



Operating Instructions

Hoist Chains EN 818-7

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1 Introduction

THIELE hoist chains meet EN 818-7 requirements and are used with chain blocks for the safe handling of loads.

How these chains are safely used is described in these operating instructions.

The present operating manual is a translation of the German-language original document within the meaning of 2006/42/EG.

2 Intended Use

Hoist chains according to EN 818-7 are intended for use with hand- or motor-operated chain blocks for load lifting service.

Hoist chains must exclusively employed

- for chain blocks of suitable design,
- within the limits of their permissible working load limit,
- within the limits of the maximum stresses shown in EN 818-7 and ISO 3077 table B.1,
- within the temperature limits prescribed,
- by trained and authorized persons.

3 Storage

Hoist chains have to be stored in dry spaces at temperatures ranging between 0 and +40 °C.

4 Safety Notes

4.1 Personnel

- Operators must in particular observe the instructions given in the chain blocks' manuals, the German Employers' Liability Insurance Association's regulations BGR 500, chapter 2.8, BGI 556, BGV-C1, BGV D6, BGV D8, their implementation directives as well as standard specification DIN 685-5.
- Chains must exclusively be installed, removed, inspected and maintained by comprehensively and properly trained and authorized persons.

Outside the Federal Republic of Germany the specific provisions issued locally in the country where the items are used must also be observed.

4.2 Product Safety



Risk of Injury

Make sure to use hoist chains free from defects.

- Hoist chains must not be used for the direct attachment of loads.
- Never put to use worn-out, bent or damaged hoist chains.

- Never make structural changes to the hoist chains (e.g. by welding).

Chains in Operation



Risk of Injury

Never walk or stay under lifted loads!

- Never expose hoist chains to loads exceeding the specified working load limit.
- Do not start lifting before you have made sure the load has been correctly attached.
- Make sure nobody enters or stays in the immediate danger zone where suspended loads are handled.
- Never move a suspended load over persons.
- Never cause suspended loads to swing.
- Always monitor a suspended load.
- Avoid impacts, e.g. due to abruptly lifting loads with chain in slack condition.
- Never use hoist chains for „choke hitch“ or „basket hitch“ attachment methods.

5 Product Description

THIELE hoist chains of type T (quenched and tempered) and DT, resp. DAT (case hardened) are manufactured to meet the requirements of EN 818-7 and other more stringent specifications.

They are in conformity with EG Machinery Directive 2006/42/EG and have a safety factor of at least 4 based on relevant WLL.

6 Technical Data

Data concerning carrying capacity and article numbers for spare parts ordering are shown in the pertinent test/inspection certificate.

7 Mounting/Removing Chains

7.1 Preparations

Convince yourself that the chain blocks and all components to be mounted are in perfect condition.

Check the documentation for completeness.

7.2 Chain Mounting/Removal

When mounting or removing hoist chains the relevant instructions issued for the components are to be observed, especially those issued for chain blocks and crane equipment. Take care of an assembly of chain with connected parts that there is enough clearance and no deformation occurs to the chain. The operating instruction of the chain hoist may give hints for the mounting orientation of the chain (orientation of the welded areas).

8 Conditions of Use

The different hoist chain types are to be employed for the following services:

Chain type T:

- for manually operated chain blocks
- intended for motorized chain blocks operating at lower speed rates, very light duty cycles and under conditions causing low wear only

Chain type DAT:

- intended for motor-operated chain blocks
- for higher loads and speed rates
- for longer duty cycles
- NOT intended for portable, manually operated chain blocks

Chain type DT:

- for motor-operated chain blocks in wear-causing environments, e.g. where high dust loads arise
- NOT intended for portable, manually operated chain blocks

In the interest of attaining a high service life hoist chains must be lubricated. Appropriate specifications to this effect are usually included in the operating manuals of the chain blocks.

8.1 Use at Elevated Temperatures

Operating temperature ranges:

- Type T -40 to +200 °C
- Type DAT -20 to +200 °C
- Type DT -10 to +200 °C

Hoist chains may only be used at temperatures outside the ranges indicated when prior approval of the manufacturer has been obtained. The use of hoist chains exposed to temperatures above 200 °C is prohibited.

8.2 Use under Adverse Environmental Conditions

Never use the chains if adverse chemical conditions exist, e.g. acids, fumes or the like.

Hoist chains must not be exposed to dirt/contamination preventing the free movement of the individual links.

8.3 Further informations

Please especially note the hints given in EN 818-7 chapter 9.

Hoist chains may never be turned and have to run straight line on the wheels and supported by guiding devices. A twisted hook block causes a non allowed chain twisting.

9 Marking

An identification tag which also shows the CE symbol is attached to one strand end of the supplied chains.

Hoist chains are stamped with marks providing information about chain type, manufacturer's symbol (e.g. BG stamp 'H4') and a traceability code (2- or 3-digit combination of numbers/letters).

10 Maintenance

10.1 Inspections

Check the hoist chains visually at regular intervals. Visual inspections must focus on the entire length of the chains and also include the concealed inside of the link crowns.

The inspections shall be documented in the respective inspection logs in conjunction with the chain blocks.

An inspection must be performed at minimum once a year or more often if the chains are in heavy-duty service (e.g. multi-shift or automatic operation, recurring hoisting positions, corrosive environment etc.). After three years at the latest the chains must additionally be examined for cracks.

Immediately stop using chain blocks if their hoist chains show the following defects:

- Deformation/elongation (even if only individual chain links are concerned),
- Cuts, notches, cracks, incipient cracks, pinching,
- Chains heated beyond permissible limits,
- Severe corrosion,
- Wear exceeding 10% (e.g. average chain link thickness),
- Pitch enlargement of single chain links by more than 5 %,
- Pitch enlargement over 11 links by more than 2 % for motor- or more than 3 % for hand-operated chain hoists,
- Identification marks are unreadable.

10.2 Repairs

Only use THIELE spare parts. Replace without delay any hoist chains that show signs of damage. Do not repair hoist chains, instead replace complete chain legs only.

10.3 Inspection Service

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

Please do not hesitate to contact us at:

Phone: +49 (0) 2371 / 947 – 0

E-mail: info@thiele.de

The information included in this manual has been carefully checked with respect to correctness and completeness.

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