HOOKS
GRADES 8 AND 10

Original in compliance with 2006/42/EC

Sling hooks with clevis

TWN 1340/1
TWN 1840/1

Sling hooks with eye

TWN 0855/1
TWN 0858/1
TWN 1841/1

Foundry hooks

TWN 0859
TWN 0856
TWN 1856

Swivel hooks

TWN 0854

Lifting hook for engines

TWN 0889

1 DESCRIPTION AND INTENDED USE

THIELE hooks are intended for the usage in sling chains according to EN 818-4 or in lashing chain slings according to EN 12195-3.

The connection to the chain is made directly by the clevis or indirectly by using connecting links which are assembled to the eye.

Hooks with eye can also be used within welded sling chains.

Hooks must exclusively be used:

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

THIELE hooks meet EC Machinery Directive 2006/42/EC requirements and feature a safety factor of at least 4 based on the working load limit (WLL). They are usually certified by the German Employers' Liability Insurance Association for Wood and Metal (BGHM) # and marked with the H4-stamp.

They are signed with the corresponding chain size, grade, manufacturers mark and traceability code.

THIELE hooks 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) the working load limit must be reduced.

THIELE hooks with safety latch (except TWN 0889) can also be used for lashing. If the hooks are used **exclusively** for lashing, the maximum lashing capacity (LC) is calculated by doubling the working load limit to LC = 2 x WLL. #

Alternating use for lifting and lashing is only permitted up to the load corresponding to the working load limit (WLL), i.e. LC = WLL! #

Even a single lashing load above the working load limit (LC > WLL) makes further use as a hook for lifting impermissible. #

As a rule, hooks are not permitted for the transportation of persons.

2 SAFETY NOTES

- Operators, fitters, and maintenance personnel must in particular observe the operating instructions of the used sling chains, the documentations DGUV V 1, DGUV R 109-017, DGUV I 209-013 and DGUV I 209-021 issued by the German Employers' Liability Insurance Association (DGUV) #, 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 near the product during the time the equipment is used. Please contact the manufacturer if replacements are needed. See also Chapter 7.
- 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.**
- Never put to use worn-out, bent or damaged hooks.
- Do not overload hooks.
- Do not use force when mounting/positioning the hooks.
- Do not tip-load a hook.
- Hooks shall have well-functioning safety latches.
- Avoid bending loads to act on hooks.
- When using hooks without safety latch special care must be taken and a special risk assessment should be done.
- Usage without working safety devices is not permissible.
- Safety elements must not be excessively stressed or strained operationally.
- Avoid sharp edges. Use edge protectors or reduce the WLL by 20 %.
- Do not start lifting before you have made sure the load has been correctly attached.
- 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.
- Avoid hooks to get caught under the load.
- 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.

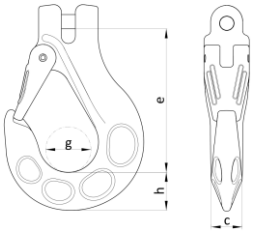
Dispose of the packing in an environmentally compatible way according to local rules.

4 TECHNICAL DATA

Table includes article numbers of basic versions but no customized editions.

4.1 Sling hooks with clevis TWN 1340/1, grade 8

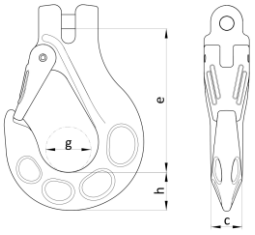
Version TWN 1340 without safety latch (not shown)



Nominal size	Article no.	WLL [t]	Dimensions [mm]				Mass [kg]
			c	e	g	h	
6-8	F336010	1,12	17	76	20	20	0,36
8-8	F336110	2,0	22	95	27	25	0,76
10-8	F336210	3,15	28	114	34	32	1,41
13-8	F336310	5,3	35	134	41	41	2,48
16-8	F336410	8,0	42	162	48	50	4,44
20-8 #	F336510	12,5	51	201	59	58	8,57
22-8 #	F336610	15,0	55	224	68	62	11,46

4.2 Sling hooks with clevis TWN 1840/1, grade 10

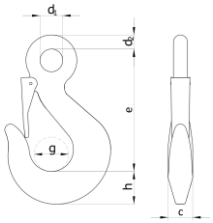
Version TWN 1840 without safety latch (not shown)



Nominal size	Article no.	WLL [t]	Dimensions [mm]				Mass [kg]
			c	e	g	h	
6-10	F336050	1,4	17	76	20	20	0,36
7-10 #	F336070	1,9	20	91	24	22	0,59
8-10	F336150	2,5	22	95	27	25	0,76
10-10	F336250	4,0	28	114	34	32	1,41
13-10	F336350	6,7	35	134	41	41	2,48
16-10	F336450	10,0	42	162	48	50	4,46
20-10 #	F336550	16,0	51	201	59	58	8,59
22-10 #	F33664	19,0	55	223	68	62	11,48

4.3 Sling hooks with eye TWN 0855/1, grade 8

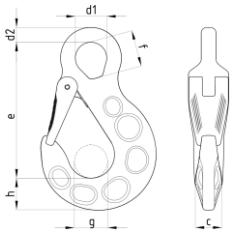
Version TWN 0855 without safety latch (not shown)



Nominal size	Article no.	WLL [t]	Dimensions # [mm]						Mass [kg]
			c	d_1	d_2	e	g	h	
36-8	Z06159 #	40	78	72	44,5	388	90	103	32,3 #
40-8	Z06160 #	50	89	84	50,5	442	103	116	47,0 #
45-8	Z06161 #	63	99	90	56,0	494	114	130	64,4 #
50-8	Z06162 #	80	110	102	63,0	610	131	145	81,9 #

4.4 Sling hooks with eye TWN 0858/1, grade 8

Version TWN 0858 without safety latch (not shown)

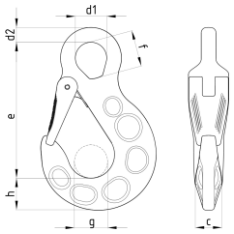


Nominal size	Article no.	WLL [t]	Dimensions # [mm]							Mass [kg]
			c	d_1	d_2	e	f #	g	h	
6-8	F329010 #	1,12	17	21 1)	11	91,5	-	20	20	0,36
8-8	F329110 #	2,0	20	28 1)	14	118	-	27	25	0,76
10-8	F329210 #	3,15	28	36 1)	18	146	-	34	32	1,49
13-8	F329310 #	5,3	34,5	42 1)	21	168	-	41	41	2,54
16-8	F329410 #	8,0	41	54 1)	25	210	-	48	50	4,64
18/20-8	F329510 #	12,5	51	58 1)	27	244	-	59	58	7,61 #
22-8	F329710	15,0	56	65 1)	30	271	-	68	62	10,2 #
26-8	F329810	21,2	60	70	33	302	81	74	70	15,0 #
32-8	F329910	31,5	70	76	44	350	101	90	84	25,1 #

1) with circular eyelet #

4.5 Sling hooks with eye TWN 1841/1, grade 10

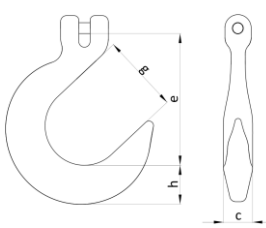
Version TWN 1841 without safety latch (not shown)



Nominal size	Article no.	WLL [t]	Dimensions # [mm]							Mass [kg]
			c	d_1	d_2	e	f	g	h	
6-10	F32905	1,4	17	21 1)	11	91,5	-	20	20	0,36
7/8-10	F32915	2,5	20	28 1)	14	118	-	27	25	0,76
10-10	F32925	4,0	28	36 1)	18	146	-	34	32	1,49
13-10	F32935	6,7	35	42 1)	21	168	-	41	41	2,54
16-10	F32945	10,0	41	54 1)	25	210	-	48	50	4,64
20-10 #	F32965	16,0	51	58 1)	27	244	-	59	58	7,61
22-10	F32975	19,0	56	65 1)	30	271	-	68	62	10,2
26-10 #	F32985	26,5	60	70	33	302	81	74	70	15,0
32-10 #	F32995	40,0	70	76	44	350	101	90	84	25,1

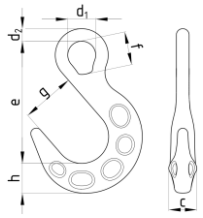
1) with circular eyelet #

4.6 Foundry hooks with clevis TWN 0859, grade 8



Nominal size	Article no.	WLL [t]	Dimensions [mm]				Mass [kg]
			c	e	g	h	
8-8	F33310	2,0	27	110	66	33	1,12
10-8	F33320	3,15	32	133	76	35	1,61
13-8	F33330	5,3	38	159	89	41	3,4
16-8	F33340	8,0	45	189	102	48	5,5
20-8 #	F33355	12,5	51	217	114	54	9,0
22-8 #	F33360	15,0	56	244	124	60	12,0

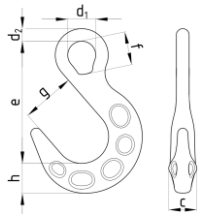
4.7 Foundry hooks with eye TWN 0856, grade 8



Nom. size	Article no.	WLL [t]	Dimensions [mm]							Mass [kg]
			c	d_1	d_2	e	f	g	h	
6-8	F32354	1,12	20	21 [1)]	12	108	-	50	24	0,44
7/8-8	F32364	2,0	26	28 [1)]	14	135	-	66	33	0,97
10-8	F32374	3,15	32,5	32 [1)]	18	161	-	76	35	1,56
13-8	F32384	5,3	38	42 [1)]	21	196	-	89	42	2,96
16-8	F32394	8,0	45	54 [1)]	23	229	-	102	48	4,71
18/20-8	F32404	12,5	58,5	59	27	259	70	114	63	7,95
22-8	F32414	15,0	65	65	30	288	78	127	70	10,9
26-8	F32424	21,2	75	76	35	329	89	136	81	16,5
32-8	F32444	31,5	83	85	42	358	100	152	97	26,2

[1)] with circular eyelet

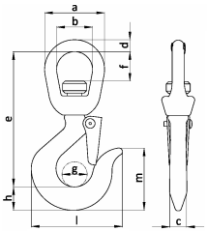
4.8 Foundry hooks with eye TWN 1856, grade 10



Nom. size	Article no.	WLL [t]	Dimensions [mm]							Mass [kg]
			c	d_1	d_2	e	f	g	h	
6-10	F32353	1,4	20	21 [1)]	12	108	-	50	24	0,44
7/8-10	F32363	2,5	26	28 [1)]	14	135	-	66	33	0,97
10-10	F32373	4,0	32,5	32 [1)]	18	161	-	76	35	1,56
13-10	F32383	6,7	38	42 [1)]	21	196	-	89	42	2,96
16-10	F32395	10,0	45	54 [1)]	23	229	-	102	48	4,71
18/20-10	F32405	16,0	58,5	59	27	259	70	114	63	7,95
22-10	F32413	19,0	65	65	30	288	78	127	70	10,9
26-10	F32423	26,5	75	76	35	329	89	136	81	16,5
32-10	F32443	40,0	83	85	42	358	100	152	97	26,2

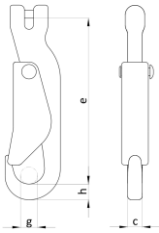
[1)] with circular eyelet

4.9 Swivel hooks TWN 0854, grade 8



Nom. size	Article no.	WLL [t]	Dimensions # [mm]										Mass [kg]
			a	b	c	d	e	f	g	h	l	m	
0,75	F32103	0,75	50	30	13	10	113,5	25	19	14	62,5	42,5	0,37
6-8	F32100	1,12	50	30	14	10	113	25	18	20	73	52	0,38
8-8	F32110	2,0	76	44	19	16	155	42	21	25	88	61	1,0
10-8	F32120	3,15	76	44	21	16	162	42	23	30	104	72	1,2
13-8	F32130	5,3	89	51	28	19	190	43	32	33	123	87	2,08
16-8	F32140	8,0	114	64	35	25	247	61	40	43	156	110	4,45

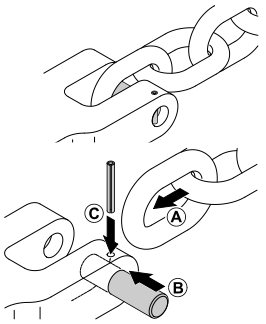
4.10 Lifting hook for engines TWN 0889, grade 8



Size	Article no.	Chain size [mm]	WLL [t]	Dimensions [mm]				Mass [kg]
				c	e	g	h	
0,50	F33439	6	0,50	12	137	19	13	0,55

5 ASSEMBLY AND REMOVAL

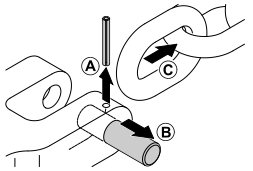
5.1 Assembly of clevis-type fastening system



- 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!

The dowel pins must only be installed once.

5.2 Disassembly of clevis-type fastening system



- Slacken the respective chain leg.
- (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.

5.3 Safety latch

Disassembly by driving the dowel pins out.

Assembling by correct positioning of safety latch together with spring and driving in the thicker dowel pin by a hammer. Afterwards the thinner dowel pin has to be driven in, taking care that the slots positioned adverse.

Check the correct operability of the safety latch.

6 OPERATION

6.1 Normal use

Hooks must always be freely movable when attached to the load.

Hooks must not rest on or be supported by other structural parts.

6.2 Influence of temperature

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

Grade	Temperature range	Remaining working load limit
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 hooks have been exposed to temperatures exceeding the maximum values specified, they must no longer be used.

6.3 Environmental influence

Hooks 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 THIELE OPERATING AND MOUNTING INSTRUCTIONS

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

8 SPARE PARTS

Use only original spare parts.

8.1 Spare part sets for safety latches

A set consists of safety latch, spring und dowel pins.

for TWN 0835/1, TWN 0858/1, TWN 1340/1		for TWN 1835/1, TWN 1840/1 TWN 1841/1	
Nominal size	Article no.	Nominal size	Article no.
6-8	F48730	6-10	F48731
8-8	F48732	8-10	F48733
10-8	F48734	10-10	F48735
13-8	F48736	13-10	F48737
16-8	F48738	16-10	F48739
18-8	F48585	-	-
20-8	F48742	20-10	F48743 #
22-8	F48744	22-10	F48745
26-8	F48746	-	-
32-8	F48747	-	-

8.2 Spare part sets for clevis-type fastening system

A set consists of pin and dowel pin.

Nominal size	Article no.	Nominal size	Article no.
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	-	-
20-8	F48369	20-10	F48692 #
22-8	F48367	22-10	F48693 #

9 INSPECTIONS, MAINTENANCE, DISPOSAL

9.1 Inspections

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 hooks 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 at first use. The register will show characteristic data of the hooks and other components as well as identity details.

Immediately stop using hooks that show the following defects:

- missing or illegible identification/marking,
- deformation, elongation or fractures,
- cuts, notches, cracks, incipient cracks, pinching,
- heating beyond permissible limits,
- severe corrosion,
- broken springs,
- not sufficient workíng safety devices,
- wear in excess of 10 %, e.g. in the receiving area of the pin diameter,
- missing or damaged pin locks or removal preventing guards.

9.2 Inspection service

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

9.3 Maintenance

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

Minor notches and cracks at the rings 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.

9.4 Disposal

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

10 STORAGE

Hooks to be stored in dry locations at temperatures ranging between +5 °C and +40 °C.

11 IMPRINT

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