

DESIGN FEATURES

- Built-in ISO 5211 Mounting Pad for Easy Automation
- **Fire Safe** Design Approved
- **Ex** Anti-static Devices for Ball-Stem-Body
- Blow-out Proof Stem
- Pressure Balance Hole in Ball Slot
- **TA-LUFT** **ISO15848-1** Design Approved
- NACE standard MR0175 & MR0103 (Optional)
- Casting Approved by TÜV AD 2000-Merkblatt W0



APPLICABLE STANDARDS

- Design : ASME B16.34
- Fire Safe : API 607 5th 2005, ISO10497
- Wall Thickness : ASME B16.34
- Flanged Ends : ASME B16.5 Class 150/300
- Inspection & Testing : API 598

CV / KV VALUES

NPS	CV	CV
1/2	30	26
3/4	55	48
1	96	83
1 1/4	170	147
1 1/2	270	234
2	470	407
2 1/2	780	675
3	1150	995
4	2100	1817
5	3000	2595
6	4500	3893

WEIGHT

	NPS	Weight (kg)	Weight(lb)
KV-071 KV-071F	1/2	1.2	2.65
	3/4	1.4	3.09
	1	2.4	5.29
	1 1/4	2.8	6.17
	1 1/2	3.9	8.60
	2	5.6	12.35
	2 1/2	9.7	21.38
	3	12.4	27.34
KV-L71 KV-L71F	4	24.2	53.35
	5	33.5	73.85
KV-L72 KV-L72F	6	50.6	111.6
	5	—	—
	6	—	—

TORQUE VALUES

Close to Open Torque at Various Differential Pressure (ΔP), Standard Seats (TFM1600&PTFE)

unit : in·lb / N·m

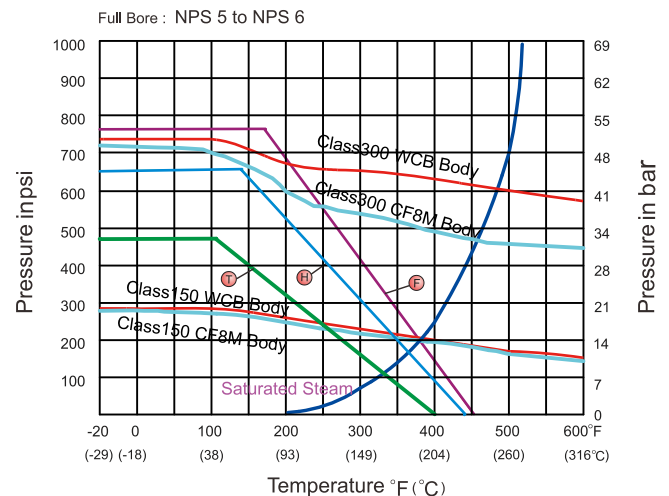
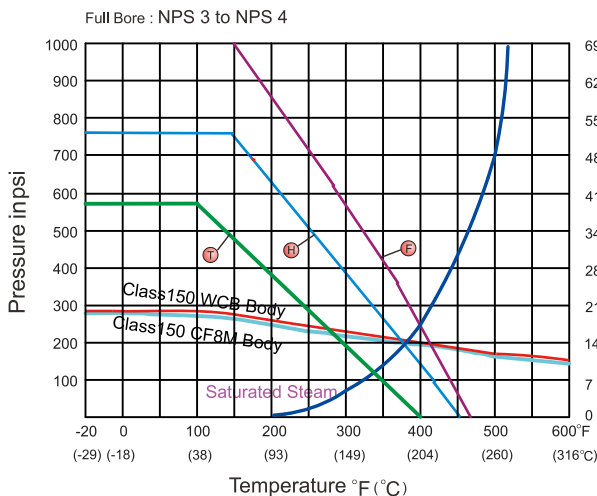
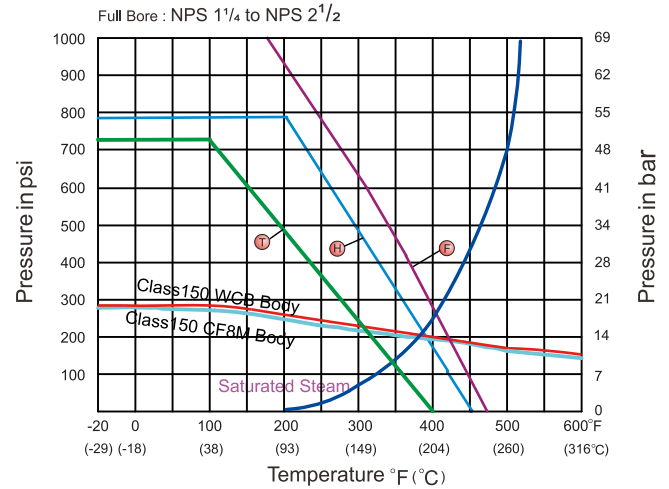
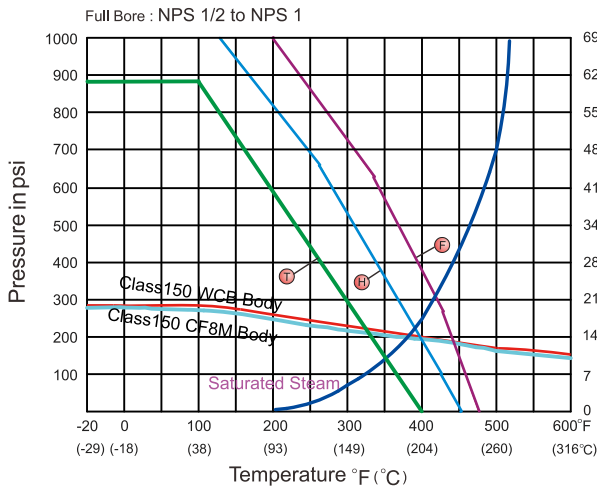
Size/ ΔP	75 psig		150 psig		300 psig		700 psig	
	5 bar		10 bar		20 bar		50 bar	
NPS	N·m	In·lb	N·m	In·lb	N·m	In·lb	N·m	In·lb
1/2	5	44	5	44	5	44	5	44
3/4	6	53	6	53	6	53	6	53
1	10	88	10	88	11	97	11	97
1 1/4	13	115	13	115	15	133	17	150
1 1/2	19	168	19	168	22	195	24	212
2	25	221	29	257	32	283	35	310
2 1/2	40	354	45	398	49	434	54	478
3	65	575	72	637	81	717	90	796
4	100	885	110	973	122	1080	135	1195
5	190	1681	210	1858	245	2168	285	2522
6	280	2478	306	2708	340	3009	408	3611

- Remark : 1. Torques will increase about 30% if seat materials are Reinforced Fiber-Glass PTFE, Carbon-filled PTFE or EK+PTFE or TFM4215.
 2. The torque figures at 5 bar pressure are maximum values to be tested after the valves are placed for 24 hours.
 3. For actuator sizing, a safety factor of minimum 30% is recommended.

TECHNICAL INFORMATION

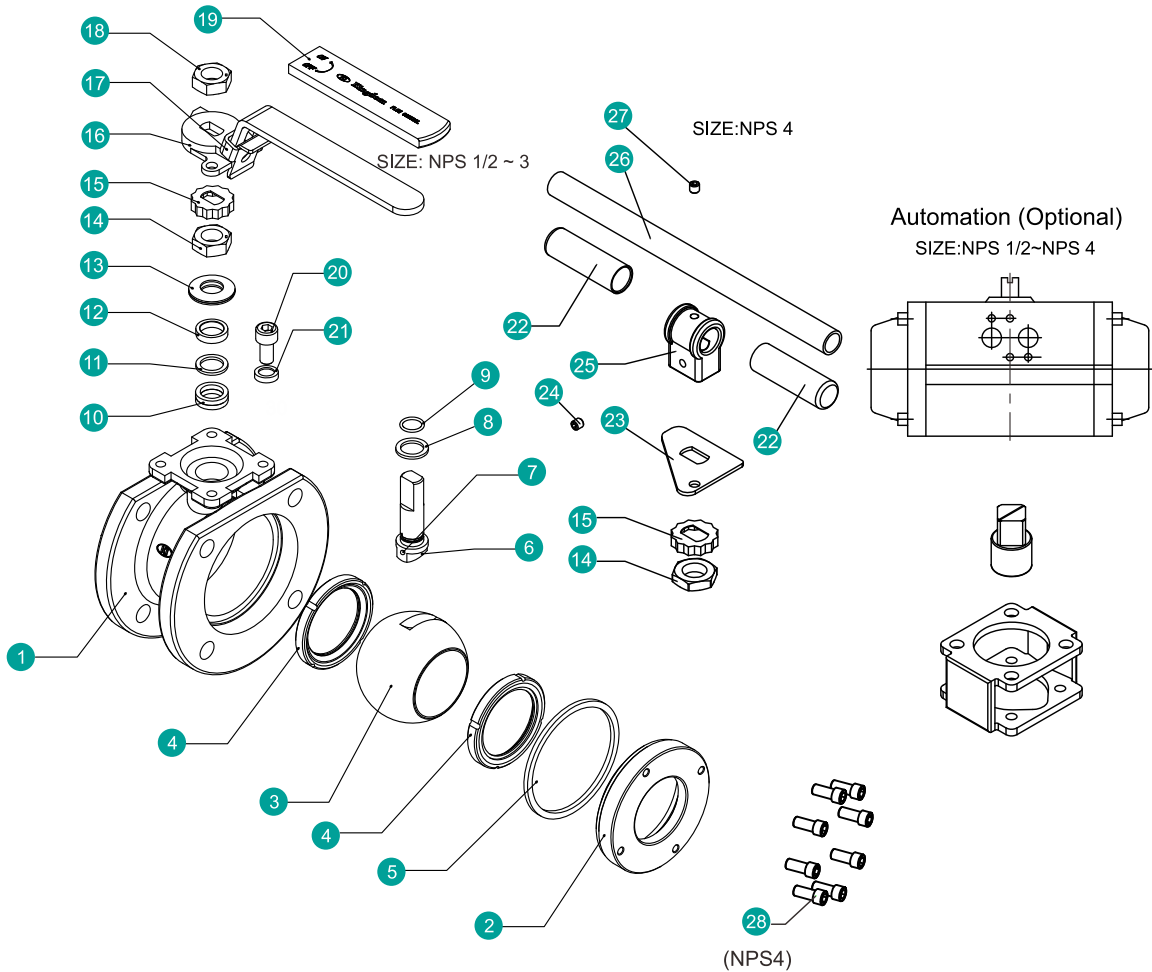
PRESSURE - TEMPERATURE DATA

The pressure-temperature data of ball valves are determined not only by valve shell materials but also by sealing materials used for ball seats, gland packings and flange gaskets.



Seat Materials : T PTFE H TFM1600 E TFM4215

SIZE: NPS 1/2~ NPS 4

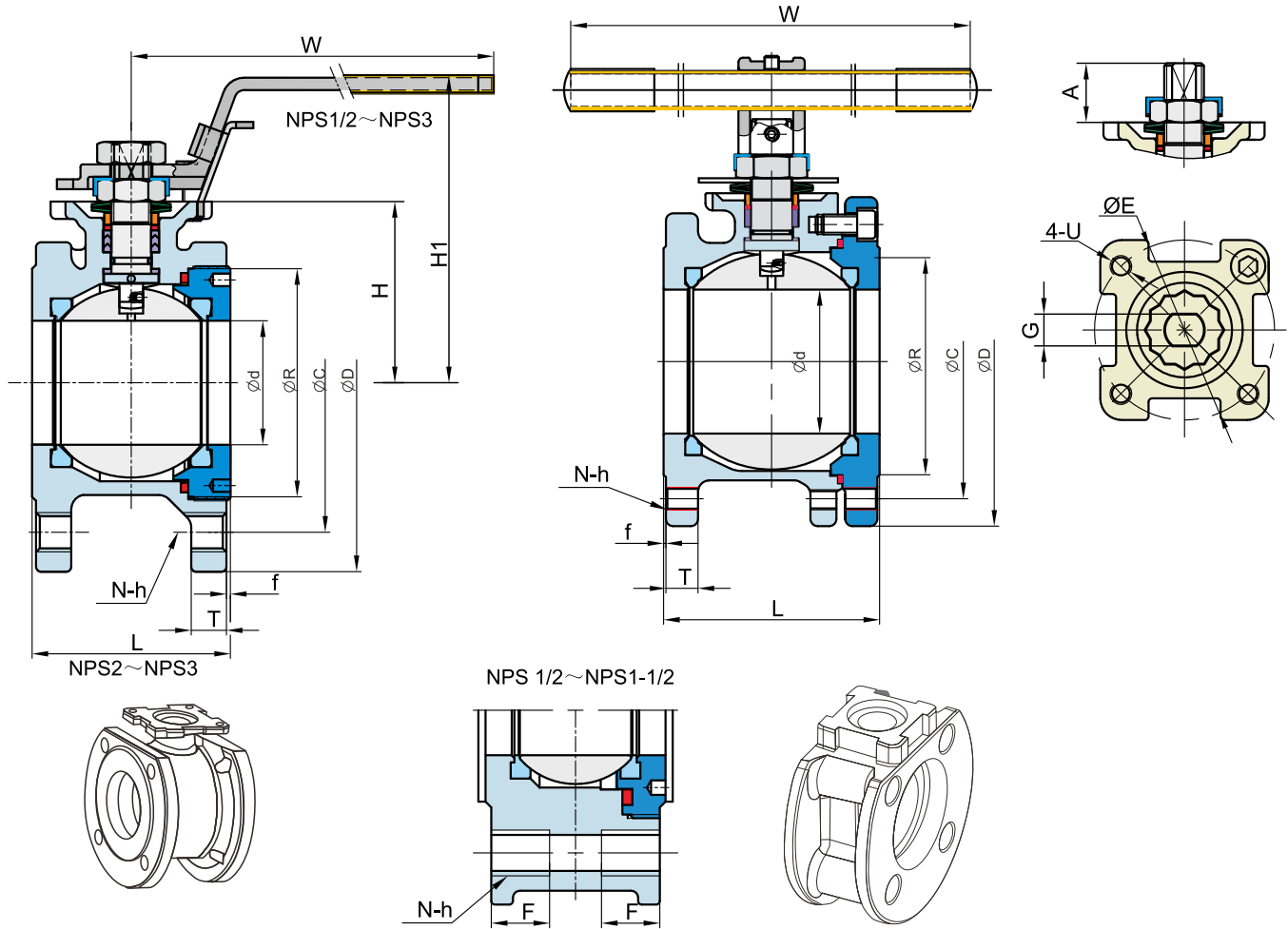


MATERIAL OF CONSTRUCTION

NO.	PART NAME	MATERIALS		
1	Body	A351-CF8M	A351-CF8	A216-WCB
2	End Cap	A351-CF8M	A351-CF8	A216-WCB
3	Ball	316		304
4	Ball Seat	TFM1600 / PTFE / TFM4215		
5	Body Gasket	PTFE / 316 Spiral Wound+GRAPHITE*		
6	Stem(NPS1-NPS5)	316		304
	Stem(NPS6)	S32205		S32205
7	Anti-Static Device	316		304
8	Thrust Washer	PTFE / TFM1600		
9	O-Ring	FKM		
10	Stem Packing	PTFE / GRAPHITE*		
11	Bushing	50%SS+50%PTFE / 304*		
12	Gland	316		
13	Belleville Washer	301		
14	Stem Nut	A194-8(304)		
15	Stop-lock-Cap	304		
16	Handle (NPS1/2~NPS3)	CF8		
17	Lock Device (NPS1/2~NPS3)	304		
18	Handle Nut (NPS1/2~NPS3)	A194-8(304)		
19	Handle Sleeve (NPS1/2~NPS3)	PVC		
20	Stop Bolt	A2-70		
21	Stop washer	304		
22	Handle Sleeve	PVC		
23	Triangle Stopper (NPS4)	304		
24	Set Screwed (NPS4)	A2-70		
25	Handle Adapter (NPS4)	A351-CF8		
26	Pipe Handle (NPS4)	A53+PLATED Zn		
27	Set Screwed (NPS4)	A2-70		
28	Bolting (NPS4)	A193-B8/A2-70		

*Materials for KV-071F Series(Fire Safe Models)

Pipe Handle Operation
SIZE: NPS 4



DIMENSION TABLE

ASME Class 150

KV-071, KV-071F

Unit: mm

NPS	d	L	R	D	C	T	f	N	h	F	H	H1	W	G	A	E	U	ISO 5211
1/2	15.0	42	35.0	89	60.5	7.9	1.5	4	1/2-13UNC	16	41	91	137	6.3	17	42	M5	F04
3/4	20.0	44	43.0	99	69.8	8.6	1.5	4	1/2-13UNC	18	44	94	137	6.3	17	42	M5	F04
1	25.0	50	51.0	108	79.2	9.7	1.5	4	1/2-13UNC	18	47	99	172	9.0	23	50	M6	F05
1 1/4	32.0	60	63.5	117	88.9	11.2	1.5	4	1/2-13UNC	25	52	104	172	9.0	24	50	M6	F05
1 1/2	38.0	65	73.2	127	98.6	12.7	1.5	4	1/2-13UNC	25	64	117	202	9.6	26	70	M8	F07
2	50.0	80	92.0	152	120.6	14.2	1.5	4	5/8-11UNC	—	73	126	202	9.6	26	70	M8	F07
2 1/2	63.5	110	104.7	178	139.7	15.7	1.5	4	5/8-11UNC	—	88	153	252	16.0	43	102	M10	F10
3	76.0	120	127.0	190	152.4	17.5	1.5	4	5/8-11UNC	—	97	162	252	16.0	43	102	M10	F10
4	100.0	150	157.0	229	190.5	22.4	1.5	8	5/8-11UNC	—	117	212	400	18.0	52	102	M10	F10

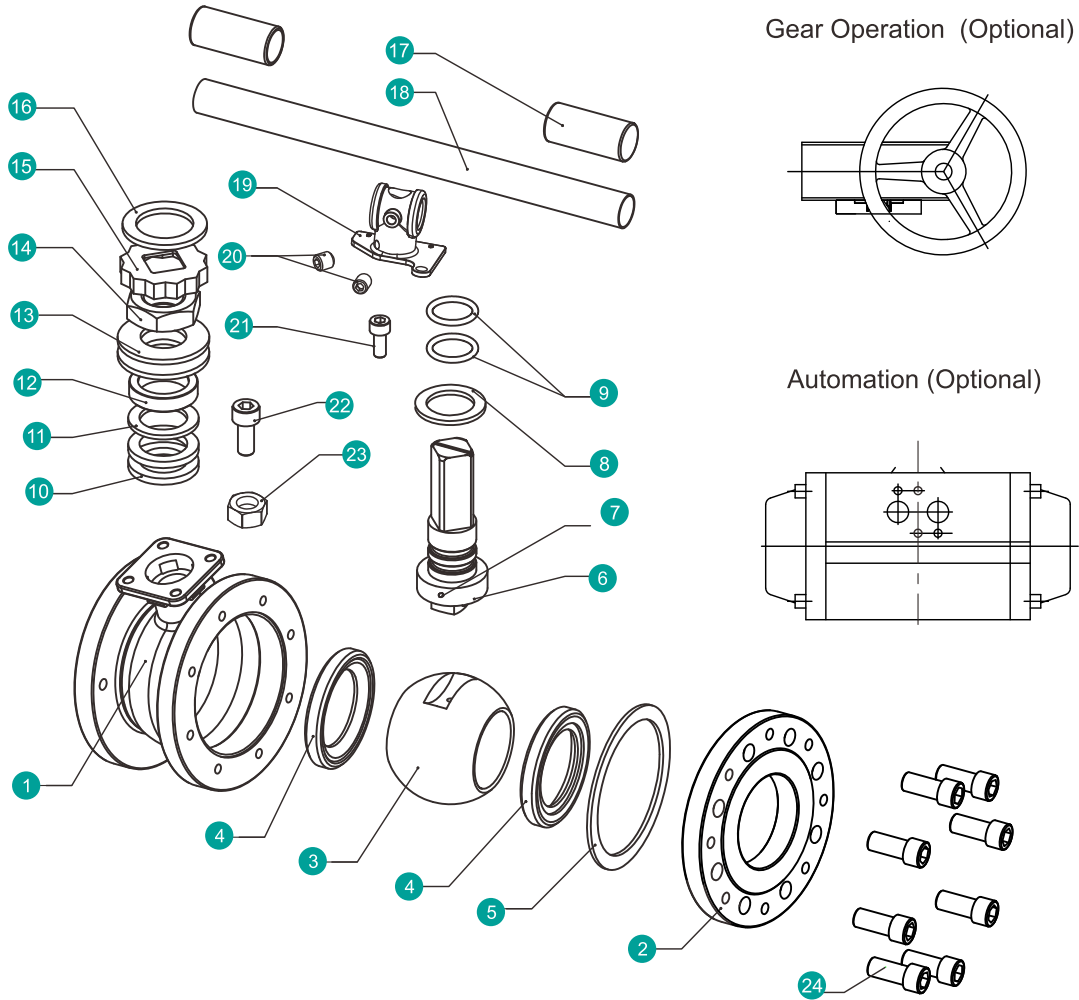
ASME Class 150

KV-071, KV-071F

Unit: inch

NPS	d	L	R	D	C	T	f	N	h	F	H	H1	W	G	A	E	U	ISO5211
1/2	0.59	1.65	1.38	3.50	2.38	—	0.06	4	1/2-13UNF	0.63	1.61	3.58	5.39	0.248	0.67	1.65	M5	F04
3/4	0.79	1.73	1.69	3.88	2.75	—	0.06	4	1/2-13UNF	0.70	1.73	3.70	5.39	0.248	0.67	1.65	M5	F04
1	0.98	1.97	2.01	4.25	3.12	—	0.06	4	1/2-13UNF	0.70	1.83	3.90	6.77	0.354	0.91	1.97	M6	F05
1 1/4	1.26	2.36	2.50	4.62	3.50	—	0.06	4	1/2-13UNF	0.98	2.05	4.09	6.77	0.354	0.94	1.97	M6	F05
1 1/2	1.50	2.56	2.88	5.00	3.88	—	0.06	4	1/2-13UNF	0.98	2.52	4.61	7.95	0.378	1.02	2.76	M8	F07
2	1.97	3.15	3.62	6.00	4.75	0.56	0.06	4	5/8-11UNF	—	2.88	4.96	7.95	0.378	1.02	2.76	M8	F07
2 1/2	2.50	4.33	4.12	7.00	5.50	0.62	0.06	4	5/8-11UNF	—	3.46	6.02	9.92	0.630	1.69	4.02	M10	F10
3	2.99	4.72	5.00	7.50	6.00	0.69	0.06	4	5/8-11UNF	—	3.82	6.38	11.9	0.630	1.69	4.02	M10	F10
4	3.94	5.91	6.19	9.00	7.50	0.88	0.06	8	5/8-11UNF	—	4.61	8.35	15.9	0.709	2.02	4.02	M10	F10

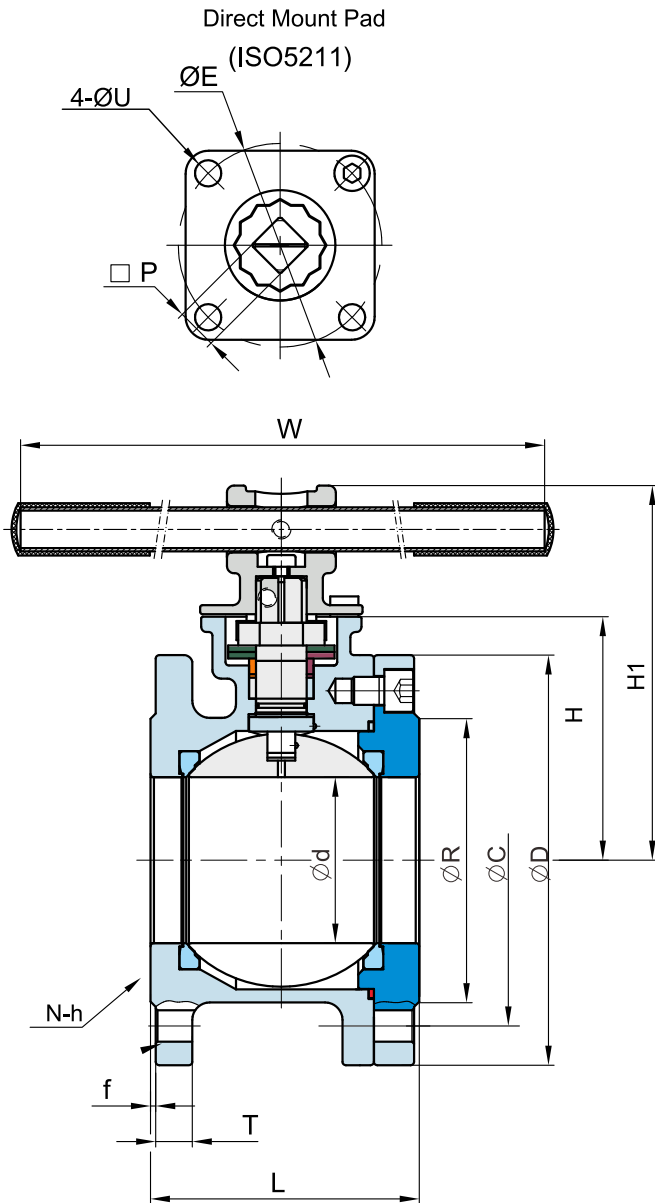
SIZE: NPS 5~ NPS 6



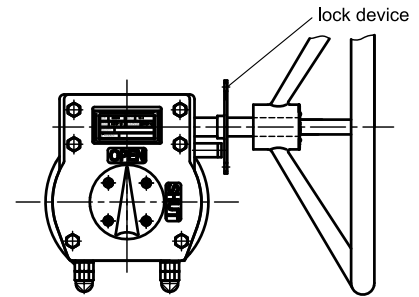
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5	Body Gasket	PTFE / 316 Spiral Wound+GRAPHITE*		
6	Stem(NPS1/2-NPS5)	316		304
	Stem(NPS6)	S32205		S32205
7	Anti-Static Device	316		304
8	Thrust Washer	PTFE / TFM1600		
9	O-Ring	FKM		
10	Stem Packing	PTFE / GRAPHITE*		
11	Bushing	50%SS+50%PTFE / 304*		
12	Gland	316/304		
13	Belleville Washer	301		
14	Stem Nut	A194-8		
15	Stop-lock-Cap	304		
16	Handle Gland	304		
17	Handle Sleeve	PVC		
18	Pipe Handle	A53+PLATED ZN		
19	Handle Adapter	A351-CF8		
20	Set Screw	A2-70		
21	Bolting	A2-70		
22	Stop Bolt	A2-70		
23	Stop Nut	A2-70		
24	Bolting	A2-70		

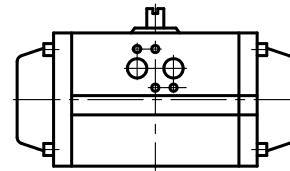
*Materials for KV-L71F, KV-72F Series(fire Safe Models)



Gear Operation (Optional)



Automation (Optional)



DIMENSION TABLE

ASME Class 150

KV-L71, KV-L71F

Unit: mm

NPS	d	L	R	D	C	T	f	N	h	H	H1	W	P	M	E	U	ISO 5211
5	118	180	186.0	255	215.9	22.3	2	8	3/4-10UNC	175	255	600	27	17	125	14	F12
6	142	225	216.0	280	241.3	23.9	2	8	3/4-10UNC	195	275	800	27	17	125	14	F12

Unit: inch

NPS	d	L	R	D	C	T	f	N	h	H	H1	W	P	M	E	U	ISO 5211
5	4.92	7.68	7.32	10.0	8.50	0.88	0.06	8	3/4-10UNC	6.89	10.04	23.7	1.063	1.06	4.92	0.55	F12
6	5.91	8.86	8.50	11.0	9.50	0.94	0.06	8	3/4-10UNC	7.68	10.83	31.6	1.063	1.06	4.92	0.55	F12

ASME Class 300

KV-L72, KV-L72F

Unit: mm

NPS	d	L	R	D	C	T	f	N	h	H	H1	W	P	M	E	U	ISO 5211
5	118	180	186.0	280	235.0	33.4	2	8	3/4-10UNC	175	255	600	27	27	125	14	F12
6	142	225	216.0	320	269.9	35.0	2	12	3/4-10UNC	195	275	800	27	27	125	14	F12

Unit: inch

NPS	d	L	R	D	C	T	f	N	h	H	H1	W	P	M	E	U	ISO 5211
5	4.92	7.68	7.32	11.00	9.25	1.31	0.06	8	3/4-10UNC	6.89	10.04	23.7	1.063	1.06	4.92	0.55	F12
6	5.91	8.86	8.50	12.50	10.62	1.38	0.06	12	3/4-10UNC	7.68	10.83	31.6	1.063	1.06	4.92	0.55	F12