

## Tigrip® Load Hoisting Tackle

Tigrip® Lifting clamps and attachments have a reputation for reliability, quality and safety going back more than 35 years.

For transportation and handling of loads with a hoist the Tigrip® programme offers the optimum connection between hook and load for almost any application.

## Tigrip® Crane Weighers

Also renowned for many years are our precise crane weighers. Wherever weight has to be measured or forces have to be assessed the reliable and robust units can be used. Areas of application are practically unlimited.

Tigrip® - your first choice!

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## INFO

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Please note our user instructions at the beginning of each chapter.

# Yale

TIGRIP®



**TIGRIP**  
Mod. TBL 1.5 plus BJ 13  
Ser No. siehe Seitenplatte  
Tragt/WLL see side plate  
Greif/Jaw Cap 1.5 t  
Eigengew./Weight 0.20 mm  
3.0 kg  
CE COLUMBUS MCKINNON  
Ind. Products GmbH  
42549 Velbert/Germany  
Bedienungsanleitung beachten!  
Use Operating Instructions!



**This user information presents a general overview regarding the operation of some plate clamps and does not substitute the existing operating instructions for specific load hoisting tackle!**

**Lifting operations with load hoisting tackle may be carried out by competent persons (trained in theory and practice) only.**

**When operated correctly, our Tigrip products will offer the highest degree of safety, avoid damage to products and people and present a long life expectancy.**

## Modification of delivery condition

Design and construction of the load hoisting tackle may not be altered without authorization of the manufacturer, e.g. by bending, welding, grinding, cutting-off parts, adding boreholes, removal of safety devices like locking mechanisms, bolts, shear pins etc. Otherwise the validity of the declaration of conformity will be void and any liability and warranty of the manufacturer ceased.

## Limitations of operation

### Loading

The rated capacity (WLL) indicated on the tackle is the maximum load which must not be exceeded.

### Temperature

Clamps without protective lining may normally (depending on manufacturer) be operated at ambient temperatures of -40 °C up to +100 °C without capacity reduction. Clamps with protective lining may be subject to reduced temperature areas due to application of affixed linings, e.g. model TBP and TSB, which can be operated from -20 °C up to +40 °C.

### Shock loading, swinging of load

The indicated capacities are based on shock-free loading of the tackle. Light bumps as occurred during lifting and lowering as well as transporting of load with the crane are admitted. Heavier shock loadings (e.g. crashing against obstacles during transport) as well as swinging of the load are strictly forbidden!

### Chemicals

Load hoisting tackle may not be operated without hesitation in the area of chemicals or chemical vapours – consult our specialists beforehand. Hoisting tackle which has been subject to chemicals or vapours must be taken out of service and should be returned to us for inspection.

## Transport of people

Transport of people with hoisting equipment and tackle is generally forbidden!

## Operation in danger zones

Lifting or transport of loads must be avoided while personnel are in the danger zone. When using clamps or grabs without a positive fit but with force fit or friction fit the load must not be suspended above people – see AMVO §18(6)!

## Lifting products

Load hoisting tackle have been designed for specific applications and must not be used for other jobs without prior authorization of the manufacturer. This refers e.g. to the thickness of material (jaw capacity of the clamp), surface condition, hardness\* and temperature of material. Relative information is given in the respective operating instructions. These have to be available to the operator to ensure safe handling of the product.

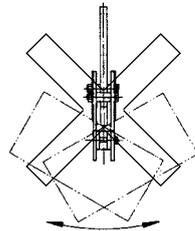
\*Please observe that for special steel plates the surface hardness may deviate substantially from the core hardness, e.g. for cold work steel.

## Inspection before initial operation

- Ensure that the surface of the steel plate, in the area where the clamp is to be attached, is dry and free from grease, paint, dirt and scale and is not coated, so that the teeth resp. the protective lining on the moving jaw can make good contact with the surface of the load.
- Check the fixed jaw and the moving jaw for wear and defects. Both jaws must have clean profiles and teeth must not be heavily worn (observe respective advice given in the operating instruction, guiding value max. 30% wear). Protective linings must not be contaminated, damaged, uneven or heavily worn.
- The entire hoisting tackle has to be checked for damage, corrosion, cracks or deformations.
- It should be easy to open and close the clamp.
- Check the function of the spring. In the CLOSED position this must present a noticeable spring pressure force when the hook ring is pressed down.

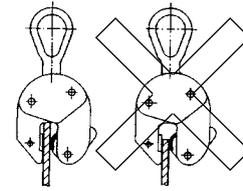
**Application advice**

- Load hoisting tackle must always be in perfect condition and provided with a legible identity plate.
- Prior to initial operation and every time before work, the tackle is to be visually inspected for obvious deficiencies!
- The suspension eye must have sufficient space in the load hook and move freely. A safety latch to prevent accidental out-hooking of the tackle must be available!
- Do not lift or transport loads while personnel are in the danger zone and do not allow people to pass under a suspended load. Note: a safe form-fit attachment requires sufficient hardness of the load. Ensure that the load or parts thereof cannot slip and fall down!



- The load hoisting tackle must be positioned over the gravity centre of the load, so that a swinging movement is avoided.
- If longer sheets of metal or profiles are to be transported, we recommend using two clamps to prevent load swinging. The clamps can be used in combination with a spreader beam or with double strand chain slings and clamps with hinged hook ring (e.g. model TBS). Observe the maximum angle from the vertical and possible capacity restrictions.
- Clamps without hinged hook ring must not be loaded laterally! (Slanted attachment of the clamp onto the steel plate in pulling direction of the clamp is normally not permitted, as the jaws would grip too close to the edge of the plate. Thus a correct fit of the clamp on the plate is not assured!)

- Always insert the load fully into the mouth of the clamp and make sure that the housing has contact on either side of the plate.
- Clamps designed for the transport of steel plate in vertical position may only accept one single plate at a time. The clamping effect must be assured on either side of the load!
- Special clamps are available for the transport of steel plate in horizontal position which allows handling of several plates at a time.
- A load must not be suspended or left unattended in raised or tensioned condition for a longer period of time.
- When attaching the clamp, the operator must ensure that neither the clamp, slings or load pose a danger to himself or other personnel.
- The operator may not move the load until he is convinced that the load is correctly attached and all personnel are outside the danger zone.
- Please take note of possible capacity restrictions depending on the pivoting range resp. pulling direction of the clamp. (Note: Not all clamp types on the market are designed for a pivoting range of 180° – strictly observe the operating instructions!)
- In case of malfunction stop using the load hoisting tackle immediately.



INFO

Due to the limitations of space in this catalogue we could not respond to all applications. Please contact us for further information!

# OPERATION

## Maintenance and repair

- To ensure safe operation, all load hoisting tackle must be subjected to regular inspections according to the maintenance instructions given by the manufacturer.
- Load hoisting tackle which are due for maintenance (normally once per year, unless adverse working conditions dictate shorter periods) or products with obvious defects may be returned to us for inspection and repair.
- Inspections and tests must be performed by competent persons or specialist workshops that use original spare parts.

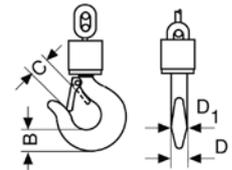
## Inspections

- Inspections are visual and functional and shall establish that the load hoisting tackle is safe and has not been damaged by incorrect transport or storage. In addition check for damage, wear, corrosion and other deficiencies as well as completeness and function of safety devices. Inspections are instigated by the user.
- All load hoisting tackle has to be cleaned prior to inspection. The cleaning procedure must not cause chemical damages (e.g. no acid – embrittlement), no incorrect temperature stress by e.g. flame cleaning or possible concealment of cracks due to excessive material loss (sand blasting)! We shall be pleased to consult you in this respect. Please submit your load hoisting tackle for inspection in clean condition. This will reduce inspection costs considerably!

## Criteria for disposal of load hoisting tackle

**Load hoisting tackle must no longer be operated if e.g.:**

- The identification (identity plate) is missing or illegible.
- Housing, components and suspension of the tackle present obvious deficiencies, e.g. cuts, grooves, cracks, excessive corrosion, staining due to heat, signs of subsequent welding resp. spatters (which cannot be easily removed) and leave stains.
- Ropes show breakages of wires resp. bruises (criteria for disposal of ropes are given in classification DIN 15020), damages to the rope sleeve and similar failures.
- The load chain presents twisted or distorted links or shows an elongation of 5% resp. undergoes the averaged nominal thickness of the link by more than 10%.
- The opening (C) of either suspension or load hook has increased/deformed by more than 10% of the nominal dimension or shows wear in the hook mouth (dimensions B resp. D) of more than 5%.
- If the inspection revealed that the tackle has been overloaded or deteriorated it can only be used again after careful inspection and repair – if necessary.



Technical questionnaire to identify the suitable Tigrip® load hoisting tackle

Company: \_\_\_\_\_ Date: \_\_\_\_\_  
 Contact: \_\_\_\_\_ e-Mail: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Clamps and grabs

Information about the load:

What will be transported?

Weight min. \_\_\_\_\_ kg - max. \_\_\_\_\_ kg  
 Length min. \_\_\_\_\_ mm - max. \_\_\_\_\_ mm  
 Width min. \_\_\_\_\_ mm - max. \_\_\_\_\_ mm  
 Height min. \_\_\_\_\_ mm - max. \_\_\_\_\_ mm  
 External diameter min. \_\_\_\_\_ mm - max. \_\_\_\_\_ mm  
 Internal diameter min. \_\_\_\_\_ mm - max. \_\_\_\_\_ mm

Material  Steel  Concrete  Wood  Paper  Others

Surface hardness for steel: \_\_\_\_\_ HRC

Surface condition  Oiled  Greasy  Dry  Scales  Others

How should/may the load be grabbed/clamped:

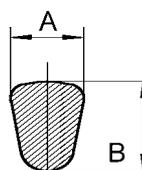
Grabbed from underneath  Jaws  Protective lining  Others

Information about the clamp/grab:

What kind of grab will be needed?

Type of crane hook or dimensions A - B

Model: \_\_\_\_\_ A = \_\_\_\_\_  
 B = \_\_\_\_\_



Other restrictions: \_\_\_\_\_  
 \_\_\_\_\_



## TBL/TBL plus Plate clamp with safety lock

Capacity 500 - 3000 kg

This clamp is primarily used for transporting single steel plates in the vertical position, as well as lifting and turning through 180°. This clamp can also be used for transporting steel constructions and profiles. It is recommended to use a pair of plate clamps in conjunction with a spreader beam for large sized sheets and long materials which have a tendency to sag.

The jaw can be opened and closed with the locking lever (except for the TBL 0.5t which uses a positive spring-loaded cam). The safety lock overrides the spring-loaded cam, preventing the clamp from opening even when there is no load.

This plate clamp is service-friendly, making it easy to exchange parts, which are available individually or in kits. Clamp repair is available by the factory, or can be done by certified and experienced staff.

The TBL 0.5 is equipped with a safety lock (positive spring-loaded cam), but comes without locking lever.

## INFO

The surface hardness of the material must not exceed HRC 30/Brinell 300.

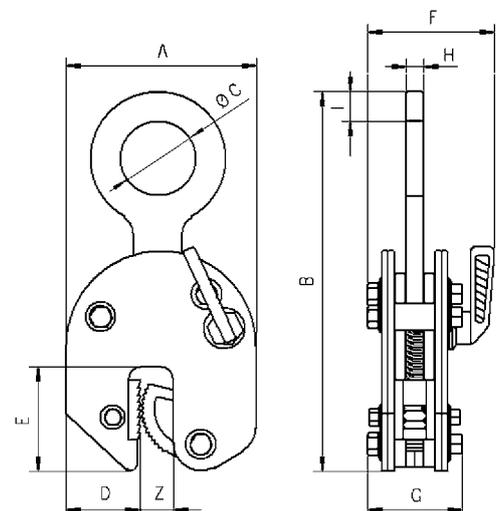
The min. load is 10% of the nominal WLL. Except for model TBL 1,5 plus, the min. load here is 100 kg!

### Technical data TBL/TBL plus

| Model        | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|--------------|-----------|-------------|-------------------|-----------|
| TBL 0,5      | N50100051 | 500         | 0 - 16            | 1.5       |
| TBL 1,5 plus | N50100056 | 1500        | 0 - 20            | 3.0       |
| TBL 2,0 plus | N50100057 | 2000        | 0 - 32            | 9.3       |
| TBL 3,0 plus | N50100058 | 3000        | 0 - 32            | 9.3       |

### Dimensions TBL/TBL plus

| Model   | TBL 0,5 | TBL 1,5 plus | TBL 2,0 plus | TBL 3,0 plus |
|---------|---------|--------------|--------------|--------------|
| A, mm   | 99      | 126          | 192          | 192          |
| B, mm   | 195     | 225          | 312          | 312          |
| Ø C, mm | 29      | 50           | 80           | 80           |
| D, mm   | 33      | 49           | 75           | 75           |
| E, mm   | 47      | 70           | 96           | 96           |
| F, mm   | 50      | 82           | 100          | 100          |
| G, mm   | 48      | 55           | 81           | 81           |
| H, mm   | 11      | 12           | 20           | 20           |
| I, mm   | 16      | 20           | 24           | 24           |



**TBL**  
**Plate clamp**  
**with safety lock**

Capacity 4000 - 30000 kg

This clamp is primarily used for transporting single steel plates in the vertical position, as well as lifting and turning through 180°. This clamp can also be used for transporting steel constructions and profiles. It is recommended to use a pair of plate clamps in conjunction with a spreader beam for large sized sheets and long materials which have a tendency to sag.

These plate clamps have the same design and applications as the clamp model TBL with a capacity from 500 - 3000 kg.



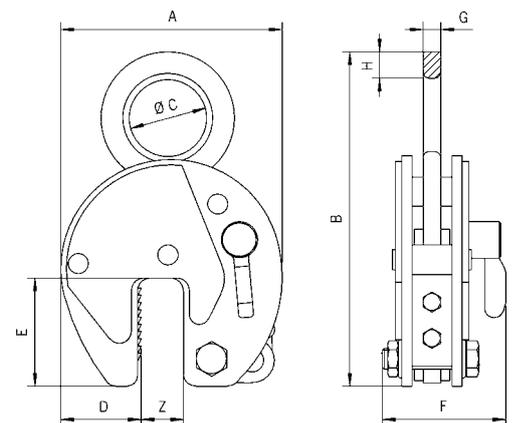
**INFO**

The surface hardness of the material must not exceed HRC 30/Brinell 300.

The min. load is 10% of the nominal WLL!

**Technical data TBL**

| Model      | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|------------|-----------|-------------|-------------------|-----------|
| TBL 4,0 S  | N50100005 | 4000        | 0 - 32            | 11.2      |
| TBL 4,0 L  | N50100006 | 4000        | 30 - 60           | 11.9      |
| TBL 6,0 S  | N50100021 | 6000        | 0 - 50            | 20.6      |
| TBL 6,0 L  | N50100008 | 6000        | 50 - 100          | 23.2      |
| TBL 8,0 S  | N50100022 | 8000        | 0 - 50            | 24.2      |
| TBL 8,0 L  | N50100023 | 8000        | 50 - 100          | 28.8      |
| TBL 10,0 S | N50100024 | 10000       | 0 - 50            | 29.5      |
| TBL 10,0 L | N50100025 | 10000       | 50 - 100          | 35.1      |
| TBL 15,0 S | N50100015 | 15000       | 0 - 50            | 76.0      |
| TBL 15,0 L | N50100016 | 15000       | 50 - 100          | 86.0      |
| TBL 20,0 S | N50100017 | 20000       | 0 - 65            | 123.0     |
| TBL 20,0 L | N50100018 | 20000       | 65 - 130          | 135.0     |
| TBL 30,0 S | N50100019 | 30000       | 0 - 65            | 195.0     |
| TBL 30,0 L | N50100020 | 30000       | 65 - 130          | 256.0     |



**Dimensions TBL**

| Model   | TBL 4,0 S | TBL 4,0 L | TBL 6,0 S | TBL 6,0 L | TBL 8,0 S | TBL 8,0 L | TBL 10,0 S | TBL 10,0 L | TBL 15,0 S | TBL 15,0 L | TBL 20,0 S | TBL 20,0 L | TBL 30,0 S | TBL 30,0 L |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|
| A, mm   | 197       | 228       | 293       | 362       | 293       | 362       | 293        | 362        | 360        | 460        | 462        | 560        | 462        | 560        |
| B, mm   | 339       | 339       | 442       | 482       | 450       | 482       | 503        | 503        | 550        | 615        | 674        | 724        | 667        | 732        |
| Ø C, mm | 80        | 80        | 89        | 89        | 89        | 89        | 110        | 110        | 130        | 130        | 130        | 130        | 60         | 60         |
| D, mm   | 68        | 68        | 95        | 114       | 95        | 114       | 95         | 114        | 125        | 175        | 165        | 195        | 165        | 195        |
| E, mm   | 93        | 100       | 143       | 143       | 143       | 143       | 143        | 143        | 162        | 162        | 210        | 210        | 210        | 210        |
| F, mm   | 110       | 110       | 129       | 129       | 129       | 129       | 139        | 139        | 204        | 204        | 235        | 235        | 295        | 295        |
| G, mm   | 20        | 20        | 20        | 20        | 20        | 20        | 25         | 25         | 45         | 45         | 45         | 45         | 65         | 65         |
| H, mm   | 32        | 32        | 35        | 35        | 42        | 42        | 45         | 45         | 55         | 55         | 65         | 65         | 66         | 67         |



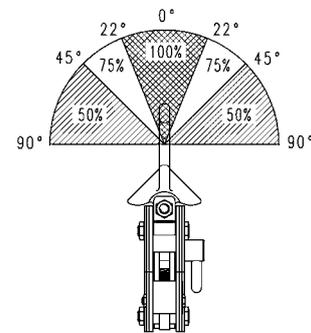
**TBS plus  
Plate clamp  
with hinged hook ring and  
safety lock**

**Capacity 1000 - 3000 kg**

The TBS plate clamp with hinged hook ring can be used for the safe handling of plates at various angles. It can lift plates from the horizontal and put down in the vertical or alternatively lift it over the edge by gripping it from the side. The hinged hook ring ensures adequate clamping force in every position. Depending on the angle of usage capacity restrictions have to be taken into account, as shown in the diagram below.

The hinged hook ring has the added advantage of providing enough clamping force to hold a plate safely. Even when transporting large-sized plates with the 2-legged lifting system slipping of the load and damage to the clamp is avoided.

In addition to transporting plates, this clamp is suitable for turning steel structures and welded constructions.



**INFO**

The surface hardness of the material must not exceed HRC 30/Brinell 300.

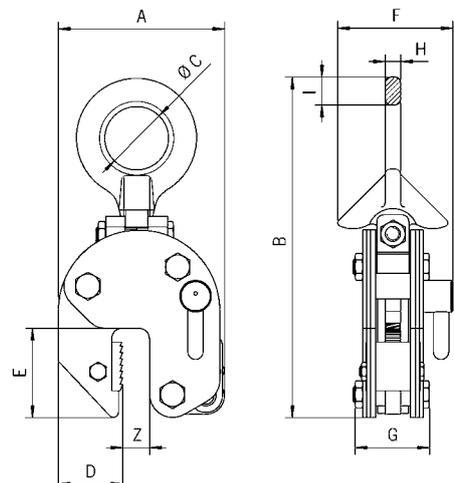
The min. load is 10% of the nominal WLL!

**Technical data TBS plus**

| Model        | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|--------------|-----------|-------------|-------------------|-----------|
| TBS 1,0 plus | N50200312 | 1000        | 0 - 20            | 3.2       |
| TBS 2,0 plus | N50200313 | 2000        | 0 - 32            | 9.4       |
| TBS 3,0 plus | N50200314 | 3000        | 0 - 32            | 9.4       |

**Dimensions TBS plus**

| Model   | TBS 1,0 plus | TBS 2,0 plus | TBS 3,0 plus |
|---------|--------------|--------------|--------------|
| A, mm   | 126          | 192          | 192          |
| B, mm   | 270          | 382          | 382          |
| Ø C, mm | 50           | 80           | 80           |
| D, mm   | 49           | 75           | 75           |
| E, mm   | 70           | 96           | 96           |
| F, mm   | 95           | 132          | 132          |
| G, mm   | 63           | 92           | 92           |
| H, mm   | 12           | 20           | 20           |
| I, mm   | 23           | 30           | 30           |



**TBS**  
**Plate clamp**  
**with pivoting shackle and**  
**safety lock**

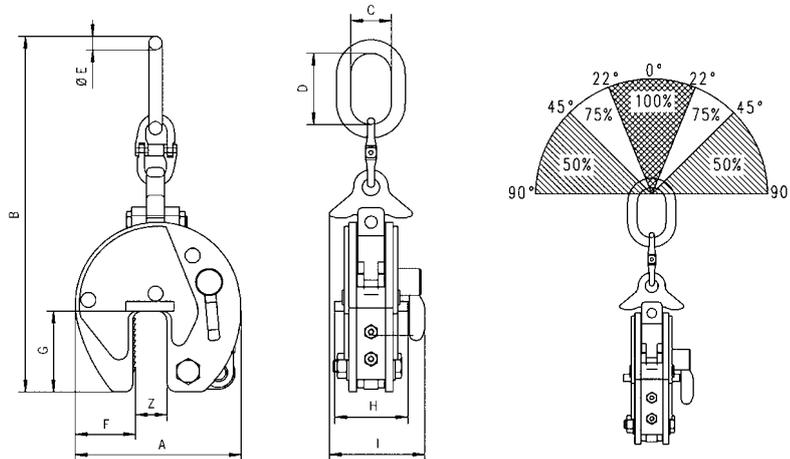
Capacity 4500 - 10000 kg



**INFO**

The surface hardness of the material must not exceed HRC 30/Brinell 300.

The min. load is 10% of the nominal WLL!



**Technical data TBS**

| Model      | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|------------|-----------|-------------|-------------------|-----------|
| TBS 4,5    | N50200309 | 4500        | 0 - 50            | 34.4      |
| TBS 6,0 S  | N50200305 | 6000        | 0 - 50            | 38.0      |
| TBS 6,0 L  | N50200306 | 6000        | 50 - 100          | 42.0      |
| TBS 8,0 S  | N50200307 | 8000        | 0 - 50            | 39.0      |
| TBS 8,0 L  | N50200310 | 8000        | 50 - 100          | 42.4      |
| TBS 10,0 S | N50200308 | 10000       | 0 - 50            | 68.0      |
| TBS 10,0 L | N50200311 | 10000       | 50 - 100          | 80.0      |

**Dimensions TBS**

| Model   | TBS 4,5 | TBS 6,0 S | TBS 6,0 L | TBS 8,0 S | TBS 8,0 L | TBS 10,0 S | TBS 10,0 L |
|---------|---------|-----------|-----------|-----------|-----------|------------|------------|
| A, mm   | 292     | 292       | 367       | 292       | 367       | 360        | 446        |
| B, mm   | 675     | 737       | 785       | 737       | 785       | 903        | 921        |
| C, mm   | 95      | 95        | 98        | 98        | 98        | 110        | 112        |
| D, mm   | 180     | 176       | 180       | 176       | 180       | 195        | 195        |
| Ø E, mm | 27.8    | 27.8      | 27.8      | 27.8      | 27.8      | 33         | 33         |
| F, mm   | 95      | 95        | 115       | 95        | 115       | 125        | 168        |
| G, mm   | 143     | 143       | 143       | 143       | 143       | 162        | 162        |
| H, mm   | 135     | 137       | 135       | 136       | 136       | 170        | 170        |
| I, mm   | 185     | 188       | 188       | 210       | 210       | 223        | 223        |



## TAG

### Universal grab

Capacity 350 - 5000 kg

## TWG

### -with modified side plates

Capacity 750 - 1250 kg

The universal grabs TAG and TWG save time, as it does not require chains, cables etc. when hoisting and loading material.

The large jaw capacity allows to tackle a variety of sizes with only one clamp. It can be used for loading machine tools, lifting steel constructions, welding and assembly jobs as well as for concrete and prefabricated pieces.

The universal grab with a small outside measurement is a specially designed grab for use on hard to reach places (e.g. lathe machine).

## Features

- The automatic clamping force is retained by a positive tension spring, even if there is slack in the chain.
- The "Quick-Open" type universal grab opens by lifting and simultaneously pulling the lever out against the tension spring. The jaw is closed by the spring.
- Universal grabs up to 2.0t capacity are equipped with round chains, clamps with increased capacities are delivered with roller chains.

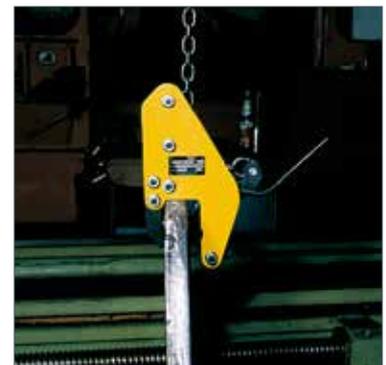
## Option

- Model TAG up to 1.25t WLL is available with protective lining on the clamping jaws on request. This results in a decrease of the jaw capacity by 10 mm.

## INFO

The surface hardness of the material must not exceed HRC 30/Brinell 300.

The min. load is 10% of the nominal WLL!



TWG with modified side plates for use in confined spaces (e.g. lathe machine).

Technical data TAG

| Model        | Art.-No.  | Capacity kg | Jaw width mm | Jaw capacity mm | Weight kg |
|--------------|-----------|-------------|--------------|-----------------|-----------|
| TAG 0,35/100 | N50300801 | 350         | 100          | 0 - 100         | 8.7       |
| TAG 0,35/200 | N50300802 | 350         | 200          | 90 - 200        | 16.3      |
| TAG 0,75/100 | N50300803 | 750         | 100          | 0 - 100         | 8.6       |
| TAG 0,75/200 | N50300804 | 750         | 200          | 90 - 200        | 16.6      |
| TAG 1,25/100 | N50300805 | 1250        | 100          | 0 - 100         | 14.9      |
| TAG 1,25/200 | N50300806 | 1250        | 200          | 90 - 200        | 24.3      |
| TAG 2,0/100  | N50300807 | 2000        | 100          | 0 - 100         | 20.8      |
| TAG 2,0/200  | N50300808 | 2000        | 200          | 90 - 200        | 29.1      |
| TAG 3,0/90   | N50300809 | 3000        | 90           | 5 - 90          | 26.5      |
| TAG 5,0/90   | N50300810 | 5000        | 90           | 5 - 90          | 30.5      |
| TAG 5,0/170  | N50300811 | 5000        | 170          | 80 - 170        | 43.8      |

Technical data TWG

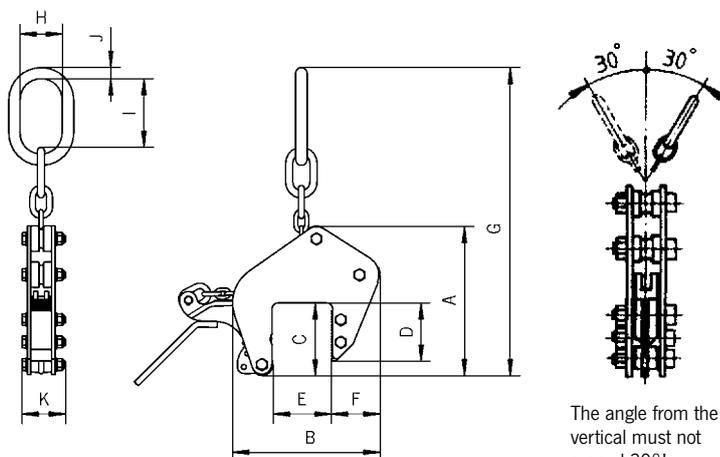
| Model        | Art.-No.  | Capacity kg | Jaw width mm | Jaw capacity mm | Weight kg |
|--------------|-----------|-------------|--------------|-----------------|-----------|
| TWG 0,75/100 | N50300821 | 750         | 100          | 30 - 100        | 11.0      |
| TWG 1,25/100 | N50300822 | 1250        | 100          | 30 - 100        | 16.0      |

Dimensions TAG

| Model | TAG 0,35/100 | TAG 0,35/200 | TAG 0,75/100 | TAG 0,75/200 | TAG 1,25/100 | TAG 1,25/200 | TAG 2,0/100 | TAG 2,0/200 | TAG 3,0/90 | TAG 5,0/90 | TAG 5,0/170 |
|-------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|------------|------------|-------------|
| A, mm | 264          | 382          | 264          | 382          | 320          | 382          | 328         | 375         | 297        | 297        | 354         |
| B, mm | 259          | 434          | 259          | 434          | 289          | 434          | 415         | 515         | 290        | 290        | 423         |
| C, mm | 128          | 195          | 128          | 195          | 128          | 195          | 135         | 195         | 136        | 136        | 180         |
| D, mm | 100          | 156          | 100          | 156          | 100          | 156          | 115         | 165         | 106        | 106        | 155         |
| E, mm | 100          | 200          | 100          | 200          | 100          | 200          | 100         | 200         | 90         | 90         | 170         |
| F, mm | 85           | 120          | 85           | 120          | 85           | 120          | 105         | 160         | 91         | 91         | 118         |
| G, mm | 550          | 760          | 550          | 760          | 570          | 760          | 571         | 750         | 570        | 570        | 620         |
| H, mm | 75           | 75           | 75           | 75           | 75           | 75           | 75          | 75          | 82         | 82         | 82          |
| I, mm | 121          | 121          | 121          | 121          | 121          | 121          | 121         | 121         | 111        | 111        | 111         |
| J, mm | 20           | 20           | 20           | 20           | 20           | 20           | 20          | 20          | 32         | 32         | 32          |
| K, mm | 78           | 90           | 83           | 90           | 83           | 90           | 105         | 105         | 137        | 147        | 147         |

Dimensions TWG

| Model | TWG 0,75/100 | TWG 1,25/100 |
|-------|--------------|--------------|
| A, mm | 264          | 320          |
| B, mm | 209          | 255          |
| C, mm | 128          | 128          |
| D, mm | 100          | 100          |
| E, mm | 100          | 100          |
| F, mm | 35           | 51           |
| G, mm | 550          | 570          |
| H, mm | 75           | 75           |
| I, mm | 121          | 121          |
| J, mm | 20           | 20           |
| K, mm | 83           | 83           |



# TIGRIP® T-MAG

## Permanent load lifting magnet

### Capacity

125 - 2000 kg (Flat material),  
50 - 1000 kg (Round material)

The permanent lifting magnets of the T-MAG series are ideal for the simple, fast and therefore economical transport of heavy workpieces made of ferromagnetic material. The use of high-quality neodymium material enables a large lifting force with a low dead weight.

Both flat and round materials can be picked up. The load is not influenced mechanically. After switching off, there is only a small amount of residual magnetism.

Thanks to the simple Easy Switch operation, the lifting magnet can be switched over quickly and safely with just one hand. This reliable system enables not only safe and practical, but also faster work with up to 40% time savings.

When activated, the operating lever is locked by a safety lock so that unintentional demagnetization is prevented.

### Features

- The simple "EASY SWITCH" enables one-hand operation.
- Extremely robust and compact design
- Easy to maintenance and service
- Low dead weight
- Low residual magnetism after switch-off
- High temperature range up to max. 80 °C
- Made in EU
- Safety factor 3:1 according to DIN EN 13155



### "Easy Switch" ALLOWS SINGLE-HANDED OPERATION



## INFO

The selection of the appropriate magnet model should be made under consideration of the varying conditions of the contact surface, kind of material alloy, ambient temperature and plate thickness.

For further information, please have a look into the manual.

### DIVERSE POSSIBILITIES OF APPLICATION

The areas of application of this load handling device are very diverse and range from typical workshop applications to aligning tools in machining centers to rough use in steelworks, shipyards and even offshore.



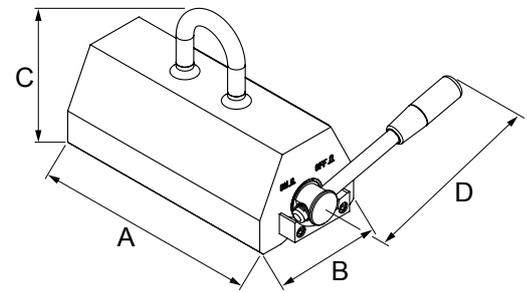
Technical data T-MAG

| Model      | Art.-No.  | Flat material              |  |                         | Round material             |                      |                         | Test load | Weight |
|------------|-----------|----------------------------|--|-------------------------|----------------------------|----------------------|-------------------------|-----------|--------|
|            |           | Capacity <sup>1</sup> max. | Material thickness min. at max. capacity | Length of material max. | Capacity <sup>1</sup> max. | Diameter min. - max. | Length of material max. |           |        |
|            |           | kg                         | mm                                       | mm                      | kg                         | mm                   | mm                      | kg        | kg     |
| T-MAG 125  | 192047639 | 125                        | 25                                       | 2500                    | 65                         | 50 - 100             | 2500                    | 375       | 3      |
| T-MAG 250  | 192047640 | 250                        | 30                                       | 3500                    | 125                        | 60 - 200             | 3500                    | 750       | 10     |
| T-MAG 500  | 192047641 | 500                        | 40                                       | 4000                    | 250                        | 65 - 270             | 4000                    | 1500      | 21     |
| T-MAG 1000 | 192047642 | 1000                       | 60                                       | 4500                    | 500                        | 100 - 300            | 4500                    | 3000      | 40     |
| T-MAG 2000 | 192047643 | 2000                       | 80                                       | 5000                    | 1000                       | 150 - 350            | 5000                    | 6000      | 90     |

<sup>1</sup> Measured on bright drawn material S235JR (ST37), air gap <0,1 mm

Dimensions T-MAG

| Model | T-MAG 125 | T-MAG 250 | T-MAG 500 | T-MAG 1000 | T-MAG 2000 |
|-------|-----------|-----------|-----------|------------|------------|
| A, mm | 93        | 152       | 246       | 306        | 478        |
| B, mm | 60        | 100       | 120       | 146        | 165        |
| C, mm | 120       | 180       | 180       | 236        | 273        |
| D, mm | 125       | 182       | 185       | 225        | 265        |



INFO

In order to achieve a maximum capacity, the contact surface should be bright and free from dirt, oil, grease, scale, corrosion, paint etc.





## TPM

### Permanent load lifting magnet

#### Capacity

100 - 3000 kg (Flat material)

50 - 1500 kg (Round material)

TPM load lifting magnets are ideal tools for easy, quick and thus economical transport of heavy objects made of ferro-magnetic material. Typical operating areas are workshops and warehouses, loading and unloading of machines as well as construction of jigs and fixtures.

Compact design of the units for a large number of applications.

The load is not affected mechanically which allows lifting of flat as well as round material. The efficient magnet body provides strong lifting capacity at low dead weight. The permanent magnets do not require electric energy and will leave only minor residual magnetism on the material after use.

The magnets are activated /deactivated easily by turning a locking lever. In activated condition the hand lever will be safely locked and thus prevent unintended demagnetising.

The selection of the appropriate magnet model should be made under consideration of the varying conditions of the contact surface, kind of material alloy and plate thickness /bar diameter (see table).

## INFO

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In order to achieve a maximum capacity, the contact surface should be bright and free from dirt, oil, grease, scale, corrosion, paint etc.



## Technical data TPM

| Model   | Art.-No.  | Flat material                       |   |                                     | Capacity <sup>1</sup><br>max.<br>kg | Round material                |                                     | Test load<br>kg | Weight<br>kg |
|---------|-----------|-------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------|-------------------------------------|-----------------|--------------|
|         |           | Capacity <sup>1</sup><br>max.<br>kg | Material<br>thickness min.<br>at max.<br>capacity<br>mm | Length of<br>material<br>max.<br>mm |                                     | Diameter<br>min. - max.<br>mm | Length of<br>material<br>max.<br>mm |                 |              |
| TPM 0,1 | N56400001 | 100                                 | 14  | 2000                                | 50                                  | 40 - 300                      | 2000                                | 300             | 5.3          |
| TPM 0,3 | N56400002 | 300                                 | 20  | 2500                                | 150                                 | 60 - 300                      | 2500                                | 900             | 13.5         |
| TPM 0,5 | N56400003 | 500                                 | 24  | 3000                                | 250                                 | 60 - 400                      | 3000                                | 1500            | 27.5         |
| TPM 0,8 | N56400004 | 800                                 | 34  | 3500                                | 400                                 | 60 - 400                      | 3500                                | 2400            | 52.0         |
| TPM 1,0 | N56400005 | 1000                                | 40  | 3500                                | 500                                 | 80 - 400                      | 3500                                | 3000            | 57.0         |
| TPM 2,0 | N56400006 | 2000                                | 55  | 3500                                | 1000                                | 100 - 400                     | 3500                                | 6000            | 125.0        |
| TPM 3,0 | 192019927 | 3000                                | 65  | 3500                                | 1500                                | 200 - 500                     | 3500                                | 9000            | 195.0        |

<sup>1</sup> Measured on bright drawn material S235JR (ST 37), air gap <0,1 mm

## Dimensions TPM

| Model | TPM 0,1 | TPM 0,3 | TPM 0,5 | TPM 0,8 | TPM 1,0 | TPM 2,0 | TPM 3,0 |
|-------|---------|---------|---------|---------|---------|---------|---------|
| A, mm | 122     | 192     | 232     | 302     | 332     | 392     | 497     |
| B, mm | 69      | 95      | 120     | 154     | 154     | 196     | 220     |
| C, mm | 185     | 225     | 270     | 320     | 320     | 420     | 453     |
| D, mm | 160     | 250     | 250     | 450     | 450     | 450     | 600     |

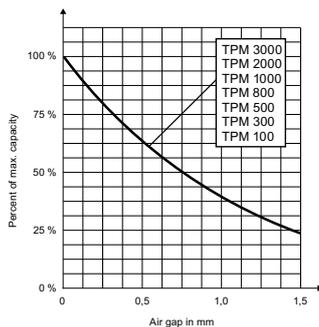


Diagram: WLL/air gap

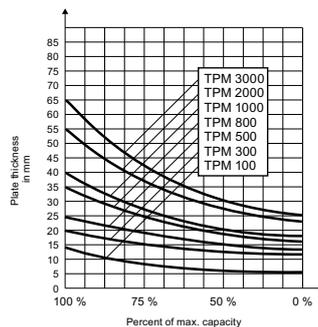
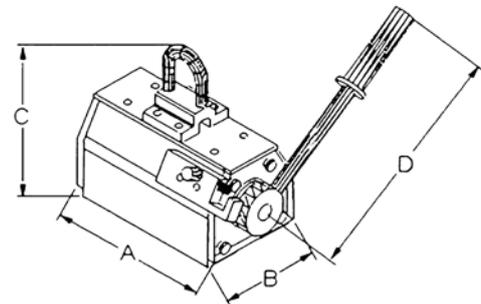
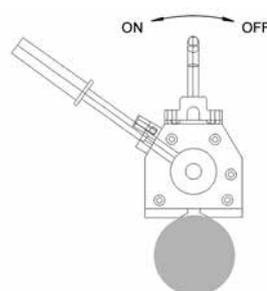
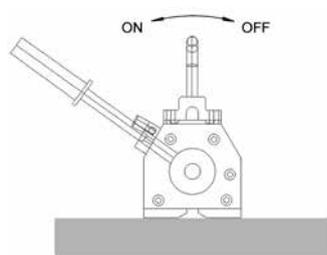


Diagram: WLL/material thickness



TPM



Correct use On/Off

| Reduction of capacity       | % of capacity |
|-----------------------------|---------------|
| Temperature ≤ 60 °C         | 100 %         |
| Humidity ≤ 80 %             | 100 %         |
| St 52                       | 95 %          |
| Alloy steel                 | 80 %          |
| High carbon steel           | 70 %          |
| Cast iron                   | 45 %          |
| Nickel                      | 10 %          |
| Austenitic, stainless steel | 0 %           |
| Brass                       | 0 %           |
| Aluminium                   | 0 %           |





## TBP

### Non-marring grab

Capacity 500 - 1500 kg

The TBP non-marring grab is suitable for lifting, turning and transporting of plates with a sensitive surface without leaving behind indentations.

It can be used for aluminium and stainless steel plate or those with an extremely hard surface.

## INFO

The surface of the plate must be free of oil, grease or any other liquid to ensure safe transport.

The min. load is 10% of the nominal WLL!

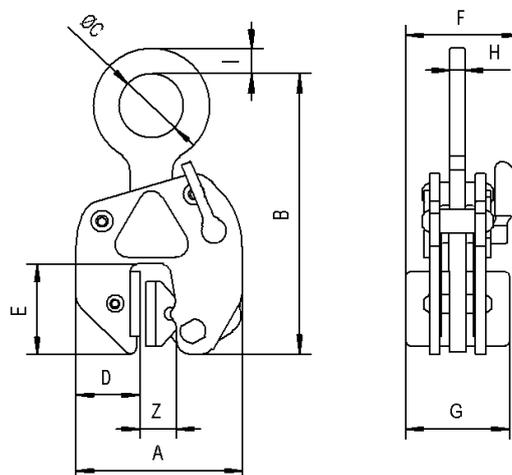
Temperature range from -20 °C up to +60 °C

### Technical data TBP

| Model   | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|---------|-----------|-------------|-------------------|-----------|
| TBP 0,5 | N51502419 | 500         | 0 - 10            | 3.0       |
| TBP 1,5 | N51502420 | 1500        | 0 - 20            | 12.6      |

### Dimensions TBP

| Model   | TBP 0,5 | TBP 1,5 |
|---------|---------|---------|
| A, mm   | 127     | 215     |
| B, mm   | 200     | 345     |
| D, mm   | 52      | 75      |
| E, mm   | 69      | 135     |
| F, mm   | 87      | 131     |
| G, mm   | 76      | 118     |
| H, mm   | 13      | 20      |
| I, mm   | 20      | 24      |
| Ø C, mm | 55      | 85      |



**TSB**

**Non-marring grab with chain**

Capacity 750 - 1250 kg

The TSB grab has parallel-facing jaws that equally distribute the clamping pressure over a relatively large surface area. This makes the grab attractive for plate material with sensitive surfaces. The protective lining “Bremsit” offers an outstanding friction coefficient, thereby enhancing the grip of the jaws. This lining can be easily replaced when worn.

Similar to the universal grab, this grab has a large jaw capacity and the security of a safety lock device with a hold-open/hold-closed feature.



**INFO**

The surface of the plate must be free of oil, grease or any other liquid to ensure safe transport.

The min. load is 10% of the nominal WLL!

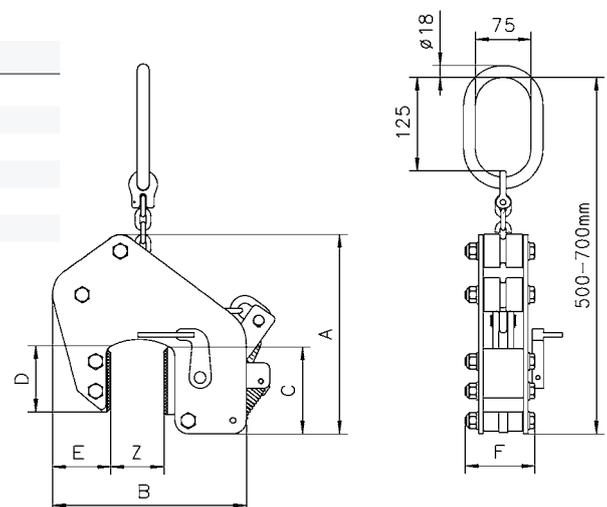
Temperature range from -20 °C up to +60 °C

**Technical data TSB**

| Model       | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|-------------|-----------|-------------|-------------------|-----------|
| TSB 0,75/65 | N51202202 | 750         | 0 - 65            | 11.8      |
| TSB 1,25/65 | N51202203 | 1250        | 0 - 65            | 16.7      |

**Dimensions TSB**

| Model | TSB 0,75/65 | TSB 1,25/65 |
|-------|-------------|-------------|
| A, mm | 272         | 330         |
| B, mm | 260         | 280         |
| C, mm | 128         | 128         |
| D, mm | 100         | 100         |
| E, mm | 79          | 90          |
| F, mm | 78          | 90          |





## TTG Girder grab for horizontal transport

Capacity 500 - 7500 kg

The girder grab TTG is designed for the horizontal transport of girders, metal plates, profiles etc. The offset suspension lug ensures that the flange of the girder will be kept practically horizontal during transport.

The positive safety lock keeps the clamp safely locked, even before the lift begins. This allows the operator to place the clamp, lock it closed and move away from the load. The lever ensures easy opening and closing of the clamping jaw and has a "lock open" feature.

## INFO

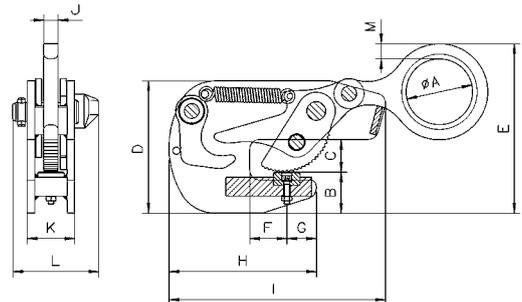
When transporting long girders, it is recommended to use a pair of clamps in conjunction with a spreader beam.

### Technical data TTG

| Model   | Art.-No.  | Capacity kg | Jaw capacity mm | Weight kg |
|---------|-----------|-------------|-----------------|-----------|
| TTG 0,5 | N50901950 | 500         | 0 - 20          | 2.9       |
| TTG 1,5 | N50901951 | 1500        | 0 - 30          | 6.8       |
| TTG 3,0 | N50901952 | 3000        | 0 - 35          | 11.3      |
| TTG 4,5 | N50901953 | 4500        | 0 - 40          | 14.8      |
| TTG 7,5 | N50901954 | 7500        | 0 - 45          | 30.0      |

### Dimensions TTG

| Model   | TTG 0,5 | TTG 1,5 | TTG 3,0 | TTG 4,5 | TTG 7,5 |
|---------|---------|---------|---------|---------|---------|
| Ø A, mm | 50      | 70      | 80      | 90      | 110     |
| B, mm   | 36      | 43      | 55      | 60      | 64      |
| C, mm   | 25      | 35      | 42      | 46      | 55      |
| D, mm   | 148     | 140     | 180     | 196     | 222     |
| E, mm   | 200     | 180     | 214     | 248     | 304     |
| F, mm   | 27      | 40      | 40      | 40      | 50      |
| G, mm   | 20      | 30      | 32      | 35      | 42      |
| H, mm   | 95      | 155     | 190     | 207     | 237     |
| I, mm   | 110     | 230     | 284     | 314     | 367     |
| J, mm   | 10      | 15      | 20      | 20      | 22      |
| K, mm   | 56      | 50      | 60      | 64      | 90      |
| L, mm   | 85      | 100     | 114     | 117     | 143     |
| M, mm   | 13      | 16      | 20      | 25      | 30      |



**TTR**  
**Girder grab**  
**for vertical transport**

Capacity 750 - 3000 kg

The girder grab TTR is designed for vertical transport, especially for lifting and stacking of girders. The unique position of the offset suspension lug keeps the girder virtually in a vertical position during transport.

The positive safety lock keeps the clamp safely locked, even before the lift begins. This allows the operator to place the clamp, lock it closed and move away from the load. The lever ensures easy opening and closing of the clamping jaw and has a "lock open" feature.



**INFO**

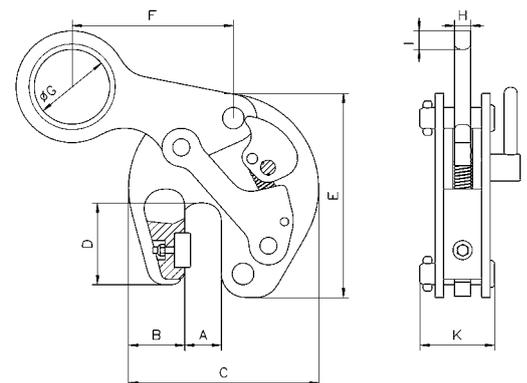
When transporting long girders, it is recommended to use a pair of clamps in conjunction with a spreader beam.

**Technical data TTR**

| Model    | Art.-No.  | Capacity kg | Jaw capacity mm | Weight kg |
|----------|-----------|-------------|-----------------|-----------|
| TTR 0,75 | N51702551 | 750         | 5 - 16          | 3.1       |
| TTR 1,50 | N51702552 | 1500        | 5 - 25          | 6.8       |
| TTR 3,00 | N51702553 | 3000        | 5 - 28          | 10.9      |

**Dimensions TTR**

| Model   | TTR 0,75 | TTR 1,50 | TTR 3,00 |
|---------|----------|----------|----------|
| A, mm   | 24       | 33       | 37       |
| B, mm   | 40       | 53       | 56       |
| C, mm   | 132      | 176      | 194      |
| D, mm   | 62       | 76       | 78       |
| E, mm   | 145      | 190      | 208      |
| F, mm   | 118      | 152      | 163      |
| Ø G, mm | 50       | 70       | 80       |
| H, mm   | 12       | 15       | 20       |
| I, mm   | 12       | 17       | 23       |
| K, mm   | 53       | 69       | 85       |





## TTT Girder grab for horizontal transport

Capacity 750 - 4500 kg

The girder grab TTT is used for the horizontal transport of steel girders. Due to the split fixed jaw, it can be positioned centrally on the end of the beam. The grab should only be used in pairs.

The safety lock with positive spring tension holds the grab in position on the end of the girder even without load tension.

The lever is used to engage and disengage the jaw and to keep it open.

## INFO

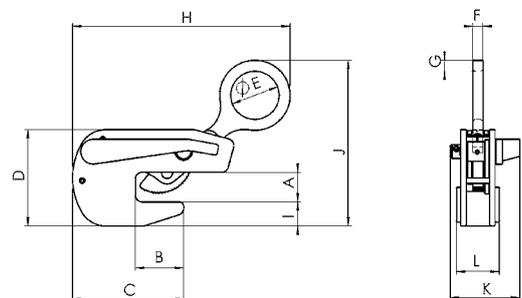
The angle from the vertical must not exceed 30°!

### Technical data TTT

| Model    | Art.-No.  | Capacity<br>kg | Jaw capacity<br>mm | Weight<br>kg |
|----------|-----------|----------------|--------------------|--------------|
| TTT 0,75 | N54509121 | 750            | 0 - 20             | 3            |
| TTT 1,5  | N54509122 | 1500           | 0 - 35             | 6            |
| TTT 3,0  | N54509123 | 3000           | 0 - 40             | 10           |
| TTT 4,5  | N54509124 | 4500           | 0 - 45             | 16           |

### Dimensions TTT

| Model   | TTT 0,75 | TTT 1,5 | TTT 3,0 | TTT 4,5 |
|---------|----------|---------|---------|---------|
| A, mm   | 30       | 38      | 50      | 60      |
| B, mm   | 70       | 70      | 75      | 90      |
| C, mm   | 100      | 155     | 195     | 222     |
| D, mm   | 142      | 150     | 195     | 222     |
| Ø E, mm | 50       | 70      | 80      | 90      |
| F, mm   | 16       | 19      | 19      | 22      |
| G, mm   | 16       | 20      | 25      | 30      |
| H, mm   | 225      | 335     | 400     | 450     |
| I, mm   | 45       | 45      | 80      | 90      |
| J, mm   | 200      | 210     | 214     | 248     |
| K, mm   | 106      | 120     | 125     | 147     |
| L, mm   | 52       | 66      | 80      | 88      |



## TCH Horizontal lifting gear

Capacity 1000 - 20000 kg

The TCH lifting clamp is designed to be used as a pair with a two-legged chain sling.

It is especially suited for the transport of single plates with a minimum thickness of approx. 5 mm as well as for plate bundles. The two-legged version is appropriate for normal sized plates.

For extra large or long plates, it is recommended to use two sets of the two-legged lifting gears in conjunction with a spreader beam. In the standard version, the lifting clamp is suitable for plates up to 1500 mm width. Lifting gears with longer chains for larger plate widths are available on request.



Similar image

## INFO

The angle from the vertical must not exceed 45°!

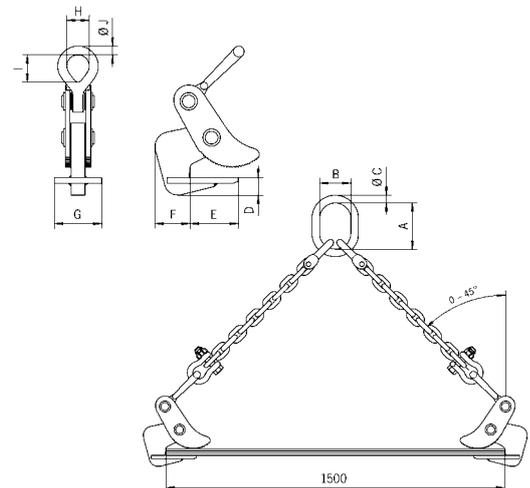
The capacity applies to a pair of lifting clamps.

## Technical data TCH

| Model      | Art.-No.<br>single clamp | Capacity <sup>1</sup><br>kg | Jaw capacity<br>mm | Weight <sup>2</sup><br>kg |
|------------|--------------------------|-----------------------------|--------------------|---------------------------|
| TCH 1,0    | N50501517                | 1000                        | 0 - 50             | 13.0                      |
| TCH 2,0    | N50501511                | 2000                        | 5 - 32             | 17.7                      |
| TCH 4,0    | N50501512                | 4000                        | 5 - 50             | 31.0                      |
| TCH 6,0    | N50501513                | 6000                        | 5 - 75             | 69.0                      |
| TCH 8,0    | N50501514                | 8000                        | 5 - 75             | 72.0                      |
| TCH 10,0/1 | N50501515                | 10000                       | 5 - 100            | 93.8                      |
| TCH 10,0/2 | N50501516                | 10000                       | 50 - 150           | 108.6                     |
| TCH 15,0/1 | N4300012878              | 15000                       | 5 - 100            | 110                       |
| TCH 15,0/2 | N4300012879              | 15000                       | 50 - 150           | 123                       |
| TCH 20,0/1 | N4300014489              | 20000                       | 5 - 100            | 165                       |
| TCH 20,0/2 | N4300014491              | 20000                       | 50 - 150           | 172                       |

<sup>1</sup> Per pair, up to an angle of 45° from the vertical

<sup>2</sup> Approx. weight for 2 single clamps with a chain length = 1 m



## Dimensions TCH

| Model   | TCH 1,0 | TCH 2,0 | TCH 4,0 | TCH 6,0 | TCH 8,0 | TCH 10,0/1 | TCH 10,0/2 | TCH 15,0/1 | TCH 15,0/2 | TCH 20,0/1 | TCH 20,0/2 |
|---------|---------|---------|---------|---------|---------|------------|------------|------------|------------|------------|------------|
| A, mm   | 135     | 160     | 180     | 200     | 260     | 300        | 300        | -          | -          | -          | -          |
| B, mm   | 75      | 90      | 100     | 110     | 140     | 160        | 160        | -          | -          | -          | -          |
| Ø C, mm | 18      | 22      | 26      | 32      | 36      | 40         | 40         | -          | -          | -          | -          |
| D, mm   | 15      | 32      | 44      | 58      | 56      | 70         | 66         | 71         | 71         | 70         | 70         |
| E, mm   | 82      | 83      | 114     | 172     | 170     | 216        | 218        | 230        | 230        | 220        | 220        |
| F, mm   | 65      | 61      | 75      | 97      | 100     | 116        | 116        | 120        | 120        | 118        | 118        |
| G, mm   | 100     | 100     | 99      | 129     | 128     | 149        | 150        | 150        | 150        | 220        | 220        |
| H, mm   | 32      | 49      | 62      | 90      | 90      | 113        | 113        | 144        | 144        | 80         | 80         |
| I, mm   | 44      | 72      | 89      | 127     | 130     | 113        | 113        | 144        | 144        | 120        | 120        |
| Ø J, mm | 13      | 19      | 26      | 36      | 37      | 50         | 50         | 50         | 50         | 60         | 60         |



## TGF Horizontal lifting gear

Capacity 1300 - 10000 kg

The TGF horizontal lifting gear consists of two clamps with a two-legged chain sling and is especially suited for the transport of plate bundles.

The clamps are easily adjusted to the height of the plate by a special ratcheting lever.

The lifting clamps are available in special versions for bundle thicknesses up to 400 mm. The lifting gear is made according to your requirements

## INFO

The angle from the vertical must not exceed 45°!

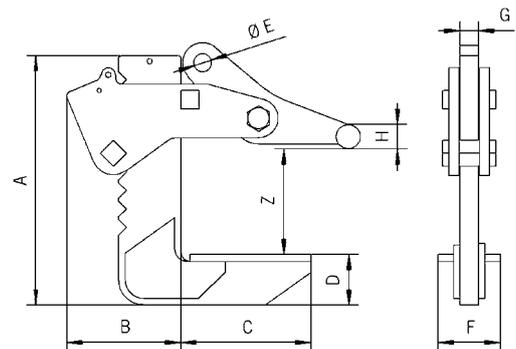
The capacity applies to a pair of lifting clamps.

### Technical data TGF

| Model        | Art.-No.<br>single clamp | Capacity <sup>1</sup><br>kg | Jaw capacity<br>Z<br>mm | Weight <sup>2</sup><br>kg |
|--------------|--------------------------|-----------------------------|-------------------------|---------------------------|
| TGF 1,3/150  | N50601617                | 1300                        | 0 - 150                 | 23                        |
| TGF 3,3/150  | N50601619                | 3300                        | 0 - 150                 | 39                        |
| TGF 6,6/150  | N50601621                | 6650                        | 0 - 150                 | 65                        |
| TGF 1,3/250  | N50601624                | 1300                        | 0 - 250                 | 23                        |
| TGF 3,3/250  | N50601626                | 3300                        | 0 - 250                 | 39                        |
| TGF 6,6/250  | N50601628                | 6650                        | 0 - 250                 | 87                        |
| TGF 10,0/300 | 192065646                | 10000                       | 0 - 300                 | 92                        |

<sup>1</sup> Per pair, up to an angle of 45° from the vertical

<sup>2</sup> Approx. weight for 2 single clamps with a chain length = 1 m



### Dimensions TGF

| Model   | TGF 1,3/150 | TGF 3,3/150 | TGF 6,6/150 | TGF 1,3/250 | TGF 3,3/250 | TGF 6,6/250 | TGF 10,0/300 |
|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| A, mm   | 298         | 321         | 405         | 448         | 417         | 495         | 495          |
| B, mm   | 122         | 130         | 185         | 122         | 130         | 185         | 210          |
| C, mm   | 160         | 160         | 210         | 140         | 160         | 210         | 240          |
| D, mm   | 41          | 50          | 82          | 41          | 60          | 82          | 100          |
| Ø E, mm | 20          | 23          | 30          | 20          | 23          | 30          | 40           |
| F, mm   | 80          | 80          | 100         | 80          | 80          | 100         | 120          |
| G, mm   | 20          | 25          | 30          | 20          | 25          | 30          | 50           |
| Ø H, mm | 25          | 25          | 40          | 25          | 25          | 40          | 40           |

## BVH Horizontal lifting hook

Capacity 500 - 7500 kg

The BVH horizontal lifting hooks are used in pairs with chain or wire rope slings to lift plate bundles that are relatively close to the ground.

The high tensile hooks have a serrated lifting surface.



## INFO

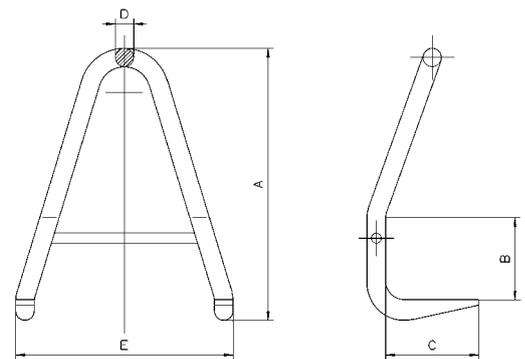
The angle from the vertical must be 30 - 45°!

The chain has to be in line with the crank of the lifting hooks.

### Technical data BVH

| Model    | Art.-No.  | Capacity <sup>1</sup><br>kg | Weight<br>kg |
|----------|-----------|-----------------------------|--------------|
| BVH 0,5  | N50500001 | 500                         | 1.2          |
| BVH 1,12 | N50500002 | 1120                        | 1.4          |
| BVH 1,5  | N50500003 | 1500                        | 2.4          |
| BVH 2,0  | N50500004 | 2000                        | 3.9          |
| BVH 2,5  | N50500005 | 2500                        | 8.2          |
| BVH 3,2  | N50500006 | 3200                        | 8.3          |
| BVH 4,0  | N50500007 | 4000                        | 13.6         |
| BVH 5,3  | N50500008 | 5300                        | 21.0         |
| BVH 6,0  | N50500009 | 6000                        | 39.0         |
| BVH 7,5  | N50500010 | 7500                        | 60.0         |

<sup>1</sup> Pro Stück



### Dimensions BVH

| Model | BVH 0,5 | BVH 1,12 | BVH 1,5 | BVH 2,0 | BVH 2,5 | BVH 3,2 | BVH 4,0 | BVH 5,3 | BVH 6,0 | BVH 7,5 |
|-------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| A, mm | 180     | 210      | 240     | 280     | 340     | 400     | 530     | 660     | 800     | 980     |
| B, mm | 50      | 60       | 70      | 80      | 100     | 120     | 160     | 200     | 250     | 300     |
| C, mm | 80      | 95       | 105     | 115     | 120     | 140     | 180     | 210     | 250     | 300     |
| D, mm | 18      | 20       | 22      | 26      | 32      | 32      | 36      | 40      | 50      | 60      |
| E, mm | 150     | 170      | 200     | 220     | 270     | 320     | 420     | 520     | 640     | 760     |



## THS Lifting clamp with safety lock

Capacity 750 - 4500 kg

The THS lifting clamp is normally used in pairs especially for the horizontal transport of plates. The transport of slightly sagging plates is also possible. Individually, it can be used to load presses shears, and other machines. The safety lock is preventing the clamp from opening, even when there is no load. The jaws can be opened and closed with the safety lock lever. This clamp has a lock-open feature.

### Option

- THS 1.5 and THS 3.0 are available with a hinged hook ring on request.

## INFO

When used in pairs the angle from the vertical must not exceed 30°!



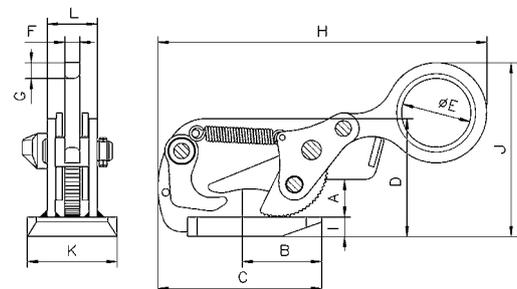
## Technical data THS

| Model    | Art.-No.  | Capacity <sup>1</sup><br>kg | Jaw capacity<br>mm | Weight<br>kg |
|----------|-----------|-----------------------------|--------------------|--------------|
| THS 0,75 | N50801851 | 750                         | 0 - 20             | 3.2          |
| THS 1,5  | N50801852 | 1500                        | 0 - 35             | 6.1          |
| THS 3,0  | N50801853 | 3000                        | 0 - 40             | 12.7         |
| THS 4,5  | N50801854 | 4500                        | 0 - 40             | 16.5         |

<sup>1</sup>Per unit

## Dimensions THS

| Model   | THS 0,75 | THS 1,5 | THS 3,0 | THS 4,5 |
|---------|----------|---------|---------|---------|
| A, mm   | 30       | 38      | 45      | 47      |
| B, mm   | 70       | 80      | 95      | 110     |
| C, mm   | 130      | 165     | 205     | 235     |
| D, mm   | 97       | 120     | 160     | 196     |
| Ø E, mm | 50       | 70      | 80      | 90      |
| F, mm   | 12       | 15      | 20      | 20      |
| G, mm   | 15       | 17      | 25      | 30      |
| H, mm   | 255      | 335     | 400     | 450     |
| I, mm   | 15       | 20      | 30      | 59      |
| J, mm   | 135      | 165     | 195     | 230     |
| K, mm   | 80       | 90      | 100     | 110     |
| L, mm   | 40       | 50      | 60      | 64      |



## TWH Lifting clamp

Capacity 1500 - 5000 kg

The TWH lifting clamp, when used in pairs, is well-suited for horizontal transport of individual and bundled plates.

The clamp is not suited for thin plates that have a tendency to sag during transport.

It is normally used in combination with a two-legged chain sling.

The capacity (WLL) applies to a pair of lifting clamps.

### Option

- Protective lining



## INFO

The angle from the vertical must not exceed 45°!

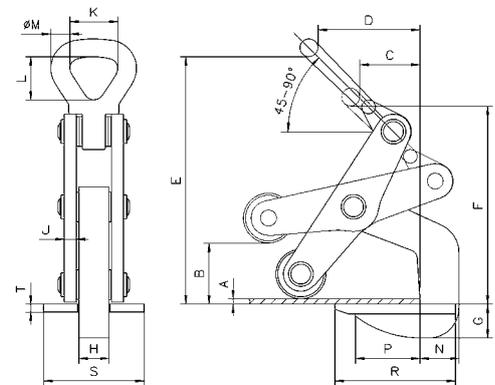
### Technical data TWH

| Model               | Art.-No.  | Capacity <sup>1</sup><br>kg | Jaw capacity<br>mm | Weight <sup>2</sup><br>kg |
|---------------------|-----------|-----------------------------|--------------------|---------------------------|
| TWH 30 with roller  | N54509101 | 1500                        | 5 - 60             | 5.6                       |
| TWH 50 with roller  | N54509102 | 2500                        | 10 - 70            | 10.3                      |
| TWH 70 with roller  | N54509103 | 3500                        | 10 - 80            | 13.4                      |
| TWH 100 with roller | N54509104 | 5000                        | 10 - 102           | 27.7                      |
| TWH 30 with plate   | N54509105 | 1500                        | 5 - 60             | 5.7                       |
| TWH 70 with plate   | N54509107 | 3500                        | 10 - 80            | 13.5                      |

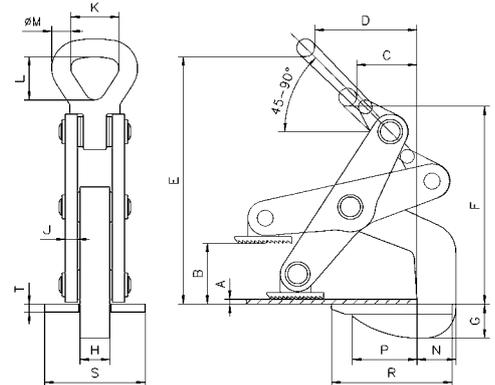
<sup>1</sup>Per pair, angle from the vertical max. 45°    <sup>2</sup>Per unit

### Dimensions TWH

| Model   | TWH 30<br>with roller | TWH 50<br>with roller | TWH 70<br>with roller | TWH 100<br>with roller | TWH 30<br>with plate | TWH 70<br>with plate |
|---------|-----------------------|-----------------------|-----------------------|------------------------|----------------------|----------------------|
| A, mm   | 5                     | 10                    | 10                    | 10                     | 5                    | 10                   |
| B, mm   | 60                    | 70                    | 80                    | 102                    | 60                   | 80                   |
| C, mm   | 60                    | 75                    | 90                    | 110                    | 60                   | 90                   |
| D, mm   | 105                   | 130                   | 162                   | 170                    | 105                  | 162                  |
| E, mm   | 250                   | 315                   | 345                   | 425                    | 250                  | 345                  |
| F, mm   | 200                   | 275                   | 292                   | 345                    | 200                  | 292                  |
| G, mm   | 31                    | 45                    | 55                    | 57                     | 22                   | 48                   |
| H, mm   | 30                    | 30                    | 30                    | 45                     | 30                   | 30                   |
| J, mm   | 12                    | 12                    | 15                    | 20                     | 12                   | 15                   |
| K, mm   | 50                    | 64                    | 64                    | 89                     | 50                   | 64                   |
| L, mm   | 73                    | 92                    | 92                    | 130                    | 73                   | 92                   |
| Ø M, mm | 18                    | 25                    | 25                    | 35                     | 18                   | 25                   |
| N, mm   | 36                    | 58                    | 65                    | 80                     | 36                   | 65                   |
| P, mm   | 65                    | 77                    | 105                   | 120                    | 65                   | 105                  |
| R, mm   | 120                   | 150                   | 185                   | 210                    | 120                  | 185                  |
| S, mm   | 100                   | 100                   | 100                   | 120                    | 100                  | 100                  |
| T, mm   | 10                    | 10                    | 10                    | 12                     | 10                   | 10                   |



TWH with roller



TWH with plate



## THK Lifting clamp

Capacity 750 - 9000 kg

The THK lifting clamp, when used in pairs, is especially well-suited for horizontal transport of thin plates that have a tendency to sag.

It is normally used in combination with a two-legged chain sling.

The capacity applies to a pair of lifting clamps.



## INFO

The angle from the vertical must not exceed 30°!

### Technical data THK

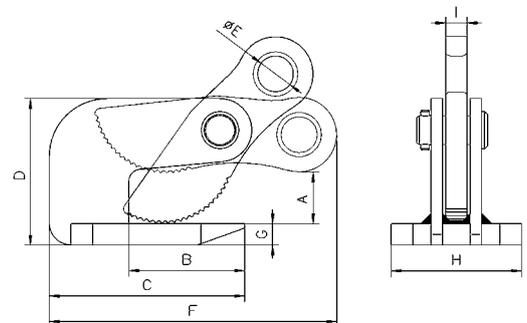
| Model    | Art.-No.  | Capacity <sup>1</sup><br>kg | Jaw capacity<br>mm | Weight <sup>2</sup><br>kg |
|----------|-----------|-----------------------------|--------------------|---------------------------|
| THK 0,75 | N50701751 | 750                         | 0 - 25             | 1.7                       |
| THK 1,5  | N50701752 | 1500                        | 0 - 35             | 3.2                       |
| THK 3,0  | N50701753 | 3000                        | 0 - 35             | 5.7                       |
| THK 4,5  | N50701754 | 4500                        | 0 - 45             | 8.4                       |
| THK 6,0  | N50701755 | 6000                        | 0 - 60             | 11.6                      |
| THK 9,0  | N50701756 | 9000                        | 0 - 60             | 17.9                      |

<sup>1</sup>Per pair, angle from the vertical max. 30°

<sup>2</sup>Per unit

### Dimensions THK

| Model   | THK 0,75 | THK 1,5 | THK 3,0 | THK 4,5 | THK 6,0 | THK 9,0 |
|---------|----------|---------|---------|---------|---------|---------|
| A, mm   | 25       | 36      | 38      | 48      | 63      | 65      |
| B, mm   | 72       | 80      | 93      | 103     | 124     | 113     |
| C, mm   | 118      | 135     | 168     | 183     | 214     | 223     |
| D, mm   | 81       | 102     | 119     | 140     | 176     | 188     |
| Ø E, mm | 20       | 25      | 30      | 30      | 35      | 40      |
| F, mm   | 161      | 198     | 227     | 238     | 284     | 317     |
| G, mm   | 12       | 15      | 20      | 25      | 30      | 35      |
| H, mm   | 86       | 102     | 110     | 122     | 110     | 148     |
| I, mm   | 12       | 15      | 20      | 20      | 20      | 20      |



## TPZ Board clamp

Capacity 400 - 750 kg

The TPZ clamp is made for lifting and vertically transporting wood, particle board and plastic sheets.

The pliers are fastened to the plate with the aid of a hand-held lever. The jaw, which has a protective lining, grabs once lifting begins and holds the board securely.

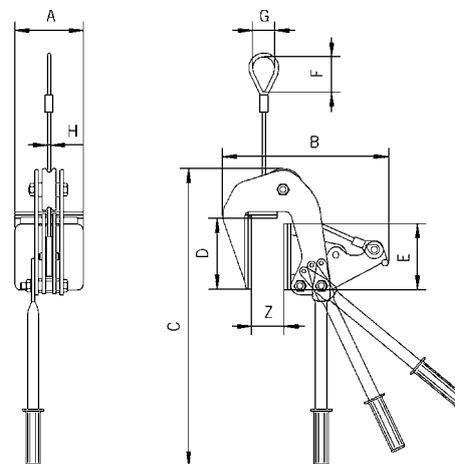


### Technical data TPZ

| Model        | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|--------------|-----------|-------------|-------------------|-----------|
| TPZ 0,4/50   | N56200001 | 400         | 5 - 50            | 6.3       |
| TPZ 0,4/100  | N56200002 | 400         | 50 - 100          | 9.0       |
| TPZ 0,75/60  | N56200003 | 750         | 5 - 60            | 12.0      |
| TPZ 0,75/120 | N56200004 | 750         | 60 - 120          | 14.0      |

### Dimensions TPZ

| Model | TPZ 0,4/50 | TPZ 0,4/100 | TPZ 0,75/60 | TPZ 0,75/120 |
|-------|------------|-------------|-------------|--------------|
| A, mm | 120        | 120         | 155         | 155          |
| B, mm | 290        | 335         | 349         | 406          |
| C, mm | 525        | 525         | 545         | 560          |
| D, mm | 125        | 125         | 145         | 145          |
| E, mm | 117        | 117         | 135         | 135          |
| F, mm | 60         | 60          | 121         | 121          |
| G, mm | 40         | 40          | 75          | 75           |
| H, mm | 6          | 6           | 8 x 24      | 8 x 24       |



TPZ, up to 400 kg equipped with rope,  
from 750 kg equipped with chain.



## THM Manual claw, magnetic

Capacity 120 - 170 kg

The THM manual magnetic claw is used for transporting steel sheets horizontally and vertically, lifting plates from racks, pulling steel sheets out of shelving, as well as transporting flat pieces of magnetizable steel.

The clamp, depending on the type, can be used for plate thicknesses from 1 to 5 mm.

Pressing down on the handle activates a cam which releases the magnetic claw from the workpiece.

This manual claw is maintenance-free and keeps the magnetic force for an unlimited period of time.

## INFO

In order to achieve a maximum capacity, the contact surface should be bright and free from dirt, oil, grease, scale, corrosion, paint etc.

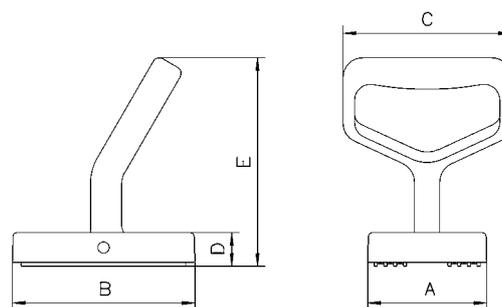
### Technical data THM

| Model   | Art.-No.  | Capacity <sup>1</sup><br>kg | Pulling capacity <sup>1</sup><br>kg | Weight<br>kg |
|---------|-----------|-----------------------------|-------------------------------------|--------------|
| THM 120 | N51602501 | 120                         | 70                                  | 2            |
| THM 170 | N51602502 | 170                         | 100                                 | 2            |

<sup>1</sup>Measured at a safety factor 2:1 on bright drawn material St37 k

### Dimensions THM

| Model | THM 120 | THM 170 |
|-------|---------|---------|
| A, mm | 116     | 116     |
| B, mm | 140     | 140     |
| C, mm | 130     | 130     |
| D, mm | 25      | 25      |
| E, mm | 172     | 172     |



## THG Hand clamp

Capacity 250 kg

The THG hand clamp is suited for the individual transport of light and thin plates. Pressing down on the hand grip releases the tension spring, allowing the clamp to open and slide onto the plate.

The plate can be transported by holding onto the ergonomically designed hand grip.

The positive spring pressure prevents the plate from accidental slipping out of the clamp.



## INFO

The plate surface of the material must not exceed a hardness of HRC 30.

### Technical data THG

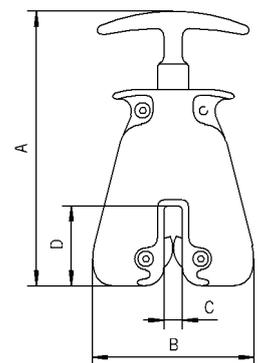
| Model               | Art.-No.    | Capacity kg | Jaw capacity mm | Weight kg |
|---------------------|-------------|-------------|-----------------|-----------|
| THG                 | N51502415   | 250         | 0 - 10          | 1.4       |
| THG EX <sup>1</sup> | N4300013269 | 250         | 0 - 10          | 1.5       |
| THG EB <sup>2</sup> | N4300007661 | 250         | 0 - 10          | 1.4       |

<sup>1</sup> EX = Extended handle (300 mm)

<sup>2</sup> EB = Eye bolt (instead of handle)

### Dimensions THG

| Model         | THG | THG EX | THG EB |
|---------------|-----|--------|--------|
| A, mm         | 184 | 280    | 610    |
| B, mm         | 105 | 105    | 105    |
| C, mm         | 12  | 12     | 12     |
| D, mm         | 53  | 53     | 53     |
| Thickness, mm | 40  | 40     | 40     |



Attaching



Transport



## TSH Screw clamp for vertical and horizontal pulling

Capacity 750 - 5000 kg

The screw clamp offers many possible applications. It is particularly useful for lifting, turning and pulling steel plates, girders and steel constructions.

The spindle is closed only finger tight.

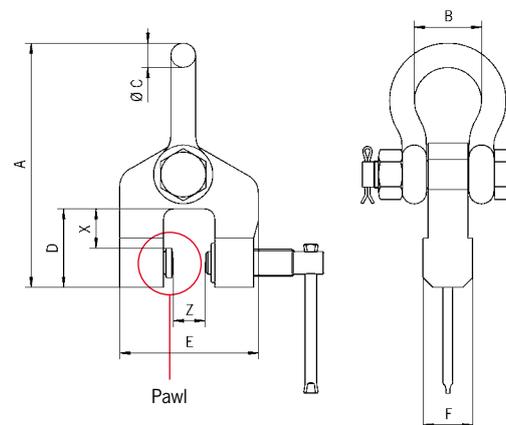
Once the screw clamp is tightened and lifting begins, the pivoting pad clamping system produces a wedging action against the material, holding it securely (see below functional drawing).

### Technical data TSH

| Model     | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|-----------|-----------|-------------|-------------------|-----------|
| TSH 0,75  | N51502400 | 750         | 0 - 28            | 3.1       |
| TSH 1,5   | N51502401 | 1500        | 0 - 32            | 7.4       |
| TSH 2,0   | N51502422 | 2000        | 90 - 140          | 14.8      |
| TSH 2,0 S | N51502428 | 2000        | 50 - 100          | 14.5      |
| TSH 3,0   | N51502402 | 3000        | 0 - 50            | 11.4      |
| TSH 5,0   | N51502403 | 5000        | 0 - 80            | 27.6      |

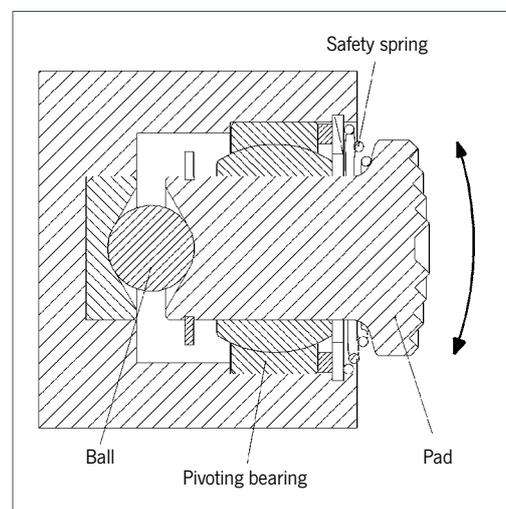
### Dimensions TSH

| Model   | TSH 0,75 | TSH 1,5 | TSH 2,0 | TSH 2,0 S | TSH 3,0 | TSH 5,0 |
|---------|----------|---------|---------|-----------|---------|---------|
| A, mm   | 190      | 255     | 318     | 318       | 290     | 470     |
| B, mm   | 52       | 65      | 74      | 74        | 74      | 130     |
| Ø C, mm | 19       | 26      | 30      | 30        | 30      | 50      |
| D, mm   | 43       | 75      | 90      | 90        | 85      | 135     |
| E, mm   | 113      | 130     | 286     | 246       | 170     | 225     |
| F, mm   | 35       | 44      | 60      | 60        | 50      | 72      |
| X, mm   | 15       | 40      | 38      | 38        | 40      | 50      |



## INFO

The plate surface of the material must not exceed a hardness level of HRC 50.



Functional drawing pivoting pad

## TSZ Screw clamp for three-dimensional pulling

Capacity 500 - 7500 kg

The TSZ screw clamp is designed to pull in three directions. It offers many different possibilities for transporting steel constructions, feeding machining centres, etc.

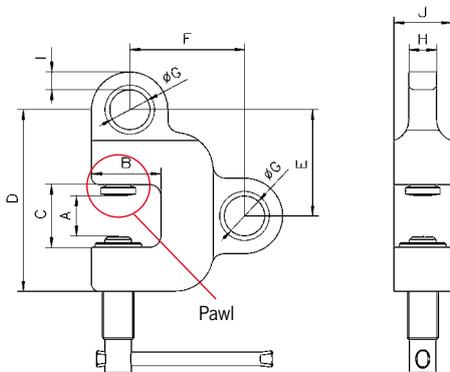
The spindle is closed only finger tight.

When the screw clamp is tightened and lifting begins, the pivoting pad clamping system produces a wedging action against the material, holding it securely (see below functional drawing).



### INFO

The plate surface of the material must not exceed a hardness level of HRC 50.

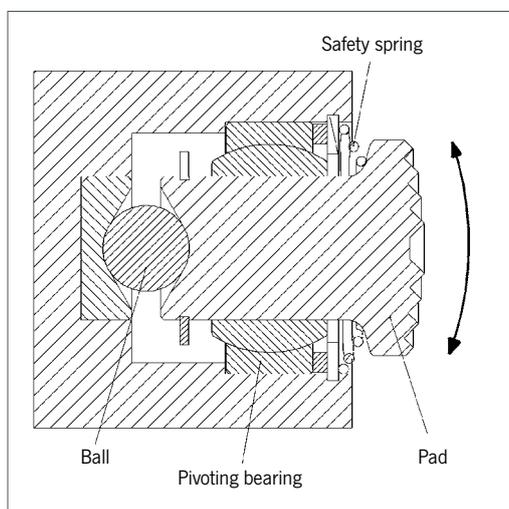


### Technical data TSZ

| Model   | Art.-No.  | Capacity kg | Jaw capacity mm | Weight kg |
|---------|-----------|-------------|-----------------|-----------|
| TSZ 0,5 | N51502410 | 500         | 0 - 28          | 2.3       |
| TSZ 1,5 | N51502411 | 1500        | 0 - 35          | 5.6       |
| TSZ 3,0 | N51502412 | 3000        | 0 - 35          | 8.8       |
| TSZ 5,0 | N51502413 | 5000        | 0 - 40          | 16.2      |
| TSZ 7,5 | N51502414 | 7500        | 0 - 40          | 20.9      |

### Dimensions TSZ

| Model   | TSZ 0,5 | TSZ 1,5 | TSZ 3,0 | TSZ 5,0 | TSZ 7,5 |
|---------|---------|---------|---------|---------|---------|
| A, mm   | 28      | 35      | 35      | 40      | 40      |
| B, mm   | 43      | 60      | 67      | 85      | 92      |
| C, mm   | 45      | 55      | 65      | 75      | 75      |
| D, mm   | 125     | 158     | 195     | 230     | 240     |
| E, mm   | 72      | 93      | 114     | 133     | 143     |
| F, mm   | 83      | 99      | 120     | 150     | 162     |
| Ø G, mm | 26      | 35      | 46      | 55      | 65      |
| H, mm   | 16      | 24      | 34      | 40      | 50      |
| I, mm   | 12      | 16      | 17      | 18      | 23      |
| J, mm   | 35      | 50      | 60      | 75      | 80      |



Functional drawing pivoting pad

## TRU Roundstock grab

Capacity 100 - 4000 kg

The TRU roundstock grab picks up roundstock and pipe material up to 600 mm in diameter quickly and safely. With its optional protective lining, it can also pick up materials with sensitive surfaces.

### INFO

When using protective lining, it is important that the surfaces are dry, clean and free of oil and grease.

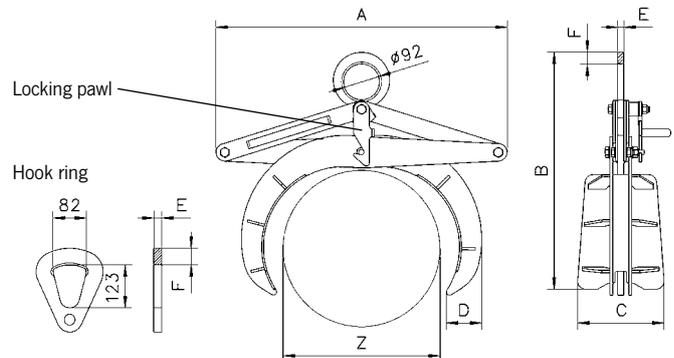


### Technical data TRU

| Model       | Art.-No.  | Art.-No.<br>with protective lining | Capacity<br>kg | Jaw capacity Z<br>mm | Weight<br>kg |
|-------------|-----------|------------------------------------|----------------|----------------------|--------------|
| TRU 0,1/150 | N51902711 | N51902712                          | 100            | 50 - 150             | 4.2          |
| TRU 0,5/200 | N51902701 | N51902706                          | 500            | 35 - 200             | 13.6         |
| TRU 1,0/200 | N51902702 | N51902707                          | 1000           | 35 - 200             | 13.6         |
| TRU 1,5/300 | N51902703 | N51902708                          | 1500           | 80 - 300             | 27.0         |
| TRU 3,0/300 | N51902704 | N51902709                          | 3000           | 80 - 300             | 49.0         |
| TRU 4,0/600 | N51902705 | N51902710                          | 4000           | 200 - 600            | 204.0        |

### Dimensions TRU

| Model      | TRU<br>0,1/150 | TRU<br>0,5/200 | TRU<br>1,0/200 | TRU<br>1,5/300 | TRU<br>3,0/300 | TRU<br>4,0/600 |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
| A, mm      | 270            | 503            | 509            | 720            | 740            | 1420           |
| B min., mm | 292            | 417            | 437            | 520            | 582            | 930            |
| B max., mm | 458            | 723            | 745            | 937            | 960            | 1815           |
| C, mm      | 97             | 150            | 178            | 204            | 220            | 318            |
| D, mm      | 43             | 56             | 82             | 84             | 125            | 205            |
| E, mm      | 8              | 15             | 15             | 20             | 20             | 30             |
| F, mm      | 17             | 17             | 30             | 25             | 30             | 35             |



TRU, hook ring for grabs for 2000 kg and above. Locking pawl keeps the grab in the open position.

**TPR**  
**Profile steel grab**

Capacity 500 - 3000 kg

The TPR steel grab is designed for transport of girders, profile steel, etc. It boasts a large jaw capacity, which makes it useful for various flange widths.

The clamping jaws press securely with a positive fit to the girder.

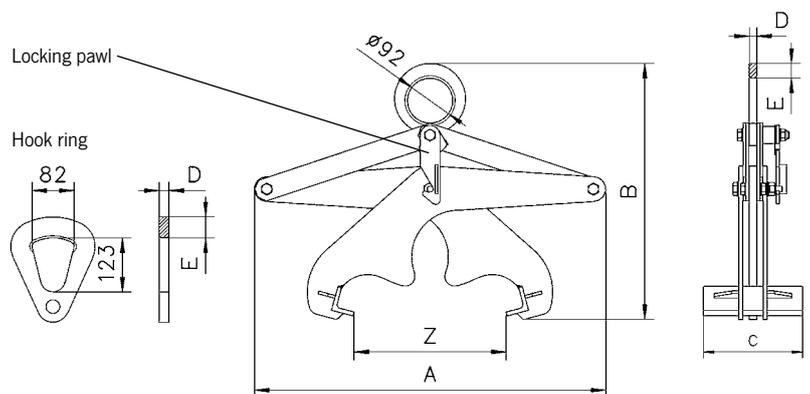


**Technical data TPR**

| Model       | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|-------------|-----------|-------------|-------------------|-----------|
| TPR 0,5/200 | N51802601 | 500         | 0 - 200           | 15.0      |
| TPR 1,5/300 | N51802602 | 1500        | 0 - 300           | 22.6      |
| TPR 3,0/300 | N51802603 | 3000        | 0 - 300           | 41.7      |

**Dimensions TPR**

| Model      | TPR 0,5/200 | TPR 1,5/300 | TPR 3,0/300 |
|------------|-------------|-------------|-------------|
| A, mm      | 510         | 710         | 720         |
| B min., mm | 390         | 495         | 525         |
| B max., mm | 625         | 830         | 920         |
| C, mm      | 200         | 200         | 220         |
| D, mm      | 15          | 15          | 20          |
| E, mm      | 30          | 30          | 43          |



Hook ring for grabs for 2000 kg and above.  
Locking pawl keeps the grab in the open position.



## TVB Block grab

Capacity 250 and 500 kg

The TVB block grab is useful for the transport of stone and concrete blocks and other materials with parallel surfaces. The grab has a protective lining to ensure a safe and non-marring transport.

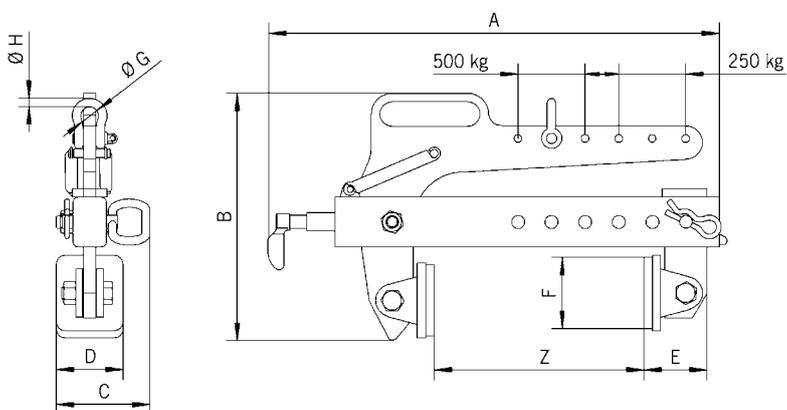
The clamping jaw and the center of gravity are easily and quickly adjustable by means of the locking pin.

## INFO

It is important that the surfaces are dry, clean and free of oil and grease.

### Technical data TVB

| Model   | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|---------|-----------|-------------|-------------------|-----------|
| TVB 500 | N52625000 | 250/500     | 0 - 240           | 13        |



### Dimensions TVB

| Model   | TVB 500 |
|---------|---------|
| A, mm   | 537     |
| B, mm   | 296     |
| C, mm   | 112     |
| D, mm   | 80      |
| E, mm   | 75      |
| F, mm   | 85      |
| Ø G, mm | 22      |
| Ø H, mm | 10      |

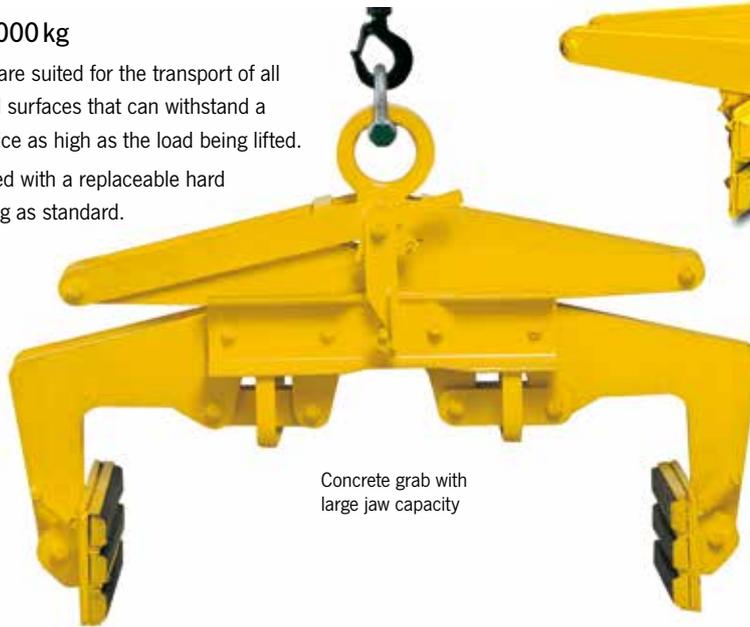


**TBG**  
**Concrete grab**

Capacity 500 - 1000 kg

The TBG block grabs are suited for the transport of all materials with parallel surfaces that can withstand a clamping pressure twice as high as the load being lifted.

The grabs are delivered with a replaceable hard rubber protective lining as standard.



Concrete grab with large jaw capacity



Concrete grab with small jaw capacity



**Technical data TBG with small and large jaw capacity**

| Model        | Art.-No.  | Capacity kg | Jaw capacity Z mm | Weight kg |
|--------------|-----------|-------------|-------------------|-----------|
| TBG 0,5/150  | N52604009 | 500         | 0 - 150           | 27        |
| TBG 1,0/250  | N52604010 | 1000        | 50 - 250          | 50        |
| TBG 0,2/500  | N52604156 | 200         | 200 - 500         | 49        |
| TBG 0,3/700  | N52604157 | 300         | 400 - 700         | 52        |
| TBG 0,5/900  | N52604158 | 500         | 600 - 900         | 55        |
| TBG 1,0/400  | N52704251 | 1000        | 100 - 400         | 51        |
| TBG 1,0/1100 | N52604159 | 1000        | 800 - 1100        | 72        |

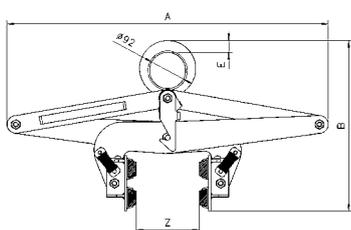
**INFO**

When using rubber protective lining it is important that the surfaces are dry, clean and free of oil and grease.

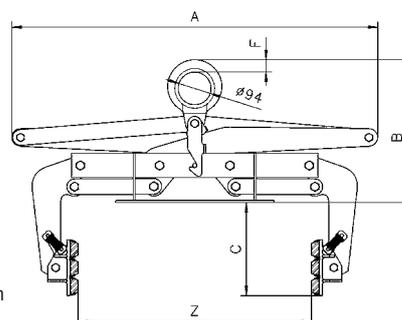
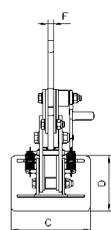
**Dimensions TBG with small and large jaw capacity**

| Model               | TBG 0,5/150 | TBG 1,0/250 | TBG 0,2/500 | TBG 0,3/700 | TBG 0,5/900 | TBG 1,0/400 | TBG 1,0/1100 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| A <sup>1</sup> , mm | 815         | 1050        | 1040        | 1040        | 1120        | 1040        | 1320         |
| B min., mm          | 420         | 460         | 390         | 390         | 390         | 390         | 390          |
| B max., mm          | 760         | 980         | 840         | 840         | 840         | 840         | 840          |
| C, mm               | 200         | 250         | 275         | 275         | 275         | 250         | 275          |
| D, mm               | 160         | 160         | 160         | 160         | 160         | 160         | 160          |
| E, mm               | 30          | 29          | 300         | 300         | 300         | 300         | 300          |
| F, mm               | 15          | 20          | 35          | 35          | 35          | 35          | 35           |
| G, mm               | -           | -           | 20          | 20          | 20          | 20          | 20           |

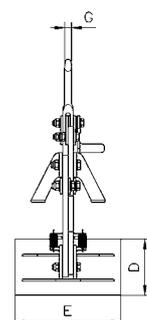
<sup>1</sup> Scissor dimensions



Concrete grab with small jaw capacity



Concrete grab with large jaw capacity





## TBA Bale grab

Capacity 200 - 1000 kg

The TBA bale grab transports bales of fiber, wool, fabric, paper, pressed straw and various types of shavings up to a width of 1.3 m. Bales are gripped safely yet gently, and where applicable, the clamps are lined with a soft and pliable material.

The locking pawl only engages if the grab is opened without manual intervention.

## INFO

The standard grab is equipped with protective linings.

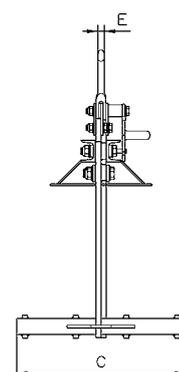
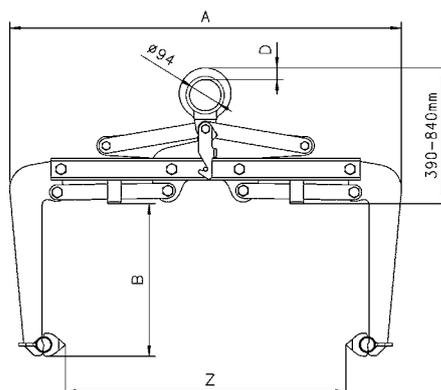
Serrated jaws available on request.

### Technical data TBA

| Model         | Art.-No. with protective lining | Capacity kg | Jaw capacity Z mm | Weight kg |
|---------------|---------------------------------|-------------|-------------------|-----------|
| TBA 0,2/700   | N52804501                       | 200         | 250 - 700         | 40        |
| TBA 0,3/900   | N52804502                       | 300         | 450 - 900         | 42        |
| TBA 0,5/1100  | N52804503                       | 500         | 650 - 1100        | 45        |
| TBA 0,75/1300 | N52804504                       | 750         | 850 - 1300        | 62        |
| TBA 1,0/1300  | N52804505                       | 1000        | 850 - 1300        | 62        |

### Dimensions TBA

| Model | TBA 0,2/700 | TBA 0,3/900 | TBA 0,5/1100 | TBA 0,75/1300 | TBA 1,0/1300 |
|-------|-------------|-------------|--------------|---------------|--------------|
| A, mm | 890         | 1090        | 1290         | 1550          | 1550         |
| B, mm | 420         | 420         | 420          | 420           | 420          |
| C, mm | 500         | 500         | 500          | 500           | 500          |
| D, mm | 35          | 35          | 35           | 35            | 35           |
| E, mm | 20          | 20          | 20           | 20            | 20           |



TBA 0.2-1t with serrated jaw

## TCR Rail grab with safety lock

Capacity 1000 - 2000 kg

The TCR rail grab transports rails, as used by railways, easily and safely. A safe grip is ensured by the lever operated safety lock. For long rails, two grabs must be attached to a spreader beam to avoid sagging.

Since the rails are primarily grabbed with positive fit, it is important that the clamp stays in a vertical position during initial lift.



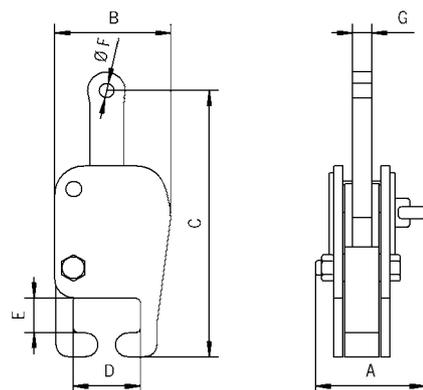
### Technical data TCR

| Model   | Art.-No.  | Capacity kg | Weight kg |
|---------|-----------|-------------|-----------|
| TCR 1,0 | N51402351 | 1000        | 12.4      |
| TCR 2,0 | N51402352 | 2000        | 13.9      |

### Dimensions TCR

| Model               | TCR 1,0 | TCR 2,0 |
|---------------------|---------|---------|
| A <sup>1</sup> , mm | 144     | 144     |
| B, mm               | 152     | 163     |
| C, mm               | 350     | 350     |
| D, mm               | 90      | 90      |
| E, mm               | 46      | 46      |
| Ø F, mm             | 20      | 20      |
| G, mm               | 25      | 25      |

<sup>1</sup> Scissor dimensions



### INFO

For special sizes please advise rail type and profile!

A TCR multiple rail system is also available for the simultaneous transport of up to 12 rails.

For rail jacks please see page 124.



TCU



TCO



Container lifting lug TCO

## TCU and TCO Container lifting lugs

Capacity 32000 - 56000 kg

The lugs serve as flexible attachment points for the transport of containers. Two types are available which can be fastened to either the "top" or to the "bottom" of the container.

These container lifting lugs are offered in a set of 4 pieces.

### TCO

Model TCO is vertically mounted in the hole at the top of the container. Turning the TCO 90°, locks it securely in place.

Transport is done with the use of a spreader beam in conjunction with wire rope, chain or textile slings making sure the load is suspended vertically.

### TCU

Model TCU is laterlay mounted at the bottom fixing hole on the container and has a spring-loaded bolt to prevent an accidental release.

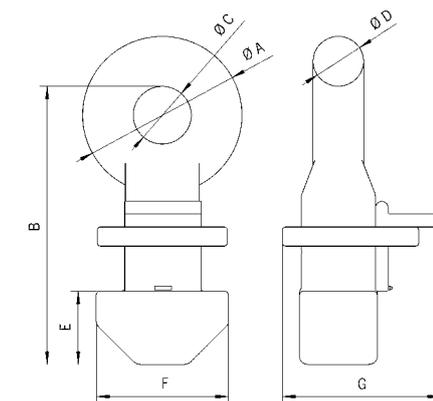
### Technical data TCO and TCU

| Model  | Art.-No.  | Capacity <sup>1</sup><br>kg | Weight <sup>1</sup><br>kg | Sling angle from<br>vertical |
|--------|-----------|-----------------------------|---------------------------|------------------------------|
| TCU 32 | N53508014 | 32000                       | 19.5                      | 50°                          |
| TCU 40 | N53508014 | 40000                       | 19.5                      | 36°                          |
| TCO 56 | N53508016 | 56000                       | 30.1                      | vertical                     |

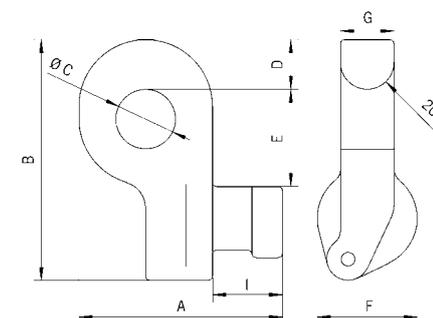
<sup>1</sup>set of 4 pieces

### Dimensions TCO and TCU

| Model   | TCU 32 | TCU 40 | TCO 56 |
|---------|--------|--------|--------|
| A, mm   | 152    | 152    | 123    |
| B, mm   | 181    | 181    | 217    |
| Ø C, mm | 45     | 45     | 45     |
| D, mm   | 37     | 37     | 39     |
| E, mm   | 73     | 73     | 57     |
| F, mm   | 75     | 75     | 101    |
| G, mm   | 40     | 40     | 121    |
| I, mm   | 51     | 51     | -      |



TCO



TCU

## TKB Clamps for cable drums

Capacity 5000 kg

Specifically designed for the transport of cable drums, these clamps are used in pairs together with a two-legged chain sling.

By the spreading of the clamp, it locks inside the drum.

The clamps can be held in place by a locking lever.

Easy handling, light-weight design, and the size of the clamp contribute to a safe transport of all types of cable drums.



## INFO

Various sizes are available on request.  
Please supply dimensions C and D!

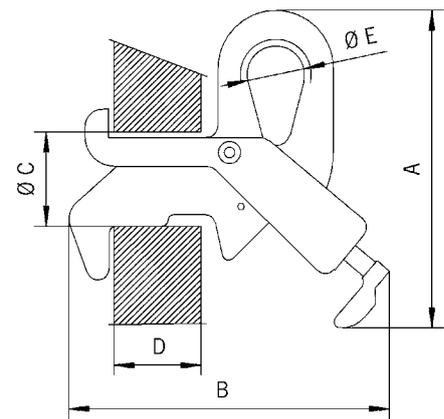
### Technical data TKB

| Model | Art.-No.  | Capacity <sup>1</sup><br>kg | Weight<br>kg |
|-------|-----------|-----------------------------|--------------|
| TKB   | N52210000 | 5000                        | 11           |

<sup>1</sup>Per pair

### Dimensions TKB

| Model   | TKB |
|---------|-----|
| A, mm   | 277 |
| B, mm   | 277 |
| Ø C, mm | 82  |
| D, mm   | 85  |
| Ø E, mm | 50  |





The picture shows the standard version with tines 3/4 length of the coil

## TCK C-hook

Capacity 500 - 10000 kg

Coils, rolls, rings and similar items are transported safely with the Tigrip C-hooks.

Tine length and usable height with the most frequently encountered coil sizes are listed in the table below.

Other working loads, measurements, and models, such as C-hooks with automatic balancing device, are available on request.

### Technical data TCK

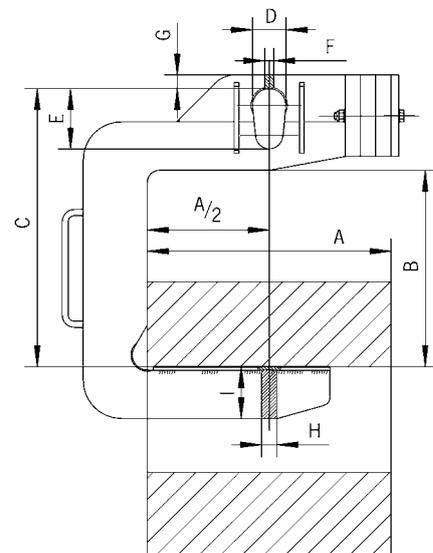
| Model         | Art.-No.  | Capacity kg | Weight kg |
|---------------|-----------|-------------|-----------|
| TCK 0,5/300   | N53507801 | 500         | 21        |
| TCK 0,5/500   | N53507802 | 500         | 30        |
| TCK 0,5/800   | N53507803 | 500         | 46        |
| TCK 1,0/300   | N53507804 | 1000        | 28        |
| TCK 1,0/500   | N53507805 | 1000        | 40        |
| TCK 1,0/800   | N53507806 | 1000        | 95        |
| TCK 2,0/300   | N53507807 | 2000        | 45        |
| TCK 2,0/500   | N53507808 | 2000        | 90        |
| TCK 2,0/800   | N53507809 | 2000        | 140       |
| TCK 2,0/1000  | N53507810 | 2000        | 180       |
| TCK 3,0/300   | N53507811 | 3000        | 68        |
| TCK 3,0/500   | N53507812 | 3000        | 127       |
| TCK 3,0/800   | N53507813 | 3000        | 165       |
| TCK 3,0/1000  | N53507814 | 3000        | 215       |
| TCK 5,0/500   | N53507815 | 5000        | 184       |
| TCK 5,0/800   | N53507816 | 5000        | 238       |
| TCK 5,0/1000  | N53507817 | 5000        | 286       |
| TCK 5,0/1250  | N53507818 | 5000        | 364       |
| TCK 7,5/800   | N53507819 | 7500        | 390       |
| TCK 7,5/1000  | N53507820 | 7500        | 520       |
| TCK 7,5/1250  | N53507821 | 7500        | 650       |
| TCK 7,5/1500  | N53507822 | 7500        | 767       |
| TCK 10,0/1000 | N53507823 | 10000       | 772       |
| TCK 10,0/1250 | N53507824 | 10000       | 810       |
| TCK 10,0/1500 | N53507825 | 10000       | 980       |

Dimensions TCK

| Model               | TCK<br>0,5/300 | TCK<br>0,5/500 | TCK<br>0,5/800 | TCK<br>1,0/300 | TCK<br>1,0/500 | TCK<br>1,0/800 | TCK<br>2,0/300 | TCK<br>2,0/500 | TCK<br>2,0/800 | TCK<br>2,0/1000 |
|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Coil width A, mm    | 300            | 500            | 800            | 300            | 500            | 800            | 300            | 500            | 800            | 1000            |
| Usable height B, mm | 400            | 400            | 400            | 450            | 450            | 450            | 500            | 500            | 500            | 500             |
| C, mm               | 570            | 580            | 580            | 620            | 630            | 630            | 700            | 700            | 720            | 720             |
| D, mm               | 60             | 60             | 60             | 60             | 60             | 60             | 75             | 75             | 75             | 75              |
| E, mm               | 120            | 120            | 120            | 120            | 120            | 120            | 150            | 150            | 150            | 150             |
| F, mm               | 20             | 20             | 25             | 25             | 20             | 30             | 25             | 30             | 30             | 20              |
| G, mm               | 25             | 23             | 23             | 23             | 23             | 23             | 38             | 38             | 38             | 35              |
| H, mm               | 20             | 20             | 25             | 20             | 25             | 30             | 25             | 30             | 30             | 40              |
| I, mm               | 50             | 65             | 70             | 70             | 80             | 90             | 90             | 110            | 125            | 125             |

| Model               | TCK<br>3,0/300 | TCK<br>3,0/500 | TCK<br>3,0/800 | TCK<br>3,0/1000 | TCK<br>5,0/500 | TCK<br>5,0/800 | TCK<br>5,0/1000 | TCK<br>5,0/1250 | TCK<br>7,5/800 | TCK<br>7,5/1000 |
|---------------------|----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|-----------------|
| Coil width A, mm    | 300            | 500            | 800            | 1000            | 500            | 800            | 1000            | 1250            | 800            | 1000            |
| Usable height B, mm | 500            | 500            | 500            | 500             | 550            | 550            | 550             | 550             | 600            | 600             |
| C, mm               | 700            | 700            | 720            | 720             | 800            | 800            | 820             | 820             | 900            | 900             |
| D, mm               | 75             | 75             | 75             | 75              | 100            | 100            | 100             | 100             | 110            | 110             |
| E, mm               | 150            | 150            | 150            | 150             | 200            | 200            | 200             | 200             | 220            | 220             |
| F, mm               | 30             | 20             | 25             | 20              | 25             | 30             | 30              | 30              | 35             | 35              |
| G, mm               | 38             | 40             | 40             | 40              | 45             | 45             | 45              | 45              | 50             | 50              |
| H, mm               | 30             | 30             | 40             | 40              | 40             | 50             | 50              | 50              | 50             | 60              |
| I, mm               | 105            | 125            | 140            | 155             | 145            | 160            | 180             | 200             | 200            | 200             |

| Model               | TCK<br>7,5/1250 | TCK<br>7,5/1500 | TCK<br>10,0/1000 | TCK<br>10,0/1250 | TCK<br>10,0/1500 |
|---------------------|-----------------|-----------------|------------------|------------------|------------------|
| Coil width A, mm    | 1250            | 1500            | 1000             | 1250             | 1500             |
| Usable height B, mm | 600             | 600             | 650              | 650              | 650              |
| C, mm               | 900             | 920             | 980              | 1000             | 1000             |
| D, mm               | 110             | 110             | 130              | 130              | 130              |
| E, mm               | 220             | 220             | 250              | 250              | 250              |
| F, mm               | 35              | 35              | 40               | 45               | 45               |
| G, mm               | 45              | 50              | 50               | 55               | 55               |
| H, mm               | 60              | 70              | 70               | 70               | 80               |
| I, mm               | 220             | 220             | 220              | 240              | 240              |



TCK specials

with 4/4 length of tines and safety nose on request



## TCS Coil hook

Capacity 500 - 3000 kg

The TCS coil hook is an universal C-Hook. Due to its tipping feature, it can lift or lower the coil, whether the coil is lying flat or is in an upright position. With this tipping device, the coil is tipped safely through 90°.

The slow and safe movement of the tipping device ensures a continuous flowing movement when lifting or lowering the coil. At the same time, the tipping device serves the purpose of preventing accidental slipping of the load during transport.

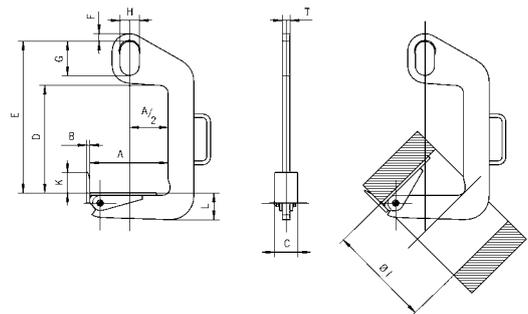


## INFO

Other sizes and models available on request.

## Technical data TCS

| Model       | Art.-No.  | Capacity kg | Weight kg |
|-------------|-----------|-------------|-----------|
| TCS 0,5/120 | N53507850 | 500         | 6.9       |
| TCS 0,5/200 | N53507851 | 500         | 9.6       |
| TCS 1,0/200 | N53507852 | 1000        | 15.4      |
| TCS 1,0/300 | N53507853 | 1000        | 20.0      |
| TCS 2,0/200 | N53507854 | 2000        | 24.8      |
| TCS 2,0/300 | N53507855 | 2000        | 33.4      |
| TCS 3,0/200 | N53507856 | 3000        | 45.0      |
| TCS 3,0/300 | N53507857 | 3000        | 51.0      |



## Dimensions TCS

| Model                 | TCS 0,5/120 | TCS 0,5/200 | TCS 1,0/200 | TCS 1,0/300 | TCS 2,0/200 | TCS 2,0/300 | TCS 3,0/200 | TCS 3,0/300 |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Coil width A min, mm  | 50          | 100         | 100         | 200         | 100         | 200         | 100         | 200         |
| Coil width A max., mm | 120         | 200         | 200         | 300         | 200         | 300         | 200         | 300         |
| B, mm                 | 10          | 10          | 10          | 10          | 12          | 12          | 15          | 15          |
| C, mm                 | 60          | 60          | 80          | 80          | 90          | 90          | 100         | 100         |
| D, mm                 | 330         | 330         | 460         | 460         | 420         | 420         | 610         | 610         |
| E, mm                 | 470         | 470         | 600         | 600         | 600         | 600         | 820         | 820         |
| F, mm                 | 20          | 20          | 20          | 20          | 30          | 30          | 40          | 40          |
| G, mm                 | 110         | 110         | 110         | 110         | 135         | 135         | 160         | 160         |
| H, mm                 | 60          | 60          | 60          | 60          | 75          | 75          | 90          | 90          |
| K, mm                 | 50          | 50          | 60          | 60          | 80          | 80          | 100         | 100         |
| L, mm                 | 45          | 50          | 65          | 70          | 85          | 95          | 100         | 110         |
| T, mm                 | 20          | 20          | 25          | 25          | 30          | 30          | 35          | 35          |
| Ø I, mm               | 220         | 300         | 300         | 400         | 300         | 400         | 300         | 400         |



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## TFA D

### Barrel grab with tipping device

Capacity 300 kg

The grab with tipping device is suited to lift, transport as well as tipping and emptying the barrel.

In order to tip the barrel easily, it must be picked up at the correct center of gravity.



## INFO

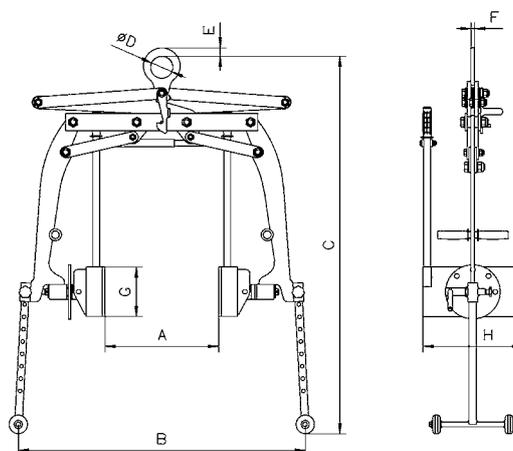
For barrels according to EN ISO 15750-2.

### Technical data TFA D

| Model         | Art.-No.  | Capacity<br>kg | Jaw capacity Z<br>diameter<br>mm | Weight<br>kg |
|---------------|-----------|----------------|----------------------------------|--------------|
| TFA 0,3/600 D | N52203404 | 300            | 400 - 600                        | 83           |

### Dimensions TFA D

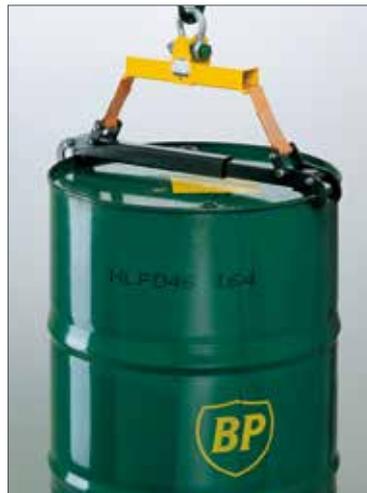
| Model   | TFA 0,3/600 D |
|---------|---------------|
| A, mm   | 600           |
| B, mm   | 1150          |
| C, mm   | 1525          |
| Ø D, mm | 90            |
| E, mm   | 34            |
| F, mm   | 15            |
| G, mm   | 200           |
| H, mm   | 400           |



TFA 0,35/700 R and  
TFA 0,35/700 TR  
Barrel grab

Capacity 350 kg

These barrel grabs are designed for transport of steel barrels. The clamping jaws press securely with a positive fit underneath the rim of the barrel.



TFA-R



TFA-TR

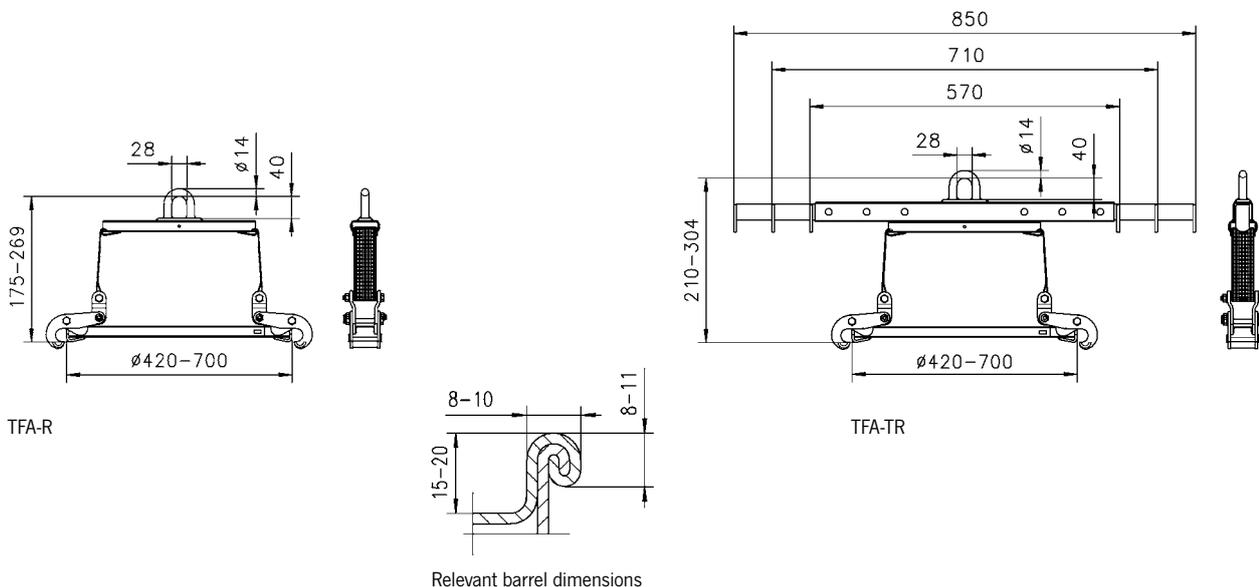
INFO

TFA 0,35/700 TR is a combination unit for the transport of barrels that can be used with either an overhead crane or forklift.

For barrels according to EN ISO 15750-2.

Technical data TFA R/TR

| Model           | Art.-No.  | Capacity | Jaw capacity Z | Weight |
|-----------------|-----------|----------|----------------|--------|
|                 |           | kg       | diameter mm    |        |
| TFA 0,35/700 R  | N52303561 | 350      | 420 - 700      | 5.7    |
| TFA 0,35/700 TR | N52303562 | 350      | 420 - 700      | 9.2    |





## TFRK Barrel rim clamp

Capacity 500 kg

The TFRK barrel rim clamp can be used individually, as a pair, or as a multi-legged chain sling.

The clamp grabs under the rim of the barrel. A spring-loaded cam prevents the accidental opening of the clamp.

## INFO

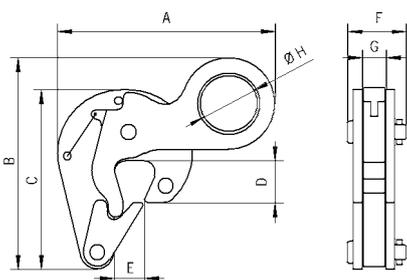
For barrels according to EN ISO 15750-2.

### Technical data TFRK

| Model | Art.-No.  | Capacity kg | Weight kg |
|-------|-----------|-------------|-----------|
| TFRK  | N52203456 | 500         | 1.5       |

### Dimensions TFRK

| Model   | TFRK 0,5 |
|---------|----------|
| A, mm   | 152      |
| B, mm   | 150      |
| C, mm   | 127      |
| D, mm   | 30       |
| E, mm   | 21       |
| F, mm   | 41       |
| G, mm   | 17       |
| Ø H, mm | 40       |



**TFK**  
**Barrel clamp**

Capacity 500 kg

Its light weight and small overall design makes it ideal for lifting barrels where access or space is limited.

The center of gravity of the barrel is the lifting point during transport.



**INFO**

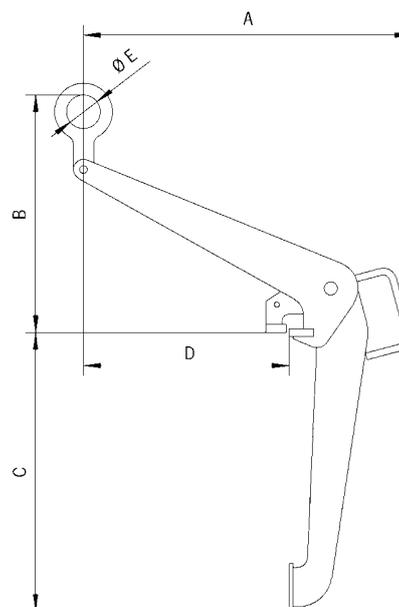
For barrels according to EN ISO 15750-2.

**Technical data TFK**

| Model   | Art.-No.  | Capacity kg | Weight kg |
|---------|-----------|-------------|-----------|
| TFK 0,5 | N52203455 | 500         | 7.3       |

**Dimensions TFK**

| Model   | TFK 0,5 |
|---------|---------|
| A, mm   | 479     |
| B, mm   | 350     |
| C, mm   | 410     |
| D, mm   | 300     |
| Ø E, mm | 50      |





## TKA/d Crate grab with tipping device

Capacity 150 kg

The crate grab with tipping device is an absolutely safe unit, which not only securely transports stacking boxes, but can empty them in mid-air as well.

The crate grab is very robust but still very easy to operate and complies with the relevant standards and EC directives.

A safety lever system prevents the accidental opening of the grab.

The clamping jaws tightly grab under the rim of the crate without damaging the crate. To engage the tipping motion in order to empty the crate, the safety lock must be manually unlocked. The tipping motion is limited to 120°. This prevents the crate from flipping completely over while emptying, thereby reducing the risk of injury.

### Option

- Grabs for other sizes of crates.

## INFO

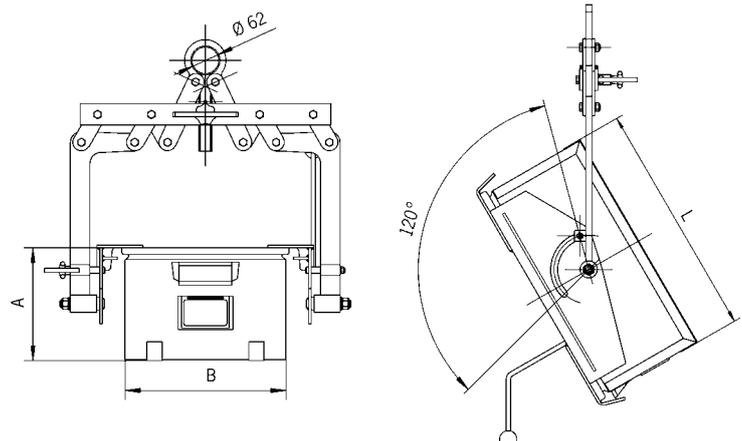
Please provide the crate dimensions or a sample crate when ordering.

### Technical data TKA/d

| Model         | Art.-No.  | Capacity kg | Weight kg |
|---------------|-----------|-------------|-----------|
| TKA 0,15/330d | N52123220 | 150         | 25.8      |
| TKA 0,15/480d | N52123225 | 150         | 26.0      |

### Dimensions TKA/d

| Model | TKA 0,15/330d | TKA 0,15/480d |
|-------|---------------|---------------|
| A, mm | 200 - 300     | 300           |
| B, mm | 315 - 330     | 470 - 480     |
| L, mm | 465 - 540     | 550 - 660     |



**TKA a/i  
Crate grab**

Capacity 250 kg

The easy-handling crate grab, which grabs on the side plates or the front sides of the crate, transports crates safely and without damaging them.

The moveable jaws press the edge of the crate gently against the outside grab support rails. Stacking boxes made of steel or plastic will not get deformed. After the box has been set down, the safety device holds the grab open.

When lifting the crate and grabbing the support rails, the safety device must be manually pulled back until it lies over the safety bolt. With further lifting, the jaws grab under the outer top edge of the crate and lift it up safely.

The crate grab is available as an external or internal operating grab.



TKA.../...a external operating



TKA.../...i internal operating



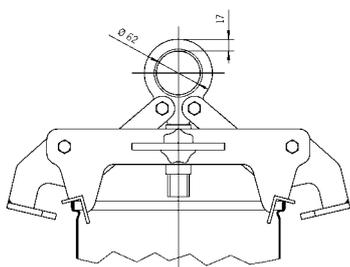
TKA.../...i internal operating

**INFO**

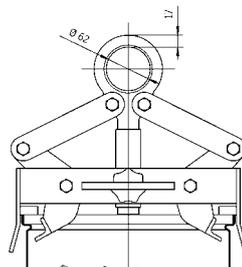
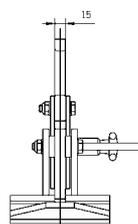
Please provide the crate dimensions or a sample crate when ordering.

**Technical data TKA a/i**

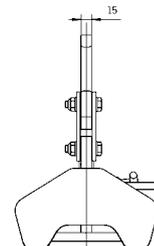
| Model         | Art.-No.  | Capacity kg | Weight kg | Jaw capacity mm |
|---------------|-----------|-------------|-----------|-----------------|
| TKA 0,25/320a | N52103210 | 250         | 9.3       | 320             |
| TKA 0,25/480a | N52103207 | 250         | 9.3       | 480             |
| TKA 0,25/600a | N52103208 | 250         | 9.3       | 600             |
| TKA 0,25/320i | N52103204 | 250         | 8.5       | 320             |
| TKA 0,25/480i | N52103206 | 250         | 8.5       | 480             |
| TKA 0,25/600i | N52103209 | 250         | 8.5       | 600             |



TKA.../...a external operating



TKA.../...i internal operating





## BTG Concrete pipe lifting gear

Capacity 1500 - 3000 kg

Lifting gear for the vertical transport of concrete pipe and culverts must be very versatile. Most important, it must be absolutely safe and easy to handle under even the harshest conditions.

The Tigrip concrete pipe lifting gear meets all these requirements. It is a three legged lifting system for the safe and non-marring transport of concrete pipes up to a diameter of Ø 2000 mm and a load of up to 3 t.

The jaw capacity is designed for concrete pipe thicknesses from 40 - 220 mm.

Attachment and removal of the clamps can be done easily due to the handles that have been incorporated into each clamp.

### Features

- Solid design
- Safety factor 4:1
- Simple and safe handling
- Large jaw capacity
- For the toughest operating conditions
- Lightweight design
- Service-friendly

## INFO

For concrete pipes according to DIN 4034.

Lifting gear for concrete pipe up to a diameter of Ø 3000 mm available on request!



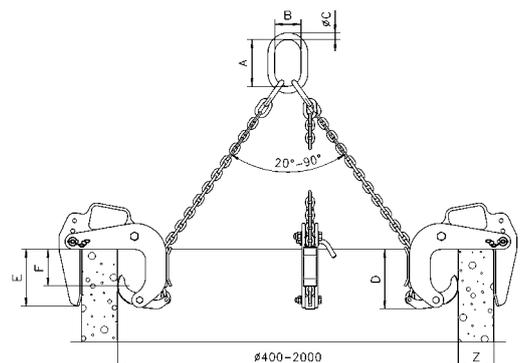
## Technical data BTG

| Model            | Art.-No.  | Capacity <sup>1</sup><br>kg | Jaw capacity Z<br>mm | Mouth depth E<br>mm | Pressure line F<br>mm | Chain Ø<br>mm | Weight<br>kg |
|------------------|-----------|-----------------------------|----------------------|---------------------|-----------------------|---------------|--------------|
| BTG 1,5/120      | N54609200 | 1500                        | 40 - 120             | 165                 | 100                   | 6             | 35           |
| BTG 3,0/180 TM-N | N54609204 | 3000                        | 50 - 180             | 245                 | 175                   | 10            | 90           |
| BTG 3,0/220 TM-N | N54609206 | 3000                        | 90 - 220             | 245                 | 175                   | 10            | 94           |

<sup>1</sup>Per lifting gear - three legged

## Dimensions BTG

| Model   | BTG<br>1,5/120 | BTG<br>3,0/180 TM-N | BTG<br>3,0/220 TM-N |
|---------|----------------|---------------------|---------------------|
| A, mm   | 135            | 180                 | 180                 |
| B, mm   | 75             | 100                 | 100                 |
| Ø C, mm | 18             | 26                  | 26                  |
| D, mm   | 180            | 310                 | 310                 |



**TCP**  
**Trench shield grab**

Capacity 1500 - 5500 kg

The TCP grab is suitable for vertical positioning and transportation of trench shields.

Once the grab is set onto the trench shield, a spring-loaded bolt locks itself into the hole of the shield. Releasing the bolt is done with the 15 m pull cord attached to the grab.

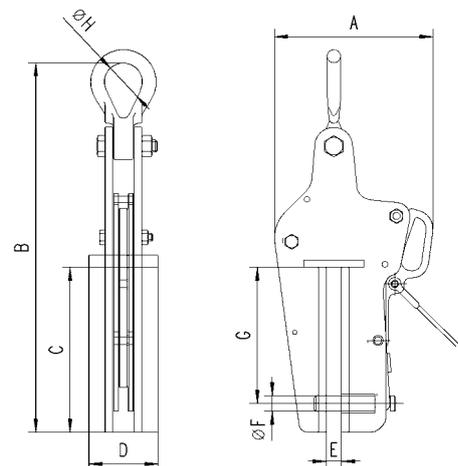


**Technical data TCP**

| Model   | Art.-No.  | Capacity kg | Weight kg |
|---------|-----------|-------------|-----------|
| TCP 1,5 | N56000001 | 1500        | 12.2      |
| TCP 3,0 | N56000002 | 3000        | 19.5      |
| TCP 5,5 | N56000003 | 5500        | 26.7      |

**Dimensions TCP**

| Model   | TCP 1,5 | TCP 3,0 | TCP 5,5 |
|---------|---------|---------|---------|
| A, mm   | 207     | 226     | 269     |
| B, mm   | 488     | 517     | 575     |
| C, mm   | 218     | 218     | 218     |
| D, mm   | 90      | 100     | 120     |
| E, mm   | 18      | 24      | 24      |
| Ø F, mm | 20      | 24      | 30      |
| G, mm   | 180     | 180     | 180     |
| Ø H, mm | 50      | 63      | 89      |





## TPP

### Trench shield clamp

Capacity 3000 - 8000 kg

The TPP trench shield clamp is similar to a regular plate clamp in its construction but has a much deeper jaw.

The compact construction combined with a high capacity makes it ideal for pulling trench shields out of the ground.

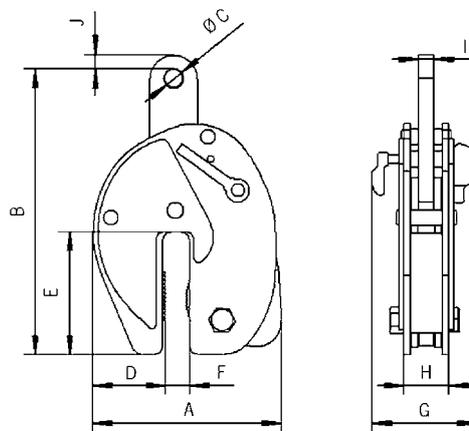
A safety lock prevents the accidental opening of the clamp.

#### Technical data TPP

| Model | Art.-No.  | Capacity kg | Jaw capacity mm | Weight kg |
|-------|-----------|-------------|-----------------|-----------|
| TPP 3 | N51502418 | 3000        | 0 - 16          | 16.0      |
| TPP 8 | N51502416 | 8000        | 0 - 30          | 27.8      |

#### Dimensions TPP

| Model   | TPP 3 | TPP 8 |
|---------|-------|-------|
| A, mm   | 224   | 294   |
| B, mm   | 325   | 445   |
| Ø C, mm | 20    | 30    |
| D, mm   | 88    | 109   |
| E, mm   | 147   | 194   |
| F, mm   | 25    | 42    |
| G, mm   | 123   | 146   |
| H, mm   | 60    | 72    |
| I, mm   | 20    | 25    |
| J, mm   | 18    | 26    |



TRO

Pipe hook

Capacity 2000 - 10000 kg

The pipe hooks are used in pairs for the safe transport of pipes.

Scope of delivery

The shackles are included with the hooks.

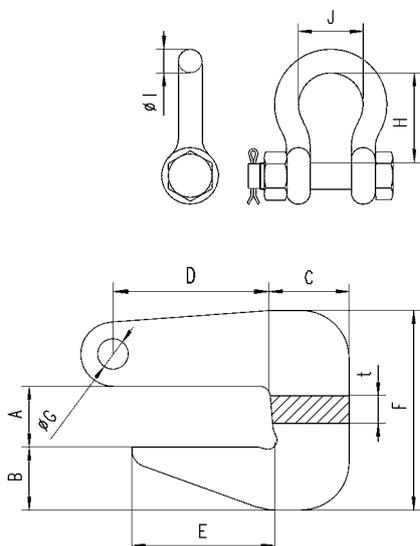
Technical data TRO für 60° - 90° chain-top angle

| Model     | Art.-No.  | Capacity <sup>1</sup><br>kg | Weight <sup>1</sup><br>kg |
|-----------|-----------|-----------------------------|---------------------------|
| TRO 2/90  | N53508004 | 2000                        | 3.1                       |
| TRO 4/90  | N53508005 | 4000                        | 5.6                       |
| TRO 6/90  | N53508006 | 6000                        | 10.5                      |
| TRO 8/90  | N53508007 | 8000                        | 17.8                      |
| TRO 10/90 | N53508008 | 10000                       | 22.0                      |

<sup>1</sup>Per pair

Dimensions TRO für 60° - 90° chain-top angle

| Model   | TRO 2/90 | TRO 4/90 | TRO 6/90 | TRO 8/90 | TRO 10/90 |
|---------|----------|----------|----------|----------|-----------|
| t, mm   | 20       | 30       | 30       | 40       | 40        |
| A, mm   | 0 - 40   | 0 - 50   | 0 - 60   | 0 - 70   | 0 - 80    |
| B, mm   | 35       | 40       | 51       | 55       | 69        |
| C, mm   | 40       | 48       | 62       | 67       | 80        |
| D, mm   | 62       | 77       | 90       | 105      | 115       |
| E, mm   | 62       | 77       | 90       | 105      | 115       |
| F, mm   | 116      | 142      | 173      | 190      | 221       |
| Ø G, mm | 16.3     | 24.3     | 24.3     | 30.3     | 30.3      |
| H, mm   | 47.6     | 72.2     | 72.2     | 95.3     | 95.3      |
| Ø I, mm | 12.7     | 19       | 19       | 25.4     | 25.4      |
| J, mm   | 30.2     | 44.5     | 44.5     | 58.7     | 58.7      |



### Spreader beam range

Bulkier or heavier loads must be carried on multiple points to ensure safe weight distribution and less sagging. The extensive TIGRIP® range provides a vast choice of load capacities, working widths, adjustment ranges and hook types to cater for the great majority of applications. In addition to our quality-engineered, robust and cost-effective standard range, we can also provide special designs to meet individual, bespoke customer requirements.

Options include side welding hooks (so-called cow horns), that take rope loops or lifting bands' crane eye for carrying pipes. Rolls or rollers on two or more points; star crossbars for carrying cylindrical items, or transverse crossbars for four point suspension, a further version of the reliable, easy to use and safe TIGRIP® crane hook spreader beams.

Spreader beams can be used for a diverse range of shapes and designs, and can be individually designed to meet specific applications. The following illustrations provide a short overview of the many designs available. Suspension and load carrying variants can be easily combined with most designs.



### Suspension variants

#### Eyelet suspension

**Standard suspension for use with single hooks according to DIN 15401**

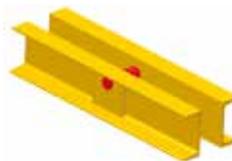
Possible for defined load centre of gravity for symmetrical but also asymmetrical loads.



#### Chain suspension

**To stabilise swinging movements**

Multitude of options in combination with our chain programme. Lifting ring for single hooks but also double hooks Shortening hooks allow the centre of gravity to be adjusted for asymmetrical loads.



#### Internal bolt suspension

**To reduce the build height**

Fixed welded-on but also plug-in variants possible.



#### Double eyelet suspension for two crane operation

**Allows the spreader beam to be used on two cranes at the same time**

Each suspension variant can be operated as a double suspension.



#### Bracket suspension

**For use with double hooks according to DIN 15402**

## Load carrying variants

### Eyehooks

with forged safety latch

For use with any sling or sling points.



### Swivel hooks

Allows alignment of the hook to the sling point

Variants possible with plain-bearing mounted swivel (cannot be rotated under load) and also ball-bearing mounted swivel (can be rotated under load).



### Front welded-on hook

(cow horn with safety latch)

To reduce the height on single spreader beam



### Welded-on hooks

(cow horns with safety latch)

For use with two single-stranded or singly wrapped sling

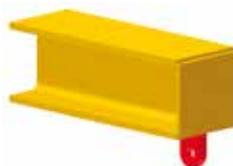
Also possible with adjusting bracket.



### Mounting eyelets

for fixed slings

With the mounting eyelets, the spreader beam can be combined with any slings from our programme.



### Centre hooks

For crane use if the crossbar is not required

With the centre hook there is no need to place and remove the spreader beam.

Variants possible as eyehooks or swivel hooks.





## TTS-E Spreader beam, non-adjustable

Capacity 1000 - 10000 kg

For the transport of symmetrical loads.

### Features

- Lifting brackets for single hook according to DIN 15401
- Eyehooks with forged safety latch

### Options

- Other capacities
- Working widths according customer requirements
- Accentral suspension for asymmetrical loads

### Technical data TTS-E

| Model           | Art.-No.  | Capacity kg | Working width Z mm | Hook mouth mm | Weight kg |
|-----------------|-----------|-------------|--------------------|---------------|-----------|
| TTS 1,0/1000 E  | N53106201 | 1000        | 1000               | 23            | 23        |
| TTS 2,0/1000 E  | N53106202 | 2000        | 1000               | 23            | 25        |
| TTS 3,0/1000 E  | N53106203 | 3000        | 1000               | 30            | 28        |
| TTS 5,0/1000 E  | N53106204 | 5000        | 1000               | 38            | 41        |
| TTS 7,5/1000 E  | N53106205 | 7500        | 1000               | 42            | 50        |
| TTS 10,0/1000 E | N53106206 | 10000       | 1000               | 42            | 61        |
| TTS 1,0/1500 E  | N53106211 | 1000        | 1500               | 23            | 31        |
| TTS 2,0/1500 E  | N53106212 | 2000        | 1500               | 23            | 33        |
| TTS 3,0/1500 E  | N53106213 | 3000        | 1500               | 30            | 41        |
| TTS 5,0/1500 E  | N53106214 | 5000        | 1500               | 38            | 64        |
| TTS 7,5/1500 E  | N53106215 | 7500        | 1500               | 42            | 74        |
| TTS 10,0/1500 E | N53106216 | 10000       | 1500               | 42            | 90        |
| TTS 1,0/2500 E  | N53106221 | 1000        | 2500               | 23            | 46        |
| TTS 2,0/2500 E  | N53106222 | 2000        | 2500               | 23            | 69        |
| TTS 3,0/2500 E  | N53106223 | 3000        | 2500               | 30            | 88        |
| TTS 5,0/2500 E  | N53106224 | 5000        | 2500               | 38            | 106       |
| TTS 7,5/2500 E  | N53106225 | 7500        | 2500               | 42            | 148       |
| TTS 10,0/2500 E | N53106226 | 10000       | 2500               | 42            | 181       |
| TTS 1,0/3500 E  | N53106231 | 1000        | 3500               | 23            | 77        |
| TTS 2,0/3500 E  | N53106232 | 2000        | 3500               | 23            | 118       |
| TTS 3,0/3500 E  | N53106233 | 3000        | 3500               | 30            | 138       |
| TTS 5,0/3500 E  | N53106234 | 5000        | 3500               | 38            | 167       |
| TTS 7,5/3500 E  | N53106235 | 7500        | 3500               | 42            | 235       |
| TTS 10,0/3500 E | N53106236 | 10000       | 3500               | 42            | 272       |
| TTS 1,0/5000 E  | N53106241 | 1000        | 5000               | 23            | 163       |
| TTS 2,0/5000 E  | N53106242 | 2000        | 5000               | 23            | 189       |
| TTS 3,0/5000 E  | N53106243 | 3000        | 5000               | 30            | 223       |
| TTS 5,0/5000 E  | N53106244 | 5000        | 5000               | 38            | 295       |
| TTS 7,5/5000 E  | N53106245 | 7500        | 5000               | 42            | 372       |
| TTS 10,0/5000 E | N53106246 | 10000       | 5000               | 42            | 478       |

Dimensions TTS-E

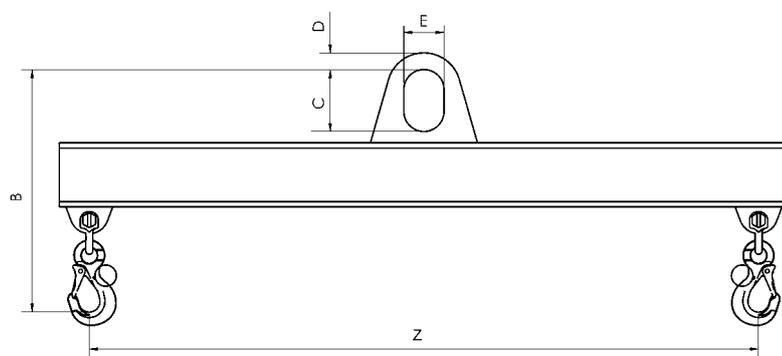
| Model | TTS<br>1,0/1000 E | TTS<br>2,0/1000 E | TTS<br>3,0/1000 E | TTS<br>5,0/1000 E | TTS<br>7,5/1000 E | TTS<br>10,0/1000 E |
|-------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| B, mm | 405               | 430               | 500               | 615               | 720               | 800                |
| C, mm | 110               | 135               | 160               | 180               | 200               | 260                |
| D, mm | 25                | 30                | 35                | 40                | 60                | 70                 |
| E, mm | 60                | 75                | 90                | 100               | 130               | 130                |

| Model | TTS<br>1,0/1500 E | TTS<br>2,0/1500 E | TTS<br>3,0/1500 E | TTS<br>5,0/1500 E | TTS<br>7,5/1500 E | TTS<br>10,0/1500 E |
|-------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| B, mm | 405               | 430               | 520               | 635               | 740               | 820                |
| C, mm | 110               | 135               | 160               | 180               | 200               | 260                |
| D, mm | 25                | 30                | 35                | 40                | 60                | 70                 |
| E, mm | 60                | 75                | 90                | 100               | 130               | 130                |

| Model | TTS<br>1,0/2500 E | TTS<br>2,0/2500 E | TTS<br>3,0/2500 E | TTS<br>5,0/2500 E | TTS<br>7,5/2500 E | TTS<br>10,0/2500 E |
|-------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| B, mm | 405               | 470               | 560               | 655               | 780               | 860                |
| C, mm | 110               | 135               | 160               | 180               | 200               | 260                |
| D, mm | 25                | 30                | 35                | 40                | 60                | 70                 |
| E, mm | 60                | 75                | 90                | 100               | 130               | 130                |

| Model | TTS<br>1,0/3500 E | TTS<br>2,0/3500 E | TTS<br>3,0/3500 E | TTS<br>5,0/3500 E | TTS<br>7,5/3500 E | TTS<br>10,0/3500 E |
|-------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| B, mm | 435               | 490               | 580               | 695               | 800               | 880                |
| C, mm | 110               | 135               | 160               | 180               | 200               | 260                |
| D, mm | 25                | 30                | 35                | 40                | 60                | 70                 |
| E, mm | 60                | 75                | 90                | 100               | 130               | 130                |

| Model | TTS<br>1,0/5000 E | TTS<br>2,0/5000 E | TTS<br>3,0/5000 E | TTS<br>5,0/5000 E | TTS<br>7,5/5000 E | TTS<br>10,0/5000 E |
|-------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| B, mm | 475               | 510               | 600               | 715               | 820               | 920                |
| C, mm | 110               | 135               | 160               | 180               | 200               | 260                |
| D, mm | 25                | 30                | 35                | 40                | 60                | 70                 |
| E, mm | 60                | 75                | 90                | 100               | 130               | 130                |



INFO

The spreader beams can be combined with the different suspension types (see pages 202-203).



## TTS Spreader beam, adjustable

Capacity 1000 - 25000 kg

For the transport of symmetrical and asymmetrical loads.

### Features

- Lifting brackets for single hook according to DIN 15401
- Adjustment with grids
- Adjustable bracket with handle and swivel hook (cannot be rotated under load)

### Technical data TTS

| Model         | Art.-No.  | Capacity kg | Working width Z mm | Hook mouth mm | Weight kg |
|---------------|-----------|-------------|--------------------|---------------|-----------|
| TTS 1,0/1500  | N53106001 | 1000        | 700 - 1500         | 18            | 40        |
| TTS 2,0/1500  | N53106002 | 2000        | 700 - 1500         | 18            | 41        |
| TTS 3,0/1500  | N53106003 | 3000        | 700 - 1500         | 21            | 53        |
| TTS 5,0/1500  | N53106004 | 5000        | 700 - 1500         | 23            | 79        |
| TTS 7,5/1500  | N53106005 | 7500        | 700 - 1500         | 32            | 98        |
| TTS 10,0/1500 | N53106006 | 10000       | 700 - 1500         | 32            | 117       |
| TTS 12,5/1500 | N53106007 | 12500       | 700 - 1500         | 40            | 116       |
| TTS 15,0/1500 | N53106008 | 15000       | 700 - 1500         | 40            | 137       |
| TTS 20,0/1500 | N53106009 | 20000       | 700 - 1500         | 50            | 180       |
| TTS 25,0/1500 | N53106010 | 25000       | 700 - 1500         | 50            | 226       |
| TTS 1,0/2500  | N53106011 | 1000        | 1500 - 2500        | 18            | 58        |
| TTS 2,0/2500  | N53106012 | 2000        | 1500 - 2500        | 18            | 84        |
| TTS 3,0/2500  | N53106013 | 3000        | 1500 - 2500        | 21            | 105       |
| TTS 5,0/2500  | N53106014 | 5000        | 1500 - 2500        | 23            | 127       |
| TTS 7,5/2500  | N53106015 | 7500        | 1500 - 2500        | 32            | 178       |
| TTS 10,0/2500 | N53106016 | 10000       | 1500 - 2500        | 32            | 215       |
| TTS 12,5/2500 | N53106017 | 12500       | 1500 - 2500        | 40            | 198       |
| TTS 15,0/2500 | N53106018 | 15000       | 1500 - 2500        | 40            | 237       |
| TTS 20,0/2500 | N53106019 | 20000       | 1500 - 2500        | 50            | 287       |
| TTS 25,0/2500 | N53106020 | 25000       | 1500 - 2500        | 50            | 342       |
| TTS 1,0/3500  | N53106021 | 1000        | 1700 - 3500        | 18            | 95        |
| TTS 2,0/3500  | N53106022 | 2000        | 1700 - 3500        | 18            | 137       |
| TTS 3,0/3500  | N53106023 | 3000        | 1700 - 3500        | 21            | 162       |
| TTS 5,0/3500  | N53106024 | 5000        | 1700 - 3500        | 23            | 228       |
| TTS 7,5/3500  | N53106025 | 7500        | 1700 - 3500        | 32            | 278       |
| TTS 10,0/3500 | N53106026 | 10000       | 1700 - 3500        | 32            | 317       |
| TTS 12,5/3500 | N53106027 | 12500       | 1700 - 3500        | 40            | 295       |
| TTS 15,0/3500 | N53106028 | 15000       | 1700 - 3500        | 40            | 340       |
| TTS 20,0/3500 | N53106029 | 20000       | 1700 - 3500        | 50            | 451       |
| TTS 25,0/3500 | N53106030 | 25000       | 1700 - 3500        | 50            | 512       |
| TTS 1,0/5000  | N53106031 | 1000        | 2000 - 5000        | 18            | 190       |
| TTS 2,0/5000  | N53106032 | 2000        | 2000 - 5000        | 18            | 219       |
| TTS 3,0/5000  | N53106033 | 3000        | 2000 - 5000        | 21            | 260       |
| TTS 5,0/5000  | N53106034 | 5000        | 2000 - 5000        | 23            | 372       |
| TTS 7,5/5000  | N53106035 | 7500        | 2000 - 5000        | 32            | 423       |
| TTS 10,0/5000 | N53106036 | 10000       | 2000 - 5000        | 32            | 531       |
| TTS 12,5/5000 | N53106037 | 12500       | 2000 - 5000        | 40            | 449       |
| TTS 15,0/5000 | N53106038 | 15000       | 2000 - 5000        | 40            | 568       |
| TTS 20,0/5000 | N53106039 | 20000       | 2000 - 5000        | 50            | 691       |
| TTS 1,0/8000  | N53106040 | 1000        | 3000 - 8000        | 18            | 342       |
| TTS 2,0/8000  | N53106041 | 2000        | 3000 - 8000        | 18            | 458       |
| TTS 3,0/8000  | N53106042 | 3000        | 3000 - 8000        | 21            | 547       |
| TTS 5,0/8000  | N53106043 | 5000        | 3000 - 8000        | 23            | 788       |
| TTS 7,5/8000  | N53106044 | 7500        | 3000 - 8000        | 32            | 883       |
| TTS 10,0/8000 | N53106045 | 10000       | 3000 - 8000        | 32            | 1319      |
| TTS 12,5/8000 | N53106046 | 12500       | 3000 - 8000        | 40            | 979       |
| TTS 15,0/8000 | N53106047 | 15000       | 3000 - 8000        | 40            | 1046      |

Dimensions TTS

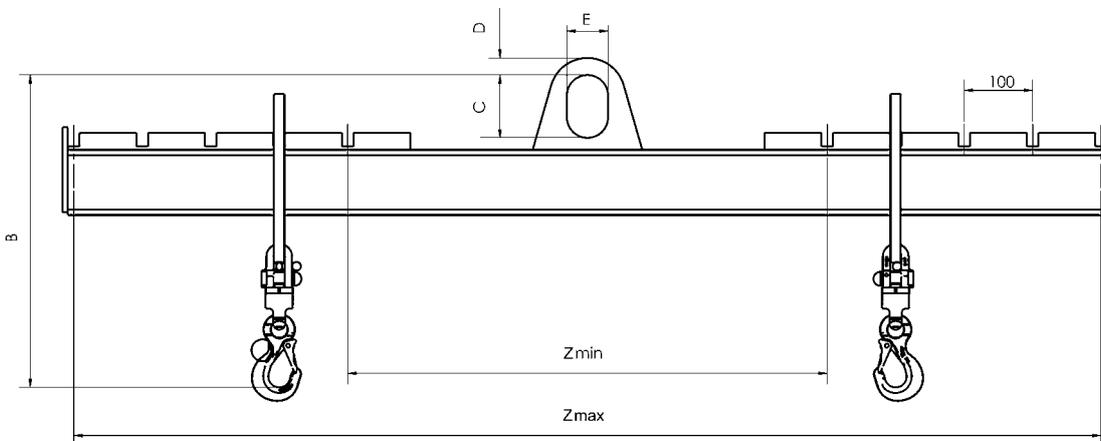
| Model | TTS 1,0/1500 | TTS 2,0/1500 | TTS 3,0/1500 | TTS 5,0/1500 | TTS 7,5/1500 | TTS 10,0/1500 | TTS 12,5/1500 | TTS 15,0/1500 | TTS 20,0/1500 | TTS 25,0/1500 |
|-------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| B, mm | 440          | 470          | 570          | 655          | 740          | 835           | 865           | 910           | 1020          | 1230          |
| C, mm | 110          | 135          | 160          | 180          | 200          | 260           | 260           | 260           | 260           | 300           |
| D, mm | 25           | 30           | 35           | 40           | 60           | 70            | 75            | 85            | 90            | 100           |
| E, mm | 60           | 75           | 90           | 100          | 130          | 130           | 140           | 140           | 160           | 160           |

| Model | TTS 1,0/2500 | TTS 2,0/2500 | TTS 3,0/2500 | TTS 5,0/2500 | TTS 7,5/2500 | TTS 10,0/2500 | TTS 12,5/2500 | TTS 15,0/2500 | TTS 20,0/2500 | TTS 25,0/2500 |
|-------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| B, mm | 440          | 505          | 610          | 675          | 785          | 880           | 915           | 955           | 1060          | 1255          |
| C, mm | 110          | 135          | 160          | 180          | 200          | 260           | 260           | 260           | 260           | 300           |
| D, mm | 25           | 30           | 35           | 40           | 60           | 70            | 75            | 85            | 90            | 100           |
| E, mm | 60           | 75           | 90           | 100          | 130          | 130           | 140           | 140           | 160           | 160           |

| Model | TTS 1,0/3500 | TTS 2,0/3500 | TTS 3,0/3500 | TTS 5,0/3500 | TTS 7,5/3500 | TTS 10,0/3500 | TTS 12,5/3500 | TTS 15,0/3500 | TTS 20,0/3500 | TTS 25,0/3500 |
|-------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|
| B, mm | 440          | 530          | 635          | 715          | 810          | 905           | 935           | 980           | 1115          | 1300          |
| C, mm | 110          | 135          | 160          | 180          | 200          | 260           | 260           | 260           | 260           | 300           |
| D, mm | 25           | 30           | 35           | 40           | 60           | 70            | 75            | 85            | 90            | 100           |
| E, mm | 60           | 75           | 90           | 100          | 130          | 130           | 140           | 140           | 160           | 160           |

| Model | TTS 1,0/5000 | TTS 2,0/5000 | TTS 3,0/5000 | TTS 5,0/5000 | TTS 7,5/5000 | TTS 10,0/5000 | TTS 12,5/5000 | TTS 15,0/5000 | TTS 20,0/5000 |
|-------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|
| B, mm | 495          | 550          | 655          | 740          | 830          | 950           | 980           | 1025          | 1155          |
| C, mm | 110          | 135          | 160          | 180          | 200          | 260           | 260           | 260           | 260           |
| D, mm | 25           | 30           | 35           | 40           | 60           | 70            | 75            | 85            | 90            |
| E, mm | 60           | 75           | 90           | 100          | 130          | 130           | 140           | 140           | 160           |

| Model | TTS 1,0/8000 | TTS 2,0/8000 | TTS 3,0/8000 | TTS 5,0/8000 | TTS 7,5/8000 | TTS 10,0/8000 | TTS 12,5/8000 | TTS 15,0/8000 |
|-------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|
| B, mm | 515          | 590          | 700          | 785          | 895          | 1010          | 1045          | 1085          |
| C, mm | 110          | 135          | 160          | 180          | 200          | 260           | 260           | 260           |
| D, mm | 25           | 30           | 35           | 40           | 60           | 70            | 75            | 85            |
| E, mm | 60           | 75           | 90           | 100          | 130          | 130           | 140           | 140           |



INFO

The spreader beams can be combined with the different suspension types (see pages 202-203).



**TTS-HE**  
H-frame spreader beam

Capacity up to 10000 kg  
For the transport of symmetrical loads.

**Features**

- Lifting brackets for single hook according to DIN 15401
- Eyehooks with forged safety latch

**Option**

- Accentral suspension for asymmetrical loads

**INFO**

Capacity, working length and width designed on individual customer requirements.

The spreader beams can be combined with the different suspension types (see pages 202-203).

**Technical questionnaire**

Capacity \_\_\_\_\_ kg  
Working length \_\_\_\_\_ mm  
Working width \_\_\_\_\_ mm



**TTS-H**  
H-frame spreader beam

Capacity up to 25000 kg  
For the transport of symmetrical and asymmetrical loads.

**Features**

- Lifting brackets for single hook according to DIN 15401
- Adjustment with grids
- Adjustable bracket with handle and swivel hook (cannot be rotated under load)

**INFO**

Capacity, working length and width designed on individual customer requirements.

The spreader beams can be combined with the different suspension types (see pages 202-203).

**Technical questionnaire**

Capacity \_\_\_\_\_ kg  
Working length, min. \_\_\_\_\_ mm  
Working length, max. \_\_\_\_\_ mm  
Working width, min. \_\_\_\_\_ mm  
Working width, max. \_\_\_\_\_ mm

## TTS Spreader beam for box pallets

Capacity 1000 - 3000 kg

Box pallets with DIN 15155 specifications, are usually moved around with a forklift, but are so sturdy that they can be picked up and transported with a spreader beam grab and an overhead crane hooked up to the top of the box pallet's frame.

Thanks to these spreader beams, the shipping and receiving area is no longer entirely dependent on floor-level material handling equipment such as forklifts.

The version designed for the individual transport of box pallets is equipped with two fixed yokes and two pivoted ones, interconnected with a control bar. The load tackling gear is fixed and unfixed by only one person.

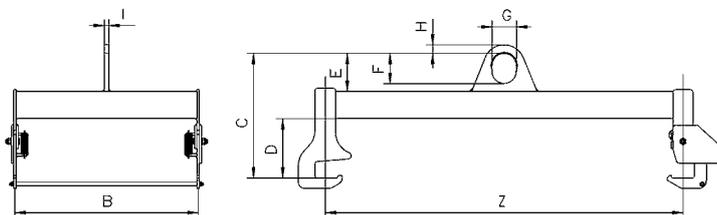


### Technical data TTS

| Model              | Art.-No.  | Capacity kg | Weight kg |
|--------------------|-----------|-------------|-----------|
| TTS 1,0/1240 - 810 | N53207001 | 1000        | 38        |
| TTS 2,0/1240 - 810 | N53207002 | 2000        | 61        |
| TTS 3,0/1240 - 810 | N53207003 | 3000        | 80        |

### Dimensions TTS

| Model | TTS 1,0/1240 - 810 | TTS 2,0/1240 - 810 | TTS 3,0/1240 - 810 |
|-------|--------------------|--------------------|--------------------|
| B, mm | 600                | 600                | 600                |
| C, mm | 410                | 495                | 520                |
| D, mm | 195                | 215                | 215                |
| E, mm | 125                | 180                | 205                |
| F, mm | 100                | 150                | 170                |
| G, mm | 80                 | 100                | 130                |
| H, mm | 28                 | 30                 | 40                 |
| I, mm | 15                 | 20                 | 25                 |
| Z, mm | 1175               | 1175               | 1175               |





## TTB Spreader beam for Big-Bags

Capacity 1000 - 2000 kg

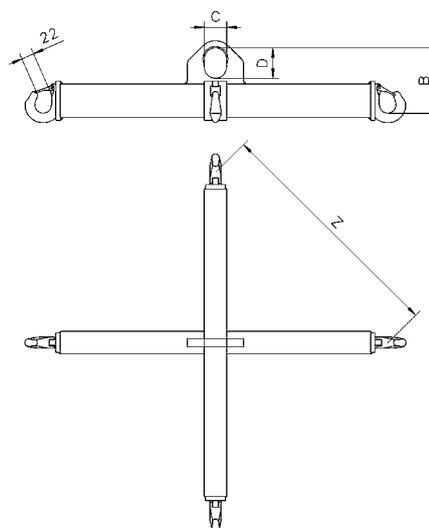
This four-point spreader beam in a fixed frame construction with weld-on hooks and safety latch is designed for lifting and transporting of Big-Bags.

### Technical data TTB

| Model               | Art.-No.  | Capacity kg | Working width Z mm | Weight kg |
|---------------------|-----------|-------------|--------------------|-----------|
| TTB 1,0/1090 - 1090 | N53156300 | 1000        | 750 - 800          | 27        |
| TTB 1,0/1320 - 1320 | N53156301 | 1000        | 900 - 970          | 33        |
| TTB 2,0/1090 - 1090 | N53156302 | 2000        | 750 - 800          | 42        |
| TTB 2,0/1320 - 1320 | N53156303 | 2000        | 900 - 970          | 44        |

### Dimensions TTB

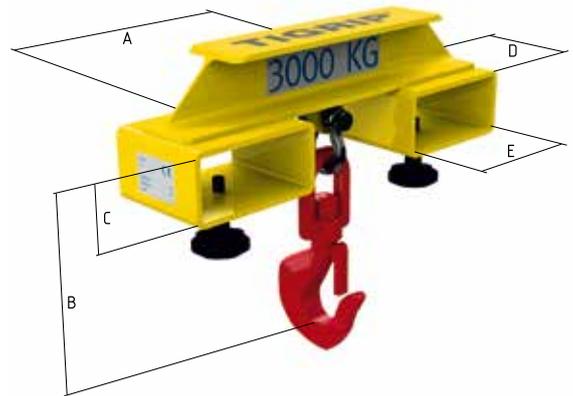
| Model | TTB<br>1,0/1090 - 1090 | TTB<br>1,0/1320 - 1320 | TTB<br>2,0/1090 - 1090 | TTB<br>2,0/1320 - 1320 |
|-------|------------------------|------------------------|------------------------|------------------------|
| B, mm | 210                    | 210                    | 240                    | 240                    |
| C, mm | 60                     | 60                     | 75                     | 75                     |
| D, mm | 110                    | 110                    | 135                    | 135                    |



**TTS-Z**  
Fork lift cross beam

Capacity 2000 - 3150 kg

The model TTS-Z with two bags is used for forklift tines and has one centered, pivoting eye hook (do not pivot under load). The fork lift cross beam is fastened with two spindles and ensures safety while lifting.



Technical data TTS-Z

| Model      | Art.-No.    | Capacity kg | Height B mm | Dim. C mm | Dim. D mm | Dim. E mm | Weight kg |
|------------|-------------|-------------|-------------|-----------|-----------|-----------|-----------|
| TTS 2,0/Z  | N4300000170 | 2000        | 246         | 70        | 160       | 150       | 14.0      |
| TTS 3,15/Z | N4300015315 | 3150        | 274         | 84        | 160       | 184       | 19.0      |

**TZH**  
Tine hook

Capacity 1500 - 5000 kg

For fastening hoisting equipment and loads to single forklift tines. The TZH are pushed onto the forklift tines and are fastened with two spindles. The pivoting as well as swivelling hook with safety latch ensures safety while lifting.



Technical data TZH

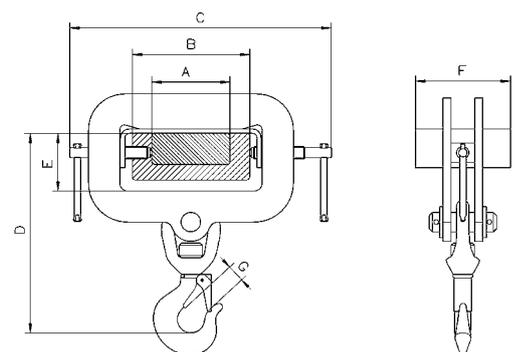
| Model       | Art.-No.  | Capacity kg | Weight kg |
|-------------|-----------|-------------|-----------|
| TZH 1,5/150 | N55100001 | 1500        | 7.2       |
| TZH 3,0/150 | N55100002 | 3000        | 10.8      |
| TZH 5,0/150 | N55100004 | 5000        | 17.3      |

Dimensions TZH

| Model      | TZH 1,5/150 | TZH 3,0/150 | TZH 5,0/150 |
|------------|-------------|-------------|-------------|
| A, mm      | 100         | 100         | 100         |
| B, mm      | 150         | 150         | 150         |
| C min., mm | 310         | 350         | 350         |
| C max., mm | 360         | 400         | 400         |
| D, mm      | 260         | 270         | 295         |
| E, mm      | 74          | 74          | 74          |
| F, mm      | 120         | 120         | 120         |
| G, mm      | 25          | 28          | 34          |

INFO

Attention must be paid to the working load limit of the single forklift tines.



TZH, swivel hooks, pivoting and swivelling

## INFO

For the transport of loads above persons (e.g. on construction sites) appropriate security measures against falling loads or parts must be taken.

The load must not exceed the fork length.



## TKG vhs Crane forks

Capacity 200 - 5000 kg

These crane forks are equipped with adjustable tines, height adjustability and an automatic balancing system. Crane forks with automatic balancing\* tend to point their tines upward when being transported. This prevents the load from unintentionally slipping off the tines.

The shackle is movable and runs on a track depending on the load. The automatic balancing engages by a pressurized gas spring once the forks are loaded. The load will always be in the center of gravity of the forks, ensuring a safe transport.

**\*The automatic balancing system requires a minimum load of 20% of the crane forks' working load limit!**

### Features

- All crane forks comply with the latest standards and CE-directives.
- Safety factor 4:1
- Maintenance-free
- Highly visible safety colour
- For the transport of rings or coils, the fork tines are simply pushed together.
- Easily adjustable tines for all pallet sizes.

### Scope of delivery

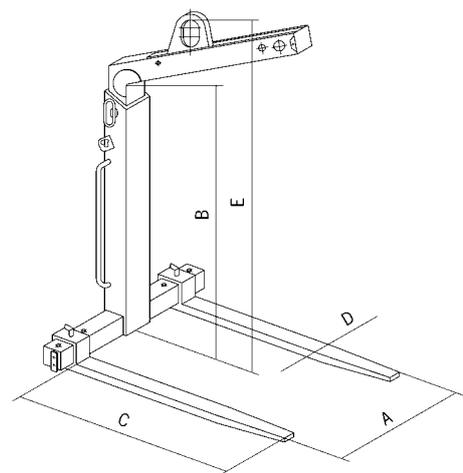
Chain for load securing

### Technical data TKG vhs

| Model       | Art.-No.  | Capacity kg | Weight kg |
|-------------|-----------|-------------|-----------|
| TKG 1,0 vhs | N53407531 | 200 - 1000  | 128       |
| TKG 1,5 vhs | N53407532 | 300 - 1500  | 158       |
| TKG 2,0 vhs | N53407533 | 400 - 2000  | 203       |
| TKG 3,0 vhs | N53407534 | 600 - 3000  | 260       |
| TKG 5,0 vhs | N53407535 | 1000 - 5000 | 413       |

### Dimensions TKG vhs

| Model                     | TKG 1,0 vhs | TKG 1,5 vhs | TKG 2,0 vhs | TKG 3,0 vhs | TKG 5,0 vhs |
|---------------------------|-------------|-------------|-------------|-------------|-------------|
| Adjustment of tines A, mm | 350 - 900   | 350 - 900   | 400 - 900   | 450 - 900   | 500 - 1000  |
| Usable height B, mm       | 1100 - 1600 | 1300 - 2000 | 1300 - 2000 | 1300 - 2000 | 1300 - 2000 |
| Length of tines C, mm     | 1000        | 1000        | 1000        | 1000        | 1000        |
| Section of tines D, mm    | 100 x 30    | 100 x 40    | 120 x 40    | 120 x 50    | 150 x 60    |
| Overall height E, mm      | 1420 - 1920 | 1650 - 2350 | 1655 - 2355 | 1720 - 2420 | 1710 - 2410 |



## TKG vh Crane forks

Capacity 1000 - 5000 kg

These crane forks are equipped with adjustable tines and height adjustability. The balancing system engages when the shackle is manually hooked into the appropriate notch.

### Features

- All crane forks comply with the latest standards and CE-directives.
- Safety factor 4:1
- Maintenance-free
- Highly visible safety colour
- For the transport of rings or coils, the fork tines are simply pushed together.
- Easily adjustable tines for all pallet sizes.

### Scope of delivery

Chain for load securing

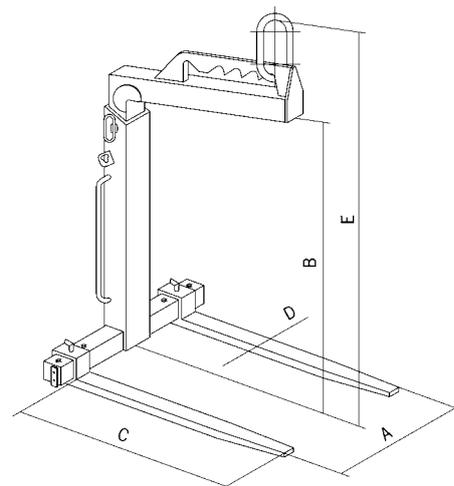


## INFO

The load must not exceed the fork length.

### Technical data TKG vh

| Model      | Art.-No.  | Capacity kg | Weight kg |
|------------|-----------|-------------|-----------|
| TKG 1,0 vh | N53407511 | 1000        | 128       |
| TKG 1,5 vh | N53407512 | 1500        | 148       |
| TKG 2,0 vh | N53407513 | 2000        | 193       |
| TKG 3,0 vh | N53407514 | 3000        | 248       |
| TKG 5,0 vh | N53407515 | 5000        | 388       |



### Dimensions TKG vh

| Model                     | TKG 1,0 vh  | TKG 1,5 vh  | TKG 2,0 vh  | TKG 3,0 vh  | TKG 5,0 vh  |
|---------------------------|-------------|-------------|-------------|-------------|-------------|
| Adjustment of tines A, mm | 350 - 900   | 350 - 900   | 400 - 900   | 450 - 900   | 500 - 1000  |
| Usable height B, mm       | 1100 - 1600 | 1300 - 2000 | 1300 - 2000 | 1300 - 2000 | 1300 - 2000 |
| Length of tines C, mm     | 1000        | 1000        | 1000        | 1000        | 1000        |
| Section of tines D, mm    | 100 x 30    | 100 x 40    | 120 x 40    | 120 x 50    | 150 x 60    |
| Overall height E, mm      | 1390 - 1890 | 1600 - 2300 | 1640 - 2340 | 1670 - 2370 | 1700 - 2400 |



## -TKI with digital display and radio control

The crane weigher can be operated by radio control. The displayed values can be taken off the remote control device and can be transferred to a PC. Several measured values can be totalled and saved. Various functions like piece counting, maximum weight (gross/net) can be realized.

### Features

- TKI crane weigher has the same features like the model TKE.
- Remote control and data exchange via radio transmission.
- USB interface
- Accumulation memory

### Options

- User software for data processing
- PC cable
- Lower hook

### Scope of delivery

- Crane weigher with infrared remote control
- Remote control and data exchange via radio transmission.
- 8 x 1.5V AA batteries
- Carrying case
- Test certificate
- Upper and lower shackle

## Crane weighers

### Measuring range 0 - 9.5 t

The crane weighers TKE and TKI are compact measuring devices for the weighing of loads.

Due to the compact design and robust steel housing the crane weighers are suitable for a wide range of applications. The crane weighers have a liquid crystal display (LCD), which can tare as well as show either the gross or the net load.

Both models TKE and TKI are fitted with an infrared remote control with a range of 8 m.

### - TKE with digital display

#### Features

- High accuracy:  $\pm 0,03\%$  of the weighing range
- Lightweight design
- Easy-to-read display
- Easy to use
- Robust design
- Retains the peak value to memory.
- Operating time of about 40 hours (without radio frequency communication)
- Automatic setting to zero when load indicator is switched on.
- Display of maximum weight (gross/net).
- Display of measuring units on the load indicator.
- Measuring units g, kg, t and lbs.
- Automatic stand-by for a prolonged battery lifetime.

#### Option

- Lower hook

#### Scope of delivery

- Crane weigher with with infrared remote control
- 4 x 1.5V AA batteries
- Carrying case
- Test certificate
- Upper and lower shackle

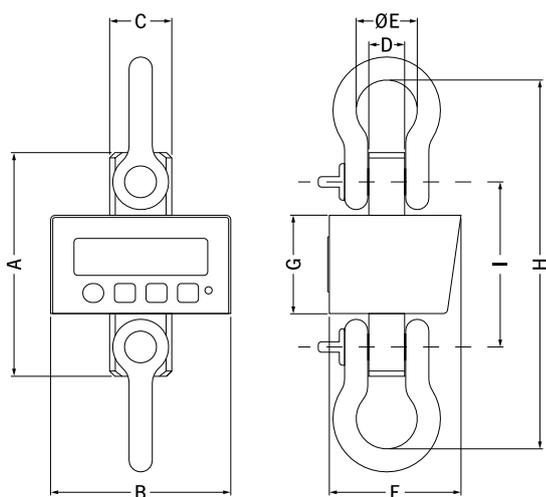
Technical data TKE and TKI

| Model                                   | TKE 1,5<br>TKI 1,5  |                  |                   | TKE 6,0<br>TKI 6,0 |                   |                   | TKE 9,5<br>TKI 9,5 |                   |                   |
|---|---|------------------|-------------------|--------------------|-------------------|-------------------|--------------------|-------------------|-------------------|
|   | Art.-No. TKE  | N53908560        |                   |                    | N53908561         |                   |                    | N53908562         |                   |
| Art.-No. TKI                            | N53908566   |                  |                   | N53908567          |                   |                   | N53908568          |                   |                   |
| Measuring range, t                      | 0 - 1.5   |                  |                   | 0 - 6.0            |                   |                   | 0 - 9.5            |                   |                   |
| Breaking load, t                        | ≥ 4.5   |                  |                   | ≥ 24.0             |                   |                   | ≥ 38.0             |                   |                   |
| Weight with lifting accessories, kg     | 6   |                  |                   | 10                 |                   |                   | 15                 |                   |                   |
| Resolution step, kg (partition)         | up to 300<br>0.1  | up to 600<br>0.2 | up to 1500<br>0.5 | up to 1500<br>0.5  | up to 3000<br>1.0 | up to 6000<br>2.0 | up to 3000<br>1.0  | up to 6000<br>2.0 | up to 9500<br>5.0 |
| Operation time, approx., h <sup>1</sup> | 40  |                  |                   |                    |                   |                   |                    |                   |                   |
| Temperature range (operation)           | - 10 °C up to + 40 °C   |                  |                   |                    |                   |                   |                    |                   |                   |
| Temperature range (storage)             | - 10 °C up to + 40 °C   |                  |                   |                    |                   |                   |                    |                   |                   |
| Protection                              | IP 40   |                  |                   |                    |                   |                   |                    |                   |                   |
| Display (LCD 25 mm high)                | 5 ½ digits  |                  |                   |                    |                   |                   |                    |                   |                   |
| Tare range                              | 100% of rated capacity  |                  |                   |                    |                   |                   |                    |                   |                   |
| Overload warning                        | The crane weigher switches off when exceeding the rated load. |                  |                   |                    |                   |                   |                    |                   |                   |

<sup>1</sup>with 4 x 1.5 V AA batteries (without radio frequency communication)

Dimensions TKE and TKI

| Model | TKE 1,5<br>TKI 1,5 | TKE 6,0<br>TKI 6,0 | TKE 9,5<br>TKI 9,5 |
|-------|--------------------|--------------------|--------------------|
| A, mm | 193                | 226                | 246                |
| B, mm | 175                | 175                | 175                |
| C, mm | 49                 | 59                 | 80                 |
| D, mm | 24                 | 37                 | 46                 |
| E, mm | 44                 | 58                 | 74                 |
| F, mm | 133                | 133                | 133                |
| G, mm | 104                | 104                | 104                |
| H, mm | 330                | 363                | 430                |
| J, mm | 153                | 170                | 180                |





### -TKR with digital display and radio control

The crane weigher can be operated by radio control. The displayed values can be taken off the remote control device and can be transferred to a PC. The system can be combined with an easy-to-read display. Several measured values can be totalled and saved.

#### Features

- TKR crane weigher has the same features like the model TKL plus:
- Remote control and data exchange via radio transmission.
- USB interface
- Accumulation memory

#### Option

- External easy-to-read display.

#### Scope of delivery

- Crane weigher
- Remote control with display
- 7 x 1.5V AA batteries
- Carrying case
- Test certificate
- PC cable
- User software



## Crane weighers

### Measuring range 0 - 12t

The crane weighers TKL and TKR are compact measuring devices for the weighing of loads. Use appropriate attachments like grade 8 forgings between the hook of the hoist or crane, the crane weigher and the load.

The crane weighers have a liquid crystal display (LCD), which can tare as well as show either the gross or the net load. It also indicates overload at 110% of the rated capacity and the status of the battery.

### -TKL with digital display

#### Features

- High accuracy
- Lightweight design
- Easy-to-read display
- Easy to use
- Robust design
- Housing can be rotated 180°
- Retains the peak value to memory.
- The battery capacity provides for around 200 operating hours.
- Automatic setting to zero when load indicator is switched on.
- Use of rechargeable batteries possible (external battery charger\*).
- Display of maximum weight (gross/net).
- Display of measuring units on the load indicator.
- Measuring units kg, t, lbs, to, kN.
- Automatic stand-by for a prolonged battery lifetime.
- Simple change of batteries
- Warning if batteries are low
- Overload warning

#### Scope of delivery

- Crane weigher
- 4 x 1.5V AA batteries
- Carrying case
- Test certificate

\* not part of the delivery package.

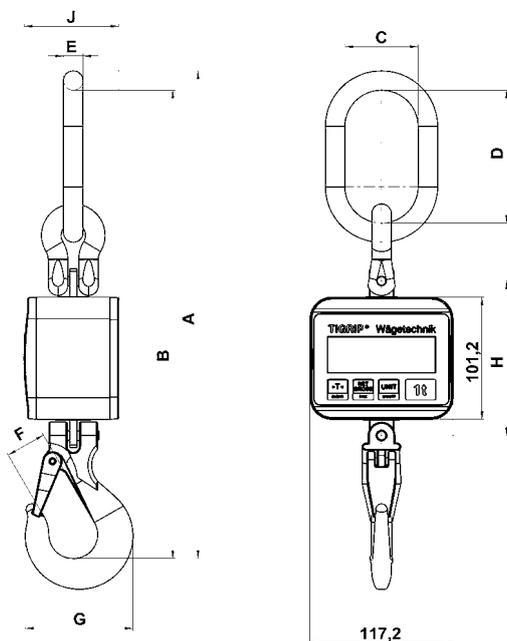
Technical data TKL and TKR

| Model                                   | TKL 1,0  | TKL 2,0   | TKL 3,2   | –<br>TKR 5,0 | –<br>TKR 8,0 | –<br>TKR 12,0 |
|---|--|-----------|-----------|--------------|--------------|---------------|
| Art.-No. TKL                            | N53908446                                      | N53908448 | N53908451 | –            | –            | –             |
| Art.-No. TKR                            | –  | –         | –         | N53908454    | N53908456    | N53908458     |
| Measuring range, t                      | 0 - 1.0  | 0 - 2.0   | 0 - 3.2   | 0 - 5.0      | 0 - 8.0      | 0 - 12.0      |
| Limit load, t                           | 1.0  | 2.0       | 3.2       | 5.0          | 8.0          | 12.0          |
| Breaking load, t                        | 1.1  | 2.2       | 3.5       | 5.5          | 8.8          | 13.2          |
| Breaking load, t                        | ≥4.0   | ≥8.0      | ≥13.0     | ≥20.0        | ≥32.0        | ≥48.0         |
| Weight without lifting accessories, kg  | 1.85   | 1.99      | 2.5       | 2.7          | 3.6          | 3.9           |
| Weight with lifting accessories, kg     | 3.0  | 3.5       | 6.0       | 7.5          | 10.5         | 20.0          |
| Accuracy of the end value               | 0.1%   | 0.1%      | 0.1%      | 0.1%         | 0.1%         | 0.1%          |
| Resolution step, kg (partition)         | 0.5  | 1.0       | 1.0       | 1.0          | 2.0          | 5.0           |
| Operation time, approx., h <sup>1</sup> | 200  |           |           |              |              |               |
| Temperature range (operation)           | -10 °C up to +50 °C                            |           |           |              |              |               |
| Temperature range (storage)             | -20 °C up to +70 °C                            |           |           |              |              |               |
| Protection                              | IP 54  |           |           |              |              |               |
| Display (LCD 20.5mm high)               | 4 ½ digits                                     |           |           |              |              |               |
| Tare range                              | 100% of rated capacity                         |           |           |              |              |               |
| Overload warning                        | Overload warning at 110% of the rated capacity |           |           |              |              |               |

<sup>1</sup>with 4 x 1.5V AA batteries

Dimensions TKL and TKR

| Model | TKL 1,0 | TKL 2,0 | TKL 3,2 | –<br>TKR 5,0 | –<br>TKR 8,0 | –<br>TKR 12,0 |
|-------|---------|---------|---------|--------------|--------------|---------------|
| A, mm | 389     | 417     | 488     | 571          | 657          | 804           |
| B, mm | 356     | 379     | 441     | 514          | 588          | 709           |
| C, mm | 60      | 60      | 75      | 90           | 100          | 140           |
| D, mm | 110     | 110     | 135     | 160          | 180          | 260           |
| E, mm | 13      | 16      | 18      | 22           | 26           | 35            |
| F, mm | 20      | 25      | 32      | 40           | 49           | 45            |
| G, mm | 70      | 81      | 103     | 126          | 152          | 190           |
| H, mm | 128     | 136     | 140     | 148          | 158          | 176           |
| J, mm | 77.4    | 77.4    | 84.4    | 84.4         | 97.4         | 97.4          |





## - TZR with digital display and radio control

The load indicator can be operated via radio control. The displayed values can be taken off the remote control device and can be transmitted to a PC. The system can be combined with an easy-to-read display. Several measured values can be totalled and saved.

### Features

- TZR load indicator has the same features like the model TZL plus:
- Remote control and data exchange via radio transmission.
- USB interface
- Accumulation memory

### Option

- External easy-to-read display.

### Scope of delivery

- Load indicator
- Remote control with display
- 7 x 1.5V AA batteries
- Carrying case
- Test certificate
- Without shackles and hooks
- PC cable
- User software

## Load indicator

### Measuring range 0 - 100 t

The Tigrip® load indicator is a mechanical measuring instrument with electronic display. On account of its flexibility the Tigrip® load indicator has universal applications. Whether used as a conventional crane weigher or to measure forces, it is the economical choice for various applications. It can be used in conjunction with shackles and hooks.

The load indicator is provided with liquid crystal display (LCD), which can tare as well as show either the gross or the net load. It also indicates overload at 110% of the rated capacity and the status of the battery).

## - TZL with digital display

### Features

- High accuracy
- Lightweight design
- Easy-to-read display
- Easy to use
- Robust design
- Retains the peak value to memory.
- The battery capacity provides for around 200 operating hours.
- Automatic setting to zero when load indicator is switched on.
- Use of rechargeable batteries possible (external battery charger\*).
- Display of maximum weight (gross/net).
- Display of measuring units on the load indicator.
- Measuring units kg, t, lbs, to, kN.
- Automatic stand-by for a prolonged battery lifetime.
- Simple change of batteries
- Warning if batteries are low.
- Overload warning

### Scope of delivery

- Load indicator
- 4 x 1.5V AA batteries
- Carrying case
- Test certificate
- Without shackles and hooks

\* not part of the delivery package.



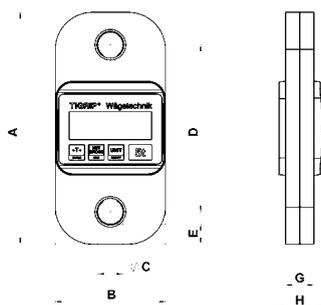
Technical data TZL and TZR

| Model                                   | TZL 2,5<br>-                                   | TZL 5,0<br>- | TZL 10,0<br>TZR 10,0 | TZL 20,0<br>TZR 20,0 | -<br>TZR 35,0 | -<br>TZR 50,0 | -<br>TZR 100,0 |
|---|--|--------------|----------------------|----------------------|---------------|---------------|----------------|
| Art.-No. TZL                            | N53808324                                      | N53808325    | N53808326            | N53808327            | -             | -             | -              |
| Art.-No. TZL shackles                   | CM851A   | N42000064    | N42000069            | N42000069            | -             | -             | -              |
| Art.-No. TZL hooks                      | N53818351                                      | N53818352    | N53818322            | N53818324            | -             | -             | -              |
| Art.-No. TZR                            | -  | -            | N53808333            | N53808335            | N53808336     | N53808337     | N53808338      |
| Art.-No. TZR shackles                   | -  | -            | N42000069            | N42000069            | N42000071     | N42000072     | N42000075      |
| Art.-No. TZR hooks                      | -  | -            | N53818322            | N53818324            | N53818326     | N53818328     | N53818330      |
| Measuring range, t                      | 0 - 2.5  | 0 - 5.0      | 0 - 10,0             | 0 - 20,0             | 0 - 35,0      | 0 - 50,0      | 0 - 100,0      |
| Limit load, t                           | 2.5  | 5.0          | 10.0                 | 20.0                 | 35.0          | 50.0          | 100.0          |
| Breaking load, t                        | 2.75   | 5.5          | 11                   | 22                   | 38.5          | 55            | 110            |
| Breaking load, t                        | ≥ 10   | ≥ 20         | ≥ 40                 | ≥ 80                 | ≥ 140         | ≥ 200         | ≥ 400          |
| Weight without lifting accessories, kg  | 1.7  | 2.1          | 3.9                  | 6.8                  | 9.4           | 14.4          | 39.3           |
| Accuracy of the end value               | 0.2%   | 0.2%         | 0.2%                 | 0.2%                 | 0.2%          | 0.2%          | 0.2%           |
| Resolution step, kg (partition)         | 1  | 1            | 10                   | 10                   | 10            | 10            | 50             |
| Operation time, approx., h <sup>1</sup> | 200  |              |                      |                      |               |               |                |
| Temperature range (operation)           | -10 °C up to +50 °C                            |              |                      |                      |               |               |                |
| Temperature range (storage)             | -20 °C up to +70 °C                            |              |                      |                      |               |               |                |
| Protection                              | IP 54  |              |                      |                      |               |               |                |
| Display (LCD 20.5 mm high)              | 4½ digits                                      |              |                      |                      |               |               |                |
| Tare range                              | 100% of rated capacity                         |              |                      |                      |               |               |                |
| Overload warning                        | Overload warning at 110% of the rated capacity |              |                      |                      |               |               |                |

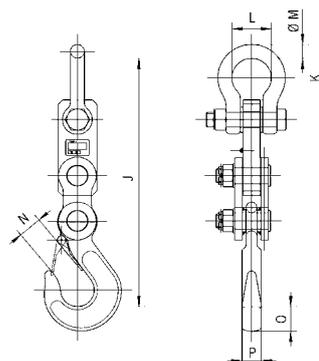
<sup>1</sup>with 4 x 1.5V AA batteries

Dimensions TZL and TZR

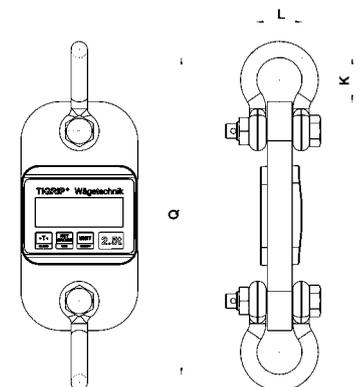
| Model | TZL 2,5<br>- | TZL 5,0<br>- | TZL 10,0<br>TZR 10,0 | TZL 20,0<br>TZR 20,0 | -<br>TZR 35,0 | -<br>TZR 50,0 | -<br>TZR 100,0 |
|-------|--------------|--------------|----------------------|----------------------|---------------|---------------|----------------|
| A, mm | 233          | 250          | 325                  | 378                  | 405           | 450           | 640            |
| B, mm | 118          | 118          | 118                  | 141                  | 156           | 180           | 260            |
| C, mm | 22           | 27           | 48                   | 55                   | 66            | 76            | 100            |
| D, mm | 173          | 180          | 213                  | 233                  | 245           | 264           | 380            |
| E, mm | 19           | 21.5         | 22                   | 32                   | 47            | 55            | 80             |
| G, mm | 25           | 30.5         | 47                   | 57                   | 67            | 77            | 99             |
| H, mm | 42.2         | 45.1         | 64.4                 | 74.2                 | 84.2          | 94.2          | 113            |
| J, mm | 604          | 610          | 690                  | 780                  | 1000          | 1170          | -              |
| K, mm | 34           | 50           | 105                  | 92                   | 130           | 140           | 300            |
| L, mm | 38           | 44           | 95                   | 95                   | 114           | 132           | 238            |
| M, mm | 16           | 19           | 35                   | 35                   | 44            | 51            | 89             |
| N, mm | 25           | 32           | 50                   | 70                   | 110           | 115           | -              |
| O, mm | 23           | 37           | 63                   | 80                   | 123           | 132           | -              |
| P, mm | 17           | 28           | 44                   | 57                   | 90            | 97            | -              |
| Q, mm | 309          | 315          | 535                  | 562                  | 665           | 730           | 1240           |



Load indicator TZL/TZR 2.5 up to 100.0t



Load indicator TZL/TZR with hook



Load indicator TZL/TZR with shackle