

Operating instructions for attachment point type APH / APZ

General principles for the use of attachment devices:

These operating instructions must be kept together with the certificate and the CE Declaration of Conformity.

The falling of loads caused by the failure and/or incorrect use and handling of attachment devices or their components constitutes a danger to the life or health of people who are present in the danger area during lifting procedures.

These operating instructions contain notes on the safe use and handling of the attachment device. Before using the attachment device, the person assigned to use it must be instructed on its handling and use by a qualified person.

The fundamental rules are:

- The permissible working load limit (see marking) of the load lifting attachment must correspond to the load. The load lifting attachment must not be used if the marking is missing or illegible.
- No hazards (e.g. pinch points, shear points, trapping points or impact points) may be created that could endanger or hamper the rigger and/or the transport.
- The base material and the structural design of the load must be able to absorb the forces to be introduced without deformation.
- Stresses, e.g. due to the off-centre introduction of force leading to uneven load distribution, must be considered when choosing the load lifting attachment.
- If extreme stresses or highly dynamic loads (shock effects) can occur, these must be considered when selecting the attachment device and the working load limit.
- Attachment devices must not be used to transport people. People must never be present in the danger area of the suspended load.
- Attachment devices must not come into contact with acids and other aggressive media. Note that acid fumes can also be released in certain production processes.
- Never make unauthorised modifications to attachment devices (e.g., grinding, bending, attachment of parts)!
- The attachment device must not be exposed to impermissible temperatures.
- The relevant additional regulations must be observed when transporting hazardous goods.
- Load lifting attachments must be stored in such a way that they are protected against damage and cannot cause any hazard.
- In the case of malfunctions, the attachment device must be taken out of operation immediately and serviced.
- Load lifting attachments must be disposed of on reaching the replacement state of wear. Note: any environmentally harmful substances that may be present (e.g. greases and oils) must be disposed of separately.

Inspection and maintenance:

Attachment devices must be visually inspected, e.g. by the rigger, on a regular basis prior to use to ensure that they are used properly and are in perfect condition (e.g. heavy corrosion, deformations, damage, etc.). Faulty attachment devices must not be used. They are to be tested by a qualified person at least once per year, taking into consideration the relevant standards and professional association guidelines (e.g. in Germany DGUV Rule 109-017). JDT recommends checking for freedom from cracks every 3 years by a qualified person using professional test equipment. The user must observe the results of the hazard assessment according to the industrial safety regulations. The time interval is shortened if the products are exposed to critical operating conditions. Records of the inspections must be archived.

The test coefficient (see EU Directive 2006/42/EC point 4.4.1) is specified by the corresponding standards and is equivalent to the factor 2.5 in the case of the APH.

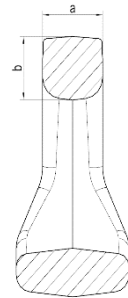
Note: Contravention will result in the operating permit being revoked.



Maximal permissible wear: 5 % (see table 1)

Designation	Max. permissible wear dimension	
	a [mm]	b [mm]
APH 1,6 / APZ 3.200	15,2	14,3
APH 3,2 / APZ 6.400	21,9	19,0
APH 5 / APZ 10.000	25,7	25,7
APH 10 / APZ 20.000	36,1	32,3
APH 20 / APZ 40.000	49,4	37,1
APH 31,5	60,8	46,6

Table 1



General mounting instructions

The following must be observed when mounting the attachment points:

- The mounted attachment points must be easily recognisable (colour markings).
- The contact surface of the attachment points must be flat in order to ensure good force introduction.
- The attachment points should be positioned in such a way that they can be reached easily and without hindrance in order to attach and detach the attachment device.
- The number and positions of the attachment points must be selected so that the load does not unexpectedly change its position during transport.
- When under load, the attachment point must neither be used to rotate the load.

Welding instructions

Welding may only be carried out by welders who are sufficiently qualified according to EN ISO 9606-1 for the welding task to be performed (process, filler material, position).

- The rules and regulations applying to the application case must be complied with.
- In the unregulated area we recommend certification to EN 3834.
- The material of the attachment point to be welded on is 23 MnNiMoCr 5 4 (1.6758) according to DIN 17115 or equivalent.
- We recommend that the specifications of EN 1011 be taken into account.
- **APH / APZ are coated as standard; coatings and dirt in the area of the welding seam must be removed before welding.**
- Weld toes must be executed without notches.
- The suitability of the welding consumable and the execution of the weld must be guaranteed by the manufacturer (of the weld).

Welding consumables for the inert gas shielded arc welding process ISO 4063-135 (MAG):

- according to EN ISO 14341, with a yield strength of 380 MPa (code number ≥ 38) or higher.

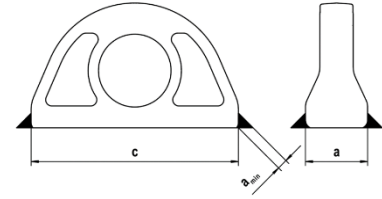
Welding consumables for the arc welding process ISO 4063-111:

- according to EN ISO 2560, with a yield strength of at least 380 MPa (code number ≥ 38).

The use of a different welding process is the responsibility of the user.

Designation	c	a	Fillet weld	Total length	Volume
	[mm]	[mm]	a_{min}	[mm]	[mm ³]
APH 1,6 / APZ 3.200	100	30	4	260	5250
APH 3,2 / APZ 6.400	137	41	6	356	16500
APH 5 / APZ 10.000	172	51	7	446	26920
APH 10 / APZ 20.000	228	70	8	596	46310
APH 20 / APZ 40.000	272	90	12	724	164680
APH 31,5	320	108	15	856	288030

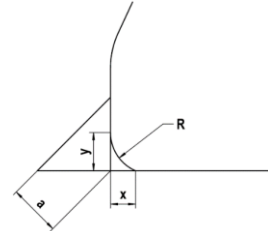
Table 2



Expanded single bevel butt weld with fillet weld

Designation	a	R	x	y
	[mm]	[mm]	[mm]	[mm]
APH 1,6 / APZ 3.200	4	4	2.4	3.7
APH 3,2 / APZ 6.400	6	5	6.2	5.2
APH 5 / APZ 10.000	7	5	6.3	5.2
APH 10 / APZ 20.000	8	6	7.1	6.1
APH 20 / APZ 40.000	12	--	11	11
APH 31,5	15	--	13	13

Table 3



Working load limit

The corresponding working load limits are stamped on the attachment point and are listed below in tabular and graphic form (Tables 4 and 5). They must not be exceeded. In the case of asymmetrical load distribution, the working load limits are the same for the 2- to 4-leg attachment methods as for single-leg under an angle of inclination of 90° or the nominal working load limit. This corresponds to the working load limit specified on the attachment point.

APZ attachment points are designed only for lashing. If APH are used for lashing, they may no longer be used for lifting afterwards.

The APH / APZ may be loaded in all directions. If loaded in the longitudinal direction (fig. 1), the higher working load limits in brackets apply to the APH.

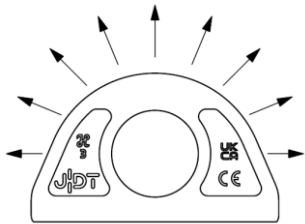


Fig. 1 – Loading in the longitudinal direction (values in brackets in Table 4)

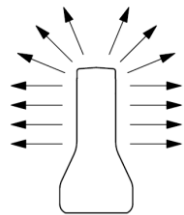


Fig. 2 – Loading in the transverse direction

Anschlagart kind of attachment	1		2		2		3 o. 4	
	0°	90°	0°	90°	0°-45°	45°-60°	0°-45°	45°-60°
Stück / number of pieces	1	1	2	2	2	2	3 o. 4	3 o. 4
Neigungswinkel Inclination angle	0°	90°	0°	90°	0°-45°	45°-60°	0°-45°	45°-60°
Bezeichnung Code	Tragfähigkeit WLL		Tragfähigkeit WLL		Tragfähigkeit WLL		Tragfähigkeit WLL	
	[t]	[t]	[t]	[t]	[t]	[t]	[t]	[t]
APH 1,6	4	1.6 (4)	8	3.2 (8)	2.2 (5.6)	1.6 (4)	3.4 (8.4)	2.4 (6)
APH 3,2	9	3.2 (9)	18	6.4 (18)	4.5 (12.6)	3.2 (9)	6.7 (18.9)	4.8 (13.5)
APH 5	12	5 (12)	24	10 (24)	7 (16.8)	5 (12)	10.5 (25.2)	7.5 (18)
APH 10	20	10 (20)	40	20 (40)	14 (28)	10 (20)	21.2 (42)	15 (30)
APH 20	32	20 (32)	64	40	28	20	42	30
APH 31,5	40	31.5 (40)	80	63	45	31.5	67	47.5

Table 4

Lashing capacity (LC)		
Designation Code	[daN]	
APZ 3.200	3,200	
APZ 6.400	6,400	
APZ 10.000	10,000	
APZ 20.000	20,000	
APZ 40.000	40,000	

Table 5

Heat treatment

After welding on, the JDT APH and APZ attachment points can be relaxed once without load, at maximally 600 °C, for maximally one hour. The full working load limit is still ensured after cooling to room temperature.

Temperature usability

The maximum temperature that the attachment device can accept in the individual case should be carefully observed. The influence of higher temperatures on the working load limit (WLL) of the attachment device is specified in Table 6 below:

Table 6

<u>Operating temperature in °C</u>	<u>WLL in %</u>
minus 40 °C - plus 200 °C	100
plus 200 °C - plus 300 °C	90
plus 300 °C - plus 400 °C	75
over 400 °C	not permissible



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

Declaration of conformity

EG-Konformitätserklärung der Fa. JDT

EG-Konformitätserklärung
 EC Conformity Declaration
 Déclaration de conformité CE
 EG-Conformiteitsverklaring
 Declaración de conformidad CEE
 Dichiarazione di conformità CE
 EY-yhdenmukaisuustodistus
 EF-Overensstemmelseerklæring
 EG-Konformitetsförklaring
 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.
 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-retningslinie maskiner 2006/42 EF og videre supplerende retningslinier.
 I enlighet med EG : s 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/Allekirjoittanut, yhtiön/Den undertegnede, befuldmægtiget af/förklarar undertecknad, bemyndigad av
 Niżej 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 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.
 valtuuttamana 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) 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 omständige sida uppförda anslagmedlet (-medlen) i det av oss sålda 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
 Direttive CE
 EY-direktiivit
 EF-retningslinier
 EG-Direktiv
 Dyrektywy EG

EG Richtlinien Maschinen geändert durch
 EC Guideline for Machines amended by
 Directives CE Machines modifiées en
 EG-richtlijn machines gewijzigd door
 Directiva CEE 'Maquinas' modificada por
 Direttive CE sulle macchine cambiate con
 Koneista annettu EY-direktiivi muutettu direktiiveillä
 EF retningslinie maskiner forandret gennem
 EG:s Maskindirektiv andrat genom
 Dyrektywy maszynowe EG zmienione w drodze

2006/42 EG

Harmonisierte Normen
 Harmonized standards
 Normes harmonisées
 Overeenkomstige normen
 Normas armonizadas
 Norme armonizzate
 Harmonisoidut standardit
 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
 DIN 685-5

R. Aberspach
 Leitung Qualitätswesen

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
 BS EN 818-1 - BS EN 818-7
 BS EN 1677-1 - BS EN 1677-6
 BS EN ISO 12100 / BS EN 13155 / BS EN 13889

T. Muchowski
 Managing Director

Rev.1