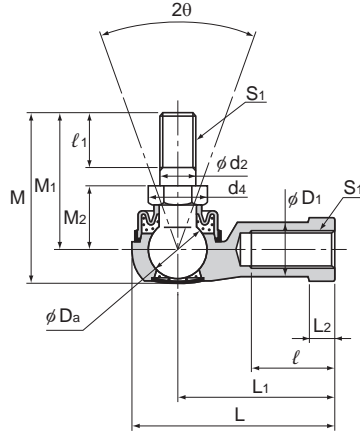


Model BL and Model BL-A



| Model No. | Outer dimensions | | | Threaded S ₁ JIS Class 2 | Holder dimensions | | | | | |
|-----------|------------------|---------------|-------------|---|-------------------|----|----------------|----------------|----------------|----------------|
| | Length L | Diameter D | Height M | | L ₁ | ℓ | L ₂ | D ₁ | D ₂ | W 0 -0.3 |
| BL 4DA | 24.5 | 13 | 20 | M4×0.7 | 18 | 8 | 4 | 7.5 | 9.5 | 8 |
| BL 5DA | 34.5 | 15 | 26.7 | M5×0.8 | 27 | 15 | 4 | 9 | 12 | 10 |
| BL 6D | 38 | 16 | 32.6 | M6×1 | 30 | 16 | 5 | 10 | 13 | 11 |
| BL 8D | 45.5 | 19 | 38.6 | M8×1.25 | 36 | 19 | 6 | 12.5 | 16 | 14 |
| BL 10D | 55.5 | 25 | 46.3 | M10×1.25 | 43 | 23 | 7 | 14.5 | 19 | 17 |
| BL 10BD | 55.5 | 25 | 52.3 | M10×1.5 | 43 | 23 | 7 | 14.5 | 19 | 17 |
| BL 12D | 64.5 | 29 | 52.7 | M12×1.25 | 50 | 26 | 8 | 17.5 | 22 | 19 |
| BL 12BD | 64.5 | 29 | 59.7 | M12×1.75 | 50 | 26 | 8 | 17.5 | 22 | 19 |
| BL 14D | 74 | 34 | 68.4 | M14×1.5 | 57 | 30 | 10 | 20 | 25 | 22 |
| BL 14BD | 74 | 34 | 74.4 | M14×2 | 57 | 30 | 10 | 20 | 25 | 22 |
| BL 16D | 83 | 38 | 74 | M16×1.5 | 64 | 34 | 11 | 22 | 27 | 24 |
| BL 16BD | 83 | 38 | 80 | M16×2 | 64 | 34 | 11 | 22 | 27 | 24 |

Note) Model BL-A is only available in size 4 and 5.

[Material]

Holder : A-1 alloy (BL4 to 5) (see **A22-5**)
 : High strength zinc alloy (BL6 to 16) (see **A22-6**)
 Ball shank : Lightly Carburized Carbon Steel Ball:
 650 HV or higher
 Shank S35C (20 to 28 HRC)
 Chromate treatment
 Boot : NBR special synthetic rubber

[Spherical Clearance]

Radial direction : 0.02 to 0.06mm
 Axial direction : 0.3mm or less

[Tolerance of the Mating Hole of the Ball Shank]

H10 is recommended

Model number coding

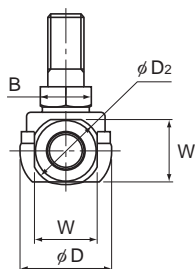
BL6 D L

Model number | D | L

With boot attached | | Screw symbol

| Screw symbol | No symbol | L |
|-----------------------|------------|-----------|
| Holder unit set screw | Right-hand | Left-hand |
| Ball shank | Right-hand | |

Note) No model is available without boot.

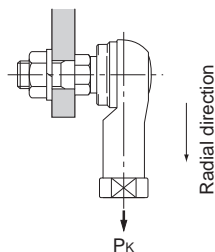


Unit: mm

| Ball shank dimensions | | | | | | | Ball diameter Da | Permissible tilt angles 20° | Applied static load C _s N | Yield-point strength P _k N | Mass g |
|-----------------------|----------------|------------------------|----------------|---------------------------|----------------|--------|---------------------|-----------------------------------|---|--|-----------|
| d ₂ h9 | M ₁ | M ₂ ±0.3 | ℓ ₁ | Hexagon B 0 -0.3 | d ₄ | | | | | | |
| 4 | 15 | 7 | 6 | 7 | 8.1 | 7.938 | 40 | 4510 | 1370 | 7 | |
| 5 | 21 | 10 | 8 | 8 | 9.2 | 9.525 | 40 | 6470 | 2250 | 12 | |
| 6 | 26 | 11 | 11 | 10 | 11.6 | 11.112 | 40 | 9900 | 3920 | 26 | |
| 8 | 31 | 14 | 12 | 12 | 13.8 | 12.7 | 40 | 12500 | 6570 | 49 | |
| 10 | 37 | 17 | 15 | 14 | 16.2 | 15.875 | 40 | 18300 | 11300 | 87 | |
| 10 | 43 | 17 | 21 | 14 | 16.2 | 15.875 | 40 | 18300 | 11300 | 90 | |
| 12 | 42 | 19 | 17 | 17 | 19.6 | 19.05 | 40 | 26700 | 16400 | 143 | |
| 12 | 49 | 19 | 24 | 17 | 19.6 | 19.05 | 40 | 26700 | 16400 | 148 | |
| 14 | 56 | 21.5 | 22 | 19 | 21.9 | 22.225 | 40 | 36400 | 19800 | 235 | |
| 14 | 62 | 21.5 | 28 | 19 | 21.9 | 22.225 | 40 | 36400 | 19800 | 245 | |
| 16 | 60 | 23.5 | 23 | 22 | 25.4 | 22.225 | 30 | 36400 | 26900 | 315 | |
| 16 | 66 | 23.5 | 29 | 22 | 25.4 | 22.225 | 30 | 36400 | 26900 | 325 | |

[Yield-Point Strength]

It indicates the strength in the direction shown in the figure below.

**[Lubrication]**

Lithium soap group grease No. 2 is contained in the boot and the cap.

[Identification of Left-hand Thread]

If the female threading is left-handed, its identification depends on the marking.

| Threaded | Identification |
|------------|----------------|
| | Cap marking |
| Right-hand | — |
| Left-hand | L mark |