



## iwis solutions for the confectionery industry



The confectionery industry is renowned for its strong global growth, high standard of production efficiency and increasingly strict hygiene requirements for product quality and safety. iwis chains ensure the reliability, long service life and maximum precision of confectionery production machinery.

### iwis industry solutions



[iwis.de/Industries](http://iwis.de/Industries)

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



## Maximum positioning accuracy

Chains and chain drive systems used in confectionery production, one of the most important branches of the food industry, must meet extreme requirements. The crucial factors are **steady, reliable parallel running, precise positioning** and **optimised downtimes** to guarantee maximum efficiency and trouble-free conveying of moulds. Cleaning, relubrication and corresponding product safety are also becoming increasingly important issues.

Thanks to the wide and diverse range of suitable products, products, processes, materials and lubricants we provide, iwis precision chains offer outstanding service life, the highest possible length accuracy and narrow tolerances for pair-matched chains in every application.

**iwis antriebssysteme – drive systems technology leader and your partner for every conveying solution!**

## Highlights

- Reliability and extremely long service life
- Highest possible length accuracy and pair tolerances
- Optimum selection of materials and lubricants
- Maintenance-free MEGAlife chains – for applications where relubrication is impossible or undesirable
- Local customer care by iwis staff

iwis antriebssysteme regards itself as a **development partner** and technology leader who can help you to meet the challenges you face. **State-of-the-art simulation and configuration tools** developed in-house help our design engineers to decide on the right products at an early stage.

### Your iwis specialist

#### Markus Glorius

Key Account Manager

Tel. +49 151 40243745

Markus.Glorius@iwis.com



iwis vCard – Scan and save my digital contact automatically!



## Product range chain and attachment versions

iwis reference	ISO	Pitch p (mm)	Ave. tensile strength $F_b$ (N)	Min. tensile strength $F_u$ (N)	Breaking area $f$ (cm <sup>2</sup> )	Weight per m $q$ (kg/m)	$b_1$ (mm) min.	$b_2$ (mm) min.	$g$ (mm) max.	Inner link $a_1$ (mm) max. <sup>1)</sup>	Outer link $a$ (mm) max. <sup>1)</sup>	Roller $d_1$ (mm) max.	Pin $d_2$ (mm) max.	
<b>Maintenance-free roller chains</b>														
L 85 ML	08 B-1	1/2	12,70	22.000	17.800	0,50	0,70	7,75	11,30	11,80	16,90	18,50	8,51	4,45
L 85 AML	08 A-1 ANSI 40	1/2	12,70	17.500	13.900	0,44	0,60	7,94	11,15	12,00	16,60	17,50	7,95	3,96
M 127 ML	12 B-1	3/4	19,05	30.000	28.900	0,89	1,25	11,75	15,62	16,20	22,70	23,60	12,07	5,72
M 128 AML	12 A-1 ANSI 60	3/4	19,05	41.000	31.300	1,06	1,47	12,70	17,75	18,00	25,30	26,70	11,91	5,96
M 1611 ML	16 B-1	1	25,4	75.000	60.000	2,10	2,70	17,02	25,45	21,10	36,10	36,90	15,88	8,28
M 2012 ML	20 B-1	1 1/4	31,75	120.000	95.000	2,92	3,72	19,56	29,1	26,2	41,6	43,3	19,05	10,17
<b>Special chains and double-pitch chains</b>														
EC-13-M-NI			20,0	35.500	34.200	1,35	2,00	16,00	22,50	19,00	32,10	35,90	12,00	6,00
LR206		1 1/4	31,75	28.000	22.400	1,65	1,20	28,75	32,20	15,10	38,70	42,80	10,16	5,08
LR248A		1 1/2	38,1	32.300	30.000	1,06	1,00	12,70	17,75	18,09	25,50	28,00	11,91	5,96

<sup>1)</sup> Differing dimensions for cranked links. If cranked links are fitted, it should be noted that the breaking strength of the chain may be reduced by approximately 20 %.



Various standard attachments



Asymmetrical bent attachments



Conic attachment plates



Push-fit connecting links with asymmetrical attachments



Push-fit connecting links with symmetrical attachments and plastic plates



Push-fit connecting links with attachments and spacing rollers as finished sub-assembly



Roller chains with bent attachments for pateroster lifts with pitches 60 mm and 70 mm



Double-pitch chains with triple rollers and attachments



Roller chains with special attachments and lateral ball bearings

## Maintenance-free iwis chains for added value



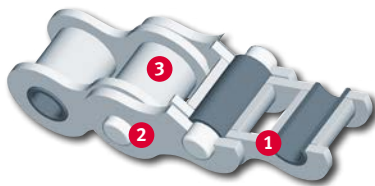
### MEGAlife

MEGAlife maintenance-free roller chains feature chemically nickel-plated individual components for corrosion protection, and can be used in a temperature range from -40° to +150°C.

Special oil-impregnated sintered bushes are a **highlight in terms of wear resistance and prolonged service life**, as they provide long-term self-lubrication of the chain bearing – no additional lubricants are required.

#### Highlights

- **Seamless sintered bush ①** made of a material developed specifically for this application, hardened and treated to optimize its tribological properties
- Pin ② with **wear-resistant, friction-optimized coating**
- Seamless roller ③ with **corrosion-resistant coating** and optimized geometry for the sintered bush



### b.dry

b.dry roller chains are made from rust- and maintenance-free CF stainless steel, and their optimized link design is a **high-precision highlight**. The secret of the b.dry range: “steel-on-steel” is a thing of the past!

Our b.dry bushes are made from a special high-performance polymer and are completely lubricant-free. To date, the properties of this material are unrivalled and unique.

#### Highlights

- **High-performance polymer bush ①** made from FDA-compliant material
- Thin-walled seamless **stainless steel bush ②**, ball-drifted
- Base chain: **Jwis CF stainless steel chain ③**



#### Benefits of our maintenance-free roller chains:

Optimized wear properties, very high fatigue strength and breaking strength, high-quality long-lasting corrosion protection, reduced downtime and maintenance costs for machines and plant, reduced risk of product or production facility contamination.

For more information, see our product flyer or online at [www.iwis.com/megalife](http://www.iwis.com/megalife)



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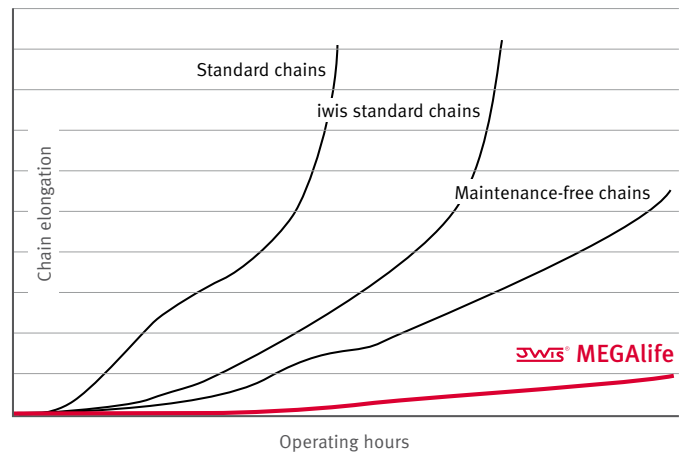
## Engineering

### Elongation

Increased productivity and higher output volumes mean that regular preventive maintenance of production facilities can only take place at long intervals, so it is vital to ensure that drive chains and conveyor systems are durable and completely reliable.

We reduce initial and operational wear with a special pre-stretching process that allows fast, easy and precise chain fitting, and optimize wear elongation with a balanced combination of ideal material matching, high-precision chain production and maintenance-free components.

**Our maintenance-free roller chains also prevent corrosion and stiffness.**



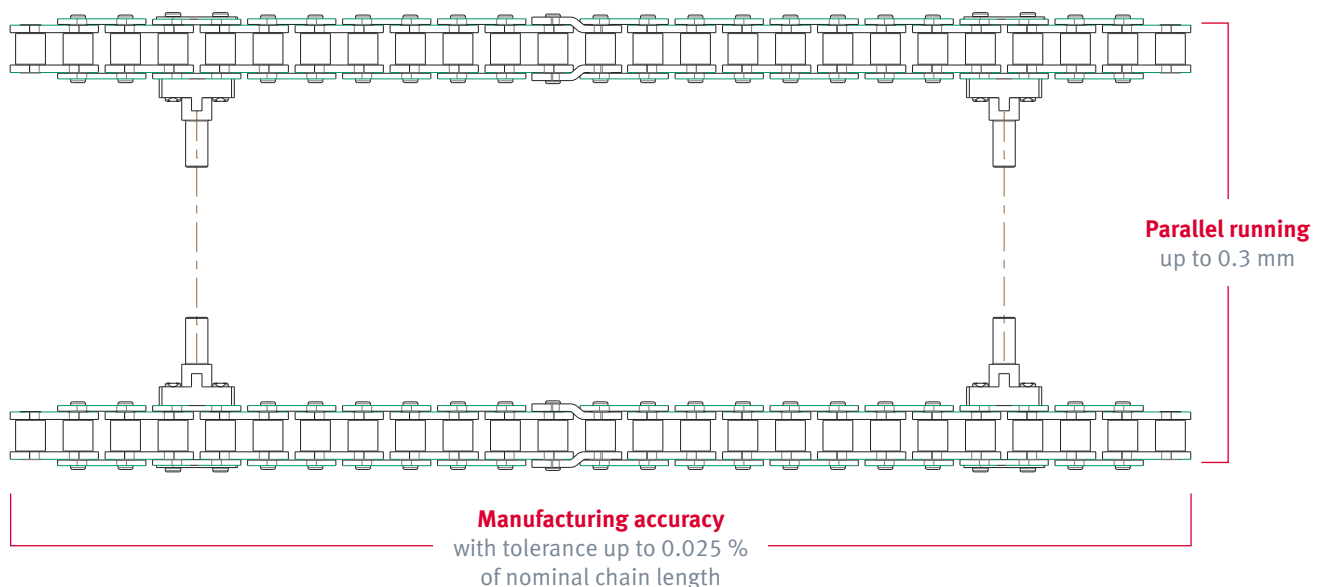
### Positioning / Accuracy

Applications in the confectionery industry often involve the conveying of finished products or moulds, which in turn requires the use of roller chains with restricted length tolerances to guarantee high-precision parallel drives and accurate relative positioning of chain attachments.

Chains manufactured to standard DIN ISO 606 must be produced to tolerances between +0 to +0.15 % of their nominal length under a defined measuring force and length. In the case of a 5-metre standard length chain, this can mean length deviations of up to 7.5 mm.

Thanks to a special production process, we are able to reduce the tolerance range of our JWIS precision chains even further – as little as 0.025 % of the nominal length – thereby achieving maximum possible accuracy within individual roller chains.

With parallel drives consisting of two chain strands, parallel running to within 0.3 mm – regardless of total chain length – can also be achieved, which guarantees accurate positioning.



## Chain lubrication

Most friction in chain drives occurs in the joint area, so lubrication here has a decisive influence on the service life of a chain drive. In the confectionery industry, the use of food-grade lubricants depends on operating conditions such as chain accessibility, maintenance intervals, risk of contamination and the intensity of cleaning processes.


When selecting a suitable lubricant, it is important to consider the substances which will come into contact with the chain in operation. Products such as chocolate, fruit jelly or powder can penetrate the chain joint, where they can neutralize the effect of lubricants and/or cause abrasion. Possible consequences are ineffective relubrication and stiff chain links.

Depending on application and operating conditions, we recommend the following **initial lubricants**:

### IP16 Oil-based food-grade lubricant

**IP16** provides optimum protection against wear and corrosion and ensures maximum penetration of the chain joint. This high-performance oil forms an effective, drip-proof protective film and allows trouble-free relubrication.


#### Technical data:

Chemical composition	Synthetic hydrocarbon oil + ester oil
Colour	Yellow
Viscosity	Kinematic (40 °C   104 °F): 15 cm <sup>2</sup> /s (1500 cSt)
Density	Approx. 0.86 g/cm <sup>3</sup> (20 °C   68 °F)
Physical state	Liquid
Operating temperature	-25 °C (-13 °F) to +120 °C (+248 °F)
NSF H1 certified	154891 

### EL-6 High-performance wax-based lubricant

**EL-6** is a wax-based chain lubricant with outstanding adhesive properties. Developed especially for food industry applications, this lubricant has a positive effect on wear and corrosion by forming a protective layer which prevents abrasive particles from penetrating the chain joint.

#### Technical data:

Structure	Paste
Colour	Beige
Viscosity	Approx. 125 mm <sup>2</sup> /s at +100 °C
Density	Approx. 0.89
Operating temperature	-25 °C to approx. +80 °C (changes state)
NSF H1 certified	154890 

**iWIDUR®**

## Relubrication

Our high-adhesion **VP6 Kombi Superplus Spray** is an ideal relubricant. It goes without saying that all these lubricants fulfil the strict FDA H1 requirements and are therefore suitable for food industry applications.

Our maintenance-free chains **MEGALife** and **CF b.dry** also offer outstandingly long chain service life, even without initial or follow-up lubrication (dry running).



### VP6 SuperPlus Spray

- Temperature range 0 °C to 250 °C
- Wide range of possible applications
- Easy dosage
- High-performance lubricant developed especially for chain applications
- Optimum penetration
- Silicone free



### NEW VP8 FoodPlus Spray

- NSF H1 certified (No. 157999)
- MOSH/MOAH-free
- Easy, economical dosage
- Excellent penetration to the chain joint (creep)
- Temperature range -35 °C to +135 °C
- Free from animal products and ethanol
- Silicone free

For more information, see our flyer „Preventive maintenance and relubrication“

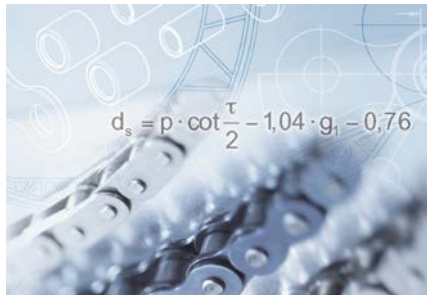


## iwis Services: close to our customers



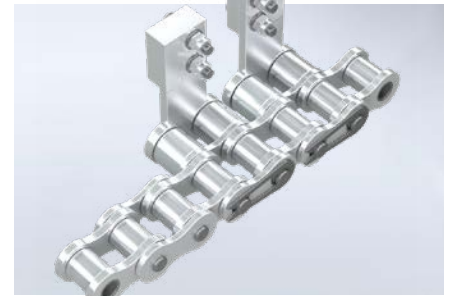
### On-site advice & expert evaluation

- Full assessment of chain drives and analysis of plant machinery
- Advice and recommendations from experts
- Application-specific solutions



### Technical support

- Calculation of chain drives ([www.iwis.com/chain-design](http://www.iwis.com/chain-design))
- Service life tests and benchmarking
- Fatigue strength, tensile strength and metallographic analyses
- 3D-printing models
- Technical documentation



### Individual solutions

- Wide range of attachment installation possibilities
- Redesign and optimization of attachments
- Customer-specific article inscriptions



### Chain condition monitoring

Chain wear elongation monitoring system (CCM) as an ideal aid in preventive maintenance.



### Online tools

- CAD drawings
- ChainFinder
- Chain Configurator



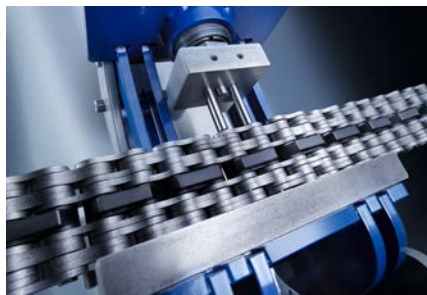
### Online Shop – [www.iwis.com/shop](http://www.iwis.com/shop)

At-a-glance product information and fast-track ordering for standard chain lengths.



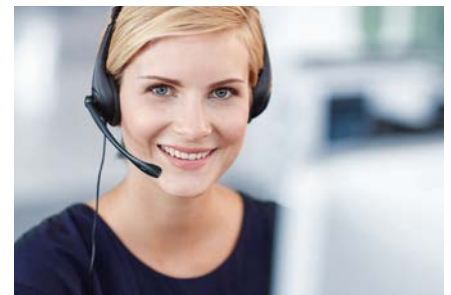
### Drive components

- Sprockets
- Idler wheels
- Chain tensioners



### iwiTools

- Chain breaking tools
- Chain pullers
- Pin extractors



### Customer Service

Tel. 089 76909-1500  
Fax 089 76909-1198  
[sales-muenchen@iwis.com](mailto:sales-muenchen@iwis.com)

# Our subsidiaries

## Germany

iwis antriebssysteme GmbH & Co. KG  
Albert-Roßhaupter-Straße 53  
81369 München  
Tel. +49 89 76909-1600  
Fax +49 89 76909-1198  
sales-muenchen@iwis.com

## Germany

iwis antriebssysteme GmbH  
Essener Straße 23  
57234 Wilnsdorf  
Tel. +49 2739 86-0  
Fax +49 2739 86-22  
sales-wilnsdorf@iwis.com

## Germany

iwis agrisystems  
Schützenweg 5  
36205 Sontra  
Tel. +49 5653 9778-0  
Fax +49 5653 9778-26  
agrisystems@iwis.com

## Brazil

iwis Sistemas de Transmissão  
de Energia Mecânica Ltda.  
Rua Bento Rosa, nº 1816  
Bairro Hidráulica  
95.900-000 Lajeado, RS  
Tel. +55 51 3748-7402  
salesbrazil@iwis.com

## China

iwis drive systems (Suzhou) Co., Ltd.  
No. 266 LvliangShan Road  
215153 Suzhou SND  
Tel. +86 512 8566-3010  
Fax +86 512 8566-3009  
salescn@iwis.com

## France

iwis systèmes de transmission  
10, rue du Luxembourg  
69330 Meyzieu  
Tel. +33 4374515-70  
Fax +33 4374515-71  
salesfr@iwis.com

## Great Britain

iwis drive systems Ltd.  
Unit 8c Bloomfield Park  
Bloomfield Road, Tipton  
West Midlands, DY4 9AP  
Tel. +44 12 15213600  
Fax +44 12 15200822  
salesuk@iwis.com

## India

iwis drive systems India Pvt. Ltd.  
„Anisha“, Unit No3, SR. No. 84/1  
Regency Cosmos, Baner Mahalunge Road,  
Opposite to Amruta Hotel  
Baner, Pune, Maharashtra-411045  
Tel. +91 20 67110305  
salesin@iwis.com

## Italy

iwis drive systems Srl  
Via Carlo Rota, 10  
20090 Monza (MB)  
Tel. +39 340 9296142  
Fax +49 89 7690949-1726  
italia@iwis.com

## Canada

iwis drive systems, Inc.  
101-19097, 26th Avenue,  
Surrey BC V3Z 3V7  
Tel. +1 604 560-6395  
Fax +1 604 560-6397  
salesca@iwisusa.com

## South Korea

iwis engine systems Korea Co., Ltd.  
Office No. 403-2, 322 Yanghyeon-ro  
(Yatap-dong, Korea Design Center)  
Bundang-Gu, Seongnam Si,  
Gyeonggi-Do, Korea (ZIP) 13496  
Tel. +82 31 788-7545  
saleskor@iwis.com

## Switzerland

iwis AG Kettentechnik  
Bahnweg 4 (Postfach)  
5504 Othmarsingen  
Tel. +41 62 8898999  
Fax +41 62 8898990  
info@iwis-ketten.ch

## South Africa

iwis drive systems, (Pty) Ltd.  
Unit 3, 127 Koornhof Road  
Meadowdale, 1613  
Tel. +27 11 392-2306  
Fax +27 11 392-3295  
salessa@iwis.com

## Czechia

iwis antriebssysteme spol. s r.o.  
Přísecká 893  
38601 Strakonice  
Tel. +420 383 411811  
Fax +420 383 321695  
salescz@iwis.com

## Turkey

iwis tahrik sistemleri ltd. şti.  
Kağıthane Ofis Park 4C-Blok  
Bağlar Cad. No: 14  
34406 Kağıthane-Istanbul  
Tel. +90 212 939-3843  
Fax +90 212 939-3701  
salestr@iwis.com

## USA

iwis drive systems, LLC  
Building 100, 8266 Zionsville Road  
Indianapolis, IN 46268  
Tel. +1 317 821-3539  
Fax +1 317 821-3569  
sales-us@iwis.com

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

**iwis**  
wir bewegen die welt

Your sales representative

