# Pneumatic Guided Cylinders

## Features

- Double-rod guide unit
- Two groups of inlet and outlet air ports
- Can be mounted from three directions
- Twelve bore sizes are available
- Magnetic switch slots around the cylinder body

## RS PRO Guide Cylinders

0291796

RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

# Pneumatic Guided Cylinders

## Product Description

Two guides of special bearing steel and linear bearing or brass bearing guide are used to prevent rotating. They can bear high torque and radial load.
Drive unit and guide unit are in the same barrel that no additional accessories are needed with minimal space required.
There are magnetic switch slots around the cylinder body convenient to istall inducting switch.

## General Specifications

| | |
|---|---|
| **Stroke** | See table below for more details |
| **Bore** | See table below for more details |
| **Manufacturer Series** | HNG |
| **Action** | Double |
| **Bearing Type** | See table below for more details |
| **Pneumatic Connection** | See table below for more details |
| **Maximum Operating Pressure** | 10 bar |
| **Cushioning Type** | Rubber cushion |

## Mechanical Specifications

| | |
|---|---|
| **Body** | Aluminium |
| **Rod** | Carbon steel |
| **Maximum Operating Temperature** | 70°C |
| **Minimum Operating Temperature** | -20°C |
| **Dimension** | See table below for more details |
| **Weight** | See table below for more details |
| **Length** | See table below for more details |

# Pneumatic Guided Cylinders

## RS PRO HNG BS Series Slide Cylinder Specifications

| | |
|---|---|
| **Bearing Type** | Slide Bearing |

| Stock No. | Series Model | Bore (mm) | Stroke (mm) | Length (mm) | Height (mm) | Width (mm) | Weight (g) | Pneumatic Connect. |
|---|---|---|---|---|---|---|---|---|
| 0291796 | BS | 12 | 10 | 52 | 26 | 58 | 250 | M5 |
| 0291797 | BS | 12 | 20 | 62 | 26 | 58 | 290 | M5 |
| 0291799 | BS | 12 | 25 | 67 | 26 | 58 | 310 | M5 |
| 0291800 | BS | 12 | 30 | 72 | 26 | 58 | 330 | M5 |
| 0291801 | BS | 12 | 40 | 82 | 26 | 58 | 370 | M5 |
| 0291803 | BS | 12 | 50 | 92 | 26 | 58 | 410 | M5 |
| 0291804 | BS | 12 | 75 | 130 | 26 | 58 | 540 | M5 |
| 0291806 | BS | 12 | 80 | 135 | 26 | 58 | 560 | M5 |
| 0291807 | BS | 12 | 100 | 155 | 26 | 58 | 640 | M5 |
| 0291808 | BS | 16 | 10 | 56 | 30 | 64 | 360 | M5 |
| 0291810 | BS | 16 | 20 | 66 | 30 | 64 | 410 | M5 |
| 0291812 | BS | 16 | 30 | 76 | 30 | 64 | 460 | M5 |
| 0291813 | BS | 16 | 50 | 96 | 30 | 64 | 560 | M5 |
| 0291814 | BS | 16 | 75 | 140 | 30 | 64 | 760 | M5 |
| 0291816 | BS | 16 | 150 | 245 | 30 | 64 | 1210 | M5 |
| 0291817 | BS | 20 | 20 | 73 | 36 | 83 | 710 | 1/8 |
| 0291819 | BS | 20 | 30 | 83 | 36 | 83 | 790 | 1/8 |
| 0291820 | BS | 20 | 50 | 103 | 36 | 83 | 950 | 1/8 |
| 0291822 | BS | 20 | 75 | 155 | 36 | 83 | 1260 | 1/8 |
| 0291823 | BS | 20 | 100 | 180 | 36 | 83 | 1460 | 1/8 |
| 0291825 | BS | 20 | 150 | 254 | 36 | 83 | 1950 | 1/8 |
| 0291826 | BS | 20 | 200 | 304 | 36 | 83 | 2340 | 1/8 |
| 0291828 | BS | 25 | 30 | 83,5 | 42 | 93 | 1090 | 1/8 |
| 0291829 | BS | 25 | 40 | 93,5 | 42 | 93 | 1210 | 1/8 |
| 0291831 | BS | 25 | 50 | 103,5 | 42 | 93 | 1420 | 1/8 |
| 0291832 | BS | 25 | 75 | 157 | 42 | 93 | 1740 | 1/8 |
| 0291834 | BS | 25 | 100 | 182 | 42 | 93 | 2020 | 1/8 |
| 0291835 | BS | 32 | 25 | 103 | 48 | 112 | 1480 | 1/8 |
| 0291836 | BS | 32 | 50 | 128 | 48 | 112 | 1860 | 1/8 |
| 0291838 | BS | 32 | 100 | 202 | 48 | 112 | 2950 | 1/8 |
| 0291844 | BS | 32 | 150 | 268 | 48 | 112 | 3850 | 1/8 |
| 0291845 | BS | 40 | 25 | 103 | 54 | 120 | 1730 | 1/8 |
| 0291847 | BS | 40 | 50 | 128 | 54 | 120 | 2150 | 1/8 |
| 0291848 | BS | 50 | 50 | 139 | 64 | 148 | 3250 | 1/4 |
| 0291850 | BS | 50 | 80 | 198 | 64 | 148 | 4500 | 1/4 |

# Pneumatic Guided Cylinders

## RS PRO HNG BB Series Slide Cylinder Specifications

| | |
|---|---|
| **Bearing Type** | Slide Bearing |

| Stock No. | Series Model | Bore (mm) | Stroke (mm) | Length (mm) | Height (mm) | Width (mm) | Weight (g) | Pneumatic Connecct. |
|---|---|---|---|---|---|---|---|---|
| 0291851 | BB | 12 | 20 | 62 | 26 | 58 | 240 | M5 |
| 0291853 | BB | 16 | 10 | 56 | 30 | 64 | 360 | M5 |
| 0291854 | BB | 16 | 30 | 76 | 30 | 64 | 420 | M5 |
| 0291856 | BB | 16 | 100 | 165 | 30 | 64 | 790 | M5 |
| 0291857 | BB | 50 | 100 | 218 | 64 | 148 | 4600 | 1/4 |

## Specifications

### Specifications

| Bore(mm) | | 6 | 10 | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acting type | | Double acting | | | | | | | | | |
| Working medium | | Clean Air(after 40 μ m filtration) | | | | | | | | | |
| Working pressure (MPa) | | 0.1~1.0 | | | | | | | | | |
| Guaranteed pressure (MPa) | | 1.5 | | | | | | | | | |
| Working temperature (℃) | | -20~70( No freezing) | | | | | | | | | |
| Piston speed (mm/s) | | 30~500 | | | | | | | | | |
| Cushion | | Rubber cushion | | | | | | | | | |
| Stroke tolerance(mm) | | +1.0 0 | | | | | | | | | |
| No-rotating precision ★ | BB | — | | ±0.08° | | ±0.07° | | ±0.06° | | ±0.05° | |
| | BS | ±0.10° | | | | ±0.09° | | ±0.08° | | ±0.06° | |
| Port Size | | M3×0.5 | | M5×0.8 | | G1/8❶ | | | | G1/4❶ | |

★ Retract position. ❶ PT、NPT port size is optional.

### Stroke

| Bore (mm) | Standard Stroke (mm) | Max. Stroke (mm) |
|---|---|---|
| 6 | 5 10 15 20 | 20 |
| 10 | 5 10 15 20 25 30 | 30 |
| 12 | 10 20 25 30 40 50 60 70 75 80 90 100 125 150 | 150 |
| 16 | 10 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200 | 200 |
| 20/25 | 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250 | 250 |
| 32~63 | 25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250 | 250 |

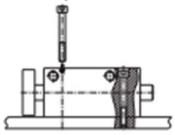
Note: the middle non-standard stroke is made by adding a pad in the cylinder of standard stroke; The Ø12~Ø32 cylinder diameter corresponds to every 1mm stroke, and the Ø40~Ø63 cylinder diameter corresponds to every 5mm stroke;

# Pneumatic Guided Cylinders

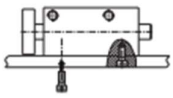
## Mount Instructions

**How to Mount ?**

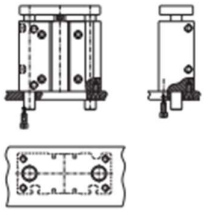
Fixation of screw on top surface



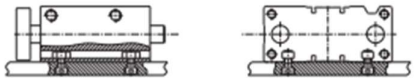
Fixation of screw at bottom surface



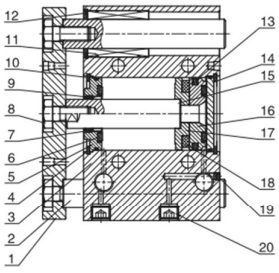
Fixation of screw at back surface



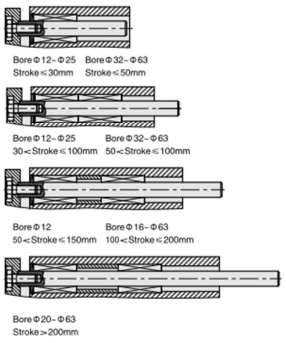
Fixation of T slot at bottom



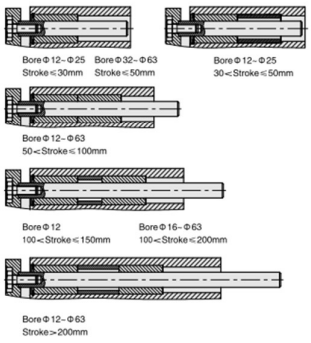
## Internal Structure




HNG...BB




HNG...BS

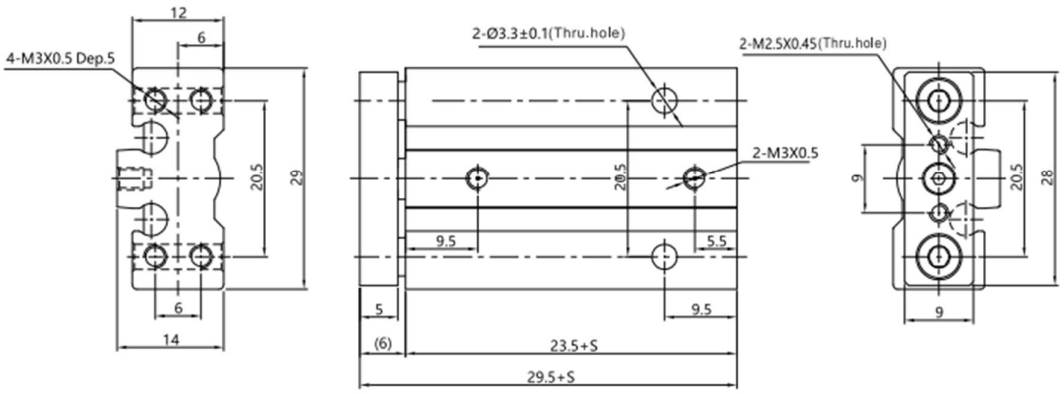



| No. | Part Name | Material |
|---|---|---|
| 1 | Fixing plate | Aluminum alloy |
| 2 | Leader | Steel |
| 3 | Barrel | Aluminum alloy |
| 4 | C type retainer ring | Spring steel |
| 5 | Head cover | Aluminum alloy |
| 6 | Anti–bump cushion | NBR/TPU |
| 7 | Piston rod seal | TPU |
| 8 | Screw | Stainless steel |
| 9 | Self lubricating bearing | Bronze powder |
| 10 | O–ring | NBR |
| 11 | Linear bearing( BB ) Slide bearing ( BS ) | Brass ( BS ) Composite material ( BB ) |
| 12 | C type retainer ring | Spring steel |
| 13 | Piston seal | NBR |
| 14 | Rear cover | Aluminum alloy |
| 15 | Piston rod | S45C hard chrome carbon steel |
| 16 | Piston | Aluminum alloy |
| 17 | Magnet base | Aluminum alloy |
| 18 | Magnet | Plastic |
| 19 | Nut | Carbon steel |
| 20 | Hex fix screw(G ) | Carbon steel |
| 21 | Spacer | Aluminum alloy |

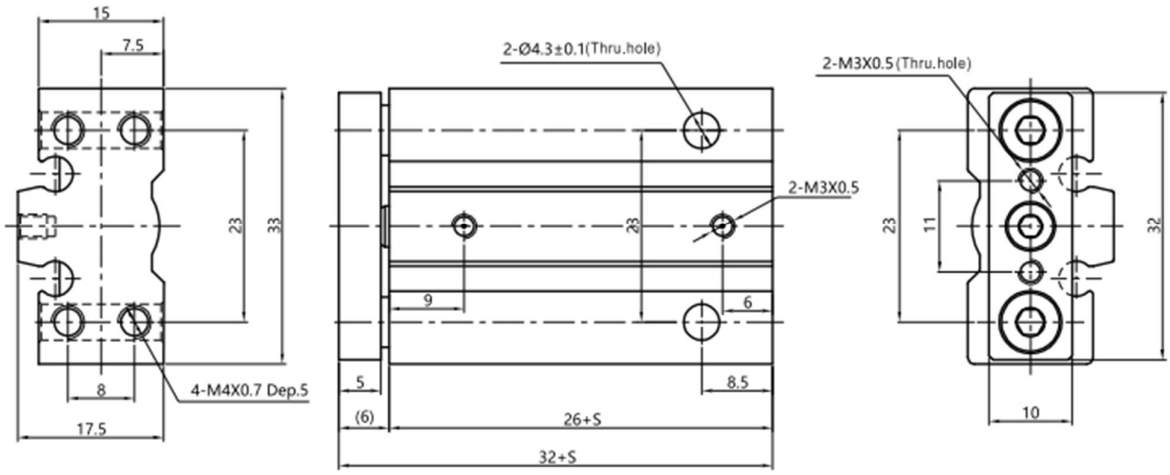
# Pneumatic Guided Cylinders

## Dimensions

HNG006...BS

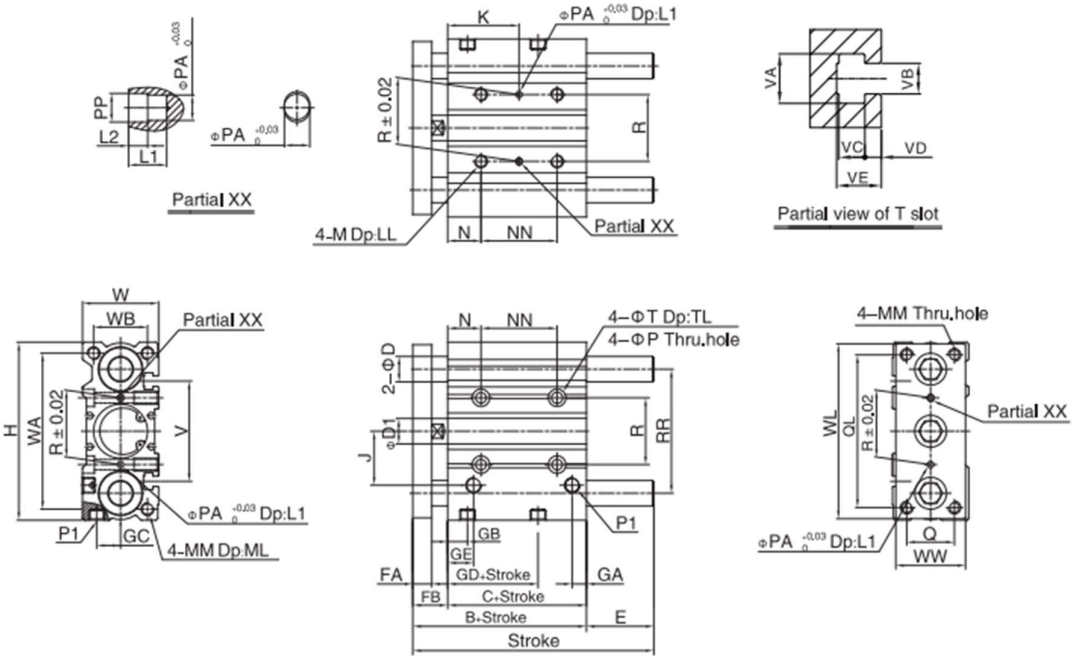



HNG010...BS



# Pneumatic Guided Cylinders

## HNG012...063




(mm)

| Bore\Sign | E (BB) | | | | E (BS) | | | | NN | | | | K | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ≤30 | 31~100 | 101~200 | >200 | ≤50 | 51~100 | 101~200 | >200 | ≤30 | 31~100 | 101~200 | >200 | ≤30 | 31~100 | 101~200 | >200 |
| 12 | 0 | 13 | 43 | – | 0 | 13 | 43 | – | 20 | 40 | 110 | – | 15 | 25 | 60 | – |
| 16 | 0 | 19 | 49 | – | 0 | 19 | 49 | – | 24 | 44 | 110 | – | 17 | 27 | 60 | – |
| 20 | 0 | 27 | 51 | 69 | 0 | 27 | 51 | 69 | 24 | 44 | 120 | 200 | 29 | 39 | 77 | 117 |
| 25 | 0 | 28.5 | 51 | 68.5 | 0 | 28.5 | 51 | 68.5 | 24 | 44 | 120 | 200 | 29 | 39 | 77 | 117 |
| Bore\Sign | ≤50 | 51~100 | 101~200 | >200 | ≤50 | 51~100 | 101~200 | >200 | ≤40 | 41~100 | 101~200 | >200 | ≤40 | 41~100 | 101~200 | >200 |
| 32 | 5.5 | 42.5 | 58.5 | 80.5 | 5.5 | 42.5 | 58.5 | 80.5 | 24 | 48 | 124 | 200 | 33 | 45 | 83 | 121 |
| 40 | 0 | 36 | 52 | 74 | 0 | 36 | 52 | 74 | 24 | 48 | 124 | 200 | 34 | 46 | 84 | 122 |
| 50 | 4 | 46 | 62 | 89 | 4 | 46 | 62 | 89 | 24 | 48 | 124 | 200 | 36 | 48 | 86 | 124 |
| 63 | 0 | 41 | 57 | 84 | 0 | 41 | 57 | 84 | 28 | 52 | 128 | 200 | 38 | 50 | 88 | 124 |

| Bore\Sign | B | C | FA | FB | P1 | GA | GB | GC | GD | GE | R | RR | N | P | PA | PP | T | TL | M | LL | D1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 42 | 29 | 8 | 13 | M5X0.8 | 7.5 | 11 | 8 | 13 | 11 | 23 | 41 | 5 | 4.2 | 3 | 3.5 | 8 | 4.5 | M5X0.8 | 10 | 6 |
| 16 | 46 | 33 | 8 | 13 | M5X0.8 | 8 | 11 | 10 | 15 | 11 | 24 | 46 | 5 | 4.2 | 3 | 3.5 | 8 | 4.5 | M5X0.8 | 10 | 8 |
| 20 | 53 | 37 | 10 | 16 | 1/8" | 9 | 10.5 | 10.5 | 12.5 | 10.5 | 28 | 54 | 17 | 5.2 | 3 | 3.5 | 9.5 | 5.5 | M6X1.0 | 12 | 10 |
| 25 | 53.5 | 37.5 | 10 | 16 | 1/8" | 9 | 11.5 | 13.5 | 12.5 | 11.5 | 34 | 64 | 17 | 5.2 | 4 | 4.5 | 9.5 | 5.5 | M6X1.0 | 12 | 12 |
| 32 | 59.5 | 37.5 | 12 | 22 | 1/8" | 9 | 12.5 | 15 | 7 | 12.5 | 42 | 78 | 21 | 6.9 | 4 | 4.5 | 11 | 7.5 | M8X1.25 | 16 | 16 |
| 40 | 66 | 44 | 12 | 22 | 1/8" | 10 | 14 | 18 | 13 | 14 | 50 | 86 | 22 | 6.9 | 4 | 4.5 | 11 | 7.5 | M8X1.25 | 16 | 16 |
| 50 | 72 | 44 | 16 | 28 | 1/4" | 11 | 12 | 21.5 | 9 | 14 | 66 | 110 | 24 | 8.7 | 5 | 6 | 14 | 9 | M10X1.5 | 20 | 20 |
| 63 | 77 | 49 | 16 | 28 | 1/4" | 13.5 | 16.5 | 28 | 14 | 16.5 | 80 | 124 | 24 | 8.7 | 5 | 6 | 14 | 9 | M10X1.5 | 20 | 20 |

| Bore\Sign | D (BB) | D (BS) | J | W | WA | WB | WL | WW | H | Q | QL | MM | ML | L1 | L2 | V | VA | VB | VC | VD | VE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 6 | 8 | 18 | 26 | 50 | 18 | 56 | 22 | 58 | 14 | 48 | M4X0.7 | 10 | 6 | 3 | 37 | 7.4 | 4.4 | 3.7 | 2 | 6.2 |
| 16 | 8 | 10 | 19 | 30 | 56 | 22 | 62 | 25 | 64 | 16 | 54 | M5X0.8 | 12 | 6 | 3 | 38 | 7.4 | 4.4 | 3.7 | 2.5 | 6.7 |
| 20 | 10 | 12 | 25 | 36 | 72 | 24 | 81 | 30 | 83 | 18 | 70 | M5X0.8 | 13 | 6 | 3 | 44 | 8.4 | 5.4 | 4.5 | 2.8 | 7.8 |
| 25 | 12 | 16 | 28.5 | 42 | 82 | 30 | 91 | 38 | 93 | 26 | 78 | M6X1.0 | 15 | 6 | 3 | 50 | 8.4 | 5.4 | 4.5 | 3 | 8.2 |
| 32 | 16 | 20 | 34 | 48 | 98 | 34 | 110 | 44 | 112 | 30 | 96 | M8X1.25 | 20 | 6 | 3 | 63 | 10.5 | 6.5 | 5.5 | 3.5 | 9.5 |
| 40 | 16 | 20 | 38 | 54 | 106 | 40 | 118 | 44 | 120 | 30 | 104 | M8X1.25 | 20 | 6 | 3 | 72 | 10.5 | 6.5 | 5.5 | 4 | 11 |
| 50 | 20 | 25 | 47 | 64 | 130 | 46 | 146 | 60 | 148 | 40 | 130 | M10X1.5 | 22 | 8 | 4 | 92 | 13.5 | 8.5 | 7.5 | 4.5 | 13.5 |
| 63 | 20 | 25 | 55 | 78 | 142 | 58 | 158 | 70 | 162 | 50 | 130 | M10X1.5 | 22 | 8 | 4 | 110 | 17.8 | 11 | 10 | 7 | 18.5 |