App

THIELE

XL

# Lifting Products Grade 100

# Product Overview XL

# Product Overview XL

| | | | | | |
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| Page 38 – 41 | TWN 1853  | TWN 1827/1  | TWN 1851  | TWN 1852  | TWN 1896  |
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# Product Overview XL

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**TWN 0944**

**TWN 0945**

**TWN 1402**


**TWN 1904/0**

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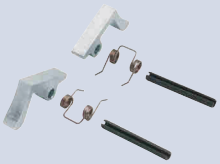
**TWN 1930/0**

**TWN 1931/0**



**TWN 1933/0**

**TWN 1935**

**TWN 1940**


**TWN 1946**


**Spare Parts and Accessories XL**

# Product Overview XL



| | TWN 1601/ 1-Leg | TWN 1651/2-Leg | TWN 1751/4-Leg |
|---|---|---|---|
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| Page 51 – 55 | Chain Slings XL | | |

| | | | |
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| Page 56 | Shortening Options XL | | |

| | Form K11 | Form K12 | Form K22 |
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| Page 57 | Endless Chains XL | | |

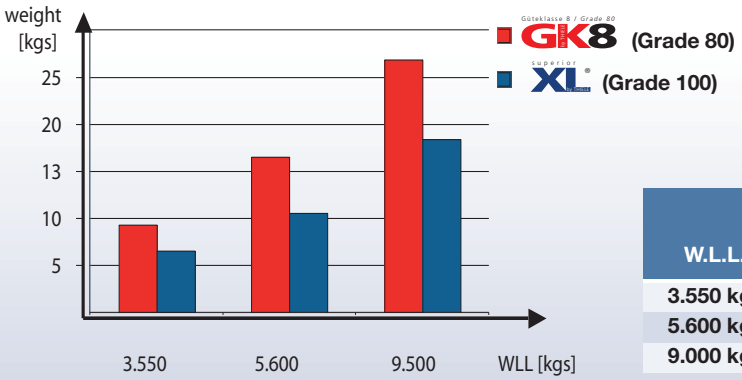
# Lifting Products Grade 100

## Comparison between Grade 80 and Grade 100

**Save up to 30% weight on a 2-leg chain sling.**

**for Example:**

| Article | THIELE Plant Standard | Pieces |
|---|---|---|
| Master Link | TWN 1807 | 1 |
| XL-LOK® | TWN 1820 | 2 |
| 2 m Round Steel Link Chain | TWN 1805 | 2 |
| Clevis Sling Hook | TWN 1840/1 | 2 |




| W.L.L. | GK8 Weight | XL Weight | Saving |
|---|---|---|---|
| **3.550 kg** | **9,3 kg** | **6,6 kg** | **30 %** |
| **5.600 kg** | **16,5 kg** | **10,6 kg** | **35 %** |
| **9.000 kg** | **26,8 kg** | **18,4 kg** | **31 %** |

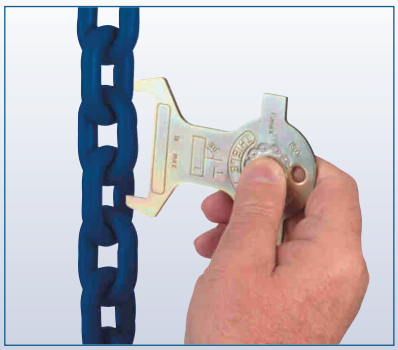
| Properties | GK8 | XL | |
|---|---|---|---|
| **Working Load Limit (WLL)** | | 25 % stronger | |
| **Safety Factor** | 4 | 4 (-7 %) | |
| **Elongation at break (completed finish)** | 20 % | 20 % | |
| **Weight** | | abt. 30 % less | |
| **Nominal Size** | | same as GK8 | |
| **Breaking Stress** | 800 N/mm² | 1000 N/mm² | |
| **Component Strength** | 1150-1250 MPa | 1450-1550 MPa | |
| **Load Factor** | acc. to catalogue | same as GK8 | |
| | | | |
| **Temperature Application Range** | -40 – 200 °C<br>200 – 300 °C (90 %)<br>300 – 400 °C (75 %) | ***XL200***<br>-20 – 200 °C (100 %) | ***XL400***<br>-30 – 200 °C (100 %)<br>200 – 300 °C (90 %)<br>300 – 380 °C (60 %) |
| **Asymmetry Factor** | acc. to catalogue | same as GK8 | |
| **Acids and Lyes** | not allowed | not allowed | |
| **Compatibility with other system** | possible | restricted | |
| **Colour** Round Steel Link Chains (solvent-free) | black painted (RAL 9005) | Ultramarin blue painted (RAL 5002) | |
| **Colour** Forgings (solvent-free) | powder painted red (RAL 3003) | Ultramarin blue powder painted (RAL 5002) | |
| **Standards** | European and International | PAS 1061 (Manufactures Recommendation) | |
| **Wear** | | less abrasion | |

# Selection Criteria for XL-Slings Chains

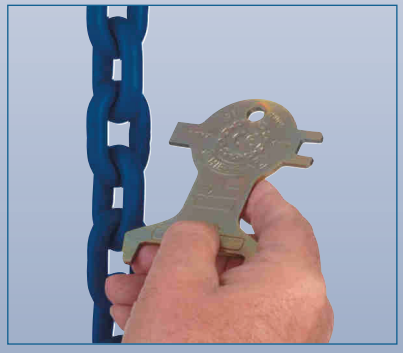
1. Determine the **weight of the load** to be lifted.
2. Check **number of chain-legs** required
   (depending on the numbers of available lifting points).
3. Determine the **nominal size** of the chain sling by taking the **inclination angle** into consideration.
   (See table 1-3 in page 25-27.)
4. Consider possible existing **temperature influences**. (See special advices page 26)
5. Consider that **asymmetry** may influence the load factor. (See table 4 page 27)
6. Choose the master links, shortening elements and components suitable for the selected chain size.
7. Determine the **chain length** by considering the total-effective-reach.
8. Inspect selected components and/or chain slings in-use to ensure that they meet or exceed
   all applicable industry and government safety rules and regulations.

# Chain inspection gauge XL

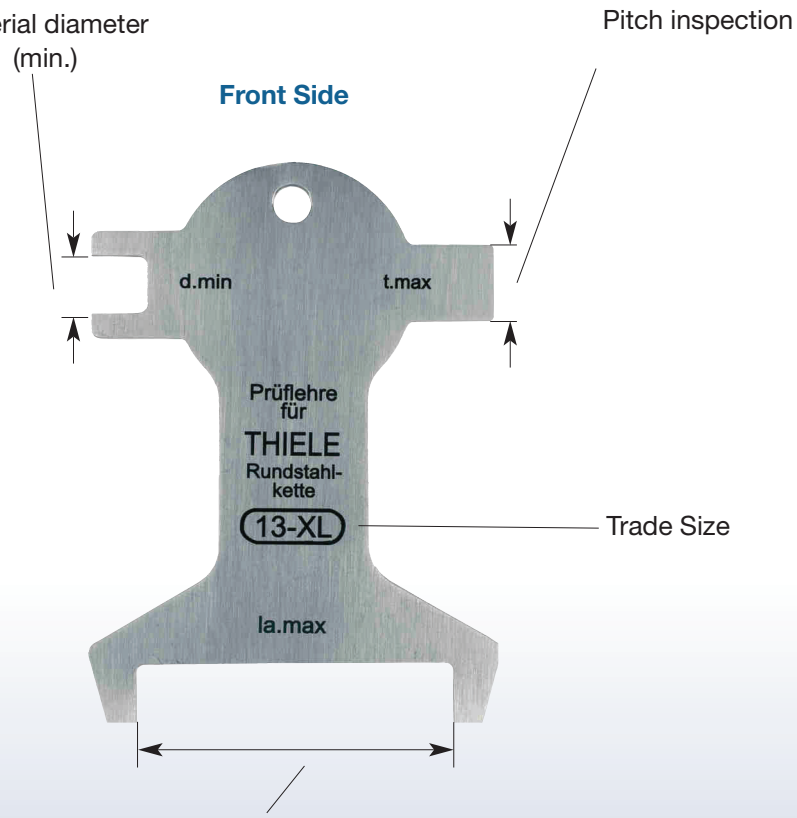
Inspection of Material Diameter



Inspection of permanent elongation



Pitch inspection





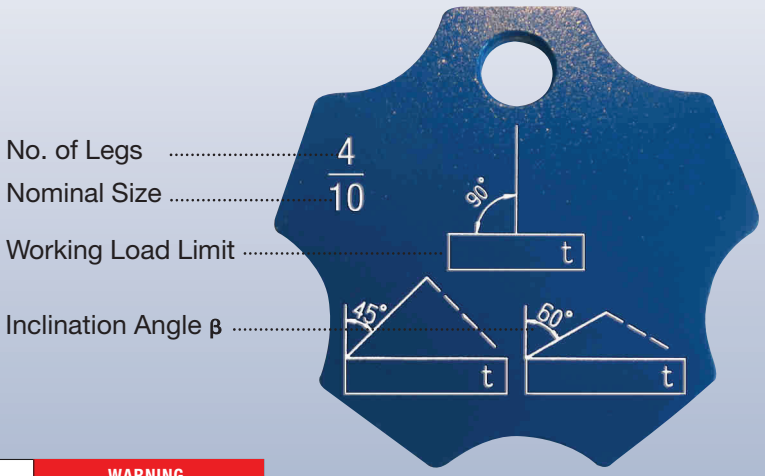
We only supply the XL-Chain Sling Gauge with marking details according to EN 818-4 as a spare part.

# XL-Identification Tag

The details of the Identification Tag are in accordance with EN 818-4 for chain slings.
The Grade **XL** differs particularly by shape (decagon) and colour (RAL 5002) in comparison to other Grades.

## Front Side


## Back Side





### Legal marking of Grade 80 chains by the German professional association

The number 4 under the H only represent a registration number of the German professional association and helps in care of damage to find the manufacture of the chain. The marking is also recognized from all international certification societies as well as from work authorities etc. among others A. I. B. Brüssel.

# Liability, Assembly, Material


From the BG-approved Round Steel Link Chains and Components **XL**-400 are stamped with H4, Nominal Size and Grade **XL** and a traceability code.

Round Steel Link Chains **XL** -200 are stamped with T 3, Nominal Size and Grade **10** and a traceability code. They are only allowed to couple with original **XL**-Components of the corresponding Trade Size.

**Liability**
THIELE does not take any type of liability for **XL**-Round Steel Link Chains and Components which are used together with other manufacturers products.

**Assembly**
The combination of different Grades in one sling chain is not allowed.

Use only original **XL**-Spare Parts.

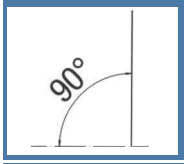
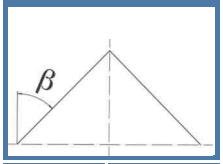
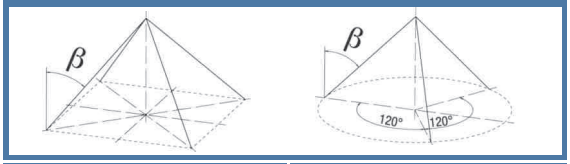
**Material**
For the production of Grade **XL**, only High Alloy Steels according to DIN 17115 are used.

## THIELE Plant Standard (TWN)

THIELE Plant Standard fulfill the requirements of the EG Directive for Machines, particularly for the safety relevant components. The Working Load Limits and the test requirements are **SUPERIOR** to European Standards.

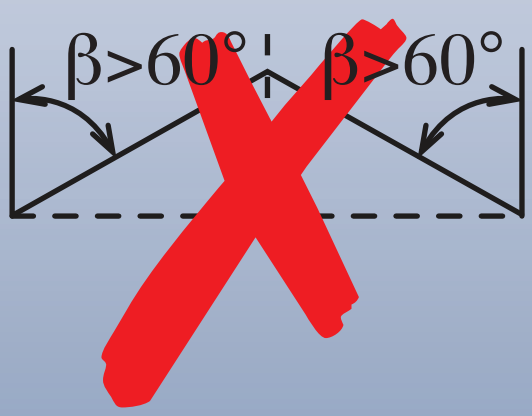
# Working Load Limit Tables XL

## Working Load Limit in t – direct sling

| Table 1 | | 1-leg | 2-leg | | 3- and 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] | | | | | |
| 6-XL | 6 | 1,40 | 2,00 | 1,40 | 3,00 | 2,12 |
| 8-XL | 8 | 2,50 | 3,55 | 2,50 | 5,30 | 3,75 |
| 10-XL | 10 | 4,00 | 5,60 | 4,00 | 8,00 | 6,00 |
| 13-XL | 13 | 6,70 | 9,00 | 6,70 | 14,00 | 10,00 |
| 16-XL | 16 | 10,00 | 14,00 | 10,00 | 21,20 | 15,00 |
| 20-XL | 20 | 16,00 | 22,40 | 16,00 | 33,50 | 23,60 |
| 22-XL | 22 | 19,00 | 26,50 | 19,00 | 40,00 | 28,00 |
| 26-XL | 26 | 26,50 | 37,50 | 26,50 | 56,00 | 40,00 |

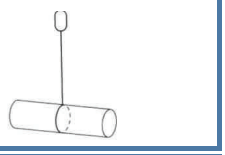
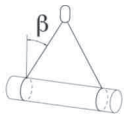
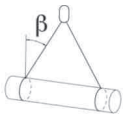
Additional nominal sizes are also available in welded finish on request.

Inclination Angle β > 60°




Can fail if damaged, misused or overloaded. Inspect before use. Use only if trained. Observe rated capacity in table 1, 2, 3.
DEATH or INJURY can occur from improper use or maintenance.

## Working Load Limit in t – choke hitch

| Table 2 | | 1-leg | 2-leg | 3- and 4-leg |
|---|---|---|---|---|
| | |  |  |  |
| Inclination Angle β | | β = 0° | 0°<β ≤ 45° | 45°<β ≤ 60° |
| Load Factor | | 0,8 | 1,12 | 0,8 |
| Trade Size | Nominal Size [mm] | | | |
| **6-XL** | 6 | 1,12 | 1,60 | 1,12 |
| **8-XL** | 8 | 2,00 | 2,80 | 2,00 |
| **10-XL** | 10 | 3,15 | 4,50 | 3,15 |
| **13-XL** | 13 | 5,30 | 7,50 | 5,30 |
| **16-XL** | 16 | 8,00 | 11,20 | 8,00 |
| **20-XL** | 20 | 12,80 | 17,90 | 12,80 |
| **22-XL** | 22 | 15,20 | 21,20 | 15,20 |
| **26-XL** | 26 | 21,20 | 29,60 | 21,20 |

Inclination angles β over 60° are prohibited. Additional nominal sizes are also available in welded finish on request.

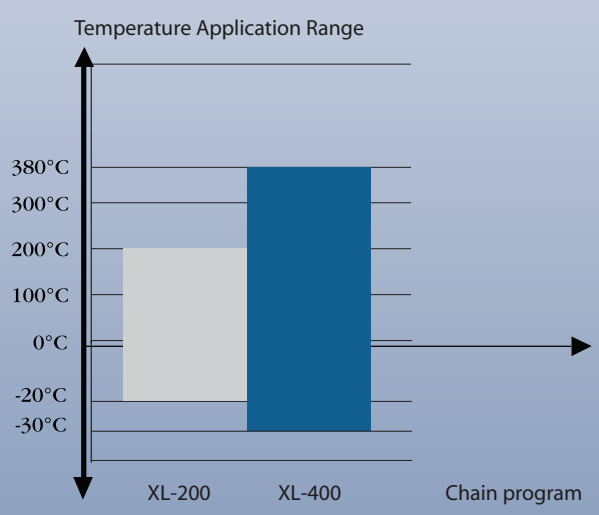
## Temperature Application Range

### Round Steel Link Chains XL-200 (according to ASTM 973)

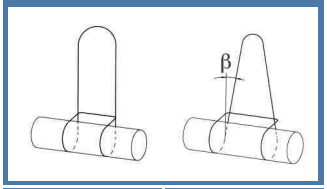
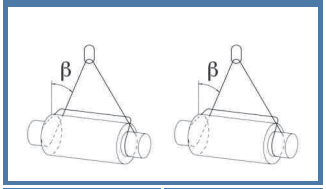
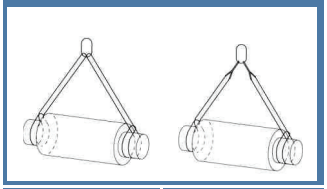
| Temperature Application Range | W.L.L. |
|---|---|
| -20°C to 200°C | 100 % |

### Round Steel Link Chains XL-400 (according to PAS 1061)

| 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 % |



# Working Load Limit in t – endless chain

| Table 3 | | K11 | | K12 | K13 | K22 | K23 |
|---|---|---|---|---|---|---|---|
| | |  | |  | |  | |
| **Inclination Angle β** | | **β = 0°** | **0° < β ≤ 25°** | **0° < β ≤ 45°** | **45° < β ≤ 60°** | **0° < β ≤ 45°** | **45° < β ≤ 60°** |
| **Load Factor** | | **1,6** | **1,45** | **1,12** | **0,8** | **1,7** | **1,2** |
| **Trade Size** | **Nominal Size [mm]** | | | | | | |
| **6-XL** | 6 | 2,24 | 2,00 | 1,50 | 1,12 | 2,36 | 1,60 |
| **8-XL** | 8 | 4,00 | 3,55 | 2,80 | 2,00 | 4,00 | 3,00 |
| **10-XL** | 10 | 6,30 | 5,66 | 4,50 | 3,15 | 6,70 | 4,75 |
| **13-XL** | 13 | 10,60 | 9,50 | 7,50 | 5,30 | 11,20 | 8,00 |
| **16-XL** | 16 | 16,00 | 14,00 | 11,20 | 8,00 | 16,00 | 11,80 |
| **20-XL** | 20 | 25,00 | 22,40 | 18,00 | 12,50 | 26,50 | 19,00 |
| **22-XL** | 22 | 30,00 | 26,50 | 21,20 | 15,00 | 31,50 | 22,40 |
| **26-XL** | 26 | 40,00 | 37,50 | 28,00 | 21,20 | 42,50 | 31,50 |

Inclination angles β over 60° are prohibited. Additional nominal sizes are also available in welded finish on request.

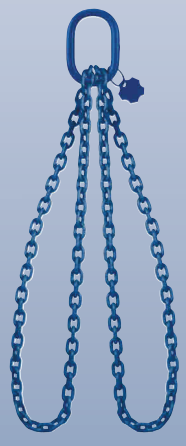
**Table 4 Load Factor at Asymmetry**

| No. of Legs | 1 | 2 | | 3 | | 4 | |
|---|---|---|---|---|---|---|---|
| Inclination Angle β | - | 0°– 45° | 46° – 60° | 0°– 45° | 46° – 60° | 0°– 45° | 46° – 60° |
| Load factor | 1 | 1 | 1 | 1,4 | 1 | 1,4 | 1 |

**Form K11**

**Form K12**

**Form K22**



Can fail if damaged, misused or overloaded. Inspect before use. Use only if trained. Observe rated capacity in table 1, 2, 3. DEATH or INJURY can occur from improper use or maintenance.

# Product Features XL

## Round Steel Link Chains TWN 1805 acc. to PAS 1061 XL-400


| Trade Size | 6-XL | 8-XL | 10-XL | 13-XL | 16-XL | 20-XL | 22-XL | 26-XL |
|---|---|---|---|---|---|---|---|---|
| Art.No. | F01610B | F01615B | F01622B | F01629B | F01635B | F01638B | F01650B | F01660B |
| Nominal Size (d) | 6 | 8 | 10 | 13 | 16 | 20 | 22 | 26 |
| Pitch (p) | 18 | 24 | 30 | 39 | 48 | 60 | 66 | 78 |
| Pitch Tolerance (±) | 0,5 | 0,7 | 0,9 | 1,2 | 1,4 | 1,8 | 2,0 | 2,3 |
| Inside Width $w_1$ min. | 7,8 | 10,92 | 13,0 | 17,48 | 20,8 | 26,0 | 28,6 | 33,8 |
| Outside Width $w_2$ max. | 22,2 | 29,6 | 37,0 | 48,1 | 59,2 | 74,0 | 81,4 | 96,2 |
| **Working Load Limit (t)** | **1,4** | **2,5** | **4,0** | **6,7** | **10,0** | **16,0** | **19,0** | **26,5** |
| Weight approx (kg/m) | 0,9 | 1,6 | 2,5 | 4,3 | 6,5 | 10,1 | 12,3 | 17,1 |

dipped in environmental friendly AQUA-chain lacquer

# Round Steel Link Chains TWN 0072 acc. to ASTM 973 XL-200

New

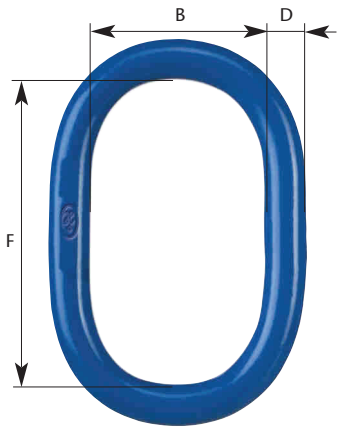
| Trade Size | 6-10 | 7-10 | 8-10 | 10-10 | 13-10 | 16-10 |
|---|---|---|---|---|---|---|
| Art.No. | F01616 | F01621 | F01617 | F01618 | F01619 | F01620 |
| Nominal Size (d) | 6 | 7 | 8 | 10 | 13 | 16 |
| Pitch (p) | 18 | 22 | 24 | 30 | 39 | 48 |
| Pitch Tolerance (±) | 0,5 | 0,7 | 0,7 | 0,9 | 1,2 | 1,4 |
| Inside Width $w_1$ min. | 7,95 | 9,53 | 10,92 | 13,0 | 17,48 | 20,63 |
| Outside Width $w_2$ max. | 22,2 | 25,9 | 29,6 | 37,0 | 48,1 | 59,2 |
| **Working Load Limit (t)** | **1,4** | **1,95** | **2,6** | **4,0** | **6,8** | **10,3** |
| Weight approx (kg/m) | 0,9 | 0,9 | 1,6 | 2,5 | 4,1 | 6,2 |


dipped in environmental friendly AQUA-chain lacquer

## Comparison between Round Steel Link Chains XL-200 and XL-400

| Grade | XL-200 | XL-400 |
|---|---|---|
| Standard | ASTM 973 | PAS 1061 |
| Material | alloyed steel | higher alloyed steel |
| Temperature Application Range | -20°C up to 200°C | -30°C up to 380°C;<br>reduction starting from 200°C |
| Working Load Limit (WLL) | 25% higher than Grade 80 | 25% higher than Grade 80 |
| Manufacturers Proof Force | min. 2 x WLL | min. 2,5 x WLL |
| Elongation at break (completed finish) | min. 20% | min. 20% |
| Breaking Force | min. 4 x WLL | min. 4 x WLL; up to 7% reduction allowed |
| Charpy Notch Value | min. 36 J at - 20°C | min. 42 J at - 20°C<br>or at lower temperatures<br>mentioned by the manufactures |
| Deflection | min. 0,8 x d | min. 0,8 x d |
| Fatigue | | min. 20.000 LW |
| Material properties (stress corrosion) | | according to standard |
| Finish | Galvanizing not allowed | Galvanizing not allowed |
| Colour (solvent-free) | RAL 7011 | RAL 5002 |
| Marking | XL-200 / T3-10<br>XYZ – GERMANY | XL-400 - (10)-10<br>XYZ – GERMANY |
| Certification | Own approval | approved by BG |

# Suspension Components XL




## The Master Link Form A TWN 1807

according to DIN 5688 for 1-leg chain slings enables an easy assembly of a XL-LOK® TWN 1829. This way of coupling offers a higher flexibility in assembling of chain slings with the advantage of less stock inventory.

The Master Link Form A TWN 1807 is suitable for Crane Hooks according to DIN 15401:

| Trade Size | Crane Hook No. |
|---|---|
| 6 – XL | No. 2,5 |
| 8 – XL | No. 2,5 |
| 10 – XL | No. 5 |
| 13 – XL | No. 6 |
| 16 – XL | No. 8 |

Finish: RAL 5002

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] D | F | B | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|
| **6-XL** | F180706 | 6 | 1,40 | 13 | 90 | 50 | 0,29 |
| **8-XL** | F180708 | 8 | 2,50 | 16 | 110 | 60 | 0,53 |
| **10-XL** | F180710 | 10 | 4,00 | 18 | 130 | 70 | 0,79 |
| **13-XL** | F180713 | 13 | 6,70 | 22 | 160 | 90 | 1,50 |
| **16-XL** | F180716 | 16 | 10,00 | 26 | 180 | 100 | 2,30 |
| New **22-XL** | F180722 | 22 | 19,00 | 36 | 250 | 140 | 6,20 |


## The Master Link Form A TWN 1808

according to DIN 5688 for 2-leg chain slings enables an easy assembly of a XL-LOK® TWN 1829. This way of coupling offers a higher flexibility in assembling of chain slings with the advantage of less stock inventory.

The Master Link Form A TWN 1808 is suitable for Crane Hooks according to DIN 15401:

| Trade Size | Crane Hook No. |
|---|---|
| 6 – XL | No. 2,5 |
| 8 – XL | No. 5 |
| 10 – XL | No. 6 |
| 13 – XL | No. 8 |
| 16 – XL | No. 10 |

Finish: RAL 5002

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] D | F | B | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|
| **6-XL** | F180806 | 6 | 2,00 | 13 | 90 | 50 | 0,29 |
| **8-XL** | F180808 | 8 | 3,55 | 18 | 130 | 70 | 0,79 |
| **10-XL** | F180810 | 10 | 5,60 | 20 | 140 | 80 | 1,10 |
| **13-XL** | F180813 | 13 | 9,00 | 26 | 180 | 100 | 2,30 |
| **16-XL** | F180816 | 16 | 14,00 | 32 | 230 | 125 | 4,40 |
| New **22-XL** | F180822 | 22 | 26,50 | 45 | 320 | 175 | 12,0 |

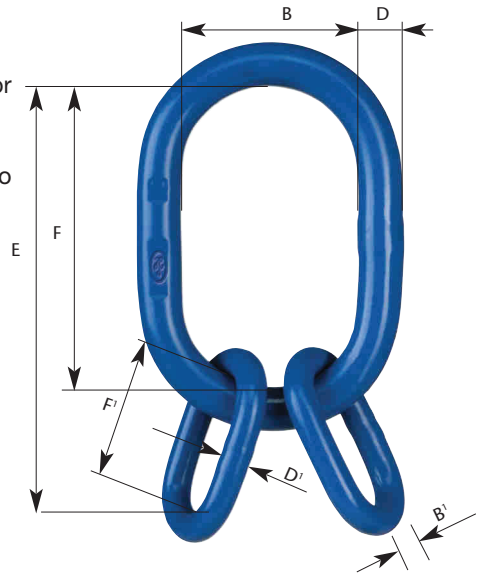
# Suspension Components XL

The **Master Link Assembly TWN1809** according to DIN 5688 for 3-/ 4-leg chain slings enables easy assembling of a XL-LOK® TWN1829.

The Master Link Assembly TWN 1809 is suitable for Crane Hooks according to DIN 15401:

| Trade Size | Crane Hook No. |
|---|---|
| 6 – XL | No. 5 |
| 8 – XL | No. 6 |
| 10 – XL | No. 8 |
| 13 – XL | No. 10 |
| 16 – XL | No. 16 |

Finish: RAL 5002



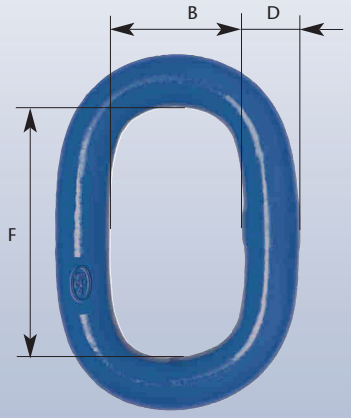

XL

| Trade Size | Article-No. | Nominal Size [mm] | W. L. L. 0°< β ≤ 45° [t max] | Dimensions [mm] E | D | F | B | D¹ | F¹ | B¹ | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **6-XL** | F180906 | 6 | 3,00 | 170 | 16 | 110 | 60 | 13 | 60 | 30 | 1,00 |
| **8-XL** | F180908 | 8 | 5,30 | 210 | 20 | 140 | 80 | 16 | 70 | 35 | 2,20 |
| **10-XL** | F180910 | 10 | 8,00 | 270 | 26 | 180 | 100 | 20 | 90 | 45 | 3,80 |
| **13-XL** | F180913 | 13 | 14,00 | 350 | 32 | 230 | 125 | 26 | 120 | 60 | 7,70 |
| **16-XL** | F180916 | 16 | 21,20 | 420 | 40 | 290 | 160 | 28 | 130 | 65 | 13,00 |
| New **22-XL** | F180922 | 22 | 40,00 | 520 | 50 | 340 | 190 | 40 | 180 | 90 | 28,00 |

## The Intermediate Master Link Type B TWN 1795

according to DIN 5688-3:2007-04 enables assembling of a XL-Lok and other components. The WLL as well as the manufacturers and proof requirements are based on the standard DIN EN 1677-01:2009 and DIN EN 1677-4:2009-3 considering a 25% higher WLL.

Finish: RAL 5002




| Trade Size | Article-No. | Working Load Limit [t max] | Dimensions [mm] D | F | B | Weight approx. [kgs] | Manufacturing Proof Load (MPF) [kN] | Break Force (BF) [kN] |
|---|---|---|---|---|---|---|---|---|
| **B8** | F179508 | 1,40 | 8 | 36 | 18 | 0,05 | 34,30 | 54,90 |
| **B10** | F179510 | 2,50 | 10 | 46 | 23 | 0,09 | 61,30 | 98,10 |
| **B13** | F179513 | 4,00 | 13 | 60 | 30 | 0,20 | 98,10 | 157,00 |
| **B16** | F179516 | 6,70 | 16 | 70 | 35 | 0,36 | 164,00 | 263,00 |
| **B20** | F179520 | 10,00 | 20 | 90 | 45 | 0,73 | 245,00 | 392,00 |
| **B22** | F179522 | 12,50 | 22 | 100 | 50 | 0,97 | 306,00 | 490,00 |
| **B26** | F179526 | 16,00 | 26 | 120 | 60 | 1,60 | 392,00 | 628,00 |
| **B28** | F179528 | 19,00 | 28 | 130 | 65 | 1,90 | 466,00 | 745,00 |
| **B32** | F179532 | 26,50 | 32 | 140 | 70 | 2,90 | 650,00 | 1040,00 |
| **B36** | F179536 | 31,30 | 36 | 160 | 80 | 4,20 | 766,00 | 1226,00 |
| **B40** | F179540 | 40,00 | 40 | 180 | 90 | 5,80 | 981,00 | 1569,00 |
| **B45** | F179545 | 50,00 | 45 | 200 | 100 | 8,20 | 1230,00 | 1960,00 |

# Suspension Components XL


## The Fixed Size Master Link Assembly TWN 1810/1

Type TAA1 for 1- leg chain slings is automatically determined to the nominal size by the Ringshackle. The Ringshackle moves freely. A welded identification tag contains all the necessary data required. The dimensions are in accordance with DIN 5688, form A. The Fixed Size Master Link Assembly Type TAA 1 can also be delivered without the Ringshackle as a Master Link TWN 1807.

The Fixed Size Master Link Assembly TWN 1810/1 is suitable for Crane Hooks according to DIN 15401:

| Trade Size | Crane Hook No. |
|---|---|
| 6 – XL | No. 2,5 |
| 8 – XL | No. 2,5 |
| 10 – XL | No. 5 |
| 13 – XL | No. 6 |
| 16 – XL | No. 8 |

Finish: RAL 5002

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | D | F | B | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **6-XL** | F1810106 | 6 | 1,40 | 121 | 13 | 90 | 50 | 0,40 |
| **8-XL** | F1810108 | 8 | 2,50 | 147 | 16 | 110 | 60 | 0,71 |
| **10-XL** | F1810110 | 10 | 4,00 | 176 | 18 | 130 | 70 | 1,21 |
| **13-XL** | F1810113 | 13 | 6,70 | 219 | 22 | 160 | 90 | 2,33 |
| **16-XL** | F1810116 | 16 | 10,00 | 256 | 26 | 180 | 100 | 3,90 |


## The Fixed Size Master Link Assembly TWN 1810/2

Type TAA2 for 2- leg chain slings is automatically determined to the nominal size by the Ringshackle. The Ringshackle moves freely. A welded identification tag contains all the necessary data required. The dimensions are in accordance with DIN 5688, form A. The Fixed Size Master Link Assembly Type TAA2 can also be delivered without the Ringshackle as a Master Link TWN 1808.

The Fixed Size Master Link Assembly TWN 1810/2 is suitable for Crane Hooks according to DIN 15401:

| Trade Size | Crane Hook No. |
|---|---|
| 6 – XL | No. 2,5 |
| 8 – XL | No. 5 |
| 10 – XL | No. 6 |
| 13 – XL | No. 8 |
| 16 – XL | No. 10 |

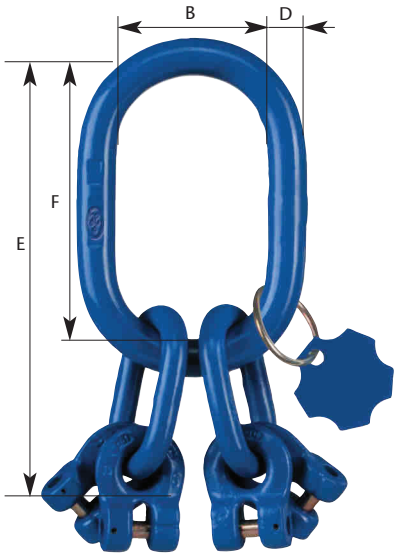
Finish: RAL 5002

| Trade Size | Article-No. | Nominal Size [mm] | W. L. L. $0° < \beta \leq 45°$ [t max] | Dimensions [mm] E | D | F | B | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **6-XL** | F1810206 | 6 | 2,00 | 121 | 13 | 90 | 50 | 0,50 |
| **8-XL** | F1810208 | 8 | 3,55 | 167 | 18 | 130 | 70 | 1,20 |
| **10-XL** | F1810210 | 10 | 5,60 | 186 | 20 | 140 | 80 | 1,90 |
| **13-XL** | F1810213 | 13 | 9,00 | 239 | 26 | 180 | 100 | 4,00 |
| **16-XL** | F1810216 | 16 | 14,00 | 296 | 32 | 230 | 125 | 7,60 |

# Suspension Components XL

## The Fixed Size Master Link Assembly TWN 1810/4

Type TAA4 for 3/4- leg chain slings is automatically determined to the nominal size by the Ringshackle. The Ringshackle moves freely. A welded identification tag contains all the necessary data required. The dimensions are in accordance with DIN 5688, form A. The Fixed Size Master Link Assembly Type TAA4 can also be delivered without the Ring-shackle as a Master Link TWN 1809.



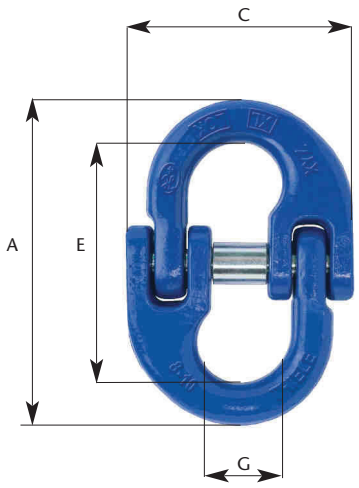

The Fixed Size Master Link Assembly TWN 1810/4 is suitable for Crane Hooks according to DIN 15401:

| Trade Size | Crane Hook No. |
|---|---|
| 6 – XL | No. 5 |
| 8 – XL | No. 6 |
| 10 – XL | No. 8 |
| 13 – XL | No. 10 |
| 16 – XL | No. 16 |

Finish: RAL 5002

| Trade Size | Article-No. | Nominal Size [mm] | W. L. L. 0° < β ≤ 45° [t max] | Dimensions [mm] E | D | F | B | D¹ | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| **6-XL** | F1810406 | 6 | 3,00 | 201 | 16 | 110 | 60 | 13 | 1,40 |
| **8-XL** | F1810408 | 8 | 5,30 | 247 | 20 | 140 | 80 | 16 | 2,70 |
| **10-XL** | F1810410 | 10 | 8,00 | 316 | 26 | 180 | 100 | 20 | 5,40 |
| **13-XL** | F1810413 | 13 | 14,00 | 409 | 32 | 230 | 125 | 26 | 11,20 |
| **16-XL** | F1810416 | 16 | 21,20 | 495 | 40 | 290 | 160 | 28 | 19,40 |

# Connector XL-LOK®




## Connecting link XL-LOK® TWN 1820

Connecting links XL-LOK according to this THIELE Plant Standard (TWN) are designated for safe lifting, moving or slinging of weights. Capacity and product requirements are based on the EN 1677-1 taking a 25% improved working load limit into account.
Connecting links are certified and marked with the (GL) 4-stamp.

Connecting links are coated in RAL 5002 ultramarine blue.
Spare parts are available according to TWN 1921.

| Trade Size | Article-No. | Working Load Limit [t max] | Dimensions [mm] E | G | A | C | B | F | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| **6-XL** | F30807 | 1,40 | 45,0 | 14,0 | 61,0 | 38,5 | 12,2 | 7,6 | 0,07 |
| **8-XL** | F30817 | 2,50 | 62,0 | 19,0 | 70,9 | 55,0 | 16,0 | 10,0 | 0,20 |
| **10-XL** | F30827 | 4,00 | 72,0 | 23,8 | 85,0 | 65,5 | 18,0 | 12,6 | 0,35 |
| **13-XL** | F30837 | 6,70 | 87,3 | 28,0 | 97,2 | 82,5 | 23,0 | 16,7 | 0,74 |
| **16-XL** | F30847 | 10,00 | 105,0 | 34,3 | 146,2 | 109,0 | 31,5 | 20,6 | 1,16 |
| New **22-XL** | F30861 | 19,00 | 140,0 | 47,3 | 200,0 | 165,0 | 39,0 | 22,0 | 3,52 |

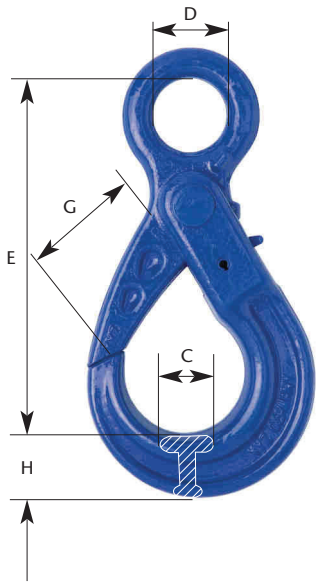
# Hooks XL

The **Eye Self Locking Hook TWN 1836** automatically locks at load. The flattened extra large eye offers universal coupling options. A robust trigger at the back side of the hook can be easily hand operated. Despite of an extra wide hook opening the Eye Self Locking Hooks offer a slim shape and enable an versatile use.
100% Magnetic Crack Tested.

The available Trigger Sets are universal for hooks type TWN1836, 1837 and 1838.

100% Magnetic Crack Tested. BG - approved.

Finish: RAL 5002




XL

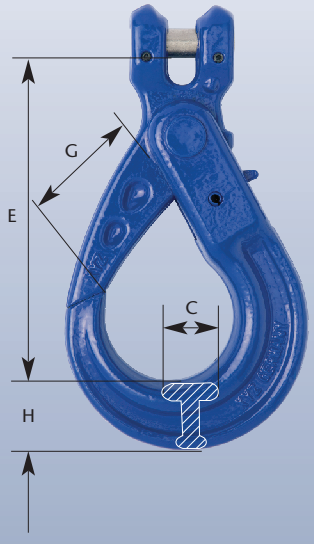
| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | D | G | H | C | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| **6-XL** | F092203 | 6 | 1,40 | 110 | 21 | 28 | 20 | 15 | 0,50 |
| **8-XL** | F092213 | 8 | 2,50 | 137 | 27 | 35,5 | 26 | 20 | 0,80 |
| **10-XL** | F092223 | 10 | 4,00 | 169 | 34,5 | 45 | 30 | 26 | 1,50 |
| **13-XL** | F092233 | 13 | 6,70 | 209 | 40 | 53,5 | 40,5 | 32,5 | 3,00 |
| **16-XL** | F092243 | 16 | 10,00 | 254 | 50 | 62 | 50,5 | 38 | 6,00 |
| New **22-XL** | F092273 | 22 | 19,00 | 319,5 | 70 | 80 | 66 | 52 | 11,74 |

The **Clevis Self Locking Hook TWN 1837**
automatically locks at load. A robust trigger at the back side of the hook can be easily hand operated. Despite of an extra wide hook opening the Clevis Self Locking Hooks offer a slim shape and enable an versatile use.
100% Magnetic Crack Tested.

The available Trigger Sets are universal for hooks type TWN1836, 1837 and 1838.

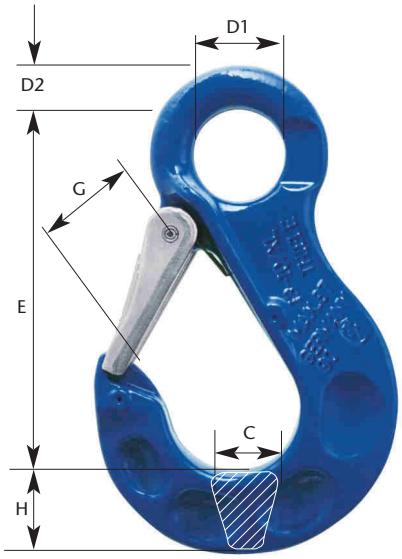
100% Magnetic Crack Tested. BG - approved.

Finish: RAL 5002




| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | G | H | C | Weight ca. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **6-XL** | F092002 | 6 | 1,40 | 96 | 28 | 20 | 15 | 0,50 |
| **8-XL** | F092012 | 8 | 2,50 | 123 | 35,5 | 26 | 20 | 0,90 |
| **10-XL** | F092022 | 10 | 4,00 | 144 | 45 | 30 | 26 | 1,50 |
| **13-XL** | F092032 | 13 | 6,70 | 182 | 53,5 | 40,5 | 32,5 | 3,00 |
| **16-XL** | F092042 | 16 | 10,00 | 217 | 62 | 50,5 | 38 | 5,90 |
| New **22-XL** | F092072 | 22 | 19,00 | 276,5 | 80 | 66 | 52 | 12,31 |

# Hooks XL




The **Eye Sling Hook TWN1841/1** with its robust forged Safety Latch and its eye is designed to the corresponding nominal size.
The onforged measurement points and maximum admissible values allows an easy check of the hook opening. The Safety Latch is protected by a wear edge of the hook body. Additionally the safety latch has a fixed position due to the forged seat at the tip of the hook. The shape makes the Original of THIELE unique.

100% Magnetic Crack Tested. BG-approved.

Finish: RAL 5002

| Trade Size | Article-No. | Working Load Limit [t max] | Dimensions [mm] E | D1 | D2 | G | H | C | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| **6-XL** | F32905 | 1,40 | 91 | 11 | 21 | 24 | 20 | 17 | 0,36 |
| **8-XL** | F32915 | 2,50 | 118 | 14 | 28 | 30 | 25 | 22 | 0,78 |
| **10-XL** | F32925 | 4,00 | 145 | 18 | 36 | 37 | 32 | 28 | 1,50 |
| **13-XL** | F32935 | 6,70 | 168 | 21 | 42 | 42 | 41 | 35 | 2,55 |
| **16-XL** | F32945 | 10,00 | 210 | 27 | 54 | 51 | 50 | 41 | 4,65 |
| New **22-XL** | F32975 | 15,00 | 271 | 65 | 30 | 70 | 62 | 54 | 9,70 |

# Hooks XL

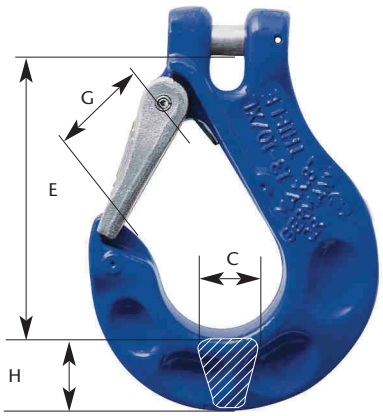
The **Clevis Sling Hook TWN1840/1** with its robust forged Safety Latch and its clevis is designed to the corresponding nominal size. The onforged measurement points and maximum admissible values allows an easy check of the hook opening. The Safety Latch is protected by a wear edge of the hook body. Additionally the safety latch has a fixed position due to the forged seat at the tip of the hook.

The shape makes the Original of THIELE unique.

100% Magnetic Crack Tested. BG-approved.

Finish: RAL 5002

New

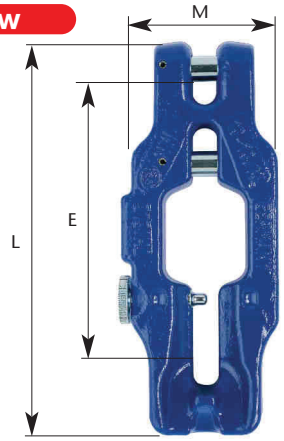



XL

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | G | H | C | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **6-XL** | F336050 | 6 | 1,40 | 75 | 24 | 20 | 17 | 0,36 |
| **8-XL** | F336150 | 8 | 2,50 | 92 | 30 | 25 | 22 | 0,75 |
| **10-XL** | F336250 | 10 | 4,00 | 113 | 37 | 32 | 28 | 1,40 |
| **13-XL** | F336350 | 13 | 6,70 | 133 | 42 | 41 | 35 | 2,50 |
| **16-XL** | F336450 | 16 | 10,00 | 162 | 51 | 50 | 41 | 4,40 |


# Hooks XL

New




The patented **Combi Quick Fastener TWN 1853** distinguishes itself through the flat constructive form and particulary through quick and easy handling. The Combi Quick Fastener complies with the requirements of DIN 5692 and has a minimum breaking force relation between chain and fastener of 100%. The Quick Fastener can be combined with either the universal XL-LOK or the fixed size shackle. In the shortened position of the chain, the links of chain receives only a slight redirection in its induced loads. The chain seats safely in a good shaped chain bed. The Combi Quick Fastener is equipped with a supporting nose for the better seating of the position of the chain.

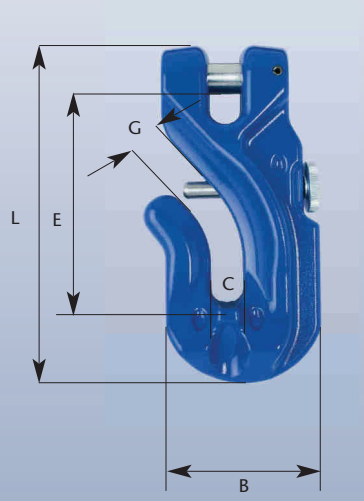
A locking pin with a mounted spring prevents the unintended unlocking of the chain.

100 % crack tested. BG approved.

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | L | M | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|
| **6-XL*** | F349155 | 6 | 1,40 | 107 | 118 | 47 | 0,40 |
| **8-XL** | F349255 | 8 | 2,50 | 143 | 158 | 63 | 0,85 |
| **10-XL** | F349355 | 10 | 4,00 | 177 | 194 | 78 | 1,60 |
| **13-XL*** | F349455 | 13 | 6,70 | 231 | 252 | 100 | 3,40 |
| **16-XL*** | F349555 | 16 | 10,00 | 248 | 291 | 157 | 5,20 |
| **22-XL** | F349845 | 22 | 19,00 | 365 | 396 | 162 | 13,60 |

*In development

New




The **Shortening Hook TWN1827/1** according to DIN 5692 makes the lifting of loads safer. The new shape of the shortening Hooks TWN 1827/1 offer you much more safety than with conventional shortening hooks. The extra wide chain attachment enables us to guarantee you an especially firm seating of the inserted chain link and it is also protected from damage at the same time. The locking pin prevents an accidental loosening of the sling chain.

With our new TWN 1827/1 shortening hook, we are offering you grade 10 perfection together with a long shelf life of your slinging equipment.

100% Magnetic Crack Tested. BG-approved.

Finish: RAL 5002

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | G | L | B | | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|---|
| **6-XL*** | F33195 | 6 | 1,40 | - | - | - | - | - | – |
| **8-XL*** | F33205 | 8 | 2,50 | - | - | - | - | - | 0,49 |
| **10-XL** | F33215 | 10 | 4,00 | 83 | 12,5 | 132 | 68 | 40 | 0,95 |
| **13-XL*** | F33225 | 13 | 6,70 | - | - | - | - | - | 1,86 |
| **16-XL*** | F33235 | 16 | 10,00 | - | - | - | - | - | – |

*In development

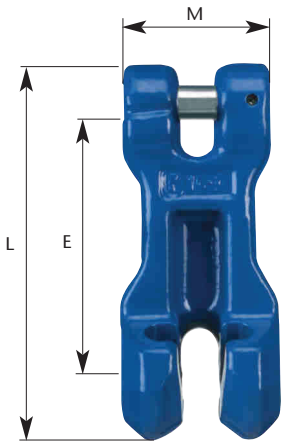
# Shortening Components XL

## The Clevis Shortening Claw TWN 1851

proven over many decades, has been further developed into the Grade XL and its clevis is designed to the corresponding nominal size. The chain has a safe seat in the claw pocket so that prematurely release will be avoided at any time.

100% Magnetic Crack Tested. BG-approved.

Finish: RAL 5002



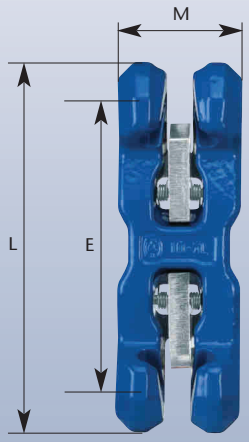

XL

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | L | M | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|
| **6-XL** | F34904 | 6 | 1,40 | 54 | 81 | 32 | 0,21 |
| **8-XL** | F34924 | 8 | 2,50 | 80 | 115 | 46 | 0,61 |
| **10-XL** | F34934 | 10 | 4,00 | 90 | 134 | 56 | 0,96 |
| **13-XL** | F34944 | 13 | 6,70 | 117 | 175 | 72 | 2,00 |
| **16-XL** | F34954 | 16 | 10,00 | 144 | 214 | 86 | 3,57 |

## The RAPID-Shortening Claw TWN1852 can be assembled and disassembled fast and easily with no additional tools. The ergonomic and compact design enables its positioning at any place on the chain. Two robust locking devices avoid the unsafe release of the chain in a loaded or unloaded condition. The locking device is equipped with a robust spring system.

100% Magnetic Crack Tested. BG-approved.

Finish: RAL 5002




| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | L | M | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|
| **6-XL*** | F34765 | 6 | 1,4 | - | - | - | - |
| **8-XL** | F34775 | 8 | 2,5 | 111 | 148 | 48 | 0,79 |
| **10-XL** | F34780 | 10 | 4,0 | 134 | 180 | 60 | 1,97 |
| **13-XL** | F34785 | 13 | 6,7 | 179 | 240 | 78 | 2,70 |
| **16-XL** | F34790 | 16 | 10,0 | 222 | 296 | 96 | 9,00 |

*In development

# Attaching the RAPID shortening claw XL to the chain

The following helpful instructions assume the person installing the claw is right-handed. Left-handers can perform the steps shown as a mirror image.The instructions provide only installation information. Other manipulations that achieve the safe positioning of the chain in the two pockets of the shortening claw are possible as well.


**Positioning the chain in the upper pocket:**
Take the shortening claw as in illustrated in **Figure 1** into the right hand and open the upper safety lever with your index finger.

From the bottom, use your left hand to grasp the chain so that the chain link to be placed into the upper pocket is positioned at the lower bow with your index finger and thumb.

Now slide the chain link all the way into the top pocket and release the safety lever.
**Check the tightness of the chain in the top pocket.**



**Positioning the chain in the lower pocket:**
Take hold of the shortening claw already hanging in the upper pocket with thumb and forefinger of your right hand as shown in **Figure 2** and open the lower safety lever with your middle finger as shown in **Figure 3**.

From the top, use your left hand to grasp the chain so that the chain link to be placed into the lower pocket is held at the upper bow with your index finger and thumb.


Now slide the chain link all the way into the bottom pocket and release the safety lever.
**Check the tightness of the chain in the bottom pocket.**

**Avoid twisting the chains.**

**Always check the correct positioning after settings the shortening claw and always before each lifting operation!**

If correctly assembled, the positioning of the shortening claw corresponds to the structural and nonstructural chain strands in **Figure 4**.



**Detaching the chain from the lower pocket:**

Take hold of the shortening claw with thumb and forefinger of your right hand as shown in **Figure 5** and open the lower safety lever with your middle finger.

Grasp with your left hand the lower chain strand and move it up as indicated by the arrow in **Figure 6**.

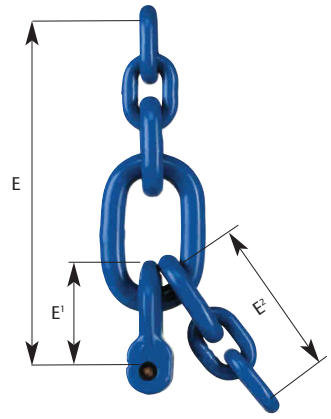
Note: Use a little jerk to make removal of the chain from the bottom pocket easier.

# Shortening Components XL

## The Fixed Size Shortening Device TWN1896

the only one in the world completes the XL-assembly system and is automatically determined to the nominal size by the Ringshackle. Therefore, it avoids the possibility of malfunction and provides additional safety for the user.
The high value powder coating provides a longer service life of the shortening device.

Finish: RAL 5002




XL

| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | E¹ | E² | B-Link | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **6-XL** | F189606 | 6 | 1,4 | 137 | 31 | 60 | ø10 x 46 x 23 | 0,32 |
| **8-XL** | F189608 | 8 | 2,5 | 175 | 38 | 78 | ø13 x 60 x 30 | 0,70 |
| **10-XL** | F189610 | 10 | 4,0 | 215 | 46 | 99 | ø16 x 70 x 35 | 1,40 |
| **13-XL** | F189613 | 13 | 6,7 | 270 | 59 | 126 | ø18 x 85 x 40 | 2,60 |
| **16-XL** | F189616 | 16 | 10,0 | 326 | 76 | 150 | ø22 x 100 x 50 | 5,00 |

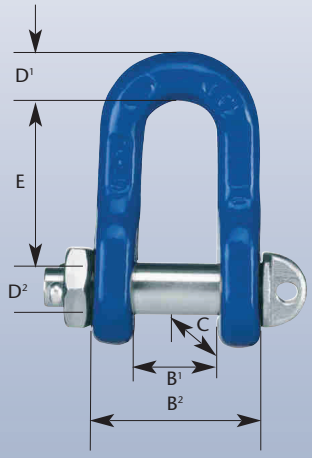
# Shackle

## Bolt Shackle Type C, TWN 1871

dimensionally in accordance with DIN 82101, will be supplied with galvanized bolt, nut and split pin.

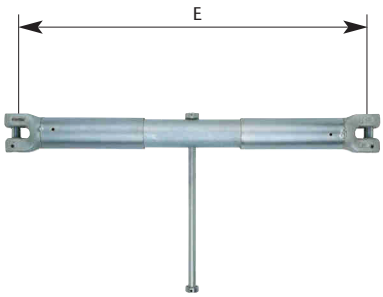
100% Magnetic crack tested. BG-approved.

Finish: RAL 5002




| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | D¹ | D² | C | B¹ | B² | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|---|---|
| **10-XL** | F303100 | 10 | 4,0 | 49 | 15 | 16 | 32 | 21 | 47 | 0,45 |
| **13-XL** | F303200 | 13 | 6,7 | 61 | 19 | 20 | 40 | 27 | 61 | 0,84 |
| **16-XL** | F303300 | 16 | 10,0 | 73 | 23 | 24 | 48 | 33 | 75 | 1,41 |

# Chain Tensioners XL




The **Chain Tensioner TWN 1454** is in accordance with standard EN 12195-3 and EN1677-1. Together with other lashing- and connecting components they are basically used in Lashing Chains according to EN 12195-3 for securing of loads in all industry sectors. Additionally, they are suitable for overhead lifting purposes.

The Tensioners achieve a high pre-tension force with less effort because of the screw transmission.
This feature is important for tying down, because only the pretension force is contributing to the securing of loads.

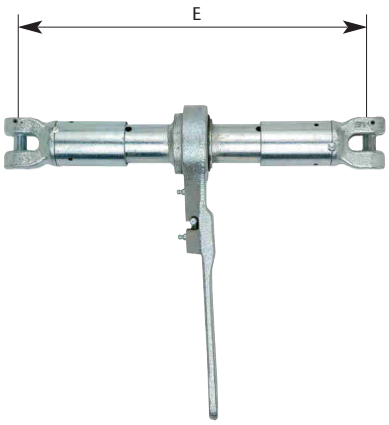
**Further advantages can also be mentioned:**

- A practical dimensioned tensioning hub
- Protected screw spindle located inside
- Robust protection tubes
- Integrated turn off locking mechanism
- Clevis type connection on both ends allows easy assembly of the corresponding round steel link chain.
- Handle is dimensioned according to EN 12195-3 (ergonomic aspect: Maximum hand pulling force is limited to 500N)
- Finish: electro galvanized and yellow chromated

| Trade Size | Article-No. | Nominal Size [mm] | norm. straight load ($S_{TF}$) min. [daN] | tensioner under straight load max. in [daN] | Dimensions [mm] $E_{max}$ | $E_{min}$ | stroke | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **13-XL** | F341877 | 13 | 2.600 | 13.000 | 675 | 445 | 230 | 7,20 |
| **16-XL** | F341977 | 16 | 3.100 | 20.000 | 834 | 554 | 280 | 11,80 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | suitable for lifting |

# Chain Tensioners XL

The **Chain Tensioner TWN 1455** is in accordance with standard EN 12195-3 and EN1677-1. Together with other lashing- and connecting components they are basically used in Lashing Chains according to EN 12195-3 for securing of loads in all industry sectors. Additionally, they are suitable for overhead lifting purposes.



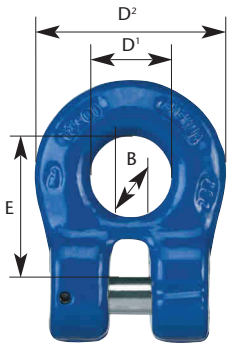

The Ratchet Tensioners achieve a high pre-tension force with less effort because of the screw transmission. This feature is important for tying down because only the pretension force is contributing to the securing of loads.

**Further advantages can also be mentioned:**

- A practical dimensioned tensioning hub
- Protected screw spindle located inside
- Robust protection tubes
- Integrated turn off locking mechanism
- Clevis type connection on both ends allows easy assembly of the corresponding round steel link chain.
- Handle is dimensioned according to EN 12195-3 (ergonomic aspect: Maximum hand pulling force is limited to 500N)
- Finish: electro galvanized and yellow chromated

| Trade Size | Articel-No. | Nominal Size [mm] | norm. straight load ($S_{TF}$) min. [daN] | tensioner under straight load max. in [daN] | Dimensions [mm] $E_{max}$ | $E_{min}$ | stroke | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **13-XL** | F341878 | 13 | 2.600 | 13.000 | 675 | 445 | 230 | 8,40 |
| **16-XL** | F341978 | 16 | 3.100 | 20.000 | 834 | 554 | 280 | 13,50 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | suitable for lifting |

## Special Sling Component XL




The forged **Ringshackle TWN1812** is automatically determined to the nominal size. It can be used as a lower terminal in the chain sling to be connected to a clevis lashing point. Coupling with a XL-LOK® is possible.

100 % Magnetic Crack Tested. BG - approved.

Finish: RAL 5002

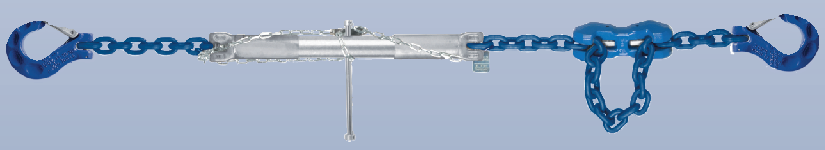
| Trade Size | Article-No. | Nominal Size [mm] | Working Load Limit [t max] | Dimensions [mm] E | D¹ | D² | B | Weight approx. [kgs] |
|---|---|---|---|---|---|---|---|---|
| **6-XL** | F31704 | 6 | 1,40 | 31 | 17 | 39 | 8 | 0,10 |
| **8-XL** | F31714 | 8 | 2,50 | 37 | 21 | 50 | 11 | 0,20 |
| **10-XL** | F31724 | 10 | 4,00 | 46 | 26 | 62 | 14 | 0,39 |
| **13-XL** | F31734 | 13 | 6,70 | 59 | 33 | 79 | 18 | 0,83 |
| **16-XL** | F31744 | 16 | 10,00 | 75 | 42 | 100 | 23 | 1,59 |

## Lashing Chains XL

### Lashing Chain XL with tensioner TWN 1410

Standard length L = 3.500 mm, with extended tensioner and unshortened chain. All lengths available upon request. The adjustment will be reached by the shortening device and the tensioner.

according to DIN EN 12195-3



| Trade Size | Article-No. | Nominal Size [mm] | admissible tensile strength under straight load [kN] | Weight approx. [kgs] |
|---|---|---|---|---|
| **13-XL** | F34183 | 13 | 130 | 21,63 |
| **16-XL** | F34184 | 16 | 200 | 39,35 |

# Special Sling Component XL

## Lashing Chain XL with ratchet TWN 1411

Standard length L = 3.500 mm, with extended tensioner and unshortened chain.
All lengths available upon request. The adjustment will be reached by the shortening device and the ratchet tensioner.

according to DIN EN 12195-3

XL

| Trade Size | Article-No. | Nominal Size [mm] | admissible tensile strength under straight load [kN] | Weight approx. [kgs] |
|---|---|---|---|---|
| **13-XL** | F34183R | 13 | 130 | 22,83 |
| **16-XL** | F34184R | 16 | 200 | 41,05 |
| | | | | |

# Spare Parts and Accessories XL

Spare Parts are only available as sets!

## Chain Card File XL TWN 0944

To file the regular tests of chains according to EN standards.
**Art.-No. Z04575**

## Assembly Set XL TWN 0945

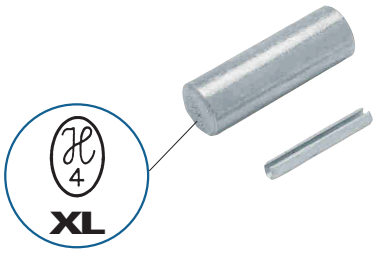
Consisting of 6 punches in a plastic holder to disassemble chains from components.
The complete set covers all nominal sizes for the use with the THIELE-Sling-Assembly-System.
**Art.-No. Z 03303**

## Tensioning Tag XL TWN 1402 for Lashing Chains,

**Article-No. Z07264 (EN 12195-3)**

# Spare Parts and Accessories XL

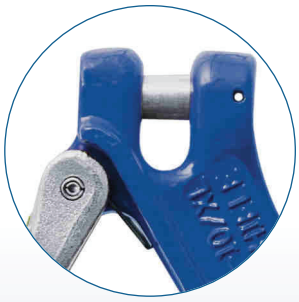
Spare Parts are only available as sets!




Load Pin XL
for Clevis Type Hooks

## Spare Parts XL TWN 1904/0

for Clevis Type Hooks (Bolt and Spirol Pin)



| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **6-XL** | F48686 | 1 set | 0,01 |
| **8-XL** | F48687 | 1 set | 0,01 |
| **10-XL** | F48688 | 1 set | 0,03 |
| **13-XL** | F48689 | 1 set | 0,07 |
| **16-XL** | F48690 | 1 set | 0,11 |

Spare Parts XL for Sling Hooks

(TWN 1835/1) (TWN 1840/1) (TWN 1841/1)

## Spare Parts XL TWN 1908/0

for Sling Hooks (Safety Latch, spring and Spirol Pin)

| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **6-XL** | F48731 | 1 set | 0,03 |
| **8-XL** | F48733 | 1 set | 0,06 |
| **10-XL** | F48735 | 1 set | 0,11 |
| **13-XL** | F48737 | 1 set | 0,19 |
| **16-XL** | F48739 | 1 set | 0,32 |
| **22-XL** | F48745 | 1 set | 0,88 |

# Spare Parts and Accessories XL

Spare Parts are only available as sets!

## Spare Parts XL TWN 1921

for XL-LOK® (Bolt and Spirol Pin)

Spare Part Set for XL-LOK®

| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **6-XL** | F486013 | 1 set | 0,01 |
| **8-XL** | F486043 | 1 set | 0,01 |
| **10-XL** | F486073 | 1 set | 0,03 |
| **13-XL** | F486103 | 1 set | 0,05 |
| **16-XL** | F486133 | 1 set | 0,12 |
| **22-XL** | F486191 | 1 set | 0,46 |

(XL-LOK®, TWN 1820)

## Spare Parts XL TWN 1930/0

for C-Shackle, TWN 1871 (Bolt, Nut and Cotter Pin)

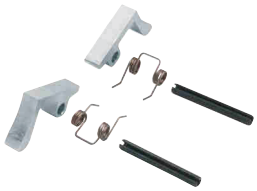
Spare Part Set for C-Shackle

| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **10-XL** | F304510 | 1 set | 0,13 |
| **13-XL** | F304610 | 1 set | 0,25 |
| **16-XL** | F304710 | 1 set | 0,36 |
| | | | |
| | | | |

(TWN 1871)

# Spare Parts and Accessories XL

Spare Parts are only available as sets!



Trigger Set for RAPID®
Shortening Claw

RAPID®, (TWN 1852)

## Spare Parts XL TWN 1931/0

for RAPID® Shortening Claw, TWN 1852 (2 Retainers, 2 Springs and 2 Spirol Pins)

| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **8-XL** | F347750 | 1 set | 0,04 |
| **10-XL** | F347800 | 1 set | 0,10 |
| **13-XL** | F347850 | 1 set | 0,17 |
| **16-XL** | F347900 | 1 set | 0,33 |

Pin Set for Clevis Self Locking Hook

(TWN 1837)

## Spare Parts XL TWN 1933/0

for Clevis Self Locking Hook, TWN 1837 (Load Pin, 2 Spirol Pins)

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

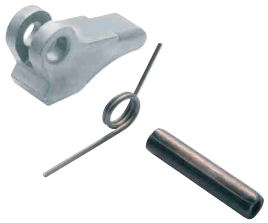
# Spare Parts and Accessories XL

Spare Parts are only available as sets!

## Trigger Set XL TWN 1935

for Self Locking Hooks (TWN 1836, TWN 1837 and TWN 1838)
(Retainer, Spring, Assembly Plastic Bush and Spirol Pin)

| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **6-XL** | Z10110 | 1 set | 0,02 |
| **8-XL** | Z10111 | 1 set | 0,04 |
| **10-XL** | Z10112 | 1 set | 0,05 |
| **13-XL** | Z10113 | 1 set | 0,18 |
| **16-XL** | Z10114 | 1 set | 0,19 |
| **22-XL** | Z10117 | 1 set | 0,25 |



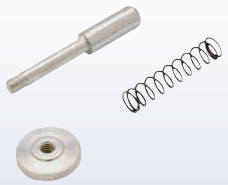
Trigger Set for Self Locking Hooks

(TWN 1836) (TWN 1837)

## Spare Parts XL TWN 1950

for Shortening Hook (TWN 1827/1)
(Safety Bolt, Pressure Spring, Knurled Screw)

| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **8-XL** | F48330 | 1 set | 0,012 |
| **10-XL** | F48328 | 1 set | 0,024 |
| **13-XL** | F48329 | 1 set | 0,026 |
| **16-XL** | F48339 | 1 set | 0,048 |



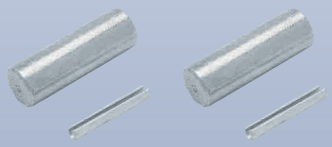
Spare Parts
for Shortening Hook

(TWN 1827/1)

## Spare Parts XL TWN 1951

for Combi Quick Fastener (TWN 1853)
(2 Bolts and 2 Spirol Pins)

| Trade Size | Article-No. | Packing Units | Weight approx. [kgs] |
|---|---|---|---|
| **6-XL** | F486865 | 1 set | 0,02 |
| **8-XL** | F486875 | 1 set | 0,04 |
| **10-XL** | F486885 | 1 set | 0,08 |
| **13-XL** | F486895 | 1 set | 0,17 |
| **16-XL** | F486905 | 1 set | 0,29 |
| **22-XL** | F486935 | 1 set | 0,71 |

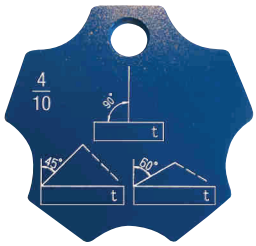


Spare Parts
for Combi Quick Fastener

(TWN 1853)

# Spare Parts and Accessories XL

Spare Parts are only available as sets!


Pic.: TWN 1940
Front- and Backside

## Identification Tag XL TWN 1940

for Chain Slings XL

| Article.-No. Single Leg + Multi Leg | Type | Weight approx. [kgs] |
|---|---|---|
| **F08052** | without welded ring | 0,10 |
| **F08053** | with welded ring | 0,10 |



Pic.: TWN 1946
Front- and Backside

## Chain Gauge XL TWN 1946

for Round Steel Link Chains XL

| Trade Size | Article-No. | | Weight approx. [kgs] |
|---|---|---|---|
| **6-XL** | F01690 | | 0,10 |
| **8-XL** | F01691 | | 0,15 |
| **10-XL** | F01692 | | 0,20 |
| **13-XL** | F01693 | | 0,25 |
| **16-XL** | F01694 | | 0,30 |

## Examples for Chain Slings XL

### 1-Leg Chain Slings XL with XL-LOK®-coupling

TWN 1600

TWN 1601

TWN 1602

TWN 1603

TWN 1604

# Examples for Chain Slings XL

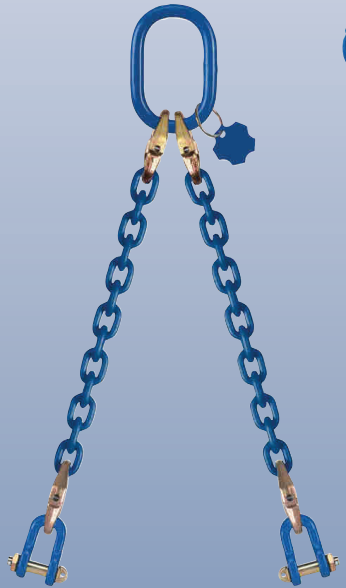
## 2-Leg Chain Slings XL with XL-LOK®-coupling

TWN 1650

TWN 1651

TWN 1652

TWN 1653



TWN 1654

## Examples for Chain Slings XL

### 4-Leg Chain Slings XL with XL-LOK®-coupling

**TWN 1750**

**TWN 1751**

**TWN 1752**

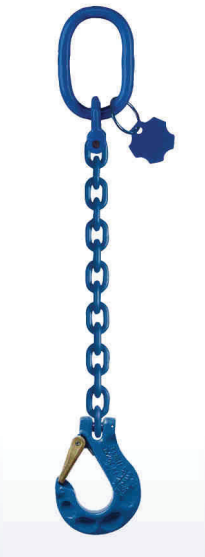
**TWN 1753**

**TWN 1754**

# Examples for Chain Slings XL

## 1-Leg Chain Slings XL, Fixed Size

### TWN 1631

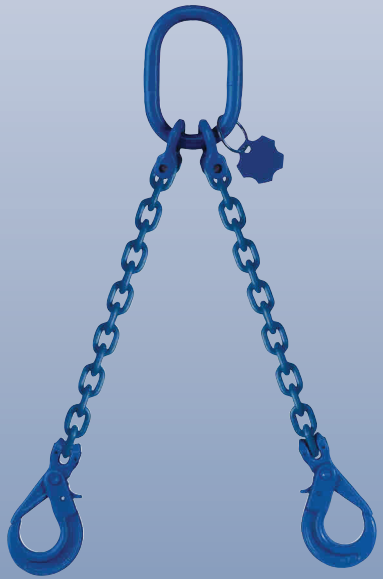


### TWN 1632

## 2-Leg XL-Chain Slings, Fixed Size

### TWN 1681

### TWN 1682



## Examples for Chain Slings XL

### 4-Leg Chain Slings XL, Fixed Size

**TWN 1781**

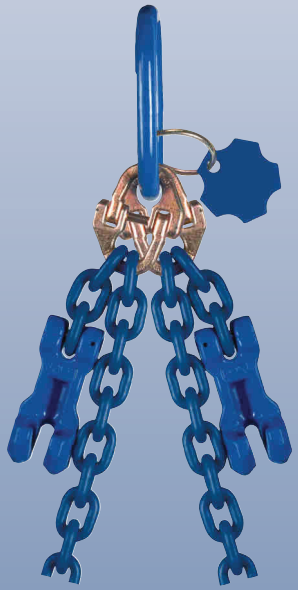
**TWN 1782**

# Shortening Options



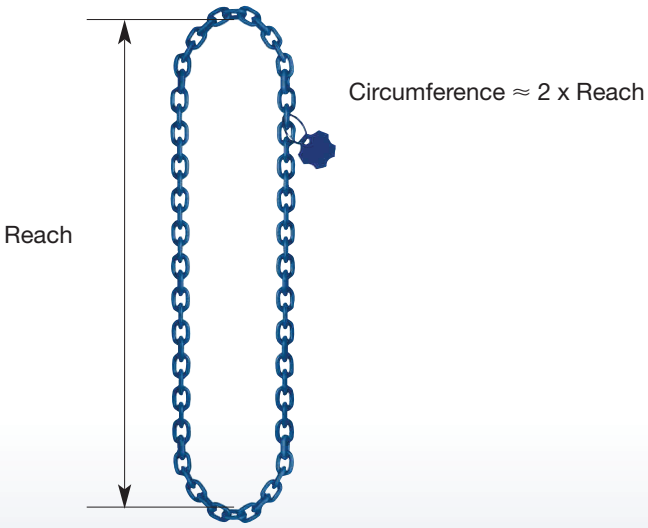





# Endless Chains XL

## Form K11




## Form K12


## Form K22

# Operating Manual

**WARNING!**

· Chain Slings and Components can only be used, if user instructions and operating instructions have been read carefully and are completely understood.

· The indicated values of loads on the I.D. tags must not be exceeded.

· Due to improper use, chains can fail.

**IT S A QUESTION OF YOUR SAFETY**
**Death or injury can occur from improper use or maintenance!**

**1. Transport and Storing**
All products must be protected during transportation, use, and storage in severe weather conditions.

**2. Before first use**
Assembling, disassembling and using should only be accomplished by authorized persons according to BGR 500, Chapter 2.8 (in Germany)
Check the following points before using the chain sling for the first time:
- all test certificates exist (declaration of conformity, inspection certificate 3.1.B etc.); the chain sling you are going to use is the same that you ordered
- Chain slings and Lashing Chains are provided with the CE label
- identification and working load limit marked on the chain sling are identical to the corresponding information indicated on the test certificate; all details concerning the chain sling have been entered into the chain card file
- The assembly is prohibited until it has been found out, that the machine in which should be built in, corresponds with the EC Directive for machines and its amendments ( European rules and regulations).
- In suitable intervals, check the chain sling for damages or wear (depending upon severity of conditions slings shall be inspected for damage as frequently as prior to each lift. All supplied user instructions must be maintained and available for reference until the product is removed from service.

**3. Warning and use advice**
- EC Directive for Machines and its amendments as per 2006/42/EG
- Operation and use instructions for chain slings according to DIN 685 - 5, EN 818 –6.
- Consult safety regulations for round Steel Link Chains used as slinging gear in hot dipped galvanizing plants (german rules and regulations) according to BGR 150
- Consult Safety Regulations for Cranes according to BGV D 6
- Consult load Suspension Devices for Lifting Operations (german rules and safety regulations) according to BGR 500, Chapter 2.8
- Consult Safety certificate for riggers according to BGI 556
- Consult components for chain slings according to EN 1677-2
- Consult principles for test of industrial safety of lifting products
- Consult slinging of rod iron using steel round Steel Link Chains when loading and unloading sea-going ships
- Consult German rules and regulations VDI 2700-2701-2702

Special Sling Components, hooks and clutching devices should only be used in straight tensile direction

**Especially forbidden is:**
- the combination of different grades when assembling (except tongs)
- the using of chain slings which do not correspond to grade 100
- overloading
- To use a combination of products with different working load limits, unless the working load noted on the I.D. tag is based on the weakeast component.
- the use of twisted or knotted chains
- to use bolts or wires to connect components
- to use deformed components, rigid or elongated chains
- to lift or pull loads with sharp edges without padding the edges
- to drive equipment over chain sling
- to multiple wrap a chain around a loadhook or tension point
- to modify products by welding, burning, bending or other mechanical modifications
- to make inadmissible modifications, e.g. the use of a 2-leg chain sling with shortening hooks as a 4-leg chain sling
- to tip load a hook into a chain link
- to apply the load on the tip, side or back of the hook
- to load connectors (XL-Lok s) at one side
- to adjust chain links or products
- to adapt inclination over 60°
- to turn swivels or swivel hooks under load
- to weld transport ring screw type lifting eyes
- to exceed the indicated grip on lifting tongs
- the use of open or riveted repair links

It must be taken into consideration:
- the load to be lifted
- the free mobility of the hook's safety latches
- the use under chemical influences for example acids and steam is restricted or prohibited
- the influence of temperature on alloy chain and components
- shock load impacts the chain or fitting while lifting or securing
- any type of surface treatment to chain or fittings especially of hot dipped galvanizing can only be carried out by the manufacturer
- when lifting keep hands and other parts of body far away from the components
- be careful when locking hooks under load Danger of injury!
- when not in use chain slings shall be hung on a rack
- ensure free mobility of chain slings or other devices in the crane hook
- when using hooks without latches pay special attention to the position of the hook placement
- to the installation positon
- if necessary protect screw tensioners by locking elements to prevent automatic unlocking
- load claws with chains only on the bottom of the pocket claws
- protect chain by padding or wrapping sharp edges
- Safety latches should not be obstructed when hooks are loaded
- in case of shortening hooks, load chains must be loaded in the bowl of the hook
- hook openings must point away from the load being lifted
- that the hook up point and lifting hooks are compatible
- also be sure that the lifting components are suitable for the application
- do not sit loads on the chain sling
- reduction of working load limits is necessary when making lifts at severe angles
- consult charts when using alloy chain at extreme temperatures
- working load limits must be reduced when using endless and basket slings
- extreme caution should be used when using hooks for lifting molten metal or chemicals
- chain slings shall be loaded properly to avoid damage to chain and load
- keep personnel away from loads being lifted

**4. Maintance and tests**
- The chain sling must be visually inspected before use. If damage is found, you must consult a chain expert according to BGR 500.
- The product must be removed from service if the following damage is found:
- unreadable tags
- breaks or deformation
- cuts, notches, grooves or cracks
- strong corrosion
- heating over the admissible temperature allowed
- elongation of chain must not exceed 5% of manufacturer's published size
- elongation of the overall chain length shall not exceed 5 %
- to determine wear rejection on the diameter of a link, you must measure the horizontal and the vertical and reject if reduction is more than 10%.
- reject hooks if throat opening is opened greater than 10% of new hook or the safety latch does not seat properly
- wear of hook eye or hook body exceed 5 %
- missing or damaged safety latch of the hook or shortening component
- incorrect screw replacement on lifting eyes
- incorrect or damaged bolts or turn off locking

Don't repair chain slings yourself unless fully trained. Please contact the manufacturer or a repair expert. Use only original spare parts from THIELE.

**5. Regular inspections**
Regular inspection shall include measurement and visual inspection and should be carried out once each year at minimum.
Each third year inspection must include the crack detection (magna flux).
On a new chain, you must set up chain card index that shall contain a description of the chain as well as the identity of the certificate. The inspection schedule must be fixed. The condition of chain slings or lashing chains and their components shall be noted at each inspection. If damage is repaired, all repairs and details must be noted on the chain card.

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