RUD®

SHERIFF APPROVED.
INDUSTRY PROVEN.

Lifting points that work
as hard as you do.

Available at: CALDWELL LIFTING SOLUTIONS

THE NEW **SHERIFF IN TOWN.**

Our Sheriff of Heavy Lifting symbolizes the reliability and expertise of RUD products and services. He's your trusted partner for all lifting needs – helping you choose the right lifting point, tackle complex tasks, and ensure fast, efficient delivery.

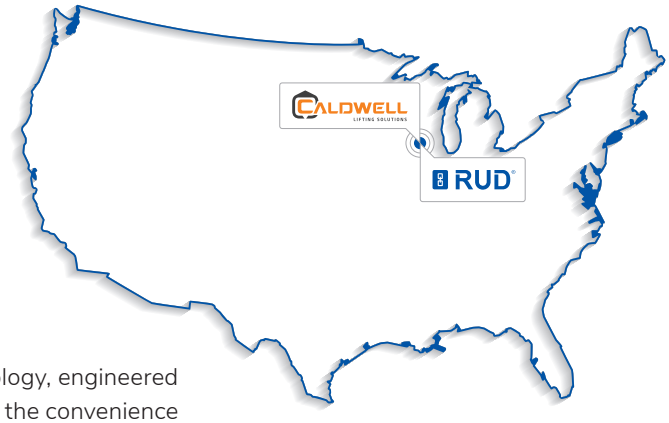
Always by your side, he represents the commitment of Caldwell Inc. and RUD to excellence. **You have our word!**

CONTENT.

WELCOME TO
THE WORLD OF RUD.

Powerful lifting points and services you really need.

More choice, better service, faster delivery: RUD Lifting is your strong and experienced partner for demanding lifting tasks. RUD is backed by for 150 years of experience in many industries, meeting premium standards for lifting points and offering an excellent price-performance ratio. In short: We make lifting and moving loads even safer, easier and more efficient for you.

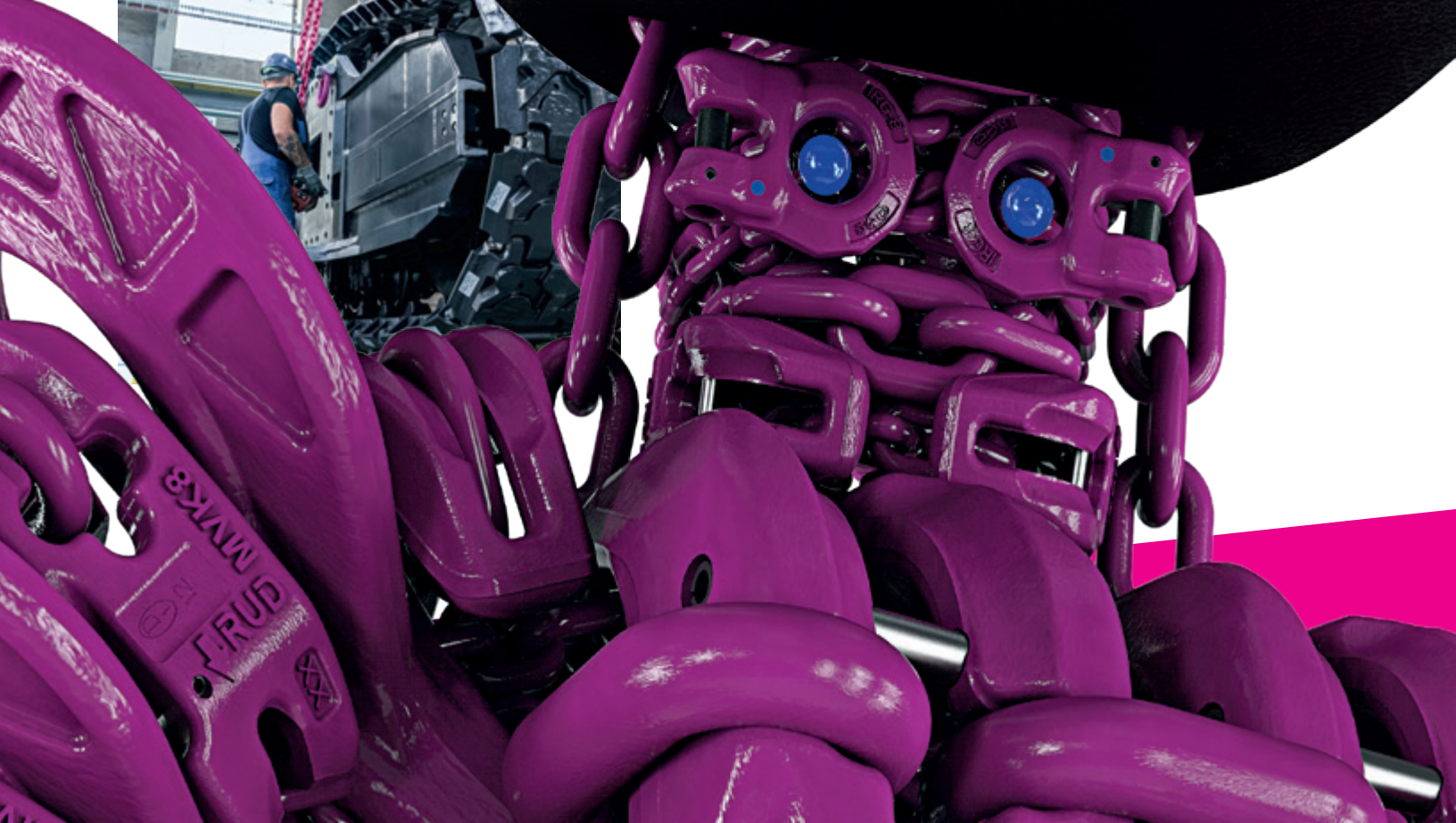


IN STOCK IN THE **HEART OF THE USA.**

RUD combines cutting-edge technology, engineered and manufactured in Germany, with the convenience of a centralized warehouse in Rockford, IL. Available through Caldwell, our products ensure fast delivery, combining German precision with local services.

PORTFOLIO OF RUD.

For one and a half centuries, RUD has been pushing boundaries in lifting, moving and securing loads. RUD is your full-service provider along the value chain, also providing various digital solutions for your everyday lifting tasks.



YOUR TRUSTED PARTNER IN NORTH AMERICA.

HUGE PRODUCT **SELECTION.**

Looking for the perfect lifting point for your lifting task? At RUD, we have a range that is second to none in the USA. Our standard range already includes well over 1,000 lifting points. Plus countless variants that we manufacture individually for our customers.

GOODBYE, **SERVICE VOID.**

Sometimes feel left alone when it comes to customer service and advice? Together with Caldwell Inc., we are there to help you with any questions about the best choice of product and any challenges relating to lifting heavy loads. Simply call us.

Phone:
+1.815.229.5667

DELIVERED WITHIN **48 HOURS.**[1]

In order to supply you quickly with RUD lifting points, we have teamed up with a strong US partner: Caldwell Inc. with a centralized warehouse in Rockford, IL. From here, all key products and sizes are in stock and can be delivered to you within 48 hours.

[1] only within the continental USA

PUT YOUR TRUST IN **GERMAN ENGINEERING AND MANUFACTURING.**

RUD stands for German engineering and manufacturing expertise combined with 150 years of experience. Our products are designed and engineered in Germany to ensure unsurpassed quality, precision, safety and reliability.

BUILT FOR SAFETY.

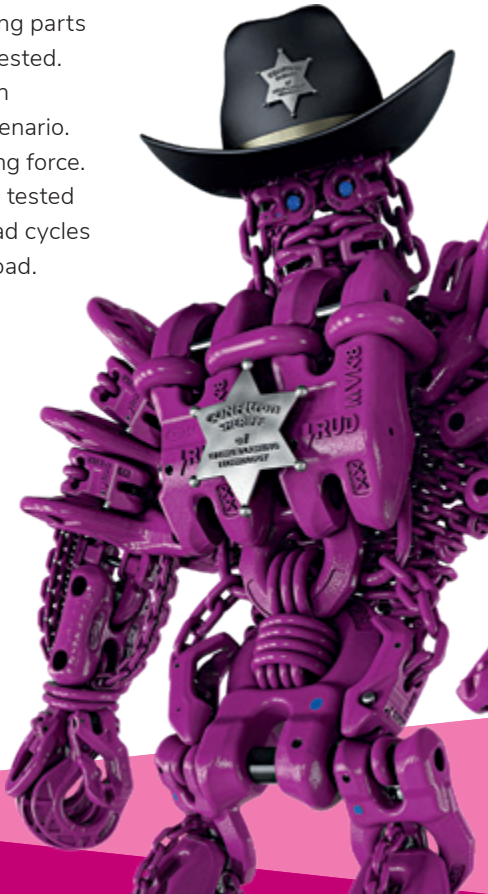
RUD lifting points are built to the highest safety standards. Selected products are ASME certified and guarantee maximum reliability. All load-bearing components are 100 % crack tested, offering exceptional durability and safety for any application.

GERMAN QUALITY, **LOCAL AVAILABILITY.**

Think RUD products are more expensive because they come from a German manufacturer? In reality, RUD operates locally in the USA, which ensures competitive pricing without international transportation costs. RUD could be your best choice.

RUD LIFTING POINTS, **THE FIRST CHOICE FOR YOU.**

- All load-bearing parts 100 % crack tested.
- WLL based on worst case scenario.
- 400 % breaking force.
- Designed and tested for 20,000 load cycles at 50 % overload.



PRACTICAL KNOWLEDGE:

THE VARIETY OF RUD LIFTING POINTS.

How to find the optimum solution for every application.

RUD lifting points have stood for top quality, ergonomics and safety in lifting technology and load securing for many decades. We provide more than 1,000 tested plug-in, boltable and weldable lifting point variants in load ranges up to 250 t. Each of them meets maximum requirements in its area of application – supported by the unique application diversity of our ICE and VIP lifting means. Thanks to a unique variety of models, RUD can supply the perfect lifting point for every conceivable application.

SPECIAL FEATURES OF RUD LIFTING POINTS.

RUD has long been focusing on solutions for demanding lifting tasks. Many hundreds of application-specific products now make up the world's largest range of lifting points. Our modern and tested product solutions increase safety for people and loads as well as efficiency. They can also drastically reduce the handling times that are not included in any calculation.

The RUD range includes boltable lifting points with load capacities of up to 250 t and weldable versions with up to 100 t WLL. Our product range also includes plug-in lifting points. All load-bearing elements are 100 % crack-tested. They can withstand 4–5 times the WLL until they break. The boltable variants are powder-coated in the striking pink or magenta colour. At many lifting points, the RUD design engineers have integrated innovative wear markings and there are clear details showing the minimum WLL for the worst case load direction. The most common variants are tested by the Employer's Liability Insurance Association, which is documented by a test certificate and a test stamp.

WHAT IS
A LIFTING POINT, REALLY?

A lifting point is an important part of the lifting means system and connects the load with the crane when lifting, turning, rotating and moving cargo. Lifting points are eye bolts, eyes, flanges etc. which the lifting means are attached to using hooks, shackles or other connecting elements.

DESIGN DOCUMENTS AND **CALCULATION PROGRAMS.**

RUD has design documents in 2D and 3D as well as calculation programs for the solution of your lifting tasks. This is important because when calculating the correct WLL of individual lifting points, a series of factors must be taken into account, such as:

- the number of strands to be lifted,
- the influence of the angle conditions during the lifting process
- the shape of the design part (symmetrical or asymmetrical).

WHAT TYPES OF LIFTING POINTS ARE AVAILABLE?

PLUG-IN LIFTING POINTS.

With the first plug-in lifting points of their kind, RUD has added another innovation to the market. They are the first choice wherever the same or similar components with through or undercut holes need to be lifted repeatedly – for example large flanges. In this case, the lock nut would be difficult to reach on a boltable lifting point. Or it may not even be possible to fit a nut – for example, if flanges are to be stacked.

Wind power plants, turbines, gear wheels, motors or other applications: RUD's plug-in lifting points can be assembled and dismantled in up to 80 per cent less time than boltable models. And all of that without tools. Unlock, insert, lock, done: the handling advantages are huge. In addition, the lifting points can be used variably in length and diameter within the defined framework, so they do not have to fit exactly into the hole.

BOLTABLE LIFTING POINTS.

When it comes to lifting loads, boltable lifting points are generally used. In more than 40 years of experience with lifting points, RUD has continually developed them further and decisively improved them. Boltable lifting points can be installed as necessary. If they are no longer necessary or would get in the way during the further working process, they can be removed with little effort. Due to their wide range of threads, they can be attached to almost any load. This makes them very flexible in use.

RUD lifting points are designed for a dynamic load of at least 20,000 load cycles, they are tested at an overload of 50 %. Their WLL range from 100 kg to 250 t. The bolts on our lifting points for boltable connections are 100 % crack-tested. They offer quadruple safety in every loading direction. In addition, all the load-bearing parts have been crack-tested and load-tested in accordance with EN 1677.

WELDABLE LIFTING POINTS.

Weldable lifting points are used in approximately 25 % of the constructions. Weldable RUD lifting points (weld-on points) are permanently connected to the load. The advantage: There is no need to unscrew the lifting point, e. g. when rotating and turning loads. A clear plus in terms of safety. RUD weldable lifting points are designed for a dynamic load of at least 20,000 load cycles, they are tested at an overload of 50 %. Their WLL range from 630 kg to 100 t, allowing them to offer quadruple safety in every loading direction. In addition, all the load-bearing parts have been crack-tested and load-tested in accordance with EN 1677.

RUD weld-on points are suitable for every common welding process. The weld-on blocks consist of a easy to weld material and the suspension rings are made from drop-forged, high-strength quenched and tempered steel in lightweight construction. Clear specifications are always available for the corresponding welding preparation and execution. It is crucial that it is followed exactly and that the weld seam is then checked for correctness.

Important: Welding must be carried out by a qualified welder in accordance with DIN EN ISO 9606-1. The material of the welding blocks can be found in the user manual. The connecting surfaces must be free of impurities, oil, paint etc.

RIGID AND ROTATING / SWIVEL LIFTING POINTS.

Boltable and weldable lifting points can be divided into rigid and rotating/ swivelling lifting points.

- RIGID LIFTING POINTS.

Rigid lifting points are eye bolts or weldable D-rings. Because their pulling direction cannot be changed, they are preferably used in single leg lifts. They must therefore not be flexible.

- ROTATING AND SWIVEL LIFTING POINTS.

The area of application for rotating or swivelling lifting points is usually a multiple leg lift, because in this application the lifting points must align themselves in the direction of pull when the load is lifted. Rotating and swivelling lifting points are therefore more flexible than rigid variants.

ROTATING AND TURNING LOADS WITH LIFTING POINTS.

Special RUD lifting points for rotating and turning have special application advantages and therefore a considerable added value. They are equipped with a ball bearing, making them the perfect choice for these applications.

The advantage: Thanks to the ball bearing, the forces resulting from lifting are converted shock-free into a rotating movement. Such shock-free rotation under load is not possible without ball bearings, because impact to the complete system cannot be avoided. Read how to use the lifting point properly below.

ROTATING AND TURNING: POINTS TO WATCH FOR WHEN SELECTING THE LIFTING POINT.

Clearance to the load.

- In the case of sensitive surfaces, choose a lifting point that guarantees enough clearance to the load and does not damage it.
- Important: choose suitable lifting means.
- Avoid contact of the lifting point bracket, e.g., with the load.

The tonnage.

- Take the overall weight of the load into account.
- Taking the rotating movement (swinging of the load) and resulting dynamism into account.
- Note the direction of rotation: Which direction does the load swing in?
- How is the load lifted?
- When determining the maximum WLL, take the calculation for a 2-leg suspension into account, as all legs generally do not bear the load.

The lifting point design.

- Is the lifting point centric or off-center?
- What requirements do the loaded goods make on the lifting process?

Attachment to the load: boltable or weldable.

- **Should the lifting point be boltable?**
  This allows it to be mounted and removed as required.
- **Should the lifting point be weldable?**
  In this way it remains permanently connected to the load and cannot untwist.

GENERAL SELECTION CRITERIA
FOR LIFTING POINTS.

1. Determine the overall weight of the load.
2. Then determine the number of lifting points to be used according to the possible installation position.
3. In accordance with the operating instructions, observe the reduction factors resulting from the tilt angle and the temperature influences.
4. Select the correct lifting point according to the type of use with a WLL that exceeds the weight determined under point 3.

HOW MANY LIFTING POINTS
CAN BE USED ON A LOAD?

- You can attach up to four lifting points on a construction, which you distribute depending on the properties of the load. During installation, ensure that the load hangs straight when being lifted and, for example, does not tilt – if necessary, use special lifting means from the RUD range.
- Important: Choose the right size of lifting point and tighten it properly.
- Also take into account that the WLL changes depending on the angle.

ASYMMETRICAL LOADS.

- Caution: With an asymmetrical load and several lifting points, one lifting point must bear the whole load in extreme cases, therefore load factor = 1.

EN 818-6 A.1.3.5

ICE-BOLT – THE NEW BOLT CLASS FOR LIFTING POINTS.

FROM THE CHAIN TO THE BOLT.

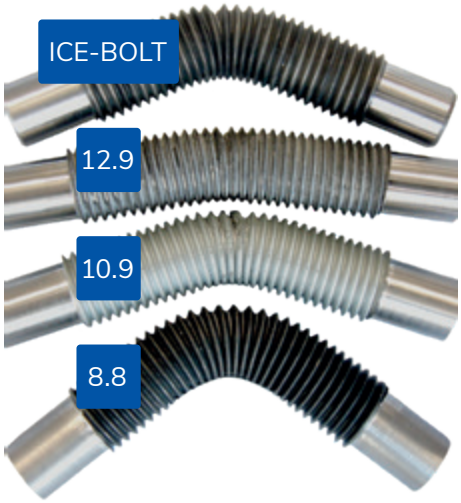
When it comes to materials for lifting means or lifting points, RUD has always been one step ahead of its time. RUD's specialists developed the well-known ICE-chain a few years ago. Thanks to the "Innovative Chain Evolution", an ICE-lifting or lashing chain can now replace a grade 8 chain of the next larger nominal thickness. The advantage: The dead weight of the pink-coloured chain is more than 30 percent lower, the working ergonomics are noticeably higher.

HIGH SAFETY EVEN AT LOW TEMPERATURES AND EXTREMELY HIGH TEMPERATURES.

However, not only chains, but also the flanges of modern botable lifting points perform very hard work. Every day they have to withstand the highest WLL. And not just in one direction, but in every conceivable one. These extreme bending and shearing forces must be safely absorbed both statically and dynamically. This is just as true at Arctic deep temperatures as it is at extremely high temperatures.

THE ICE-BOLT: **HIGHER WLL WITH SMALLER BOLT DIAMETERS.**

After intensive development, the RUD engineers have successfully transferred the innovative ICE-material to the fastening bolts of the RUD lifting points: The ICE-BOLT was born. After all, the patented fine-grained steel of the ICE-chain is virtually predestined to meet the high safety requirements in lifting technology. For example, the breaking forces of M8–M16 could be increased by 88 % compared to 8.8 bolts and by 44 % compared to 10.9 bolts. This allows an M24 ICE-BOLT to be used instead of an M30-8.8 bolt. And this with at least the same, but usually higher breaking force. In terms of bending strength, the ICE-BOLT effortlessly beats grades 10.9 and 12.9 and even approaches the values of 8.8 bolts.



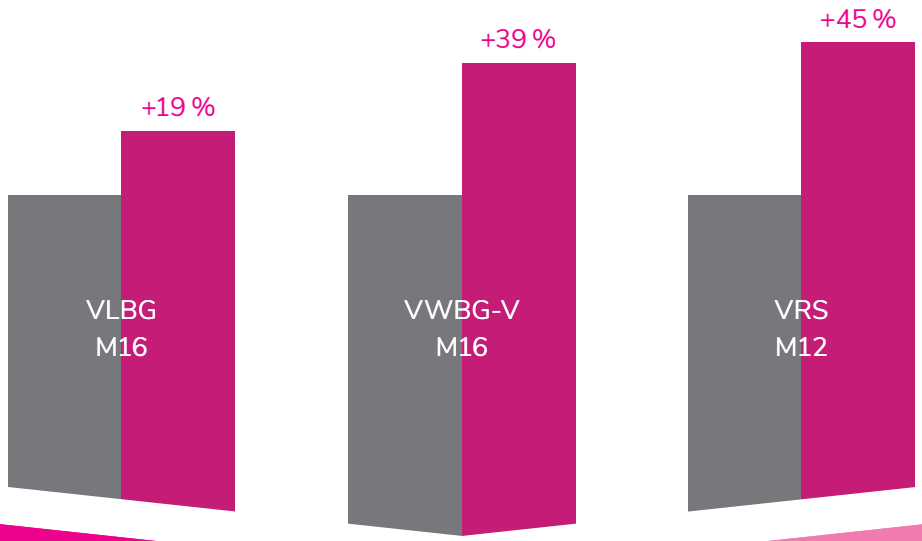
The thread of the ICE-BOLT proves itself in the prism bending test. The test shows: the ICE-BOLT masters static and dynamic WLL safely.

SAFETY MEETS ECONOMY: THE DECISIVE ADVANTAGES OF THE ICE-BOLT.

- Higher WLL or thinner bolt diameters.
- Unmatched high safety factors.
- Incomparable low temperature resistance down to –60 °C.
- Maximum strength with particularly high toughness.
- Particularly high bending resistance at the critical transition between load absorption and load.
- Lower wear.

In brief: RUD lifting points with ICE-BOLTs represent maximum safety.

INCREASE IN THE BREAKING FORCE THANKS TO ICE-BOLT.



INSTALLATION
OF LIFTING POINTS.

Whether boltable or weldable:

Please observe the following:

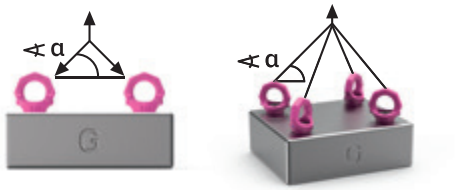
- Place the lifting point so that the exerted forces can be absorbed by the base material without deformation.
- For boltable variants, the load and material must be suitable for bolting the lifting point in up to the contact surface.
- Attach the lifting point as follows to avoid impermissible stresses such as twisting or turning of the load:

  - Single strand attachment: vertically above the load centre.
  - Double strand attachment: above and on both sides of the centre of gravity.
  - Three- or four-strand attachment: evenly in one plane around the load's centre of gravity.

- Symmetry of load: Determine the necessary WLL of the individual lifting point for symmetrical and non-symmetrical loads using the following physical equation:

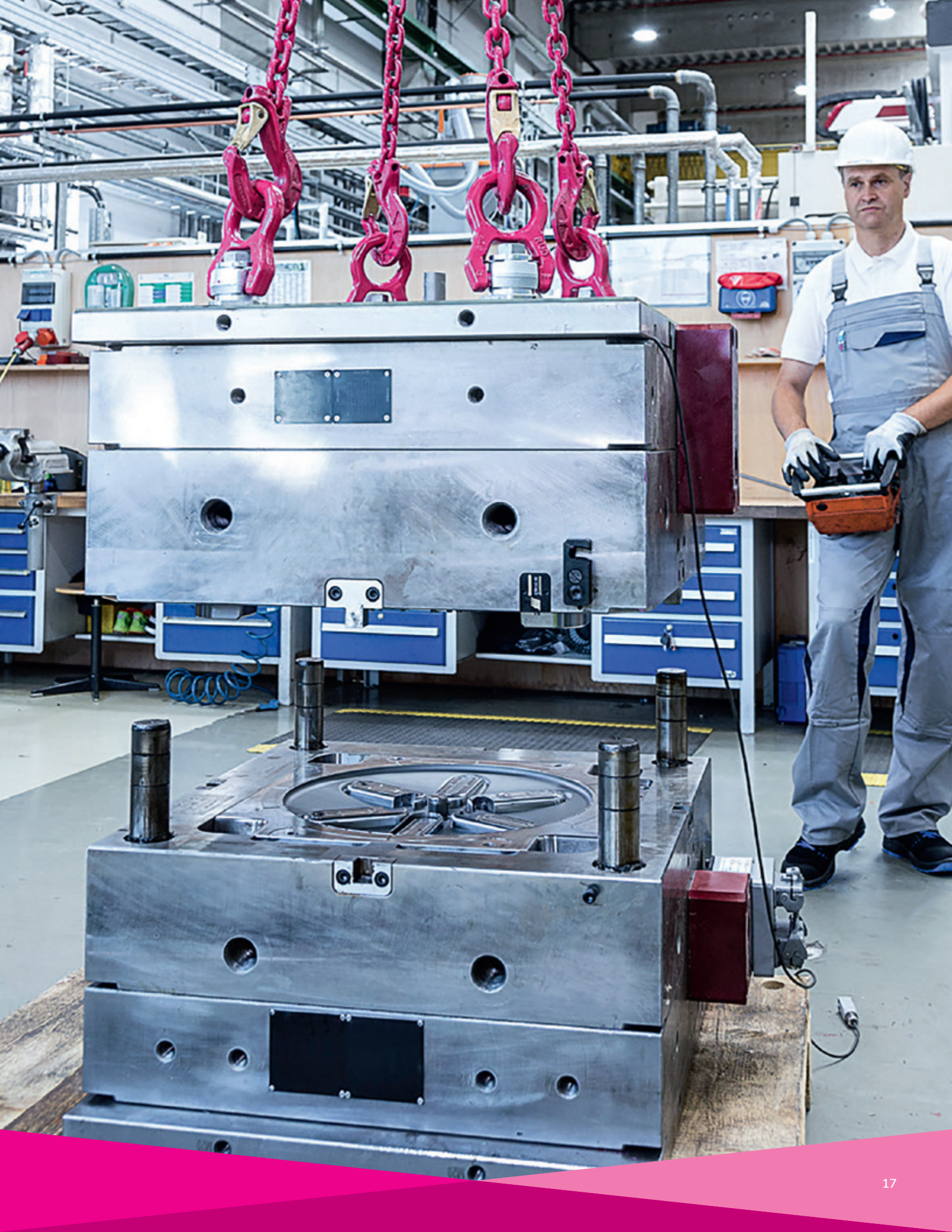
$$W_{LL} = \frac{G}{n \times \sin \alpha}$$

W_{LL} = **req. WLL of the lifting point / single strand (kg)**
G = **Load weight (kg)**
n = **Number of supporting strands**
α = **Inclination angle alpha of the individual strands**



- Prevent any damage to the lifting means by a load with sharp edges.
- Check the lifting points regularly and before each commissioning for a tight bolt fitting (torque moment), heavy corrosion, wear occurrence, cracks in the weld seam, deformations etc.

IMPORTANT:
When installing the lifting points, follow the instructions supplied.



USEFUL INFORMATION ON THE SAFETY OF RUD'S LIFTING POINTS.

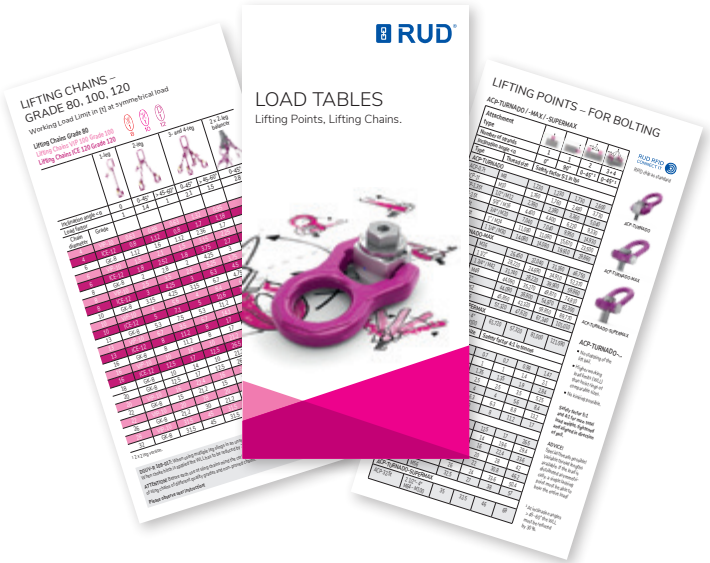
RUD lifting points are designed to maximise safety down to the last detail and are tested and certified in accordance with the strictest regulations. In addition, RUD offers numerous options for evaluating and ensuring the usability of your lifting points.

- All load-bearing parts are crack-tested or test-loaded according to EN 1677.
- In boltable RUD lifting points, the bolts are also 100 % crack-tested.
- RUD lifting points offer 4-times the safety in every loading direction.
- All lifting points stand out due to low installation heights, and high dynamic and static strengths.
- Types ACP-TURNADO, VLBG, VLBG-PLUS, VLBG 10.9, VLBG-Z, VWBG, VWBG-V, VRS and VRM can be adjusted in all loading directions.
- The RUD lifting point configurator facilitates the correct design of lifting points.
- RUD lifting points are designed for a max. dynamic load of 20,000 load cycles (tested at 50 % overload).
- Ask the manufacturer in case of a higher dynamic WLL.

FOR A QUICK **OVERVIEW ...**

... use the handy load table flyer, available at your local Caldwell dealer.

Detailed product information is also available at rudlifting.com.



WLL PLUG-IN LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type												
Number of strands	1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α	90°	0–7°	0–7°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type												
PIP-RAPIDO												
PIP-RAPIDO D30-D41	[1]	4.2	8.4	[1]	[1]	5.85	[1]	[1]	[1]	8.8	[1]	[1]

[1] Design-dependent.

Maximum transport weight “G” in [t] with different lifting methods.

PIP-RAPIDO

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
ACP-TURNADO													
ACP-TURNADO-0.7t	M8	0.7	0.7	1.4	1.4	1.2	0.98	0.7	0.7	1.8	1.47	1	0.7
ACP-TURNADO-1t	M10	1	1	2	2	1.73	1.4	1	1	2.6	2.1	1.5	1
ACP-TURNADO-1.35t	M12	1.35	1.35	2.7	2.7	2.33	1.9	1.35	1.35	3.5	2.84	2	1.35
ACP-TURNADO-2.5t	M16	2.5	2.5	5	5	4.33	3.5	2.5	2.5	6.5	5.25	3.75	2.5
ACP-TURNADO-4t	M20	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
ACP-TURNADO-6.3t	M24	6.3	6.3	12.6	12.6	10.9	8.8	6.3	6.3	16.3	13.2	9.4	6.3
ACP-TURNADO-8t	M30	8	8	16	16	13.8	11.2	8	8	20.7	17	11.8	8
ACP-TURNADO MAX													
ACP-TURNADO-MAX-12.5t	M36	12.5	15	30	25	21.6	17	12.5	12.5	32.4	26.5	19	12.5
ACP-TURNADO-MAX-16t	M42	16	18	36	32	27.7	22.4	16	16	41.5	33.6	24	16
ACP-TURNADO-MAX-20t	M48	20	25	50	40	34.6	28	20	20	51	42	30	20
ACP-TURNADO-MAX-24t	M52	24	26	52	48	41.5	33.6	24	24	62	50.4	36	24
ACP-TURNADO-MAX-27t	M56	27	32.5	65	54	46.7	38	27	27	70	57	40.5	27
ACP-TURNADO SUPERMAX													
ACP-TURNADO-SUPERMAX-32.5t	M64	32.5	35	70	65	56	46	32.5	32.5	84	69	49	32.5
ACP-TURNADO-SUPERMAX-32.5t	M72	32.5	35	70	65	56	46	32.5	32.5	84	69	49	32.5
ACP-TURNADO-SUPERMAX-32.5t	M80	32.5	35	70	65	56	46	32.5	32.5	84	69	49	32.5
ACP-TURNADO-SUPERMAX-32.5t	M90	32.5	35	70	65	56	46	32.5	32.5	84	69	49	32.5
ACP-TURNADO-SUPERMAX-32.5t	M100	32.5	35	70	65	56	46	32.5	32.5	84	69	49	32.5

Maximum transport weight “G” in [t] with different lifting methods.

ACP-TURNADO

ACP-TURNADO MAX

ACP-TURNADO SUPERMAX

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
ACP-TURNADO													
ACP-TURNADO-1.35t	1/2"	2,380	2,380	4,760	4,760	4,110	3,360	2,380	2,380	6,160	5,040	3,570	2,380
ACP-TURNADO-2.5t	5/8"	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
ACP-TURNADO-4t	3/4"	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
ACP-TURNADO-6.3t	1"	11,080	11,080	22,160	22,160	19,160	15,670	11,080	11,080	28,690	23,500	16,620	11,080
ACP-TURNADO-8t	1 1/4"	14,080	14,080	28,160	28,160	24,350	19,910	14,080	14,080	36,460	29,860	21,120	14,080
ACP-TURNADO MAX													
ACP-TURNADO-MAX-14t	1 1/2"	24,690	28,220	56,440	49,380	42,710	34,910	24,690	24,690	63,940	52,370	37,030	24,690
ACP-TURNADO-MAX-16t	1 3/4"	28,220	31,740	63,480	56,440	48,820	39,900	28,220	28,220	73,090	59,860	42,330	28,220
ACP-TURNADO-MAX-22t	2"	38,800	44,090	88,180	77,600	67,120	54,870	38,800	38,800	100,490	82,300	58,200	38,800
ACP-TURNADO SUPERMAX													
ACP-TURNADO-SUPERMAX-32.5t	2 1/2"	57,320	61,720	123,440	114,640	99,160	81,000	57,320	57,320	139,130	121,590	85,980	57,320
ACP-TURNADO-SUPERMAX-32.5t	3"	57,320	61,720	123,440	114,640	99,160	81,000	57,320	57,320	139,130	121,590	85,980	57,320
ACP-TURNADO-SUPERMAX-32.5t	3 1/2"	57,320	61,720	123,440	114,640	99,160	81,000	57,320	57,320	139,130	121,590	85,980	57,320
ACP-TURNADO-SUPERMAX-32.5t	4"	57,320	61,720	123,440	114,640	99,160	81,000	57,320	57,320	139,130	121,590	85,980	57,320

Maximum transport weight "G" in [lbs] with different lifting methods.

ACP-TURNADO

ACP-TURNADO MAX

ACP-TURNADO SUPERMAX

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
VLBG-PLUS													
VLBG-PLUS-0.63t	M8	0.63	0.63	1.26	1.26	1.1	0.88	0.63	0.63	1.63	1.32	0.95	0.63
VLBG-PLUS-0.9t	M10	0.9	0.9	1.8	1.8	1.55	1.3	0.9	0.9	2.33	1.9	1.35	0.9
VLBG-PLUS-1.35t	M12	1.35	1.35	2.7	2.7	2.33	1.9	1.35	1.35	3.5	2.84	2	1.35
VLBG-PLUS-2t	M16	2	2	4	4	3.46	2.8	2	2	5.2	4.25	3	2
VLBG-PLUS-3.5t	M20	3.5	3.5	7	7	6.1	4.9	3.5	3.5	9.1	7.35	5.25	3.5
VLBG-PLUS-4.5t	M24	4.5	4.5	9	9	7.8	6.3	4.5	4.5	11.6	9.5	6.75	4.5
VLBG-PLUS-6.7t	M30	6.7	6.7	13.4	13.4	11.6	9.5	6.7	6.7	17.4	14.1	10	6.7
VLBG-PLUS-7t	M36	7	7	14	14	12.1	9.8	7	7	18.1	14.7	10.5	7
VLBG-PLUS-8t	M36	8	8	16	16	13.8	11.2	8	8	20.7	17	11.8	8
VLBG-PLUS-10t	M42	10	10	20	20	17.3	14	10	10	25.9	21.2	15	10
VLBG-PLUS-15t	M42	15	15	30	30	25.9	21.2	15	15	38.9	31.5	22.4	15
VLBG-PLUS-20t	M48	20	20	40	40	34.6	28	20	20	51	42	30	20
VLBG													
VLBG-1.2t	M14	1.2	1.2	2.4	2.4	2.07	1.68	1.2	1.2	3.11	2.52	1.8	1.2
VLBG-2t	M18	2	2	4	4	3.46	2.8	2	2	5.19	4.2	3	2
VLBG-2.5t	M22	2.5	2.5	5	5	4.33	3.5	2.5	2.5	6.49	5.25	3.75	2.5
VLBG-4t	M27	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
VLBG-10.9													
VLBG-0.3t-10.9	M8	0.3	0.3	0.6	0.6	0.52	0.42	0.3	0.3	0.77	0.63	0.45	0.3
VLBG-0.63t-10.9	M10	0.63	0.63	1.26	1.26	1.1	0.88	0.63	0.63	1.63	1.32	0.95	0.63
VLBG-1t-10.9	M12	1	1	2	2	1.73	1.4	1	1	2.6	2.1	1.5	1
VLBG-1.5t-10.9	M16	1.5	1.5	3	3	2.6	2.1	1.5	1.5	3.9	3.15	2.25	1.5
VLBG-2.5t-10.9	M20	2.5	2.5	5	5	4.33	3.5	2.5	2.5	6.5	5.25	3.75	2.5
VLBG-4t-10.9	M24	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4

Maximum transport weight “G” in [t] with different lifting methods.

VLBG-PLUS

VLBG / VLBG-10.9

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3 + 4	3 + 4	3 + 4	3 + 4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
VLBG-Z													
VLBG-Z-0.63t	3/8"	1,110	1,110	2,220	2,220	1,920	1,570	1,110	1,110	2,870	2,350	1,660	1,110
VLBG-Z-1t	1/2"	1,760	1,760	3,520	3,520	3,040	2,480	1,760	1,760	4,550	3,730	2,640	1,760
VLBG-Z-1.5t	5/8"	2,640	2,640	5,280	5,280	4,560	3,730	2,640	2,640	6,830	5,600	3,960	2,640
VLBG-Z-2.5t	3/4"	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
VLBG-Z-2.5t	7/8"	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
VLBG-Z-4t	1"	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
VLBG-Z-5t	1 1/4"	8,810	8,810	17,620	17,620	15,240	12,450	8,810	8,810	22,810	18,680	13,210	8,810
VLBG-Z-5t	1 1/4"	8,810	8,810	17,620	17,620	15,240	12,450	8,810	8,810	22,810	18,680	13,210	8,810
VLBG-Z-8t	1 1/2"	14,080	14,080	28,160	28,160	24,350	19,910	14,080	14,080	36,460	29,860	21,120	14,080
VLBG-Z-20t	2"	35,270	35,270	70,540	70,540	61,010	49,870	35,270	35,270	91,340	74,810	52,900	35,270

Maximum transport weight “G” in [lbs] with different lifting methods.

VLBG-Z

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
PP-S / PP-B / PP-VIP / So-PP-VIP													
PP-S-0.63t / PP-B-0.63t / PP-VIP-0.63t	M12	0.63	0.63	1.26	1.26	1.1	0.88	0.63	0.63	1.63	1.32	0.95	0.63
PP-S-1.5t / PP-B-1.5t / PP-VIP-1.5t	M16	1.5	1.5	3	3	2.6	2.1	1.5	1.5	3.9	3.15	2.25	1.5
PP-S-2.5t / PP-B-2.5t / PP-VIP-2.5t	M20	2.5	2.5	5	5	4.33	3.5	2.5	2.5	6.5	5.25	3.75	2.5
PP-S-4t / PP-B-4t / PP-VIP-4t	M24	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
PP-S-5t / PP-B-5t / PP-VIP-5t	M30	5	6.7	13.4	10	8.66	7.1	5	5	12.9	10.6	7.5	5
PP-S-8t / PP-B-8t / PP-VIP-8t	M36	8	10	20	16	13.8	11.2	8	8	20.7	17	11.8	8
So-PP-VIP-4/0.6t	M12	0.6	0.63	1.26	1.2	1	0.84	0.6	0.6	1.55	1.26	0.9	0.6
So-PP-VIP-6/1t	M14	1	1.5	3	2	1.73	1.4	1	1	2.6	2.1	1.5	1
So-PP-VIP-6/1.3t	M16	1.3	1.5	3	2.6	2.25	1.82	1.3	1.3	3.37	2.73	1.95	1.3
So-PP-VIP-8/2t	M20 / M22	2	2.5	5	4	3.46	2.8	2	2	5.2	4.25	3	2
So-PP-VIP-10/3.5t	M24 / M27	3.5	4	8	7	6.1	4.9	3.5	3.5	9.1	7.35	5.25	3.5
So-PP-VIP-13/5t	M30	5	6.7	13.4	10	8.66	7.1	5	5	12.9	10.6	7.5	5
So-PP-VIP-16/8t	M36 / M39 / M42	8	10	20	16	13.8	11.2	8	8	20.7	17	11.8	8

Maximum transport weight “G” in [t] with different lifting methods.

PP-S

PP-B

PP-VIP

So-PP-VIP

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3 + 4	3 + 4	3 + 4	3 + 4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
PP-S / PP-B / PP-VIP / So-PP-VIP													
PP-S-0.63t / PP-B-0.63t / PP-VIP-0.63t	1/2"	1,110	1,110	2,220	2,220	1,920	1,570	1,110	1,110	2,870	2,350	1,660	1,110
PP-S-1.5t / PP-B-1.5t / PP-VIP-1.5t	5/8"	2,640	2,640	5,280	5,280	4,560	3,730	2,640	2,640	6,830	5,600	3,960	2,640
PP-S-2.5t / PP-B-2.5t / PP-VIP-2.5t	3/4"	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
PP-S-2.5t / PP-B-2.5t / PP-VIP-2.5t	7/8"	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
PP-S-4t / PP-B-4t / PP-VIP-4t	1"	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
PP-S-5t / PP-B-5t / PP-VIP-5t	1 1/4"	8,810	11,810	23,620	17,620	15,240	12,45	8,810	8,810	22,810	18,680	13,210	8,810
PP-S-8t / PP-B-8t / PP-VIP-8t	1 1/2"	14,080	17,630	35,260	28,160	24,350	19,910	14,080	14,080	36,460	29,860	21,120	14,080
So-PP-VIP-4/0.6t	1/2"	1,050	1,110	2,220	2,100	1,810	1,480	1,050	1,050	2,710	2,220	1,570	1,050
So-PP-VIP-6/1.3t	5/8"	2,280	2,640	5,280	4,560	3,940	3,220	2,280	2,280	5,900	4,830	3,420	2,280
So-PP-VIP-8/2t	3/4"	3,520	4,400	8,800	7,040	6,080	4,970	3,520	3,520	9,110	7,460	5,280	3,520
So-PP-VIP-10/3.5t	1"	6,170	7,040	14,080	12,340	10,670	8,720	6,170	6,170	15,980	13,080	9,250	6,170
So-PP-VIP-13/5t	1 1/4"	8,810	11,810	23,620	17,620	15,240	12,450	8,810	8,810	22,810	18,680	13,210	8,810
So-PP-VIP-16/8t	1 1/2"	14,080	17,630	35,260	28,160	24,350	19,910	14,080	14,080	36,460	29,860	21,120	14,080

Maximum transport weight "G" in [lbs] with different lifting methods.

PP-S	PP-B	PP-VIP	So-PP-VIP
			

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
VWBG-V													
VWBG-V-0.3t	M8	0.3 (0.4) [1]	0.6	1.2	0.6 (0.8) [1]	0.52 (0.69) [1]	0.42 (0.56) [1]	0.3 (0.4) [1]	0.3 (0.4) [1]	0.77 (1.04) [1,2]	0.63 (0.84) [1,2]	0.45 (0.6) [1,2]	0.3 (0.4) [1,2]
VWBG-V-0.45t	M10	0.45 (0.6) [1]	0.9	1.8	0.9 (1.2) [1]	0.77 (1) [1]	0.63 (0.84) [1]	0.45 (0.6) [1]	0.45 (0.6) [1]	1.16 (1.55) [1,2]	0.94 (1.26) [1,2]	0.67 (0.9) [1,2]	0.45 (0.6) [1,2]
VWBG-V-0.6t	M12	0.6 (0.75) [1]	1.2	2.4	1.2 (1.5) [1]	1 (1.3) [1]	0.84 (1) [1]	0.6 (0.75) [1]	0.6 (0.75) [1]	1.55 (1.94) [1,2]	1.26 (1.57) [1,2]	0.9 (1.12) [1,2]	0.6 (0.75) [1,2]
VWBG-V-1t	M14	1 (1.25) [1]	2	4	2 (2.5) [1]	1.73 (2.16) [1]	1.4 (1.75) [1]	1 (1.25) [1]	1 (1.25) [1]	2.6 (3.24) [1,2]	2.1 (2.62) [1,2]	1.5 (1.87) [1,2]	1 (1.25) [1,2]
VWBG-V-1.3t	M16	1.3 (1.5) [1]	2.6	5.2	2.6 (3) [1]	2.25 (2.6) [1]	1.82 (2.1) [1]	1.3 (1.5) [1]	1.3 (1.5) [1]	3.37 (3.9) [1,2]	2.73 (3.15) [1,2]	1.95 (2.25) [1,2]	1.3 (1.5) [1,2]
VWBG-V-1.8t	M18	1.8 (2) [1]	3.6	7.2	3.6 (4) [1]	3.11 (3.46) [1]	2.52 (2.8) [1]	1.8 (2) [1]	1.8 (2) [1]	4.67 (5.2) [1,2]	3.75 (4.25) [1,2]	2.7 (3) [1,2]	1.8 (2) [1,2]
VWBG-V-2t	M20	2 (2.5) [1]	4	8	4 (5) [1]	3.46 (4.33) [1]	2.8 (3.5) [1]	2 (2.5) [1]	2 (2.5) [1]	5.2 (6.5) [1,2]	4.25 (5.25) [1,2]	3 (3.75) [1,2]	2 (2.5) [1,2]
VWBG-V-2t	M22	2 (2.5) [1]	4	8	4 (5) [1]	3.46 (4.33) [1]	2.8 (3.5) [1]	2 (2.5) [1]	2 (2.5) [1]	5.2 (6.5) [1,2]	4.25 (5.25) [1,2]	3 (3.75) [1,2]	2 (2.5) [1,2]
VWBG-V-3.5t	M24	3.5 (4) [1]	7	14	7 (8) [1]	6.1 (6.92) [1]	4.9 (5.6) [1]	3.5 (4) [1]	3.5 (4) [1]	9.1 (10.3) [1,2]	7.35 (8.4) [1,2]	5.25 (6) [1,2]	3.5 (4) [1,2]
VWBG-V-3.5t	M27	3.5 (4) [1]	7	14	7 (8) [1]	6.1 (6.92) [1]	4.9 (5.6) [1]	3.5 (4) [1]	3.5 (4) [1]	9.1 (10.3) [1,2]	7.35 (8.4) [1,2]	5.25 (6) [1,2]	3.5 (4) [1,2]
VWBG-V-5t	M30	5 (6) [1]	10	20	10 (12) [1]	8.66 (10.3) [1]	7.1 (8.4) [1]	5 (6) [1]	5 (6) [1]	12.9 (15.5) [1,2]	10.6 (12.6) [1,2]	7.5 (9) [1,2]	5 (6) [1,2]
VWBG													
VWBG-6(7.5)t	M33	6 (7.5) [1]	15	30	12 (15) [1]	10.3 (12.9) [1]	8.4 (10.5) [1]	6 (7.5) [1]	6 (7.5) [1]	15.5 (19.4) [1]	12.6 (15.75) [1]	9 (11.25) [1]	6 (7.5) [1]
VWBG-8(10)t	M36–39	8 (10) [1]	15	30	16 (20) [1]	13.8 (17.3) [1]	11.2 (14) [1]	8 (10) [1]	8 (10) [1]	20.7 (25.9) [1]	17 (21.2) [1]	11.8 (15) [1]	8 (10) [1]
VWBG-12(13)t	M42–45	12 (13) [1]	17	34	24 (26) [1]	20.7 (22.5) [1]	16.8 (18.2) [1]	12 (13) [1]	12 (13) [1]	31.1 (33.7) [1]	25.2 (27.3) [1]	18 (19.5) [1]	12 (13) [1]
VWBG-12(15)t	M45	12 (15) [1]	18	36	24 (30) [1]	20.7 (25.9) [1]	16.8 (21.2) [1]	12 (15) [1]	12 (15) [1]	31.1 (38.9) [1]	25.2 (31.5) [1]	18 (22.4) [1]	12 (15) [1]
VWBG-13(16)t	M48–52	13 (16) [1]	18	36	26 (32) [1]	22.5 (27.7) [1]	18.2 (22.4) [1]	13 (16) [1]	13 (16) [1]	33.7 (41.5) [1]	27.3 (33.6) [1]	19.5 (24) [1]	13 (16) [1]
VWBG-14(20)t	M52	14 (20) [1]	25	50	28 (40) [1]	24.2 (34.6) [1]	19.6 (28) [1]	14 (20) [1]	14 (20) [1]	36.3 (51) [1]	29.4 (42) [1]	21 (30) [1]	14 (20) [1]
VWBG-16(22)t	M56–62	16 (22) [1]	28	56	32 (44) [1]	27.7 (38.1) [1]	22.4 (30.8) [1]	16 (22) [1]	16 (22) [1]	41.5 (57) [1]	33.6 (46.2) [1]	24 (33) [1]	16 (22) [1]
VWBG-16(25)t	M64–76	16 (25) [1]	28	56	32 (50) [1]	27.7 (43.3) [1]	22.4 (35) [1]	16 (25) [1]	16 (25) [1]	41.5 (64) [1]	33.6 (52.5) [1]	24 (37.5) [1]	16 (25) [1]
VWBG-31.5(40)t	M72–76	31.5 (40) [1]	50	100	63 (80) [1]	54 (69) [1]	45 (56) [1]	31.5 (40) [1]	31.5 (40) [1]	81 (103) [1]	67 (84) [1]	47.5 (60) [1]	31.5 (40) [1]
VWBG-35(48)t	M80–85	35 (48) [1]	50	100	70 (96) [1]	60 (83) [1]	49 (67.2) [1]	35 (48) [1]	35 (48) [1]	90 (124) [1]	73.5 (100.8) [1]	52.5 (72) [1]	35 (48) [1]
VWBG-40(50)t	M90–150	40 (50) [1]	50	100	80 (100) [1]	69 (86) [1]	56 (70) [1]	40 (50) [1]	40 (50) [1]	103 (129) [1]	84 (105) [1]	60 (75) [1]	40 (50) [1]

[1] ( ) = Higher WLL by optimized attachment or application.
[2] Note: The values indicated for 3/4 strands only apply if it is ensured the load is evenly distributed over more than 2 strands. Otherwise, the 2-strand values should be assumed (see DGUV 109-017).

Maximum transport weight "G" in [t] with different lifting methods.

VWBG-V

VWBG

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
VWBG-V													
VWBG-V-0.3t	5/16"	520 (700) [1]	1,050	2,100	1,040 (1,400) [1]	900 (1,210) [1]	730 (990) [1]	520 (700) [1]	520 (700) [1]	1,340 (1,180) [1,2]	1,100 (1,480) [1,2]	780 (1,050) [1,2]	520 (700) [1,2]
VWBG-V-0.45t	3/8"	790 (1,050) [1]	1,580	3,160	1,580 (2,100) [1]	1,360 (1,810) [1]	1,110 (1,480) [1]	790 (1,050) [1]	790 (1,050) [1]	2,040 (2,710) [1,2]	1,670 (2,220) [1,2]	1,180 (1,570) [1,2]	790 (1,050) [1,2]
VWBG-V-0.6t	1/2"	1,050 (1,320) [1]	2,110	4,220	2,100 (2,640) [1]	1,810 (2,280) [1]	1,480 (1,860) [1]	1,050 (1,320) [1]	1,050 (1,320) [1]	2,710 (3,410) [1,2]	2,220 (2,800) [1,2]	1,570 (1,980) [1,2]	1,050 (1,320) [1,2]
VWBG-V-1.3t	5/8"	2,280 (2,640) [1]	4,580	9,160	4,560 (5,280) [1]	3,940 (4,560) [1]	3,220 (3,730) [1]	2,280 (2,640) [1]	2,280 (2,640) [1]	5,900 (6,830) [1,2]	4,830 (5,600) [1,2]	3,420 (3,960) [1,2]	2,280 (2,640) [1,2]
VWBG-V-2t	3/4"	3,520 (4,400) [1]	7,040	14,080	7,040 (8,800) [1]	6,080 (7,610) [1]	4,970 (6,220) [1]	3,520 (4,400) [1]	3,520 (4,400) [1]	9,110 (11,390) [1,2]	7,460 (9,330) [1,2]	5,280 (6,600) [1,2]	3,520 (4,400) [1,2]
VWBG-V-3.5t	1"	6,170 (7,040) [1]	12,340	24,680	12,340 (14,080) [1]	10,670 (12,170) [1]	8,720 (9,950) [1]	6,170 (7,040) [1]	6,170 (7,040) [1]	15,980 (18,230) [1,2]	13,080 (14,930) [1,2]	9,250 (10,560) [1,2]	6,170 (7,040) [1,2]
VWBG-V-5t	1 1/4"	8,810 (10,580) [1]	17,630	35,260	17,620 (21,160) [1]	15,240 (18,300) [1]	12,450 (10,580) [1]	8,810 (10,580) [1]	8,810 (10,580) [1]	22,810 (27,400) [1,2]	18,680 (22,440) [1,2]	13,210 (15,870) [1,2]	8,810 (10,580) [1,2]
VWBG													
VWBG-6(7.5)t	1 3/8"	10,580 (13,220) [1]	26,450	52,900	21,160 (26,440) [1]	18,300 (22,870) [1]	14,960 (18,690) [1]	10,580 (13,220) [1]	10,580 (13,220) [1]	27,400 (34,230) [1]	22,440 (28,040) [1]	15,870 (19,830) [1]	10,580 (13,220) [1]
VWBG-8(10)t	1 1/2"	14,080 (17,630) [1]	26,450	52,900	28,160 (35,260) [1]	24,350 (30,500) [1]	19,910 (24,930) [1]	14,080 (17,630) [1]	14,080 (17,630) [1]	36,460 (45,660) [1]	29,860 (37,400) [1]	21,120 (26,440) [1]	14,080 (17,630) [1]
VWBG-12(13)t	1 3/4"	21,160 (22,920) [1]	29,980	59,960	42,320 (45,840) [1]	36,600 (39,650) [1]	29,920 (32,410) [1]	21,160 (22,920) [1]	21,160 (22,920) [1]	54,800 (59,360) [1]	44,880 (48,620) [1]	31,740 (34,380) [1]	21,160 (22,920) [1]
VWBG-13(16)t	2"	22,920 (28,220) [1]	31,740	63,480	45,840 (56,440) [1]	39,650 (48,820) [1]	32,410 (39,900) [1]	22,920 (28,220) [1]	22,920 (28,220) [1]	59,360 (73,090) [1]	48,620 (59,860) [1]	34,380 (42,330) [1]	22,920 (28,220) [1]
VWBG-14(20)t	2 1/4" / 2 1/2"	24,690 (35,270) [1]	44,090	88,180	49,380 (70,540) [1]	42,710 (61,010) [1]	34,910 (49,870) [1]	24,690 (35,270) [1]	24,690 (35,270) [1]	63,940 (91,340) [1]	52,370 (74,810) [1]	37,030 (52,900) [1]	24,690 (35,270) [1]
VWBG-16(22)t	2 1/4" / 2 1/2"	28,220 (38,800) [1]	49,380	98,760	56,440 (77,600) [1]	48,820 (67,120) [1]	39,900 (54,870) [1]	28,220 (38,800) [1]	28,220 (38,800) [1]	73,090 (100,490) [1]	59,860 (82,300) [1]	42,330 (58,200) [1]	28,220 (38,800) [1]
VWBG-16(25)t	2 3/4" / 3"	28,220 (44,090) [1]	49,380	98,760	56,440 (88,180) [1]	48,820 (76,270) [1]	39,900 (62,350) [1]	28,220 (44,090) [1]	28,220 (44,090) [1]	73,090 (114,190) [1]	59,860 (93,520) [1]	42,330 (66,130) [1]	28,220 (44,090) [1]
VWBG-31.5(40)t	3"	55,550 (70,540) [1]	88,180	176,360	111,100 (141,080) [1]	96,100 (122,030) [1]	78,560 (99,750) [1]	55,550 (70,540) [1]	55,550 (70,540) [1]	143,870 (182,700) [1]	117,830 (149,630) [1]	83,320 (105,810) [1]	55,550 (70,540) [1]
VWBG-35(48)t	3 1/4" / 3 1/2"	61,720 (84,650) [1]	88,180	176,360	123,440 (169,300) [1]	106,770 (146,440) [1]	87,280 (119,710) [1]	61,720 (84,650) [1]	61,720 (84,650) [1]	159,850 (219,240) [1]	130,920 (179,570) [1]	92,580 (126,970) [1]	61,720 (84,650) [1]
VWBG-40(50)t	4" / 5"	70,540 (88,180) [1]	88,180	176,360	141,080 (176,360) [1]	122,030 (152,560) [1]	99,750 (124,710) [1]	70,540 (88,180) [1]	70,540 (88,180) [1]	182,700 (228,400) [1]	149,630 (187,060) [1]	105,810 (132,270) [1]	70,540 (88,180) [1]

[1] ( ) = Higher WLL by optimized attachment or application.
[2] Note: The values indicated for 3/4 strands only apply if it is ensured the load is evenly distributed over more than 2 strands. Otherwise, the 2-strand values should be assumed (see DGUV 109-017).

Maximum transport weight "G" in [lbs] with different lifting methods.

VWBG-V

VWBG

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
WBPG													
WBPG-85t	6 x M48	85	85	170	170	147	119	85	85	220	178	127	85
WBPG-100t	6 x M48	100	100	200	200	173	140	100	100	259	210	150	100
WBPG-120t	6 x M48	120	120	240	240	207	168	120	120	311	252	180	120
WBPG-200t	10 x M48	200	200	400	400	346	280	200	200	519	420	300	200
WBPG-250t	12 x M48	250	250	500	500	433	350	250	250	649	525	375	250
VRS / VRS-F / VRM													
VRS- / VRS-F- / VRM-0.1t [1]	M6	0.1	0.5	1	0.2	0.17	0.14	0.1	0.1	0.26	0.21	0.15	0.1
VRS- / VRS-F- / VRM-0.3t [1]	M8	0.3	1	2	0.6	0.52	0.42	0.3	0.3	0.77	0.63	0.45	0.3
VRS- / VRS-F- / VRM-0.4t [1]	M10	0.4	1	2	0.8	0.69	0.56	0.4	0.4	1.04	0.84	0.6	0.4
VRS- / VRS-F- / VRM-0.75t [1]	M12	0.75	2	4	1.5	1.3	1	0.75	0.75	1.94	1.57	1.12	0.75
VRS- / VRS-F-0.75t [1]	M14	0.75	2	4	1.5	1.3	1	0.75	0.75	1.94	1.57	1.12	0.75
VRS- / VRS-F- / VRM-1.5t [1]	M16	1.5	4	8	3	2.6	2.1	1.5	1.5	3.9	3.15	2.25	1.5
VRS- / VRS-F-1.5t [1]	M18	1.5	4	8	3	2.6	2.1	1.5	1.5	3.9	3.15	2.25	1.5
VRS- / VRS-F- / VRM-2.3t [1]	M20	2.3	6	12	4.6	3.98	3.22	2.3	2.3	5.97	4.83	3.45	2.3
VRS- / VRS-F-2.3t [1]	M22	2.3	6	12	4.6	3.98	3.22	2.3	2.3	5.97	4.83	3.45	2.3
VRS- / VRS-F- / VRM-3.2t [1]	M24	3.2	8	16	6.4	5.54	4.5	3.2	3.2	8.3	6.7	4.8	3.2
VRS- / VRS-F-3.2t [1]	M27	3.2	8	16	6.4	5.54	4.5	3.2	3.2	8.3	6.7	4.8	3.2
VRS- / VRS-F- / VRM-4.5t [1]	M30	4.5	12	24	9	7.8	6.3	4.5	4.5	11.6	9.5	6.75	4.5
VRS- / VRS-F-4.5t [1]	M33	4.5	12	24	9	7.8	6.3	4.5	4.5	11.6	9.5	6.75	4.5
VRS-F-7t	M36	7	16	32	14	12.1	9.8	7	7	18.1	14.7	10.5	7
VRS-F-9t	M42	9	24	48	18	15.5	12.6	9	9	23.3	18.9	13.5	9
VRS-F-12t	M48	12	32	64	24	20.7	16.8	12	12	31.1	25.2	18	12
VRS-F-16t	M56	16	50	100	32	27.7	22.4	16	16	41.5	33.6	24	16
VRS-F-20t	M64	20	60	120	40	34.6	28	20	20	51	42	30	20

[1] WLL values of VRM only apply in conjunction with thread bolts of quality class 10.9 min.
Maximum transport weight "G" in [t] with different lifting methods.

WBPG

VRS-F (with wrench)

VRM-STARPOINT

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3 + 4	3 + 4	3 + 4	3 + 4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
VRS / VRS-F													
VRS- / VRS-F-0.1t	1/4"	170	880	1,760	340	290	240	170	170	440	360	250	170
VRS- / VRS-F-0.3t	5/16"	520	1,760	3,520	1,040	900	730	520	520	1,340	1,100	780	520
VRS- / VRS-F-0.4t	3/8" + 7/16"	700	1,760	3,520	1,400	1,210	990	700	700	1,810	1,480	1,050	700
VRS- / VRS-F-0.75t	1/2"	1,320	3,520	7,040	2,640	2,280	1,860	1,320	1,320	3,410	2,800	1,980	1,320
VRS- / VRS-F-1.5t	5/8"	2,640	7,040	14,080	5,280	4,560	3,730	2,640	2,640	6,830	5,600	3,960	2,640
VRS- / VRS-F-2.3t	3/4"	4,050	10,580	21,160	8,100	7,000	5,720	4,050	4,050	10,490	8,590	6,070	4,050
VRS- / VRS-F-3.2t	1" + 1 1/8"	5,640	14,080	28,160	11,280	9,750	7,970	5,640	5,640	14,600	11,960	8,460	5,640
VRS- / VRS-F-4.5t	1 1/4"	7,930	21,160	42,320	15,860	13,710	11,210	7,930	7,930	20,530	16,820	11,890	7,930
VRS-F-7t	1 1/2"	12,340	28,220	56,440	24,680	21,340	17,450	12,340	12,340	31,960	26,170	18,510	12,340
VRS-F-9t	1 3/4"	15,870	42,320	84,640	31,740	27,450	22,440	15,870	15,870	41,100	33,660	23,800	15,870
VRS-F-12t	2"	21,160	56,430	112,860	42,320	36,600	29,920	21,160	21,160	54,800	44,880	31,740	21,160

Maximum transport weight "G" in [lbs] with different lifting methods.

VRS-F (with wrench)

WLL BOLTABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Thread size												
INOX-STAR													
INOX-STAR-0.3t	M8	0.3	0.7	1.4	0.6	0.52	0.42	0.3	0.3	0.77	0.63	0.45	0.3
INOX-STAR-0.3t	M10	0.3	0.7	1.4	0.6	0.52	0.42	0.3	0.3	0.77	0.63	0.45	0.3
INOX-STAR-0.5t	M12	0.5	1.2	2.4	1	0.86	0.71	0.5	0.5	13	1.1	0.75	0.5
INOX-STAR-1t	M16	1	2.4	4.8	2	1.73	1.4	1	1	2.6	2.1	1.5	1
INOX-STAR-2t	M20	2	3.6	7.2	4	3.46	2.8	2	2	5.2	4.25	3	2
INOX-STAR-2.5t	M24	2.5	5.2	10.4	5	4.33	3.5	2.5	2.5	6.5	5.25	3.75	2.5
VWBM													
VWBM-0.6t	M12	0.6	1.2	2.4	1.2	1	0.84	0.6	0.6	1.55	1.26	0.9	0.6
VWBM-1t	M16	1	2.6	5.2	2	1.73	1.4	1	1	2.6	2.1	1.5	1
VWBM-1.8t	M20	1.8	4	8	3.6	3.11	2.5	1.8	1.8	4.67	3.75	2.7	1.8
B-ABA													
B-ABA-1.6t	4 x M10	1.6	1.6	3.2	3.2	2.77	2.2	1.6	1.6	4.15	3.4	2.4	1.6
B-ABA-3.2t	4 x M12	3.2	3.2	6.4	6.4	5.54	4.5	3.2	3.2	8.3	6.7	4.8	3.2
B-ABA-5t	4 x M16	5	5	10	10	8.66	7.1	5	5	12.9	10.6	7.5	5
B-ABA-10t	4 x M20	10	10	20	20	17.3	14	10	10	25.9	21.2	15	10
B-ABA-20t	6 x M24	20	20	40	40	34.6	28	20	20	51	42	30	20
B-ABA-31.5t	6 x M30	31.5	31.5	63	63	54	45	31.5	31.5	81	67	47.5	31.5
RBG / VRBG / VRBG-FIX													
RBG-3t	2 x M16	3	3	6	6	5.2	4.25	3	3	7.8	6.3	4.5	3
VRBG-10t	4 x M20	10	10	20	20	17.3	14	10	10	25.9	21.2	15	10
VRBG-16t	4 x M30	16	16	32	32	27.7	22.4	16	16	41.5	33.6	24	16
VRBG-FIX-31.5t	6 x M36	31.5	31.5	63	63	54	45	31.5	31.5	81	67	47.5	31.5
VRBG-FIX-50t	8 x M36	50	50	100	100	86	70	50	50	129	105	75	50
VRBG-FIX-100t	8 x M48	100	100	200	200	173	140	100	100	259	210	150	100

Maximum transport weight “G” in [t] with different lifting methods.

INOX-STAR	VWBM	B-ABA	RBG / VRBG / VRBG-FIX
			


B4

WLL WELDABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Welding seam												
VLBS / VLBS-U													
VLBS-1.5t / VLBS-U-1.5t	HV5+3	1.5	1.5	3	3	2.6	2.1	1.5	1.5	3.9	3.15	2.25	1.5
VLBS-2.5t / VLBS-U-2.5t	HV7+3	2.5	2.5	5	5	4.33	3.5	2.5	2.5	6.5	5.25	3.75	2.5
VLBS-4t / VLBS-U-4t	HV8+3	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
VLBS-6.7t / VLBS-U-6.7t	HV12+4	6.7	6.7	13.4	13.4	11.6	9.5	6.7	6.7	17.4	14.1	10	6.7
VLBS-10t / VLBS-U-10t	HV16+4	10	10	20	20	17.3	14	10	10	25.9	21.2	15	10
VLBS-16t / VLBS-U-16t	HV25+6	16	16	32	32	27.7	22.4	16	16	41.5	33.6	24	16
VLBS-U-LT / VLBS-P													
VLBS-U-LT-2.5t	HV7+a3	2.5	2.5	5	5	4.33	3.5	2.5	2.5	6.5	5.25	3.75	2.5
VLBS-U-LT-4t	HV8+a3	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
VLBS-U-LT-6.7t	HV12+a4	6.7	6.7	13.4	13.4	11.6	9.5	6.7	6.7	17.4	14.1	10	6.7
VLBS-U-LT-10t	HV16+a4	10	10	20	20	17.3	14	10	10	25.9	21.2	15	10
VLBS-P-4t	HV13 concave	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
VRBS-FIX													
VRBS-FIX-4t	HY3	8	4	4	8	6.92	5.6	4	4	10.3	8.4	6	4
VRBS-FIX-6.7t	HY5	13.4	6.7	6.7	13.4	11.6	9.5	6.7	6.7	17.4	14.1	10	6.7
VRBS-FIX-10t	HY6	20	10	10	20	17.3	14	10	10	25.9	21.2	15	10
VRBS-FIX-16t	HY9	32	16	16	32	27.7	22.4	16	16	41.5	33.6	24	16
VRBS-FIX-31.5t	HY12	63	31.5	31.5	63	54	45	31.5	31.5	81	67	47.5	31.5
VRBS-FIX-50t	HY19	100	50	50	100	86	70	50	50	129	105	75	50
VRBS-FIX-100t	HY28	200	100	100	200	173	140	100	100	259	210	150	100
VRBS													
VRBS-4t	HY4+a3	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
VRBS-6.7t	HY5.5+a3	6.7	6.7	13.4	13.4	11.6	9.5	6.7	6.7	17.4	14.1	10	6.7
VRBS-10t	HY6+a4	10	10	20	20	17.3	14	10	10	25.9	21.2	15	10
VRBS-16t	HY8.5+a4	16	16	32	32	27.7	22.4	16	16	41.5	33.6	24	16
VRBS-31.5t	HY18+a4	31.5	31.5	63	63	54	45	31.5	31.5	81	67	47.5	31.5

Maximum transport weight “G” in [t] with different lifting methods.

VLBS	VLBS-U-LT	VRBS-FIX	VRBS
			

WLL WELDABLE LIFTING POINTS.

DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Welding seam												
VLBS													
VLBS-1.5t / VLBS-U-1.5t	HV5+3	2,640	2,640	5,280	5,280	4,560	3,730	2,640	2,640	6,830	5,600	3,960	2,640
VLBS-2.5t / VLBS-U-2.5t	HV7+3	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
VLBS-4t / VLBS-U-4t	HV8+3	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
VLBS-6.7t / VLBS-U-6.7t	HV12+4	11,810	11,810	23,620	23,620	20,430	16,700	11,810	11,810	30,580	25,050	17,710	11,810
VLBS-10t / VLBS-U-10t	HV16+4	17,630	17,630	35,260	35,260	30,500	24,93	17,630	17,630	45,660	37,400	26,440	17,630
VLBS-16t / VLBS-U-16t	HV25+6	28,220	28,220	56,440	56,440	48,820	39,900	28,220	28,220	73,090	59,860	42,330	28,220
VLBS-U-LT / VLBS-P													
VLBS-U-LT-2.5t	HV7+a3	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
VLBS-U-LT-4t	HV8+a3	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
VLBS-U-LT-6.7t	HV12+a4	11,810	11,810	23,620	23,620	20,430	16,700	11,810	11,810	30,580	25,050	17,710	11,810
VLBS-U-LT-10t	HV16+a4	17,630	17,630	35,260	35,260	30,500	24,930	17,630	17,630	45,660	37,400	26,440	17,630
VLBS-P-4t	HV13 concave	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
VRBS-FIX													
VRBS-FIX-4t	HY3	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
VRBS-FIX-6.7t	HY5	11,810	11,810	23,620	23,620	20,430	16,700	11,810	11,810	30,580	25,050	17,710	11,810
VRBS-FIX-10t	HY6	17,630	17,630	35,260	35,260	30,500	24,930	17,630	17,630	45,660	37,400	26,440	17,630
VRBS-FIX-16t	HY9	28,220	28,220	56,440	56,440	48,820	39,900	28,220	28,220	73,090	59,860	42,330	28,220
VRBS-FIX-31.5t	HY12	55,550	55,550	111,100	111,100	96,100	78,560	55,550	55,550	143,870	117,830	83,320	55,550
VRBS-FIX-50t	HY19	88,180	88,180	176,360	176,360	152,560	124,710	88,180	88,180	228,400	187,060	132,270	88,180
VRBS-FIX-100t	HY28	176,370	176,370	352,740	352,740	305,120	249,420	176,370	176,370	456,790	374,130	264,550	176,370
VRBS													
VRBS-4t	HY4+a3	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
VRBS-6.7t	HY5.5+a3	11,810	11,810	23,620	23,620	20,430	16,700	11,810	11,810	30,580	25,050	17,710	11,810
VRBS-10t	HY6+a4	17,630	17,630	35,260	35,260	30,500	24,930	17,630	17,630	45,660	37,400	26,440	17,630
VRBS-16t	HY8.5+a4	28,220	28,220	56,440	56,440	48,820	39,900	28,220	28,220	73,090	59,860	42,330	28,220
VRBS-31.5t	HY18+a4	55,550	55,550	111,100	111,100	96,100	78,560	55,550	55,550	14,3870	117,830	83,320	55,550

Maximum transport weight "G" in [lbs] with different lifting methods.

VLBS	VLBS-U-LT	VRBS-FIX	VRBS
			

WLL WELDABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

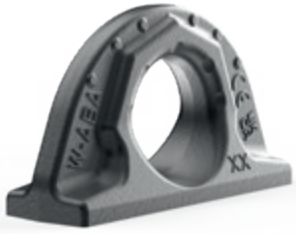
Attachment type												
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Welding seam												
VRBK-FIX													
VRBK-FIX-4t	HY4+a3	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
VRBK-FIX-6.7t	HY5+a3	6.7	6.7	13.4	13.4	11.6	9.5	6.7	6.7	17.4	14.1	10	6.7
VRBK-FIX-10t	HY8+a3	10	10	20	20	17.3	14	10	10	25.9	21.2	15	10
VRBK-FIX-16t	HY10	16	16	32	32	27.7	22.4	16	16	41.5	33.6	24	16
VRBK-FIX-31.5t	HY17	31.5	31.5	63	63	54	45	31.5	31.5	81	67	47.5	31.5
VRBK-50t	HY25	50	50	100	100	86	70	50	50	129	105	75	50
W-ABA													
W-ABA-0.8t	a3	0.8 (2) [1]	2	4	1.6 (4) [1]	1.38 (3.46) [1]	112(2.8) [1]	0.8 (2) [1]	0.8 (2) [1]	21 (5.2) [1]	1.7 (4.25) [1]	1.18(3) [1]	0.8(2) [1]
W-ABA-1.6t	a4	1.6 (4) [1]	4	8	3.2 (8) [1]	2.77 (6.92) [1]	2.2 (5.6) [1]	1.6 (4) [1]	1.6 (4) [1]	4.15 (10.3) [1]	3.4 (8.4) [1]	2.4 (6) [1]	1.6(4) [1]
W-ABA-3.2t	a6	3.2 (9) [1]	9	18	6.4 (18) [1]	5.54 (15.5) [1]	4.5 (12.6) [1]	3.2 (9) [1]	3.2 (9) [1]	8.3 (23.3) [1]	6.7 (18.9) [1]	4.8 (13.5) [1]	3.2(9) [1]
W-ABA-5t	a7	5 (12) [1]	12	24	10 (24) [1]	8.66 (20.7) [1]	7.1 (16.8) [1]	5 (12) [1]	5 (12) [1]	12.9 (31.1) [1]	10.6 (25.2) [1]	7.5 (18) [1]	5(12) [1]
W-ABA-10t	a8	10 (20) [1]	20	40	20 (40) [1]	17.3 (34.6) [1]	14 (28) [1]	10 (20) [1]	10 (20) [1]	25.9 (51) [1]	21.2 (42) [1]	15 (30) [1]	10(20) [1]
W-ABA-20t	a12	20	20	40	40	34.6	28	20	20	51	42	30	20
W-ABA-31.5t	a15	31.5	31.5	63	63	54	45	31.5	31.5	81	67	47.5	31.5
INOX-ABA													
INOX-ABA-0.8t	HY3+4	0.8 (3) [1]	3	6	1.6 (6) [1]	1.38 (5.2) [1]	1.12 (4.25) [1]	0.8 (3) [1]	0.8 (3) [1]	2.1 (7.8) [1]	1.7 (6.3) [1]	1.18 (4.5) [1]	0.8 (3) [1]
INOX-ABA-1.6t	HY5+3	1.6 (5) [1]	5	10	3.2 (10) [1]	2.77 (8.66) [1]	2.2 (7.1) [1]	1.6 (5) [1]	1.6 (5) [1]	4.15 (12.9) [1]	3.4 (10.6) [1]	2.4 (7.5) [1]	1.6 (5) [1]
INOX-ABA-2.7t	HY25	2.7 (7.5) [1]	7.5	15	5.4 (15) [1]	4.67 (12.9) [1]	3.8 (10.5) [1]	2.7 (7.5) [1]	2.7 (7.5) [1]	7 (19.4) [1]	5.7 (15.75) [1]	4 (11.25) [1]	2.7 (7.5) [1]

[1] ( ) = Higher WLL by optimized attachment or application.

Maximum transport weight "G" in [t] with different lifting methods.

VRBK-FIX

W-ABA



INOX-ABA

WLL WELDABLE LIFTING POINTS.

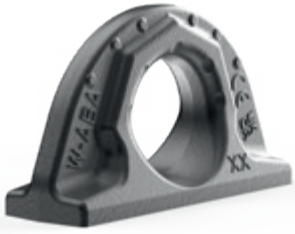
DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Welding seam												
VRBK-FIX													
VRBK-FIX-4t	HY4+a3	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
VRBK-FIX-6.7t	HY5+a3	11,810	11,810	23,620	23,620	20,430	16,700	11,810	11,810	30,580	25,050	17,710	11,810
VRBK-FIX-10t	HY8+a3	17,630	17,630	35,260	35,260	30,500	24,930	17,630	17,630	45,660	37,400	26,440	17,630
VRBK-FIX-16t	HY10	28,220	28,220	56,440	56,440	48,820	39,900	28,220	28,220	73,090	59,860	42,330	28,220
VRBK-FIX-31.5t	HY17	55,550	55,550	111,100	111,100	96,100	78,560	55,550	55,550	143,870	117,830	83,320	55,550
VRBK-50t	HY25	88,180	88,180	176,360	176,360	152,560	124,710	88,180	88,180	228,400	187,060	132,270	88,180
W-ABA													
W-ABA-0.8t	a3	1,410 (3,520) [1]	3,520	7,040	2,820 (7,040) [1]	2,430 (6,080) [1]	1,990 (4,970) [1]	1,410 (3,520) [1]	1,410 (3,520) [1]	3,650 (9,110) [1]	2,990 (7,460) [1]	2,110 (5,280) [1]	1,410 (3,520) [1]
W-ABA-1.6t	a4	2,820 (7,040) [1]	7,040	14,080	5,640 (14,080) [1]	4,870 (12,170) [1]	3,980 (9,950) [1]	2,820 (7,040) [1]	2,820 (7,040) [1]	7,300 (18,230) [1]	5,980 (14,930) [1]	4,230 (10,560) [1]	2,820 (7,040) [1]
W-ABA-3.2t	a6	5,640 (15,870) [1]	15,870	31,740	11,280 (31,740) [1]	9,750 (27,450) [1]	7,970 (22,440) [1]	5,640 (15,870) [1]	5,640 (15,870) [1]	14,600 (41,100) [1]	11,960 (33,660) [1]	8,460 (23,800) [1]	5,640 (15,870) [1]
W-ABA-5t	a7	8,810 (21,160) [1]	21,160	42,320	17,620 (42,320) [1]	15,240 (36,600) [1]	12,450 (29,920) [1]	8,810 (21,160) [1]	8,810 (21,160) [1]	22,810 (54,800) [1]	18,680 (44,880) [1]	13,210 (31,740) [1]	8,810 (21,160) [1]
W-ABA-10t	a8	17,630 (35,270) [1]	35,270	70,540	35,260 (70,540) [1]	30,500 (61,010) [1]	24,930 (49,870) [1]	17,630 (35,270) [1]	17,630 (35,270) [1]	45,660 (91,340) [1]	37,400 (74,810) [1]	26,440 (52,900) [1]	17,630 (35,270) [1]
W-ABA-20t	a12	35,270	35,270	70,540	70,540	61,010	49,870	35,270	35,270	91,340	74,810	52,900	35,270
W-ABA-31.5t	a15	55,550	55,550	111,100	111,100	96,100	78,560	55,550	55,550	143,870	117,830	83,320	55,550
INOX-ABA													
INOX-ABA-0.8t	HY3+4	1,410 (5,290) [1]	5,290	10,580	2,820 (10,580) [1]	2,430 (9,150) [1]	1,990 (7,480) [1]	1,410 (5,290) [1]	1,410 (5,290) [1]	3,650 (13,700) [1]	2,990 (11,220) [1]	2,110 (7,930) [1]	1,410 (5,290) [1]
INOX-ABA-1.6t	HY5+3	2,820 (8,810) [1]	8,810	17,620	5,640 (17,620) [1]	4,870 (15,240) [1]	3,980 (12,450) [1]	2,820 (8,810) [1]	2,820 (8,810) [1]	7,300 (22,810) [1]	5,980 (18,680) [1]	4,230 (13,210) [1]	2,820 (8,810) [1]
INOX-ABA-2.7t	HY25	4,750 (13,220) [1]	13,220	26,440	9,500 (26,440) [1]	8,210 (22,870) [1]	6,710 (18,690) [1]	4,750 (13,220) [1]	4,750 (13,220) [1]	12,300 (34,230) [1]	10,070 (28,040) [1]	7,120 (19,830) [1]	4,750 (13,220) [1]

[1] ( ) = Higher WLL by optimized attachment or application.
Maximum transport weight "G" in [lbs] with different lifting methods.

VRBK-FIX

W-ABA



INOX-ABA

WLL WELDABLE LIFTING POINTS.

DESIGN FACTOR 4:1. For max. total load weight in **tonnes (t)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Welding seam												
WPP- / WPPH-S **WPP- / WPPH-B** **WPP- / WPPH-VIP**													
WPP- / WPPH-S-0.63t WPP- / WPPH-B-0.63t WPP- / WPPH-VIP-4/0.63t	4	0.63	0.63	1.26	1.26	11	0.88	0.63	0.63	1.63	1.32	0.95	0.63
WPP- / WPPH-S-1.5t WPP- / WPPH-B-1.5t WPP- / WPPH-VIP-6/1.5t	5	1.5	1.5	3	3	2.6	2.1	1.5	1.5	3.9	3.15	2.25	1.5
WPP- / WPPH-S-2.5t WPP- / WPPH-B-2.5t WPP- / WPPH-VIP-8/2.5t	HY3+5	2.5	2.5	5	5	4.33	3.5	2.5	2.5	6.5	5.25	3.75	2.5
WPP- / WPPH-S-4t WPP- / WPPH-B-4t WPP- / WPPH-VIP-10/4t	HY3+6	4	4	8	8	6.92	5.6	4	4	10.3	8.4	6	4
WPP- / WPPH-S-5t WPP- / WPPH-B-5t WPP- / WPPH-VIP-13/5t	HY3+8	5	6.7	13.4	10	8.66	7.1	5	5	12.9	10.6	7.5	5
WPP- / WPPH-S-8t WPP- / WPPH-B-8t WPP- / WPPH-VIP-16/8t	HY3+10	8	10	20	16	13.8	11.2	8	8	20.7	17	11.8	8
VWBS / VWBS-KA													
VWBS-KA-28/31.5t WPPH-KA-28/31.5t	HY22+a19	31.5	31.5	63	63	54	45	31.5	31.5	81	67	47.5	31.5

Maximum transport weight “G” in [t] with different lifting methods.

WPP-S	WPP-B	WPP-VIP	VWBS
			

WLL WELDABLE LIFTING POINTS.

DESIGN FACTOR 5:1. For max. total load weight in **pounds (lbs)**.

Attachment type													
Number of strands		1	1	2	2	2	2	2	2	3+4	3+4	3+4	3+4
Inclination angle <α		90°	0°	0°	90°	60°	45°	30°	Asymm.	60°	45°	30°	Asymm.
Type	Welding seam												
WPP- / WPPH-S **WPP- / WPPH-B** **WPP- / WPPH-VIP**													
WPP- / WPPH-S-0.63t WPP- / WPPH-B-0.63t WPP- / WPPH-VIP-4/0.63t	4	1,110	1,110	2,220	2,220	1,920	1,570	1,110	1,110	2,870	2,350	1,660	1,110
WPP- / WPPH-S-1.5t WPP- / WPPH-B-1.5t WPP- / WPPH-VIP-6/1.5t	5	2,640	2,640	5,280	5,280	4,560	3,730	2,640	2,640	6,830	5,600	3,960	2,640
WPP- / WPPH-S-2.5t WPP- / WPPH-B-2.5t WPP- / WPPH-VIP-8/2.5t	HY3+5	4,400	4,400	8,800	8,800	7,610	6,220	4,400	4,400	11,390	9,330	6,600	4,400
WPP- / WPPH-S-4t WPP- / WPPH-B-4t WPP- / WPPH-VIP-10/4t	HY3+6	7,040	7,040	14,080	14,080	12,170	9,950	7,040	7,040	18,230	14,930	10,560	7,040
WPP- / WPPH-S-5t WPP- / WPPH-B-5t WPP- / WPPH-VIP-13/5t	HY3+8	8,810	11,810	23,620	17,620	15,240	12,450	8,810	8,810	22,810	18,680	13,210	8,810
WPP- / WPPH-S-8t WPP- / WPPH-B-8t WPP- / WPPH-VIP-16/8t	HY3+10	14,080	17,630	35,260	28,160	24,350	19,910	14,080	14,080	36,460	29,860	21,120	14,080
VWBS / VWBS-KA													
VWBS-KA-28/31.5t WPPH-KA-28/31.5t	HY22+a19	55,550	55,550	111,100	111,100	96,100	78,560	55,550	55,550	143,870	117,830	83,320	55,550

Maximum transport weight "G" in [lbs] with different lifting methods.

WPP-S	WPP-B	WPP-VIP	VWBS
			

PLUG-IN / BOLTABLE LIFTING POINTS.

OVERVIEW OF
PLUG-IN / BOLTABLE LIFTING POINTS.

	Ideal for rotating and turning	Ball bearing mounted	Safety factor 4:1	Safety factor 5:1	100 % electromagnetically crack-tested	WLL possible on all sides or turning into load direction	Retaining spring	Turning range	Pivoting area/hook-in link	Metric thread	Metric fine thread	UNC inch thread	8UN inch thread	UNF inch thread	BSW – British Standard Whitworth	G – pipe inch (according to ISO 228)	Variable thread lengths	Operating temperature range **without** WLL reduction	Max. application temperature **with** WLL reduction	Equipped with ICE-BOLT	RUD BLUE-ID SYSTEM	DGUV approval	Certified according to the DNV guideline	Safety standard for lifting accessories	Plug-in mechanism for tool-free assembly
			■		■			■	■								■ [1]	■			■				■
			■	■	■	■		■	■	■		■					■	■	■	■	■			■	
			■	■	■	■		■	■	■		■					■	■	■	■	■				
			■	■	■	■		■	■	■		■					■	■	■	■	■			■	
			■		■	■	■	■	■	■	■	■					■	■	■	■	■	■	■		
			■		■	■	■	■	■	■							■	■	■		■		■		
	■	■	■		■	■		■	■	■	■	■		■	■	■	■	■	■		■	■			
	■	■	■		■	■		■	■	■	■	■	■	■	■		■	■	■	■	■	■			
	■	■	■		■	■		■	■	■								■	■		■				
			■		■	■		■		■	■	■	■		■	■	■	■	■	■	■	■			
			■		■	■		■		■								■	■		■				
			■		■	■		■		■								■			■				

[1] Variable length. No thread.

BOLTABLE LIFTING POINTS.

OVERVIEW OF
BOLTABLE LIFTING POINTS.

Ideal for rotating and turning	Ball bearing mounted	Safety factor 4:1	Safety factor 5:1	100 % electromagnetically crack-tested	WLL possible on all sides or turning into load direction	Retaining spring	Turning range	Pivoting area/hook-in link	Metric thread	Metric fine thread	UNC inch thread	8UN inch thread	UNF inch thread	BSW – British Standard Whitworth	G – pipe inch (according to ISO 228)	Variable thread lengths	Operating temperature range **without** WLL reduction	Max. application temperature **with** WLL reduction	Equipped with ICE-BOLT	RUD BLUE-ID SYSTEM	DGUV approval	Certified according to the DNV guideline	Safety standard for lifting accessories	Plug-in mechanism for tool-free assembly
■	■	■		■	■		■	■	■								■	■		■				
		■		■					■								■	■	■	■				
		■		■					■								■	■	■	■				
		■		■	■				■								■	■	■	■	■			
		■		■	■	■		■	■							■	■	■		■				

PIP-RAPIDO

The first plug-in lifting point. From RUD.

FEATURES AND BENEFITS:

- Quick to assemble by hand without tools.
- Ideal for through hole fixtures with a difficult-to-access rear side – even for drill holes with undercut.
- Up to 80 % time saving compared to boltable lifting points – especially for regularly recurring lifting operations of the same or similar components.
- More flexibility with tolerance ranges of 2 mm (diameter) and 10 mm (length) – without affecting the WLL.
- Available in the diameter range (D) 30–41 mm and a length (L) of 16–100 mm.

PLUG-IN LIFTING POINT.

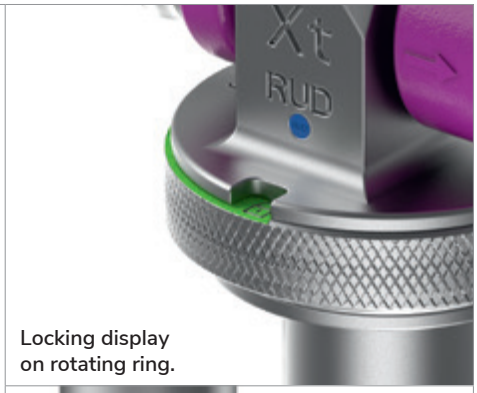
Do you frequently lift flanges or similar loads? Then the assembly and dismantling of boltable lifting points will cost valuable time. The solution: the RUD PIP-RAPIDO. It can be mounted in through-holes or undercut holes in seconds without tools. This saves up to 80 per cent time compared to boltable lifting points and offers clear handling advantages. The tolerance ranges for diameter and length ensure increased flexibility – without compromising the WLL.

Turn. Insert. Click. Done.

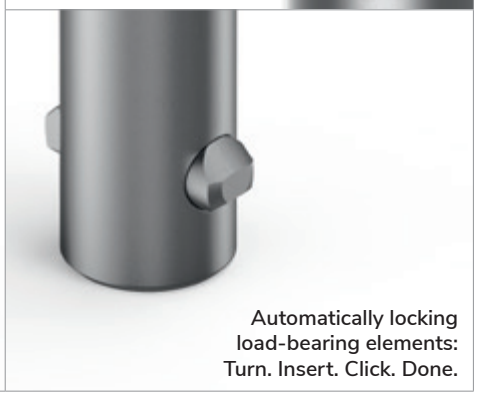
PIP-RAPIDO

Technical Data.

Optimal in combination with the RUD CCS-FASTLOX.[1]



Locking display on rotating ring.



Automatically locking load-bearing elements: Turn. Insert. Click. Done.

[1] Can also be used with all standard shackles.

PIP-RAPIDO – PLUG-IN LIFTING POINT.

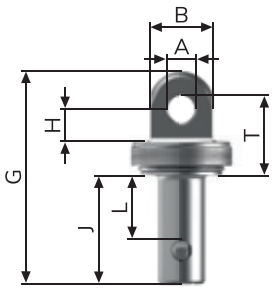
DESIGN FACTOR 4:1 Type	WLL 0–45° [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	L [mm]	Order no.
PIP-RAPIDO-D30-D41	4.2	[2]	54.5	19	42	25	30–41	D+8	55	L+104	23	68	L+34	16–100	8600670

[2] Weight depends on the design.

Subject to technical changes!

PIP-RAPIDO

PIP-RAPIDO



ACP-TURNADO

Automatic-Center-Point.

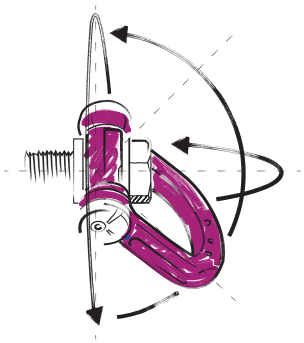
FEATURES AND BENEFITS:

- Unique RUD spring mechanism – prevents the lift bail from stopping at worst case position.
- No dangerous transverse loads.
- No kinking.
- Higher WLL compared to other existing designs.
- Fulfills the requirements of the American standard ASME B30.26.
- Pivots 180°, rotates 360°.
- Equipped with RUD ICE-BOLT up to size M24.
- Innovative wear markings for checking discard criteria.
- Embedded RFID transponder to make checks easier.

US Pat. No. 12031571

BYE BYE, WORST CASE.

It is considered the world's first smart lifting point: the RUD ACP-TURNADO has been setting new standards for the safe lifting of valuable loads since 2019.
The special feature: Its lift bail immediatelly turns in the load direction when the load is attached. This eliminates the possibility of missaplications, because the U-bar does not remain in the worst case position. Dangerous transverse loads and a sudden drop of the load are excluded. Its secret: a unique spring mechanism.



THE ACP-TURNADO IN DETAIL.

Unique RUD spring mechanism.

Swivel joint in the lifting ring axis.

No kinking due to the round lift bail design.

RUD ICE-BOLT with combination head up to M24.

Innovative wear markings.

RFID connected (as standard).

RUD RFID CONNECT IT

ACP-TURNADO

Technical Data.

ACP-TURNADO – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
ACP-TURNADO-0.7t-M8	0.7	0.36	83	11	10.5	38	30	12	28	45.3	13	58	40	M8	5	30	7912061
ACP-TURNADO-1t-M10	1	0.37	83	11	10.5	38	30	16	28	50.4	17	58	44	M10	6	60	7912064
ACP-TURNADO-1.35t-M12	1.35	0.38	83	11	10.5	38	30	19	28	54.5	19	58	47	M12	8	80	7909314
ACP-TURNADO-2.5t-M16	2.5	0.88	107	14	14	50	40	22	36	68	24	76	58	M16	10	150	7909316
ACP-TURNADO-4t-M20	4	1.41	118	17	17.25	50	45	26.5	43.5	82.5	30	89	70	M20	12	300	7909317
ACP-TURNADO-6.3t-M24	6.3	3.27	154	23	23	66	60	34	55	104	36	121	89	M24	14	500	7909318
ACP-TURNADO-8t-M30	8	5.69	183	29	27	76	75	41.5	68.5	129	46	148	110	M30	17	800	7909319

Subject to technical changes!

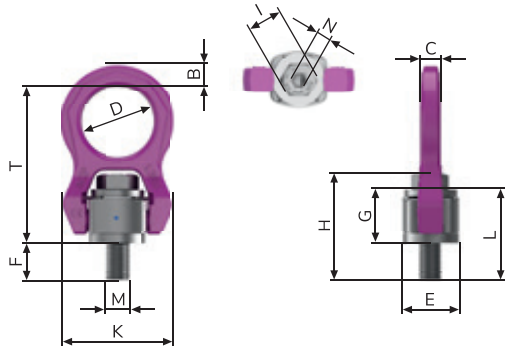
ACP-TURNADO – METRIC THREAD IN VARIABLE LENGTH INCL. SECURING NUT AND WASHER.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F vario [mm]	G [mm]	H vario [mm]	I [mm]	K [mm]	L vario [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
ACP-TURNADO-0.7t-M8	0.7	[1]	83	11	10.5	38	30	8–77	28	41.3–110.3	13	58	36–105	M8	5	30	8600630
ACP-TURNADO-1t-M10	1	[1]	83	11	10.5	38	30	10–97	28	44.4–131.4	17	58	38–125	M10	6	60	8600631
ACP-TURNADO-1.35t-M12	1.35	[1]	83	11	10.5	38	30	12–117	28	55–153	19	58	40–145	M12	8	80	8600632
ACP-TURNADO-2.5t-M16	2.5	[1]	107	14	14	50	40	16–149	36	68–195	24	76	52–185	M16	10	150	8600634
ACP-TURNADO-4t-M20	4	[1]	118	17	17.25	50	45	20–186	43.5	82–242	30	89	63–230	M20	12	300	8600636
ACP-TURNADO-6.3t-M24	6.3	[1]	154	23	23	66	60	24–210	55	104–280	36	121	79–265	M24	14	500	8600638
ACP-TURNADO-8t-M30	8	[1]	183	29	27	76	75	30–271	68.5	129–359	46	148	98–340	M30	17	800	8600640

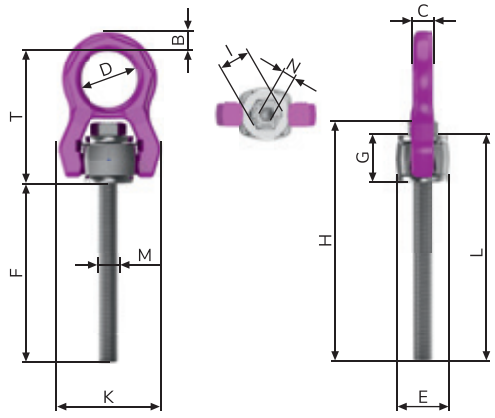
[1] Weight depends on the design.

Subject to technical changes!

ACP-TURNADO



ACP-TURNADO – vario length



ACP-TURNADO

Technical Data.

ACP-TURNADO – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	T [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]	H [inch]	I	K [inch]	L [inch]	M	N	Tightening torque [Nm]	Order no.
ACP-TURNADO-1.35t-1/2"-13UNC	1.35	0.39	83	11	10.5	38	30	18	28	54	3/4"	58	46	1/2"-13UNC	5/16"	80	7909417
ACP-TURNADO-2.5t-5/8"-11UNC	2.5	0.88	107	14	14	50	40	22	36	68	15/16"	76	58	5/8"-11UNC	3/8"	150	7909418
ACP-TURNADO-4t-3/4"-10UNC	4	1.41	118	17	17.25	50	45	25.5	43.5	81	1 1/8"	89	69	3/4"-10UNC	1/2"	300	7909419
ACP-TURNADO-6.3t-1"-8UNC	6.3	3.22	154	23	23	66	60	36	55	105.5	1 1/2"	121	91	1"-8UNC	9/16"	500	7909420
ACP-TURNADO-8t-1 1/4"-7UNC	8	5.77	183	29	27	76	75	46.5	68.5	135	1 7/8"	148	115	1 1/4"-7UNC	5/8"	800	7909421

Subject to technical changes!

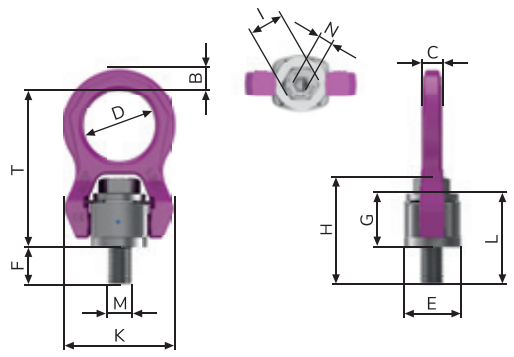
ACP-TURNADO – UNC INCH THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	T [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F vario [inch]	G [inch]	H vario [inch]	I	K [inch]	L vario [inch]	M	N	Tightening torque [Nm]	Order no.
ACP-TURNADO-1.35t-1/2"-13UNC	1.35	[1]	83	11	10.5	38	30	18–124	28	54–160	3/4"	58	40–152	1/2"-13UNC	5/16"	80	8600632
ACP-TURNADO-2.5t-5/8"-11UNC	2.5	[1]	107	14	14	50	40	16–148	36	68–194	15/16"	76	52–184	5/8"-11UNC	3/8"	150	8600634
ACP-TURNADO-4t-3/4"-10UNC	4	[1]	118	17	17.25	50	45	20–185	43.5	81–240	1 1/8"	89	64–228	3/4"-10UNC	1/2"	300	8600636
ACP-TURNADO-6.3t-1"-8UNC	6.3	[1]	154	23	23	66	60	25–199	55	105.5–270	1 1/2"	121	80–254	1"-8UNC	9/16"	500	8600638
ACP-TURNADO-8t-1 1/4"-7UNC	8	[1]	183	29	27	76	75	32–271	68.5	135–359	1 7/8"	148	100–339	1 1/4"-7UNC	5/8"	800	8600640

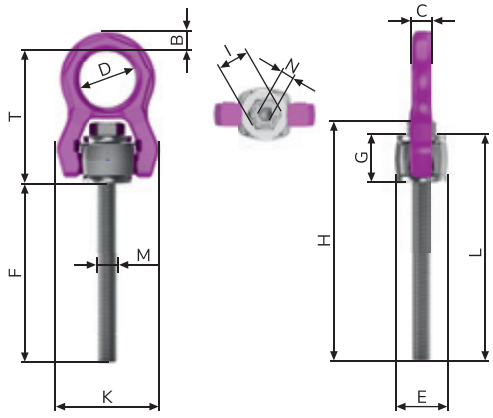
[1] Weight depends on the design.

Subject to technical changes!

ACP-TURNADO



ACP-TURNADO – vario length



ACP-TURNADO MAX

Automatic-Center-Point.

FEATURES AND BENEFITS:

- Innovative internal spring mechanism – prevents the lift bail from stopping at worst case position.
- No dangerous transverse loads.
- No kinking.
- Higher WLL compared to other existing designs.
- Fulfills the requirements of the American standard ASME B30.26.
- Pivots 180°, rotates 360°.
- Deflector disc with angle marking, WLL information in “t” and “lbs”, safety factors and torque moment.
- Free space for individual marking / stamp.
- Innovative wear markings for checking discard criteria.
- Embedded RFID transponder to make checks easier.

US Pat. No. 17/995647

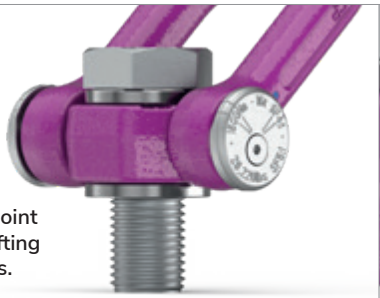
MOVE HEAVY WEIGHTS SAFELY.

The heavier the load, the higher the demands on the lifting point. This is why the RUD ACP-TURNADO comes in three different WLL ranges and designs, which compliment each other perfectly. One is the ACP-TURNADO MAX, which is available in thread sizes of M36 to M56 (1 ½" – 2").

Just like all other versions of the RUD ACP-TURNADO, it boasts a WLL that is up to 30 % higher than that of lifting points from other suppliers that are comparable in design and size. This gives you considerable reserves in terms of maximum WLL, as well as noticeable weight and handling advantages. This makes the RUD ACP-TURNADO MAX the first choice wherever extra heavy loads have to be moved safely, precisely and ergonomically.

THE ACP-TURNADO MAX IN DETAIL.

Innovative internal spring mechanism.



Swivel joint in the lifting ring axis.

Deflector disc with angle marking.

Combination head bolt with internal and external hexagon socket.

Innovative wear markings.

RFID connected (as standard).

RUD RFID
CONNECT IT

ACP-TURNADO MAX

Technical Data.

ACP-TURNADO MAX – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	T [mm]	Tightening torque [Nm]	Order no.
ACP-TURNADO-MAX-12.5t-M36	12.5	7.1	106	32	32	82	70	45	60	128	55	168	105	M36	22	189	800	7911052
ACP-TURNADO-MAX-16t-M42	16	7.5	106	32	32	82	70	53	60	136	65	168	113	M42	24	189	1,500	7911053
ACP-TURNADO-MAX-20t-M48	20	16	126	45	45	103	90	60.5	78.5	169	75	204	139	M48	27	235	2,000	7912630
ACP-TURNADO-MAX-24t-M52 [1]	24	16.5	123.5	45	45	103	95	65	108	173	75	204	–	M52	24	232	2,000	7912631
ACP-TURNADO-MAX-27t-M56 [1]	27	16.7	123.5	45	45	103	95	70	108	178	75	204	–	M56	24	232	2,000	7912632

[1] Bolt cannot be replaced.

Subject to technical changes!

ACP-TURNADO MAX – METRIC THREAD IN VARIABLE LENGTH.

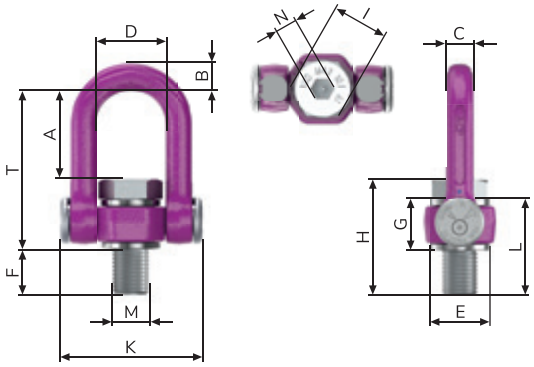
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F vario [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L vario [mm]	M	N [mm]	T [mm]	Tightening torque [Nm]	Order no.
ACP-TURNADO-MAX-12.5t-M36	12.5	[2]	106	32	32	82	70	36–240	60	128–323	55	168	105–300	M36	22	189	800	8600642
ACP-TURNADO-MAX-16t-M42	16	[2]	106	32	32	82	70	42–290	60	136–373	65	168	113–350	M42	24	189	1,500	8600644
ACP-TURNADO-MAX-20t-M48	20	[2]	126	45	45	103	90	48–311.5	78.5	156.5–420	75	204	126.5–390	M48	27	235	2,000	8600645
ACP-TURNADO-MAX-24t-M52 [1]	24	[2]	123.5	45	45	103	95	52–300	–	160–408	75	204	–	M52	24	232	2,000	8600647
ACP-TURNADO-MAX-27t-M56 [1]	27	[2]	123.5	45	45	103	95	56–300	–	164–408	75	204	–	M56	24	232	2,000	8600648

[1] Bolt cannot be replaced.

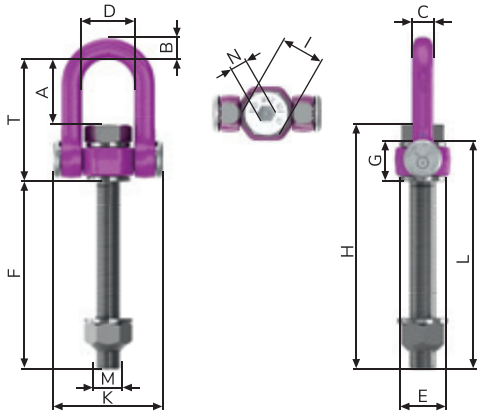
[2] Weight depends on the design.

Subject to technical changes!

ACP-TURNADO MAX



ACP-TURNADO MAX – vario length



ACP-TURNADO MAX

Technical Data.

ACP-TURNADO MAX – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]	H [inch]	I	K [inch]	L [inch]	M	N [inch]	T [inch]	Tightening torque [Nm]	Order no.
ACP-TURNADO-MAX-14t-1 1/2"-6UNC	14	7.3	106	32	32	82	70	48	60	131	2 1/4"	168	108	1 1/2"-6UNC	7/8"	189	800	7911054
ACP-TURNADO-MAX-16t-1 3/4"-5UNC	16	7.5	104	32	32	82	70	56	60	141	2 5/8"	168	117	1 3/4"-5UNC	1"	189	1,500	7911055
ACP-TURNADO-MAX-22t-2"-4.5UNC	22	14.9	126	45	45	103	90	63.5	79	172	3"	204	142	2"-4.5UNC	1 1/8"	235	2,000	7912638

Subject to technical changes!

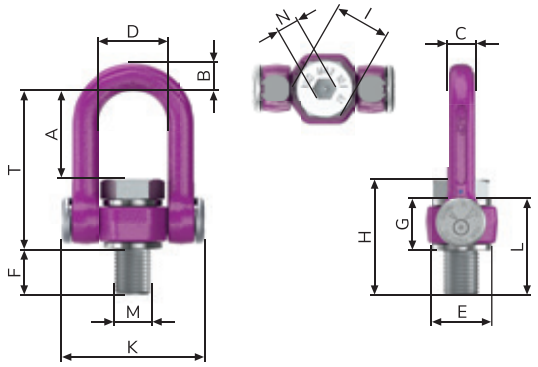
ACP-TURNADO MAX – UNC INCH THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F vario [inch]	G [inch]	H vario [inch]	I	K [inch]	L vario [inch]	M	N [inch]	T [inch]	Tightening torque [Nm]	Order no.
ACP-TURNADO-MAX-14t-1 1/2"-6UNC	14	[1]	106	32	32	82	70	48–287	60	131–370	2 1/4"	168	108–347	1 1/2"-6UNC	7/8"	189	800	8600643
ACP-TURNADO-MAX-22t-2"-4.5UNC	22	[1]	126	45	45	103	90	51–311	79	160–420	3"	204	130–390	2"-4.5UNC	1 1/8"	235	2,000	8600646

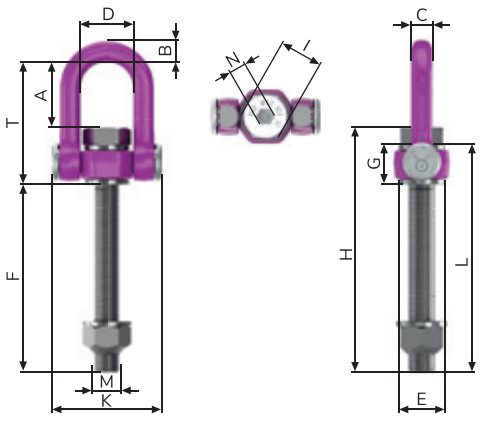
[1] Weight depends on the design.

Subject to technical changes!

ACP-TURNADO MAX



ACP-TURNADO MAX – vario length



ACP-TURNADO SUPERMAX

Automatic-Center-Point.

FEATURES AND BENEFITS:

- Innovative internal spring mechanism – prevents the lift bail from stopping at worst case position.
- No dangerous transverse loads.
- No kinking.
- Higher WLL compared to other existing designs.
- Fulfills the requirements of the American standard ASME B30.26.
- Pivots 180°, rotates 360°.
- Deflector disc with angle marking, WLL information in “t” and “lbs”, design factors and torque moment.
- Free space for individual marking / stamp.
- Innovative wear markings for checking discard criteria.
- Embedded RFID transponder to make checks easier.

US Pat. No. 17/995647

READY FOR THE BIGGEST THINGS.

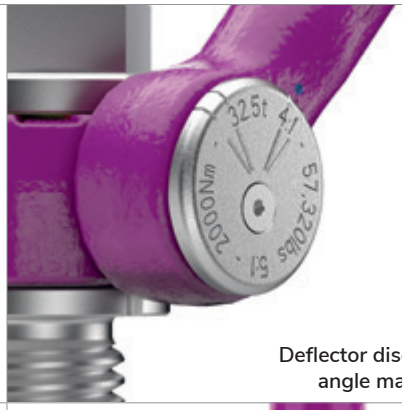
When it comes to extreme heavy load applications, the ACP-TURNADO SUPERMAX is exactly the right decision. With thread sizes of M64 to M100 (2 ½" – 4"), it increases the application range of the intelligent lifting point considerably.

For this and all other variants of the RUD ACP-TURNADO, we have significantly modified the basic design and essential details of conventional center lifting points and adapted them precisely to perfect a familiar design. The result was a lifting point that eliminates the disadvantages of existing solutions and makes the user’s work easier and safer. All variants fulfill the requirements of the standard ASME B30.26.

THE ACP-TURNADO SUPERMAX IN DETAIL.

Innovative internal spring mechanism.

Swivel joint in the lifting ring axis.



Deflector disc with angle marking.

Combination head bolt with internal and external hexagon socket.

Innovative wear markings.

RFID connected (as standard).

RUD RFID
CONNECT IT

ACP-TURNADO SUPERMAX

Technical Data.

ACP-TURNADO SUPERMAX – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	M	N [mm]	T [mm]	Tightening torque [Nm]	Order no.
ACP-TURNADO-SUPERMAX-32.5t-M64	32.5	17.2	123.5	45	45	103	95	80	108	188	75	204	M64	24	232	2,000	7912633
ACP-TURNADO-SUPERMAX-32.5t-M72	32.5	18.2	123.5	45	45	103	95	90	108	198	75	204	M72	24	232	2,000	7912634
ACP-TURNADO-SUPERMAX-32.5t-M80	32.5	19.3	123.5	45	45	103	95	100	108	208	75	204	M80	24	232	2,000	7912635
ACP-TURNADO-SUPERMAX-32.5t-M90	32.5	21.5	123.5	45	45	103	110	113	116	229	75	204	M90	24	240	2,000	7912636
ACP-TURNADO-SUPERMAX-32.5t-M100	32.5	23.8	123.5	45	45	103	110	125	116	241	75	204	M100	24	240	2,000	7912637

Subject to technical changes!

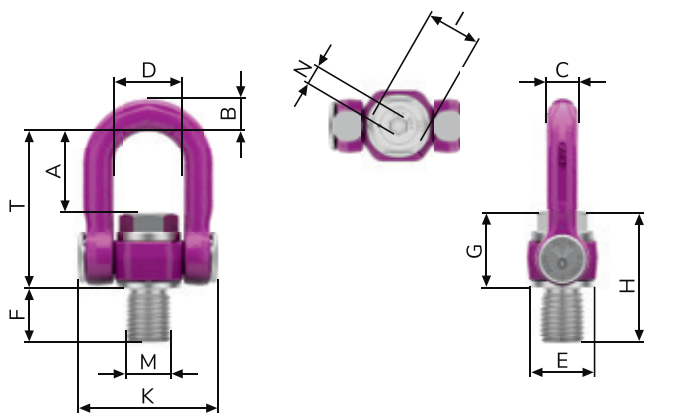
ACP-TURNADO SUPERMAX – METRIC THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F vario [mm]	G [mm]	H vario [mm]	I [mm]	K [mm]	M	N [mm]	T [mm]	Tightening torque [Nm]	Order no.
ACP-TURNADO-SUPERMAX-32.5t-M64	32.5	[1]	123.5	45	45	103	95	64–300	108	172–408	75	204	M64	24	232	2,000	8600649
ACP-TURNADO-SUPERMAX-32.5t-M72	32.5	[1]	123.5	45	45	103	95	72–300	108	180–408	75	204	M72	24	232	2,000	8600649
ACP-TURNADO-SUPERMAX-32.5t-M80	32.5	[1]	123.5	45	45	103	95	80–300	108	188–408	75	204	M80	24	232	2,000	8600649
ACP-TURNADO-SUPERMAX-32.5t-M90	32.5	[1]	123.5	45	45	103	110	90–300	116	206–416	75	204	M90	24	240	2,000	8600649
ACP-TURNADO-SUPERMAX-32.5t-M100	32.5	[1]	123.5	45	45	103	110	100–300	116	216–416	75	204	M100	24	240	2,000	8600649

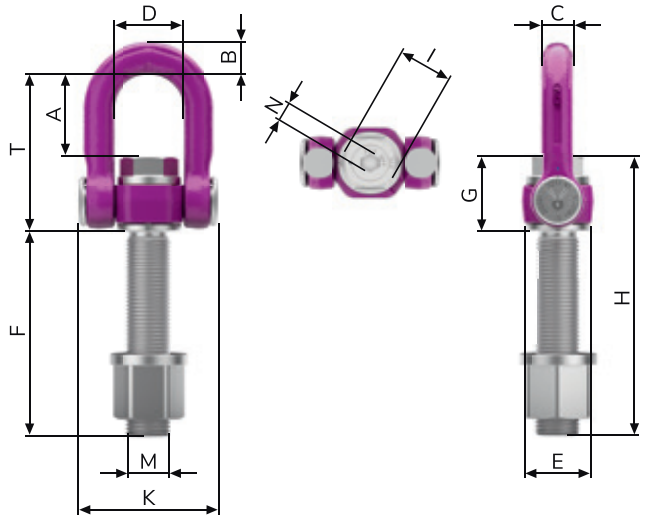
[1] Weight depends on the design.

Subject to technical changes!

ACP-TURNADO SUPERMAX



ACP-TURNADO SUPERMAX – vario length



ACP-TURNADO SUPERMAX

Technical Data.

ACP-TURNADO SUPERMAX – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]	H [inch]	I [inch]	K [inch]	M	N [inch]	T [inch]	Tightening torque [Nm]	Order no.
ACP-TURNADO-SUPERMAX-32.5t-2 1/2"-4UNC	32.5	17.2	123.5	45	45	103	95	79	108	187	75	204	2 1/2"-4UNC	24	232	2,000	7912639
ACP-TURNADO-SUPERMAX-32.5t-3"-4UNC	32.5	18.7	123.5	45	45	103	95	95	108	203	75	204	3"-4UNC	24	232	2,000	7912640
ACP-TURNADO-SUPERMAX-32.5t-3 1/2"-4UNC	32.5	21.5	123.5	45	45	103	110	111	116	227	75	204	3 1/2"-4UNC	24	240	2,000	7912641
ACP-TURNADO-SUPERMAX-32.5t-4"-4UNC	32.5	24	123.5	45	45	103	120	127	116	243	75	204	4"-4UNC	24	240	2,000	8600649

Subject to technical changes!

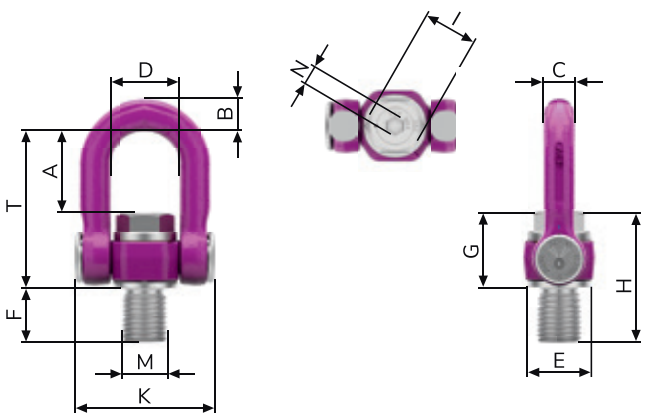
ACP-TURNADO SUPERMAX – UNC INCH THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F vario [inch]	G [inch]	H vario [inch]	I [inch]	K [inch]	M	N [inch]	T [inch]	Tightening torque [Nm]	Order no.
ACP-TURNADO-SUPERMAX-32.5t-2 1/2"-4UNC	32.5	[1]	123.5	45	45	103	95	63.5–300	108	171.5–408	75	204	2 1/2"-4UNC	24	232	2,000	8600649
ACP-TURNADO-SUPERMAX-32.5t-3"-4UNC	32.5	[1]	123.5	45	45	103	95	76–300	108	184–408	75	204	3"-4UNC	24	232	2,000	8600649
ACP-TURNADO-SUPERMAX-32.5t-3 1/2"-4UNC	32.5	[1]	123.5	45	45	103	110	89–300	116	205–416	75	204	3 1/2"-4UNC	24	240	2,000	8600649
ACP-TURNADO-SUPERMAX-32.5t-4"-4UNC	32.5	[1]	123.5	45	45	103	120	102–300	116	218–416	75	204	4"-4UNC	24	240	2,000	8600649

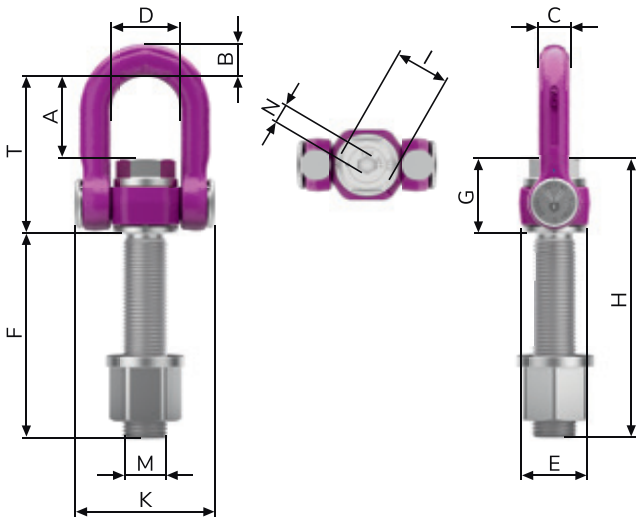
[1] Weight depends on the design.

Subject to technical changes!

ACP-TURNADO SUPERMAX



ACP-TURNADO SUPERMAX – vario length



VLBG-PLUS / VLBG

VIP-Load ring thread PLUS.

FEATURES AND BENEFITS:

- Large WLL range 0.63 t – 20 t.
- Captive but exchangeable ICE-BOLT made of patented steel up to size M24, meaning a higher working load limit can be achieved compared to structurally identical attachment points.
- The clamping spring reduces noise and keeps the suspension ring in the desired direction; thereby simple hinging of the lifting means is possible or a flat design in the folded state.
- DNV certification from size M30.

LOAD RING TYPE VLBG-PLUS.

Load rings such as the VLBG-PLUS are characterized by their extremely low construction with a pivoting suspension ring and an eccentric force introduction. An important advantage: They automatically align themselves correctly in the respective loading direction.

THE VLBG-PLUS IN DETAIL.

RUD ICE-BOLT with combination head.

360° rotatable, 180° pivotable.

Clear marking of the minimum WLL.

Clamping spring.

Off centre split force introduction.

VLBG-PLUS

Metric thread.

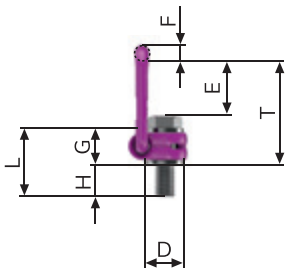
VLBG-PLUS-LOAD RING THREAD PLUS – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
VLBG-PLUS-0.63t-M8	0.63	0.3	75	30	52	34	24	40	10	29	11	75	45	40	M8	32	30	8504651
VLBG-PLUS-0.9t-M10	0.9	0.32	75	30	54	34	24	39	10	29	15	75	45	44	M10	32	60	8504652
VLBG-PLUS-1.35t-M12	1.35	0.33	75	32	54	34	26	38	10	29	18	75	45	47	M12	32	150	8504653
VLBG-PLUS-2t-M16	2	0.55	85	33	56	36	30	39	13.5	36	22	86	47	58	M16	38	150	8504655
VLBG-PLUS-3.5t-M20	3.5	1.3	110	50	82	54	45	55	16.5	43	32	113	64	75	M20	48	400	8504657
VLBG-PLUS-4.5t-M24	4.5	1.5	125	50	82	54	45	67	18	43	37	130	78	80	M24	48	760	8504659
VLBG-PLUS-6.7t-M30	6.7	3.3	147	60	103	65	60	67	22.5	61	49	151	80	110	M30	67	1,000	8504661
VLBG-PLUS-7t-M36 (Special bolt)	7	3.4	146	60	103	65	60	74	22.5	55	52	151	80	107	M36	67	700	8500829
VLBG-PLUS-8t-M36	8	6.2	196	77	122	82	70	97	26.5	77	63	205	113	140	M36	79	800	7983553
VLBG-PLUS-10t-M42	10	6.7	196	77	122	82	70	94	26.5	77	73	205	113	150	M42	79	1,000	7983554
VLBG-PLUS-15t-M42	15	10.9	222	95	156	100	85	109	36	87	63	230	130	150	M42	100	1,500	7982966
VLBG-PLUS-20t-M48	20	11.6	222	95	156	100	95	105	36	87	73	230	130	160	M48	100	2,000	7982967

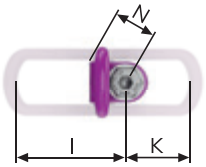
Subject to technical changes!

VLBG-PLUS – metric thread

VLBG-PLUS – metric thread



VLBG-PLUS – metric thread



VLBG-PLUS / VLBG

Metric thread variable length.

VLBG-PLUS-LOAD RING THREAD PLUS – METRIC THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H vario [mm]	I [mm]	K [mm]	L vario [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
VLBG-PLUS-0.63t-M8	0.63	[1]	75	30	54	34	24	40	10	29	8–76	75	45	37–105	M8	32	30	8600470
VLBG-PLUS-0.9t-M10	0.9	[1]	75	30	54	34	24	39	10	29	10–96	75	45	39–125	M10	32	60	8600471
VLBG-PLUS-1.35t-M12	1.35	[1]	75	32	54	34	26	38	10	29	12–116	75	45	41–145	M12	32	150	8600472
VLBG-PLUS-2t-M16	2	[1]	85	33	56	36	30	39	13.5	36	16–149	86	47	52–185	M16	38	150	8600474
VLBG-PLUS-3.5t-M20	3.5	[1]	110	50	82	54	45	55	16.5	43	20–187	113	64	63–230	M20	48	400	8600476
VLBG-PLUS-4.5t-M24	4.5	[1]	125	50	82	54	45	67	18	43	24–222	130	78	67–265	M24	48	760	8600478
VLBG-PLUS-6.7t-M30	6.7	[1]	147	60	103	65	60	67	22.5	61	30–279	151	80	91–340	M30	67	1,000	8600480
VLBG-PLUS-8t-M36	8	[1]	197	77	122	82	70	97	26.5	77	36–223	205	110	113–300	M36	87	800	8600289
VLBG-PLUS-10t-M42	10	[1]	197	77	122	82	70	94	26.5	77	42–273	205	110	119–350	M42	70	1,000	8600290
VLBG-PLUS-15t-M42	15	[1]	222	95	156	100	85	109	36	87	42–263	230	130	129–350	M42	100	1,500	8600291
VLBG-PLUS-20t-M48	20	[1]	222	95	156	100	95	105	36	87	48–303	230	130	135–350	M48	100	2,000	8600292

[1] Weight depends on the design.

Subject to technical changes!

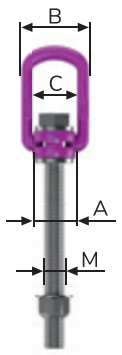
VLBG-LOAD RING THREAD – METRIC THREAD INTERMEDIATE SIZES IN VARIABLE LENGTH.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H vario [mm]	I [mm]	K [mm]	L vario [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
VLBG-1.2t-M14	1.2	[1]	85	33	56	36	30	39	13.5	36	14-129	86	47	50–165	M14	38	120	8600399
VLBG-2t-M18	2	[1]	110	50	82	54	45	55	16.5	43	18–27	113	64	61–70	M18	48	200	8600384
VLBG-2.5t-M22	2.5	[1]	110	50	82	54	45	54	16.5	43	22–57	113	64	65–100	M22	48	250	8600385
VLBG-4t-M27	4	[1]	147	60	103	65	60	59	22.5	61	27–239	151	80	88–300	M27	67	400	8600387

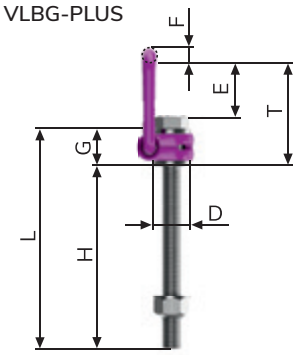
[1] Weight depends on the design.

Subject to technical changes!

VLBG-PLUS

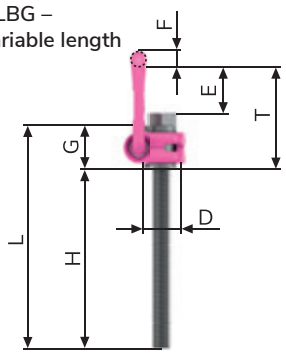


VLBG-PLUS

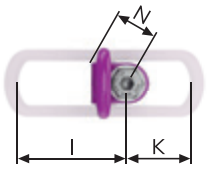


VLBG – variable length

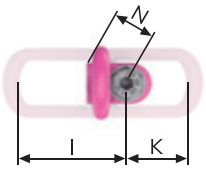
VLBG – variable length



VLBG-PLUS



VLBG – variable length



VLBG-Z

UNC inch thread / UNC inch thread in variable length.

VLBG-Z-LOAD RING THREAD – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
VLBG-Z-0.63t-3/8"-16UNC	0.63	0.29	75	30	54	34	24	39	10	29	16	75	45	45	3/8"-16UNC	32	60	8504256
VLBG-Z-1t-1/2"-13UNC	1	0.36	75	32	54	34	26	38	10	29	22	75	45	50	1/2"-13UNC	32	100	8502349
VLBG-Z-1.5t-5/8"-11UNC	1.5	0.5	85	33	56	36	30	39	13.5	36	24	86	47	60	5/8"-11UNC	38	150	8502350
VLBG-Z-2.5t-3/4"-10UNC	2.5	1.3	110	50	82	54	45	55	16.5	43	28	113	64	71	3/4"-10UNC	48	250	8502351
VLBG-Z-2.5t-7/8"-9UNC	2.5	1.25	110	50	82	54	45	55	16.5	43	27	113	64	70	7/8"-9UNC	48	250	8502352
VLBG-Z-4t-1"-8UNC	4	1.5	125	50	82	54	45	67	18	43	41	130	78	84	1"-8UNC	48	400	8502353
VLBG-Z-5t-1 1/4"-7UNC	5	3.33	147	60	103	65	60	64	22.5	61	41	151	80	102	1 1/4"-7UNC	67	500	8503187
VLBG-Z-5t-1 1/4"-8UN	5	3.33	147	60	103	65	60	64	22.5	61	41	151	80	102	1 1/4"-8UN	67	500	8502354
VLBG-Z-8t-1 1/2"-6UNC	8	6.2	197	77	122	82	70	97	26.5	77	62	205	110	140	1 1/2"-6UNC	87	800	8504257
VLBG-Z-20t-2"-4.5UNC	20	11.7	222	95	156	100	95	105	36	87	69	230	130	156	2"-4.5UNC	100	2,000	8504258

Subject to technical changes!

VLBG-Z-LOAD RING THREAD – UNC INCH THREAD IN VARIABLE LENGTH.

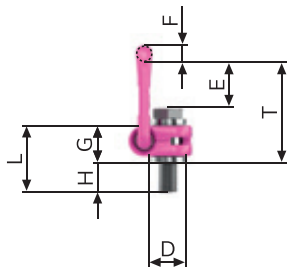
DESIGN FACTOR 5:1 Type	WLL [lbs]	Weight (lbs/unit)	T [inch]	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]	H vario [inch]	I [inch]	K [inch]	L vario [inch]	M	N [inch]	Tightening torque [Nm]	Order no.
VLBG-Z-0.63t-3/8"-16UNC	1,110	[1]	2.95	1.18	2.13	1.34	0.94	1.54	0.47	1.14	0.63–3.86	2.95	1.77	1.77–5.00	3/8"-16UNC	1.26	22	8600440
VLBG-Z-1t-1/2"-13UNC	1,760	[1]	2.95	1.26	2.13	1.34	1.02	1.50	0.47	1.14	0.87–4.84	2.95	1.77	1.97–5.98	1/2"-13UNC	1.26	44	8600441
VLBG-Z-1.5t-5/8"-11UNC	2,640	[1]	2.95	1.30	2.20	1.42	1.18	1.54	0.53	1.42	0.94–5.83	3.39	1.85	2.36–7.24	5/8"-11UNC	1.50	111	8600442
VLBG-Z-2.5t-3/4"-10UNC	4,400	[1]	3.35	1.97	3.23	2.13	1.77	2.17	0.65	1.69	1.10–7.28	4.45	2.52	2.80–8.98	3/4"-10UNC	1.89	111	8600443
VLBG-Z-2.5t-7/8"-9UNC	7,040	[1]	4.33	1.97	3.23	2.13	1.77	2.17	0.65	1.69	1.06–8.31	4.45	2.52	2.76–10.00	7/8"-9UNC	1.89	295	8600444
VLBG-Z-4t-1"-8UNC	8,810	[1]	4.92	1.97	3.23	2.13	1.77	2.64	0.71	1.69	1.61–8.31	5.12	3.07	3.31–10.00	1"-8UNC	1.89	561	8600445
VLBG-Z-5t-1 1/4"-7UNC	14,080	[1]	5.79	2.36	4.06	2.56	2.36	2.52	0.89	2.40	1.61–10.94	5.94	3.15	4.02–13.35	1 1/4"-7UNC	2.64	738	8600446
VLBG-Z-8t-1 1/2"-6UNC	35,270	[1]	7.76	3.03	4.80	3.23	2.76	3.82	1.04	3.03	2.44–10.63	8.07	4.33	5.51–13.66	1 1/2"-6UNC	3.43	590	8600447
VLBG-Z-20t-2"-4.5UNC	44,000	[1]	7.76	3.74	6.14	3.94	3.74	4.13	1.42	3.43	2.72–11.89	9.06	5.12	6.14–15.31	2"-4.5UNC	3.94	738	8600448

[1] Weight depends on the design.

Subject to technical changes!

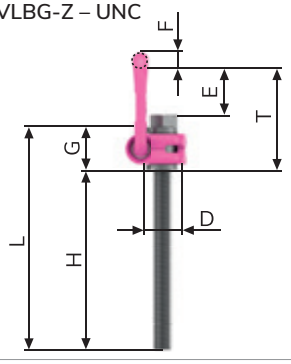
VLBG-Z – UNC

VLBG-Z – UNC



VLBG-Z – UNC

VLBG-Z – UNC



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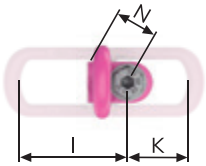
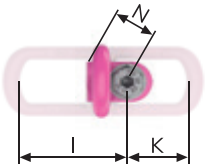


VLBG-Z – UNC



VLBG-10.9

VIP-Load ring thread with 10.9 bolt.

FEATURES AND BENEFITS:

- Large WLL range 0.3 t–4 t.
- Captive yet exchangeable 10.9 bolt.
- The clamping spring reduces noise and keeps the suspension ring in the desired direction; thereby simple hinging of the lifting means is possible or a flat design in the folded state.
- All sizes M8–M24 with DNV certification.

THE VLBG-PLUS IN DETAIL.

360° rotatable,
180° pivotable.

Clear marking of
the minimum WLL.

Off centre split force introduction.

Clamping spring.

VLBG-10.9

Technical Data.

VIP-LOAD RING THREAD 10.9 BOLTS – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
VLBG-0.3t-M8-10.9	0.3	0.29	75	30	52	34	24	40	10	29	11	75	45	40	M8	32	30	7908052
VLBG-0.63t-M10-10.9	0.63	0.3	75	30	54	34	24	39	10	29	15	75	45	44	M10	32	60	7908053
VLBG-1t-M12-10.9	1.0	0.34	75	32	54	34	26	38	10	29	18	75	45	47	M12	32	100	7908054
VLBG-1.5t-M16-10.9	1.5	0.55	85	33	56	36	30	39	13.5	36	22	86	47	58	M16	38	150	7908055
VLBG-2.5t-M20-10.9	2.5	1.3	110	50	82	54	45	55	16.5	43	32	113	64	75	M20	48	250	7908057
VLBG-4t-M24-10.9	4.0	1.4	125	50	82	54	45	67	18	43	37	130	78	80	M24	48	400	7908058

Subject to technical changes!

VIP-LOAD RING THREAD 10.9 BOLTS – METRIC THREAD INTERMEDIATE SIZES IN VARIABLE LENGTH.

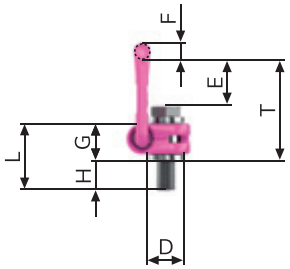
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H vario [mm]	I [mm]	K [mm]	L vario [mm]	M	N	Tightening torque [Nm]	Order no.
VLBG-0.3t-M8-10.9	0.3	[1]	75	30	54	34	24	40	10	29	8–76	75	45	37–105	M8	32	30	8600389
VLBG-0.63t-M10-10.9	0.63	[1]	75	30	54	34	24	39	10	29	10–96	75	45	39–125	M10	32	60	8600390
VLBG-1t-M12-10.9	1.0	[1]	75	32	54	34	26	38	10	29	12–116	75	45	41–145	M12	32	150	8600391
VLBG-1.5t-M16-10.9	1.5	[1]	85	33	56	36	30	39	13.5	36	16–194	86	47	52–230	M16	38	150	8600392
VLBG-2.5t-M20-10.9	2.5	[1]	110	50	82	54	45	55	16.5	43	20–187	113	64	75–230	M20	48	400	8600393
VLBG-4t-M24-10.9	4.0	[1]	125	50	82	54	45	67	18	43	24–222	130	78	67–265	M24	48	760	8600394

[1] Weight depends on the design.

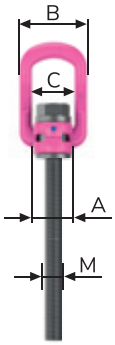
Subject to technical changes!

VLBG-10.9 – metric thread

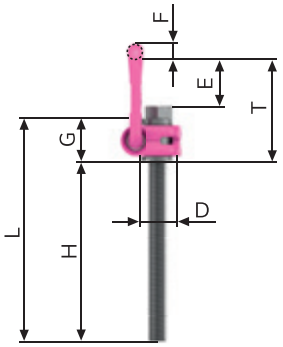
VLBG-10.9 – metric thread



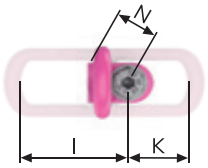
VLBG-10.9 – metric thread in variable length



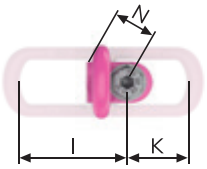
VLBG-10.9 – metric thread in variable length



VLBG-10.9 – metric thread



VLBG-10.9 – metric thread in variable length



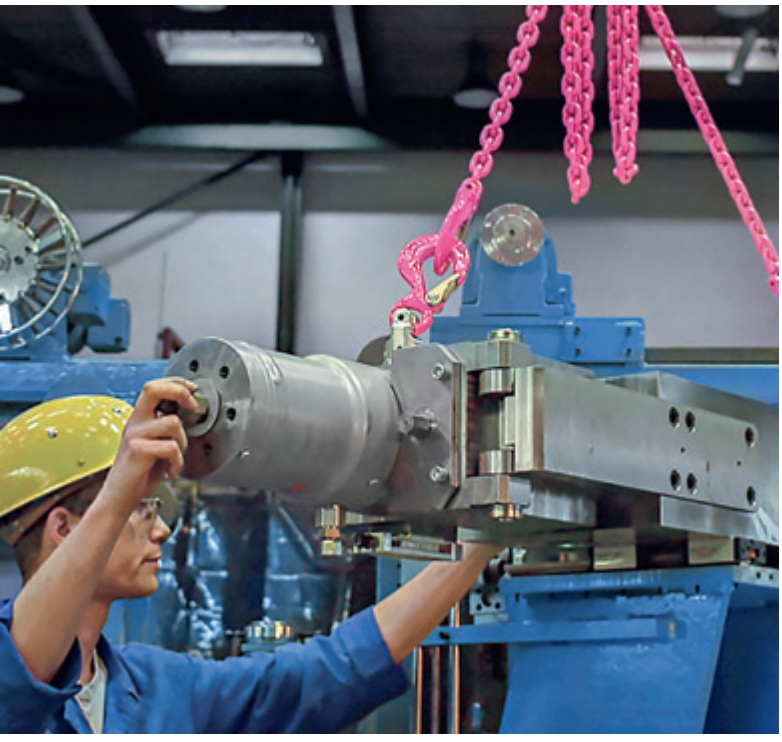
PP-S / PP-B / PP-VIP

POWERPOINT®-Star / -Eye connection / -VIP-Chain connection.

FEATURES AND BENEFITS:

- Large WLL range 0.63 t – 8 t.
- PP-S: universal connection with hook for ring suspensions, round slings, wire ropes, hook suspensions.
- PP-B: eye connection for hook suspension.
- PP-VIP: direct chain connection.
- So-PP-S, So-PP-B, So-PP-VIP: variable thread lengths.
- Rotatable 90° to the bolt-on direction under WLL.
- Lowest kinking possibility due to cardan joint.
- PP-VIP, So-PP-VIP: universal and non-mix-up clevis connection for easy construction with chains, hooks and eye.
- PP-S, So-PP-S: The shape of the hook tip prevents hinging in small openings and the WLL on the hook tip.
- PP-S: Robust forged safety latch.

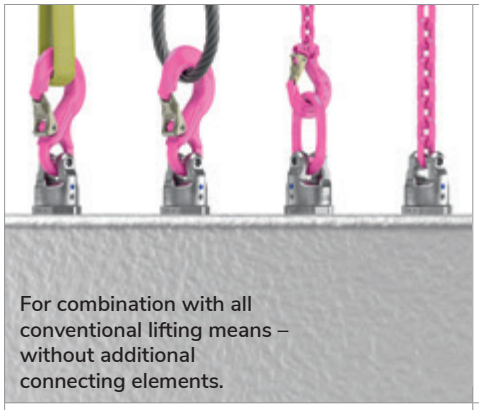
PP-S PP-B PP-VIP



UNIVERSAL TALENT WITH DOUBLE BALL BEARING.

The POWERPOINT®-family is a universal solution for boltable lifting points. Equipped with double ball bearings, they also take over the rotatable WLL 90° to the bolt-on direction. The patented clevis head of the PP-B variant, for example, can be connected to various RUD-specific components, while the PP-VIP variant enables the direct connection of a VIP-Lifting chain. In contrast, on the POWERPOINT®-Star (PP-S), thanks to the movable hook, all standard lifting means can be connected universally: ideal, for example, if the designer does not know how his construction will be lifted later.

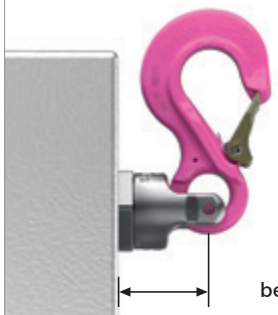
THE PP-S / PP-B / PP-VIP IN DETAIL.



For combination with all conventional lifting means – without additional connecting elements.

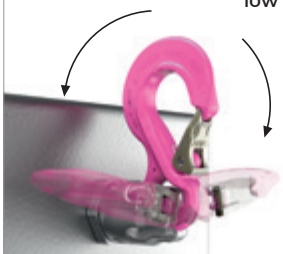
Double ball bearing – rotating and turning under load.

Rotatable through 360°.

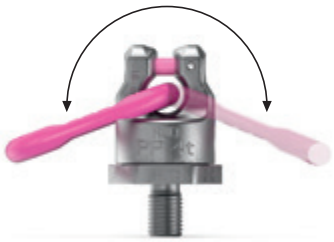


Large clearance between the bolt-on surface and load.

90° rotatable through the bolt-on direction – low kinking possibility.



Extended pivoting area ~230°.



PP-S / PP-B / PP-VIP

Metric thread.

PP-S – POWERPOINT® – STAR UNIVERSAL CONNECTION – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
PP-S-0.63t-M12	0.63	0.4	116	13	75	18	40	36	18	41	M12	–	10	7990719
PP-S-1.5t-M16	1.5	0.9	146	20	97	25	46	41	24	50	M16	–	30	7989719
PP-S-2.5t-M20	2.5	1.7	187	28	126	30	61	55	30	61	M20	–	70	7989075
PP-S-4t-M24	4	3.5	227	36	150	35	78	70	36	77	M24	–	150	7989076
PP-S-5t-M30	5 (6.7) [1]	7.5	267	37	174	40	95	85	45	93	M30	–	225	7989720
PP-S-8t-M36	8 (10) [1]	9.2	310	49	208	48	100	90	54	102	M36	–	410	7989077

[1] ( ) = Higher WLL with axial load.

Subject to technical changes!

PP-B – POWERPOINT® – EYE CONNECTION – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
PP-B-0.63t-M12	0.63	0.35	106	9	65	35	40	36	18	41	M12	15	10	7989522
PP-B-1.5t-M16	1.5	0.6	115	11	65	35	46	41	24	49	M16	15	30	7989523
PP-B-2.5t-M20	2.5	1.1	136	13	75	40	61	55	30	61	M20	18	70	7989081
PP-B-4t-M24	4	2.4	172	16	95	45	78	70	36	77	M24	20	150	7989082
PP-B-5t-M30	5 (6.7) [1]	5.2	223	21	130	60	95	85	45	93	M30	25	225	7989524
PP-B-8t-M36	8 (10) [1]	6.3	242	24	140	65	100	90	54	102	M36	28	410	7989083

[1] ( ) = Higher WLL with axial load.

Subject to technical changes!

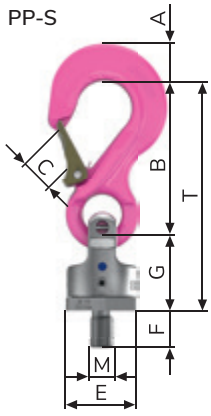
PP-VIP – POWERPOINT® – DIRECT VIP-CHAIN CONNECTION – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
PP-VIP-4/0.63t-M12	0.63	0.25	41	4	–	–	40	36	18	–	M12	–	10	7989525
PP-VIP-6/1.5t-M16	1.5	0.45	49	6	–	–	46	41	24	–	M16	–	30	7989526
PP-VIP-8/2.5t-M20	2.5	0.95	61	8	–	–	61	55	30	–	M20	–	70	7989527
PP-VIP-10/4t-M24	4	2.2	77	10	–	–	78	70	36	–	M24	–	150	7989528
PP-VIP-13/5t-M30	5 (6.7) [1]	3.5	93	13	–	–	95	85	45	–	M30	–	225	7989529
PP-VIP-16/8t-M36	8 (10) [1]	4.7	102	16	–	–	100	90	54	–	M36	–	410	7989530

[1] ( ) = Higher WLL with axial load.

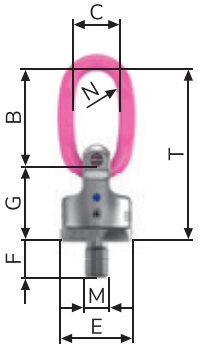
Subject to technical changes!

PP-S



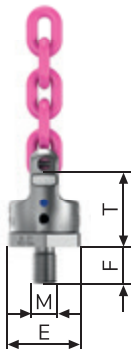
PP-S

PP-B



PP-B

PP-VIP



PP-VIP

PP-S / PP-B / PP-VIP

UNC inch thread.

PP-S – POWERPOINT® – STAR UNIVERSAL CONNECTION – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
PP-S-0.63t-1/2"-13UNC	0.63	0.4	116	13	75	18	40	36	18	41	1/2"-13UNC	–	10	8600581
PP-S-1.5t-5/8"-11UNC	1.5	0.9	146	20	97	25	46	41	25	49	5/8"-11UNC	–	30	8600582
PP-S-2.5t-3/4"-10UNC	2.5	1.7	187	28	126	30	61	55	30	61	3/4"-10UNC	–	70	8600583
PP-S-2.5t-7/8"-9UNC	2.5	1.7	187	28	126	30	61	55	30	61	7/8"-9UNC	–	70	8600583
PP-S-4t-1"-8UNC	4	3.5	227	36	150	35	78	70	36	77	1"-8UNC	–	150	8600584
PP-S-5t-1 1/4"-7UNC	5 (6.7) [1]	7.5	267	37	174	40	95	85	45	93	1 1/4"-7UNC	–	225	8600585
PP-S-8t-1 1/2"-6UNC	8 (10) [1]	9.2	310	49	208	48	100	90	54	102	1 1/2"-6UNC	–	410	8600526

[1] ( ) = Higher WLL with axial load.

Subject to technical changes!

PP-B – POWERPOINT® – EYE CONNECTION – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
PP-B-0.63t-1/2"-13UNC	0.63	0.35	106	9	65	35	40	36	18	41	1/2"-13UNC	15	10	8600591
PP-B-1.5t-5/8"-11UNC	1.5	0.6	115	11	65	35	46	41	24	50	5/8"-11UNC	15	30	8600592
PP-B-2.5t-3/4"-10UNC	2.5	1.1	136	13	75	40	61	55	30	61	3/4"-10UNC	18	70	8600593
PP-B-2.5t-7/8"-9UNC	2.5	1.1	136	13	75	40	61	55	30	61	7/8"-9UNC	18	70	8600593
PP-B-4t-1"-8UNC	4	2.4	172	16	95	45	78	70	36	77	1"-8UNC	20	150	8600594
PP-B-5t-1 1/4"-7UNC	5 (6.7) [1]	5.2	223	21	130	60	95	85	45	93	1 1/4"-7UNC	25	225	8600595
PP-B-8t-1 1/2"-6UNC	8 (10) [1]	6.3	242	24	140	65	100	90	54	102	1 1/2"-6UNC	28	410	8600566

[1] ( ) = Higher WLL with axial load.

Subject to technical changes!

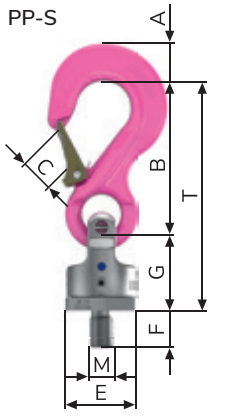
PP-VIP – POWERPOINT® – DIRECT VIP-CHAIN CONNECTION – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
PP-VIP-4/0.63t-1/2"-13UNC	0.63	0.25	41	4	–	–	40	36	18	–	1/2"-13UNC	–	10	8600571
PP-VIP-6/1.5t-5/8"-11UNC	1.5	0.45	49	6	–	–	46	41	24	–	5/8"-11UNC	–	30	8600572
PP-VIP-8/2.5t-3/4"-10UNC	2.5	0.95	61	8	–	–	61	55	30	–	3/4"-10UNC	–	70	8600573
PP-VIP-8/2.5t-7/8"-9UNC	2.5	1	61	8	–	–	61	55	30	–	7/8"-9UNC	–	70	8600573
PP-VIP-10/4t-1"-8UNC	4	2.2	77	10	–	–	78	70	36	–	1"-8UNC	–	150	8600574
PP-VIP-13/5t-1 1/4"-7UNC	5 (6.7) [1]	3.5	93	13	–	–	95	85	45	–	1 1/4"-7UNC	–	225	8600575
PP-VIP-16/8t-1 1/2"-6UNC	8 (10) [1]	4.7	102	16	–	–	100	90	54	–	1 1/2"-6UNC	–	410	8600305

[1] ( ) = Higher WLL with axial load.

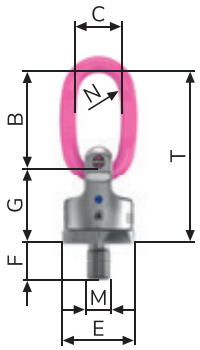
Subject to technical changes!

PP-S



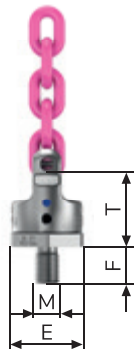
PP-S

PP-B



PP-B

PP-VIP



PP-VIP

So-PP-VIP

Metric thread / metric fine thread.

So-PP-VIP[1] – SPECIAL POWERPOINT® – VIP-CHAIN CONNECTION – METRIC THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	D [mm]	E [mm]	F vario [mm]	M	Tightening torque [Nm]	Order no.
So-PP-VIP-4/0.6t-M12	0.6 (0.63) [2]	[3]	47	4	42	36	12–140	M12	10	8600320
So-PP-VIP-6/1t-M14	1 (1.5) [2]	[3]	58	6	48	41	14–160	M14	25	8600326
So-PP-VIP-6/1.3t-M16	1.3 (1.5) [2]	[3]	58	6	48	41	16–180	M16	30	8600321
So-PP-VIP-8/2t-M20	2 (2.5) [2]	[3]	73	8	61	55	20–224	M20	70	8600322
So-PP-VIP-8/2t-M22	2 (2.5) [2]	[3]	73	8	61	55	22–94	M22	70	8600322
So-PP-VIP-10/3.5t-M24	3.5 (4) [2]	[3]	94	10	81	70	24–255	M24	150	8600323
So-PP-VIP-10/3.5t-M27	3.5 (4) [2]	[3]	94	10	81	70	27–92	M27	200	8600323
So-PP-VIP-13/5t-M30	5 (6.7) [2]	[3]	108	13	99	85	30–330	M30	225	8600324
So-PP-VIP-16/8t-M36	8 (10) [2]	[3]	100	16	100	90	36–300	M36	410	8600305
So-PP-VIP-16/8t-M39	8 (10) [2]	[3]	100	16	100	90	39–300	M39	410	8600305
So-PP-VIP-16/8t-M42	8 (10) [2]	[3]	100	16	100	90	42–300	M42	410	8600305

[1] So-PP can also be installed with eye hook as So-PP-S or with link as So-PP-B.

[2] ( ) = Higher WLL with axial load.
[3] Weight depends on the design.

Subject to technical changes!

So-PP-VIP[1] – SPECIAL POWERPOINT® – VIP-CHAIN CONNECTION – METRIC FINE THREAD IN VARIABLE LENGTH.

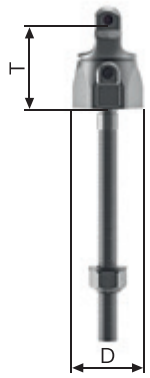
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	D [mm]	E [mm]	F vario [mm]	M	Tightening torque [Nm]	Order no.
So-PP-VIP-4/0.6t-M12x1.5	0.6 (0.63) [2]	[3]	47	4	42	36	12–55	M12 x 1.5	10	8600320
So-PP-VIP-6/1t-M14x1.5	1 (1.5) [2]	[3]	58	6	48	41	14–65	M14 x 1.5	25	8600326
So-PP-VIP-6/1.3t-M16x1.5	1.3 (1.5) [2]	[3]	58	6	48	41	16–70	M16 x 1.5	30	8600321
So-PP-VIP-8/2t-M20x1.5	2 (2.5) [2]	[3]	73	8	61	55	20–89	M20 x 1.5	70	8600322
So-PP-VIP-10/3.5t-M24x1.5	3.5 (4) [2]	[3]	94	10	81	70	24–95	M24 x 1.5	150	8600323
So-PP-VIP-13/5t-M30x2	5 (6.7) [2]	[3]	108	13	99	85	30–125	M30 x 2	225	8600324

[1] So-PP can also be installed with eye hook as So-PP-S or with link as So-PP-B.

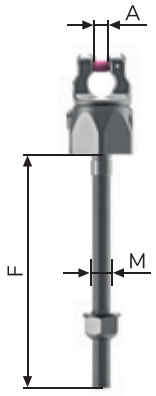
[2] ( ) = Higher WLL with axial load
[3] Weight depends on the design.

Subject to technical changes!

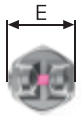
So-PP-VIP



So-PP-VIP



So-PP-VIP




RUD
CLOSE
2w.in
RUD

VWBG-V / VWBG

VIP-Load ring thread VARIO / VIP-Load ring thread.

FEATURES AND BENEFITS:

- Ball bearing for shock-free and less friction when rotating and turning.
- Optical markings to determine the load angle and wear occurrence.
- Large working load limit range from 0.3 t – 50 t.
- Higher working load limits possible thanks to optimized attachment / alignment (WLL X / Y / Z).
- Variable bolt lengths available for use in threaded and through bores.

VWBG-V VWBG

LOAD RING VWBG-V / VWBG.

The VWBG load ring with ball bearing allows vertical rotation under full load. Tipping and flipping actions are therefore possible and safe. Even loading 90° (rectangular) to the ring plane is possible. This load force occurs, for example, when a plate must be pivot from the vertical into a horizontal position. Further advantages are a relatively small contact surface and the larger clearance of the suspension to the bolt-on surface. This means that even with a 90° loading, the attached hooks cannot damage the load.

On the VWBG-V (V = Vario) the threaded part consists of a bolt (ICE-BOLT). This enables a higher WLL and the installation of a bolt of any length with a selectable thread type.

THE VWBG-V / VWBG IN DETAIL.

Ball bearing.

Rotatable through 360°.

Extended pivoting area ~230°.

Innovative wear markings.

Ready to be discarded.

New.

WLL X

WLL Y

WLL Z

VWBG-V / VWBG

Metric thread.

VWBG-V LOAD RING – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL-X [t]	WLL-Y [t]	WLL-Z [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	Tightening torque [Nm]	Order no.
VWBG-V-0.3t-M8	0.3	0.4	0.6	0.18	2.99	0.31	1.22	1.14	1.18	1.06	13	1.42	M8	10	7103720
VWBG-V-0.45t-M10	0.45	0.6	0.9	0.29	3.07	0.31	1.22	1.14	1.32	1.18	17	1.50	M10	10	7103715
VWBG-V-0.6t-M12	0.6	0.75	1.2	0.41	4.21	0.39	1.93	1.38	1.65	1.42	21	1.85	M12	10	7100180
VWBG-V-1t-M14(F=21)	1	1.25	2	0.63	4.49	0.51	1.81	1.50	1.89	1.61	21	2.20	M14	25	7910221
VWBG-V-1.3t-M16	1.3	1.5	2.6	0.59	4.49	0.51	1.81	1.50	1.89	1.61	25	2.20	M16	30	7100430
VWBG-V-1.8t-M18(F=27)	1.8	2	3.6	1.18	5.39	0.51	2.13	1.38	2.44	2.17	27	2.64	M18	50	8600338
VWBG-V-2t-M20	2	2.5	4	1.42	5.39	0.51	2.13	1.38	2.44	2.17	33	2.64	M20	70	7100800
VWBG-V-2t-M22(F=33)	2	2.5	4	1.45	5.39	0.51	2.13	1.38	2.44	2.17	33	2.64	M22	120	8600334
VWBG-V-3.5t-M24	3.5	4	7	2.63	6.81	0.71	2.60	1.57	3.19	2.76	40	3.46	M24	150	7100640
VWBG-V-3.5t-M27(F=41)	3.5	4	7	2.65	6.81	0.71	2.60	1.57	3.19	2.76	41	3.46	M27	200	8600335
VWBG-V-5t-M30	5	6	10	5.09	8.70	0.87	3.54	1.97	3.90	3.35	50	4.17	M30	225	7100650

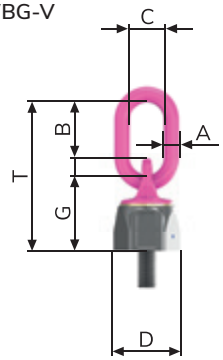
Subject to technical changes!

VWBG LOAD RING – METRIC THREAD.

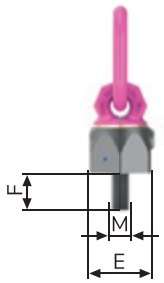
DESIGN FACTOR 4:1 Type	WLL-X [t]	WLL-Y [t]	WLL-Z [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	M	Tightening torque [Nm]	Order no.
VWBG-6(7.5)t-M33(F=50)	6	7.5	15	4.7	208	22	86	50	90	80	50	94	M33	350	8600150
VWBG-8(10)t-M36	8	10	15	4.7	208	22	86	50	90	80	54	94	M36	410	7999059
VWBG-12(13)t-M42	12	13	17	6.1	234	26	111	65	98	85	63	95	M42	550	7999044
VWBG-12(15)t-M45	12	15	18	6.2	234	26	111	65	98	85	67	95	M45	550	7900455
VWBG-13(16)t-M48	13	16	18	6.8	234	26	111	65	98	85	68	95	M48	550	7999045
VWBG-14(20)t-M52	14	20	25	10.6	271	32	119	70	120	95	78	120	M52	750	7901081
VWBG-16(22)t-M56	16	22	28	10.7	271	32	119	70	120	95	84	120	M56	800	7999004
VWBG-16(22)t-M60(F=90)	16	22	28	11.4	271	32	119	70	120	95	90	120	M60	800	8600454
VWBG-16(25)t-M64	16	25	28	11.4	271	32	119	70	120	95	94	120	M64	800	7999043
VWBG-31.5(40)t-M72	31.5	40	50	30	338	46	130	90	170	145	108	159	M72	1,200	7900097
VWBG-35(48)t-M80	35	48	50	31	338	46	130	90	170	145	120	159	M80	1,500	7900100
VWBG-40(50)t-M90	40	50	50	35	378	46	168	110	170	145	135	159	M90	2,000	7903408
VWBG-40(50)t-M100(F=150)	40	50	50	37	378	46	168	110	170	145	150	159	M100	2,000	8600458

Subject to technical changes!

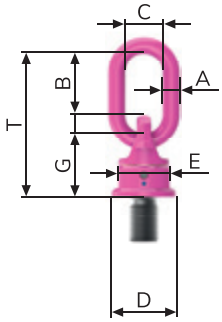
VWBG-V



VWBG-V



VWBG



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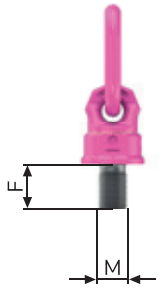


VWBG-V / VWBG

Metric thread in variable length.

VWBG-V LOAD RING – METRIC THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 4:1 Type	WLL-X [t]	WLL-Y [t]	WLL-Z [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F vario [mm]	G [mm]	M	Tightening torque [Nm]	Order no.
VWBG-V-0.3t-M8	0.3	0.4	0.6	[1]	76	8	31	29	30	27	8–102	36	M8	10	8600330
VWBG-V-0.45t-M10	0.45	0.6	0.9	[1]	78	8	31	29	33.5	30	10–122	38	M10	10	8600331
VWBG-V-0.6t-M12	0.6	0.75	1.2	[1]	107	10	49	35	42	36	12–140	47	M12	10	8600332
VWBG-V-1t-M14	1	1.25	2	[1]	114	13	46	38	48	41	14–160	56	M14	25	8600337
VWBG-V-1.3t-M16	1.3	1.5	2.6	[1]	114	13	46	38	48	41	16–225	56	M16	30	8600333
VWBG-V-1.8t-M18	1.8	2	3.6	[1]	137	13	54	35	62	55	18–83	67	M18	50	8600338
VWBG-V-2t-M20	2	2.5	4	[1]	137	13	54	35	62	55	20–223	67	M20	70	8600334
VWBG-V-2t-M22	2	2.5	4	[1]	137	13	54	35	62	55	22–94	67	M22	120	8600334
VWBG-V-3.5t-M24	3.5	4	7	[1]	173	18	66	40	81	70	24–257	88	M24	150	8600335
VWBG-V-3.5t-M27	3.5	4	7	[1]	173	18	66	40	81	70	27–92	88	M27	200	8600335
VWBG-V-5t-M30	5	6	10	[1]	221	22	90	50	99	85	30–330	106	M30	225	8600336

[1] Weight depends on the design.

Subject to technical changes!

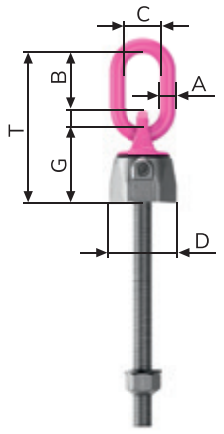
VWBG LOAD RING – METRIC THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 4:1 Type	WLL-X [t]	WLL-Y [t]	WLL-Z [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F vario [mm]	G [mm]	M	Tightening torque [Nm]	Order no.
VWBG-6(7.5)t	6	7.5	15	[1]	208	22	86	50	90	80	33–300	94	M33	350	8600150
VWBG-8(10)t	8	10	15	[1]	208	22	86	50	90	80	36–300	94	M36–M39	410	8600451
VWBG-12(13)t	12	13	17	[1]	234	26	111	65	98	85	42–300	95	M42–M45	550	8600452
VWBG-13(16)t	13	16	18	[1]	234	26	111	65	98	85	48–300	95	M48–M52	550	8600453
VWBG-14(20)t	14	20	25	[1]	271	32	119	70	120	95	52–300	120	M52	750	8600158
VWBG-16(22)t	16	22	28	[1]	271	32	119	70	120	95	56–300	120	M56–M60	800	8600454
VWBG-16(25)t	16	25	28	[1]	271	32	119	70	120	95	64–300	120	M64–M76	800	8600455
VWBG-31.5(40)t	31.5	40	50	[1]	338	46	130	90	170	145	72–300	159	M72–M76	1,200	8600456
VWBG-35(48)t	35	48	50	[1]	338	46	130	90	170	145	80–300	159	M80–M85	1,500	8600457
VWBG-40(50)t	40	50	50	[1]	378	46	168	110	170	145	90–300	159	M90–M150	2,000	8600458

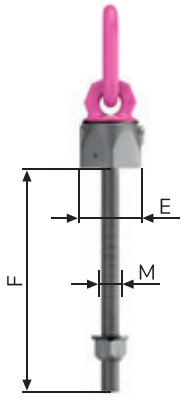
[1] Weight depends on the design.

Subject to technical changes!

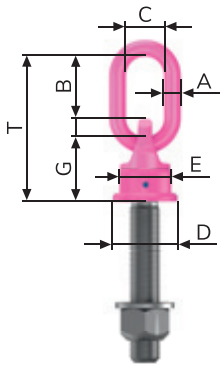
VWBG-V



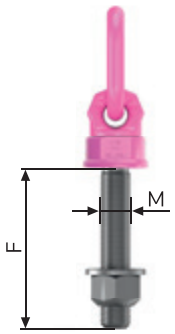
VWBG-V



VWBG



VWBG



VWBG-V

UNC inch thread.

VWBG-V LOAD RING – UNC INCH THREAD.

DESIGN FACTOR 5:1 Type	WLL-X [lbs]	WLL-Y [lbs]	WLL-Z [lbs]	Weight (lbs/unit)	T [inch]	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F [inch]	G [inch]	M	Tightening torque [Nm]	Order no.
VWBG-V-0.3t-5/16"-18UNC	520	700	1,050	0.4	2.99	0.31	1.22	1.14	1.18	1.06	0.31	1.42	5/16"-18UNC	7.4	7991090
VWBG-V-0.45t-3/8"-16UNC	790	1,050	1,580	0.64	3.07	0.31	1.22	1.14	1.32	1.18	0.39	1.50	3/8"-16UNC	10	7991091
VWBG-V-0.6t-1/2"-13UNC	1,050	1,320	2,110	0.9	4.21	0.39	1.93	1.38	1.65	1.42	0.47	1.85	1/2"-13UNC	10	7991092
VWBG-V-1.3t-5/8"-11UNC	2,280	2,640	4,580	1.14	4.49	0.51	1.81	1.50	1.89	1.61	0.63	2.20	5/8"-11UNC	22	7991093
VWBG-V-2t-3/4"-10UNC	3,520	4,400	7,040	3.12	5.39	0.51	2.13	1.38	2.44	2.17	0.71	2.64	3/4"-10UNC	52	7991094
VWBG-V-3.5t-1"-8UNC	6,170	7,040	12,340	5.79	5.39	0.51	2.13	1.38	2.44	2.17	0.79	2.64	1"-8UNC	111	7991095
VWBG-V-5t-1 1/4"-7UNC	8,810	10,580	17,630	11.20	6.81	0.71	2.60	1.57	3.19	2.76	0.94	3.46	1 1/4"-7UNC	166	7991096

Subject to technical changes!

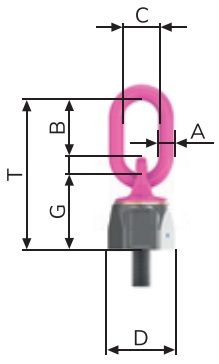
VWBG-V LOAD RING – UNC INCH THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 5:1 Type	WLL-X [lbs]	WLL-Y [lbs]	WLL-Z [lbs]	Weight (lbs/unit)	T [inch]	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F vario [inch]	G [inch]	M	Tightening torque [Nm]	Order no.
VWBG-V-0.45t-3/8"-16UNC	790	1,050	1,580	[1]	3.07	0.31	1.22	1.14	1.32	1.18	0.39–0.67	1.50	3/8"-16UNC	10	8600331
VWBG-V-0.6t-1/2"-13UNC	1,050	1,320	2,110	[1]	4.21	0.39	1.93	1.38	1.65	1.42	0.47–0.83	1.85	1/2"-13UNC	10	8600332
VWBG-V-1.3t-5/8"-11UNC	2,280	2,640	4,580	[1]	4.49	0.51	1.81	1.50	1.89	1.61	0.63–1.14	2.20	5/8"-11UNC	22	8600333
VWBG-V-2t-3/4"-10UNC	3,520	4,400	7,040	[1]	5.39	0.51	2.13	1.38	2.44	2.17	0.71–1.10	2.64	3/4"-10UNC	52	8600334
VWBG-V-3.5t-1"-8UNC	6,170	7,040	12,340	[1]	5.39	0.51	2.13	1.38	2.44	2.17	0.79–1.50	2.64	1"-8UNC	111	8600335
VWBG-V-5t-1 1/4"-7UNC	8,810	10,580	17,630	[1]	6.81	0.71	2.60	1.57	3.19	2.76	0.94–1.85	3.46	1 1/4"-7UNC	166	8600336

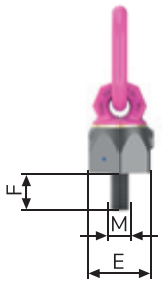
[1] Weight depends on the design.

Subject to technical changes!

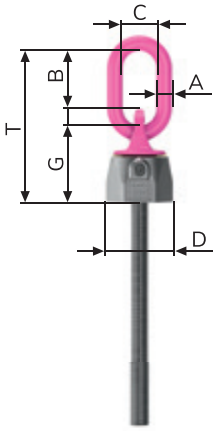
VWBG-V – UNC



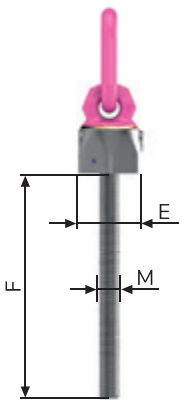
VWBG-V – UNC



VWBG-V – UNC



VWBG-V – UNC



VWBG

UNC inch thread / BSW-Whitworth inch thread.

VWBG LOAD RING – UNC INCH THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 5:1 Type	WLL-X [lbs]	WLL-Y [lbs]	WLL-Z [lbs]	T [inch]	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F vario [inch]	G [inch]	M	Tightening torque [Nm]	Order no.
VWBG-8(10)t-1 1/2"-6UNC(F=57)	14,080	17,630	26,450	8.19	0.87	3.39	1.97	3.54	3.15	1.42–11.81	94	1 1/2"-6UNC	410	8600451
VWBG-12(13)t-1 3/4"-5UNC(F=66)	21,160	22,920	29,980	9.21	1.02	4.37	2.56	3.86	3.35	1.65–11.81	95	1 3/4"-5UNC	550	8600452
VWBG-13(16)t-2"-4.5UNC(F=76)	22,920	28,220	31,740	9.21	1.02	4.37	2.56	3.86	3.35	1.89–11.81	95	2"-4.5UNC	550	8600453
VWBG-16(22)t-2 1/4"-4.5UNC(F=85)	28,220	38,800	49,380	10.67	1.26	4.69	2.76	4.72	3.74	2.20–11.81	120	2 1/4"-4.5UNC	800	8600454
VWBG-16(22)t-2 1/2"-4UNC(F=95)	28,220	38,800	49,380	10.67	1.26	4.69	2.76	4.72	3.74	2.20–11.81	120	2 1/2"-4UNC	800	8600454
VWBG-16(25)t-2 3/4"-4UNC(F=104)	28,220	44,090	49,380	10.67	1.26	4.69	2.76	4.72	3.74	2.52–11.81	120	2 3/4"-4UNC	800	8600455
VWBG-31.5(40)t-3"-4UNC(F=114)	55,550	70,540	88,185	13.31	1.81	5.12	3.54	6.69	5.71	2.83–11.81	159	3"-4UNC	1,200	8600456
VWBG-35(48)t-3 1/2"-4UNC(F=133)	61,720	84,650	88,185	13.31	1.81	5.12	3.54	6.69	5.71	3.15–11.81	159	3 1/2"-4UNC	1,500	8600457
VWBG-40(50)t-4"-4UNC(F=150)	70,540	88,185	88,185	14.88	1.81	6.61	4.33	6.69	5.71	3.54–11.81	159	4"-4UNC	2,000	8600458
VWBG-40(50)t-4 1/2"-4UNC(F=170)	70,540	88,185	88,185	14.88	1.81	6.61	4.33	6.69	5.71	3.54–11.81	159	4 1/2"-4UNC	2,000	8600458
VWBG-40(50)t-5"-4UNC(F=190)	70,540	88,185	88,185	14.88	1.81	6.61	4.33	6.69	5.71	3.54–11.81	159	5"-4UNC	2,000	8600458

Weight depends on the design.

Subject to technical changes!

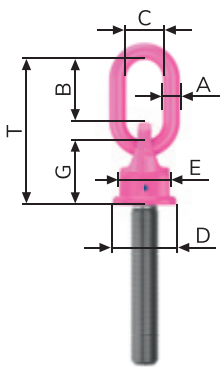
VWBG LOAD RING – BSW-WHITWORTH INCH THREAD IN VARIABLE LENGTH.

DESIGN FACTOR 5:1 Type	WLL-X [lbs]	WLL-Y [lbs]	WLL-Z [lbs]	T [inch]	A [inch]	B [inch]	C [inch]	D [inch]	E [inch]	F vario [inch]	G [inch]	M	Tightening torque [Nm]	Order no.
VWBG-8(10)t-1 1/2"-BSW(F=57)	14,080	17,630	26,450	8.19	0.87	3.39	1.97	3.54	3.15	1.42–11.81	94	1 1/2"-6BSW	410	8600451
VWBG-12(13)t-1 3/4"-BSW(F=66)	21,160	22,920	29,980	9.21	1.02	4.37	2.56	3.86	3.35	1.65–11.81	95	1 3/4"-5BSW	550	8600452
VWBG-13(16)t-2"-BSW(F=76)	22,920	28,220	31,740	9.21	1.02	4.37	2.56	3.86	3.35	1.89–11.81	95	2"-4.5BSW	550	8600453
VWBG-16(22)t-2 1/4"-BSW(F=85)	28,220	38,800	49,380	10.67	1.26	4.69	2.76	4.72	3.74	2.20–11.81	120	2 1/4"-4BSW	800	8600454
VWBG-16(22)t-2 1/2"-BSW(F=95)	28,220	38,800	49,380	10.67	1.26	4.69	2.76	4.72	3.74	2.20–11.81	120	2 1/2"-4BSW	800	8600454
VWBG-16(25)t-2 3/4"-BSW(F=104)	28,220	44,090	49,380	10.67	1.26	4.69	2.76	4.72	3.74	2.52–11.81	120	2 3/4"-3.5BSW	800	8600455
VWBG-31.5(40)t-3"-BSW(F=114)	55,550	70,540	88,185	13.31	1.81	5.12	3.54	6.69	5.71	2.83–11.81	159	3"-3.5BSW	1,200	8600456
VWBG-35(48)t-3 1/2"-BSW(F=133)	61,720	84,650	88,185	13.31	1.81	5.12	3.54	6.69	5.71	3.15–11.81	159	3 1/2"-3.25BSW	1,500	8600457
VWBG-40(50)t-4"-BSW(F=150)	70,540	88,185	88,185	14.88	1.81	6.61	4.33	6.69	5.71	3.54–11.81	159	4"-3BSW	2,000	8600458
VWBG-40(50)t-4 1/2"-BSW(F=170)	70,540	88,185	88,185	14.88	1.81	6.61	4.33	6.69	5.71	3.54–11.81	159	4 1/2"-2.875BSW	2,000	8600458
VWBG-40(50)t-5"-BSW(F=190)	70,540	88,185	88,185	14.88	1.81	6.61	4.33	6.69	5.71	3.54–11.81	159	5"-2.75BSW	2,000	8600458

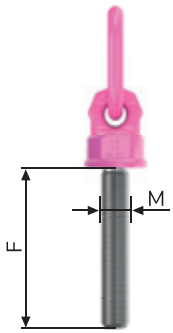
Weight depends on the design.

Subject to technical changes!

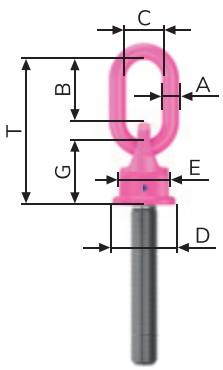
VWBG – UNC



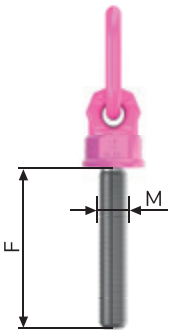
VWBG – UNC



VWBG – BSW-WHITWORTH



VWBG – BSW-WHITWORTH



WBPG

Boltable plate hoist ring.

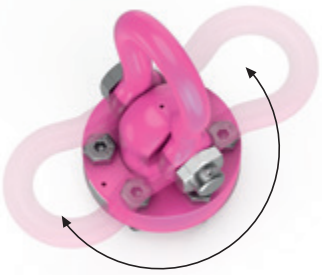
FEATURES AND BENEFITS:

- Large WLL range 85 t – 250 t.
- Suspension ring, resp. shackle pivots 180°.
- Lifting point swivels 360°.
- Removable suspension ring in shape of a shackle for attaching in conventional lifting means.
- Original RUD bolt with special corrosion protection Corrud-DT for 85 t – 250 t.
- Installation possible with clevis, ring and allen key.
- Also available with sling shackle as suspension ring (WBPG-SL).

THE WBPG IN DETAIL.

Up to 250 t WLL.

360° rotatable,
180° pivotable.



Removable bail in shape of a shackle.

WBPG on a flat surface.

WBPG on flange.

WBPG on cone.

WBPG

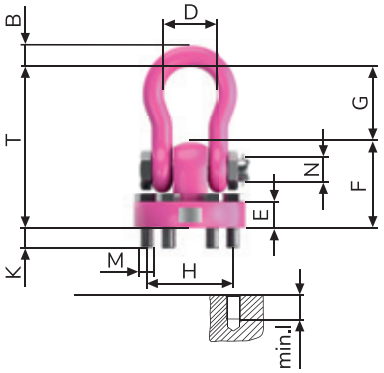
Technical Data.

WBPG – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
WBPG-85t-6×M48-Ø400mm	85	170	577	400	75	190	89	304	273	310	73	71	6 × M48	83	6,000	7993712
WBPG-100t-6×M48-Ø400mm	100	198	577	400	83	190	89	304	273	310	73	71	6 × M48	83	6,000	7993245
WBPG-120t-6×M48-Ø570mm	120	360	651	571	95	238	110	344	307	445	77	75	6 × M48	95	6,000	7900917
WBPG-200t-10×M48-Ø650mm	200	671	880	650	120	290	100	460	426	500	73	71	10 × M48	130	6,000	7900383
WBPG-250t-12×M48-Ø730mm	250	992	920	730	130	305	138	496	424	580	74	72	12 × M48	140	6,000	7905690
WBPG-SL-250t-12×M48-Ø730mm	250	844	844	730	126	300	138	452	380	580	74	72	12 × M48	120	6,000	7909644

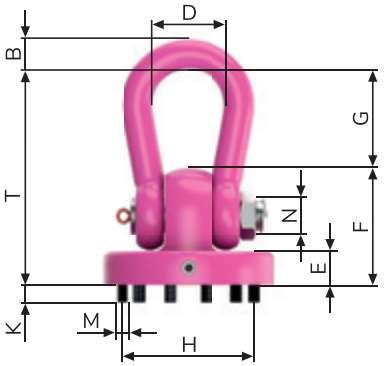
Subject to technical changes!

WBPG-85 t–200 t



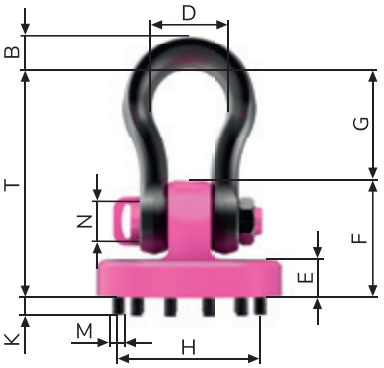
WBPG-85 t–200 t

WBPG-250 t



WBPG-250 t

WBPG-SL



WBPG-SL

VRS-STARPOINT

VARIO-Ring bolt.

FEATURES AND BENEFITS:

- Much higher WLL than eye bolts in accordance with DIN 580.
- Star profile key for simple installation and removal.
- Higher working load limits possible thanks to optimized attachment or application.
- Variable bolt lengths available for use in threaded and through bores.

VRS-F
(with star profile key)

VRS
(star profile key)

VRS-STARPOINT.

The VRS-STARPOINT in octagonal shape aligns itself around the installed bolt into the load force direction. This excludes dangerous untightening (like rigid DIN-580 bolts). Thanks to high-strength quenched and tempered steels and ICE-BOLT, the modern lifting point allows a 4 to 5 times higher WLL or half the diameter size than DIN 580. Current tests of the Employer's Insurance Association (BG) also confirm the positive tests in the worst critical loading direction of 90° in the load ring plane.

If the lifting points are only used during the manufacturing of a machine component, choose the VRS-STARPOINT variant with integrated star profile key. It can be installed and removed easily, quickly and without additional tools.

The VRS-STARPOINT is available in several bolt lengths with corresponding washers and crack detected lock nuts in different thread types.

THE VRS-STARPOINT IN DETAIL.

RUD ICE-BOLT.
Up to 1" (M24).

Rotatable through 360°.

Simple adjustment
in load direction.

Variable bolt length.

WLL Y

WLL Z

Star profile key

metric thread

UNC inch thread

VRS-F- / VRS-STARPOINT

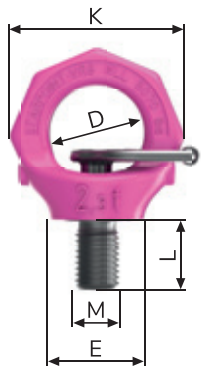
Metric thread with and without star profile key.

VRS-F- / VRS-STARPOINT – METRIC THREAD WITH (VRS-F) AND WITHOUT STAR PROFILE KEY (VRS).

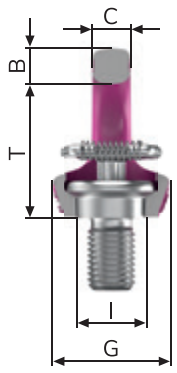
DESIGN FACTOR 4:1 Type	WLL [t]	Weight VRS-F (kg/unit)	Weight VRS (kg/unit)	T [mm]	B [mm]	C [mm]	D [mm]	E [mm]	G [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no. VRS-F	Order no. VRS
VRS-F-M6/VRS-M6	0.1	0.07	0.07	28	9	7	20	23	28	13	37	9	M6	6	5	7900906	7900909
VRS-F-M8/VRS-M8	0.3	0.12	0.1	35	11	9	25	25	30	16.3	47	12	M8	6	10	8500911	7100554
VRS-F-M10/VRS-M10	0.4	0.12	0.1	35	11	9	25	25	30	16.3	47	15	M10	6	10	7104029	7100555
VRS-F-M12/VRS-M12	0.75	0.19	0.19	42	13	10	30	30	34	19.8	56	18	M12	8	25	7101313	7100556
VRS-F-M14/VRS-M14	0.75	0.22	0.2	42	13	10	30	30	34	19.8	56	18	M14	8	30	7999330	7100557
VRS-F-M16/VRS-M16	1.5	0.36	0.33	49	15	13	35	36	40	23.5	65	24	M16	10	60	7101314	7100558
VRS-F-M18/VRS-M18	1.5	0.37	0.33	49	15	13	35	36	40	23.5	65	24	M18	10	60	7903387	7992219
VRS-F-M20/VRS-M20	2.3	0.6	0.54	58	17	16	40	41	50	29.3	76	30	M20	12	115	7101315	7100559
VRS-F-M22/VRS-M22	2.3	0.62	0.56	58	17	16	40	41	50	29.3	76	30	M22	12	125	7992197	7904625
VRS-F-M24/VRS-M24	3.2	1.06	0.97	70	20	19	49	51	60	35	92	36	M24	14	190	7101316	7100560
VRS-M24-SL2M	3.2	–	1	70	20	19	49	51	60	35	92	48	M24	14	190	–	7990615
VRS-F-M27/VRS-M27	3.2	1.08	1	70	20	19	49	51	60	35	92	36	M27	14	250	7994138	7904626
VRS-F-M30/VRS-M30	4.5	2.08	1.92	87	26	24	60	66	75	44	114	45	M30	17	330	7101317	7100561
VRS-F-M33/VRS-M33	4.5	2.13	1.97	87	26	24	60	66	75	44	114	45	M33	17	350	7993439	7904627
VRS-F-M36/VRS-M36	7	3.5	3.3	104	32	29	73	76	98	53	135	54	M36	22	590	7984201	7984198
VRS-F-M36-SL2M	7	–	3.3	103	32	29	73	76	98	53	135	72	M36	22	590	–	7991247
VRS-F-M42/VRS-M42	9	5.4	5	122	36	34	85	86	109	62	157	63	M42	24	925	7984202	7984199
VRS-F-M48/VRS-M48	12	8.1	7.6	138	42	38	94	101	128	70	179	72	M48	27	1,400	7984203	7984200
VRS-F-M56/VRS-M56	16	13	11.9	161	50	44	110	112	145	82	209	84	M56	32	1,400	7910836	7907508
VRS-F-M64/VRS-M64	20	17.8	16.2	176	55	48	120	122	157	90	228	96	M64	36	1,400	7910837	7907509

Subject to technical changes!

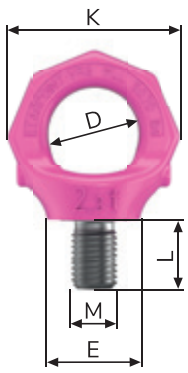
VRS-F



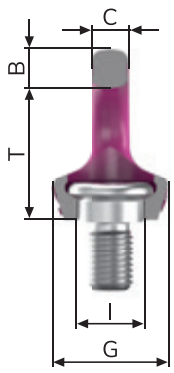
VRS-F



VRS



VRS



VRS-F

VRS

VRS-F- / VRS-G-STARPOINT

Metric thread with variable length / pipe thread.

VRS-F-STARPOINT – METRIC THREAD WITH VARIABLE LENGTH.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	B [mm]	C [mm]	D [mm]	E [mm]	G [mm]	I [mm]	K [mm]	L vario [mm]	M	N [mm]	Tightening torque [Nm]	Order no. VRS-F
VRS-F-M10	0.4	[1]	35	11	9	25	25	30	16.3	47	16–70	M10	6	10	8600270
VRS-F-M12	0.75	[1]	42	13	10	30	30	34	19.8	56	19–150	M12	8	25	8600271
VRS-F-M16	1.5	[1]	49	15	13	35	36	40	23.5	65	25–120	M16	10	60	8600272
VRS-F-M20	2.3	[1]	58	17	16	40	41	50	29.3	76	31–160	M20	12	115	8600273
VRS-F-M24	3.2	[1]	70	20	19	49	51	60	35	92	37–140	M24	14	190	8600274
VRS-F-M30	4.5	[1]	87	26	24	60	66	75	44	114	46–190	M30	17	330	8600275

[1] Weight depends on the design.

Subject to technical changes!

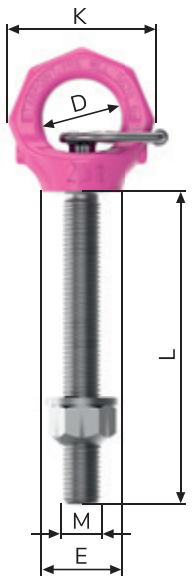
VRS-G-STARPOINT – PIPE THREAD ISO 228-1.

DESIGN FACTOR 4:1 Type	WLL [lbs]	Weight (lbs/unit)	T [inch]	B [inch]	C [inch]	D [inch]	E [inch]	G [inch]	I [inch]	K [inch]	L [inch]	M	N [inch]	Tightening torque [Nm]	Order no. VRS-G
VRS-G-3/8"	0.3	0.2	52	13	9	25	30	30	–	47	24	G 3/8"	8	25	7911864
VRS-G-1/4" [2]	1,320	0.44	1.65	0.51	0.39	1.18	1.18	–	0.78	2.20	0.71	G 1/4"	0.31	18	7999269
VRS-G-1/2"	1,320	0.66	2.05	0.51	0.39	1.18	1.38	1.18	–	2.20	0.79	G 1/2"	0.31	18	7998682
VRS-G-3/4"	2,640	1.17	2.40	0.59	0.51	1.38	1.65	1.42	–	2.56	0.91	G 3/4"	0.39	44	7998880
VRS-G-1"	2,640	1.32	2.40	0.59	0.51	1.38	1.85	1.61	–	2.56	1.26	G 1"	0.39	44	7999163
VRS-G-1 1/4"	2,640	2.20	2.52	0.59	0.51	1.38	2.28	1.97	–	2.56	1.57	G 1 1/4"	0.39	44	7903732
VRS-G-2"	2,640	3.30	2.52	0.59	0.51	1.38	3.19	2.76	–	2.56	1.77	G 2"	0.39	74	7999164
VRS-G-2"	4,050	4.18	2.87	0.67	0.63	1.57	3.19	2.76	–	2.99	1.77	G 2"	0.47	85	7900433

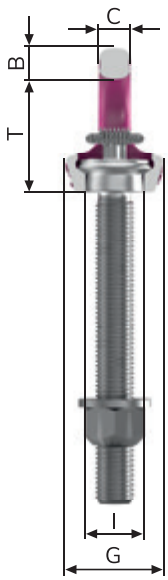
[2] Identical to VRS metric thread.

Subject to technical changes!

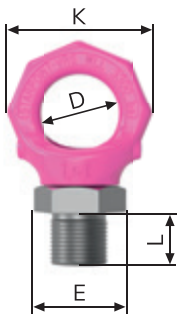
VRS-F



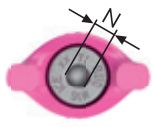
VRS-F



VRS-G



VRS-G



VRS-F- / VRS-STARPOINT

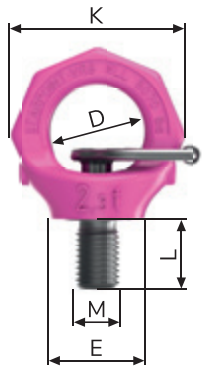
UNC inch thread with and without star profile key.

VRS-F- / VRS-STARPOINT – UNC INCH THREAD WITH (VRS-F) AND WITHOUT STAR PROFILE KEY (VRS).

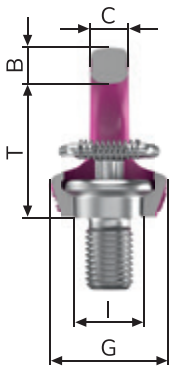
DESIGN FACTOR 5:1 Type	WLL [t]	Weight VRS-F (lbs/unit)	Weight VRS (lbs/unit)	T [inch]	B [inch]	C [inch]	D [inch]	E [inch]	G [inch]	I [inch]	K [inch]	L [inch]	M	N [inch]	Tightening torque [Nm]	Order no. VRS-F	Order no. VRS
VRS-1/4"-20UNC	0.1	–	0.24	28	9	7	20	23	28	13	37	9	1/4"-20UNC	1/4"	5	–	7999105
VRS-F-5/16"-18UNC	0.3	0.13	–	35	11	9	25	25	30	16.3	47	12	5/16"-18UNC	1/4"	10	7999106	–
VRS-F-/VRS-3/8"-16UNC	0.4	0.12	0.11	35	11	9	25	25	30	16.3	47	15	3/8"-16UNC	1/4"	10	7104480	7103959
VRS-F-/VRS-7/16"-14UNC	0.4	0.12	0.1	35	11	9	25	25	30	16.3	47	15	7/16"-14UNC	1/4"	10	7904195	7903118
VRS-F-/VRS-1/2"-13UNC	0.75	0.22	0.2	42	13	10	30	30	34	19.8	56	19	1/2"-13UNC	5/16"	25	7104481	7103960
VRS-F-/VRS-5/8"-11UNC	1.5	0.35	0.54	49	15	13	35	36	40	23.5	65	24	5/8"-11UNC	3/8"	60	7104482	7103961
VRS-F-/VRS-3/4"-10UNC	2.3	0.58	0.35	58	17	16	40	41	50	29.3	76	29	3/4"-10UNC	1/2"	115	7104483	7103962
VRS-F-/VRS-7/8"-9UNC	2.3	0.61	0.7	58	17	16	40	41	50	29.3	76	33	7/8"-9UNC	1/2"	115	7104484	7103963
VRS-F-/VRS-1"-8UNC	3.2	1.04	0.97	70	20	19	49	51	60	35	92	38	1"-8UNC	9/16"	190	7104485	7103964
VRS-F-/VRS-1 1/8"-8UN	3.2	1.08	1	70	20	19	49	51	60	35	92	36	1 1/8"-8UN	9/16"	250	7903386	7999385
VRS-F-/VRS-1 1/8"-7UNC	3.2	1.08	1	70	20	19	49	51	60	35	92	36	1 1/8"-7UNC	9/16"	250	7903383	7999384
VRS-F-/VRS-1 1/4"-7UNC	4.5	2.08	1.95	87	26	24	60	66	75	44	114	48	1 1/4"-7UNC	3/4"	330	7104486	7103965
VRS-F-/VRS-1 1/2"-6UNC	7	3.6	2.9	104	32	29	73	76	98	53	135	54	1 1/2"-6UNC	7/8"	590	7104487	7103966
VRS-F-/VRS-1 3/4"-5UNC	9	4.95	4.6	122	36	34	85	86	109	62	158	63	1 3/4"-5UNC	1"	925	7104488	7103967
VRS-F-2"-4.5UNC	12	7.6	7	138	42	38	96	101	128	70	180	72	2"-4.5UNC	1 1/8"	1,400	7104489	7103968

Subject to technical changes!

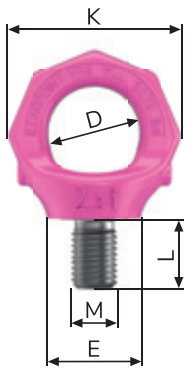
VRS-F – UNC



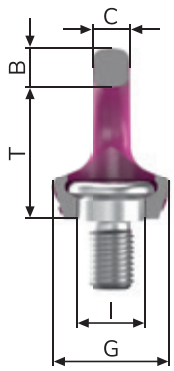
VRS-F – UNC



VRS – UNC



VRS – UNC



VRS-F – UNC

VRS – UNC

VRS-STARPOINT

Star profile key / socket key.

VRS STAR PROFILE KEY – METRIC THREAD.

Type	Weight (kg/unit)	A [mm]	B [mm]	D [mm]	N [mm]	Suitable for VRS type	Order no.
Star profile key, width across flats 6	0.02	–	–	–	6	M6 + M8 + M10	7983986
Star profile key, width across flats 8	0.02	–	–	–	8	M12 + M14	7905453
Star profile key, width across flats 10	0.03	–	–	–	10	M16 + M18	7903254
Star profile key, width across flats 12	0.04	–	–	–	12	M20 + M22	7904282
Star profile key, width across flats 14	0.08	–	–	–	14	M24 + M27	7904283
Star profile key, width across flats 17	0.12	–	–	–	17	M30 + M33	7904284
Star profile key, width across flats 22	0.15	–	–	–	22	M36	7904285
Star profile key, width across flats 24	0.3	–	–	–	24	M42	7904286
Star profile key, width across flats 27	0.4	–	–	–	27	M48	7904287
Star profile key, width across flats 32	1.1	–	–	–	32	M56	7911045
Star profile key, width across flats 36	1.3	–	–	–	36	M64	7911046

Subject to technical changes!

VRS STAR PROFILE KEY – UNC INCH THREAD.

Type	Weight (kg/unit)	A [mm]	B [mm]	D [mm]	N [mm]	Suitable for VRS type	Order no.
Star profile key, width across flats 1/4"	0.04	–	–	–	1/4"	5/16"-18UNC + 3/8"-16UNC + 7/16"-14UNC	7983995
Star profile key, width across flats 5/16"	0.04	–	–	–	5/16"	1/2"-13UNC	7983996
Star profile key, width across flats 3/8"	0.07	–	–	–	3/8"	5/8"-11UNC	7983997
Star profile key, width across flats 1/2"	0.09	–	–	–	1/2"	3/4"-10UNC + 7/8"-9UNC	7983998
Star profile key, width across flats 9/16"	0.18	–	–	–	9/16"	1"-8UNC + 1 1/8"-8UN + 1 1/8"-7UNC	7983999
Star profile key, width across flats 5/8"	0.26	–	–	–	5/8"	1 1/4"-7UNC	7984000
Star profile key, width across flats 7/8"	0.33	–	–	–	7/8"	1 1/2"-6UNC	7984001
Star profile key, width across flats 1"	0.66	–	–	–	1"	1 3/4"-5UNC	7984002
Star profile key, width across flats 1 1/8"	0.88	–	–	–	1 1/8"	2"-4.5UNC	7984003

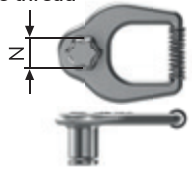
Subject to technical changes!

VRS SOCKET KEY.

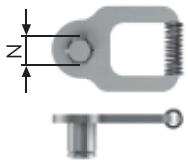
Type	Weight (kg/unit)	A [mm]	B [mm]	D [mm]	N [mm]	Suitable for VRS type	Order no.
Socket key, width across flats 6	0.09	118	7.5	1/2"	6	M6 + M8 + M10	7997749
Socket key, width across flats 8	0.11	118	9	1/2"	8	M12 + M14	7997750
Socket key, width across flats 10	0.15	138	12	1/2"	10	M16 + M18	7997751
Socket key, width across flats 12	0.2	137	14	1/2"	12	M20 + M22	7997752
Socket key, width across flats 14	0.24	140	16.5	1/2"	14	M24 + M27	7997753
Socket key, width across flats 17	0.47	152	22	3/4"	17	M30 + M33	7902078
Socket key, width across flats 22	1	192	26	1"	22	M36	7902079
Socket key, width across flats 24	1.2	276	29	1"	24	M42	7902080
Socket key, width across flats 27	2	304	33	1"	27	M48	7902081
Socket key, width across flats 32	2.4	324	38	32 mm	16	M56	7908744
Socket key, width across flats 36	3.1	324	43	36 mm	20	M64	7907745

Subject to technical changes!

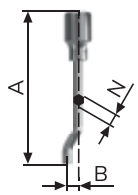
VRS star profile key – metric thread



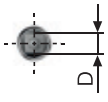
VRS star profile key – UNC inch thread



VRS socket key



VRS socket key



VRM-STARPOINT

VARIO eye nut.

FEATURES AND BENEFITS:

- The WLL information corresponds with the min. WLL (worst case scenario) in all loading directions. Higher WLL by optimized attachment or application.
- Available as a standard metric thread M6–M30 (DIN EN 13).
- Special application for use with existing threaded bolts.

EYE NUT VRM-STARPOINT.

Are there threaded rods on the load or can they be inserted from the opposite side? Then the VRM-STARPOINT can be the optimum solution. The VARIO eye nut is fastened with a ring spanner and the suspension ring can turn into the load direction.

THE VRM-STARPOINT IN DETAIL.

Rotatable
through 360°.

WLL Y

Clear marking of
the minimum WLL.

WLL Z

VRM-STARPOINT

Metric thread.

VRM VIP-EYE NUT – METRIC THREAD.

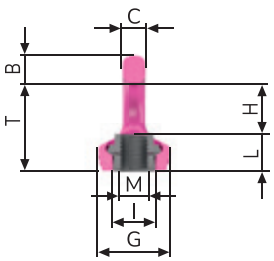
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Order no.
VRM-M6	0.1	0.05	28	9	7	20	23	16	28	17	13	37	11	M6	9	7900786
VRM-M8	0.3	0.1	35	11	9	25	25	21	30	21	16.3	47	14	M8	12	7992989
VRM-M10	0.4	0.1	35	11	9	25	25	21	30	21	16.3	47	14	M10	12	7990311
VRM-M12	0.75	0.2	42	13	10	30	30	24	34	25	19.8	56	17	M12	14	7990312
VRM-M16	1.5	0.3	49	15	13	35	36	30	40	31	23.6	65	21	M16	19	7990314
VRM-M20	2.3	0.5	58	17	16	40	41	37	50	35	29.3	76	23	M20	24	7990315
VRM-M24	3.2	0.9	70	20	19	49	51	45	60	41	35.2	92	29	M24	30	7990316
VRM-M30	4.5	1.5	87	26	24	60	66	56	75	51	44	114	36	M30	36	7993008

WLL values of VRM only apply in conjunction with thread bolts, which correspond to a minimum of quality class 10.9.

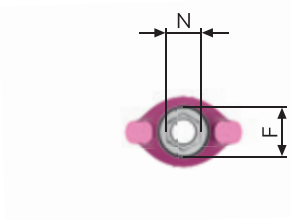
Subject to technical changes!

VRM

VRM



VRM




SMP

INOX-STAR

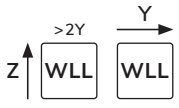
Stainless steel eye bolt.

FEATURES AND BENEFITS:

- Large WLL range 0.5 t – 2.5 t.
- Non-removable special bolt and ring body made of duplex steel 1.4462.
- Variable bolt length for use in threaded and through holes for defined thread dimensions.
- Fast and simple installation.
- High resistance in seawater or in environments with high concentration of chlorine ions.
- The penta shape clearly distinguishes it from conventional lifting points.
- Rotatable through 360°.
- Can be loaded from all sides.

THE INOX-STAR IN DETAIL.

Penta shape.



Rotatable through 360°.

Clear marking of the minimum WLL.

INOX-STAR

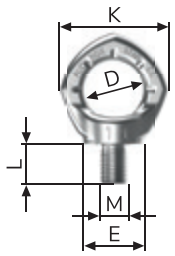
Technical Data.

INOX-STAR STAINLESS STEEL EYE BOLT – METRIC THREAD.

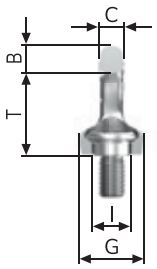
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	B [mm]	C [mm]	D [mm]	E [mm]	G [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
INOX-STAR-M8	0.3	0.11	35	12	10	25	25	28	16.3	46	12	M8	6	10	7912457
INOX-STAR-M10	0.3	0.12	35	12	10	25	25	28	16.3	46	15	M10	6	10	7912454
INOX-STAR-M12	0.5	0.19	43	14	12	30	30	32	20	56	18	M12	8	25	7993835
INOX-STAR-M16	1	0.31	50	16	14	35	36	38	22	65	24	M16	10	60	7993836
INOX-STAR-M20	2	0.53	58	19	16	40	43	47	27.5	74	30	M20	12	115	7993837
INOX-STAR-M24	2.5	0.92	70	24	19	48	51	56	33	92	36	M24	14	190	7993838
INOX-STAR-M12-L=50	0.5	0.22	43	14	12	30	30	32	18	56	50	M12	8	25	7997822
INOX-STAR-M16-L=50	1	0.35	50	16	14	35	36	38	22	65	50	M16	10	60	7910089
INOX-STAR-M20-L=60	2	0.6	58	19	16	40	43	47	27.5	74	60	M20	12	115	7998714

Subject to technical changes!

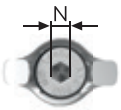
INOX-STAR



INOX-STAR



INOX-STAR



VWBM

Swivel hoist ring metric thread – with internal thread.

FEATURES AND BENEFITS:

- Rotatable lifting point with internal thread.
- Rotatable 90° to the bolt-on direction under rated WLL.
- Large clearance between the bolt-on surface and load to prevent damage.
- Fast and simple installation.

THE VWBM IN DETAIL.

VWBM

Internal thread.

Clear marking of the minimum WLL.

Innovative wear markings.

Ready to be discarded.

New.

VWBM

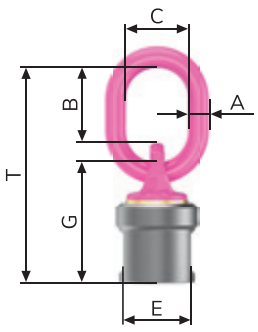
Technical Data.

VWBM – METRIC THREAD.

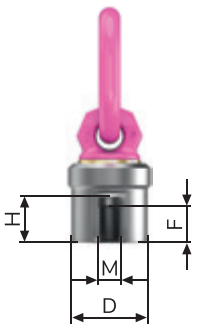
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	M [mm]	T [mm]	Tightening torque [Nm]	Order no.
VWBM-0.6t-M12	0.6	0.6	10	49	35	41	36	15	62	21	12	122	80	7909682
VWBM-1t-M16	1	0.9	13	46	38	46	41	20	73	27	16	131	150	7909683
VWBM-1.8t-M20	1.8	1.8	13	54	35	62	55	25	88	34	20	158	240	7911439

Subject to technical changes!

VWBM – metric thread



VWBM – metric thread



VABH-B

VIP-boltable attachment block.

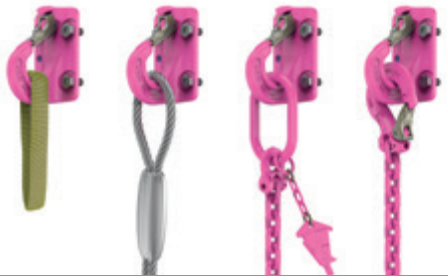
FEATURES AND BENEFITS:

- Large WLL range 1.5 t – 6.7 t.
- For combination with all conventional lifting means without additional connecting elements.
- ICE-BOLT made from patented steel. Improved toughness meaning higher bending strength and lower wear occurrence.
- Innovative wear markings for easy determination of wear.
- Robust forged safety latch.

THE VABH-B IN DETAIL.

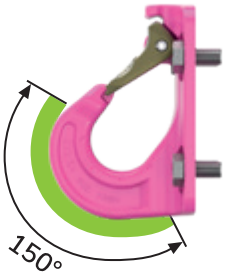
ICE-BOLT made from patented steel.

For combination with all conventional lifting means.

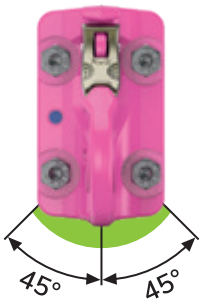


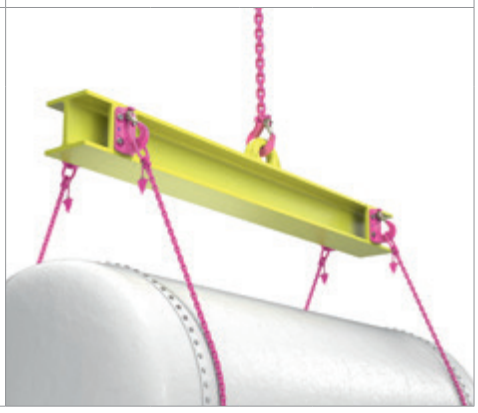
Innovative wear markings. Ready to be discarded. New.

VABH-B



VABH-B





VABH-B

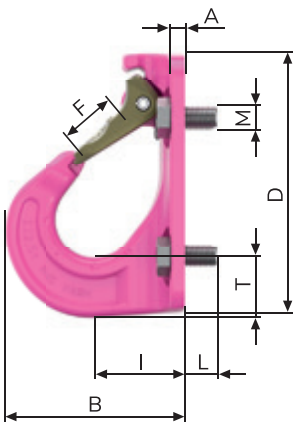
Technical Data.

VABH-B – VIP-BOLTABLE ATTACHMENT BLOCK – METRIC THREAD.

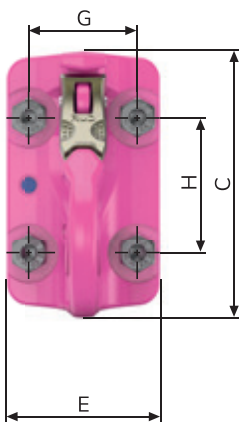
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	L [mm]	M	Tightening torque [Nm]	Order no.
VABH-B-1.5t	1.5	0.78	26	7.5	76	115	111	70	26	48	60	38	13.5	4 x M10	55	7991205
VABH-B-2.5t	2.5	1.73	33	8.5	98	148	143	85	31.5	60	75	49	18	4 x M12	100	7991206
VABH-B-4t	4	3	40	11	119	168	164	104	35	70	90	59	25	4 x M16	240	7991207
VABH-B-6.7t	6.7	5.58	51	13	147	205	200	120	40	85	110	70	28	4 x M20	450	8502238

Subject to technical changes!

VABH-B



VABH-B



VCGH-G

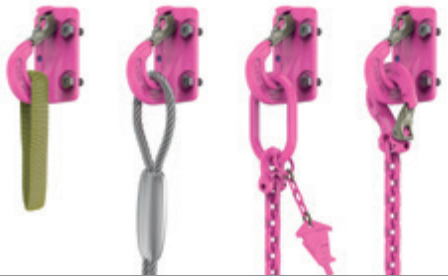
VIP-boltable attachment block.

FEATURES AND BENEFITS:

- Large WLL range 10 t, 16 t – 20 t.
- For combination with all conventional lifting means without additional connecting elements.
- ICE-BOLT made from patented steel. Safe deep temperature usage; improved toughness meaning higher bending strength and lower wear occurrence.
- Innovative wear markings for easy determination of wear.
- Robust forged safety latch.

THE VCGH-G IN DETAIL.

ICE-BOLT made from patented steel.



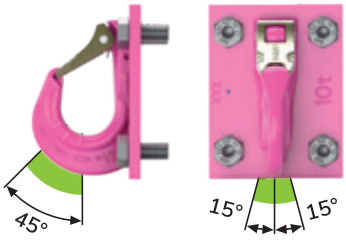
For combination with all conventional lifting means.

Innovative wear markings.

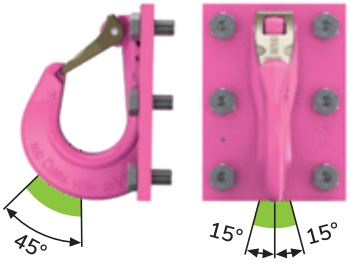
Ready to be discarded.

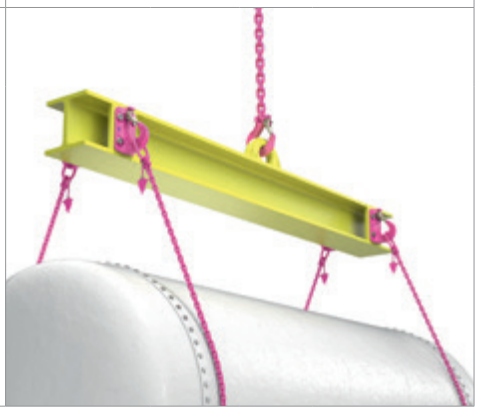
New.

VCGH-G 16



VCGH-G 20/22





VCGH-G

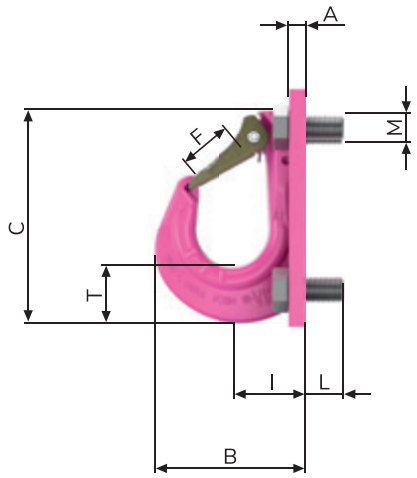
Technical Data.

VCGH-G – VIP-BOLTABLE ATTACHMENT BLOCK – METRIC THREAD.

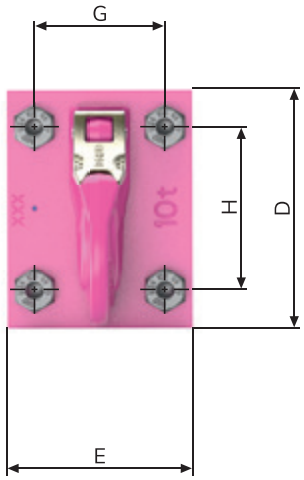
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	L [mm]	M	Tightening torque [Nm]	Order no.
VCGH-G-16	10	8.49	49	15	141	200	220	170	48	120	150	69	35	4 x M24	800	7984048
VCGH-G-20	16	18	69	20	187	272	288	210	63	150	2 x 110	87	30	6 x M24	800	7984311
VCGH-G-22	20	18.9	74	20	196	276	292	240	63	150	2 x 110	92	30	6 x M24	950	7984313

Subject to technical changes!

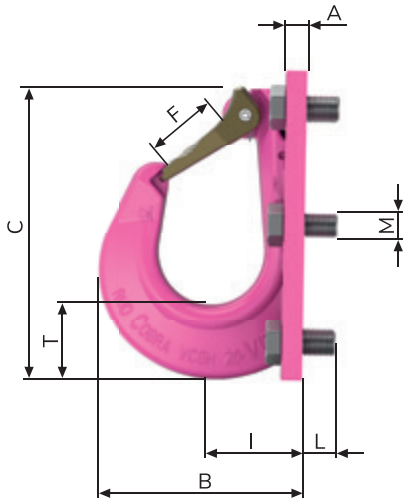
VCGH-G-16



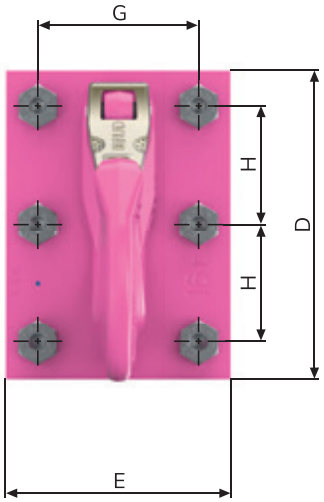
VCGH-G-16



VCGH-G-20 / -22



VCGH-G-20 / -22



B-ABA

Boltable lifting point that can be loaded on all sides.

FEATURES AND BENEFITS:

- Large WLL range 1.6 t–31.5 t.
- No rattling noise or shaking even with strong vibrations, easy connection of the lifting means possible.
- ICE-BOLT made from patented steel. Safe deep temperature usage; improved toughness meaning higher bending strength and lower wear occurrence.
- Innovative wear markings inside and out.
- Clear marking of the minimum WLL.

THE B-ABA IN DETAIL.

No rattling noise or shaking.

ICE-BOLT made from patented steel.

Clear marking.

WLL X

X → WLL

WLL Y

Y=1X → WLL

WLL Z

Z=1X ↑ WLL

B-ABA

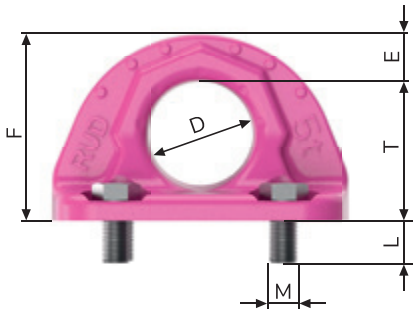
Technical Data.

B-ABA – LIFTING POINT THAT CAN BE LOADED ON ALL SIDES – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	L [mm]	M	Tightening torque [Nm]	Order no.
B-ABA-1.6t	1.6	0.88	46.5	75	16	100	35	16	62.5	55	55	13	4 x M10	55	7906266
B-ABA-3.2t	3.2	2	65	92	23	137	50	21	86	70	75	16	4 x M12	100	7906267
B-ABA-5t	5	4.1	80	113	27	172	60	28	108	84	95	24	4 x M16	240	7906268
B-ABA-10t	10	9.3	105	146	38	228	80	36	141	110	125	25	4 x M20	450	7906269
B-ABA-20t	20	18.8	148	200	52	272	115	40	188	150	75	30	6 x M24	800	7906270
B-ABA-31.5t	31.5	29.5	170	230	64	320	130	50	220	175	87.5	40	6 x M30	950	7906271

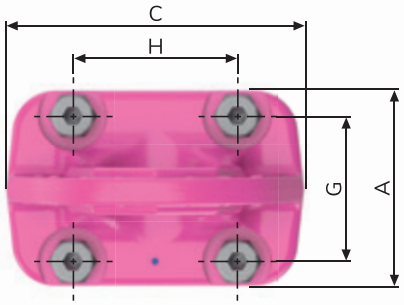
Subject to technical changes!

B-ABA-1.6t to 10t

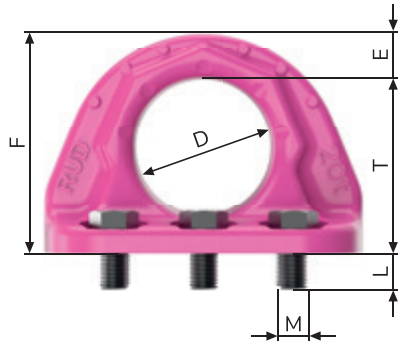


B-ABA-1.6t to 10t

B-ABA-1.6t to 10t

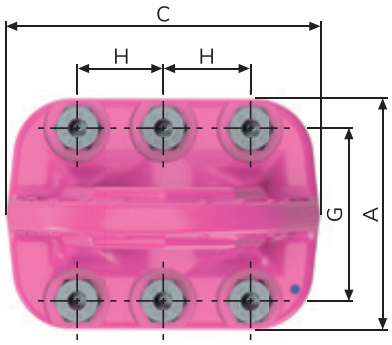


B-ABA-20t to 31.5t



B-ABA-20t to 31.5t

B-ABA-20t to 31.5t



RBG / VRBG

Load ring thread / VIP-Load ring thread.

FEATURES AND BENEFITS:

- Large WLL range 3 t – 16 t.
- Split force introduction thanks to multiple point fixing.
- Lift bail can be pivoted through 180°.
- WLL possible up to 90° in load ring plane.
- Clear indication of the minimum WLL for all loading directions.

RBG-3

VRBG-16

THE RBG / VRBG IN DETAIL.

RBG-3
2 bolts.

Also with vario-length

VRBG-10 / -16
4 bolts.

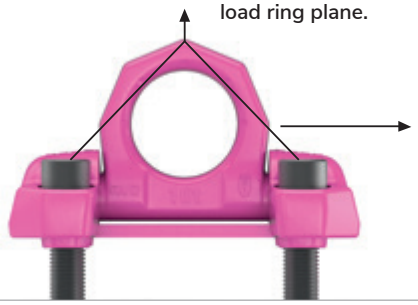
Innovative wear markings.

Ready to be discarded.

New.

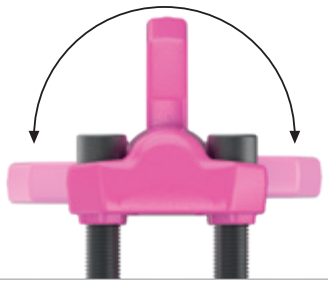
VRBG split force introduction.

WLL possible up to 90° in load ring plane.



VRBG

Can be pivoted through 180°.



RBG / VRBG

Technical Data.

RBG – LOAD RING FOR BOLTING – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
RBG-3	3	1.07	67	34	16	5	48	22	92	6	18	30	1	178	2 x M16	71	120	51817
RBG-3-SL	3	[1]	67	34	16	5	48	22	92	6	18	25–205	1	178	2 x M16	71	120	8600318

[1] Weight depends on the design.

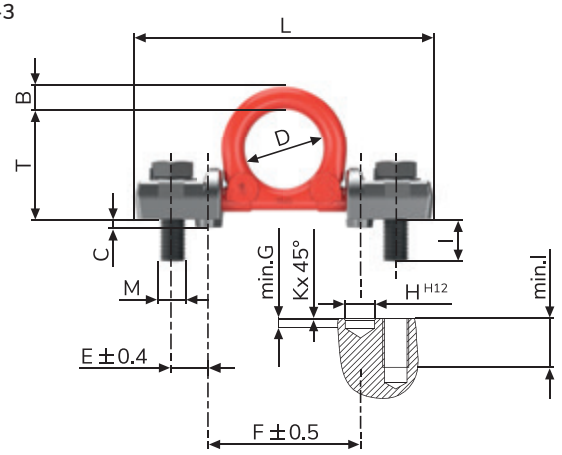
Subject to technical changes!

VRBG – VIP-LOAD RING FOR BOLTING – METRIC THREAD.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
VRBG-10	10	5.43	103	125	22	6	65	143	78	8	30	50	43	213	4 x M20	100	300	7994537
VRBG-16	16	11.3	131	170	30	8	90	198	104	10	46	70	63	270	4 x M30	134	600	7993255

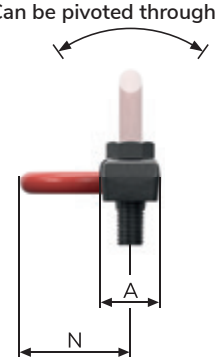
Subject to technical changes!

RBG-3

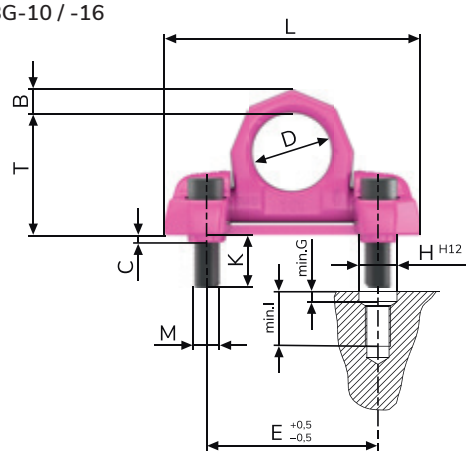


RBG-3

Can be pivoted through 180°.

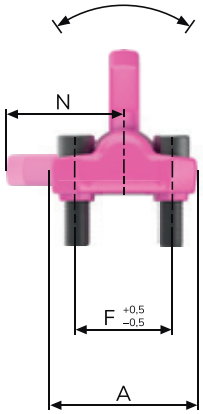


VRBG-10 / -16



VRBG-10 / -16

Can be pivoted through 180°.



VRBG / VRBG-FIX

VIP-Load ring for bolting / VIP-Load ring for bolting FIX.

FEATURES AND BENEFITS:

- Large WLL range 31.5 t – 100 t.
- Split force introduction thanks to multiple point fixing.
- Suspension ring can be pivoted through 180°.
- WLL possible up to 90° in load ring plane.
- Clear indication of the minimum WLL for all loading directions.

VRBG-FIX-31.5t

VRBG-FIX-50t / -100t

THE RBG / VRBG IN DETAIL.

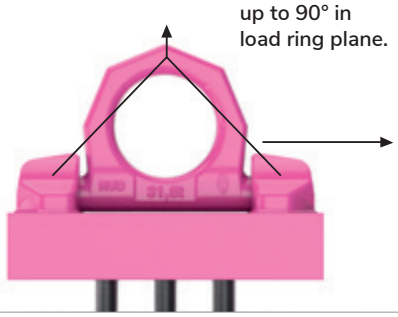
VRBG-FIX-31.5t
6 bolts.

VRBG-FIX-50t
8 bolts.

VRBG-FIX-100t
8 bolts.

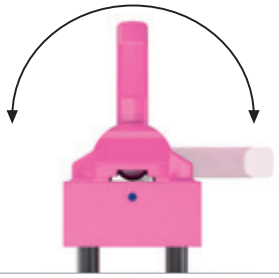
VRBG split force introduction.

WLL possible up to 90° in load ring plane.



VRBG

Can be pivoted through 180°.



Innovative wear markings.

VRBG / VRBG-FIX

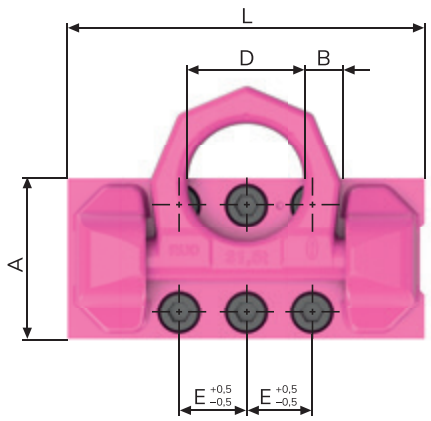
Technical Data.

VRBG / VRBG-FIX – VIP-LOAD RING ON PLATE – METRIC THREAD.

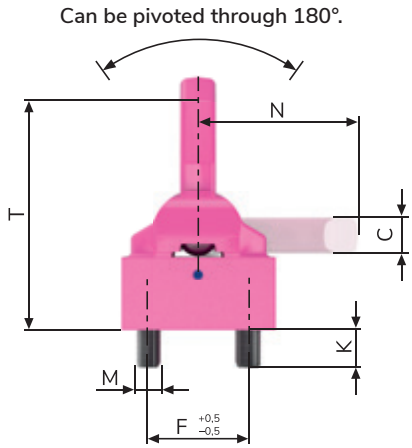
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	K [mm]	L [mm]	M	N [mm]	Tightening torque [Nm]	Order no.
VRBG-31.5t	31.5	66.3	265	180	42	42	130	75	120	46	400	6 x M30	195	900	7910387
VRBG-FIX-31.5t	31.5	66.3	288	180	42	42	130	75	120	46	400	6 x M30	195	900	7910591
VRBG-FIX-50t	50	204	430	270	70	55	230	100	200	60	650	8 x M36	335	1,000	7909951
VRBG-FIX-100t	100	450	510	380	97	77	250	100	240	79	825	8 x M48	392	2,000	7912696

Subject to technical changes!

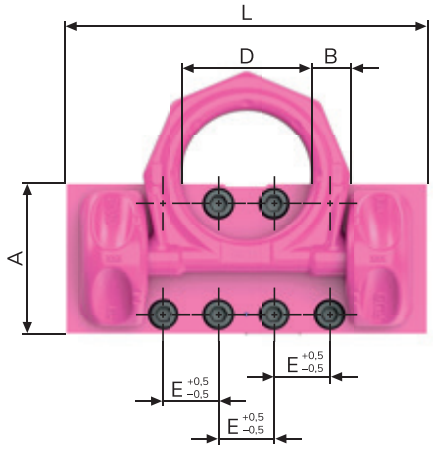
VRBG-31.5t / VRBG-FIX-31.5t



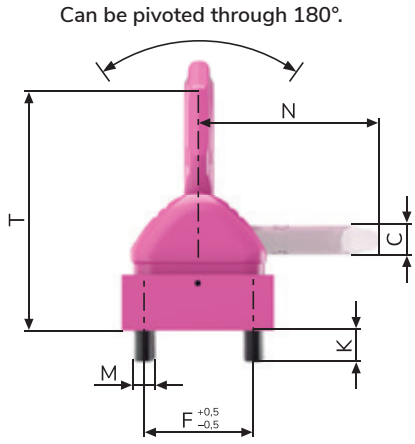
VRBG-31.5t / VRBG-FIX-31.5t



VRBG-FIX-50t / -100t



VRBG-FIX-50t / -100t




WELDABLE
LIFTING POINTS.

OVERVIEW OF WELDABLE LIFTING POINTS.

		Ideal for rotating and turning	Ball bearing mounted	Safety factor 4:1	Safety factor 5:1	100 % electromagnetically crack-tested	WLL possible on all sides or turning into load direction	Retaining spring	Turning range	Pivoting area/hook-in link	Operating temperature range **without** WLL reduction	Max. application temperature **with** WLL reduction	RUD BLUE-ID SYSTEM	DGUV approval	Certified according to the DNV guideline	Safety standard for lifting accessories
p. 104	 **VLBS / -U / -U-LT / -P** 1.5 t – 16 t			■		■	■	■		■	■	■		■	■	
p. 108	 **VRBS-FIX / VRL-FIX / VASK-FIX** 4 t – 100 t			■		■	■	■		■	■	■		■		
p. 112	 **VRBS / VRL-FIX / VASK** 4 t – 31.5 t			■		■	■			■	■	■				
p. 114	 **VRBK-FIX** 4 t – 50 t			■		■	■	■		■	■	■		■		
p. 116	 **W-ABA** 0.8 t – 31.5 t			■		■	■				■	■		■	■	
p. 120	 **INOX-ABA** 0.8 t – 2.7 t			■		■	■				■	■			■	
p. 122	 **VABH-W / VCGH-S** 1.5 t – 20 t			■		■					■	■				
p. 124	 **WPP-S / -B / -VIP + VWBS / VWBS-KA** 0.63 t – 50 t	■	■	■		■	■		■	■	■	■				

VLBS / -U / -U-LT / -P

VIP-Load ring weldable / VIP-Load ring weldable-captive.

FEATURES AND BENEFITS:

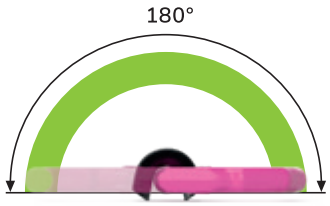
- Large WLL range 1.5 t – 16 t.
- Suspension ring can be pivoted through 180°.
- WLL possible up to 90° in load ring plane.
- The clamping spring reduces noise and keeps the suspension ring in the desired position.
- Lift bail and welding block on VLBS-U undetachable thanks to retention spring.
- Variants available for low temperatures and for welding to pipes (VLBS-P / VLBS-T).

VLBS.

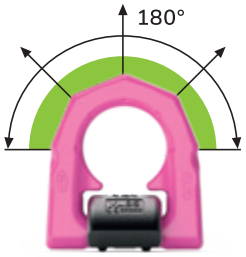
Patented supporting noses are located inside the octagon-shaped forged D-Ring, which allows also loading in the 90° side direction of the suspension ring. A clamping spring underneath the weld-on block also reduces the generation of rattling noise.

THE VLBS IN DETAIL.

180° WLL in the folding direction.



180° WLL in the load ring plane.



Clear marking of the minimum WLL.

VLBS | VLBS-U-LT up to –45° C | VLBS-P

Clamping spring. VLBS, VLBS-U-LT

Clamping spring. VLBS-P

Distance knobs on weld-on block.

VLBS-P

VLBS / VLBS-U

Technical data.

VLBS – VIP-LOAD RING FOR WELDING (WITHOUT CLAMPING SPRING).

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Welding seam	Order no.
VLBS-1.5t	1.5	0.35	65	33	66	25	38	40	14	33	14	HV5 + a3	7993115
VLBS-2.5t	2.5	0.53	75	36	77	27	45	47	16	40	14	HV7 + a3	7995346
VLBS-4t	4	0.76	83	42	87	31	51	52	18	46	16	HV8 + a3	7993116
VLBS-6.7t	6.7	1.9	117	61	115	44	67	73	24	60	22	HV12 + a4	7993117
VLBS-10t	10	2.76	126	75	129	55	67	71	26.5	60	26	HV16 + a4	7993118
VLBS-16t	16	7.1	176	96	192	70	100	106	40	90	26.5	HV25 + a6	7993041

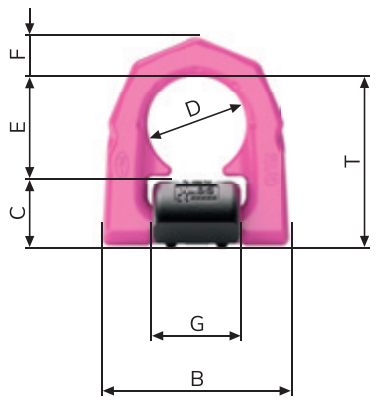
Subject to technical changes!

VLBS-U – VIP-LOAD RING WELDABLE-CAPTIVE (WITH CLAMPING SPRING).

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Welding seam	Order no.
VLBS-U-1.5t	1.5	0.35	65	33	66	25	38	40	14	33	14	HV5 + a3	7993035
VLBS-U-2.5t	2.5	0.53	75	36	77	27	45	47	16	40	14	HV7 + a3	7994830
VLBS-U-4t	4	0.76	83	42	87	31	51	52	18	46	16	HV8 + a3	7993036
VLBS-U-6.7t	6.8	1.9	117	61	115	44	67	73	24	60	22	HV12 + a4	7993037
VLBS-U-10t	10	2.76	126	75	129	55	67	71	26.5	60	26	HV16 + a4	7993040
VLBS-U-16t	16	7.1	176	96	192	70	100	106	40	90	26.5	HV25 + a6	7906640

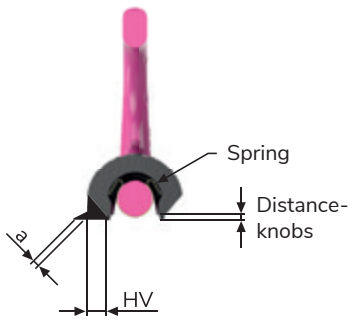
Subject to technical changes!

VLBS / VLBS-U



VLBS / VLBS-U

VLBS / VLBS-U



VLBS-U-LT / VLBS-P

Technical data.

VLBS-U-LT – VIP-WELDABLE LOAD RING FOR LOW TEMPERATURES.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Welding seam	Order no.
VLBS-U-LT-2.5t	2.5	0.53	75	36	77	27	45	47	16	40	14	HV7 + a3	7903522
VLBS-U-LT-4t	4	0.76	83	42	87	31	51	52	18	46	16	HV8 + a3	7903400
VLBS-U-LT-6.7t	6.7	1.9	117	61	115	44	67	73	24	60	22	HV12 + a4	7903684
VLBS-U-LT-10t	10	2.76	126	75	129	55	67	71	26.5	60	26	HV16 + a4	7903135

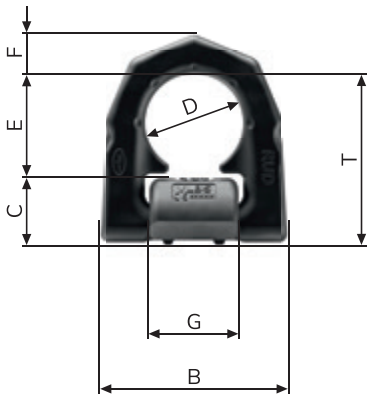
Subject to technical changes!

VLBS-P – VIP-LOAD RING WELDABLE PIPES (FOR PIPES Ø 82 – Ø 220 MM).

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Welding seam	Order no.
VLBS-P-4t	4	0.8	87	45	87	35	51	52	18	46	16.5	HV13 concave	7995472

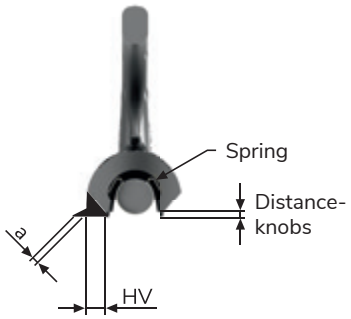
Subject to technical changes!

VLBS-U-LT

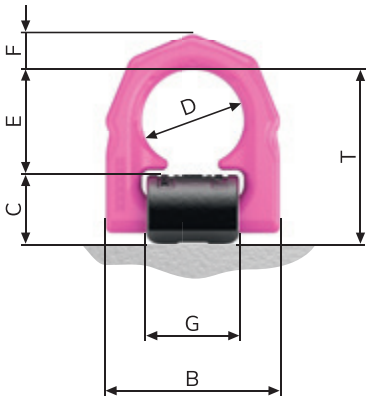


VLBS-U-LT

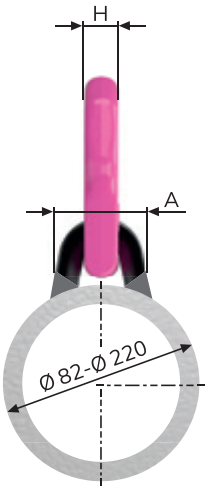
VLBS-U-LT



VLBS-P



VLBS-P



VRBS-FIX

VIP-Load ring for weldable FIX.

FEATURES AND BENEFITS:

- Split force introduction thanks to multiple point fixing.
- Excellent welding properties thanks to specially selected materials.
- Large working load limit range from 4 t–100 t.

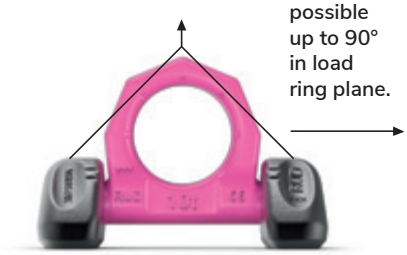
VRBS-FIX.

The type VRBS-FIX is particularly suitable where it makes sense to apply the force through the weld seam at two points. This results in smaller and lower cost welds that are continuous (no crevice corrosion). The force can then be introduced onto thinner sheets. The patented bearing system also allows a perfect WLL up to 90° to the load ring plane of the 180° pivoting suspension ring – and this under full load. A patented radial clamping spring reduces the noise and keeps the weld-on blocks at a precisely defined distance during welding.

THE VRBS-FIX IN DETAIL.

Split force introduction.

WLL possible up to 90° in load ring plane.

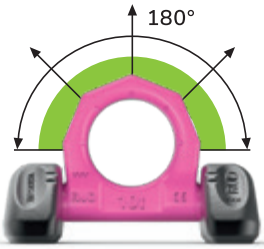


Patented fixing and clamping.

180° pivoting.

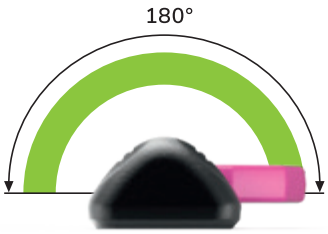
HY welding seam.

WLL angle in load ring plane.

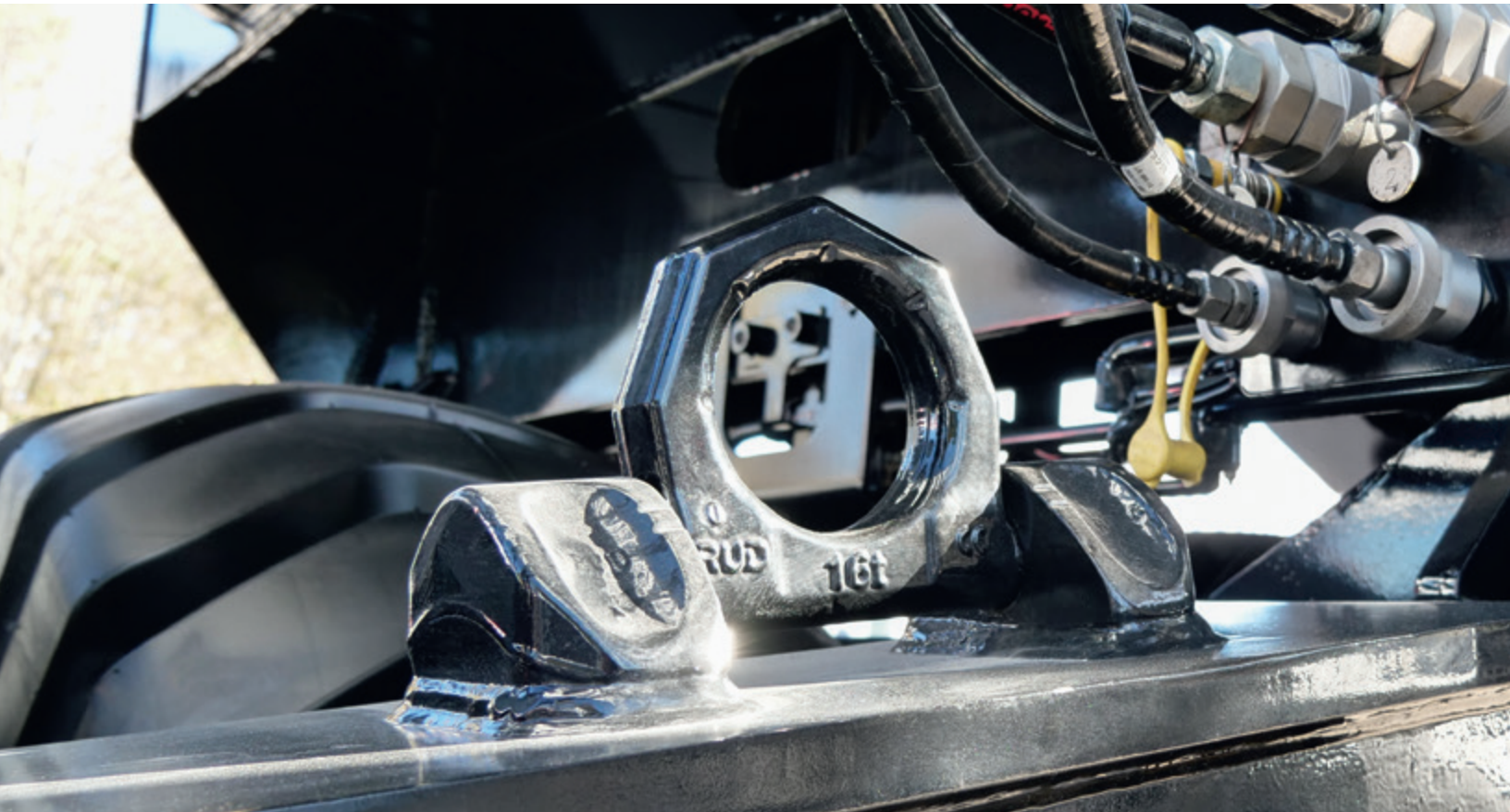


WLL

WLL angle for side loading.



WLL



VRBS-FIX / VRL-FIX / VASK-FIX

Technical data.

VRBS-FIX – VIP-LOAD RING WITH CIRCULAR WELDING SEAM.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
VRBS-FIX-4t	4	0.94	74	60	14	39	48	132	69	HY 3	7999019
VRBS-FIX-6.7t	6.7	2.24	97	88	20	50	60	167	91	HY 5	7999020
VRBS-FIX-10t	10	3.72	108	100	22	60	65	191	100	HY 6	7999021
VRBS-FIX-16t	16	8.23	140	130	30	72	90	267	134	HY 9	7999301
VRBS-FIX-31.5t	31.5	18.36	202	160	42	99	130	366	195	HY 12	7999302
VRBS-FIX-50t	50	64.86	330	246	70	148	230	596	335	HY 19	7906272
VRBS-FIX-100t	100	148.2	390	320	97	195	250	763	392	HY 28	7906273

Subject to technical changes!

VRL-FIX – OCTAGONAL RING LINK.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
VRL-FIX-4t	4	0.4	55	107	14	69	48	17	18	76	7906890
VRL-FIX-6.7t	6.7	0.93	71	134	19	90	60	23	24	99	7906891
VRL-FIX-10t	10	1.44	78	152	19.5	97	65	28	29	105	7906892
VRL-FIX-16t	16	3.2	104	204	27.5	131	90	35	37	146	7906893
VRL-FIX-31.5t	31.5	8.8	152	292	41	192	130	46	47	214	7906894
VRL-FIX-50t	50	27.9	265	510	70	335	230	63	63	371	7907412
VRL-FIX-100t	100	64.4	295	606	97	392	250	90	90	447	7906204

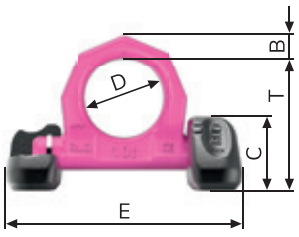
Subject to technical changes!

VASK-FIX – VRBS-FIX-WELD-ON BLOCK.

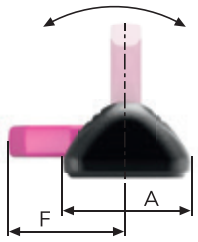
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
VASK-FIX-4t	4	0.28	27	60	–	38	18.5	–	29	HY 3	7908210
VASK-FIX-6.7t	6.7	0.63	37	88	–	52	24.5	–	34	HY 5	7908211
VASK-FIX-10t	10	1.15	43	100	–	60	30	–	44	HY 6	7908212
VASK-FIX-16t	16	2.43	52	130	–	72	37	–	62	HY 9	7908213
VASK-FIX-31.5t	31.5	4.93	71	160	–	99	48.5	–	76	HY 12	7908214
VASK-FIX-50t	50	18.4	98	246	–	148	66	–	123	HY 19	7906205
VASK-FIX-100t	100	41.9	142	320	–	195	94	–	166	HY 28	7906206

Subject to technical changes!

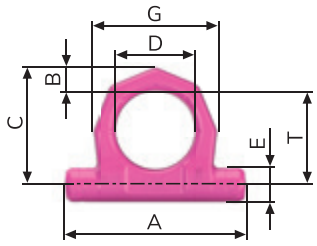
VRBS-FIX



VRBS-FIX
Can be pivoted through 180°.

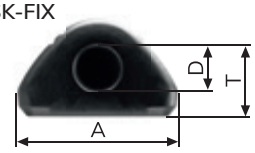


VRL-FIX – octagonal ring link

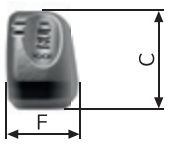


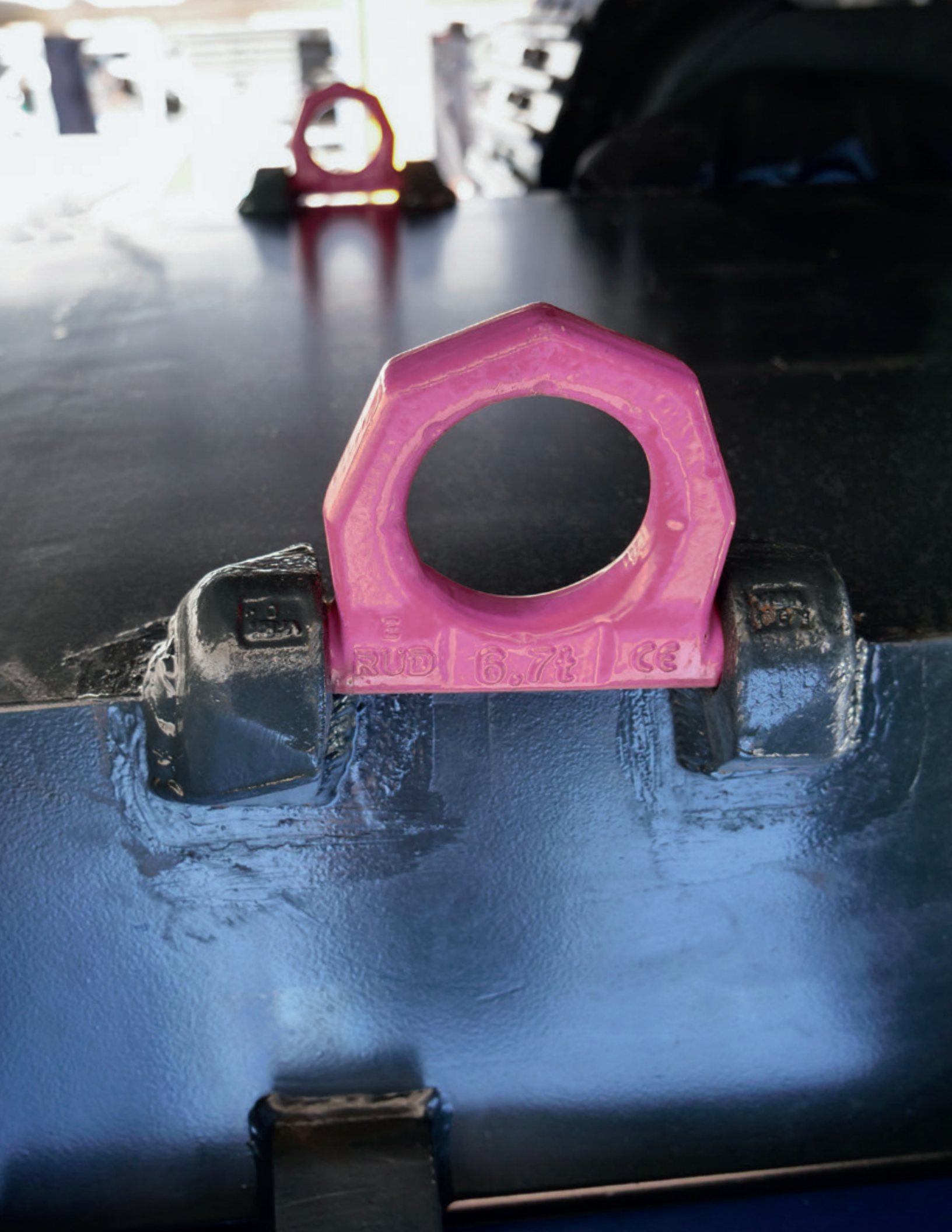
VRL-FIX – octagonal ring link

VASK-FIX



VASK-FIX




RUD 6,7t CE

VRBS

VIP-Load ring for welding.

FEATURES AND BENEFITS:

- Large WLL range 4 t – 31.5 t.
- Clear indication of the minimum WLL for all loading directions.
- Innovative wear markings for easy determination of wear.
- Distance knobs on the weld-on block for the necessary distance for root welding.
- The weld-on block is forged from a material that is easy to weld.

US Pat. No. 8807617

THE VRBS IN DETAIL.

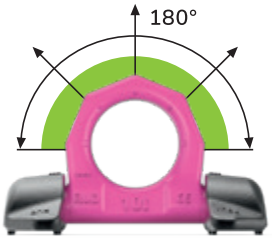
Split force introduction.

WLL possible up to 90° in load ring plane.

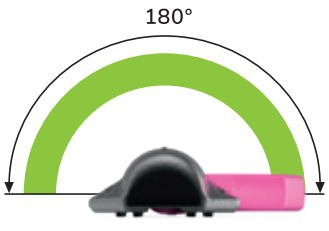
180° pivoting.

Innovative wear markings.

WLL angle in load ring plane.



WLL angle for side loading.



VRBS / VRL-FIX / VASK

Technical Data.

VRBS – VIP-LOAD RING FOR WELDING.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
VRBS-4t	4	0.8	65	62	14	28	48	135	71	HY 4 + a3	7992488
VRBS-6.7t	6.7	1.6	84	88	20	39	60	170	92	HY 5.5 + a3	7992489
VRBS-10t	10	2.6	95	100	22	46	65	195	100	HY 6 + a4	7992490
VRBS-16t	16	5.53	127	130	30	57	90	263	134	HY 8.5 + a4	7992491
VRBS-31.5t	31.5	15.6	178	160	42	79	130	375	195	HY 18 + a4	60267

Subject to technical changes!

VRL-FIX-OCTAGONAL RING LINK (UNIVERSAL DESIGN FOR VRBS-FIX AND VRBS).

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G	Order no.
VRL-FIX-4t	4	0.4	55	107	14	69	48	17	18	76	7906890
VRL-FIX-6.7t	6.7	0.93	71	134	19	90	60	23	24	99	7906891
VRL-FIX-10t	10	1.44	78	152	19.5	97	65	28	29	105	7906892
VRL-FIX-16t	16	3.2	104	204	27.5	131	90	35	37	146	7906893
VRL-FIX-31.5t	31.5	8.8	152	292	41	193	130	46	47	214	7906894

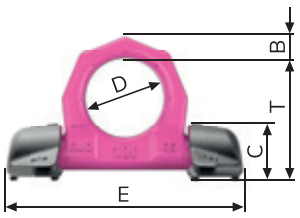
Subject to technical changes!

VASK – VRBS-WELD-ON BLOCK.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
VASK-4t	4	0.13	19	62	–	28	–	–	30	HY 4 + a3	7992004
VASK-6.7t	6.7	0.34	24	88	–	39	–	–	36	HY 5.5 + a3	7992005
VASK-10t	10	0.63	31	100	–	46	–	–	46	HY 6 + a4	7992007
VASK-16t	16	1.3	39	130	–	57	–	–	57	HY 8.5 + a4	7992008
VASK-31.5t	31.5	3.24	49	160	–	78	–	–	82	HY 18 + a4	7987160

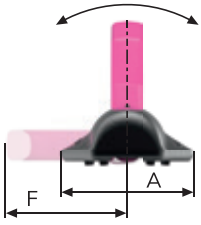
Subject to technical changes!

VRBS

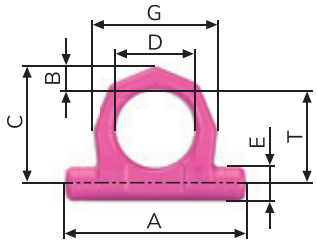


VRBS

Can be pivoted through 180°.

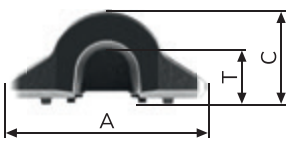


VRL-FIX – octagonal ring link



VRL-FIX – octagonal ring link

VASK-FIX



VASK-FIX

VRBK-FIX

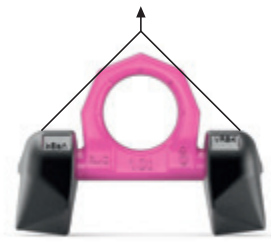
VIP-Load ring edge FIX.

FEATURES AND BENEFITS:

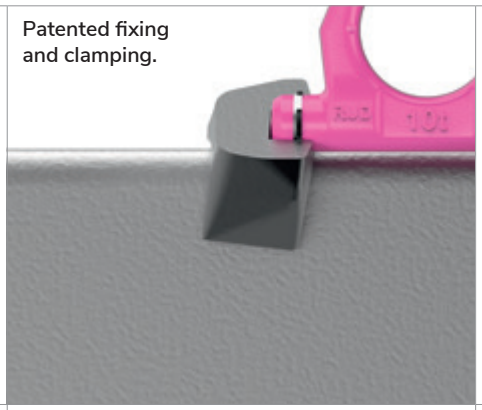
- Large WLL range 4 t – 50 t.
- Split force introduction thanks to multiple point fixing.
- Suspension ring pivots 270°.
- WLL possible up to 90° in load ring plane.
- Thanks to the weld arrangement (circular fillet weld), no contact/crevice corrosion can occur.
- Innovative wear markings for easy determination of wear.
- The clamping spring reduces noise and keeps the suspension ring in the desired direction.

THE VRBK-FIX IN DETAIL.

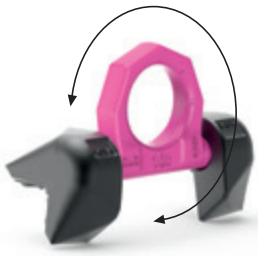
Split force introduction.



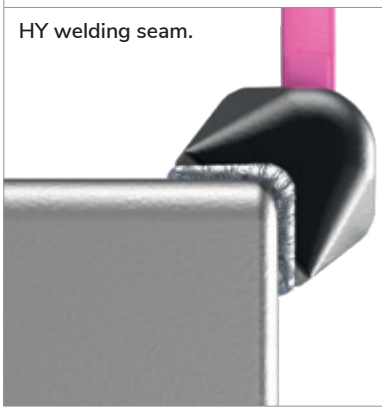
Patented fixing and clamping.



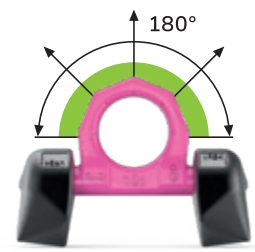
270° pivoting.



HY welding seam.

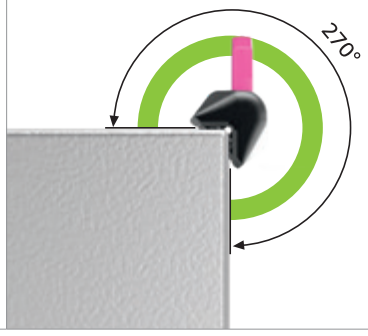


WLL angle in load ring plane.



WLL

WLL angle for side loading.



WLL

VRBK-FIX / VRL-FIX / VASKK-FIX

Technical Data.

VRBK-FIX – WELDABLE VIP-LOAD RING FOR 90° EDGES.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
VRBK-FIX-4t	4	1.05	65	32	14	28	48	141	30	HY 4 + a3	7902149
VRBK-FIX-6.7t	6.7	2.16	84	40	20	35	60	181	34	HY 5 + a3	7902150
VRBK-FIX-10t	10	4.4	94	52	22	46	65	212	46	HY 8 + a3	7902256
VRBK-FIX-16t	16	9.73	126	66	27	57	90	284	64	HY 10	7909845
VRBK-FIX-31.5t	31.5	24.84	177	89	42	78	130	394	70	HY 17	7906225
VRBK-50t	50	76.35	303	134	70	118	230	626	96	HY 25	7904653

Subject to technical changes!

VRL-FIX – OCTAGONAL RING LINK.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	Order no.
VRL-FIX-4t	4	0.4	55	107	14	69	48	17	18	76	7906890
VRL-FIX-6.7t	6.7	0.93	71	134	19	90	60	23	24	99	7906891
VRL-FIX-10t	10	1.44	78	152	19.5	97	65	28	29	105	7906892
VRL-FIX-16t	16	3.2	104	204	27.5	131	90	35	37	146	7906893
VRL-FIX-31.5t	31.5	8.8	152	292	41	193	130	46	47	214	7906894
VRL-FIX-50t	50	27.9	265	510	70	335	230	63	63	371	7907412

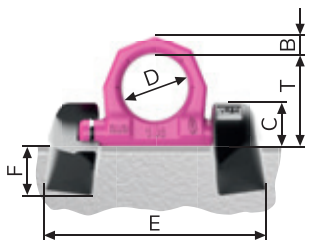
Subject to technical changes!

VASKK-FIX – WELD-ON BLOCK.

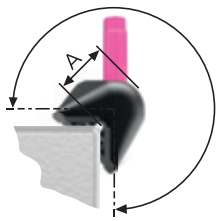
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
VASKK-FIX-4t	4	0.33	18	32	–	28	18.5	–	30	HY 4 + a3	7910942
VASKK-FIX-6.7t	6.7	0.57	24	40	–	35	24.5	–	34	HY 5 + a3	7910943
VASKK-FIX-10t	10	1.42	29	52	–	46	30	–	46	HY 8 + a3	7910944
VASKK-FIX-16t	16	3.32	41	66	–	57	37	–	65	HY 10	7909844
VASKK-FIX-31.5t	31.5	7.9	51	89	–	78	48.5	–	70	HY 17	7910279
VASKK-50t	50	23.5	71	134	–	118	67	–	96	HY 25	7903914

Subject to technical changes!

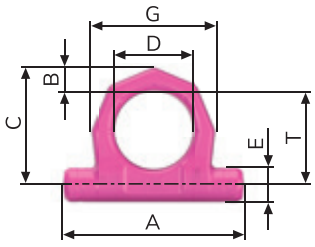
VRBK-FIX



VRBK-FIX
Can be pivoted through 270°

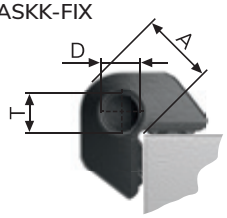


VRL-FIX-octagonal ring link

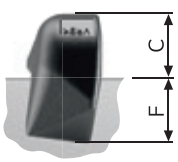


VRL-FIX-octagonal ring link

VASKK-FIX



VASKK-FIX

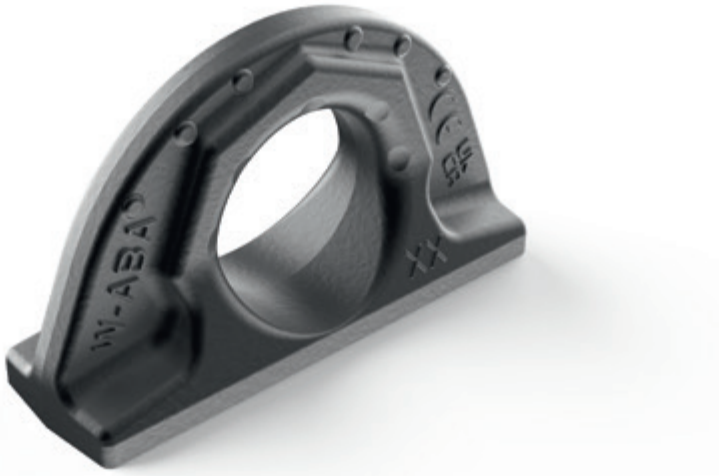


W-ABA

Weldable lifting point that can be loaded on all sides.

FEATURES AND BENEFITS:

- Innovative wear markings inside and out.
- Tempered main body, making it more wear resistant.
- As a result of the weld seam layout (circumferential fillet weld), no gap corrosion formations can occur.
- Very suitable for outdoor use.

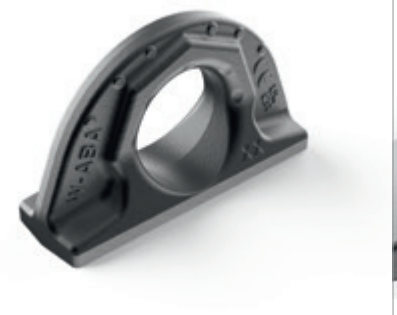


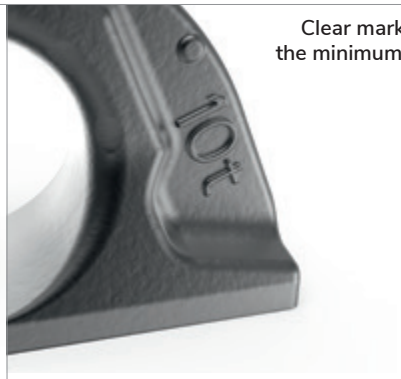
LIFTING POINT W-ABA THAT CAN BE LOADED ON ALL SIDES.

On many constructions, you will find weld-on flame cutted plates, which have considerable and often serious disadvantages. The W-ABA from RUD (weldable lifting point that can be loaded on all sides) meets all requirements for modern, safe lifting lugs – and all this in an attractive design. The requirements of DIN EN 1090 are fulfilled thanks to the endless circular fillet weld seam. Since there is no risk of contact/crevice corrosion, W-ABA can also be used for outdoor constructions.

THE W-ABA IN DETAIL.

Forged from a single piece.

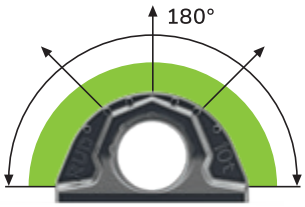




Clear marking of the minimum WLL.

Circular fillet weld.

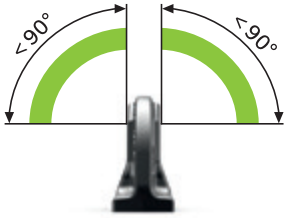
WLL angle in load ring plane.



>1X

WLL

WLL angle for side loading.

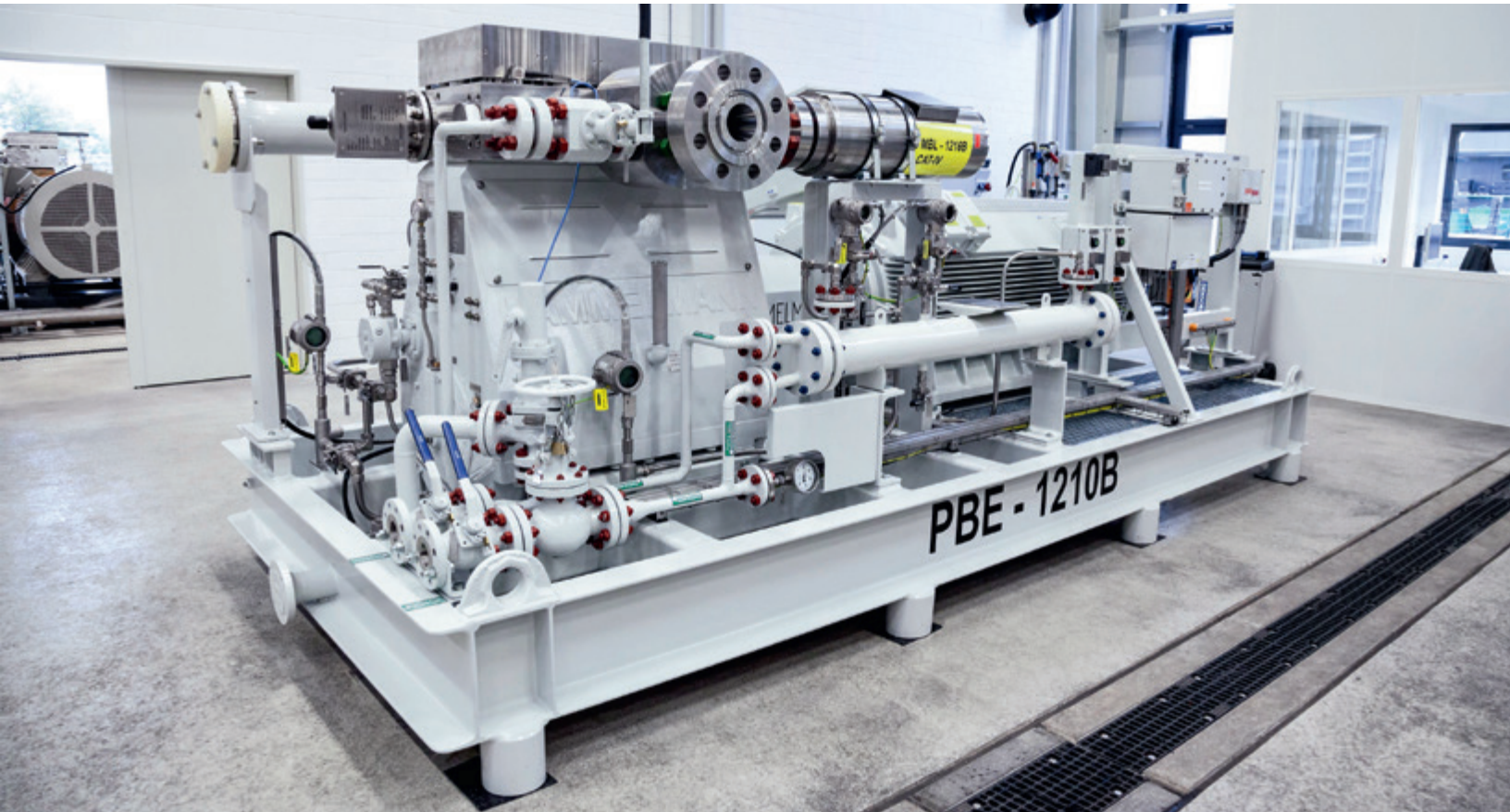


WLL

Innovative wear markings.

Ready to be discarded.

New.



W-ABA

Technical data.

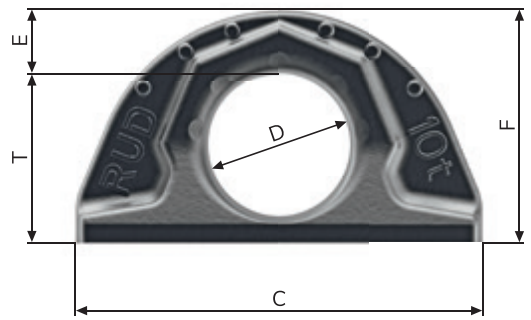
W-ABA – WELD-ON POINT THAT CAN BE LOADED ON ALL SIDES.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
W-ABA-0.8t	0.8 (2) [1]	0.2	38	22	12	70	32	12	50	a3	7907698
W-ABA-1.6t	1.6 (4) [1]	0.45	42	30	16	100	35	16	57	a4	7900352
W-ABA-3.2t	3.2 (9) [1]	1.15	59	41	23	137	50	21	80	a6	7900353
W-ABA-5t	5 (12) [1]	2.26	72	51	27	172	60	28	99	a7	7900354
W-ABA-10t	10 (20) [1]	5.37	95	70	38	228	80	35	130	a8	7900355
W-ABA-20t	20	10.72	135	90	52	272	115	40	175	a12	7902174
W-ABA-31.5t	31.5	18.33	154	108	64	320	130	50	204	a15	7902175

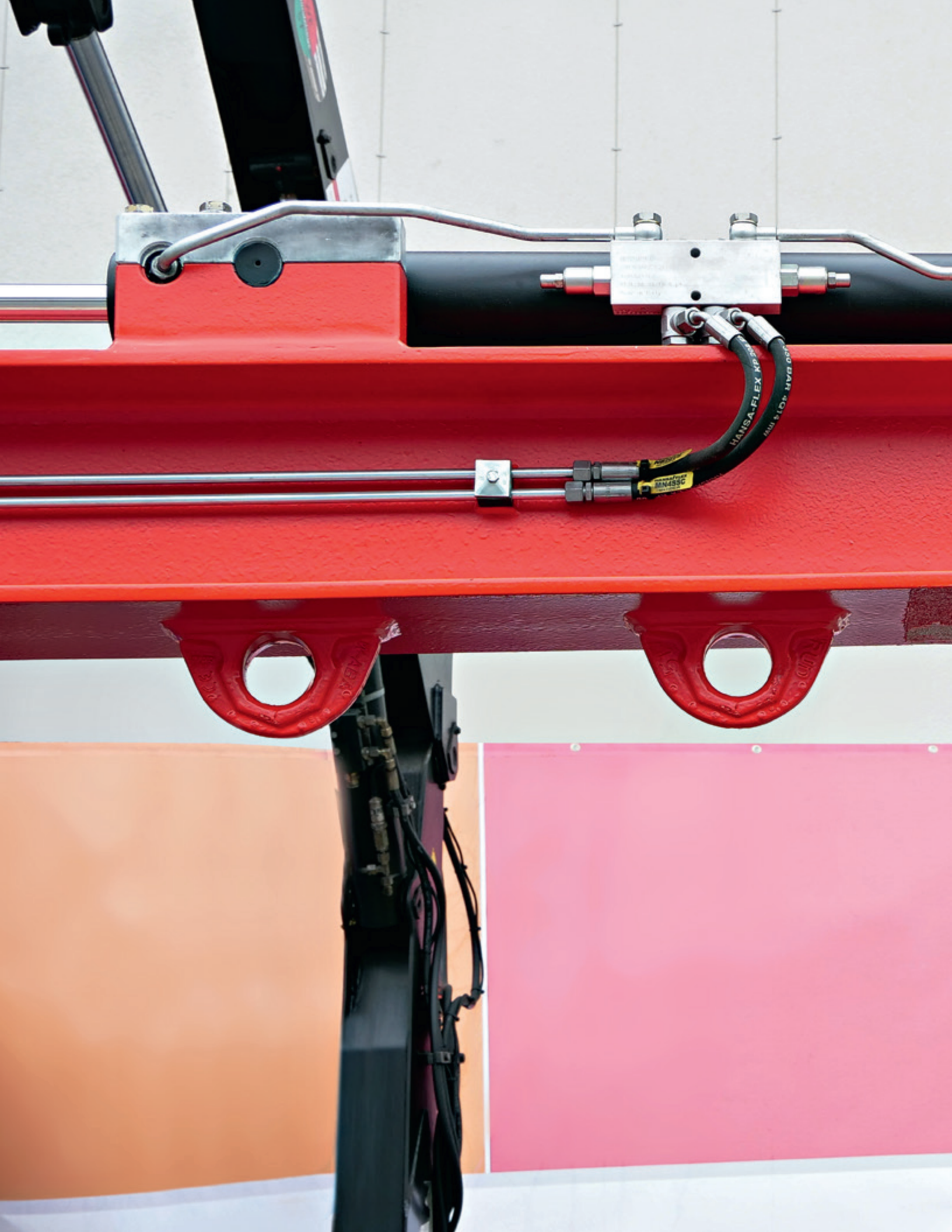
[1] ( ) = Higher WLL with load in load ring plane.

Subject to technical changes!

W-ABA



W-ABA

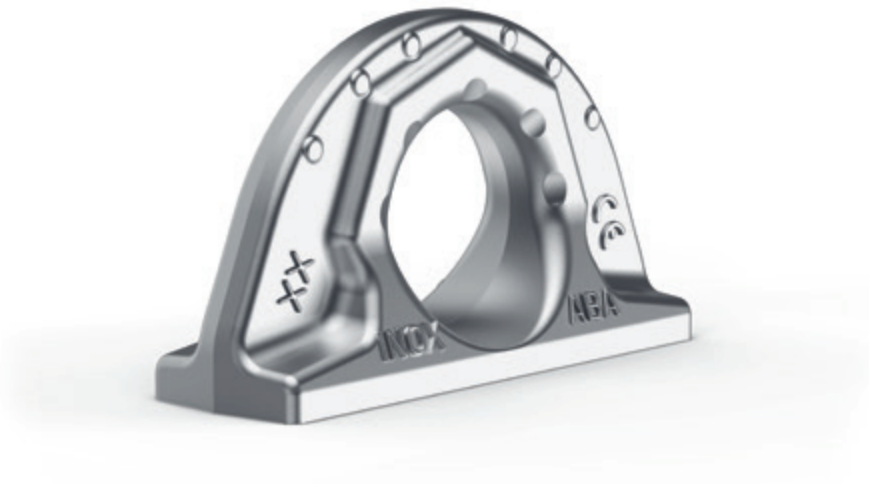

HANSA-FLEX

INOX-ABA

Lifting point that can be loaded on all sides. Stainless and corrosion-resistant.

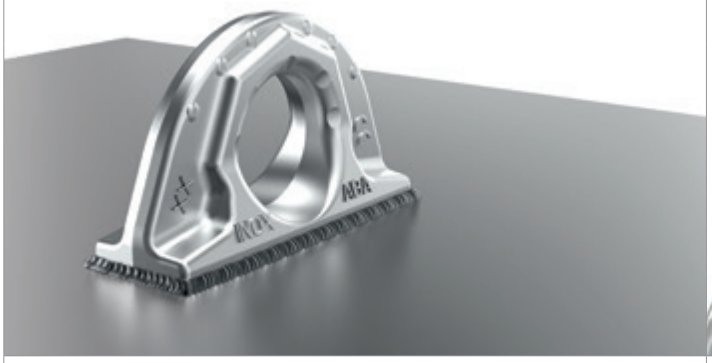
FEATURES AND BENEFITS:

- Made from Duplex steel 1.4462.
- 4-times the safety against breakage.
- Forged from a single piece: no rattling noise or shaking.
- Fulfils DIN EN 1090 due to circular fillet weld: No contact / crevice corrosion – can be used outdoors.
- Innovative wear markings for easy determination of the discard age.



THE INOX-ABA IN DETAIL.

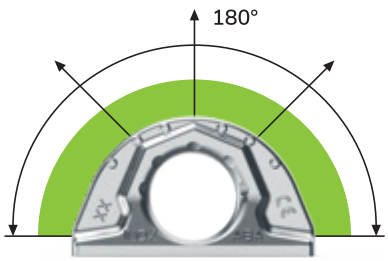
Circular fillet weld.



Innovative wear markings.

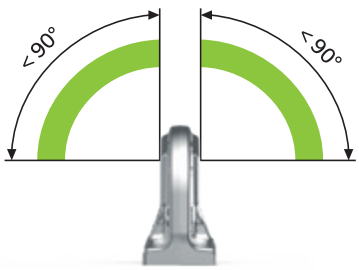
Ready to be discarded. New.

WLL angle in load ring plane.



WLL

WLL angle for side loading.



WLL

INOX-ABA

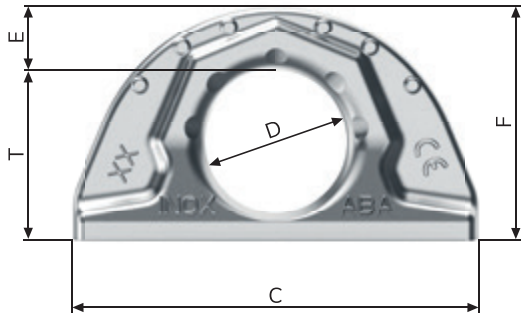
Technical Data.

INOX-ABA – STAINLESS WELD-ON POINT THAT CAN BE LOADED ON ALL SIDES.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Welding seam	Order no.
INOX-ABA-0.8t	0.8	0.2	38	22	12	70	32	12	50	a3	7912396
INOX-ABA-1.6t	1.6	0.45	41.5	30	16	100	35	16	57	a4	7912397
INOX-ABA-2.7t	2.7	1.1	59	41	23	137	50	21	80	a6	7912398

Subject to technical changes!

INOX-ABA



INOX-ABA

VABH-W / VCGH-S

VIP-weld-on-block.

FEATURES AND BENEFITS:

- Large WLL range 1.5 t – 20 t.
- For combination with all conventional lifting means without additional connecting elements.
- Innovative wear markings for easy determination of wear.
- Robust forged safety latch.
- Phosphated surface.
- VABH-W also for use as excavator hook.
- Simple and fast welding installation.

VABH-W VCGH-S

THE VABH-W / VCGH-S IN DETAIL.

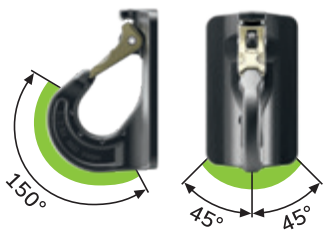
Robust forged hook latch.

For combination with all conventional lifting means.

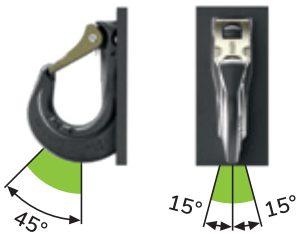
Innovative wear markings.

Ready to be discarded. New.

VABH-W



VCGH-S



VABH-W / VCGH-S

Technical Data.

VABH-W – VIP-WELD-ON-BLOCK.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	I [mm]	Welding seam	Order no.
VABH-W-1.5t	1.5	0.8	26	7.5	76	115	111	70	26	38	a4	7991208
VABH-W-2.5t	2.5	1.8	33	8.5	98	148	143	85	31.5	49	a5	7991209
VABH-W-4t	4	3.12	40	12	119	168	164	104	35	59	a6	7991210
VABH-W-6.7t	6.7	5.89	51	13	147	205	200	120	40	70	a6	8502239

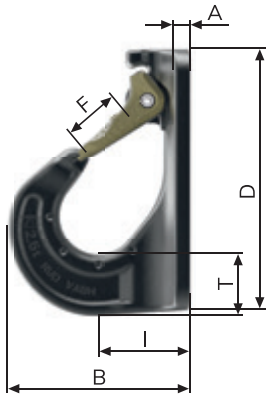
Subject to technical changes!

VCGH-S – VIP-WELD-ON-BLOCK.

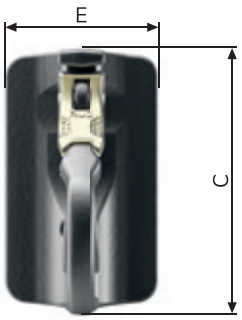
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	I [mm]	Welding seam	Order no.
VCGH-S-16	10	5.67	49	15	141	200	220	100	48	69	a8	7984047
VCGH-S-20	16	8.4	69	20	187	272	288	120	63	87	a8	7984310
VCGH-S-22	20	14.5	74	20	196	276	292	120	63	92	a8	7984312

Subject to technical changes!

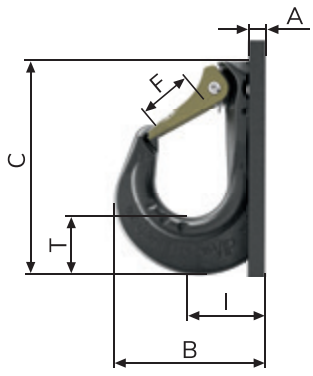
VABH-W



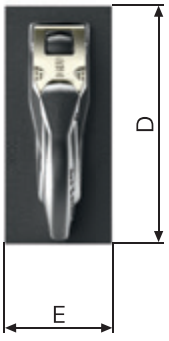
VABH-W



VCGH-S



VCGH-S



WPP-S / -B / -VIP

POWERPOINT®-Star / -Eye connection / -VIP-weldable chain connection.

FEATURES AND BENEFITS:

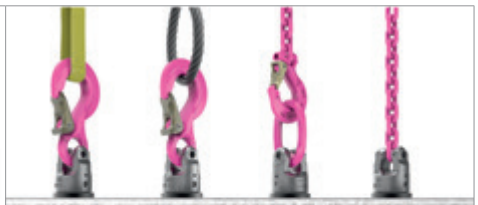
- Large WLL range 0.63 t – 8 t.
- WPP-S: weldable universal connection with hook for ring suspensions, round slings, wire ropes, hook suspensions.
- WPP-B: weldable eye connection for hook suspension.
- WPP-VIP: weldable direct chain connection.
- Lowest kinking possibility due to cardan joint.
- Can be rotated parallel to the weld-on surface under rated WLL.

WPP-S WPP-B WPP-VIP

THE WPP-S / -B / -VIP IN DETAIL.

Rotatable through 360°.

Double ball bearing – ideal for rotating and turning under load.



For combination with all conventional lifting means – without additional connecting elements.

Large clearance between the bolt-on surface and load.

90° rotatable through the bolt-on direction – low kinking possibility.

Extended pivoting area ~230°.

WPP-S / -B / -VIP

Technical Data.

WPP-S – POWERPOINT®-STAR UNIVERSAL CONNECTION FOR WELDING (ROTATABLE).

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	N [mm]	Welding seam	Order no.
WPP-S-0.63t	0.63	0.4	115	13	75	18	40	40	–	a4	7990721
WPP-S-1.5t	1.5	1	147	20	97	25	46	50	–	a5	7989944
WPP-S-2.5t	2.5	1.7	187	28	126	30	61	61	–	HY 3 + a5	7989945
WPP-S-4t	4	3.4	227	36	150	35	78	77	–	HY 3 + a6	7989946
WPP-S-5t	5 (6.7) [1]	7.1	267	37	174	40	95	93	–	HY 3 + a8	7989947
WPP-S-8t	8 (10) [1]	8.2	310	49	208	48	100	102	–	HY 3 + a10	7989948

[1] ( ) = Higher WLL with axial load.

Subject to technical changes!

WPP-B – POWERPOINT® EYE CONNECTION FOR HOOK SUSPENSION FOR WELDING (ROTATABLE).

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	N [mm]	Welding seam	Order no.
WPP-B-0.63t	0.63	0.35	105	9	65	35	40	40	15	a4	7989954
WPP-B-1.5t	1.5	0.4	115	11	65	35	46	50	15	a5	7989955
WPP-B-2.5t	2.5	1	135	13	74	40	61	61	18	HY 3 + a5	7989956
WPP-B-4t	4	2.3	172	16	95	45	78	77	20	HY 3 + a6	7989957
WPP-B-5t	5 (6.7) [1]	4.7	223	19	130	60	95	93	25	HY 3 + a8	7989958
WPP-B-8t	8 (10) [1]	5.3	242	24	140	65	100	102	28	HY 3 + a10	7989959

[1] ( ) = Higher WLL with axial load.

Subject to technical changes!

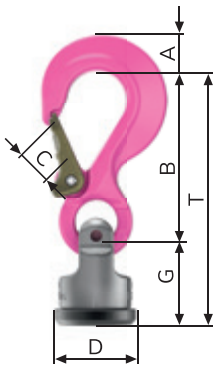
WPP-VIP – POWERPOINT® FOR VIP-CHAIN CONNECTION FOR WELDING (ROTATABLE).

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	N [mm]	Welding seam	Order no.
WPP-VIP4/0.63t	0.63	0.23	41	4	–	–	40	–	–	a4	7989960
WPP-VIP6/1.5t	1.5	0.39	50	6	–	–	46	–	–	a5	7989961
WPP-VIP8/2.5t	2.5	0.85	61	8	–	–	61	–	–	HY 3 + a5	7989962
WPP-VIP10/4t	4	1.8	77	10	–	–	78	–	–	HY 3 + a6	7989963
WPP-VIP13/5t	5 (6.7) [1]	3.4	93	13	–	–	95	–	–	HY 3 + a8	7989964
WPP-VIP16/8t	8 (10) [1]	4.5	102	16	–	–	100	–	–	HY 3 + a10	7989965

[1] ( ) = Higher WLL with axial load.

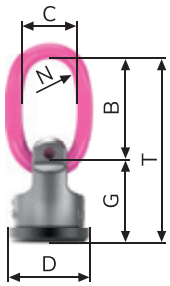
Subject to technical changes!

WPP-S



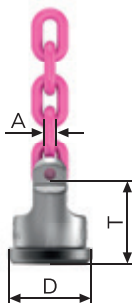
WPP-S

WPP-B



WPP-B

WPP-VIP



WPP-VIP

VWBS / VWBS-KA

Technical data.

VWBS – ROTATABLE VIP-LOAD RING FOR WELDING.

DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	N [mm]	Welding seam	Order no.
VWBS-40(50)t	40 (50) [1]	27.9	380	46	170	110	170	161	55	HY 22 + a19	7903650

[1] ( ) = Higher WLL with axial load.

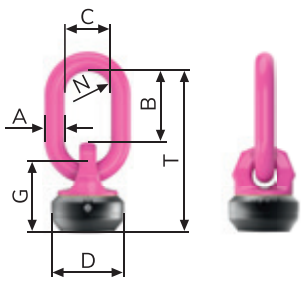
Subject to technical changes!

VWBS-KA – ROTATABLE VIP-LOAD RING FOR WELDING WITH CHAIN CONNECTION.

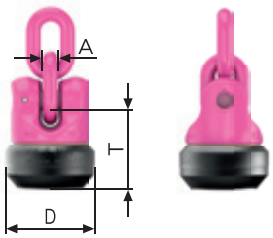
DESIGN FACTOR 4:1 Type	WLL [t]	Weight (kg/unit)	T [mm]	A [mm]	B [mm]	C [mm]	D [mm]	G [mm]	N [mm]	Welding seam	Order no.
VWBS-KA-28/31.5t	31.5	24	146	28	–	–	170	–	–	HY 22 + a19	7903440

Subject to technical changes!

VWBS



VWBS-KA

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