

HIGH PRESSURE BALL VALVES

KHB & KHM Series

2-way Ball Valves with SAE & NPT Connections



KHB Series
Block Housing



KHM Series
Forged Housing

Specifications

- 1/4" - 2" Full Port Design
- NPT or SAE O-Ring Connections
- Carbon Steel or Stainless Steel Housings
- Block Housing: Sizes 06 - 25
- Forged Housing: Sizes 32 - 50
- 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°F to 176°F with standard materials (1114) up to maximum pressure rating. Extended temperature range -40°F to 392°F on request with special materials and reduced pressure rating (*see page A1-3*).

Model Code

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

Housing Type

- KHB = Block Housing, Sizes 06 - 25
KHM = Forged Housing, Sizes 32 - 50

Nominal Sizes

Nom Size	SAE		NPT	
	Tube Size	Thread Size	Pipe Size	Pipe øD
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

Body Material

- 1 = Carbon Steel
3 = Stainless Steel

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*)
8 = PEEK

O-Ring Material

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

Handle Codes

- 09x = Without Handle (*see page A1-24 to order handle separately*)
11x = Straight Aluminum, Sizes 06-25
16x = Offset Steel, Sizes 32-50
18x = Offset Stainless Steel - option for stainless valves size 06-50

Housing Surface Finish

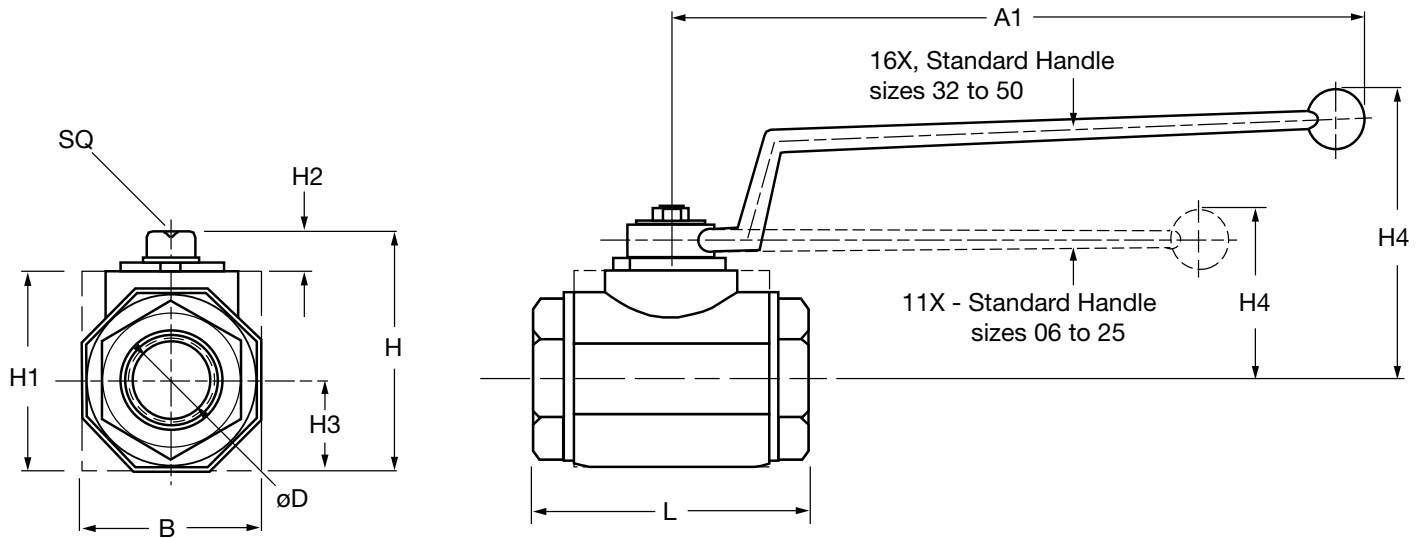
- A = Zinc plated (*standard for all carbon steel valves*)
(omit) = No plating for Stainless Steel

Locking Device Option

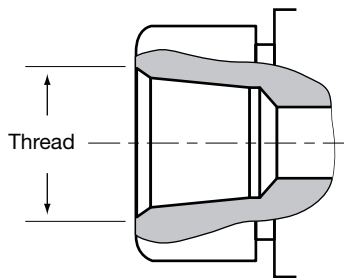
- L = Locking Device (*see page A1-22 to order locking device separately*)
LS = Locking Device with 5 amp Limit Switch, Available for sizes 20-50 (*Not available with PTFE Spindle Seals*)

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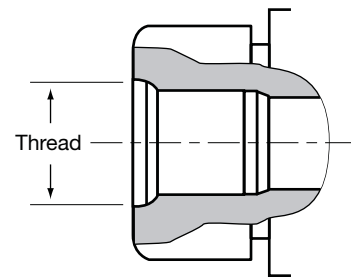
Dimensions



NPT Port
Internal Thread



SAE Port
Straight Thread
O-Ring Boss



Model	Thread	Max. psi*	A1	B	øD	H	H1	H2	H3	H4	L	SQ	Weight
KHB-06SAE	7/16-20UNF (SAE 4)	7250	5.91 (150)	0.98 (25)	0.24 (6)	1.89 (48)	1.38 (35)	0.28 (7)	0.51 (13)	1.65 (42)	2.72 (69)	0.35 (9)	0.66 (0.3)
KHB-06NPT	1/4" NPT												
KHB-10SAE	9/16-18UNF (SAE 6)	7250	5.91 (150)	1.26 (32)	0.39 (10)	2.09 (53)	1.57 (40)	0.33 (8.5)	0.67 (17)	1.69 (43)	2.83 (72)	0.35 (9)	1.10 (0.5)
KHB-10NPT	3/8" NPT												
KHB-16SAE	3/4-16UNF (SAE 8)	6000 CS	6.88 (175)	1.50 (38)	0.63 (16)	2.48 (63)	1.77 (45)	0.43 (11)	0.75 (19)	2.01 (51)	3.27 (83)	0.47 (12)	1.65 (0.75)
KHB-16NPT	1/2" NPT	5800 SS											
KHB-20SAE	1-1/16-12UN (SAE 12)	6000 CS	7.88 (200)	1.89 (48)	0.79 (20)	2.95 (75)	2.24 (57)	0.43 (11)	0.96 (24.5)	2.28 (58)	3.74 (95)	0.55 (14)	2.87 (1.3)
KHB-20NPT	3/4" NPT	5000 SS											
KHB-25SAE	1-5/16-12UN (SAE 16)	6000 CS	7.88 (200)	2.24 (57)	0.98 (25)	3.23 (82)	2.52 (64)	0.43 (11)	1.12 (28.5)	2.40 (61)	4.45 (113)	0.55 (14)	4.41 (2.0)
KHB-25NPT	1" NPT	5000 SS											
KHM-32SAE	1-5/8-12UN (SAE 20)	6000 CS	12.00 (305)	2.95 (75)	1.18 (30)	4.06 (103)	3.35 (85)	0.47 (12)	1.48 (37.5)	5.94 (151)	4.33 (110)	0.67 (17)	6.84 (3.1)
KHM-32NPT	1-1/4" NPT	5000 SS											
KHM-40SAE	1-7/8-12UN (SAE 24)	6000 CS	12.00 (305)	3.35 (85)	1.50 (38)	4.49 (114)	3.78 (96)	0.47 (12)	1.67 (42.5)	6.18 (157)	5.12 (130)	0.67 (17)	9.70 (4.4)
KHM-40NPT	1-1/2" NPT	5000 SS											
KHM-50SAE	2-1/2-12UN (SAE 32)	6000 CS	12.00 (305)	4.13 (105)	1.89 (48)	5.18 (131.5)	4.43 (112.5)	0.47 (12)	2.07 (52.5)	6.46 (164)	5.51 (140)	0.67 (17)	14.55 (6.6)
KHM-50NPT	2" NPT	5000 SS											

*Dependent upon valve and seal materials selected.

Notes:

1. Note difference in pressure ratings for Carbon Steel (CS) and Stainless Steel (SS).

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

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

HIGH PRESSURE BALL VALVES

KHB & KHM Series

2-way Ball Valves with BSP & Metric Tube Connections



KHB Series
Block Housing



KHM Series
Forged Housing

Specifications

- 1/4" - 2" Full Port Design
- BSP or DIN2353 Connections
- Carbon Steel or Stainless Steel Housings
- Block Housing: Sizes 06 - 25
- Forged Housing: Sizes 32 - 50
- Ball Seals: Polyacetal (*standard*)
- O-Rings: Fluoroelastomer (FPM) (*standard*)
- Operating Pressure to 7250 psi (500 bar) depending on valve size and seal materials selected
- Temperature Range: 14°F to 176°F with standard materials (1114) up to maximum pressure rating. Extended temperature range -40°F to 392°F on request with special materials and reduced pressure rating (*see page A1-3*).

Model Code

KHB - 16 SR - 1 1 1 4 - 11X - A - L

Housing Type

- KHB = Block Housing, DN 06 - 25
KHM = Forged Housing, DN 32 - 50

Nominal Sizes

Nom Size	G (BSP)	LR	SR
DN04	-	06LR M12X1.5	08SR M16X1.5
DN06	G1/4	08LR M14X1.5	10SR M18X1.5
DN08	-	10LR M16X1.5	12SR M20X1.5
DN10	G3/8	12LR M18X1.5	14SR M22X1.5
DN12	-	15LR M22X1.5	16SR M24X1.5
DN16	G1/2	18LR M26X1.5	20SR M30X2
DN20	G3/4	22LR M30X1.5	25SR M36X2
DN25	G1	28LR M36X1.5	30SR M42X2
DN32	G1 1/4	35LR M45X1.5	- M52X2
DN40	G1 1/2	42LR M52X1.5	-
DN50	G2	-	-

Connection Type

- G = BSP ports with ISO 228 threads
LR = Light Range Metric Tube Connections, DIN 2353
SR = Heavy Range Metric Tube Connections, DIN 2353

Body Material

- 1 = Carbon Steel
3 = Stainless Steel

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*)
8 = PEEK

O-Ring Material

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

Handle Codes

- 09x = Without Handle (*see page A1-24 to order handle separately*)
11x = Straight Aluminum, Sizes 06-25
16x = Offset Steel, Sizes 32-50
18x = Offset Stainless Steel - optional for Stainless Steel valves, all sizes

Housing Surface Finish

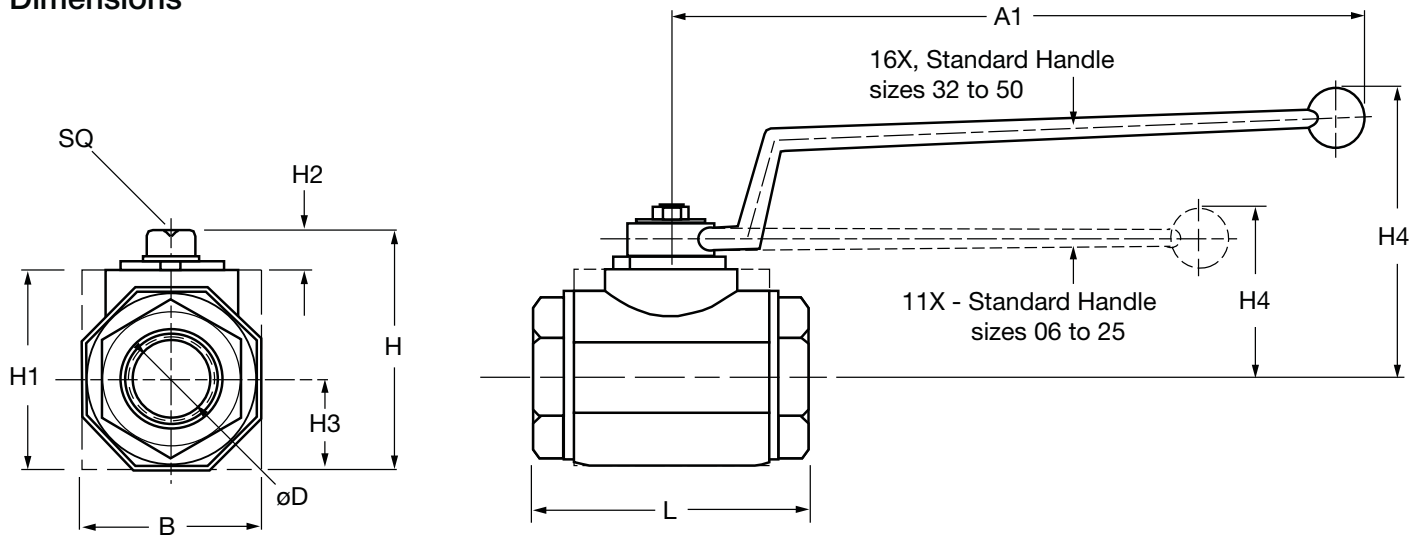
- A = Zinc plated (*standard for all Carbon Steel valves*)
(omit) = No plating (*for Stainless Steel Valves*)

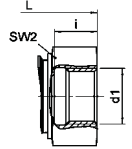
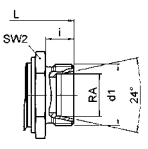
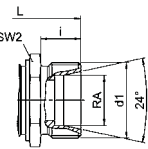
Locking Device Option

- 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*)

HIGH PRESSURE BALL VALVES

Dimensions



Connection Type	Type	DN	øD	RA	d1	l	L	L1	B	H	h1	h2	h3	SW1	SW2	Weight (kg)	Nom. pressure PN (bar)
DIN ISO 228 Female thread 	KHB-G1/4	6	8	-	G1/4	14	69	37	28	44	14	33	7	9	22	0.32	500
	KHB-G3/8	10	10	-	G3/8	14	72	42	32	53	17	40	8,5	9	27	0.46	500
	KHB-G1/2	16	15	-	G1/2	16	83	47	40	62	20	46	11	12	32	0.7	420
	KHB-G3/4	20	20	-	G3/4	18	95	60	49	75	24.5	57	11.6	14	41	1.3	420
	KHB-G1	25	25	-	G1	20,5	113	65	58	82	28.5	65	11.6	14	50	2.03	420
	KHM-G11/4	32	30	-	G11/4	22	109.4	83.4	82	106.2	40	87.7	12	17	60	3.1	420
	KHM-G11/2	40	38	-	G11/2	24	130	91	94	118.2	45	99.7	12	17	70	4.4	420
	KHM-G2	50	48	-	G2	28	140	100	111	134.2	55.5	115.7	12	17	80	6.6	420
DIN 2353 Light range 	KHB-06LR	4	4	6	M12x1.5	7	67	37	28	44	14	33	7	9	22	0.26	500
	KHB-08LR	6	6	8	M14x1.5	7	67	37	28	44	14	33	7	9	22	0.26	500
	KHB-10LR	8	8	10	M16x1.5	11	74	42	32	53	17	40	8.5	9	27	0.43	500
	KHB-12LR	10	10	12	M18x1.5	11	74	42	32	53	17	40	8.5	9	27	0.43	500
	KHB-15LR	12	12	15	M22x1.5	12	82	47	40	62	20	46	11.6	12	32	0.64	420
	KHB-18LR	16	15	18	M26x1.5	12	82	47	40	62	20	46	11	12	32	1.25	420
	KHB-22LR	20	19	22	M30x2	14	101	60	49	75	24.5	57	11.6	14	41	1.54	420
	KHB-28LR	25	24	28	M36x2	14	108	65	58	82	28.5	65	11.6	14	50	1.54	420
	KHM-35LR	32	30	35.3	M45x2	16	141.4	83.4	82	106.2	40	87.7	12	17	60	3.36	420
	KHM-42LR	40	36	42.3	M52x2	16	162	91	94	118.2	45	99.7	12	17	70	4.88	420
DIN 2353 Heavy range 	KHB-08SR	4	5	8	M16x1.5	7	73	37	28	44	14	33	7	9	22	0.28	500
	KHB-10SR	6	7	10	M18x1.5	7,5	73	37	28	44	14	33	7	9	22	0.32	500
	KHB-12SR	8	8	12	M20x1.5	12	76	42	32	53	17	40	8.5	9	27	0.45	500
	KHB-14SR	10	10	14	M22x1.5	14	80	42	32	53	17	40	8.5	9	27	0.46	500
	KHB-16SR	12	12	16	M24x1.5	14	86	47	40	62	20	46	11.6	12	32	0.65	420
	KHB-20SR	16	15	20	M30x2	16	90	47	40	62	20	46	11	12	32	0.67	420
	KHB-25SR	20	20	25	M36x2	18	109	60	49	75	24.5	57	11.6	14	41	1.32	420
	KHB-30SR	25	25	30	M42x2	20	120	65	58	82	28.5	65	11.6	14	50	1.87	420
KHM-38SR	32	30	38.3	M52x2	22	153.4	83.4	82	106.2	40	87.7	12	17	60	3.43	420	

Notes:

1. Dimensions are in (mm), (kg) and (bar).
2. Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.