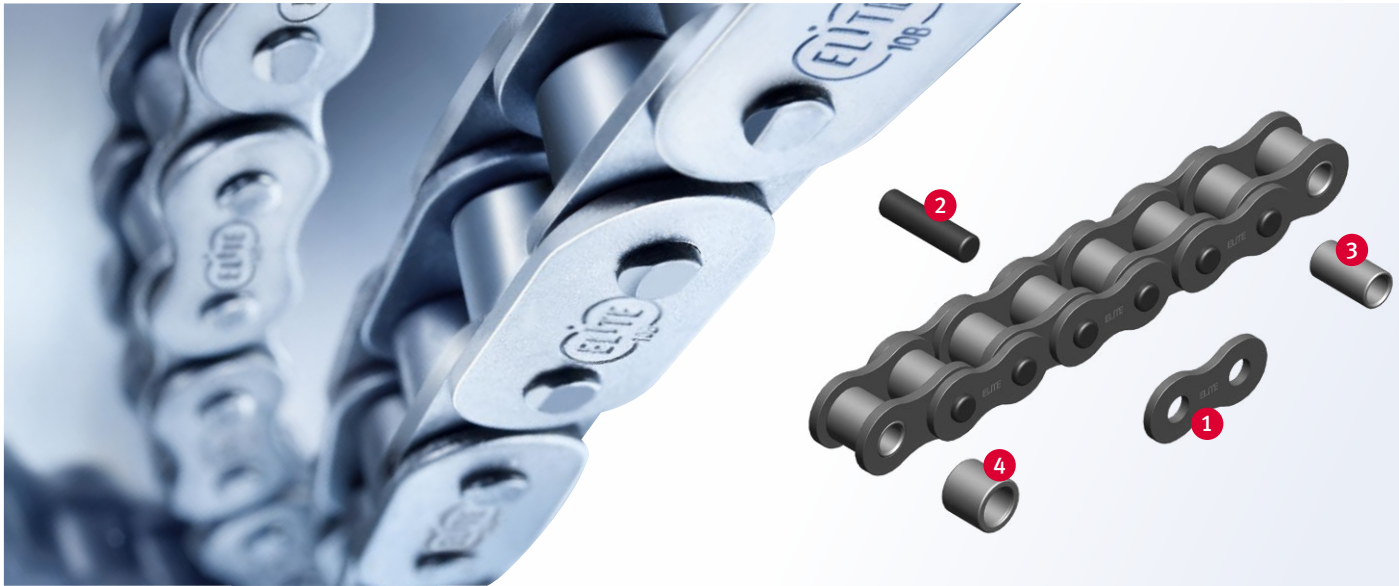
During controlled chain retensioning operations, it is important to avoid excessive chain tensions just as much as it is necessary to avoid excessive sagging in order to prevent pressure on the bearing surface from being increased more than necessary. Traces of wear on the chain rollers may indicate that the tension is too great.

For further information, see our product flyer or visit [www.iwis.com](http://www.iwis.com)



More information on chain tensioning in our maintenance flyer online: [www.iwis.com](http://www.iwis.com)





## Drive chains for every application

ELITE roller chains boast high wear resistance and have significantly greater fatigue strength than is required by the relevant standard. This makes ELITE roller chains the right choice for industrial applications: robust and reliable.

All ELITE transmission roller chains are highly preloaded and our high-tech initial lubricant **elidur<sup>+</sup>**, a special additive chain oil, is applied. **elidur<sup>+</sup>** is a non-drip oil that excels not only through the improved running capabilities it confers but also through the improved corrosion resistance it offers.

### ELITE specification

- ELITE link plates **1** with optimised geometry are precisely formed and heat-treated. They are taper-cut and shot-peened and have a particularly high percentage contact area
- ELITE pins **2** have a smooth, extremely strong surface
- ELITE bushes **3** have an absolutely cylindrical shape which is either seamless or wound depending on the application
- ELITE rollers **4** are seamless and are hardened as of  $\frac{3}{4}$ " in order to achieve high impact resistance
- Very high wear resistance thanks to the use of **elidur<sup>+</sup>** as initial lubricant
- With approx. 40% of the fatigue strength, chains are preloaded by 10% more than is required by ISO 606
- On average, the tensile strength is 20% higher than required by ISO 606
- Special lubrication for low-temperature operations down to -30 °C or high-temperature applications up to +250 °C available on request
- On request, iwis can supply marked pair or set-matched chains

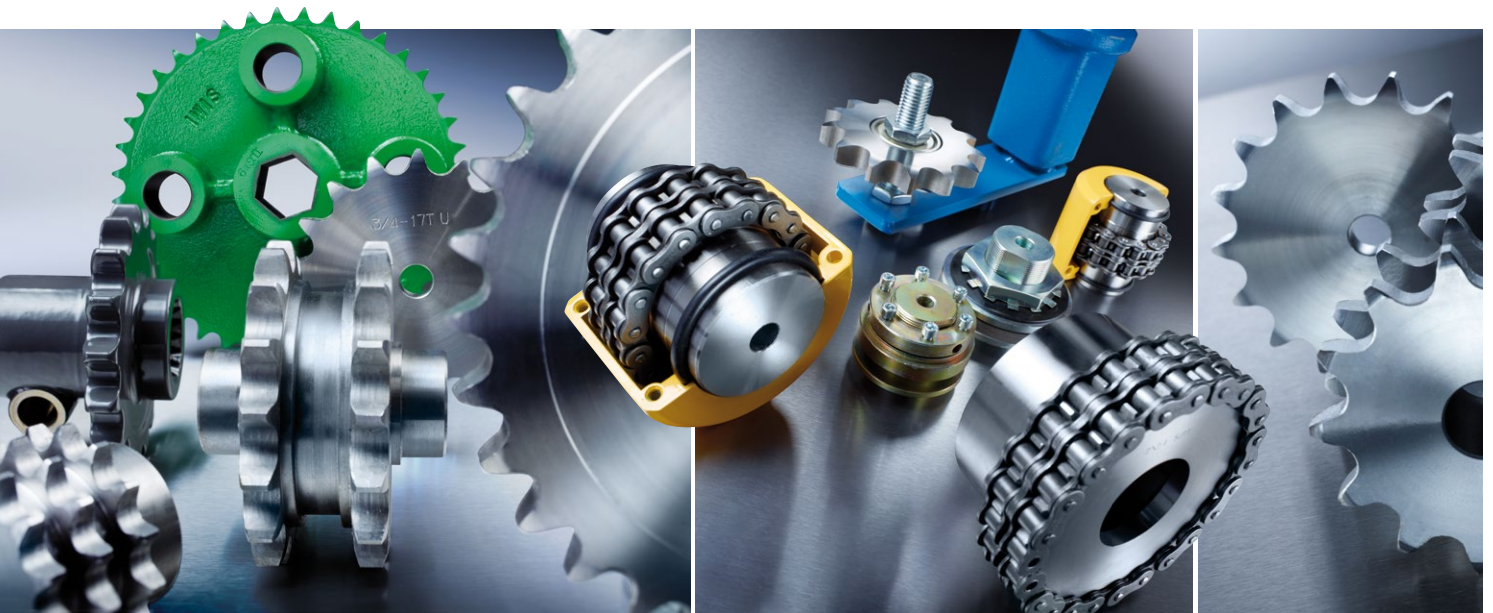
## Our “heavy” series

ANSI chains, as well as specially strengthened versions of chains manufactured to the European standard are available for applications with extremely high loads. “Heavy” versions of ANSI roller chains have the same dimensions as the corresponding ANSI chains, but with plates of the same thickness as those of the next larger size of chain.

- **H chains** are generally made with the same pin materials as standard roller chains. However, their major advantage is that they provide higher wear resistance and greater tensile strength than standard chains, while retaining virtually the same breaking strength.
- **HV chains** are fitted with special case-hardened steel alloy pins, giving the chains not only increased tensile strength, but also extremely high breaking strength values.
- **H.SP roller chains** are made from high-quality case-hardened steel alloys for increased tensile strength. In addition, the pin holes in the chain plates are ball-drifted to give the chains maximum fatigue strength.

For further information, see our ELITE catalogue or visit [www.iwis.com](http://www.iwis.com)





## Sprockets and drive components

A perfectly functioning drive requires the use of suitable **sprockets and drive components**. Alongside the wide range of standard sprockets kept in stock to meet **short-term needs**, iwis combines **state-of-the-art and proven manufacturing processes** to perform individually customised component machining quickly and successfully according to customer drawings or specifications.

### Highlights

- Production of keyways in accordance with DIN 6885/1, various special sizes and special dimensions possible
- Conventional internal machining of sprockets and rotating parts
- Press-in ball bearings fitted in drawing-based components together with the manufacture of chain tensioners on hydraulic presses equipped with special equipment
- Wide range of heat treatment capabilities depending on drawing specifications
- Surface treatment methods such as galvanisation, black oxide, nickel-plating or painting
- Sprockets with high tolerance specifications
- Pitch hole drilling, thread drilling and the manufacture of machined parts of any required geometry
- Support for the design of sprockets to ensure weight- and cost-optimised design

To guarantee **fast response times**, iwis always has a wide range of standard sprockets (04B-1 to 32B-3) in stock.





## Cast and forged parts

As an extension to its product portfolio in the field of drive technology, iwis is also able to supply **cast and forged parts** according to customer drawings. These parts include hubs, spigots, levers, belt pulleys and other components.



Gears and Pulleys



Spigots



Hubs

## Highlights

- These components are subject to particularly stringent requirements with regard to dimensional accuracy and technological properties
- iwis has considerable expertise in this area thanks to its many years of experience of the corresponding manufacturing methods which have, for example, also been employed to produce a wide range of sprockets



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