

HIGH PRESSURE BALL VALVES

KHB3K Series

3-way Diverter Ball Valves



Specifications

- 1/4" - 1" Full Port Design
- 2 Position
- Carbon Steel Housing
- NPT or SAE O-Ring Connections
- Ball Seals: Polyacetal (*standard*)
- O-Rings: Fluoroelastomer (*FPM*) (*standard*)
- Operating Pressure: to 7250 psi depending on valve size and seal materials selected
- Temperature Range: 14° to 176°F with standard materials (*1114*) up to maximum pressure rating. Extended temperature range -40° to 392°F on request with special materials and reduced pressure rating (*see page A1-3*).

Model Code

KHB3K - 16 NPT - L - 1 1 1 4 - 11X - A - L

Housing Type

KHB3K = Three-Way Diverter Ball Valve

Nominal Sizes

Nom Size	SAE Tube	SAE Thread	NPT Pipe Size	NPT Pipe OD
06	-4	7/16-20 UNF	1/4"	0.540"
10	-6	9/16-18 UNF	3/8"	0.675"
16	-8	3/4-16 UNF	1/2"	0.840"
20	-12	1-1/16-12 UN	3/4"	1.050"
25	-16	1-5/16-12 UN	1"	1.315"
32	-20	1-5/8-12 UN	1-1/4"	1.660"
40	-24	1-7/8-12 UN	1-1/2"	1.900"
50	-32	2-1/2-12 UN	2"	2.375"

Connection Type

NPT = ANSI/ASME 1.20.1 Taper Pipe Thread
SAE = SAEJ1926 Ports with ISO 725 Threads and O-Ring Sealing

Ball Drilling

L = standard

Body Material

1 = Carbon Steel (*phosphate coated*)

Spindle and Ball Material

1 = Carbon Steel (*ball is chrome plated, spindle is zinc plated*)
3 = **Stainless Steel**

Ball Seal Material

1 = Polyacetal (*standard*)
3 = **PTFE (1500 psi max)**

O-Ring Material

2 = **NBR (Buna N)**
3 = **PTFE Spindle Seals and FPM (Fluoroelastomer) O-Rings (1500 psi max)**
4 = **FPM (Fluoroelastomer) (standard)**

Handle Codes

09x = Without Handle
11x = Straight Aluminum, Sizes 06-25
16x = **Offset Steel Handle, Sizes 32-50**

Housing Surface Finish

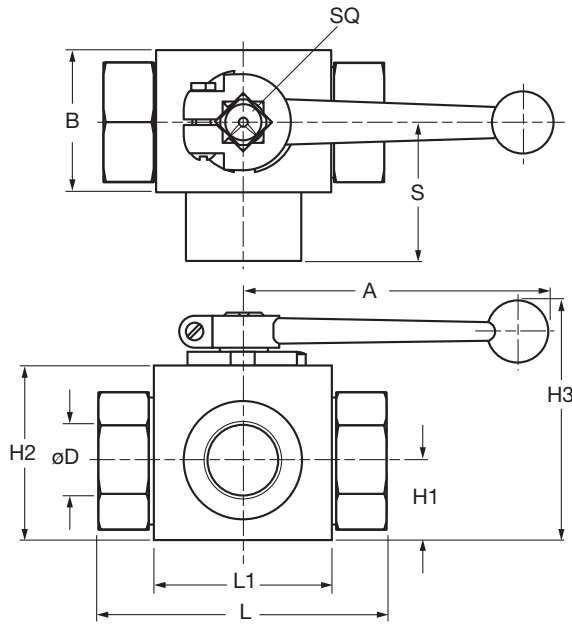
A = Zinc plated (*standard for all carbon steel valves*)
(omit) = **No plating for Stainless Steel**

Locking Device Option

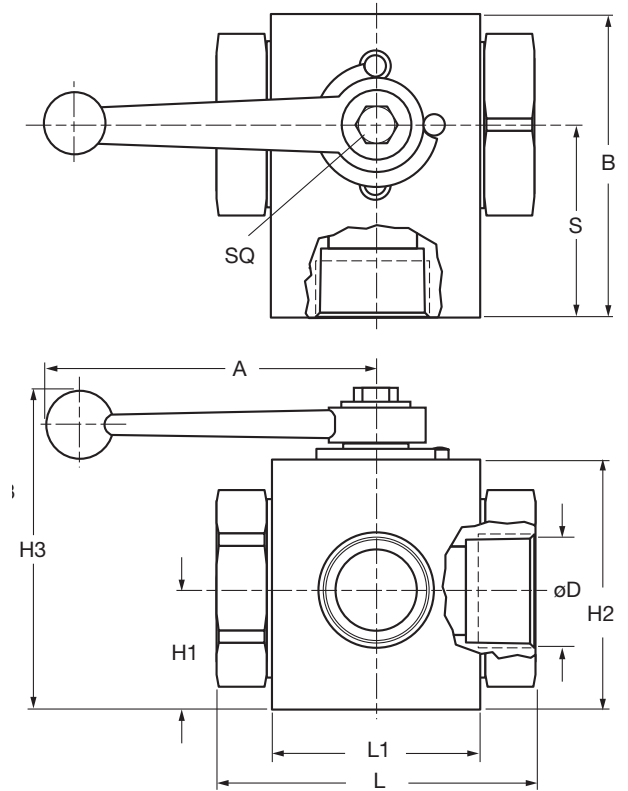
L = Locking Device (*see page A1-22 to order locking device separately*)
LS = Locking Device with 5 amp Limit Switch, Available for Sizes 20-50 (*Not available with PTFE Spindle Seals*)

Dimensions

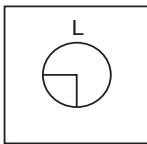
Sizes 06 - 25



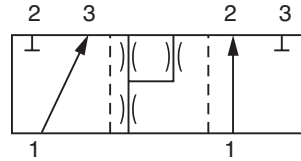
Sizes 32 - 50



Ball Drilling



Function Diagrams



Notes: Pressure port 1 should always be the highest pressure port



At intermediate position flow will not be completely shut off. Notes: Valve is not designed to be used as a flow control valve. Valve should not be left in an intermediate position to avoid seal damage.

Model	Port Threads	Max. psi*	A	B	øD	H1	H2	H3	L	L1	SQ	S	Weight
KHB3K-06SAE...	7/16"-20 UNF	7250	5.90 (150)	1.02 (26)	0.24 (6)	0.51 (13)	1.26 (32)	1.65 (42)	2.72 (69)	1.46 (37)	0.35 (9)	1.36 (34.5)	0.88 (0.4)
KHB3K-06NPT...	1/4" NPT												
KHB3K-10SAE...	9/16"-18 UNF	7250	5.90 (150)	1.26 (32)	0.39 (10)	0.67 (17)	1.57 (40)	1.69 (47)	2.83 (72)	1.65 (42)	0.35 (9)	1.42 (36)	1.32 (0.6)
KHB3K-10NPT...	3/8" NPT												
KHB3K-16SAE...	3/4"-16 UNF	5800	6.89 (175)	1.50 (38)	0.63 (16)	0.75 (19)	1.77 (45)	2.01 (51)	3.27 (83)	1.85 (47)	0.47 (12)	1.64 (41.5)	1.76 (0.8)
KHB3K-16NPT...	1/2" NPT												
KHB3K-20SAE...	1-1/16"-12 UN	5000	7.87 (200)	1.93 (49)	0.79 (20)	1.08 (27.5)	2.36 (60)	2.28 (58)	3.74 (95)	2.36 (60)	0.55 (14)	1.87 (47.5)	3.31 (1.5)
KHB3K-20NPT...	3/4" NPT												
KHB3K-25SAE...	1-5/16"-12 UN	5000	7.87 (200)	2.28 (58)	0.98 (25)	1.16 (29.5)	2.56 (65)	2.40 (61)	4.45 (113)	2.56 (65)	0.55 (14)	2.22 (56.5)	4.85 (2.2)
KHB3K-25NPT...	1" NPT												
KHB3K-32SAE...	1-5/8"-12 UNF	5000	9.00 (228)	4.35 (110.5)	1.18 (30)	1.70 (43.3)	3.54 (90.0)	5.47 (139)	4.53 (115)	2.99 (76)	0.67 (17)	2.76 (70)	7.7 (3.5)
KHB3K-32NPT...	1-1/4" NPT												
KHB3K-40SAE...	1-7/8"-12 UN	5000	9.00 (228)	4.69 (119)	1.38 (35)	1.71 (43.5)	3.79 (96.2)	5.71 (145)	5.31 (135)	3.35 (85)	0.67 (17)	2.95 (75)	11 (5)
KHB3K-40NPT...	1-1/2" NPT												
KHB3K-50SAE...	2-1/2"-12 UN	5000	9.00 (228)	5.73 (145.5)	1.73 (44)	2.35 (59.8)	4.72 (120)	6.02 (153)	5.91 (150)	4.72 (120)	0.67 (17)	3.35 (85)	16.5 (7.5)
KHB3K-50NPT...	2" NPT												

*Dependent upon valve and seal materials selected.

Notes:

1. Dimensions are in inches (mm) and lbs (kg)

2. Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.