

Operating instructions for toggle chains **NORM 8 (quality grade 8)**

General principles for using sling gear:

The operating instructions need to be kept together with the certificate and CE conformity declaration.

Falling loads caused by failure and/or incorrect use and handling of sling gear or parts thereof harbour a direct risk for the body and health of persons present in the danger zone of lifting operations.

These operating instructions include advice for the safe use and handling of the sling gear. Before applying the sling gear, the persons required to do so must be instructed in its handling and use by a qualified person.

Principal requirements:

- The load rating (see label) of load handling devices needs to match the load. Load handling devices must not be used if the labelling is lacking or illegible.
- The creation of hazard areas (e.g. crushing zones, shearing points, trapping or impact points) that could obstruct or jeopardize the slinger or transport must be avoided.
- The load's basic material and constructive design must be able to withstand the forces applied without deforming.
- Stresses causing uneven load distribution, e.g. by eccentric force application, need to be considered in the selection of the load handling equipment.
- The potential occurrence of extreme stresses or strong dynamic loads (shock impacts) needs to be considered in the selection of the sling gear and load rating.
- Sling gear must not be used for passenger transport. Persons must keep out of the hazard area of suspended loads at all times.
- Sling gear must not be brought into contact with acid or other aggressive media. Please note that specific production processes can also generate acid fumes.
- Never change sling gear on your own authority (e.g. by milling, welding, bending, attachment of parts)!
- The sling gear must not be exposed to inadmissible temperature conditions.
- Only original replacement parts must be used.
- Relevant additional requirements must be met when transporting hazardous materials.
- Load handling equipment needs to be stored in a manner ensuring that it is protected from damage and will not pose any risks.
- In the event of malfunction, the sling gear needs to be taken out of circulation immediately and serviced.
- Load handling equipment needs to be disposed of appropriately upon meeting discard criteria. Note: Possibly provided pollutants (e.g. grease and oils) must be disposed of separately.

Note: Violation will cause the operating licence to expire.

1. Load rating and temperature usability

Table 1 **NORM 8 (quality grade 8)** load rating/WLL in t as per EN 818

	1 strand	2 x 1 strand	2 x 1 strand	1 strand in V-arrangement	2 strands in V-arrang.	2 strands in V-arrang.
Nom. size						
[mm]	0°	0°-20°	20°-45°	0°-45°	0°-20°	20°-45°
10	2,3	2,3	3,1	2,6	2,6	3,5
13	5,0	5,0	6,8	5,6	5,6	7,6

Careful attention should be paid to the maximum temperature potentially reached by the sling gear in the individual case.

Table 2

Working temperature in °C	WLL NORM 8 (quality grade 8) in %
minus 20° C - plus 100° C	100

2. Assembly of the load handling equipment

The nominal size and quality grade need to be considered in the assembly of chain suspensions. All fully assembled load handling equipment must be labelled in keeping with the European Machinery Directive.

3. Use of the sling chains

The sling chains must only be used in keeping with the requirements of DGUV Regulation 100-500, Chapter 2.8, and/or the respective national regulations.

3.1 Getting started - before first use

Before using the sling gear for the first time, please ensure that

- the sling gear conforms with the order exactly;
- the test certificates are provided (inspection certificate, declaration of conformity, etc.);
- the label information and load rating provided on the sling gear conform with the information provided in the test certificates (see Table 1).

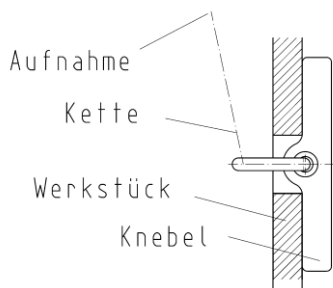
3.2 Load handling

Before every use, the sling gear should be checked for evident damage or signs of wear. If any damage is discovered, please proceed in keeping with the maintenance specifications.

- The weight of the load must be known.
- The load's centre of gravity must be known.
- The chain sling must not be twisted or knotted.
- Chains may be dragged over sharp edges (radius \leq chain diameter). The 20 % reduction in the working load limit is already included.

3.3 General assembly instructions:

- The toggle chain sling used needs to match the size of the provided retainer.
- The toggle and chain need to be threaded through the workpiece to be lifted. Then the toggle needs to be reoriented so that the bar can serve as a support for the workpiece to be lifted. Tighten the chain sling afterwards.
- Loads need to be lifted and transported carefully.
- Loads must be put down stably. Only then may the chain sling with toggle be removed.



Übers.: Retainer Chain Workpiece Toggle

4. Sling gear storage

When not in use, sling gear should be stored on a rack intended for this. It should not be left lying on the ground after use as it could be damaged there. Sling gear that is not expected to be used for a longer period of time should be protected from corrosion.

5. Inspection and maintenance

Before use, sling gear should be regularly checked for appropriate use and perfect condition (e.g. absence of strong corrosion, deformations, etc.), e.g. by the slinger. Faulty sling gear must not be used. It must be inspected in keeping with the applicable standards (incl. EN 818-6) and guidelines (e.g. DGUV regulation 100500) by a qualified person every six months as a minimum. Every 3 years, sling gear needs to be inspected for cracks by a qualified person using appropriate test devices.

The user needs to take risk assessment results into account as required by industrial safety regulations. Intervals are shortened if products are exposed to critical operating conditions. Records of the inspections must be kept.

The test coefficient (see EU Directive 2006/42/EC, section 4.4.1) is prescribed by DIN EN 818ff and/or DIN EN 1677ff.

If the following defects occur, the sling gear needs to be taken out of service immediately for repair:

- Label information on the load rating or for verifying the identity of the sling gear is illegible or lacking.
- Deformations at the suspension, chain or other sling elements (Fig. 1).
- Inadmissible wear or distension of a chain link is for example provided if the nominal inner length is exceeded by 5 %, which equals an outer extension of 3 % (Fig. 2).
- The thickness of a chain link is reduced by > 10 % on average in any place (Fig. 3).
- Clear differences in length between strands used for multi-strand sling chains.
- Toggle wear (thickness reduction) $\geq 5\%$.
- Damages such as: cuts, notches, grooves, linear cracks, excessive corrosion, heat-related discolouration, bent or twisted chain links or other defects.



Fig. 1

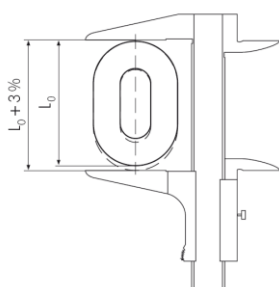


Fig. 2

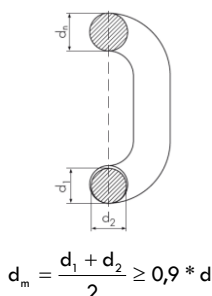


Fig. 3

6. Repair

Repairs must be performed by qualified persons. Chains meeting discard criteria must be replaced. If only a single link of a sling chain meets discard criteria, the entire chain strand must be replaced. Welded sling chains must only be repaired by the manufacturer.

7. Documentation

The records of the regular inspections (section 5) and repair (section 6) need to be documented.

JDT offers professional support for these activities, as well as a PC program, >Sbase<, for digital sling gear documentation and administration.



8. Declaration of Conformity

EG-Konformitätserklärung
EC Conformity Declaration
Déclaration de conformité CE
EG-Konformitätsverklärung
Declaración de conformidad CEE
Dichiarazione di conformità CE
EY-yhdenmukaisuusodistus
EF-Överensstemmelseserklæring
EG-Konformitetsförklaring

Im Sinne der EG Richtlinie Maschinen 2006/42 EG und weiter ergänzender Richtlinien.
As defined by the EC Guideline Machines 2006/42 EC and other complementary guidelines.
Dans le sens des directives CE Machines 2006/42 CE et des directives complémentaires.
Overeenkomstig de EG-richtlijn Machines 2006/42 EG en verdere aanvullende richtlijnen.
Conforme a la Directiva CE de Máquinas 2006/42 CE y otras Directivas suplementarias.
Ai sensi della direttiva CE sulle macchine 2006/42 CE e altre direttive integrative.
Koneista annetun EY-direktiivin 2006/42 EY ja muiden lisädirektiivien tarkoittamassa mielessä.
I overensstemmelse med EF-retningslinje maskiner 2006/42 EF og videre supplerende retningslinjer.
I enlighet med EG:s Maskindirektiv 2006/42 EG samt vidare kompletterande direktiv.

Der Unterzeichnende, bevollmächtigt von der
The undersigned, empowered by
Le sousigné, mandataire de
De ondergetekende, gemachtigde van de firma
El suscrito, autorizado por la
Il sottoscritto, delegato dalla
Allekirjoittanut, yhtiön
Den undertegnede, befuldmægtiget af
förklarar undertecknad, bemyndigad av

J. D. Theile GmbH & Co. KG, Postfach 18 29, D-58213 Schwerte

erklärt, daß das (die) umseitig bezeichnete(n) Anschlagmittel in der von uns in Verkehr gebrachten Ausführung bei bestimmungsgemäßer Benutzung mit den grundlegenden Sicherheits- und Gesundheitsanforderungen übereinstimmen.

declares that sling gear, listed overleaf, conform in its marketed design with the requisite basic safety and health requirement, provided they are used in accordance with their intended purpose.

déclare que le matériel de levage décrit au verso et employé conformément aux prescriptions, dans l'exécution mise en circulation par nos soins, est conforme aux exigences fondamentales de sécurité et de santé.

verklaart dat de op de achterzijde aangegeven aanslagmiddelen in de door ons in het verkeer gebrachte uitvoering bij doelmatig gebruik met de principiële eisen omtrent veiligheid en gezondheid overeenstemmen.

declara que el(los) dispositivo(s) de suspensión mencionado(s) al dorso en la forma lanzada al mercado concuerdan con los requerimientos básicos impuestos a la seguridad y a la salud bajo la condición de una aplicación de acuerdo con los fines previstos.

dichiara che il(i) dispositivo(i) di arresto definito(i) a tergo, nel modello da noi distribuito, se usato(i) nel modo dovuto risponde (rispondono) ai requisiti basilari di sicurezza e sanitari.

valluuttamana vakuuttaa, että kääntöpuolella mainittu/tut kiinnitysväline/et myyntiin tuomassamme muodossa ja sitä/niitä asianmukaisesti käytettynä ovat perustavanlaatuisen turvallisuus- ja terveysvaatimusten kanssa yhdenmukaisia.

erklærer, at det (de) omstående anslagsmidlet (-medler) i den udførelse, som vi har givet den ud, ved bestemmelsens benyttelse stemmer overens med de grundlæggende sikkerheds- og sundhedskrav.

att det (de) på omstående sida uppförda anslagmedlet (-medlen) i det av oss sålunda utförandet vid ändamålsenlig användning överensstämmer med de grundläggande kraven beträffande säkerhet och hälsa.

EG-Richtlinien EG Richtlinien Maschinen geändert durch
EC Guidelines EC Guideline for Machines amended by
Directives CE Directives CE Machines modifiée en
EG-richtlijnen EG-richtlijn machines gewijzigd door
Directivas CEE Directiva CEE "Maquinas" modificada por
Directive CE Direttive CE sulle macchine cambiate con
EY-direktiivit Koneista annetun EY-direktiivi muutettu direktiiveillä
EF-retningslinier EF retningslinje maskiner forandret gennem
EG-Direktiv EG:s Maskindirektiv ändrat genom

2006/42 EG

Harmonisierte Normen
Harmonized standards
Normes harmonisées
Overeenkomstige normen
Normas armonizadas
Norme armonizzate
Harmonisoidut standardit
Harmoniserade normer
Harmoniserade standarder

EN ISO 12100

EN 818-1
EN 818-2
EN 818-3
EN 818-4
EN 818-5
EN 818-6
EN 818-7
EN 1677-1
EN 1677-2
EN 1677-3
EN 1677-4
EN 1677-5
EN 1677-6
EN 13889
EN 13155

Angewendete nationale Normen
Applied national standards
Normes nationales appliquées
Toegepaste nationale normen
Normas nacionales aplicadas
Norme nazionali applicate
Sovelletut kansalliset standardit
Brugte nationale normer
Nationella normer som tillämpats

}	DIN 685-2	DIN 5688-1	DIN 5687-1	DIN 695
	DIN 685-3	DIN 5688-3	PAS 1061	DIN 32891
	DIN 685-4	DIN 5692		DIN 766
	DIN 685-5			DIN 764-1
				DIN 764-2

Aberspach / Qualitätsmanager
Unterschrift

Dokumentationsverantwortlich: R. Aberspach in Fa. J.D.Theile, Letmather Str. 26-45, D-58239 Schwerte

UKCA Declaration of Conformity

The undersigned, empowered by

J.D. Theile GmbH & Co. KG, Postfach 18 29, D-58213 Schwerte, Germany

declares that sling gear, listed overleaf and marked with UKCA, conform in its marketed design with the requisite basic safety and health requirement, provided they are used in accordance with their intended purpose.

Applicable standards :

UK Guideline Supply of Machinery (Safety) regulation 2008

EN BS 818-1 – EN BS 818-7

EN BS 1677-1 – EN BS 1677-6

EN BS 12100

EN BS 13155

EN BS 13889

Schwerte, 2021-11-02



J. D. Theile GmbH & Co. KG
T. Muchowski, Managing Director