

Operating instructions for attachment point "flat point" (FP)

General principles regarding the utilisation of lifting accessories and their components:

The operating instructions are to be stored together with the certificate and the EC declaration of conformity.

The falling of loads, caused by the failure and / or incorrect utilisation and handling of lifting equipment or its individual parts constitutes a direct risk to the life or health of the people who are present in the danger zone of lifting processes.

These operating instructions contain information with regard to the safe utilisation and handling of the lifting accessories and their components. Before using the lifting equipment, the assigned persons are to be briefed with regard to handling and utilisation by a qualified person.

The following principles apply:

- The Working Load Limit (WLL) (see label) of the lifting equipment must correspond to the load. The lifting equipment may not be used if the label is missing or is illegible.
- No danger areas (e.g. crushing points, cutting points, trapping or impact points) may occur that may hinder or endanger the person carrying out the slinging process and / or the transport.
- The base material and the constructive design of the load must be able to hold the applied forces without deformation.
- Stress that leads to a non-uniform load distribution, e.g. which is caused as a result of an off-centre introduction of force must be taken into account when selecting the lifting accessories and their components.
- In the event that extreme stress or strong dynamic strain (shock influences) may occur, this must be taken into account when selecting the lifting equipment and the Working Load Limit (WLL).
- The lifting equipment may not be used for the transportation of persons. No persons are ever permitted to remain present in the danger area of a suspended load.
- The lifting equipment may not come into contact with acids and other aggressive agents. Attention must also be paid to the fact that acid fumes may occur in certain production processes.
- Never make unauthorised amendments to the lifting equipment (e.g. grinding, welding, bending, and attachment of parts)!
- The lifting equipment may not be exposed to any forbidden manipulation of temperature.
- Only original spare parts may be used.
- The relevant additional regulations must be observed when transporting hazardous substances.
- Lifting accessories and their components must be stored in such a manner that they are protected against being damaged and do not cause any danger.
- If damaged, the lifting equipment must be immediately taken out of circulation and has to undergo maintenance work.
- When ready to be discarded, lifting equipment is to be correctly disposed of. Attention: Any substances present that are hazardous to the environment (e.g. greases and oils) are to be disposed of separately.

Inspection and maintenance:

On a regular basis before being used, lifting equipment is to be closely inspected with regard to correct utilisation and faultless condition (e.g. screw fit, absence of strong corrosion and deformation, etc.), for example by the person carrying out the slinging process. Defective lifting equipment may not be used. It has to be tested at least once a year by a qualified person whilst taking the relevant standards and trade association regulations (e.g. DGUV Regel 100-500) into account. Every three years lifting equipment must be tested by a qualified person using a proper testing device in order to check that the product is free of cracks. The user must observe the results of the risk assessment in accordance with the occupational safety directives. The re-testing period is shortened in the event that the products are exposed to critical operating conditions. Inspection records are to be kept.

The testing coefficient (EC-Machinery Directive 2006/42/EC point 4.4.1) is defined according to the respective standards and corresponds to 2.5.

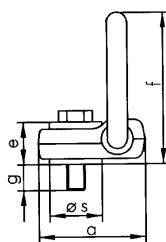
Attention: In the event of violation, the operating permission will become void.

General assembly instructions

The sling points must be easily recognisable on the load (e.g. by means of coloured marking). The >flat points< are to be positioned on the load in such a manner that a flat bearing surface is created that is suitable for lifting the anticipated introduction of force. The bearing surface must at least correspond to the diameter >s< (see Table 1) of the utilised attachment swivel body and the threaded hole must be perpendicular to the bearing surface.

Table 1

Nominal size	Diameter >s<	
FP 0.5 M 10	34	
FP 0.8 M 12	34	
FP 1.5 M 16	34	
FP 2.5 M 20	41	
FP 4-S M 24	41	
FP 4 M 24	58	
FP 5 M 27	58	
FP 6 M 30	58	
FP 8 M 36	58	
FP 10 M 42	90	
FP 15 M 48	90	

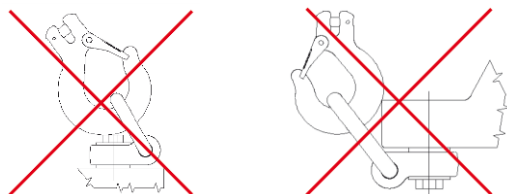


The sling points are to be attached to the load so that:

- They are easily accessible without hindrance in order to attach and release the lifting equipment.
- The slinging equipment will not be diverted by other construction parts and that damage, caused by sharp edges for example, cannot occur.
- The >flat point< may not be rotated whilst under load nor be used in order to turn the load.

Attention: Ensure that the sling link is correctly mounted and positioned.

NOT PERMITTED



The link must be placed in the tensile direction, be able to move freely and may not be supported on edges of the sling point.



When installing a replacement screw, the socket labelling must always point upwards. Insert the screw from above by applying light pressure.

Inspect visually the screw connection paying particular attention to screw size and screw-in length. When dealing with blind holes, the thread depth on the load must be at least 1.1 times of the screw-in length (g). We recommend the following as the minimum screw-in lengths (g):

in steel	1	x d
in cast iron	1.25	x d, in cast iron with strengths < 200 MPa min. 1.5 x d
in aluminium	2.5	x d
in aluminium-magnesium alloys	2	x d

(whereby d = thread size, e.g. when M 24 d = 24 mm)

Only **crack-tested** screws conforming to **strength class 10.9** are to be used. Only thread sizes that are labelled on the construction part may be used. Tighten by hand with a spanner until flush with the bearing surface, e.g. open-ended wrench according to DIN 895 / DIN 894, in the event of a one-off transport procedure. Should the attachment swivel remain in the load on a permanent basis or should it be used to rotate and turn loads, the tightening is to be carried out with a higher tightening torque in accordance with the following Table 3. The tightening torques in the table 3 are reference values. In the event that TP are secured with screw nuts, these nuts must correspond to strength class 10 and be crack-tested.

Working load limit, temperature use and screw tightening torques

When dealing with screws conforming to strength class 10.9, the lifting capacities must be reduced depending upon the working temperatures in accordance with the details contained in Tables 2a and 2b.

Table 2 a: only applies for original JDT screws (catalogue articles):

M10x40; M12x45; M16x55; M20x70; M24x80; M27x90;
M30x90; M36x100

Table 2 b: applies for all special screws not listed in the catalogues and that were provided by JDT.

Working temperature in °C	WLL in %
minus 40°C - minus 20°C	75
minus 20°C - plus 100°C	100
plus 100°C - plus 200°C	85
plus 200°C - plus 250°C	80
plus 250°C - plus 350°C	75
above 350°C	not allowed

Working temperature in °C	WLL in %
minus 20°C - plus 100°C	100
plus 100°C - plus 200°C	85
plus 200°C - plus 250°C	80
plus 250°C - plus 300°C	75
above 300°C	not allowed

The respective working load limits are marked on the "flat point" and are listed in both tabular and graphic form in Table 3. These working load limits may not be exceeded. In case of an asymmetrical load distribution, the working load limit applicable to the 2- to 4- leg sling types is the same as for 1-leg sling type with an inclination angle of 0°. This corresponds to the working load limit marking on the attachment point.

If an attachment point is used for lashing, the permissible lashing force (LC) is 2 x WLL (working load limit).

An attachment point loaded with more than 1 x WLL may no longer be used for lifting!

Table 3

110°
working range



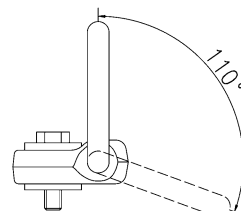
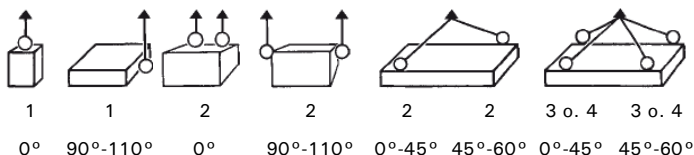
Anschlagart
kind of attachment

Stück / number of pieces

Neigungswinkel
Inclination angle

Bezeichnung
Marking

Anziehdreh-
moment
Tightening
torque



			Anziehdreh- moment Tightening torque	Tragfähigkeit WLL		Tragfähigkeit WLL		Tragfähigkeit WLL		Tragfähigkeit WLL	
			[Nm]	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
FP 0.5	M 10	60	0.5	0.7	1	1.4	0.7	0.5	1	0.7	
FP 0.8	M 12	90	0.8	1.25	1.6	2.5	1.12	0.8	1.6	1.12	
FP 1.5	M 16	160	1.5	2.12	3	4	2	1.5	3.15	2.24	
FP 2.5	M 20	420	2.5	3.55	5	7.1	3.35	2.5	5	3.75	
FP 4-S	M 24	750	4	4	8	8	5.6	4	8	6	
FP 4	M 24	750	4	5.6	8	11.2	5.6	4	8	6	
FP 5	M 27	1000	5.3	7.1	10.6	14	7.1	5.3	11.2	8	
FP 6	M 30	1400	6	8	12	16	8	6	12.5	9	
FP 8	M 36	1800	8	8	16	16	11.2	8	16.8	12	
FP 10	M 42	2000	10	15	20	30	14	10	21.2	15	
FP 15	M 48	2000	15	20	30	40	21.2	15	31.5	22.4	

Application Examples:



Inclination angle 0°-45°




Inclination angle 90°



Translation of the original operating instructions
In case of doubts or misunderstanding, the German version of the document is decisive.

Conformity Declaration



EG-Konformitätserklärung der Fa. JDT

EG-Konformitätserklärung
EC Conformity Declaration
Déclaration de conformité CE
EG-Konformitätsverklaring
Declaración de conformidad CEE
Dichiarazione di conformità CE
EY-yhdenmukaisuustodistus
EF-Överensstemmelseerklæring
EG-Konformitätserklärung
Deklaracja zgodności WE

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.
 Al sensi della direttiva CE sulle macchine 2006/42 CE e altre direttive integrative.
 Koneista annetun EY-direktiivin 2006/42 EY ja muiden lisädirektiivien tarkoitamassa mielessä.
 I overensstemmelse med EF-retningslinje maskiner 2006/42 EF og videre supplerende retningslinjer.
 I enlighet med EG : a Maskindirektiv 2006/42 EG samt vidare kompletterande direktiv.
 W rozumieniu dyrektywy maszynowej WE 2006/42/WE oraz uzupełniających dyrektyw.

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

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 doelmatic gebruik met de principiele 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.
 vakuuttaa, että kääntöpuolella mainittut kiinnitysvälineet myyntiin tuomassamme muodossa ja sitä/nitä asianmukaisesti käytettynä ovat perustavanlaatuisen turvallisuus- ja terveysvaatimusten kanssa yhdenmukaisia.
 erklærer, at det (de) omstændige anslagsmiddel (-midler) 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 anslagsmedlet (-medien) i det av oss sålunda utförandet vid ändamålsenlig användning överensstämmer med de grundläggande kraven beträffande säkerhet och hälsa.
 oświadcza, że wymienione na odwrocie środki mocowania w wersji wprowadzonej przez nas na rynek są zgodne z zasadniczymi wymogami dotyczącymi bezpieczeństwa i ochrony zdrowia w przypadku zastosowania zgodnego z przeznaczeniem.

EG-Richtlinien
EC Guidelines
Directives CE
EG-richtlijnen
Directivas CEE
Directive CE
EY-direktiivit
EF-retningslinier
EG-Direktiv
Dyrektywy EG

} 2006/42 EG

EG Richtlinien Maschinen geändert durch
 EC Guideline for Machines amended by
 Directives CE Machines modifiée en
 EG-richtlijnen machines gewijzigd door
 Directiva CEE "Máquinas" modificada por
 Direttiva CE sulle macchine cambiate con
 Koneista annetun EY-direktiivin muutettu direktiivillä
 EF retningslinje maskiner forandret gennem
 EG-a Maskindirektiv ändrat genom
 Dyrektywy maszynowe EG zmienione w drodze

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

} 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 13155
 EN 13889

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
Stosowane normy krajowe

} 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

Rg If 67
 Aberspach/Qualitätsmanager
 Unterschrift

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