

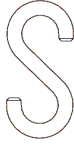
Operating Instructions

Original in compliance with 2006/42/EG



S-Hooks TWN 0860

Grade 8



Manufacturer:
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1 Description and Intended Use

THIELE S-Hooks are intended to lift loads. They may be used alone or together with sling chain assemblies.

Based on the simple design the use is all-purpose.

S-Hooks are made of a single heat treated wire which is bended to an S-shaped body.

S-Hooks must exclusively used

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

THIELE S-Hooks meet the EG Machinery Directive 2006/42/EG and feature a safety factor of at least 4 based on the Working Load Limit.

S-Hooks are marked with nominal size, quality grade, manufacturer's symbol, traceability code and CE-symbol.

S-Hooks feature no safety device against unintended hanging out.

THIELE S-Hooks are designed to withstand 20 000 dynamic load changes under maximum load conditions. In the event of higher loads (e.g. multi-shift operation) the WLL must be reduced.

As a rule, S-Hooks are not permitted for the transportation of persons or for lashing.

S-Hooks are not permitted for the use at building yards.

2 Safety Notes

Risk of Injury!
Never walk or stay under lifted loads!
Make sure to use hoisting/ attachment means free from defects.

- Operators, fitters and maintenance personnel must in particular observe the Operating Instructions of the used sling chain assemblies as well as documentations DGUV V 1, DGUV R 100-500 Chapter 2.8, DGUV I 209-013 and DGUV I 209-021 issued by the German Employers' Liability Insurance Association.
- 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 Operating Instructions and specified documentations relating to safety, assembly, operation, inspection and maintenance must be made available to the respective persons.
- Make sure these Operating Instructions are available in a place near the product during the time the equipment is used.
- 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).
- Visually inspect S-Hooks prior to each use.
- Never put to use worn-out, bent or damaged S-Hooks.
- Do not overload S-Hooks.
- Do not use force when mounting/positioning the S-Hooks.
- Do not tip-load S-Hooks.
- Do not bend S-Hooks.
- Avoid sharp edges.
- The universal usability may cause multiple possible errors.
S-Hooks should only be used if an unintended hanging out is excluded.
When using S-Hooks special care must be taken and a risk analysis should be made for each concrete application.
- Only lift loads which are freely movable and not fixed to the ground.
- In case of multi-leg sling chain assemblies never allow for inclination angles of less than 15 ° and in excess of 60 °.

- Do not start lifting before you have made sure the load has been correctly attached.
Check the right position of each S-Hook for every lifting process especially when the lifting process is interrupted.
- Make sure no one including you (operator) is in the way of the moving load (hazard area).
- During lifting/hoisting make sure your hands or other body parts do not come into contact with S-Hooks.
Only remove hoisting means manually (use your hands).
- Avoid impacts, e.g. due to abruptly lifting loads with chain in slack condition.
- Never move a suspended load over persons.
- Never cause suspended loads to swing.
- Always monitor a suspended load.
- Put the load only down in flat places/sites where it can be safely deposited.
- Avoid S-Hooks to get caught under the load.
- Take care for sufficient place for the personnel to move when choosing the route of transportation and storage location.
Danger to life and risk of injury by crushing hazards.
- 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!

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

3 Commissioning

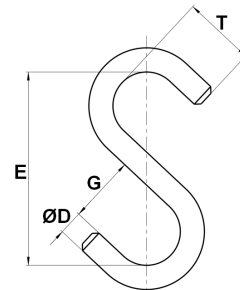
Prior to using the components for the first time make sure that

- the S-Hooks 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,
- 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 article numbers of standard and not customized parts.



Nominal size	Article-no.	WLL [t]	Dimensions [mm]				Mass [kg]
			E	D	G	T	
0,15	F18130	0,15	80	10	28	30	0,1
0,25	F18160	0,25	100	12	36	38	0,2
0,4	F18180	0,4	130	16	46	48	0,5
0,8	F18200	0,8	160	20	56	58	0,9
1,12	F18220	1,12	180	22	64	64	1,2
1,5	F18230	1,5	200	26	70	70	1,9
2	F18250	2	230	32	80	80	3,4
3,15	F18260	3,15	260	36	90	90	4,8
4	F18280	4	300	40	104	104	6,8
4,5	F18290	4,5	350	45	122	121	10
5,3	F18300	5,3	400	51	140	138	15
6	F18310	6	450	57	158	154	20
8	F18320	8	500	63	160	160	27
10	F18330	10	550	72	166	168	39

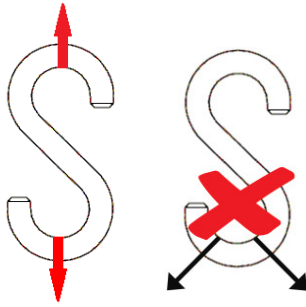
5 Operation

5.1 Normal Use

S-Hooks should be hang up to the two components are to be connected (e.g. end fitting of a sling chain assembly and load) by the hook's openings.

Take care each loading point is located at the peak of each opening.

Never position two or more loads to one opening.



S-Hooks must be able to move freely and must not be restraint-guided.

They should not stay in contact sideways to loads or other parts.

5.2 Influence of Temperature

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

Grade	Temperature range	Remaining WLL
8	-40 °C ≤ 200 °C	100 %
	200 °C ≤ 300 °C	90 %
	300 °C ≤ 400 °C	75 %

If S-Hooks have been exposed to temperatures exceeding the maximum values specified they must no longer be used.

5.3 Environmental Influence

S-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.

6 Spare Parts

Because of the design no spare parts are available.

7 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 S-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 as 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 S-Hook is first used. The register will show characteristic data as well as identity details.

Immediately stop using S-Hooks that show the following defects

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

Because of non visible damages bent S-Hooks must not put into use again!

Inspection Service

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

Maintenance

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.

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.

8 Storage

Make sure S-Hooks are stored in dry locations at temperatures ranging between 0 °C and +40 °C.

9 Publishing Information

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*# Changes to previous edition.

EU Declaration of Conformity

acc. to Machinery Directive 2006/42/EG, Annex II A for a machine

THIELE GmbH & Co. KG herewith declares as manufacturer that

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are placed on the market in the form of a complete machine by THIELE together with the relevant test certificate, and are in compliance with the applicable provisions of the EU Machinery Directive 2006/42/EG.

The following harmonized standards have been observed

- DIN EN 1677-1
- DIN EN 12100

This declaration/statement is not meant to warrant any product properties. Safety notes and instructions pertinent to the products must be observed.

Responsible for the documentation: Iserlohn, 11th February 2011

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Dr. Günther Philipp

(Managing Director)