

# Mounting Instructions

Original in compliance with 2006/42/EG



## Master Links for 1-2-Leg Slings, Intermediate Links

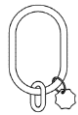
Grades 8 and 10



Master link  
Type A



Intermediate  
link  
Type B



Special master  
link assembly



Fixed size  
master link  
TAA / TAB

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### 1 Description and Intended Use

Master links and master link assemblies are intended to be built in sling chain assemblies for lifting of loads according to EN 818-4.

They are prevalently used as upper end fittings to connect the sling chain assemblies to the crane hooks or are used as bottom end fittings to be assembled together with shackles to carry the load.

Fixed size master links have integrated ringshackles for easy attachments of sling chain and therefore they are predestinated for mounted sling chain assemblies.

A usage for lashing chain assemblies according to EN 12195-3 is possible.

These Mounting Instructions apply to following products:

- TWN 0803, TWN 0807, TWN 0808, TWN 1807, TWN 1808, TWN 1313, TWN 1813<sup>#</sup>  
Master links type A
- TWN 0795, TWN 0804, TWN 1795  
Intermediate links type B
- TWN 0815, TWN 0816, TWN 1816<sup>#</sup>  
Special master link assemblies for 1- and 2-leg slings chain assemblies used for crane hooks DIN15401
- TWN 0810/1, TWN 0810/2, TWN 0811/1, TWN 0811/2, TWN 1810/1, TWN 1810/2  
Fixed size master link assemblies type TAA and TAB

The master links and master link assemblies meet EG Machinery Directive 2006/42/EG requirements and feature a safety factor of at least 4 based on Working Load Limit (WLL).

THIELE master links and master link assemblies are designed to withstand 20 000 dynamic load changes under maximum load conditions. In the event of higher loads (e.g. multi-shift/automatic operation, magnets) the WLL must be reduced.

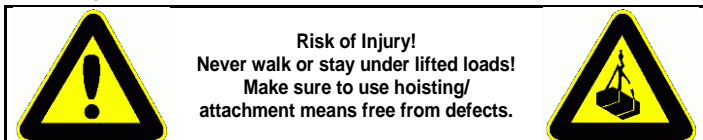
Master link assemblies must exclusively be used

- within the limits of their permissible Working Load Limit,
- within the temperature limits prescribed,
- for permissible attachment methods and inclination angles,
- by trained and authorized persons.

Any alternating use for lifting and lashing purposes is impermissible!

Master link assemblies are as a rule not permitted for the transportation of persons.

### 2 Safety Notes



- Operators, fitters and maintenance personnel must in particular observe the Operating Instructions of the sling chain assembly into which the master links are to be installed, documentations DGUV V 1, DGUV R 100-500 Chapter 2.8, DGUV R 109-004, DGUV I 209-013 and DGUV I 209-021 issued by the German Employers' Liability Insurance Association as well as standard specifications DIN 685-5, DIN 5688-3, EN 818-4 and EN 818-6.
- In the Federal Republic of Germany, the Operational Safety Ordinance (BetrSichV) has to be implemented and the Technical Rule for Industrial Safety TRBS 1201, in particular Annex 1, Chapter 2 "Special regulations for the use of working equipment for lifting loads" must be observed.<sup>#</sup>
- Outside the Federal Republic of Germany the specific provisions issued locally in the country where the items are used must also be observed.

- The directions given in these Mounting Instructions and specified documentations relating to safety, assembly, operation, inspection and maintenance must be made available to the respective persons.
- Make sure these Mounting Instructions are available in a place near the product during the time the equipment is used. Please contact the manufacturer if replacements are needed. See chapter 12.<sup>#</sup>
- When performing work make sure to wear your personal protective equipment!
- **Improper assembly and use may cause personal injury and/or damage to property.**
- Assembly and removal as well as inspection and maintenance must exclusively be carried out by skilled and authorized persons.
- Structural changes are impermissible (e.g. welding, bending).
- **Operators must carry out a visual inspection and, if necessary, a functional test of the safety equipment before each use.**<sup>#</sup>
- Never put to use worn-out, bent or damaged master links.
- Never expose master links and master link assemblies to loads exceeding the specified Working Load Limit.
- Do not use force when mounting/positioning the master links.
- Master links must be allowed to move freely in all tensile directions.
- Avoid bending loads to act on master links and master link assemblies.
- During lifting/hoisting make sure your hands or other body parts do not come into contact with hoisting means. Only remove hoisting means manually (use your hands).
- Avoid impacts, e.g. due to abruptly lifting loads with chain in slack condition.
- Usage of fixed site master link assemblies without working safety elements (dowel pins) is not permissible.
- In the event of doubts about the use, inspection, maintenance or similar things contact your safety officer or the manufacturer!

**THIELE will not be responsible for damage caused through non-observance of the instructions, rules, standards and notes indicated!**

**As regards quality grade 10 THIELE does not give its general approval to the assembly of components stemming from different manufacturers!**

**Working under the influence of drugs or alcohol is strictly forbidden!**

### 3 Commissioning

Prior to using the parts for the first time make sure that

- the parts comply with the order and have not been damaged,
- test certificate, statement of compliance and Mounting Instructions are at hand,
- markings correspond with what is specified in the documentation,
- inspection deadlines and the qualified persons for examinations are determined,<sup>#</sup>
- visibility and functional testing are carried out and documented,<sup>#</sup>
- documentations are safely kept in an orderly manner.

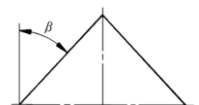
Dispose of the packing in an environmentally compatible way according to local rules.

### 4 Technical Data

Tables include only article numbers of standard and not customized parts.

WLL = Working Load Limit

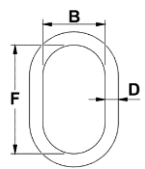
For 2-leg sling chains the data for WLL are depending on the inclination angle  $\beta$ :



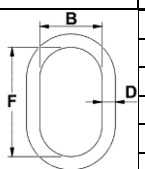
#### 4.1 Master Links Type A, TWN 0803, Grade 8 for Offshore Sling Chains

| TWN 0803<br>(Offshore) | Article-no. | WLL<br>[t] | Dimensions<br>[mm] |     |     | Mass<br>app. [kg] |
|------------------------|-------------|------------|--------------------|-----|-----|-------------------|
|                        |             |            | D                  | F   | B   |                   |
|                        | F0803208    | 4,75       | 20                 | 140 | 80  | 1,1               |
|                        | F0803228    | 5,6        | 22                 | 160 | 90  | 1,5               |
|                        | F0803268    | 8,0        | 26                 | 180 | 100 | 2,3               |
|                        | F0803328    | 12,5       | 32                 | 230 | 125 | 4,4               |
|                        | F0803368    | 16         | 36                 | 250 | 140 | 6,2               |
|                        | F0803408    | 19         | 40                 | 290 | 160 | 8,8               |
|                        | F0803458    | 25         | 45                 | 320 | 175 | 12                |
|                        | F0803508    | 31,5       | 50                 | 340 | 190 | 16                |
|                        | F0803568    | 40         | 56                 | 380 | 210 | 23                |
|                        | F0803638    | 50         | 63                 | 430 | 240 | 33                |
|                        | F0803708    | 63         | 70                 | 470 | 260 | 44                |
|                        | F0803808    | 80         | 80                 | 520 | 290 | 64                |

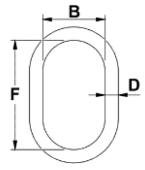
**4.2 Master Links Type A, TWN 0807, Grade 8**  
for 1-Leg Sling Chains (as of October 2018 replaced by TWN 1313) #

| TWN 0807   | Nominal size | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|--|--------------|-------------|---------|-----------------|-----|-----|----------------|
|  |              |             |         | D               | F   | B   |                |
|  | 6-8          | F0807068    | 1,12    | 13              | 90  | 50  | 0,3            |
|  | 8-8          | F0807088    | 2,0     | 16              | 110 | 60  | 0,5            |
|  | 10-8         | F0807108    | 3,15    | 18              | 130 | 70  | 0,8            |
|  | 13-8         | F0807138    | 5,3     | 22              | 160 | 90  | 1,5            |
|  | 16-8         | F0807168    | 8,0     | 26              | 180 | 100 | 2,3            |
|  | 18-8         | F0807188    | 10      | 32              | 230 | 125 | 4,4            |
|  | 20-8         | F0807208    | 12,5    | 32              | 230 | 125 | 4,4            |
|  | 22-8         | F0807228    | 15      | 36              | 250 | 140 | 6,2            |
|  | 26-8         | F0807268    | 21,2    | 45              | 320 | 175 | 12             |
|  | 28-8         | F0807288    | 25,0    | 45              | 320 | 175 | 12             |
|  | 32-8         | F0807328    | 31,5    | 50              | 340 | 190 | 16             |
|  | 36-8         | F0807368    | 40      | 56              | 380 | 210 | 23             |
|  | 40-8         | F0807408    | 50      | 63              | 430 | 240 | 33             |
|  | 45-8         | F0807458    | 63      | 70              | 470 | 260 | 44             |
|  | 50-8         | F0807508    | 80      | 80              | 520 | 290 | 64             |
|  | 56-8         | F0807568    | 100     | 85              | 520 | 290 | 73             |
|  | 63-8         | F0807638    | 125     | 95              | 580 | 320 | 100            |
|  | 71-8         | F0807718    | 160     | 110             | 680 | 380 | 160            |
| 80-8   | F0807808     | 200         | 125     | 720             | 400 | 220 |                |

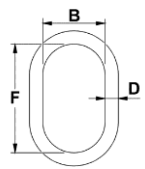
**4.3 Master Links Type A, TWN 1807, Grade 10**  
for 1-Leg Sling Chains (as of October 2018 replaced by TWN 1813) #

| TWN 1807  | Nominal size | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|---|--------------|-------------|---------|-----------------|-----|-----|----------------|
|   |              |             |         | D               | F   | B   |                |
|  | 6-10         | F180706     | 1,4     | 13              | 90  | 50  | 0,3            |
|   | 8-10         | F180708     | 2,5     | 16              | 110 | 60  | 0,5            |
|   | 10-10        | F180710     | 4,0     | 18              | 130 | 70  | 0,8            |
|   | 13-10        | F180713     | 6,7     | 22              | 160 | 90  | 1,5            |
|   | 16-10        | F180716     | 10      | 26              | 180 | 100 | 2,3            |
|   | 22-10        | F180722     | 19      | 36              | 250 | 140 | 6,2            |

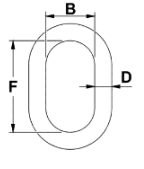
**4.4 Master Links Type A, TWN 0808, Grade 8**  
for 2-Leg Sling Chains (as of October 2018 replaced by TWN 1813) #

| TWN 0808   | Nominal size | Article-no. | WLL [t]           |                    | Dimensions [mm] |     |     | Mass app. [kg] |
|--|--------------|-------------|-------------------|--------------------|-----------------|-----|-----|----------------|
|  |              |             | $\beta$<br>0°≤45° | $\beta$<br>45°≤60° | D               | F   | B   |                |
|  | 6-8          | F0808068    | 1,6               | 1,12               | 13              | 90  | 50  | 0,3            |
|  | 8-8          | F0808088    | 2,8               | 2,0                | 18              | 130 | 70  | 0,8            |
|  | 10-8         | F0808108    | 4,25              | 3,15               | 20              | 140 | 80  | 1,1            |
|  | 13-8         | F0808138    | 7,5               | 5,3                | 26              | 180 | 100 | 2,3            |
|  | 16-8         | F0808168    | 11,2              | 8,0                | 32              | 230 | 125 | 4,4            |
|  | 18-8         | F0808188    | 14                | 10                 | 36              | 250 | 140 | 6,2            |
|  | 20-8         | F0808208    | 17                | 12,5               | 40              | 290 | 160 | 8,8            |
|  | 22-8         | F0808228    | 21,2              | 15                 | 45              | 320 | 175 | 12             |
|  | 26-8         | F0808268    | 30                | 21,2               | 50              | 340 | 190 | 16             |
|  | 28-8         | F0808288    | 33,5              | 25                 | 56              | 380 | 210 | 23             |
|  | 32-8         | F0808328    | 45                | 31,5               | 63              | 430 | 240 | 33             |
|  | 36-8         | F0808368    | 56                | 40                 | 70              | 470 | 260 | 44             |
|  | 40-8         | F0808408    | 71                | 50                 | 80              | 520 | 290 | 64             |
|  | 45-8         | F0808458    | 90                | 63                 | 85              | 520 | 290 | 73             |
|  | 50-8         | F0808508    | 112               | 80                 | 95              | 580 | 320 | 100            |
|  | 56-8         | F0808568    | 140               | 100                | 110             | 680 | 380 | 160            |

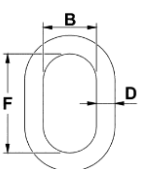
**4.5 Master Links Type A, TWN 1808, Grade 10**  
for 2-Leg Sling Chains (as of October 2018 replaced by TWN 1813) #

| TWN 1808   | Nominal size | Article-no. | WLL [t]           |                    | Dimensions [mm] |     |     | Mass app. [kg] |
|--|--------------|-------------|-------------------|--------------------|-----------------|-----|-----|----------------|
|  |              |             | $\beta$<br>0°≤45° | $\beta$<br>45°≤60° | D               | F   | B   |                |
|  | 6-10         | F180806     | 2,0               | 1,4                | 13              | 90  | 50  | 0,3            |
|  | 8-10         | F180808     | 3,55              | 2,5                | 18              | 130 | 70  | 0,8            |
|  | 10-10        | F180810     | 5,6               | 4,0                | 20              | 140 | 80  | 1,1            |
|  | 13-10        | F180813     | 9,0               | 6,7                | 26              | 180 | 100 | 2,3            |
|  | 16-10        | F180816     | 14                | 10                 | 32              | 230 | 125 | 4,4            |
|  | 22-10        | F180822     | 26,5              | 19                 | 45              | 320 | 175 | 12             |

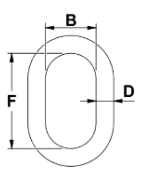
**4.6 Intermediate Links Type B, TWN 0795, Grade 8**

| TWN 0795  | Nominal size | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|---|--------------|-------------|---------|-----------------|-----|-----|----------------|
|   |              |             |         | D               | F   | B   |                |
|  | B8           | F122880     | 1,12    | 8               | 36  | 18  | 0,1            |
|   | B10          | F122890     | 2,0     | 10              | 46  | 23  | 0,1            |
|   | B13          | F122930     | 3,15    | 13              | 60  | 30  | 0,2            |
|   | B16          | F122970     | 5,3     | 16              | 70  | 35  | 0,3            |
|   | B18          | F123010     | 6,7     | 18              | 85  | 40  | 0,5            |
|   | B20          | F123030     | 8,0     | 20              | 90  | 45  | 0,7            |
|   | B22          | F123070     | 10      | 22              | 100 | 50  | 1,0            |
|   | B26          | F123090     | 12,5    | 26              | 120 | 60  | 1,6            |
|   | B28          | F123190     | 15      | 28              | 130 | 65  | 1,9            |
|   | B32          | F123110     | 21,2    | 32              | 140 | 70  | 2,9            |
|   | B36          | F123130     | 25      | 36              | 160 | 80  | 4,2            |
|   | B40          | F123150     | 31,5    | 40              | 180 | 90  | 5,8            |
|   | B45          | F123170     | 40      | 45              | 200 | 100 | 8,2            |
|   | B50          | F123210     | 50      | 50              | 220 | 110 | 11             |
|   | B56          | F123230     | 63      | 56              | 260 | 130 | 16             |
|   | B63          | F123270     | 80      | 63              | 280 | 140 | 22             |
|   | B70          | F123290     | 100     | 70              | 320 | 160 | 31             |
|   | B80          | F123300     | 125     | 80              | 360 | 180 | 46             |
|   | B90          | F123320     | 160     | 90              | 400 | 200 | 65             |

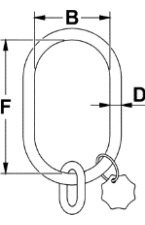
**4.7 Intermediate Links Type B, TWN 1795, Grade 10**

| TWN 1795   | Nominal size | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|--|--------------|-------------|---------|-----------------|-----|-----|----------------|
|  |              |             |         | D               | F   | B   |                |
|  | B8           | F179508     | 1,4     | 8               | 36  | 18  | 0,1            |
|  | B10          | F179510     | 2,5     | 10              | 46  | 23  | 0,1            |
|  | B13          | F179513     | 4,0     | 13              | 60  | 30  | 0,2            |
|  | B16          | F179516     | 6,7     | 16              | 70  | 35  | 0,3            |
|  | B20          | F179520     | 10      | 20              | 90  | 45  | 0,7            |
|  | B22          | F179522     | 12,5    | 22              | 100 | 50  | 1,0            |
|  | B26          | F179526     | 16      | 26              | 120 | 60  | 1,6            |
|  | B28          | F179528     | 19      | 28              | 130 | 65  | 1,9            |
|  | B32          | F179532     | 26,5    | 32              | 140 | 70  | 2,9            |
|  | B36          | F179536     | 31,3    | 36              | 160 | 80  | 4,2            |
|  | B40          | F179540     | 40      | 40              | 180 | 90  | 5,8            |
|  | B45          | F179545     | 50      | 45              | 200 | 100 | 8,2            |

**4.8 Intermediate Links Type B, TWN 0804, Grade 8**  
for Offshore Sling Chains

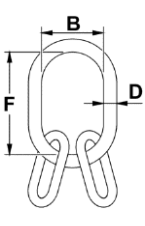
| TWN 0804 (Offshore)   | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|---|-------------|---------|-----------------|-----|-----|----------------|
|   |             |         | D               | F   | B   |                |
|  | F0804138    | 3,35    | 13              | 60  | 30  | 0,2            |
|   | F0804168    | 5,6     | 16              | 70  | 35  | 0,3            |
|   | F0804208    | 8,5     | 20              | 90  | 45  | 0,7            |
|   | F0804228    | 10      | 22              | 100 | 50  | 1,0            |
|   | F0804268    | 14      | 26              | 120 | 60  | 1,6            |
|   | F0804288    | 16      | 28              | 130 | 65  | 1,9            |
|   | F0804328    | 22,4    | 32              | 140 | 70  | 2,9            |
|   | F0804368    | 28      | 36              | 160 | 80  | 4,2            |
|   | F0804408    | 33,5    | 40              | 180 | 90  | 5,8            |
|   | F0804458    | 42,5    | 45              | 200 | 100 | 8,2            |
| F0804508  | 53          | 50      | 220             | 110 | 11  |                |

**4.9 Special Master Link Assemblies, TWN 0815, Grade 8 for 1-Leg Sling Chains with Crane Hooks**

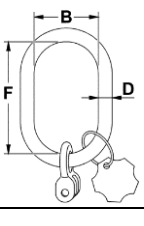
| TWN 0815   | Nominal size       | Article-no. | Crane Hook No. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|--|--------------------|-------------|----------------|---------|-----------------|-----|-----|----------------|
|  |                    |             |                |         | D               | F   | B   |                |
|  | 6-8                | F08150616   | 16             | 1,12    | 18              | 260 | 140 | 1,7            |
|  | 8-8                | F08150816   | 16             | 2,0     | 22              | 260 | 140 | 2,6            |
|  | 10-8               | F08151016   | 16             | 3,15    | 22              | 260 | 140 | 2,6            |
|  | 13-8 <sup>1)</sup> | F08151316   | 16             | 5,3     | 26              | 260 | 140 | 3,2            |
|  | 16-8 <sup>1)</sup> | F08151616   | 16             | 8,0     | 30              | 260 | 140 | 4,3            |
|  | 18-8               | F08151816   | 16             | 10      | 36              | 250 | 140 | 7,8            |
|  | 6-8                | F08150625   | 25             | 1,12    | 20              | 340 | 180 | 2,5            |
|  | 8-8                | F08150825   | 25             | 2,0     | 20              | 340 | 180 | 2,5            |
|  | 10-8 <sup>1)</sup> | F08151025   | 25             | 3,15    | 24              | 340 | 180 | 3,8            |
|  | 13-8               | F08151325   | 25             | 5,3     | 28              | 340 | 180 | 5,1            |
|  | 16-8               | F08151625   | 25             | 8,0     | 32              | 340 | 180 | 6,9            |
|  | 18-8               | F08151825   | 25             | 10      | 40              | 340 | 180 | 10,9           |
|  | 20-8 <sup>1)</sup> | F08152025   | 25             | 12,5    | 40              | 340 | 180 | 10             |
|  | 22-8 <sup>1)</sup> | F08152225   | 25             | 15      | 40              | 340 | 180 | 10             |
|  | 6-8                | F08150640   | 40             | 1,12    | 22              | 430 | 220 | 3,7            |
|  | 8-8                | F08150840   | 40             | 2,0     | 22              | 430 | 220 | 3,7            |
|  | 10-8               | F08151040   | 40             | 3,15    | 26              | 430 | 220 | 5,3            |
|  | 13-8               | F08151340   | 40             | 5,3     | 30              | 430 | 220 | 7              |
|  | 16-8               | F08151640   | 40             | 8,0     | 34              | 430 | 220 | 9,4            |
|  | 18-8               | F08150616   | 40             | 10      | 42              | 430 | 220 | 14,5           |
|  | 20-8 <sup>1)</sup> | F08150816   | 40             | 12,5    | 42              | 430 | 220 | 13,5           |
|  | 22-8 <sup>1)</sup> | F08151016   | 40             | 15      | 42              | 430 | 220 | 13,5           |

1) without intermediate links, directly assembly possible.

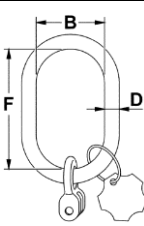
**4.10 Special Master Link Assemblies, TWN 0816, Grade 8 for 2-Leg Sling Chains with Crane Hooks**

| TWN 0816   | Nom. size | Article-no. | Crane Hook No. | WLL [t]<br>0° <math>\beta \leq 45^\circ</math> | Dimensions [mm] |     |     | Mass app. [kg] |
|--|-----------|-------------|----------------|--|-----------------|-----|-----|----------------|
|  |           |             |                |  | D               | F   | B   |                |
|  | 6-8       | F08160616   | 16             | 1,6  | 18              | 260 | 140 | 1,9            |
|  | 8-8       | F08160816   | 16             | 2,8  | 22              | 260 | 140 | 2,9            |
|  | 10-8      | F08161016   | 16             | 4,25   | 26              | 260 | 140 | 3,9            |
|  | 13-8      | F08161316   | 16             | 7,5  | 30              | 260 | 140 | 5,8            |
|  | 16-8      | F08161616   | 16             | 11,2   | 36              | 250 | 140 | 9,4            |
|  | 6-8       | F08160625   | 25             | 1,6  | 22              | 340 | 180 | 3,3            |
|  | 8-8       | F08160825   | 25             | 2,8  | 24              | 340 | 180 | 4,1            |
|  | 10-8      | F08161025   | 25             | 4,25   | 28              | 340 | 180 | 5,4            |
|  | 13-8      | F08161325   | 25             | 7,5  | 32              | 340 | 180 | 7,7            |
|  | 16-8      | F08161625   | 25             | 11,2   | 40              | 340 | 180 | 11,9           |
|  | 18-8      | F08161825   | 25             | 14   | 40              | 340 | 180 | 11,9           |
|  | 20-8      | F08162025   | 25             | 17   | 45              | 340 | 180 | 18,6           |
|  | 6-8       | F08160640   | 40             | 1,6  | 26              | 430 | 220 | 5,7            |
|  | 8-8       | F08160840   | 40             | 2,8  | 26              | 430 | 220 | 5,7            |
|  | 10-8      | F08161040   | 40             | 4,25   | 30              | 430 | 220 | 7,4            |
|  | 13-8      | F08161340   | 40             | 7,5  | 34              | 430 | 220 | 9,9            |
|  | 16-8      | F08161640   | 40             | 11,2   | 42              | 430 | 220 | 15,5           |
|  | 18-8      | F08161840   | 40             | 14   | 42              | 430 | 220 | 15,5           |
|  | 22-8      | F08162240   | 40             | 21,2   | 48              | 430 | 220 | 23,7           |

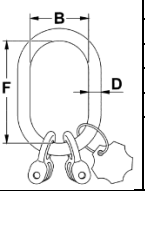
**4.11 Fixed Size Master Link Assemblies Type TAA, TWN 0810/1, Grade 8 for 1-Leg Sling Chains**

| TWN 0810/1   | Nominal size | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|--|--------------|-------------|---------|-----------------|-----|-----|----------------|
|  |              |             |         | D               | F   | B   |                |
|  | 6-8          | F08101068   | 1,12    | 13              | 90  | 50  | 0,4            |
|  | 8-8          | F08101088   | 2,0     | 16              | 110 | 60  | 0,8            |
|  | 10-8         | F08101108   | 3,15    | 18              | 130 | 70  | 1,2            |
|  | 13-8         | F08101138   | 5,3     | 22              | 160 | 90  | 2,3            |
|  | 16-8         | F08101168   | 8       | 26              | 180 | 100 | 4              |
|  | 22-8         | F08101228   | 15      | 36              | 250 | 140 | 10             |

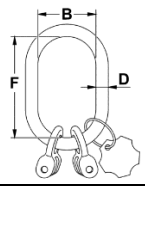
**4.12 Fixed Size Master Link Assemblies Type TAA, TWN 1810/1, Grade 10 for 1-Leg Sling Chains**

| TWN 1810/1  | Nominal size | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] |
|---|--------------|-------------|---------|-----------------|-----|-----|----------------|
|   |              |             |         | D               | F   | B   |                |
|  | 6-10         | F1810106    | 1,4     | 13              | 90  | 50  | 0,4            |
|   | 8-10         | F1810108    | 2,5     | 16              | 110 | 60  | 0,7            |
|   | 10-10        | F1810110    | 4,0     | 18              | 130 | 70  | 1,2            |
|   | 13-10        | F1810113    | 6,7     | 22              | 160 | 90  | 2,3            |
|   | 16-10        | F1810116    | 10      | 26              | 180 | 100 | 3,9            |

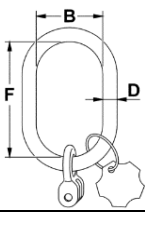
**4.13 Fixed Size Master Link Assemblies Type TAA, TWN 0810/2, Grade 8 for 2-Leg Sling Chains**

| TWN 0810/2  | Nom. size | Article-no. | WLL [t]                               |  | Dimensions [mm] |     |     | Mass app. [kg] |
|---|-----------|-------------|---------------------------------------|--|-----------------|-----|-----|----------------|
|   |           |             | $\beta$ 0° <math>\leq 45^\circ</math> | $\beta$ 45° <math>\leq 60^\circ</math> | D               | F   | B   |                |
|  | 6-8       | F08102068   | 1,6                                   | 1,12                                   | 13              | 90  | 50  | 0,5            |
|   | 8-8       | F08102088   | 2,8                                   | 2,0                                    | 18              | 130 | 70  | 1,2            |
|   | 10-8      | F08102108   | 4,25                                  | 3,15                                   | 22              | 160 | 90  | 2,3            |
|   | 13-8      | F08102138   | 7,5                                   | 5,3                                    | 26              | 180 | 100 | 4,0            |
|   | 16-8      | F08102168   | 11,2                                  | 8,0                                    | 32              | 230 | 125 | 7,6            |
|   | 22-8      | F08102228   | 21,2                                  | 15                                     | 45              | 320 | 175 | 19,6           |

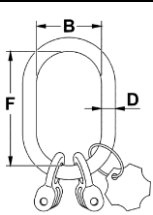
**4.14 Fixed Size Master Link Assemblies Type TAA, TWN 1810/2, Grade 10 for 2-Leg Sling Chains**

| TWN 1810/2  | Nominal size | Article-no. | WLL [t]                               |  | Dimensions [mm] |     |     | Mass app. [kg] |
|---|--------------|-------------|---------------------------------------|--|-----------------|-----|-----|----------------|
|   |              |             | $\beta$ 0° <math>\leq 45^\circ</math> | $\beta$ 45° <math>\leq 60^\circ</math> | D               | F   | B   |                |
|  | 6-10         | F1810206    | 2,0                                   | 1,4                                    | 13              | 90  | 50  | 0,5            |
|   | 8-10         | F1810208    | 3,55                                  | 2,5                                    | 18              | 130 | 70  | 1,2            |
|   | 10-10        | F1810210    | 5,6                                   | 4,0                                    | 20              | 140 | 80  | 1,9            |
|   | 13-10        | F1810213    | 9,0                                   | 6,7                                    | 26              | 180 | 100 | 4,0            |
|   | 16-10        | F1810216    | 14                                    | 10                                     | 32              | 230 | 125 | 7,6            |

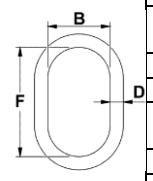
**4.15 Fixed Size Master Link Assemblies Type TAB, TWN 0811/1, Grade 8 for 1-Leg Sling Chains**

| TWN 0811/1  | Nominal size | Article-no. | WLL [t] | Dimensions [mm] |     |    | Mass app. [kg] |
|---|--------------|-------------|---------|-----------------|-----|----|----------------|
|   |              |             |         | D               | F   | B  |                |
|  | 6-8          | F08111068   | 1,12    | 13              | 60  | 30 | 0,3            |
|   | 8-8          | F08111088   | 2,0     | 16              | 70  | 35 | 0,6            |
|   | 10-8         | F08111108   | 3,15    | 20              | 90  | 45 | 1,1            |
|   | 13-8         | F08111138   | 5,3     | 22              | 100 | 50 | 1,8            |
|   | 16-8         | F08111168   | 8,0     | 26              | 120 | 60 | 3,2            |
|   | 18-8         | F08111188   | 10      | 32              | 140 | 70 | 5,4            |
|   | 22-8         | F08111228   | 15      | 36              | 160 | 80 | 8,0            |

**4.16 Fixed Size Master Link Assemblies Type TAB, TWN 0811/2, Grade 8 for 2-Leg Sling Chains**

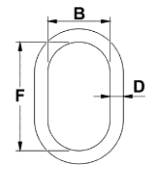
| TWN 0811/2   | Nominal size | Article-no. | WLL [t]                       |                                | Dimensions [mm] |     |    | Mass app. [kg] |
|--|--------------|-------------|-------------------------------|--------------------------------|-----------------|-----|----|----------------|
|  |              |             | $\beta$<br>0° ≤ $\beta$ ≤ 45° | $\beta$<br>45° ≤ $\beta$ ≤ 60° | D               | F   | B  |                |
|  | 6-8          | F08112068   | 1,6                           | 1,12                           | 13              | 60  | 30 | 0,4            |
|  | 8-8          | F08112088   | 2,8                           | 2                              | 16              | 70  | 35 | 0,8            |
|  | 10-8         | F08112108   | 4,25                          | 3,15                           | 20              | 90  | 45 | 1,6            |
|  | 13-8         | F08112138   | 7,5                           | 5,3                            | 26              | 120 | 60 | 3,3            |
|  | 16-8         | F08112168   | 11,2                          | 8                              | 28              | 130 | 65 | 5,1            |
|  | 18-8         | F08112188   | 14,0                          | 10                             | 32              | 140 | 70 | 7,9            |
|  | 22-8         | F08112228   | 21,2                          | 15                             | 40              | 180 | 90 | 13             |

**4.17 Master Links Type A, TWN 1313, Grade 8 # for 1-Leg and 2-Leg Sling Chains**

| TWN 1313  | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] | for chain slings of size |                     |
|---|-------------|---------|-----------------|-----|-----|----------------|--------------------------|---------------------|
|   |             |         | D               | F   | B   |                | 1-Leg                    | 2-Leg <sup>1)</sup> |
|  | F1313013    | 2,0     | 13              | 90  | 50  | 0,3            | 6-8                      | 6-8                 |
|   | F1313016    | 3,15    | 16              | 110 | 60  | 0,5            | 8-8                      | 7-8                 |
|   | F1313018    | 4,0     | 18              | 130 | 70  | 0,8            | 10-8                     | 8-8                 |
|   | F1313020    | 4,75    | 20              | 140 | 80  | 1,1            | -                        | 10-8                |
|   | F1313022    | 5,6     | 22              | 160 | 90  | 1,5            | 13-8                     | -                   |
|   | F1313026    | 8,0     | 26              | 180 | 100 | 2,3            | 16-8                     | 13-8                |
|   | F1313032    | 12,5    | 32              | 230 | 125 | 4,4            | 18-8                     | 16-8                |
|   | F1313036    | 16      | 36              | 250 | 140 | 6,2            | 22-8                     | 18-8                |
|   | F1313040    | 19      | 40              | 290 | 160 | 8,8            | -                        | 20-8                |
|   | F1313045    | 25      | 45              | 320 | 175 | 12             | 26-8                     | 22-8                |
|   | F1313050    | 31,5    | 50              | 340 | 190 | 16             | 32-8                     | 26-8                |
|   | F1313056    | 40      | 56              | 380 | 210 | 23             | 36-8                     | 28-8                |
|   | F1313063    | 50      | 63              | 430 | 240 | 33             | 40-8                     | 32-8                |
|   | F1313070    | 63      | 70              | 470 | 260 | 44             | 45-8                     | 36-8                |
|   | F1313080    | 80      | 80              | 520 | 290 | 64             | 50-8                     | 40-8                |
|   | F1313085    | 100     | 85              | 520 | 290 | 73             | 56-8                     | 45-8                |
| F1313095  | 125         | 95      | 580             | 320 | 100 | 63-8           | 50-8                     |                     |
| F1313110  | 160         | 110     | 680             | 380 | 160 | 71-8           | 56-8                     |                     |

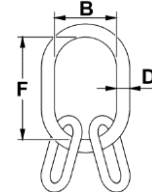
1) The classification applies to the inclination angle range  $0^\circ < \beta \leq 45^\circ$ .

**4.18 Master Links Type A, TWN 1313, Grade 10 # for 1-Leg and 2-Leg Sling Chains**

| TWN 1813   | Article-no. | WLL [t] | Dimensions [mm] |     |     | Mass app. [kg] | for chain slings of size |                     |
|--|-------------|---------|-----------------|-----|-----|----------------|--------------------------|---------------------|
|  |             |         | D               | F   | B   |                | 1-Leg                    | 2-Leg <sup>2)</sup> |
|  | F1813013    | 2,5     | 13              | 90  | 50  | 0,3            | 6-10                     | 6-10                |
|  | F1813016    | 4,0     | 16              | 110 | 60  | 0,5            | 8-10                     | 7-10                |
|  | F1813018    | 5,0     | 18              | 130 | 70  | 0,8            | 10-10                    | 8-10                |
|  | F1813020    | 6,0     | 20              | 140 | 80  | 1,1            | -                        | 10-10               |
|  | F1813022    | 7,1     | 22              | 160 | 90  | 1,5            | 13-10                    | -                   |
|  | F1813026    | 10      | 26              | 180 | 100 | 2,3            | 16-10                    | 13-10               |
|  | F1813032    | 15      | 32              | 230 | 125 | 4,4            | 18-10                    | 16-10               |
|  | F1813036    | 20      | 36              | 250 | 140 | 6,2            | 22-10                    | 18-10               |
|  | F1813040    | 23,6    | 40              | 290 | 160 | 8,8            | -                        | 20-10               |
|  | F1813045    | 30      | 45              | 320 | 175 | 12             | 26-10                    | 22-10               |
|  | F1813050    | 40      | 50              | 340 | 190 | 16             | 32-10                    | 26-10               |
|  | F1813056    | 50      | 56              | 380 | 210 | 23             | -                        | -                   |
|  | F1813063    | 60      | 63              | 430 | 240 | 33             | -                        | 32-10               |
| F1813070   | 75          | 70      | 470             | 260 | 44  | -              | -                        |                     |

2) The classification applies to the inclination angle range  $0^\circ < \beta \leq 45^\circ$ .

**4.19 Special Master Link Assemblies, TWN 1816, Grade 10 for 2-Leg Sling Chains with Crane Hooks #**

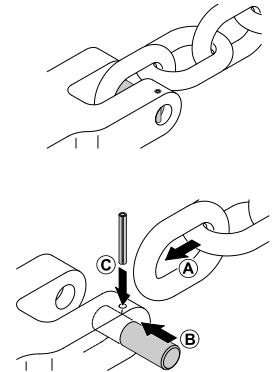
| TWN 1816  | Nominal size | Article-no. | Crane Hook No. | WLL [t]<br>0° < $\beta$ ≤ 45° | Dimensions [mm] |     |     | Mass app. [kg] |
|---|--------------|-------------|----------------|-------------------------------|-----------------|-----|-----|----------------|
|   |              |             |                |                               | D               | F   | B   |                |
|  | 8-10         | F18160825   | 25             | 3,55                          | 24              | 340 | 180 | 4,1            |
|   | 10-10        | F18161025   | 25             | 5,6                           | 28              | 340 | 180 | 5,4            |
|   | 13-10        | F18161325   | 25             | 9,0                           | 32              | 340 | 180 | 7,7            |
|   | 16-10        | F18161625   | 25             | 14                            | 40              | 340 | 180 | 12             |
|   | 20-10        | F18162025   | 25             | 22,4                          | 45              | 340 | 180 | 19             |

**5 Assembly and Disassembly Clevis-type Fastening System**

Only chain and component of same nominal size and grade belong together!

**Assembly**

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

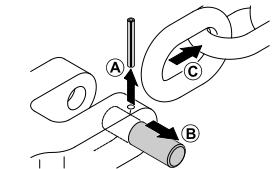


Only connect pins and attachment components of identical quality grades (starting with Ø 13 mm the pins are marked on the front end).

The dowel pins must only be installed once.

**Disassembly**

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



Suitable drift punches are available by Article No. Z03303.

**6 Operation**

Master links and master link assemblies must not be guided by other parts during operation. They also must not be forced sideways to avoid bending stress.

Take care for reduction of Working Load Limits relating to inclination angles  $\beta$ .

Data see tables chapter 4.

**7 Conditions of Use**

**7.1 Influence of Temperature**

Using master link assemblies at elevated temperatures will cause the Working Load Limit to be reduced as indicated below.

| Grade | Temperature range   | Remaining WLL |
|-------|---------------------|---------------|
| 8     | -40 °C ≤ t ≤ 200 °C | 100 %         |
|       | 200 °C < t ≤ 300 °C | 90 %          |
|       | 300 °C < t ≤ 400 °C | 75 %          |
| 10    | -30 °C ≤ t ≤ 200 °C | 100 %         |
|       | 200 °C < t ≤ 300 °C | 90 %          |
|       | 300 °C < t ≤ 380 °C | 60 %          |

If the master link assemblies have been exposed to temperatures exceeding the maximum values specified they must no longer be used.

**7.2 Environmental Influence**

Master link assemblies must not be used in environments where acids, aggressive or corrosive chemicals or their fumes are present.  
Hot-dip galvanizing or a galvanic treatment is prohibited as well.

### 7.3 Especially Hazardous Conditions

The degree of danger when used in offshore applications, the lifting of persons or hazardous loads, such as for example liquid metal, or similar risk potentials have to be assessed by a competent person in the form of a risk analysis.

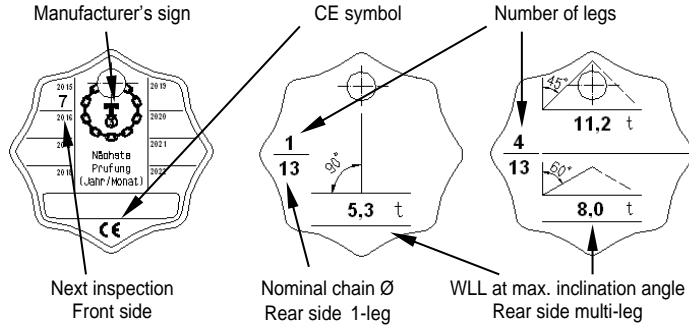
Any additional rules and directives must be followed in this case.

### 8 Identification/Marking

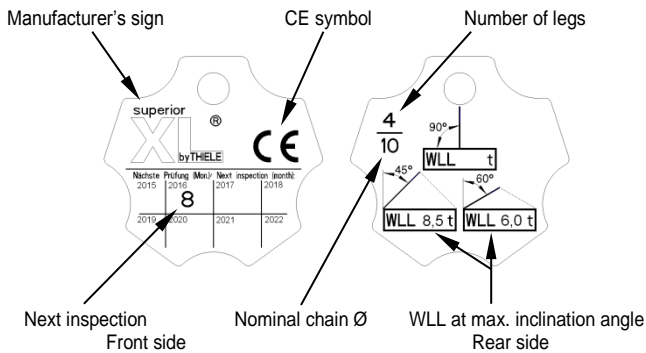
As a rule, an identification tag as prescribed in EN 818-4 is attached to the sling chain assembly adjacent to the master link.

#### Tags for Quality Grade 8, Example:

Form and color (red) of the tags correspond to requirements set forth in DIN EN 818-4.



#### Tags for Quality Grade 10 (Special Type, Blue Color), Example:



### 9 Inspections, Maintenance, Disposal

Inspections and maintenance must be arranged for by the Owner!

Inspection intervals shall be determined by the Owner!

Inspections must be carried out and documented by competent persons regularly but at least once a year, or more frequently if the master link assemblies are in heavy-duty service. After three years at the latest they must additionally be examined for cracks. A load test shall never be considered a substitute for this examination.

The results of the inspection shall be entered into a register (DGUV I 209-062 or DGUV I 209-063) to be prepared when the sling chain assembly is first used. The register will show characteristic data of the chains and components as well as identity details.

Immediately stop using sling chain assemblies that show the following defects:

- missing or illegible identification/markings,
- deformation, elongation or fractures of chains or components,
- cuts, notches, cracks, incipient cracks, pinching,
- parts heated beyond permissible limits,
- severe corrosion,
- reduction of the averaged link thickness by more than 10 % as mean value of measurements taken perpendicularly towards each other,
- missing or damaged dowel pins.

#### Inspection Service

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

### Maintenance and Repair

Maintenance and repair work must only be performed by competent persons. Minor notches and cracks may be eliminated by careful grinding observing the maximum cross section reduction requirement of 10 % and avoid making more severe cuts or scores.

Welded sling chain assemblies must exclusively be repaired by the manufacturer.

All maintenance and repair activities are to be documented.

### Disposal

All components and accessories of steel taken out of service are to be scrapped in line with local regulations and provisions.

### 10 Spare Parts

Only use original spare parts.

#### Spare Parts Sets for Clevis-type Fastening System

Consisting of pin and dowel pin

| Nominal size | Article-no. Set | Nominal size | Article-no. Set |
|--------------|-----------------|--------------|-----------------|
| 6-8          | F48694          | 6-10         | F48686          |
| 8-8          | F48352          | 8-10         | F48687          |
| 10-8         | F48355          | 10-10        | F48688          |
| 13-8         | F48358          | 13-10        | F48689          |
| 16-8         | F48361          | 16-10        | F48690          |
| 18-8         | F48364          |              |                 |
| 22-8         | F48367          |              |                 |

#### Article Numbers for Tags

| Grade | Article-no. | Execution           |
|-------|-------------|---------------------|
| 8     | F08040      | without welded ring |
|       | F08042      | with welded ring    |
| 10    | F08052      | without welded ring |
|       | F08053      | with welded ring    |

### 11 Storage

Make sure sling chain components are stored in dry locations at temperatures ranging between 0 °C and +40 °C.

### 12 THIELE Operating and Mounting Instructions

Current operating and installation instructions are available as a PDF download on the homepage.



### 13 Publishing Information

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#' Changes to previous edition.