

Instructions for use

Original version acc. to 2006/42/EG



Self-locking hooks

Grades 8 and 10/XL



TWN 0798
Eye type



TWN 0799
Clevis type



TWN 1836
Eye type



TWN 1837
Clevis type



TWN 1838
Swivel type

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1 Description and purpose

Self-locking hooks are intended for use in chain slings for attaching and lifting loads, in accordance with EN 818-4, and in lashing chains, in accordance with EN 12195.

Self-locking hooks of type TWN 0799 and TWN 1837 are fitted directly to the chain sling. Self-locking hooks type TWN 0798, TWN 1836 and TWN 1838 are usually attached to the chain by means of links or are connected to other lifting gear with the help of shackles.

Self-locking hooks must only be used:

- within their permissible load rating
- within their permissible temperature limits
- in compliance with the permitted slinging configuration and angle
- by trained and authorised persons
- with original connecting bolts and pins of the specified size.

Self-locking hooks are marked with the nominal chain size and grade, the manufacturer's symbol and the identification number. Self-locking hooks meet the requirements of Machinery Directive 2006/42/EC and have a design factor of 4 in relation to their load rating.

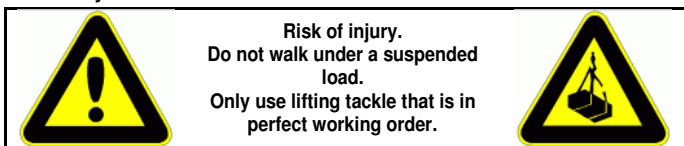
THIELE self-locking hooks are designed to withstand 20,000 dynamic load cycles at maximum loading capacity. For higher workloads (e.g. multi-shift and automated operations) the loading capacity is to be reduced accordingly.

When used as a lashing system the maximum lashing capacity is obtained by doubling the load rating.

Do not alternate between lifting and lashing applications.

Self-locking hooks are not generally approved for carrying persons.

2 Safety information



- Operators, fitters and maintenance engineers are to pay particular attention to the operating instructions for the machine to which the connecting links are fitted, as well as to the relevant Professional Association documents DGUV V 1, DGUV R 100-500 section 2.8, DGUV I 209-013 and DGUV I 209-021 and to technical standards DIN 685-5 DIN EN 818-6.
- When working outside Germany it is also essential to comply with the national regulations in the country of use.
- The information relating to safety, fitting, operating, testing and maintenance, as provided in this instruction sheet and in the documents mentioned, is to be made available to all relevant personnel.
- Ensure that this instruction sheet is kept in the vicinity of the product during the period of usage.
- Always wear your personal protective equipment when working.
- **Incorrect fitting and use can lead to personal injury and material damage.**
- Assembly, dismantling, testing and maintenance work must only be carried out by trained and authorised persons.
- Structural modifications (e.g. welding, bending, detachment of parts, drilling) are not permitted. Never attempt to reduce the size of the opening on self-locking hooks by bending or welding in a spacer piece.
- Visually inspect the equipment before each use.
- Worn, bent or damaged hooks should not be employed.
- Never exceed the sling's specified load capacity.
- Do not force the self-locking hook into position.

- Self-locking hooks must only be loaded at their base, never at their nose.
- The hook must be lined up in the direction of tension, not sideways to it, in order to avoid bending stress.
- When lifting loads keep hands and other parts of the body away from the lifting tackle.
- Avoid shock loads, e.g. caused by pulling the load from a slack chain.
- Do not operate the system without fully functioning safety devices (cotters, spring pins, latch).
- Loads must only be lifted when the hooks are in a locked position.
- Consult your safety officer or the manufacturer if you are in any way uncertain about the proper use, testing or maintenance etc. of the equipment.

THIELE cannot be held liable for damage resulting from a failure to observe the regulations, standards and other information relating to this equipment.

THIELE does not give general approval for components supplied by other manufacturers to be fitted to and used on equipment of grade 10/XL.

It is expressly forbidden to carry out slinging and lashing operations when under the influence of drugs or alcohol (including residual alcohol).

3 Initial commissioning

When using the equipment for the first time ensure that

- the components are as ordered and are undamaged
- test certificate and fitting instructions are included
- markings and documents are matching
- all related documents are properly stored in a safe place.

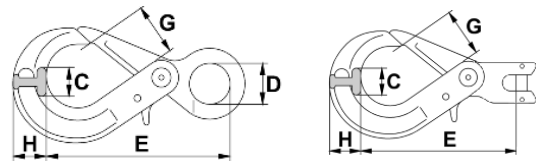
Dispose of all packaging material according to local environmental regulations.

4 Storage

Self-locking hooks should be stored in a dry place, and in a clean condition with anti-corrosion coating applied, at temperatures of between 0 und 40 °C.

5 Technical data

The tables refer to standard product codes and data only. No individual customer specifications are shown.

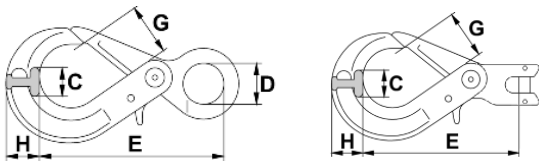


Self-locking hook with eye TWN 0798, grade 8

nominal size	product code	load rating [t]	dimensions [mm]					weight [kg]
			E	D	G	H	C	
6-8	Z07274	1.12	107	22	28	22	18	0.5
7/8-8	Z07275	2.0	133	24	33	25	23	0.8
10-8	Z07276	3.15	167	32	45	34	27	1.7
13-8	Z07277	5.3	208	39	52	40	34	3.1
16-8	Z07278	8.0	254	49	64	53	43	5.9
18/20-8	Z10187	12.5	272	59	77	64	48	7.8
22-8	Z10184	15	310	70	92	74	57	15

Self-locking hook with clevis TWN 0799, grade 8

nominal size	product code	load rating [t]	dimensions [mm]				weight [kg]
			E	G	H	C	
6-8	Z07279	1.12	98	28	22	18	0.6
8-8	Z07280	2.0	120	33	25	23	0.9
10-8	Z07281	3.15	150	45	34	27	1.8
13-8	Z07282	5.3	185	52	40	34	3.3
16-8	Z07296	8.0	215	64	53	43	6.2
18/20-8	Z10192	12.5	235	77	64	48	8.0



Self-locking hook with eye TWN 1836, grade 10/XL

nominal size	product code	load rating [t]	dimensions [mm]					weight [kg]
			E	D	G	H	C	
6-10/XL	F09220	1.4	110	22	34	24	15	0.5
8-10/XL	F09221	2.5	134	30	46	26	18	0.8
10-10/XL	F09222	4.0	167	36	56	33	25	1.6
13-10/XL	F09223	6.7	200	47	72	42	34	3.2
16-10/XL	F09224	10	253	60	88	47	35	6.0

Self-locking hook with clevis TWN 1837, grade 10/XL

nominal size	product code	load rating [t]	dimensions [mm]				weight [kg]
			E	G	H	C	
6-10/XL	F09200	1.4	88	34	24	15	0.5
8-10/XL	F09201	2.5	111	46	26	18	0.8
10-10/XL	F09202	4.0	142	56	33	25	1.5
13-10/XL	F09203	6.7	175	72	42	34	3.1
16-10/XL	F09204	10	214	88	47	35	5.9

Self-locking hook with swivel TWN 1838, grade 10/XL

nominal size	product code	load rating [t]	dimensions [mm]					weight [kg]
			E	D	G	H	C	
6-10/XL	F09240	1.4	144	30	34	24	10	0.6
8-10/XL	F09241	2.5	178	38	45	27	12	1.0
10-10/XL	F09242	4.0	208	44	55	33	14	2.0
13-10/XL	F09243	6.7	252	50	68	44	18	3.8
16-10/XL	F09244	10	322	66	85	46	20	7.0

6 Fitting and removal

Self-locking hooks with eyes or swivels are usually attached to chain slings by means of connecting links.

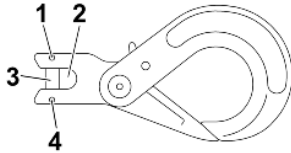
Always observe the fitting instructions for the connecting links.

Self-locking hooks with clevis pins can be attached directly to the chain.

Attaching the clevis system

The chain and clevis pin must be of the same rated size

- Remove the spring pins (1/4) and clevis pin (3) if necessary.
- Introduce the end of the chain between the sides of the clevis (2).
- Insert the pin (3) sideways into the clevis and through the final link of the chain.
- Drive home the spring pins (1/4) so that they sit flush within their recesses.
The slot must face away from the clevis pin.
- Check that the chain is free to move.



Detaching the clevis system

- Loosen the relevant chain sling.
- Use a mandrel to drive out the spring pins (1/4).
- Remove the pin (3)
- Remove the chain link

Only connect together pins and sling parts of the same grade (pins Ø 13 mm and over are marked on their face side).

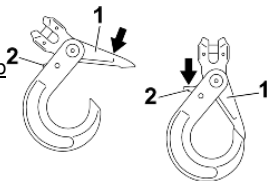
Spring pins are intended for one-off use only.

7 Operation

To lock the hook push the top section (1) down towards the lower section.

When lifting loads do not grasp between the top and bottom sections as the hook automatically closes tight under load.

To open the hook loosen the chain sling and press down on the locking lever (2).



8 Operating conditions

8.1 Self-locking hook with swivel

The swivel is only used to slew the chain into its correct position before loading. It is strictly forbidden to rotate the hook under load.

8.2 Temperature effect

If the self-locking hook is to be used at higher temperatures reduce the load rating in accordance with the following table.

grade	temperature range	remaining load capacity
8	-40 °C ≤ 200 °C	100 %
	200 °C ≤ 300 °C	90 %
	300 °C ≤ 400 °C	75 %
10/XL	-30 °C ≤ 200 °C	100 %
	200 °C ≤ 300 °C	90 %
	300 °C ≤ 380 °C	60 %

Any hook that has been heated up above the maximum operating temperature should be withdrawn from service.

8.3 Environmental influence

It is not permitted to use the hook in an environment where acids, aggressive/corrosive chemicals or their vapours are present.

The hook must not be galvanised or heat-treated in any way.

9 Testing, maintenance and disposal

It is the responsibility of the operator to ensure that testing and maintenance is properly carried out.

The operator is to schedule the test cycles.

The equipment is to be tested regularly, and at least once a year, by a competent person, and the results recorded. This frequency is to be increased for heavy-duty applications. An additional test to verify that no cracks are present must be carried out within a period of three years. Load tests are no substitute for these condition tests.

The condition of the slinging equipment is to be recorded during each test.

The tests are to be entered in a file (DGUV I 209-062 or DGUV I 209-063) that is to be set up when the chain assembly is first commissioned. This file should contain the characteristic data for the chains and components along with proof of identity.

If any of the following defects are present the self-locking hook should be withdrawn from service immediately:

- restricted swivel capacity or reduced resetting force (the safety catch or the swivel have become jammed), locking function defective
- broken spring
- wear in excess of 10%, e.g. hook attachment area and pin diameter
- excessive play between the top and bottom sections
- less than 50% overlap between the top section and the nose
- deformation, stretch, nicks, gouges, cracks, pinching
- exposure to heat above the permitted range
- severe corrosion, illegible markings.

Maintenance

Maintenance work must only be undertaken by competent persons. Small indentations and cracks can be carefully removed by grinding, bearing in mind the maximum permitted 10% reduction in cross section and the need to avoid any gouges or notches.

All maintenance work must be documented.

Testing service

THIELE can provide qualified and trained personnel to carry out testing and maintenance work on chain slinging equipment and accessories.

Disposal

Steel components and attachments that have reached the end of their useful life are to be sent for scrap in accordance with local regulations.

10 Replacement parts

Only use original spare parts.

10.1 Spare parts set TWN 0967/0 for TWN 0798, TWN 0799

nominal size	product code	contents
6-8	F333700	clevis pin, spring pins
8-8	F333711	
10-8	F333721	
13-8	F333730	
16-8	F333741	
18/20-8	F0922057	

10.2 Spare parts set TWN 0967/1 for TWN 0798, TWN 0799

nominal size	product code	contents
6-8	F329090	safety catch, spring, spring pin
8-8	F329190	
10-8	F329290	
13-8	F329390	
16-8	F329490	
18/20-8	F0922056	
22-8	F0922056	

10.3 Spare parts set TWN 1933 for TWN 1836, TWN 1837, TWN 1838

nominal size	product code	contents
6-10/XL	Z10118	clevis pin, spring pins
8-10/XL	Z10119	
10-10/XL	Z10120	
13-10/XL	Z10121	
16-10/XL	Z10122	
22-10/XL	Z10125	

10.4 Spare parts set TWN 1935 for TWN 1836, TWN 1837, TWN 1838

nominal size	product code	contents
6-10/XL	Z10110	safety catch, spring, spring pin
8-10/XL	Z10111	
10-10/XL	Z10112	
13-10/XL	Z10113	
16-10/XL	Z10114	
22-10/XL	Z10117	

11 Imprint

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'#' Denotes change from previous version