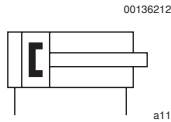


## Piston rod cylinders → Short-stroke and compact cylinders

### Series KHZ

► Ø 12 - 100 mm ► Ports: M5 - G 1/4 ► double-acting ► with magnetic piston ► cushioning: elastic ► piston rod: internal thread



Compressed air connection

internal thread

Ambient temperature min./max.

-25 °C / +80 °C

Medium temperature min./max.

-25 °C / +80 °C

Medium

Compressed air

Max. particle size

50 µm

Oil content of compressed air

0 mg/m³ - 5 mg/m³

Pressure for determining piston forces

6,3 bar

Materials:

Cylinder tube

Aluminum, anodized

Piston rod

Stainless steel

Piston

Nitrile rubber

End cover

Aluminum

Scraper

Polyurethane

#### Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

| Piston Ø                   | [mm]          | 12     | 16     | 20     | 25     | 32       |
|----------------------------|---------------|--------|--------|--------|--------|----------|
| Retracting piston force    | [N]           | 53     | 95     | 148    | 260    | 260      |
| Extending piston force     | [N]           | 71     | 127    | 198    | 309    | 309      |
| Impact energy              | [J]           | 0.04   | 0.01   | 0.08   | 0.1    | 0.16     |
| Weight                     | 0 mm stroke   | 0.05   | 0.065  | 0.092  | 0.178  | 0.195    |
|                            | +10 mm stroke | 0.07   | 0.085  | 0.111  | 0.201  | 0.281    |
| Working pressure min./max. | [bar]         | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | 0.6 - 10 |
| Note                       |               | 1)     | 1)     | 1)     | 1)     | 2)       |

| Piston Ø                   | [mm]          | 40       | 50       | 63       | 80       | 100      |
|----------------------------|---------------|----------|----------|----------|----------|----------|
| Retracting piston force    | [N]           | 720      | 1110     | 1837     | 2857     | 4639     |
| Extending piston force     | [N]           | 792      | 1237     | 1964     | 3167     | 4948     |
| Impact energy              | [J]           | 0.24     | 0.32     | 0.38     | 0.38     | 0.5      |
| Weight                     | 0 mm stroke   | 0.285    | 0.388    | 0.636    | 1.222    | 2.385    |
|                            | +10 mm stroke | 0.367    | 0.458    | 0.726    | 1.442    | 2.631    |
| Working pressure min./max. | [bar]         | 0.6 - 10 | 0.6 - 10 | 0.6 - 10 | 0.6 - 10 | 0.6 - 10 |
| Note                       |               | 2)       | 2)       | 2)       | 2)       | 2)       |

1) Material front cover: Brass

2) Material front cover: Aluminum

## Piston rod cylinders → Short-stroke and compact cylinders

## Series KHZ

► Ø 12 - 100 mm ► Ports: M5 - G 1/4 ► double-acting ► with magnetic piston ► cushioning: elastic ► piston rod: internal thread

|                                                                                  | Piston Ø<br>Piston rod thread<br>Ports | 12                | 16                | 20                | 25                 | 32                  |
|----------------------------------------------------------------------------------|----------------------------------------|-------------------|-------------------|-------------------|--------------------|---------------------|
|                                                                                  |                                        | M3<br>M5          | M5<br>M5          | M5<br>M5          | M5<br>G 1/8        | M6<br>G 1/8         |
|  | Stroke 5                               | <b>0822010600</b> | <b>0822010610</b> | <b>0822010620</b> | <b>0822010630</b>  | <b>0822010640</b>   |
|                                                                                  | 10                                     | <b>0822010601</b> | <b>0822010611</b> | <b>0822010621</b> | <b>0822010631</b>  | <b>0822010641</b>   |
|                                                                                  | 15                                     | <b>0822010602</b> | <b>0822010612</b> | <b>0822010622</b> | <b>0822010632</b>  | <b>0822010642</b>   |
|                                                                                  | 20                                     | <b>0822010603</b> | <b>0822010613</b> | <b>0822010623</b> | <b>0822010633</b>  | <b>0822010643</b>   |
|                                                                                  | 25                                     | <b>0822010604</b> | <b>0822010614</b> | <b>0822010624</b> | <b>0822010634</b>  | <b>0822010644</b>   |
|                                                                                  | 30                                     | <b>0822010605</b> | <b>0822010615</b> | <b>0822010625</b> | <b>0822010635</b>  | <b>0822010645</b>   |
|                                                                                  | 40                                     | <b>0822010606</b> | <b>0822010616</b> | <b>0822010626</b> | <b>0822010636</b>  | <b>0822010646</b>   |
|                                                                                  | 50                                     | -                 | -                 | <b>0822010627</b> | <b>0822010637</b>  | <b>0822010647</b>   |
|                                                                                  | 80                                     | -                 | -                 | -                 | -                  | <b>0822010648</b>   |
|                                                                                  | 100                                    | -                 | -                 | -                 | -                  | <b>0822010649</b>   |
|                                                                                  | Piston Ø<br>Piston rod thread<br>Ports | 40<br>M6<br>G 1/8 | 50<br>M8<br>G 1/8 | 63<br>M8<br>G 1/8 | 80<br>M10<br>G 1/4 | 100<br>M12<br>G 1/4 |
|                                                                                  | Stroke 5                               | <b>0822010650</b> | -                 | -                 | -                  | -                   |
|                                                                                  | 10                                     | <b>0822010651</b> | <b>0822010661</b> | <b>0822010671</b> | <b>0822010681</b>  | <b>0822010691</b>   |
|                                                                                  | 15                                     | <b>0822010652</b> | <b>0822010662</b> | <b>0822010672</b> | -                  | -                   |
|                                                                                  | 20                                     | <b>0822010653</b> | <b>0822010663</b> | <b>0822010673</b> | -                  | -                   |
|                                                                                  | 25                                     | <b>0822010654</b> | <b>0822010664</b> | <b>0822010674</b> | <b>0822010684</b>  | <b>0822010694</b>   |
|                                                                                  | 30                                     | <b>0822010655</b> | <b>0822010665</b> | <b>0822010675</b> | -                  | -                   |
|                                                                                  | 40                                     | <b>0822010656</b> | <b>0822010666</b> | <b>0822010676</b> | -                  | -                   |
|                                                                                  | 50                                     | <b>0822010657</b> | <b>0822010667</b> | <b>0822010677</b> | <b>0822010687</b>  | <b>0822010697</b>   |
|                                                                                  | 80                                     | <b>0822010658</b> | <b>0822010668</b> | <b>0822010678</b> | <b>0822010688</b>  | <b>0822010698</b>   |
|                                                                                  | 100                                    | <b>0822010659</b> | <b>0822010669</b> | <b>0822010679</b> | <b>0822010689</b>  | <b>0822010699</b>   |

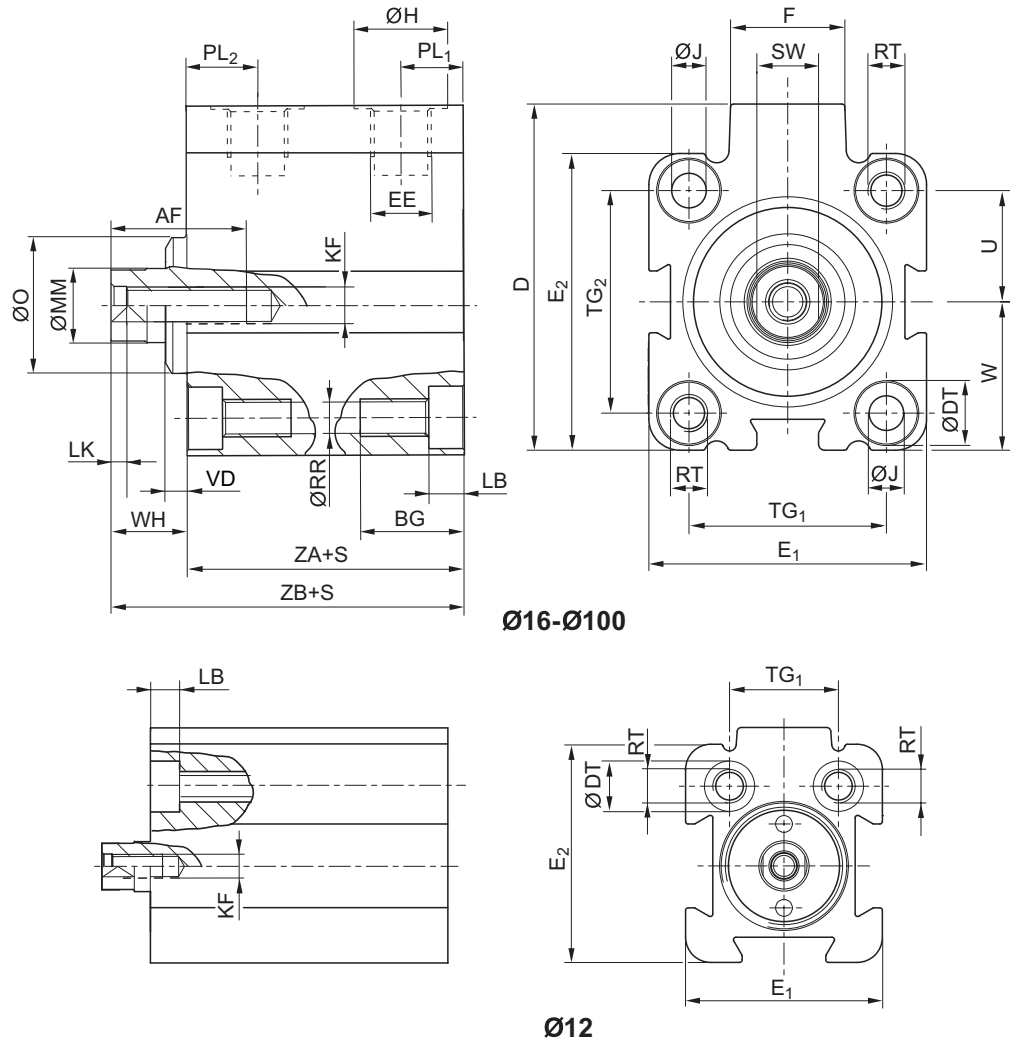
other versions can be ordered from Bosch Rexroth sales offices

## Piston rod cylinders → Short-stroke and compact cylinders

## Series KHZ

► Ø 12 - 100 mm ► Ports: M5 - G 1/4 ► double-acting ► with magnetic piston ► cushioning: elastic ► piston rod: internal thread

## Dimensions



S = stroke

00106563

| Piston Ø | S                   | AF<br>+1 | BG <sup>1)</sup> | D<br>JS15 | ØDT<br>H13 | E1<br>JS15 | E2<br>JS15 | EE    | F    | ØH | ØJ   | KF   | LB<br>+0,4 |
|----------|---------------------|----------|------------------|-----------|------------|------------|------------|-------|------|----|------|------|------------|
| 12       | 5 - 10              | 8        | 12.4             | 28        | 6          | 23.5       | 26         | M 5   | 11   | 8  | 3.3  | M 3  | 3.4        |
| 12       | 15 - 40             | 8        | 17.5             | 28        | 6          | 23.5       | 26         | M 5   | 11   | 8  | 3.3  | M 3  | 8.5        |
| 16       | 5 - 10              | 10       | 12.4             | 33        | 6          | 28         | 28         | M 5   | 11.5 | 8  | 3.55 | M 5  | 3.4        |
| 16       | 15 - 40             | 10       | 17.5             | 33        | 6          | 28         | 28         | M 5   | 11.5 | 8  | 3.55 | M 5  | 8.5        |
| 20       | 5 - 10              | 10       | 13.6             | 37        | 7.5        | 32         | 32         | M 5   | 11   | 8  | 4.55 | M 5  | 4.6        |
| 20       | 15 - 50             | 10       | 13.6             | 37        | 7.5        | 32         | 32         | M 5   | 11   | 8  | 4.55 | M 5  | 4.6        |
| 25       | 5 - 50              | 10       | 13.6             | 47.5      | 8          | 37         | 39         | G 1/8 | 17.5 | 15 | 4.55 | M 5  | 4.6        |
| 32       | 5 - 100             | 15       | 16.7             | 56        | 10         | 45         | 48         | G 1/8 | 18.5 | 15 | 5.5  | M 6  | 5.7        |
| 40       | 5 - 100             | 15       | 16.7             | 62.5      | 10         | 54.5       | 54.5       | G 1/8 | 18.5 | 15 | 5.5  | M 6  | 5.7        |
| 50       | 10 - 100            | 18       | 19.8             | 73        | 11         | 66         | 66         | G 1/8 | 18   | 15 | 7.3  | M 8  | 6.8        |
| 63       | 10 - 100            | 18       | 25               | 88        | 15         | 80         | 80         | G 1/8 | 23   | 15 | 9.2  | M 8  | 9          |
| 80       | 10/25/50/<br>80/100 | 18       | 25               | 110       | 15         | 100        | 100        | G 1/4 | 27   | 19 | 9.2  | M 10 | 9          |

## Piston rod cylinders → Short-stroke and compact cylinders

## Series KHZ

► Ø 12 - 100 mm ► Ports: M5 - G 1/4 ► double-acting ► with magnetic piston ► cushioning: elastic ► piston rod: internal thread

| Piston Ø | S                   | AF<br>+1 | BG <sup>1)</sup> | D<br>JS15 | ØDT<br>H13 | E1<br>JS15 | E2<br>JS15 | EE    | F  | ØH | ØJ | KF   | LB<br>+0,4 |
|----------|---------------------|----------|------------------|-----------|------------|------------|------------|-------|----|----|----|------|------------|
| 100      | 10/25/50/<br>80/100 | 20       | 30               | 132       | 17.5       | 124        | 124        | G 1/4 | 28 | 19 | 11 | M 12 | 11         |

| Piston Ø | LK<br>+0,5 | ØMM<br>f8 | ØO | PL1  | PL2  | ØRR  | RT   | SW<br>-0,3 | TG1<br>±0,2 | TG2<br>±0,2 | U    | W<br>±0,2 | VD<br>-1 |
|----------|------------|-----------|----|------|------|------|------|------------|-------------|-------------|------|-----------|----------|
| 12       | 2          | 6         | –  | 6    | 10.5 | 3.3  | M 4  | 5          | 13          | –           | 9.5  | 11.5      | –        |
| 12       | 2          | 6         | –  | 6    | 10.5 | 3.3  | M 4  | 5          | 13          | –           | 9.5  | 11.5      | –        |
| 16       | 2          | 8         | –  | 6.5  | 11.3 | 3.3  | M 4  | 7          | 20          | 20          | 10   | 14        | –        |
| 16       | 2          | 8         | –  | 6.5  | 11.3 | 3.3  | M 4  | 7          | 20          | 20          | 10   | 14        | –        |
| 20       | 2          | 10        | –  | 6.5  | 10   | 4.2  | M 5  | 8          | 22          | 22          | 11   | 16        | –        |
| 20       | 2          | 10        | –  | 6.5  | 10   | 4.2  | M 5  | 8          | 22          | 22          | 11   | 16        | –        |
| 25       | 2          | 10        | 20 | 9.5  | 11.5 | 4.2  | M 5  | 8          | 26          | 28          | 14   | 19.5      | 3.5      |
| 32       | 2.5        | 12        | 22 | 8.5  | 15   | 5.05 | M 6  | 10         | 32          | 36          | 18   | 24        | 3.5      |
| 40       | 2.5        | 12        | 30 | 10   | 13.5 | 5.05 | M 6  | 10         | 40          | 40          | 20   | 27.3      | 4.5      |
| 50       | 3.5        | 16        | 35 | 10   | 14   | 6.8  | M 8  | 13         | 50          | 50          | 25   | 33        | 6        |
| 63       | 3.5        | 16        | 35 | 11.5 | 14   | 8.5  | M 10 | 13         | 62          | 62          | 31   | 40        | 6.5      |
| 80       | 4          | 20        | 46 | 12   | 15.5 | 8.5  | M 10 | 17         | 82          | 82          | 41   | 50        | 8.5      |
| 100      | 4          | 25        | 56 | 12   | 18.5 | 10.2 | M 12 | 22         | 103         | 103         | 51.5 | 62        | 7        |

| Piston Ø | WH   | ZA<br>±0,2 | ZB<br>±0,8 |  |  |  |  |  |  |  |  |  |  |
|----------|------|------------|------------|--|--|--|--|--|--|--|--|--|--|
| 12       | 5.5  | 30.5       | 36         |  |  |  |  |  |  |  |  |  |  |
| 12       | 5.5  | 30.5       | 36         |  |  |  |  |  |  |  |  |  |  |
| 16       | 4.5  | 32         | 36.5       |  |  |  |  |  |  |  |  |  |  |
| 16       | 4.5  | 38         | 42.5       |  |  |  |  |  |  |  |  |  |  |
| 20       | 4.5  | 32         | 36.5       |  |  |  |  |  |  |  |  |  |  |
| 20       | 4.5  | 38         | 42.5       |  |  |  |  |  |  |  |  |  |  |
| 25       | 9.5  | 39         | 48.5       |  |  |  |  |  |  |  |  |  |  |
| 32       | 11   | 39.5       | 50.5       |  |  |  |  |  |  |  |  |  |  |
| 40       | 13.5 | 39.5       | 53         |  |  |  |  |  |  |  |  |  |  |
| 50       | 13.5 | 39.5       | 53         |  |  |  |  |  |  |  |  |  |  |
| 63       | 15.5 | 42         | 57.5       |  |  |  |  |  |  |  |  |  |  |
| 80       | 18   | 46         | 64         |  |  |  |  |  |  |  |  |  |  |
| 100      | 20   | 56         | 76         |  |  |  |  |  |  |  |  |  |  |

1) Min.