



Master links
Type A

TWN 0803
TWN 1303
TWN 1803



Intermediate
links
Type B

TWN 0795
TWN 1795
TWN 0804



Special master
link assemblies

TWN 0815
TWN 0816



Fixed size
master links
TAA / TAB

TWN 0810/1
TWN 0810/2
TWN 1810/1
TWN 1810/2
TWN 0811/1
TWN 0811/2

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


DEFINITIONS

Clevis

A U-shaped fitting with pin.


Working Load Limit (WLL)

The maximum load which a chain sling or a component is designed to support.



WARNING

The following Mounting Instructions must always be followed to avoid the risk of personal injury or property damage.
Do not use a master link for 1- and 2-leg chain slings or an intermediate link before reading these Mounting Instructions.



NOTICE

Read ASME B30.9 „Slings“, Chapters 9-0 and 9-1.
Read ASME B30.26 “Rigging Hardware”, Chapters 26-0, 26-1, 26-4.

1. ABOUT THIS INSTRUCTION

This Mounting Instructions describes in particular how master links for 1- and 2-leg chain slings and intermediate links according to several TWN (TWN = THIELE Shop Standard) are to be safely used for lifting purposes.

The instruction applies analogously to components of identical design.

To comply with these instructions is essential to help avoid hazards and increases the reliability and service life of the links.

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


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

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

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

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

2. BASIC SAFETY REQUIREMENTS



WARNING

To prevent the risk of injury never walk or stay under lifted loads!
The Working Load Limit must not be exceeded!
Only use master or intermediate links as well as lifting and attachment means free from defects!
Working under the influence of drugs, medications impairing the sense and/or alcohol is strictly forbidden!

SAFETY INSTRUCTIONS

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

**SAFETY
INSTRUCTIONS**

- The specific safety and operating regulations and standards issued locally in the country where the items are used must be observed.
- The directions given in these Mounting Instructions and specified documentations relating to safety, assembly, operation, inspection, and maintenance must be made available to persons operating and using the master or intermediate links.
- These Mounting Instructions must be available in a place near the product during the time the equipment is used. Please contact the manufacturer if replacements are needed. Also see chapter 13.
- During operation work, wear your personal protective equipment!
- **Improper assembly and use may cause personal injury and/or damage to property.**
- Assembly and removal as well as inspections and maintenance must exclusively be carried out by skilled, qualified, trained and authorized persons only.
- Structural changes are impermissible (e.g. welding, bending).
- **Operators must carry out a visual inspection and, if necessary, a functional test of the safety equipment before each use.**
- Never use worn-out, bent or damaged master or intermediate links.
- Only lift loads that do not exceed the Working Load Limit of the master or intermediate links.
- Never expose master or intermediate links to loads exceeding the specified Working Load Limit.
- Do not use force when mounting/positioning the master or intermediate links.
- Avoid bending loads to act on master or intermediate links.
- Only lift loads that are freely movable and not attached or fastened.
- Always monitor a suspended load.
- Master links must be allowed to move freely in all tensile directions.
- Do not start lifting before you have made sure the load has been correctly attached and balanced.
- **No one including you (operator) must be in the way of the moving load (hazard area).**
- During lifting make sure your hands or other body parts do not come into contact with lifting means. Only remove lifting means manually (use your hands).

- Avoid impacts, e.g. due to abruptly lifting loads with chain in slack condition.
- Usage of fixed size master link assemblies without working safety elements (dowel pins) is not permissible.
- Put the load only down in flat places/sites where it can be safely deposited.
- In the event of doubts or concerns about the proper and safe use, inspection, maintenance or similar things contact your safety officer or the manufacturer.

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

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

As a rule, master or intermediate links are not permitted for the transportation of persons.

3. DESCRIPTION AND INTENDED USE

Master links, intermediate links and fixed size master links are exclusively intended for the usage in chain sling assemblies according to ASTM A 906/A 906M.

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 to easily attach sling chains and therefore they are predestinated for mounted sling chain assemblies.

These Mounting Instructions apply to following products:

- TWN 0803, TWN 1303, TWN 1803:
Master links type A
- TWN 0795, TWN 0804, TWN 1795:
Intermediate links type B
- TWN 0815, TWN 0816:
Special master link assemblies for 1- and 2-leg slings chain assemblies used for crane hooks DIN15401
- TWN 0810/1, TWN 0810/2, TWN 1810/1, TWN 1810/2:
Fixed size master link assemblies type TAA
- TWN 0811/1, TWN 0811/2:
Fixed size master link assemblies type TAB



Master link, intermediate links and fixed size master links must exclusively be used

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

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

The master links, intermediate links and fixed size master links meet EG Machinery Directive 2006/42/EG requirements and feature a safety factor of at least 4 based on Working Load Limit.

They are signed with the corresponding chain size, grade, manufacturer's symbol and traceability code.

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 Working Load Limit must be reduced.

Master links or fixed size master links can also be used within lashing chain assemblies. When used within a lashing system the lashing capacity is obtained by doubling the Working Load Limit.

Any alternating use for lifting and lashing purposes is impermissible!

4. COMMISSIONING

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

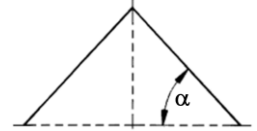
- the parts comply with the order and have not been damaged,
- test certificates and Mounting Instructions are at hand,
- markings correspond with what is specified in the documentation,
- inspection deadlines and the qualified persons for examinations are determined,
- visibility and functional testings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

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

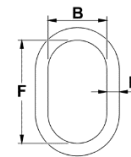
5. TECHNICAL DATA

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

For 2-leg chain slings the data for WLL are depending on the sling angle α .

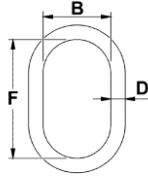


5.1 Master Links Type A, TWN 0803, Grade 80, for Offshore Chain Slings

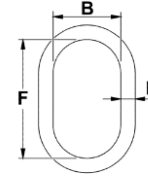


Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
		D	F	B	
F0803208	10,500	20	140	80	2.43
F0803228	12,300	22	160	90	3.31
F0803268	17,600	26	180	100	5.07
F0803328	27,600	32	230	125	9.70
F0303368	35,300	36	250	140	13.7
F0803408	41,900	40	290	160	19.4
F0803458	55,100	45	320	175	26,5
F0803508	69,400	50	340	190	35,3
F0803568	88,200	56	380	210	50,7
F0803638	110,200	63	430	240	72,8
F0803708	138,900	70	470	260	97,0
F0803808	176,400	80	520	290	141

5.2 Master Links Type A, TWN 1303, Grade 80, for 1- and 2-Leg Chain Slings



5.3 Master Links Type A, TWN 1803, Grade 100, for 1- and 2-Leg Chain Slings



for 1-leg Chain Slings						
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
15/64	F1303013	5,800	13	90	50	0.64
9/32	F1303013	5,800	13	90	50	0.64
5/16	F1303013	5,800	13	90	50	0.64
3/8	F1303018	11,000	18	130	70	1.75
1/2	F1303020	13,200	20	140	80	2.36
5/8	F1303026	23,300	26	180	100	5.11
3/4	F1303032	34,700	32	230	125	9.79
7/8	F1303032	34,700	32	230	125	9.79
1	F1303040	53,000	40	290	160	19.3
1 ¼	F1303050	87,100	50	340	190	36
1 27/64	F1303056	111,000	56	380	210	50
1 37/64	F1303063	138,000	63	430	240	72

for 2-leg Chain Slings						
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
15/64	F1303013	5,800	13	90	50	0.64
9/32	F1303016	9,000	16	110	60	1.18
5/16	F1303018	11,000	18	130	70	1.75
3/8	F1303022	15,700	22	160	90	3.24
1/2	F1303026	23,300	26	180	100	5.11
5/8	F1303032	34,700	32	230	125	9.79
3/4	F1303045	69,000	45	320	175	27
7/8	F1303045	69,000	45	320	175	27
1	F1303056	111,000	56	380	210	50
1 ¼	F1303070	175,000	70	470	260	97
1 27/64	F1303070	175,000	70	470	260	97
1 37/64	F1303080	234,000	80	520	290	141

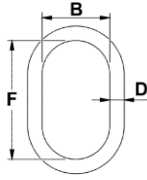
for others						
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
-	F1303085	280,000	85	520	290	161
-	F1303095	315,000	95	580	320	224
-	F1303110	412,000	110	680	380	352

for 1-leg Chain Slings						
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
15/64	F1803013	7,300	13	90	50	0.64
9/32	F1803013	7,300	13	90	50	0.64
5/16	F1803016	11,300	16	110	60	1.18
3/8	F1803018	13,800	18	130	70	1.75
1/2	F1803022	19,600	22	160	90	3.24
5/8	F1803026	29,100	26	180	100	5.11
3/4	F1803032	43,400	32	230	125	9.79
7/8	F1803036	55,200	36	250	140	13.6
1	F1803045	86,200	45	320	175	27
1 ¼	F1803050	109,000	50	340	190	35

for 2-leg Chain Slings						
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
15/64	F1803013	7,300	13	90	50	0.64
9/32	F1803016	11,300	16	110	60	1.18
5/16	F1803018	13,800	18	130	70	1.75
3/8	F1803022	19,600	22	160	90	3.24
1/2	F1803026	29,100	26	180	100	5.11
5/8	F1803036	55,200	36	250	140	13.6
3/4	F1803045	86,200	45	320	175	27
7/8	F1803045	86,200	45	320	175	27
1	F1803056	138,000	56	380	210	50
1 ¼	F1803070	218,000	70	470	260	97

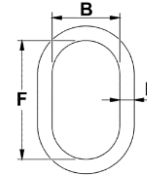
for others						
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
-	F1803020	16,600	20	140	80	2.36
-	F1803040	66,200	40	290	160	19.3
-	F1803063	172,000	63	430	240	72

5.4 Intermediate Links Type B, TWN 0795, Grade 80



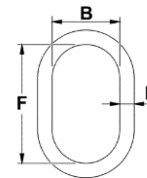
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
B8	F122880	2,500	8	36	18	0.22
B10	F122890	4,500	10	46	23	0.22
B13	F122930	6,900	13	60	30	0.44
B16	F122970	11,700	16	70	35	0.66
B20	F123030	17,600	20	90	45	1.54
B22	F123070	22,000	22	100	50	2.20
B26	F123090	27,600	26	120	60	3.53
B28	F123190	33,100	28	130	65	4.19
B32	F123110	46,700	32	140	70	6.39
B36	F123130	55,100	36	160	80	9.26
B40	F123150	69,400	40	180	90	12.8
B45	F123170	88,200	45	200	100	18.1
B50	F123210	110,200	50	220	110	24
B56	F123230	138,900	56	260	130	35
B63	F123270	176,400	63	280	140	48
B70	F123290	220,500	70	320	160	68
B80	F123300	275,600	80	360	180	101
B90	F123320	352,700	90	400	200	143

5.5 Intermediate Links Type B, TWN 1795, Grade 100



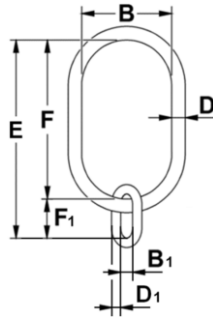
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
			D	F	B	
B8	F179508	3,100	8	36	18	0.22
B10	F179510	5,700	10	46	23	0.22
B13	F179513	8,800	13	60	30	0.44
B16	F179516	15,000	16	70	35	0.66
B20	F179520	22,600	20	90	45	1.54
B22	F179522	27,600	22	100	50	2.20
B26	F179526	35,300	26	120	60	3.53
B28	F179528	41,900	28	130	65	4.19
B32	F179532	58,400	32	140	70	6.39
B36	F179536	69,000	36	160	80	9.26
B40	F179540	88,200	40	180	90	12.8
B45	F179545	110,200	45	200	100	18.1

5.6 Intermediate Links Type B, TWN 0804, Grade 80, for Offshore Chain Slings



Article-No.	WLL [lbs.]	Dimensions [mm]			Mass [lbs.]
		D	F	B	
F0804138	7,400	13	60	30	0.44
F0804168	12,300	16	70	35	0.66
F0804208	18,700	20	90	45	1.54
F0804228	22,000	22	100	50	2.20
F0804268	30,900	26	120	60	3.53
F0804288	35,300	28	130	65	4.19
F0804328	49,400	32	140	70	6.39
F0804368	61,700	36	160	80	9,26
F0804408	73,800	40	180	90	12.8
F0804458	93,700	45	200	100	18.1
F0804508	116,800	50	220	110	24.3

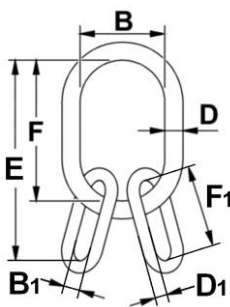
5.7 Special Master Link Assemblies, TWN 0815, Grade 80, for 1-Leg Sling Chains suitable for Crane Hooks



Nominal Size	Article No.	Crane Hook No.	WLL [lbs.]	Dimensions [mm]							Mass [lbs.]
				E	D	F	B	D ₁	F ₁	B ₁	
15/64	F08150616	16	2,500	320	18	260	140	13	60	30	3.75
15/64	F08150625	25	2,500	400	20	340	180	13	60	30	5.51
15/64	F08150640	40	2,500	490	22	430	220	13	60	30	8.16
5/16	F08150816	16	4,500	330	22	260	140	16	70	35	5.73
5/16	F08150825	25	4,500	400	20	340	180	13	60	30	5.51
5/16	F08150616	40	4,500	490	22	430	220	13	60	30	8.16
3/8	F08151016	16	7,100	330	22	260	140	16	70	35	5.73
3/8	F08151025	25	7,100	410	24	340	180	16	70	35	8.38
3/8	F08151040	40	7,100	500	26	430	220	16	70	35	11.7
1/2	F08151316 ¹⁾	16	12,000	260	26	260	140	-	-	-	7.05
1/2	F08151325	25	12,000	410	28	340	180	16	70	35	11.2
1/2	F08151340	40	12,000	500	30	430	220	16	70	35	15.6
5/8	F08151616 ¹⁾	16	18,100	260	30	260	140	-	-	-	9.5
5/8	F08151625	25	18,100	430	32	340	180	20	90	45	15.4
5/8	F08151640	40	18,100	520	34	430	220	20	90	45	20.7
3/4	F08152025 ¹⁾	25	28,300	340	40	340	180	-	-	-	22.1
3/4	F08152040 ¹⁾	40	28,300	430	42	430	220	-	-	-	29.8
7/8	F08152225 ¹⁾	25	34,200	340	40	340	180	-	-	-	22.1
7/8	F08152240 ¹⁾	40	34,200	430	42	430	220	-	-	-	29.8

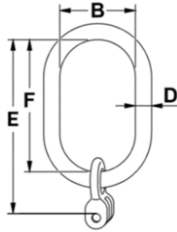
1) Without intermediate links, directly assembly possible

5.8 Special Master Link Assemblies, TWN 0816, Grade 80, for 2-Leg Chain Slings suitable for Crane Hooks



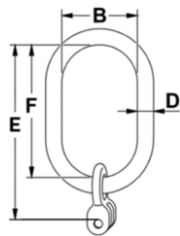
Nominal Size	Article No.	Crane Hook No.	WLL [lbs.] 45° ≤ α < 90°	Dimensions [mm]							Mass [lbs.]
				E	D	F	B	D ₁	F ₁	B ₁	
15/64	F08160616	16	3,500	320	18	260	140	13	60	30	4.19
15/64	F08160625	25	3,500	400	20	340	180	13	60	30	5,95
15/64	F08160640	40	3,500	500	26	430	220	16	70	35	12,6
5/16	F08160816	16	6,200	330	22	260	140	16	70	35	6.61
5/16	F08160825	25	6,200	410	24	340	180	16	70	35	9,0
5/16	F08160840	40	6,200	500	26	430	220	16	70	35	12.6
3/8	F08161016	16	9,400	330	26	260	140	16	70	35	8.6
3/8	F08161025	25	9,400	410	28	340	180	16	70	35	11.9
3/8	F08161040	40	9,400	500	30	430	220	16	70	35	16.3
1/2	F08161316	16	16,500	350	30	260	140	20	90	45	12.6
1/2	F08161325	25	16,500	430	32	340	180	20	90	45	17
1/2	F08161340	40	16,500	520	34	430	220	20	90	45	22.3
5/8	F08161616	16	24,700	370	36	250	140	26	120	60	20.7
5/8	F08161625	25	24,700	440	40	340	180	26	120	60	26.2
5/8	F08161640	40	24,700	530	42	430	220	26	120	60	34.2
3/4	F08162025	25	37,500	480	45	340	180	32	140	70	41.0
7/8	F08162240	40	46,700	570	48	430	220	32	140	70	52.3

5.9 Fixed Size Master Link Assemblies Type TAA, TWN 0810/1, Grade 80, for 1-Leg Chain Slings



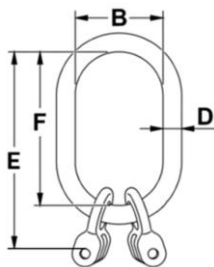
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]				Mass [lbs.]
			E	D	F	B	
15/64	F08101068	2,500	121	13	90	50	0.88
5/16	F08101088	4,500	147	16	110	60	1.54
3/8	F08101108	7,100	176	18	130	70	2.65
1/2	F08101138	12,000	219	22	160	90	5.07
5/8	F08101168	18,100	255	26	180	100	8.6
7/8	F08101228	34,200	350	36	250	140	22

5.10 Fixed Size Master Link Assemblies Type TAA, TWN 1810/1, Grade 100, for 1-Leg Chain Slings



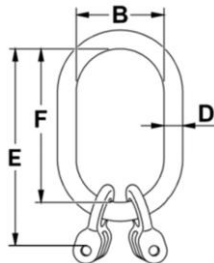
Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]				Mass [lbs.]
			E	D	F	B	
15/64	F1810106	3,100	121	13	90	50	0,88
5/16	F1810108	5,700	147	16	110	60	1.54
3/8	F1810110	8,800	176	18	130	70	2.65
1/2	F1810113	15,000	219	22	160	90	5.07
5/8	F1810116	22,600	255	26	180	100	8,6

5.11 Fixed Size Master Link Assemblies Type TAA, TWN 0810/2, Grade 80, for 2-Leg Chain Slings



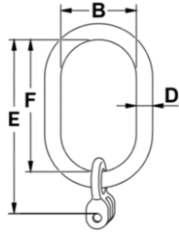
Nominal Size	Article No.	WLL [lbs.]			Dimensions [mm]				Mass [lbs.]
		60° ≤ α < 90°	45° ≤ α < 90°	30° ≤ α < 45°	E	D	F	B	
15/64	F08102068	4,300	3,500	2,500	121	13	90	50	1.10
5/16	F08102088	7,800	6,400	4,500	167	18	130	70	2.65
3/8	F08102108	12,300	10,000	7,100	186	22	160	90	5.07
1/2	F08102138	20,800	17,000	12,000	239	26	180	100	8.82
5/8	F08102168	31,300	25,600	18,100	305	32	230	125	16.8
7/8	F08102228	59,200	48,400	34,200	420	45	320	175	43.2

5.12 Fixed Size Master Link Assemblies Type TAA, TWN 1810/2, Grade 100, for 2-Leg Chain Slings



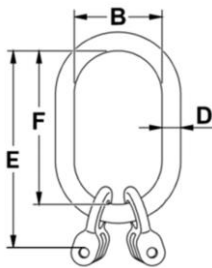
Nominal Size	Article No.	WLL [lbs.]			Dimensions [mm]				Mass [lbs.]
		60° ≤ α < 90°	45° ≤ α < 90°	30° ≤ α < 45°	E	D	F	B	
15/64	F1810206	5,400	4,400	3,100	121	13	90	50	1.10
5/16	F1810208	9,900	8,100	5,700	167	18	130	70	2.65
3/8	F1810210	15,200	12,400	8,800	186	20	140	80	4.19
1/2	F1810213	26,000	21,200	15,000	239	26	180	100	8.19
5/8	F1810216	29,100	32,000	22,600	296	32	230	125	16.7

5.13 Fixed Size Master Link Assemblies Type TAB, TWN 0811/1, Grade 80, for 1-Leg Chain Slings



Nominal Size	Article No.	WLL [lbs.]	Dimensions [mm]				Mass [lbs.]
			E	D	F	B	
15/64	F08111068	2,500	91	13	60	30	0.66
5/16	F08111088	4,500	107	16	70	35	1.32
3/8	F08111108	7,100	136	20	90	45	2.43
1/2	F08111138	12,000	159	22	100	50	3.97
5/8	F08111168	18,100	195	26	120	60	7.05
7/8	F08111228	34,200	260	36	160	80	17.6

5.14 Fixed Size Master Link Assemblies Type TAB, TWN 0811/2, Grade 80, for 2-Leg Chain Slings



Nominal Size	Article No.	WLL [lbs.]			Dimensions [mm]				Mass [lbs.]
		$60^\circ \leq \alpha < 90^\circ$	$45^\circ \leq \alpha < 60^\circ$	$30^\circ \leq \alpha < 45^\circ$	E	D	F	B	
15/64	F08112068	4,300	3,500	2,500	91	13	60	30	0.88
5/16	F08112088	7,800	6,400	4,500	107	16	70	35	1.76
3/8	F08112108	12,300	10,000	7,100	136	20	90	45	3.53
1/2	F08112138	20,800	17,000	12,000	179	26	120	60	7.28
5/8	F08112168	31,300	25,600	18,100	205	28	130	65	11.2
7/8	F08112228	59,200	48,400	34,200	280	40	180	90	28.6

6. ASSEMBLY AND DISASSEMBLY OF CLEVIS-TYPE FASTENING SYSTEMS

6.1 Preparations

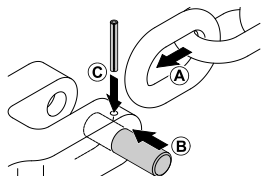
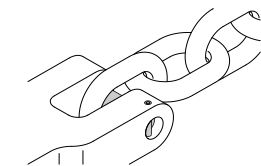
All components to be installed or used must be in perfect condition and the relevant Working Load Limits of all parts must accommodate the respective load to be handled.

6.2 Clevis Fastening System

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

6.2.1 ASSEMBLY

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



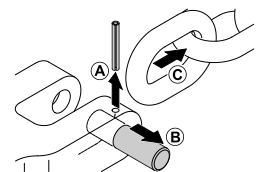
WARNING
Check whether the chain runs smoothly.

The dowel pins must only be installed once.

Only connect pins and attachment components of identical grades. Starting with $\varnothing \frac{1}{2}$ " the pins are marked on the front end.

6.2.2 DISASSEMBLY

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



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

7. CONDITIONS OF USE

7.1 General

Master links and fixed size master links 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 sling angles α . Data see tables in chapter 5.

7.2 Influence of Temperature



The respective temperature range limits must be considered for all components used.

Using master links for 1- and 2-leg chain slings and intermediate links in high temperatures will cause the Working Load Limit to be reduced as indicated below.

	Temperature range	Remaining WLL
Grade 80	-40 °C ≤ t ≤ 205 °C -40 °F ≤ t ≤ 400 °F	100 %
	205 °C < t ≤ 300 °C 400 °F < t ≤ 572 °F	90 %
	300 °C < t ≤ 400 °C 572 °F < t ≤ 752 °F	75 %
	Grade 100	-40 °C ≤ t ≤ 205 °C -40 °F ≤ t ≤ 400 °F



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

7.3 Environmental Influence



Master links for 1- and 2-leg chain slings and intermediate links must not be used in environments where acids, aggressive or corrosive chemicals or their fumes are present. Hot-dip galvanizing or galvanic treatment is prohibited as well.

7.4 Special Hazardous Conditions



The degree of danger when used in offshore applications, the lifting of 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.



Short inspection intervals must be scheduled for abrasive blasting environments. Selecting a welded sling chain assembly of the next greater nominal size will increase the permissible wear allowance.

Components with clevis are not intended for applications in abrasive blasting environments.

8. IDENTIFICATION/MARKING

As a rule, an identification tag is attached to the master links for 1- and 2-leg chain slings adjacent to the master link.

9. INSPECTION, MAINTENANCE, DISPOSAL

9.1 General



Inspections and maintenance must be arranged by the Owner!

Inspection intervals shall be determined by the Owner!

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

The results of the inspection shall be kept in a file that has to be set up for each component before first use. The register shall show characteristic data of the parts as well as identity details.

Immediately stop using master links for 1- and 2-leg chain slings and intermediate links that show the following defects:

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



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

9.2 Inspection Service

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

9.3 Maintenance and Repair



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

All maintenance and repair activities are to be documented properly.

9.4 Disposal



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

10. SPARE PARTS



Use only original spare parts.

Sets consist of pin and dowel pin.

Nominal Size	Article No. Set	Nominal Size	Article No.
15/64	F48694	15/64	F48686
5/16	F48352	5/16	F48687
3/8	F48355	3/8	F48688
1/2	F48358	1/2	F48689
5/8	F48361	5/8	F48690
7/8	F48367		

11. STORAGE



Master links for 1- and 2-leg chain slings and intermediate links must be stored properly sorted and in dry conditions at temperatures between 32 °F and 104 °F.

Do not store in a manner that cause mechanical damage.

12. THIELE OPERATING AND MOUNTING INSTRUCTIONS



Current operating and installation instructions are available as a PDF download on the THIELE-website www.thiele.de.



13. PUBLISHING INFORMATION

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