

## Ball Valves

### KHB / KHM

**Model code**  
(also order example)

**KHB G 1/2 1112 01 X A SO940**

#### Designation

KHB = Block-type ball valve DN 04-25 (steel)  
KHM = Sleeve type ball valve DN 32-50 (steel)  
DN 04-50 (stainless steel)

#### Type of connection

Thread size or outside diameter of pipe and type of connection

#### Materials

##### Housing, connection adapters

1 = Steel  
3 = Stainless steel

##### Ball, control spindle

1 = Steel  
3 = Stainless steel  
11 = Hardened steel

##### Sealing cups

1 = POM  
3 = PTFE (max. operating pressure 100 bar)  
8 = PEEK  
11 = Steel

##### Control spindle seals and connection seals

2 = NBR (Perbunan)  
3 = PTFE (max. operating pressure 100 bar)  
4 = FKM (Viton)

#### Handle

01 = Aluminium clamped handle, straight DN 12 - 50  
02 = Aluminium clamped handle, cranked DN 12 - 50  
03 = Zinc die-cast clamped handle, straight DN 04 - 10, 13  
04 = Zinc die-cast bolt-on handle, cranked DN 04 - 10, 13  
06 = Steel bolt-on handle, cranked DN 12 - 50  
09 = Without handle  
26 = Steel bolt-on handle, cranked, long DN 12 - 50

#### Series

(determined by manufacturer)

#### Surface protection

... = Phosphate-plated (no details required)  
A = Zinc-plated, chrome (VI)-free  
ZN = Zinc-nickel, chrome (VI)-free

#### Option

TT = O-rings for low temperatures, temperature range from -40 °C to +80 °C (only for stainless steel version)  
SO 940 = Ball valve with 4 threaded holes  
SO 1073 = Ball Valve with 2 fixing holes

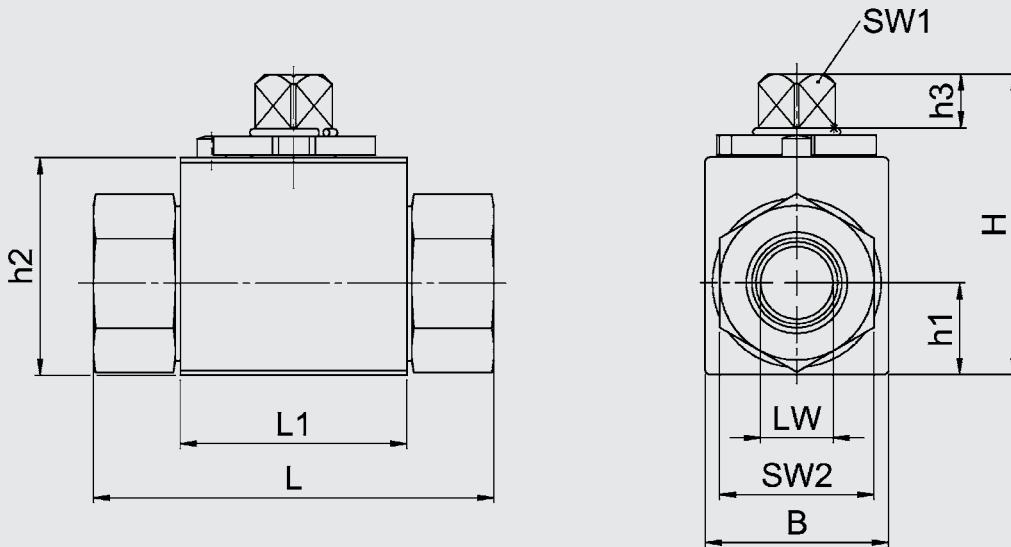
Delivery for non-standard valves is longer and the price is higher.

## Technical specifications

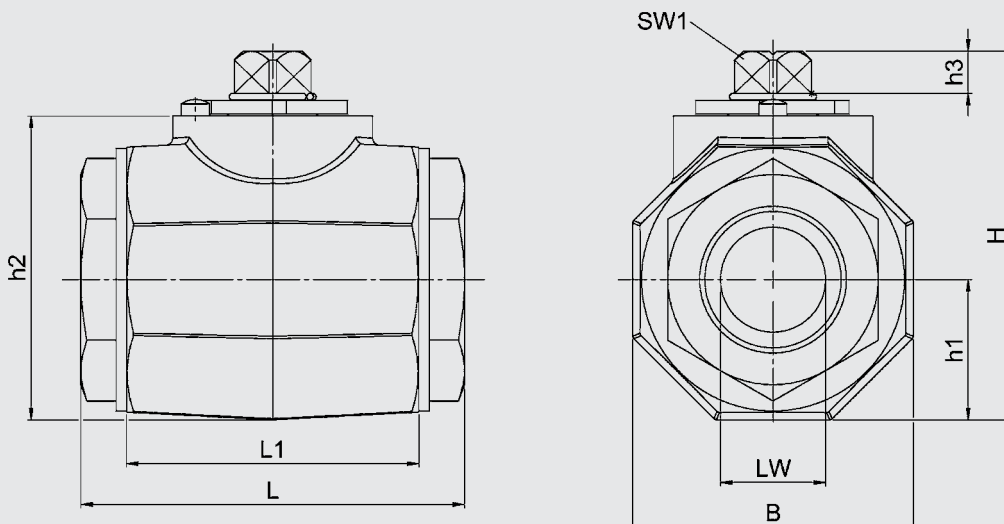
Type of construction:	Block type KHB DN 04 - 25 Sleeve type KHM DN 32 - 50			
Types of connection:	Light and heavy threaded pipe connection to DIN 2353 Whitworth female thread to ISO 228 NPT SAE			
Mounting position:	Optional			
Ambient temperature:	-10 °C to +80 °C			
Nominal pressure:	up to PN 500 / 7250 PSI			
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			
Type of construction:	Shut-off device is a ball			
Weight:	See table			
Flow direction:	Optional			
Spare parts:	Seal kits available on request			
Accessories:	All ball valves can be supplied with the following options: <table style="float: right; margin-left: 20px;"> <tr> <td>Actuator</td> </tr> <tr> <td>Limit controls</td> </tr> <tr> <td>Lock</td> </tr> </table>	Actuator	Limit controls	Lock
Actuator				
Limit controls				
Lock				

## Dimensions

KHB



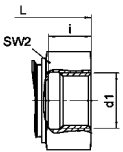
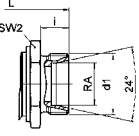
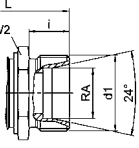
KHM



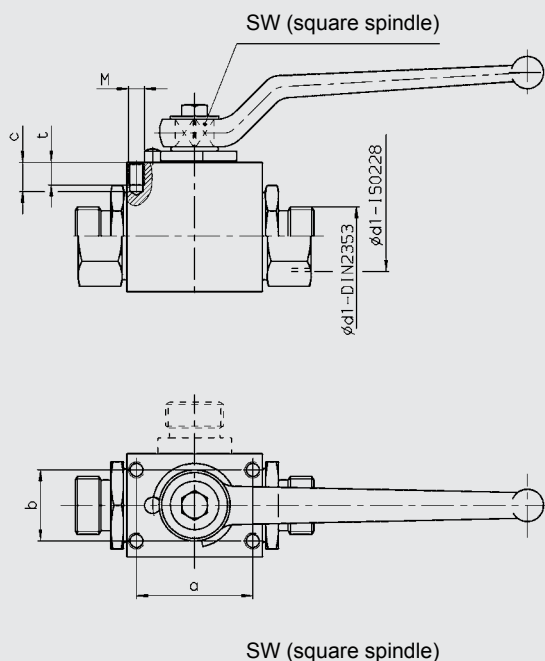
# Steel

Connection type	Type	DN	LW	RA	d1	l	L	L1	B	H	h1	h2	h3	SW1	SW2	Weight [kg]	Nom. pressure PN [bar]
<b>DIN ISO 228</b> Female thread	KHB-G1/8	4	8	–	G1/8	10	69	37	28	44	14	33	7	9	22	0.29	500
	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	13	12	–	G1/2	15	84	47	35	53	17	40	8,5	9	30	0.59	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
	KHB-G11/4	25/32	25	–	G11/4	22	120	65	58	82	28.5	65	11.6	14	50	2.06	315
	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	
<b>DIN 2353</b> 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	13	12	15	M22x1,5	12	82	47	35	53	17	40	8.5	9	30	0.54	500
	KHB-15LR	12	12	15	M22x1,5	12	82	47	40	62	20	46	11.6	12	32	0.64	420
	KHB-18LR	13	12	18	M26x1,5	12	82	47	35	53	17	40	8.5	9	30	0.63	500
	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
	KHB-35LR	25/32	25	35,3	M45x2	16	112	65	58	82	28.5	65	11.6	14	50	1.95	315
	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	
<b>DIN 2353</b> 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	13	12	16	M24x1,5	14	86	47	35	53	17	40	8.5	9	30	0.55	500
	KHB-16SR	12	12	16	M24x1,5	14	86	47	40	62	20	46	11.6	12	32	0.65	420
	KHB-20SR	13	12	20	M30x2	16	90	47	35	53	17	40	8.5	9	30	0.61	500
	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
	KHB-38SR	25/32	25	38,3	M52x2	22	124	65	58	82	28.5	65	11.6	14	55	2.18	315
	KHM-38SR	32	30	38,3	M52x2	22	153.4	83.4	82	106.2	40	87.7	12	17	60	3.43	420
<b>ANSI B1.20.1</b> NPT female thread	KHB-06NPT	6	8	–	1/4 - 18 NPT	6.7	69	37	28	44	14	33	7	9	22	0.3	500
	KHB-10NPT	10	10	–	3/8 - 18 NPT	10.36	72	42	32	53	17	40	8.5	9	27	0.5	500
	KHB-16NPT	13	12	–	1/2 - 14 NPT	13.56	84	47	35	53	17	40	8.5	9	30	0.6	500
	KHB-16NPT	16	15	–	1/2 - 14 NPT	13.56	83	47	40	62	20	46	11	12	32	0.75	420
	KHB-20NPT	20	20	–	3/4 - 14 NPT	13.86	95	60	49	75	24.5	57	11.6	14	41	1.3	420
	KHB-25NPT	25	25	–	1 - 11 1/2 NPT	17.34	113	65	58	82	28.5	65	11.6	14	50	2	420
	KHM-32NPT	32	30	–	1 1/4 - 11 1/2 NPT	17.95	109.4	83.4	82	106.2	40	87.7	12	17	60	3.1	420
	KHM-40NPT	40	38	–	1 1/2 - 11 1/2 NPT	18.38	130	91	94	118.2	45	99.7	12	17	70	4.4	420
	KHM-50NPT	50	48	–	2 - 11 1/2 NPT	19.22	140	100	111	134.2	55.5	115.7	12	17	80	6.6	420
	<b>SAE J 514 UN/UNF</b> Female thread	KHB-06SAE	6	8	–	7/16 - 20 UNF	12	69	37	28	44	14	33	7	9	22	0.3
KHB-10SAE		10	10	–	9/16 - 18 UNF	13	72	42	32	53	17	40	8.5	9	27	0.5	500
KHB-16SAE		13	12	–	3/4 - 16 UNF	15	92	47	35	53	17	40	8.5	9	30	0.6	500
KHB-16SAE		16	15	–	3/4 - 16 UNF	15	83	47	40	62	20	46	11	12	32	0.75	420
KHB-20SAE		20	20	–	1 1/16 - 12 UN	20	95	60	49	75	24.5	57	11.6	14	41	1.3	420
KHB-25SAE		25	25	–	1 5/16 - 12 UN	20	113	65	58	82	28.5	65	11.6	14	50	2	420
KHM-32SAE		32	30	–	1 5/8 - 12 UN	20	109.4	83.4	82	106.2	40	87.7	12	17	60	3.1	420
KHM-40SAE		40	38	–	1 7/8 - 12 UN	20	130	91	94	118.2	45	99.7	12	17	70	4.4	420
KHM-50SAE		50	48	–	2 1/2 - 12 UN	20	140	100	111	134.2	55.5	115.7	12	17	80	6.6	420

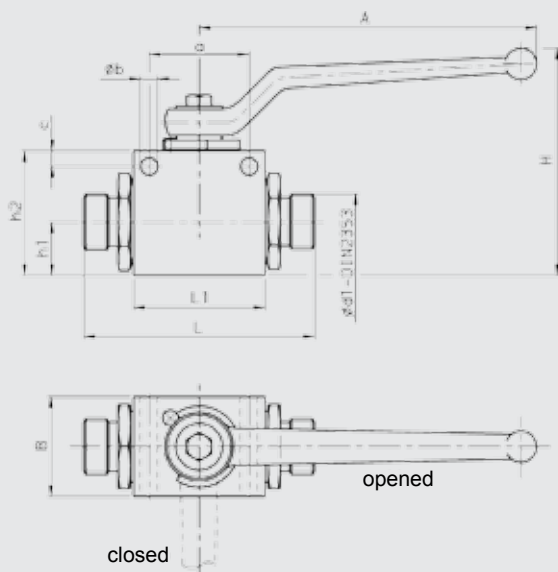
## Stainless steel

Connection type	Type	DN	LW	RA	d1	l	L	L1	B	H	h1	h2	h3	SW1	SW2	Weight [kg]	Nom. pressure PN [bar]
<b>DIN ISO 228</b> Female thread 	KHB-G1/8	4	8	–	G1/8	10	69	37	28	44.7	14	33	6.7	9	22	0.36	500
	KHB-G1/4	6	8	–	G1/4	14	69	37	28	44.7	14	33	6.7	9	22	0.43	500
	KHB-G3/8	10	10	–	G3/8	14	71.9	42	32	53.2	17.2	40	8.2	9	27	0.59	500
	KHB-G1/2	13	12	–	G1/2	15	84.2	47	35	53.2	17.2	40	8.2	9	30	0.66	500
	KHB-G1/2	16	15	–	G1/2	16	82.8	47	40	63.2	20	46	11	12	32	1.82	400
	KHB-G3/4	20	20	–	G3/4	18	95	60	49	74.8	24.5	57	11.4	14	41	1.82	350
	KHB-G1	25	25	–	G1	20.5	113.1	65	58	82.6	29.5	65	11.4	14	50	2.97	350
	KHM-G11/4	32	30	–	G11/4	22	109.4	83.4	80	105.2	40	86.7	12	17	60	3.29	350
	KHM-G11/2	40	38	–	G11/2	24	130	91	90	116.2	45	97.7	12	17	70	4	350
	KHM-G2	50	48	–	G2	28	140	100	111	134.2	55.5	115.7	12	17	80	6.82	350
<b>DIN 2353</b> Light range 	KHB-06LR	4	4	6	M12x1,5	10	67	37	28	44.7	14	33	6.7	9	22	0.32	500
	KHB-08LR	6	6	8	M14x1,5	10	67	37	28	44.7	14	33	6.7	9	22	0.43	500
	KHB-10LR	8	8	10	M16x1,5	11	73.9	42	32	53.2	17.2	40	8.2	9	27	0.66	500
	KHB-12LR	10	10	12	M18x1,5	11	73.9	42	32	53.2	17.2	40	8.2	9	27	0.66	500
	KHB-15LR	13	12	15	M22x1,5	12	82	47	35	53.2	17.2	40	8.2	9	30	0.92	500
	KHB-18LR	16	15	18	M26x1,5	12	81.8	47	40	63.2	20	46	11	12	32	0.98	400
	KHB-22LR	20	19	22	M30x2	14	100.7	60	49	74.8	24.5	57	11.4	14	41	1.88	350
	KHB-28LR	25	24	28	M36x2	14	107.9	65	58	82.6	29.5	65	11.4	14	50	2.88	350
	KHM-35LR	32	30	35,3	M45x2	16	141.4	83.4	80	105.2	40	86.7	12	17	60	3.7	350
	KHM-42LR	40	36	42,3	M52x2	16	162	91	90	116.2	45	97.7	12	17	70	4.9	350
<b>DIN 2353</b> Heavy range 	KHB-08SR	4	5	8	M16x1,5	12	73	37	28	44.7	14	33	6.7	9	22	0.46	500
	KHB-10SR	6	7	10	M18x1,5	12	73	37	28	44.7	14	33	6.7	9	22	0.55	500
	KHB-12SR	8	8	12	M20x1,5	12	75.9	42	32	53.2	17.2	40	8.2	9	27	0.67	500
	KHB-14SR	10	10	14	M22x1,5	14	79.9	42	32	53.2	17.2	40	8.2	9	27	0.68	500
	KHB-16SR	13	12	16	M24x1,5	14	85.9	47	35	53.2	17.2	40	8.2	9	30	0.63	500
	KHB-20SR	16	15	20	M30x2	16	89.8	47	40	63.2	20	46	11	12	32	0.95	400
	KHB-25SR	20	20	25	M36x2	18	108.8	60	49	74.8	24.5	57	11.4	14	41	1.98	350
	KHB-30SR	25	25	30	M42x2	20	119.9	65	58	82.6	29.5	65	11.4	14	50	3.09	350
	KHM-38SR	32	30	38,3	M52x2	22	153.4	83.4	80	105.2	40	86.7	12	17	60	3.89	350

## Fixing hole dimensions (SO 940)



## Fixing hole dimensions (SO 1073)



### DIN ISO 228

\*\* NOTE: Dimensions changed

$\phi d1$	DN	SW	a	b	M	t	c
G 1/8	4	9	31**	20**	M4	6	8
G 1/4	6	9	31**	20**	M4	6	8
G 3/8	10	9	36	22	M5	7	9
G 1/2*	13	9	36	22	M5	7	9
G 1/2	16	12	39**	26**	M5	7	9
G 3/4	20	14	45	28	M6	9	11
G 1	25	14	45	28	M6	9	11

### DIN 2353 Light Range

$\phi d1$	DN	SW	a	b	M	t	c
06LR	4	9	31**	20**	M4	6	8
08LR	6	9	31**	20**	M4	6	8
10LR	8	9	36	22	M5	7	9
12LR	10	9	36	22	M5	7	9
15LR*	12	12	36	22	M5	7	9
15LR	13	9	36	22	M5	7	9
18LR	16	12	39**	26**	M5	7	9
18LR*	13	9	36	22	M5	7	9
22LR	20	14	45	28	M6	9	11
28LR	25	14	45	28	M6	9	11

### DIN 2353 Heavy Range

$\phi d1$	DN	SW	a	b	M	t	c
08SR	4	9	31**	20**	M4	6	8
10SR	6	9	31**	20**	M4	6	8
12SR	8	9	36	22	M5	7	9
14SR	10	9	36	22	M5	7	9
16SR	12	12	36	22	M5	7	9
16SR*	13	9	36	22	M5	7	9
20SR	16	12	39**	26**	M5	7	9
20SR*	13	9	36	22	M5	7	9
25SR	20	14	45	28	M6	9	11
30SR	25	14	45	28	M6	9	11

### DIN ISO 228

$\phi d1$	DN	L	L1	B	H	h1	h2	a	$\phi b$	c	A
G 1/8	4	69	37	26	64	13	32	28	5.5	4.5	108
G 1/4	6	69	37	26	64	13	32	28	5.5	5	108
G 3/8	10	72	42	32	68	17	40	32	5.5	5	108
G 1/2*	13	84	47	35	68	17	40	32	5.5	5	108
G 1/2	16	83	47	38	102	19	45	38	5.5	5	174
G 3/4	20	95	60	48	115	24.5	57	46	6.6	6	174
G 1	25	113	65	57	122	28.5	64	46	6.6	6	174

### DIN 2353 Light Range

$\phi d1$	DN	L	L1	B	H	h1	h2	a	$\phi b$	c	A
08LR	6	67	37	26	64	13	32	28	5.5	4.5	108
10LR	8	71	37	26	64	13	32	28	5.5	4.5	108
12LR	10	74	42	32	68	17	40	32	5.5	5	108
15LR*	13	82	47	35	68	17	40	32	5.5	5	108
15LR	12	82	47	38	102	19	45	38	5.5	5	174
18LR	16	82	47	38	102	19	45	38	5.5	5	174
22LR	20	101	60	48	115	24.5	57	46	6.6	6	174
28LR	25	108	65	57	122	28.5	64	46	6.6	6	174

### DIN 2353 Heavy Range

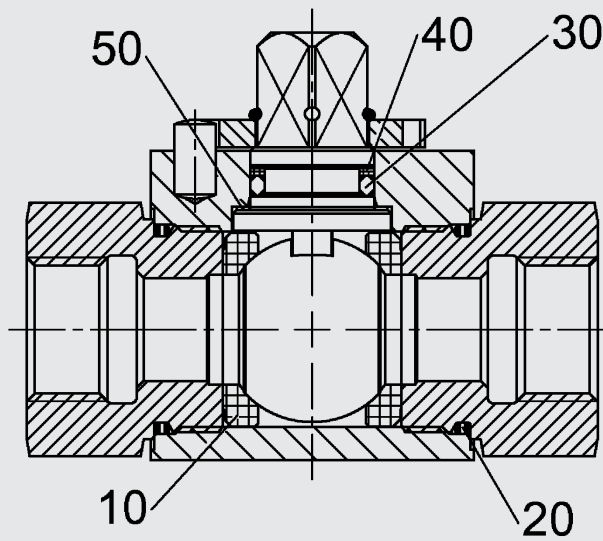
$\phi d1$	DN	L	L1	B	H	h1	h2	a	$\phi b$	c	A
08SR	4	73	35	25	55	13	30	27	4.5	4	70
10SR	6	73	35	25	55	13	30	27	4.5	4	70
12SR	8	76	42	32	68	17	40	32	5.5	5	108
14SR	10	80	42	32	68	17	40	32	5.5	5	108
16SR*	12	86	47	35	68	17	40	32	5.5	5	108
16SR	13	86	47	38	102	19	45	38	5.5	5	174
20SR*	16	90	47	35	68	17	40	32	5.5	5	108
20SR	13	90	47	38	102	19	45	38	5.5	5	174
25SR	20	109	60	48	115	24.5	57	46	6.6	6	174
30SR	25	120	65	57	122	28.5	64	46	6.6	6	174

\* reduced bore

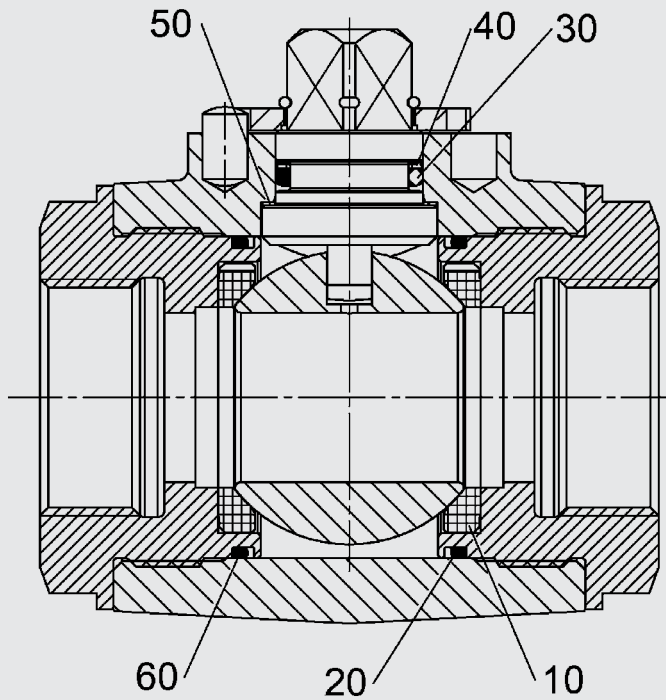
## Spare Parts

(Seal kit)

**KHB, DN 04 - 25**



**KHM, DN 32 - 50**



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
DN 32	703 045
DN 40	701 292
DN 50	703 007

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

## NOTE

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

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

Subject to technical modifications.