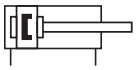
# RA/192000/M/EX, ISO Compact cylinder
# Magnetic piston, double acting

- Ø 20 ... 125 mm
- Conforms to ISO 21287
- M/50 switches can be mounted flush with the profile
- Magnetic piston as standard
- Seals ensure low friction operation and long life
- Two different guiding systems: RA/192000/N2, .../N4
- These cylinders are applicable in zones 1&2 (gas), 21&22 (dust), ATEX Cat. II 2G and 2D





## Technical features

**Medium:**
Compressed air, filtered, lubricated or non-lubricated

**Standard: Based on ISO 21287**
**Operation:**
RA/192000/M/EX:
Double acting, magnetic piston, male piston rod, thread, buffer cushioning
RA/192000/MX/EX:
Double acting, magnetic piston, female piston rod thread, buffer cushioning

**Operating pressure:**
1 ... 10 bar (14 ... 145 psi)

**Ports:**
M5, G1/8 ... G1/4

**Cylinder diameters:**
20, 25, 32, 40, 50, 63, 80, 100 and 125 mm

**Standard Strokes:**
See below

**Ambient temperature:**
-5° ... +60°C (+23° ... +140°F)

**Operating temperature:**
-5 ... +80°C max. (+23 ... +176°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

**Equipment marking acc. to ATEX:**
Ⓔx II 2G Ex h IIC T4 Gb
II 2D Ex h IIIC T120°C Db

**Materials:**
Profile barrel:
Anodized aluminium
End covers: Pressure diecast aluminium
Piston rod: Stainless steel
Piston rod seals: PUR
Piston seals: NBR
O-rings: NBR

## Technical

| Cylinder Ø (mm) | 20 | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125 |
|---|---|---|---|---|---|---|---|---|---|
| Port size | M 5 | M 5 | G 1/8 | G 1/8 | G 1/8 | G 1/8 | G 1/8 | G 1/8 | G 1/4 |
| Piston rod Ø (mm) | 10 | 10 | 12 | 16 | 20 | 20 | 25 | 25 | 32 |
| Piston rod thread | M8x1,25 | M8x1,25 | M10x1,25 | M10x1,25 | M12x1,25 | M12x1,25 | M16x1,5 | M16x1,5 | M27x2 |
| Energy (J) max. | 0,2 | 0,3 | 0,45 | 0,75 | 1,1 | 1,3 | 1,9 | 2,3 | 3 |
| Theoretical thrusts at 6 bar outstroke (N) | 188 | 294 | 482 | 754 | 1178 | 1870 | 3016 | 4710 | 7363 |
| Theoretical thrusts at 6 bar instroke (N) | 141 | 247 | 414 | 633 | 990 | 1680 | 2722 | 4416 | 6882 |
| Air consumption at 6 bar outstroke (l/cm) | 0,022 | 0,035 | 0,056 | 0,088 | 0,137 | 0,218 | 0,35 | 0,55 | 0,86 |
| Air consumption at 6 bar instroke (l/cm) | 0,016 | 0,028 | 0,048 | 0,074 | 0,114 | 0,195 | 0,32 | 0,51 | 0,79 |

## Technical data, RA/1920xx/TM./EX

| For Model only RA/1920xx/TM./EX. | 20 | 25 | 32 | 40 | 50 | 63 | 80 | 100 |
|---|---|---|---|---|---|---|---|---|
| Energy (J) max. | 0,2 | 0,3 | 0,45 | 0,75 | 1,1 | 1,3 | 1,9 | 2,3 |
| Theoretical thrusts at 6 bar outstroke (N) | 330 | 542 | 897 | 1387 | 2168 | 3552 | 3737 | 9130 |
| Theoretical thrusts at 6 bar instroke (N) | 141 | 247 | 414 | 633 | 990 | 1680 | 2722 | 4416 |
| Air consumption at 6 bar outstroke (l/cm) | 0,038 | 0,063 | 0,105 | 0,162 | 0,253 | 0,414 | 0,669 | 1,065 |
| Air consumption at 6 bar instroke (l/cm) | 0,016 | 0,028 | 0,048 | 0,074 | 0,114 | 0,195 | 0,32 | 0,51 |

## Standard strokes

| Cylinder Ø (mm) | Stroke length (mm) 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 80 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | • | • | • | • | • | • | • | • | – | – | – |
| 40 | • | • | • | • | • | • | • | • | – | – | – |
| 50 | – | • | • | • | • | • | • | • | • | • | • |
| 63 | – | – | • | • | • | • | • | • | • | • | • |
| 80 | – | – | • | • | • | • | • | • | • | • | • |
| 100 | – | – | • | • | • | • | • | • | • | • | • |
| 125 | – | – | • | • | • | • | • | • | • | • | • |


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## Explosion protection according ATEX directive 2014/34/EU
## EN ISO 80079 Non-electrical equipment for potentally explosive atmospheres

| | | | | |
|---|---|---|---|---|
| Range of application | | All range of application other than mines | | |
| Equipment group | | II | | |
| Potentially explosive atmosphere | | Mixture of air and gases, vapours, mists G (gas) | | |
| (compustible materials) | | Dust/air - mixture D (dust) | | |
| Probability risk for a potentially explosive atmosphere | | Continuous or long-term or frequent | Occasional | Rarely and briefly |
| Equipment categories | | 1 | 2 | 3 |
| Equipment safety | | very high | high | normal |
| Gas | Equipment-identification Ex... | Ex II 1G | Ex II 2G | Ex II 3G |
| | ATEX-zone | Zone 0 | Zone 1 | Zone 2 |
| Dust | Equipment-identification Ex... | Ex II 1D | Ex II 2D | Ex II 3D |
| | ATEX-zone | Zone 20 | Zone 21 | Zone 22 |

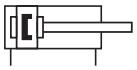
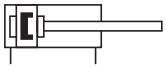
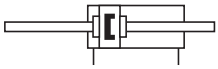
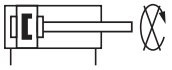
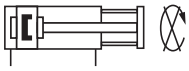
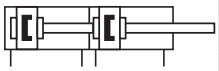
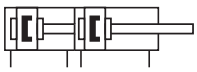
## Equipment identification for IMI Norgren pneumatic cylinder: (Example for standard cylinder)

**II 2G Ex h IIC T4 Gb**
**II 2D Ex h IIIC T120°C Db**

| | | |
|---|---|---|
| Equipment group: | II | All application other than mines |
| Equipment categorie: | 2 | High level of equipment safety |
| Usability for zones: | G and D | Gas and dust |
| Explosions groups | IIC and IIIC | Max. ignitability gas- and dust groups |
| Temperature class for gas: | T4 | Max. surface temperature 135°C |
| Temperature data for dust: | 120°C | Max. surface temperature |
| Equipment Protection Level (EPL) | Gb and Db | Gas and dust, save by normal operation and expected equipment fault |


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## Cylinder variants

| Symbol | R | S | Model with magnetic piston | Description | Dimensions Page |
|---|---|---|---|---|---|
|  | X | • | RA/192000/M/EX | Standard cylinder, male piston rod thread *1) | 8 |
| | X | • | RA/192000/MX/EX | Standard cylinder, female piston rod thread *1) | 8 |
| | X | • | RA/192000/W2/EX | Special wiper/seal, male piston rod thread, Ø 20 ... 125 mm | 8 |
| | X | • | RA/192000//W2X/EX | Special wiper/seal, female piston rod thread, Ø 20 ... 125 mm | 8 |
| | X | • | RA/192000/X4/EX | Low friction cylinders, male piston rod thread, Ø 32 ... 100 mm<br>Medium: compressed air, filtered and non-lubricated recommended, 0,2 ... 10 bar | 8 |
| | X | • | RA/192000/X4X/EX | Low friction cylinders, female piston rod thread, Ø 32 ... 100 mm,<br>Medium: compressed air, filtered and non-lubricated recommended, 0,2 ... 10 bar | 8 |
|  | X | • | RA/192000/MU/EX | Cylinder with extended piston rod, male piston rod thread | 8 |
| | X | • | RA/192000/MUX/EX | Cylinder with extended piston rod, female piston rod thread | 8 |
| | X | | | | |
|  | X | • | RA/192000/JM/EX | Cylinder with double ended piston rod, male piston rod thread *1) | 9 |
| | X | • | RA/192000/JMX/EX | Cylinder with double ended piston rod, female piston rod thread *1) | 9 |
| | X | | | | |
|  | X | | RA/192000/N2/EX | Cylinder with non-rotating piston rod (internal), male piston rod thread, Ø 20 ... 100 mm | 8 |
| | X | | RA/192000/N2X/EX | Cylinder with non-rotating piston rod (internal), female piston rod thread, Ø 20 ... 100 mm | 8 |
| | X | | | | |
|  | X | | RA/192000/N4/EX | Cylinder with guiding, Ø 20 ... 100 mm | 9 |
| | X | | | Ø 20 and 25 mm max. stroke 80 mm, Ø 32 ... 100 mm max. stroke 100 mm | |
| | X | | | | |
|  | X | • | RA/192000/TM/EX | Tandem cylinder (double drive), male piston rod thread, Ø 20 ... 100 mm | 10 |
| | X | • | RA/192000/TMX/EX | Tandem cylinder (double drive), female piston rod thread, Ø 20 ... 100 mm | 10 |
| | X | | | | |
|  | X | • | RA/192000/SM/EX | Multi-Position cylinder, male piston rod thread, Ø 20 ... 100 mm | 10 |
| | X | • | RA/192000/SMX/EX | Multi-Position cylinder, female piston rod thread, Ø 20 ... 100 mm | 10 |
| | X | | | | |

*1) Alternative variants without magnetic piston (Ø 63 ... 125 mm) on request.
Piston rod material:
R = Stainless steel martensitic;
S = Stainless steel austenitic
X = standard; • = option


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## Option selector

★A/192★★★/★★★/EX/★★★

| Piston rod materials | Substitute |
|---|---|
| Stainless steel martensitic (1.4021) | R |
| Stainless steel austenitic (1.4305) | S |

| Cylinder Ø (mm) | Substitute |
|---|---|
| 20 | 020 |
| 25 | 025 |
| 32 | 032 |
| 40 | 040 |
| 50 | 050 |
| 63 | 063 |
| 80 | 080 |
| 100 | 100 |
| 125 | 125 |

Note: If option is not required, disregard option position within part number eg. RA/192100/M/EX/100.
For combinations of cylinder variants consult our technical service.
This options selector explains only the cylinder variants.
Additional variants/options can not be derived from.

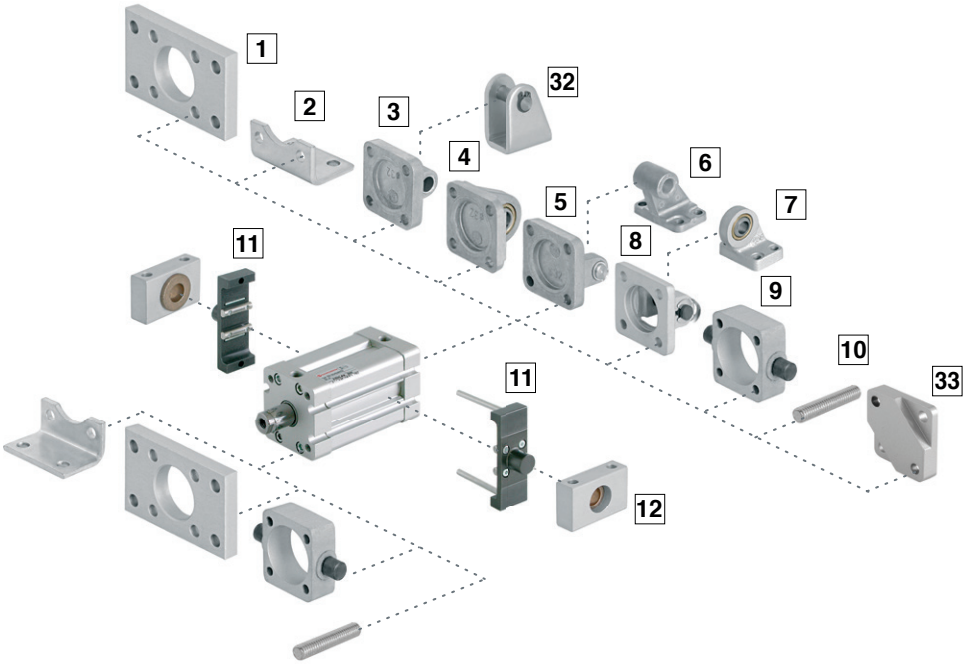
| Strokes (mm) | Substitute |
|---|---|
| Ø 20 and 25 | 5 < 200 |
| Ø 32 and 40 | 5 < 300 |
| Ø 50 and 63 | 10 < 400 |
| Ø 80 to 125 | 15 < 500 |

| Piston rod thread | Substitute |
|---|---|
| Female | X |
| Male | None |

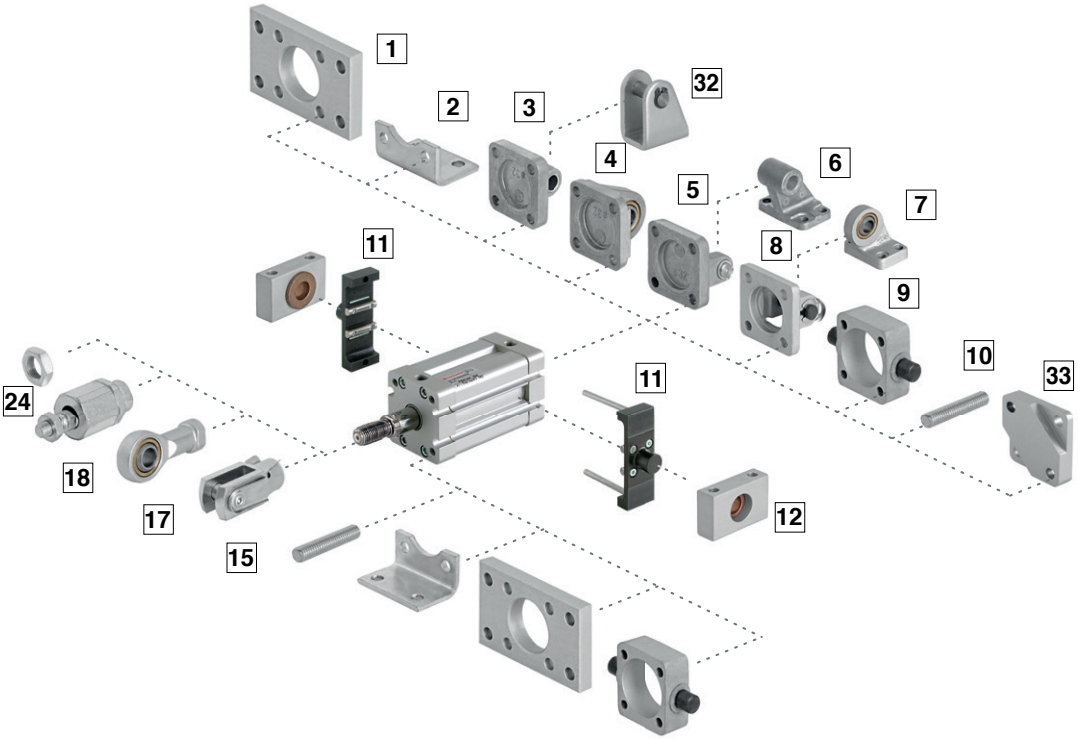
| Variants (magnetic piston) | Substitute |
|---|---|
| Standard | M |
| Double ended piston rod | JM |
| Non-rotating piston rod (internal) | N2 |
| Guiding | N4 |
| Special wiper/seal | W2 |
| Extended piston rod | MU |
| RA/192***/MU*/EX/***/*** → Extension (mm) | |
| Low friction | X4 |
| Tandem cylinder | TM |
| Multi-positon cylinder | SM |
| RA/192***/SM*/EX/***/*** → Rear cylinder stroke; → Front cylinder stroke | |


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## Series RA/192000/MX/EX




## Series RA/192000/M/EX






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## Mountings

| Model | A | B, G | C | D | D2 | FH | L2 |
|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| | 10 | 1 | 2 | 5 | 8 | 9 | 32 |
| Ø | Page 11 | Page 11 | Page 11 | Page 12 | Page 12 | Page 12 | Page 13 |
| 20 | – | QA/192020/22 | QM/192020/21 | – | – | – | QM/8020/44 |
| 25 | – | QA/192025/22 | QM/192025/21 | – | – | – | QM/8020/44 |
| 32 | QM/8032/35 | QA/8032/22 | QA/192032/21 | QA/8032/23 | QA/8032/42 | QA/8032/34 | – |
| 40 | QM/8032/35 | QA/8040/22 | QA/192040/21 | QA/8040/23 | QA/8040/42 | QA/8040/34 | – |
| 50 | QM/8050/35 | QA/8050/22 | QA/192050/21 | QA/8050/23 | QA/8050/42 | QA/8050/34 | – |
| 63 | QM/8050/35 | QA/8063/22 | QA/192063/21 | QA/8063/23 | QA/8063/42 | QA/8063/34 | – |
| 80 | QM/8080/35 | QA/8080/22 | QA/192080/21 | QA/8080/23 | QA/8080/42 | QA/8080/34 | – |
| 100 | QM/8080/35 | QA/8100/22 | QA/192100/21 | QA/8100/23 | QA/8100/42 | QA/8100/34 | – |
| 125 | QM/8125/35 | QM/8125/22 | QM/8125/21 | QM/8125/23 | QA/8125/42 | QA/8125/34 | – |

| Model | R | S | SW | UH | UR | US | Assembly Kit |
|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| | 3 | 12 | 6 | 11 | 4 | 7 | 33 |
| Ø | Page 12 | Page 13 | Page 14 | Page 13 | Page 13 | Page 14 | Page 15 |
| 20 | QM/192020/27 | – | – | – | – | – | QA/192020/55 |
| 25 | QM/192025/27 | – | – | – | – | – | QA/192025/55 |
| 32 | QA/8032/27 | QA/8032/41 | M/P19493 | PQA/182032/40 | QA/8032/33 | M/P40310 | QA/192032/55 |
| 40 | QA/8040/27 | QA/8040/41 | M/P19494 | PQA/182040/40 | QA/8040/33 | M/P40311 | QA/192040/55 |
| 50 | QA/8050/27 | QA/8040/41 | M/P19495 | PQA/182050/40 | QA/8050/33 | M/P40312 | QA/192050/55 |
| 63 | QA/8063/27 | QA/8063/41 | M/P19496 | PQA/182063/40 | QA/8063/33 | M/P40313 | QA/192063/55 |
| 80 | QA/8080/27 | QA/8063/41 | M/P19497 | PQA/182080/40 | QA/8080/33 | M/P40314 | QA/192080/55 |
| 100 | QA/8100/27 | QA/8100/41 | M/P19498 | PQA/182100/40 | QA/8100/33 | M/P40315 | QA/192100/55 |
| 125 | QM/8125/27 | QA/8100/41 | M/P19499 | PQA/182125/40 | QM/8125/33 | M/P71355 | QA/192125/55 |

## For cylinders with male piston rod thread

## Accessories

| Model | AK | F | N2 | UF | Magnetically operated switches | Groove key | Valve mounting kit |
|---|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |  |
| | 18 | 15 | 24 | 17 | | | |
| Ø | Page 11 | Page 12 | Page 13 | Page 12 | Page 16 & 17 | Page 15 | Page 15 |
| 20 | QM/8020/38 | QM/8020/25 | M/P1501/60 | QM/8020/32 | | M/P72816 | – |
| 25 | QM/8020/38 | QM/8020/25 | M/P1501/60 | QM/8020/32 | | M/P72816 | – |
| 32 | QM/8025/38 | QM/8025/25 | M/P1501/89 | QM/8025/32 | | M/P72816 | – |
| 40 | QM/8025/38 | QM/8025/25 | M/P1501/89 | QM/8025/32 | | M/P72816 | – |
| 50 | QM/8040/38 | QM/8040/25 | M/P1501/90 | QM/8040/32 | | M/P72816 | QA/180050/22/54 |
| 63 | QM/8040/38 | QM/8040/25 | M/P1501/90 | QM/8040/32 | | M/P72816 | QA/180050/22/54 |
| 80 | QM/8050/38 | QM/8050/25 | M/P1501/91 | QM/8050/32 | | M/P72816 | QA/180080/22/54 |
| 100 | QM/8050/38 | QM/8050/25 | M/P1501/91 | QM/8050/32 | | M/P72816 | QA/180080/22/54 |
| 125 | QM/8125/38 | QM/8125/25 | M/P1501/105 | QM/8125/32 | | M/P72816 | QA/180080/22/54 |

## Sevice kit

Service kit

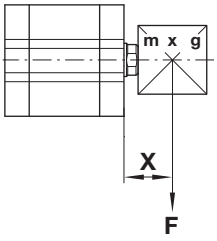


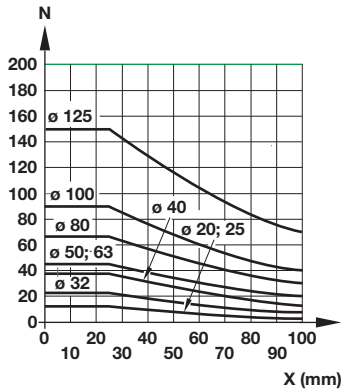
| Ø | | Ø | | Ø | |
|---|---|---|---|---|---|
| 20 | QM/192020/00 | 40 | QM/192040/00 | 80 | QM/192080/00 |
| 25 | QM/192025/00 | 50 | QM/192050/00 | 100 | QM/192100/00 |
| 32 | QM/192032/00 | 63 | QM/192063/00 | 125 | QM/192125/00 |



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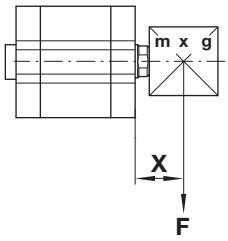
## RA/192000/M./EX – Standard cylinder
## RA/192000/N2./EX – Cylinder with non-rotating piston rod
### Side load

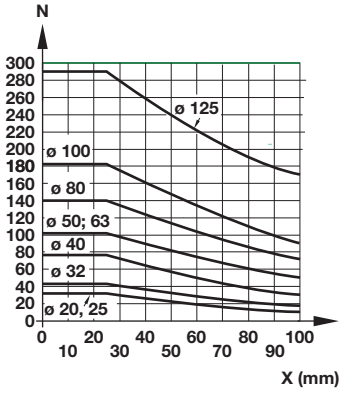


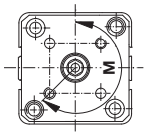

| Ø | Torque max. (Nm) | Model | |
|---|---|---|---|
| 20 | 0,15 | RA/192020/M./EX | RA/192020/N2./EX |
| 25 | 0,25 | RA/192025/M./EX | RA/192025/N2./EX |
| 32 | 0,4 | RA/192032/M./EX | RA/192032/N2./EX |
| 40 | 0,75 | RA/192040/M./EX | RA/192040/N2./EX |
| 50 | 1,5 | RA/192050/M./EX | RA/192050/N2./EX |
| 63 | 1,5 | RA/192063/M./EX | RA/192063/N2./EX |
| 80 | 2,5 | RA/192080/M./EX | RA/192080/N2./EX |
| 100 | 2,5 | RA/192100/M./EX | RA/192100/N2./EX |

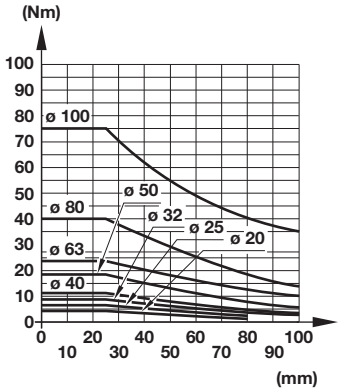
## RA/192000/JM/EX – Cylinder with double ended /EX piston rod
### Side load



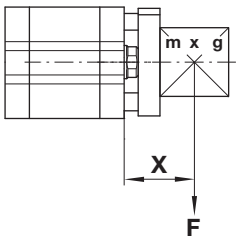



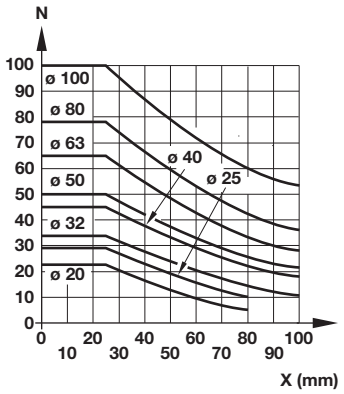

## RA/192000/N4 – Cylinder with guiding
### Torque moment




### Side load

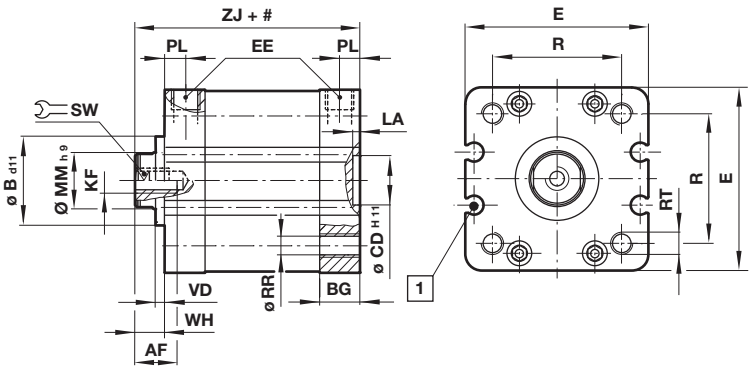




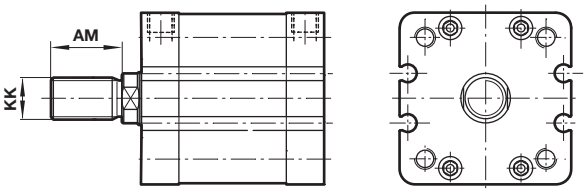
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## Dimensions
## RA/192000/MX/EX – Standard cylinder
## With female piston rod thread




## Dimensions
## RA/192000/M/EX – Standard cylinder
## With male piston rod thread

Dimensions in mm
Projection/First angle



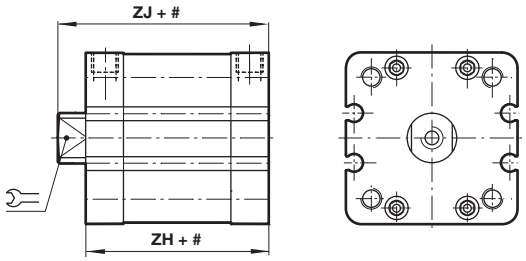

# Stroke
1 M/50 switches can be mounted flush with the profile

| Ø | AF | AM | Ø B d11 | BG | Ø CD H11 | □E | EE | KF | KK | LA | Ø MM h9 | PL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 10 | 16 | – | 12 | 10 | 37 | M 5 | M6 | M8x1,25 | 2,5 | 10 | 7 |
| 25 | 10 | 16 | – | 13 | 10 | 41 | M 5 | M6 | M8x1,25 | 2,5 | 10 | 7 |
| 32 | 12 | 19 | – | 14,5 | 14 | 48 | G 1/8 | M8 | M10x1,25 | 2,5 | 12 | 7,5 |
| 40 | 12 | 19 | – | 14,5 | 14 | 54,5 | G 1/8 | M8 | M10x1,25 | 2,5 | 16 | 7,5 |
| 50 | 16 | 22 | – | 14 | 18 | 66 | G 1/8 | M10 | M12x1,25 | 2,5 | 20 | 7,5 |
| 63 | 16 | 22 | – | 14 | 18 | 76 | G 1/8 | M10 | M12x1,25 | 2,5 | 20 | 7,5 |
| 80 | 20 | 28 | – | 15,5 | 23 | 96 | G 1/8 | M12 | M16x1,5 | 3 | 25 | 7,5 |
| 100 | 20 | 28 | – | 21,5 | 26 | 116 | G 1/8 | M12 | M16x1,5 | 3 | 25 | 10,5 |
| 125 | 30 | 54 | 60 | 20,5 | 28 | 142 | G 1/4 | M20 | M27x2 | 3 | 32 | 10,5 |

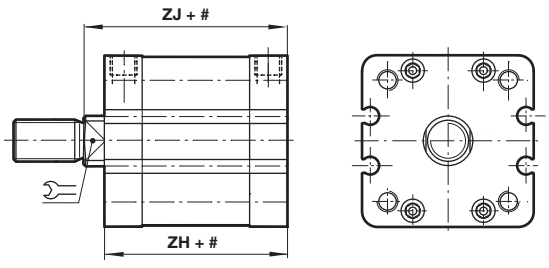
| Ø | □R | Ø RR | RT | SW | VD | WH | ZJ | kg at 0 mm | kg per 5 mm | Model |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 22 | 4,3 | M5 | 8 | – | 6 | 43 | 0,12 | 0,01 | RA/192020/M./EX/* |
| 25 | 26 | 4,3 | M5 | 8 | – | 6 | 45 | 0,15 | 0,01 | RA/192025/M./EX/* |
| 32 | 32,5 | 5,3 | M6 | 10 | – | 7 | 51 | 0,23 | 0,02 | RA/192032/M./EX/* |
| 40 | 38 | 5,3 | M6 | 13 | – | 7 | 52 | 0,30 | 0,02 | RA/192040/M./EX/* |
| 50 | 46,5 | 6,8 | M8 | 17 | – | 8 | 53 | 0,46 | 0,03 | RA/192050/M./EX/* |
| 63 | 56,5 | 6,8 | M8 | 17 | – | 8 | 57 | 0,70 | 0,03 | RA/192063/M./EX/* |
| 80 | 72 | 8,6 | M10 | 22 | – | 10 | 64 | 1,23 | 0,04 | RA/192080/M./EX/* |
| 100 | 89 | 8,6 | M10 | 22 | – | 10 | 77 | 2,20 | 0,05 | RA/192100/M./EX/* |
| 125 | 110 | 10,6 | M12 | 27 | 4 | 18 | 89 | 3,60 | 0,07 | RA/192125/M./EX/* |

* Please insert standard stroke length.

## Cylinder variants
## RA/192000/N2X/EX –
## Cylinder with non-rotating piston rod
## With female piston rod thread




## RA/192000/N2/EX –
## Cylinder with non-rotating piston rod
## With male piston rod thread



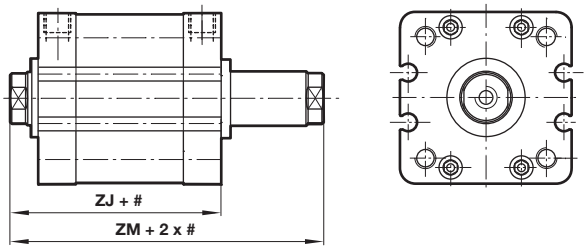

# Stroke

| Ø | | ZH | ZJ | kg at 0 mm | kg per 5 mm | Model |
|---|---|---|---|---|---|---|
| 20 | 8 | 47 | 53 | 0,12 | 0,01 | RA/192020/N2./EX/* |
| 25 | 8 | 49 | 55 | 0,15 | 0,01 | RA/192025/N2./EX/* |
| 32 | 10 | 54 | 61 | 0,23 | 0,02 | RA/192032/N2./EX/* |
| 40 | 13 | 55 | 62 | 0,30 | 0,02 | RA/192040/N2./EX/* |
| 50 | 16 | 55 | 63 | 0,46 | 0,03 | RA/192050/N2./EX/* |
| 63 | 16 | 59 | 67 | 0,70 | 0,03 | RA/192063/N2./EX/* |
| 80 | 21 | 64 | 74 | 1,23 | 0,04 | RA/192080/N2./EX/* |
| 100 | 21 | 77 | 87 | 2,20 | 0,05 | RA/192100/N2./EX/* |

Note: The basic length of the RA/192000/N2 version is slightly longer than the standard.

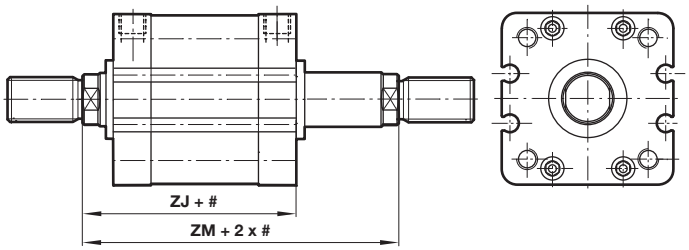

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## RA/192000/JMX/EX
## Cylinder with double ended piston rod
## With female piston rod thread




## RA/192000/JM/EX
## Cylinder with double ended piston rod
## With male piston rod thread

Dimensions in mm
Projection/First angle

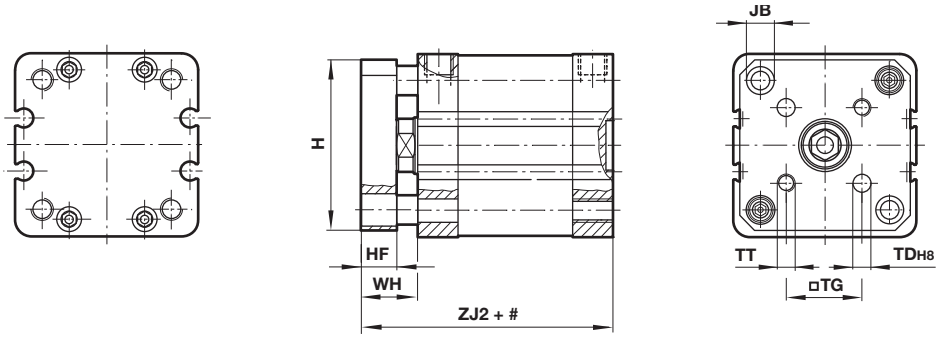



# Stroke

| Ø | ZJ | ZM | kg at 0 mm | kg per 5 mm | Model |
|---|---|---|---|---|---|
| 20 | 43 | 49 | 0,15 | 0,01 | RA/192020/JM./EX/* |
| 25 | 45 | 51 | 0,18 | 0,01 | RA/192025/JM./EX/* |
| 32 | 51 | 58 | 0,28 | 0,02 | RA/192032/JM./EX/* |
| 40 | 52 | 59 | 0,35 | 0,02 | RA/192040/JM./EX/* |
| 50 | 53 | 61 | 0,52 | 0,03 | RA/192050/JM./EX/* |
| 63 | 57 | 65 | 0,76 | 0,03 | RA/192063/JM./EX/* |
| 80 | 64 | 74 | 1,30 | 0,04 | RA/192080/JM./EX/* |
| 100 | 77 | 87 | 2,30 | 0,05 | RA/192100/JM./EX/* |
| 125 | 89 | 107 | 3,75 | 0,07 | RA/192125/JM./EX/* |

* Please insert standard stroke length.

## RA/192000/N4/EX – Cylinder with guiding



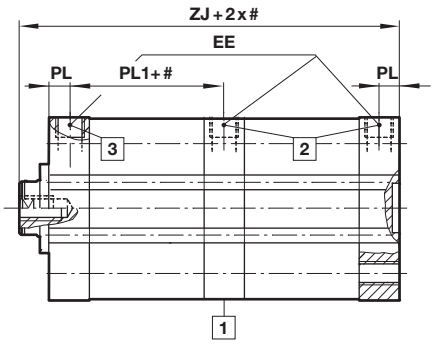

# Stroke

| Ø | H | HF | Ø JB | Ø TDH8 | □TG | TT | WH | ZJ2 | kg at 0 mm | kg per 5 mm | Model |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 34 | 8 | 7,5 | 4 | 12 | M4 | 14 | 51 | 0,17 | 0,01 | RA/192020/N4/EX/* |
| 25 | 38 | 8 | 7,5 | 5 | 15,6 | M5 | 14 | 53 | 0,23 | 0,01 | RA/192025/N4/EX/* |
| 32 | 45 | 10 | 9 | 5 | 19,8 | M5 | 17 | 61 | 0,33 | 0,02 | RA/192032/N4/EX/* |
| 40 | 51 | 10 | 9 | 5 | 23,3 | M5 | 17 | 62 | 0,45 | 0,02 | RA/192040/N4/EX/* |
| 50 | 62,5 | 12 | 11 | 6 | 29,7 | M6 | 20 | 65 | 0,65 | 0,03 | RA/192050/N4/EX/* |
| 63 | 72 | 12 | 11 | 6 | 35,4 | M6 | 20 | 69 | 0,95 | 0,03 | RA/192063/N4/EX/* |
| 80 | 92 | 15 | 15 | 8 | 46 | M8 | 25 | 79 | 1,70 | 0,04 | RA/192080/N4/EX/* |
| 100 | 112 | 15 | 15 | 10 | 56,5 | M10 | 25 | 92 | 3,10 | 0,05 | RA/192100/N4/EX/* |

* Please insert standard stroke length.

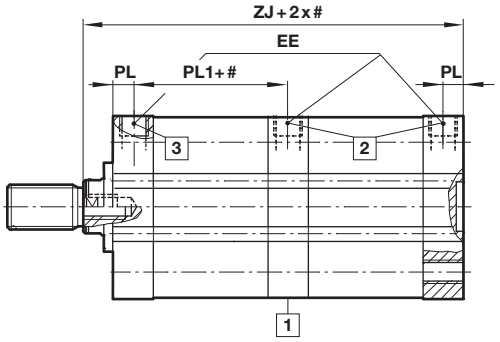

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## RA/192000/TMX/EX – Tandem cylinder with female piston rod thread




## RA/192000/TM/EX – Tandem cylinder with male piston rod thread

Dimensions in mm
Projection/First angle

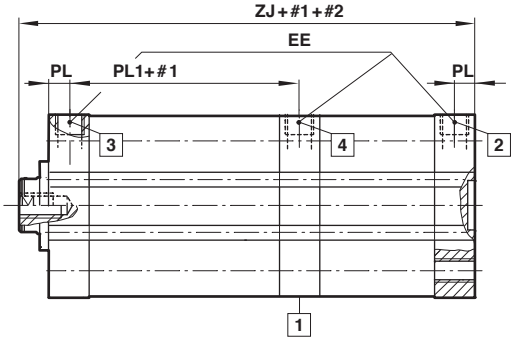



| Ø | EE | PL | PL1 | ZJ | kg at 0 mm | kg per 5 mm | Model |
|---|---|---|---|---|---|---|---|
| 20 | M5 | 7 | 25,5 | 68 | 0,21 | 0,01 | RA/192020/TM./EX/* |
| 25 | M5 | 7 | 26,5 | 71 | 0,26 | 0,01 | RA/192025/TM./EX/* |
| 32 | G 1/8 | 7,5 | 30 | 81 | 0,39 | 0,02 | RA/192032/TM./EX/* |
| 40 | G 1/8 | 7,5 | 31 | 83 | 0,51 | 0,02 | RA/192040/TM./EX/* |
| 50 | G 1/8 | 7,5 | 31 | 85 | 0,78 | 0,03 | RA/192050/TM./EX/* |
| 63 | G 1/8 | 7,5 | 36 | 94 | 1,21 | 0,03 | RA/192063/TM./EX/* |
| 80 | G 1/8 | 7,5 | 40 | 104 | 2,11 | 0,04 | RA/192080/TM./EX/* |
| 100 | G 1/8 | 10,5 | 45,5 | 122 | 3,68 | 0,05 | RA/192100/TM./EX/* |

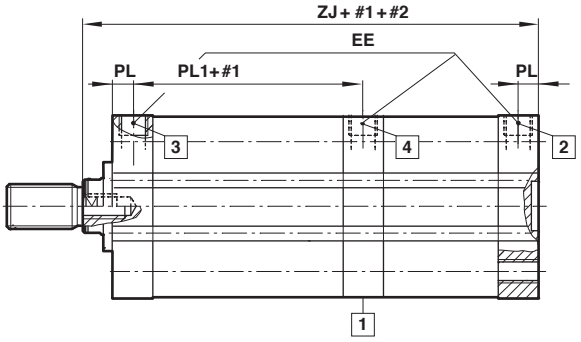
* Please insert standard stroke length.

# Stroke
1 Exhaust port
Note: Do not cover this area!
2 Pressure »outstroke«
3 Pressure »instroke«

## RA/192000/SMX/EX – Multi position cylinder with female piston rod thread




## RA/192000/SM/EX – Multi position cylinder with male piston rod thread




| Ø | EE | PL | PL1 | ZJ | kg at 0 mm | kg per 5 mm | Model |
|---|---|---|---|---|---|---|---|
| 20 | M5 | 7 | 25,5 | 68 | 0,21 | 0,01 | RA/192020/SM./EX/* |
| 25 | M5 | 7 | 26,5 | 71 | 0,26 | 0,01 | RA/192025/SM./EX/* |
| 32 | G 1/8 | 7,5 | 30 | 81 | 0,39 | 0,02 | RA/192032/SM./EX/* |
| 40 | G 1/8 | 7,5 | 31 | 83 | 0,51 | 0,02 | RA/192040/SM./EX/* |
| 50 | G 1/8 | 7,5 | 31 | 85 | 0,78 | 0,03 | RA/192050/SM./EX/* |
| 63 | G 1/8 | 7,5 | 36 | 94 | 1,21 | 0,03 | RA/192063/SM./EX/* |
| 80 | G 1/8 | 7,5 | 40 | 104 | 2,11 | 0,04 | RA/192080/SM./EX/* |
| 100 | G 1/8 | 10,5 | 45,5 | 122 | 3,68 | 0,05 | RA/192100/SM./EX/* |

* Please insert standard stroke length.

1 Exhaust port
Note: Do not cover this area!

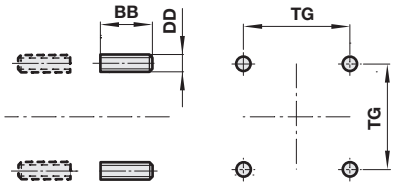
#1 Stroke front cylinder
#2 Stroke rear cylinder
Note: Stroke (#1) > stroke (#2)

2 Pressure »outstroke« rear cylinder
3 Pressure »instroke«
4 Pressure »outstroke« front cylinder


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## Mountings
## Front or rear stud mounting A
## Conforms to ISO 15552, type MX1



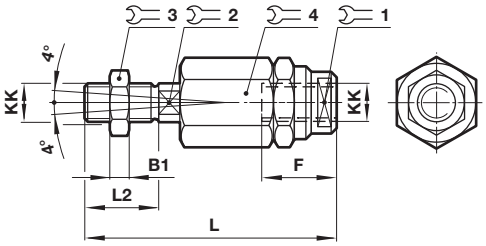



| Ø | BB | DD | TG | kg | Model (A) |
|---|---|---|---|---|---|
| 32/40 | 17 | M6 | 32,5/38 | 0,02 | QM/8032/35 |
| 50/63 | 23 | M8 | 46,5/56,5 | 0,05 | QM/8050/35 |
| 80/100 | 28 | M10 | 72/89 | 0,08 | QM/8080/35 |
| 125 | 34 | M12 | 110 | 0,14 | QM/8125/35 |

## Piston rod swivel AK

Dimensions in mm
Projection/First angle

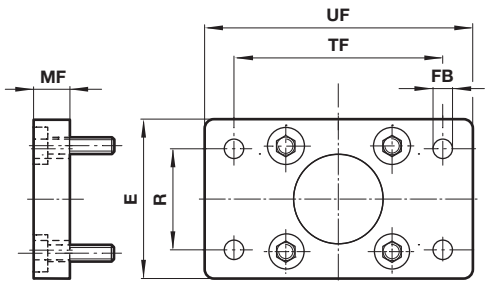





| Ø | KK | B1 | F | L | L2 | 1 | 2 | 3 | 4 | kg | Model (AK) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20/25 | M8x1,25 | 4 | 18 | 55 | 16 | 10 | 7 | 13 | 17 | 0,05 | QM/8020/38 |
| 32/40 | M10x1,25 | 5 | 26 | 73 | 20 | 19 | 12 | 17 | 30 | 0,20 | QM/8025/38 |
| 50/63 | M12x1,25 | 6 | 26 | 77 | 24 | 19 | 12 | 19 | 30 | 0,20 | QM/8040/38 |
| 80/100 | M16x1,5 | 8 | 34 | 106 | 32 | 30 | 19 | 24 | 42 | 0,65 | QM/8050/38 |
| 125 | M27x2 | 13,5 | 40 | 147 | 54 | 40 | 24 | 41 | 55 | 1,70 | QM/8125/38 |

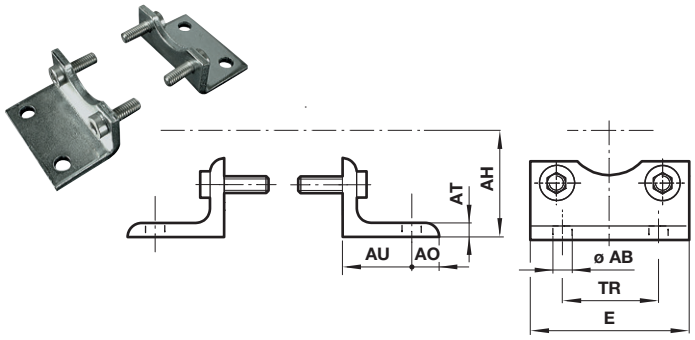
## Front flange B, Front flange G
## Conforms to ISO 21 287 (Ø 20 and 25 mm) and ISO 15552 (Ø 32 to 125 mm), type MF1 and MF2






| Ø | E | Ø FB | MF | R | TF | UF | kg | Model (B/G) |
|---|---|---|---|---|---|---|---|---|
| 20 | 36 | 6,6 | 8 | – | 55 | 70 | 0,16 | QA/192020/22 |
| 25 | 40 | 6,6 | 8 | – | 60 | 76 | 0,2 | QA/192025/22 |
| 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 | 0,7 | QA/8050/22 |
| 63 | 75 | 9 | 12 | 50 | 100 | 125 | 0,8 | QA/8063/22 |
| 80 | 100 | 12 | 16 | 63 | 126 | 154 | 1,35 | QA/8080/22 |
| 100 | 120 | 14 | 16 | 75 | 150 | 186 | 2,2 | QA/8100/22 |
| 125 | 140 | 16 | 20 | 90 | 180 | 224 | 2,7 | QM/8125/22 |

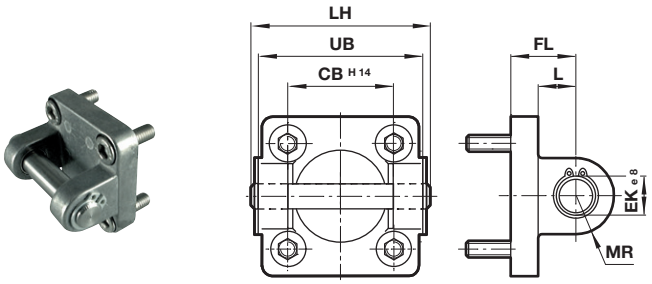
## Foot C
## Conforms to ISO 15552, type MS1




| Ø | Ø AB | AH | AO | AT | AU | E | TR | kg | Model (C) |
|---|---|---|---|---|---|---|---|---|---|
| 20 | 7 | 27 | 6 | 4 | 16 | 36 | 22 | 0,03 | QM/192020/21 |
| 25 | 7 | 29 | 7 | 4 | 16 | 40 | 26 | 0,04 | QM/192025/21 |
| 32 | 7 | 33,5 | 7 | 4 | 16 | 48 | 32 | 0,15 | QA/192032/21 |
| 40 | 10 | 38 | 9 | 4 | 18 | 54,5 | 36 | 0,18 | QA/192040/21 |
| 50 | 10 | 45 | 9 | 5 | 21 | 66 | 45 | 0,3 | QA/192050/21 |
| 63 | 10 | 50 | 9 | 5 | 21 | 76 | 50 | 0,39 | QA/192063/21 |
| 80 | 12 | 63 | 11 | 6 | 26 | 96 | 63 | 0,8 | QA/192080/21 |
| 100 | 14,5 | 74 | 13 | 6 | 27 | 116 | 75 | 0,95 | QA/192100/21 |
| 125 | 16 | 90 | 20 | 9 | 45 | 140 | 90 | 2,4 | QM/8125/21 |


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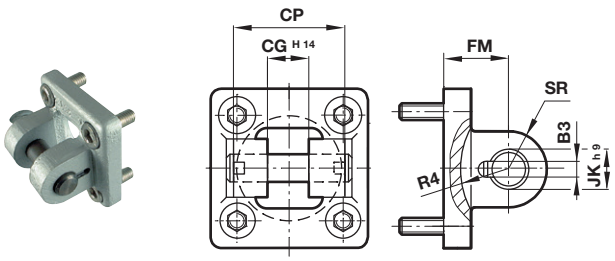
## Rear clevis D
## Conforms to ISO 15552, type MP2




| Ø | CB H14 | Ø EKe8 | 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 |
| 125 | 70 | 25 | 50 | 31 | 139 | 25 | 130 | 2,70 | QM/8125/23 |

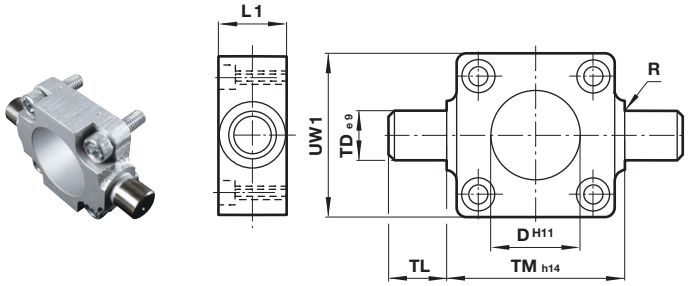
## Rear clevis D2
## Conforms to ISO 15552, type AB6

Dimensions in mm
Projection/First angle



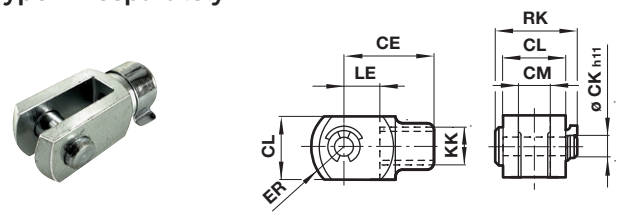

| Ø | B1 H14 | B2 | B3 | Ø EK h9 | FL | R1 | R2 | kg | Model (D2) |
|---|---|---|---|---|---|---|---|---|---|
| 32 | 14 | 34 | 3,3 | 10 | 22 | 11 | 17 | 0,20 | QA/8032/42 |
| 40 | 16 | 40 | 4,3 | 12 | 25 | 12 | 20 | 0,23 | QA/8040/42 |
| 50 | 21 | 45 | 4,3 | 16 | 27 | 14,5 | 22 | 0,36 | QA/8050/42 |
| 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 |
| 125 | 37 | 97 | 6,3 | 30 | 50 | 30 | 42 | 2,7 | QA/8125/42 |

## Front or rear detachable trunnion FH
## Conforms to VDMA 24562 part 2, type MT 5/6



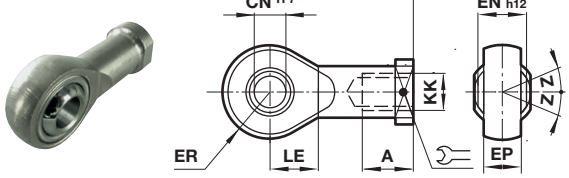

| Ø | Ø D h11 | L1 | R | Ø TDe9 | TL | TMh14 | UW1 | kg | Model (FH) |
|---|---|---|---|---|---|---|---|---|---|
| 32 | 30 | 16 | 1 | 12 | 12 | 50 | 45 | 0,20 | QA/8032/34 |
| 40 | 35 | 20 | 1,6 | 16 | 16 | 63 | 55 | 0,38 | QA/8040/34 |
| 50 | 40 | 24 | 1,6 | 16 | 16 | 75 | 65 | 0,60 | QA/8050/34 |
| 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 |
| 125 | 60 | 50 | 2 | 25 | 25 | 160 | 145 | 6,50 | QA/8125/34 |

## Piston rod clevis F
## Conforms to DIN ISO 8140
## For cylinders with male piston rod thread order nut, Type N2 separately



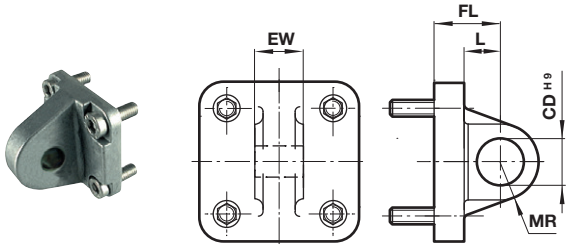

| Ø | KK | CE | Ø CKh11 | CL | CM | ER | LE | RK | kg | Model (F) |
|---|---|---|---|---|---|---|---|---|---|---|
| 20/25 | M8x1,25 | 32 | 8 | 16 | 8 | 13 | 16 | 22 | 0,06 | QM/8020/25 |
| 32/40 | M10x1,25 | 40 | 10 | 20 | 10 | 16 | 20 | 28 | 0,09 | QM/8025/25 |
| 50/63 | M12x1,25 | 48 | 12 | 24 | 12 | 19 | 24 | 32 | 0,13 | QM/8040/25 |
| 80/100 | M16x1,5 | 64 | 16 | 32 | 16 | 25 | 32 | 41,5 | 0,33 | QM/8050/25 |
| 125 | M27x2 | 110 | 30 | 55 | 30 | 45 | 54 | 62 | 1,35 | QM/8125/25 |

## Universal piston rod eye UF
## Conforms to DIN ISO 8139
## For cylinders with male piston rod thread order nut, Type N2 separately




| Ø | Thread KK | AX | CE | Ø CNH7 | EN -0,1 | ER | LE | Z | kg | Model (UF) |
|---|---|---|---|---|---|---|---|---|---|---|
| 20/25 | M8x1,25 | 16 | 36 | 8 | 12 | 11 | 13 | 5° | 0,05 | QM/8020/32 |
| 32/40 | M10x1,25 | 20 | 43 | 10 | 14 | 14 | 15 | 13° | 0,09 | QM/8025/32 |
| 50/63 | M12x1,25 | 22 | 50 | 12 | 16 | 16 | 17 | 13° | 0,13 | QM/8040/32 |
| 80/100 | M16x1,5 | 28 | 64 | 16 | 21 | 21 | 22 | 15° | 0,33 | QM/8050/32 |
| 125 | M27x2 | 51 | 110 | 30 | 37 | 35 | 36 | 15° | 1,35 | QM/8125/32 |

## Rear eye R
## Conforms to ISO 21 287 (Ø 20 and 25 mm) and ISO 15552 (Ø 32 to 125 mm), type MP4

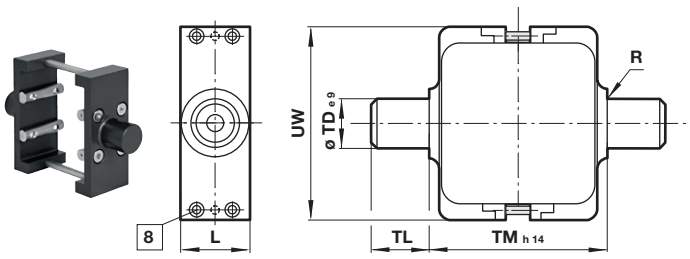



| Ø | ØCDH9 | EW | FL | L | MR | kg | Model (R) |
|---|---|---|---|---|---|---|---|
| 20 | 8 | 15,8 | 20 | 14 | 8 | 0,02 | QM/192020/27 |
| 25 | 8 | 15,8 | 20 | 14 | 8 | 0,03 | QM/192025/27 |
| 32 | 10 | 25,8 | 22 | 13 | 9 | 0,09 | QA/8032/27 |
| 40 | 12 | 27,8 | 25 | 16 | 12 | 0,11 | QA/8040/27 |
| 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 | 3,2 | QM/8125/27 |



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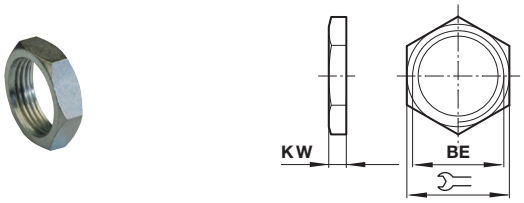
## Adjustable trunnion mounting UH
## Conforms to ISO 15552, type MT4




| Ø | L | R | Ø De9 | TL | TM h14 | UW | Torque max. (Nm) | kg | Model (UH) |
|---|---|---|---|---|---|---|---|---|---|
| 32 | 25 | 1 | 12 | 12 | 50 | 58 | 2 | 0,16 | PQA/182032/40 |
| 40 | 28 | 1,6 | 16 | 16 | 63 | 65 | 3,5 | 0,35 | PQA/182040/40 |
| 50 | 28 | 1,6 | 16 | 16 | 75 | 80 | 3,5 | 0,65 | PQA/182050/40 |
| 63 | 36 | 1,6 | 20 | 20 | 90 | 96 | 5 | 0,85 | PQA/182063/40 |
| 80 | 36 | 1,6 | 20 | 20 | 110 | 116 | 6 | 1,20 | PQA/182080/40 |
| 100 | 48 | 2 | 25 | 25 | 132 | 140 | 6 | 2,30 | PQA/182100/40 |
| 125 | 48 | 2 | 25 | 25 | 160 | 163 | 6 | 3,30 | PQA/182125/40 |

Note: It is most important that the locking screws which secure the mounting to the cylinder barrel are tightened to the torque figures shown in the table. For maximum energy input, consult our Technical Service.

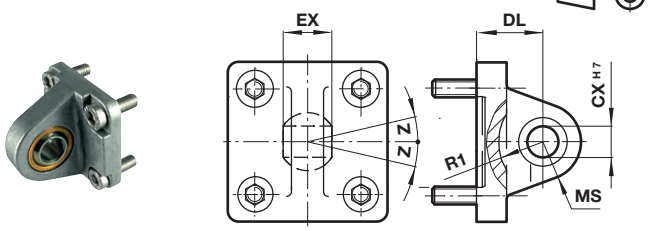
## Nut N2
## For cylinder with male piston rod thread




| Ø | BE | KW | ⌲ | kg | Model(N2) |
|---|---|---|---|---|---|
| 20/25 | M8x1,25 | 4 | 13 | 0,01 | M/P1501/60 |
| 32/40 | M10x1,25 | 5 | 17 | 0,01 | M/P1501/89 |
| 50/63 | M12x1,25 | 6 | 19 | 0,01 | M/P1501/90 |
| 80/100 | M16x1,5 | 8 | 24 | 0,02 | M/P1501/91 |
| 125 | M27x2 | 13,5 | 41 | 0,09 | M/P1501/105 |

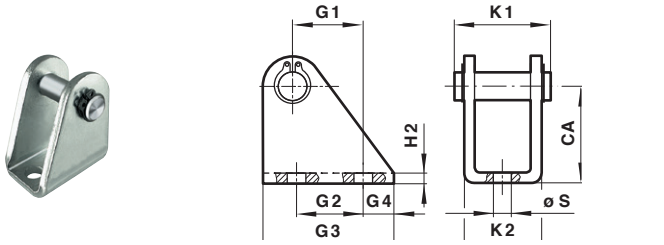
## Universal rear eye UR
## Conforms to ISO 15552, type MP6

Dimensions in mm
Projection/First angle



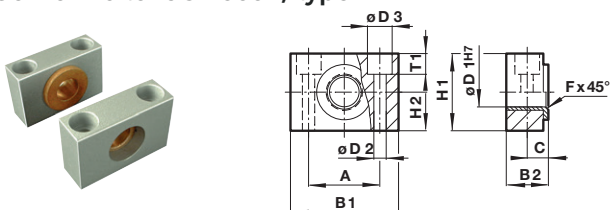

| Ø | Ø CNH7 | EN | ER | FL | R | Z | kg | Model (UR) |
|---|---|---|---|---|---|---|---|---|
| 32 | 10 | 14 | 16 | 22 | 14,5 | 13° | 0,15 | QA/8032/33 |
| 40 | 12 | 16 | 18 | 25 | 18 | 13° | 0,25 | QA/8040/33 |
| 50 | 16 | 21 | 21 | 27 | 19 | 15° | 0,40 | QA/8050/33 |
| 63 | 16 | 21 | 23 | 32 | 24 | 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 |

## Bracket hinge L2
## For rear eye mounting R




| Ø | CA | G1 | G2 | G3 | G4 | H2 | K1 | K2 | Ø S | kg | Model(L2) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20/25 | 30 | 16 | 20 | 32 | 6 | 4 | 29,5 | 24 | 6,6 | 0,08 | QM/8020/44 |

## Trunnion support S
## Conforms to ISO 15552, type AT4



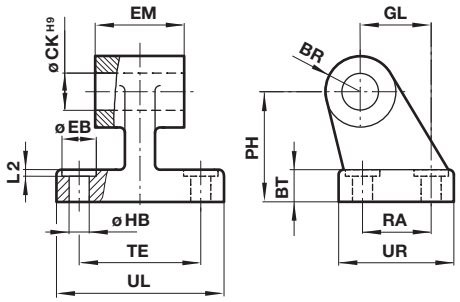

| Ø | A | B1 | B2 | C | Ø D1H7 | Ø D1 | Ø D3 | F x 45° | H1 | H2 | T1 | kg | Model (S) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 32 | 46 | 18 | 10,5 | 12 | 6,6 | 11 | 1 | 30 | 15,3 | 6,8 | 0,11 | QA/8032/41 |
| 40/50 | 36 | 55 | 21 | 12 | 16 | 9 | 15 | 1,6 | 36 | 18 | 9 | 0,16 | QA/8040/41 |
| 63/80 | 42 | 65 | 23 | 13 | 20 | 11 | 18 | 1,6 | 40 | 20 | 11 | 0,23 | QA/8063/41 |
| 100/125 | 50 | 75 | 28,5 | 16 | 25 | 14 | 20 | 2 | 50 | 25 | 13 | 0,42 | QA/8100/41 |


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## Wide hinge SW
## Conforms to ISO 15552, type AB7

Dimensions in mm
Projection/First angle

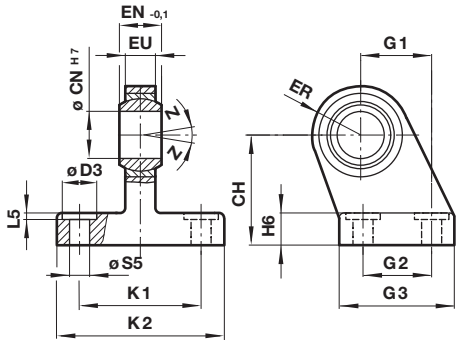





| Ø | CA | Ø CKH9 | Ø D | H2 | EM | G1 | G2 | G3 | K1 | K2 | L1 | R | Ø S | kg | Model (SW) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 32 | 10 | 11 | 7 | 25,5 | 21 | 18 | 31 | 38 | 50 | 1,6 | 10 | 6,6 | 0,05 | M/P19493 |
| 40 | 36 | 12 | 11 | 9 | 27,5 | 24 | 22 | 35 | 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 |

## Swivel hinge US
## Conforms to VDMA 24562 part 2





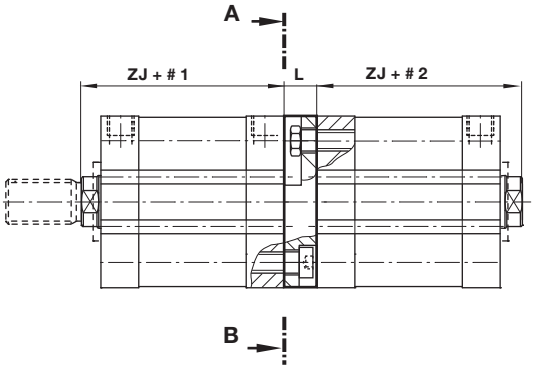

| Ø | CH | Ø CNH7 | Ø D | EN -0,1 | ER | EU | G1 | G2 | G3 | H2 | K1 | K2 | L1 | Ø S | Z | kg | Model (US) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 32 | 10 | 11 | 14 | 16 | 10,5 | 21 | 18 | 31 | 10 | 38 | 51 | 1,6 | 6,6 | 13° | 0,19 | M/P40310 |
| 40 | 36 | 12 | 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 |
| 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° | 1,4 | M/P40315 |
| 125 | 90 | 30 | 20 | 371 | 40 | 25 | 70 | 60 | 90 | 20 | 94 | 124 | 3,2 | 14 | 15° | 3,10, | M/P71355 |

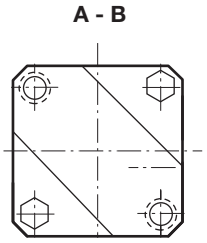

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## Assembly kit for four position cylinders

Dimensions in mm
Projection/First angle



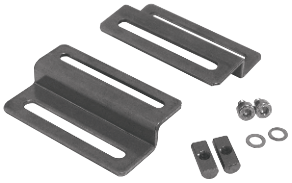


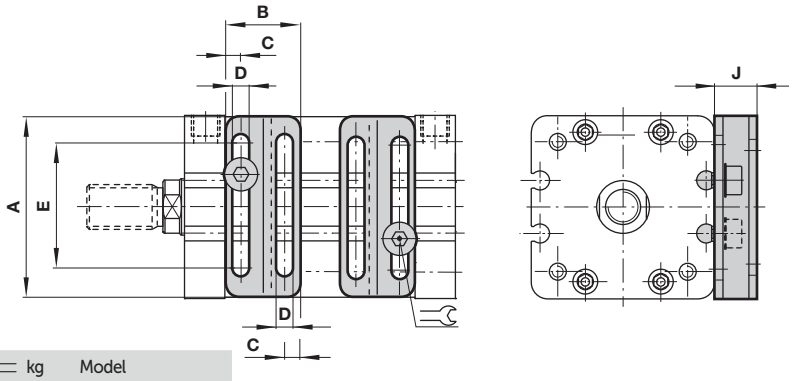




# Stroke

| Ø | L | ZJ | kg | Model |
|---|---|---|---|---|
| 20 | 10 | 43 | 0,03 | QA/192020/55 |
| 25 | 10 | 45 | 0,04 | QA/192025/55 |
| 32 | 12,5 | 51 | 0,07 | QA/192032/55 |
| 40 | 12,5 | 52 | 0,09 | QA/192040/55 |
| 50 | 15 | 53 | 0,14 | QA/192050/55 |
| 63 | 15 | 57 | 0,19 | QA/192063/55 |
| 80 | 20 | 64 | 0,35 | QA/192080/55 |
| 100 | 20 | 77 | 0,72 | QA/192100/55 |
| 125 | 25 | 89 | 1,03 | QA/192125/55 |

## Valve mounting kit



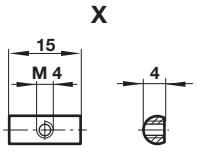



| Ø | A | B | C | D | E | F | G | H | J | ⌴ | kg | Model |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50/63 | 60 | 37 | 7 | 4,5 | 46 | 8,5 | 5,5 | 2 | 12 | 3 | 0,02 | QA/180050/22/54 |
| 80/100/125 | 90 | 37 | 7 | 4,5 | 76 | 8,5 | 6,5 | 2 | 12 | 3 | 0,02 | QA/180080/22/54 |

## Groove key

Model: M/P72816
Weight: 0,01 kg








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- ATEX - Magnetically operating switch, reed contact
- Suitable for all cylinder ranges with magnetic piston
- LED indicator
- CE verificated



## Technical features

**Operation:**
Normal open with LED (yellow)

**Switching voltage (Ub):**
10 ... 240 V a.c./170 V d.c.

**Switching voltage output:**
Ub - 2,7 V

**Switching current (see graph overleaf):** 0,18 A max.

**Switching power:**
10 W/10 VA max.

**Contact resistance:**
150 mΩ

**Response time:**
1,8 ms

**Operating temperatur:**
-20 ... +50°C (-4 ... +122°F)

**Ex-Identification:**
II 3G Ex nC IIC T5 Gc X
II 3D Ex tc IIIC T120°C Dc X

**Protection rating (EN 60529):**
IP67

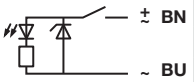
**Cable type:**
PVC 2 x 0,25 mm²

**Cable length:**
5 m

**Electromagnetic compatibility according to:**
EN 60947-5-2

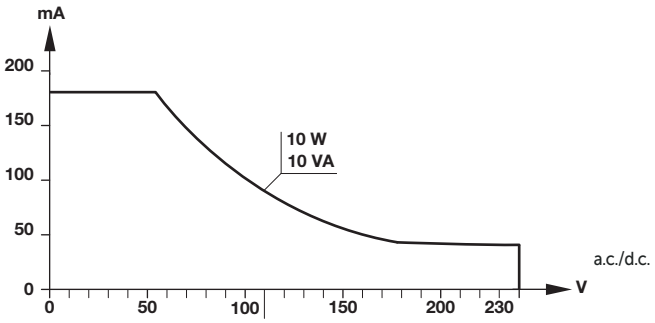
**Materials:**
Body: plastic
Cable: see table below

## Technical data - Reed switches - additional information see data sheet en 4.3.015

| Symbol | Voltage (V a.c.) | Voltage (V d.c.) | Current maximum (mA) | Function | Operating temperature (°C) | LED | Protection class | Cable length (m) | Cable type | Weight (g) | Model |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  ± BN ~ BU | 10 ... 240 | 10 ... 170 | 180 | Closer | -20 ... +50 | • | IP67 | 5 | PVC 2 x 0,25 | 40 | M/50/LXU/5V |

Color code: BN = brown, BU = blue

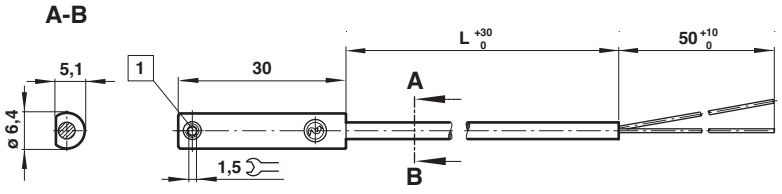
## Switching current and switching voltage




## Dimensions
## Cable length L = 5 m

Dimensions in mm
Projection/First angle






1 Fixing screw



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- ATEX - Magnetically operating switch, solid state
- Suitable for all cylinder ranges with magnetic piston
- LED indicator
- Resistant, reliable switching with a very fast response time
- Particularly suited for use in high levels of vibration
- CE verificated
- UL certificated



## Technical features

**Operation:**
PNP-output with LED (yellow)

**Switching voltage (Ub):**
10 ... 30 V d.c.

**Switching voltage output:**
Ub - 2 V

**Switching current (see graph):**
150 mA max.

**Switching power:**
4,5 W max.

**Response time:**
< 0,5 ms

**Switching frequency:**
1 kHz

**Operating temperatur:**
-20 ... +50°C (-4 ... +122°F)

**Ex-Identification:**
II 3G Ex nA IIC T4 Gc X
II 3D Ex tc IIIC T110°C Dc X

**Protection rating (EN 60529):**
IP67

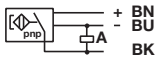
**Cable type:**
PVC 3 x 0,25 mm$^2$

**Cable length:** 5 m

**Electromagnetic compatibility according to:**
EN 60947-5-2

**Materials:**
Body: plastic
Cable: see table below

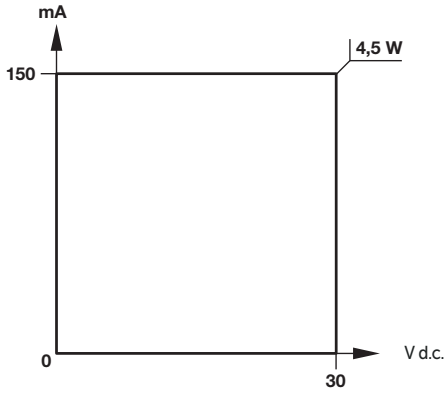
## Technical data - Reed switches - additional information see data sheet en 4.3.017

| Symbol | Voltage (V d.c.) | Current maximum (mA) | Function | Operating temperature (°C) | LED | Protection class | Cable length (m) | Cable type | Weight (g) | Model |
|---|---|---|---|---|---|---|---|---|---|---|
|  | 10 ... 30 | 150 | PNP | -20 ... +50 | • | IP67 | 5 | PVC 3 x 0,25 | 40 | M/50/EXP/5V |



Color code: BK = black, BN = brown, BU = blue

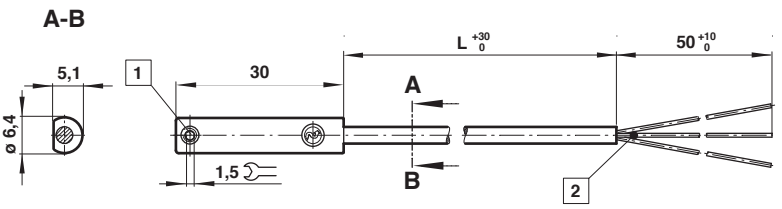
## Switching current and switching voltage




## Dimensions
## Cable length L = 5 m

Dimensions in mm
Projection/First angle






1 Fixing screw
2 Color code
BK = black
BN = brown
BU = blue


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ATTENTION:
The setting of magnetic switches on a cylinder barrel forms an ATEX assembly:
- Each part is separate classified according ATEX for use in potentially explosive atmospheres.
- The resulting range of approved applications for the module corresponds to that of the individual part assigned to the lowest category.
- The result concerns the device category, potentially explosive atmosphere G or D, max. surface temperature and explosion classification if applicable.

**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/ data**«.
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 GmbH.

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.


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