

HAVE WE
GOT YOU
HOOKED?

ACP-TURNADO.COM



 **RUD**[®]
ACP-TURNADO

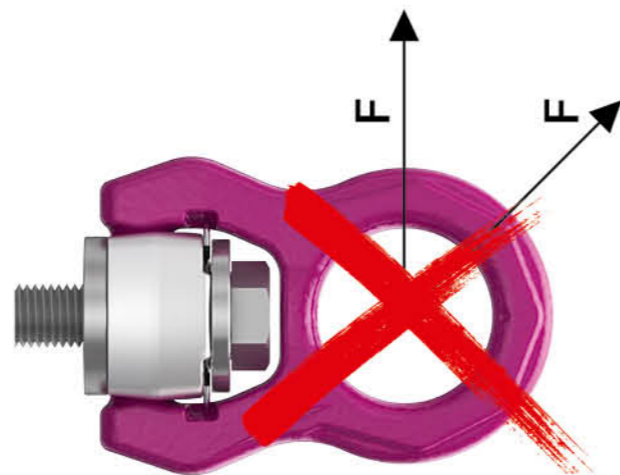
LIFTING REINVENTED.

THE RUD ACP-TURNADO: THE WORLD'S FIRST SMART LIFTING POINT.

With conventional lifting points, especially in the 90° side load use, the lifting ring sometimes stays in the upright position when the lifting procedure starts. This leads to dangerous transverse loading.

In this case, two things may occur:

1. High shear stresses and huge bending moments will be induced into the lifting point and particularly to the bolt. This may result in mechanical damage or even breakage.
2. Dangerous high forces occur as soon as the lift ring flips jerky and the load sinks suddenly. At this juncture additional forces arise and may damage the crane.



CLEVER DESIGN: RUD'S INGENUOUS SPRING MECHANISM.

The RUD ACP-TURNADO reacts actively and avoids self-contained the "worst-case-scenario"-area with this high transverse loading. Its ingenious spring mechanism turns the lift ring automatically into the direction of an optimal force transmission. No tilting. No unintentional reverting.



SIMPLY OFFERS MORE.

THE RUD ACP-TURNADO: HIGHER WORKING LOAD LIMITS (WLL) COMPARED TO HOIST RINGS OF THE SAME SIZE.

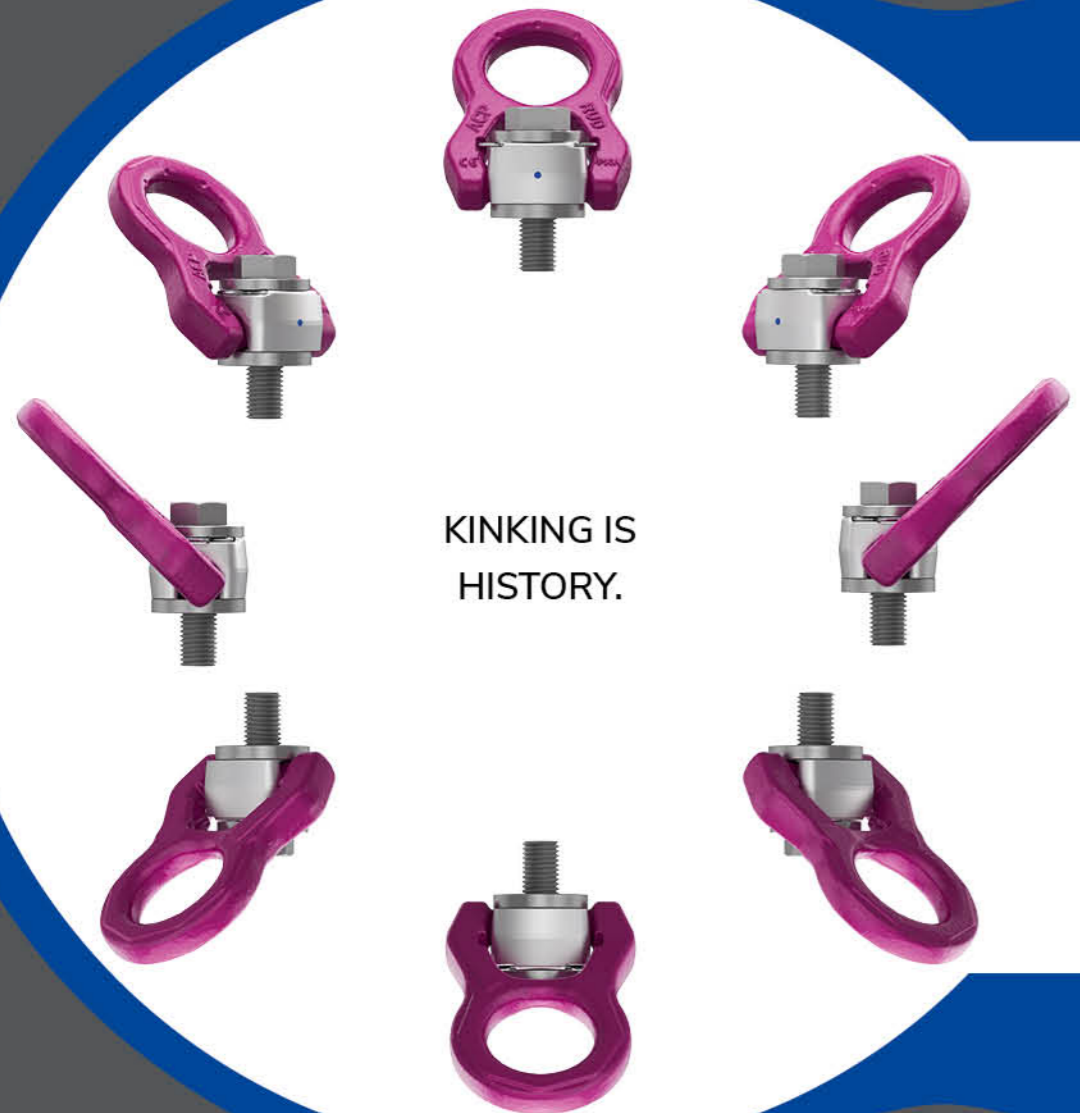
Developed with experience: Our engineering team has strengthened the new hoist ring especially at its most stressed areas and has optimised its height and shape. This revolutionary design, in combination with the especially for RUD developed ICE fine grain steel bolt technology sets the new standard. The result? Up to 30% higher WLL compared to matchable design sizes.



ENSURES UNRIVALED CONNECTIONS.

The RUD ICE-BOLT screw technology guarantees unsurpassably high safety factors and unparalleled resistance to low temperatures and to bending at the critical transition between the load suspension assembly and the load. The RUD steel that was specially developed for this application combines maximum strength with very high ductility. This means that the RUD ICE-BOLT screw can safely handle particularly high bending loads, both statically and dynamically.





KINKING IS HISTORY.

Conventionally designed center pull hoist rings favour kinking of the hook more likely. No proper position of the hook within the suspension ring, no optimal load force transmission. This status will be favoured especially by the following facts:

1. The lifting points does not automatically and safely turn into the load direction.
2. The hook cants at the inside profile of the suspension ring.

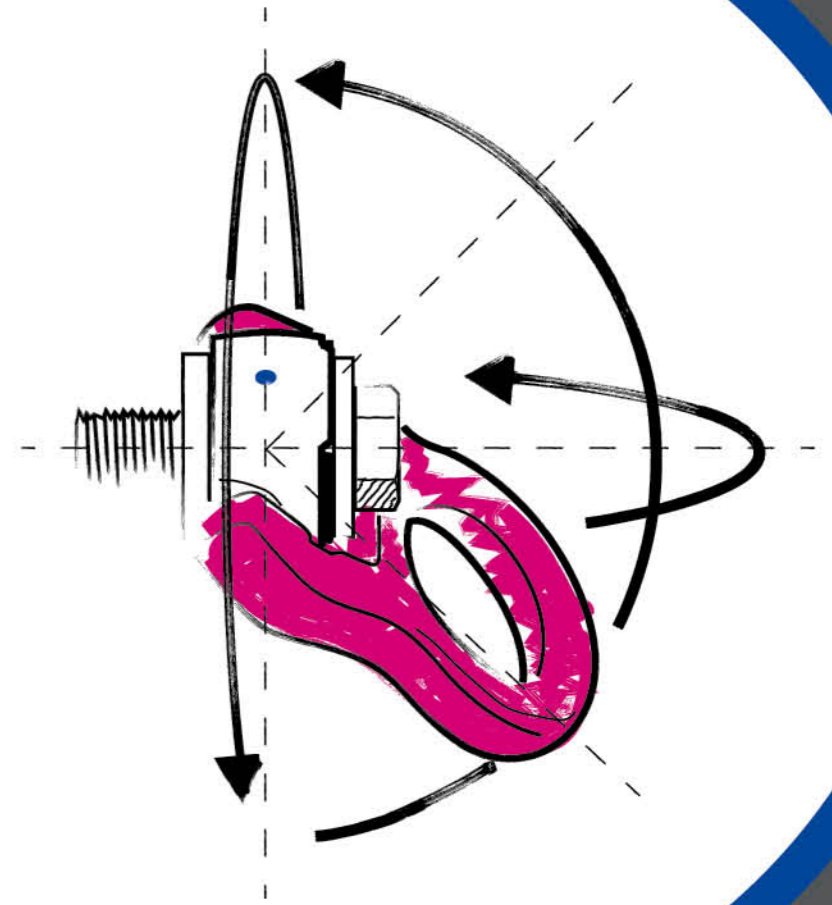
The RUD ACP-TURNADO eliminates these dangers completely. The intelligent spring mechanism makes sure that the suspension ring turns optimal into the load force direction. The lift ring design guarantees a safe position of the hook without kinking. The result: The first hoist ring which ensures no kinking!

HANDLING IS IN ITS GENES.

The RUD ACP-TURNADO moreover unites features which significantly improve handling of loads.

Wear indicators, positioned at the critical points of force transmission, make it easy to quickly identify whether the wear of the lifting point is still within a safe range or whether the lifting point is no longer safe to use. To allow easy and clear reading of the most relevant information like WLL, torque, dimension of the bolt etc. even under toughest conditions, it is either stamped or embossed into the surface of the lifting point.

The bolt provides an in- and outside hexagon and is captive, but can be exchanged if necessary.



INSPECTING AND DOCUMENTING OF COMPONENTS. TIME CONSUMING AND COSTLY.

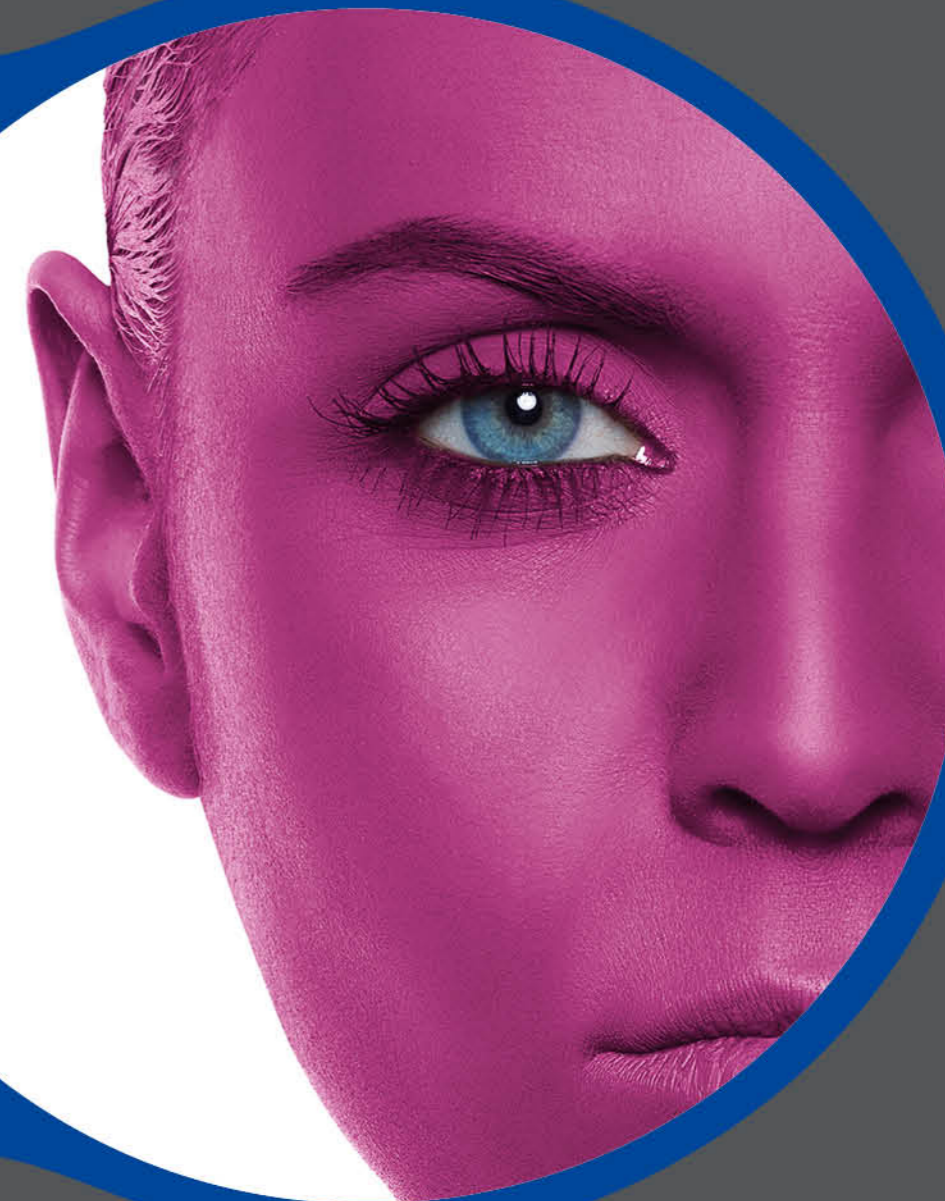
THE SOLUTION: WIRELESS INSPECTION DOCUMENTATION BY MEANS OF RFID TECHNOLOGY.

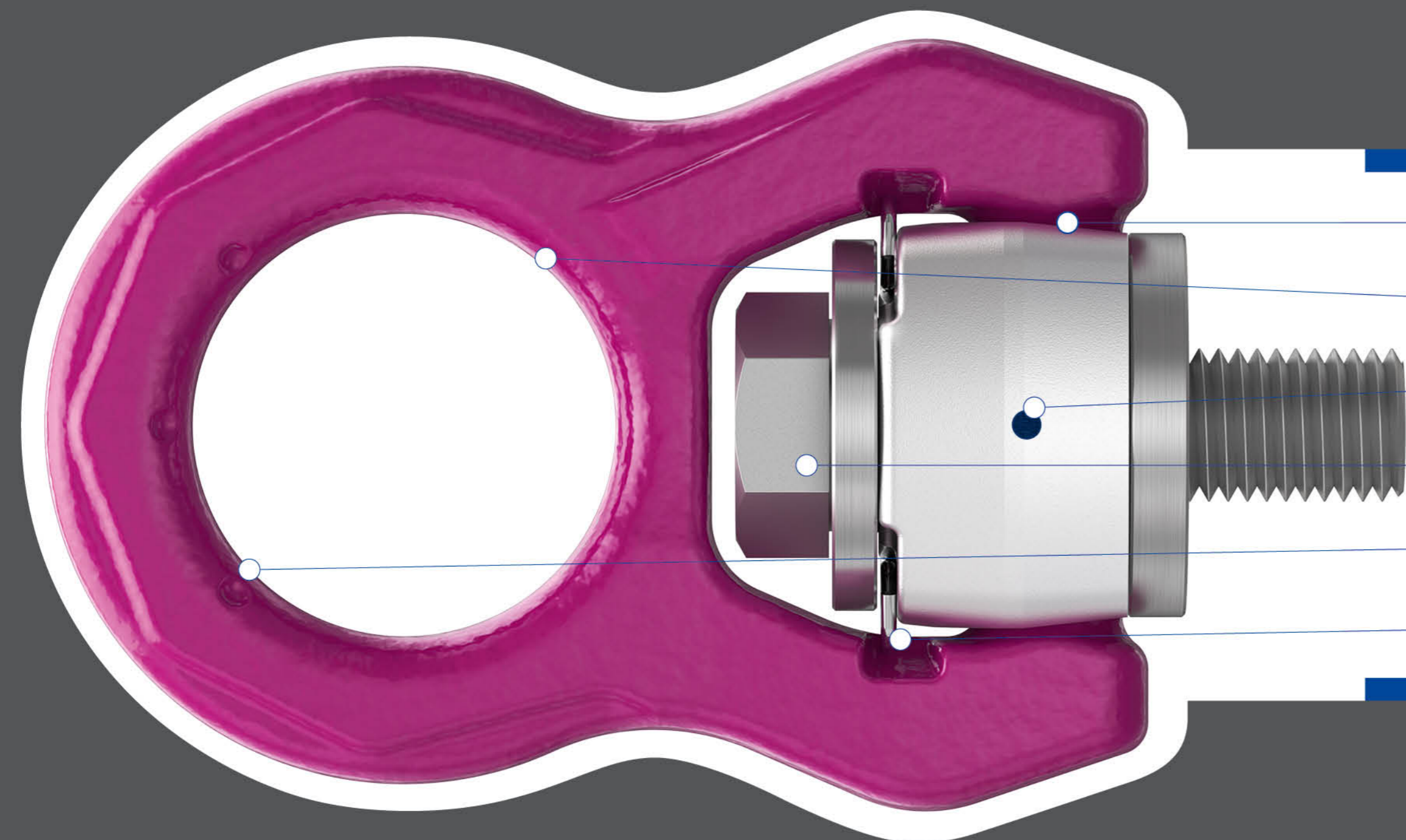
While lifting heavy loads a lot of things can go wrong. This may have severe reasons. Inaccurate handling, incorrect determination of lifting components, improper usage of rigging equipment and material fatigue. Therefore legislators and regulatory authorities in many countries require regular inspections of lifting means and legally compliant documentation of the inspection results. The RUD ACP-TURNADO comes with a factory equipped RFID transponder which allows to use either a RFID reader or a smartphone to capture the unique 16 character ID-number and to allocate the inspections results accordingly.

RUD RFID
CONNECT IT 

RUD BLUE-ID  SYSTEM

- Clearly characterisation / identification of the products
- Reduction of inspection costs and expenditure of time for inspection processes
- Process reliability (prevention of inspection and documentation errors)
- Factory initialized product information details
- Factory equipped RFID transponders, embedded in the product
- Maintenance and management of relevant inspection data and documents in customer-specific databases or with Aye-D.Net, the cloud-based operating equipment management tool from RUD's partner company Syfit





Pivot joint in lifting ring axis

Round shape of ring avoids kinking

Factory equipped with RFID transponder

RUD ICE-BOLT with inside and outside hexagon

Wear marking indicators

Unique RUD spring mechanism

**KEEPS IT
PROMISES.**

THE RUD ACP-TURNADO – MORE THAN
THE SUM OF ITS PARTS.

MORE THAN JUST ANOTHER CENTER PULL HOIST RING.

THE RUD ACP-TURNADO: SETS THE NEW STANDARD.

Whether the plastic processing industry, machine building, the tool and die industry or other industry sectors: For the worldwide transport and the handling of heavy loads, RUD lifting means are highly valued for their quality and the innovative design.

Correspondingly the challenge for the ACP design team was to develop a lifting point, which eliminates the disadvantages of the present existing designs and makes the usage considerably easier and safer. The result: The RUD ACP-TURNADO, the world's first perceptive lifting point.



FROM LIGHTWEIGHT TO HEAVY-DUTY.

THE RUD ACP-TURNADO PRODUCT RANGE.



M12, 1/2"



M16, 5/8"



M20, 3/4"



M24, 1"



M30, 1 1/4"

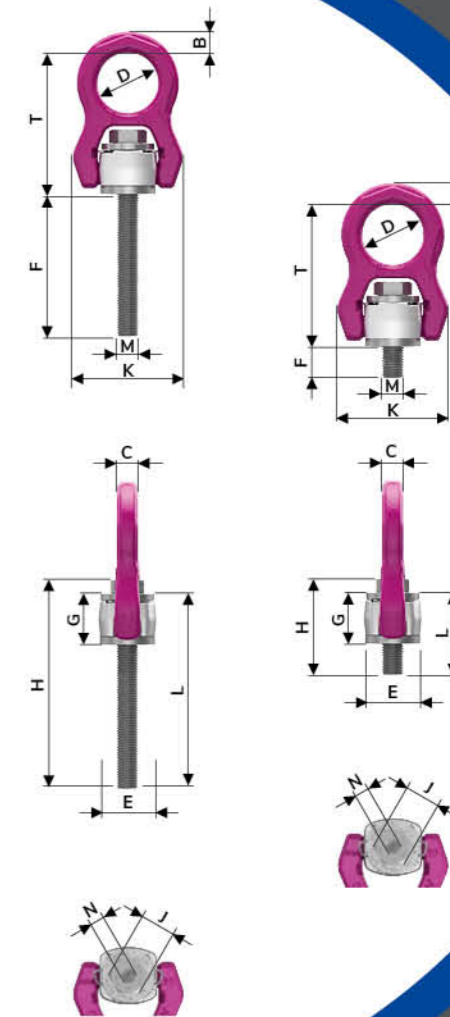
Additional sizes are in the planning process.

OVERVIEW OF DIMENSIONS

| Type | Weight [kg] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | F _{max} [mm] | G [mm] | H [mm] | K [mm] | L [mm] | L _{max} [mm] | M | N [mm] | J [mm] | T [mm] | Torque moment [Nm] | Ref.-No. | |
|---------|-------------|--------|--------|--------|--------|--------|-----------------------|--------|--------|--------|--------|-----------------------|----|--------|--------|--------|--------------------|-----------|--------------|
| | | | | | | | | | | | | | | | | | | with bolt | without bolt |
| ACP M12 | 0.375 | 11 | 10.5 | 38 | 30 | 19 | 117 | 28 | 54.5 | 58 | 47 | 145 | 12 | 8 | 19 | 83 | 80 | 7909314 | 7909320 |
| ACP M16 | 0.815 | 14 | 14 | 50 | 40 | 22 | 149 | 36 | 68 | 76 | 58 | 185 | 16 | 10 | 24 | 107 | 150 | 7909316 | 7909321 |
| ACP M20 | 1.342 | 17 | 17.25 | 50 | 45 | 26.5 | 186.5 | 43.5 | 82 | 89 | 70 | 230 | 20 | 12 | 30 | 118 | 300 | 7909317 | 7909322 |
| ACP M24 | 3.03 | 23 | 23 | 66 | 60 | 34 | 210 | 55 | 104 | 120.5 | 89 | 265 | 24 | 14 | 36 | 154 | 500 | 7909318 | 7909323 |
| ACP M30 | 5.66 | 29 | 27 | 75 | 75 | 41.5 | 271.5 | 68.5 | 128.7 | 148 | 110 | 340 | 30 | 17 | 46 | 183 | 800 | 7909319 | 7909324 |

| Type | Weight [kg] | B [mm] | C [mm] | D [mm] | E [mm] | F [mm] | F _{max} [mm] | G [mm] | H [mm] | K [mm] | L [mm] | L _{max} [mm] | M | N [mm] | J [mm] | T [mm] | Torque moment [Nm] | Ref.-No. | |
|------------|-------------|--------|--------|--------|--------|--------|-----------------------|--------|--------|--------|--------|-----------------------|--------|--------|--------|--------|--------------------|-----------|--------------|
| | | | | | | | | | | | | | | | | | | with bolt | without bolt |
| ACP 1/2" | 0.375 | 11 | 10.5 | 38 | 30 | 18 | 124.4 | 28 | 54 | 58 | 46 | 152.4 | 1/2" | 5/16" | 3/4" | 83 | 80 | 7909417 | 7909422 |
| ACP 5/8" | 0.815 | 14 | 14 | 50 | 40 | 22 | 148.5 | 36 | 68 | 76 | 58 | 184 | 5/8" | 3/8" | 15/16" | 107 | 150 | 7909418 | 7909423 |
| ACP 3/4" | 1.342 | 17 | 17.25 | 50 | 45 | 25.5 | 185 | 43.5 | 80.5 | 89 | 69 | 228.6 | 3/4" | 1/2" | 1 1/8" | 118 | 300 | 7909419 | 7909424 |
| ACP 1" | 3.145 | 23 | 23 | 66 | 60 | 36 | 199 | 55 | 106.5 | 120.5 | 91 | 254 | 1" | 9/16" | 1 1/2" | 154 | 500 | 7909420 | 7909425 |
| ACP 1 1/4" | 5.76 | 29 | 27 | 75 | 75 | 46.5 | 271 | 68.5 | 134.5 | 148 | 115 | 339.5 | 1 1/4" | 5/8" | 1 7/8" | 183 | 800 | 7909421 | 7909426 |

Subject to technical modifications.



SAFETY FACTOR 4:1

| Lifting method | | | | | | | | | |
|--------------------------------------|-----|----|-----|-------|---------|--------|-------|---------|--------|
| Number of legs | 1 | 2 | 2 | 2 | 2 | 2 | 3/4 | 3/4 | 3/4 |
| Inclination angle β | 90° | 0° | 90° | 0-45° | >45-60° | Asymm. | 0-45° | >45-60° | Asymm. |
| Load factor | 1 | 2 | 2 | 1.4 | 1 | 1 | 2.1 | 1.5 | 1 |

Safety factor 4:1 for max. total load weight in tonnes, tightened and aligned in direction of pull

| | | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|------|------|
| ACP M 12 / 1/2" | 1.35 | 2.7 | 2.7 | 1.9 | 1.35 | 1.35 | 2.84 | 2 | 1.35 |
| ACP M 16 / 5/8" | 2.5 | 5 | 5 | 3.5 | 2.5 | 2.5 | 5.25 | 3.75 | 2.5 |
| ACP M 20 / 3/4" | 4 | 8 | 8 | 5.6 | 4 | 4 | 8.4 | 6 | 4 |
| ACP M 24 / 1" | 6.3 | 12.6 | 12.6 | 8.8 | 6.3 | 6.3 | 13.2 | 9.5 | 6.3 |
| ACP M 30 / 1 1/4" | 8 | 16 | 16 | 11.2 | 8 | 8 | 16.8 | 12 | 8 |

Safety factor 4:1 for max. total load weight in lbs, tightened and aligned in direction of pull

| | | | | | | | | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ACP M 12 / 1/2" | 4400 | 5940 | 5940 | 4158 | 2970 | 2970 | 6237 | 4455 | 2970 |
| ACP M 16 / 5/8" | 8800 | 11000 | 11000 | 7700 | 5500 | 5500 | 11550 | 8250 | 5500 |
| ACP M 20 / 3/4" | 13200 | 17600 | 17600 | 12320 | 8800 | 8800 | 18480 | 13200 | 8800 |
| ACP M 24 / 1" | 17600 | 27720 | 27720 | 19404 | 13860 | 13860 | 29106 | 20790 | 13860 |
| ACP M 30 / 1 1/4" | 26400 | 35200 | 35200 | 24640 | 17600 | 17600 | 36960 | 26400 | 17600 |

Working load limit in tonnes (top) and in lbs (bottom).

Subject to technical modifications.

SAFETY FACTOR 5:1

| Lifting method | | | | | | | | | |
|--------------------------------------|-----|----|-----|-------|---------|--------|-------|---------|--------|
| Number of legs | 1 | 2 | 2 | 2 | 2 | 2 | 3/4 | 3/4 | 3/4 |
| Inclination angle β | 90° | 0° | 90° | 0-45° | >45-60° | Asymm. | 0-45° | >45-60° | Asymm. |
| Load factor | 1 | 2 | 2 | 1.4 | 1 | 1 | 2.1 | 1.5 | 1 |

Safety factor 5:1 for max. total load weight in tonnes, tightened and aligned in direction of pull

| | | | | | | | | | |
|-------------------|-----|------|------|-----|-----|-----|------|-----|-----|
| ACP M 12 / 1/2" | 1.1 | 2.2 | 2.2 | 1.5 | 1.1 | 1.1 | 2.3 | 1.6 | 1.1 |
| ACP M 16 / 5/8" | 2 | 4 | 4 | 2.8 | 2 | 2 | 4.2 | 3 | 2 |
| ACP M 20 / 3/4" | 3.2 | 6.4 | 6.4 | 4.5 | 3.2 | 3.2 | 6.7 | 4.8 | 3.2 |
| ACP M 24 / 1" | 5 | 10 | 10 | 7 | 5 | 5 | 10.5 | 7.5 | 5 |
| ACP M 30 / 1 1/4" | 6.4 | 12.8 | 12.8 | 9 | 6.4 | 6.4 | 13.5 | 9.6 | 6.4 |

Safety factor 5:1 for max. total load weight in lbs, tightened and aligned in direction of pull

| | | | | | | | | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ACP M 12 / 1/2" | 2375 | 4750 | 4750 | 3325 | 2375 | 2375 | 4988 | 3563 | 2375 |
| ACP M 16 / 5/8" | 4400 | 8800 | 8800 | 6160 | 4400 | 4400 | 9240 | 6600 | 4400 |
| ACP M 20 / 3/4" | 7040 | 14080 | 14080 | 9856 | 7040 | 7040 | 14784 | 10560 | 7040 |
| ACP M 24 / 1" | 11080 | 22160 | 22160 | 15512 | 11080 | 11080 | 23268 | 16620 | 11080 |
| ACP M 30 / 1 1/4" | 14080 | 28160 | 28160 | 19712 | 14080 | 14080 | 29568 | 21120 | 14080 |

Working load limit in tonnes (top) and in lbs (bottom).

Subject to technical modifications.



WE'RE AT YOUR DISPOSAL.

OUR CUSTOMER SERVICE.

Do you have any questions regarding the RUD ACP-TURNADO, or would you like to take some advice on any other RUD product?

Our experienced team is prepared to help. Give us a call:

+49 7361 504-1070

We're pleased to serve you.



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