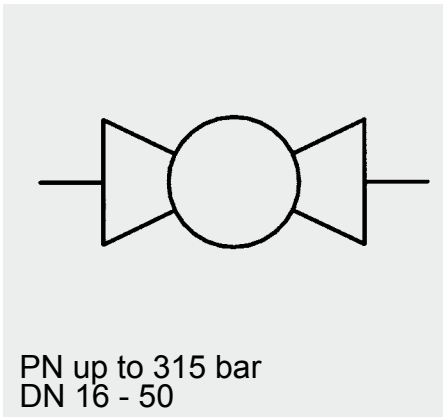
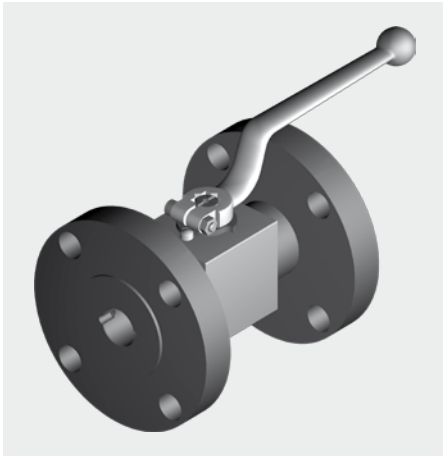


Flanged Ball Valves

KHBF / KHMFF / KHMFF



PN up to 315 bar
DN 16 - 50

Model code

(also order example)

KHBF 16 PN040 11141 02 X ...

Designation

KHBF	=	Block-type ball valve	DN 16 - 25 (steel)
KHMFF	=	Sleeve-type ball valve	DN 32 - 50 (steel)
		Long version –	DN 16 - 50 (stainless steel)
		DIN-EN 558-1, FTF, basic range 1	DIN 3202 - F1
KHMFF	=	Sleeve-type ball valve	DN 32 - 50 (steel / stainless steel)
		Short version –	DIN 3202 - F4
		DIN-EN 558-1, FTF, basic range 14	

Nominal bore

(DN)

Pressure range

(to DIN 2401)

Materials

Housing, connection adapters and control spindle

- 1 = Steel
- 3 = Stainless steel (1.4571)

Ball

- 1 = Steel
- 3 = Stainless steel (1.4571)

Ball seal

- 1 = POM (polyacetal)

Soft seal

- 4 = FKM (Viton)

Flanges

- 1 = Steel
- 3 = Stainless steel (1.4571)

(other material combinations on request)

Handle

- 02 = aluminium clamped handle, cranked, supplied loose DN 16 - 25
- 06 = steel bolt-on handle, cranked, supplied loose DN 32 - 50

Series

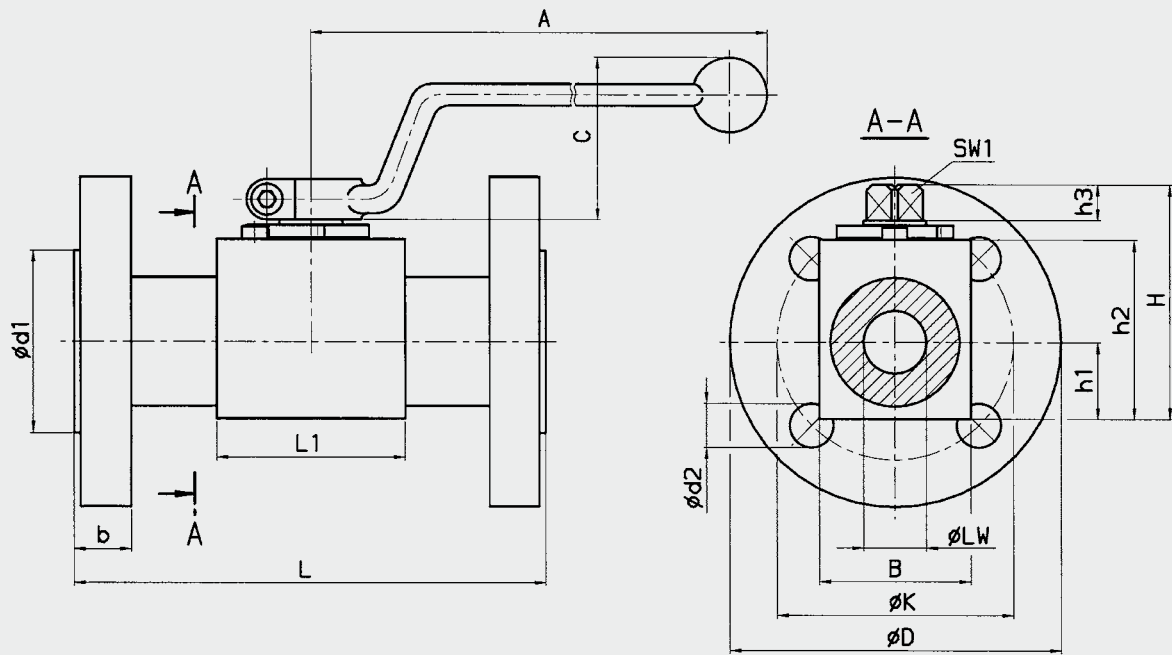
(determined by manufacturer)

Surface protection

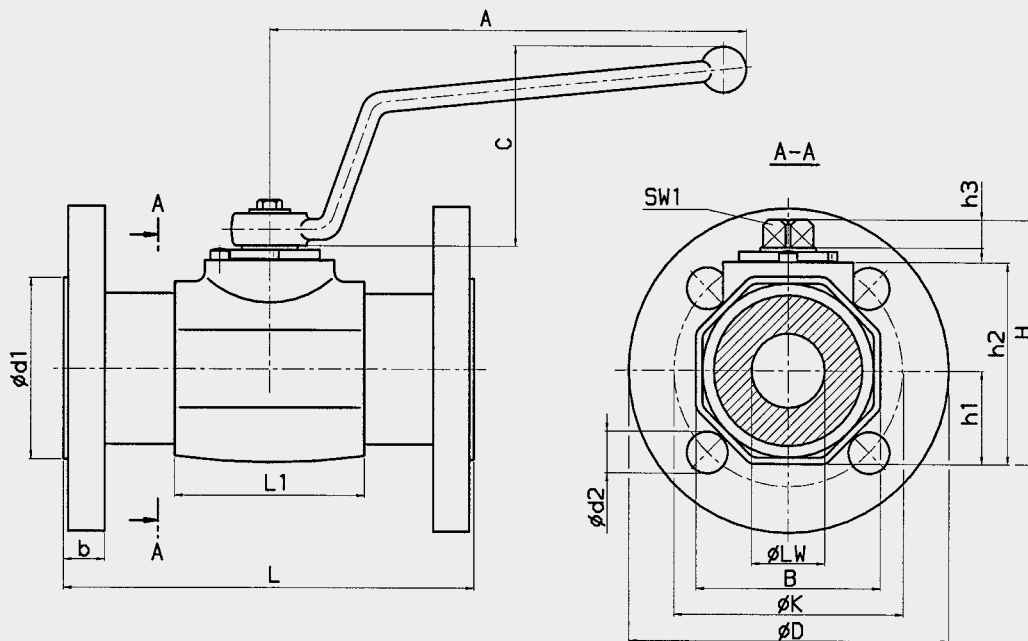
- ... = phosphate-plated (no details required)
- A = zinc-plated, chrome (VI)-free

Dimensions

KHBF



KHMF / KHMFF



Version	Housing dimensions											PN (Ball valve) [bar]
	DN	LW	L1	B	H	h1	h2	h3	SW1	A	C	
Block housing KHBF DN16-25 (steel)	16	15	47	38	62	19	45	11	12	185	47	400
	20	20	60	48	75	24.5	57	11	14	203	54	315
	25	25	65	57	81.5	28.5	64	11	14	203	54	315
Sleeve housing KHMF / KHMFF DN16-50 (stainless steel) DN32-50 (steel)	16	15	46	45	66.5	22.5	48.5	11	12	185	47	400
	20	20	58	55	78	27.5	60	11	14	203	54	315
	25	25	64	60	83.5	30	65.5	11	14	203	54	315
	32	30	84	75	103	38	85	12	17	228	80	315
	40	38	91	85	114	43	96	12	17	228	80	315
50	48	100	105	131.5	53	113	12	17	228	80	315	

E 5.502.15/03.10

Type of connection / Seal face	Type	Pressure range PN [bar]	L	D	d1	d2	K	b	Z*	Weight [kg]
F1 (FTF, basic range 1)	KHBF - 16 KHMFF - 16	40	130	95	45	14	65	16	4	2.2
		160	130	105	45	14	75	20	4	3.0
		315	130	130	45	18	90	26	4	4.1
	KHBF - 20 KHMFF - 20	40	150	105	58	14	75	18	4	3.4
	KHBF - 25 KHMFF - 25	40	160	115	68	14	85	18	4	5.0
		160	160	140	68	18	100	24	4	7.1
		250	160	150	68	22	105	28	4	8.6
		315	160	160	68	22	115	34	4	9.2
	KHMFF - 32	40	180	140	78	18	100	18	4	7.3
		160	180	155	78	22	110	26	4	10.0
	KHMFF - 40	40	200	150	88	18	110	18	4	9.5
		160	200	170	88	22	125	28	4	13.0
		250	200	185	88	26	135	34	4	15.5
		315	200	195	88	26	145	38	4	17.5
	KHMFF - 50	40	230	165	102	18	125	20	4	13.1
		63	230	180	102	22	135	26	4	18.0
160		230	195	102	26	145	30	4	23.5	
250		230	200	102	26	150	38	8	28.5	
315		230	210	102	26	160	42	8	31.0	
Flange connection DIN 2501, Form E F4 (FTF, basic range 14)	KHMFF - 032 KHMFF - 040 KHMFF - 050	40	130	140	78	18	100	18	4	6.1
		40	140	150	88	18	110	18	4	7.7
		40	150	165	102	18	125	20	4	10.7

z* = number of fixing holes

Technical specifications

Length:	DIN-EN 558-1 - FTF, basic range 1 (DIN 3202 – F1, long version) DIN-EN 558-1 - FTF, basic range 14 (DIN 3202 – F4, short version)
Flange dimensions:	DIN 2501, Form E
Flange connections:	rotating flanges
Mounting position:	optional
Ambient temperature:	-10 °C to +80 °C
Nominal pressure:	up to PN 315 bar (see pressure range)
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
Accessories:	all ball valves can be supplied with the following options: Actuator Limit switch Lock

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.

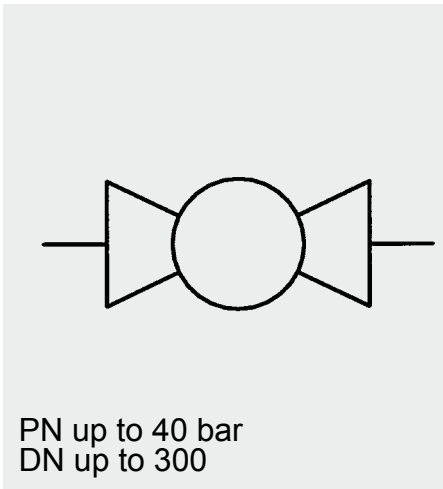
HYDAC Accessories GmbH
Hirschbachstr. 2
66280 Sulzbach/Saar
Tel.: +49 (0)6897 - 509-1001
Fax: +49 (0)6897 - 509-1009
Internet: www.hydac.com
E-Mail: info@hydac.com





Flange Type Ball Valve DN 65 - 300

KHMFF



PN up to 40 bar
DN up to 300

Model code

(also order example)

KHMFF 080 PN016 8834 02 X

Designation

KHMFF = Sleeve-type flange ball valve
(short version F4) DN 65 - 100
and DN 125 reduced

KHMFF = Sleeve-type flange ball valve
(short version F5) DN 125 -300

Nominal bore

DN 65 - 100	PN 16	Material code	8834
DN 65 - 100	PN 40	Material code	10834
DN 65 - 125	PN 16 reduced	Material code	8232
DN 125 - 150	PN 16	Material code	8834
DN 125 - 150	PN 40	Material code	10333
DN 200 - 300	on request	Material code	10333

Pressure range

to DIN 2501

Materials

Housing, flange

- 8 = Cast iron (GG25), spindle in steel
- 10 = Cast steel (GS-C25), spindle in stainless steel

Ball

- 2 = Brass
- 3 = Stainless steel
- 8 = Cast iron, hard-chromed

Ball seal

- 3 = PTFE

Housing seal and control spindle seal

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

Handle

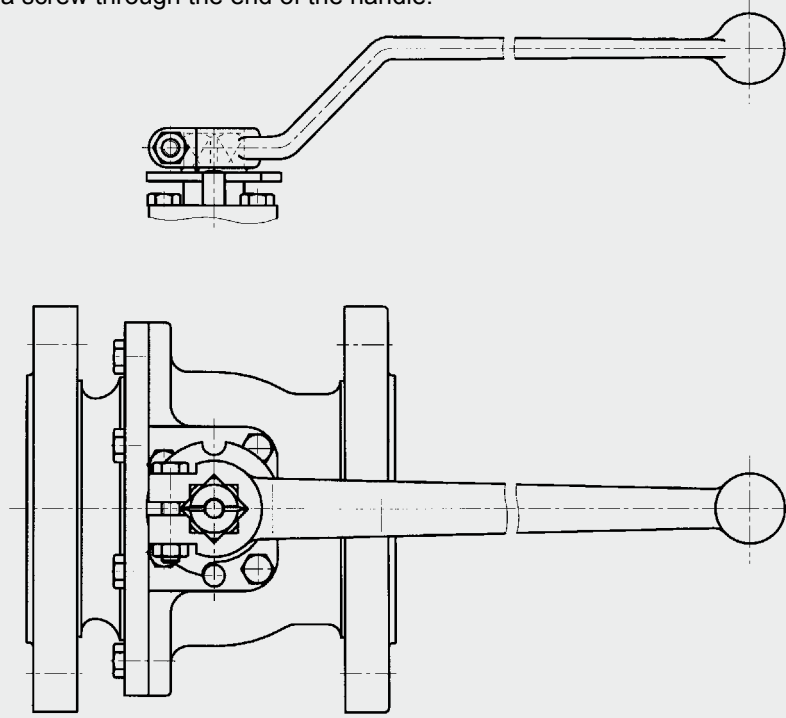
02	= Aluminium clamped handle, cranked (AK)	DN 65 - 100
05	= Steel bolt-on handle, straight (SG)	DN 150 - 200
06	= Steel bolt-on handle, cranked (SK)	DN 125 PN 40
16	= Steel bolt-on handle, cranked, supplied fitted reduced nominal bores	DN 65 - 125
AM	= Mechanical drive (worm gear with handwheel)	DN 250 - 300

Series

(determined by manufacturer)

Notes on assembly

The clamped handle is pushed onto the square end of the ball valve spindle and clamped to the square by means of a screw through the end of the handle.



The handles can be displaced by 45° DN 65 - 100.
(Except for DN 65 - 125 reduced and DN 125 - 200 with fixed handle position)

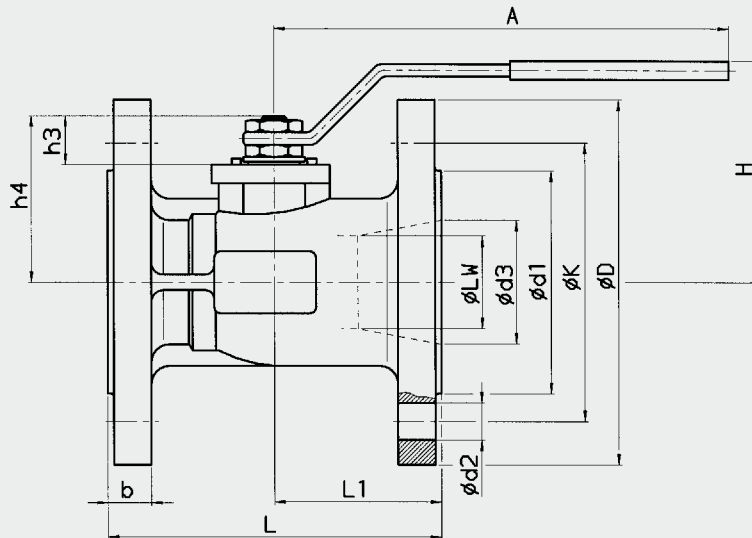
SW 22

Torque value

10 Nm

Dimensions

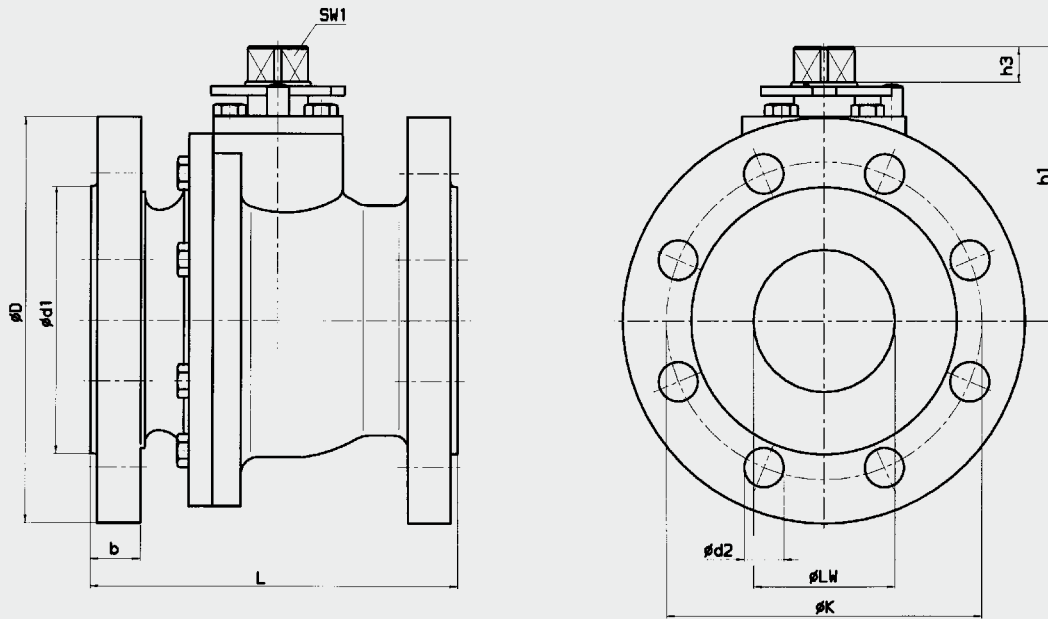
KHMFF (reduced)



Type of conn. / Seal face	Type	Pressure range	LW	A	L	L1	D	d1	d2	d3	K	b	H	h3	h4	Z*	Weight [kg]	Length DIN 3202
Flange connection DIN 2501, Form E F4	KHMFF - 065	16	50.2*	250	170	85	185	122	18	65	145	18	112	23	86.5	4	10.5	F4
	KHMFF - 080	16	64*	321	180	90	200	138	18	80	160	20	128	29	105	8	15	F4
	KHMFF - 100	16	76*	321	190	95	220	158	18	100	180	20	138	29	114.5	8	18	F4
	KHMFF - 125	16	95*	381	200	100	250	188	18	125	210	22	157	33	137.5	8	26.5	F4

* = reduced nominal bore
Z* = number of fixing holes

KHMFF (DN 65-300)



Type of conn. / Seal face	Type	Pressure range	LW	L	D	d1	d2	K	b	h1	h3	SW1	Z*	Weight [kg]
F4 Flange connection DIN 2501, Form E	KHMFF - 065	10 - 16	65	170	185	122	18	145	21.5	118	16	22	4	17
	KHMFF - 065	25 - 40	65	170	185	122	18	145	22	150	18	14	8	17.5
	KHMFF - 080	10 - 16	80	180	200	138	18	160	24	128	16	22	8	20
	KHMFF - 080	25 - 40	80	180	200	138	18	160	24	161	20	19.3	8	21
	KHMFF - 100	10 - 16	100	190	220	158	18	180	22	142.5	16	22	8	24
	KHMFF - 100	25 - 40	100	190	235	162	22	190	24	178	20	19.3	8	25
F5 Flange connection DIN 2501, Form C	KHMFF - 125	10 - 16	125	325	250	188	18	210	22	265	30	25.5	8	48
	KHMFF - 125	25 - 40	125	325	270	188	26	220	26	265	30	25.5	8	67
	KHMFF - 150	10 - 16	150	350	285	212	22	240	22	297.5	41.5	32	8	72
	KHMFF - 150	25 - 40	150	350	300	218	26	250	28	297.5	41.5	32	8	95
	KHMFF - 200	16	200	400	340	268	22	295	26	335	41.5	32	12	146
	KHMFF - 200	40	200	400	375	285	30	320	34	335	41.5	32	12	172
	KHMFF - 250	16	250	450	405	320	26	355	26	390	51	36	12	242
	KHMFF - 250	40	250	450	450	345	33	385	38	390	51	36	12	287
	KHMFF - 300	16	300	500	460	378	26	410	28	425	51	36	12	330
	KHMFF - 300	40	300	500	515	410	33	450	42	425	51	36	16	375

Z* = number of fixing holes

NOTE

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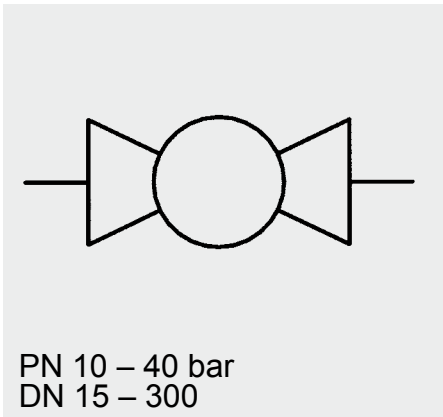
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HYDAC Accessories GmbH
Hirschbachstr. 2
66280 Sulzbach/Saar
Tel.: +49 (0)6897 - 509-1001
Fax: +49 (0)6897 - 509-1009
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E-Mail: info@hydac.com



Flanged Ball Valves KHFF



Model code
(also order example)

KHFF 100 PN040 10333 06 X

Designation

KHFF = Flange ball valve DN 15 - 200 (short version - DIN EN 558-1 - Series 27)
KHF = Flange ball valve DN 15 - 200 (long version - DIN EN 558-1 - Series 1)

Nominal bore

Pressure range

Materials

Housing

3 = stainless steel (1.4408)
10 = cast steel (1.0619)

Ball

3 = stainless steel (1.4408 / 1.4308)

Ball seal

3 = PTFE + 25% glass fibre reinforced

Stem seal

3 = PTFE

(other materials on request)

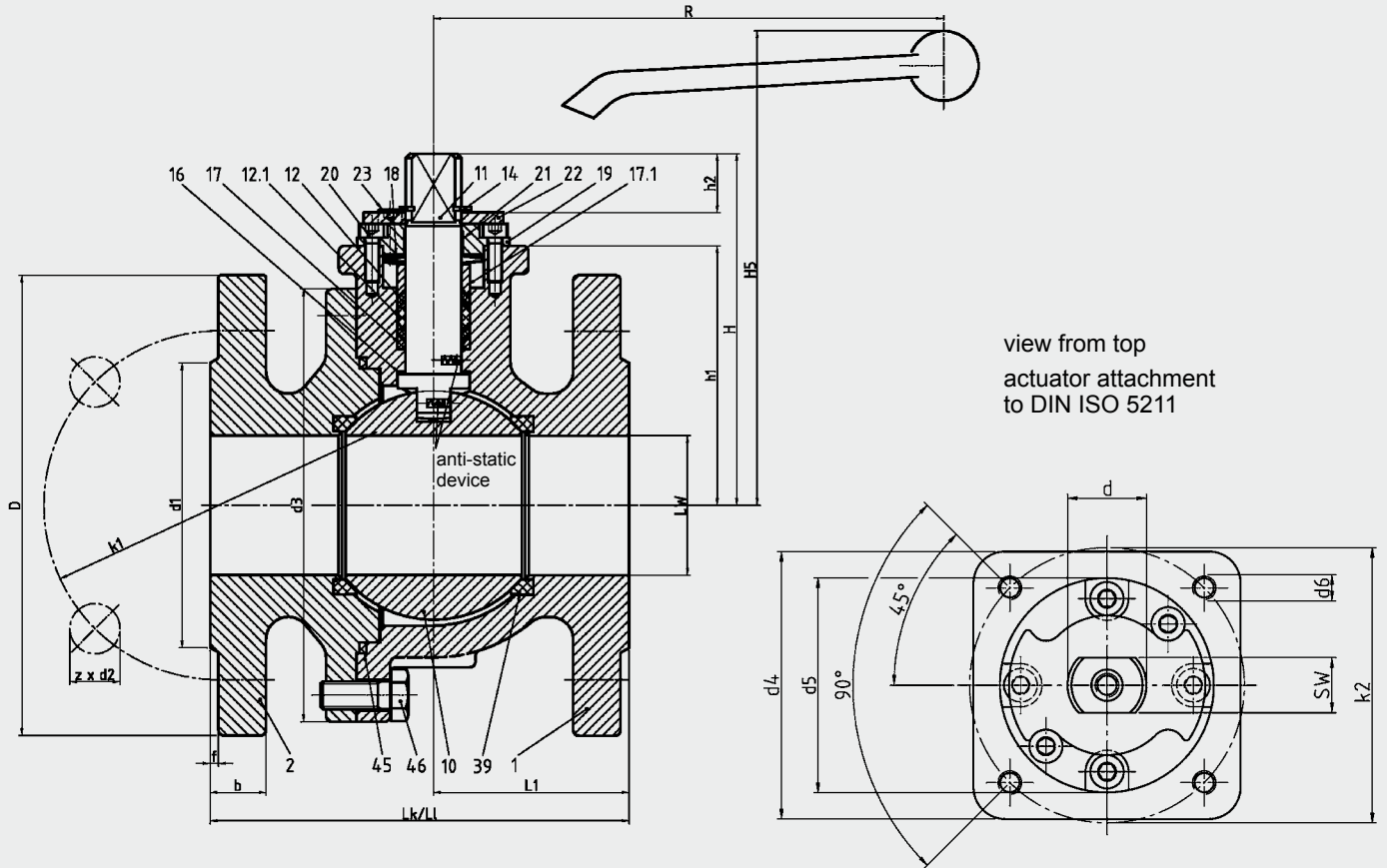
Handle

06 = steel bolt-on handle, cranked

Series

(determined by manufacturer)

KHFF



Item	Description
1	Body 1
2	Body 2
10	Ball
11	Stem
12	Stem seal
12.1	Stem seal
14	Safety ring
16	Thrust ring
17	Ring
17.1	Gland
18	Belleville-type washer
19	Cover
20	Socket head screw
21	Bearing strip
22	Stop disc
23	Socket head screw
39	Ball seat ring
45	Body seal
46	Hexagon bolt

Dimensions

DN	PN	LW	L _k *	L _l *	L1	d3	H	H5	h1	h2	d	SW	k1	d1	d2	d4	d5	d6	k2	R	D	b	f	z	Wt. kg L _k *	Wt. kg L _l *	ISO 5211	
15	40	16	115	130	47								65	45								95	16			3.9	4	
20	40	20	120	150	49	90	80	133	63	10	16	12.4	75	58	14	48	35	M6	50	160	105					4.4	4.5	F 05
25	40	25	125	160	52								85	68							115					4.6	4.7	
32	40	32	130	180	55	98	85	138	68				100	78							140	18		4		6.4	6.8	
40	40	40	140	200	69.5	129	109	158	80	14			110	88							150					8.5	8.9	F 07
50	40	50	150	230	70	155	126	171	93				125	102		68	55	M8	70		165	20				12.8	13.5	
65	16									18	20	14			18						215					19	20.5	
65	40	65	170	290	80	190	150	195	115				145	122							185	22				20	21.5	
80	40	80	180	310	86	208	161	211	124				160	138		96	70	M10	102		200	24				25	27.5	F 10
100	16									20	25	19.3	180	158							300	220	20			30	34	
100	40	100	190	350	94.5	242	178	228	141				190	162	22						235	24				33.5	37.5	
125	16												210	188	18						635	250	22	8		67	72	
125	40	125	325	400	162.5	290	265	270	222	30	35	25.5	220		26						270	26				72	77	
150	16												240	212	22							285	22	2		100	106	
150	40	150	350	480	175	327	297.5	301	242.5				250	218	26	150	85	M12	125		300	28				106	112	F 12
200	10									41.5	44	32	295	268	22						800	340	24			161	173	
200	16												310	278	26							360	30			164	176	
200	25	200	400	600	200	400	335	338	280				320	285	30							375	34			172	184	
250	10												350	320	22							395	26			255		
250	16												355		26							405		12		257		
250	25	250	450	-	225	492	390	-	330				370	335	30							425	32			272		
250	40												385	345	33							450	38			292		
300	10									51	48	36	400	370	22	175	100	M16	140	-		445	26			339		F 14
300	16												410	378	26							460	28			340		
300	25	300	500	-	250	575	425	-	365				430	395	30							485	34			355		
300	40												450	410	33							515	42	16		380		

* L_k = short version - DIN EN 558-1 - Series 27

* L_l = long version - DIN EN 558-1 - Series 1

Technical specifications

Flange connections:	DIN EN 1092 - 1 : 2000, DN 15 - DN 300, PN 10 - PN 40
Raised face:	DIN EN 1092 - 1 : 2000 Form B1 (others on request)
Face-to-face:	DIN EN 558- 1 Series 27 (F4/F5), DIN EN 558- 1 Series 1 (F1)
Stem seal:	PTFE or graphite stuffing box, supported by Belleville-type washer. Belleville-type washers are completely enclosed and protected against ingress of dirt.
Operation:	By stem on two flats according to NAMUR recommendation.
Top flange:	DIN ISO 5211 for hand-operation by worm gear, pneumatic, electric or hydraulic actuator.
Test certificates:	EN 10204 2.2 or 3.1 B/C/A
Certification according to:	PED 97/23/EC manufactured to AD-2000 TA - Luft 2002 (Technical Instructions on Air Quality Control) Fire Safe BS 6755, part 2 (DN 25 - DN 100) DIN DVGW Reg.- No. NG-4313AP1147 (German Technical and Scientific Association for Gas and Water) DIN EN ISO 9001 - TÜV CERT -
Accessories:	Stem extension, locking and positioning device, heating jackets and high quality sensors (additional equipment on request).
Temperature range:	-50 °C to + 230 °C, depending on ball seats.
Application:	Neutral gases and fluids, mineral oil products, alkalis, corrosive fluids and gases.

NOTE

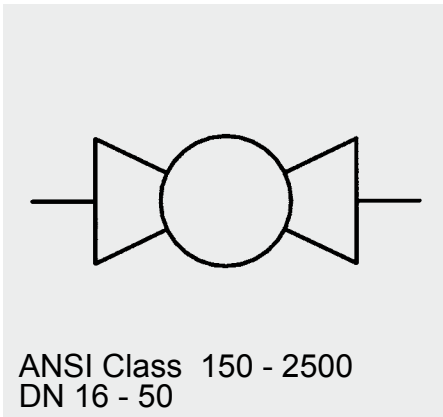
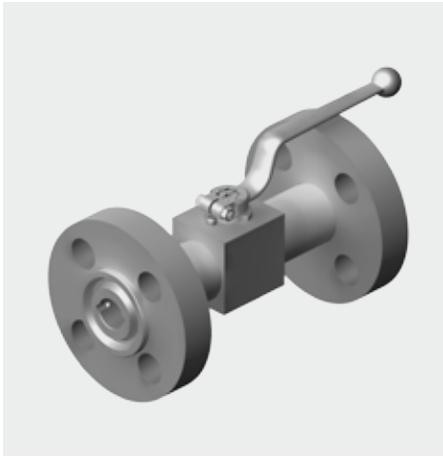
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Internet: www.hydac.com
E-Mail: info@hydac.com





ANSI Flange Ball Valves KHBF / KHMF

Model code

(also order example)

KHBF 16 A0150 ... 11141 06 X ...

Designation

KHBF = Block-type ball valve DN 16 – 25 (steel)
KHMF = Sleeve-type ball valve DN 32 – 50 (steel)
DN 16 – 50 (stainless steel)

Nominal bore

Pressure range ANSI class

150 220 psi / 15 bar
300 574 psi / 40 bar
400 768 psi / 54 bar
600 1151 psi / 81 bar
900 1725 psi / 121 bar
1500 2876 psi / 202 bar
2500 4792 psi / 337 bar

Sealing surface

... = smooth seal face (no details required)
RTJ = seal face with O-ring

Materials

Housing, connection adapters and control spindle

1 = steel
3 = stainless steel (1.4571)

Ball

1 = steel
3 = stainless steel (1.4571)

Ball seal

1 = POM (polyacetal)

Soft seal

4 = FKM (Viton)

Flanges

1 = steel
3 = stainless steel (1.4571)

(other materials on request)

Handle

06 = steel bolt-on handle, cranked (supplied loose)

Series

(determined by manufacturer)

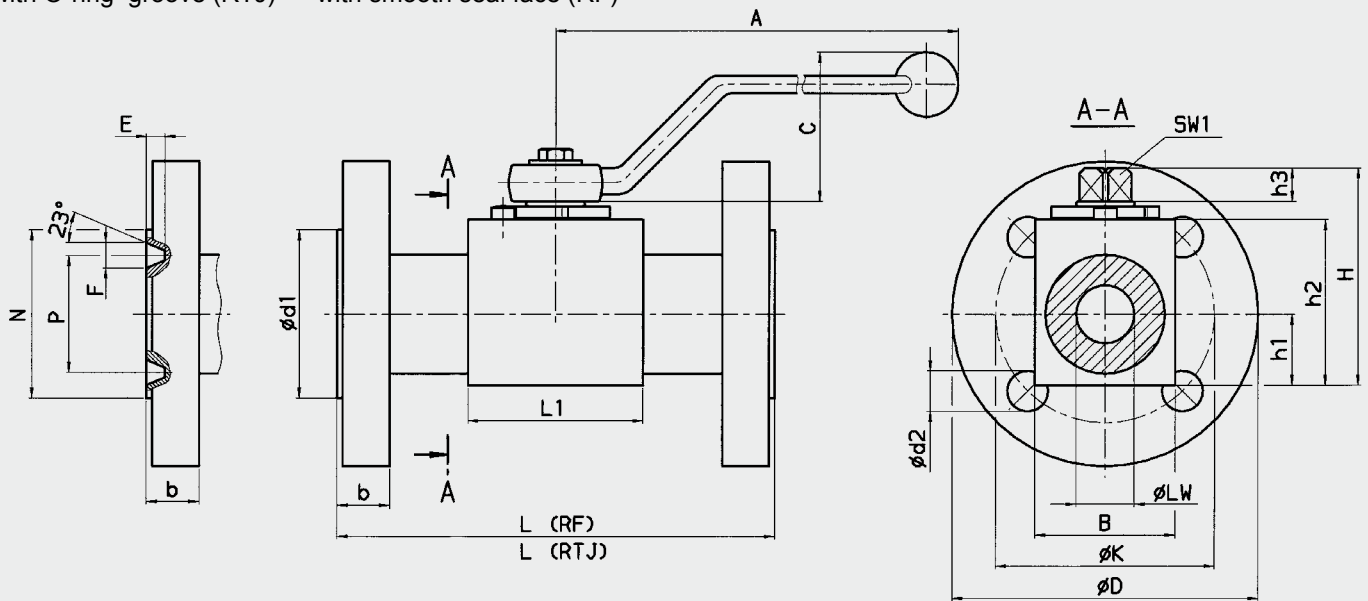
Surface protection

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

Dimensions

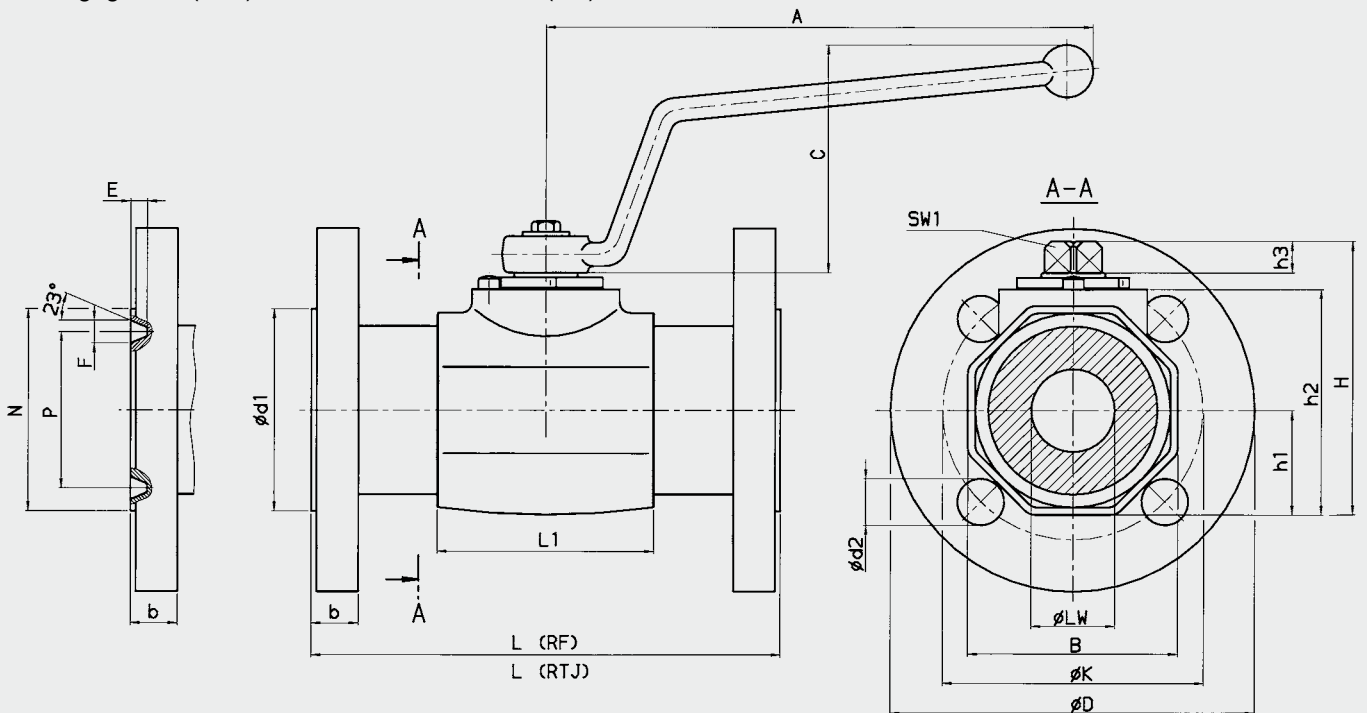
KHBF

with O-ring groove (RTJ) with smooth seal face (RF)



KHMF

with O-ring groove (RTJ) with smooth seal face (RF)



Type of constr.	Housing dimensions												PN (Ball valve) [bar]
	Type	DN	LW	L1	B	H	h1	h2	h3	SW1	A	C	
Block housing DN16-25 (steel)	KHBF-16	1/2"	15	47	38	62	19	45	11	12	169	59	400
	KHBF-20	3/4"	20	60	48	75	24.5	57	11	14	169	59	350
	KHBF-25	1"	25	65	57	81.5	28.5	64	11	14	169	59	350
Sleeve housing DN16-50 (stainless steel) DN32-50 (steel)	KHMF-16	1/2"	15	45.8	45	66.5	22.5	48.5	11	12	169	59	400
	KHMF-20	3/4"	20	58.3	55	78	27.5	60	11	14	169	59	350
	KHMF-25	1"	25	63.5	60	83.5	30	65.5	11	14	169	59	350
	KHMF-32	1 1/4"	30	84	75	103	38	85	12	17	228	80	350
	KHMF-40	1 1/2"	38	91	85	114	43	96	12	17	228	80	350
KHMF-50	2"	48	100	105	131.5	53	113	12	17	228	80	350	

Flange dimensions ANSI Class 150

DN	L (RF)	L (RTJ)	D	d1	d2	k	b	z*	N	P	F	E	Weight [kg]
16 - 1/2"	108	-	88.9	35.1	15.8	60.5	11.2	4	-	-	-	-	1.8
20 - 3/4"	117.4	-	98.6	42.9	15.8	69.9	12.7	4	-	-	-	-	2.9
25 - 1"	127	139.7	108	50.8	15.8	79.2	14.2	4	63.5	47.6	8.7	6.4	4.0
32 - 1 1/4"	139.7	152.4	117.3	63.5	15.8	88.9	15.7	4	73.2	57.2	8.7	6.4	6.4
40 - 1 1/2"	165.1	177.8	127	73.2	15.8	98.6	17.5	4	82.6	65.1	8.7	6.4	7.5
50 - 2"	177.8	190.5	152.4	91.9	19	120.7	19	4	101.6	82.6	8.7	6.4	11.1

Flange dimensions ANSI Class 300

DN	L (RF)	L (RTJ)	D	d1	d2	k	b	z*	N	P	F	E	Weight [kg]
16 - 1/2"	139.7	150.9	95.3	35.1	15.8	66.6	14.2	4	50.8	34.1	7.1	5.6	2.2
20 - 3/4"	152.4	165.1	117.4	42.9	19	82.6	15.7	4	63.5	42.9	8.7	6.4	3.9
25 - 1"	165.1	177.8	124	50.8	19	88.9	17.5	4	69.9	50.8	8.7	6.4	5.0
32 - 1 1/4"	177.8	190.5	133.4	63.5	19	98.6	19	4	79.3	60.3	8.7	6.4	8.3
40 - 1 1/2"	190.5	203.2	155.5	73.2	22.4	114.3	20.6	4	90.4	68.3	8.7	6.4	9.9
50 - 2"	215.9	231.7	165.1	91.9	19	127	22.4	8	108	82.6	11.9	7.9	12.8

Flange dimensions ANSI Class 400/600

DN	L (RF)	L (RTJ)	D	d1	d2	k	b	z*	N	P	F	E	Weight [kg]
16 - 1/2"	165.1	163.6	95.3	35.1	15.8	66.6	20.6	4	50.8	34.1	7.1	5.6	2.5
20 - 3/4"	190.5	190.5	117.4	42.9	19	82.6	22.1	4	63.5	42.9	8.7	6.4	4.4
25 - 1"	215.9	215.9	124	50.8	19	88.9	23.9	4	69.9	50.8	8.7	6.4	5.5
32 - 1 1/4"	228.6	228.6	133.4	63.5	19	98.6	26.9	4	79.3	60.3	8.7	6.4	9.2
40 - 1 1/2"	241.3	241.3	155.4	73.2	22.4	114.3	28.7	4	90.4	68.3	8.7	6.4	11.1
50 - 2"	292.1	295.2	165.1	91.9	19	127	31.8	8	108	82.6	11.9	7.9	14.7

Flange dimensions ANSI Class 900/1500

DN	L (RF)	L (RTJ)	D	d1	d2	k	b	z*	N	P	F	E	Weight [kg]
16 - 1/2"	215.9	215.9	120.7	35.1	22.4	82.6	28.7	4	60.5	39.7	8.7	6.4	4.9
20 - 3/4"	228.6	228.6	130.1	42.9	22.4	88.9	31.8	4	66.6	44.5	8.7	6.4	6.7
25 - 1"	254	254	149.4	50.8	25.4	101.6	34.8	4	71.4	50.8	8.7	6.4	9.7
32 - 1 1/4"	279.4	279.4	158.8	63.5	25.4	111.3	34.8	4	81	60.3	8.7	6.4	13.5
40 - 1 1/2"	304.8	304.8	177.8	73.2	28.5	124	38.1	4	92	68.3	8.7	6.4	17.4
50 - 2"	368.3	371.4	215.9	91.9	25.4	165.1	44.5	8	124	95.3	11.9	7.9	28.4

Flange dimensions ANSI Class 2500

DN	L (RF)	L (RTJ)	D	d1	d2	k	b	z*	N	P	F	E	Weight [kg]
16 - 1/2"	263.7	263.7	133.4	35.1	22.4	88.9	36.6	4	65	42.9	8.7	6.4	9.0
20 - 3/4"	273.1	273.1	139.7	42.9	22.4	95.3	38.1	4	73.2	50.8	8.7	6.4	11.5
25 - 1"	307.9	307.9	158.8	50.8	25.4	108	41.4	4	82.6	60.3	8.7	6.4	14.8
32 - 1 1/4"	349.3	352.3	184.2	63.5	28.5	130.1	44.5	4	101.6	72.2	11.9	7.9	21.9
40 - 1 1/2"	384.1	387.1	203.1	73.2	31.8	146	50.8	4	114.3	82.6	11.9	7.9	29.5
50 - 2"	450.9	453.9	235	91.9	28.5	171.5	57.2	8	133.4	101.6	11.9	7.9	43.0

z* = number of fixing holes

Technical specifications

Length:	ASME / ANSI - B16.10
Flange dimensions:	ASME / ANSI - B16.5
Flange connections:	Rotating flanges
Mounting position:	Optional
Ambient temperature:	-10 °C to +80 °C
Nominal pressure:	up to PN 337 bar (see pressure range)
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
Accessories:	All ball valves can be supplied with the following options: Actuator Limit controls Lock

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.

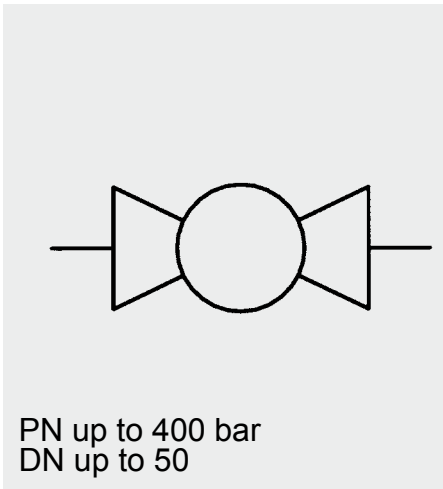
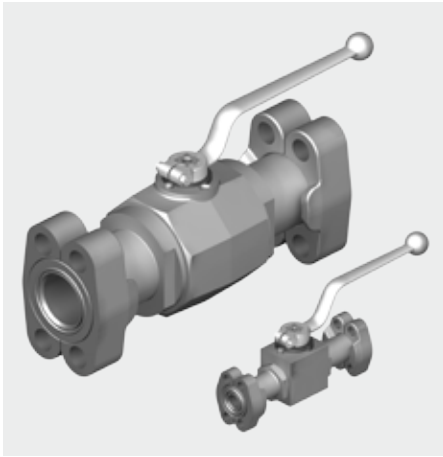
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HYDAC Accessories GmbH
Hirschbachstr. 2
66280 Sulzbach/Saar
Tel.: +49 (0)6897 - 509-1001
Fax: +49 (0)6897 - 509-1009
Internet: www.hydac.com
E-Mail: info@hydac.com



SAE Flanged Ball Valves

KHB-F3/6 / KHM-F3/6



Model code

(also order example)

KHB 20 F3 11141 02 X

Designation

KHB = Block-type ball valve DN 16 - 25
KHM = Sleeve-type ball valve DN 32 - 50

Nominal bore

Type of SAE flange

Materials

Housing, connection adapters and control spindle

- 1 = steel
- 3 = stainless steel

Ball

- 1 = steel
- 3 = stainless steel

Ball seals

- 1 = POM

Control spindle seal and connection seal

- 4 = FKM (Viton)

SAE threaded flange

- 1 = steel
- 3 = stainless steel

Handle

- 02 = aluminium clamped handle, cranked
- 06 = steel bolt-on handle, cranked

Series

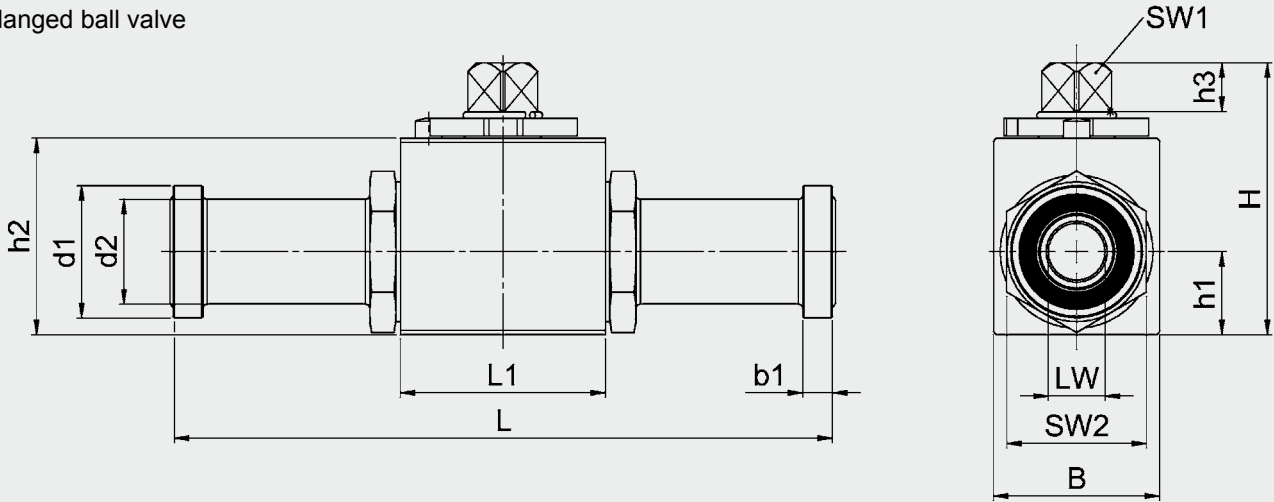
(determined by manufacturer)

Technical specifications

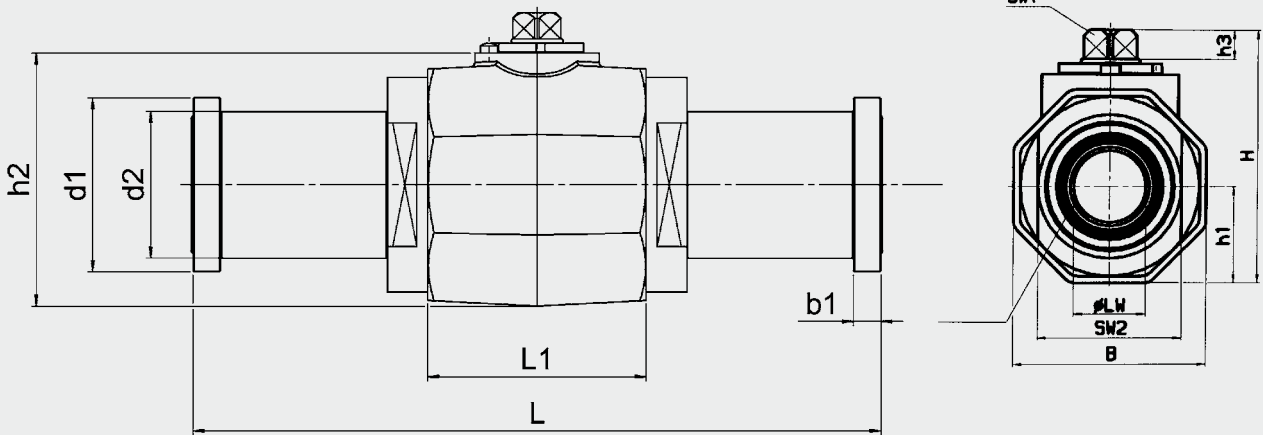
Type of construction:	Block-type KHB DN 16 - 25 Sleeve-type KHM DN 32 - 50
Flange dimensions:	ISO 6162, Table 1 and 2 (SAE J 518 c)
Flange connections:	SAE split flanges
Mounting position:	Optional
Ambient temperature:	-10 °C to +80 °C
Nominal pressure:	up to PN 400 bar
Operating fluids:	Mineral oil 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

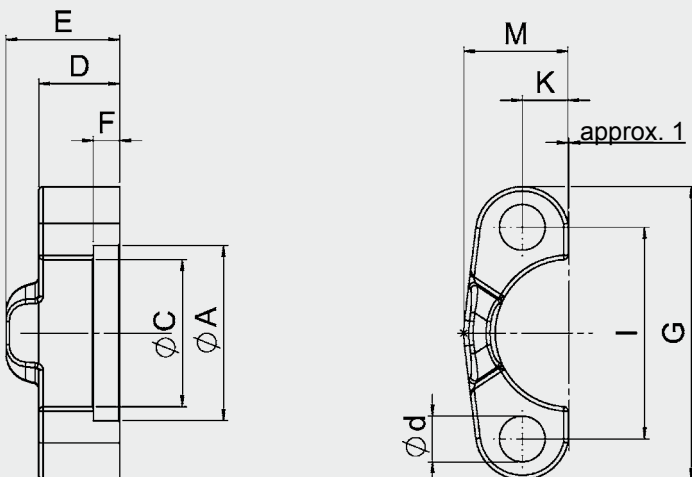
SAE flanged ball valve
KHB



KHM



SAE Split flanges



KHB / KHM - F3

Type	SAE size	DN	LW	L	L1	H	h1	h2	h3	B	b1	d1	d2	SW1	SW2	O-ring
KHB-16-F3	3/4"	16	16*	170	47	62	19	45	11	38	6.8	38.1	31.5	12	32	25x3.53
KHB-20-F3	3/4"	20	19	170	60	75	24.5	57	11.6	48	6.8	38.1	31.5	14	41	25x3.53
KHB-25-F3	1"	25	25	176.5	65	82	28.5	64	11.6	57	8	44.45	38	14	50	32.92x3.53
KHM-32-F3	1 1/4"	32	30	191.4	83.4	105.2	40	86.7	12	80	8	50.8	43	17	60	37.7x3.53
KHM-40-F3	1 1/2"	40	38	231	91	116.2	45	97.7	12	90	8	60.35	50	17	70	47.22x3.53
KHM-50-F3	2"	50	48	234	100	134.2	55.5	115.7	12	111	9.6	71.4	62	17	80	56.74x3.53

KHB / KHM - F3 - XL

Type	SAE size	DN	LW	L	L1	H	h1	h2	h3	B	b1	d1	d2	SW1	SW2	O-ring
KHM-32-F3-XL	1 1/4"	32	30	274	83.4	105.2	40	86.7	12	80	8	50.8	43	17	60	37.7x3.53
KHM-40-F3-XL	1 1/2"	40	38	320	91	116.2	45	97.7	12	90	8	60.35	50	17	70	47.22x3.53
KHM-50-F3-XL	2"	50	48	323	100	134.2	55.5	115.7	12	111	9.6	71.4	62	17	80	56.74x3.53

SAE Split flanges - F3

Type	A	C	D	E	F	M	K	I	G	d	Nominal size	Weight (kg)
KHB-16-F3	38.9	32.1	14	22	6.2	26	11.1	47.6	65	10.5	350	1.6
KHB-20-F3	38.9	32.1	14	22	6.2	26	11.1	47.6	65	10.5	350	2.1
KHB-25-F3	45.2	38.5	16	22	7.5	29.2	13.1	52.4	70	10.5	350	2.8
KHM-32-F3	51.6	43.7	14	22	7.5	36.3	15.1	58.7	80	12	275	4.7
KHM-40-F3	61.1	50.8	16	24	7.5	41.1	17.9	69.9	94	13.5	210	6.9
KHM-50-F3	72.2	62.7	16	26	9	48.2	21.4	77.8	102	13.5	210	9.7

KHB / KHM - F6

Type	SAE size	DN	LW	L	L1	H	h1	h2	h3	B	b1	d1	d2	SW1	SW2	O-ring
KHB-16-F6	3/4"	16	16*	170	47	62	19	45	11	38	8.8	41.3	32	12	32	25x3.53
KHB-20-F6	3/4"	20	19	170	60	75	24.5	57	11.6	48	8.8	41.3	32	14	46	25x3.53
KHB-25-F6	1"	25	25	198.5	65	82	28.5	64	11.6	57	9.5	47.6	38	14	50	32.92x3.53
KHM-32-F6	1 1/4"	32	30	223.4	83.4	105.2	40	86.7	12	80	10.3	54	44	17	60	37.7x3.53
KHM-40-F6	1 1/2"	40	38	281	91	116.2	45	97.7	12	90	12.6	63.5	51	17	70	47.22x3.53
KHM-50-F6	2"	50	48	315	100	134.2	55.5	115.7	12	111	12.6	79.4	67	17	80	56.74x3.53

KHB / KHM - F6 - XL

Type	SAE size	DN	LW	L	L1	H	h1	h2	h3	B	b1	d1	d2	SW1	SW2	O-ring
KHM-32-F6-XL	1 1/4"	32	30	322	83.4	105.2	40	86.7	12	80	10.3	54	44	17	60	37.7x3.53
KHM-40-F6-XL	1 1/2"	40	38	380	91	116.2	45	97.7	12	90	12.6	63.5	51	17	70	47.22x3.53
KHM-50-F6-XL	2"	50	48	385	100	134.2	55.5	115.7	12	111	12.6	79.4	67	17	80	56.74x3.53

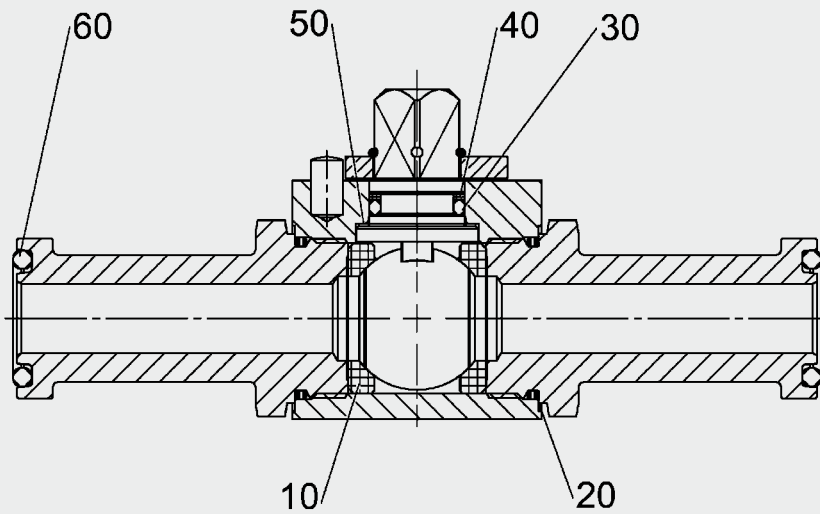
SAE Split flanges - F6

Type	A	C	D	E	F	M	K	I	G	d	Nominal size	Weight (kg)
KHB-16-F6	42	32.5	19	28	8.3	30	11.9	50.8	72	10.5	400	1.9
KHB-20-F6	42	32.5	19	28	8.3	30	11.9	50.8	72	10.5	350	2.5
KHB-25-F6	48.4	38.9	24	32	9	35	13.9	57.2	81	13	350	3.5
KHM-32-F6	54.8	44.5	27	38	9.8	39	15.9	66.7	96	15	350	6.4
KHM-40-F6	64.3	51.6	30	42	12.1	48	18.3	79.4	113	17	350	9.7
KHM-50-F6	80.2	67.6	37	52	12.1	57	22.2	96.8	134	21	350	14.7

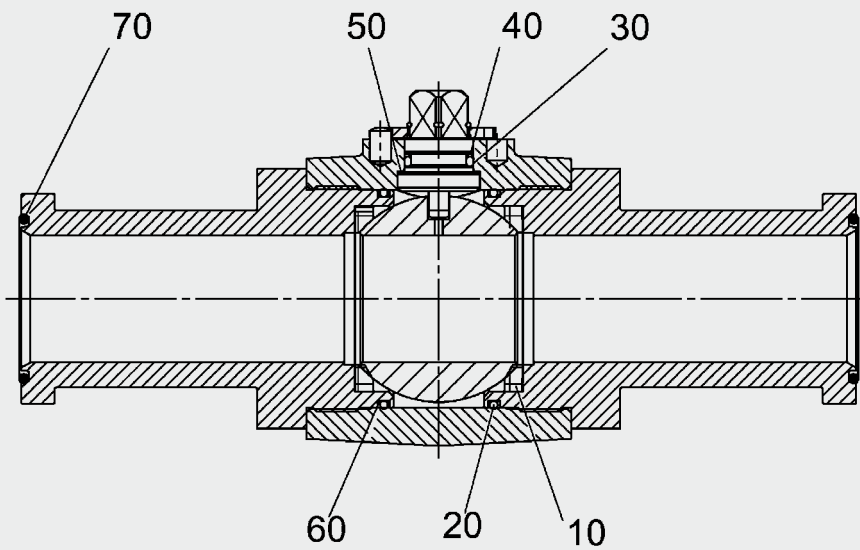
Spare parts

(Seal kit)

KHB, DN 16 - 25



KHM, DN 32 - 50



Seal kit	Order No. = Part No.
DN 16	554819
DN 20	703153
DN 25	703117
DN 32	703142
DN 40	703030
DN 50	703031

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

NOTE

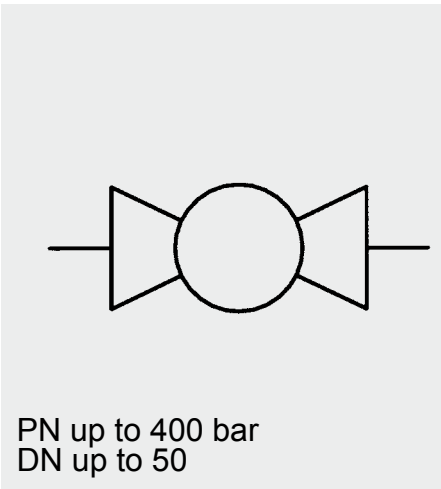
The information in this brochure relates to the operating conditions and applications described.

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

Subject to technical modifications.

SAE Threaded Flange Ball Valves

KHBG-F3/6 / KHMG-F3/6



Model code
(also order example)

KHBG 20 F3 11141 02 X ...

Designation

KHBG = Block type ball valve - threaded flange
DN 16 - 25

KHMG = Sleeve type ball valve - threaded flange
DN 32 - 50

Nominal bore

SAE flange type

F3
F6

Materials

Housing, connection adapters and control spindle

1 = steel
3 = stainless steel

Ball

1 = steel
3 = stainless steel

Ball seals

1 = POM

Control spindle seal and connection seal

4 = FKM (Viton)

SAE threaded flange

1 = steel
3 = stainless steel

Handle

02 = aluminium clamped handle, cranked
06 = steel bolt-on handle, cranked

Series

(determined by manufacturer)

Surface protection

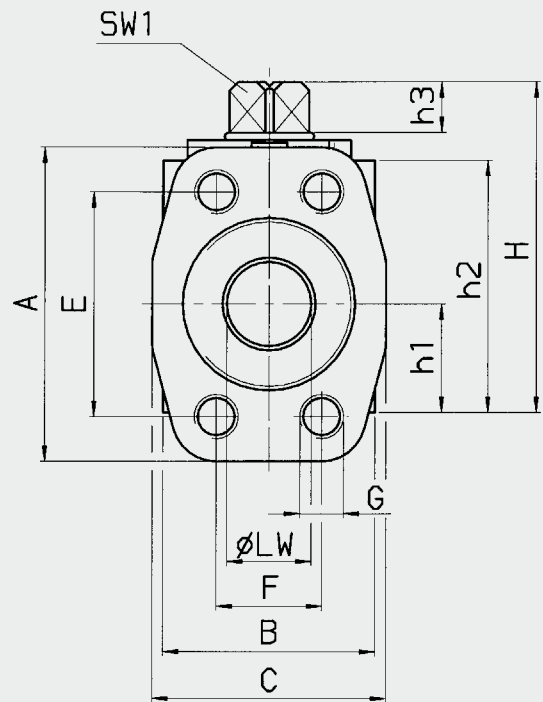
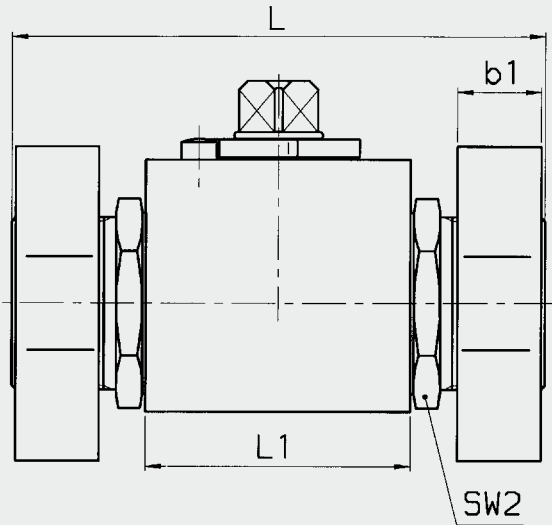
... = phosphate-plated (no details required)
A = zinc-plated, chrome (VI)-free

Technical specifications

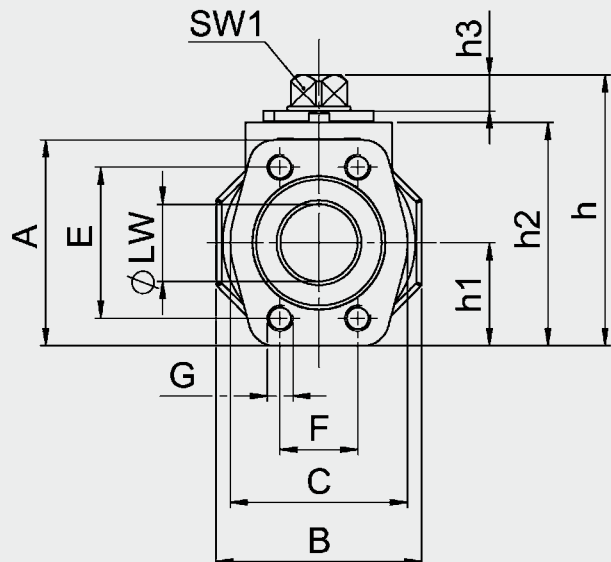
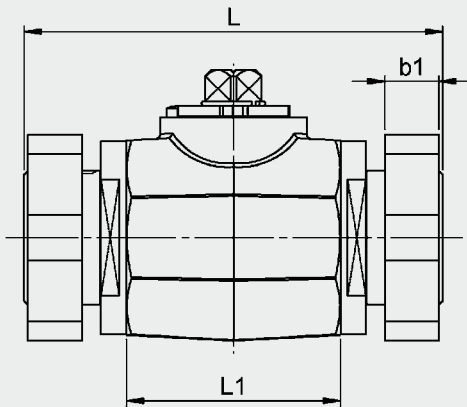
Type of construction:	Block type KHBG DN 16 - 25 Sleeve type KHMG DN 32 - 50
Type of connection:	ISO 6162, Table 1 and 2 (SAE J 518 c)
Flange connections:	SAE threaded flange
Mounting position:	Optional
Ambient temperature:	-10 °C to +80 °C
Nominal pressure:	up to PN 400 bar
Operating fluids:	Mineral 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, see Spare Parts List

Dimensions

SAE Threaded flange ball valve
KHBG



KHMG



KHBG / KHMG - F3

Type	SAE size	DN	LW	L	L1	H	h1	h2	h3	B	SW1	SW2
KHBG-16-F3	1/2"	16	13	104	47	62	19	45	11	38	12	32
KHBG-20-F3	3/4"	20	19	121	60	75	24.5	57	11.6	48	14	41
KHBG-25-F3	1"	25	25	133	65	82	28.5	64	11.6	57	14	50
KHMG-32-F3	1 1/4"	32	30	163	83.4	105.2	40	86.7	12	80	17	60
KHMG-40-F3	1 1/2"	40	38	168	91	116.2	45	97.7	12	90	17	70
KHMG-50-F3	2"	50	48	186	100	134.2	55.5	115.7	12	111	17	80

Flange F3

Type	b1	A	C	E	F	G	Nom. pressure PN [bar]	Weight (kg)
KHBG-16-F3	16	57	47	38.1	17.5	M8	350	1.1
KHBG-20-F3	18	66	49	47.6	22.3	M10	350	1.9
KHBG-25-F3	19	71	53	52.4	26.2	M10	350	2.4
KHMG-32-F3	21	80	69	58.7	30.2	M10	275	3.8
KHMG-40-F3	24	95	77	69.9	35.7	M12	210	4.5
KHMG-50-F3	24	103	89	77.8	42.9	M12	210	6.5

KHBG / KHMG - F6

Type	SAE size	DN	LW	L	L1	H	h1	h2	h3	B	SW1	SW2
KHBG-16-F6	1/2"	16	13	104	47	62	19	45	11	38	12	32
KHBG-20-F6	3/4"	20	19	121	60	75	24.5	57	11.6	48	14	46
KHBG-25-F6	1"	25	25	133	65	82	28.5	64	11.6	57	14	50
KHMG-32-F6	1 1/4"	32	30	163	83.4	105.2	40	86.7	12	80	17	60
KHMG-40-F6	1 1/2"	40	38	168	91	116.2	45	97.7	12	90	17	70
KHMG-50-F6	2"	50	48	186	100	134.2	55.5	115.7	12	111	17	80

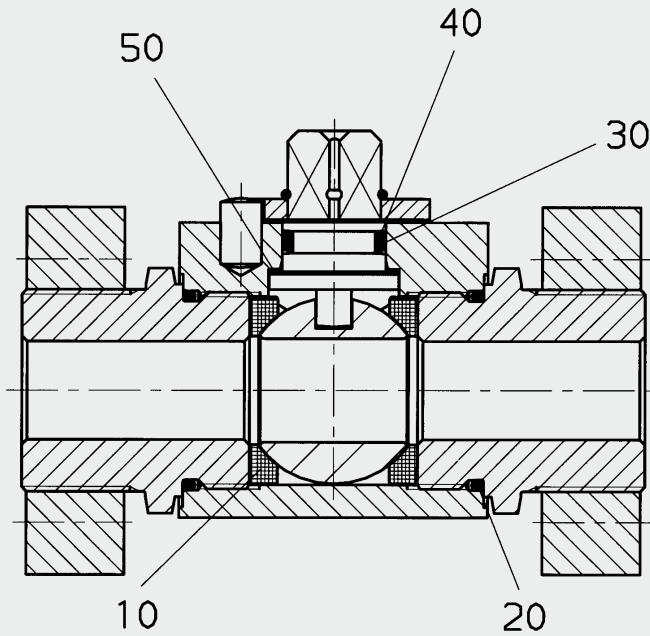
Flange F6

Type	b1	A	C	E	F	G	Nom. pressure PN [bar]	Weight (kg)
KHBG-16-F6	16	57	47	40.5	18.2	M8	400	1.2
KHBG-20-F6	19	71	53	50.8	23.8	M10	350	2
KHBG-25-F6	21	80	66	57.2	27.8	M12	350	2.6
KHMG-32-F6	24	94	77	66.6	31.8	M14	350	4
KHMG-40-F6	24	103	89	79.3	36.5	M16	350	4.7
KHMG-50-F6	30	135	123	96.9	44.5	M20	350	7.2

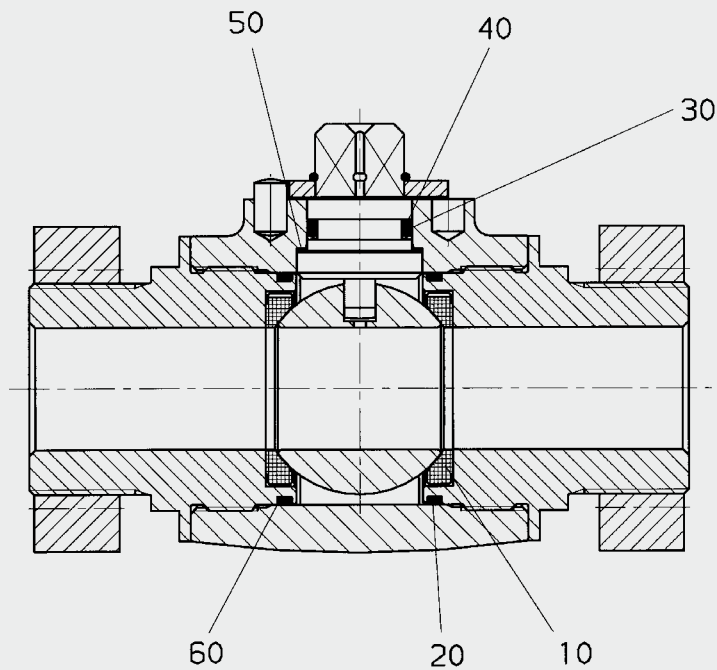
Spare parts

(Seal kit)

KHBG, DN 16 - 25



KHMG, DN 32 - 50



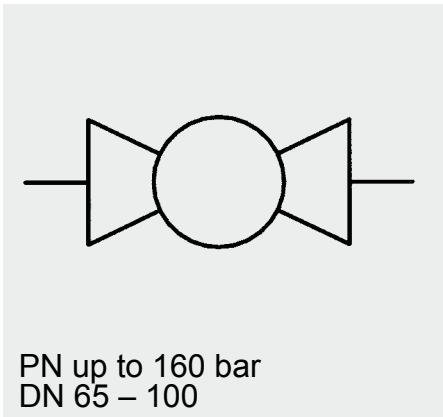
Seal kit	Order No. = Part No.
DN 16	703003
DN 20	703016
DN 25	700978
DN 32	703025
DN 40	703015
DN 50	701293

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.



SAE Fixed Flange Ball Valves KHF3

Model code
(also order example)

KHF3 65 1114 05 X A ...

Designation

KHF3 = Fixed flange ball valve DN 65 - 100

Nominal bore

Materials

Housing, housing flange, control spindle

- 1 = steel
- 3 = stainless steel

Ball

- 1 = steel
- 3 = stainless steel

Ball seal

- 1 = POM (polyacetal)

Soft seal

- 4 = FKM (Viton)

(other materials on request)

Handle

- 05 = steel bolt-on handle, straight

Series

(determined by manufacturer)

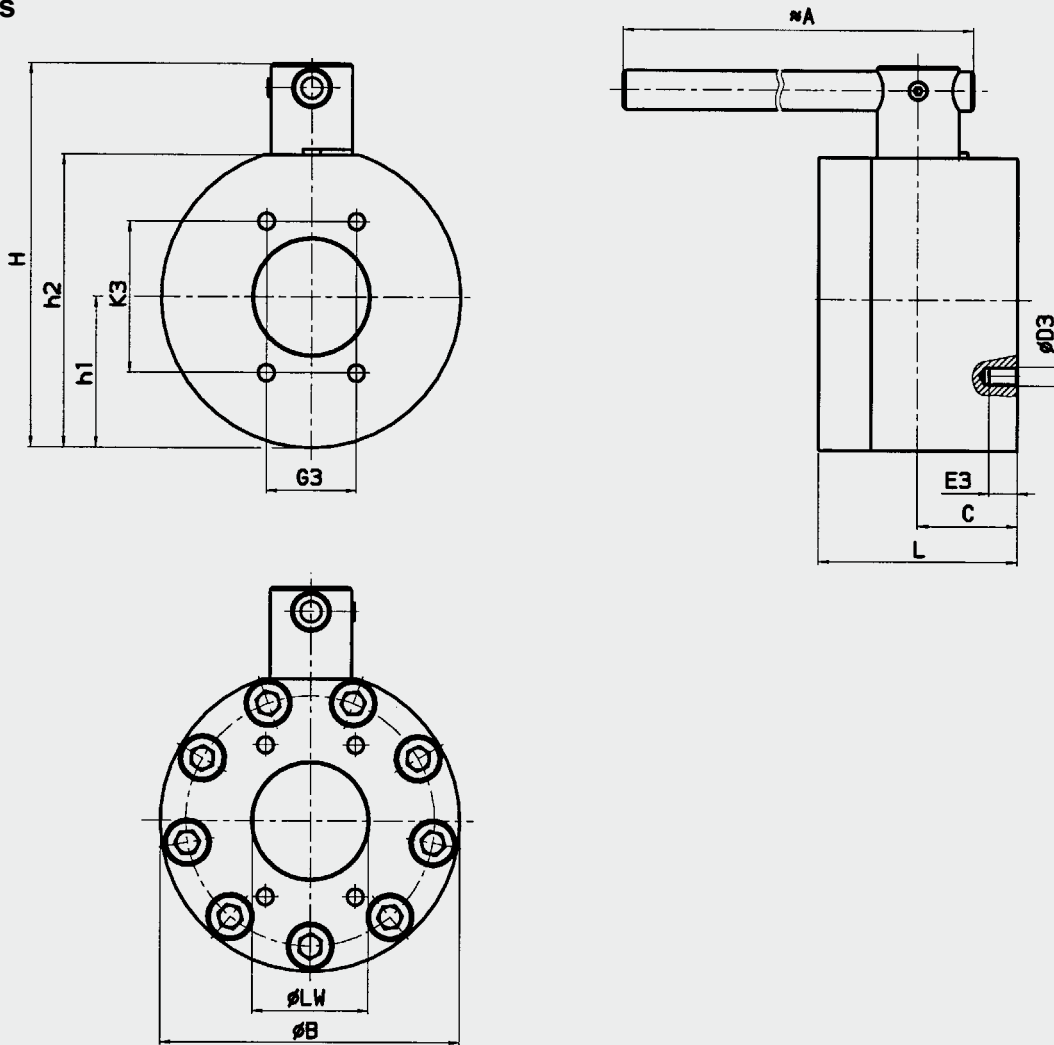
Surface protection

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

Version

- ... = metric connection thread (no details required)
- UNC = UNC connection thread

Dimensions KHF3



Connection type			Housing dimensions								PN [bar]	Weight [kg]
	DN	SAE size	LW	L	C	H	h1	h2	B	A		
Fixed flange to ISO 6162 Table 1 (SAE J 518 c) SAE - F3	65	2 1/2"	63	150	75	274	99	193	198	800	160	33.3
	80	3"	76	140	70	290	105	209	210	800	100	40.0
	100	4"	100	170	85	332	129	251	258	800	25	59.5

DN	SAE Size	Connection dimensions - metric				Connection dimensions - UNC			
		K3	G3	D3	E3	K3	G3	D3	E3
65	2 1/2"	88.9	50.8	M12	20	88.9	50.8	1/2-13 UNC	20
80	3"	106.4	61.9	M16	24	106.4	61.9	5/8-11 UNC	24
100	4"	130.2	77.8	M16	24	130.2	77.8	5/8-11 UNC	24

Technical specifications

Mounting position:	optional
Ambient temperature:	-10 °C to +80 °C
Nominal pressure:	up to PN 160 bar (see pressure range)
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
Accessories:	All ball valves can be supplied with the following options: Actuator Limit switch Lock

NOTE

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

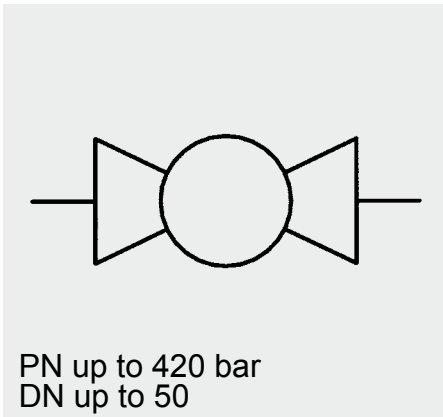
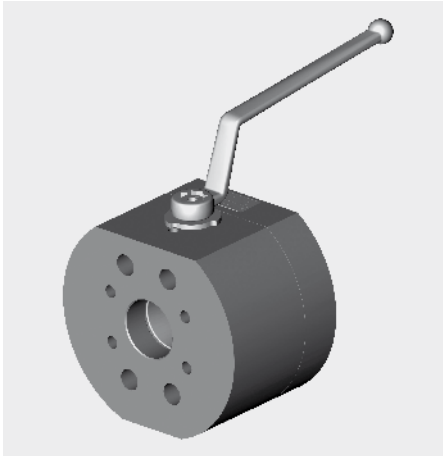
For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

HYDAC Accessories GmbH
Hirschbachstr. 2
66280 Sulzbach/Saar
Tel.: +49 (0)6897 - 509-1001
Fax: +49 (0)6897 - 509-1009
Internet: www.hydac.com
E-Mail: info@hydac.com

SAE Fixed Flange Ball Valves

KHF3/6



Model code

(also order example)

KHF3/6 20 1114 16 X A

Designation

KHF3/6 = Fixed flange ball valve

Nominal 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

- 16 = steel bolt-on handle, cranked, fitted
- 18 = stainless steel bolt-on handle, cranked, fitted
- 36 = steel bolt-on handle, cranked, long, fitted

Series

(determined by manufacturer)

Surface protection

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

Technical specifications

Types of connection:	SAE fixed flanges to ISO 6162, Table 1 and 2 (SAE J 518 c), either with metric or UNC thread
Mounting position:	Optional
Ambient temperature:	-10 °C to +80 °C
Nominal pressure:	420 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

Metric thread version

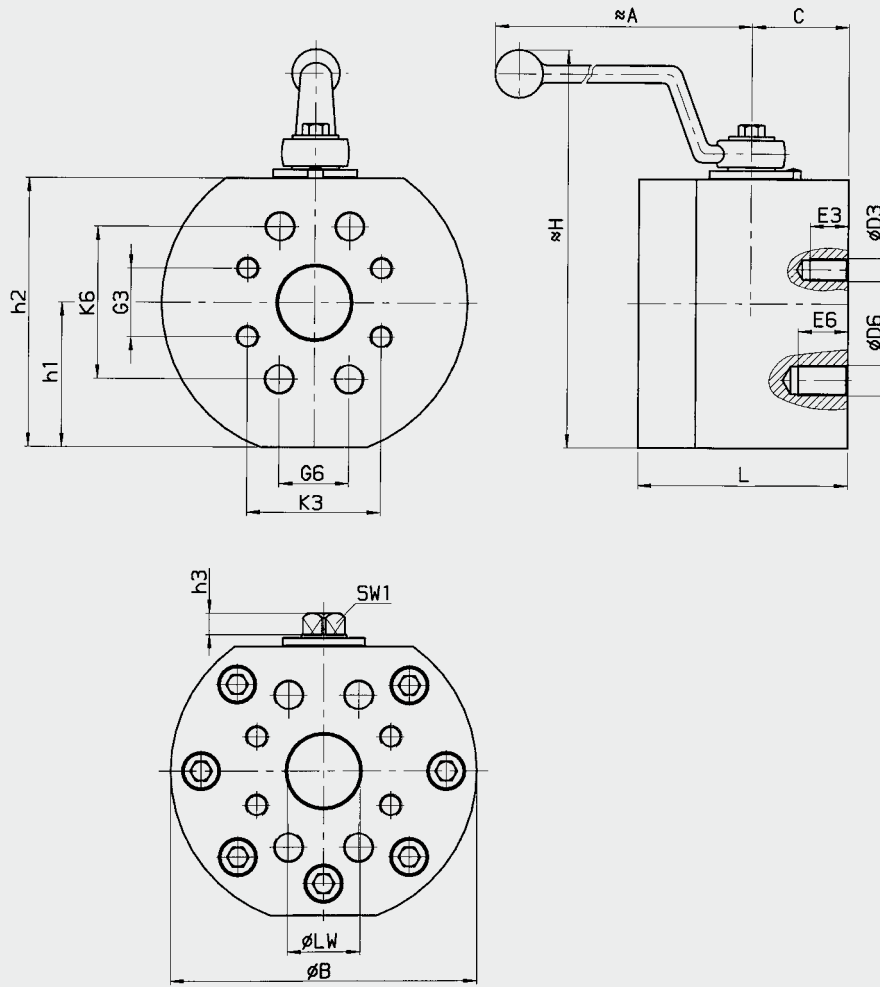
Connection type	SAE Size	Nominal bore / Type	Nominal bore DN	Nominal pressure PN [bar] *	Weight [kg]
Fixed flange connection to ISO 6162 Table 1+2 (SAE J 518 c) F3/F6	1/2 "	KHF3/6 - 16 - 1114-16X-G	16	420	2.5
	3/4 "	KHF3/6 - 20 - 1114-16X-G	20	420	3.9
	1 "	KHF3/6 - 25 - 1114-16X-G	25	420	6.0
	1 1/4 "	KHF3/6 - 32 - 1114-36X-G-M12	32	420	11.6
	1 1/4 "	KHF3/6 - 32 - 1114-36X-G-M14	32	420	11.6
	1 1/2 "	KHF3/6 - 40 - 1114-36X-G	40	420	16.4
	2 "	KHF3/6 - 50 - 1114-36X-G	50	420	24.9

UNC thread version

Connection type	SAE Size	Nominal bore / Type	Nominal bore DN	Nominal pressure PN [bar] *	Weight [kg]
Fixed flange connection to ISO 6162 Table 1+2 (SAE J 518 c) F3/F6	1/2 "	KHF3/6 - 16 - 1114-16X-UNC	16	420	2.5
	3/4 "	KHF3/6 - 20 - 1114-16X-UNC	20	420	3.9
	1 "	KHF3/6 - 25 - 1114-16X-UNC	25	420	6.0
	1 1/4 "	KHF3/6 - 32 - 1114-36X-UNC	32	420	11.6
	1 1/2 "	KHF3/6 - 40 - 1114-36X-UNC	40	420	16.4
	2 "	KHF3/6 - 50 - 1114-36X-UNC	50	420	24.9

* = The permitted operating pressure for the flange connection must be adhered to.

Dimensions



KHF3/6

Type	SAE size	DN	LW	L	C	H	h1	h2	h3	B	SW1	A
KHF3/6-16	1/2"	16	13	75	32.5	136.6	37.5	77.5	11	79	12	169
KHF3/6-20	3/4"	20	19	80	34.3	155.2	46	90	11.6	99	14	169
KHF3/6-25	1"	25	25	88	38	167.2	55	102	11.6	119	14	169
KHF3/6-32	1 1/4"	32	30	100	44	211.5	65	124	12	139	17	306
KHF3/6-40	1 1/2"	40	38	110	51	227.5	75	140	12	159	17	306
KHF3/6-50	2"	50	48	116	54	244	84	156.6	12	179	17	306

Connection dimensions - metric

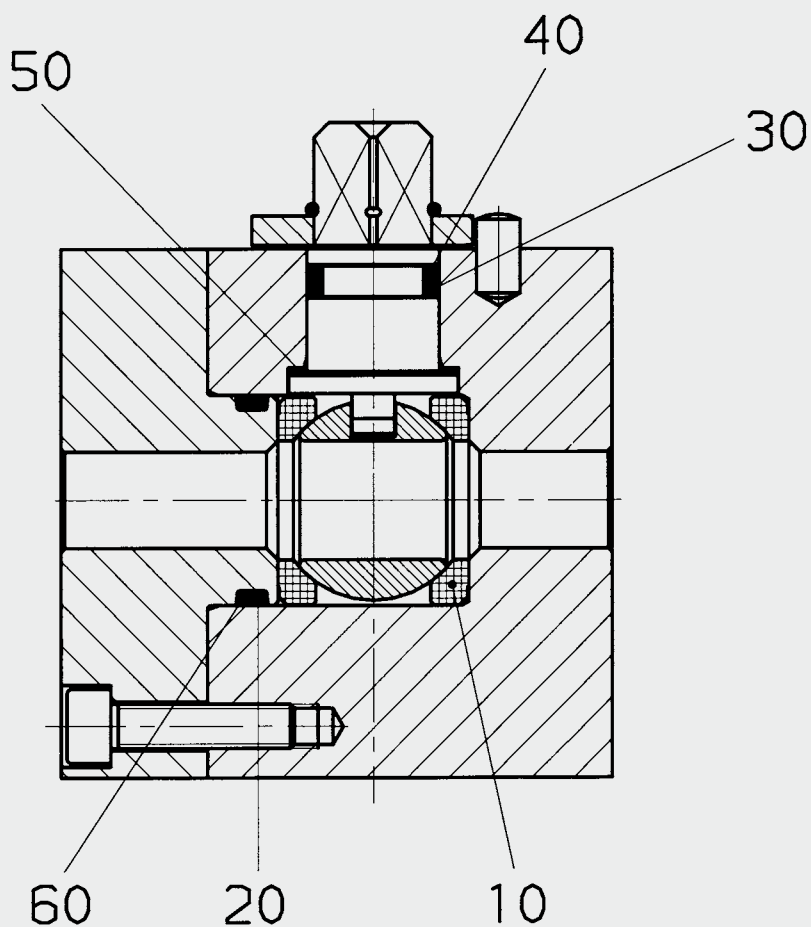
Type	K3	G3	D3	E3	K6	G6	D6	E6
KHF3/6-16	38.1	17.5	M8	16	40.5	18.2	M8	16
KHF3/6-20	47.6	22.3	M10	18	50.8	23.8	M10	18
KHF3/6-25	52.4	26.2	M10	18	57.2	27.8	M12	21
KHF3/6-32 / M12	58.7	30.2	M10	18	66.6	31.8	M12	21
KHF3/6-32 / M14	58.7	30.2	M10	18	66.6	31.8	M14	21
KHF3/6-40	69.9	35.7	M12	20	79.3	36.5	M16	26
KHF3/6-50	77.8	42.9	M12	22	96.8	44.5	M20	34

Connection dimensions - UNC

Type	K3	G3	D3	E3	K6	G6	D6	E6
KHF3/6-16	38.1	17.5	5/16-18-UNC	16	40.5	18.2	5/16-18-UNC	16
KHF3/6-20	47.6	22.3	3/8-16-UNC	18	50.8	23.8	3/8-16-UNC	19
KHF3/6-25	52.4	26.2	3/8-16-UNC	21	57.2	27.8	7/16-14-UNC	21
KHF3/6-32	58.7	30.2	7/16-14-UNC	18	66.6	31.8	1/2-13-UNC	21
KHF3/6-40	69.9	35.7	1/2-13-UNC	26	79.3	36.5	5/8-11-UNC	26
KHF3/6-50	77.8	42.9	1/2-13-UNC	22	96.8	44.5	3/4-10-UNC	30

Spare parts

(Seal kit)



Seal kit	Order No. = Part number
DN 16	3015691
DN 20	3015694
DN 25	3015695
DN 32	3015696
DN 40	3015697
DN 50	3015698

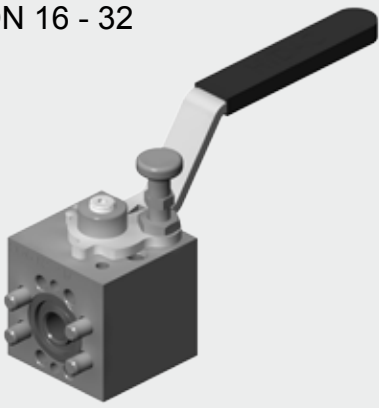
NOTE

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

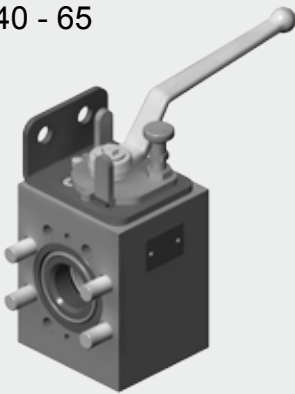
For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

DN 16 - 32



DN 40 - 65



PN up to 420 bar
DN up to 80

Direct Flange Ball Valves KHDF3 / KHDF6

Model code

(also order example)

KHDF3 16 1114 18X A X

Designation

KHDF3 = Direct flange ball valve 3000PSI
KHDF6 = Direct flange ball valve 6000PSI

Nominal bore

Materials

Housing, connection adapters and control spindle

1 = steel (standard)
3 = stainless steel

Ball

1 = steel (standard)
3 = stainless steel

Ball seal

1 = POM

Control spindle seal

2 = NBR (Perbunan)
4 = FKM (Viton) (Standard)

Handle

18 = stainless steel bolt-on handle, cranked DN16-32
16 = steel bolt-on handle, cranked DN40-80

Surface protection

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

Options

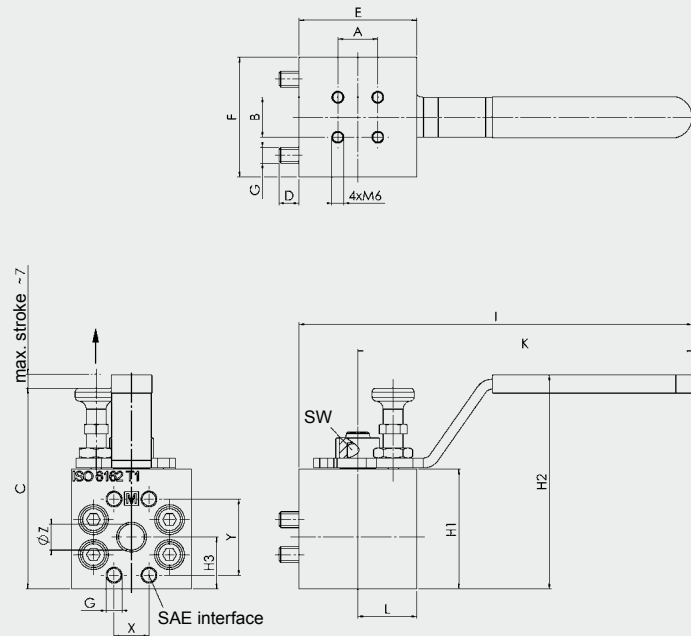
SO 760 = can be locked in open and closed position using padlock.
Padlock not supplied
I-1.300 = adapted for proximity switch M12,
monitoring of ball valve in either open, closed or both positions
I-1.200 = with standard proximity switch M12,
monitoring of ball valve in open position
I-3.200 = with 2 standard proximity switches M12,
monitoring of ball valve in open and closed positions

Note

For DN40-50-65 the ball is trunnion mounted (double bearing, easy operation)
Detent on open and closed position as standard
4 mounting bolts are supplied

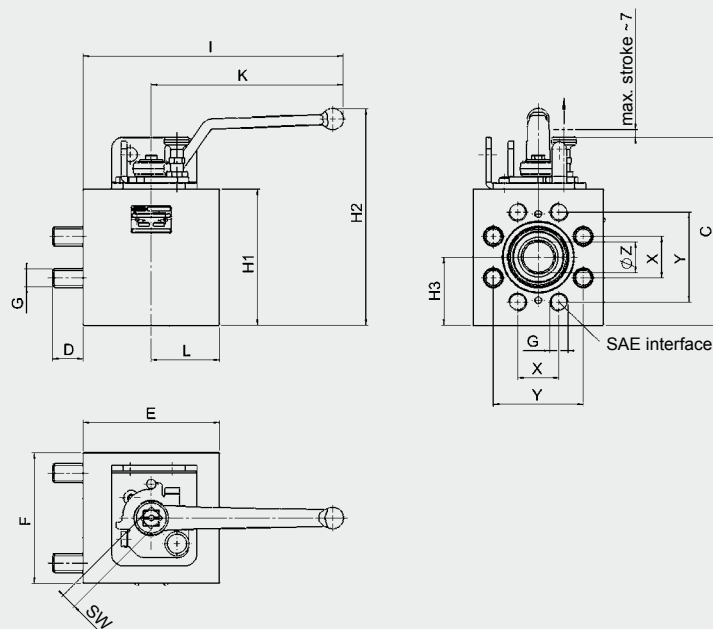
Dimensions

KHDF3



Type	A	B	C	D	E	F	G	H1	H2	H3	I	K	L	X	Y	SW	Z	PN		Proximity switch
																		bar	PSI	
KHDF3-16	20	20	100.6	10	59	60	M8	60	107.1	26	197	167	29.5	17.5	38.1	12	13	350	5000	
KHDF3-20	20	20	111	12.6	68	70	M10	70	118	32.5	206	170	32	22.3	47.6	14	19	350	5000	
KHDF3-25	25	25	116	11.6	69	75	M10	75	123	37.5	206	170	33	26.2	52.4	14	20	350	5000	
KHDF3-32	25	25	126	12	81	85	M10	85	133	42.5	209	170	42	30.2	58.7	14	25	250	3600	
KHDF3-40			165.5	19	84	94	M12	120	190.7	60	208	169	45	35.7	69.9	14	27	210	3000	M12
KHDF3-50			185.4	19	94	102	M12	140	238.7	70	275	228	47	42.9	77.8	17	35	210	3000	M12
KHDF3-65			200.4	19	114	120	M12	155	253.7	77.5	286	228	56	50.8	88.9	17	45	160	2300	M12
KHDF3-80			217	25.5	162	158	M16	171	258	85.5	381	300	81	61.9	106.4	22	55	100	1400	M18

KHDF6



Type	A	B	C	D	E	F	G	H1	H2	H3	I	K	L	X	Y	SW	Z	PN		Proximity switch
																		bar	PSI	
KHDF6-16	20	20	105.6	13.5	65	60	M8	65	112.1	31	200	167	32.5	18.2	40.5	12	13	400	5800	
KHDF6-20	20	20	116	15	71	75	M10	75	123	37.5	206	170	35	23.8	50.8	14	19	400	5800	
KHDF6-25	25	25	126	18	81	85	M12	85	133	42.5	209	170	42	27.8	57.2	14	25	400	5800	
KHDF6-32	25	25	141	20	81	100	M12	100	147	49.5	209	147	42	31.8	66.6	14	25	400	5800	
KHDF6-32	25	25	141	19	81	100	M14	100	147	49.5	209	170	42	31.8	66.6	14	25	400	5800	
KHDF6-40			165.4	27	120	115	M16	120	190.7	60	229	169	60	36.5	79.3	14	32	420	6000	M12
KHDF6-50			185.5	29	142	135	M20	140	238.8	70	299	228	71	44.5	96.8	17	35	420	6000	M12

Technical specifications

Types of connection	SAE fixed flanges to ISO 6161, Table 1 and 2 (SAE J 518c)
Mounting position	Optional
Ambient temperature	-10°C to +80°C
Nominal pressure	210 bar or 420 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

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.

HYDAC Accessories GmbH
Hirschbachstr. 2
66280 Sulzbach/Saar
Tel.: +49 (0)6897 - 509-1001
Fax: +49 (0)6897 - 509-1009
Internet: www.hydac.com
E-Mail: info@hydac.com

