

Minicylinders Series 16, 24 and 25



Series 16: \varnothing 8 - 10 - 12

Series 24: \varnothing 16 - 20 - 25 magnetic

Series 25: \varnothing 16 - 20 - 25 magnetic cushioned



- » Single and double-acting
- » Standard CETOP RP52P DIN/ISO 6432
- » Stainless steel tube and piston rod
- » Anodised AL end blocks

Minicylinders Series 16, 24 and 25 are manufactured according to the European Standard Specifications CETOP RP52-P and DIN/ISO 6432. The choice of materials and other design features have provided the basis for a complete range of versatile and reliable cylinders.

The precise method of placing the tube at the end block ensures that all the parts are perfectly aligned. Since the Series 16 and 24 may be required to operate at very high speeds, a fixed mechanical cushioning has been fitted as standard in order to reduce wear by high impact loads. Series 24 and 25 are suitable for mounting magnetic proximity switches. Series 25 has an adjustable pneumatic cushioning and a magnetic piston. Various mounting accessories are available to enable the cylinders to be fitted to suit the requirement of a particular application.

GENERAL DATA

| | |
|-----------------------|--|
| Type of construction | flanged |
| Operation | single-acting or double-acting |
| Materials | aluminium end - blocks, stainless steel tube and piston rod, polyurethane seals, other parts (see coding) |
| Brackets | screw, flange, feet, trunnion |
| Stroke min - max | Series 16 \varnothing 8 + \varnothing 10: 10 - 250 mm / Series 16: \varnothing 12: 10 - 300 mm Series 24 & 25 \varnothing 16: 10 - 600 mm; \varnothing 20 - \varnothing 25: 10 - 1000 mm |
| Bores | Series 16: \varnothing 8, 10, 12 / Series 24 & 25: \varnothing 16, 20, 25 |
| Operating temperature | 0°C + 80°C (with dry air -20°C) |
| Operating pressure | 1 + 10 bar (double-acting); 2 + 10 bar (single-acting) |
| Fluid | clean air, without lubrication, if lubricated air is used, it is recommended to use oil ISO VG32. Once applied the lubrication should never be interrupted. |
| Speed | 10 + 1000 mm/sec (without load) |

STANDARD STROKES FOR MINICYLINDERS

- = Double - acting
- ✕ = Single - acting

| STANDARD STROKES | | | | | | | | | | | | | | | |
|------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Series | ∅ | 10 | 25 | 40 | 50 | 80 | 100 | 125 | 160 | 200 | 250 | 300 | 320 | 400 | 500 |
| 16 | 8 | ✕✕ | ✕✕ | ✕✕ | ✕✕ | ■ | ■ | ■ | ■ | ■ | | | | | |
| 16 | 10 | ✕✕ | ✕✕ | ✕✕ | ✕✕ | ■ | ■ | ■ | ■ | ■ | | | | | |
| 16 | 12 | ✕✕ | ✕✕ | ✕✕ | ✕✕ | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| 24 | 16 | ✕✕ | ✕✕ | ✕✕ | ✕✕ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 24 | 20 | ✕✕ | ✕✕ | ✕✕ | ✕✕ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 24 | 25 | ✕✕ | ✕✕ | ✕✕ | ✕✕ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 25 | 16 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 25 | 20 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 25 | 25 | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

CODING EXAMPLE

| | | | | | | | |
|-----------|----------|----------|----------|-----------|----------|------------|----------|
| 24 | N | 2 | A | 16 | A | 100 | - |
|-----------|----------|----------|----------|-----------|----------|------------|----------|

| | |
|------------|--|
| 24 | <p>SERIES: 16 = non magnetic 24 = magnetic 25 = magnetic adjustable cushioning</p> |
| N | <p>VERSION N = standard</p> |
| 2 | <p>OPERATION 1 = single-acting (front spring) 2 = double-acting 3 = double-acting (through-rod) 7 = single-acting (through-rod)</p> |
| A | <p>MATERIALS A = rolled stainless steel rod, INOX tube</p> |
| 16 | <p>BORE: 8 mm 10 mm 12 mm 16 mm 20 mm 25 mm</p> |
| A | <p>CONSTRUCTION A = screw with ring + lock nut for rod RL = cylinder with rod lock ø20 - ø25</p> |
| 100 | <p>STROKE (see table)</p> |
| | <p>= standard V = rod seals FKM</p> |

MINICYLINDERS ACCESSORIES SERIES 16 - 24 - 25

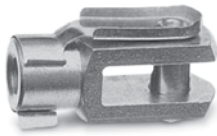
MOVEMENT



Coupling piece Mod. GKF
(New)



Self aligning rod Mod. GK
(New)



Rod fork end Mod. G



Swivel ball joint Mod. GA



Front/rear flange mount Mod. E



Foot mount Mod. B



Nose nut Mod. V



Piston rod lock nut Mod. U



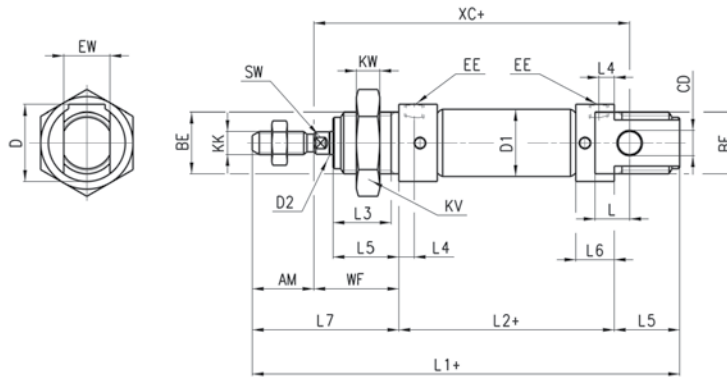
Piston rod socket joint
Mod. GY

All accessories are supplied separately, except for Piston rod lock nut Mod. U and Nose nut Mod. V



Rear trunnion bracket Mod. I

Minicylinders Series 16, 24 and 25



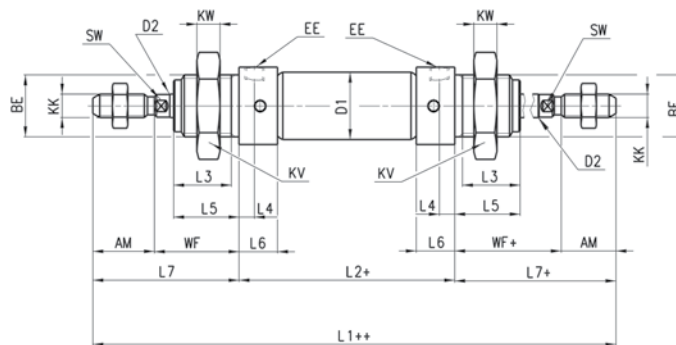
+ = add the stroke

DIMENSIONS

| Mod. | ∅ | EW | KW | BE | KK | CD | D1 | EE | ∅D2 | L1+ | XC+ | L2+ | AM | L3 | L4 | L5 | L | WF | L6 | L7 | KV | SW | D | cushion strokes front/rear |
|-------|----|----|----|----------|----------|----|------|------|-----|-------|-----|------|----|----|-----|----|----|----|----|----|----|----|----|----------------------------|
| 16 | 8 | 8 | 7 | M12x1,25 | M4x0,7 | 4 | 9,3 | M5 | 4 | 86 | 64 | 46 | 12 | 10 | 4,5 | 12 | 6 | 16 | 9 | 28 | 19 | - | 15 | - / - |
| 16 | 10 | 8 | 7 | M12x1,25 | M4x0,7 | 4 | 11,3 | M5 | 4 | 86 | 64 | 46 | 12 | 10 | 4,5 | 12 | 6 | 16 | 9 | 28 | 19 | - | 15 | - / - |
| 16 | 12 | 12 | 8 | M16x1,5 | M6x1 | 6 | 14 | M5 | 6 | 105 | 75 | 50 | 16 | 15 | 4,5 | 17 | 9 | 22 | 9 | 38 | 24 | 5 | 20 | - / - |
| 24-25 | 16 | 12 | 8 | M16x1,5 | M6x1 | 6 | 18 | M5 | 6 | 111 | 82 | 56 | 16 | 15 | 4 | 17 | 9 | 22 | 10 | 38 | 24 | 5 | 20 | 10 / 10 |
| 24-25 | 20 | 16 | 10 | M22x1,5 | M8x1,25 | 8 | 22 | G1/8 | 8 | 132 | 95 | 68 | 20 | 18 | 8 | 20 | 12 | 24 | 16 | 44 | 32 | 7 | 27 | 13 / 15 |
| 24-25 | 25 | 16 | 10 | M22x1,5 | M10x1,25 | 8 | 27 | G1/8 | 10 | 141,5 | 104 | 69,5 | 22 | 20 | 8 | 22 | 12 | 28 | 16 | 50 | 32 | 9 | 27 | 16 / 14 |

Minicylinders Series 16, 24 and 25

With through-rod.



+ = add the stroke
 ++ = add the stroke two times

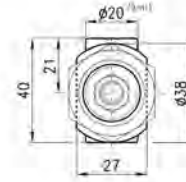
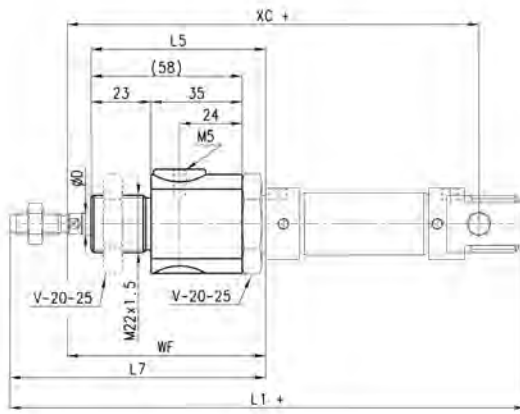
DIMENSIONS

| Mod. | ∅ | KW | BE | KK | ∅D1 | EE | ∅D2 | L1++ | L2+ | AM | L3 | L4 | L5 | WF+ | L6 | L7+ | KV | SW | cushion strokes front/rear |
|-------|----|----|----------|----------|------|------|-----|-------|------|----|----|-----|----|-----|----|-----|----|----|----------------------------|
| 16 | 8 | 7 | M12x1,25 | M4x0,7 | 9,3 | M5 | 4 | 102 | 46 | 12 | 10 | 4,5 | 12 | 16 | 9 | 28 | 19 | - | - / - |
| 16 | 10 | 7 | M12x1,25 | M4x0,7 | 11,3 | M5 | 4 | 102 | 46 | 12 | 10 | 4,5 | 12 | 16 | 9 | 28 | 19 | - | - / - |
| 16 | 12 | 8 | M16x1,5 | M6x1 | 14 | M5 | 6 | 126 | 50 | 16 | 15 | 4,5 | 17 | 22 | 9 | 38 | 24 | 5 | - / - |
| 24-25 | 16 | 8 | M16x1,5 | M6x1 | 18 | M5 | 6 | 132 | 56 | 16 | 15 | 4 | 17 | 22 | 10 | 38 | 24 | 5 | 10 / 10 |
| 24-25 | 20 | 10 | M22x1,5 | M8x1,25 | 22 | G1/8 | 8 | 156 | 68 | 20 | 18 | 8 | 20 | 24 | 16 | 44 | 32 | 7 | 13 / 15 |
| 24-25 | 25 | 10 | M22x1,5 | M10x1,25 | 27 | G1/8 | 10 | 169,5 | 69,5 | 22 | 20 | 8 | 22 | 28 | 16 | 50 | 32 | 9 | 16 / 14 |

Version with rod lock Mod. RLC



+ = add the stroke



DIMENSIONS

| Ø | ^{Ø7} D | WF | L5 | L7 | XC+ | L1+ | F (N) |
|----|-----------------|----|----|----|-----|-------|-------|
| 20 | 8 | 74 | 70 | 94 | 145 | 182 | 300 |
| 25 | 10 | 76 | 70 | 98 | 152 | 189,5 | 400 |



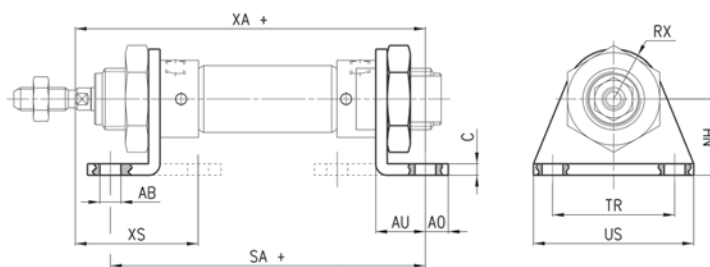
Foot mount Mod. B

Material: zinc-plated steel.



Supplied with:
2x feet
1x front end cap nut
mod. V

+ = add the stroke



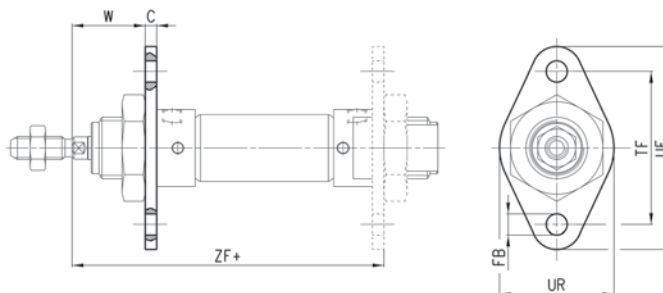
| DIMENSIONS | | | | | | | | | | | | |
|----------------|------|----|----|-----|-----|----|-----|------|----|-------|-------|------|
| Mod. | ∅ | TR | US | ∅AB | C | NH | AO | AU | RX | XA+ | SA+ | XS |
| B-8-10 | 8-10 | 25 | 35 | 4,5 | 2,5 | 16 | 4,5 | 10,5 | 10 | 72,5 | 67 | 54 |
| B-12-16 | 12 | 32 | 42 | 5,5 | 3 | 20 | 6 | 13 | 13 | 82,5 | 71 | 64 |
| B-12-16 | 16 | 32 | 42 | 5,5 | 3 | 20 | 6 | 13 | 13 | 91 | 82 | 68 |
| B-20-25 | 20 | 40 | 54 | 6,6 | 4 | 25 | 8 | 16 | 20 | 108 | 100 | 80 |
| B-20-25 | 25 | 40 | 54 | 6,6 | 4 | 25 | 8 | 16 | 20 | 113,5 | 101,5 | 85,5 |

Front/rear flange mount Mod. E

Material: zinc-plated steel.



+ = add the stroke

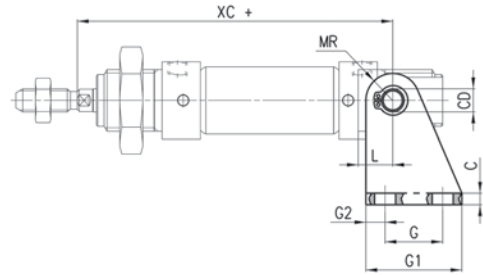
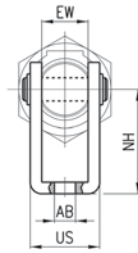


| DIMENSIONS | | | | | | | | | |
|----------------|------|-----|-----|----|----|----|------|-------|--|
| Mod. | ∅ | C | ∅FB | TF | UF | UR | W | ZF | |
| E-8-10 | 8-10 | 2,5 | 4,5 | 30 | 25 | 40 | 13,5 | 64,5 | |
| E-12-16 | 12 | 3 | 5,5 | 40 | 30 | 53 | 19 | 75 | |
| E-12-16 | 16 | 3 | 5,5 | 40 | 30 | 53 | 19 | 81 | |
| E-20-25 | 20 | 4 | 6,6 | 50 | 40 | 66 | 20 | 96 | |
| E-20-25 | 25 | 4 | 6,6 | 50 | 40 | 66 | 24 | 101,5 | |

The company reserves the right to vary models and dimensions without notice.
Products designed for industrial applications. Sale to general public is forbidden.

Rear trunnion bracket Mod. I

Material: zinc-plated steel.



+ = add the stroke

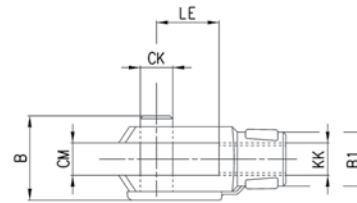
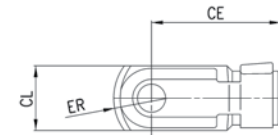
DIMENSIONS

| Mod. | ∅ | G1 | G | G2 | ∅CD | ∅AB | C | NH | EW | US | MR | XC+ | L |
|---------|------|----|------|-----|-----|-----|-----|----|----|------|----|-----|----|
| I-8-10 | 8-10 | 20 | 12,5 | 3,5 | 4 | 4,5 | 2,5 | 24 | 8 | 13,1 | 5 | 64 | 6 |
| I-12-16 | 12 | 25 | 15 | 5 | 6 | 5,5 | 3 | 27 | 12 | 18,1 | 7 | 75 | 9 |
| I-12-16 | 16 | 25 | 15 | 5 | 6 | 5,5 | 3 | 27 | 12 | 18,1 | 7 | 82 | 9 |
| I-20-25 | 20 | 32 | 20 | 6 | 8 | 6,6 | 4 | 30 | 16 | 24,1 | 10 | 95 | 12 |
| I-20-25 | 25 | 32 | 20 | 6 | 8 | 6,6 | 4 | 30 | 16 | 24,1 | 10 | 104 | 12 |

Rod fork end Mod.G

ISO 8140

Material: zinc-plated steel.



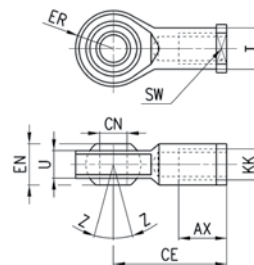
DIMENSIONS

| Mod. | ∅ | ∅CK | LE | CM | CL | ER | CE | KK | B | ∅B1 |
|---------|-------|-----|----|----|----|----|----|----------|----|-----|
| G-8-10 | 8-10 | 4 | 8 | 4 | 8 | 5 | 16 | M4x0,7 | 11 | 8 |
| G-12-16 | 12-16 | 6 | 12 | 6 | 12 | 7 | 24 | M6x1 | 16 | 10 |
| G-20 | 20 | 8 | 16 | 8 | 16 | 10 | 32 | M8x1,25 | 22 | 14 |
| G-25-32 | 25 | 10 | 20 | 10 | 20 | 12 | 40 | M10x1,25 | 26 | 18 |

Swivel ball joint Mod. GA

ISO 8139

Material: zinc-plated steel.



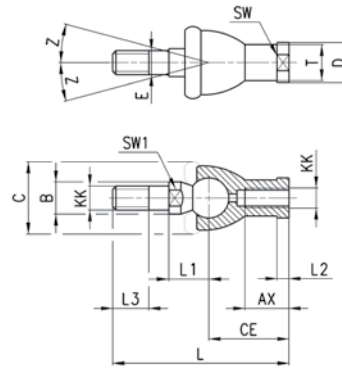
DIMENSIONS

| Mod. | ∅ | ∅CN ^(H7) | U | EN | ER | AX | CE | KK | ∅T | Z | SW |
|----------|-------|---------------------|------|----|----|----|----|----------|------|------|----|
| GA-12-16 | 12-16 | 6 | 7 | 9 | 10 | 12 | 30 | M6X1 | 10 | 6,5° | 11 |
| GA-20 | 20 | 8 | 9 | 12 | 12 | 16 | 36 | M8X1,25 | 12,5 | 6,5° | 14 |
| GA-32 | 25 | 10 | 10,5 | 14 | 14 | 20 | 43 | M10X1,25 | 15 | 6,5° | 17 |

Piston rod socket joint Mod. GY

ISO 8139

Material: zama and zinc-plated steel.



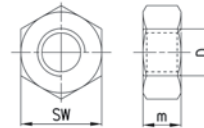
DIMENSIONS

| Mod. | ∅ | KK | L | CE | L2 | AX | E | ∅B | ∅C | ∅T | ∅D | L1 | L3 | SW1 | SW | Z |
|-----------------|-------|----------|----|----|-----|----|----|----|----|------|----|------|----|-----|----|----|
| GY-12-16 | 12-16 | M6X1 | 40 | 28 | 5 | 15 | 6 | 10 | 20 | 10 | 13 | 12,2 | 11 | 8 | 11 | 15 |
| GY-20 | 20 | M8X1,25 | 65 | 32 | 5 | 16 | 8 | 12 | 24 | 12,5 | 16 | 16 | 12 | 10 | 14 | 15 |
| GY-25-32 | 25 | M10X1,25 | 74 | 35 | 6,5 | 18 | 10 | 14 | 28 | 15 | 19 | 19,5 | 15 | 11 | 17 | 15 |

Piston rod lock nut Mod. U

UNI EN ISO 4035

Material: zinc-plated steel.



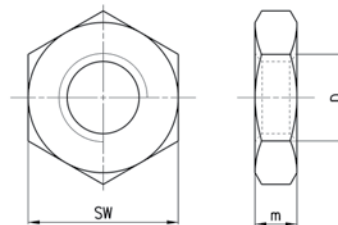
DIMENSIONS

| Mod. | ∅ | D | m | SW |
|----------------|-------|----------|---|----|
| U-8-10 | 8-10 | M4X0,7 | 3 | 7 |
| U-12-16 | 12-16 | M6X1 | 4 | 10 |
| U-20 | 20 | M8X1,25 | 5 | 13 |
| U-25-32 | 25 | M10X1,25 | 6 | 17 |

Nose nut Mod.V

UNI EN ISO 4035

Material: zinc-plated steel.

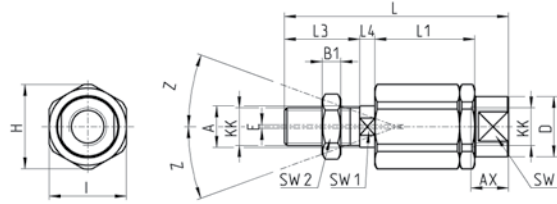


DIMENSIONS

| Mod. | ∅ | D | m | SW |
|----------------|-------|----------|----|----|
| V-8-10 | 8-10 | M12X1,25 | 5 | 19 |
| V-12-16 | 12-16 | M16X1,5 | 6 | 24 |
| V-20-25 | 20-25 | M22X1,5 | 10 | 32 |

Self aligning rod Mod. GK

New

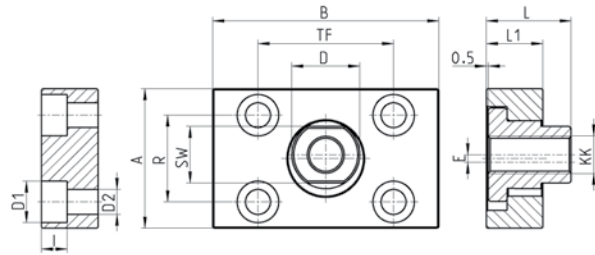
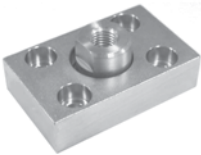


DIMENSIONS

| Mod. | ∅ | KK | L | L1 | L3 | L4 | ∅A | ∅D | H | I | SW | SW1 | SW2 | B1 | AX | Z | E |
|-----------------|-------|----------|------|----|----|-----|----|------|----|----|----|-----|-----|----|----|---|---|
| GK-20 | 20 | M8x1,25 | 57 | 26 | 21 | 5 | 8 | 12,5 | 19 | 17 | 11 | 7 | 13 | 4 | 16 | 4 | 2 |
| GK-25-32 | 25-32 | M10x1,25 | 71,5 | 35 | 20 | 7,5 | 14 | 22 | 32 | 30 | 19 | 12 | 17 | 5 | 22 | 4 | 2 |

Coupling piece Mod. GKF

New



DIMENSIONS

| Mod. | ∅ | KK | A | B | R | TF | L | L1 | I | ∅ D | ∅ D1 | ∅ D2 | SW | E |
|------------------|----|----------|----|----|----|----|------|----|-----|-----|------|------|----|-----|
| GKF-20 | 20 | M8x1,25 | 30 | 35 | 20 | 25 | 22,5 | 10 | - | 14 | 5,5 | - | 13 | 1,5 |
| GKF-25-32 | 25 | M10x1,25 | 37 | 60 | 23 | 36 | 22,5 | 15 | 6,8 | 18 | 11 | 6,6 | 15 | 2 |