TA10

THIELE®


TA10

# THIELE
# LIFTING PRODUCTS

## Grade 100

# Product Overview - Lifting Products Grade 100

## Page 27-28 — Round Steel Chains

| TWN 1805 (XL400) | TWN 0072 (XL200) |
|---|---|
|  |  |

## Pages 29-33 — Suspension Components

| TWN 1795 | TWN 1813 | TWN 1814 | TWN 1815 | TWN 1816 |
|---|---|---|---|---|
|  |  |  |  |  |
| **TWN 1810/1** | **TWN 1810/2** | **TWN 1810/4** | **TWN 1819** | |
|  |  |  |  | |

## Pages 33-34 — Connectors

| TWN 1820 | TWN 1847 |
|---|---|
|  |  |

## Pages 34-38 — Hooks

| TWN 1836 | TWN 1837 | TWN 1838 | TWN 1840/1 | TWN 1841/1 |
|---|---|---|---|---|
|  |  |  |  |  |
| **TWN 1856** | **TWN 1899** | **TWN 1869** | **TWN 0869/1** | |
|  |  |  |  | |

# Product Overview - Lifting Products Grade 100



| Pages 39-41 | Shortening Components | | | | |
|---|---|---|---|---|---|
| | TWN 1827 | TWN 1827/1 | TWN 1851/1 | TWN 1852 | TWN 1896 |
| |  |  |  |  |  |

| Page 41 | Shackles | | | | |
|---|---|---|---|---|---|
| | TWN 1871 | | | | |
| |  | | | | |

| Page 42 | Chain Tensioners | | | | |
|---|---|---|---|---|---|
| | TWN 1454 | TWN 1455 | | | |
| |  |  | | | |

# Product Overview - Lifting Products Grade 100

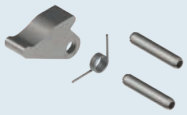
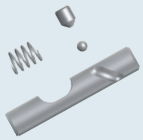
## Page 43 — Special Sling Components

| TWN 1812 | TWN 1846 | | | |
|---|---|---|---|---|
|  |  | | | |

## Pages 43-44 — Lashing Chains

| TWN 1410 | TWN 1411 |
|---|---|
|  |  |

## Pages 44-48 — Spare Parts and Accessoires

| TWN 0944 | TWN 0945 | TWN 0968 | TWN 0969 | TWN 0970 |
|---|---|---|---|---|
|  |  |  |  |  |
| **TWN 0971** | **TWN 1402** | **TWN 1904/0** | **TWN 1908/0** | **TWN 1921** |
|  |  |  |  |  |
| **TWN 1922** | **TWN 1930/0** | **TWN 1931/0** | **TWN 1933/0** | **TWN 1933/0A** |
|  |  |  |  |  |
| **TWN 1935** | **TWN 1935A** | **TWN 1940** | **TWN 1946** | **TWN 1950** |
|  |  |  |  |  |

# Product Overview - Lifting Products Grade 100



| Pages 49-50 | Chain Slings | | |
|---|---|---|---|
| | TWN 1601 1-leg | TWN 1651 2-leg | TWN 1751 4-leg |
| |  |  |  |

| Page 51 | Shortening Options | | |
|---|---|---|---|
| |  |  |  |

| Page 52 | Endless Chains | | |
|---|---|---|---|
| | Form K11 | Form K12 | Form K22 |
| |  |  |  |

# Comparison between Grade 80 and Grade 100

Up to 35 % weight reduction on a 2-leg Grade 100 chain sling compared to equivalent Grade 80 chain sling.

| Article | THIELE Plant Standard | Pieces |
|---|---|---|
| Master Link | TWN 1813 | 1 |
| XL-LOK | TWN 1820 | 2 |
| 2 m Round Steel Link Chain | TWN 1805 | 2 |
| Clevis Sling Hook | TWN 1840/1 | 2 |

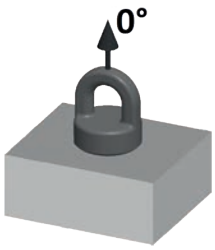
| Working Load Limit [t] | TA8 Weight [kgs] | TA10 Weight [kgs] | Weight reduction [%] |
|---|---|---|---|
| 3,55 | 9,3 | 6,5 | -30 |
| 5,60 | 16,5 | 10,6 | -35 |
| 9,00 | 26,8 | 18,4 | -31 |

| Properties / Grade | TA8 | TA10 - XL400 |
|---|---|---|
| Working Load Limit (WLL) | | app. +25 % |
| Safety Factor | 4 | 4 |
| Elongation at break (completed finish) | min. 20 % | min. 20% |
| Weight | | reduced up to 35 % |
| Nominal Breaking Stress | 800 N/mm² | 1000 N/mm² |
| Component Strength | 1150-1250 MPa[1)] | 1450-1550 MPa[1)] |
| Temperature Application Range | -40 – 200 °C (100 %)[2)]<br>200 – 300 °C (90 %)[2)]<br>300 – 400 °C (75 %)[2)] | -30 – 200 °C (100 %)[2)]<br>200 – 300 °C (90 %)[2)]<br>300 – 380 °C (60 %)[2)] |
| Acids and Lyes | not permitted | not permitted |
| Compatibility with other systems | permitted | restricted |
| Colour Round Steel Link Chains (AQUA lacquer) | Black (RAL 9005) | Ultramarine Blue (RAL 5002) |
| Colour Components | Red powder coated (RAL 3003) | Ultramarine Blue powder coated (RAL 5002) |
| Standards | DIN EN 818, DIN EN 1677 | PAS 1061 (Manufactures Specification) |
| Wear Resistance | standard | increased |

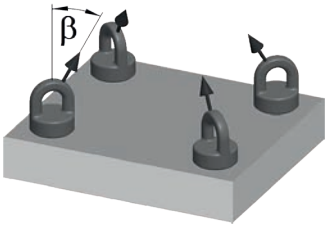
[1)] *Reference value*
[2)] *Related to Working Load Limit*

# Selection criteria for chain slings

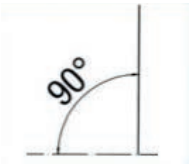
1. Determine the weight of the load to be lifted.

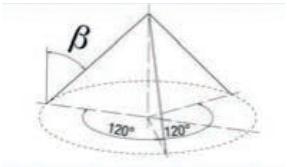



2. Determine number of chain-leg required (depending on the number of available lifting points).



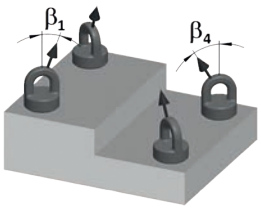

3. Determine the trade size by taking the inclination angle into consideration (see table 1 on page 25 and table 2 and 3 on page 26).



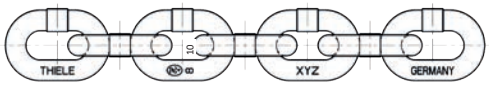

4. Consider possible temperature impacts (see load reductions on page 27).


5. Consider that asymmetry may influence the load factor (see table 4 on page 27).




6. Specify the sling using components for the selected chain trade size.

7. Determine the chain length for each strand by considering the required effective reaches.




8. Control selected components and/or chain slings to ensure that they meet applicable safety laws and regulations (e.g. DGUV).

**Special Advices:**
Please also consider special conditions of use, such as e.g. intermittent impacts on loads when selecting the grade 100 chain slings. If the chain slings were used above the maximum admissible temperature, they have to be immediately rejected. The THIELE-assembly systems must not be used with chemical influences such as acids and/or lyes.

Lifting products according to DIN EN 818-4 fullfill the requirements of the EC-directive for machines, especially for safety relevant components. The working load limit and the test requirements meet or exceed the European standards.

# Identification Tags

The use of chain slings without identification tag is not permitted.
The data on the identification tag must be in accordance with the standard DIN EN 818-4 for chain slings. THIELE Grade 100 identification tags differ by shape (decagon) and colour (blue, RAL 5002) from tags of other grades.


## Legal Marking of Grade 100 Chains according to the German DGUV

The number "4" below the (4) is the registration number of the German statutory accident insurance (DGUV) and identifies the manufacturer of the sling. The marking is also recognized by all international certification societies and work authorities.

# Chain Inspection Gauges



## Check of diameter

## TWN 1946

The THIELE chain measuring gauges TWN 1946 are used for the dimensional assessment of the state of wear and elongation of grade 100 round steel chains XL400 and XL200. It helps the user to inspect the round steel chains to ensure that they meet the requirements regarding to diameter, elongation and pitch tolarance.

## Check of pitch



## Check of permanent elongation

# Liability, Assembly, Material and Safety Information

The DGUV-approved round steel chains **XL400** are stamped with »10«, »XL-400«, »Germany« and traceability code.

Round steel chains **XL200** are stamped with »T3-10«, »XL200«, »Germany« and traceability code.

## Liability

THIELE does not take over liability of Grade 100 slings being combined with products from other manufactures.

## Assembly

The combination of different grades when mounting chain slings is prohibited.
Grade 100 round steel chains are only allowed to be assembled to original Grade 100 Components of the corresponding trade size.
Only original THIELE spare parts may be used when making repairs.

## Material

For the production of grade 100 products, only alloy steels according to DIN 17115 are used.

## Safety Information

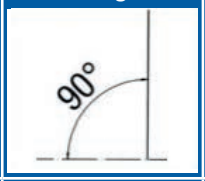
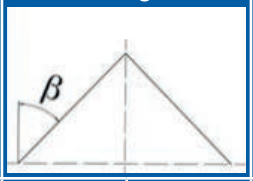
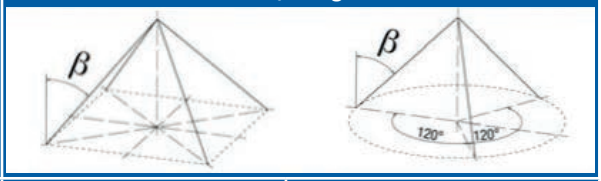
Our products are to be used only according to the prescribed guidelines.
Incorrect use, overload or damage can lead to injury or death!
Installation and operation of chain slings only permitted by trained and skilled personnel. Before commissioning slings, please pay attention to the mounting and operating instructions.
They may be found on our website www.thiele.de.

*Operating and mounting instructions*

# Working Load Limit Tables



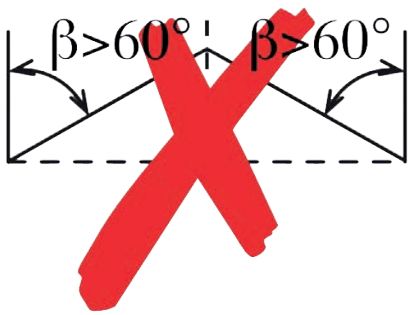
## Working Load Limit – Type: Direct Lift (Chain Slings)

| | 1-leg | 2-leg | | 3-/ 4-leg | |
|---|---|---|---|---|---|
| |  |  | |  | |
| **Inclination Angle** | **β = 0°** | **0°< β ≤ 45°** | **45°< β ≤ 60°** | **0°< β ≤ 45°** | **45°< β ≤ 60°** |
| **Load Factor** | **1** | **1,4** | **1** | **2,1** | **1,5** |
| **Trade Size** / **Nominal Size [mm]** | **[t]** | **[t]** | **[t]** | **[t]** | **[t]** |
| **6-10** | 6 | 1,40 | 2,00 | 1,40 | 3,00 | 2,12 |
| **7-10** | 7 | 1,90 | 2,65 | 1,90 | 4,00 | 2,80 |
| **8-10** | 8 | 2,50 | 3,55 | 2,50 | 5,30 | 3,75 |
| **10-10** | 10 | 4,00 | 5,60 | 4,00 | 8,00 | 6,00 |
| **13-10** | 13 | 6,70 | 9,00 | 6,70 | 14,00 | 10,00 |
| **16-10** | 16 | 10,00 | 14,00 | 10,00 | 21,20 | 15,00 |
| **20-10** | 20 | 16,00 | 22,40 | 16,00 | 33,50 | 23,60 |
| **22-10** | 22 | 19,00 | 26,50 | 19,00 | 40,00 | 28,00 |
| **26-10** | 26 | 26,50 | 37,50 | 26,50 | 56,00 | 40,00 |
| **32-10** | 32 | 40,00 | 56,00 | 40,00 | 85,00 | 60,00 |

*THIELE chain slings are available in mounted and welded execution.*

*Table 1*

Inclination Angle

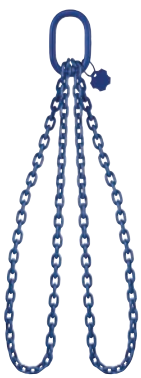



## Types of endless chains:

**Type K11**

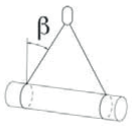
**Type K12**

**Type K22**



# Working Load Limit Tables

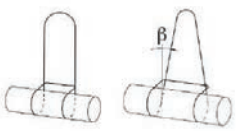
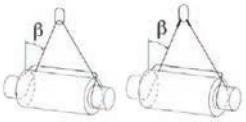
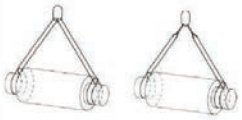
## Working Load Limit – Type: Choke Hitch (Chain Slings)

| | 1-leg | 2-leg | |
|---|---|---|---|
| |  |  | |
| **Inclination Angle** | **β = 0°** | **0°< β ≤ 45°** | **45°< ß < 60°** |
| **Load Factor** | **0,8** | **1,12** | **0,8** |
| **Trade Size** / **Nominal Size [mm]** | **[t]** | **[t]** | **[t]** |
| **6-10** | 6 | 1,12 | 1,60 | 1,12 |
| **7-10** | 7 | 1,50 | 2,12 | 1,50 |
| **8-10** | 8 | 2,00 | 2,80 | 2,00 |
| **10-10** | 10 | 3,15 | 4,50 | 3,15 |
| **13-10** | 13 | 5,30 | 7,50 | 5,30 |
| **16-10** | 16 | 8,00 | 11,20 | 8,00 |
| **20-10** | 20 | 12,50 | 18,00 | 12,50 |
| **22-10** | 22 | 15,00 | 21,20 | 15,00 |
| **26-10** | 26 | 21,20 | 30,00 | 21,20 |
| **32-10** | 32 | 31,50 | 45,00 | 31,50 |

*THIELE chain slings are available in mounted and welded execution.*

*Table 2*

## Working Load Limit – Type: Choke Hitch (Endless Chains)

| | K11 | | K12/K13 | | K22/K23 | |
|---|---|---|---|---|---|---|
| |  | |  | |  | |
| **Inclination Angle** | **β = 0°** | **0°< β ≤ 25°** | **0°< β ≤ 45°** | **45°< β ≤ 60°** | **0°< β ≤ 45°** | **45°< ß < 60°** |
| **Load Factor** | **1,6** | **1,45** | **1,12** | **0,8** | **1,7** | **1,2** |
| **Trade Size** / **Nominal Size [mm]** | **[t]** | **[t]** | **[t]** | **[t]** | **[t]** | **[t]** |
| **6-10** | 6 | 2,24 | 2,00 | 1,60 | 1,12 | 2,36 | 1,70 |
| **7-10** | 7 | 3,00 | 2,80 | 2,12 | 1,50 | 3,15 | 2,24 |
| **8-10** | 8 | 4,00 | 3,55 | 2,80 | 2,00 | 4,25 | 3,00 |
| **10-10** | 10 | 6,30 | 5,60 | 4,50 | 3,15 | 6,70 | 4,75 |
| **13-10** | 13 | 10,60 | 9,50 | 7,50 | 5,30 | 11,20 | 8,00 |
| **16-10** | 16 | 16,00 | 14,00 | 11,20 | 8,00 | 17,00 | 11,80 |
| **20-10** | 20 | 25,00 | 22,40 | 18,00 | 12,50 | 26,50 | 19,00 |
| **22-10** | 22 | 30,00 | 28,00 | 21,20 | 15,00 | 31,50 | 22,40 |
| **26-10** | 26 | 42,50 | 37,50 | 30,00 | 21,20 | 45,00 | 31,50 |
| **32-10** | 32 | 63,00 | 56,00 | 45,00 | 31,50 | 67,00 | 47,50 |

*THIELE chain slings are available in mounted and welded execution.*

*Table 3*

# Load Reduction Factors

## Temperature Application Range XL200 and XL400 of Lifting Chains

### Lifting Chains XL200

| Temperature Application Range | W.L.L. |
|---|---|
| -40 °C to 205 °C | 100 % |

### Lifting Chains XL400

| Temperature Application Range | W.L.L. |
|---|---|
| -30 °C to 200° C | 100 % |
| over 200 °C to 300 °C | 90 % |
| over 300 °C to 380 °C | 60 % |

### Load Factors at Asymmetry

| Numer of Chain Strands | 1 | 2 | | 3 | | 4 | |
|---|---|---|---|---|---|---|---|
| Inclination Angle β | - | 0° - 45° | 46° - 60° | 0° - 45° | 46° - 60° | 0° - 45° | 46° - 60° |
| Load Factor | 1 | 1,4 | 1 | 2,1 | 1,5 | 2,1 | 1,5 |

*Table 4*

## Lifting Chains XL400

**TWN 1805**

The grade 100 lifting chains XL400 are made from CrNiMo alloy steel and are used to assemble chain slings and lashing chains. The max. application temperature is 380°C. The testing requirements for these high-quality round steel chains are based on the DIN EN 818, PAS 1061 and on the German Statutory Accident Insurance test principle GS-HM 37. The lifting chains are especially characterized by their certified fatigue strength.


SAFETY 4 : 1 | DGUV ZERT | CE

| Trade Size | Article-No. | Working Load Limit [t] | Nominal Size d [mm] | Pitch p [mm] | Inside Width $w_3$ [mm] min. | Outside Width $w_2$ [mm] max. | Weight app. [kgs/m] |
|---|---|---|---|---|---|---|---|
| **6-10** | F01610B | 1,40 | 6 | 18 | 8,40 | 22,20 | 0,89 |
| **8-10** | F01615B | 2,50 | 8 | 24 | 11,30 | 29,60 | 1,59 |
| **10-10** | F01622B | 4,00 | 10 | 30 | 13,40 | 37,00 | 2,48 |
| **13-10** | F01629B | 6,70 | 13 | 39 | 18,00 | 48,10 | 4,18 |
| **16-10** | F01635B | 10,00 | 16 | 48 | 21,40 | 59,20 | 6,34 |
| **20-10** | F01638B | 16,00 | 20 | 60 | 26,80 | 74,00 | 9,91 |
| **22-10** | F01650B | 19,00 | 22 | 66 | 29,50 | 81,40 | 12,00 |
| **26-10** | F01660B | 26,50 | 26 | 78 | 34,80 | 96,20 | 16,70 |
| **32-10** | F01670B | 40,00 | 32 | 96 | 42,80 | 118,40 | 26,10 |

# Lifting Chains XL400 and XL200

## TWN 0072


## Lifting Chains XL200

Grade 100 lifting chains XL200 are made from CrNiMo alloyed steel and are used to assemble chain slings and lashing chains. The max. application temperature is 205°C.
The testing requirements for these high-quality lifting chains are based on the DIN EN 818 and ASTM 973.

SAFETY 4 : 1 CE

| Trade Size | Article-No. | Working Load Limit [t] | Nominal Size $d_n$ [mm] | Pitch $p_n$ [mm] | Inside Width $w_3$ [mm] min. | Outside Width $w_2$ [mm] max. | Weight app. [kgs/m] |
|---|---|---|---|---|---|---|---|
| **6-10** | F01616 | 1,40 | 6 | 18 | 8,40 | 22,20 | 0,80 |
| **7-10** | F01621 | 1,95 | 7 | 21 | 9,53 | 25,90 | 1,10 |
| **8-10** | F01617 | 2,60 | 8 | 24 | 11,30 | 29,60 | 1,50 |
| **10-10** | F01618 | 4,00 | 10 | 30 | 13,40 | 37,00 | 2,30 |
| **13-10** | F01619 | 6,80 | 13 | 39 | 18,00 | 48,10 | 3,90 |
| **16-10** | F01620 | 10,30 | 16 | 48 | 21,40 | 59,20 | 5,80 |
| **18-10** | F01642 | 12,50 | 18 | 54 | 24,10 | 66,60 | 7,40 |

## Comparison between Lifting Chains XL400 and XL200

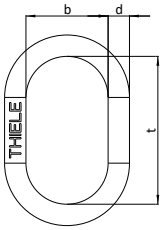
| Properties \ Chain Type | XL400 | XL200 |
|---|---|---|
| **Standard** | PAS 1061 (Manufacturers specification) | ASTM 973 |
| **Material** | High alloy steel | Alloy steel |
| **Temperature Application Range** | -30 °C up to 380 °C; reduction starting at 200 °C | -40 °C up to 205 °C |
| **Working Load Limit (WLL)** | 25 % higher than Grade 80 | 25 % higher than Grade 80 |
| **Manufacturers Proof Force (MPF)** | min. 2,5 x WLL | min. 2 x WLL |
| **Breaking Force (BF)** | min. 4 x WLL | min. 4 x WLL |
| **Elongation at break** | min. 20 % | min. 20 % |
| **Charpy Notch Value** | min. 42 J at -20 °C | min. 36 J at -30 °C, min. 27 J at -40°C |
| **Deflection** | min. 0,8 x d | min. 0,8 x d |
| **Fatigue** | (1,5 x WLL) min. 20.000 LW | No requirement |
| **Material properties (stress corrosion)** | According to standard | No requirement |
| **Finish** | Galvanizing not permitted | Galvanizing not permitted |
| **Colour (solvent-free)** | Ultramarine blue (RAL 5002) | Grey (RAL 7011) |
| **Marking** | XL400; (H)-10, Germany, ID-Code | XL200; T3-10, Germany, ID-Code |
| **Certification** | DGUV | THIELE |
| **Market compliance** | MRL / EAC | ASME, MD / EAC |

## Master Links Form A for 1- and 2-leg Chain Slings

TWN 1813

The grade 100 master links TWN 1813 are used to assemble 1- and 2-leg chain slings. The manufacturing and testing requirements are based on DIN EN 1677 parts 1 and 4, under consideration of grade 100 load capacities. The dimensions comply with the DIN 5688-3 and enable the use of connecting links, e.g. XL-LOKs TWN 1820. The possibility of using the links for single- and double-leg chain slings offers a high flexibility and economical warehousing. Furthermore, the master links can be used for example to assemble wire rope slings according to the DIN EN 13414-1.

SAFETY 4 : 1 DGUV ZERT



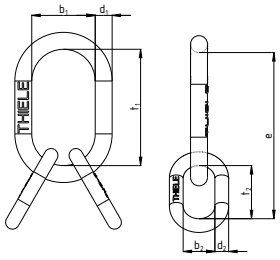

| Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | Weight app. [kgs] | Tradesize for use in Chain Slings | |
|---|---|---|---|---|---|---|---|
| | | d | t | b | | 1-leg | 2-leg |
| F1813013 | 2,50 | 13 | 90 | 50 | 0,29 | **6/7-10** | **6-10** |
| F1813016 | 4,00 | 16 | 110 | 60 | 0,53 | **8-10** | **(7-10)** |
| F1813018 | 5,00 | 18 | 130 | 70 | 0,79 | **10-10** | **8-10** |
| F1813020 | 6,00 | 20 | 140 | 80 | 1,10 | - | **10-10** |
| F1813022 | 7,10 | 22 | 160 | 90 | 1,50 | **13-10** | - |
| F1813026 | 10,00 | 26 | 180 | 100 | 2,30 | **16-10** | **13-10** |
| F1813032 | 15,00 | 32 | 230 | 125 | 4,40 | **18-10** | **16-10** |
| F1813036 | 20,00 | 36 | 250 | 140 | 6,20 | **20/22-10** | **18-10** |
| F1813040 | 23,60 | 40 | 290 | 160 | 8,80 | - | **20-10** |
| F1813045 | 30,00 | 45 | 320 | 175 | 12,00 | **26-10** | **22-10** |
| F1813050 | 40,00 | 50 | 340 | 190 | 16,00 | **32-10** | **26-10** |
| F1813056 | 50,00 | 56 | 380 | 210 | 23,00 | - | - |
| F1813063 | 60,00 | 63 | 430 | 240 | 33,00 | - | **32-10** |
| F1813070 | 75,00 | 70 | 470 | 260 | 44,00 | - | - |

## Master Link Assemblies for 3- and 4-leg Chain Slings

TWN 1814

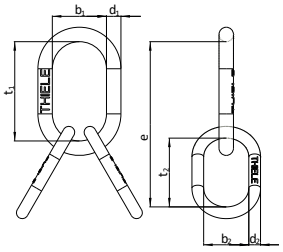
The grade 100 master link assemblies TWN 1814 are used to assemble 3- and 4-leg chain slings. The manufacturing and testing requirements are based on the DIN EN 1677 parts 1 and 4. The dimensions comply with the DIN 5688-3 and enable the use of connecting links, e.g. XL-LOKs TWN 1820. Furthermore, the master link assemblies can be used e.g. to assemble wire rope slings according to the DIN EN 13414-1.

SAFETY 4 : 1 DGUV ZERT




| Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | | | | | Weight app. [kgs] | Trade Size for use in Chain Slings |
|---|---|---|---|---|---|---|---|---|---|---|
| | | $d_1$ | $t_1$ | $b_1$ | e | $d_2$ | $t_2$ | $b_2$ | | |
| F1814016 | 4,00 | 16 | 110 | 60 | 170 | 13 | 60 | 30 | 0,94 | **6-10** |
| F1814020 | 6,00 | 20 | 140 | 80 | 210 | 16 | 70 | 35 | 1,80 | **7/8-10** |
| F1814026 | 10,00 | 26 | 180 | 100 | 270 | 20 | 90 | 45 | 3,80 | **10-10** |
| F1814032 | 15,00 | 32 | 230 | 125 | 350 | 26 | 120 | 60 | 7,70 | **13-10** |
| F1814040 | 23,60 | 40 | 290 | 160 | 420 | 28 | 130 | 65 | 13,00 | **16-10** |
| F1814050A | NEW 33,50 | 50 | 340 | 190 | 500 | 36 | 160 | 80 | 25,00 | **20-10** |
| F1814050 | 40,00 | 50 | 340 | 190 | 520 | 40 | 180 | 90 | 28,00 | **22-10** |
| F1814063 | 60,00 | 63 | 430 | 240 | 630 | 45 | 200 | 100 | 49,00 | **26-10** |
| F1814080 | 85,00 | 80 | 520 | 290 | 740 | 50 | 220 | 110 | 86,00 | **32-10** |

## TWN 1815




## Master Link Assemblies for 3- and 4-leg Rope Slings

NEW

The grade 100 master link assemblies TWN 1815 are used to assemble 3- and 4-leg wire rope slings. The extra large intermediate links enable an easy assembly of wire rope slings. The manufacturing and testing requirements are based on the DIN EN 1677 parts 1 and 4, under consideration of grade 100 load capacities. The dimensions comply with the DIN 5688-3.

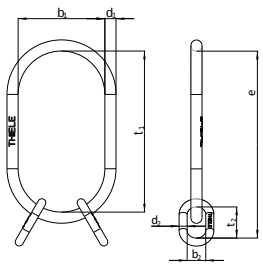
SAFETY 4 : 1 DGUV ZERT

| Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | | | | | Classification[1] of the Wire Rope Diameter* | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $d_1$ | $t_1$ | $b_1$ | e | $d_2$ | $t_2$ | $b_2$ | Fiber [mm] | Steel [mm] | |
| F1815016 | 3,50 | 16 | 110 | 60 | 200 | 13 | 90 | 50 | 12 | 11 | 1,11 |
| F1815018 | 5,00 | 18 | 130 | 70 | 240 | 16 | 110 | 60 | 14 | 14 | 1,85 |
| F1815022 | 6,60 | 22 | 160 | 90 | 290 | 18 | 130 | 70 | 16 | 16 | 3,08 |
| F1815026 | 9,30 | 26 | 150 | 100 | 340 | 22 | 160 | 90 | 20 | 18 | 5,40 |
| F1815032 | 13,90 | 32 | 230 | 125 | 410 | 26 | 180 | 100 | 24 | 22 | 9,10 |
| F1815036 | 20,00 | 36 | 250 | 140 | 480 | 32 | 230 | 125 | 28 | 28 | 15,00 |
| F1815045 | 26,30 | 45 | 320 | 175 | 540 | 36 | 250 | 140 | 32 | 32 | 24,40 |
| F1815050 | 40,00 | 50 | 340 | 190 | 660 | 45 | 320 | 175 | 40 | 40 | 40,40 |
| F1815056 | 50,20 | 56 | 380 | 210 | 720 | 50 | 340 | 190 | 44 | 44 | 55,40 |
| F1815063 | 62,60 | 63 | 430 | 240 | 810 | 56 | 380 | 210 | 52 | 48 | 78,40 |
| F1815085 | 127,20 | 85 | 520 | 290 | 1040 | 80 | 520 | 290 | 60 | 60 | 201,00 |

**Acc. to the DIN EN 13414-1*

*[1] The classification for use in the 3 / 4 strand takes into account an angle of inclination of 0° < β ≤ 45°.*

## TWN 1816




## Oversized Master Link Assemblies for 2-leg Chain Slings for Single Crane Hook DIN 15401 (16 t, 25 t)

NEW

The grade 100 oversized master link assemblies TWN 1816 are used to assemble 2-leg chain slings and are used with big crane hooks according to the DIN 15401. The manufacturing and testing requirements are based on the DIN EN 1677 parts 1 and 4, under consideration of grade 100 load capacities. The dimensions comply with the DIN 5688-3. The intermediate links enable the use of connecting links, e.g. XL-LOKs TWN 1820.

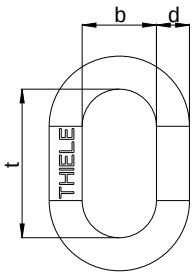
SAFETY 4 : 1 DGUV ZERT

| Trade Size | Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | | | | | Assignment to crane hooks acc. to the DIN 15401 [No.] | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | $d_1$ | $t_1$ | $b_1$ | e | $d_2$ | $t_2$ | $b_2$ | | |
| **8-10** | F18160816 | 3,55 | 22 | 260 | 140 | 330 | 16 | 70 | 35 | 16 | 2,96 |
| **8-10** | F18160825 | 3,55 | 24 | 340 | 180 | 410 | 16 | 70 | 35 | 25 | 4,14 |
| **10-10** | F18161025 | 5,60 | 28 | 340 | 180 | 410 | 16 | 70 | 35 | 25 | 5,43 |
| **13-10** | F18161325 | 9,00 | 32 | 340 | 180 | 430 | 20 | 90 | 45 | 25 | 7,68 |
| **16-10** | F18161625 | 14,00 | 40 | 340 | 180 | 440 | 22 | 100 | 50 | 25 | 11,90 |
| **20-10** | F18162025 | 22,40 | 45 | 340 | 180 | 480 | 32 | 140 | 70 | 25 | 18,60 |

## Intermediate Links Type B

TWN 1795

The grade 100 intermediate links TWN 1795 are used to manufacture chain slings. The dimensions are according to the DIN 5688-3 and enable the use of connecting links, e.g. XL-LOKs TWN 1820. The manufacturing and testing requirements are based on DIN EN 1677 parts 1 and 4, under consideration of grade 100 load capacities.



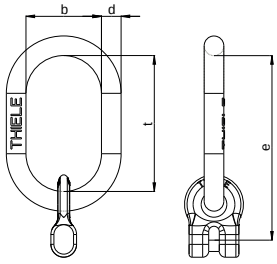

SAFETY 4 : 1 | DGUV ZERT

| Trade Size | Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|
| | | | d | t | b | |
| B8 | F179508 | 1,40 | 8 | 36 | 18 | 0,05 |
| B10 | F179510 | 2,50 | 10 | 46 | 23 | 0,09 |
| B13 | F179513 | 4,00 | 13 | 60 | 30 | 0,20 |
| B16 | F179516 | 6,70 | 16 | 70 | 35 | 0,36 |
| B20 | F179520 | 10,00 | 20 | 90 | 45 | 0,73 |
| B22 | F179522 | 12,50 | 22 | 100 | 50 | 0,97 |
| B26 | F179526 | 16,00 | 26 | 120 | 60 | 1,60 |
| B28 | F179528 | 19,00 | 28 | 130 | 65 | 1,90 |
| B32 | F179532 | 26,50 | 32 | 140 | 70 | 2,90 |
| B36 | F179536 | 31,30 | 36 | 160 | 80 | 4,20 |
| B40 | F179540 | 40,00 | 40 | 180 | 90 | 5,80 |
| B45 | F179545 | 50,00 | 45 | 200 | 100 | 8,20 |

## Fixed Size Master Links TAA1 for 1-leg Chain Slings

TWN 1810/1

The grade 100 fixed size master links TWN 1810/1 are used to assemble 1-leg chain slings. The permanently installed ring shackles enable the assembly of lifting chains of the appropriate nominal size only. The dimensions of the fixed size master links type A comply with the DIN 5688-3. Welded-in identification tags contain all the necessary data for the operator. The manufacturing and testing requirements are based on the DIN EN 1677 parts 1 and 4, under consideration of grade 100 load capacities.




SAFETY 4 : 1 | DGUV ZERT | 100 %

| Trade Size | Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | d | t | b | e | |
| 6-10 | F1810106 | 1,40 | 13 | 90 | 50 | 121 | 0,40 |
| 8-10 | F1810108 | 2,50 | 16 | 110 | 60 | 147 | 0,71 |
| 10-10 | F1810110 | 4,00 | 18 | 130 | 70 | 176 | 1,20 |
| 13-10 | F1810113 | 6,70 | 22 | 160 | 90 | 219 | 2,33 |
| 16-10 | F1810116 | 10,00 | 26 | 180 | 100 | 256 | 3,90 |
| 22-10* NEW | F1810122 | 19,00 | 36 | 250 | 140 | 350 | 10,10 |

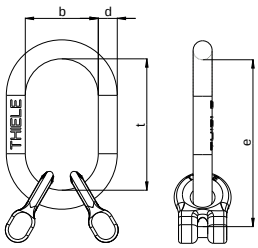
**On request*

## TWN 1810/2

## Fixed-Size Master Links TAA2 for 2-leg Chain Slings

The grade 100 fixed size master links TWN 1810/2 are used to assemble 2-leg chain slings. The permanently installed ring shackles allow the assembly of lifting chains of the appropriate nominal size only. The dimensions of the fixed size master links type A comply with the DIN 5688-3. The manufacturing and testing requirements are based on the DIN EN 1677 parts 1 and 4, under consideration of grade 100 load capacities. Welded-in identification tags contain all the necessary data for the operator.

SAFETY 4 : 1 | DGUV ZERT | 100 %




| Trade Size | Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | d | t | b | e | |
| 6-10 | F1810206 | 2,00 | 13 | 90 | 50 | 121 | 0,50 |
| 8-10 | F1810208 | 3,55 | 18 | 130 | 70 | 167 | 1,20 |
| 10-10 | F1810210 | 5,60 | 20 | 140 | 80 | 186 | 1,90 |
| 13-10 | F1810213 | 9,00 | 26 | 180 | 100 | 239 | 4,00 |
| 16-10 | F1810216 | 14,00 | 32 | 230 | 125 | 296 | 7,60 |
| 22-10* NEW | F1810222 | 26,50 | 45 | 320 | 175 | 420 | 19,80 |

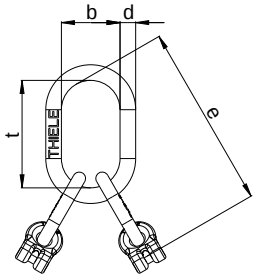
*On request*

## TWN 1810/4

## Fixed-Size Master Links TAA4 for 3- and 4-leg Chain Slings

The grade 100 fixed size master links TWN 1810/4 are used to assemble 3- and 4-leg chain slings. The permanently installed ring shackles allow the assembly of lifting chains of the appropriate nominal size only. The dimensions of the fixed size master links type A comply with the DIN 5688-3. The manufacturing and testing requirements are based on the DIN EN 1677 parts 1 and 4, under consideration of grade 100 capacities. Welded-in identification tags contain all the necessary data for the operator.

SAFETY 4 : 1 | DGUV ZERT | 100 %




| Trade Size | Article-No. | Working Load Limit 0°< β ≤ 45° [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | d | t | b | e | |
| 6-10 | F1810406 | 3,00 | 16 | 110 | 60 | 201 | 1,40 |
| 8-10 | F1810408 | 5,30 | 20 | 140 | 80 | 247 | 2,70 |
| 10-10 | F1810410 | 8,00 | 26 | 180 | 100 | 316 | 5,40 |
| 13-10 | F1810413 | 14,00 | 32 | 230 | 125 | 409 | 11,20 |
| 16-10 | F1810416 | 21,20 | 40 | 290 | 160 | 495 | 19,40 |
| 22-10* NEW | F1810422 | 40,00 | 50 | 340 | 190 | 620 | 43,20 |

*On request*

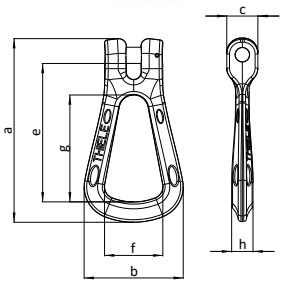
## Clevis Master Links

### TWN 1819

The grade 100 clevis master links TWN 1819 are predominantely used to assemble basket slings for bundling of loads. The manufacturing and testing requirements are based on the DIN EN 1677-1, under consideration of grade 100 load capacities.

SAFETY 4 : 1 | 100 %

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | c | e | f | g | h | |
| 13-10 | F31025 | 6,70 | 189 | 102 | 32 | 142,5 | 60 | 110 | 22 | 1,11 |




# Connectors

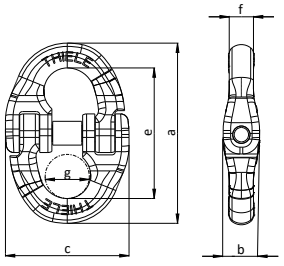
## XL-LOK Connecting Links

### TWN 1820

The grade 100 XL-LOK connecting links TWN 1820 are used to connect lifting chains with sling components to assemble chain slings and lashing chains. The manufacturing and testing requirements are based on DIN EN 1677-1, under consideration of grade 100 load capacities.

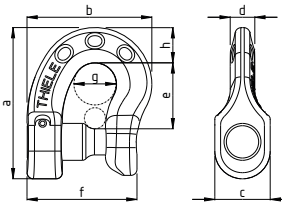
SAFETY 4 : 1 | DGUV ZERT | 100 %

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | c | e | f | g | |
| 6-10 | F30807 | 1,40 | 61 | 12 | 38,5 | 45 | 8 | 14 | 0,07 |
| 7-10 NEW | F308090 | 1,90 | 71 | 14 | 47 | 50,5 | 9 | 16 | 0,14 |
| 8-10 | F30817 | 2,50 | 85 | 16 | 55 | 62 | 10 | 19 | 0,20 |
| 10-10 | F30827 | 4,00 | 97 | 18 | 66,5 | 72 | 13 | 24 | 0,35 |
| 13-10 | F30837 | 6,70 | 125 | 23 | 82,5 | 87 | 17 | 28 | 0,74 |
| 16-10 | F30847 | 10,00 | 146 | 31,5 | 109 | 105 | 21 | 34 | 1,20 |
| 20-10 NEW | F308570 | 16,00 | 178,5 | 37 | 143,5 | 127,5 | 25 | 45 | 2,80 |
| 22-10 NEW | F308670 | 19,00 | 196,5 | 40,5 | 150,5 | 140,5 | 27,5 | 45 | 3,50 |
| 26-10 NEW | F308770 | 26,50 | 232 | 47,5 | 178 | 166 | 33 | 56 | 5,80 |
| 32-10 NEW | F308870 | 40,00 | 285,5 | 58,5 | 220,5 | 204 | 40 | 70 | 10,9 |



## TWN 1847

## Open Ring Shackles NEW




The innovative grade 100 open ring shackles TWN 1847 are used as a fixed size connection of lifting chains with sling components to assemble chain slings. For the correct assignment of the nominal size of the suspension links, the ring shackles are provided with a diameter indication forged on the body. The ring shackles provide an optimized, almost non-interchangeable and safe connection option for the simple assembly of chain slings. The manufacturing and testing requirements are based on DIN EN 1677-1 under consideration of the grade 100 load capacities.

SAFETY 4 : 1 | DGUV ZERT | 100 %

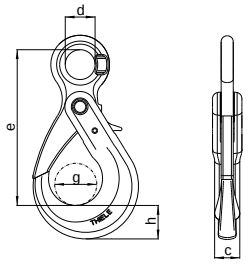
| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | a | b | c | e | f | g | d | h | |
| 6-10* | F31705 | 1,40 | - | - | - | - | - | - | - | - | 0,25 |
| 8-10* | F31715 | 2,50 | - | - | - | - | - | - | - | - | 0,30 |
| 10-10 | F31725 | 4,00 | 76 | 64 | 28 | 34 | 57 | 21 | 14 | 19 | 0,37 |
| 13-10 | F31735 | 6,70 | 99 | 82 | 36 | 43 | 72 | 27 | 16 | 23 | 0,77 |
| 16-10* | F31745 | 10,00 | - | - | - | - | - | - | - | - | 1,00 |

*On request

# Hooks

## TWN 1836

## Eye Self-Locking Hooks




The grade 100 eye self-locking hooks TWN 1836 are used to assemble lifting slings and are also used in the construction industry. The round steel chains may be assembled with connecting links, e.g. XL-LOKs TWN 1820. When the hooks are under load, they lock automatically. They may only be reopened manually, when the hooks are not under load anymore. The self-locking hooks comply with DIN EN 1677-3 under consideration of grade 100 load capacities.

SAFETY 4 : 1 | 100 %

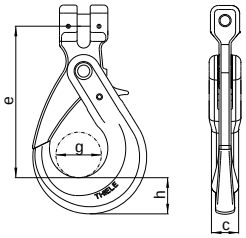
| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|
| | | | d | e | c | g | h | |
| 6-10* NEW | F092003 | 1,40 | 22 | 107 | 18 | 28 | 22 | 0,52 |
| 7/8-10* NEW | F092103 | 2,50 | 24 | 133 | 23 | 33 | 25 | 0,88 |
| 10-10* NEW | F092303 | 4,00 | 32 | 167 | 27 | 45 | 34 | 1,63 |
| 13-10* NEW | F092403 | 6,70 | 39 | 205 | 34 | 52 | 40 | 3,20 |
| 13-10[1)] | F092233 | 6,70 | 40 | 209 | 32,5 | 53,5 | 40,5 | 2,92 |
| 16-10* NEW | F092503 | 10,00 | 49 | 262 | 43 | 64 | 53 | 6,33 |
| 16-10[1)] | F092243 | 10,00 | 50 | 254 | 38 | 62 | 50,5 | 5,82 |
| 20-10* NEW | F092603 | 16,00 | 59 | 282 | 49 | 77 | 54 | 9,27 |
| 22-10* NEW | F092703 | 19,00 | 70 | 310 | 57 | 92 | 74 | 13,62 |
| 22-10[1)] | F092273 | 19,00 | 70 | 319,5 | 52 | 80 | 66 | 11,74 |

*On request
[1)] TWN 1836A

## Clevis Self-Locking Hooks

### TWN 1837

The grade 100 clevis self-locking hooks TWN 1837 are used to assemble chain slings and are often used in the construction industry. The clevis design enables the direct attachment to the chain strands. When the hooks are under load, they lock automatically. They may only be reopened manually when the hooks are not under load anymore. The self-locking hooks comply with the DIN EN 1677-3, under consideration of grade 100 load capacities.



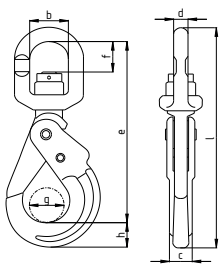

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | e | c | g | h | |
| 6-10* | NEW F0920031 | 1,40 | 98 | 18 | 28 | 22 | 0,59 |
| 7-10* | NEW F0920033 | 1,90 | 120 | 23 | 33 | 25 | 0,94 |
| 8-10* | NEW F092013 | 2,50 | 120 | 23 | 33 | 25 | 0,94 |
| 10-10* | NEW F092023 | 4,00 | 150 | 27 | 45 | 34 | 1,73 |
| 13-10* | NEW F092033 | 6,70 | 185 | 34 | 52 | 40 | 3,34 |
| 13-10[1)] | F092032 | 6,70 | 182 | 32,5 | 53,5 | 40,5 | 3,00 |
| 16-10* | NEW F092043 | 10,00 | 220 | 43 | 64 | 53 | 6,58 |
| 16-10[1)] | F092042 | 10,00 | 217 | 38 | 62 | 50,5 | 5,92 |
| 20-10* | NEW F092053 | 16,00 | 235 | 49 | 77 | 54 | 9,17 |
| 22-10* | NEW F092063 | 19,00 | 260 | 57 | 92 | 74 | 13,90 |
| 22-10[1)] | F092072 | 19,00 | 276,5 | 52 | 80 | 66 | 12,31 |

**On request*
*[1)] TWN 1837A*

## Swivel Self-Locking Hooks NEW

### TWN 1838

The grade 100 swivel self-locking hooks TWN 1838 are used to assemble chain- and wire rope- slings and are often used in the construction industry. The swivel with ball bearing allows the operator to swivel under load. When the hooks are under load, they lock automatically. They may only be reopened manually when the hooks are not under load anymore. The self-locking hooks comply with the DIN EN 1677-3 under consideration of grade 100 load capacities.



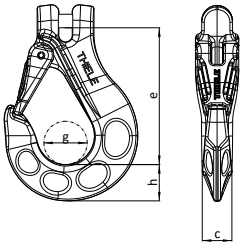

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | e | c | g | b | d | f | h | l | |
| 6-10 | F0923003 | 1,40 | 120 | 16,5 | 28 | 30 | 10,5 | 18,5 | 25 | 180 | 0,60 |
| 8-10 | F092313 | 2,50 | 201 | 23 | 33 | 43 | 14 | 33 | 25 | 242 | 1,00 |
| 10-10 | F092323 | 4,00 | 240 | 27 | 45 | 49 | 16 | 38 | 34 | 289 | 2,00 |
| 13-10 | F092333 | 6,70 | 303 | 34 | 52 | 57 | 21 | 49 | 40 | 363 | 3,80 |
| 16-10 | F092343 | 10,00 | 340 | 43 | 64 | 60 | 23 | 49 | 53 | 410 | 7,00 |
| 20-10 | F092353 | 16,00 | 380 | 49 | 77 | 80 | 27 | 68 | 54 | 470 | 9,60 |
| 22-10 | F092363 | 19,00 | 471 | 57 | 92 | 99 | 33 | 99 | 74 | 573 | 13,00 |

## TWN 1840/1

## Clevis Sling Hooks with Forged Safety Latch

The grade 100 clevis sling hooks with forged safety latch TWN 1840/1 are used to assemble standard chain slings and lashing chains. The clevis design enables the direct attachment to the lifting chain. The sling hooks comply with the DIN EN 1677-2, under consideration of grade 100 load capacities. Forged-in measuring points of the max. limit values of the hook opening enables easy control. The forged safety latch prevents an unintentional detachment from the load.

SAFETY 4 : 1 | DGUV ZERT | 100 %



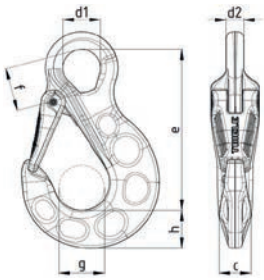

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | e | g | h | c | |
| 6-10 | F336050 | 1,40 | 76 | 24 | 20 | 17 | 0,36 |
| 7-10 NEW | F336070 | 1,90 | 91 | 26,5 | 22 | 20 | 0,53 |
| 8-10 | F336150 | 2,50 | 94 | 30 | 25 | 22 | 0,76 |
| 10-10 | F336250 | 4,00 | 114 | 37 | 32 | 28 | 1,41 |
| 13-10 | F336350 | 6,70 | 134 | 42 | 41 | 35 | 2,48 |
| 16-10 | F336450 | 10,00 | 162 | 51 | 50 | 41 | 4,40 |
| 20-10 NEW | F336550 | 16,00 | 201 | 61 | 58 | 51 | 8,60 |
| 22-10 NEW | F33664 | 19,00 | 223 | 70 | 62 | 55 | 11,50 |

## TWN 1841/1

## Sling Hooks with Eye and Forged Safety Latch

The grade 100 eye sling hooks with safety latch TWN 1841/1 are used to assemble standard chain slings. The round steel chains are assembled by using connecting links, e.g. XL-LOKs TWN 1820. The sling hooks comply with the DIN EN 1677-2, under consideration of grade 100 load capacities. Forged-in measuring points of the max. limit values of the hook opening enable easy control. The forged safety latches prevent unintentional detachment from the load.

SAFETY 4 : 1 | DGUV ZERT | 100 %




| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | e | $d_1$ | $d_2$ | g | h | c | f | |
| 6-10 | F32905 | 1,40 | 92 | 21[1)] | 11 | 24 | 20 | 17 | - | 0,36 |
| 7/8-10 | F32915 | 2,50 | 118 | 28[1)] | 14 | 30 | 25 | 20 | - | 0,76 |
| 10-10 | F32925 | 4,00 | 146 | 36[1)] | 18 | 37 | 32 | 29 | - | 1,50 |
| 13-10 | F32935 | 6,70 | 168 | 42[1)] | 21 | 42 | 41 | 35 | - | 2,55 |
| 16-10 | F32945 | 10,00 | 210 | 54[1)] | 25 | 51 | 50 | 41 | - | 4,65 |
| 20-10 NEW | F32965 | 16,00 | 244 | 58[1)] | 27 | 62 | 59 | 51 | - | 7,61 |
| 22-10 | F32975 | 19,00 | 271 | 65[1)] | 30 | 70 | 62 | 55 | - | 10,20 |
| 26-10 | F32985 | 26,50 | 302 | 70 | 33 | 75 | 71 | 60 | 81 | 15,00 |
| 32-10 NEW | F32995 | 40,00 | 350 | 80 | 38 | 90 | 84 | 70 | 99 | 24,30 |

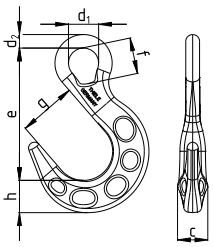
[1)] *With circular eyelet*

## Eye Foundry Hooks NEW

The grade 100 eye foundry hooks with enlarged eye TWN 1856 are used to assemble chain slings predominantly for foundries. The round steel chains are assembled by using connecting links, e.g. XL-LOKs TWN 1820. The manufacturing and testing requirements comply with the DIN EN 1677-1, under consideration of grade 100 capacities.

SAFETY 4 : 1 | 100 %

**TWN 1856**




| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | $d_1$ | $d_2$ | e | c | g | h | f | |
| **6-10*** | F32353 | 1,40 | 21 [1)] | 12 | 108 | 20 | 50 | 24 | - | 0,44 |
| **7/8-10*** | F32363 | 2,50 | 28 [1)] | 14 | 135 | 26 | 66 | 33 | - | 0,97 |
| **10-10*** | F32373 | 4,00 | 32 [1)] | 18 | 161 | 32,5 | 76 | 35 | - | 1,56 |
| **13-10*** | F32383 | 6,70 | 42 [1)] | 21 | 196 | 38 | 89 | 42 | - | 2,96 |
| **16-10*** | F32395 | 10,00 | 54 [1)] | 23 | 229 | 45 | 102 | 48 | - | 4,71 |
| **18/20-10** | F32405 | 16,00 | 59 | 27 | 259 | 58,5 | 114 | 63 | 70 | 7,95 |
| **22-10** | F32413 | 19,00 | 65 | 30 | 288 | 65 | 127 | 70 | 78 | 10,88 |
| **26-10*** | F32423 | 26,50 | 76 | 35 | 329 | 75 | 136 | 81 | 89 | 16,49 |
| **32-10*** | F32443 | 40,00 | 85 | 42 | 358 | 83 | 152 | 97 | 100 | 26,20 |

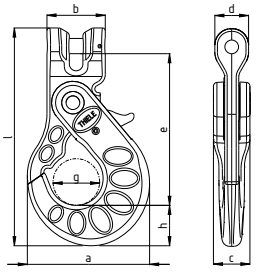
**On request*
*[1)] With circular eyelet*

## Clevis Skip Suspension Hooks NEW

The grade 100 skip suspension hooks TWN 1899 connect chain slings with the pivot of containers, e.g. containers according to the DIN 30720. The shape of the hook opening is designed to fit container lifting pivots. The clevis design enables the direct attachment to the chain. The hooks lock automatically when under load and may only be reopened manually if not under load anymore. The skip suspension hooks comply with the DIN EN 1677-3, under consideration of grade 100 working load capacities.

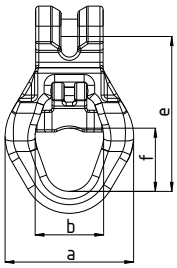
**TWN 1899**

SAFETY 4 : 1 | 100 %




| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | e | c | g | h | d | b | a | l | |
| **13-10** | F335100 | 6,70 | 166 | 40 | 51 | 42 | 37 | 64 | 135 | 239 | 3,34 |

## TWN 1869



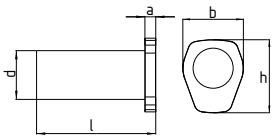

### Clevis Skip Suspension Links for One-Hand Operation and Forged Safety Latch NEW

The grade 100 skip suspension links TWN 1869 connect chain slings with the pivots on containers, e.g. containers according to the DIN EN 30720. The shape of the eyelet is designed to fit container suspension pivots. The clevis design enables the direct attachment to the chain. The forged safety latch enables a one-hand operation. The manufacturing and testing requirements are based on DIN EN 1677-1, under consideration of grade 100 load capacities.

SAFETY 4 : 1 | 100 %

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | e | f | b | a | |
| **13-10** | F313805 | 6,7 | 142 | 57,5 | 65 | 122 | 1,94 |

## TWN 0869/1




### Container Pivots

The container pivots TWN 0869/1 are welded to containers and serve as lifting points for attaching skip suspension hooks and links.

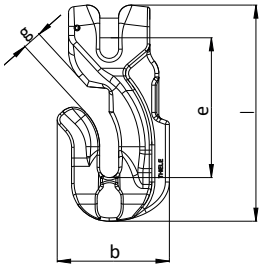
| Article-No. | Dimensions [mm] | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|
| | a | d | b | l | h | |
| F31410 | 10 | 45 | 68 | 110 | 82 | 1,60 |

## Clevis Shortening Hooks

### TWN 1827

The grade 100 clevis shortening hooks TWN 1827 are used to adjust the strand lengths of chain slings and lashing chains. The clevis design enables the direct attachment to the chain. The manufacturing and testing requirements comply with the DIN EN 1677-1 and DIN 5692, under consideration of grade 100 load capacities. The shortening hook has been tested in combination with the lifting chain. The extra wide chain support ensures a particularly firm fit of the inserted chain link. At the same time the link is protected from getting damaged.

SAFETY 4 : 1 | 100 %




| Trade Size | | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|
| | | | | e | g | l | b | |
| 7-10* | | F33203 | 1,90 | 68,5 | 8,5 | 102,5 | 54 | 0,50 |
| 8-10 | NEW | F33204 | 2,50 | 71 | 9,5 | 110 | 56 | 0,53 |
| 10-10 | | F33214 | 4,00 | 83 | 12,5 | 132 | 67 | 0,93 |
| 13-10 | | F33224 | 6,70 | 109 | 15,5 | 168 | 83 | 1,99 |
| 16-10 | | F33234 | 10,00 | 137 | 18,5 | 208 | 101 | 3,62 |
| 20-10* | NEW | F33236 | 16,00 | 170 | 23,5 | 260 | 127 | 7,38 |
| 22-10* | NEW | F33238 | 19,00 | 186 | 25,5 | 286 | 139 | 9,95 |
| 26-10* | NEW | F33242 | 26,50 | 220 | 30 | 337 | 164 | 15,26 |
| 32-10* | NEW | F33244 | 40,00 | 271 | 37 | 415 | 202 | 28,18 |

*On request

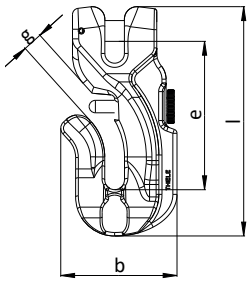
## Clevis Shortening Hooks with Safety Pin

### TWN 1827/1

The grade 100 clevis shortening hooks with safety pin TWN 1827/1 are used to adjust the strand lengths of chain slings and lashing chains. The clevis design enables the direct attachment to the chain. The safety pin prevents the chain strand from accidental release. The manufacturing and testing requirements comply with the DIN EN 1677-1 and DIN 5692, under consideration of grade 100 load capacities. The shortening hook has been tested in combination with the lifting chain. The extra wide chain support ensures a particularly firm fit for the inserted chain link. At the same time the link is protected from getting damaged. The safety bolt enables the use in lashing chains according to the DIN EN 12195-3.

SAFETY 4 : 1 | 100 %

***NEW:***
*Application and assembly video for the shortening hook with safety pin on YouTube!*




| Trade Size | | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|
| | | | | e | g | l | b | |
| 7-10* | NEW | F332022 | 1,90 | 68,3 | 8,5 | 102,5 | 54 | 0,50 |
| 8-10 | NEW | F33205 | 2,50 | 71 | 9,5 | 110 | 56 | 0,54 |
| 10-10 | | F33215 | 4,00 | 82,7 | 12,5 | 132 | 67 | 0,94 |
| 13-10 | | F33225 | 6,70 | 109 | 15,5 | 168 | 83 | 2,00 |
| 16-10 | | F33235 | 10,00 | 137 | 18,5 | 208 | 101 | 3,64 |
| 20-10* | NEW | F33237 | 16,00 | 170 | 23,5 | 260 | 127 | 7,42 |
| 22-10* | NEW | F33239 | 19,00 | 186 | 25,5 | 286 | 139 | 10,00 |
| 26-10* | NEW | F33243 | 26,50 | 220 | 30 | 337 | 164 | 15,37 |
| 32-10* | NEW | F33247 | 40,00 | 271 | 37 | 415 | 200 | 28,29 |

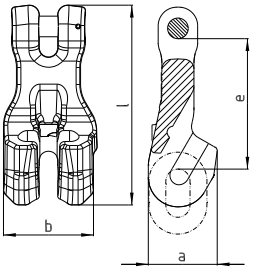
*On request

## TWN 1851/1

## Clevis Shortening Claws with Safety Pin NEW

The grade 100 clevis shortening claws with safety pin TWN 1851/1 are used to adjust the strand lengths of chain slings and lashing chains. The clevis design enables the direct attachment to the chain. The safety pin prevents the chain strand from accidental release. The manufacturing and testing requirements comply with the DIN EN 1677-1 and the DIN 5692, under consideration of grade 100 load capacities. The shortening claws have been tested in interaction with the lifting chain. The chain pockets ensure a particularly tight fit for the inserted chain link. The safety bolt enables the use in lashing chains according to DIN EN 12195-3.

SAFETY 4 : 1 | DGUV ZERT | 100 %




| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | e | a | b | l | |
| 6-10 | F349141 | 1,40 | 51 | 27 | 37 | 78 | 0,25 |
| 8-10 | F349241 | 2,50 | 65 | 34 | 46 | 100 | 0,50 |
| 10-10 | F349341 | 4,00 | 81 | 43 | 56 | 124 | 0,94 |
| 13-10 | F349441 | 6,70 | 106 | 56 | 73 | 162 | 2,03 |
| 16-10 | F349551 | 10,00 | 130 | 68 | 88 | 198 | 3,61 |
| 20-10 | F349661 | 16,00 | 161 | 85 | 109 | 246 | 7,08 |
| 22-10 | F349771 | 19,00 | 177 | 94 | 120 | 271 | 9,52 |
| 26-10* | F349881 | 26,50 | 196 | 109 | 135 | 307 | 13,20 |
| 32-10* | F349991 | 40,00 | 240 | 135 | 166 | 370 | 24,50 |

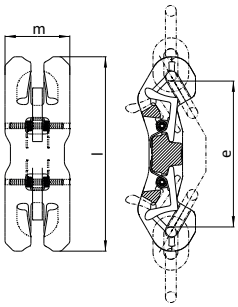
*On request*

## TWN 1852

## RAPID® Shortening Claws

The grade 100 RAPID® shortening claws TWN 1852 are used to adjust the strand lengths of chain slings and lashing chains. Due to the double claws, the RAPID® shortening claws can be universally integrated to existing chain strands without permanently mounting them into the chain sling. The manufacturing and testing requirements comply with the DIN EN 1677-1 and DIN 5692, under consideration of grade 100 load capacities. The shortening claws have been tested in interaction with the sling chains. The chain pockets ensure a tight fit of the inserted chain link.
The safety bolt enables the use in lashing chains according to the DIN EN 12195-3. RAPID® shortening claws can be installed quickly and subsequently in chain sling and lashing chains without tools.

SAFETY 4 : 1 | CE | 100 %




| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|
| | | | e | l | m | |
| 8-10 | F34775 | 2,50 | 111 | 148 | 48 | 1,11 |
| 10-10 | F34780 | 4,00 | 134 | 180 | 60 | 2,09 |
| 13-10 | F34785 | 6,70 | 179 | 240 | 78 | 4,76 |
| 16-10 | F34790 | 10,00 | 224 | 296 | 96 | 9,07 |

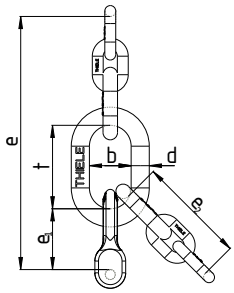
## Shortening Devices for Fixed Size Master Links

### TWN 1896

The grade 100 shortening devices for fixed size master links TWN 1896 are used in chain slings and enable the strand lengths to be adapted to the conditions of use. The manufacturing and testing requirements are based on the DIN EN 818-4, DIN EN 1677 parts 1 and 4 and the DIN 5688-3, under consideration of grade 100 load capacities.

SAFETY 4 : 1 | 100 %

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | B-Link | | | |
| | | | e | $e_1$ | $e_2$ | d | t | b | |
| 6-10 | F189606 | 1,40 | 137 | 31 | 60 | 10 | 46 | 23 | 0,32 |
| 8-10 | F189608 | 2,50 | 175 | 38 | 78 | 13 | 60 | 30 | 0,70 |
| 10-10 | F189610 | 4,00 | 215 | 46 | 99 | 16 | 70 | 35 | 1,40 |
| 13-10 | F189613 | 6,70 | 270 | 59 | 126 | 18 | 85 | 40 | 2,60 |
| 16-10 | F189616 | 10,00 | 326 | 76 | 150 | 22 | 100 | 50 | 5,00 |




# Shackles

## Bolt Shackles Type C with Nut and Roll Pin

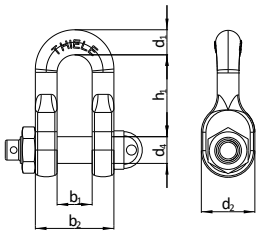
### TWN 1871

The grade 100 shackles type C with bolt, nut and roll pin TWN 1871 are used as end fittings in chain slings. The type C shackles can also be mounted directly on shackles and traverses. The dimensions of the type C shackles comply with the DIN 82101. The manufacturing and testing requirements are based on the DIN EN 1677-1, under consideration of grade 100 load capacities.

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

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| | | | $d_1$ | $d_2$ | $d_4$ | $b_1$ | $b_2$ | $h_1$ | |
| 6-10* NEW | F303000 | 1,40 | 9 | 20 | 13 | 13 | 28 | 28 | 0,32 |
| 8-10* NEW | F303005 | 2,50 | 12 | 26 | 14 | 17 | 38 | 38 | 0,40 |
| 10-10 | F303100 | 4,00 | 15 | 32 | 16 | 21 | 47 | 49 | 0,45 |
| 13-10 | F303200 | 6,70 | 19 | 40 | 20 | 28 | 62 | 61 | 0,84 |
| 16-10 | F303300 | 10,00 | 23 | 48 | 24 | 33 | 75 | 73 | 1,49 |
| 20-10* NEW | F303400 | 16,00 | 30 | 64 | 30 | 42 | 95 | 91 | 3,20 |
| 22-10 | F303500 | 19,00 | 33 | 72 | 36 | 47 | 107 | 111 | 4,59 |

*On request*

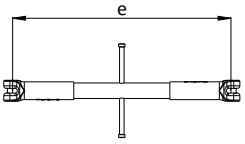


# Chain Tensioners/ Special Sling Components

## TWN 1454

### Chain Tensioners with Toggle (Large Lift)

The grade 100 chain tensioners with toggle TWN 1454 are used as tensioning elements in lashing chains. The chain tensioners can also be used in chain slings for stepless adjustment of strand lengths when lifting loads. These chain tensioners have a particularly large lift. The chain tensioners with toggle and trapezoidal thread achieve a high pretensioning force with little force impact. This property is of fundamental importance when lashing down, as the level of the pretensioning force contributes to load securing. The manufacturing and testing requirements are based on DIN EN 1677-1, under consideration of grade 100 forces.




SAFETY 4:1 2:1 | DGUV ZERT | 100 %

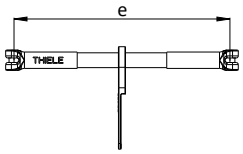
| Trade Size | Article-No. | Working Load LImit [t] | Normal straight load [daN] | Lashing Capacity (LC) [daN] | Dimensions [inch] | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|
| | | | | | $e_{max}$ | $e_{min}$ | lift | |
| **13-10** | F341877 | 6,70 | 2.600 | 13.000 | 675 | 445 | 230 | 7,19 |
| **16-10** | F341977 | 10,00 | 3.100 | 20.000 | 830 | 550 | 280 | 11,80 |

*If the products are initially used for lifting, e.g. internal transport, up to the load capacity, they can still be used as lashing products. If lifting products are used for lashing, they may no longer be used for lifting anymore!*

## TWN 1455

### Chain Tensioners with Ratchet (Large Lift)

The grade 100 chain tensioners with ratchet TWN 1455 are used as tensioning elements in lashing chains. The chain tensioners can also be used in chain slings for stepless adjustment of strand lengths when lifting loads. The chain tensioners have a particularly large lift. The chain tensioners with ratchet and trapezoidal thread achieve a high pretensioning force with little force impact. This property is of fundamental importance when lashing down, as the level of the pretensioning force contributes to load securing. The manufacturing and testing requirements are based on DIN EN 1677-1, under consideration of grade 100 forces.




SAFETY 4:1 2:1 | 100 %

| Trade Size | Article-No. | Working Load LImit [t] | Normal straight load [daN] | Lashing Capacity (LC) [daN] | Dimensions [inch] | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|
| | | | | | $e_{max}$ | $e_{min}$ | lift | |
| **13-10** | F341878 | 6,70 | 2.600 | 13.000 | 675 | 445 | 230 | 8,40 |

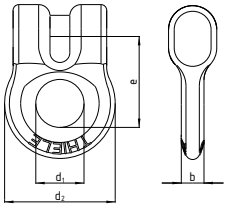
*If the products are initially used for lifting, e.g. internal transport, up to the load capacity, they can still be used as lashing products. If lifting products are used for lashing, they may no longer be used for lifting anymore!*

# Special Sling Components

## TWN 1812

### Ring Shackles

The grade 100 ring shackles TWN 1812 are used to connect chains to sling components to assemble chain slings. The manufacturing and testing requirements are based on DIN EN 1677-1, under consideration of grade 100 load capacities.



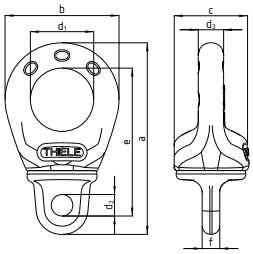

SAFETY 4:1 | 100 %

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|
| | | | e | $d_1$ | $d_2$ | b | |
| **6-10** | F31704 | 1,40 | 31 | 17 | 39 | 8 | 0,10 |
| **8-10** | F31714 | 2,50 | 37 | 21 | 50 | 11 | 0,23 |
| **10-10** | F31724 | 4,00 | 46 | 26 | 62 | 14 | 0,48 |
| **13-10** | F31734 | 6,70 | 59 | 33 | 79 | 18 | 0,85 |
| **16-10** | F31744 | 10,00 | 76 | 42 | 100 | 23 | 1,59 |
| **22-10** NEW | F31764 | 19,00 | 100 | 57 | 135 | 30,5 | 3,93 |

## Swivel Adapters NEW

### TWN 1846

The grade 100 swivel adapters with ball-bearing TWN 1846 supplement components with clevis design and align the individual suspension strands without twisting. The swivel adapter is fixed to the clevis design of the end link, e.g. a sling hook. The large eyelet enables e.g. a connection to chain or rope strands as well as textile slings. The manufacturing and testing requirements comply with the DIN EN 1677-1, under consideration of grade 100 load capacities.




SAFETY 4 : 1 | 100 % | 360°

| Trade Size | Article-No. | Working Load Limit [t] | Dimensions [mm] | | | | | | | | Weight app. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | e | $d_1$ | $d_2$ | $d_3$ | b | c | a | f | |
| **8-10*** | F32820 | 2,50 | 94 | 45 | 16 | 16 | 77 | 52 | 117 | 8,5 | 0,74 |
| **10-10** | F32825 | 4,00 | 97 | 45 | 16 | 16 | 77 | 52 | 124 | 11 | 0,79 |
| **13-10*** | F32830 | 6,70 | 117 | 50 | 20 | 20 | 90 | 59 | 151 | 14 | 1,43 |
| **16-10*** | F32835 | 10,00 | 146 | 65 | 25 | 25 | 115 | 73 | 189 | 17 | 2,72 |

**On request*

# Lashing Chains

## Lashing Chains with Tensioner

### TWN 1410

The grade 100 lashing chains with toggle and adjustable lashing chain TWN 1410 have a standard length of 3,5 m and are used for heavy-duty lashing applications. The chain tensioners with toggle and trapezoidal thread achieve a high pretensioning force with little force impact. This property is of fundamental importance when lashing down, as the level of the pretensioning force contributes to load securing. The manufacturing and testing requirements are based on the DIN EN 12195-3, under consideration of grade 100 lashing forces.

SAFETY 2 : 1 | CE

| Trade Size | Article-No. | Lashing Capacity (LC) [daN] | Weight app. [kgs] |
|---|---|---|---|
| **13-10** | F34183 | 13.000 | 28,39 |
| **16-10** | F34184 | 20.000 | 46,43 |

*Other lengths available on request.*

## Lashing Chains with Ratchet

### TWN 1411

The grade 100 lashing chains with ratchet and shortenable lashing chain TWN 1411 have a standard length of 3,5 m and are used in the heavy-duty area for lashing loads in road traffic. The chain tensioners with ratchet and trapezoidal thread achieves a high pretensioning force with little force impact. This property is of fundamental importance when lashing down, as the level of the pretensioning force contributes to load securing. The manufacturing and testing requirements are based on the DIN EN 12195-3, under consideration of grade 100 lashing forces.

SAFETY 2 : 1 | CE

| Trade Size | Article-No. | Lashing Capacity (LC) [daN] | Weight app. [kgs] |
|---|---|---|---|
| **13-10** | F34183R | 13.000 | 21,00 |

*Other lengths available on request.*

# Spare Parts and Accessoires

## TWN 0944

### Chain File

The chain file TWN 0944 is used for documentation of chain inspections.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| - | Z04575 | 1 pc. | 0,01 |

## TWN 0945

### Assembly Kit

The assembly kit TWN 0945 is used for easy disassembly of bolts and dowel pins of clevis connections.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| - | Z03303 | 1 set | 0,60 |

## TWN 0968

### Spare Part Sets for Skip Suspension Hooks and Links NEW

The spare part sets TWN 0968 consist of bolt, roll pins and are suitable for the clevis connections of the skip suspension hooks TWN 1399 and TWN 1899 and skip suspension links TWN 0869 and TWN 1869.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| **13-10** | F486741 | 1 set | 0,09 |

## TWN 0969

### Spare Part Sets for Skip Suspension Links

The spare part sets TWN 0969 consist of a forged safety latch, spring and dowel pins and are suitable for the TWN 0869 and TWN 1869.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| **13-10 (G100 \| G80)** | F314081 | 1 set | 0,20 |

## Spare Part Sets for Skip Loader Hooks NEW

TWN 0970

The spare part sets TWN 0970 consist of a retainer, spring and dowel pin and are suitable for skip loader hooks TWN 1399 and TWN 1899.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 13-10/16-10 (G100 \| G80) | F48332 | 1 set | 0,11 |

## Spare Part Sets for Clevis Shortening Claws NEW

TWN 0971

The spare part sets TWN 0971 consist of locking pin, threaded pin, spring and bearing are suitable for the clevis shortening hooks with safety pin TWN 0851/1 and TWN 1851/1.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 (G100 \| G80) | F483110 | 1 set | 0,01 |
| 8-10 (G100 \| G80) | F483112 | 1 set | 0,01 |
| 10-10 (G100 \| G80) | F483113 | 1 set | 0,02 |
| 13-10 (G100 \| G80) | F483114 | 1 set | 0,03 |
| 16-10 (G100 \| G80) | F483115 | 1 set | 0,05 |
| 20-10 (G100 \| G80) | F483117 | 1 set | 0,07 |
| 22-10 (G100 \| G80) | F483118 | 1 set | 0,09 |
| 26-10 (G100 \| G80) | F483119 | 1 set | 0,12 |
| 32-10 (G100 \| G80) | F483120 | 1 set | 0,17 |

## Identification Tag for Lashing Chains

TWN 1402

The identification tags TWN 1402 are used to identify lashing chains and provide important information for safe operation. Lashing chains and chain slings may not be operated without identification tags.

| Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|
| Z07264 | 1 pc. | 0,05 |


## Spare Part Sets for Clevis Design

TWN 1904/0

The spare part sets TWN 1904/0 consist of a bolt and dowel pins and are suitable for THIELE products with the grade 100 fixed size clevis design.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 | F48686 | 1 set | 0,02 |
| 7-10 NEW | F486861 | 1 set | 0,03 |
| 8-10 | F48687 | 1 set | 0,03 |
| 10-10 | F48688 | 1 set | 0,05 |
| 13-10 | F48689 | 1 set | 0,10 |
| 16-10 | F48690 | 1 set | 0,16 |
| 20-10 NEW | F48692 | 1 set | 0,28 |
| 22-10 NEW | F48693 | 1 set | 0,37 |
| 26-10 NEW | F486931 | 1 set | 0,57 |
| 32-10 NEW | F486933 | 1 set | 1,04 |

# Spare Parts and Accessoires

## TWN 1908/0

### Spare Part Sets for Hooks

The spare part sets TWN 1908/0 consist of a safety latch, spring and 2 dowel pins and are suitable for grade 100 sling hooks TWN 1835/1, TWN 1840/1, TWN 1841/1 and also fit the grade 80 sling hooks TWN 0835/1, TWN 0850/1, TWN 1340/1 and TWN 0858/1.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 | F48731 | 1 set | 0,05 |
| 7/8-10 NEW | F48733 | 1 set | 0,08 |
| 10-10 | F48735 | 1 set | 0,14 |
| 13-10 | F48737 | 1 set | 0,31 |
| 16-10 | F48739 | 1 set | 0,38 |
| 20-10 | F48743 | 1 set | 0,71 |
| 22-10 | F48745 | 1 set | 0,89 |
| 26-10 | F48748 | 1 set | 1,41 |
| 32-10 NEW | F48749 | 1 set | 1,77 |

## TWN 1921

### Spare Part Sets for XL-LOK Connectors

The spare part sets TWN 1921 consist of a bolt and clamping bush and are suitable for XL-LOK TWN 1820 connecting links.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 | F486013 | 1 set | 0,01 |
| 8-10 | F486043 | 1 set | 0,02 |
| 10-10 | F486073 | 1 set | 0,04 |
| 13-10 | F486103 | 1 set | 0,06 |
| 16-10 | F486133 | 1 set | 0,12 |
| 22-10 | F486191 | 1 set | 0,46 |

## TWN 1922

### Spare Part Sets for XL-LOK Connectors NEW

The spare part sets TWN 1922 consist of a bolt and clamping bush and are suitable for XL-LOK TWN 1820 connecting links.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 20-10 | F486105 | 1 set | 0,25 |
| 22-10 | F486106 | 1 set | 0,32 |
| 26-10 | F486107 | 1 set | 0,55 |
| 32-10 | F486108 | 1 set | 0,99 |

## TWN 1930/0

### Spare Part Sets for Shackles Type C

The spare part sets TWN 1930/0 consist of a head bolt, nut and splint and are suitable for grade 100 shackles type C TWN 1871.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 NEW | F304310 | 1 set | 0,03 |
| 8-10 NEW | F304410 | 1 set | 0,08 |
| 10-10 | F304510 | 1 set | 0,13 |
| 13-10 | F304610 | 1 set | 0,25 |
| 16-10 | F304710 | 1 set | 0,47 |
| 20-10 NEW | F304810 | 1 set | 1,12 |
| 22-10 NEW | F304910 | 1 set | 1,31 |

# Spare Parts and Accessoires



## Spare Part Sets for RAPID®-Shortening Claws

TWN 1931/0

The trigger sets TWN 1931/0 consist of 2 retainers, springs and roll pins and are suitable for grade 100 RAPID® shortening claws TWN 1852.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 8-10 | F347750 | 1 set | 0,02 |
| 10-10 | F347800 | 1 set | 0,09 |
| 13-10 | F347850 | 1 set | 0,09 |
| 16-10 | F347900 | 1 set | 0,17 |

## Spare Part Sets for Clevis Self-Locking Hooks NEW

TWN 1933/0

The spare part sets TWN 1933/0 consist of a bolt and a roll pin and are suitable for grade 100 self-locking hooks with clevis design TWN 1837.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 | F487800 | 1 set | 0,01 |
| 7-10 | F487801 | 1 set | 0,01 |
| 8-10 | F487802 | 1 set | 0,02 |
| 10-10 | F487803 | 1 set | 0,04 |
| 13-10 | F487804 | 1 set | 0,08 |
| 16-10 | F487805 | 1 set | 0,16 |
| 20-10 | F487806 | 1 set | 0,31 |
| 22-10 | F487807 | 1 set | 0,46 |

## Spare Part Sets for Clevis Self-Locking Hooks

TWN 1933/0A

The spare part sets TWN 1933/0A consist of bolt and 2 roll pins and are suitable for grade 100 self-locking hooks with clevis design TWN 1837A.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 | Z10118 | 1 set | 0,01 |
| 8-10 | Z10119 | 1 set | 0,02 |
| 10-10 | Z10120 | 1 set | 0,04 |
| 13-10 | Z10121 | 1 set | 0,08 |
| 16-10 | Z10122 | 1 set | 0,15 |
| 22-10 | Z10125 | 1 set | 0,46 |

## Spare Part Sets for Self Locking Hooks NEW

TWN 1935

The trigger sets TWN 1935 consist of a retainer, spring and dowel pin. The trigger sets are suitable for grade 100 self-locking hooks TWN 1836, TWN 1837 and TWN 1838.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| 6-10 | F487810 | 1 set | 0,02 |
| 7-10 | F487811 | 1 set | 0,02 |
| 8-10 | F487812 | 1 set | 0,04 |
| 10-10 | F487813 | 1 set | 0,05 |
| 13-10 | F487814 | 1 set | 0,18 |
| 16-10 | F487815 | 1 set | 0,19 |
| 20-10 | F487816 | 1 set | 0,23 |
| 22-10 | F487817 | 1 set | 0,25 |

# Spare Parts and Accessoires

## TWN 1935A

## Spare Part Sets for Self Locking Hooks

The trigger sets TWN 1935A consist of a retainer, spring and dowel pin. The trigger sets are suitable for grade 100 self-locking hooks TWN 1836A and TWN 1837A.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| **6-10** | Z10110 | 1 set | 0,02 |
| **8-10** | Z10111 | 1 set | 0,03 |
| **10-10** | Z10112 | 1 set | 0,04 |
| **13-10** | Z10113 | 1 set | 0,06 |
| **16-10** | Z10114 | 1 set | 0,11 |
| **22-10** | Z10117 | 1 set | 0,25 |

## TWN 1940

## Identification Tags for single- and multi-leg Chain Slings


The grade 100 identification tags TWN 1940 are used to identify chain slings and provide important information for the operator. Chain slings may not be used without an identification tag.

| Article-No. | Execution | Weight app. [kgs] |
|---|---|---|
| F08052 | without welded ring | 0,11 |
| F08053 | with welded ring | 0,11 |

## TWN 1946

## Chain Gauges


The chain measuring gauges TWN 1946 are used to measure the discard criteria of grade 100 lifting chains XL400 and XL200.

| Trade Size | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|
| **6-10** | F01690 | 1 pc. | 0,07 |
| **8-10** | F01691 | 1 pc. | 0,07 |
| **10-10** | F01692 | 1 pc. | 0,09 |
| **13-10** | F01693 | 1 pc. | 0,11 |
| **16-10** | F01694 | 1 pc. | 0,14 |

## TWN 1950

## Spare Part Sets for Shortening Hooks

The spare part sets TWN 1950 consist of locking pin, spring and knurled nut and are suitable for grade 100 shortening hooks TWN 1827/1.

| Trade Size | | Article-No. | Packing Units | Weight app. [kgs] |
|---|---|---|---|---|
| **7/8-10** | | F48330 | 1 set | 0,02 |
| **10-10** | | F48328 | 1 set | 0,04 |
| **13-10** | | F483290 | 1 set | 0,04 |
| **16-10** | | F48339 | 1 set | 0,06 |
| **20-10** | NEW | F48340 | 1 set | 0,11 |
| **22-10** | NEW | F48341 | 1 set | 0,12 |
| **26-10** | NEW | F48343 | 1 set | 0,29 |
| **32-10** | NEW | F48344 | 1 set | 0,34 |

# Examples for Chain Slings



## 1-leg Chain Slings with XL-LOK Connection

| TWN 1600 | TWN 1601 | TWN 1602 | TWN 1603 |
|---|---|---|---|
|  |  |  |  |
| **TWN 1604** | | | |
|  | | | |

## 2-leg Chain Slings with XL-LOK Connection

| TWN 1650 | TWN 1651 | TWN 1652 | TWN 1653 |
|---|---|---|---|
|  |  |  |  |
| **TWN 1654** | | | |
|  | | | |

# Examples for Chain Slings

## 4-leg Chain Slings with XL-LOK Connection

| TWN 1750 | TWN 1751 | TWN 1752 | TWN 1753 |
|---|---|---|---|
|  |  |  |  |

| TWN 1754 | | | |
|---|---|---|---|
|  | | | |

## 1-leg Chain Slings, Fixed Size

## 2-leg Chain Slings, Fixed Size

| TWN 1631 | TWN 1632 | TWN 1681 | TWN 1682 |
|---|---|---|---|
|  |  |  |  |

## 4-leg Chain Slings, Fixed Size

| TWN 1781 | TWN 1782 |
|---|---|
|  |  |

# Shortening Options



## With Shortening Claws TWN 1851, TWN 1851/1 und TWN 1896



## With RAPID®-Shortening Claws TWN 1852

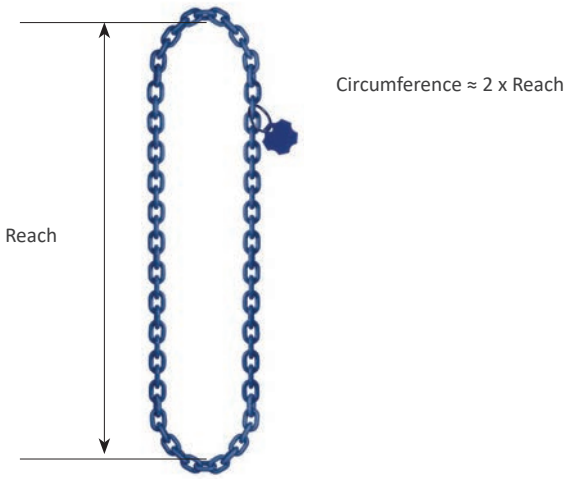


## With Shortening Claws TWN 1851, TWN 1851/1 und TWN 1896

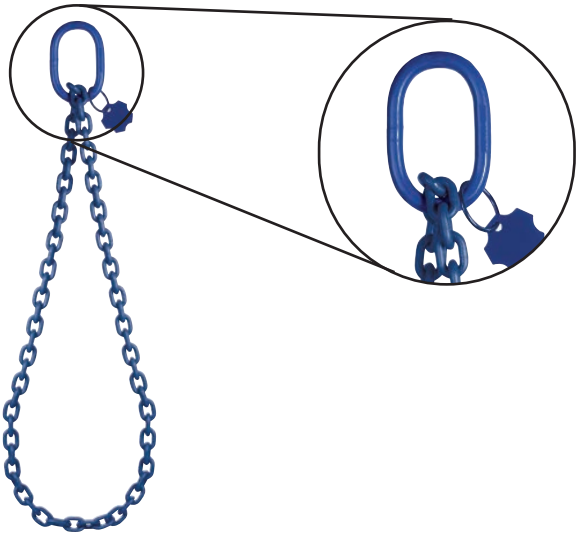


# Endless Chains

## Type K11




## Type K12



## Type K22