PowerPoint®
PP-S / PP-B / PP-VIP

Safety instructions

This safety instruction has to be kept on file for the whole lifetime of the product and forwarded with the product.

Translation of the Original instructions

OA 1951040
Sicherheit geprüft
tested safety
dguv.de/pruefzeichen

RUD®

Evers ... sichert Produktwerte

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RUD-Art.-Nr.: 8502206 - EN / V05 / 02.025

lifting Points for bolting double ballbearing
PP-S / PP-B / PP-VIP

EN

RUD®

EG-Konformitätserklärung

entsprechend der EG-Maschinenrichtlinie 2006/42/EG, Anhang II A und ihren Änderungen

Hersteller: **RUD Ketten**
Rieger & Dietz GmbH u. Co. KG
Friedensinsel
73432 Aalen

Hiermit erklären wir, dass die nachfolgend bezeichnete Maschine aufgrund ihrer Konzipierung und Bauart, sowie in der von uns in Verkehr gebrachten Ausführung, den grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Maschinenrichtlinie 2006/42/EG sowie den unten aufgeführten harmonisierten und nationalen Normen sowie technischen Spezifikationen entspricht.
Bei einer nicht mit uns abgestimmten Änderung der Maschine verliert diese Erklärung ihre Gültigkeit.

Produktbezeichnung: Anschlagpunkt PowerPoint
PP / WPP / WPPH

Folgende harmonisierten Normen wurden angewandt:

DIN EN 1677-1 : 2009-03 | DIN EN 1677-4 : 2009-03
DIN EN ISO 12100 : 2011-03

Folgende nationalen Normen und technische Spezifikationen wurden außerdem angewandt:

DGUV-R 109-017 : 2020-12

Für die Zusammenstellung der Konformitätsdokumentation bevollmächtigte Person:
Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 15.04.2021 Hermann Kolb, Bereichsleitung MA

Name, Funktion und Unterschrift Verantwortlicher

RUD®

EC-Declaration of conformity

According to the EC-Machinery Directive 2006/42/EC, annex II A and amendments

Manufacturer: **RUD Ketten**
Rieger & Dietz GmbH u. Co. KG
Friedensinsel
73432 Aalen

We hereby declare that the equipment sold by us because of its design and construction, as mentioned below, corresponds to the appropriate, basic requirements of safety and health of the corresponding EC-Machinery Directive 2006/42/EC as well as to the below mentioned harmonized and national norms as well as technical specifications.
In case of any modification of the equipment, not being agreed upon with us, this declaration becomes invalid.

Product name: Lifting point PowerPoint
PP / WPP / WPPH

The following harmonized norms were applied:

DIN EN 1677-1 : 2009-03 | DIN EN 1677-4 : 2009-03
DIN EN ISO 12100 : 2011-03

The following national norms and technical specifications were applied:

DGUV-R 109-017 : 2020-12

Authorized person for the configuration of the declaration documents:
Michael Betzler, RUD Ketten, 73432 Aalen

Aalen, den 15.04.2021 Hermann Kolb, Bereichsleitung MA

Name, function and signature of the responsible person

Before every use, please read the Safety Instruction of the Power-Point® carefully and make sure that you understand all substance.
Improper use or care of this eyebolt can result in bodily injury or property damage and eliminates any warranty!

1 Application and warning information

WARNING
Improper assembled or damaged PowerPoint® and inappropriate use can result in deadly injury or lead to heavy injuries and property damage when load drops.
Inspect the PowerPoint® before each use carefully!
The main body of the PowerPoint® may only be converted to the PP-S, PP-B and PP-VIP variants in direct connection (with clevis pin (VG-pin) and clamping pin) using the corresponding combination parts from RUD.

- Keep all body parts like fingers, hands, arms, etc. out of the hazardous area during the lifting operation.
- The PowerPoint® must only be used by competent and trained people with adequate knowledge respecting DGUV 109-017 requirements, and outside Germany the corresponding country specific requirements must be utilised.
- Do not exceed the working load limit (WLL) indicated on the lifting point.
- Continuous rotary movement under load is not permissible. RUD PowerPoint® can be rotated 90° to the bolt-in direction under nominal load capacity.
- The PowerPoint® load rings have to be rotatable by 360° when securely screwed in.
- Any combinations with eye and chain components which are not from RUD is prohibited. These combinations are not designated and can lead to component failure.

HINT
For the user it is forbidden to disassemble the ball bearing.

- No technical alterations must be implemented on the PowerPoint®.
- No people may stay in the danger zone.
- Jerky lifting (strong impacts) should be prevented.
- Always ensure a stable position of the load when lifting. Swinging must be prevented.
- Damaged or worn PowerPoint® must never be utilised.

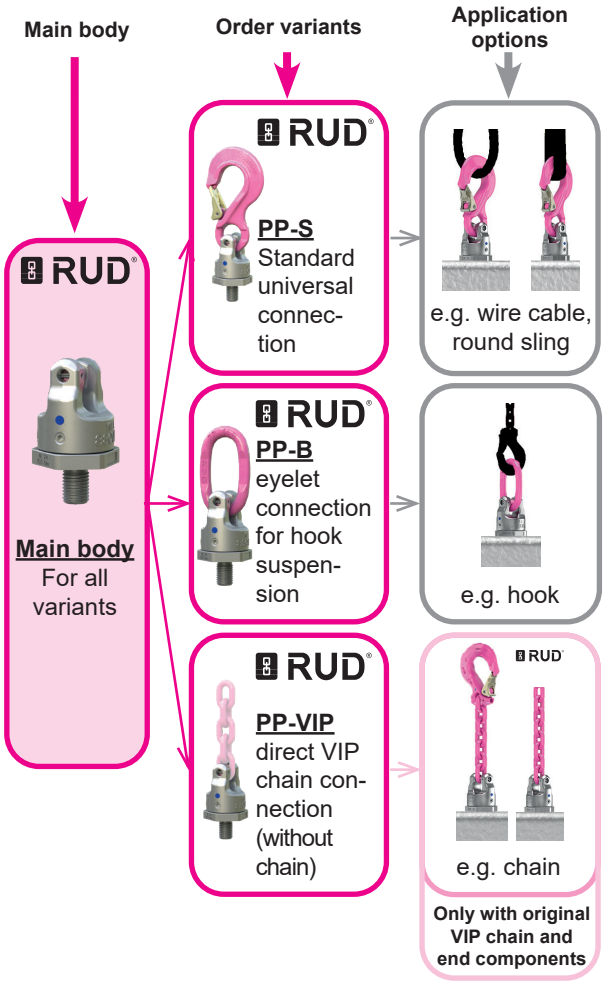
2 Intended use of PowerPoint®

PowerPoint® Lifting Points must only be used for lifting of loads and for the total WLL according to the stated inclination angles.
Turning and rotating of loads is permitted due to the ball bearing. Permanent-turning under load is not permitted.
The PowerPoint® must only be used in the hereby specified application.

3 Versions

The RUD PowerPoint® can be ordered in the following variants (see *Pic. 1 - centre):*

- **PP-S**: with standard universal connection / hook
- **PP-B**: with eye connection for hook suspension/oval link
- **PP-VIP**: with direct VIP chain connection (without chain)



Pic. 1: Main body PP-S / PP-B / PP-VIP in modular kit

WARNING
The main body of the PowerPoint® may only be converted to the PP-S, PP-B and PP-VIP variants in direct connection (with clevis pin (VG-pin) and clamping pin) using the corresponding combination parts from RUD.
The assembly of combination parts with VG-pins and clamping pins that are not specified by RUD is prohibited. Installation and use with other components is not compatible with the PowerPoint® and can lead to component failure.
The PowerPoint® in combination with a hook or eye can be used with all standard lifting means without an additional connecting element (see Pic. 1 - right) Only lifting means with the matching WLL may be combined.

- The PowerPoint® versions are available with different thread lengths (refer to separat Safety instrucion Sp-PP) and have partially reduced WLL. Please note component markings. The assembly of components must only be carried out by RUD or by authorised specialists. For the user it is forbidden to disassemble the ball bearing.

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4 Installation information

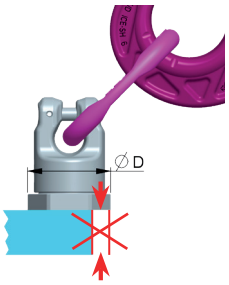
4.1 General information

- Effect of temperature:
  Due to the greasing (inside the ball bearing) we recommend to use PowerPoint®-versions not in overheated areas. If this cannot be avoided please take the reduced WLL into consideration:
  -40° up to 200°C: no reduction
  200° up to 300°C: minus 10 % (392°F up to 572°F)
  300° up to 400°C: minus 25 % (572°F up to 752°F)
  Temperatures above 400°C (752°F) are not allowed.
  Please pay attention when using DIN EN 7042 (DIN 980) nuts the max. operation temperature of 150°C (acc. to DIN EN ISO 2320).
- RUD lifting points must not be used under chemical influences such as acids, alkaline solutions and vapours e.g. in pickling baths or hot dip galvanising plants. If this cannot avoided, please contact the manufacturer indicating the concentration, period of penetration and temperature of use.
- The special fluorescent pink powder coating of the fittings permanently changes its colour during the use in higher temperatures areas. A deep black colour indicates the use beyond 400°C.

HINT
Once used in temperature >400°C (black colour occurs on the chain) any further usage is forbidden. The quality grade of the chain is no longer be given.

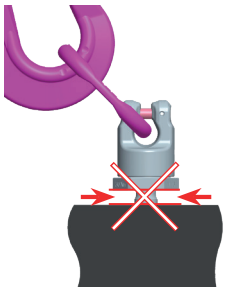
4.2 Assembly information

1. The material construction to which the lifting point will be attached should be of adequate strength to withstand forces during lifting without deformation. The German testing authority BG, recommends the following minimum for the bolt lengths:
   1 x M in steel (min. quality S235JR [1.0037])
   1.25 x M in cast iron (e.g. GG25)
   2 x M in aluminium
   2.5 x M in aluminium-magnesium alloys
   (M = thread Ø, e.g. M 20)
2. When lifting light metals, nonferrous metals and gray cast iron the thread has to be chosen in such a way that the WLL of the thread corresponds to the requirements of the corresponding base material.
3. The lifting points must be positioned to the load in such a way that movements are avoided during lifting.
   - **For single leg lifts,** the lifting point should be vertically above the centre of gravity of the load.
   - **For two leg lifts**, the lifting points must be equidistant to/or above the centre of gravity of the load.
   - **For three and four leg lifts**, the lifting points should be arranged symmetrical around the centre of gravity, in the same plane if possible.
4. A plane bolt-on surface (with a minimum ØD) with a perpendicular machined thread hole must be given. The thread has to be machined acc. to DIN 76 (counterbore diameter at the max. 1.05xd).



Pic. 2: Thread of the PP must be completely engaged and the lifting point must be installed full-faced. (The diameter of the bearing surface must be ≥ D)

5. Thread holes must be machined deep enough that the supporting area of the lifting point bears. Machine through holes up to DIN EN 20273-middle (Md, compare *Table 3*).



Pic. 3: PP must have been fully bolted in.

6. The position where the lifting points should be attached should be clearly marked with colour.
7. Load symmetry:
   The required WLL of the individual RUD lifting point are calculated using the following formula and are based on symmetrical loading:

$$W_{LL} = \frac{G}{n \times \cos ß}$$

WLL = working load limit / capacity of each lifting point
G = load weight (kg)
n = number of load bearing legs
ß = angle of inclination of the chain to the vertical

The calculation of the load bearing legs is a s follows:

	symmetrical
two leg	2
three / four leg	3

Table 1: also refer to Table 4

HINT
At unsymmetrical loads, even if several lifting points are used, the WLL of a single lifting point must be at least equal to the load weight or ask the manufacturer.

8. Due to the ball bearing, for a single use, it is sufficient to tighten by hand with a spanner, without using an extension. For long term application the PowerPoint® should be tightened with torque according *Table 3* (± 10 %).
9. All fittings connected to the PowerPoint®-versions should be free moving. Also the assembled components on the PowerPoint® must be free moveable and should not used over sharp corners.

HINT
To prevent unintended dismounting through shock loading, rotation or vibrations thread locking devices are recommended. Therefore different locking systems are possible. Liquid locking fluid such as Loctite (respect manufacturer specifications) or form closed versions such as hex castel nut, counter nut, etc.

10. For lifting points which remains on the construction we basically recommend to secure with liquid locking device and tighten with torque.
11. If the lifting points are used **exclusively** for lashing the value of the working load limit can be doubled: LC = 2 x WLL

HINT
If the PowerPoint® is/was used as a lashing point, with a force higher than the WLL, it must not be used as a lifting point afterwards.
If the PowerPoint® is/was used as a lashing point, up to the WLL only, it can still be used afterwards as a lifting point.

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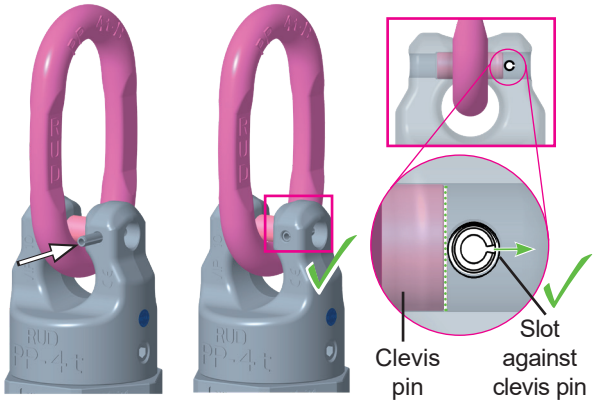
12. The PowerPoint® must not be loaded with the Manufacturing Proof Force MPF (2.5 x WLL). Should at the production of lifting means or similar products, a singular proof loading be necessary, please ask RUD in advance.
13. Mount the clamping pin to secure the clevis pin in such a way in the clevis that the slot of the clamping sleeve is opposite the clevis pin system.



Pic. 4: Assembly clamping pin

HINT
• VG-Pin/clevis pin must be assembled captive with a clamping pin in the step hole.
• Use clamping pin only once.
• Use only original RUD spare parts.

Size	VG-pin	clamping pins	Ref.-No.
VIP 4	10 pieces	10 pieces	7985638
VIP 6	10 pieces	10 pieces	7985639
VIP 8	10 pieces	10 pieces	7985640
VIP 10	10 pieces	10 pieces	7985641
VIP 13	10 pieces	10 pieces	7985642
VIP 16	4 pieces	4 pieces	7985643
VIP 28	1 piece	1 piece	7900708

Table 2: Content per RUD-spare-parts-set VG-pins / clamping pins

14. Finally check after the installation the ongoing ability of the lifting point by a competent person (see chapter *5 Inspection / Repair / Disposal*).

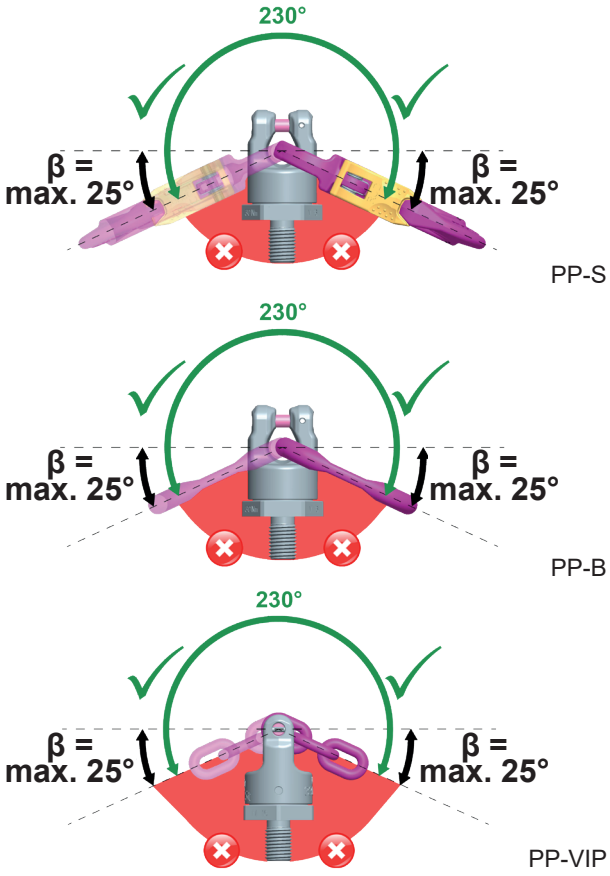
4.3 User information

- Before installation and every use, inspect visually RUD lifting points, paying particular attention to any evidence of corrosion, wear, weld cracks and deformations. Please ensure compatibility of bolt thread and tapped hole (see chapter *5 Inspection / Repair / Disposal*).

WARNING
Improper assembled or damaged PowerPoint® and inappropriate use can result in deadly injury or lead to heavy injuries and property damage when load drops.
Inspect the PowerPoint® before each use carefully!

- RUD components are designed according to DIN EN 818 and DIN EN 1677 for a dynamic load of 20,000 load cycles.
  - Keep in mind that several load cycles can occur with a lifting procedure.
  - Keep in mind that, due to the high dynamic stress with high numbers of load cycles, that there is a danger that the product will be damaged.
  - The BG/DGUV recommends: For higher dynamic loading with a high number of load cycles (continuous operation), the working load stress must be reduced according to the driving mechanism group 1Bm (M3 in accordance with DIN EN 818-7). Use a lifting point with a higher working load limit.
- When connecting and disconnecting the lifting means (wire ropes, chain slings, round slings) pinches and impacts should be avoided. Damage of the lifting means caused by sharp corners should be avoided as well.
- Before lifting the hooks must be installed without twists in the direction of pull.
- VIP Oval-link/hook/chain of the adjusted PP can be pivot by 230° (*Pic. 5*).
- To guarantee the WLL and the function (compare *Table 4*), the inclination angle of the VIP Oval-link/hook/chain must not exceed 25° when lifting point is attached from the side (compare *Pic. 5*).

ATTENTION
VIP Oval-link*/hook/chain resp. the attached lifting mean must be free moveable in the PP and must neither have support at the load edge nor at the bottom part of the PP.*



Pic. 5: Pivoting area / Loading area
β = max. 25° negative angle

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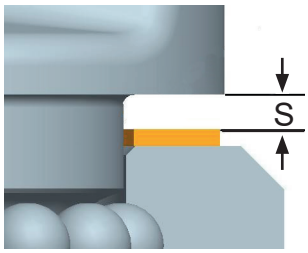
5 Inspection / Repair / Disposal

5.1 Hints for periodical inspections

The operator must determine and specify the nature and scope of the required tests as well as the periods of repeating tests by means of a risk assessment (see sections *5.2 and 5.3*).
The continuing suitability of the lifting point must be checked at least 1x year by an expert.
Depending on the usage conditions, f.e. frequent usage, increased wear or corrosion, it might be necessary to check in shorter periods than one year.
The inspection has also to be carried out after accidents and special incidents.
The operator must specify the test cycles.

5.2 Test criteria for the regular visual inspection by the user

- Ensure correct bolt size, quality and length
- Ensure compatibility of bolt thread and tapped hole - control of the torque
- The lifting point should be complete
- The WLL, thread size, batch code and manufacturers stamping should be clearly visible on the lifting point.
- Deformations of the components parts such as body, fittings and thread.
- Mechanical damages such as notches, especially in high stress areas.
- The upper fork head part of the PowerPoint®-versions must rotate smoothly.
- The maximum gap „S“ between upper- and lower part of the PowerPoint® must not be exceeded (*Pic. 6*):
  - PP-..-0.63 t (0,6) up to PP-..-2.5 t max. 1.5 mm
  - PP-..-3.5 t (4) up to PP-..-8 t (10) max. 2.5 mm



Pic. 6: Distance between upper and base part

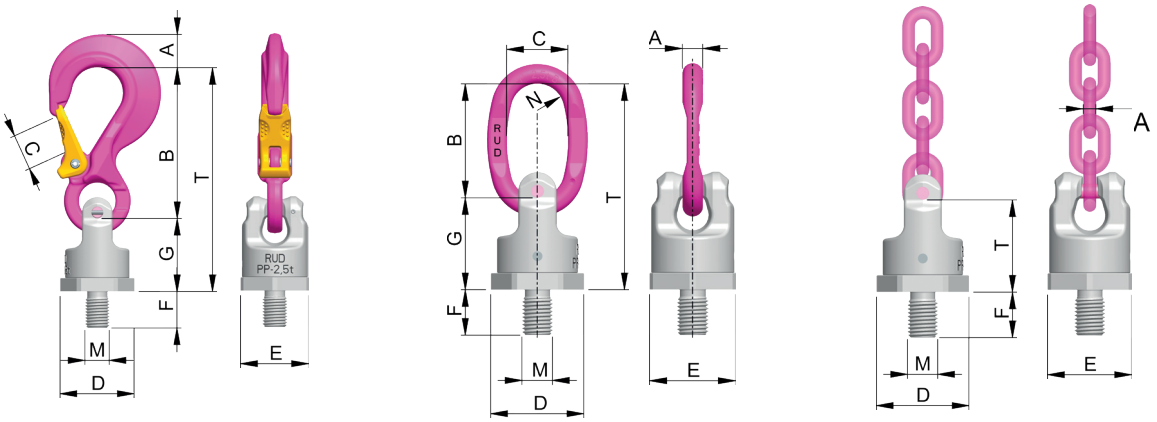
5.3 Additional test criteria for the competent person / repair worker

- Wear should be not more than 10 % of cross sectional diameter.
- Evidence of corrosion.
- Damage to the bolt and/or thread
- further checks may be required, depending on the result of the risk assessment (e.g. testing for cracks in load-bearing parts).

5.4 Disposal

Dispose worn out components / attachments or packaging according to the local waste removal requirements.

HINT
Translation of the original instruction manual
In case of doubts or missunderstandings, the German version of the document is decisive.



PP-S **PP-B** **PP-VIP**

Pic. 7: Dimensioning

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Type		thread	WLL [t] (lbs)	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	M [mm]	Md [mm]	G [mm]	T [mm]	poids [kg/pc.]	torque	Ref-no.
PP-S (hook)	VIP 4 PP-S 0,63 t	M12	0,63 (1385)	13 1/2"	75 2 15/16"	18 23/32"	40 1 9/16"	36 1 13/32"	18	12	13,5	41 1 5/8"	116 4 9/16"	0,4	10 Nm	7990719
		1/2"-13UNC							up to 18	on request**						8600581
		Vario														
	VIP 6 PP-S 1,5 t	M16	1,5 (3300)	20 25/32"	97 3 13/16"	25 1"	46 1 13/16"	41 1 5/8"	24	16	17,5	49 2"	146 5 3/4"	0,9	30 Nm	7989719
		5/8"-11UNC							up to 24	on request**						8600582
		Vario														
	VIP 8 PP-S 2,5 t	M20	2,5 (5500)	28 1 1/8"	126 5"	30 1 3/16"	61 2 13/32"	55 2 5/32"	30	20	22	61 2 13/32"	187 7 3/8"	1,8	70 Nm	7989075
		3/4"-10UNC							up to 30	on request**						8600583
		7/8"-9UNC														
		Vario														
	VIP 10 PP-S 4 t	M24	4,0 (8800)	36 1 13/32"	150 5 7/8"	35 1 3/8"	78 3"	70 2 3/4"	36	24	26	77 3"	277 8 15/16"	3,5	150 Nm	7989076
		1"-8UNC							up to 36	on request**						8600584
		Vario														
	VIP 13 PP-S 5 t	M30	5,0 (11.000)	37 1 7/16"	174 6 7/8"	40 1 9/16"	95 3 3/4"	85 3 11/32"	45	30	33	93 3 5/8"	267 10 1/2"	7,2	225 Nm	7989720
		1 1/4"-7UNC							up to 45	on request**						8600585
		Vario														
	VIP 16 PP-S 8 t	M36	8,0 (17.600)	49 1 15/16"	208 8 3/16"	48 1 7/8"	100 3 15/16"	90 3 9/16"	54	36	39	102 4"	310 12 3/16"	9,2	410 Nm	7989077
		1 1/2"-6UNC							up to 300	on request**						8600526
		Vario														
PP-B (ring)	VIP 4 PP-B 0,63 t	M12	0,63 (1385)	9 3/8"	65 2 9/16"	35 1 3/8"	40 1 9/16"	36 1 13/32"	18	12	13,5	41 1 5/8"	106 4 1/8"	0,35	10 Nm	7989522
		1/2"-13UNC							up to 18	on request**						8600591
		Vario														
	PP-B 1 t	1 1/8"-12UNF	1,0 t (2200)	3/4"	5 1/8"	2 3/8"	3 3/4"	3 11/32"	1 1/8"	1 1/8"	31	3 5/8"	8 3/4"	6,3	225 Nm	7909700
	VIP 6 PP-B 1,5 t	M16	1,5 (3300)	11 7/16"	65 2 9/16"	35 1 3/8"	46 1 13/16"	41 1 5/8"	24	16	17,5	49 2"	114 4 1/2"	0,6	30 Nm	7989523
		5/8"-11UNC							up to 24	on request**						8600592
		Vario														
	VIP 8 PP-B 2,5 t	M20	2,5 (5500)	13 1/2"	74 2 7/8"	40 1 19/16"	61 2 13/32"	55 2 5/32"	30	20	22	61 2 13/32"	136 5 15/16"	1,1	70 Nm	7989081
		3/4"-10UNC							up to 30	on request**						8600593
		7/8"-9UNC														
		Vario														
	VIP 10 PP-B 4 t	M24	4,0 (8800)	16 5/8"	95 3 3/4"	45 1 3/4"	78 3"	70 2 3/4"	36	24	26	77 3"	172 6 3/4"	2,4	150 Nm	7989082
		1"-8UNC							up to 36	on request**						8600594
		Vario														
	VIP 13 PP-B 5 t	M30	5,0 (11.000)	19 3/4"	130 5 1/8"	60 2 3/8"	95 3 3/4"	85 3 11/32"	45	30	33	93 3 5/8"	223 8 3/4"	5,2	225 Nm	7989524
		1 1/4"-7UNC							up to 45	on request**						8600595
		Vario														
	VIP 16 PP-B 8 t	M36	8,0 (17.600)	24 15/16"	140 5 1/2"	65 2 9/16"	100 3 15/16"	90 3 9/16"	54	36	39	102 4"	242 9 1/2"	6,3	410 Nm	7989083
		1 1/2"-6UNC							up to 300	on request**						8600566
		Vario														
PP-VIP (chain connection)*	VIP 4 PP-VIP 0,63 t	M12	0,63 (1385)	4 5/32"	--	--	40 1 9/16"	36 1 13/32"	18	12	13,5	--	41 1 5/8"	0,25	10 Nm	7989525
		1/2"-13UNC							up to 18	on request**						8600571
		Vario														
	VIP 6 PP-VIP 1,5 t	M16	1,5 (3300)	6 15/64"	--	--	46 1 13/16"	41 1 5/8"	24	16	17,5	--	49 2"	0,42	30 Nm	7989526
		5/8"-11UNC							1"	5/8"	17,5					7989921
		Vario							up to 24	on request**						8600572
	VIP 8 PP-VIP 2,5 t	M20	2,5 (5500)	8 5/16"	--	--	61 2 13/32"	55 2 5/32"	30	20	22	--	61 2 13/32"	0,95	70 Nm	7989527
		3/4"-10UNC							up to 30	on request**						8600573
		7/8"-9UNC														
		Vario														
	VIP 10 PP-VIP 4 t	M24	4,0 (8800)	10 3/8"	--	--	78 3"	70 2 3/4"	36	24	26	--	77 3"	2,2	150 Nm	7989528
		1"-8UNC							up to 36	on request**						8600574
		Vario														
	VIP 13 PP-VIP 5 t	M30	5,0 (11.000)	13 1/2"	--	--	95 3 3/4"	85 3 11/32"	45	30	33	--	93 3 5/8"	3,5	225 Nm	7989529
		1 1/4"-7UNC							up to 45	on request**						8600575
		Vario														
	VIP 16 PP-VIP 8 t	M36	8,0 (17.600)	16 5/8"	--	--	100 3 15/16"	90 3 9/16"	54	36	39	--	102 4"	5,2	410 Nm	7989530
		1 1/2"-6UNC							up to 300	on request**						8600305
		Vario														
	VIP 28 PP-VIP 31,5 t	M72	31,5 (69.300)	28 1 1/8"	--	--	160 6 11/16"	145 5 3/4"	108	72	78	--	146 5 3/4"	26,4	1200 Nm	7903437
		Vario							up to 300	on request**						8600239

*Table 3: Dimensioning * Only for original VIP's chain || ** on request | Subject to technical alterations*

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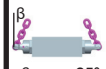
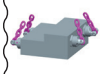
Method of lift										
Lifting from the side	**Attention, when lifting point is attached to the side the max. inclination angle ß can only be 25° / resp. until lifting means touches load (compare chapter *4.3*)!**				 β max. 25°			β max. 25°		
Number of legs	1	1	2	2	2	2	2	3 & 4	3 & 4	3 & 4
Angle of inclination <ß	0-7°	90°	0-7°	90°	0-45°	45-60°	unsymm.	0-45°	45-60°	unsymm.
Factor	1	1	2	2	1,4	1	1	2,1	1,5	1
Type	**Max. weight of load >G< in metric tons for all PowerPoint types with different sling methods**									
PP- .. - 0,63t - M12 **PP- .. - 1/2“-13UNC**	**0,63 t** (1385 lbs)	**0,63 t** (1385 lbs)	**1,26 t** (2770 lbs)	**1,26 t** (2770 lbs)	**0,88 t** (1940 lbs)	**0,63 t** (1385 lbs)	**0,63 t** (1385 lbs)	**1,32 t** (2900 lbs)	**0,95 t** (2080 lbs)	**0,63 t** (1385 lbs)
PP-B-1,0t-1 1/8“-12UNF	**1,0 t** (2200 lbs)	**1,0 t** (2200 lbs)	**2,0 t** (4400 lbs)	**2,0 t** (4400 lbs)	**1,4 t** (3080 lbs)	**1,0 t** (2200 lbs)	**1,0 t** (2200 lbs)	**2,1 t** (4620 lbs)	**1,5 t** (3300 lbs)	**1,0 t** (2200 lbs)
PP- .. - 1,5t - M16 **PP- .. - 5/8“-11UNC**	**1,5 t** (3300 lbs)	**1,5 t** (3300 lbs)	**3,0 t** (6600 lbs)	**3,0 t** (6600 lbs)	**2,1 t** (4620 lbs)	**1,5 t** (3300 lbs)	**1,5 t** (3300 lbs)	**3,15 t** (6930 lbs)	**2,25 t** (4950 lbs)	**1,5 t** (3300 lbs)
PP- .. - 2,5t - M 20 **PP- .. - 3/4“-10UNC** **PP- .. - 7/8“-9UNC**	**2,5 t** (5500 lbs)	**2,5 t** (5500 lbs)	**5,0 t** (11000 lbs)	**5,0 t** (11000 lbs)	**3,5 t** (7700 lbs)	**2,5 t** (5500 lbs)	**2,5 t** (5500 lbs)	**5,25 t** (11550 lbs)	**3,75 t** (8250 lbs)	**2,5 t** (5500 lbs)
PP- .. - 4t - M 24 **PP- .. - 1“-8UNC**	**4,0 t** (8800 lbs)	**4,0 t** (8800 lbs)	**8,0 t** (17600 lbs)	**8,0 t** (17600 lbs)	**5,6 t** (12320 lbs)	**4,0 t** (8800 lbs)	**4,0 t** (8800 lbs)	**8,4 t** (18480 lbs)	**6,0 t** (13200 lbs)	**4,0 t** (8800 lbs)
PP- .. - 5t - M 30 **PP- .. - 1 1/4“-7UNC**	**6,7 t** (14750 lbs)	**5,0 t** (11000 lbs)	**13,4 t** (29500 lbs)	**10,0 t** (22000 lbs)	**7,0 t** (15400 lbs)	**5,0 t** (11000 lbs)	**5,0 t** (11000 lbs)	**10,5 t** (23100 lbs)	**7,5 t** (16500 lbs)	**5,0 t** (11000 lbs)
PP- .. - 8t - M 36 **PP- .. - 1 1/2“-6UNC**	**10,0 t** (22000 lbs)	**8,0 t** (17600 lbs)	**20,0 t** (44000 lbs)	**16,0 t** (35200 lbs)	**11,2 t** (24620 lbs)	**8,0 t** (17600 lbs)	**8,0 t** (17600 lbs)	**16,8 t** (36960 lbs)	**12,0 t** (26400 lbs)	**8,0 t** (17600 lbs)
	EN: At a lift with one strand and two parallel strands where the inclination angles are at the max.± 7°, the lifting methode can be assumed as a vertical lift.				**EN:** When lifting with two, three or four leg lifting means, inclination angles of less than 15° shall be avoided, if possible (Risk of instability).					

Table 4: WLL overview

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