

MOUNTING INSTRUCTIONS

CONNECTING LINKS

GRADES 8 AND 10



Original in compliance with Machinery Directive 2006/42/EC



1. DESCRIPTION AND INTENDED USE

Connecting links are intended for use with chain slings for the lifting of loads according EN 818-4 or for lashing chains according EN 12195-3.

They are mainly meant to connect individual chain legs to each other or to intermediate links or other attachment elements with eyelets and must only be arranged in one load-carrying chain section.

A connecting link consists of two symmetrical halves attached to each other by means of a secured pin. The links are marked with nominal chain size in Millimetres and Inch and grade, manufacturer's symbol and traceability code.

The connecting links are certified by the German Employers' Liability Insurance Association for Wood and Metal (BGHM) and are therefore marked with the H4 stamp. #

THIELE connecting links meet Machinery Directive 2006/42/EC requirements and feature a safety factor of at least 4 based on the working load limit (WLL).

The connecting links are designed to withstand 20 000 dynamic load changes under maximum load conditions. In the event of higher loads (e.g. multi-shift/automatic operation, magnetic spreaders) the Working Load Limit (WLL) must be reduced before the links are put to use.

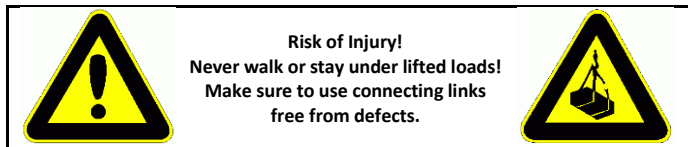
Connecting links must exclusively be used

- within the limits of their permissible working load limit,
- for permissible attachment methods and inclination angles,
- within the temperature limits prescribed,
- by trained and authorized persons.

When used in lashing chains, the maximum lashing capacity (LC) is calculated by doubling the working load limit. #

Any alternating use for lifting and lashing purposes is impermissible!

2. SAFETY NOTES



- Operators, fitters, and maintenance personnel must in particular observe the operating instructions of the associated chain sling, documentations DGUV V 1, DGUV R 109-017, 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 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.
- 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 nearby the product during the time the equipment is used. Please contact the manufacturer if replacements are needed. See also Chapter 10.
- 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 disassembly 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.**

- Never use worn-out, bent or otherwise damaged connecting links.
- Never expose connecting links to loads exceeding the specified working load limit.
- Do not use force when mounting/positioning the attachment components.
- Avoid sharp edges to come in contact to connecting links.
- Do not twist or knot the chains together.
- Usage without split sleeves is not allowed. Split sleeves do not stay in contact to other parts.
- 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 grade 10 THIELE does not give its general approval to the assembly of components stemming from different manufacturers!

Working under influence of drugs, alcohol (even remaining alcohol) or interfering medications is strictly forbidden! #

3. COMMISSIONING

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

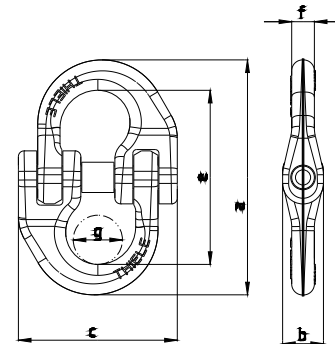
- the components comply with the order and have not been damaged,
- test certificate, statement of compliance, and Operating Instructions are at hand,
- markings correspond with what is specified in the documentation,
- inspection deadlines and the qualified persons for examinations are determined, #
- visibility and functional testing are carried out and documented, #
- the documentation is 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 series and not customized editions.

4.1 „THI-LOK“ TWN 1320, Grade 8



Nominal size	WLL [t]	Article no.	Dimensions [mm]						Mass [kg]
			a	b	c	e	f	g	
6-8	1,12	F308061	53	11	38	39	7	13	0,07
7-8	1,5	F308151	65	13	48	47	8	16	0,12
8-8	2,0	F308161	74	14	53	54	9	18	0,17
10-8	3,15	F308261	88	18	62	64	12	22	0,29
13-8	5,3	F308361	118	23	77	86	15	26	0,62
16-8	8,0	F308461	141	29	100	102	19	36	1,16
18-8	10,0	F30850	157	32	111	115	21	36	1,86
20-8	12,5	F30855	175	36	130	128	23	45	2,63
22-8	15,0	F30860	193	39	139	141	25	45	2,99
26-8	21,2	F30870	228	46	165	166	29	56	4,90
32-8	31,5	F30880	282	57	209	204	38	70	9,65
36-8	40,0	F309061	321	66	244	230	44	80	15,0
40-8	50,0	F309161	321	66	244	230	44	80	15,0

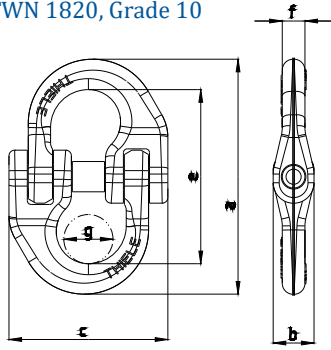
MOUNTING INSTRUCTIONS

CONNECTING LINKS

GRADES 8 AND 10



4.2 „XL-LOK“ TWN 1820, Grade 10



Nominal size	WLL [t]	Article no.	Dimensions [mm]						Mass [kg]
			a	b	c	e	f	g	
6-10	1,4	F30807	61	12	38	45	8	14	0,07
7-10	1,9	F308090	71	14	47	50	9	16	0,14
8-10	2,5	F30817	85	16	55	62	10	19	0,20
10-10	4,0	F30827	97	18	66	72	13	24	0,35
13-10	6,7	F30837	125	23	82	87	17	28	0,74
16-10	10,0	F30847	146	32	109	105	21	34	1,20
20-10	16,0	F308570	178	37	144	128	25	45	2,80
22-10	19,0	F308670	196	40	150	140	28	45	3,50
26-10	26,5	F308770	232	48	178	166	33	56	5,80
32-10	40,0	F308870	286	58	220	204	40	70	10,9

5. ASSEMBLY AND DISASSEMBLY

5.1 General

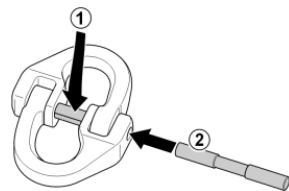
Ensure that all components to be installed are in perfect condition and that the working load limits of all components are designed for the load.

Only ever assemble and disassemble in unloaded condition!

5.2 Assembly

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

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

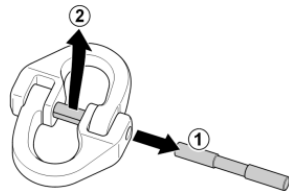


Make sure the components to be connected can move freely within the connecting link half they are placed in.

5.3 Disassembly

Unload the associated chain sling completely. #

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



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

The split sleeves must only be installed once.

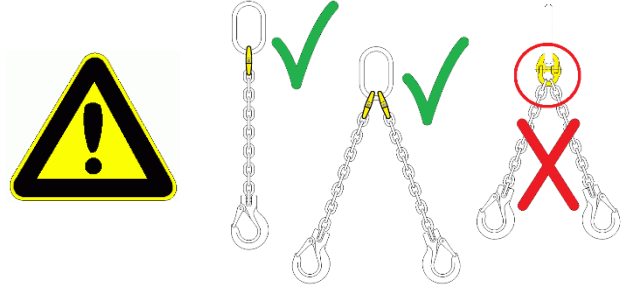
6. OPERATING CONDITIONS

6.1 Normal use

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

Nominal sizes and grades of the sling chain and connecting link must always coincide!
When attaching components observe correct position of the connecting link.

Relevant forces must act in longitudinal direction.



If two chain legs are arranged in one connecting link half for alternate use, only one chain leg must be subjected to loads!

6.2 Influence of temperature

Using connector links at elevated temperatures will cause the working load limit to be reduced below. The reduced working load limits specified in the tables only apply to short-term use under the specified temperature conditions. #

Type	Temperature range	Remaining WLL
"THI-LOK" TWN 1320 Grade 8	-40 °C ≤ t ≤ 200 °C	100 %
	200 °C < t ≤ 300 °C	90 %
	300 °C < t ≤ 400 °C	75 %
"XL-LOK" TWN 1820 Grade 10	-30 °C ≤ t ≤ 200 °C	100 %
	200 °C < t ≤ 300 °C	90 %
	300 °C < t ≤ 380 °C	60 %

If a connector link has been exposed to temperatures exceeding the maximum values specified, it must no longer be used.

6.3 Environmental influence

Connecting links 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.

Connecting links are not intended to be used for abrasive blasting environments. #

7. INSPECTIONS, MAINTENANCE, DISPOSAL

7.1 Inspections

Inspections and maintenance must be arranged for by the owner!

Inspection deadlines 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 in case of heavy-duty service. After three years at the latest the connecting links 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 products are first used. The register will show characteristic data as well as identity details.

MOUNTING INSTRUCTIONS

CONNECTING LINKS

GRADES 8 AND 10



Immediately stop using connecting links that show the following defects:

- limited hinging capability (halves get stuck),
- visible wear in the receiving area of the connecting link halves and of the pin diameter, #
- deformation, elongation or fractures of parts,
- heating beyond permissible limits,
- severe corrosion,
- missing or illegible identification/markings.

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).

7.2 Maintenance

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

All maintenance and repair activities are to be documented.

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

7.3 Disposal

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

8. SPARE PARTS#

Only use original spare parts.

Each spare part set includes pin and split sleeve.

TWN 1961			TWN 1922		
Nominal size	Article no. „THI-LOK“	Article no. Set	Nominal size	Article no. „XL-LOK“	Article no. Set
6-8	F308061	F48626	6-10	F30807	F486013
7-8	F308151	F48627	7-10	F308090	F486043
8-8	F308161	F48628	8-10	F30817	F486043
10-8	F308261	F486210	10-10	F30827	F486073
13-8	F308361	F486213	13-10	F30837	F486103
16-8	F308461	F486216	16-10	F30847	F486133
18-8	F30850	F486218			
20-8	F30855	F486220	20-10	F308570	F486105
22-8	F30860	F486221	22-10	F308670	F486106
26-8	F30870	F486222	26-10	F308770	F486107
32-8	F30880	F486223	32-10	F308870	F486108
36-8	F309061	F486224			
40-8	F309161	F486224			

Make sure that the versions/article numbers of your connecting links match those in the table so that you can use the spare parts sets listed.

If this is not the case, please contact us to research the appropriate spare parts sets.

9. STORAGE

Make sure connecting links are stored in dry locations at temperatures ranging between 0 °C and +40 °C.

10. THIELE OPERATING AND MOUNTING INSTRUCTIONS

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



11. IMPRINT

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