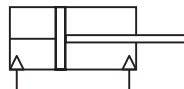


Position sensor provides an absolute analogue output voltage proportional to the stroke length of the cylinder

Dimensional standard according to ISO 15552

Accurate feed back of piston position from a resistance potentiometers for use in a wide variety of applications

Conforms to international dimensional standards offering a wide variety of installation options



Technical features

Medium:

Compressed air, filtered (to 5 µm) and non-lubricated

Dimensional standard:

ISO 15552

Operation:

Double acting, non-cushioned. A linear potentiometer located inside the piston rod gives an analogue direct voltage proportional to the stroke of the cylinder. The output socket is located in the rear end cover.

Operating pressure:

1 ... 16 bar

Port size:

G1/4, G3/8, G1/2

Cylinder diameters:

40, 50, 63, 80, 100, 125 mm

Strokes:

Standard: see below

Non-standard strokes:

available (10 ... 600 mm)

Supply voltage:

Recommended 10 V d.c.
Maximum 40 V d.c.

Power rating:

1 mW/mm of electrical travel

Output signal:

Potentiometer

Repeatability of potentiometer:

< ± 0,013 mm

Sensor resistance:

80 Ω/mm, electrical stroke
±20%, see table on page 3

Recommended input

impedance:

1000 x sensor resistance

Maximum wiper current Is:

100 µA

Insulation resistance:

> 4000 MΩ a 1000 V d.c.

Protection:

IP67 electrical plug

Operating temperature:

-20 ... +80°C max.

Air supply must be dry enough to avoid ice formation at temperatures below +2°C.

Materials

Barrel and end covers:

anodised aluminium

Piston rod: stainless steel (austenitic)

Piston and piston rod seals: polyurethane

'O'-rings: nitrile rubber

Position sensor:

Housing: plastic

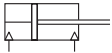
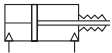
Sensor profile: nickel plated aluminium

Sensing element: conductive polymer

Technical data

| Cylinder Ø (mm) | 40 | 50 | 63 | 80 | 100 | 125 |
|--|------------|-----------|-----------|-----------|-----------|---------|
| Air ports | G1/4 | G1/4 | G3/8 | G3/8 | G1/2 | G1/2 |
| Piston rod Ø (mm) | 16 | 20 | 20 | 25 | 25 | 32 |
| Piston rod thread | M12 x 1,25 | M16 x 1,5 | M16 x 1,5 | M20 x 1,5 | M20 x 1,5 | M27 x 2 |
| Cushion length (mm) | 22 | 24 | 24 | 27 | 34 | 41 |
| Theoretical thrusts at 6 bar outstroke N | 754 | 1178 | 1870 | 3016 | 4710 | 7363 |
| Theoretical thrusts at 6 bar instroke N | 633 | 990 | 1680 | 2722 | 4416 | 6882 |
| Air consumption at 6 bar outstroke l/cm | 0,088 | 0,137 | 0,218 | 0,35 | 0,55 | 0,86 |
| Air consumption at 6 bar instroke l/cm | 0,074 | 0,114 | 0,195 | 0,32 | 0,51 | 0,79 |

Cylinder variants

| Symbol | S | Model | Description | Dimensions Page |
|---|---|---------------|---------------------------------|-----------------|
|  | • | PSA/182000/F1 | Standard cylinder | 6 |
|  | • | PSA/182000/FG | Cylinder with piston rod bellow | 6 |

Option selector

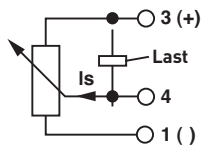
PSA/182***/**/***

| | | | | |
|-----------------------------------|------------|---|---|---------------------|
| Cylinder Ø (mm) | Substitute | ← | → | Strokes (mm) |
| 032, 040, 050, 063, 080, 100, 125 | | | | 600 max. |
| Variants | Substitute | ← | | |
| With Positionsensor | F1 | | | |
| With Positionsensor and bellow | FG | | | |

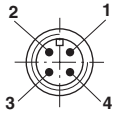
Standard strokes

| Cylinder Ø (mm) | Stroke (mm) | | | | | | | | | |
|-----------------|-------------|----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 50 | 80 | 100 | 125 | 160 | 200 | 250 | 320 | 400 | 500 |
| 40 | • | • | • | • | • | • | • | • | • | • |
| 50 | • | • | • | • | • | • | • | • | • | • |
| 63 | • | • | • | • | • | • | • | • | • | • |
| 80 | • | • | • | • | • | • | • | • | • | • |
| 100 | • | • | • | • | • | • | • | • | • | • |
| 125 | • | • | • | • | • | • | • | • | • | • |

Connection



- | | |
|---|------------------|
| 1 | Resistance-begin |
| 2 | Not used |
| 3 | Resistance-end |
| 4 | Slider ring |

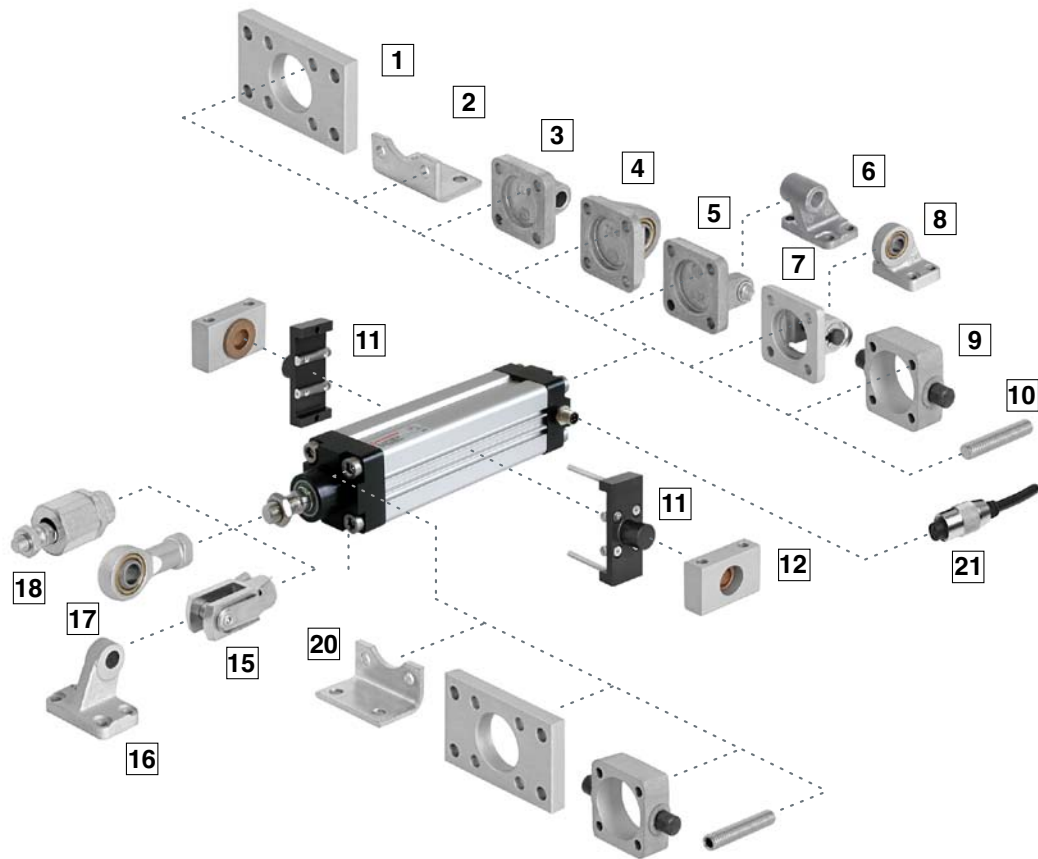


Attention

To reach the electrical values given in this catalogue sheet it is necessary to measure the take-off voltage load-free.
 In order to get proper values there must not be any load in the take-off circuit of the resistive strip potentiometer.
 The full range of the potentiometer cannot be used at the non-standard strokes.
 Zero Voltage adjustment at the instroke and max. voltage adjustment (or resistance adjustment) at full stroke has to be performed.











Sensor resistance




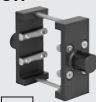





| Cylinder stroke (mm) | Sensor resistance (K Ω) |
|----------------------|---------------------------------|
| 0 ... 50 | 4 |
| 51 ... 100 | 8 |
| 101 ... 150 | 12 |
| 151 ... 200 | 16 |
| 201 ... 250 | 20 |
| 251 ... 300 | 24 |
| 301 ... 350 | 28 |
| 351 ... 400 | 32 |
| 401 ... 450 | 36 |
| 451 ... 500 | 40 |
| 501 ... 550 | 44 |
| 551 ... 600 | 48 |

Mountings and service kits


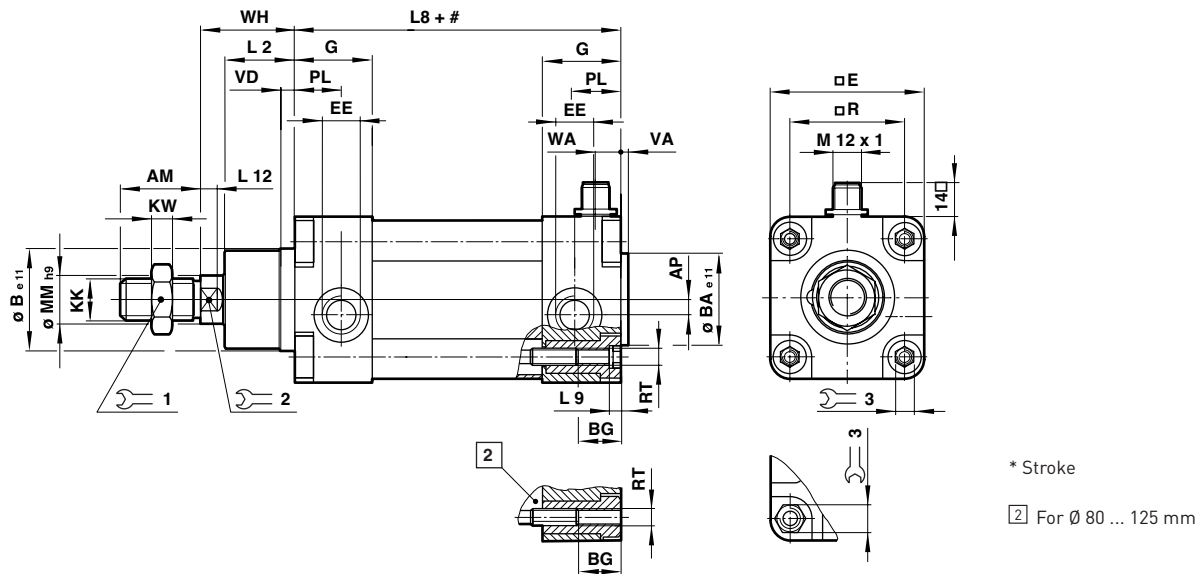
| Position | Style | Standard | Corrosion protected |
|----------|-------|--|--|
| 1 | B, G | Clear anodised aluminium | Clear anodised aluminium. Screws: A2 |
| 2 | C | Galvanized steel (ø 32 ... 63 mm) Painted steel (ø 80 & 100 mm) | — |
| 3 | R | Diecast aluminium | Black corrosion protected diecast aluminium. Certified for the food industry. Screws: A2 |
| 4 | UR | Galvanized aluminium Inner ring: steel Outer ring: brass | Black corrosion protected diecast aluminium Certified for the food industry Inner ring: stainless Steel (austenitic) Outer ring: nickel plated hardened steel |
| 5 | D | Diecast aluminium Bolt: galvanized steel (martensitic) Circlip: galvanized steel | Black corrosion protected diecast aluminium Certified for the food industry Bolt: X 10 Cr Ni S 18 9 (1.4305, AISI 303) Circlip: Stainless steel (martensitic). Screws: A2 |
| 6 | SW | Diecast aluminium | Black corrosion protected diecast aluminium Certified for the food industry |
| 7 | D2 | Painted cast iron. Bolt: stainless steel (martensitic) Circlip: galvanized steel | — |
| 8 | US | Galvanized aluminium. Inner ring: steel Outer ring: brass | — |
| 9 | FH | Cast iron | — |
| 10 | A | Galvanized steel | — |
| 11 | UH | Hard anodised aluminium Screws: galvanized steel Groove key: stainless steel | — |
| 12 | S | Clear anodised aluminium Bearing: brass | — |
| 15 | F | Galvanized steel Bolt: galvanized steel Circlip: Galvanized steel | Nickel plated steel Circlip: X 10 Cr Ni S 18 9 (1.4305, AISI 303) Bolt: X 10 Cr Ni S 18 9 (1.4305, AISI 303) |
| 16 | SS | Painted cast iron | — |
| 17 | UF | Galvanized steel. Inner ring: steel Outer ring: brass | Nickel plated steel. Inner ring: stainless steel (austenitic) Outer ring: nickel plated hardened steel. |
| 18 | AK | Galvanized steel | — |

Mountings and service kits

| Model | A | AK | B, G | C | D | D2 | F | FH | R | S |
|---------------------|---|---|---|---|---|---|--|---|---|---|
| |  |  |  |  |  |  |  |  |  |  |
| | 10 | 18 | 1 | 2 | 5 | 7 | 15 | 9 | 3 | 12 |
| Ø | Page 7 | Page 7 | Page 7 | Page 7 | Page 8 | Page 8 | Page 8 | Page 8 | Page 9 | Page 9 |
| 40 | QM/8032/35 | QM/8040/38 | QA/8040/22 | QA/8040/21 | QA/8040/23 | QA/8040/42 | QM/8040/25 | QA/8040/34 | QA/8040/27 | QA/8040/41 |
| 50 | QM/8050/35 | QM/8050/38 | QA/8050/22 | QA/8050/21 | QA/8050/23 | QA/8050/42 | QM/8050/25 | QA/8050/34 | QA/8050/27 | QA/8040/41 |
| 63 | QM/8050/35 | QM/8050/38 | QA/8063/22 | QA/8063/21 | QA/8063/23 | QA/8063/42 | QM/8050/25 | QA/8063/34 | QA/8063/27 | QA/8063/41 |
| 80 | QM/8080/35 | QM/8080/38 | QA/8080/22 | QA/8080/21 | QA/8080/23 | QA/8080/42 | QM/8080/25 | QA/8080/34 | QA/8080/27 | QA/8063/41 |
| 100 | QM/8080/35 | QM/8080/38 | QA/8100/22 | QA/8100/21 | QA/8100/23 | QA/8100/42 | QM/8080/25 | QA/8100/34 | QA/8100/27 | QA/8100/41 |
| 125 | QM/8125/35 | QM/8125/38 | QM/8125/22 | QM/8125/21 | QM/8125/23 | QM/8125/42 | QM/8125/25 | QM/8125/34 | QM/8125/27 | QA/8100/41 |
| Corrosion protected | | | | | | | | | | |
| 40 | — | — | PVQA/8040/22 | — | PVQA/8040/23 | — | PVQM/8040/25 | — | PVQA/8040/27 | — |
| 50 | — | — | PVQA/8050/22 | — | PVQA/8050/23 | — | PVQM/8050/25 | — | PVQA/8050/27 | — |
| 63 | — | — | PVQA/8063/22 | — | PVQA/8063/23 | — | PVQM/8050/25 | — | PVQA/8063/27 | — |
| 80 | — | — | PVQA/8080/22 | — | PVQA/8080/23 | — | PVQM/8080/25 | — | PVQA/8080/27 | — |
| 100 | — | — | PVQA/8100/22 | — | PVQA/8100/23 | — | PVQM/8080/25 | — | PVQA/8100/27 | — |

| Model | SS | SW | UF | UH | UR | US | Cable with socket (5 m) PVC | Cable with socket (5 m) PUR | Service Kit |
|---------------------|---|---|---|---|---|---|--|---|---|
| |  |  |  |  |  |  |  |  |  |
| | 16 | 6 | 17 | 11 | 4 | 8 | 21 | 21 | |
| Ø | Page 11 | Page 11 | Page 9 | Page 9 | Page 10 | Page 10 | | | |
| 40 | M/P19932 | M/P19494 | QM/8040/32 | QA/182040/40 | QA/8040/33 | M/P40311 | M/P34692/5 | M/P34594/5 | QA/8040/00 |
| 50 | M/P19933 | M/P19495 | QM/8050/32 | QA/182050/40 | QA/8050/33 | M/P40312 | M/P34692/5 | M/P34594/5 | QA/8050/00 |
| 63 | M/P19934 | M/P19496 | QM/8050/32 | QA/182063/40 | QA/8063/33 | M/P40313 | M/P34692/5 | M/P34594/5 | QA/8063/00 |
| 80 | M/P19935 | M/P19497 | QM/8080/32 | QA/182080/40 | QA/8080/33 | M/P40314 | M/P34692/5 | M/P34594/5 | QA/8080/00 |
| 100 | M/P19936 | M/P19498 | QM/8080/32 | QA/182100/40 | QA/8100/33 | M/P40315 | M/P34692/5 | M/P34594/5 | QA/8100/00 |
| 125 | M/P19937 | M/P19499 | QM/8125/32 | QA/182125/40 | QM/8125/33 | M/P711355 | M/P34692/5 | M/P34594/5 | QM/8125/00 |
| Corrosion protected | | | | | | | | | |
| 40 | — | M/P40460 | PVQM/8040/32 | — | PVQA/8040/33 | — | — | — | — |
| 50 | — | M/P40461 | PVQM/8050/32 | — | PVQA/8050/33 | — | — | — | — |
| 63 | — | M/P40462 | PVQM/8050/32 | — | PVQA/8063/33 | — | — | — | — |
| 80 | — | M/P40463 | PVQM/8080/32 | — | PVQA/8080/33 | — | — | — | — |
| 100 | — | M/P40464 | PVQM/8080/32 | — | PVQA/8100/33 | — | — | — | — |

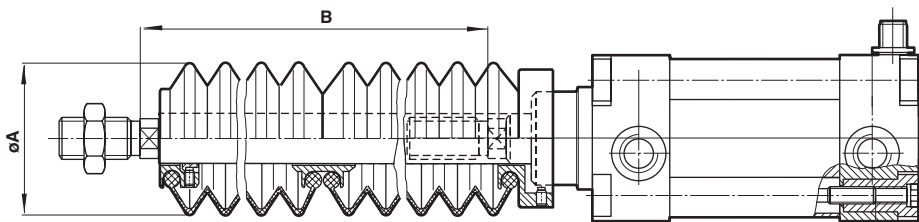
Dimensions



| Ø | AM | AP | Ø Be 11 | Ø BAe 11 | BG | BH | E | EE | G | KK | KV | KW | L2 | L8 |
|-----|----|-----|---------|----------|------|------|-----|------|------|----------|---------|-----------|------------------|-----|
| 40 | 24 | 4,5 | 35 | 35 | 16 | 6 | 53 | 1/4" | 32 | M12x1,25 | 19 | 6 | 22 | 105 |
| 50 | 32 | 6 | 40 | 40 | 16 | 8 | 65 | 1/4" | 31 | M16x1,5 | 24 | 8 | 27 | 106 |
| 63 | 32 | 10 | 45 | 45 | 16 | 8 | 75 | 3/8" | 33 | M16x1,5 | 24 | 8 | 29 | 121 |
| 80 | 40 | 8,5 | 45 | 45 | 17 | 19 | 95 | 3/8" | 33 | M20x1,5 | 30 | 10 | 33 | 128 |
| 100 | 40 | 9 | 55 | 55 | 17 | 19 | 115 | 1/2" | 37 | M20x1,5 | 30 | 10 | 36 | 138 |
| 125 | 54 | 10 | 60 | 60 | 20 | 24 | 140 | 1/2" | 46 | M27x2 | 41 | 13,5 | 45 | 160 |
| Ø | L9 | L12 | Ø MMh 9 | PL | R | RT | SW | VA | VD | WH | at 0 mm | per 25 mm | Model (Standard) | |
| 40 | 4 | 6,5 | 16 | 15 | 38 | M 6 | 13 | 3,5 | 6 | 30 | 0,80 kg | 0,08 kg | PSA/182040/F1/* | |
| 50 | 5 | 8 | 20 | 18,5 | 46,5 | M 8 | 17 | 3,5 | 6 | 37 | 1,33 kg | 0,12 kg | PSA/182050/F1/* | |
| 63 | 5 | 8 | 20 | 19 | 56,5 | M 8 | 17 | 4 | 6 | 37 | 1,80 kg | 0,13 kg | PSA/182063/F1/* | |
| 80 | - | 10 | 25 | 19 | 72 | M 10 | 22 | 4 | 6 | 46 | 3,25 kg | 0,20 kg | PSA/182080/F1/* | |
| 100 | - | 10 | 25 | 18 | 89 | M 10 | 22 | 4 | 6 | 51 | 4,81 kg | 0,23 kg | PSA/182100/F1/* | |
| 125 | - | 13 | 32 | 20 | 110 | M 12 | 27 | 6 | 15,5 | 65 | 8,00 kg | 0,33 kg | PSA/182125/F1/* | |

* Please insert standard stroke length

PSA/182000/FG./.; Cylinder with bellow



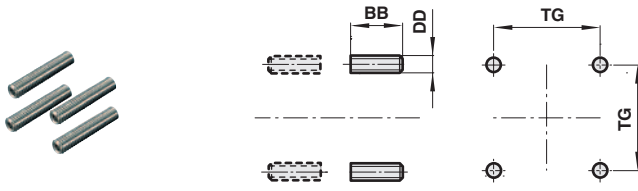
| Cyl. Ø | Ø A | Stroke max per bellow | Piston rod extension B | | Model |
|--------|-----|-----------------------|------------------------|---------------------|-----------------|
| | | | for first bellow | for further bellows | |
| 32 | 40 | 60 | 30 | 25 | PSA/182032/FG/* |
| 40 | 63 | 145 | 50 | 32 | PSA/182040/FG/* |
| 50 | 63 | 145 | 40 | 32 | PSA/182050/FG/* |
| 63 | 63 | 145 | 40 | 32 | PSA/182063/FG/* |
| 80 | 80 | 250 | 50 | 45 | PSA/182080/FG/* |
| 100 | 80 | 250 | 50 | 45 | PSA/182100/FG/* |

* Standard stroke

Mountings

Front or rear stud mounting A

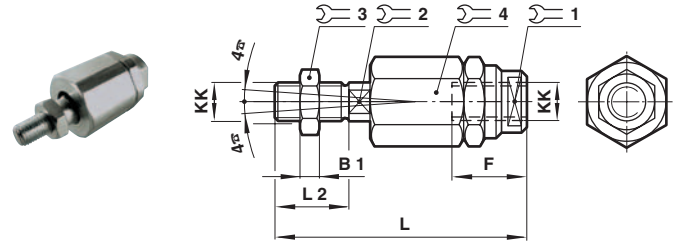
Conforms to ISO 15552, type MX1



Standard

| Ø | BB | DD | TG | kg | Model (A) |
|--------|----|-----|-----------|------|------------|
| 32/40 | 17 | M6 | 32,5/38 | 0,02 | QM/8032/35 |
| 50/63 | 23 | M8 | 46,5/56,5 | 0,05 | QM/8050/35 |
| 80/100 | 28 | M10 | 72/89 | 0,08 | QM/8080/35 |

Piston rod swivel AK

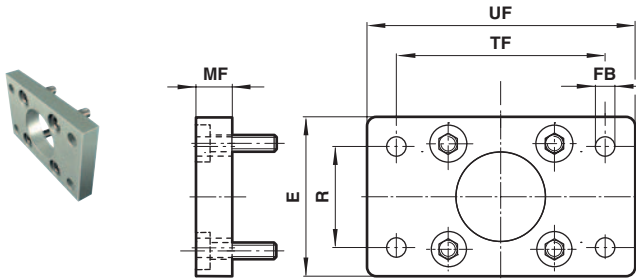


Standard

| Ø | KK | B1 | F | L | L2 | 1 | 2 | 3 | 4 | kg | Model (AK) |
|--------|----------|----|----|-----|----|----|----|----|----|------|------------|
| 32 | M10x1,25 | 5 | 26 | 73 | 20 | 19 | 12 | 17 | 30 | 0,20 | QM/8025/38 |
| 40 | M12x1,25 | 6 | 26 | 77 | 24 | 19 | 12 | 19 | 30 | 0,20 | QM/8040/38 |
| 50/63 | M16x1,5 | 8 | 34 | 106 | 32 | 30 | 19 | 24 | 42 | 0,65 | QM/8050/38 |
| 80/100 | M20x1,5 | 10 | 42 | 122 | 40 | 30 | 19 | 30 | 42 | 0,72 | QM/8080/38 |

Front flange B, G

Conforms to ISO 15552, type MF1 and MF2



Standard

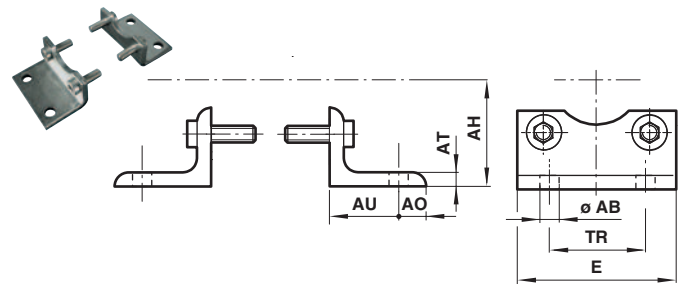
| Ø | E | Ø FB | MF | R | TF | UF | kg | Model (B, G) |
|-----|-----|------|----|----|-----|-----|------|--------------|
| 32 | 50 | 7 | 10 | 32 | 64 | 80 | 0,25 | QA/8032/22 |
| 40 | 55 | 9 | 10 | 36 | 72 | 90 | 0,35 | QA/8040/22 |
| 50 | 65 | 9 | 12 | 45 | 90 | 110 | 0,70 | QA/8050/22 |
| 63 | 75 | 9 | 12 | 50 | 100 | 125 | 0,80 | QA/8063/22 |
| 80 | 100 | 12 | 16 | 63 | 126 | 154 | 1,35 | QA/8080/22 |
| 100 | 120 | 14 | 16 | 75 | 150 | 186 | 2,20 | QA/8100/22 |

Corrosion protected

| | | | | | | | | |
|-----|-----|----|----|----|-----|-----|------|--------------|
| 32 | 50 | 7 | 10 | 32 | 64 | 80 | 0,25 | PVQA/8032/22 |
| 40 | 55 | 9 | 10 | 36 | 72 | 90 | 0,35 | PVQA/8040/22 |
| 50 | 65 | 9 | 12 | 45 | 90 | 110 | 0,7 | PVQA/8050/22 |
| 63 | 75 | 9 | 12 | 50 | 100 | 125 | 0,8 | PVQA/8063/22 |
| 80 | 100 | 12 | 16 | 63 | 126 | 154 | 1,35 | PVQA/8080/22 |
| 100 | 120 | 14 | 16 | 75 | 150 | 186 | 2,20 | PVQA/8100/22 |

Foot mounting C

Conforms to ISO 15552, type MS1

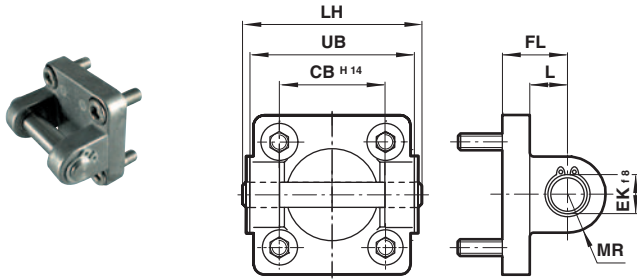


Standard

| Ø | Ø AB | AH | AO | AT | AU | E | TR | kg | Model (C) |
|-----|------|----|----|----|----|-----|----|------|------------|
| 32 | 7 | 32 | 8 | 4 | 24 | 48 | 32 | 0,15 | QA/8032/21 |
| 40 | 10 | 36 | 9 | 4 | 28 | 53 | 36 | 0,18 | QA/8040/21 |
| 50 | 10 | 45 | 10 | 5 | 32 | 64 | 45 | 0,30 | QA/8050/21 |
| 63 | 10 | 50 | 12 | 5 | 32 | 74 | 50 | 0,39 | QA/8063/21 |
| 80 | 12 | 63 | 19 | 5 | 41 | 98 | 63 | 0,80 | QA/8080/21 |
| 100 | 14 | 71 | 19 | 5 | 41 | 115 | 75 | 0,95 | QA/8100/21 |

Rear clevis D

Conforms to ISO 15552, type MP2

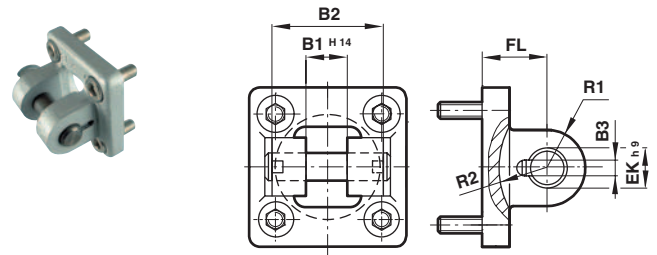


Standard

| Ø | CB ^{H14} | Ø EK ^{h9} | FL | L | LH | MR | UB | kg | Model (D) |
|----------------------------|-------------------|--------------------|----|----|-----|----|-----|------|--------------|
| 32 | 26 | 10 | 22 | 13 | 52 | 9 | 45 | 0,11 | QA/8032/23 |
| 40 | 28 | 12 | 25 | 16 | 60 | 12 | 52 | 0,16 | QA/8040/23 |
| 50 | 32 | 12 | 27 | 17 | 68 | 12 | 60 | 0,22 | QA/8050/23 |
| 63 | 40 | 16 | 32 | 22 | 79 | 15 | 70 | 0,34 | QA/8063/23 |
| 80 | 50 | 16 | 36 | 22 | 99 | 15 | 90 | 0,54 | QA/8080/23 |
| 100 | 60 | 20 | 41 | 27 | 119 | 20 | 110 | 0,90 | QA/8100/23 |
| Corrosion protected | | | | | | | | | |
| 32 | 26 | 10 | 22 | 13 | 52 | 9 | 45 | 0,11 | PVQA/8032/23 |
| 40 | 28 | 12 | 25 | 16 | 60 | 12 | 52 | 0,16 | PVQA/8040/23 |
| 50 | 32 | 12 | 27 | 17 | 68 | 12 | 60 | 0,22 | PVQA/8050/23 |
| 63 | 40 | 16 | 32 | 22 | 79 | 15 | 70 | 0,34 | PVQA/8063/23 |
| 80 | 50 | 16 | 36 | 22 | 99 | 15 | 90 | 0,54 | PVQA/8080/23 |
| 100 | 60 | 20 | 41 | 27 | 119 | 20 | 110 | 0,90 | PVQA/8100/23 |

Rear clevis D2

Conforms to ISO 15552, type AB6

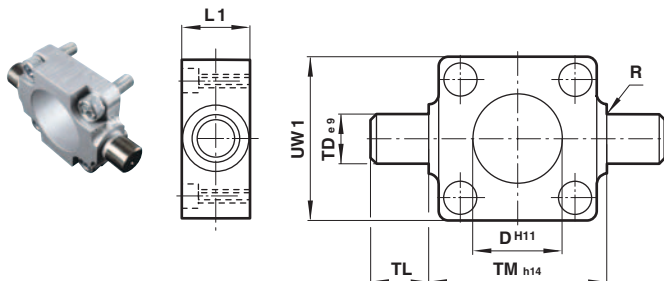


Standard

| Ø | B1 ^{H14} | B2 | B3 | Ø EK ^{h9} | FL | R1 | R2 | kg | Model (D2) |
|-----|-------------------|----|-----|--------------------|----|------|----|------|------------|
| 32 | 14 | 34 | 3,3 | 10 | 22 | 11 | 17 | 0,20 | QA/8032/42 |
| 40 | 16 | 40 | 4,3 | 12 | 25 | 12 | 20 | 0,23 | QA/8040/42 |
| 50 | 21 | 45 | 4,3 | 16 | 27 | 14,5 | 22 | 0,36 | QA/8050/42 |
| 63 | 21 | 51 | 4,3 | 16 | 32 | 18 | 25 | 0,55 | QA/8063/42 |
| 80 | 25 | 65 | 4,3 | 20 | 36 | 22 | 30 | 0,90 | QA/8080/42 |
| 100 | 25 | 75 | 4,3 | 20 | 41 | 22 | 32 | 1,45 | QA/8100/42 |

Front or rear detachable trunnion FH

Conforms to VDMA 24562 part 2, type MT 5/6

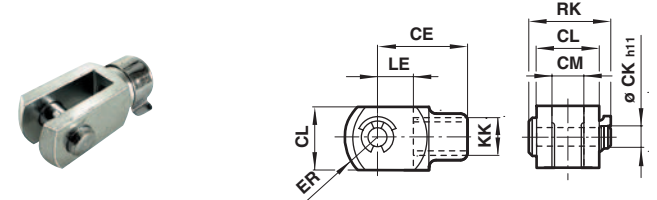


Standard

| Ø | Ø Dh11 | L1 | R | Ø TD ^{e9} | TL | TM ^{h14} | UW1 | kg | Model (FH) |
|-----|--------|----|-----|--------------------|----|-------------------|-----|------|------------|
| 32 | 30 | 16 | 1 | 12 | 12 | 50 | 45 | 0,20 | QA/8032/34 |
| 40 | 35 | 20 | 1,6 | 16 | 16 | 63 | 55 | 0,38 | QA/8040/34 |
| 50 | 40 | 24 | 1,6 | 16 | 16 | 75 | 65 | 0,60 | QA/8050/34 |
| 63 | 45 | 24 | 1,6 | 20 | 20 | 90 | 75 | 1,10 | QA/8063/34 |
| 80 | 45 | 28 | 1,6 | 20 | 20 | 110 | 100 | 1,90 | QA/8080/34 |
| 100 | 55 | 38 | 2 | 25 | 25 | 132 | 120 | 3,50 | QA/8100/34 |

Piston rod clevis F

Conforms to DIN ISO 8140

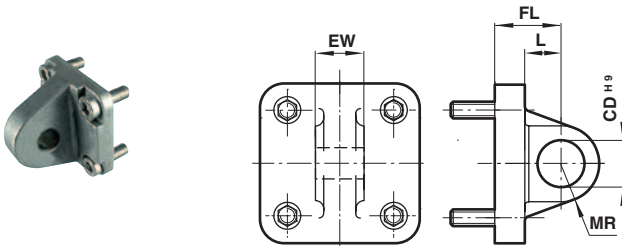


Standard

| Ø | KK | CE | Ø CK ^{h11} | CL | CM | ER | LE | RK | kg | Model (F) |
|----------------------------|----------|----|---------------------|----|----|----|----|------|------|--------------|
| 32 | M10x1,25 | 40 | 10 | 20 | 10 | 16 | 20 | 28 | 0,09 | QM/8025/25 |
| 40 | M12x1,25 | 48 | 12 | 24 | 12 | 19 | 24 | 32 | 0,13 | QM/8040/25 |
| 50/63 | M16x1,5 | 64 | 16 | 32 | 16 | 25 | 32 | 41,5 | 0,33 | QM/8050/25 |
| 80/100 | M20x1,5 | 80 | 20 | 40 | 20 | 32 | 40 | 50 | 0,67 | QM/8080/25 |
| Corrosion protected | | | | | | | | | | |
| 32 | M10x1,25 | 40 | 10 | 20 | 10 | 16 | 20 | 28 | 0,09 | PVQM/8032/25 |
| 40 | M12x1,25 | 48 | 12 | 24 | 12 | 19 | 24 | 32 | 0,13 | PVQM/8040/25 |
| 50/63 | M16x1,5 | 64 | 16 | 32 | 16 | 25 | 32 | 41,5 | 0,33 | PVQM/8050/25 |
| 80/100 | M20x1,5 | 80 | 20 | 40 | 20 | 32 | 40 | 50 | 0,67 | PVQM/8080/25 |

Rear eye R

Conforms to ISO 15552, type MP4


Standard

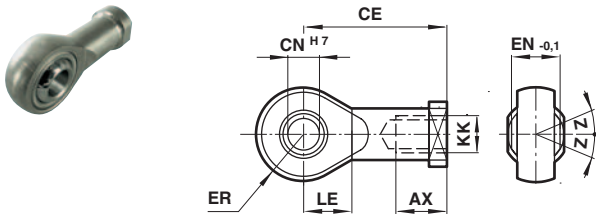
| Ø | Ø CD ^{H9} | EW | FL | L | MR | kg | Model (R) |
|-----|--------------------|------|----|----|----|------|------------|
| 40 | 12 | 27,8 | 25 | 16 | 12 | 0,11 | QA/8040/27 |
| 50 | 12 | 31,7 | 27 | 17 | 12 | 0,17 | QA/8050/27 |
| 63 | 16 | 39,7 | 32 | 22 | 15 | 0,24 | QA/8063/27 |
| 80 | 16 | 49,7 | 36 | 22 | 15 | 0,37 | QA/8080/27 |
| 100 | 20 | 59,7 | 41 | 27 | 20 | 0,59 | QA/8100/27 |
| 125 | 25 | 69,7 | 50 | 33 | 25 | 3,20 | QM/8125/27 |

Corrosion protected

| | | | | | | | |
|-----|----|------|----|----|----|------|--------------|
| 40 | 12 | 27,8 | 25 | 16 | 12 | 0,11 | PVQA/8040/27 |
| 50 | 12 | 31,7 | 27 | 17 | 12 | 0,17 | PVQA/8050/27 |
| 63 | 16 | 39,7 | 32 | 22 | 15 | 0,24 | PVQA/8063/27 |
| 80 | 16 | 49,7 | 36 | 22 | 15 | 0,37 | PVQA/8080/27 |
| 100 | 20 | 59,7 | 41 | 27 | 20 | 0,59 | PVQA/8100/27 |

Universal piston rod eye UF

Conforms to DIN ISO 8139


Standard

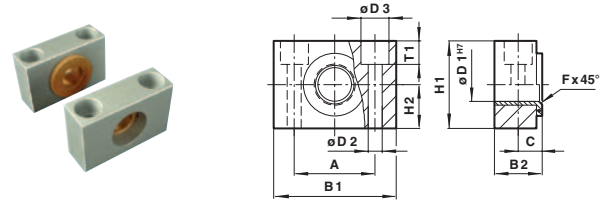
| Ø | Gewinde KK | AX | CE | Ø CN ^{H7} | EN ^{-0,1} | ER | LE | Z | kg | Model (UF) |
|--------|------------|----|-----|--------------------|--------------------|----|----|-----|------|------------|
| 40 | M12x1,25 | 22 | 50 | 12 | 16 | 16 | 17 | 13° | 0,13 | QM/8040/32 |
| 50/63 | M16x1,5 | 28 | 64 | 16 | 21 | 21 | 22 | 15° | 0,33 | QM/8050/32 |
| 80/100 | M20x1,5 | 33 | 77 | 20 | 25 | 25 | 26 | 15° | 0,67 | QM/8080/32 |
| 125 | M27x2 | 51 | 110 | 30 | 37 | 35 | 36 | 15° | 1,35 | QM/8125/32 |

Corrosion protected

| | | | | | | | | | | |
|--------|----------|----|----|----|----|----|----|-----|------|--------------|
| 40 | M12x1,25 | 22 | 50 | 12 | 16 | 16 | 17 | 13° | 0,13 | PVQM/8040/32 |
| 50/63 | M16x1,5 | 28 | 64 | 16 | 21 | 21 | 22 | 15° | 0,33 | PVQM/8050/32 |
| 80/100 | M20x1,5 | 33 | 77 | 20 | 25 | 25 | 26 | 15° | 0,40 | PVQM/8080/32 |

Trunnion support S

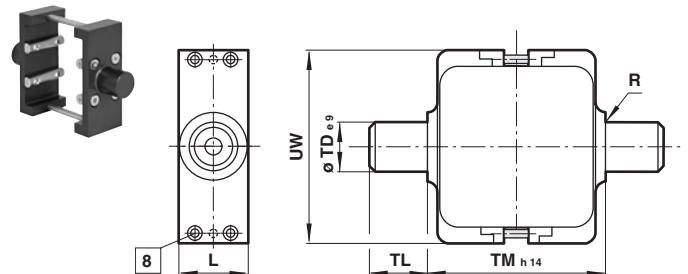
Conforms to ISO 15552, type AT4


Standard

| Ø | A | B1 | B2 | C | Ø D1 ^{H7} | Ø D1 | Ø D3 | Fx 45° | H1 | H2 | T1 | kg | Model (S) |
|---------|----|----|------|----|--------------------|------|------|--------|----|----|----|------|------------|
| 40/50 | 36 | 55 | 21 | 12 | 16 | 9 | 15 | 1,6 | 36 | 18 | 9 | 0,14 | QA/8040/41 |
| 63/80 | 42 | 65 | 23 | 13 | 20 | 11 | 18 | 1,6 | 40 | 20 | 11 | 0,18 | QA/8063/41 |
| 100/125 | 50 | 75 | 28,5 | 16 | 25 | 14 | 20 | 2 | 50 | 25 | 13 | 0,34 | QA/8100/41 |

Adjustable Trunnion Mounting UH

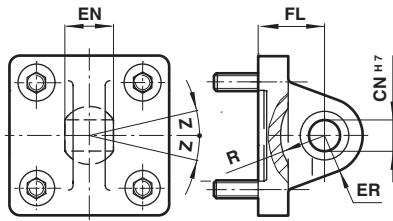
Conforms to ISO 15552, type AT4


Standard

| Ø | L | R | Ø TD e9 | TL | TM h14 | UW | Torque max. (Nm) | kg | Model (UH) |
|-----|----|-----|---------|----|--------|-----|------------------|-----|---------------|
| 40 | 28 | 1,6 | 16 | 16 | 63 | 65 | 3,5 | 0,5 | PQA/182040/40 |
| 50 | 28 | 1,6 | 16 | 16 | 75 | 80 | 3,5 | 0,8 | PQA/182050/40 |
| 63 | 36 | 1,6 | 20 | 20 | 90 | 96 | 5 | 1,4 | PQA/182063/40 |
| 80 | 36 | 1,6 | 20 | 20 | 110 | 116 | 6 | 1,9 | PQA/182080/40 |
| 100 | 48 | 2 | 25 | 25 | 132 | 140 | 6 | 2,3 | PQA/182100/40 |
| 125 | 50 | 2 | 25 | 25 | 160 | 163 | 6 | 3,3 | PQA/182125/40 |

Universal rear eye UR

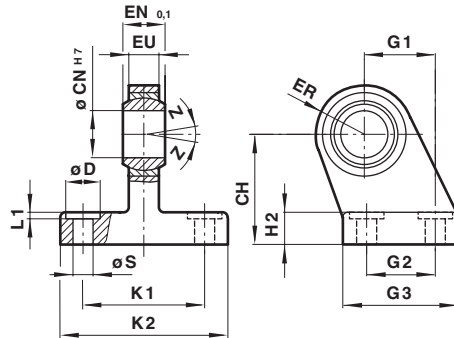
Conforms to ISO 15552, type MP6


Standard

| Ø | Ø CN ^{H7} | EN | ER | FL | R | Z | kg | Model (UR) |
|----------------------------|--------------------|----|----|----|----|-----|------|--------------|
| 40 | 12 | 16 | 18 | 25 | 18 | 13° | 0,25 | QA/8040/33 |
| 50 | 16 | 21 | 21 | 27 | 19 | 15° | 0,40 | QA/8050/33 |
| 63 | 16 | 21 | 23 | 32 | 24 | 15° | 0,55 | QA/8063/33 |
| 80 | 20 | 25 | 28 | 36 | 24 | 15° | 0,90 | QA/8080/33 |
| 100 | 20 | 25 | 30 | 41 | 29 | 15° | 1,50 | QA/8100/33 |
| 125 | 30 | 37 | 40 | 50 | 36 | 15° | 2,70 | QM/8125/33 |
| Corrosion protected | | | | | | | | |
| 40 | 12 | 16 | 19 | 25 | 18 | 13° | 0,25 | PVQA/8040/33 |
| 50 | 16 | 21 | 21 | 27 | 19 | 13° | 0,4 | PVQA/8050/33 |
| 63 | 16 | 21 | 24 | 32 | 24 | 15° | 0,55 | PVQA/8063/33 |
| 80 | 20 | 25 | 28 | 36 | 24 | 15° | 0,9 | PVQA/8080/33 |
| 100 | 20 | 25 | 30 | 41 | 29 | 15° | 1,5 | PVQA/8100/33 |

Swivel hinge US

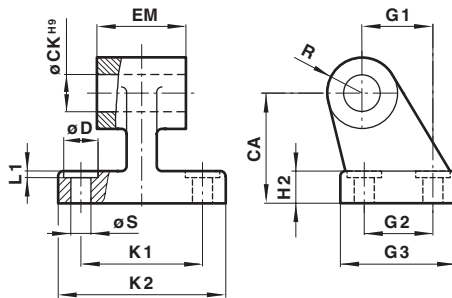
Conforms to VDMA 24562 part 2


Standard

| Ø | CH | Ø CN ^{H7} | Ø D | EN ^{-0,1} | ER | EU | G1 | G2 | G3 | H2 | K1 | K2 | L1 | Ø S | Z | kg | Model (US) |
|-----|----|--------------------|-----|--------------------|----|----|----|----|----|----|----|-----|-----|-----|-----|------|------------|
| 40 | 36 | 12 | 11 | 16 | 18 | 12 | 24 | 22 | 35 | 10 | 41 | 54 | 1,6 | 6,6 | 13° | 0,24 | M/P40311 |
| 50 | 45 | 16 | 15 | 21 | 21 | 15 | 33 | 30 | 45 | 12 | 50 | 65 | 1,6 | 9 | 13° | 0,46 | M/P40312 |
| 63 | 50 | 16 | 15 | 21 | 23 | 15 | 37 | 35 | 50 | 12 | 52 | 67 | 1,6 | 9 | 15° | 0,59 | M/P40313 |
| 80 | 63 | 20 | 18 | 25 | 28 | 18 | 47 | 40 | 60 | 14 | 66 | 86 | 2,5 | 11 | 15° | 1,03 | M/P40314 |
| 100 | 71 | 20 | 18 | 25 | 30 | 18 | 55 | 50 | 70 | 15 | 76 | 96 | 2,5 | 11 | 15° | 1,40 | M/P40315 |
| 125 | 90 | 30 | 20 | 37 | 40 | 25 | 70 | 60 | 90 | 20 | 94 | 124 | 3,2 | 14 | 15° | 3,10 | M/P71355 |

Wide hinge SW

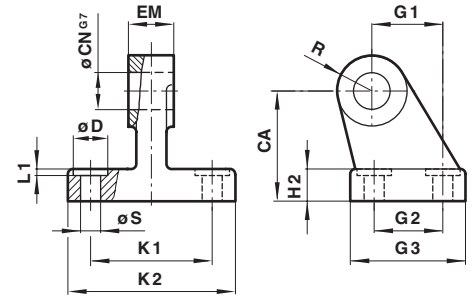
Conforms to ISO 15552, type AB7



Standard

| Ø | CA | Ø CK ^{H9} | Ø D | H2 | EM | G1 | G2 | G3 | K1 | K2 | L1 | R | Ø S | kg | Typ (SW) |
|---------------------|----|--------------------|-----|----|------|----|----|----|----|-----|-----|----|-----|------|----------|
| 40 | 36 | 12 | 11 | 9 | 27,5 | 24 | 22 | 35 | 41 | 54 | 1,6 | 11 | 6,6 | 0,07 | M/P19494 |
| 50 | 45 | 12 | 15 | 11 | 31,5 | 33 | 30 | 45 | 50 | 65 | 1,6 | 13 | 9 | 0,14 | M/P19495 |
| 63 | 50 | 16 | 15 | 12 | 39,5 | 37 | 35 | 50 | 52 | 67 | 1,6 | 15 | 9 | 0,18 | M/P19496 |
| 80 | 63 | 16 | 18 | 14 | 49,5 | 47 | 40 | 60 | 66 | 84 | 2,5 | 15 | 11 | 0,28 | M/P19497 |
| 100 | 71 | 20 | 18 | 15 | 59,5 | 55 | 50 | 70 | 76 | 94 | 2,5 | 19 | 11 | 0,42 | M/P19498 |
| 125 | 90 | 25 | 20 | 20 | 70,5 | 70 | 60 | 90 | 94 | 124 | 3,2 | 22 | 14 | 2,70 | M/P19499 |
| Corrosion protected | | | | | | | | | | | | | | | |
| 40 | 36 | 12 | 11 | 10 | 28,5 | 24 | 22 | 35 | 41 | 54 | 1,6 | 11 | 6,6 | 0,07 | M/P40460 |
| 50 | 45 | 12 | 15 | 12 | 32,5 | 33 | 30 | 45 | 50 | 65 | 1,6 | 13 | 9 | 0,14 | M/P40461 |
| 63 | 50 | 16 | 15 | 12 | 40,5 | 37 | 35 | 50 | 52 | 67 | 1,6 | 15 | 9 | 0,18 | M/P40462 |
| 80 | 63 | 16 | 18 | 14 | 50,5 | 47 | 40 | 60 | 66 | 86 | 2,5 | 15 | 11 | 0,28 | M/P40463 |
| 100 | 71 | 20 | 18 | 15 | 60,5 | 55 | 50 | 70 | 76 | 96 | 2,5 | 19 | 11 | 0,42 | M/P40464 |

Narrow hinge SS



Standard

| Ø | CA | Ø CN ^{G7} | Ø D | H2 | EM | G1 | G2 | G3 | K1 | K2 | L1 | R | Ø S | kg | Typ (SS) |
|-----|----|--------------------|-----|----|----|----|----|----|----|-----|-----|----|-----|------|----------|
| 40 | 36 | 12 | 11 | 10 | 12 | 24 | 22 | 35 | 41 | 54 | 1,6 | 11 | 6,6 | 0,20 | M/P19932 |
| 50 | 45 | 16 | 15 | 12 | 16 | 33 | 30 | 45 | 50 | 65 | 1,6 | 13 | 9 | 0,48 | M/P19933 |
| 63 | 50 | 16 | 15 | 12 | 16 | 37 | 35 | 50 | 52 | 67 | 1,6 | 15 | 9 | 0,50 | M/P19934 |
| 80 | 63 | 20 | 18 | 14 | 20 | 47 | 40 | 60 | 66 | 86 | 2,5 | 15 | 11 | 0,75 | M/P19935 |
| 100 | 71 | 20 | 18 | 15 | 20 | 55 | 50 | 70 | 76 | 96 | 2,5 | 19 | 11 | 1,20 | M/P19936 |
| 125 | 90 | 25 | 20 | 20 | 30 | 70 | 60 | 90 | 94 | 124 | 3,2 | 22 | 14 | 2,50 | M/P19937 |

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.