

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
 PN16, DN15~DN50, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to EN 1092-1
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to EN 12266-1

» Temperature Range

- -4°F to 350°F (-20°C to 180°C) with PTFE seats

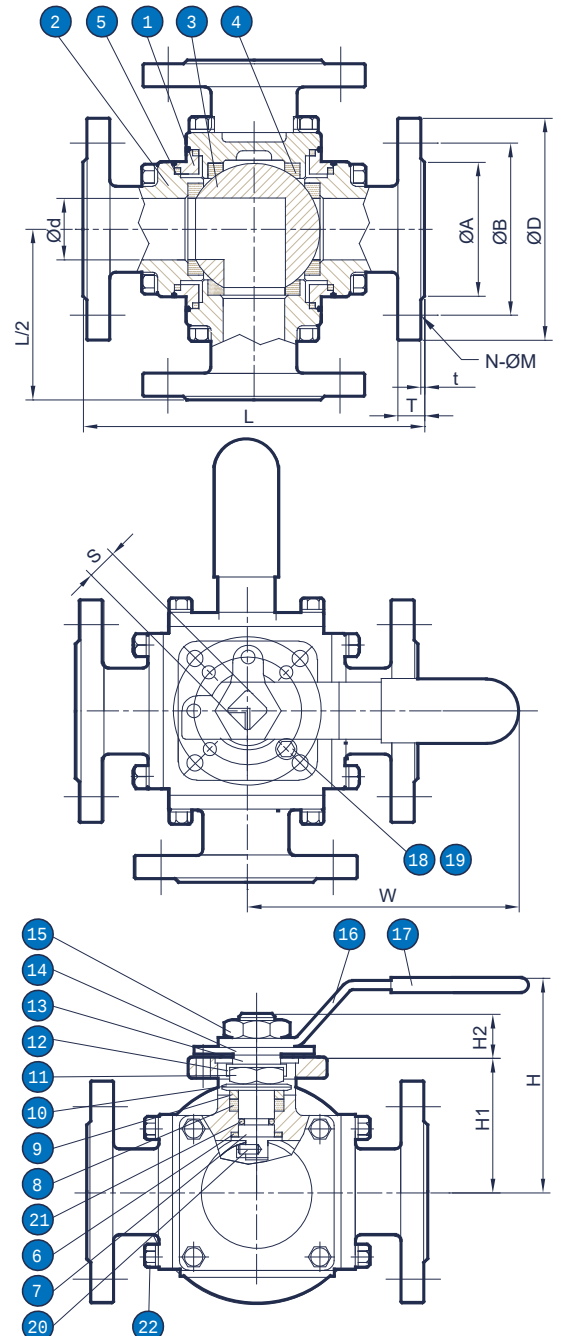
Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL	CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	THRUST WASHER	RPTFE
7	STEM	SS316
8	STEM PACKING	PTFE
9	GLAND	SS304
10	BELLEVILLE WASHER	SS301
11	STEM NUT	SS304
12	LOCK SADDLE	SS304
13	HANDLE WASHER	SS304
14	PLATE	SS304
15	HANDLE NUT	SS304
16	HANDLE	SS304
17	HANDLE SLEEVE	VINYL
18	STOP PIN BOLT	SS304
19	STOP PIN NUT	SS304
20	ANTI-STATIC DEVICE	SS316
21	O-RING	VITON
22	BODY BOLTS	SS304

Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																		
1/2"	15	15	160	105	130	95	65	45	14	2	42	11	9	4	14	F03/F04	16.5	4.4	5.3
3/4"	20	20	177	110	165	105	75	58	16	2	48.5	14	11	4	14	F04/F05	20	5.6	6.8
1"	25	25	190	118	165	115	85	68	16	2	55.5	14	11	4	14	F04/F05	35	7.2	8.7
1¼"	32	32	208	118	205	140	100	78	16	2	63	17	14	4	18	F05/F07	45	10.5	12.7
1½"	40	38	234	128	205	150	110	88	16	3	73.5	16	14	4	18	F05/F07	65	14.5	17.3
2"	50	50	273	140	325	165	125	102	18	3	92.5	21	17	4	18	F07/F10	100	23.5	27.7

Note: Torque measured at ambient temperature with no loading; safety factor is not included.



BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
PN16, DN65~DN100, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

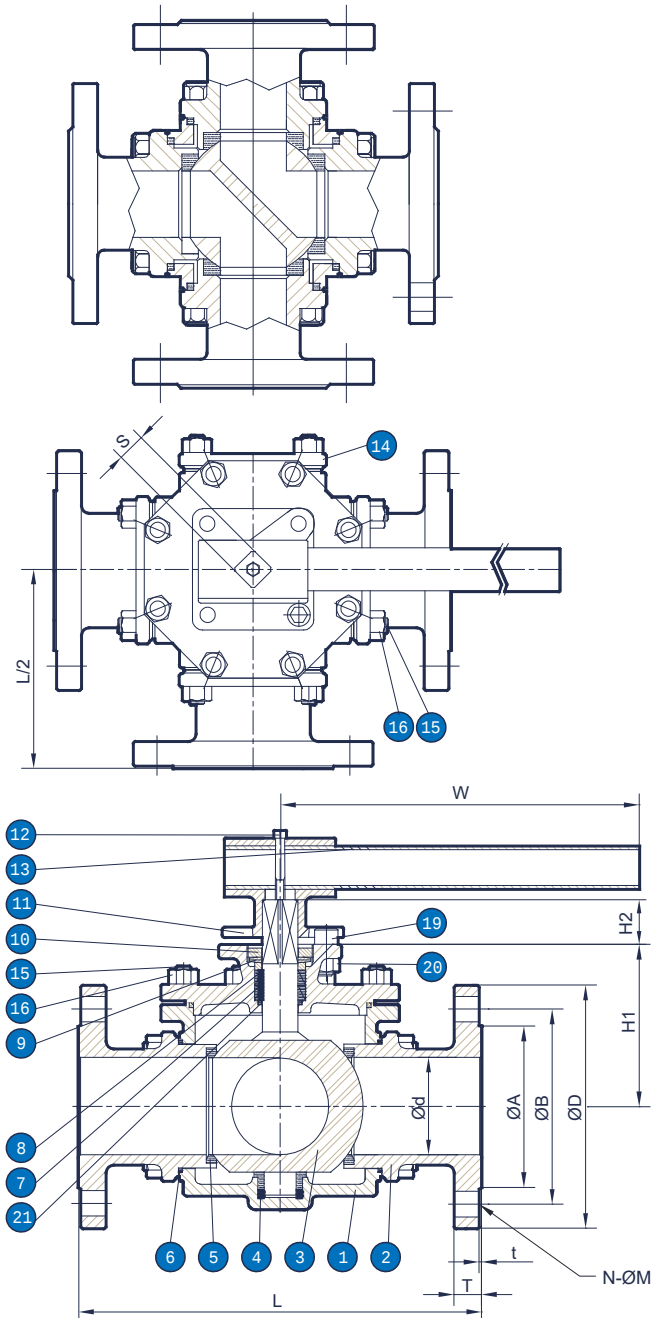
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to EN 1092-1
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to EN 12266-1

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	SS316 / SS304
4	HOUSING	RPTFE+STAINLESS
5	BALL SEAT	PTFE
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	SS304
9	BELLEVILLE WASHER	SS301
10	STEM BUSHING	SS304
11	HANDLE ADAPTOR	CF8
12	ADAPTOR BOLT	SS304
13	HANDLE PIPE	CARBON STEEL
14	BLANK END	CF8M / WCB
15	STUD	SS304
16	NUT	SS304
17	STOP PIN	SS304
18	STOP PIN NUT	SS304
19	O-RING	VITON
20	BONNET	CF8M / WCB
21	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																	
2½"	65	62	300	400	185	145	122	18	3	118.5	25	22	4	18	F10	175	28.1	32.2
3"	80	76	305	500	200	160	138	20	3	136.5	25	22	8	18	F10	250	36.6	40.6
4"	100	96	368.5	650	220	180	158	20	3	156.5	25	22	8	18	F10	305	60.3	66.6

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
PN16, DN125~DN300, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

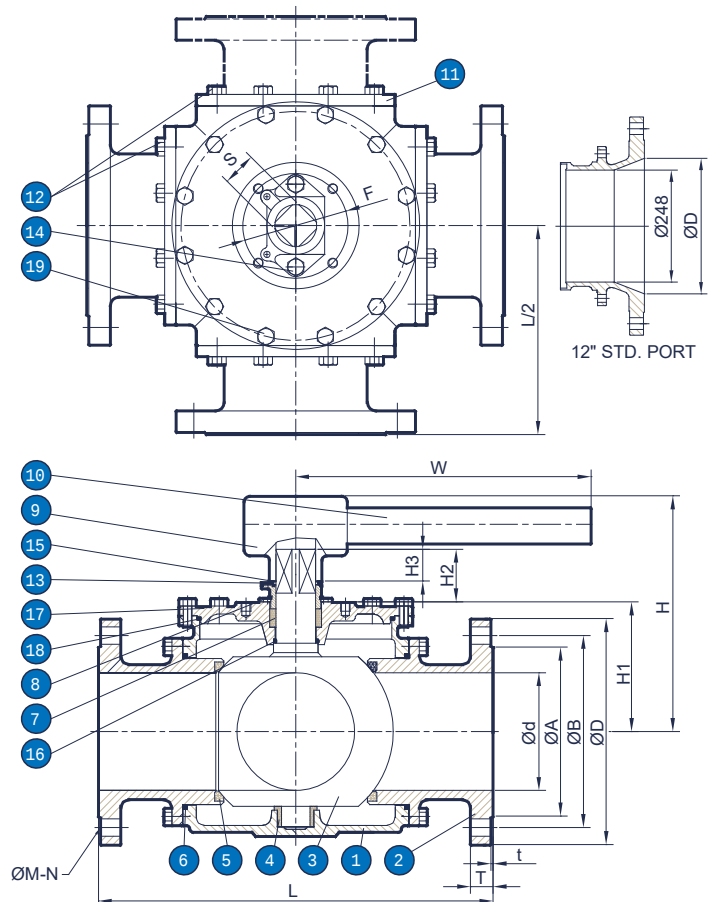
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to EN 1092-1
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to EN 12266-1

» Temperature Range

-4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	CF8M / CF8
4	HOUSING	PTFE+STAINLESS
5	BALL SEAT	PTFE / TFM1600
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	CF8 / WCB
9	HANDLE ADAPTOR	ASTM 65-45-12
10	HANDLE PIPE	CARBON STEEL
11	BLANK END	CF8M / WCB
12	STUD	SS304 / B8 / CARBON STEEL / B7
13	NUT	SS304 / B8 / CARBON STEEL / B7
14	LOCKING DEVICE	SS304
15	LOCKING DEVICE BOLT	SS304 / B8 / CARBON STEEL / B7
16	SNAP RING	SS304
17	O-RING	VITON
18	BONNET	CF8M / WCB
19	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	H3	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																			
5"	125	125	418	278	860	250	210	188	3	22	140.5	62	36	27	8	18	F12*M12	810	90.5	-
6"	150	150	427	298	1200	285	240	212	3	22	159.5	62	36	36	8	22	F12*M12	900	136	134.5
8"	200	200	532	339	1500	340	295	268	3	24	201	62	36	36	12	22	F12*M12	1160	234	187
10"	250	250	660	408	2000	405	355	320	3	26	252	93	59	36	12	26	F14*M16	1450	-	-
12"(S)	300	300	660	408	2000	460	410	378	4	28	252	93	59	36	12	26	F14*M16	1450	-	-
12"	300	300	802	488	2000	460	410	378	4	28	304	109	71	46	12	26	F16*M20	2200	-	-

* 12"(S)=12" STANDARD PORT

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
PN40, DN15~DN50, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to EN 1092-1
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to EN 12266-1

» Temperature Range

-4°F to 350°F (-20°C to 180°C) with PTFE seats

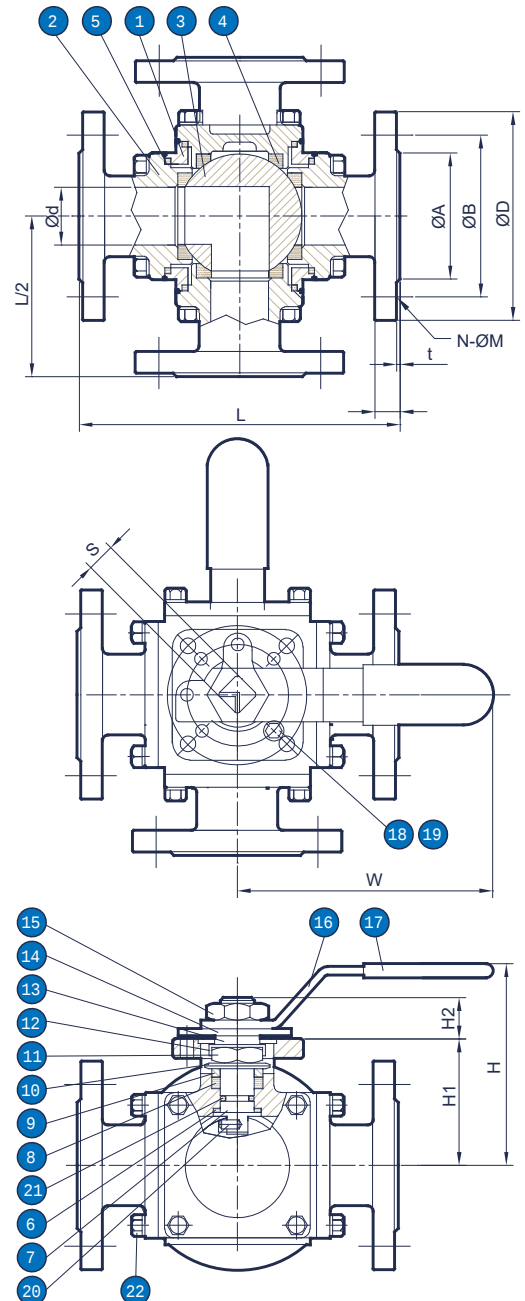
Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL	CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	THRUST WASHER	RPTFE
7	STEM	SS316
8	STEM PACKING	PTFE
9	GLAND	SS304
10	BELLEVILLE WASHER	SS301
11	STEM NUT	SS304
12	LOCK SADDLE	SS304
13	HANDLE WASHER	SS304
14	PLATE	SS304
15	HANDLE NUT	SS304
16	HANDLE	SS304
17	HANDLE SLEEVE	VINYL
18	STOP PIN BOLT	SS304
19	STOP PIN NUT	SS304
20	ANTI-STATIC DEVICE	SS316
21	O-RING	VITON
22	BODY BOLTS	SS304

Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																		
1/2"	15	15	160	105	130	95	65	45	16	2	42	11	9	4	14	F03/F04	18	4.7	5.1
3/4"	20	20	177	110	165	105	75	58	18	2	48.5	14	11	4	14	F04/F05	22	6.4	5.8
1"	25	25	190	118	165	115	85	68	18	2	55.5	14	11	4	14	F04/F05	45	7.6	7.4
1¼"	32	32	208	118	205	140	100	78	18	2	63	17	14	4	18	F05/F07	50	11.1	12.9
1½"	40	38	234	128	205	150	110	88	18	3	73.5	16	14	4	18	F05/F07	75	15	17.5
2"	50	50	273	140	325	165	125	102	20	3	92.5	21	17	4	18	F07/F10	120	24.5	-

Note: Torque measured at ambient temperature with no loading; safety factor is not included.



BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
PN40, DN65~DN100, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to EN 1092-1
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to EN 12266-1

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

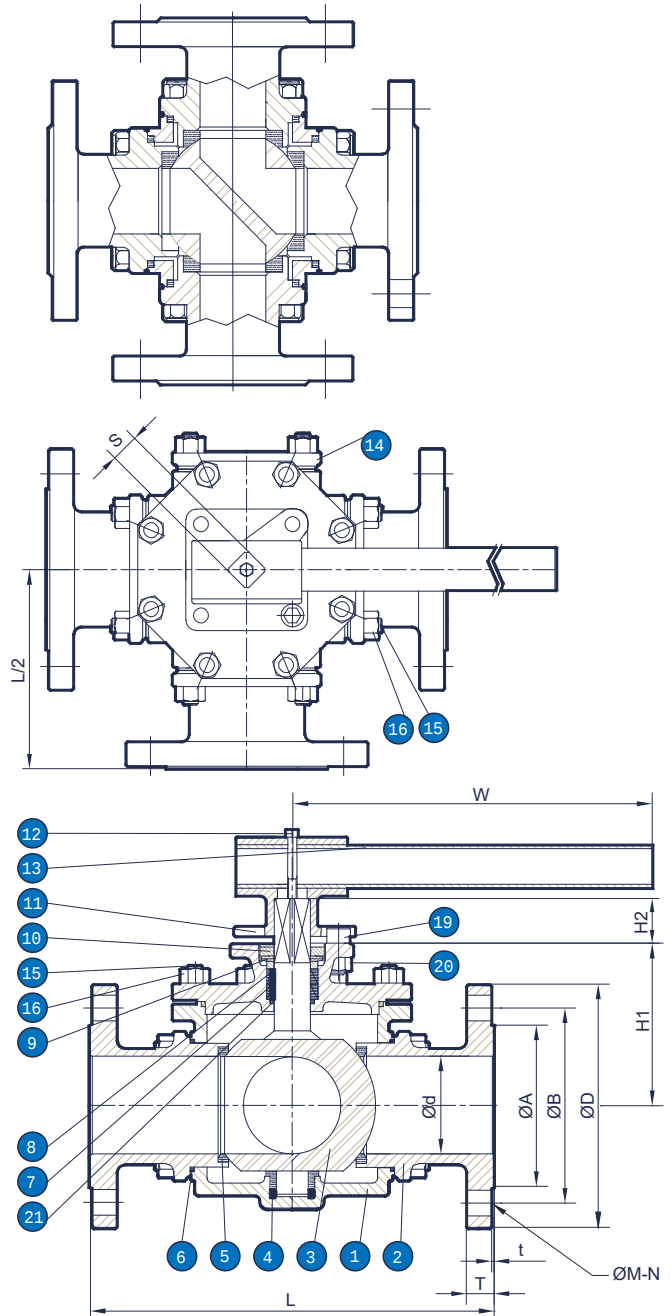
Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	SS316 / SS304
4	HOUSING	RPTFE+STAINLESS
5	BALL SEAT	PTFE
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	SS304
9	BELLEVILLE WASHER	SS301
10	STEM BUSHING	SS304
11	HANDLE ADAPTOR	CF8
12	ADAPTOR BOLT	SS304
13	HANDLE PIPE	CARBON STEEL
14	BLANK END	CF8M / WCB
15	STUD	SS304
16	NUT	SS304
17	STOP PIN	SS304
18	STOP PIN NUT	SS304
19	O-RING	VITON
20	BONNET	CF8M / WCB
21	BONNET GASKET	PTFE

Dimensions (mm):

SIZE		d	L	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																	
2½"	65	62	300	400	185	145	122	22	3	118.5	25	22	8	18	F10	190	29.8	-
3"	80	76	330.4	500	200	160	138	24	3	136.5	25	22	8	18	F10	280	37.8	44.3
4"	100	96	393.8	650	235	190	162	24	3	156.5	25	22	8	22	F10	350	64.8	74

Note: Torque measured at ambient temperature with no loading; safety factor is not included.



BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
PN40, DN125~DN250, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

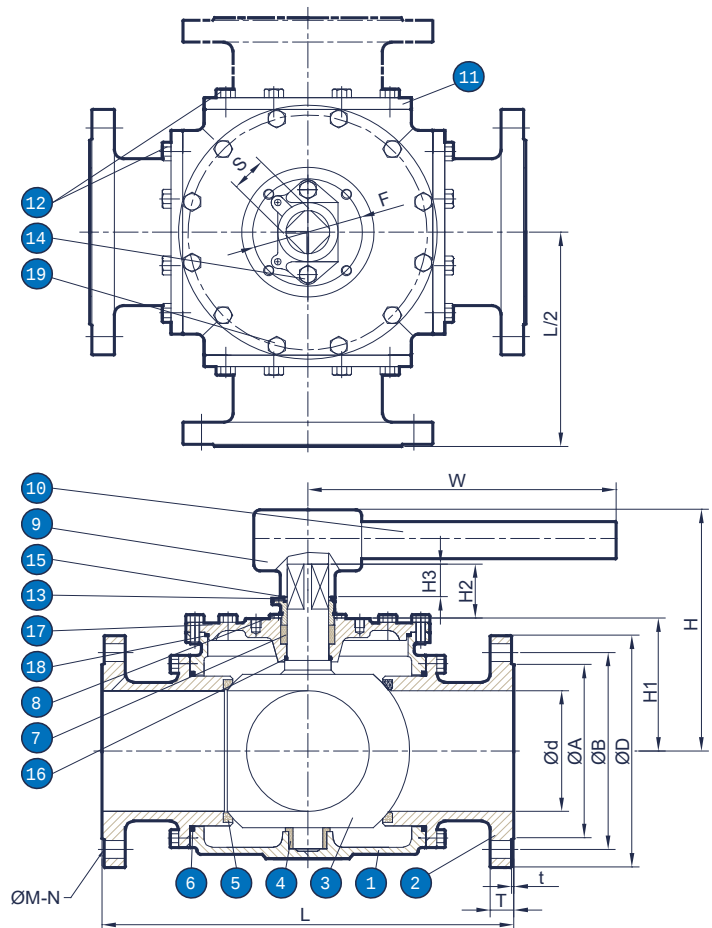
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to EN 1092-1
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to EN 12266-1

» Temperature Range

-4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	CF8M / CF8
4	HOUSING	PTFE+STAINLESS
5	BALL SEAT	PTFE / TFM1600
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	CF8 / WCB
9	HANDLE ADAPTOR	ASTM 65-45-12
10	HANDLE PIPE	CARBON STEEL
11	BLANK END	CF8M / WCB
12	STUD	SS304 / B8 / CARBON STEEL / B7
13	NUT	SS304 / B8 / CARBON STEEL / B7
14	LOCKING DEVICE	SS304
15	LOCKING DEVICE BOLT	SS304 / B8 / CARBON STEEL / B7
16	SNAP RING	SS304
17	O-RING	VITON
18	BONNET	CF8M / WCB
19	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	H3	S	N	M	ISO 5211	Torque N.m
IN	DN																	
5"	125	125	450	255	1000	270	220	188	26	3	140.5	62	36	27	8	26	F12*M12	-
6"	150	150	468	298	1200	300	250	218	28	3	159.5	62	36	36	8	26	F12*M12	1100
8"	200	200	610	339	1500	375	320	285	34	3	201	61	36	36	12	30	F12*M12	-
10"	250	250	770	443	1500	450	385	345	36	3	252	91	52	36	12	33	F14*M16	-

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
CLASS 150, 1/2"~2", SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to ASME B16.5
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

-4°F to 350°F (-20°C to 180°C) with PTFE seats

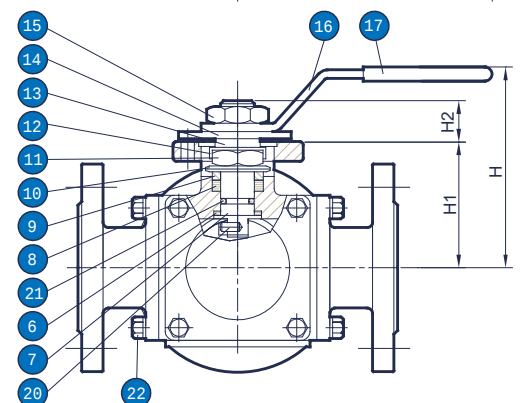
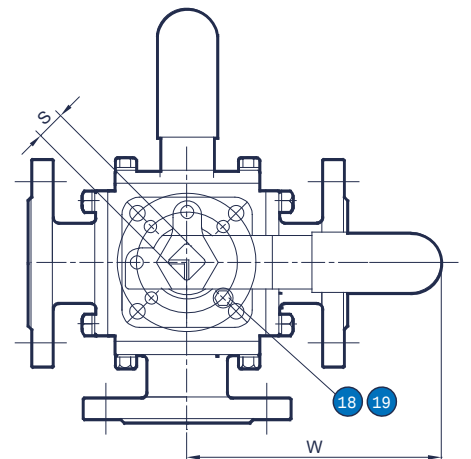
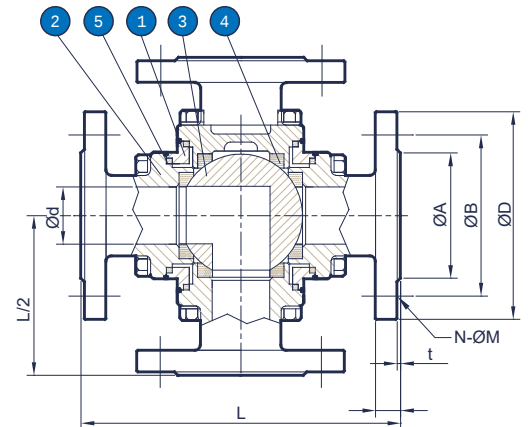
Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL	CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	THRUST WASHER	RPTFE
7	STEM	SS316
8	STEM PACKING	PTFE
9	GLAND	SS304
10	BELLEVILLE WASHER	SS301
11	STEM NUT	SS304
12	LOCK SADDLE	SS304
13	HANDLE WASHER	SS304
14	PLATE	SS304
15	HANDLE NUT	SS304
16	HANDLE	SS304
17	HANDLE SLEEVE	VINYL
18	STOP PIN BOLT	SS304
19	STOP PIN NUT	SS304
20	ANTI-STATIC DEVICE	SS316
21	O-RING	VITON
22	BODY BOLTS	SS304

Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																		
1/2"	15	15	152	105	130	89	60.5	35	11.2	1.6	42	11	9	4	16	F03/F04	16.5	3.5	4
3/4"	20	20	167	110	165	98	70	43	11.2	1.6	48.5	14	11	4	16	F04/F05	20	4.1	4.6
1"	25	25	190	118	165	108	79.5	51	11.2	1.6	55.5	14	11	4	16	F04/F05	35	6	6.7
1¼"	32	32	208	118	205	117	89	64	12.7	1.6	63	17	14	4	16	F05/F07	45	8.5	9.3
1½"	40	38	220	128	205	127	98.5	73	14.3	1.6	73.5	16	14	4	16	F05/F07	65	12.5	13.6
2"	50	50	253	140	325	152	120.5	92	15.8	1.6	92.5	21	17	4	19	F07/F10	100	21.4	23.1

Note: Torque measured at ambient temperature with no loading; safety factor is not included.



BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
CLASS 150, 2½"~4", SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

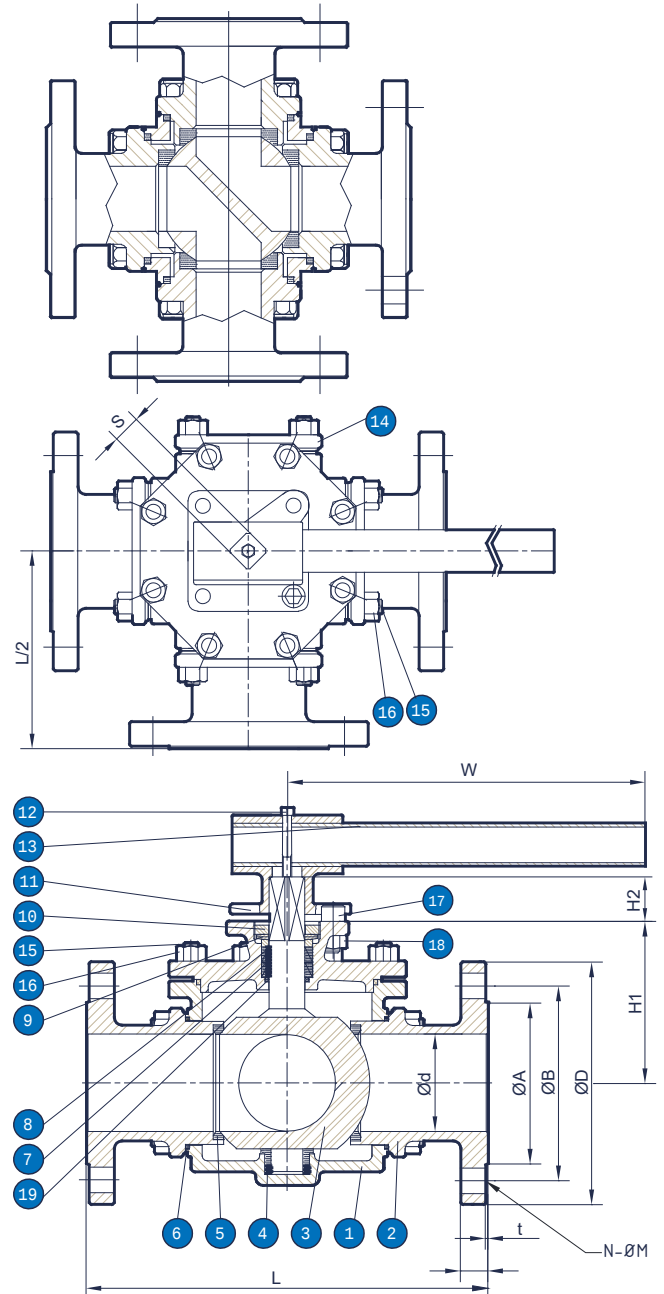
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to ASME B16.5
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	SS316 / SS304
4	HOUSING	RPTFE+STAINLESS
5	BALL SEAT	PTFE
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	SS304
9	BELLEVILLE WASHER	SS301
10	STEM BUSHING	SS304
11	HANDLE ADAPTOR	CF8
12	ADAPTOR BOLT	SS304
13	HANDLE PIPE	CARBON STEEL
14	BLANK END	CF8M / WCB
15	STUD	SS304
16	NUT	SS304
17	STOP PIN	SS304
18	STOP PIN NUT	SS304
19	O-RING	VITON
20	BONNET	CF8M / WCB
21	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																	
2½"	65	62	300	400	178	139.5	105	17.8	1.6	118.5	25	22	4	19	F10	175	28.8	31.4
3"	80	76	305	500	190	152.5	127	19.1	1.6	136.5	25	22	4	19	F10	250	35.6	39.5
4"	100	96	368.5	650	229	190.5	157	24	1.6	156.5	25	22	8	19	F10	305	64	71.9

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
CLASS 150, 5"~14, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" ~ 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

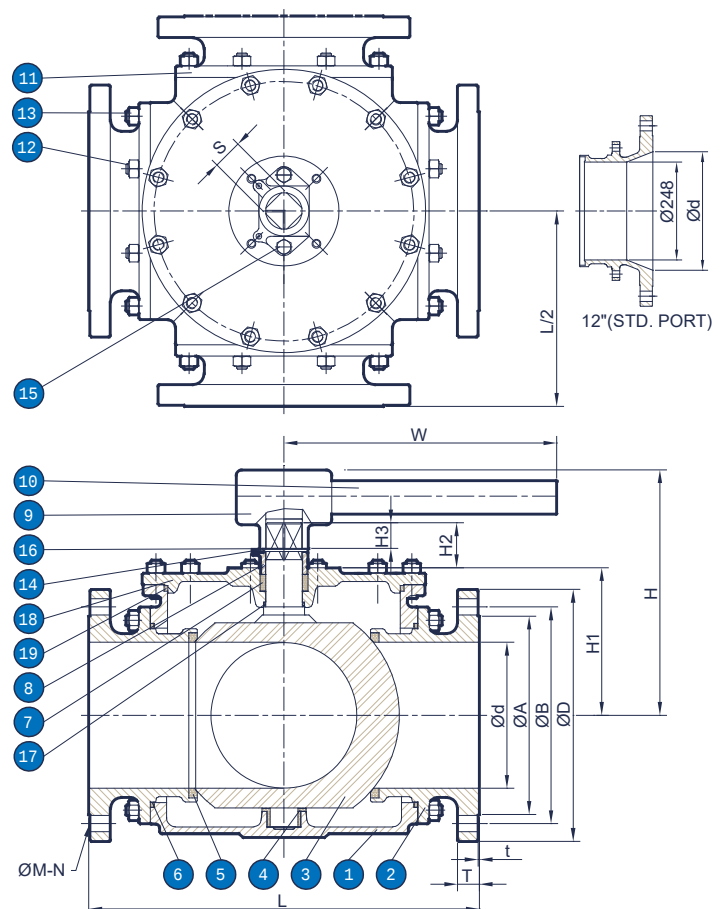
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to ASME B16.5
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

-4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	CF8M / CF8
4	HOUSING	PTFE+STAINLESS
5	BALL SEAT	PTFE / TFM1600
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	CF8 / WCB
9	HANDLE ADAPTOR	ASTM 65-45-12
10	HANDLE PIPE	CARBON STEEL
11	BLANK END	CF8M / WCB
12	STUD	SS304 / B8 / CARBON STEEL / B7
13	NUT	SS304 / B8 / CARBON STEEL / B7
14	LOCKING DEVICE	SS304
15	LOCKING DEVICE BOLT	SS304 / B8 / CARBON STEEL / B7
16	SNAP RING	SS304
17	O-RING	VITON
18	BONNET	CF8M / WCB
19	BONNET GASKET	PTFE



FULL PORT Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	H3	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																			
5"	125	125	418	255	860	254	215.9	186	23.9	1.6	140.5	59	36	27	8	22	F12*M12	810	92.7	-
6"	150	150	427	294	1200	280	241.5	216	25.4	1.6	159.5	62	36	36	8	22	F12*M12	900	124.9	127.7
8"	200	200	532	335	1500	343	298.5	270	28.6	1.6	201	62	36	36	8	22	F12*M12	1160	239.4	234.2
10"	250	248	660	408	2000	406	362	324	30.2	1.6	252	93	59	36	12	25	F14*M16	1450	342	360
12"	300	300	660	408	2000	483	432	381	32.5	1.6	252	93	59	36	12	26	F14*M16	2200	380	381

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

STANDARD PORT Dimensions (mm):

SIZE		d	d1	L	H	W	D	B	A	T	t	H1	H2	H3	S	N	M	ISO 5211	Torque N.m
IN	DN																		
12"	300	248	300	660	395	2000	483	432	381	32.5	1.6	254	76	43	36	12	26	F14*M16	1450
14"	350	296	350	815	500	2500	533.4	476.3	412.8	35.1	1.6	303	110	70	46	12	28.5	F16*M20	2200

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
CLASS 300, 1/2"~2", SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" ~ 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to ASME B16.5
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

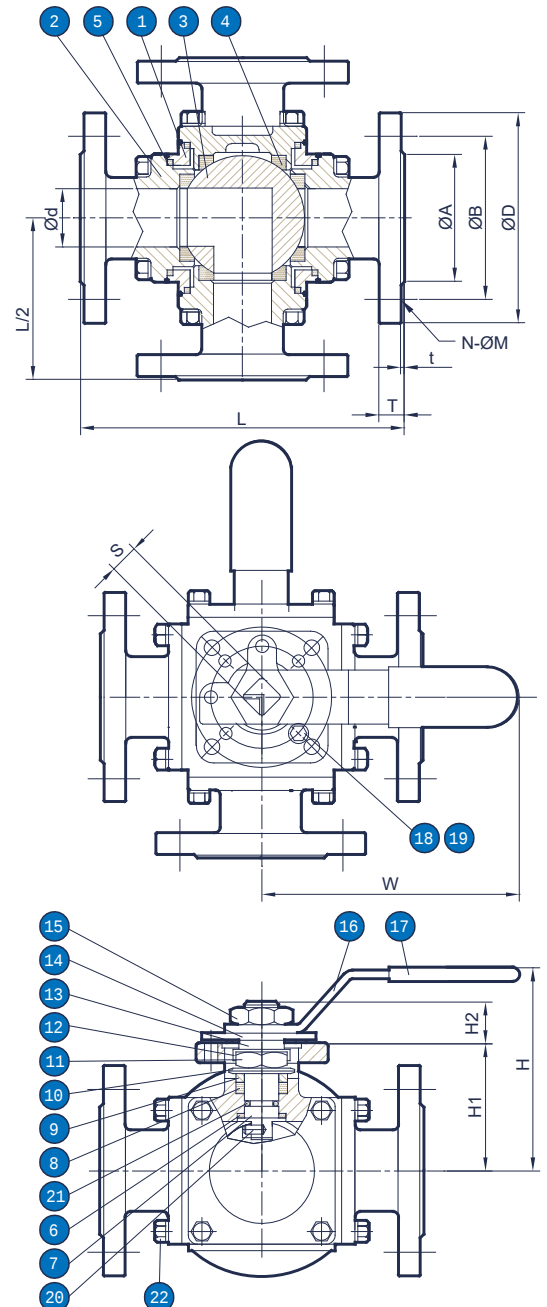
Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL	CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	THRUST WASHER	RPTFE
7	STEM	SS316
8	STEM PACKING	PTFE
9	GLAND	SS304
10	BELLEVILLE WASHER	SS301
11	STEM NUT	SS304
12	LOCK SADDLE	SS304
13	HANDLE WASHER	SS304
14	PLATE	SS304
15	HANDLE NUT	SS304
16	HANDLE	SS304
17	HANDLE SLEEVE	VINYL
18	STOP PIN BOLT	SS304
19	STOP PIN NUT	SS304
20	ANTI-STATIC DEVICE	SS316
21	O-RING	VITON
22	BODY BOLTS	SS304

Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																		
1/2"	15	15	160	105	130	95	66.5	35	14.5	1.6	42	11	9	4	16	F03/F04	18	4.3	5.1
3/4"	20	20	177	110	165	117	82.5	43	16	1.6	48.5	14	11	4	19	F04/F05	22	6	7.3
1"	25	25	200	118	165	124	89	51	17.5	1.6	55.5	14	11	4	19	F04/F05	45	8.4	9.8
1¼"	32	32	208	118	205	134	98.5	64	19.5	1.6	63	17	14	4	19	F05/F07	50	11.2	13.1
1½"	40	38	234	128	205	156	114.5	73	21	1.6	73.5	16	14	4	22	F05/F07	75	16.7	19.4
2"	50	50	273	140	325	165	127	92	22.5	1.6	92.5	21	17	8	19	F07/F10	120	24.6	27.5

Note: Torque measured at ambient temperature with no loading; safety factor is not included.



BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
CLASS 300, 2½"~4", SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" ~ 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

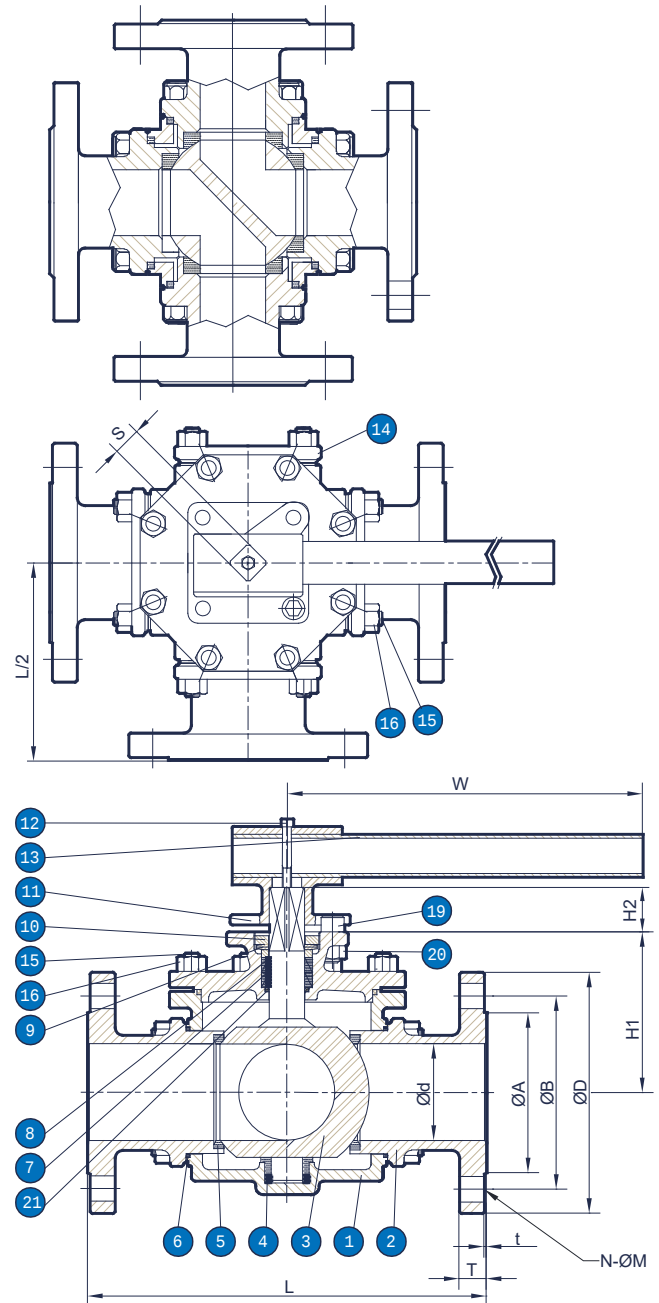
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to ASME B16.5
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	SS316 / SS304
4	HOUSING	RPTFE+STAINLESS
5	BALL SEAT	PTFE
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	SS304
9	BELLEVILLE WASHER	SS301
10	STEM BUSHING	SS304
11	HANDLE ADAPTOR	CF8
12	ADAPTOR BOLT	SS304
13	HANDLE PIPE	CARBON STEEL
14	BLANK END	CF8M / WCB
15	STUD	SS304
16	NUT	SS304
17	STOP PIN	SS304
18	STOP PIN NUT	SS304
19	O-RING	VITON
20	BONNET	CF8M / WCB
21	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																	
2½"	65	62	300	400	190	149	105	25.4	1.6	118.5	25	22	8	22	F10	190	34.5	38.8
3"	80	76	330.4	500	210	168	127	28.6	1.6	136.5	25	22	8	22	F10	280	43.3	48.5
4"	100	96	393.8	650	254	200	157	32	1.6	156.5	25	22	8	22	F10	350	81.5	82.7

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
CLASS 300, 5"~12", SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

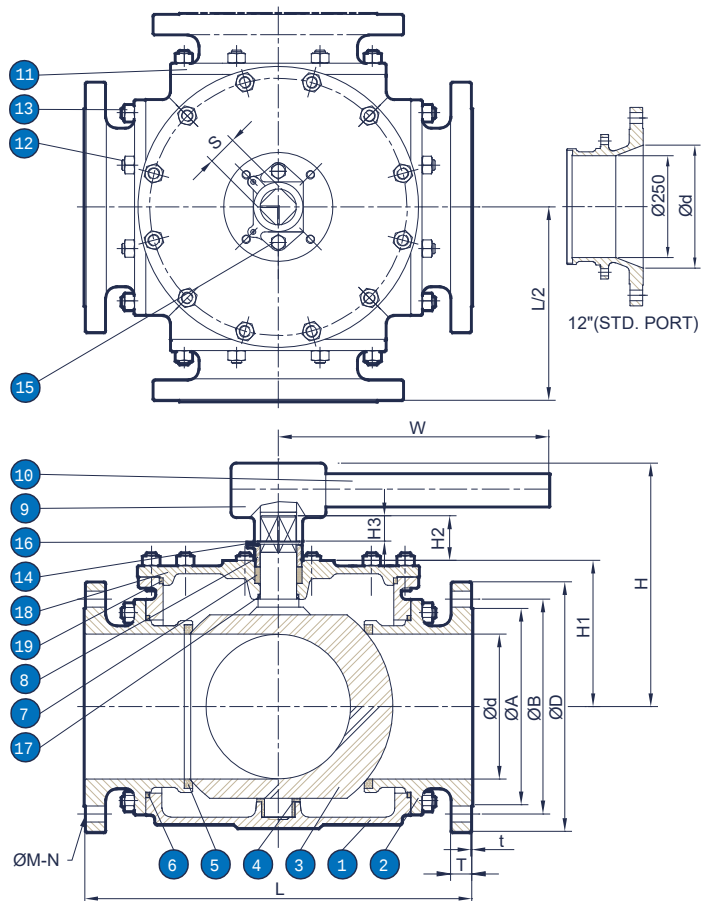
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to ASME B16.5
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

-4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	CF8M / CF8
4	HOUSING	PTFE+STAINLESS
5	BALL SEAT	PTFE / TFM1600
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	CF8 / WCB
9	HANDLE ADAPTOR	ASTM 65-45-12
10	HANDLE PIPE	CARBON STEEL
11	BLANK END	CF8M / WCB
12	STUD	SS304 / B8 / CARBON STEEL / B7
13	NUT	SS304 / B8 / CARBON STEEL / B7
14	LOCKING DEVICE	SS304
15	LOCKING DEVICE BOLT	SS304 / B8 / CARBON STEEL / B7
16	SNAP RING	SS304
17	O-RING	VITON
18	BONNET	CF8M / WCB
19	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	H3	S	N	M	ISO 5211	Torque N.m	3-Way Weight Kg	4-Way Weight Kg
IN	DN																			
5"	125	125	460	255	1000	279.5	235	186	35	1.6	140.5	62	36	27	8	22	F12*M12	-	-	-
6"	150	150	468	298	1200	318	270	216	36.5	1.6	159.5	62	36	36	12	22	F12*M12	1100	191.3	202.9
8"	200	200	597	339	1500	381	330	270	41.4	1.6	201	61	36	36	12	26	F12*M12	-	-	-
10"	250	250	745	408	1500	445	387	324	47.8	1.6	252	90	52	36	16	29	F14*M16	-	-	-
12"(S)	300	300	745	408	1500	520.7	450.9	381	50.8	1.6	252	90	52	36	16	32	F14*M16	-	-	-

* 12"(S)=12" STANDARD PORT)

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
JIS 10K, 15A~50A, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to ASME B2220
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

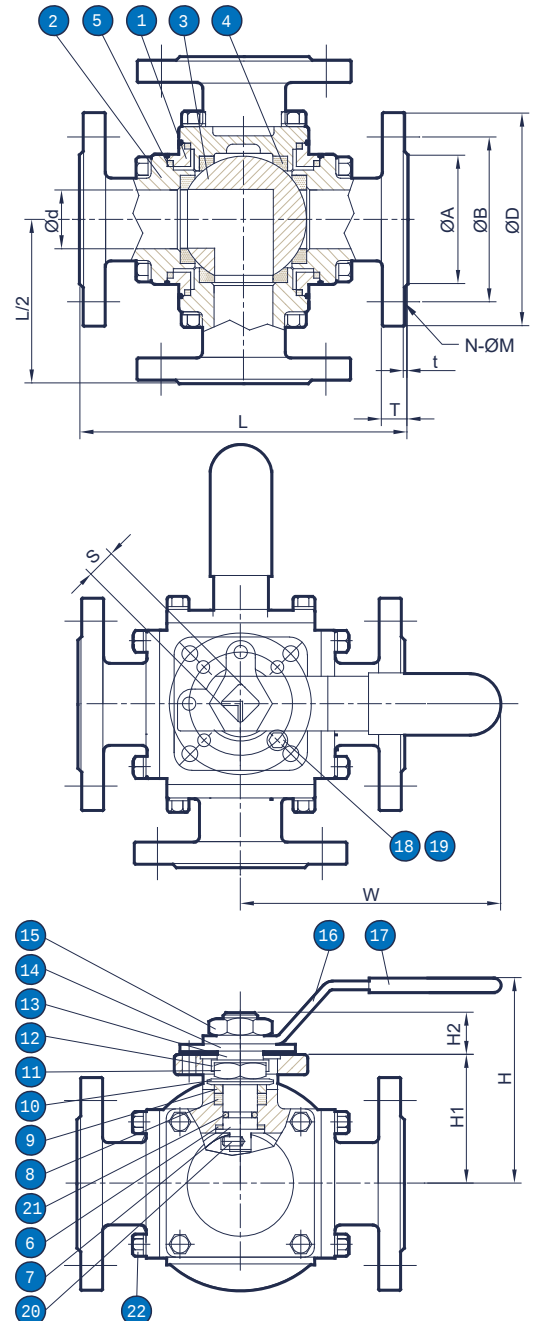
Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL	CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	THRUST WASHER	RPTFE
7	STEM	SS316
8	STEM PACKING	PTFE
9	GLAND	SS304
10	BELLEVILLE WASHER	SS301
11	STEM NUT	SS304
12	LOCK SADDLE	SS304
13	HANDLE WASHER	SS304
14	PLATE	SS304
15	HANDLE NUT	SS304
16	HANDLE	SS304
17	HANDLE SLEEVE	VINYL
18	STOP PIN BOLT	SS304
19	STOP PIN NUT	SS304
20	ANTI-STATIC DEVICE	SS316
21	O-RING	VITON
22	BODY BOLTS	SS304

Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m
IN	DN																
1/2"	15	15	152	105	130	95	70	51	12	1	42	11	9	4	15	F03/F04	16.5
3/4"	20	20	167	110	165	105	75	56	14	1	48.5	14	11	4	15	F04/F05	20
1"	25	25	190	118	165	125	90	67	14	1	55.5	14	11	4	19	F04/F05	35
1 ¼"	32	32	208	118	205	135	100	76	16	2	63	17	14	4	19	F05/F07	45
1 ½"	40	38	220	128	205	140	105	81	16	2	73.5	16	14	4	19	F05/F07	65
2"	50	50	253	140	325	155	120	96	16	2	92.5	21	17	4	19	F07/F10	100

Note: Torque measured at ambient temperature with no loading; safety factor is not included.



BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
JIS 10K, 65A~100A, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

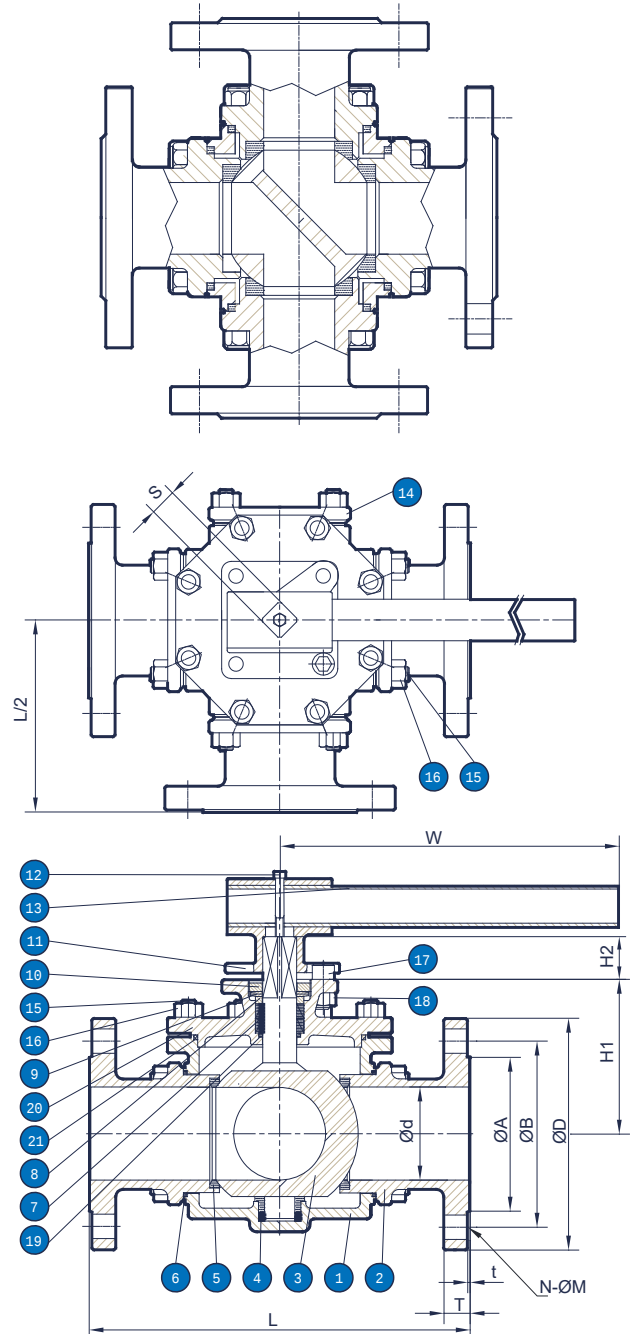
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to B2220
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	CF8M
4	HOUSING	PTFE+STAINLESS
5	BODY SEAT	PTFE / RPTFE
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	SS304
9	BELLEVILLE WASHER	SS301
10	STEM BUSHING	SS304
11	HANDLE ADAPTOR	CF8
12	ADAPTOR BOLT	SS304
13	HANDLE PIPE	CARBON STEEL
14	BLANK END	CF8M / WCB
15	STUD	SS304
16	NUT	SS304
17	STOP PIN	SS304
18	STOP PIN NUT	SS304
19	O-RING	VITON
20	BONNET	CF8M / WCB
21	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211
IN	DN														
2½"	65	62	300	500	175	140	116	18	2	119	25	22	4	19	F10
3"	80	76	305	600	185	150	126	18	2	137	25	22	8	19	F10
4"	100	96	368.4	750	210	175	151	18	2	157	25	22	8	19	F10

Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
JIS 20K, 15A~50A, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to B2220
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to API 598

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

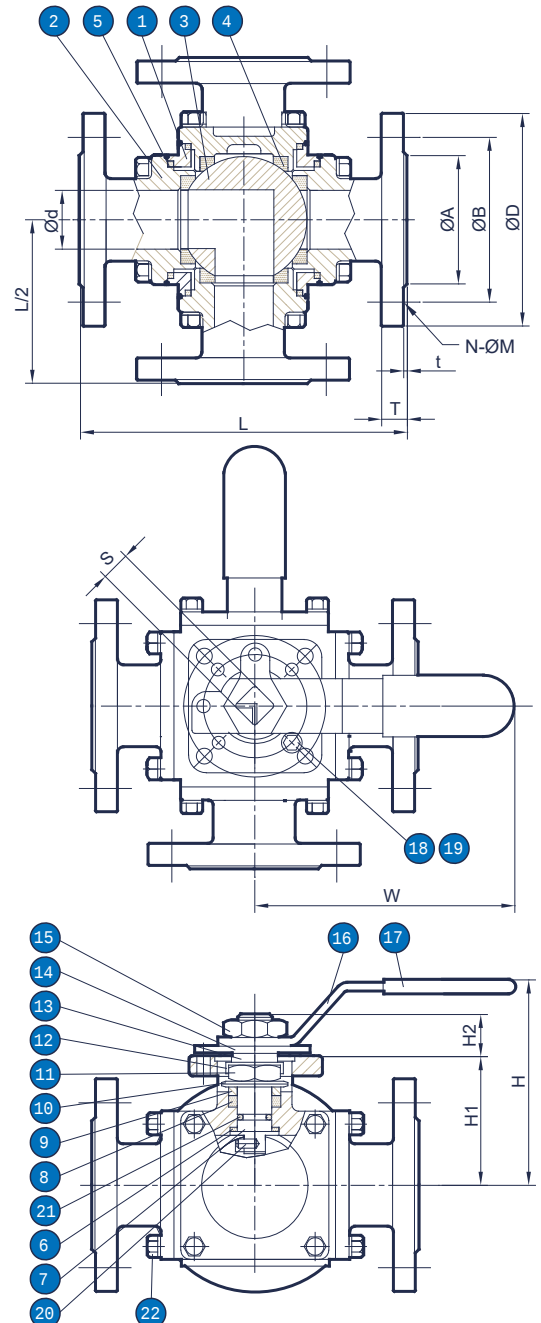
Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL	CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	THRUST WASHER	RPTFE
7	STEM	SS316
8	STEM PACKING	PTFE
9	GLAND	SS304
10	BELLEVILLE WASHER	SS301
11	STEM NUT	SS304
12	LOCK SADDLE	SS304
13	HANDLE WASHER	SS304
14	PLATE	SS304
15	HANDLE NUT	SS304
16	HANDLE	SS304
17	HANDLE SLEEVE	VINYL
18	STOP PIN BOLT	SS304
19	STOP PIN NUT	SS304
20	ANTI-STATIC DEVICE	SS316
21	O-RING	VITON
22	BODY BOLTS	SS304

Dimensions (mm):

SIZE		d	L	H	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211	Torque N.m
IN	DN																
1/2"	15	15	160	105	130	95	70	51	14	1	42	11	9	4	15	F03/F04	18
3/4"	20	20	177	110	165	100	75	56	16	1	48.5	14	11	4	15	F04/F05	22
1"	25	25	190	118	165	125	90	67	16	1	55.5	14	11	4	19	F04/F05	45
1¼"	32	32	208	118	205	135	100	76	18	2	63	17	14	4	19	F05/F07	50
1½"	40	38	234	128	205	140	105	81	18	2	73.5	16	14	4	19	F05/F07	75
2"	50	50	273	140	325	155	120	96	18	2	92.5	21	17	8	19	F07/F10	120

Note: Torque measured at ambient temperature with no loading; safety factor is not included.



BALL VALVE

Direct Mount 4-Seated 3-Way/4-Way Flanged Ball Valve
JIS 20K, 65A~100A, SIL 3 Capable

MODEL: KHD-M4F

» Features

- Available in PN16, PN40, CL150, CL300, JIS10K and JIS20K
- Size DN15 to DN50 (1/2" to 2") with floating ball design.
- Size DN65 to DN300 (2½" to 12") with trunnion ball design.
- This four-seat design can effectively prevent leakage from the upstream port to the side port for multi-port valves.
- Capable of interchange between 3-way and 4-way
- Available in T/L/X-port ball
- Anti blow-out proof stem

» Standards

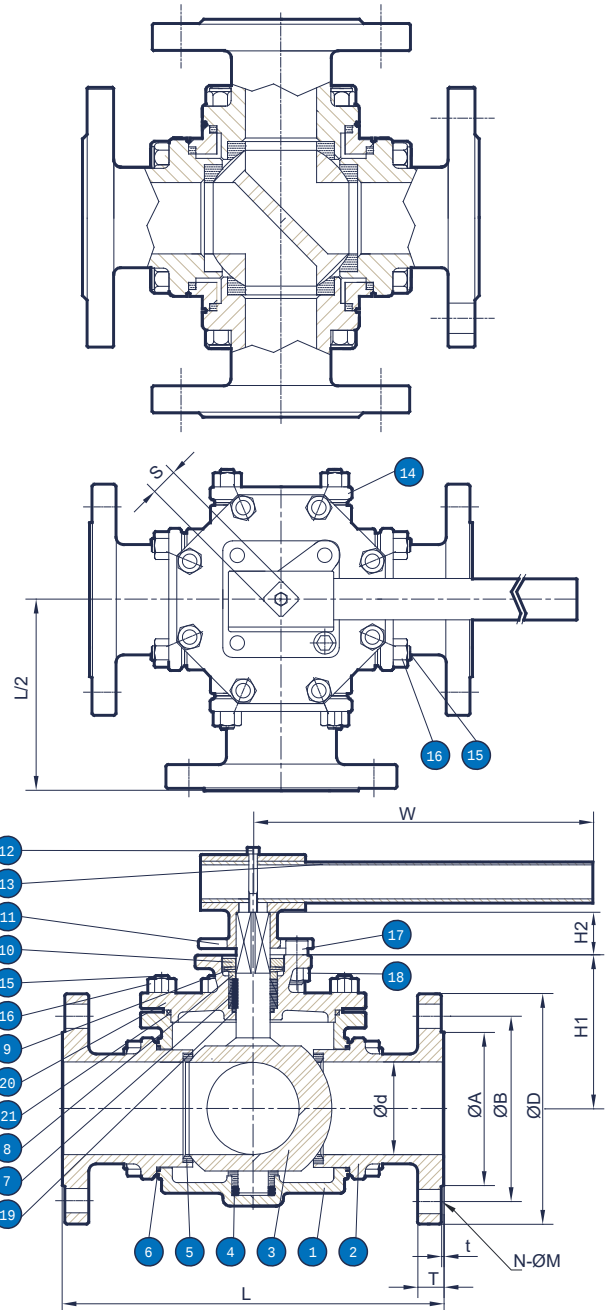
- ISO 5211 direct-mounting pad
- Design acc. to Manufacturer standard
- Flange dimension acc. to B2220
- Face-to-face acc. to Manufacturer standard
- Inspection and Test acc. to EN 12266-1

» Temperature Range

- 4°F to 350°F (-20°C to 180°C) with PTFE seats

Materials List:

NO	PART NAME	MATERIAL
1	BODY	CF8M / WCB
2	END CAP	CF8M / WCB
3	BALL & STEM	CF8M
4	HOUSING	PTFE+STAINLESS
5	BODY SEAT	PTFE / RPTFE
6	BODY SEAL	PTFE
7	STEM PACKING	PTFE
8	GLAND	SS304
9	BELLEVILLE WASHER	SS301
10	STEM BUSHING	SS304
11	HANDLE ADAPTOR	CF8
12	ADAPTOR BOLT	SS304
13	HANDLE PIPE	CARBON STEEL
14	BLANK END	CF8M / WCB
15	STUD	SS304
16	NUT	SS304
17	STOP PIN	SS304
18	STOP PIN NUT	SS304
19	O-RING	VITON
20	BONNET	CF8M / WCB
21	BONNET GASKET	PTFE



Dimensions (mm):

SIZE		d	L	W	D	B	A	T	t	H1	H2	S	N	M	ISO 5211
IN	DN														
2½"	65	62	300	500	175	140	116	20	2	119	25	22	8	19	F10
3"	80	76	330.4	600	200	160	132	22	2	137	25	22	8	23	F10
4"	100	96	393.8	750	225	185	160	24	2	157	25	22	8	23	F10

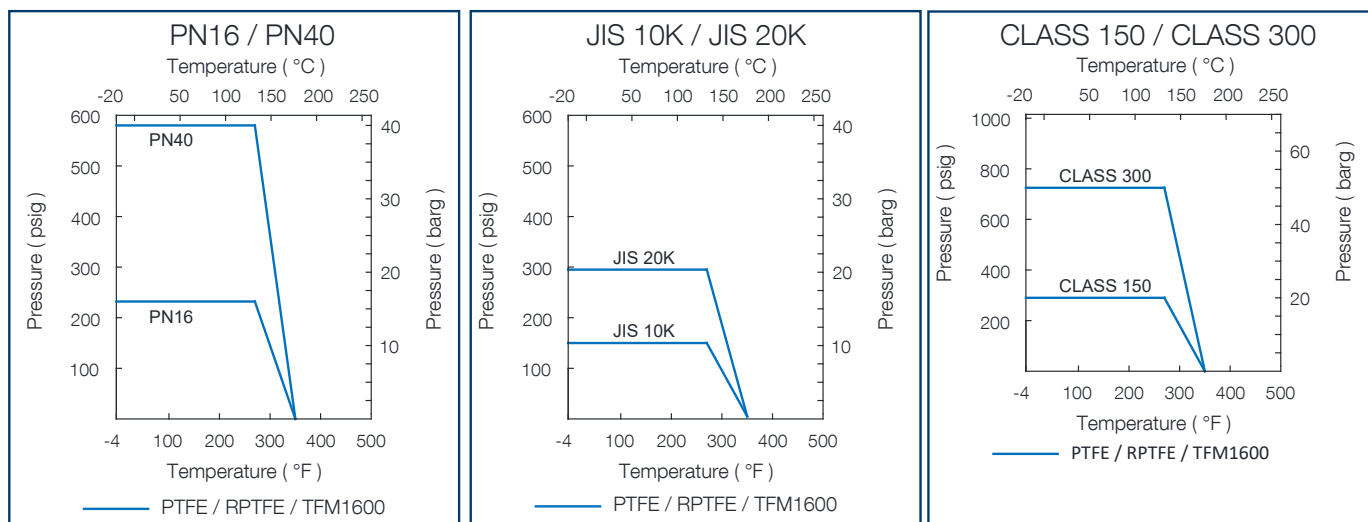
Note: Torque measured at ambient temperature with no loading; safety factor is not included.

BALL VALVE

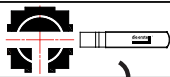
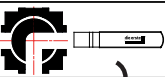
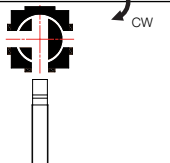
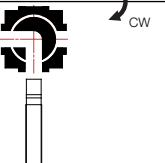
Direct Mount 4-Seated 3-Way/4-Way
Flanged Ball Valve, SIL 3 Capable

MODEL: KHD-M4F

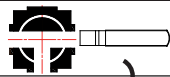
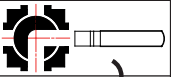
Valve Body Rating with Seat Material Plot:



3-WAY DEFAULT SETUP

PORT TURN	T-PORT	L-PORT
0°		
90°		

4-WAY DEFAULT SETUP

PORT TURN	T-PORT		X-PORT
0°			
90°	