

KHB KHM High Pressure Ball Valve

Description

KHB high-pressure ball valve is a forged-steel two-position, two-way hydraulic shut-off ball valve; it serves as a key component in hydraulic systems for controlling the flow of oil, isolating equipment during maintenance, and maintaining pressure. Its specifications are comparable to those of imported high-pressure ball valves, and it can serve as a substitute for such imported products. It is suitable for use in medium and high-pressure hydraulic circuits, intended solely for opening and closing operations – it is not appropriate for long-term flow regulation through throttling. There is also a reverse version, the BKH, which has the same installation dimensions but with the oil inlets and outlets in opposite directions.

Core Technical Parameters

1. Pressure grade: the rated working pressure is 315bar, and the instantaneous maximum pressure resistance is 500bar ; ; The valve body is formed by integral forging, which bears uniform pressure, resists hydraulic impact and is not easy to deform and leak.

2. Diameter range: standard DN04, DN06, DN08, DN10, DN12, DN16, DN20, DN25, DN32, DN40 and DN50, covering the pipeline m requirements of small and medium-sized hydraulic equipment.

3. Applicable media and temperatures: Common media include hydraulic oil and lubricating oil; water-ethylene glycol mixtures as well as low-viscosity flame-retardant hydraulic media can also be used.

4. NBR nitrile seal as standard: the applicable temperature is -10℃ ~ 80℃, and FKM fluororubber seal is optional: the applicable temperature is -30℃ ~ 170℃, which is resistant to high temperature and chemical corrosion.



Valve Body Structure & Sealing Principle

Main material: standard valve body forged with 45# carbon steel, galvanized, phosphatized and rust-proof; 304 and 316 stainless steel valve bodies can be selected for strong corrosion conditions. After quenching, the valve core ball is plated with hard chromium, which has high hardness, wear resistance and scratch resistance, and the long-term switch is not easy to wear and leak.

Sealing structure: It features a floating ball together with polytetrafluoroethylene preload ball seats on both sides of the ball; the higher the pressure, the tighter the fit between the ball seats and the ball, which ensures zero internal leakage in both flow directions. The valve stem is equipped with multiple layers of sealing rings that prevent dust from entering and oil from leaking out, thus avoiding any external oil leakage.

Operation method: Standard manual lever handle; a 90° rotation is sufficient to fully open or close it. It features a mechanical stop mechanism to prevent excessive twisting that could damage the seal.

Connection Port Types

Threads: M JB987-77, G ISO 228,NPT, SAE ANSIB1.20.1

Sleeves: DIN2353 Light, Heavy connection port

Application Scenarios

Application equipment: hydraulic pump station, hydraulic test bench, accumulator oil circuit, and branch pipelines of high and low pressure hydraulic stations are cut off.

Injection molding and rubber-plastic machinery: on-off control of high-pressure oil circuit of injection molding machine, extruder and vulcanizer.

Construction machinery: hydraulic pipeline switches for excavators, loaders, cranes and aerial vehicles.

Metallurgical mine equipment: steel rolling equipment, mine hydraulic support, hydraulic jack high-pressure oil circuit.

Marine hydraulic system: marine hydraulic system, deck hydraulic actuator and marine hydraulic pump station.

Machine tool equipment: CNC hydraulic machine tool, hydraulic fixture, hydraulic power unit.

Energy industry: hydraulic testing machine, hydraulic cylinder test bench, small hydraulic power system.

General high-pressure fluid: water glycol, hydraulic oil and other medium pipelines are cut off.

● Order Selection Table

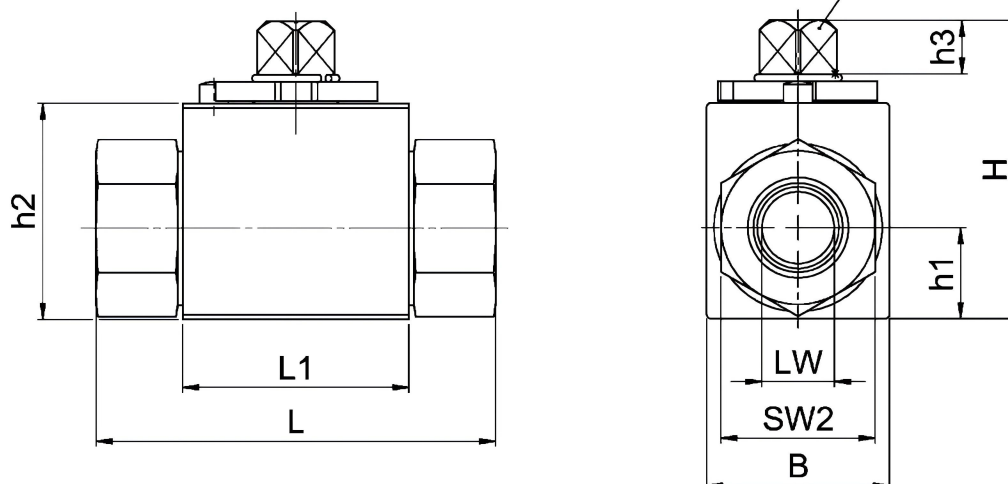
	KHB	G1/2	1	1	1	2	04	A
High Pressure Ball Valve Type								
KHB = Valve block ball valve DN04-25/40 KHM = Sleeve ball valve DN32-50								
Connection Types								
Thread specification or OD of the pipe and connection type								
Valve Body & Connector Material								
1 = Carbon steel 4 = Stainless steel								
Ball & Spindle Material								
1 = Carbon steel 4 = Stainless steel								
Body Sealing Material								
1 = POM 4 = PIFE 5 = PEEK								
Connector Seal & Spindle Seal								
2 = NBR 4 = PIFE 6 = FKM								
Handle Type								
01 = Aluminum alloy crank handle 02 = Aluminum alloy straight handle 03 = Zinc alloy crank handle 04 = Zinc alloy straight handle 05 = Steel crank handle 06 = Steel straight handle								
Finish Treatment								
A = Plated Zinc ZN = Customized								

● Technical Parameters

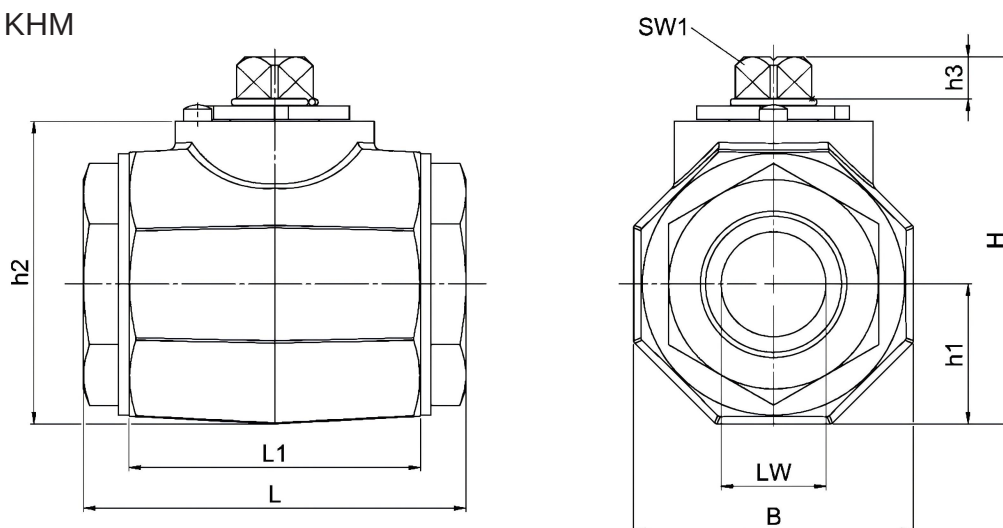
Type	KHB DN 04 - 25 KHM DN 32 - 50
Connection	Threads: M JB987-77, G ISO 228, NPT, SAE ANSIB1.20.1 Sleeves: DIN2353 Light, Heavy type sleeve connection port
Installed Direction	All direction available
Nominal Pressure	Max. PN500
Media	Mineral oil
Working Temperature	-10 °C - +80 °C
Fluid Direction	All direction available

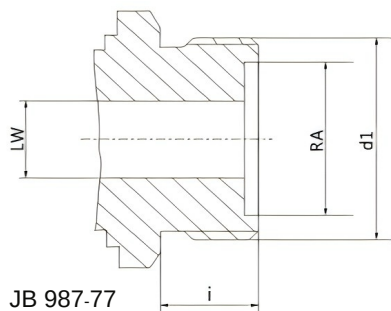
● Overall Dimensions

KHB

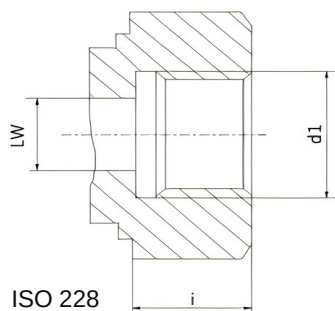


KHM

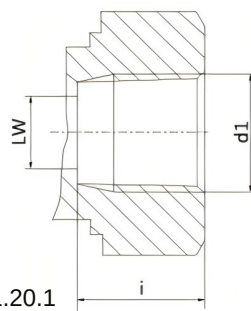




JB 987-77



ISO 228



ANSI B1.20.1

JB987-77 Male thread sealing

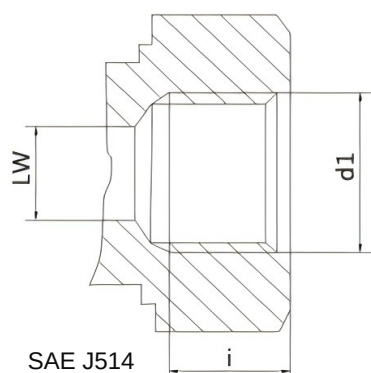
Model	DN	PN	LW	RA	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
KHB M12x1.25	4	500	4	8	M12x1.25	9	61	39	28	44.5	13	34	8	9	24
KHB M16x1.5	6	500	6	11	M16x1.5	11	69	39	28	44.5	13	34	8	9	24
KHB M22x1.5	8	500	8	16	M22x1.5	12	76	43	32	52.5	17	40	8	9	27
KHB M27x1.5	10	500	10	20	M27x1.5	12	76	43	32	52.5	17	40	8	9	32
KHB M30x1.5	16	400	15	24	M30x1.5	13	84	48	38	63.5	19	46	11	9	32
KHB M36x2	20	315	20	30	M36x2	15	103	61	48	75	24	57	12	12	41
KHB M42x2	25	315	24	35	M42x2	18	116	66	57	82	28.5	64	12	12	46
KHM M52x2	32	315	30	40	M52x2	20	149	84	82	108	41	87.5	14	14	55
KHM M60x2	40	315	38	50	M60x2	22	174	92	93	119.5	46.5	99	14	17	70
KHM M72x2	50	315	48	60	M72x2	24	178	100	110	135.5	55	115	14	17	80

ISO 228 Female Thread

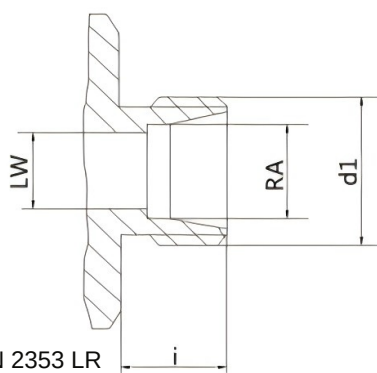
Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	S1	S2
KHB G1/8	4	500	6	G1/8	10	69	39	28	44.5	13	32	8	9	24
KHB G1/4	6	500	6	G1/4	14	69	39	28	44.5	13	32	8	9	24
KHB G3/8	10	500	10	G3/8	14	72	43	32	52.5	17	40	8	9	27
KHB G1/2	13	500	13	G1/2	16	83	43	35	52.5	17	40	8	9	32
KHB G1/2	16	400	15	G1/2	16	83	48	38	63.5	19	46	11	12	32
KHB G3/4	20	315	20	G3/4	18	95	61	48	75	24	57	12	12	41
KHB G1	25	315	25	G1	20.5	113	66	57	82	28.5	64	12	12	46
KHB G11/4	25/32	315	25	G11/4	22	120	66	60	82	28.5	64	12	14	55
KHB G11/2	25/40	315	25	G11/2	24	130	66	60	82	28.5	64	12	14	55
KHM G11/4	32	315	30	G11/4	22	110	84	82	108	41	87.5	14	17	60
KHM G11/2	40	315	38	G11/2	24	130	92	93	119.5	46.5	99	14	17	70
KHM G2	50	315	48	G2	26	140	100	110	135.5	55	115	14	17	80

ANSI B1.20.1NPT Female Thread

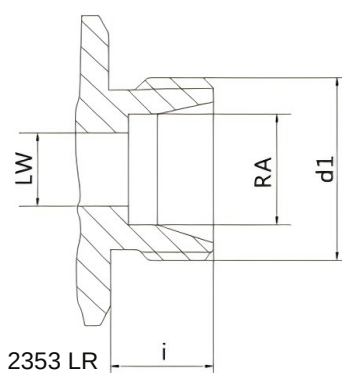
Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
KHB 1/8NPT	4	500	6	1/8NPT	10.5	69	39	28	44.5	13	32	8	9	24
KHB 1/4NPT	6	500	6	1/4NPT	14	69	39	28	44.5	13	32	8	9	24
KHB 3/8NPT	10	500	10	3/8NPT	14	72	43	32	52.5	17	40	8	9	27
KHB 1/2NPT	13	500	13	1/2NPT	17	83	49	35	52.5	17	40	8	9	32
KHB 3/4NPT	20	315	20	3/4NPT	19	95	61	48	75	24	57	12	12	41
KHB 1NPT	25	315	25	1NPT	22.5	113	66	57	82	28.5	64	12	12	50
KHB 11/4NPT	25/32	315	25	11/4NPT	22.5	120	66	60	82	28.5	64	12	14	55
KHB 11/2NPT	25/40	315	25	11/2NPT	25	130	66	60	82	28.5	64	12	14	55
KHM 11/4NPT	32	315	30	11/4NPT	25	120	84	82	108	41	87.5	14	17	55
KHM 11/2NPT	40	315	38	11/2NPT	25	130	92	93	119.5	46.5	99	14	17	70
KHM 2NPT	50	315	48	2NPT	30	140	100	110	135.5	55	115	14	17	80



SAE J514



DIN 2353 LR



IDIN 2353 LR

SAE J514UN/UNF Female Thread

Model	DN	PN	LW	d1	i	L	L1	B	H	h1	h2	h3	SW1	SW2
KHB SAE4	6	500	5	SAE4	12	69	39	28	44.5	13	32	8	9	24
KHB SAE6	10	500	10	SAE6	13	72	43	32	52.5	17	40	8	9	27
KHB SAE8	13	500	13	SAE8	15	83	49	35	52.5	17	40	8	9	32
KHB SAE12	20	315	20	SAE12	20	95	61	48	75	24	57	12	12	41
KHB SAE16	25	315	25	SAE16	20	113	66	57	82	28.5	64	12	12	46
KHB SAE20	25/32	315	25	SAE20	20	120	66	60	82	28.5	64	12	12	55
KHB SAE24	25/40	315	25	SAE24	20	130	66	60	82	28.5	64	12	12	55
KHM SAE20	32	315	30	SAE20	20	120	84	82	108	41	87.5	14	14	55
KHM SAE24	40	315	38	SAE24	20	130	92	93	119.5	46.5	99	14	17	70
KHM SAE32	50	315	40	SAE32	20	140	100	110	135.5	55	115	14	17	80

DIN 2353 Light Type

Model	DN	PN	LW	RA	d1	i	L	L1	B	H	h1	h2	h3	SW	SW2
KHB 06LR	4	500	4	6	M12x1.5	10	67	39	28	44.5	13	32	8	9	24
KHB 08LR	6	500	6	8	M14x1.5	10	67	39	28	44.5	13	32	8	9	24
KHB 10LR	8	500	8	10	M16x1.5	11	74	43	32	52.5	17	40	8	9	27
KHB 12LR	10	500	10	12	M18x1.5	11	74	43	32	52.5	17	40	8	9	27
KHB 15LR	13	500	13	15	M22x1.5	12	82	49	35	52.5	17	40	8	9	32
KHB 15LR	16	400	13	15	M22x1.5	12	82	48	38	63.5	19	46	11	9	32
KHB 18LR	13	500	13	18	M26x1.5	12	82	49	35	52.5	17	40	8	9	32
KHB 18LR	16	400	15	18	M26x1.5	12	82	48	38	63.5	19	46	11	12	32
KHB 22LR	20	315	19	22	M30x2	14	101	61	48	75	24	57	12	12	41
KHB 28LR	25	315	25	28	M36x2	14	108	66	57	82	28.5	64	12	12	46
KHB 35LR	25/32	315	25	35	M45x2	16	112	66	60	82	28.5	64	12	14	46
KHM 35LR	32	315	30	35	M45x2	16	141	84	82	108	41	87.5	14	14	60
KHM 42LR	40	315	38	42	M52x2	16	162	92	93	119.5	46.5	99	14	17	70

DIN2353 Heavy Type

Model	DN	PN	LW	RA	d1	i	L	L1	B	H	h1	h2	h3	SW	SW2
KHB 08SR	4	500	5	8	M16x1.5	12	73	39	28	44.5	13	32	8	9	24
KHB 10SR	6	500	6	10	M18x1.5	12	73	39	28	44.5	13	32	8	9	24
KHB 12SR	8	500	8	12	M20x1.5	12	76	43	32	52.5	17	40	8	9	27
KHB 14SR	10	500	10	14	M22x1.5	14	80	43	32	52.5	17	40	8	9	27
KHB 16SR	13	500	13	16	M24x1.5	14	86	49	35	52.5	17	40	8	9	32
KHB 20SR	13	500	13	20	M30x2	16	90	49	35	52.5	17	40	8	9	32
KHB 20SR	16	400	15	22	M30x2	16	90	48	38	63.5	19	46	11	9	32
KHB 25SR	20	315	19	25	M36x2	18	109	61	48	75	24	57	12	12	41
KHB 30SR	25	315	25	30	M42x2	20	120	66	57	82	28.5	64	12	12	46
KHB 38SR	25/32	315	25	38	M52x2	22	124	66	60	82	28.5	64	12	14	55
KHM 38SR	32	315	30	38	M52x2	22	153	84	82	108	41	87.5	14	14	60