

3/2 Way Ball Valves KHB3K

Model code

(also order example)

KHB3K G 1/2 L 1112 01 X A

Designation

KHB3K = 3/2 way ball valve

Type of connection

G = Whitworth female thread ISO 228
LR = Pipe connection - light range DIN 2353
SR = Pipe connection - heavy range DIN 2353
NPT = Female thread ANSI B 1.20.1

Ball bore

Materials

Housing, connection adapters and control spindle

1 = Steel
3 = Stainless steel

Ball

1 = Steel
3 = Stainless steel

Ball seal

1 = POM
3 = PTFE
8 = PEEK

Control spindle seal

2 = NBR (Perbunan)
3 = PTFE
4 = FKM (Viton)

Handle

01 = Aluminium clamped handle, straight
02 = Aluminium clamped handle, cranked
03 = Zinc die-cast clamped handle, straight
04 = Zinc die-cast bolt-on handle, cranked
06 = Steel bolt-on handle, cranked
09 = Without handle

Series

(determined by manufacturer)

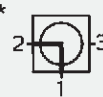
Surface protection

... = phosphate-plated (no details required)
A = zinc-plated, chrome (VI)-free

Function diagram

3/2 way ball valve L-bore 90° switch

2 3



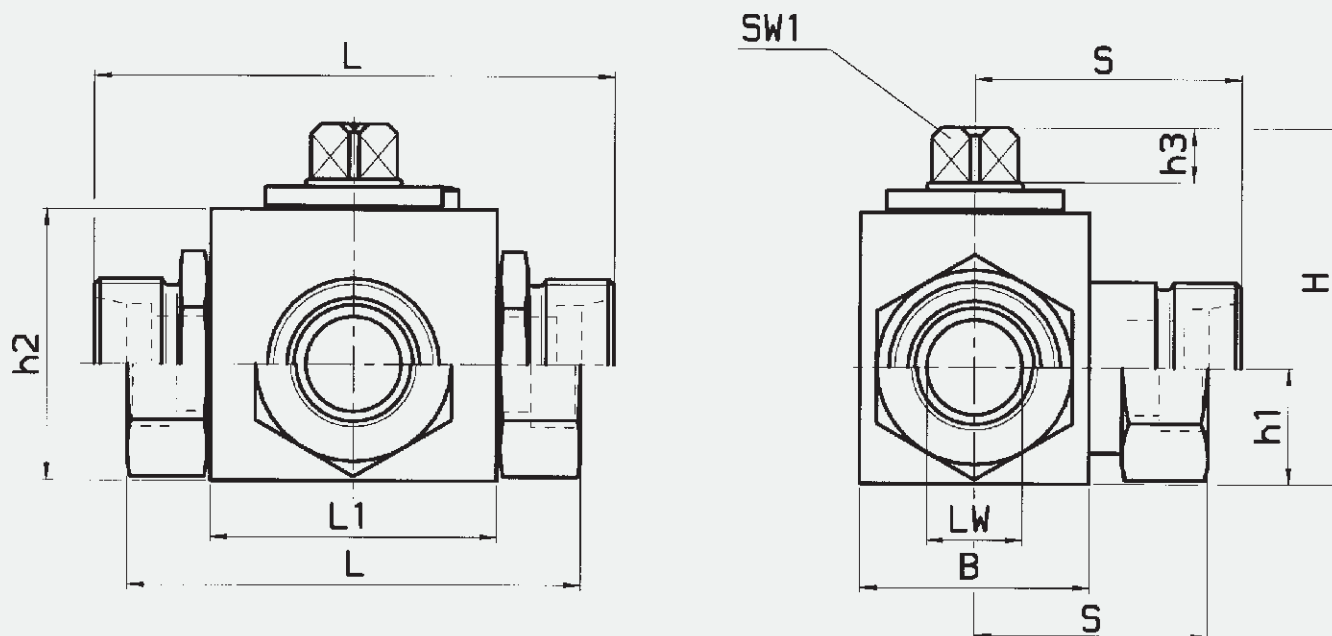
* undefined switching position

Technical specifications

| | |
|---------------------------------|--|
| Types of connection: | Light and heavy threaded pipe connection to DIN 2353 Whitworth female thread to ISO 228 NPT SAE |
| Mounting position: | Optional |
| Ambient temperature: | -10 °C to +80 °C |
| Nominal pressure: | up to PN 500 bar |
| Operating fluids: | Mineral oil to DIN 51524 Part 1 and Part 2 (other fluids on request) |
| Temperature of operating fluid: | -10 °C to +80 °C |
| Spare parts: | Seal kits available on request |

Dimensions

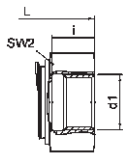
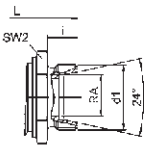
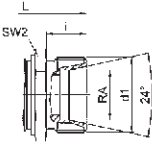
3/2 way ball valve



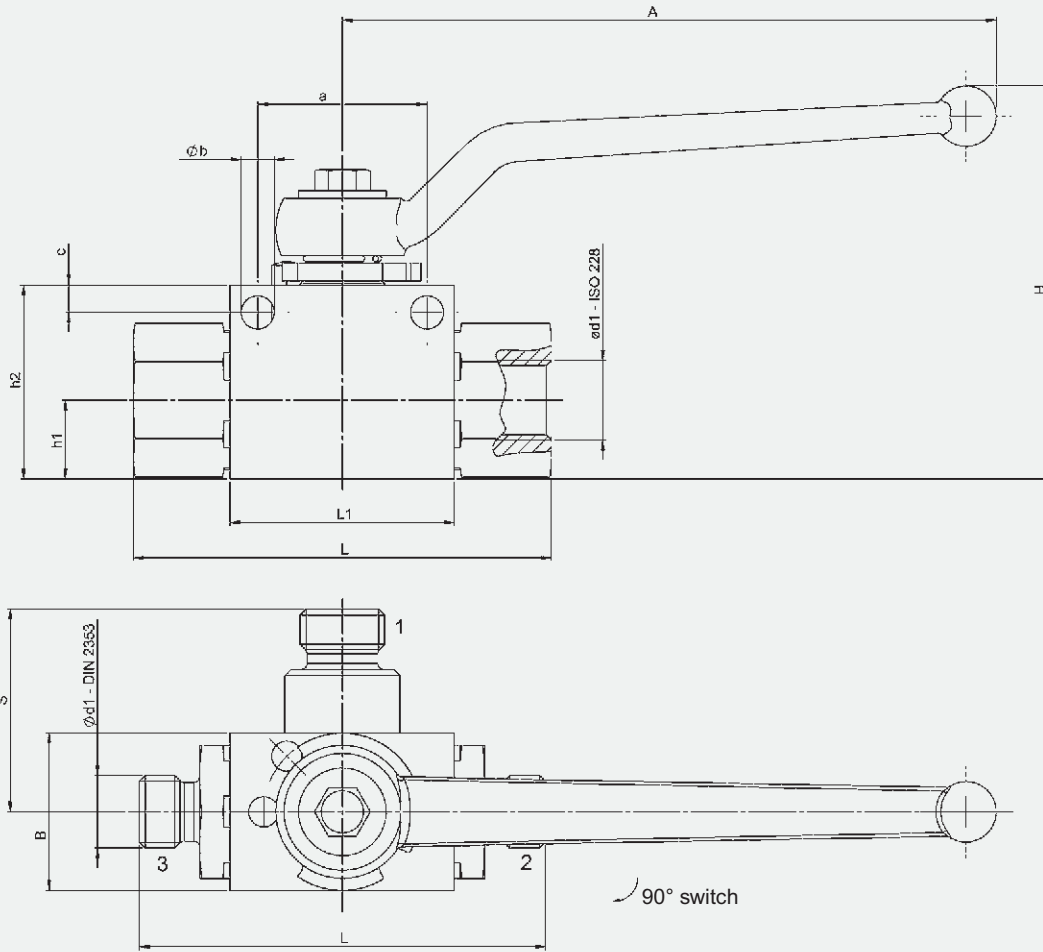
Steel

| Connection type | Type | DN | Int. dia. | RA | d1 | i | L | L1 | B | H | h1 | h2 | h3 | S | SW1 | SW2 | Wt. [kg] | Nom. press. PN [bar] | |
|--|--|-------------|-----------|-------|------------------|-------------|-----|-----|-------|-------|------|------|------|------|------|------|----------|----------------------|-----|
| DIN ISO 228 Female thread | KHB3K-G1/8 | 4 | 8 | - | G1/8 | 10 | 69 | 37 | 26 | 43.7 | 13 | 32 | 7 | 34.5 | 9 | 22 | 0.40 | 500 | |
| | KHB3K-G1/4 | 6 | 8 | - | G1/4 | 14 | 69 | 37 | 26 | 43.7 | 13 | 32 | 7 | 34.5 | 9 | 22 | 0.49 | 500 | |
| | KHB3K-G3/8 | 10 | 10 | - | G3/8 | 14 | 72 | 42 | 32 | 53.2 | 17.2 | 40 | 8.5 | 36 | 9 | 27 | 0.61 | 500 | |
| | KHB3K-G1/2 | 13 | 12 | - | G1/2 | 15 | 84 | 47 | 35 | 53.2 | 17.2 | 40 | 8.5 | 41.5 | 12 | 32 | 0.76 | 500 | |
| | KHB3K-G3/4 | 16 | 16 | - | G3/4 | 18 | 95 | 60 | 49 | 77.8 | 27.5 | 60 | 11.6 | 47.5 | 12 | 36 | 1.57 | 315 | |
| | KHB3K-G1 | 20 | 20 | - | G1 | 20.5 | 113 | 65 | 58 | 82.6 | 29.5 | 65 | 11.6 | 56.5 | 14 | 41 | 2.36 | 315 | |
| | KHB3K-G11/4 | 25 | 25 | - | G11/4 | 20 | 110 | 76 | 80 | 108.5 | 43.3 | 90 | 12 | 70.5 | 14 | 50 | 5.50 | 350 | |
| | KHB3K-G11/2 | 32 | 30 | - | G11/2 | 24 | 120 | 85 | 87 | 114.7 | 43.5 | 96.2 | 12 | 72 | 17 | 65 | 6.40 | 350 | |
| | KHB3K-G2 | 40 | 38 | - | G2 | 28 | 150 | 120 | 120 | 138.5 | 59.8 | 120 | 12 | 75 | 17 | 75 | 16.90 | 350 | |
| | DIN 2353 Light range | KHB3K-06LR | 4 | 4 | 6 | M12x1.5 | 7 | 67 | 37 | 26 | 43.7 | 13 | 32 | 7 | 33.5 | 9 | 22 | 0.30 | 500 |
| KHB3K-08LR | | 6 | 6 | 8 | M14x1.5 | 7 | 67 | 37 | 26 | 43.7 | 13 | 32 | 7 | 33.5 | 9 | 22 | 0.38 | 500 | |
| KHB3K-10LR | | 8 | 8 | 10 | M16x1.5 | 11 | 74 | 42 | 32 | 53.2 | 17.2 | 40 | 8.5 | 37 | 9 | 27 | 0.55 | 500 | |
| KHB3K-12LR | | 10 | 10 | 12 | M18x1.5 | 11 | 74 | 42 | 32 | 53.2 | 17.2 | 40 | 8.5 | 37 | 9 | 27 | 0.55 | 500 | |
| KHB3K-15LR | | 13 | 12 | 15 | M22x1.5 | 12 | 82 | 47 | 35 | 53.2 | 17.2 | 40 | 8.5 | 41 | 9 | 30 | 0.69 | 500 | |
| KHB3K-18LR | | 13 | 12 | 18 | M26x1.5 | 12 | 82 | 47 | 35 | 53.2 | 17.2 | 40 | 8.5 | 41 | 9 | 30 | 0.77 | 500 | |
| KHB3K-18LR | | 16 | 15 | 18 | M26x1.5 | 12 | 82 | 47 | 38 | 62.2 | 19 | 45 | 11 | 41 | 12 | 32 | 0.78 | 400 | |
| KHB3K-22LR | | 20 | 19 | 22 | M30x2 | 14 | 101 | 60 | 49 | 77.8 | 27.5 | 60 | 11.6 | 50.5 | 14 | 41 | 1.49 | 315 | |
| KHB3K-28LR | | 25 | 24 | 28 | M36x2 | 14 | 108 | 65 | 58 | 82.6 | 29.5 | 65 | 11.6 | 54 | 14 | 50 | 1.98 | 315 | |
| KHB3K-35LR | | 32 | 30 | 35.3 | M45x2 | 16 | 128 | 76 | 80 | 108.5 | 43.3 | 90 | 12 | 69 | 17 | 65 | 2.90 | 350 | |
| KHB3K-42LR | 40 | 35 | 42.3 | M52x2 | 16 | 149 | 85 | 87 | 114.7 | 43.5 | 96.2 | 12 | 74.5 | 17 | 75 | 5.20 | 350 | | |
| DIN 2353 Heavy range | KHB3K-08SR | 4 | 5 | 8 | M16x1.5 | 7 | 73 | 37 | 26 | 43.7 | 13 | 32 | 7 | 36.5 | 9 | 22 | 0.41 | 500 | |
| | KHB3K-10SR | 6 | 7 | 10 | M18x1.5 | 7.5 | 73 | 37 | 26 | 43.7 | 13 | 32 | 7 | 36.5 | 9 | 22 | 0.41 | 500 | |
| | KHB3K-12SR | 8 | 8 | 12 | M20x1.5 | 12 | 76 | 42 | 32 | 53.2 | 17.2 | 40 | 8.5 | 38 | 9 | 27 | 0.58 | 500 | |
| | KHB3K-14SR | 10 | 10 | 14 | M22x1.5 | 14 | 80 | 42 | 32 | 53.2 | 17.2 | 40 | 8.5 | 40 | 9 | 27 | 0.71 | 500 | |
| | KHB3K-16SR | 13 | 12 | 16 | M24x1.5 | 14 | 86 | 47 | 35 | 53.2 | 17.2 | 40 | 8.5 | 43 | 9 | 30 | 0.79 | 500 | |
| | KHB3K-20SR | 13 | 12 | 20 | M30x2 | 16 | 90 | 47 | 35 | 53.2 | 17.2 | 40 | 8.5 | 45 | 9 | 30 | 0.84 | 500 | |
| | KHB3K-20SR | 16 | 15 | 20 | M30x2 | 16 | 90 | 47 | 38 | 62.2 | 19 | 45 | 11 | 45 | 12 | 32 | 1.54 | 400 | |
| | KHB3K-25SR | 20 | 20 | 25 | M36x2 | 18 | 109 | 60 | 49 | 77.8 | 27.5 | 60 | 11.6 | 54.5 | 14 | 41 | 2.11 | 315 | |
| | KHB3K-30SR | 25 | 25 | 30 | M42x2 | 20 | 120 | 65 | 58 | 82.6 | 29.5 | 65 | 11.6 | 60 | 14 | 50 | 2.40 | 315 | |
| | KHB3K-38SR | 32 | 30 | 38.3 | M52x2 | 22 | 140 | 76 | 80 | 108.5 | 43.3 | 90 | 12 | 74 | 17 | 65 | 2.60 | 350 | |
| ANSI B1.20.1 NPT female thread | KHB3K-06NPT | 6 | 8 | - | 1/4-18 NPT | 10.21 | 69 | 37 | 26 | 43.7 | 13 | 32 | 7 | 34.5 | 9 | 22 | 0.60 | 500 | |
| | KHB3K-10NPT | 10 | 10 | - | 3/8-18 NPT | 10.36 | 72 | 42 | 32 | 53.2 | 17.2 | 40 | 8.5 | 36 | 9 | 27 | 0.60 | 500 | |
| | KHB3K-16NPT | 13 | 12 | - | 1/2-14 NPT | 13.56 | 84 | 47 | 35 | 53.2 | 17.2 | 40 | 8.5 | 41.5 | 12 | 32 | 0.30 | 500 | |
| | KHB3K-20NPT | 16 | 16 | - | 3/4-14 NPT | 13.86 | 95 | 60 | 49 | 77.8 | 27.5 | 60 | 11.6 | 47.5 | 12 | 36 | 1.57 | 315 | |
| | KHB3K-25NPT | 20 | 20 | - | 1-11 1/2 NPT | 17.34 | 113 | 65 | 58 | 82.6 | 29.5 | 65 | 11.6 | 56.5 | 14 | 41 | 2.20 | 315 | |
| | KHB3K-32NPT | 25 | 25 | - | 1 1/4-11 1/2 NPT | 17.95 | 120 | 65 | 58 | 86.5 | 29.5 | 65 | 12.4 | 60 | 17 | 50 | | 315 | |
| | KHB3K-40NPT | 32 | 30 | - | 1 1/2-11 1/2 NPT | 18.38 | 135 | 85 | 118.5 | 114.7 | 43.5 | 96.2 | 12 | 75 | 17 | 75 | 7.90 | 350 | |
| | KHB3K-50NPT | 40 | 38 | - | 2 - 11 1/2 NPT | 19.22 | 150 | 120 | 145 | 138.5 | 59.8 | 120 | 12 | 85 | 17 | 80 | 13.80 | 350 | |
| | SAE J 5/4 UN/UNF Female thread | KHB3K-06SAE | 6 | 8 | - | 7/16-20 UNF | 12 | 69 | 37 | 26 | 43.7 | 13 | 32 | 7 | 34.5 | 9 | 22 | 0.36 | 500 |
| | | KHB3K-10SAE | 10 | 10 | - | 9/16-18 UNF | 13 | 72 | 42 | 32 | 53.2 | 17.2 | 40 | 8.5 | 36 | 9 | 27 | 0.54 | 500 |
| KHB3K-16SAE | | 13 | 12 | - | 3/4-16 UNF | 15 | 83 | 47 | 38 | 62.2 | 19 | 45 | 11 | 41.5 | 12 | 32 | 0.80 | 500 | |
| KHB3K-20SAE | | 16 | 16 | - | 1 1/16-12 UN | 20 | 100 | 65 | 58 | 77.8 | 27.5 | 60 | 11.6 | 56.5 | 12 | 36 | 1.45 | 315 | |
| KHB3K-25SAE | | 20 | 20 | - | 1 5/16-12 UN | 20 | 113 | 65 | 58 | 82.5 | 29.5 | 65 | 11.6 | 56.5 | 14 | 41 | 2.28 | 315 | |
| KHB3K-32SAE | | 25 | 25 | - | 1 5/8-12 UN | 20 | 110 | 76 | 110.5 | 108.5 | 43.3 | 90 | 12 | 40.5 | 17 | 50 | 5.60 | 350 | |
| KHB3K-40SAE | | 32 | 30 | - | 1 7/8-12 UN | 20 | 120 | 85 | 119 | 114.7 | 43.5 | 96.2 | 12 | 75.5 | 17 | 65 | 7.40 | 350 | |
| KHB3K-50SAE | | 40 | 38 | - | 2 1/2-12 UN | 20 | 150 | 120 | 145.5 | 138.5 | 59.8 | 120 | 12 | 85.5 | 17 | 75 | 14.50 | 350 | |

Stainless steel

| Connection type | Type | DN | Int. Ø. | RA | d1 | i | L | L1 | B | H | h1 | h2 | h3 | S | SW1 | SW2 | Wt. [kg] | Nom. press. PN [bar] |
|---|------------|----|---------|----|---------|------|------|----|----|------|------|------|------|------|-----|-----|----------|----------------------|
| DIN ISO 228 Female thread  | KHB3K-G1/8 | 4 | 8 | – | G1/8 | 10 | 69 | 37 | 29 | 45.2 | 14.5 | 33.5 | 7 | 34.5 | 9 | 22 | 0.41 | 500 |
| | KHB3K-G1/4 | 6 | 8 | – | G1/4 | 14 | 69 | 37 | 29 | 45.2 | 14.5 | 33.5 | 7 | 34.5 | 9 | 22 | 0.49 | 500 |
| | KHB3K-G3/8 | 10 | 10 | – | G3/8 | 14 | 72 | 42 | 35 | 50.7 | 17.2 | 40 | 8.5 | 36 | 9 | 27 | 0.62 | 500 |
| | KHB3K-G1/2 | 13 | 12 | – | G1/2 | 16 | 84 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 41.5 | 9 | 30 | 0.8 | 500 |
| | KHB3K-G1/2 | 16 | 15 | – | G1/2 | 16 | 82.8 | 47 | 41 | 63.7 | 20.5 | 46.5 | 11 | 41.5 | 12 | 32 | 1 | 400 |
| | KHB3K-G3/4 | 20 | 20 | – | G3/4 | 18 | 95 | 60 | 49 | 77.8 | 27.5 | 60 | 11.6 | 47.5 | 14 | 41 | 1.9 | 315 |
| | KHB3K-G1 | 25 | 25 | – | G1 | 20.5 | 113 | 65 | 58 | 82.6 | 29.5 | 65 | 11.6 | 56.5 | 14 | 50 | 2.4 | 315 |
| DIN 2353 Light range  | KHB3K-06LR | 4 | 4 | 6 | M12x1.5 | 10 | 67 | 37 | 29 | 45.2 | 14.5 | 33.5 | 7 | 33.5 | 9 | 22 | 0.36 | 500 |
| | KHB3K-08LR | 6 | 6 | 8 | M14x1.5 | 10 | 67 | 37 | 29 | 45.2 | 14.5 | 33.5 | 7 | 33.5 | 9 | 22 | 0.36 | 500 |
| | KHB3K-10LR | 8 | 8 | 10 | M16x1.5 | 11 | 74 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 37 | 9 | 27 | 0.72 | 500 |
| | KHB3K-12LR | 10 | 10 | 12 | M18x1.5 | 11 | 74 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 37 | 9 | 27 | 0.73 | 500 |
| | KHB3K-15LR | 13 | 12 | 15 | M22x1.5 | 12 | 82 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 41 | 9 | 30 | 0.9 | 500 |
| | KHB3K-18LR | 13 | 12 | 18 | M26x1.5 | 12 | 82 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 41 | 9 | 30 | 0.92 | 500 |
| | KHB3K-18LR | 16 | 15 | 18 | M26x1.5 | 12 | 81.8 | 47 | 41 | 63.7 | 20.5 | 46.5 | 11 | 41 | 12 | 32 | 0.95 | 400 |
| | KHB3K-22LR | 20 | 19 | 22 | M30x2 | 14 | 101 | 60 | 49 | 77.8 | 27.5 | 60 | 11.6 | 50.5 | 14 | 41 | 2.02 | 315 |
| | KHB3K-28LR | 25 | 24 | 28 | M36x2 | 14 | 108 | 65 | 58 | 82.6 | 29.5 | 65 | 11.6 | 54 | 14 | 50 | 2.13 | 315 |
| DIN 2353 Heavy range  | KHB3K-08SR | 4 | 5 | 8 | M16x1.5 | 12 | 73 | 37 | 29 | 45.2 | 14.5 | 33.5 | 7 | 36.5 | 9 | 22 | 0.39 | 500 |
| | KHB3K-10SR | 6 | 7 | 10 | M18x1.5 | 12 | 73 | 37 | 29 | 45.2 | 14.5 | 33.5 | 7 | 36.5 | 9 | 22 | 0.39 | 500 |
| | KHB3K-12SR | 8 | 8 | 12 | M20x1.5 | 12 | 76 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 38 | 9 | 27 | 0.74 | 500 |
| | KHB3K-14SR | 10 | 10 | 14 | M22x1.5 | 14 | 80 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 40 | 9 | 27 | 0.77 | 500 |
| | KHB3K-16SR | 13 | 12 | 16 | M24x1.5 | 14 | 81 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 40.5 | 9 | 30 | 0.92 | 500 |
| | KHB3K-20SR | 13 | 12 | 20 | M30x2 | 16 | 85 | 42 | 35 | 53.2 | 17.2 | 40 | 8.5 | 42.5 | 9 | 32 | 1.02 | 500 |
| | KHB3K-20SR | 16 | 15 | 20 | M30x2 | 16 | 89.8 | 47 | 41 | 63.7 | 20.5 | 46.5 | 11 | 45 | 12 | 32 | 1.6 | 400 |
| | KHB3K-25SR | 20 | 20 | 25 | M36x2 | 18 | 109 | 60 | 49 | 77.8 | 27.5 | 60 | 11.6 | 54.5 | 14 | 41 | 2.2 | 315 |
| | KHB3K-30SR | 25 | 25 | 30 | M42x2 | 20 | 120 | 65 | 58 | 82.6 | 29.5 | 65 | 11.6 | 60 | 14 | 50 | 2.4 | 315 |

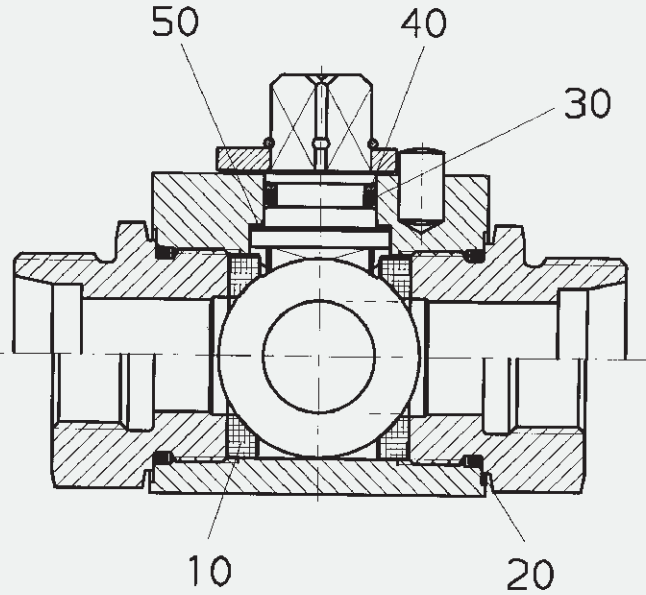
Dimensions, Mounting bore (S0 1073)



| Ød1 | DN | PN | L | L1 | B | H | h1 | h2 | a | Øb | c | A | S |
|--------|----|-----|-----|----|----|-----|------|----|----|-----|-----|-----|------|
| G 1/8 | 04 | 500 | 69 | 37 | 26 | 64 | 13.0 | 32 | 28 | 5.5 | 4.5 | 108 | 34.5 |
| G 1/4 | 06 | 500 | 69 | 37 | 26 | 64 | 13.0 | 32 | 28 | 5.5 | 4.5 | 108 | 34.5 |
| G 3/8 | 10 | 500 | 72 | 42 | 32 | 68 | 17.0 | 40 | 32 | 5.5 | 5.0 | 108 | 36.0 |
| G 1/2* | 13 | 500 | 84 | 47 | 35 | 68 | 17.0 | 40 | 32 | 5.5 | 5.0 | 108 | 41.5 |
| G 1/2 | 16 | 400 | 83 | 47 | 38 | 102 | 19.0 | 45 | 38 | 5.5 | 5.0 | 174 | 41.5 |
| G 3/4 | 20 | 315 | 95 | 60 | 48 | 115 | 24.5 | 57 | 46 | 6.6 | 6.0 | 174 | 47.5 |
| G 1 | 25 | 315 | 113 | 65 | 57 | 122 | 28.5 | 64 | 46 | 6.6 | 6.0 | 174 | 56.5 |
| 08LR | 06 | 500 | 67 | 37 | 26 | 64 | 13.0 | 32 | 28 | 5.5 | 4.5 | 108 | 33.5 |
| 10LR | 08 | 500 | 71 | 37 | 26 | 64 | 13.0 | 32 | 28 | 5.5 | 4.5 | 108 | 35.5 |
| 12LR | 10 | 500 | 74 | 42 | 32 | 68 | 17.0 | 40 | 32 | 5.5 | 5.0 | 108 | 37.0 |
| 15LR* | 13 | 500 | 82 | 47 | 35 | 68 | 17.0 | 40 | 32 | 5.5 | 5.0 | 108 | 41.0 |
| 15LR | 12 | 400 | 82 | 47 | 38 | 102 | 19.0 | 45 | 38 | 5.5 | 5.0 | 174 | 41.0 |
| 18LR | 16 | 400 | 82 | 47 | 38 | 102 | 19.0 | 45 | 38 | 5.5 | 5.0 | 174 | 41.0 |
| 22LR | 20 | 315 | 101 | 60 | 48 | 115 | 24.5 | 57 | 46 | 6.6 | 6.0 | 174 | 50.5 |
| 28LR | 25 | 315 | 108 | 65 | 57 | 122 | 28.5 | 64 | 46 | 6.6 | 6.0 | 174 | 54.0 |

* reduced bore

SPArE PARTS (seal kit)



| Seal kit | Order No. = Part No. |
|----------|----------------------|
| DN 04/06 | 703 048 |
| DN 08/10 | 703 014 |
| DN 13 | 703 046 |
| DN 12/16 | 703 010 |
| DN 20 | 703 005 |
| DN 25 | 703 004 |

The parts indicated by numbers in the above drawing are contained in the seal kit.

NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

FLUTEC INDUSTRIES

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