KWS INC. | THIELE®

KWS CATALOG 6.0

Rev. 1

Made in Germany

> Lifting Technology

> Load Securing Technology

> Light Material Handling

> Application Technology

CONTACT US

Sales & Service

Our friendly sales team is available for quotes, receiving & processing orders, and technical service.

Address

KWS Inc.
P.O. Box 470487
Tulsa, OK 74147
USA

Toll Free: +1 (800) 872-9313
Phone: +1 (539) 367-2274
Fax: +1 (539) 367-2278
email: sales@kwschain.com

Business hours

Monday to Friday:
8.00 am – 5:00 pm Central Time

WARNINGS:

Warning instructions are included in this catalog. Operating instructions for each product are either included with the products and / or are available at www.kwschain.com.
Manual instructions must always be reviewed before operation. Failure of the product can occur due to misapplication, abuse or improper maintenance, resulting in possible property damage, personal injury, or death.
Ratings shown are applicable to new products. Working Load Limits indicate the greatest force or load a product can take. Extraordinary conditions must be taken into account.
The working load limit of a chain sling must not exceed the working load limit of the weakest component in the system. The proof load on all items in this catalog is 2 times the working load limit unless otherwise shown.
Please also read the manual instructions and users guide on page 173-179 and download manuals using the QR-code below or from our website www.kwschain.com.

QR-Code for downloading operating and mounting instructions

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Company Profile

KWS INC.
A MEMBER OF THE THIELE-GROUP

Our parent Company

THIELE was established in Iserlohn-Kalthof, Germany more than 85 years ago and the company is now one of the world's leading manufacturers of chain systems. The forging of quality components has become our focus and our strength. Customers benefit from our established expertise in product design and manufacturing, with everything we supply being produced at our plant in Iserlohn, Germany.

In addition to supplying the traditional markets for conveying and lifting equipment, we also operate in new future-oriented sectors like mobility and renewable energies.

Our ultimate goal is customer satisfaction based on fulfillment of high quality products that exceed enviromental and safety requirements. THIELE has a quality management system certified according to ISO 9001 and an environmental management system certified according to ISO 14001.

THIELE is also certified according to ISO 50001 energy management system and ISO 45001 occupational health and safety management system.

The longevity of our high-quality products saves resources and protects the environment.

Therefore, they enjoy an excellent reputation among our customers worldwide.

KWS Inc.

In 1995 the company THIELE GmbH & Co. KG established operations in the United States specifically focused on the sales of the THIELE brand of overhead lifting chain and components. Since then, Conveying Chain, Fishing Chain, Lifting Points, Manual Cranes, Hoist Chains as well as Magnet Chain Slings have been added to the product line. New products are continually being added, most recently various fittings and additional trade sizes to the Grade 100-Product range. Today, KWS Inc., with its main warehouse in Beckley, WV and regional warehouses in Chicago, IL and Los Angeles, CA, is able to supply German-made quality products to its valuable customers quickly. Our commitment is: "You need it, we have it"! Our logistics system ensures stock availability of at least 6-month sales, unique in the industry! THIELE GmbH & Co. KG is an innovative manufacturer with a long tradition in the production of round steel chains and forged parts for the Lifting technology sector.

Still today the company is family-owned. In close cooperation with our customers we are always searching for better and more innovative solutions. We are also supported by renowned universities and leading research institutes. We are continuously researching new knowledge in material technique and shaping in order to develop lighter, more solid, and safer products.


DNV

MANAGEMENT SYSTEM
CERTIFICATE

This is to certify that the management system of
THIELE
Thiele GmbH & Co. KG
Werkstr. 3, 58640 Iserlohn / Kalthof, Germany

has been found to conform to the Energy Management System standard:
ISO 50001:2018

This certificate is valid for the following scope:
Design, Development, Production, Sales and Service of link and conveyor chains as well as components and accessories for:
- mining
- lifting technology
- debris handling

The scope of the system includes all processes and assets under the company's control at the certified site.

IAF

In addition to aforementioned companies, the following also belong to the THIELE-group:

Schlieper GmbH & Co. KG (GER)
RH THIELE GmbH & Co. KG (GER)
Reilloc Chain Ltd. (UK)
THIELE Asia Pte. (SIN)
RM Wilson Comp. (USA)
T-Con Ltd. (CN)

KWS Inc. Conditions of Sale & Limited Warranty

Payment Terms: 1% 10 days, net 30 days from date of invoice

Delivery Terms: F.O.B. shipping point (within continental US only)
Freight prepaid at lowest tariff rate on shipments of 2,000+ lbs.

Cut Chain: A minimum charge of 20% per foot will be applied to each length of chain cut from stock

Special Items: All orders for non-stock items will be accepted based on the understanding that the delivered quantity can vary plus or minus 10% from the original quantity and invoice will be issued accordingly.

Returns: Return requests will only be honored on standard items in new condition and within 90 days from original invoice date. The customer is responsible for return freight. If returned item is part of original prepaid shipment, a portion of original freight will also be assessed against the returned item. Minimum standard restocking charge is 20% or US$ 50.00 whichever is greater. If item is not in new condition, credit will not be issued and item will be discarded.

WARNINGS: Download and read operating instructions before usage! Please use the QR-code below to retrieve the files or go to www.kwschain.com.
To prevent accidents, proper selection, application, and loading of chains and accessories is absolutely necessary.

NEVER exceed the published working load limits of chains and accessories and NEVER use slings outside the specified temperature range.
Accessories must always have equal or higher working load limits than the chain.

THIELE Plant Standard (TWN) THIELE products acc. to THIELE Plant Standards (TWN) fulfill the requirements of the EC Machinery Directive CE for Machines, particularly for the safety relevant components.

Disclaimer: KWS Inc. conditions of sale apply error and omissions excepted.

KWS | THIELE®

YOUR ONE-STOP PROVIDER

Our range of services:

- Bending
- Forging
- Different welding processes
- Laser, plasma and flame cutting
- Multi-spindle milling machines
- CNC machining
- Assembly and end production
- Heat treatment
- Painting and surface finishing

General Information

Product development

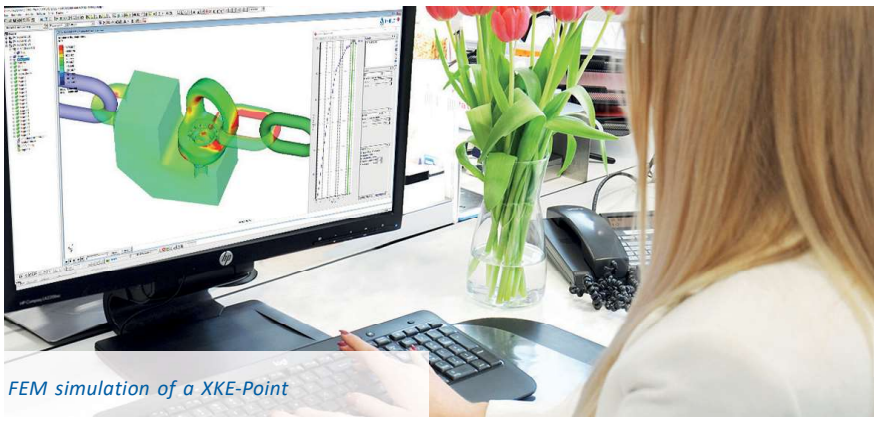
Our in-house manufacturing base covers the entire process from raw material through to the final product.
High-level expertise leads to short developing times, especially when new products are designed.

Modern 5-spindle machining centre

Manufacture of dies, trim dies and calibration tools

FEM simulation

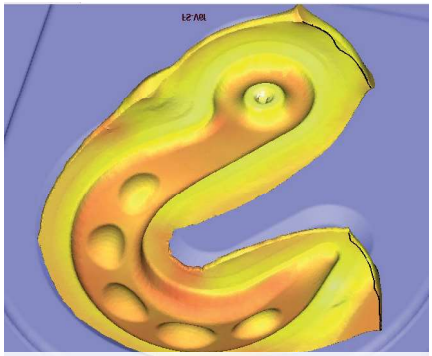
With precise calculations and the experience of our engineering team, we carry out stress analysis before production begins. This makes the product development process highly efficient and optimized to the maximum.



FEM simulation of a XKE-Point

Material flow simulation

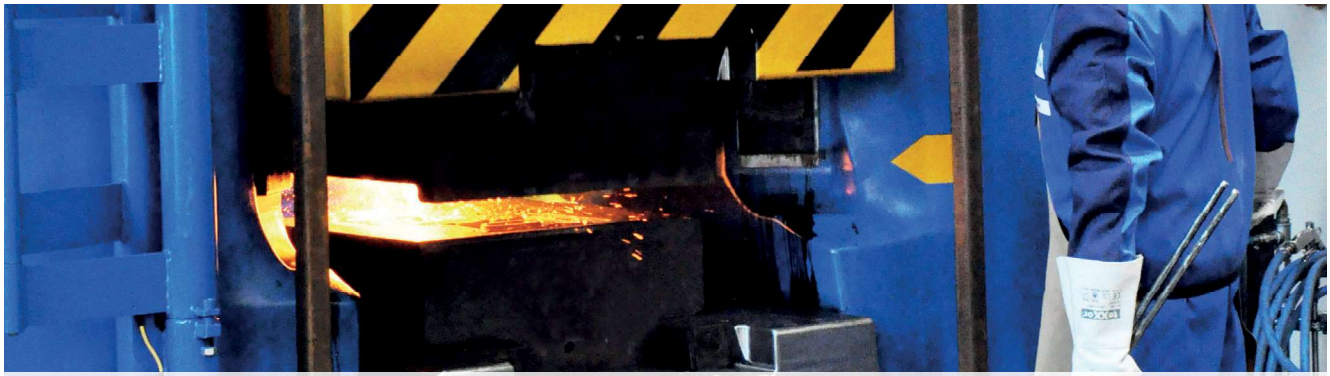
3D simulations optimize the forging process, enable precise volume calculations, increase efficiency and have a positive impact on the product quality.



Material flow simulation

CNC machining


Lasco



WHAT YOU CAN EXPECT FROM US

High added value and state-of-the-art forging aggregates

Our range services:

Forging machines (16 - 160 kJ) | forging presses (up to 1,600 t)
component weights from 100 g to 100 kgs | lengths up to 1,350 mm

Our forged products are based around a large selection of materials:

- Chain steels (DIN 17115)
- Non-alloy heat-treatable steels (DIN EN ISO 683-1)
- Alloy heat-treatable steels (DIN EN ISO 683-2)
- Case-hardened steels (DIN EN ISO 683-3)
- Non-alloy structural steels (DIN EN ISO 10025-2)

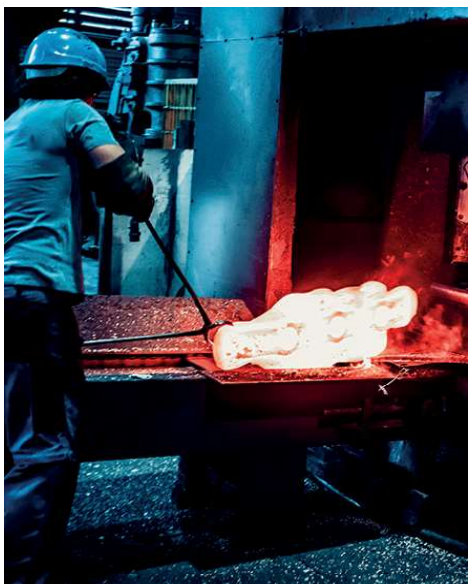
Special steels, e.g. high-alloy corrosion-resistant, heat-resistant and antimagnetic steels, are available on request.

Heat treatment:

A process-based heat treatment stage delivers the final product characteristics. Our state-of-the-art, fully automated heat treatment plant ensures that the end-products meet the highest mechanical requirements.

QR-Code to movie of Mr. Thiele making the first blow forge of the new forging hammer.

Square billets (edge length 50 to 120 mm) or round bar material (18.5 to 200 mm in diameter) can be used as raw material.



KWS SERVICE

KWS Catalog 6.0

You can download our KWS Catalog.

KWS Catalog 6.0

3D CAD Data

All user information, geometry data and CAD download can be found on the respective product pages of our website *www.kwschain.com*. Our website provides an excellent resource for engineer-friendly files!

Website/ Products

Operating and Mounting Instructions

The operating and assembly instructions for all THIELE lifting products contain important information for a safe operation in the sense of the EC Machinery Directive. They must be read before operation.

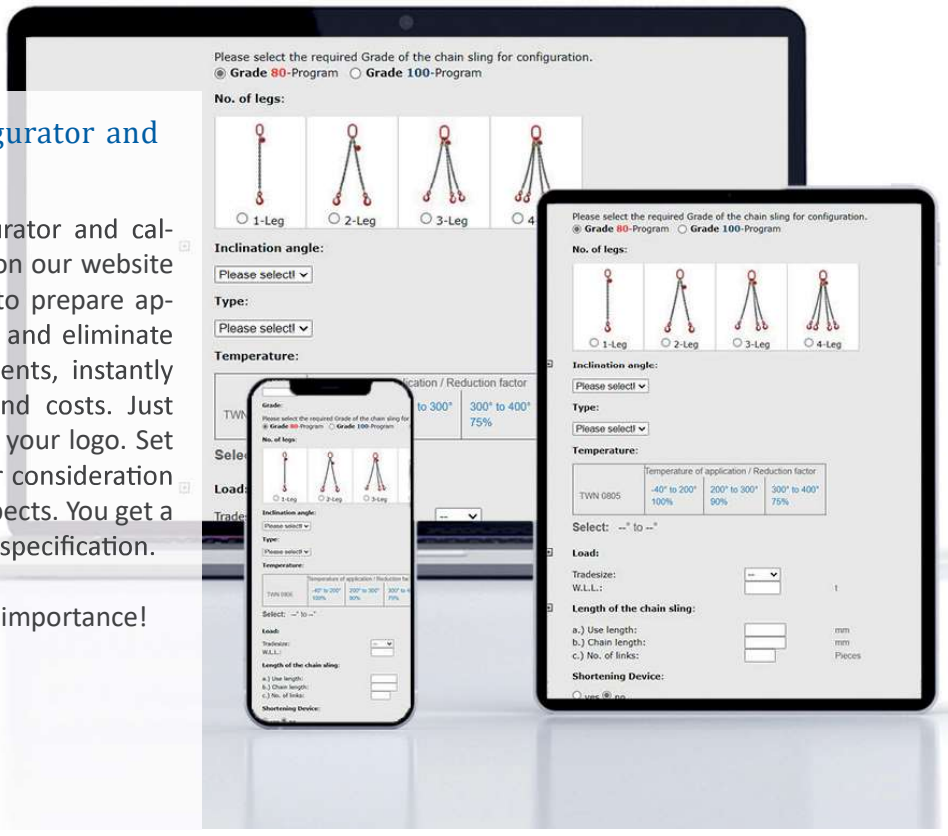
Operating and mounting instructions

THIELE Chain Sling Configurator and Calculator (TKGK)

The THIELE chain sling configurator and calculator in the customer portal on our website makes it much easier for you to prepare appropriate offers. You save time and eliminate errors when selecting components, instantly calculating lengths, weights, and costs. Just upload your company data and your logo. Set up your customized offer under consideration of commercial and technical aspects. You get a structured offer with a detailed specification.

At THIELE, SERVICE is of utmost importance!

Please ask for your login data.



THIELE-LIFTING-EVOLUTION

THIELE lifting evolution is the brand feature of the THIELE Lifting components.

All new THIELE lifting components offered by KWS Inc. are developed with a new patented design.
The design ensures you can differentiate THIELE products from the other brands.
For more than 85 years, THIELE stands for world class quality with our rugged design.
The ellipses style design adds value by improving consumer confidence while using THIELE components for their lifting application needs. Our in the field knowledge with lifting products have shown that the assured product properties are not always being upheld. Standards are often cited but not extensively fulfilled.
The requirements on safety for lifting products are more than a determination of a breaking force.

The intensity of intermediate quality controls within the production cycle creates a difference in the end result of the quality of the product. Our motto:
"At THIELE you always know, what you get!"
The ellipses style hooks will improve the orientation while in use. The enhanced design makes our product more modern, and dynamic compared to the competition. "Lifting, moving and securing of loads in shape". The improved design is a reflection of our consumers' expectations of THIELE for decades. We are committed to investing in our superior quality standards.
The result of years of experience with controlled and safer sophisticated processes in our production.
"MADE BY THIELE!"

Not available on Connectors, Master Links and Lifting Points.

Our Product Range

Lifting Products
Grade 100

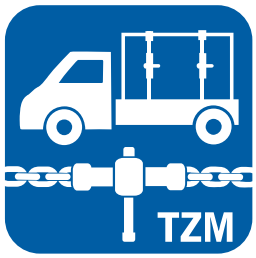
Lifting Products
Grade 80

Lifting Products
Offshore

Lifting Points

Hoist Chains

Load Lifting Equipment



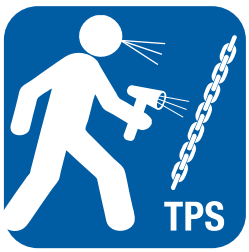
Lashing Products

Poultry Chains

Farming Chains

Chain Sprockets

Fishing Chains

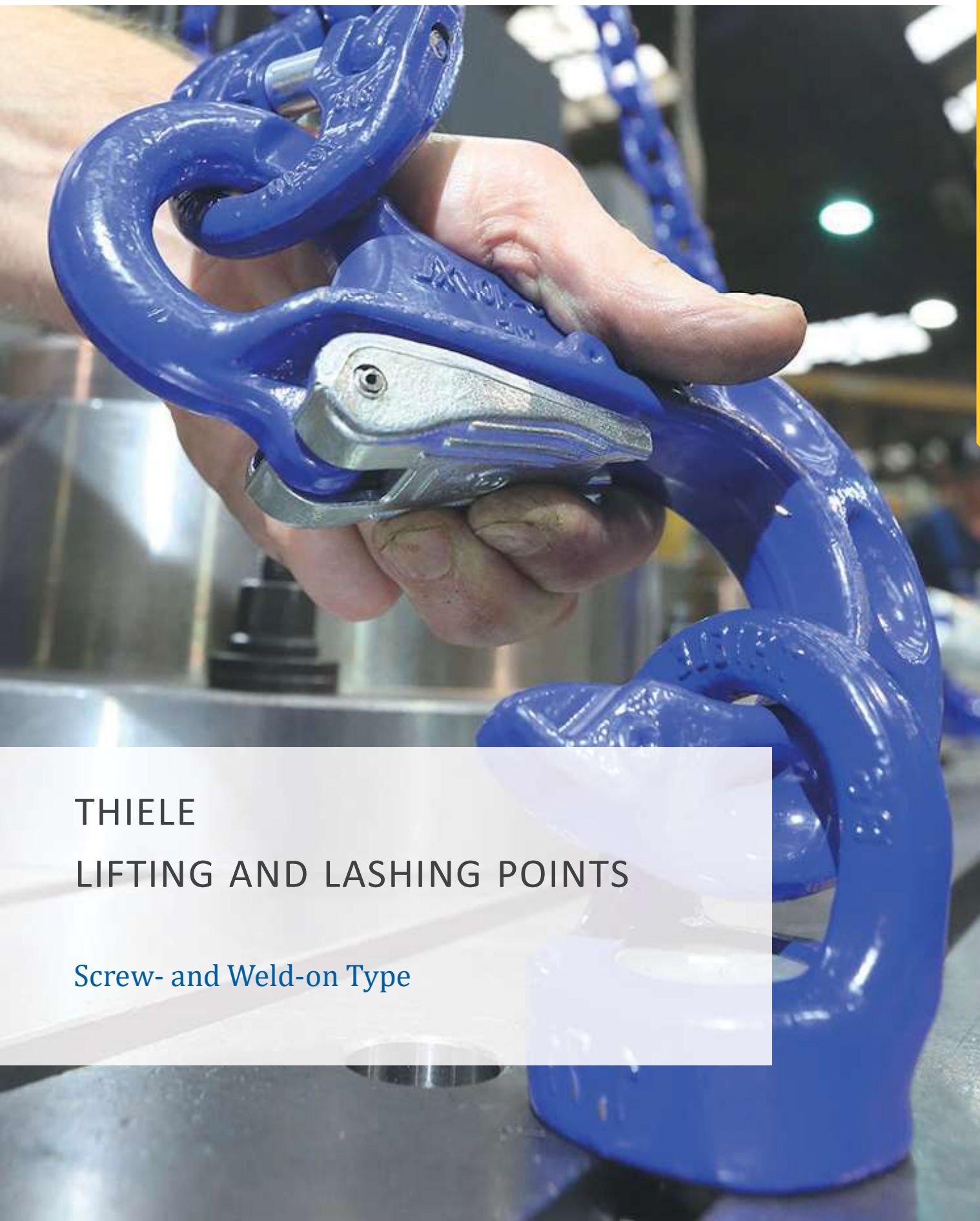


Inspection Service

Engineering

TLP

KWS INC. | THIELE®



TLP

THIELE
LIFTING AND LASHING POINTS

Screw- and Weld-on Type

Product Overview - Lifting Points

Pages 100-107	Lifting Points, Screw-Type				
	TWN 0121	TWN 0122	TWN 0123	TWN 0127	TWN 1120
					
	TWN 1830	TWN 1884	TWN 1890		
					

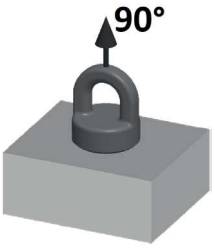
Pages 108-115	Lifting Points, Weld-on Type				
	TWN 0119A	TWN 0124	TWN 0850/1	TWN 1908/0	TWN 0850/2
					
	TWN 0913	TWN 1380	TWN 0949	TWN 1490	TWN 1882
					
	TWN 1473	TWN 1880	TWN 1477	TWN 1471	
					

Page 116	Hitches				
	TWN 0301	TWN 0302	TWN 0304	TWN 0308	TWN 0321
					
	TWN 0323				
					

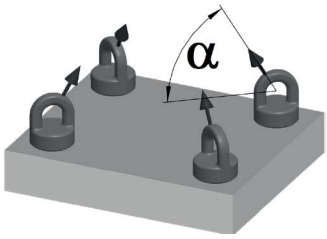
Lifting Points

Selection Criteria for Lifting Points

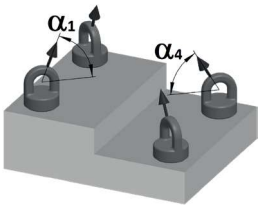
1. Determine the weight of the load to be lifted.



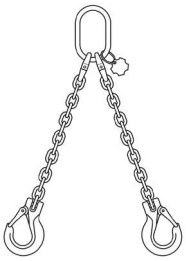
2. Determine the number of required lifting points, depending on the number of available legs of the chain slings and the number of available fitting positions (see pictographs on pages 100-103 and 108-109).

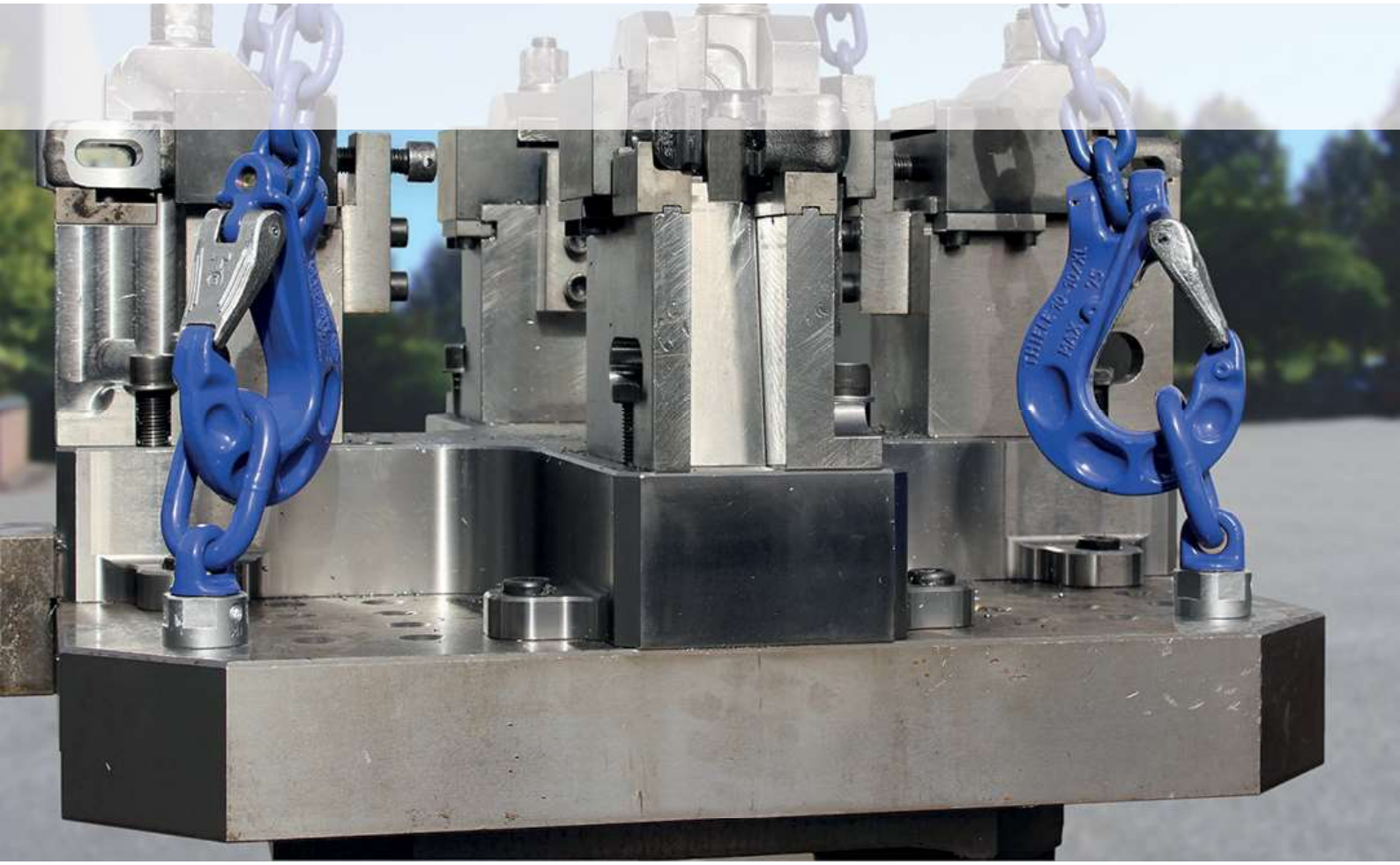


3. Determine the trade size by taking the inclination angle into consideration.



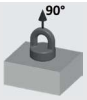
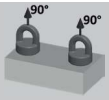
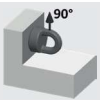
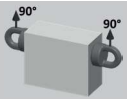
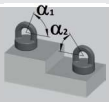
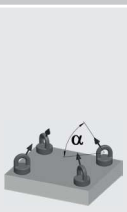
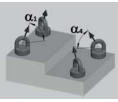
4. Select the suitable lifting point by taking the type of application and the determined working load limit under consideration.





Lifting Points, Screw-Type

Working Load Limit Table for Lifting Points, Screw-Type

Application	Inclination Angle α	Number of Legs	TWN 0121 Swivel Lifting Points								TWN 0122 Screw-Type Lifting Points							
																		
			Working Load Limit [000 lbs]															
Nominal Working Load Limit					2,5	4,4	6,9	11,7			6.9	11.7	17.6	33.1	46.7	55.1	69.5	79.4
Screw Size					M16	M20	M24	M30			M16	M20	M30	M36	M42	M45	M56	M56
	90°	1			2.5	4.4	6.9	11.7			6.9	11.7	17.6	33.1	46.7	55.1	69.5	79.4
	90°	2			5	8.8	13.8	23.4			13.8	23.4	35.2	66.2	99.4	110.2	139	158.8
	90°	1			2.5	4.4	6.9	11.7			6.9	11.7	17.6	33.1	46.7	55.1	69.5	79.4
	90°	2			5	8.8	13.8	23.4			13.8	23.4	35.2	66.2	99.4	110.2	139	158.8
	30°≤ α < 45°	2			2.5	4.4	6.9	11.7			6.9	11.7	17.6	33.1	46.7	55.1	69.5	79.4
	45°≤ α < 60°	2			3.5	6.2	9.8	16.5			9.8	16.5	24.9	46.8	66	77.9	98.3	112.3
	60°≤ α < 75°	2			4.3	7.6	12	20.3			12	20.3	30.5	57.3	80.9	95.4	120.4	137.5
	asymmetry [1]	2			2.5	4.4	6.9	11.7			6.9	11.7	17.6	33.1	46.7	55.1	69.5	79.4
	30°≤ α < 45°	3+4			3.7	6.6	10.3	17.5			10.3	17.5	26.4	49.6	70	82.6	104.2	119.1
	45°≤ α < 60°	3+4			5.3	9.3	14.6	24.8			14.6	24.8	37.3	70.2	99.1	116.9	147.4	168.4
	60°≤ α < 75°	3+4			6.5	11.4	17.9	30.4			17.9	30.4	45.7	86	121.3	143.2	180.6	206.3
	asymmetry [1]	3+4			2.5	4.4	6.9	11.7			6.9	11.7	17.6	33.1	46.7	55.1	69.5	79.4

[1] *Reduced working load limit acc. to the DIN 685-5.*

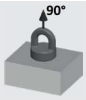
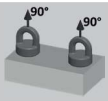
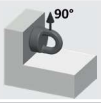
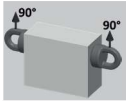
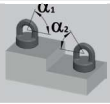
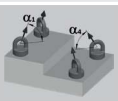
Lifting Points, Screw-Type

Working Load Limit Table for Lifting Points, Screw-Type

TWN 0123 Screw-Type Lifting Points								TWN 0127 Screw Type Lifting Points MDB							
															
Working Load Limit [000 lbs]															
	2.5	2.5	4.4	4.4	6.9	6.9					6.9	11.7			
	M16	M16	M20	M20	M24	M24					M20	M24			
	2.5	2.5	4.4	4.4	6.9	6.9					6.9	11.7			
	5	5	8.8	8.8	13.8	13.8					13.8	23.4			
	2.5	2.5	4.4	4.4	6.9	6.9					6.9	11.7			
	5	5	8.8	8.8	13.8	13.8					13.8	23.4			
	2.5	2.5	4.4	4.4	6.9	6.9					6.9	11.7			
	3.5	3.5	6.2	6.2	9.8	9.8					9.8	16.5			
	4.3	4.3	7.6	7.6	12	12					12	20.3			
	2.5	2.5	4.4	4.4	6.9	6.9					6.9	11.7			
	3.7	3.7	6.6	6.6	10.3	10.3					10.3	17.5			
	5.3	5.3	9.3	9.3	14.6	14.6					14.6	24.8			
	6.5	6.5	11.4	11.4	17.9	17.9					17.9	30.4			
	2.5	2.5	4.4	4.4	6.9	6.9					6.9	11.7			

Lifting Points, Screw-Type

Working Load Limit Table for Lifting Points, Screw-Type

Application	Inclination Angle α	Number of Legs	TWN 1120 X-TITAN Lifting Points								TWN 1830 X-TREME Lifting Points															
																										
			Working Load Limit [000 lbs]																							
Working Load Limit			0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0	1.3	3.1	5.5	7.7	11.7	17.6	22	27.5	27.5	27.5	37.5	37.5	69.4	77.1	88.1	88.1
Screw Size			M8	M10	M12	M16	M20	M24	M30	M36	M10	M12	M16	M20	M24	M30	M36	M42	M45	M48	M52	M56	M64	M72	M80	M90	M100
	90°	1	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0	2.6	6.2	11.7	15.4	22.0	33.0	39.7	44.1	44.1	44.1	61.7	61.7	110.2	110.2	110.2	110.2
	90°	2	1.3	2.8	4.4	7.4	11.0	17.6	26.4	35.2	44.0	5.2	12.4	23.4	30.8	44.0	66.0	79.4	88.2	88.2	88.2	123.4	123.4	220.4	220.4	220.4	220.4
	90°	1	0.7	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0	1.6	3.7	6.2	8.8	13.9	20.9	28.7	33.1	35.3	35.3	48.5	48.5	88.2	105.8	110.2	110.2
	90°	2	1.3	2.8	4.4	7.4	11.0	17.6	26.4	35.2	44.0	3.2	7.4	12.4	17.6	27.8	41.8	57.4	66.2	70.6	70.6	97	97	176.4	211.6	220.4	220.4
	30° ≤ α < 45°	2	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0	1.6	3.7	6.2	8.8	13.9	20.9	28.7	33.1	35.3	35.3	48.5	48.5	88.2	105.8	110.2	110.2
	45° ≤ α < 60°	2	0.93	2.0	3.1	5.2	7.8	12.4	18.7	24.9	31.1	2.3	5.3	8.7	12.5	19.6	29.6	40.5	46.8	49.9	49.9	68.6	68.6	124.7	149.7	155.9	155.9
	60° ≤ α < 75°	2	1.1	2.4	3.8	6.4	9.5	15.2	22.9	30.5	38.1	2.9	6.5	10.7	15.3	24.1	36.3	49.6	57.3	61.1	61.1	84	84	152.7	183.3	190.9	190.9
	Asymmetry [1]	2	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0	1.6	3.7	6.2	8.8	13.9	20.9	28.7	33.1	35.3	35.3	48.5	48.5	88.2	105.8	110.2	110.2
	30° ≤ α < 45°	3+4	1.0	2.1	3.3	5.5	8.2	13.2	19.8	26.4	33.0	2.5	5.6	9.3	13.2	20.8	31.4	43.0	49.6	52.9	52.9	72.8	72.8	132.3	158.7	165.3	165.3
	45° ≤ α < 60°	3+4	1.4	3.0	4.7	7.8	11.7	18.7	28.0	37.3	46.7	3.5	8	13.1	18.7	29.5	44.4	60.8	70.2	74.8	74.8	102.9	102.9	187.1	224.5	233.8	233.8
	60° ≤ α < 75°	3+4	1.7	3.6	5.7	9.6	14.3	22.9	34.3	45.7	57.2	4.3	9.7	16.0	22.9	36.1	54.4	74.5	85.9	91.6	91.6	126	126	229.1	274.9	286.4	286.4
	Asymmetry [1]	3+4	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0	1.6	3.7	6.2	8.8	13.9	20.9	28.7	33.1	35.3	35.3	48.5	48.5	88.2	105.8	110.2	110.2

[1] *Reduced working load limit acc. to DIN 685-5.*

Lifting Points, Screw-Type

Working Load Limit Table for Lifting Points, Screw-Type

TWN 1884 Screw Type XKE-Points											TWN 1890 Screw Type XS-Points								
																			
Working Load Limit [000 lbs]																			
0.7	1.1	2.2	3.7	5.7	7.7	13.2	17.6	25.4	28.7	32.0	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0
M8	M10	M12	M16	M20	M24	M30	M36	M42	M45	M48	M8	M10	M12	M16	M20	M24	M30	M36	M42
0.7	1.1	2.2	3.7	5.7	7.7	13.2	17.6	25.4	28.7	32.0	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0
1.3	2.2	4.4	7.5	11.5	15.4	26.5	35.3	50.7	57.3	63.9	1.3	2.8	4.4	7.4	11.0	17.6	26.4	35.2	44.0
0.7	1.1	2.2	3.7	5.7	7.7	13.2	17.6	25.4	28.7	32.0	0.7	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0
1.3	2.2	4.4	7.5	11.5	15.4	26.5	35.3	50.7	57.3	63.9	1.3	2.8	4.4	7.4	11.0	17.6	26.4	35.2	44.0
0.7	1.1	2.2	3.7	5.7	7.7	13.2	17.6	25.4	28.7	32.0	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0
0.9	1.6	3.1	5.3	8.1	10.9	18.7	24.9	35.9	40.5	45.2	0.93	2.0	3.1	5.2	7.8	12.4	18.7	24.9	31.1
1.1	1.9	3.8	6.5	9.9	13.4	22.9	30.5	43.9	49.6	55.4	1.1	2.4	3.8	6.4	9.5	15.2	22.9	30.5	38.1
0.7	1.1	2.2	3.7	5.7	7.7	13.2	17.6	25.4	28.7	32.0	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0
1.0	1.7	3.3	5.6	8.6	11.6	19.8	26.5	38.0	43.0	48.0	1.0	2.1	3.3	5.5	8.2	13.2	19.8	26.4	33.0
1.4	2.3	4.7	8.0	12.2	16.4	28.1	37.4	53.8	60.8	67.8	1.4	3.0	4.7	7.8	11.7	18.7	28.0	37.3	46.7
1.7	2.9	5.7	9.7	14.9	20.0	34.4	45.8	65.9	74.5	83.1	1.7	3.6	5.7	9.6	14.3	22.9	34.3	45.7	57.2
0.7	1.1	2.2	3.7	5.7	7.7	13.2	17.6	25.4	28.7	32.0	0.66	1.4	2.2	3.7	5.5	8.8	13.2	17.6	22.0

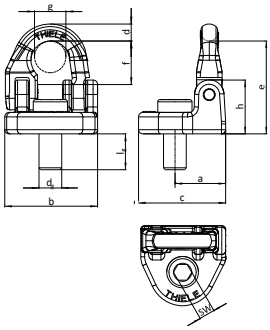
Lifting Points, Screw-Type

TWN 0121

Swivel Lifting Points NEW

The screw-type rotating lifting points TWN 0121 are predominantly used in the mold- and tool-making industry. The sliding disc enables a twist-free alignment of the chain strands. The eyelet allows easy assembling with other lifting components. The manufacturing and testing requirements are based on DIN EN 1677-1 and ISO 8539.

SAFETY 4 : 1 | DGUV ZERT | CE | 100 % | 360°



Screw Size d_g [mm]	Article-No.	Working Load Limit [lbs]	Thread Length l_g [inch]	Dimensions [inch]									Weight app. [lbs]
				e	f	c	b	h	g	d	SW	a	
M16[1)]	F35000	2,500	0.98	2.56	1.18	2.40	2.56	1.50	0.87	0.47	0.47	1.42	1.54
M20 NEW	F350100	4,500	1.26	3.15	1.34	3.07	3.54	1.93	1.10	0.67	0.55	1.77	3.44
M24[1)]	F35020	7,100	1.42	3.86	1.77	3.62	3.98	2.32	1.30	0.75	0.67	2.05	5.73
M30[1)]	F35030	12,000	2.01	4.72	2.17	4.45	4.92	2.83	1.77	0.98	0.87	2.44	10.14

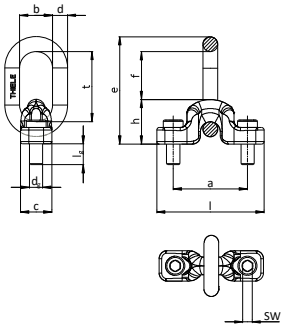
[1)] *TWN 0121/1*

TWN 0122

Screw-type Lifting Points

The screw-on lifting points TWN 0122 are predominantly used for the transportation of heavy moulds, tools, dies, machine elements and steel constructions. The intermediate links allow an easy assembling with other lifting components. The manufacturing and testing requirements comply with DIN EN 1677-1 and ISO 8539.

SAFETY 4 : 1 | DGUV ZERT | CE | > 180°



Screw Size d_g [mm]	Article-No.	Working Load Limit [lbs]	Thread Length l_g [inch]	Dimensions [inch]										Weight app. [lbs]
				e	f	a	b	l	d	h	t	c	SW	
M16	F35070	7,100	0.98	4.41	2.24	3.54	1.57	5.12	0.71	2.17	3.35	1.50	0.47	3.24
M20	F35075	12,000	1.42	5.87	3.15	4.53	1.97	6.50	0.87	2.72	4.53	1.77	0.55	5.95
M30	F35080	18,100	1.97	7.20	3.66	5.91	2.56	8.35	1.02	3.50	5.51	2.17	0.87	13.10
M36	F35095	34,200	2.09	8.54	4.13	6.89	3.15	10.04	1.42	4.41	6.30	2.83	1.06	24.43
M42	F35098	47,700	2.64	10.31	5.20	7.87	3.94	11.61	1.77	5.12	7.87	3.54	1.26	44.29
M45	F35101	55,100	2.64	10.31	5.20	7.87	3.94	11.61	1.77	5.12	7.87	3.54	1.26	45.30
M56	F35102	72,300	3.46	13.23	7.60	9.06	4.33	12.99	1.89	5.63	10.63	3.94	1.42	69.67
M56	F35285	79,400	3.46	13.23	7.60	9.06	4.33	12.99	1.89	5.63	10.63	3.94	1.42	69.67

Lifting Points, Screw-Type

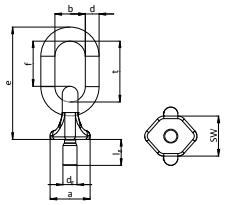
Screw-type Lifting Points

TWN 0123

The screw-type lifting points TWN 0123 are predominantly used for the transportation of moulds, tools, dies, machine parts and steel constructions. The intermediate links allow an easy assembling with other lifting components. The manufacturing and testing requirements comply with DIN EN 1677-1 and ISO 8539.

SAFETY 4 : 1 | CE

Screw Size d_g [mm]	Article-No.	Working Load Limit [lbs]	Thread Length l_g [inch]	Dimensions [inch]							Weight app. [lbs]
				e	f	d	t	b	SW	a	
M16	F34110	2,500	1.18	4.45	2.05	0.63	2.76	1.38	1.81	2.36	1.83
M16	F34115	2,500	1.18	6.02	3.62	0.63	4.33	2.36	1.81	2.36	2.20
M20	F34120	4,500	1.50	4.45	2.05	0.63	2.76	1.38	1.81	2.36	1.92
M20	F34121	4,500	1.50	6.02	3.62	0.63	4.33	2.36	1.81	2.36	2.31
M24	F34130	7,100	1.38	5.04	2.64	0.71	3.35	1.57	1.81	2.36	2.38
M24	F34131	7,100	1.77	6.02	3.62	0.71	4.33	2.36	1.81	2.36	2.78



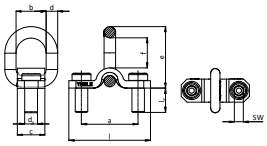
MDB Lifting Points

TWN 0127

The screw-type lifting points TWN 0127 are predominantly used for the transportation of moulds, tools, dies, machine elements and steel constructions. The D-links enable an easy assembling to lifting components. The manufacturing and testing requirements comply with DIN EN 1677-1 and ISO 8539.

SAFETY 4 : 1 | CE | > 180°

Screw Size d_g [mm]	Article-No.	Working Load Limit [lbs]	Thread Length l_g [inch]	Dimensions [inch]								Weight app. [lbs]
				e	f	c	b	l	d	SW	a	
M20	F35157	7,100	1.54	2.68	1.89	1.73	1.89	5.12	0.71	1.18	3.54	2.43
M24	F35158	12,000	1.42	4.45	2.72	2.36	2.60	6.30	0.94	1.42	4.33	5.95



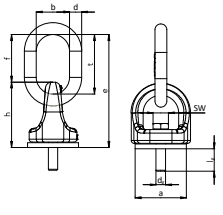
X-TITAN Lifting Points

TWN 1120

The screw-type X-TITAN lifting points TWN 1120 are predominantly used for the transportation of moulds, tools, dies, machine elements and steel constructions. The intermediate links allow an easy assembling to other lifting components. The manufacturing and testing requirements correspond to the ISO 8539 and DIN EN 1677-1.

SAFETY 4 : 1 | CE | 360° | > 180°

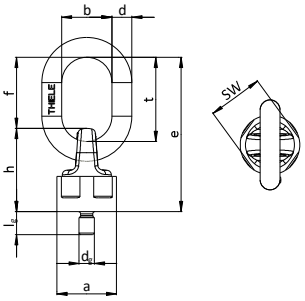
Screw Size d_g [mm]	Article-No.	Working Load Limit [lbs]	Thread Length l_g [inch]	Dimensions [inch]								Weight app. [lbs]
				e	f	b	t	d	h	SW	a	
M10	F34390	1,000	0.75	3.74	1.57	1.10	1.97	0.39	2.17	0.63	1.69	0.90
M12	F34395	1,300	0.94	3.74	1.57	1.10	1.97	0.39	2.17	0.71	1.69	0.95
M16	F34400	3,100	1.14	3.74	1.57	1.10	1.97	0.39	2.17	0.94	1.69	1.06
M20	F34410	5,500	1.30	4.53	1.93	1.34	2.36	0.47	2.60	1.18	2.13	1.74
M24	F34420	7,700	1.57	5.31	2.17	1.57	2.76	0.63	3.15	1.42	2.56	3.31
M30	F34430	15,000	2.05	6.57	2.60	1.97	3.35	0.71	3.98	1.81	3.35	6.57
M36	F34440	18,100	2.60	8.35	3.62	1.97	4.53	0.87	4.72	2.17	3.78	10.58



Lifting Points, Screw-Type

TWN 1830 X-TREME Lifting Points

The screw-type X-TREME lifting points TWN 1830 with ball-bearing are predominantly used in the mold- and tool-making industries. The ball-bearing allows the load to be rotated and turned under load. The intermediate link allows easy assembling to other components. The manufacturing and testing requirements are based on DIN EN 1677-1 and ISO 8539.



SAFETY 4 : 1 | DGUV ZERT | CE | 360° | > 180°

Screw Size d_g [mm]	Article-No.	Working Load Limit [lbs]			Thread Length l_g [inch]	Dimensions [inch]								Weight app. [lbs]
		vertical $\beta_1 = \pm 5°$ Y	extreme $5° < \beta_1 \leq 45°$ Z	folded $5° < \beta_2 \leq 105°$ X		e	f	b	t	d	h	SW	a	
M10	F34306	2,000	1,000	1,300	0.59	3.98	1.85	1.30	2.17	0.51	2.17	1.42	1.54	1.06
M12	F34307	2,600	1,300	1,700	0.71	3.98	1.85	1.30	2.17	0.51	2.17	1.42	1.54	1.08
M16	F34300	6,200	3,100	3,700	0.79	3.98	1.85	1.30	2.17	0.51	2.17	1.42	1.54	1.10
M20	F34310	11,700	5,500	6,200	0.98	4.76	2.32	1.34	2.76	0.63	2.48	1.81	1.97	2.07
M20	F34312	11,700	5,500	6,200	1.97	4.76	2.32	1.34	2.76	0.63	2.48	1.81	1.97	2.25
M24	F34320	15,400	7,700	8,800	1.18	5.83	2.83	1.57	3.35	0.71	2.99	1.97	2.24	3.31
M24	F34321	15,400	7,700	8,800	3.54	5.83	2.83	1.57	3.35	0.71	2.99	1.97	2.24	3.70
M30	F34330	22,000	11,700	13,900	1.57	6.73	3.27	1.97	3.94	0.87	3.46	2.56	2.87	6.00
M36	F34340	33,100	17,600	22,000	1.97	7.05	3.19	1.97	3.94	0.87	3.86	2.76	3.27	7.87
M36	F34341	33,100	17,600	22,000	2.48	7.05	3.19	1.97	3.94	0.87	3.86	2.76	3.27	8.09
M36	F34343	33,100	17,600	22,000	2.76	7.05	3.19	1.97	3.94	0.87	3.86	2.76	3.27	8.38
M42	F34350	37,700	22,000	27,700	2.36	9.61	4.57	2.76	5.51	1.26	5.04	3.74	4.17	18.30
M45	F34353	44,100	27,600	33,100	2.56	9.61	4.57	2.76	5.51	1.26	5.04	3.74	4.17	18.63
M48	F34355	44,100	27,600	35,300	2.68	9.61	4.57	2.76	5.51	1.26	5.04	3.74	4.17	18.96
M56	F34360	61,700	37,500	48,500	3.07	9.88	4.57	2.76	5.51	1.26	5.31	3.74	4.57	22.22
M64	F34363	61,700	37,500	55,100	3.78	9.88	4.57	2.76	5.51	1.26	5.31	3.74	4.57	25.09
M72 NEW	F34380	110,200	69,400	88,200	4.25	14.92	6.97	4.33	8.66	1.77	7.95	5.71	6.69	69.27
M80 NEW	F34383	110,200	77,200	105,800	4.72	14.92	6.97	4.33	8.66	1.77	7.95	5.71	6.69	72.02
M90 NEW	F34385	110,200	88,200	110,200	5.31	14.92	6.97	4.33	8.66	1.77	7.95	5.71	6.69	76.37
M100 NEW	F34388	110,200	88,200	110,200	5.91	14.92	6.97	4.33	8.66	1.77	7.95	5.71	6.69	81.79

Variable screw lengths available up to 5 x d standard screw lengths for thread diameters M20, M24, M30 and M36.

vertical
$\beta_1 = \pm 5°$
Y

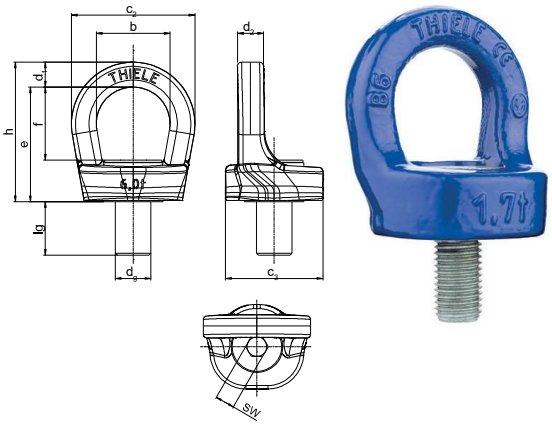
folded
$5° < \beta_2 \leq 105°$
X

extreme
$5° < \beta_1 \leq 45°$
Z

Lifting Points, Screw-Type

TWN 1884 XKE-Points

The screw-on XKE-Points TWN 1884 with ball-bearing are predominantly used in molds- and tool-making. The ball-bearing allows the load to be rotated and turned under load. The eccentrically positioned eye makes it easy to connect lifting equipment. The XKE-points have a multiple times higher load capacity than DIN 580-eye bolts and can be loaded in every direction. The eccentrically arranged eyelet enables an easy assembly with a standard allen key. The manufacturing and testing requirements are based on the ISO 8539 and DIN EN 1677-1.

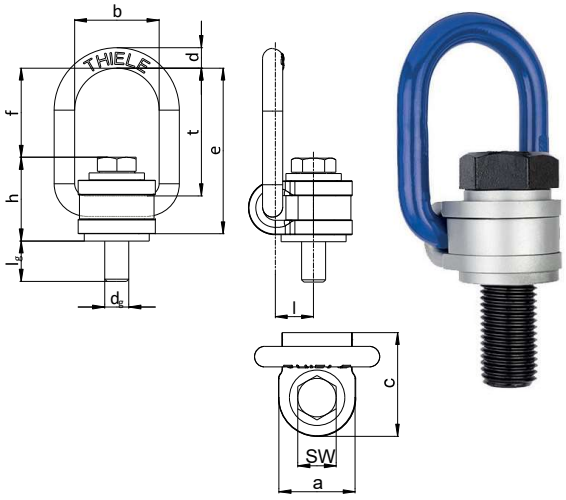


SAFETY 4 : 1 | DGUV ZERT | CE | 100 % | 360°

Screw Size d_g [mm]		Article-No.	Working Load Limit [lbs]	Thread Length l_g [inch]	Dimensions [inch]										Weight app. [lbs]
					b	c_2	c_3	e	f	h	d_1	d_2	l	SW	
M8	NEW	F38005	700	0.63	1.02	1.77	1.46	1.57	1.02	1.97	0.37	0.37	0.31	0.24	0.40
M10	NEW	F38006	1.100	0.63	1.02	1.77	1.46	1.57	1.02	1.97	0.37	0.37	0.31	0.24	0.40
M12	NEW	F38007	2.200	0.71	1.18	2.01	1.69	1.85	1.18	2.24	0.41	0.41	0.39	0.31	0.64
M16		F38010	3.700	1.06	1.50	2.60	2.20	2.44	1.50	2.99	0.55	0.55	0.51	0.39	1.46
M20		F38020	5.700	1.30	1.65	2.91	2.40	2.76	1.65	3.39	0.63	0.63	0.59	0.47	2.18
M24	NEW	F38030	7.700	1.54	2.01	3.35	2.56	3.23	2.01	3.90	0.67	0.71	0.63	0.55	2.95
M30	NEW	F38040	13.200	1.77	2.44	4.09	3.23	3.82	2.44	4.65	0.83	0.87	0.79	0.75	5.05
M36	NEW	F38050	17.600	2.17	2.95	5.16	3.62	4.57	2.95	5.67	1.10	1.10	0.98	0.75	9.19
M42	NEW	F38060	25.400	2.52	3.74	6.81	4.80	5.59	3.74	7.13	1.54	1.54	1.30	0.87	19.60
M45	NEW	F38070	28.700	2.91	3.74	6.81	4.80	5.59	3.74	7.13	1.54	1.54	1.30	0.94	20.04
M48	NEW	F38080	32.000	2.91	3.74	6.81	4.80	5.59	3.74	7.13	1.54	1.54	1.30	1.06	20.24

TWN 1890 XS-Points

The screw-type XS-Points TWN 1890 are predominantly used in mold making, tool making and vehicle construction. The extra large D-links enable an easy assembling to other lifting components. The bracket can be easily aligned in direction of force. The shape of the XS-Points allows the use of variable screw lengths. The manufacturing and testing requirements are based on the IOS 8539 and DIN EN 1677-1.



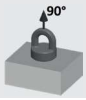
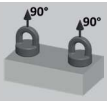
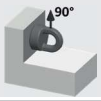
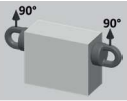
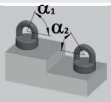
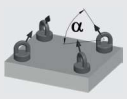
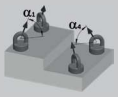
SAFETY 4 : 1 | DGUV ZERT | CE | 360° | > 180°

Screw Size d_g [mm]		Article-No.	Working Load Limit [lbs]	Thread Length l_g [inch]	Dimensions [inch]										Weight app. [lbs]
					e	f	c	l	t	b	h	d	SW	a	
M8	NEW	F352398	660	17	71	38	43	17	53	35	35	9	-	32	0.29
M10		F35243	1.400	17	71	37	43	17	53	35	35	9	16	32	0.29
M12		F35244	2.100	22	71	36	43	17	53	35	36	9	18	32	0.31
M16		F35245	3.800	28	98	46	64	25	70	50	52	13	24	48	0.96
M20		F35246	5.500	38	98	44	64	26	70	50	54	13	30	48	1.05
M24		F35247	8.800	40	135	70	71	28	102	58	65	16	36	50	1.69
M30		F35249	13.200	44	149	73	88	35	110	70	75	20	46	65	3.07
M36		F35250	18.100	64	149	70	88	35	110	70	79	20	55	67	3.55
M42		F35251	22.600	74	191	98	106	43	145	84	93	24	65	81	6.10
M48*		F35252	-	-	-	-	-	-	-	-	-	-	-	-	-

*On request

Lifting Points, Weld-on Type

Working Load Limit Table for Lifting Points, Weld-on Type

Application	Inclination Angle α	Number of Legs	TWN 0119A Weld-on type Lifting Points								TWN 0124 Weld-on type Lifting Points with Springs							
																		
			Working Load Limits [000 lbs]															
Working Load Limit			2.5	4.5	7.1	12.0	18.1	34.2	72.3	110.2			2.5	4.5	7.1	12.0	18.1	
	90°	1	2.5	4.5	7.1	12.0	18.1	34.2	72.3	110.2			2.5	4.5	7.1	12.0	18.1	
	90°	2	5.0	9.0	14.2	24.0	36.2	68.4	144.6	220.4			5.0	9.0	14.2	24.0	36.2	
	90°	1	2.5	4.5	7.1	12.0	18.1	34.2	72.3	110.2			2.5	4.5	7.1	12.0	18.1	
	90°	2	5.0	9.0	14.2	24.0	36.2	68.4	144.6	220.4			5.0	9.0	14.2	24.0	36.2	
	30°≤ α < 45°	2	2.5	4.5	7.1	12.0	18.1	34.2	72.3	110.2			2.5	4.5	7.1	12.0	18.1	
	45°≤ α < 60°	2	3.5	6.4	10.0	17.0	25.6	48.4	102.2	155.8			3.5	6.4	10.0	17.0	25.6	
	60°≤ α < 75°	2	4.3	7.8	12.3	20.8	31.4	59.2	125.2	190.9			4.3	7.8	12.3	20.8	31.4	
	asymmetry	2	2.5	4.5	7.1	12.0	18.1	34.2	72.3	110.2			2.5	4.5	7.1	12.0	18.1	
	30°≤ α < 45°	3+4	3.8	6.8	10.7	18.0	27.2	51.3	108.5	165.3			3.8	6.8	10.7	18.0	27.2	
	45°≤ α < 60°	3+4	5.3	9.5	15.1	25.5	38.4	72.5	153.4	233.8			5.3	9.5	15.1	25.5	38.4	
	60°≤ α < 75°	3+4	6.5	11.7	18.4	31.2	47.0	88.9	187.8	286.3			6.5	11.7	18.4	31.2	47.0	
	asymmetry	3+4	2.5	4.5	7.1	12.0	18.1	34.2	72.3	110.2			2.5	4.5	7.1	12.0	18.1	

Lifting Points, Weld-on Type

Working Load Limit Table for Lifting Points, Weld-on Type

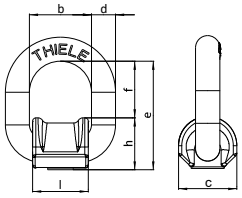
TWN 1882 COMPACT Lifting Points with Spring							
							
Working Load Limit [000 lbs]							
		3.3	5.5	8.8	15.0	22.6	
		3.3	5.5	8.8	15.0	22.6	
		6.6	11.0	17.6	30.0	45.2	
		3.3	5.5	8.8	15.0	22.6	
		6.6	11.0	17.6	30.0	45.2	
		3.3	5.5	8.8	15.0	22.6	
		4.7	7.8	12.5	21.2	32.0	
		5.7	9.5	15.3	26.0	39.1	
		3.3	5.5	8.8	15.0	22.6	
		5.0	8.3	13.2	22.5	33.9	
		7.0	11.7	18.7	31.8	47.9	
		8.6	14.3	22.9	38.9	58.7	
		3.3	5.5	8.8	15.0	22.6	

Lifting Points, Weld-on Type

TWN 0119A

Weld-on type Lifting Points

The weld-on lifting points TWN 0119 are used for universal lifting, moving and lashing of loads. The lifting points are often welded to machine frames, steel structures, lifting beams and housings. The manufacturing and testing requirements are based on DIN EN 1677-1 and ISO 8539.



SAFETY 4 : 1 | DGUV ZERT | CE | > 180°

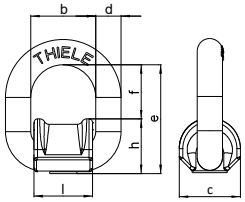
Trade Size	Article-No.	Working Load Limit [lbs]	Lashing Capacity (LC) [daN]	Dimensions [inch]							Weight app. [lbs]
				e*	f*	c	l	b	h	d	
1/4"	F35103A	2,500	2,200	2.32	1.22	1.26	1.26	1.42	1.10	0.47	0.53
5/16"	F35113A	4,500	4,000	2.72	1.42	1.50	1.50	1.65	1.30	0.55	1.01
3/8"	F35123A	7,100	6,300	3.35	1.81	1.77	1.73	1.89	1.50	0.71	1.59
1/2"	F35133A	12,000	10,600	4.72	2.72	2.36	2.36	2.60	2.01	0.94	4.25
5/8"	F35143A	18,100	16,000	5.00	2.60	2.68	2.56	2.83	2.40	1.10	5.89
7/8"	F35163A	34,200	-	7.01	3.86	3.78	4.29	4.72	3.15	1.54	17.84
1-1/4"	F35183	72,300	-	11.50	6.85	5.71	6.50	7.09	4.65	2.20	60.19
1-9/16"	F35193	110,200	-	14.61	8.78	7.32	8.27	9.06	5.71	2.83	132.28

**e- and f-Dimension vertical to the welding level.*

TWN 0124

Weld-on type Lifting Points with Spring

The weld-on lifting points TWN 0124 with spring are used for general lifting, moving and lashing of loads. The lifting points are often welded onto machine frames, steel constructions, lifting beams and housings. The D-ring is being held in position by a spring. The manufacturing and testing requirements comply with DIN EN 1677-1 and ISO 8539.



SAFETY 4 : 1 | DGUV ZERT | CE | > 180°

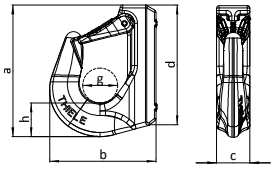
Trade Size	Article-No.	Working Load Limit [lbs]	Lashing Capacity (LC) [daN]	Dimensions [inch]							Weight app. [lbs]
				e*	f*	c	l	b	h	d	
1/4"	F35107	2,500	2,200	2.24	1.14	1.26	1.26	1.42	1.10	0.47	0.53
5/16"	F35110	4,500	4,000	2.64	1.34	1.50	1.50	1.65	1.30	0.55	1.01
3/8"	F35124	7,100	6,300	3.19	1.69	1.77	1.73	1.89	1.50	0.71	1.59
1/2"	F35139	12,000	10,600	4.61	2.60	2.36	2.36	2.60	2.13	0.94	3.55
5/8"	F35144	18,100	16,000	4.80	2.40	2.68	2.56	2.83	2.40	1.10	5.89

**e- and f-Dimension vertical to the welding level.*

TWN 0850/1

Weld-on Hooks

The weld-on hooks TWN 0850/1 are primarily welded onto earth-moving machines, buckets, shovels and traverses for lifting, moving and securing loads. The forged safety latches prevent unintentional detachment from the load.
The manufacturing and testing requirements are based on the DGUV testing principle GS-HM 35.



SAFETY 4 : 1 | CE | 100 %

Trade Size	Article-No.	Working Load Limit [lbs]	Dimensions [inch]						Weight app. [lbs]
			a	c	g	b	h	d	
1	F32751	2,500	3.70	0.94	1.02	3.03	0.94	3.35	1.15
2	F32752	4,500	4.72	1.18	1.30	3.82	1.10	4.23	1.85

Lifting Points, Weld-on Type

Spare Part Sets for Weld-on Type Hooks

TWN 1908/0

The spare part sets TWN 1908/0 consist of a safety latch, spring and dowel pin and are suitable for the weld-on hooks TWN 0850/1.

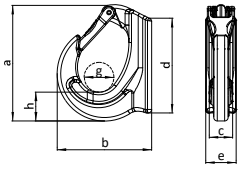
Trade Size	Article-No.	Packing Unit	Weight app. [lbs]
1	F48731	1 set	0.11
2	F48733	1 set	0.18

Weld-on Hooks NEW

TWN 0850/2

The weld-on hooks TWN 0850/2 are primarily welded onto earth-moving machines, buckets, shovels and traverses for lifting, moving and securing loads. The forged safety latches prevent unintentional detachment from the load.
The manufacturing and testing requirements are based on the DGUV testing principle GS-HM 35.

SAFETY 4 : 1 | CE | 100 %



Trade Size	Article-No.	Working Load Limit [lbs]	Dimensions [inch]							Weight app. [lbs]
			e	a	c	g	b	h	d	
1	F32770	1,00	1.02	4.25	0.75	0.98	2.83	1.10	3.07	1.15
2	F32771	2,00	1.34	4.49	0.79	1.30	3.62	1.10	3.35	1.54
3	F32772	3,00	1.34	5.08	1.02	1.30	4.13	1.26	4.09	2.54
5	F32773	5,00	1.73	6.57	1.10	1.69	5.43	1.81	5.91	5.20
8	F32774	8,00	2.01	6.81	1.65	1.69	5.71	2.09	5.83	7.32
10	F32775	10,00	2.64	8.86	1.85	2.36	7.05	2.40	7.76	14.20

Spare Part Sets for Weld-on Type Hooks

TWN 0913

The spare part sets TWN 0913 consist of a safety latch, spring and dowel pin and are suitable for the weld-on hooks TWN 0850/2.

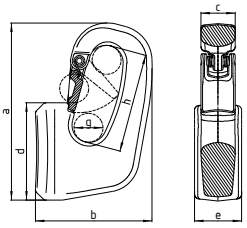
Trade Size	Article-No.	Packing Unit	Weight app. [lbs]
1, 2, 3	Z04496	1 set	0.13
5, 8	Z10614	1 set	0.44
10	Z05842	1 set	0.97

Weld-on Hooks NEW

TWN 1380

The weld-on hooks TWN 1380 are designed for lifting and moving loads and are mainly welded onto earth-moving machines, e.g. shovels. The weld-on hooks consist of a forged hook and a spring-loaded safety latch. They are painted yellow, the areas for the welds are bright.
The design and construction are based on the ISO 8539, DIN EN 1677-1 and the DGUV testing principle GS-HM 35.

SAFETY 4 : 1 | CE | 100 %



Trade Size	Article-No.	Working Load Limit [lbs]	Dimensions [inch]							Weight app. [lbs]
			a	b	c	d	e	g	h	
1	F328701	2,200	4.92	3.19	0.87	2.76	1.26	0.79	2.76	2.18
2,5	F328702	5,500	6.42	4.13	1.02	3.54	1.65	1.10	3.54	4.48
5	F328705	11,000	7.72	5.08	1.50	4.25	2.05	1.26	4.33	9.08
7,5	F328707	16,500	10.04	6.34	1.81	5.51	2.95	1.77	5.71	18.81
12,5	F328712	27,600	11.61	7.01	2.05	6.69	3.15	1.77	5.71	27.76

Lifting Points, Weld-on Type

TWN 0949

Spare Part Sets for Weld-on Type Hooks NEW

The spare part sets TWN 0949 consist of a safety latch, spring and dowel pin and are suitable for the weld-on hooks TWN 1380.

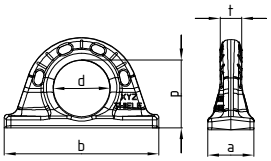
Trade Size	Article-No.	Packing Unit	Weight app. [lbs]
1	F48316	1 set	0.11
2	F48317	1 set	0.18
5	F48318	1 set	0.40
7/12	F48320	1 set	0.68

TWN 1490

Lifting points THI-EYE, weld-on type NEW

The weld-on type lifting points THI-EYE TWN 1490 are used for lifting, moving, and securing of loads, primarily to get welded onto earth-moving machines, shovels, grabs and traverses. The lifting points may be used with 100% WLL in all directions, are crack tested and feature angle indicators to optimize alignment during the rigging process. The manufacturing and testing requirements are based on the DGUV testing principal GS-HM 35, ISO 8539 and DIN EN 1677-1.

SAFETY 4 : 1 | CE | 100 %



Trade Size	Article-No.	Working Load Limit [lbs]	Dimensions [inch]					Weight app. [lbs]
			a	b	t	d	p	
3,2	F32300	7,100	1.61	5.39	0.75	1.97	2.36	2.20
5	F32301	11,000	2.01	6.77	1.02	2.36	2.87	4.85
10	F32302	22,000	2.76	8.98	1.46	3.15	3.86	11.46
20	F32303	44,100	3.54	10.71	1.97	4.53	5.51	23.15
31,5	F32304	72,300	4.25	12.60	2.44	5.12	6.30	40.79

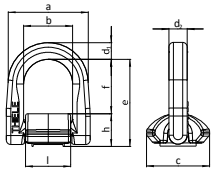
Lashing Points, Weld-on Type

COMPACT Lifting Points with Spring

TWN 1882

The weld-on COMPACT lifting points TWN 1882 with fixing spring are used for lifting and moving of loads. The lifting points are predominantly welded on machine frames, steel constructions, trusses and housings. The compact design allows a small installation space. The manufacturing and testing requirements are based on the ISO 8539 and DIN EN 1677-1.

SAFETY 4 : 1 | DGUV ZERT | CE | 100 % | > 180°



Trade Size	Article-No.	Working Load Limit [lbs]	Dimensions [inch]									Weight app. [lbs]
			d_1	d_2	b	a	l	e*	h	c	f	
1/4"	F352041	3,300	0.51	0.55	1.50	2.56	1.38	2.68	1.02	1.97	1.65	0.90
5/16"	F352051	5,500	0.59	0.59	1.77	2.99	1.65	2.87	1.06	1.97	1.81	1.26
3/8"	F352061	8,800	0.67	0.67	1.97	3.35	1.81	3.43	1.22	2.20	2.20	1.85
1/2"	F352071	15,000	0.91	0.91	2.68	4.57	2.48	4.80	1.73	3.07	3.07	4.83
5/8"	F352081	22,600	1.06	1.06	2.72	5.12	2.48	4.96	2.13	3.62	2.83	7.39

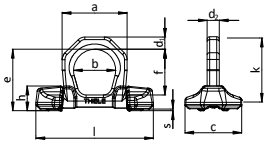
** Upright standing ring*

Lashing Points with two weld-on Brackets

TWN 1473

The weld-on lashing points TWN 1473 with two weld-on brackets are used for lashing of loads. The lashing points are predominantly welded to the vehicle frame (semi-trailers, trailers). The manufacturing and testing requirements are based on the ISO 8539 and DIN EN 1677-1.

SAFETY 4 : 1 | CE | 100 % | > 180°



Trade Size	Article-No.	Article-No. (Ring only)	Lashing Capacity (LC) [daN] max.	Dimensions [inch]											Weight app. [lbs]
				d_1	d_2	b	a	l	e*	k	h	c	s	f	
3/8"	F352001	F352002	8,000	0.55	0.55	1.89	2.91	5.28	2.91	2.91	1.10	2.56	0.08	2.24	1.74
1/2"	F352011	F352012	13,500	0.79	0.79	2.36	3.94	6.69	3.35	3.66	1.46	3.15	0.08	2.40	3.81

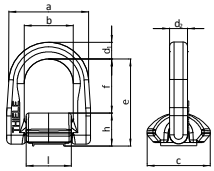
** Upright standing ring*

COMPACT Lashing Points with Spring

TWN 1880

The weld-on COMPACT lashing points TWN 1880 with fixing springs are used for securing of loads. The lashing points are predominantly welded in recessed skip fittings and on vehicle frames (semi-trailers, trailers). The compact design allows a small installation space.
The manufacturing and testing requirements are based on the ISO 8539 and DIN EN 1677-1.

SAFETY 4 : 1 | CE | 100 % | > 180°



Trade Size	Article-No.	Lashing Capacity (LC) [daN]	Dimensions [inch]									Weight app. [lbs]
			d_1	d_2	b	a	l	e*	h	c	f	
1/4"	F35204	3,000	0.51	0.55	1.50	2.56	1.38	2.68	1.02	1.97	1.65	0.90
5/16"	F35205	5,000	0.59	0.59	1.77	2.99	1.65	2.87	1.06	1.97	1.81	1.26
3/8"	F35206	8,000	0.67	0.67	1.97	3.35	1.81	3.43	1.22	2.17	2.20	1.85
1/2"	F35207	13,500	0.91	0.91	2.68	4.57	2.48	4.80	1.73	3.03	3.07	4.83
5/8"	F35208	20,000	1.06	1.06	2.72	5.12	2.48	4.96	2.13	3.62	2.83	7.39

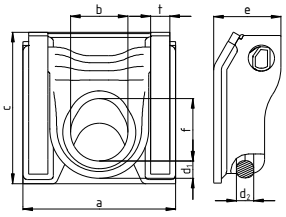
** Upright standing ring*

Lashing Points, Weld-on Type

TWN 1477

ZKS-Modules NEW

The weld-on ZKS-modules TWN 1477 are predominantly installed in C-shaped side frames of low-loaders and trailers. The large swivel range also allows the securing of overhanging loads. The pivotable large lashing eyelet built into the cassette enables a fixed mounting position for easy connection with the lashing equipment. The manufacturing and testing requirements are based on the ISO 8539 and DIN EN 1677-1.



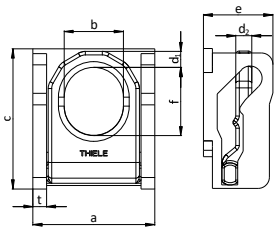
Trade Size	Article-No.	Lashing Capacity (LC) [daN]	Dimensions [inch]								Weight app. [lbs]
			d_1	d_2	b	a	t	e	c	f	
10	F352376	10,600	0.71	0.71	2.36	6.26	0.79	2.76	6.20	2.56	10.91

TWN 1471

ZK-Modules with Stressless Lashing© NEW

The weld-on ZK-modules TWN 1471 are predominantly installed in C-shaped side frames of low-loaders and trailers. The large swivel range also allows the securing of overhanging loads. A newly developed, patented cassette design enables a fixed mounting position for easy connection to the lashing equipment. Stressless Lashing© in perfection. The manufacturing and testing requirements are based on the ISO 8539 and DIN EN 1677-1.

NEW:
YouTube videoa of the ZK-module



Trade Size	Article-No.	Execution*	Lashing Capacity (LC) [daN] max.	Dimensions [inch]								Weight app. [lbs]
				d_1	d_2	b	a	t	e	c	f	
5	F352390	N	5,000	0.55	0.55	2.05	4.21	0.47	2.40	4.69	2.36	4.23
5	F352395	S	5,000	0.55	0.55	2.05	4.21	0.47	2.40	4.69	2.36	4.30
10	F352380	N	10,600	0.71	0.71	2.44	5.39	0.59	2.87	5.67	3.07	7.61
10	F352385	S	10,600	0.71	0.71	2.44	5.39	0.59	2.87	5.67	3.07	7.63

** The sheets of the lashing cassette in the execution „N“ (=Normal) are produced in micro-alloyed steel. The execution „S“ (=Special) are produced from special steel and are therefore capable to get be hot dip galvanized (up to 500°C) with the vehicle frame.*

General information

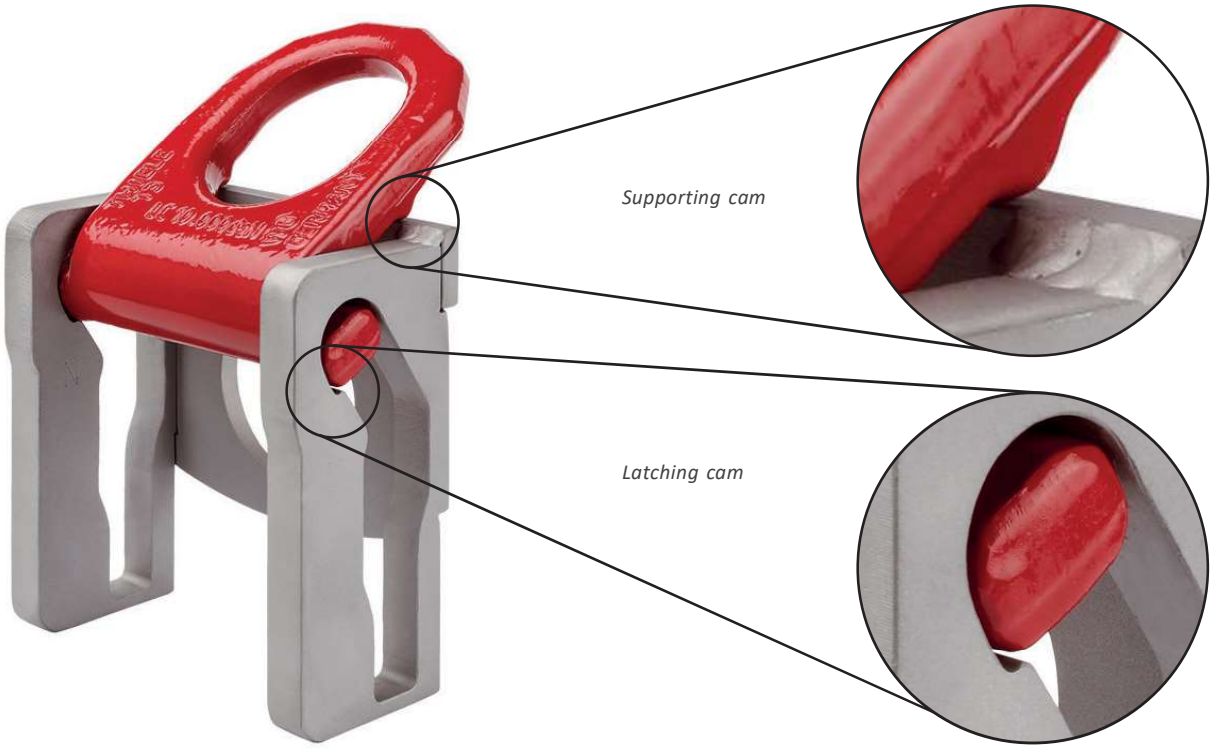
The standard DIN EN 12640 specifies the minimum testing requirements for lashing points on road trucks and trailers with flatbed bodies and a permissible total weight of more than 3,5 t for mixed cargo transportation. Lashing points are devices to attach lashing gear.
A lashing point can be an oval link, hook, lug or lashing rail. These types of lashing points may lead to safety issues when in operation.

A non-appropiate dimensioning and use of non-suitable lashing points, as well as the damage of the lashing points and frames of the vehicle, shows a high potential danger in traffic. In operation, oval links are often exposed to unforeseen torque which may cause a damage to the body-work of the vehicles. Very often required inclination angles are not properly considered. Further, oval links can cause unnecessary noise exposure in traffic. The developed THIELE ZK-Modules (lashing ring with cassette) may be easily fitted and adopted at the side frames of trailers.

The ZK-Modules are marked with permissible lashing capacity (LC), manufacturer name (THIELE) and standard number (DIN EN 12640). Official agencies may easily check the correct installation. The ZK-Modules made by THIELE provides highest safety for load securing in the heavy-duty road traffic.

TWN 1471 ZK-Modules with Stressless Lashing© NEW

YouTube video of the ZK-module



Now available with latching cam.

Positions:

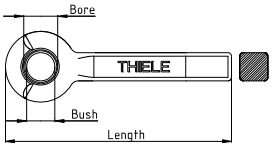
Rest Position

Hold Position

Position for oversized load

TWN 0301 - 0304 Towing Eyes acc. to DIN 74054

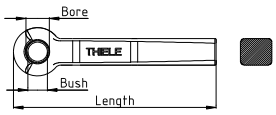
The weld-on towing eyes TWN 0301 - 0304 with shaft serve as coupling elements primarily for drawbars and on central axle trailers for the connection with the pins or trailer hitches. The bore dimensions comply with the DIN 74054 parts 1 and 2.



TWN	Article-No.	Type	Length [mm]	Bush [mm]	Bore [mm]	Weight app. [kgs]
0301	F27100	C	320	–	40	3,70
	F27101	A	320	40	48	3,70
0302	F27110	C	350	–	40	4,00
	F27111	A	350	40	48	4,00
0304	F27130	C	360	–	40	5,10
	F27131	A	360	40	48	5,10

TWN 0308 Towing Eyes acc. to DIN 74054

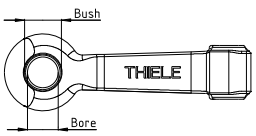
The weld-on towing eyes TWN 0321 with shaft serve as coupling elements primarily for drawbars and on central axle trailers for the connection with the pins or trailer hitches.
The bore dimensions comply with DIN 74054 parts 1 and 2.



Article-No.	Type	Length [mm]	Bush [mm]	Bore [mm]	Weight app. [kgs]
F27180	C	420	–	40	8,50
F27181	A	420	40	48	8,50
F27182	D	420	-	48	8,50

TWN 0321 Towing Eyes acc. to DIN 74054

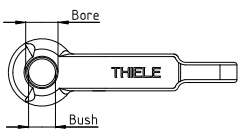
The weld-on towing eyes with shaft TWN 0321 serve as coupling elements primarily for drawbars and central axle trailers for the connection with the pins or trailer hitches.
The bore dimensions comply with the DIN 74054 parts 1 and 2.



Article-No.	Type	Bush [mm]	Bore [mm]	Weight app. [kgs]
F27300	C	–	40	7,30
F27301	A	40	48	7,30

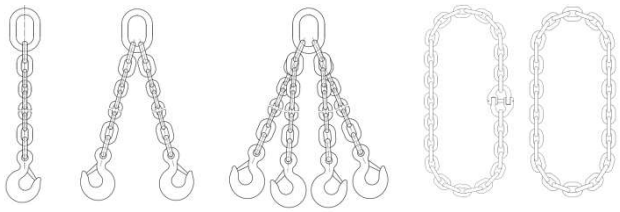
TWN 0323 Towing Eyes acc. to DIN 74054

The weld-on towing eyes TWN 0321 with shaft serve as coupling elements primarily for drawbars and on central axle trailers for the connection with the pins or trailer hitches. The bore dimensions comply with DIN 74054 parts 1 and 2.



Article-No.	Type	Bush [mm]	Bore [mm]	Weight app. [kgs]
F27320	C	–	40	6,40
F27321	A	40	48	6,40

Safety Instructions and Requirements (Vers. B11082-C US 01.20)



WARNING

The following Operating Instructions must always be followed to avoid the risk of personal injury or property damage.

Do not use a chain sling before reading these Operating Instructions.

1. ABOUT THIS INSTRUCTION

This Operating Instruction describes in particular how sling chains according to TWN 0805A grade 80, TWN 0072 and TWN 1805 grade 100 (TWN = THIELE Shop Standard) are to be safely used for lifting purposes.
The instruction applies analogously to components of the identical design.
To comply with these instructions is essential to help avoid hazards and increases the reliability and service life of the chain slings.

DANGER! Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING! Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION! Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE! Is used to address practices not related to physical injury.

Safety Instructions signs indicate specific safety-related instructions or procedures.

Chains and accessories marked with the American nominal size 7/32" already corresponded to the European nominal size 6 mm. In order to achieve a better match, the previous nominal size 7/32" is now converted to the new nominal size 15/64". The working load limits have now also been adjusted. #

DEFINITIONS

Clevis

A U-shaped fitting with pin.

Working Load Limit (WLL)

The maximum load which a chain sling is designed to support in direct tension without shock loading at a designated sling angle of lift.

NOTICE

Read ASME B30.9 "Slings", Chapters 9-0 and 9-1.

Read ASME B30.10 "Hooks".

Read ASME B30.26 "Rigging Hardware", Chapters 26-0, 26-1, 26-4.

If chain slings are used with lifting magnets, read ASME B30.20 "Below-the Hook-Lifting-Devices", Chapter 20-4.

2. BASIC SAFETY REQUIREMENTS

WARNING

To prevent the risk of injury never walk or stay under lifted loads!

The Working Load Limit must not be exceeded!

Only use lifting and attachment means free from defects!

Working under the influence of drugs, medications impairing the sense and/or alcohol is strictly forbidden!

SAFETY INSTRUCTIONS

- Operators, fitters and maintenance personnel must in particular observe the Operating Instructions as well as standards ASTM A 906/A 906 M (Standard Specification for Grade 80 and Grade 100 Alloy Steel Chain Slings for Overhead Lifting), ASTM A 952/A 952 M (Standard Specification for Forged Grade 80 and Grade 100 Steel Lifting Components and Welded Attachment Links), ISO 3056 (Non-calibrated round steel link lifting chain and chain slings; Use and maintenance), ISO 7593 (Chain slings assembled by methods other than welding; Grade T(8)) and ISO 4778 (Round steel short link chains for lifting purposes – Chains slings of welded construction – Grade 8).

Safety Instructions and Requirements (Vers. B11082-C US 01.20)

SAFETY INSTRUCTIONS

- The specific safety and operating regulations and standards issued locally in the country where the items are used must be observed.
- The directions given in these Operating Instructions and specified documentations relating to safety, assembly, operation, inspection, and maintenance must be made available to persons operating and using the sling chains.
- These Operating Instructions must be available in a place near the product during the time the equipment is used. Please contact the manufacturer if replacements are needed. Also see chapter 13.
- During operation work, wear your personal protective equipment!
- **Improper assembly and use may cause personal injury and/or damage to property.**
- Assembly and removal as well as inspections and maintenance must exclusively be carried out by skilled, qualified, trained and authorized persons only.
- Structural changes are impermissible (e.g. welding, bending).
- **Operators must carry out a visual inspection and, if necessary, a functional test of the safety equipment before each use.**
- Never use worn-out, bent or damaged chain slings.
- Only lift loads that do not exceed the Working Load Limit of the sling chain assembly.
- Never expose chains to loads exceeding the specified Working Load Limits.
- Position the load hook above the load's center of gravity.
- Do not use force when mounting/positioning the attachment components.
- The load must resist and tolerate the forces to be applied without suffering deformation.
- Do not tip-load a hook.
- Do not twist or knot the chains together.
- When using shortening elements without additional safety means (e.g. TWN 0827, TWN 1827, TWN 0851 or TWN 1851), special care must be taken and the correct position of the chain in the shortening element is to be verified for each individual lifting operation.
- Avoid sharp edges. Use edge protectors or reduce the Working Load Limit by 20 %.
- The Working Load Limit must be reduced in the following cases
  - if the load is not balanced symmetrically,
  - if the chain is used in choke hitch applications,
  - when higher temperatures prevail,
  - when high dynamic and cyclic loads arise (automated or multi-shift operation),
  - when lifting magnets are employed.
- In case of multi-leg chain slings never allow sling angles of less than 30° and in excess of 75°. #
- Hooks shall have well-functioning safety latches.
- Attach unused chain legs to the suspension link.
- Suspension links must be allowed to move freely in the crane hook.
- Only lift loads that are freely movable and not attached or fastened.
- Do not bend loads to act on chain links and components.
- Safety elements must not be stressed or strained operationally.
- Use only shortening/grab hooks or claws for chain shortening purposes.
- Shortening hooks must not be attached directly to loads, e.g. metal sheets.
- For shortening claws, only the chain coming out of the bottom of the claw pocket must be loaded.
- Only chain legs and shortening elements of the same nominal size and grade may be connected.
- Shortening elements must be allowed to move freely in all tensile directions.
- Safeguard chain slings to prevent slipping when using the basket hitch application method.
- Do not start lifting before you have made sure the load has been correctly attached and balanced.
- **No one including you (operator) must be in the way of the moving load (hazard area).**
- During lifting your hands or other body parts must not come into contact with lifting means. Only remove lifting means manually (use your hands).
- Avoid impacts, e.g. due to abruptly lifting loads with chain in slack condition.
- Never move a suspended load over persons.
- Never cause suspended loads to swing.
- Always monitor a suspended load.
- Put the load down only in flat places/sites where it can be safely deposited.
- Do not allow the sling chain assembly getting caught under the load.
- Assume for sufficient space for the personnel to move when choosing the route of transportation and storage location. Danger to life and risk of injury by crushing hazards!
- In the event of doubts or concerns about the proper and safe use, inspection, maintenance or similar things contact your safety officer or the manufacturer.

SAFETY INSTRUCTIONS

THIELE is not responsible for damage caused by non-observance of the instructions, rules, standards and notes indicated!

As regard grade 100, THIELE does not give its approval to the assembly of components sourced from different manufacturers!

As a rule, chain slings are not permitted for the transportation of persons.

3. DESCRIPTION AND INTENDED USE

THIELE sling chains and attachment components form part of chain slings and are intended for a safe transportation of loads.

This Operating Instructions describe in particular how sling chains according to TWN 0805A grade 80, TWN 0072 and TWN 1805 grade 100 (TWN = THIELE Shop Standard) are to be safely used for lifting purposes.

THIELE chain slings of the following design configurations are available:

- assembled with clevis fastening system,
- assembled with connecting links,
- assembled with clevis fastening system and connecting links,
- as welded sling chain assembly,
- as welded endless chain, #
- as endless chain with mounted connector. #

THIELE sling chains and chain slings meet EG Machinery Directive 2006/42/EG requirements and feature a safety factor of at least 4 based on Working Load Limit.

Sling chains and pertinent components are marked with nominal chain size and grade data, manufacturer's symbol and traceability code.

THIELE chain slings and attachment elements are designed to withstand 20,000 dynamic load changes under maximum load conditions. In the event of higher loads (e.g. multi-shift/automatic operation, magnetic spreaders), the Working Load Limit must be reduced.

Chain slings shall be composed of sling chains and components of identical nominal chain size and grade. In case of deviating configurations the pertinent documentation (Operating Instructions etc.) must be suitably modified.

Sling chains according to TWN 0805A, TWN 0072 and TWN 1805 as well as the related attachment components and connecting links are intended for use as chain slings according to ASTM A 906/A 906M for lifting of loads.

WARNING

Chain slings must only be used

- if mass and center of gravity of the load are known or have been professionally estimated,
- within the limits of their permissible Working Load Limit,
- for permissible attachment methods and sling angles, #
- within the temperature limits prescribed,
- with suitable connecting links, attachment components or shortening elements,
- by trained and authorized persons.

Failure to do so may cause serious injury or property damage.

DANGER

Chain slings must not be employed for binding, rigging, lashing or as hoist chains.

Shortening elements must not be connected directly to the load!

4. COMMISSIONING

Prior to using the components for the first time assure that

- the components comply with the order and have not been damaged,
- test certificate and Operating Instructions are at hand,
- markings correspond with what is specified in the documentation,
- inspection deadlines and the qualified persons for examinations are determined,
- visibility and functional testings are carried out and documented,
- documentation is safely kept in an orderly manner.

Dispose of the packing in an environmentally compatible way according to local rule.

6. ASSEMBLY AND REMOVAL

6.1 Preparations

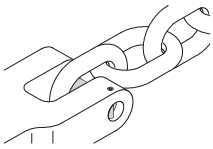
All components to be installed or used must be in perfect condition and the relevant Working Load Limits of all parts must accommodate the respective load to be handled.

6.2 Chain Assembly

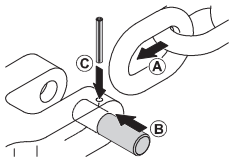
When assembling or disassembling chain slings the relevant assembly and Operating Instructions issued for the components must be observed.

6.3 Clevis Fastening System

The clevis fastening system only permits attachment of the nominal chain size that suits the attachment component.



6.3.1 ASSEMBLY



- If necessary, remove dowel pin and pin.
- (A) Place end of chain leg between the lateral clevis elements.
- (B) Push pin from the side fully into the clevis and through the last chain link of the leg.
- (C) Drive dowel pin fully in (must not project) to secure the pin. The slot must face away from the pin.

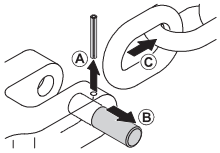
WARNING

Check whether the chain runs smoothly.

The dowel pins must only be installed once.

Only connect pins and attachment components of identical grades. Starting with Ø ½" the pins are marked on the front end.

6.3.2 DISASSEMBLY



- Slacken the respective chain leg.
- (A) Drive dowel pin out using hammer and drift punch [1].
- (B) Push pin out using a drift punch.
- (C) Remove the chain.

1) Suitable drift punches are available by Article No. Z03303.

7. CONDITIONS OF USE

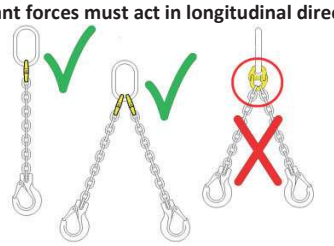
7.1 Normal Use

WARNING

When 4-leg chain slings are used there is a risk that the load will act on two oppositely located chain legs only. In such a case, check the Working Load Limit of the sling chain assembly and use an assembly that has a higher Working Load Limit.
Shortening individual chain legs is indicative of a non-symmetrical load distribution. In this case, the Working Load Limit must be reduced.
If choke hitch applications are involved the Working Load Limit is to be additionally reduced by 20 %.
When using hooks without safety latch, e.g. due to operational necessities, special care is to be taken, and a separate risk analysis must be carried out before operation.

DANGER

When attaching components, observe the correct position of the connecting links.
Relevant forces must act in longitudinal direction.



If two chain legs are assembled into one connecting link half for alternate use of the legs, only one chain leg must be subjected to loads!

If not all chain legs in a multi-leg sling chain assembly are used, the Working Load Limit is to be reduced according to the following table:

Total number of legs	Number of legs to be put to use	Use factor relevant to WLL specified
2	1	1/2
3 or 4	2	2/3
3 or 4	1	1/3

7.2 Influence of Temperature

WARNING

The respective temperature range limits must be considered for all components used. Using chain slings in high temperatures will cause the Working Load Limit to be reduced as indicated below.

	Temperature range	Remaining WLL
Grade 80 TWN 0805A	-40 °C ≤ t ≤ 205 °C -40 °F ≤ t ≤ 400 °F	100 %
	205 °C < t ≤ 300 °C# 400 °F < t ≤ 572 °F	90 %
	300 °C < t ≤ 400 °C 572 °F < t ≤ 752 °F	75 %
Grade 100 TWN 0072	-40 °C ≤ t ≤ 205 °C# -40 °F ≤ t ≤ 400 °F	100 %
Grade 100 TWN 1805	-30 °C ≤ t ≤ 205 °C# -22 °F ≤ t ≤ 400 °F	100 %

DANGER

If the chain slings have been exposed to temperatures exceeding the maximum values specified they must not be used furthermore.

7.3 Environmental Influence

WARNING

Chain slings must not be used in environments where acids, aggressive or corrosive chemicals or their fumes are present. Hot-dip galvanizing or a galvanic treatment is prohibited.

7.4 Special Hazardous Conditions

WARNING

The degree of danger when used in offshore applications, the lifting of hazardous loads, such as for example liquid metal or similar, risk potentials must be assessed by a competent person in the form of a risk analysis. Any additional rules and directives must be followed in this case.
For applications in abrasive blasting environments short inspection intervals must be scheduled. Selecting a welded sling chain assembly of the next bigger nominal size increases the permissible wear allowance.

8. GENERAL NOTES ON ATTACHMENT COMPONENTS

8.1 Connecting Links

WARNING

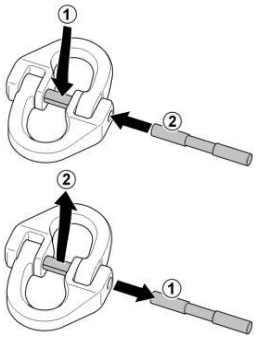
In mounted chain slings the chains are, for example, joined to other components by the use of connecting links. In this way, components can be mounted the nominal size of which deviates from that of the chain.

Sizes and grades of sling chains and connecting links must always coincide!

8.1.1 ASSEMBLY

Install the connecting link halves in the components to be connected and join both halves.

1. Position split sleeve as shown.
2. Push pin up to the split sleeve, align pin bevels to suit split sleeve and drive the pin in using a hammer.
3. Check to make sure split sleeve safely embraces the pin centrally.



8.1.2 DISASSEMBLY

1. Use drift to drive pin out.
2. Remove the split sleeve.
3. Separate connecting link halves from the components they joined.

A set of drifts according to TWN 0945 is available by Article No. Z03303.

The split sleeves must only be installed once.

The components to be connected must be able to move freely within the connecting link half they are placed in.

8.2 Shortening Elements

A shortening element within a chain leg is intended only to shorten the effective length to optimize the balance of the whole system.

When using shortening elements, such as for example shortening hooks or claws, please read the respective separate operating and/or assembly instructions.

9. IDENTIFICATION/MARKING

An identification tag must be attached to the chain sling adjacent to the master link.

The identification tag must show

- name or trademark of manufacturer
- nominal chain size
- grade
- number of legs
- rated load and corresponding sling angle
- length/reach
- individual identification/serial number

10. INSPECTION, MAINTENANCE, DISPOSAL

10.1 General

WARNING

Inspections and maintenance must be arranged by the owner!

Inspection intervals shall be determined by the owner!

Visual inspections must be regularly carried out and documented by competent and trained persons, at least once a year or more frequently if the chain slings are in heavy duty service. After three years at the latest they must additionally be examined for cracks. A load test is not a substitute for this examination.

The results of the inspections shall be kept in a file that has to be set up for each sling chain before first use. The register shall show characteristic data of the chains and components as well as identity details.

Immediately stop using chain slings that show the following defects:

- missing or illegible identification/marking,
- deformation, elongation or fractures of chain links or components,
- cuts, notches, cracks, incipient cracks, pinching,
- links heated beyond permissible limit,
- severe corrosion,
- pitch elongation of individual chain links by more than 5 % each,
- reduction of the average diameter of more than 10 % as mean value of measurements taken perpendicularly towards each other,
- impaired or missing safety systems, for example if the hooks' safety latch is defect,
- widening of the hook opening by more than 10 % or if the safe seating of the hook safety latch is no longer ensured
- limited hinging capability of connecting links (e.g. halves get stuck),
- wear in excess of 10%, e.g. in the receiving area of the connecting link halves or of the pin diameter,
- missing or damaged pin locks or removal of preventing guards

WARNING

Cleaning (e.g. prior to inspections) must not take place by using flames or methods that might cause hydrogen embrittlement (e.g. pickling or immersion in acidic solutions).

The following chain gauges are available to be used during chain inspections:

Nominal size		Article No.
Grade 80		F48856
15/64#	Grade 100	F01690
5/16	Grade 100	F01691
3/8	Grade 100	F01692
1/2	Grade 100	F01693
5/8	Grade 100	F01694

10.2 Inspection Service

THIELE offers inspection, maintenance and repair services by trained and competent personnel.

10.3 Maintenance and Repair

DANGER

Maintenance and repair work must only be performed by competent and trained persons.

WARNING

Do not repair or replace individual chain links but replace complete chain legs only.
If the safety latch of hooks does not engage properly with the tip of the hook, probably not only the hook but also the corresponding chain leg has been overloaded. In all such cases, all items used in the respective leg must be replaced (chain, shortening element, ring shackle etc.).

Minor notches and cracks may be eliminated by careful grinding, observing the maximum cross section reduction requirement of max. 10 % and avoid making more severe cuts or scores.

Welded chain slings must exclusively be repaired by the manufacturer.
All maintenance and repair activities must be documented properly.

10.4 Disposal

NOTICE

All steel components and accessories taken out of service must be scrapped in accordance with local regulations and provisions.

11. SPARE PARTS - ARTICLE NUMBERS FOR SLING CHAINS AND OTHER COMPONENTS

WARNING

Use only original spare parts.

11. Article Numbers for Sling Chains and other Components

Detailed information on spare parts for other THIELE-components can be found in the respective component instructions that are available for download on www.thiele.de, www.kwschain.com or upon request.

12. STORAGE

NOTICE

Chain slings must be stored properly sorted, suspended and in dry conditions at temperatures between 32 °F and 104 °F.

Do not store in a manner that causes mechanical damage.

13. THIELE OPERATING AND MOUNTING INSTRUCTIONS

NOTICE

All operating and mounting instructions are available in the download-center on our website www.kwschain.com and www.thiele.de.

14. PUBLISHING INFORMATION

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