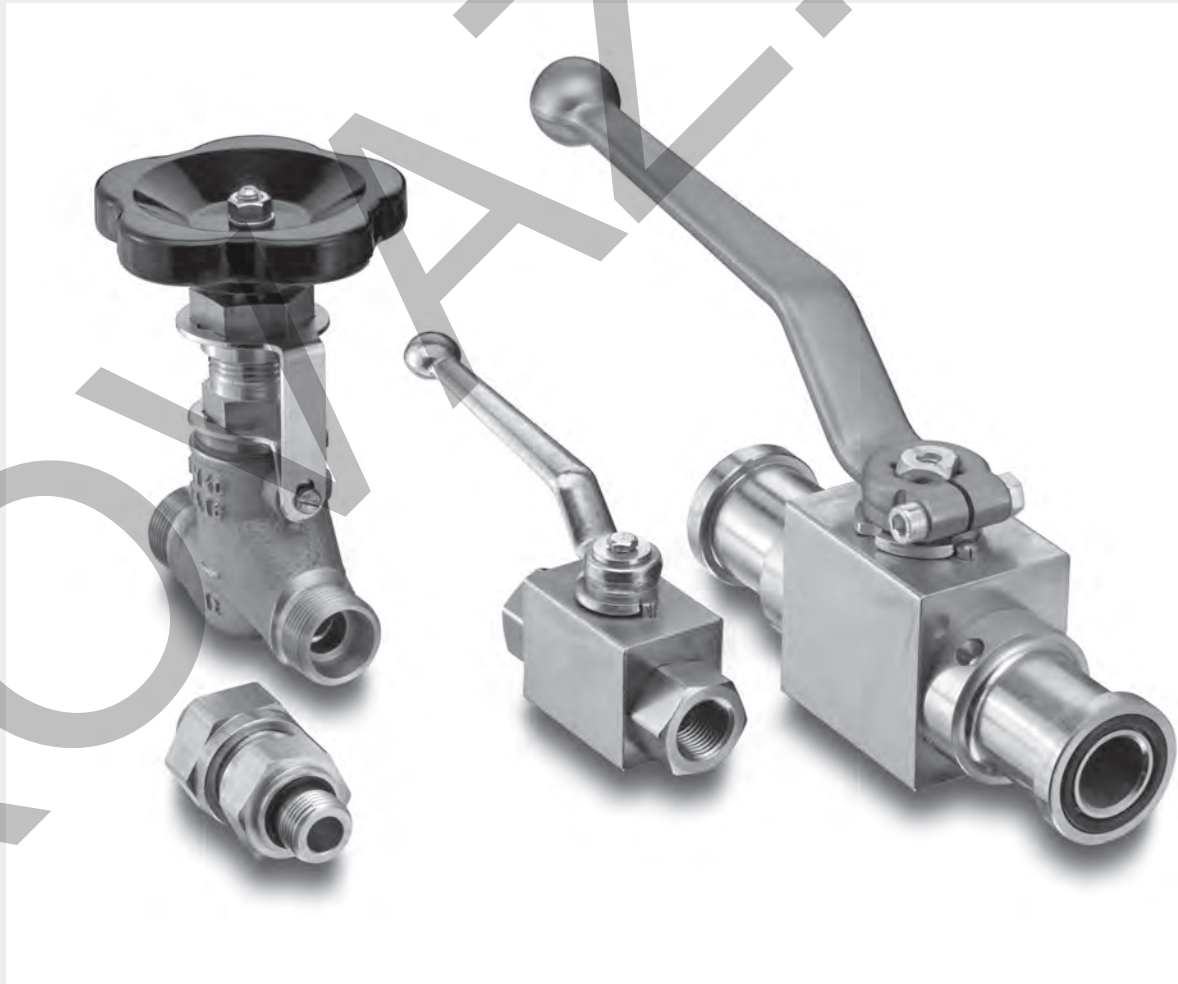
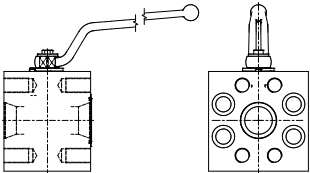
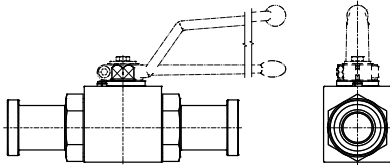
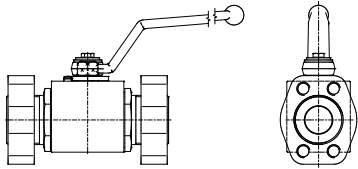




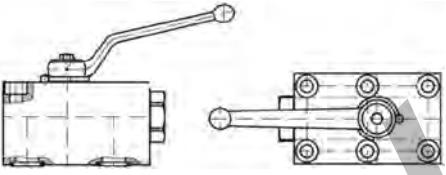
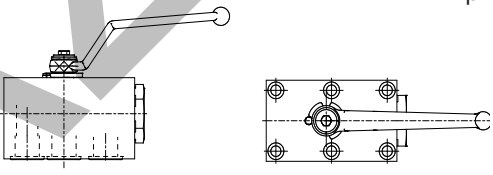
**EO<sup>®</sup> Ermeto Original  
Valves**



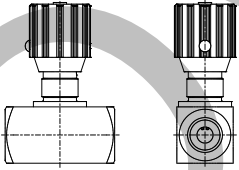
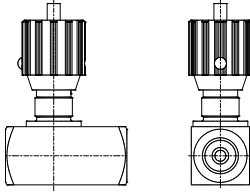
**Visual index SAE ball valves**

<p><b>KH-B1V (Steel CF)</b> p. 052</p>  <p>Ball valve with SAE Flange connection</p>	<p><b>KH-A (Steel CF)</b> p. 053</p>  <p>Ball valve with SAE Flange connection</p>
<p><b>KH-T (Steel CF)</b> p. 054</p>  <p>Ball valve with SAE Flange connection ISO 6162 (1/2)</p>	<p>More flange ball valves see catalogue 4162</p>

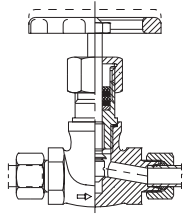
**Visual index ball valves for block structure**

<p><b>KHBLOCK</b> p. 055</p>  <p>2-way ball valve for block structure</p>	<p><b>KHBLOCK -3-way</b> p. 056</p>  <p>3-way ball valve for block structure</p>
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**Visual index Flow Control Valves**

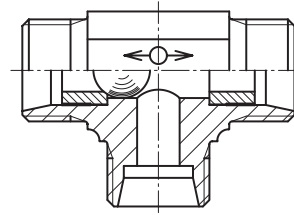
<p><b>RDV</b> p. 058</p>  <p>Flow Control Valve (Female BSPP thread ISO 1179-1)</p>	<p><b>RDVR</b> p. 059</p>  <p>Flow Control Check Valve (Female BSPP thread ISO 1179-1)</p>
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Visual index shut off valves



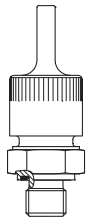
EO tube end

**VDHA**  
p. O60



EO 24° cone end

**WV**  
p. O61



Air-bleed valves

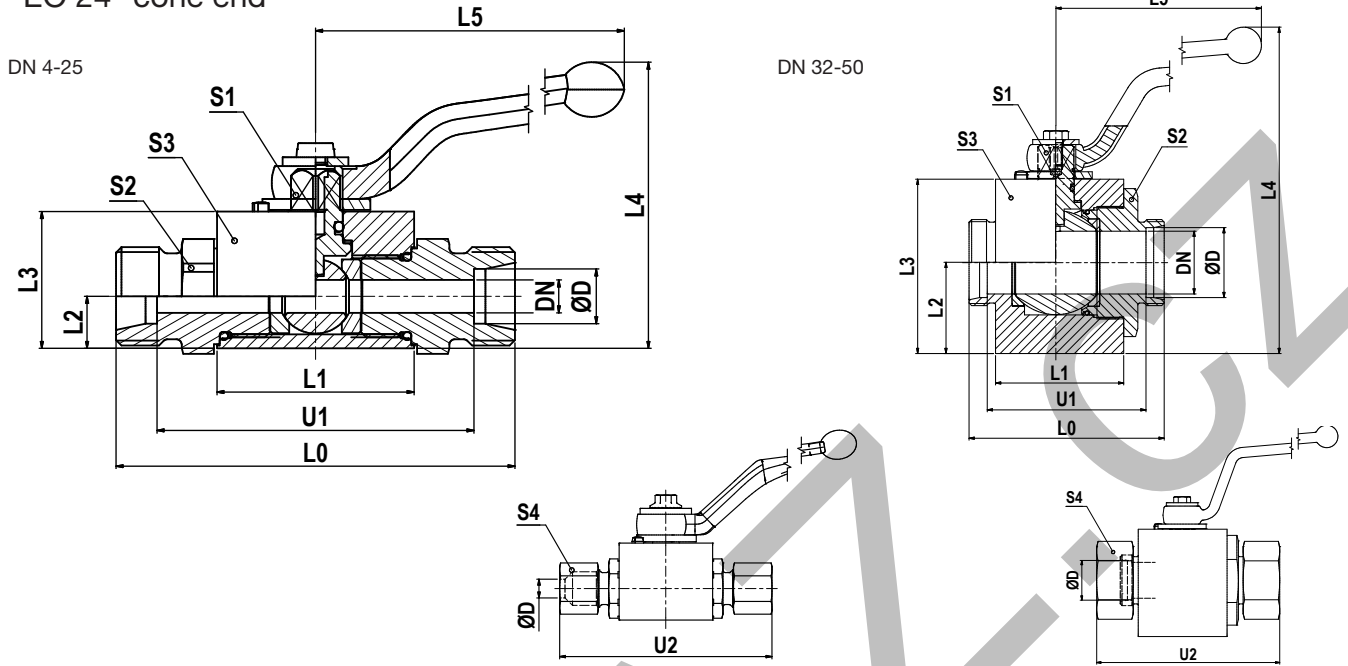
**ELA/ELAE**  
p. O62/O63

KOLVANZ.COM



## KH 2-way ball valve steel

EO 24° cone end



Series	D	DN	L0	L1	L2	L3	L4	L5	U1	U2	S1	S2	S3	S4	Weight g/1 piece	Order code	PN (bar)	
L <sup>1)</sup>	06	4	67	36.0	9.5	25	54.5	76	53	82	7	19	20	14	195	KH06LCFX	500	
	08	6	67	36.0	9.5	25	54.5	76	53	82	7	19	20	17	190	KH08LCFX	500	
	10	8	75	45.0	14.5	35	67.5	100	61	90	8	24	30	19	420	KH10LCFX	500	
	12	10	75	45.0	14.5	35	67.5	100	61	90	8	24	30	22	410	KH12LCFX	500	
	15	13	83	51.0	17.0	40	93.0	113	69	99	10	30	35	27	631	KH15LCFX	500	
	18	16	82	50.0	20.0	45	98.0	113	67	99	10	36	45	32	850	KH18LCFX	420	
	22	20	99	60.0	24.0	55	120.0	171	84	116	14	41	45	36	1210	KH22LCFX	420	
	28	25	108	70.0	26.0	60	125.0	171	93	126	14	50	55	41	1750	KH28LCFX	420	
	35	32/25	116	70.0	26.0	60	125.0	171	95	138	14	50	55	50	1820	KH35LDN25CFX	420	
	35	32	121	79.0	48.5	94	187.0	228	100	143	17	60	Ø97	50	4888	KH35LCFX	420	
	42	40/25	121	70.0	26.0	60	125.0	171	99	144	14	55	55	60	1940	KH42LDN25CFX	420	
	42	40	118	77.5	53.5	104	197.0	228	96	141	17	75	Ø107	60	5590	KH42LCFX	420	
	S <sup>2)</sup>	08	5	73	36.0	9.5	25	54.5	76	59	88	7	19	20	19	214	KH08SCFX	500
		10	6	73	36.0	9.5	25	54.5	76	58	90	7	19	20	22	220	KH10SCFX	500
		12	8	77	45.0	14.5	35	67.5	100	62	94	8	24	30	24	430	KH12SCFX	500
14		10	81	45.0	14.5	35	67.5	100	65	100	8	24	30	27	440	KH14SCFX	500	
16		13	87	51.0	17.0	40	93.0	113	70	106	10	30	35	30	649	KH16SCFX	500	
20		16	90	50.0	20.0	45	98.0	113	69	112	10	36	45	36	900	KH20SCFX	420	
25		20	107	60.0	24.0	55	120.0	171	83	131	14	41	45	46	1290	KH25SCFX	420	
30		25	120	70.0	26.0	60	125.0	171	93	146	14	50	55	50	1880	KH30SCFX	420	
38		32/25	134	70.0	26.0	60	125.0	171	102	163	14	55	55	60	1950	KH38SDN25CFX	420	
38		32	127	73.0	48.5	94	187.0	228	95	156	17	60	Ø97	60	4740	KH38SCFX	420	

<sup>1)</sup>L = light series; <sup>2)</sup>S = heavy series

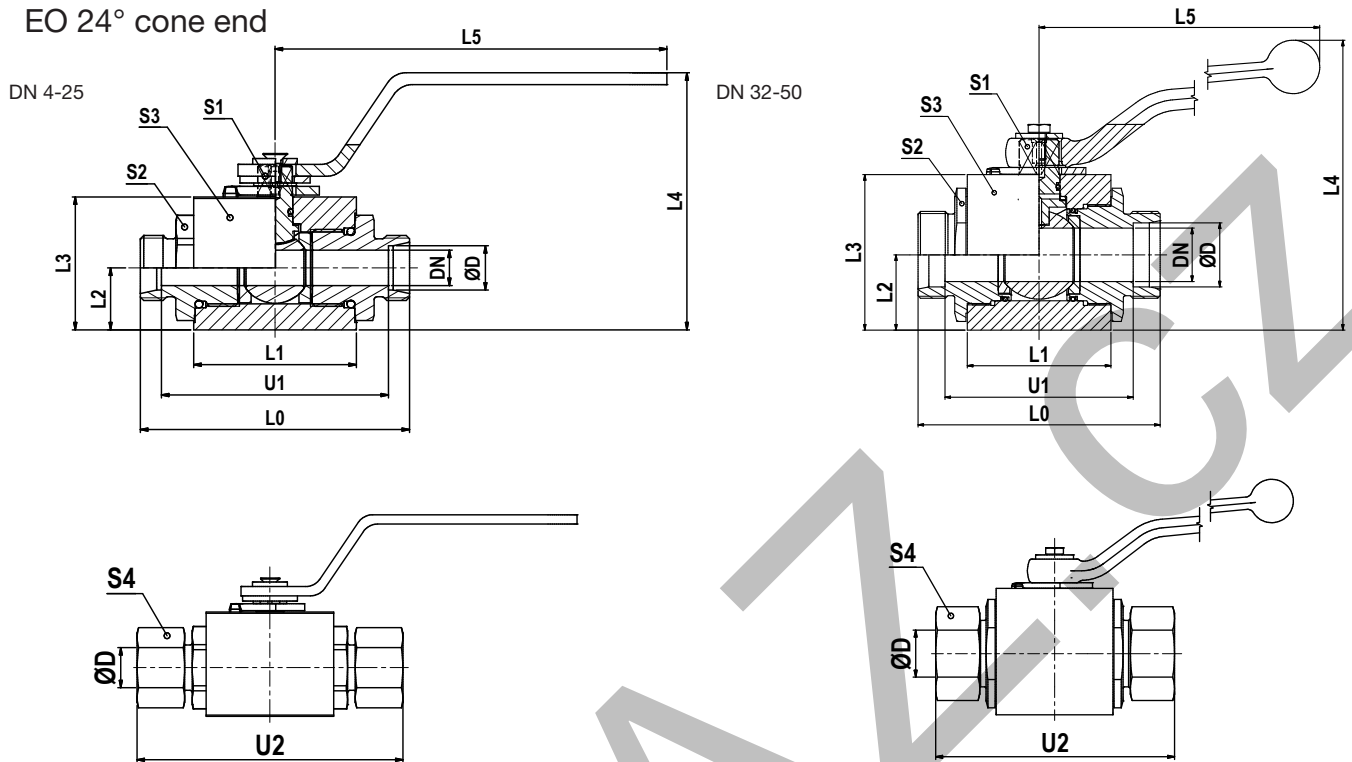
$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

Delivery without nut and ring.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH06LCFX	POM / NBR

## KH 2-way ball valve stainless steel

EO 24° cone end



Series	D	DN	L0	L1	L2	L3	L4	L5	U1	U2	S1	S2	S3	S4	Weight g/1 piece	Order code	PN (bar)
L <sup>1)</sup>	06	4	73	41.5	13.5	30.0	54	80.0	58.5	88	7	22	30	14	391	<b>KH06L71X</b>	500
	08	6	73	41.5	13.5	30.0	54	80.0	58.5	88	7	22	30	17	392	<b>KH08L71X</b>	500
	10	8	87	53.0	18.0	40.0	82	132.5	73.0	102	8	30	40	19	833	<b>KH10L71X</b>	500
	12	10	87	53.0	18.0	40.0	82	132.5	73.0	102	8	30	40	22	812	<b>KH12L71X</b>	500
	15	12	91	55.0	21.0	45.0	87	132.5	76.5	107	10	32	45	27	1018	<b>KH15L71X</b>	500
	18	12	91	55.0	21.0	45.0	87	132.5	75.5	108	10	32	45	32	1059	<b>KH18L71X</b>	500
	22	20	105	65.0	31.0	65.0	118	190.0	89.5	122	14	46	65	36	2427	<b>KH22L71X</b>	400
	28	25	112	71.0	38.0	75.0	128	190.0	96.5	130	14	50	75	41	3313	<b>KH28L71X</b>	400
	35	32	145	86.0	45.0	93.0	174	320.0	123.5	167	19	70	Ø100	50	6230	<b>KH35L71X</b>	400
	42	40	150	92.0	52.0	104.5	185	320.0	127.5	173	19	80	Ø110	60	7706	<b>KH42L71X</b>	400
S <sup>2)</sup>	08	4	76	41.5	13.5	30.0	54	80.0	61.5	91	7	22	30	19	390	<b>KH08S71X</b>	500
	10	6	76	41.5	13.5	30.0	54	80.0	60.5	91	7	22	30	22	406	<b>KH10S71X</b>	500
	12	8	89	53.0	18.0	40.0	82	132.5	74.0	106	8	30	40	24	855	<b>KH12S71X</b>	500
	14	10	93	53.0	18.0	40.0	82	132.5	77.0	112	8	30	40	27	850	<b>KH14S71X</b>	500
	16	12	96	55.0	21.0	45.0	87	132.5	78.5	115	10	32	45	30	1050	<b>KH16S71X</b>	500
	20	12	99	55.0	21.0	45.0	87	132.5	77.5	121	10	32	45	36	1090	<b>KH20S71X</b>	500
	25	20	113	65.0	31.0	65.0	118	190.0	88.5	137	14	46	65	46	2490	<b>KH25S71X</b>	400
	30	25	124	71.0	38.0	75.0	128	190.0	96.5	150	14	50	75	50	3430	<b>KH30S71X</b>	400
	38	32	145	86.0	45.0	93.0	174	320.0	112.5	174	19	70	Ø100	60	5881	<b>KH38S71X</b>	400

1) L = light series; 2) S = heavy series

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

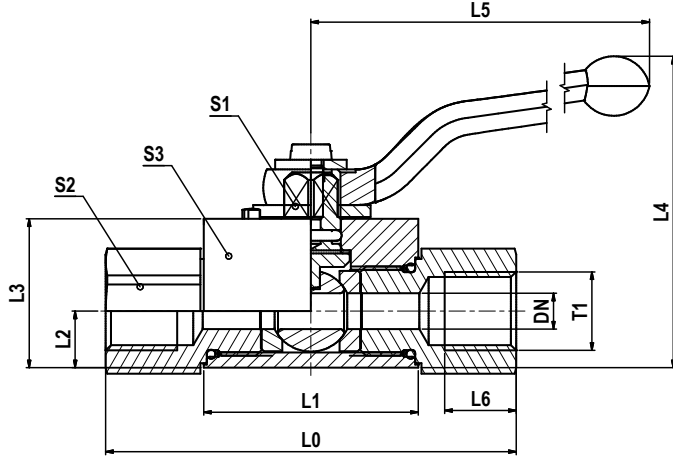
Delivery without nut and ring.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Stainless Steel	71	KH06L71X	POM / NBR

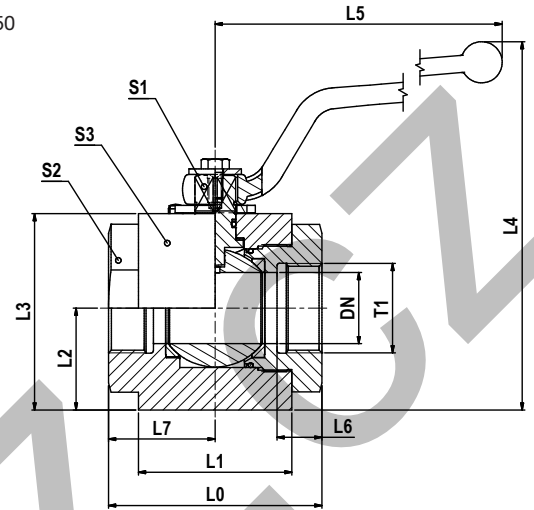
## KH 2-way BSPP ball valve steel

Female BSPP thread (ISO 1179-1)

DN 4-25



DN 32-50



T1	DN	L0	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	Weight g/1 piece	Order code	PN (bar)
G 1/8	5	69	36	9.5	25.0	54.5	76	12	-	7	19	20	220	<b>KH1/8CFX</b>	500
G 1/4	6	69	36	9.5	25.0	54.5	76	12	-	7	19	20	210	<b>KH1/4CFX</b>	500
G 3/8	10	73	45	14.5	35.0	67.5	100	14	-	8	24	30	430	<b>KH3/8CFX</b>	500
G 1/2	13	82	51	17.0	40.0	93.0	113	15	-	10	30	35	670	<b>KH1/2CFX</b>	500
G 5/8	16	88	50	20.0	45.0	98.0	113	18	-	10	36	45	973	<b>KH5/8CFX</b>	420
G 3/4	20	93	60	24.0	55.0	120.0	171	18	-	14	41	45	1280	<b>KH3/4CFX</b>	420
G 1	25	115	70	26.0	60.0	125.0	171	20	-	14	50	55	1982	<b>KH1CFX</b>	420
G 1 1/4	32	110	80	48.5	94.0	187.0	228	22	55	17	60	Ø97	4888	<b>KH11/4CFX</b>	420
G 1 1/4	32/25	134	70	26.0	60.0	125.0	171	22	-	14	50	55	2066	<b>KH11/4DN25CFX</b>	420
G 1 1/2	40	114	82	53.5	104.0	197.0	228	24	57	17	75	Ø107	6330	<b>KH11/2CFX</b>	420
G 1 1/2	40/25	139	70	26.0	60.0	125.0	171	24	-	14	55	55	2200	<b>KH11/2DN25CFX</b>	420
G 2	50	133	100	61.5	119.5	211.5	306	26	65	17	85	Ø123	9220	<b>KH2CFX</b>	420

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

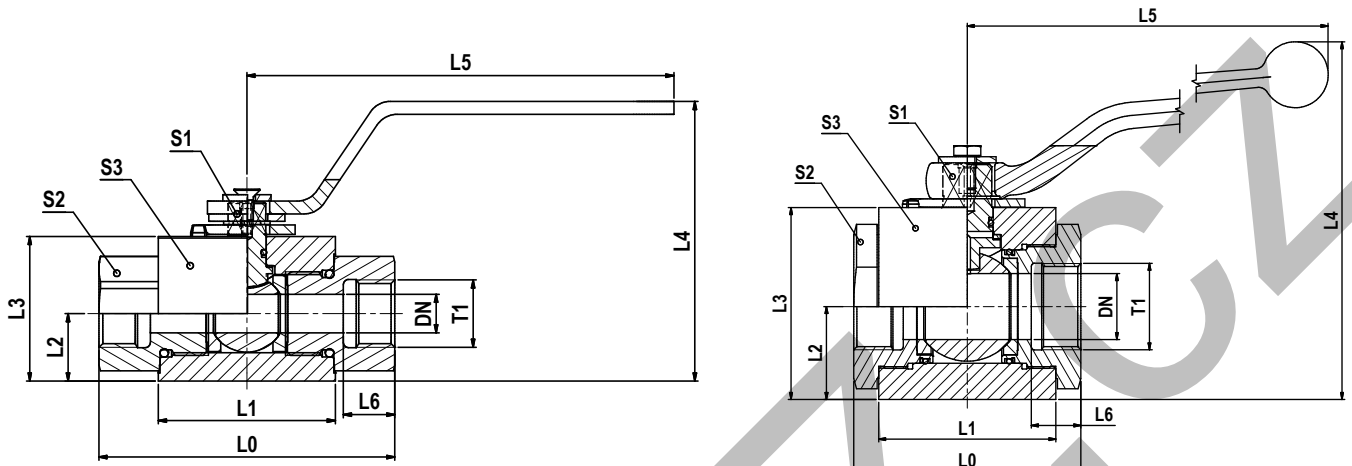
Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH1/8CFX	POM / NBR

## KH 2-way BSPP ball valve stainless steel

Female BSPP thread (ISO 1179-1)

DN 4-25

DN 32-50



T1	DN	L0	L1	L2	L3	L4	L5	L6	S1	S2	S3	Weight g/1 piece	Order code	PN (bar)
G 1/8	4	69	41.5	13.5	30.0	54	80.0	11.0	7	22	30	420	<b>KH1/871X</b>	500
G 1/4	6	75	41.5	13.5	30.0	54	80.0	14.0	7	22	30	427	<b>KH1/471X</b>	500
G 3/8	10	86	53.0	18.0	40.0	82	132.5	14.0	8	30	40	902	<b>KH3/871X</b>	500
G 1/2	12	92	55.0	21.0	45.0	87	132.5	16.0	10	32	45	1100	<b>KH1/271X</b>	500
G 3/4	20	111	65.0	31.0	65.0	118	190.0	18.0	14	46	65	2699	<b>KH3/471X</b>	400
G 1	25	122	71.0	38.0	75.0	128	190.0	20.0	14	50	75	3620	<b>KH171X</b>	400
G 1 1/4	32	110	86.0	45.0	93.0	174	320.0	24.0	19	70	Ø100	5688	<b>KH11/471X</b>	400
G 1 1/2	40	120	92.0	52.0	104.5	185	320.0	26.0	19	80	Ø110	7379	<b>KH11/271X</b>	400
G 2	50	140	97.0	59.5	119.5	201	320.0	27.5	19	95	Ø125	10086	<b>KH271X</b>	400

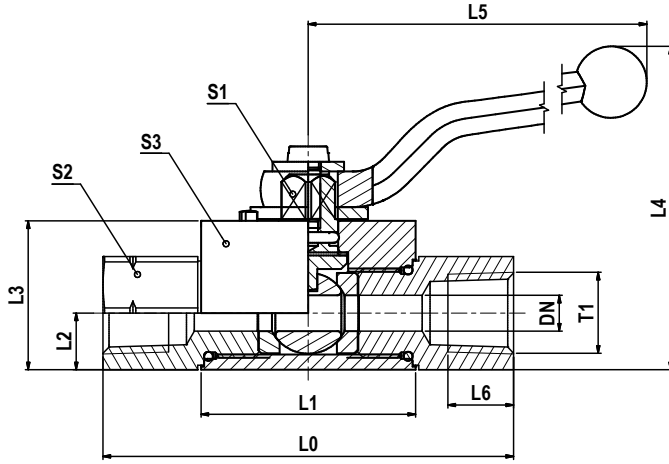
$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Stainless Steel	71	KH1/871X	POM / NBR

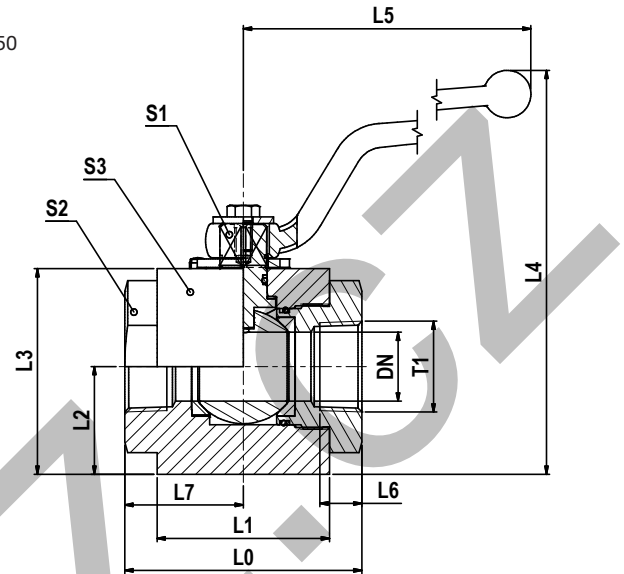
## KH 2-way NPT ball valve steel

Female NPT thread (SAE 476)

DN 4-25



DN 32-50



T1	DN	L0	L1	L2	L3	L4	L5	L6	L7	S1	S2	S3	Weight g/1 piece	Order code	PN (bar)
1/8-27 NPT	5	69	36	9.5	25.0	55.0	76	7.0	-	7	19	20	225	<b>KH1/8NPTCFX</b>	500
1/4-18 NPT	6	69	36	9.5	25.0	55.0	76	11.0	-	7	19	20	210	<b>KH1/4NPTCFX</b>	500
3/8-18 NPT	10	73	45	14.5	35.0	68.0	100	11.5	-	8	24	30	430	<b>KH3/8NPTCFX</b>	500
1/2-14 NPT	13	82	51	17.0	40.0	93.0	113	15.0	-	10	30	35	670	<b>KH1/2NPTCFX</b>	500
3/4-14 NPT	20	93	60	24.0	55.0	120.0	171	16.0	-	14	41	45	1300	<b>KH3/4NPTCFX</b>	420
1-11.5 NPT	25	115	70	26.0	60.0	125.0	171	19.0	-	14	50	55	2000	<b>KH1NPTCFX</b>	420
1 1/4-11.5 NPT	32	110	80	48.5	94.0	187.0	228	19.5	55	17	60	Ø97	4888	<b>KH11/4NPTCFX</b>	420
1 1/2-11.5 NPT	40	114	82	53.5	104.0	197.0	228	19.5	57	17	75	Ø107	5590	<b>KH11/2NPTCFX</b>	420
2-11.5 NPT	50	133	100	61.5	119.5	211.5	306	22.0	65	17	85	Ø123	9220	<b>KH2NPTCFX</b>	420

$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH1/8NPTCFX	POM / NBR

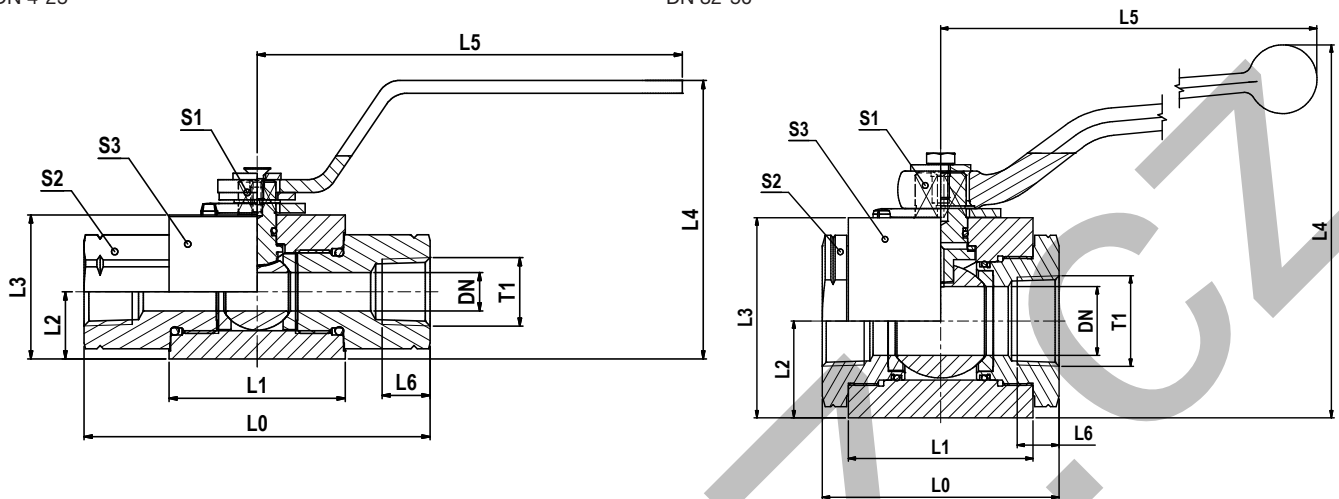


## KH 2-way NPT ball valve stainless steel

Female NPT thread (SAE 476)

DN 4-25

DN 32-50



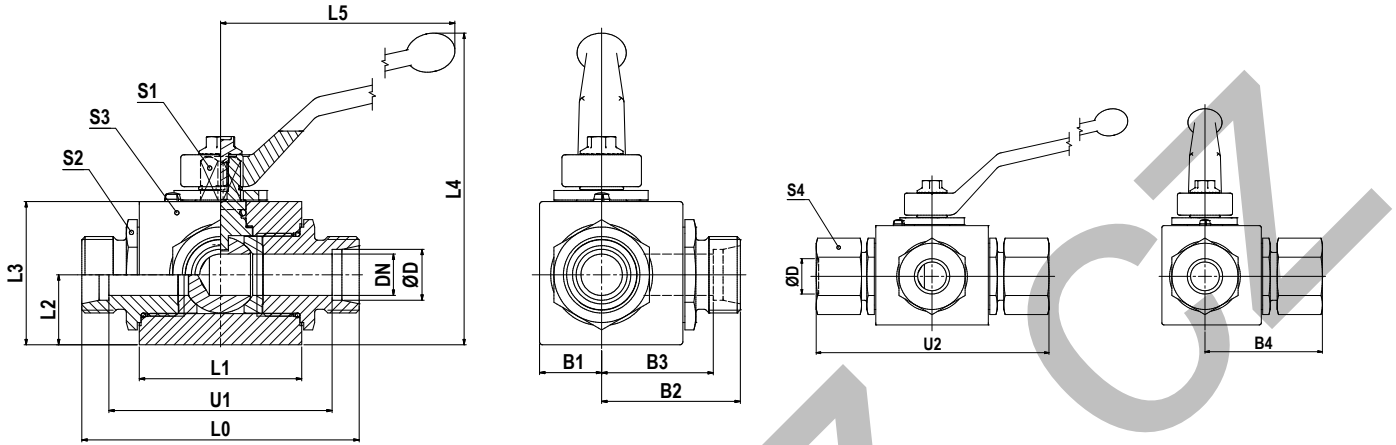
T1	DN	L0	L1	L2	L3	L4	L5	L6	S1	S2	S3	Weight g/1 piece	Order code	PN (bar)
1/8-27 NPT	4	82	41.5	13.5	30.0	54	80.0	8.0	7	22	30	431	<b>KH1/8NPT71X</b>	500
1/4-18 NPT	6	82	41.5	13.5	30.0	54	80.0	11.5	7	22	30	436	<b>KH1/4NPT71X</b>	500
3/8-18 NPT	10	95	53.0	18.0	40.0	82	132.5	11.5	8	30	40	956	<b>KH3/8NPT71X</b>	500
1/2-14 NPT	12	108	55.0	21.0	45.0	87	132.5	15.0	10	32	45	1204	<b>KH1/2NPT71X</b>	500
3/4-14 NPT	20	111	65.0	31.0	65.0	118	190.0	16.0	14	46	65	2723	<b>KH3/4NPT71X</b>	400
1-11.5 NPT	25	122	71.0	38.0	75.0	128	190.0	19.0	14	50	75	3646	<b>KH1NPT71X</b>	400
1 1/4-11.5 NPT	32	110	86.0	45.0	93.0	174	320.0	19.5	19	70	Ø100	5887	<b>KH1/4NPT71X</b>	400
1 1/2-11.5 NPT	40	120	92.0	52.0	104.5	185	320.0	19.5	19	80	Ø110	7430	<b>KH1/2NPT71X</b>	400
2-11.5 NPT	50	140	97.0	59.5	119.5	201	320.0	25.0	19	95	Ø125	10100	<b>KH2NPT71X</b>	400

$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$

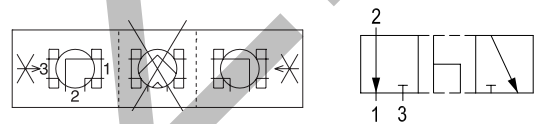
Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Stainless steel	71	KH1/8NPT71X	POM / NBR

## KH 3-way compact ball valve steel

EO 24° cone end



By default 3-way ball valves are manufactured as L-Bore version. Alternative design on request. Pressure inlet only from center port (connector 2).



Series	D	DN	L0	L1	L2	L3	L4	L5	U1	U2	B1	B2	B3	B4	S1	S2	S3	S4	Weight g/1 piece	Order code	PN (bar)
L <sup>1)</sup>	06	4	67	36	14.5	30	59.5	76	53	82	12.0	33.5	26.5	41.0	7	19	30	14	320	<b>KH3/2-06LCFX</b>	500
	08	6	67	36	14.5	30	59.5	76	53	82	12.0	33.5	26.5	41.0	7	19	30	17	320	<b>KH3/2-08LCFX</b>	500
	10	8	75	45	14.5	35	67.5	100	61	90	17.5	37.5	30.5	45.0	8	24	40	19	550	<b>KH3/2-10LCFX</b>	500
	12	10	75	45	14.5	35	67.5	100	61	90	17.5	37.5	30.5	45.0	8	24	40	22	550	<b>KH3/2-12LCFX</b>	500
	15	13	83	51	22.0	45	98.0	113	69	99	19.5	41.5	34.5	49.5	10	30	45	27	890	<b>KH3/2-15LCFX</b>	500
	18	16	82	50	25.0	50	103.0	113	67	99	25.0	41.0	33.5	49.5	10	36	50	32	1050	<b>KH3/2-18LCFX</b>	400
	22	20	99	60	29.0	60	125.0	171	84	116	23.5	51.0	43.5	58.0	14	41	55	36	1610	<b>KH3/2-22LCFX</b>	400
	28	25	108	70	31.0	65	130.0	171	93	126	30.0	54.0	46.5	63.0	14	50	65	41	2270	<b>KH3/2-28LCFX</b>	400
	35	32/25	116	70	31.0	65	130.0	171	95	138	30.0	58.0	47.5	69.5	14	50	65	50	2480	<b>KH3/2-35LDN25CFX</b>	400
	42	40/25	121	70	31.0	65	130.0	171	99	144	30.0	60.5	49.5	71.5	14	55	65	60	2600	<b>KH3/2-42LDN25CFX</b>	400
S <sup>2)</sup>	08	5	73	36	14.5	30	54.5	76	59	88	12.0	36.5	29.5	44.0	7	19	30	19	350	<b>KH3/2-08SCFX</b>	500
	10	6	73	36	14.5	30	54.5	76	58	90	12.0	36.5	29.0	45.0	7	19	30	22	350	<b>KH3/2-10SCFX</b>	500
	12	8	77	45	14.5	35	67.5	100	62	94	17.5	38.5	31.0	47.0	8	24	40	24	570	<b>KH3/2-12SCFX</b>	500
	14	10	81	45	14.5	35	67.5	100	65	100	17.5	40.5	32.5	50.0	8	24	40	27	570	<b>KH3/2-14SCFX</b>	500
	16	13	87	51	22.0	45	98.0	113	70	106	19.5	43.5	35.0	53.0	10	30	45	30	910	<b>KH3/2-16SCFX</b>	500
	20	16	90	50	25.0	50	103.0	113	69	112	25.0	45.0	34.5	56.0	10	36	50	36	1120	<b>KH3/2-20SCFX</b>	400
	25	20	107	60	29.0	60	125.0	171	83	131	23.5	55.0	43.0	65.5	14	41	55	46	1720	<b>KH3/2-25SCFX</b>	400
	30	25	120	70	31.0	65	130.0	171	93	146	30.0	60.0	46.5	73.0	14	50	65	50	2440	<b>KH3/2-30SCFX</b>	400
	38	32/25	134	70	31.0	65	130.0	171	102	163	30.0	67.0	51.0	81.5	14	55	65	60	2950	<b>KH3/2-38SDN25CFX</b>	400

1) L = light series; 2) S = heavy series

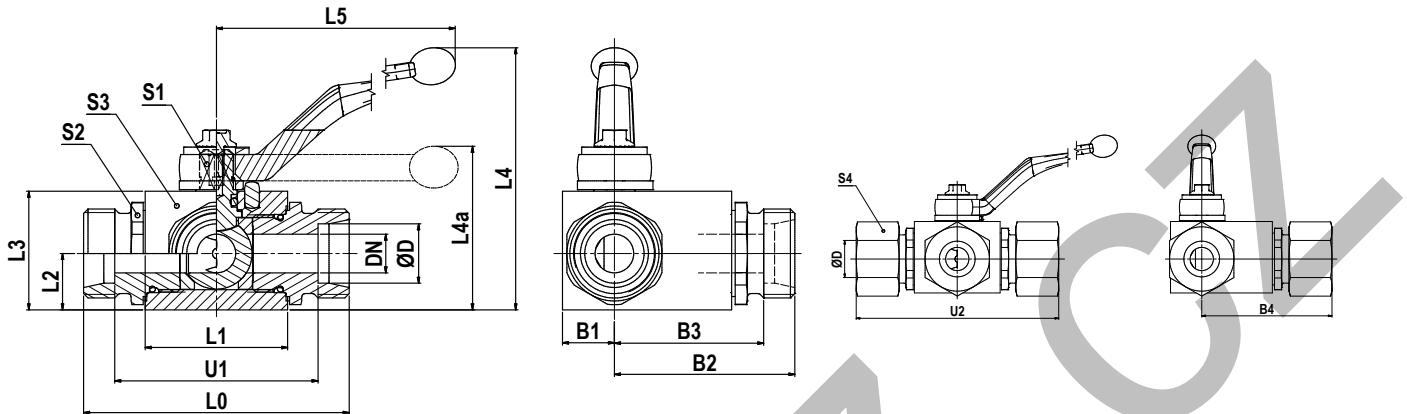
$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

Delivery without nut and ring.

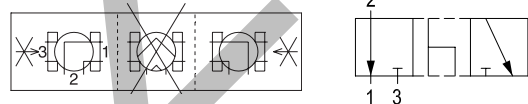
Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH3/2-06LCFX	POM / NBR

## KH 3-way compact ball valve stainless steel

EO 24° cone end



By default 3-way ball valves are manufactured as L-Bore version. Alternative design on request. Pressure inlet only from center port (connector 2).



Series	D	DN	L0	L1	L2	L3	L4	L4a	L5	U1	B1	B2	B3	B4	S1	S2	S3	S4	Weight g/1 piece	Order code	PN (bar)
L <sup>1)</sup>	06	4	67	40	13.5	33	82		115	53	13.0	50.0	43.0	57.5	9	22	47.5	14	500	<b>KH3/2-06L71X</b>	500
	08	6	67	40	13.5	33	82		115	53	13.0	51.5	44.5	59.5	9	22	47.5	17	520	<b>KH3/2-08L71X</b>	500
	10	8	74	40	13.5	33	82		115	60	13.0	52.5	45.5	60.5	9	22	47.5	19	540	<b>KH3/2-10L71X</b>	500
	12	10	74	43	17.5	38	86		115	60	16.0	55.5	48.5	63.0	9	27	52.0	22	730	<b>KH3/2-12L71X</b>	500
	15	13	82	48	19.0	40	89		115	68	17.5	60.5	53.5	68.5	9	30	57.0	27	850	<b>KH3/2-15L71X</b>	500
	18	13	82	48	19.0	40	89		115	67	17.5	61.5	54.0	70.5	9	30	57.0	32	890	<b>KH3/2-18L71X</b>	500
S <sup>2)</sup>	22	20	101	62	24.5	57		79	200	86	24.5	71.5	64.0	80.5	14	41	72.0	36	1870	<b>KH3/2-22L71X</b>	315
	28	25	108	66	29.5	65		87	200	93	29.0	81.5	74.0	90.5	14	50	85.5	41	2450	<b>KH3/2-28L71X</b>	315
	35	25	112	66	29.5	65		87	200	91	29.0	85.0	74.5	96.0	14	50	86.0	50	2900	<b>KH3/2-35L71X</b>	315
	08	4	73	40	13.5	33	82		115	59	13.0	56.5	49.5	64.5	9	22	47.5	19	520	<b>KH3/2-08S71X</b>	500
	10	6	73	40	13.5	33	82		115	58	13.0	56.5	49.0	65.5	9	22	47.5	22	540	<b>KH3/2-10S71X</b>	500
	12	8	76	40	13.5	33	82		115	61	13.0	58.5	51.0	67.5	9	22	47.5	24	560	<b>KH3/2-12S71X</b>	500
	14	10	80	43	17.5	38	86		115	64	16.0	62.5	54.5	72.0	9	27	52.0	27	730	<b>KH3/2-14S71X</b>	500
	16	13	86	48	19.0	40	89		115	69	17.5	66.5	58.0	76.5	9	30	57.0	30	860	<b>KH3/2-16S71X</b>	500
	20	13	90	48	19.0	40	89		115	69	17.5	70.5	60.0	81.5	9	32	57.0	36	940	<b>KH3/2-20S71X</b>	500
	25	20	109	62	24.5	57		79	200	85	24.5	82.5	70.5	94.5	14	41	72.0	46	1950	<b>KH3/2-25S71X</b>	315
30	25	120	66	29.5	65		87	200	93	29.0	93.5	80.0	106.5	14	50	85.5	50	2650	<b>KH3/2-30S71X</b>	315	
38	32/25	124	66	29.5	65		87	200	92	29.0	99.0	83.0	114.0	14	55	86.0	60	3100	<b>KH3/2-38SDN2571X</b>	315	

<sup>1)</sup> L = light series; <sup>2)</sup> S = heavy series

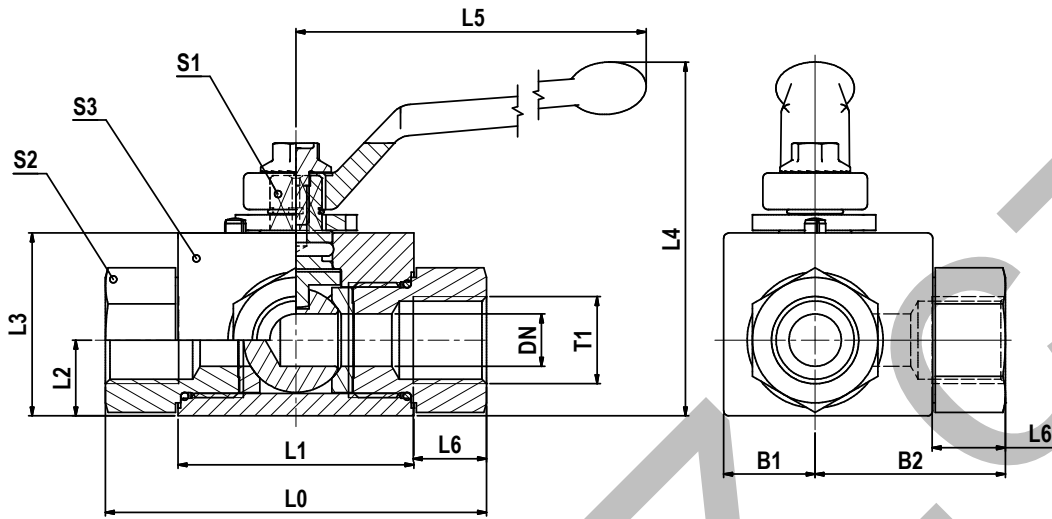
$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$

Delivery without nut and ring.

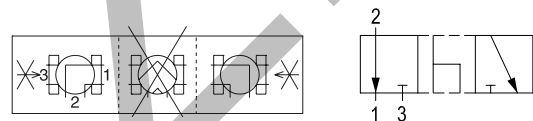
Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Stainless steel	71	KH3/2-06L71X	POM / NBR

### KH 3-way compact BSPP ball valve steel

Female BSPP thread (ISO 1179-1)



By default 3-way ball valves are manufactured as L-Bore version. Alternative design on request. Pressure inlet only from center port (connector 2).



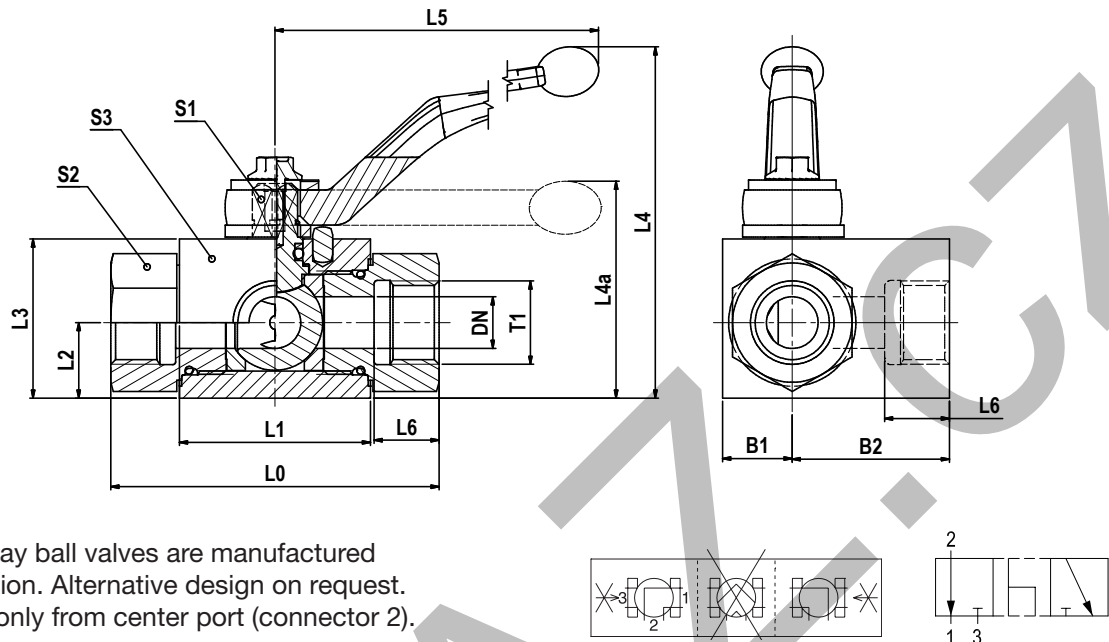
T1	DN	L0	L1	L2	L3	L4	L5	L6	B1	B2	S1	S2	S3	Weight g/1 piece	Order code	PN (bar)
G 1/8	5	69	36	14.5	30	59.5	76	12	12.0	34.5	7	19	30	370	<b>KH3/2-1/8CFX</b>	500
G 1/4	6	69	36	14.5	30	59.5	76	12	12.0	34.5	7	19	30	340	<b>KH3/2-1/4CFX</b>	500
G 3/8	10	73	45	14.5	35	67.5	100	14	17.5	36.5	8	24	40	570	<b>KH3/2-3/8CFX</b>	500
G 1/2	13	82	51	22.0	45	98.0	113	15	19.5	41.0	10	30	45	940	<b>KH3/2-1/2CFX</b>	500
G 5/8	16	88	50	25.0	50	103.0	113	18	25.0	44.0	10	36	50	1240	<b>KH3/2-5/8CFX</b>	400
G 3/4	20	93	60	29.0	60	125.0	171	18	23.5	48.0	14	41	55	1720	<b>KH3/2-3/4CFX</b>	400
G 1	25	115	70	31.0	65	130.0	171	20	30.0	57.5	14	50	65	2650	<b>KH3/2-1CFX</b>	400
G 1 1/4	32/25	134	70	31.0	65	130.0	171	22	30.0	67.0	14	50	65	2710	<b>KH3/2-11/4DN25CFX</b>	400
G 1 1/2	40/25	139	70	31.0	65	130.0	171	24	30.0	69.5	14	55	65	2910	<b>KH3/2-11/2DN25CFX</b>	400

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH3/2-1/8CFX	POM / NBR

## KH 3-way compact BSPP ball valve stainless steel

Female BSPP thread (ISO 1179-1)



By default 3-way ball valves are manufactured as L-Bore version. Alternative design on request. Pressure inlet only from center port (connector 2).

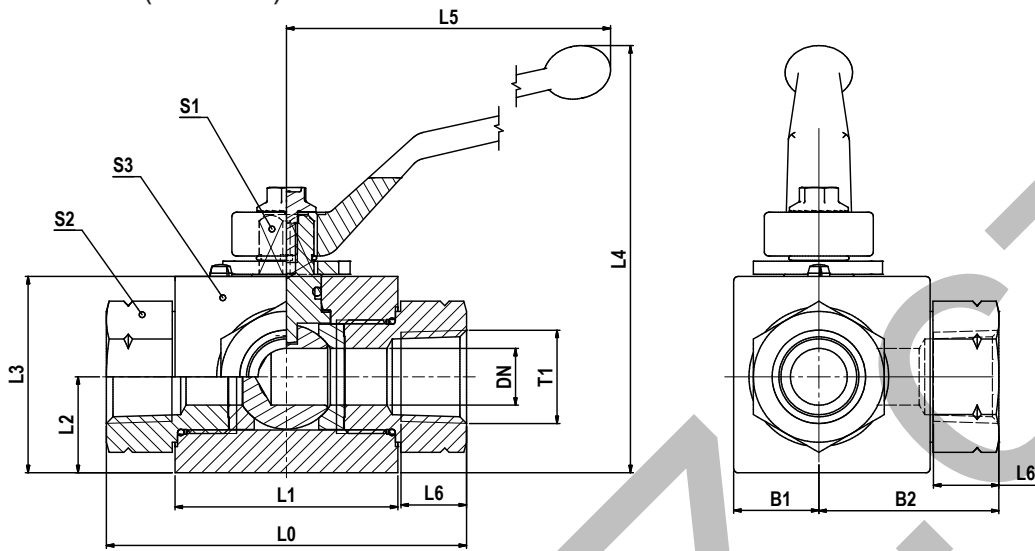
T1	DN	L0	L1	L2	L3	L4	L4a	L5	L6	B1	B2	S1	S2	S3	Weight g/1 piece	Order code	PN (bar)
G 1/8	5	69	40	13.5	33.0	82		115	10.0	13.0	34.5	9	22	47.5	550	<b>KH3/2-1/871X</b>	500
G 1/4	6	69	40	13.5	33.0	82		115	14.0	13.0	34.5	9	22	47.5	550	<b>KH3/2-1/471X</b>	500
G 3/8	10	72	43	17.5	38.0	86		115	14.0	16.0	36.0	9	27	52.0	770	<b>KH3/2-3/871X</b>	500
G 1/2	13	83	48	19.0	40.0	89		115	16.5	17.5	39.5	9	30	57.0	900	<b>KH3/2-1/271X</b>	500
G 3/4	20	95	62	24.5	57.0		79	200	18.0	24.5	47.5	14	41	72.0	1950	<b>KH3/2-3/471X</b>	315
G 1	25	113	66	29.5	65.0		87	200	20.0	29.0	56.5	14	50	85.5	2400	<b>KH3/2-171X</b>	315
G 1 1/4	30	111	81	39.0	84.5		115	320	22.0	39.0	55.0	17	60	94.0	5400	<b>KH3/2-11/471X</b>	350
G 1 1/2	38	130	104	53.0	106.0		136	320	24.0	53.0	65.0	17	75	118.0	9400	<b>KH3/2-11/271X</b>	350
G 2	48	150	118	58.0	116.0		146	320	26.0	58.0	75.0	17	95	133.0	13000	<b>KH3/2-271X</b>	350

$$\frac{\text{PN (bar)}}{10} = \text{PN (MPa)}$$

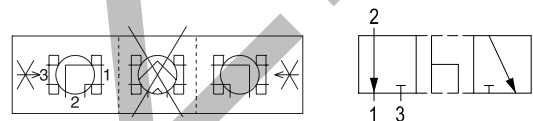
Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Stainless steel	71	KH3/2-1/871X	POM / NBR

## KH 3-way compact NPT ball valve steel

Female NPT thread (SAE 476)



By default 3-way ball valves are manufactured as L-Bore version. Alternative design on request. Pressure inlet only from center port (connector 2).



T1	DN	L0	L1	L2	L3	L4	L5	L6	B1	B2	S1	S2	S3	Weight g/1 piece	Order code	PN (bar)
1/8-27 NPT	5	69	36	14.5	30	59.5	76	7.0	12.0	34.5	7	19	30	370	<b>KH3/2-1/8NPTCFX</b>	500
1/4-18 NPT	6	69	36	14.5	30	59.5	76	10.0	12.0	34.5	7	19	30	340	<b>KH3/2-1/4NPTCFX</b>	500
3/8-18 NPT	10	73	45	14.5	35	67.5	100	11.5	17.5	36.5	8	24	40	570	<b>KH3/2-3/8NPTCFX</b>	500
1/2-14 NPT	13	82	51	22.0	45	98.0	113	15.0	19.5	41.0	10	30	45	940	<b>KH3/2-1/2NPTCFX</b>	500
3/4-14 NPT	20	93	60	29.0	60	125.0	171	16.0	23.5	48.0	14	41	55	1720	<b>KH3/2-3/4NPTCFX</b>	400
1-11.5 NPT	25	115	70	31.0	65	130.0	171	19.0	30.0	57.5	14	50	65	2650	<b>KH3/2-1NPTCFX</b>	400
1 1/4-11.5 NPT	32/25	134	70	31.0	65	130.0	171	19.5	30.0	67.0	14	50	65	2710	<b>KH3/2-11/4NPTDN25CFX</b>	400
1 1/2-11.5 NPT	40/25	139	70	31.0	65	130.0	171	19.5	30.0	69.5	14	55	65	2910	<b>KH3/2-11/2NPTDN25CFX</b>	400

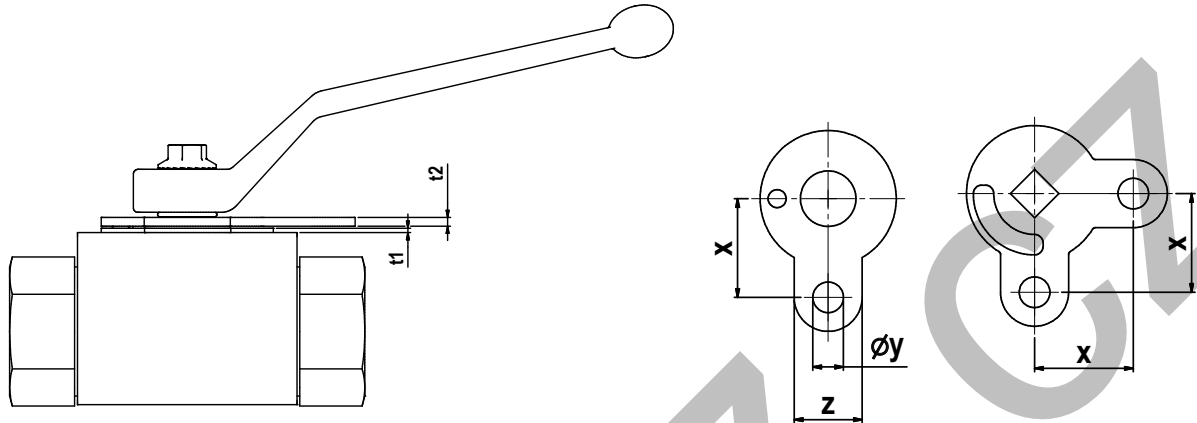
$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

Also available in stainless steel with different dimensions, e.g. KH3/2-1/8NPT71X

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH3/2-1/8NPTCFX	POM / NBR

## KH – Locking Devices for Two Way and Multiway ball valves

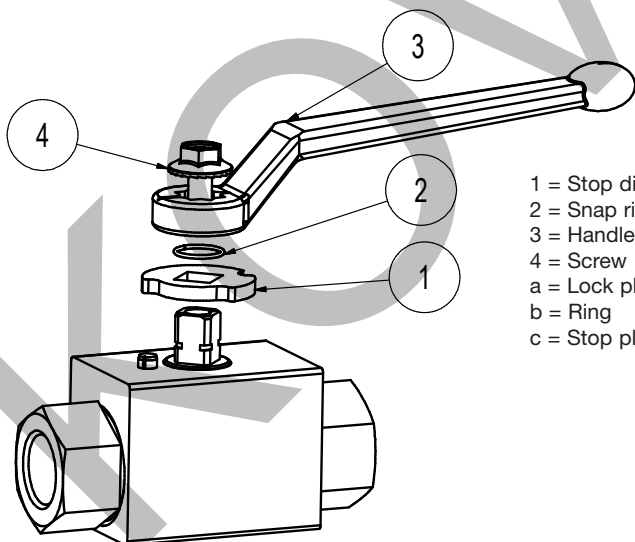
with floating ball – steel and stainless steel



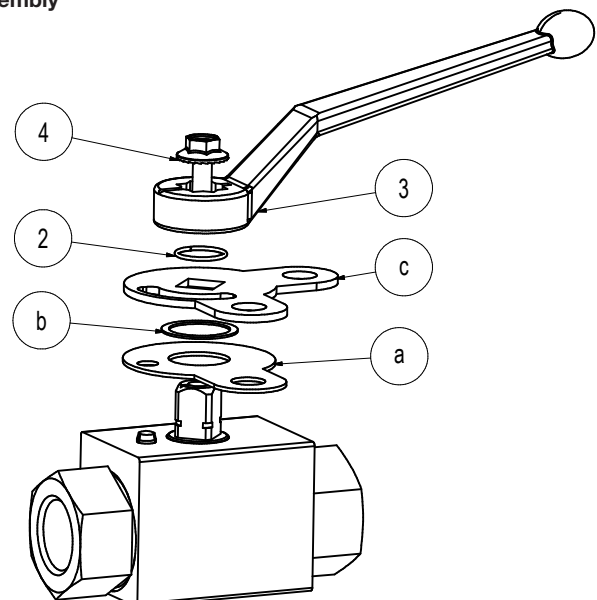
DN	t1	t2	z	y	X	Order code Steel	Order code Stainless steel
4/6	0.5	1.5	20	9	21.5	KHLOCKINGD.SIZE1X	KHLOCKINGD.SIZE171X
8/10	1.0	2.0	20	9	26.5	KHLOCKINGD.SIZE2X	KHLOCKINGD.SIZE271X
12	1.0	2.0	20	9	29.0	KHLOCKINGD.SIZE3X	KHLOCKINGD.SIZE371X
20/25	1.5	2.0	20	9	44.0	KHLOCKINGD.SIZE5X	KHLOCKINGD.SIZE571X
32/40/50	1.5	2.0	20	9	54.0	KHLOCKINGD.SIZE6X	-
32/40/50	1.5	1.5	20	9	54.0	-	KHLOCKINGD.SIZE671X

Disassembly

Assembly



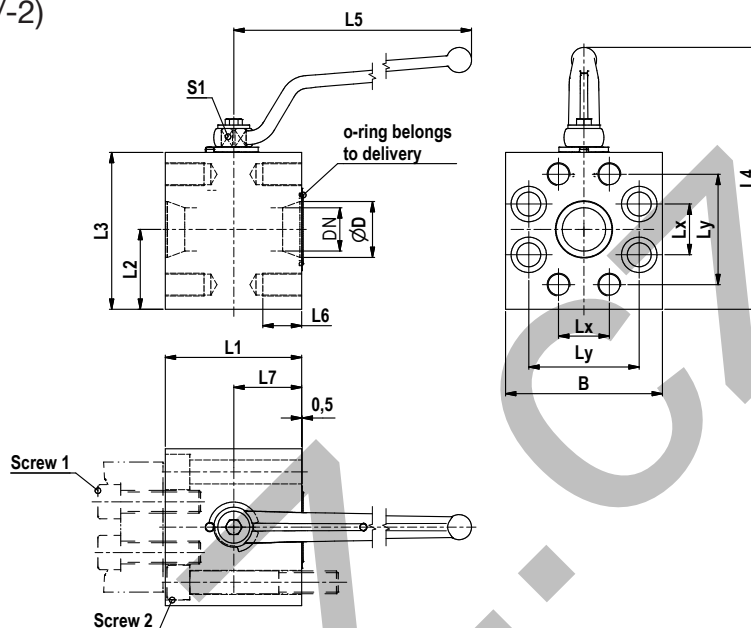
- 1 = Stop disc
- 2 = Snap ring
- 3 = Handle
- 4 = Screw
- a = Lock plate
- b = Ring
- c = Stop plate



\*Locking Devices shown are not suitable for 3/2 way stainless steel ball valves and valves with alternative sealing options. Suitable versions on request.

## KH-B Ball valve - SAE Flange connection (3000/6000 PSI)

SAE Flange connection (ISO 6162-1/-2)



**Pressure applications only with connected flanges!**  
Screws and flanges not included

### 3000 PSI Series

SAE Inch	DN	D	L1	L2	L3	L4	L5	L6	L7	Lx	Ly	B	S1	M	Screw 1	Screw 2	O-ring	Weight (Steel) kg	Order code Steel	PN (bar)
1/2	13	13	68	30.0	58.0	109	115	15	34.0	17.5	38.1	58.0	9	M08	M8x30-10.9	M8x70-10.9	18.64x3.53	1.57	<b>KH12B1V32CF</b>	350
3/4	20	20	70	37.5	75.0	146	171	17	35.0	22.2	47.6	75.0	14	M10	M10x30-10.9	M10x80-10.9	24.99x3.53	2.76	<b>KH20B1V33CF</b>	350
1	25	25	78	44.0	84.5	155	171	17	39.0	26.2	52.4	84.5	14	M10	M10x30-10.9	M10x80-10.9	32.92x3.53	3.85	<b>KH25B1V34CF</b>	320
1 1/4	25	32	90	50.0	100.0	171	171	21	45.0	30.2	58.7	100.0	14	M10	M10x30-10.9	M10x90-10.9	37.96x3.53	6.35	<b>KH32B1V35CF</b>	280
1 1/2	32	38	99	60.0	120.0	214	306	21	49.5	35.7	69.9	120.0	17	M12	M12x35-10.9	M12x100-10.9	47.22x3.53	10.40	<b>KH40B1V36CF</b>	210
2	38	49	120	70.0	137.5	232	306	21	60.0	42.9	77.8	137.5	17	M12	M12x35-10.9	M12x120-10.9	56.74x3.53	16.00	<b>KH50B1V38CF</b>	210

### 6000 PSI Series

SAE Inch	DN	D	L1	L2	L3	L4	L5	L6	L7	Lx	Ly	B	S1	M	Screw 1	Screw 2	O-ring	Weight (Steel) kg	Order code Steel	PN (bar)
1/2	13	13	68	30.0	58.0	109	115	15	34.0	18.2	40.5	58.0	9	M08	M8x30-10.9	M8x70-10.9	18.64x3.53	1.57	<b>KH12B1V62CF</b>	420
3/4	20	20	70	37.5	75.0	146	171	17	35.0	23.8	50.8	75.0	14	M10	M10x35-10.9	M10x80-10.9	24.99x3.53	2.73	<b>KH20B1V63CF</b>	420
1	25	25	78	44.0	84.5	155	171	21	39.0	27.8	57.2	84.5	14	M12	M12x45-10.9	M12x80-10.9	32.92x3.53	3.63	<b>KH25B1V64CF</b>	420
1 1/4	25	32	90	50.0	100.0	171	171	20	45.0	31.8	66.7	100.0	14	M12	M12x45-10.9	M12x90-10.9	37.96x3.53	6.25	<b>KH32B1V65CF</b>	420
1 1/2	32	38	99	60.0	120.0	214	306	27	49.5	36.5	79.4	120.0	17	M16	M16x55-10.9	M16x100-10.9	47.22x3.53	9.76	<b>KH40B1V66CF</b>	420
2	38	49	120	70.0	137.5	232	306	34	60.0	44.5	96.8	137.5	17	M20	M20x70-10.9	M20x130-10.9	56.74x3.53	14.74	<b>KH50B1V68CF</b>	420

PN (bar) = PN (MPa) / 10

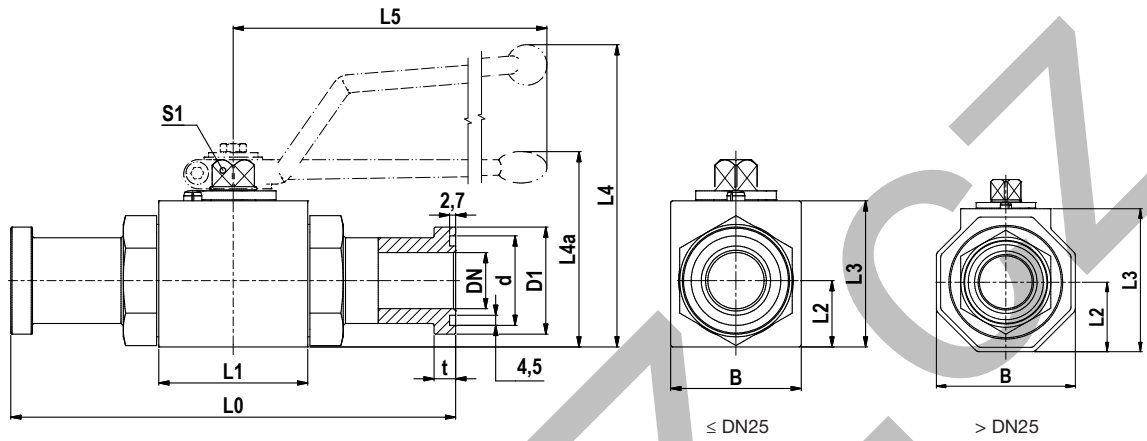
More flange ball valves see catalogue 4162.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH12B1V62CF	POM / NBR
Stainless steel	71	KH12B1V6271	POM / NBR



# KH-A Ball valve - SAE Flange adapter connection

SAE Flange adapter (ISO 6162-1/-2)



### 3000 PSI Series

SAE Inch	DN	L0	L1	L2	L3	L4	L4a	L5	B	D1	d	t	S1	Weight (steel)/kg	Order code	PN (bar)
1/2	13	151	48	19.0	40	89		115	35	30.2	25.5	6.8	9	0.85	<b>KH12A32CF</b>	350
3/4	20	162	62	24.5	57		79	200	49	38.1	31.9	6.8	14	1.87	<b>KH20A33CF</b>	350
1	25	178	66	29.5	65		87	200	58	44.4	39.8	8.1	14	2.70	<b>KH25A34CF</b>	315
1 1/4	32	191	80	40.5	86		107	320	81	50.8	44.6	8.1	17	4.22	<b>KH32A35CF</b>	280
1 1/2	38	231	85	50.0	103		124	320	100	60.3	54.1	8.1	17	6.54	<b>KH40A36CF</b>	210
2	48	232	100	59.0	117		138	320	118	71.4	63.6	9.6	17	9.29	<b>KH50A38CF</b>	210

### 6000 PSI Series

SAE Inch	DN	L0	L1	L2	L3	L4	L4a	L5	B	D1	d	t	S1	Weight (steel)/kg	Order code	PN (bar)
1/2	13	151	48	19.0	40	89		115	35	31.8	25.5	7.9	9	0.90	<b>KH12A62CF</b>	420
3/4	20	174	62	24.5	57		79	200	49	41.3	31.9	8.9	14	1.99	<b>KH20A63CF</b>	420
1	25	206	74	34.5	70		92	200	70	47.6	39.8	9.6	14	3.66	<b>KH25A64CF</b>	420
1 1/4	32	223	80	40.5	86		107	320	81	54.0	44.6	10.4	17	4.72	<b>KH32A65CF</b>	420
1 1/2	40	281	85	50.0	103		124	320	100	63.5	54.1	12.7	17	7.49	<b>KH40A66CF</b>	420
2	48	316	100	59.0	117		138	320	118	79.4	63.6	12.7	17	11.39	<b>KH50A68CF</b>	420

$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$

Also available in stainless steel with different dimensions, e.g. KH12A3271

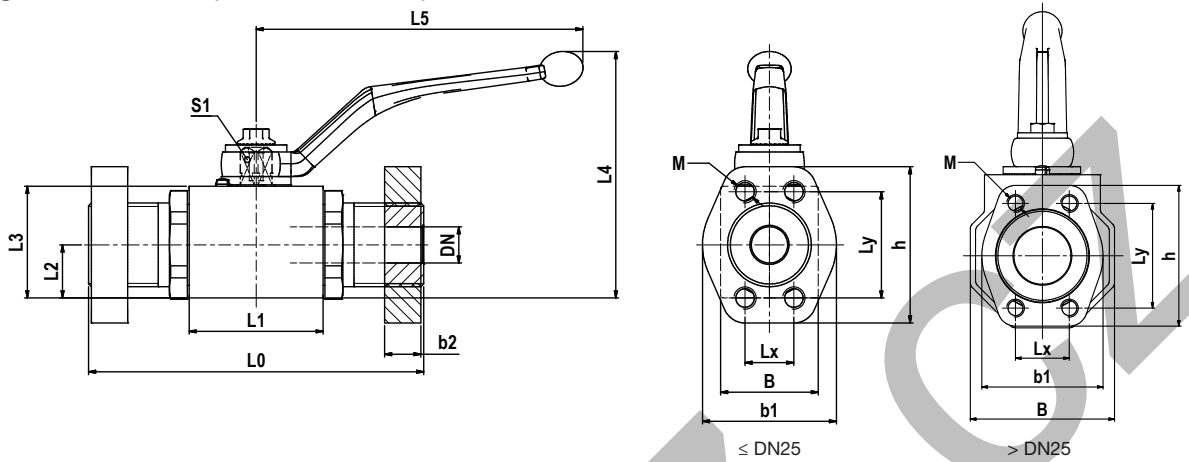
Handles are part of the delivery.  
O-rings are part of the delivery.

More flange ball valves see catalogue 4162.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH12A62CF	POM / NBR

## KH-T Ball valve - SAE Flange connection ISO 6162 (1/2)

SAE Flange connection (ISO 6162-1/-2)



### 3000 PSI series

SAE Inch	DN	L0	L1	L2	L3	L4	L5	B	Lx	Ly	b1	b2	h	M	S1	O-ring	Weight (Steel) kg	Order code	PN (bar)
1/2	13	120	48	19.0	40	89	115	35	17.5	38.1	48	13	56	M08	9	18.64x3.53	1.5	<b>KH-T-308-13CF</b>	350
3/4	20	136	62	24.5	57	127	171	49	22.2	47.6	50	14	65	M10	14	24.99x3.53	3.0	<b>KH-T-312-20CF</b>	315
1	25	148	66	29.5	65	135	171	58	26.2	52.4	60	16	70	M10	14	32.92x3.53	4.5	<b>KH-T-316-25CF</b>	315
1 1/4	32	172	80	40.5	86	180	306	81	30.2	58.7	68	16	79	M10	17	37.69x3.53	7.5	<b>KH-T-320-32CF</b>	280
1 1/4	32	172	80	40.5	86	180	306	81	30.2	58.7	68	16	79	M12	17	37.69x3.53	7.5	<b>KH-T-320-32TM12CF</b>	210
1 1/2	40	177	85	50.0	103	197	306	100	35.7	69.9	78	16	93	M12	17	47.22x3.53	11.1	<b>KH-T-324-40CF</b>	210
2	50	196	100	59.0	117	211	306	118	42.9	77.8	90	16	102	M12	17	56.74x3.53	19.3	<b>KH-T-332-50CF</b>	210
2 1/2	50/65	196	100	59.0	117	211	306	118	50.8	88.9	105	19	114	M12	17	69.44x3.53	19.9	<b>KH-T-340-50CF</b>	175

### 6000 PSI series

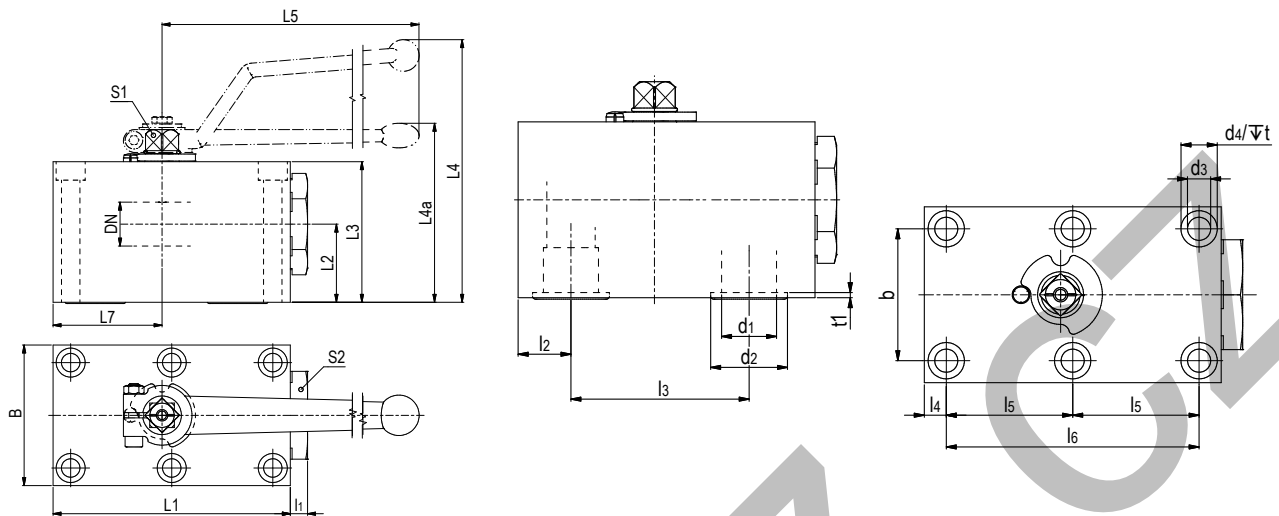
SAE Inch	DN	L0	L1	L2	L3	L4	L5	B	Lx	Ly	b1	b2	h	M	S1	O-ring	Weight kg	Order code	PN (bar)
1/2	13	120	48	19.0	40	89	115	35	18.2	40.5	48	16	56	M08	9	18.64x3.53	1.6	<b>KH-T-608-13CF</b>	420
3/4	20	136	62	24.5	57	127	171	49	23.8	50.8	60	19	71	M10	14	24.99x3.53	3.3	<b>KH-T-612-20CF</b>	420
1	25	156	74	34.5	70	140	171	70	27.8	57.2	70	24	81	M12	14	32.92x3.53	5.0	<b>KH-T-616-25CF</b>	420
1 1/4	32	172	80	40.5	86	180	306	81	31.8	66.7	78	27	95	M12	17	37.69x3.53	8.5	<b>KH-T-620-32CF</b>	420
1 1/4	32	172	80	40.5	86	180	306	81	31.8	66.7	78	27	95	M14	17	37.69x3.53	8.5	<b>KH-T-620-32TM14CF</b>	420
1 1/2	40	177	85	50.0	103	197	306	100	36.5	79.4	94	30	112	M16	17	47.22x3.53	12.2	<b>KH-T-624-40CF</b>	420
2	50	196	100	59.0	117	211	306	118	44.5	96.8	114	35	134	M20	17	56.74x3.53	21.5	<b>KH-T-632-50CF</b>	420

Also available in stainless steel with different dimensions, e.g. KH-T-308-13SS

More flange ball valves see catalogue 4162.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KH-T-308-13CF	POM / NBR

## KHBLOCK 2-way manifold ball valve



DN	L1	L2	L3	L4	L4a	L5	L7	I1	I2	I3	I4	I5	I6	b	B	d1	d2	d3	d4	t	t1
6	57	19.5	35	67		80	26.0	6	8.5	35	8.5	17.5	35	27	40	6.0	11.8	6.5	10.5	7.0	2.0
10	70	24.5	45	96		115	29.0	10	10.0	44	7.5	27.5	55	40	55	9.5	14.9	8.4	13.5	8.5	2.0
12	98	34.0	55	104		115	42.5	10	16.0	58	7.5	41.5	83	45	60	13.0	24.9	8.4	13.5	7.0	2.0
20	117	37.5	70	on request	92	200	51.0	10	20.0	69	10.0	48.5	97	51	70	20.0	29.0	10.5	16.5	10.5	2.0
25	135	44.5	80		102	200	62.0	10	24.0	81	10.0	57.5	115	60	80	25.0	34.9	10.5	16.5	10.5	2.5
32	165	54.5	100		130	320	75.0	11	29.0	96	12.0	68.0	136	78	100	32.0	40.0	13.0	19.0	12.0	2.0
40	200	57.0	110		140	320	84.5	17	28.5	112	28.5	56.0	112	95	130	38.0	47.7	16.5	25.0	19.0	2.5
50	240	71.0	129		159	320	106.0	15	38.0	136	38.0	68.0	136	112	150	48.0	59.8	21.0	31.0	21.5	2.5

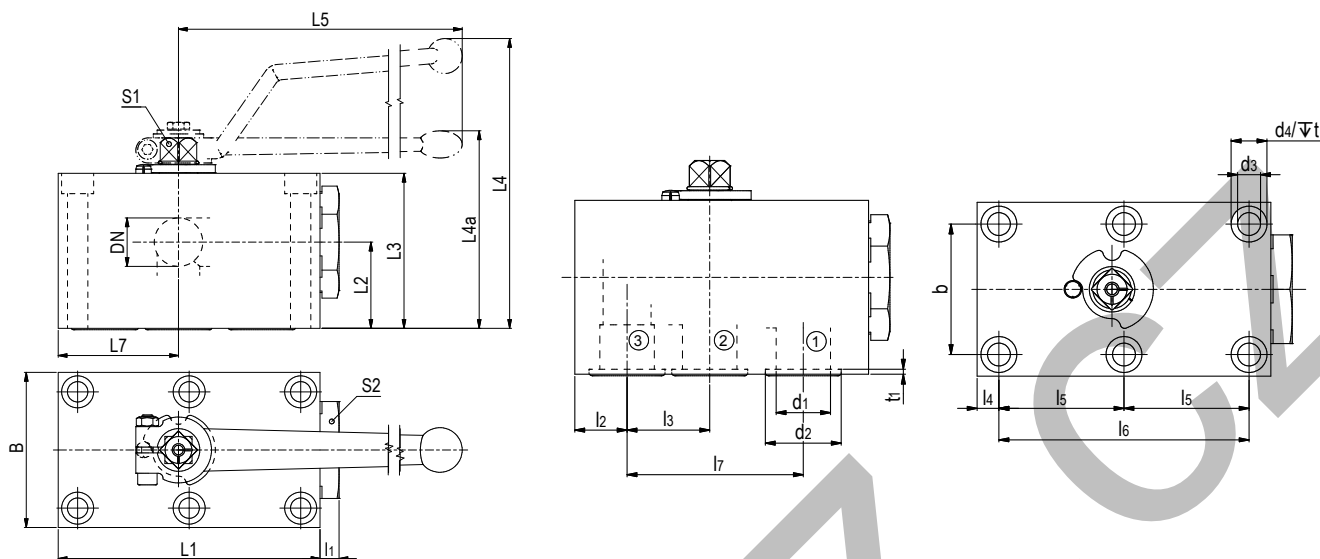
DN	S1	S2	Hexagon Screws	Torque for screws	O-ring	Weight kg	Order code steel	PN (bar)
6	7	19	6x M6x40 - 12.9	14	7x2.5	0.60	<b>KHBLOCKDN6CF</b>	500
10	9	30	6x M8x40 - 12.9	35	10x2.5	1.30	<b>KHBLOCKDN10CF</b>	500
12	9	32	6x M8x60 - 12.9	35	20x2.5	2.30	<b>KHBLOCKDN12CF</b>	420
20	14	46	6x M10x80 - 12.9	70	23.47x2.62	3.92	<b>KHBLOCKDN20CF</b>	420
25	14	50	6x M10x90 - 12.9	70	29x3	5.68	<b>KHBLOCKDN25CF</b>	420
32	17	70	6x M12x110 - 12.9	110	34.59x2.62	11.00	<b>KHBLOCKDN32CF</b>	420
40	17	80	6x M16x120 - 12.9	300	42x3	18.78	<b>KHBLOCKDN40CF</b>	420
50	17	90	6x M20x140 - 12.9	600	54x3	29.70	<b>KHBLOCKDN50CF</b>	420

Tmin/Tmax Steel -20°C / 100°C  
 Tmin/Tmax Stainless steel -30°C / 100°C

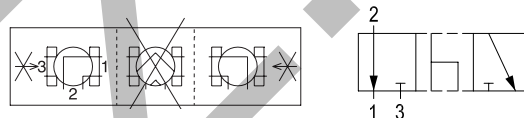
Handles are part of the delivery.  
 O-ring are part of the delivery.  
 Screws are not part of the delivery.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KHBLOCKDN10CF	POM / NBR
Stainless steel	71	KHBLOCKDN1071	POM / NBR

## KHBLOCK 3-way manifold ball valve



Pressure inlet only from center port (connector 2)



DN	L1	L2	L3	L4	L4*	L5	L7	l1	l2	l3	l4	l5	l6	l7	b	B	d1	d2	d3	d4
6	57	19.5	35	67		80	26.0	6	8.5	17.5	8.5		35	35	27	40	6.0	12.0	6.5	10.5
10	70	24.5	45	93		115	29.0	10	10.0	19.0	7.5		55	44	40	55	9.5	15.0	8.5	13.5
12	98	34.0	55	104		115	42.5	10	16.0	26.5	7.5	41.5	83	58	45	60	13.0	25.0	8.5	13.5
20	117	37.5	70		92	200	51.0	10	20.0	31.0	10.0	48.5	97	69	51	70	20.0	29.0	10.5	16.5
25	135	44.5	80		102	200	62.0	10	24.0	38.0	10.0	57.5	115	81	60	80	25.0	35.0	10.5	16.5
32	165	54.5	100		130	320	75.0	11	29.0	46.0	12.0	68.0	136	96	78	100	32.0	40.0	13.0	19.0
40	200	57.0	110		140	320	84.5	17	28.5	56.0	28.5	56.0	112	112	95	130	38.0	47.5	16.5	25.0
50	240	71.0	129		159	320	106.0	15	38.0	68.0	38.0	68.0	136	136	112	150	48.0	60.0	21.0	31.0

DN	t	t1	S1	S2	Hexagon screws	Torque for screws	O-ring	Weight kg	Order code steel	PN (bar)
6	7.0	2.0	7	19	4x M6x40 - 12.9	14	7x2.5	0.60	KHBLOCK3/2DN6CF	500
10	8.5	2.0	9	30	4x M8x40 - 12.9	35	10x2.5	1.30	KHBLOCK3/2DN10CF	500
12	7.0	2.0	9	32	6x M8x60 - 12.9	35	20x2.5	2.32	KHBLOCK3/2DN12CF	420
20	10.5	2.0	14	46	6x M10x80 - 12.9	70	23.47x2.62	3.90	KHBLOCK3/2DN20CF	420
25	10.5	2.5	14	50	6x M10x90 - 12.9	70	29x3	5.68	KHBLOCK3/2DN25CF	420
32	12.0	2.0	17	70	6x M12x110 - 12.9	110	34.59x2.62	11.00	KHBLOCK3/2DN32CF	420
40	19.0	2.5	17	80	6x M16x120 - 12.9	300	42x3	18.70	KHBLOCK3/2DN40CF	420
50	21.5	2.5	17	90	6x M20x140 - 12.9	600	54x3	28.80	KHBLOCK3/2DN50CF	420

Tmin/Tmax Steel -20°C / 100°C  
 Tmin/Tmax Stainless steel -30°C / 100°C

Handles are part of the delivery.  
 O-ring are part of the delivery.  
 Screws are not part of the delivery.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	KHBLOCK3/2DN6CF	POM / NBR
Stainless steel	71	KHBLOCK3/2DN671	POM / NBR

## Technical data flow control valves

### Leakage rate

**Flow control valves:** Max.  $0.01 \times \text{DN mm}^3/\text{sec}$  -  
Test medium water (DIN EN 12266)

**Check valves:** Max.  $1.0 \times \text{DN mm}^3/\text{sec}$  - Test medium water  
(DIN EN 12266)

Flow control valves can not be used as shut off devices.  
Small leakage rates are possible in closed position.

The pressure ratings PN for flow control valves include  
design factor 1.5 (according DIN 3230 T5 and ISO 5208).

## Steel Flow control valves

### Material:

Body: Steel

### Seals:

O-ring: NBR

According to application, different seal combinations are  
available\*

### Temperature range:

-20 up to +100 °C.

### Cracking pressure:

0.5 bar (optional 4.5 bar)

## Stainless Steel Flow control valves

### Material:

Body: Stainless steel

### Seals:

O-ring: NBR

According to application, different seal combinations are  
available.\*

### Temperature range:

-30 up to +100 °C.

### Cracking pressure:

0.5 bar (optional 4.5 bar)

### Caution!

Please note the admissible pressure ratings of connec-  
tion components!

### \*Remarks:

For clarification of the suitability of the restriction valves for different media and applications please provide the following data: system pressure, medium, temperature, possible pressure peaks (including pressure and frequency) and possible operation with full differential pressure.

## Pressure drop curves:

On demand

## VDHA High pressure valve

### EO tube end / EO tube end

with internal threaded stem and body of low grade forged stainless steel  
 The pressure specification PN for hand-operated shut-off valves applies to the design factor 1,5 (according DIN 3230 T5 and ISO 5208).

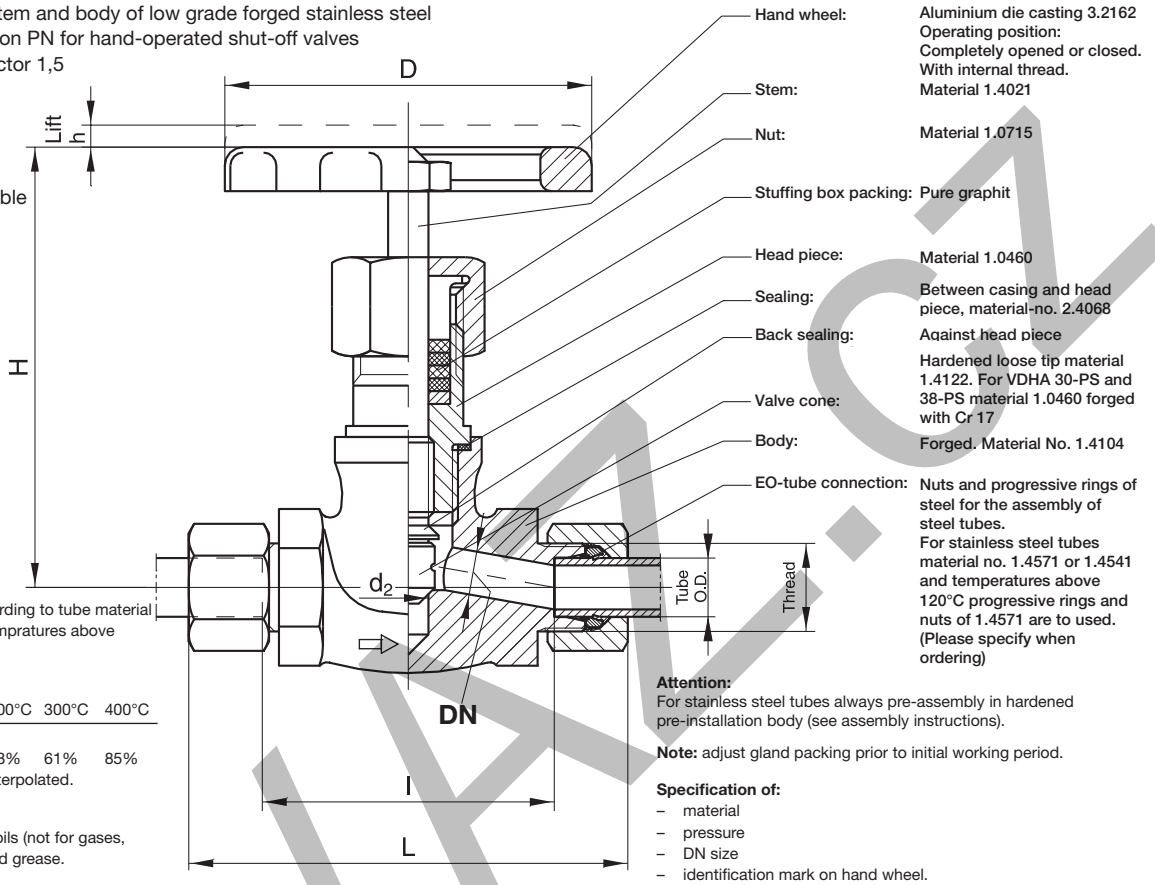
**Caution!**  
 Please note the admissible pressure ratings for the EO-tube ends.

Temperatures up to 400°C according to tube material (consider pressure drop with temperatures above 50°C)

Required pressure reductions	temperature	50°C	100°C	200°C	300°C	400°C
pressure reductions		6%	18%	38%	61%	85%

Intermediate values are to be interpolated.

**Applications:**  
 For water, steam, hot and cold oils (not for gases, oxygen etc.) on mineral oil based grease.  
 For compressed air up to 50°C.



Series	Tube O.D.	PN (bar)	DN	Thread	d2	H	L	I	h	D	Weight g/1 piece	With Nut and Ring Dry Technology EO-2	PSR steel	M/Nm
S <sup>4)</sup>	06	630	4	M 14×1.5	9.5	120	95	66	6	100	891	VDHA06ZS	VDHA06S	70
	08	630	5	M 16×1.5	9.5	120	95	66	6	100	917	VDHA08ZS	VDHA08S	70
	10	630	7	M 18×1.5	9.5	120	97	65	6	100	937	VDHA10ZS	VDHA10S	70
	12	630	8	M 20×1.5	9.5	120	97	65	6	100	940	VDHA12ZS	VDHA12S	70
	14	630	10	M 22×1.5	9.5	120	119	84	6	100	1194	VDHA14ZS	VDHA14S	70
	16	400	11	M 24×1.5	9.5	120	119	83	6	100	1209	VDHA16ZS	VDHA16S	60
	20	400	13	M 30×2.0	11.0	120	122	79	6	100	1292	VDHA20ZS	VDHA20S	60
	25	400	17	M 36×2.0	12.0	143	154	106	9	125	2013	VDHA25ZS	VDHA25S	60
	30	250	19	M 42×2.0	22.5	164	156	103	12	125	2596	VDHA30ZS	VDHA30S	45
	38	250	25	M 52×2.0	26.5	198	179	118	12	180	4972	VDHA38ZS	VDHA38S	70

<sup>1)</sup> Pressure shown = item deliverable

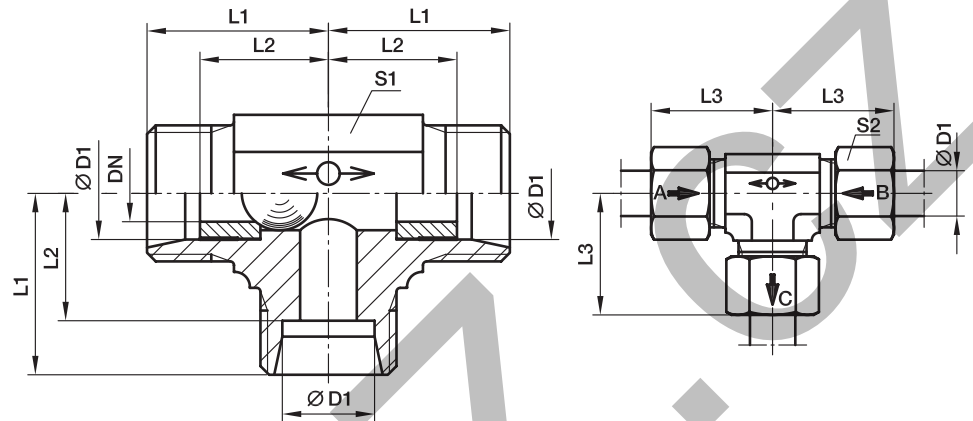
<sup>4)</sup> S = heavy series

$$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$$

## WV Alternating valve

EO 24° cone end / EO 24° cone end / EQ 24° cone end

These valves permit the passage of flow from either inlet 1 or 2 to the outlet port whilst shutting the inlet port not in use. The shutting off, of an inlet is achieved by a floating ball bearing which moves by the pressure of the flow. The alternating valve is used as an automatic switching device for hydraulic fluids within an enclosed hydraulic circuit.



Material: steel  
Surface finish: Cr(VI)-free.

Valves are not recommended for compressed air and gases.  
WV-valves are not to be used in connection with weld nipples SKA, SKM or other components where there is no contact with a shoulder stop in the inner cone.

Temperature range without pressure reductions: -40°C up to +120°C.

Recommended fitting position as shown in the picture.

Leakage rate for alternating valves hydraulic test with test pressure =  $P_{max}$ : approx. 20 drops (test period of 1 minute).

Directions of flow:

$D_1 \rightarrow D_3 = D_2$  closed  
 $D_2 \rightarrow D_3 = D_1$  closed

Series	D1	T1	DN	L1	L2	L3	S1	S2	Weight g/1 piece	Order code*	PN (bar) <sup>1)</sup> CF
L <sup>3)</sup>	8	M 14×1.5	4.5	21	14	29	14	17	53	<b>WV08LOMD</b>	160
	10	M 16×1.5	6.0	22	15	30	17	19	73	<b>WV10LOMD</b>	160
	12	M 18×1.5	7.5	24	17	32	19	22	96	<b>WV12LOMD</b>	160
	15	M 22×1.5	10.0	28	21	36	19	27	134	<b>WV15LOMD</b>	160

<sup>1)</sup> Pressure shown = item deliverable

<sup>3)</sup> L = light series

$\frac{PN \text{ (bar)}}{10} = PN \text{ (MPa)}$

Delivery without nut and ring. Information on ordering complete fittings or alternative sealing materials see page I7.

\*Please add the suffixes below according to the material/surface required.

Order code suffixes			
Material	Suffix surface and material	Example	Standard sealing material (no additional suffix needed)
Steel	CF	WV08LOMDCF	Steel ball