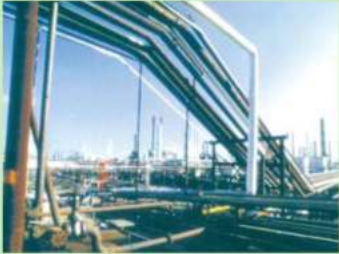




PROTEK



www.protekvalves.com



Stainless & Carbon Steel valves

2025



- Ball Valves
- Gate Valves
- Globe Valves
- Check Valves
- Strainer & Bellow seal



CE 0035





PROTEK



Protek Valve have strong technical capability . It is also equipped with many manufacturing facilities and test equipments including Ultrasonic test, Radiographic test both X-ray and gamma ray, Magnetic particle test , liquid Penetant test , Pressure test and materials analyzers which can assure the reliability and safety of the products.

Protek Valve Co., Ltd has obtained API certificates and was granted the Quality System certificate of ISO9001-2000 by TUV Rhineland. The company also obtained PED module "H" certificate issued by TUV Rhineland as European Notified Body and get the authorization to use CE marking for industrial valves , Protek valves , has adopted API ANSI ASME MSS JIS BS DIN etc standard to design , manufacturing and inspection of industrial valves , and has become one of major manufacturers and supplies of valves used in petroleum and petrochemical industrials. Protek valves have exported the industrial valve to international markets such as North and South America , Europe , Middle East and South east Asia, We also established good relationship with many international company and traders.

The main products manufactured at Protek is Gate , Globe , Check , Ball , Plug, Butterfly and some special requirement valves. The pressure rating is from Class 150 (PN20) to Class 2500 (PN420) and size range is from 1/8(DN3) to 36 (DN900). The main material of valves are Carbon, Alloy and Stainless steel materials, such as WCB (DIN 1.0619), CF8 (DIN1.4403) CF8M (DIN1.4408) and Titanium and Monel etc. We also can provide other special materials as per customer's requirements. Based on our company's policy "Clients first ". Protek will provide quality valves as well as best services to both domestic and foreign customers.



ISO 9001 Certificate

API 6D Certificate



Company Presentation

Introduction

It is with great pleasure that we introduce the PROTEK group, which since its foundation has been dedicated to the production and supply of the best in industrial valves. The company's name is of some importance in both the home and international markets.

Quality has always been a priority with PROTEK and we aim to manufacture a product, which guarantees the strictest and most demanding standards of the different sectors, which use our valves.

PROTEK has been on the market now for several years with a recognised registered and approved product range. Through this time we have not only gained in experience and increased the quality of our products but we have also improved the service to our customers.

Behind the PROTEK brand is an experienced and highly skilled group of valve specialists who are the real driving force of the company.



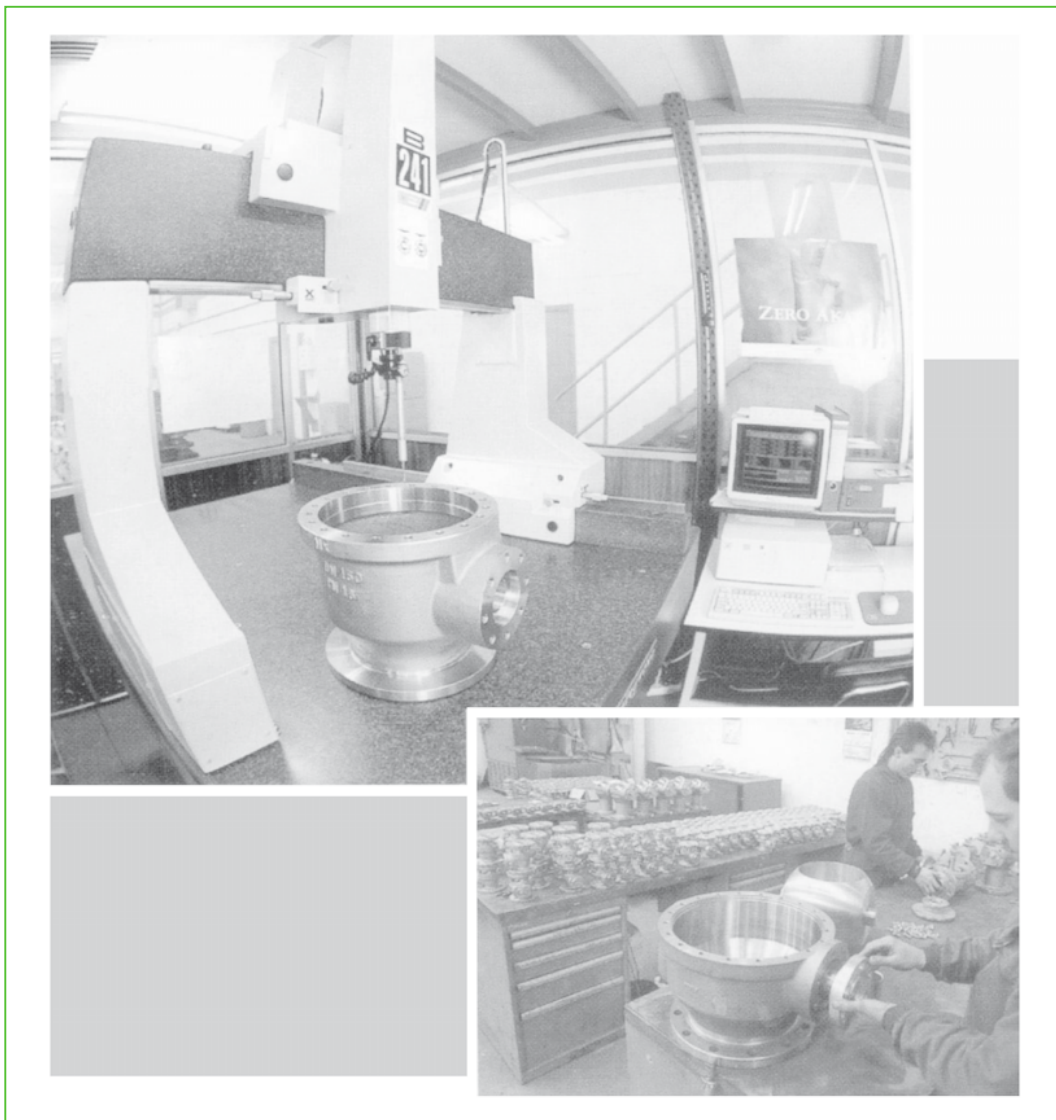


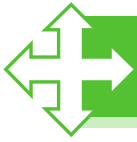
Products

The **PROTEK** group consists of a number of individual manufacturing companies based throughout Europe who manufacture a wide range of Valve Products. In general terms those products are:

Butterfly Valves	Gate Valves	Check Valves
Knife Gate Valves	Globe/Diaphragm Valves	Ball Valves
Full range of actuators		

In addition to selling a wide range of standard products **PROTEK** is also able to offer a design and manufacturing service for speciality or large diameter valves.





Companies

All PROTEK products are manufactured to the very highest quality considerations and under an ISO 9001 / 9002 quality control system. The locations include:

Newcastle England (Head Office)		
Bilbao Spain	Valencia Spain	Madrid Spain
Barcelona Spain	Milan Italy	Gothenburg Sweden
Bangkok Thailand		Osaka Japan

Sales & Marketing

PROTEK products are sold worldwide via a network of agents and representatives. The attached map indicates the location of these agents. For further details please contact **PROTEK** UK head office.



England – Spain – France – Finland – Germany – Greece - India - Saudi Arabia - Kuwait - United Arab Emirates - Singapore – Indonesia - USA - Canada - Morocco - Mexico - Cuba – Colombia - Venezuela – Ecuador



SELECTED MAJOR REFERENCE LIST

Customers & Products

De Beers Engineering South Africa	Butterfly & Knife Gate Valves
Fluor Daniel Engineering South Africa	Butterfly & Knife Gate Valves
PETKIM - Turkey	Butterfly Ball & Gate Valves
National Refinery Pakistan	Gate Globe & Check Valves
SCA Paper - Canada	Knife Gate Valves
Kimberly Clark - Canada	Knife Gate Valves
Bangkok Municipality Thailand	Butterfly & Knife Gate Valves
RJB Mining UK	Butterfly & Knife Gate Valves
Thames Water Engineering-UK	Butterfly & Knife Gate Valves
Northumbrian Water-UK	Butterfly & Knife Gate Valves
North West Water Engineering-UK	Knife Gate Valves
Severn Trent Water -UK	Butterfly & Knife Gate Valves
TOSHIBA Corporation Japan	Butterfly Gate Check & Globe
MATSUI Corporation Japan	Butterfly Gate Check & Globe
Republic South Africa Navy	Butterfly Valves
British Nuclear Fuels Ltd (Sellafield)	Butterfly Valves
Du Pont Iberia Spain	Butterfly & Ball Valves
Bayer WIEN Austria	Butterfly & Ball Valves
BASF Austria	Butterfly Globe & Check Valves
Hellenic Sugar Mills Greece	Butterfly Check & Globe Valves
Hellenic Petroleum Greece	Gate Globe Check & Ball Valves
Jordan Petroleum Refineries, Jordan	Ball Globe Gate & Check Valves
Jordan Phosphate Mining Jordan	Butterfly & Check Valves
Abu Dhabi Municipality, U.A.E.	Gate, Check & Air Valves

Major Projects & Products

Kimberly Gold Mining Project	Butterfly & Knife Gate Valves
Whittle Dene Water Treatment Plant	Butterfly, Check & Knife Gate Valves
Umiray Transbasin Project	Butterfly & Knife Gate Valves
Johar Water Treatment Plant	Butterfly, Check & Knife Gate Valves
Sha Tin Treatment Hong Kong	Butterfly, Check, Plug & Knife Gate Valves
Ghazi Barotha Project Pakistan	Butterfly, Gate, Check & Globe
Sulcis Thermoelectric Project Sardinia	Globe & Ball Valves

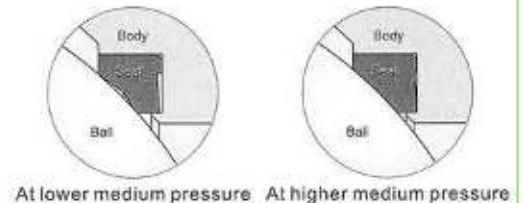
Application

Floating ball valves are suitable for use on various kinds of pipelines of Class 150 to Class 1500, PN16 to PN100, and JIS 10K to JIS 20K to turn on or off the pipeline medium, of which the operation types include manual, worm gear and pneumatic or electric actuators.

Construction and features of floating ball valve

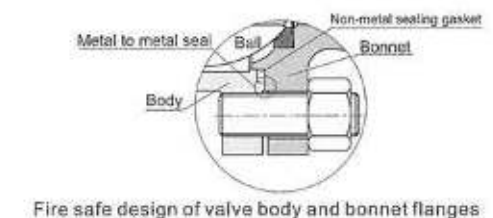
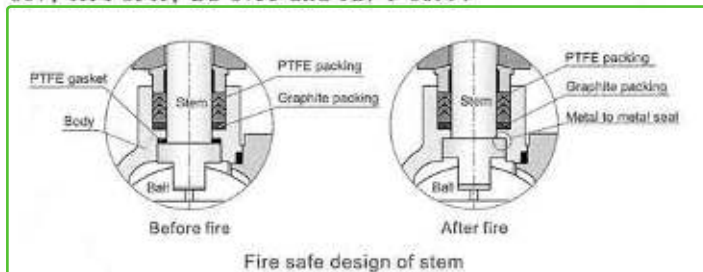
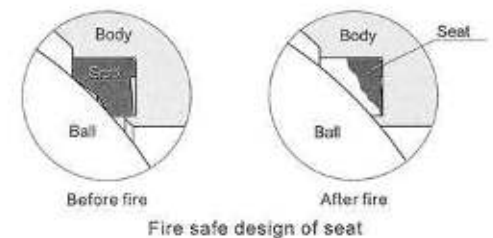
Reliable seat seal

The structure design of elastic sealing ring has been adopted for floating ball valves. This seat design features a bigger sealing pressure ratio between the ring surface and the ball when medium pressure gets lower, where the contacting area is smaller. Thus, the reliable seal is ensured. When the medium pressure gets higher, the contacting area between seat ring and ball becomes bigger as the sealing ring transforms elastically to undertake the bigger force pushed by the medium without any damage.



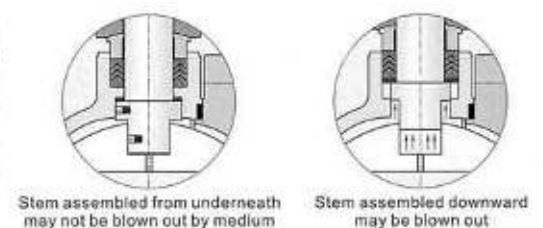
Fire safe design

With the valve heated in a fire application, the non-metal material parts such as seat sealing ring of PTFE, stem back seat gasket, gland packing, and the sealing gasket between body and bonnet might disintegrate or be damaged due to high temperature. CHAODA's specially designed structure of auxiliary metal to metal seal is provided to effectively prevent both internal and external leakage of the valve. As required by customers, **PROTEK**'s floating ball valves with fire safe design can meet the requirement of API 607, API 6FA, BS 6755 and JB/T 6899.

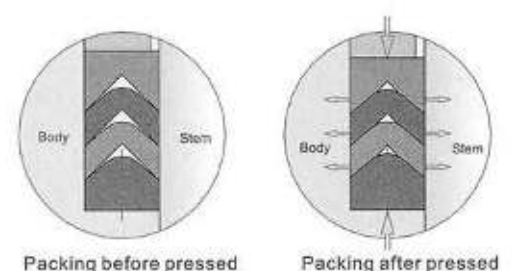


Reliable stem seal

The blow-out proof design has been adopted for the stem to ensure that even if the pressure in the body cavity is risen accidentally and the packing flange becomes invalid, the stem may not be blown out by medium. The stem features the design with a backseat, being assembled from underneath. The sealing force against the backseat gets higher as the medium pressure becomes higher. So the reliable seal of the stem can be assured under variable medium pressure.

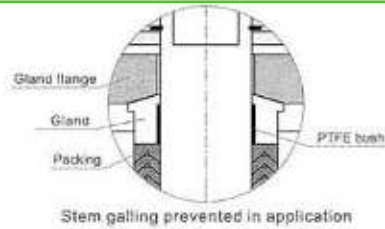


V type packing structure has been employed to effectively transform the pushing force of the gland flange and the medium pressure into the sealing force against the stem.

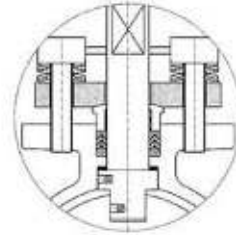




The traditional packing flange design has been improved to be of two piece structure, i.e., being as a gland flange and gland, the latter contacts the gland flange with spherical surface. Thus, the gland remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.

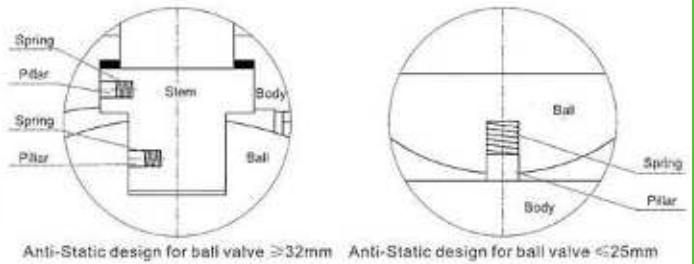


Based on customers' requirement, a packing tightening design may be employed to obtain more reliable stem packing seal, which is loaded by bevelling spring.



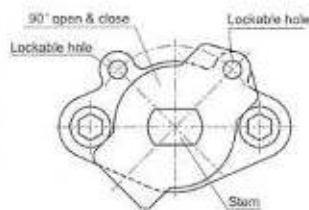
Anti-Static Feature

The traditional packing flange design has been improved to be of two piece structure, i.e., being as a packing flange plate and a follower, the latter contacts the flange plate with spherical surface. Thus, the follower remains vertical always, and is lined internally with a PTFE bush to prevent the galling against and friction between the stem, which can also reduce the operation torque of the valve.



Wrong operation prevention

To prevent the ball valve from wrong operation, the key lock with 90° of open and close positioning pad has been provided, which can be lockable as required. At the stem head, where the lever fixes, a flat is so designed that the valve opens with the lever in parallel to piping, and with the lever right-angled to the piping, the valve is closed. So, it is ensured that the valve indicator of open and close can never make mistake.



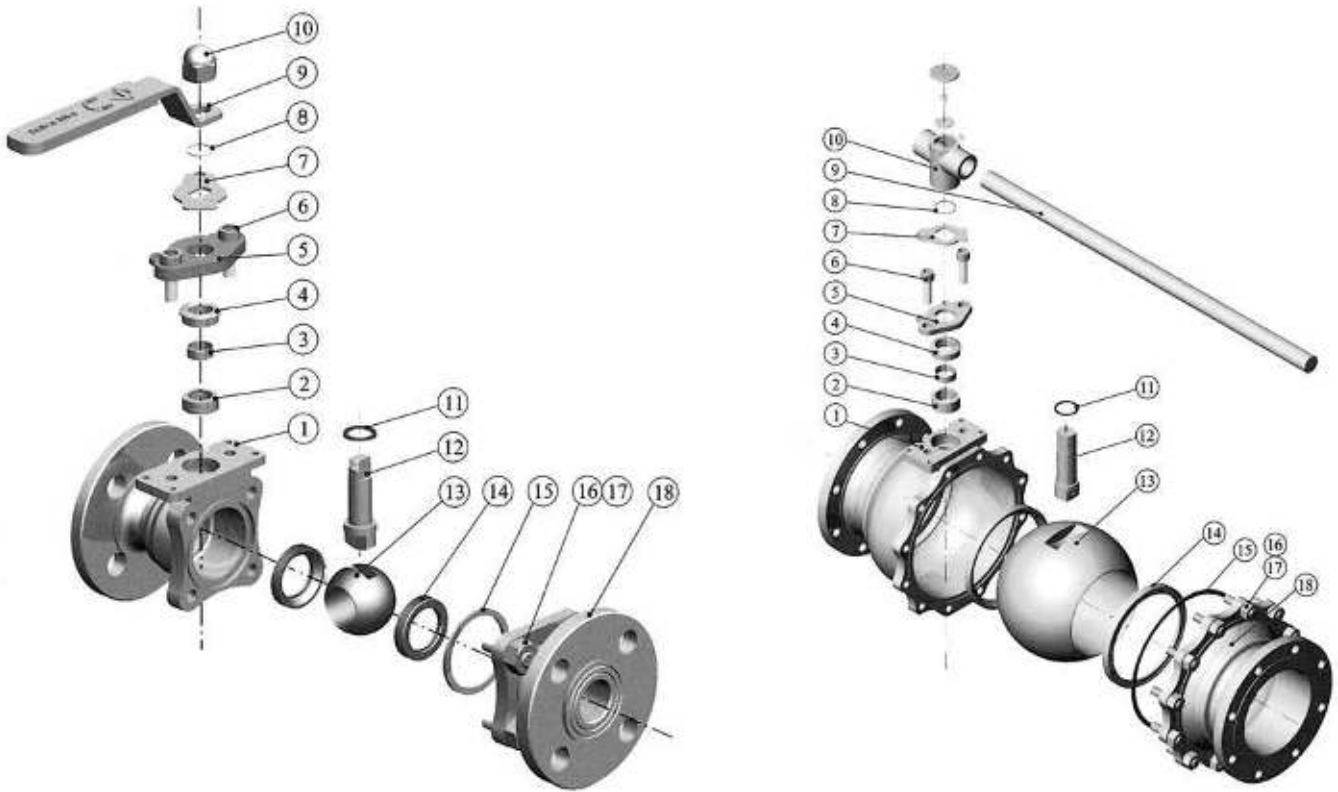
Mounting pad provided

PROTEK company has provided for floating ball valve with a mounting pad, through which it is easy to fix the actuators, such as worm gear, pneumatic and electric actuators.





Typical drawing of floating ball valve and parts composition

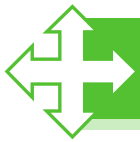


Parts and material list

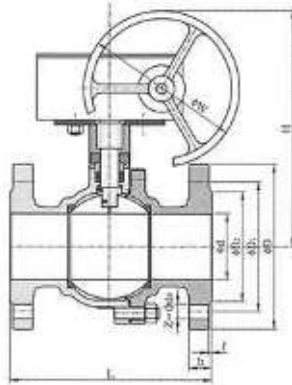
FIG. BA/BK/BP

Parts No.	Parts name	Materials				
		WCB/13Cr	WCB/304	WCB/316	CF8	CF8M
1	Body	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
2	Packing	PTFE	PTFE	PTFE	PTFE	PTFE
3	Stem bearing	PTFE	PTFE	PTFE	PTFE	PTFE
4	Gland	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
5	Gland flange	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
6	Gland bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
7	Stop collar	Carbon steel	Carbon steel	Carbon steel	Stainless steel	Stainless steel
8	Circlip	Carbon steel	Carbon steel	Carbon steel	Stainless steel	Stainless steel
9	Lever	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel
10	Nut or wrench head	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel
11	Thrust washer	PTFE	PTFE	PTFE	PTFE	PTFE
12	Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
13	Ball	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
14	Seat	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE
15	Gasket	PTFE	PTFE	PTFE	PTFE	PTFE
16	Body nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
17	Body bolting	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
18	Closure	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M

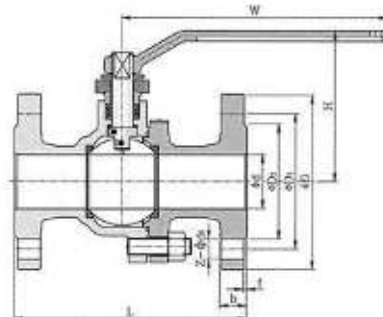
Note: The chart above only lists out some common composition of steel ball valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.



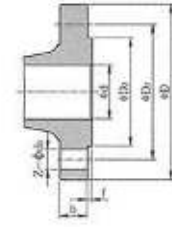
Main size and weight



Gear box

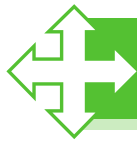


Hand wheel



Class600~Class1500 flange

Pressure stage	Size		Dimensions (mm)											Weight (kg)			
	DN	NPS	L		d	D	D ₁	D ₂	b	f	Z-φ do	W		H		Hand wheel	Gear box
			RF	RTJ								Hand wheel	Gear box	Hand wheel	Gear box		
Class150 PN20	15	1/2	108	119	14	89	60.5	35	11.5	1.6	4-15	140	-	85	-	3	-
	20	3/4	117	130	19	98	70	43	11.5	1.6	4-15	140	-	90	-	4	-
	25	1	127	140	25	108	79.5	51	11.5	1.6	4-15	150	-	99	-	5	-
	32	1 1/4	140	153	32	117	89	64	13	1.6	4-15	180	-	105	-	7	-
	40	1 1/2	165	178	38	127	98.5	73	14.5	1.6	4-15	200	-	126	-	8	-
	50	2	178	191	51	152	120.5	92	16	1.6	4-19	250	-	140	-	12	-
	65	2 1/2	190	203	64	178	139.5	105	17.5	1.6	4-19	300	-	165	-	18	-
	80	3	203	216	76	190	152.5	127	19.5	1.6	4-19	350	-	178	-	24	-
	100	4	229	242	102	229	190.5	157	24	1.6	8-19	500	305	230	380	38	53
	125	5	356	369	127	254	216	186	24	1.6	8-22	800	305	280	405	60	79
150	6	394	407	152	279	241.5	216	25.5	1.6	8-22	800	305	310	460	82	102	
200	8	457	470	203	343	298.5	270	29	1.6	8-22	1000	305	350	550	145	185	
250	10	533	546	254	406	362	324	31	1.6	12-25	-	400	-	706	-	280	
Class300 PN50	15	1/2	140	151	14	95	66.5	35	14.5	1.6	4-15	140	-	85	-	3	-
	20	3/4	152	165	19	117	82.5	43	16	1.6	4-19	140	-	90	-	5	-
	25	1	165	178	25	124	89	51	17.5	1.6	4-19	150	-	99	-	6	-
	32	1 1/4	178	191	32	133	98.5	64	19.5	1.6	4-19	180	-	105	-	8	-
	40	1 1/2	190	203	38	156	114.5	73	21	1.6	4-22	200	-	126	-	11	-
	50	2	216	232	51	165	127	92	22.5	1.6	8-19	250	-	142	-	16	-
	65	2 1/2	241	257	64	190	149	105	25.5	1.6	8-22	300	-	165	-	24	-
	80	3	283	299	76	210	168.5	127	29	1.6	8-22	350	-	178	330	34	52
	100	4	305	321	102	254	200	157	32	1.6	8-22	500	305	230	380	56	76
	125	5	381	397	127	279	235	186	35	1.6	8-22	800	305	280	420	86	124
150	6	403	419	152	318	270	216	37	1.6	12-22	800	305	310	480	125	163	
200	8	502	518	203	381	330	270	41.5	1.6	12-25	1000	305	350	560	222	267	
Class600 PN110	15	1/2	165	164	14	95	66.5	35	14.5	6.4	4-15	140	-	79	-	5	-
	20	3/4	190	190	19	118	82.5	43	16	6.4	4-19	140	-	83	-	7	-
	25	1	216	216	25	124	89	51	17.5	6.4	4-19	200	-	114	-	9	-
	32	1 1/4	229	229	32	133	98.5	64	21	6.4	4-19	200	-	120	-	13	-
	40	1 1/2	241	241	38	156	114.5	73	22.5	6.4	4-22	250	-	125	-	17	-
	50	2	292	295	51	165	127	92	25.5	6.4	8-19	300	-	156	-	25	-
	65	2 1/2	330	333	64	190	149	105	29	6.4	8-22	350	-	172	-	42	-
	80	3	356	359	76	210	168	127	32	6.4	8-22	500	305	220	370	56	76
100	4	432	435	102	273	216	157	38.5	6.4	8-25	650	305	250	400	85	123	
Class900 PN150	15	1/2	216	216	14	121	82.5	35	22.5	6.4	4-23	150	-	98	-	9	-
	20	3/4	229	229	20	130	88.9	43	25.5	6.4	4-23	150	-	105	-	13	-
	25	1	254	254	25	149	101.6	51	29	6.4	4-26	200	-	110	-	16	-
	32	1 1/4	279	279	32	159	111.1	64	29	6.4	4-26	250	-	120	-	24	-
	40	1 1/2	305	305	38	178	123.8	73	32	6.4	4-29	250	-	125	-	31	-
50	2	368	371	50	216	165.1	92	38.5	6.4	8-26	350	-	160	-	45	-	
Class1500 PN260	15	1/2	216	216	14	121	82.5	35	22.5	6.4	4-23	182	-	98	-	10	-
	20	3/4	229	229	20	130	88.9	43	25.5	6.4	4-23	200	-	105	-	14	-
	25	1	254	254	25	149	101.6	51	29	6.4	4-26	250	-	110	-	17	-
	32	1 1/4	279	279	32	159	111.1	64	29	6.4	4-26	300	-	120	-	25	-
	40	1 1/2	305	305	38	178	123.8	73	32	6.4	4-29	350	-	130	-	33	-
50	2	368	371	50	216	165.1	92	38.5	6.4	8-26	500	-	160	-	48	-	



Nominal pressure	DN	15	20	25	32	40	50	65	80	100	125	150	200	250	
PN16	L	130	140	150	165	180	200	220	250	280	320	360	400	–	
	W	Hand wheel	140	140	150	180	200	250	300	350	500	800	800	1000	–
		Gear box	–	–	–	–	–	–	–	–	305	305	305	305	–
	H	Hand wheel	85	90	99	105	126	140	165	178	230	280	310	350	–
		Gear box	–	–	–	–	–	–	–	–	380	405	460	550	–
	Weight (kg)	Hand wheel	3	4	5	7	8	12	17	23	35	52	76	134	–
Gear box		–	–	–	–	–	–	–	–	53	79	102	185	–	
PN25	L	130	140	150	165	180	200	220	250	320	400	400	550	–	
	W	Hand wheel	140	140	150	180	200	250	300	350	500	800	800	1000	–
		Gear box	–	–	–	–	–	–	–	–	305	305	305	305	–
	H	Hand wheel	85	90	99	105	126	140	165	178	230	280	310	350	–
		Gear box	–	–	–	–	–	–	–	–	380	405	460	550	–
	Weight (kg)	Hand wheel	3	4	5	7	9	12	19	23	45	67	95	170	–
Gear box		–	–	–	–	–	–	–	–	53	79	102	185	–	
PN40	L	130	140	150	180	200	220	250	280	320	400	400	550	–	
	W	Hand wheel	140	140	150	180	200	250	300	350	500	800	800	1000	–
		Gear box	–	–	–	–	–	–	–	–	305	305	305	400	–
	H	Hand wheel	85	90	99	105	126	142	165	178	230	280	310	350	–
		Gear box	–	–	–	–	–	–	–	–	330	380	420	480	560
	Weight (kg)	Hand wheel	3	4	5	8	11	15	20	29	48	68	98	178	–
Gear box		–	–	–	–	–	–	–	–	47	68	88	136	223	
PN63	L	140	152	165	178	190	216	241	283	305	–	–	–	–	
	W	Hand wheel	140	140	200	200	250	300	350	500	650	–	–	–	–
		Gear box	–	–	–	–	–	–	–	305	305	–	–	–	–
	H	Hand wheel	79	83	114	120	125	156	172	220	250	–	–	–	–
		Gear box	–	–	–	–	–	–	–	390	440	–	–	–	–
	Weight (kg)	Hand wheel	5	7	9	13	17	25	42	56	85	–	–	–	–
Gear box		–	–	–	–	–	–	–	76	123	–	–	–	–	
PN100	L	165	190	216	229	241	292	330	356	432	–	–	–	–	
	W	Hand wheel	140	140	200	200	250	300	350	500	650	–	–	–	–
		Gear box	–	–	–	–	–	–	–	305	305	–	–	–	–
	H	Hand wheel	79	83	114	120	125	156	172	220	250	–	–	–	–
		Gear box	–	–	–	–	–	–	–	390	440	–	–	–	–
	Weight (kg)	Hand wheel	5	7	9	13	17	25	42	56	85	–	–	–	–
Gear box		–	–	–	–	–	–	–	76	123	–	–	–	–	
JIS 10K	L	108	117	127	140	165	178	190	203	229	356	394	457	533	
	W	Hand wheel	140	140	150	180	200	250	300	350	500	800	800	1000	–
		Gear box	–	–	–	–	–	–	–	–	305	305	305	305	400
	H	Hand wheel	85	90	99	105	126	140	165	178	230	280	310	350	–
		Gear box	–	–	–	–	–	–	–	–	380	405	460	550	706
	Weight (kg)	Hand wheel	3	4	5	7	8	12	18	24	38	60	82	145	–
Gear box		–	–	–	–	–	–	–	–	53	79	102	185	280	
JIS 20K	L	140	152	165	178	190	216	241	283	305	381	403	502	–	
	W	Hand wheel	140	140	150	180	200	250	300	350	500	800	800	1000	–
		Gear box	–	–	–	–	–	–	–	–	305	305	305	400	–
	H	Hand wheel	85	90	99	105	126	142	165	178	230	280	310	350	–
		Gear box	–	–	–	–	–	–	–	–	330	380	420	480	560
	Weight (kg)	Hand wheel	3	5	6	8	11	15	23	33	53	82	120	212	–
Gear box		–	–	–	–	–	–	–	–	52	76	124	163	267	

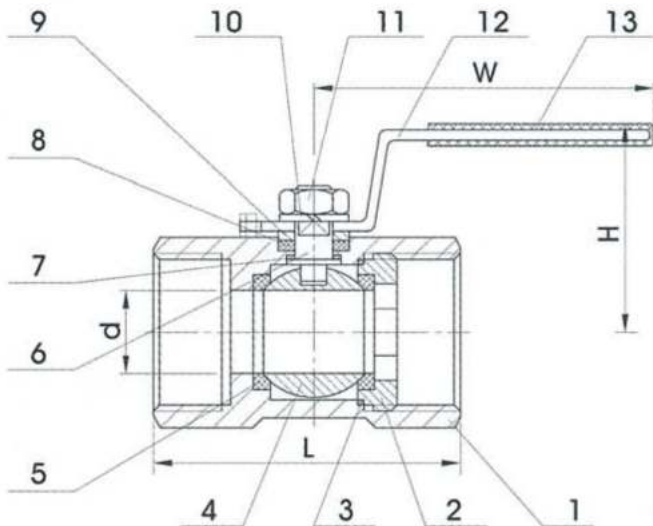
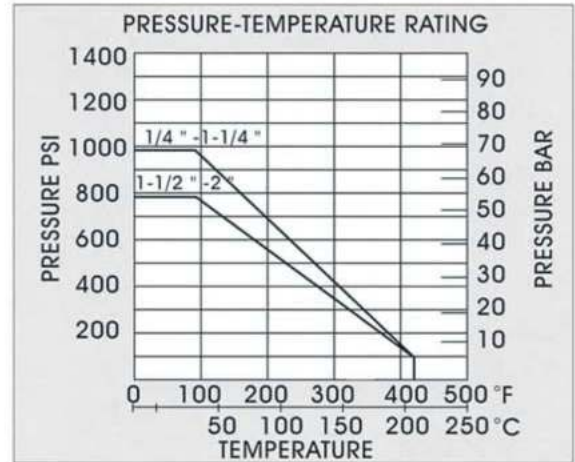


1-pc Investment Casting Ball Valve

Reduce bore, Screw End, 1000 WOG.

BS1

- Investment Castings for Body and Cap
 - Threaded ends: ANSI B2.1, BS 21, DIN 259/2999
 - Internal entry blow-out proof stem
 - Pressure rating: 1000 PSI (PN63)
 - Material: CF8M, CF8, CF3M, WCB
 - Pressure test: API 598
-
- 1000PSI (PN63)
 - ANSI B2.1, BS 21, DIN 259/2999
 - CF8M, CF8, CF3M, WCB



ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Cap	CF8M(1.4408)	1
3	Body Gasket	PTFE	1
4	Ball	SS316	1
5	Ball Seat	R-PTFE(15%)	2
6	Stem	SS316	1
7	Thrust Washer	PTFE	1
8	Stem Packing	PTFE	1
9	Washer	SS304	1
10	Spring Washer	SS304	1
11	Nut	SS304	1
12	Handle	SS304	1
13	Handle Cover	Plastic	1



SIZE	d	L	H	W	TORQUE(N·m)	WEIGHT(Kgs)
1/4 "	5	40	33	67	2	0.07
3/8 "	7	45	36	67	2	0.10
1/2 "	9	57	37	93	3	0.16
3/4 "	12.5	60	42	93	3	0.25
1 "	15	71	52	103	4	0.40
1-1/4 "	20	78	56	103	5	0.65
1-1/2 "	25	82	65	125	7	0.83
2 "	32	100	70	125	9	1.30

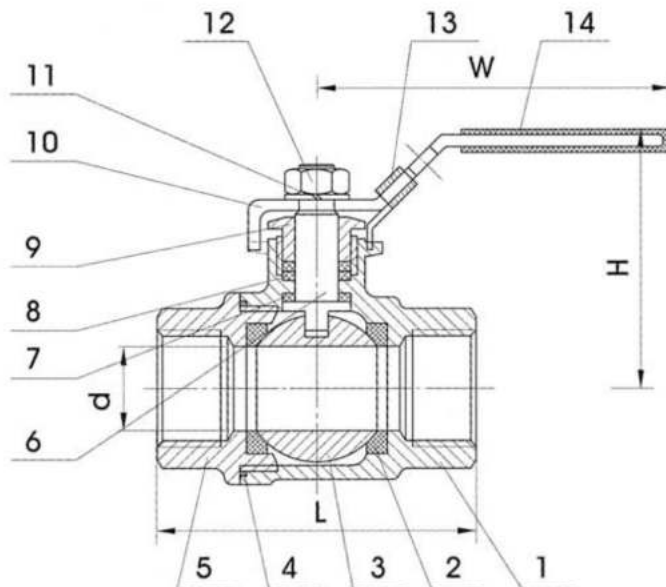
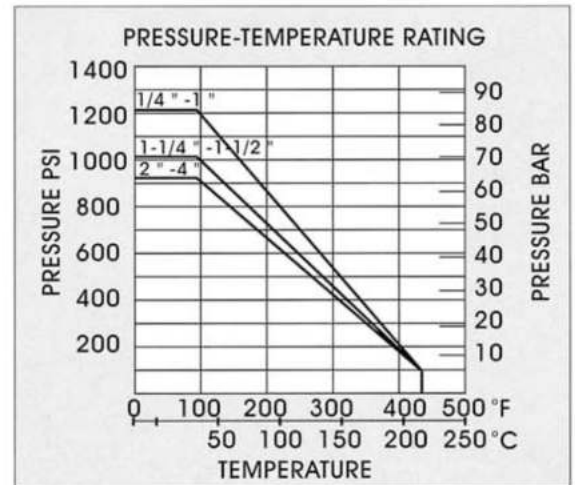


2-pc Investment Casting Ball Valve

Full Port, Screw End, 1000 WOG.

BS2

- Investment Castings for Body and Cap
 - Threaded ends:ANSI B2.1,BS 21,DIN 259/2999
 - Internal entry blow-out proof stem
 - Pressure rating:1000 PSI(PN63)
 - Material:CF8M,CF8,CF3M,WCB
 - Pressure test: API 598
-
- 1000PSI (PN63)
 - ANSI B2.1,BS 21,DIN 259/2999
 - CF8M,CF8,CF3M,WCB



ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Ball Seat	R-PTFE(15%)	2
3	Ball	SS316	1
4	Body Gasket	PTFE	1
5	Cap	CF8M(1.4408)	1
6	Stem	SS316	1
7	Thrust Washer	PTFE	1
8	Stem Packing	PTFE	1
9	Gland Nut	SS304	1
10	Handle	SS304	1
11	Spring Washer	SS304	1
12	Nut	SS304	1
13	Lock Device	SS304	1
14	Handle Cover	Plastic	1

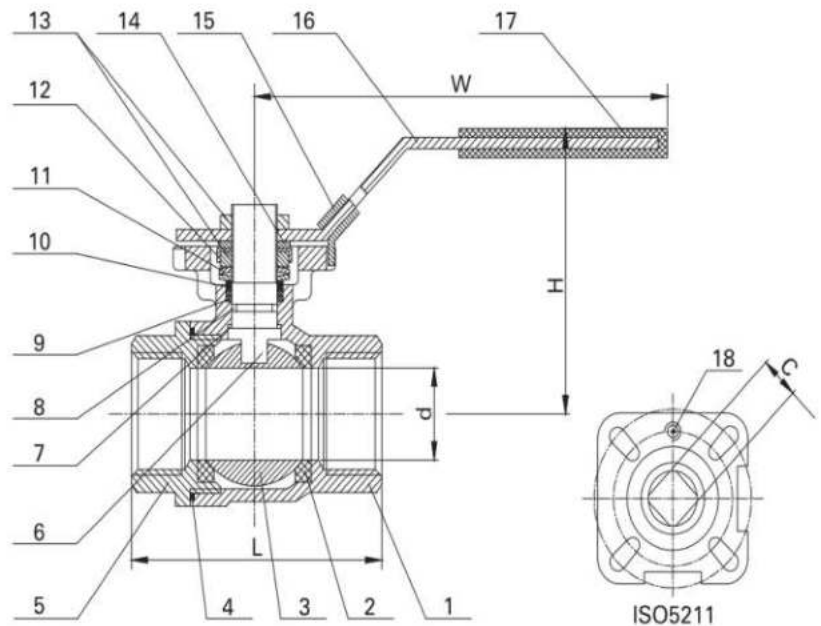


SIZE	d	L	H	W	TORQUE(N·m)	WEIGHT(Kgs)
1/4 "	11.6	50	50	100	4	0.23
3/8 "	12.5	50	50	100	4	0.22
1/2 "	15	58	52	100	5	0.26
3/4 "	20	65	57	115	8	0.47
1 "	25	80	75	150	10	0.65
1-1/4 "	32	92	80	150	14	1.15
1-1/2 "	40	105	95	180	18	1.65
2 "	50	125	100	180	25	2.75
2-1/2 "	65	155	120	245	48	4.90
3 "	76	175	130	245	75	7.70
4 "	94	220	160	278	110	16.10



2-pc Investment Casting Ball Valve (PN130)

Full Port, Screw End, 1000 WOG. With Mounting



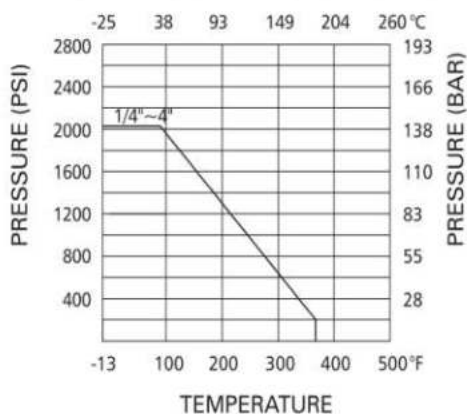
MV-26M

- Investment casting for body and cap
- Threaded: ISO, BS, DIN, JIS, ASME
- Mounting Pad: ISO5211
- Length: DIN3202-M3
- Pressure rating: 2000 PSI (PN130)
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Ball Seat	R-PTFE(15%)	2
3	Ball	SS316	1
4	Body Gasket	PTFE	1
5	Cap	CF8M	1
6	Stem	SS316	1
7	Thrust Washer	PTFE	1
8	O- Ring	VITON	1
9	Stem Packing	PTFE	2
10	Stem Ring	SS316	1
11	Belleville Washer	SS301	2
12	Nut Stopper	SS304	1
13	Nut	SS304	2
14	Plate Washer	SS304	2
15	Lock Device	SS304	1
16	Handle	SS304	1
17	Plastic Cover	PLASTIC	1
18	Stop Pin	SS304	1

PRESSURE-TEMPERATURE RATING



DIMENSION LIST

SIZE	d	L	H	W	C	ISO5211	N.m
1/4"	11.5	50	65	115	9	F03	5
3/8"	12.5	60	65	115	9	F03	5
1/2"	15	75	65	117	9	F03/F04	5
3/4"	20	80	70	117	9	F03/F04	8
1"	25	90	75	134	11	F04/F05	10
1-1/4"	32	110	85	134	11	F04/F05	14
1-1/2"	40	120	95	203	14	F05/F07	18
2"	50	140	105	203	14	F05/F07	25
2-1/2"	65	185	140	255	17	F07/F10	48
3"	76	205	145	255	17	F07/F10	75
4"	94	240	175	302	17	F07/F10	110

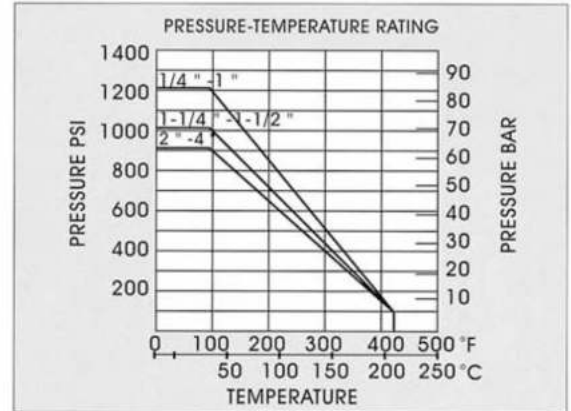


3-pc Investment Casting Ball Valve

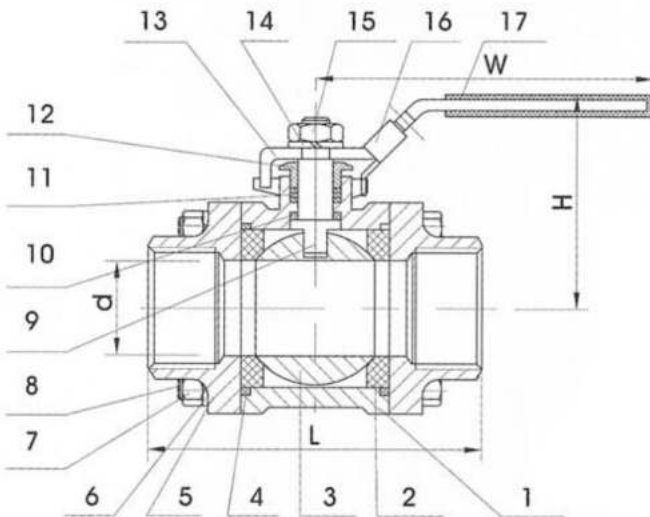
Full Port, Screw End, 1000 WOG.

BS3

- Investment Castings for Body and Cap
 - Threaded ends:ANSI B2.1,BS 21,DIN 259/2999
 - Length According to DIN 3202-M3
 - Internal entry blow-out proof stem
 - Pressure rating:1000 PSI(PN63)
 - Material:CF8M,CF8,CF3M,WCB
 - Pressure test: API 598
-
- 1000PSI (PN63)
 - ANSI B2.1,BS 21,DIN 259/2999
 - CF8M,CF8,CF3M,WCB



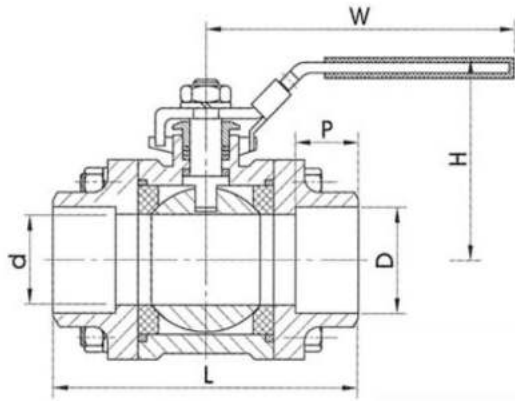
ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Ball Seat	R-PTFE(15%)	2
3	Ball	SS316	1
4	Body Gasket	PTFE	2
5	Cap	CF8M(1.4408)	2
6	Spring Washer	SS304	4(6)
7	Nut	SS304	4(6)
8	Bolt	SS304	4(6)
9	Stem	SS316	1
10	Thrust Washer	PTFE	1
11	Stem Packing	PTFE	1
12	Gland Nut	SS304	1
13	Handle	SS304	1
14	Spring Washer	SS304	1
15	Nut	SS304	1
16	Lock Device	SS304	1
17	Handle Cover	Plastic	1



SIZE	d	L	H	W	TORQUE(N·m)	WEIGHT(Kgs)
1/4 "	11	68	50	96	4	0.33
3/8 "	12.7	68	50	96	4	0.32
1/2 "	15	75	52	128	5	0.39
3/4 "	20	85	57	130	8	0.76
1 "	25	90	78	162	10	1.02
1-1/4 "	32	112	88	162	14	1.73
1-1/2 "	40	120	95	184	18	2.42
2 "	50	145	102	184	25	3.42
2-1/2 "	65	185	119	224	48	8.11
3 "	80	210	130	224	75	12.10
4 "	100	278	159	278	110	20.60



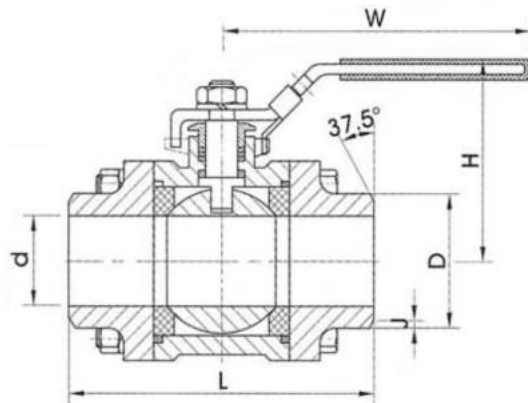
Socket Weld End



SIZE	d	D	P	L	H	W	TORQUE(N·m)	WEIGHT(Kgs)
1/4 "	11	14	10	68	50	96	4	0.33
3/8 "	12.7	17.6	10	68	50	96	4	0.32
1/2 "	15	21.7	10	75	52	128	5	0.40
3/4 "	20	27.3	13	85	57	130	8	0.74
1 "	25	34.1	13	90	78	162	10	0.96
1-1/4 "	32	42.8	13	112	88	162	14	1.72
1-1/2 "	40	48.7	13	120	95	184	18	2.38
2 "	50	61	16	145	102	184	25	3.40
2-1/2 "	65	77	16	185	119	224	48	8.09
3 "	80	90	16	210	130	224	75	12.00
4 "	100	115.2	20	268	159	278	110	20.50



Butt Weld End

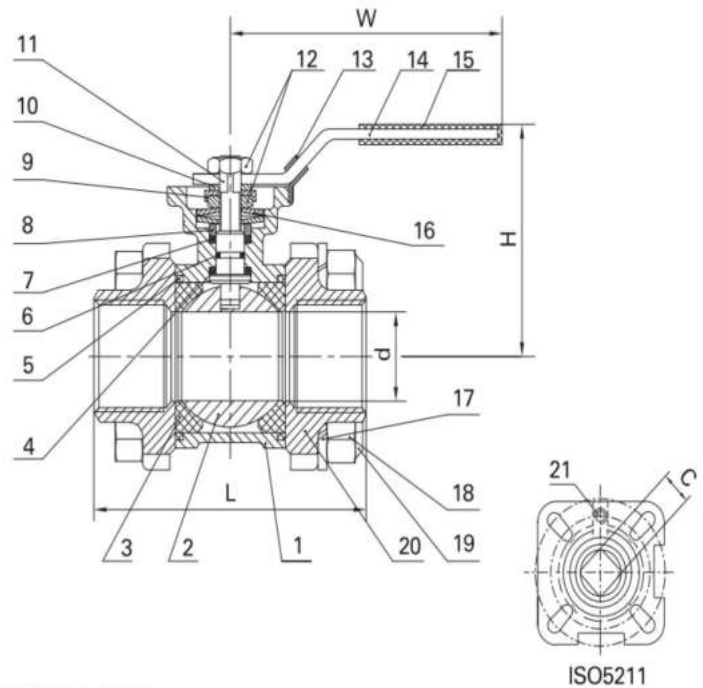


SIZE	d	D	J	L	H	W	TORQUE(N·m)	WEIGHT(Kgs)
3/8 "	10	17.5	1.6	70	50	96	4	0.31
1/2 "	15	21.7	1.6	75	52	128	5	0.41
3/4 "	20	27.2	1.6	90	57	130	8	0.72
1 "	25	34	1.6	100	78	162	10	0.94
1-1/4 "	32	42.7	1.6	110	88	162	14	1.70
1-1/2 "	40	48.6	1.6	125	95	184	18	2.35
2 "	50	60.5	1.6	150	102	184	25	3.24
2-1/2 "	65	76.3	2	190	119	224	48	8.02
3 "	80	90	2	220	130	224	75	11.90
4 "	100	116	3.5	270	159	278	110	20.30



3-pc Investment Casting Ball Valve

Full Port, Mounting

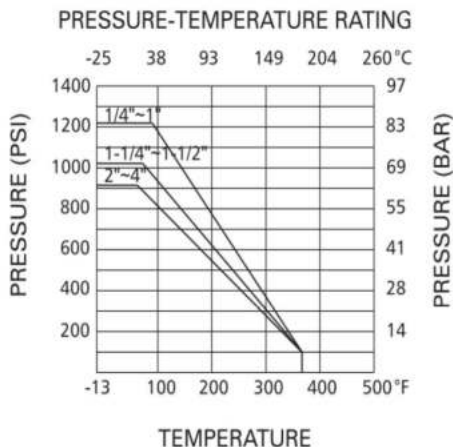


BS3MH

- Investment casting for body and cap
- Full bore
- Thread: ISO, BS, DIN, JIS, ASME
- Mounting pad: ISO 5211
- Pressure rating: 1000PSI (PN63)
- Working temperature: -25°C ~ + 180°C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

ITEM	PARTS	MATERIAL	QTY.
1	Body	CF8M	1
2	Ball	SS316	1
3	Ball Seat	R-PTFE(15%)	2
4	Thrust Washer	PTFE	1
5	Body Gasket	PTFE	2
6	O-Ring	VITON	1
7	Stem Packing	PTFE	1
8	Stem Ring	SS316	1
9	Nut Stopper	SS304	1
10	Plate Washer	SS304	1
11	Stem	SS316	1
12	Nut	SS304	2
13	Lock Device	SS304	1
14	Handle	SS304	1
15	Handle Cover	PLASTIC	1
16	Belleville Washer	SS301	2
17	Spring Washer	SS304	4(12)
18	Nut	SS304	4(12)
19	Bolt	SS304	4(6)
20	Cap	CF8M	2
21	Stop Pin	SS304	1



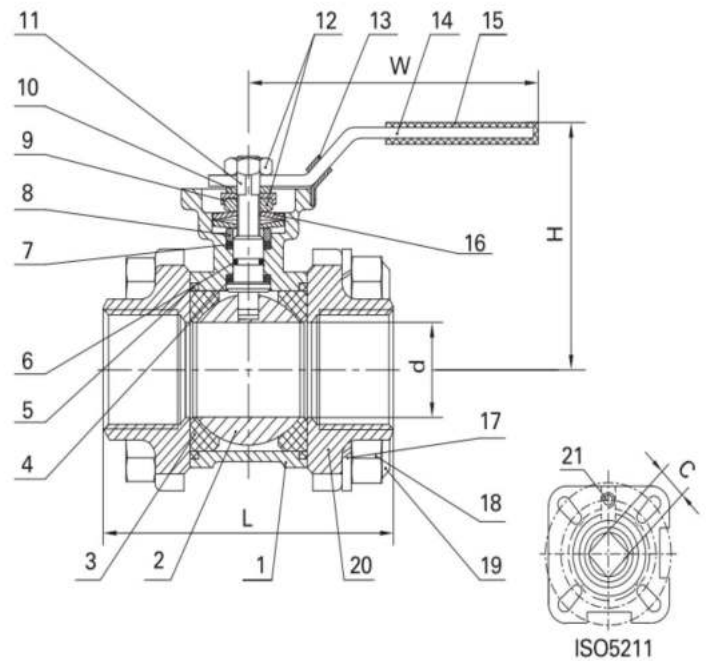
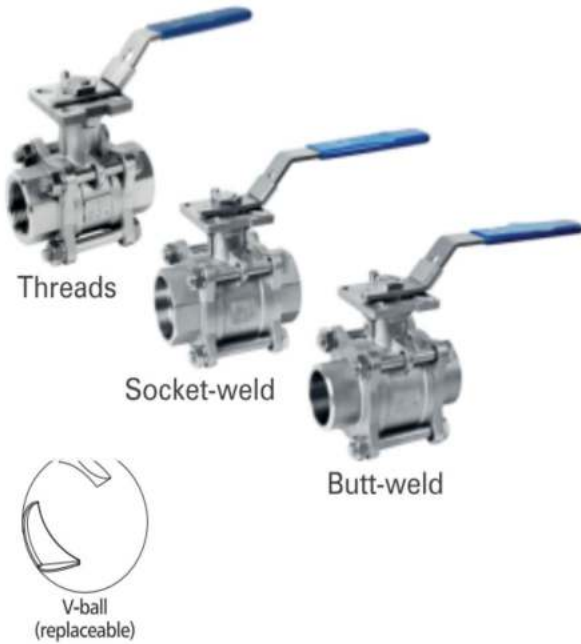
DIMENSION LIST (Thread)

SIZE	d	BSP	L	NPT	H	C	W	ISO5211	N-m
1/4"	11		48		59	9	115	F03	4
3/8"	12.5		48		59	9	115	F03	4
1/2"	15		54		70	9	117	F03-F04	5
3/4"	20		73		78	11	134	F04/F05	8
1"	25		80		87	11	134	F04/F05	10
1-1/4"	32		90		98	14	203	F05/F07	14
1-1/2"	40		102		104	14	203	F05/F07	18
2"	50		118		112	14	203	F05/F07	25
2-1/2"	65	151	141		140	17	255	F07/F10	48
3"	80	182	172		153	17	255	F07/F10	75
4"	100	218	202		166	17	302	F07/F10	110



3-pc Investment Casting Ball Valve

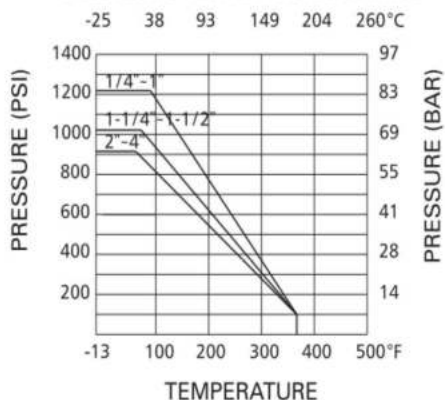
Full Port, Mounting



BS3MH-V

- Investment casting for body and cap
- Full bore
- Thread: ISO, BS, DIN, JIS, ASME
- Mounting pad: ISO 5211
- Length: DIN3202-M3(MV-33/33S)
DIN3202-S13(MV-33B)
- Pressure rating: 1000PSI (PN63)
- Working temperature: -25°C ~ +180°C
- Material: CF8M, CF8, CF3M, WCB

PRESSURE-TEMPERATURE RATING



MATERIAL LIST

ITEM	PARTS	MATERIAL	QTY.
1	Body	CF8M	1
2	Ball	SS316	1
3	Ball Seat	R-PTFE(15%)	2
4	Thrust Washer	PTFE	1
5	Body Gasket	PTFE	2
6	O-Ring	VITON	1
7	Stem Packing	PTFE	1
8	Stem Ring	SS316	1
9	Nut Stopper	SS304	1
10	Plate Washer	SS304	1
11	Stem	SS316	1
12	Nut	SS304	2
13	Lock Device	SS304	1
14	Handle	SS304	1
15	Handle Cover	PLASTIC	1
16	Belleville Washer	SS301	2
17	Spring Washer	SS304	4(12)
18	Nut	SS304	4(12)
19	Bolt	SS304	4(6)
20	Cap	CF8M	2
21	Stop Pin	SS304	1

DIMENSION LIST (Threads)

SIZE	d	L	H	C	W	ISO5211	N-m	Kgs
1/4"	11	50	59	9	115	F03	4	0.46
3/8"	12.5	60	59	9	115	F03	4	0.48
1/2"	15	75	70	9	117	F03/F04	5	0.50
3/4"	20	80	78	11	134	F04/F05	8	0.89
1"	25	90	87	11	134	F04/F05	10	1.28
1-1/4"	32	110	98	14	203	F05/F07	14	1.99
1-1/2"	40	120	104	14	203	F05/F07	18	2.96
2"	50	140	112	14	203	F05/F07	25	3.75
2-1/2"	65	185	140	17	255	F07/F10	48	7.80
3"	80	205	153	17	255	F07/F10	75	12.40
4"	100	240	166	17	302	F07/F10	110	20.80



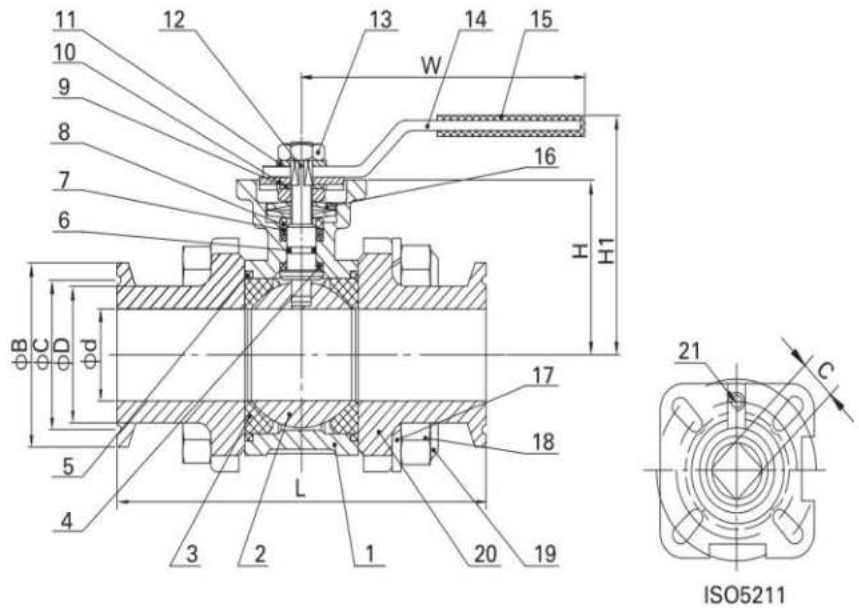
3-pc Investment Casting Ball Valve Clamp

Full Port 1000 W.O.G



MV-83HC(33C)

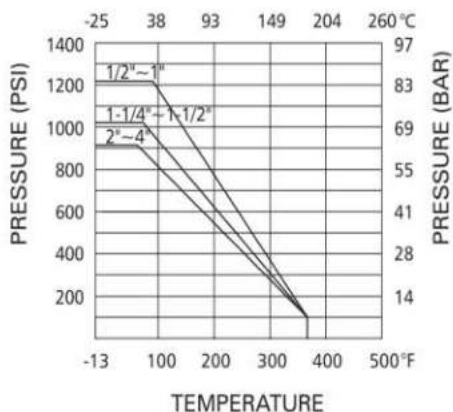
- Mounting pad: ISO 5211
- Clamp ends: ASME BPE-2022
- Pressure rating: 1000PSI (PN63)
- Working temperature: -25°C ~ +180°C
- Material: CF8M, CF8, CF3M
- Inner side polish Ra 0.8 μm



MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Ball	SS316	1
3	Ball Seat	PTFE	2
4	Thrust Washer	PTFE	1
5	Body Gasket	PTFE	2
6	O-ring	VITON	1
7	Stem Packing	PTFE	1
8	Gland	SS304	1
9	Tab Washer	SS304	1
10	Stopper	SS304	1
11	Spring Washer	SS304	1
12	Stem	SS316	1
13	Nut	SS304	2
14	Handle	SS304	1
15	Handle Cover	PLASTIC	1
16	Belleville Washer	SS301	2
17	Spring Washer	SS304	4(12)
18	Nut	SS304	4(12)
19	Bolt	SS304	4(6)
20	Cap	CF8M	2
21	Stop Pin	SS304	1

PRESSURE-TEMPERATURE RATING



DIMENSION LIST

SIZE	L	φd	φB	φC	φD	H	H1	C	W	ISO5211
DN15	89	9.4	25.1	20.0	12.7	43	70	9	117	F03-F04
DN20	98	15.8	25.1	20.0	19.1	50	78	11	134	F04/F05
DN25	108	22.1	50.5	43.5	25.4	58	87	11	134	F04/F05
DN32	117	28.5	50.5	43.5	31.8	64	98	14	203	F05/F07
DN40	127	34.8	50.5	43.5	38.1	69.5	104	14	203	F05/F07
DN50	152	47.5	64	56.5	50.8	78	112	14	203	F05/F07
DN65	178	60.2	91	83.5	63.5	100	140	17	255	F07/F10
DN80	190	72.9	106	97	76.2	112.5	153	17	255	F07/F10
DN100	229	97.4	119	110	101.6	125.5	166	17	302	F07/F10

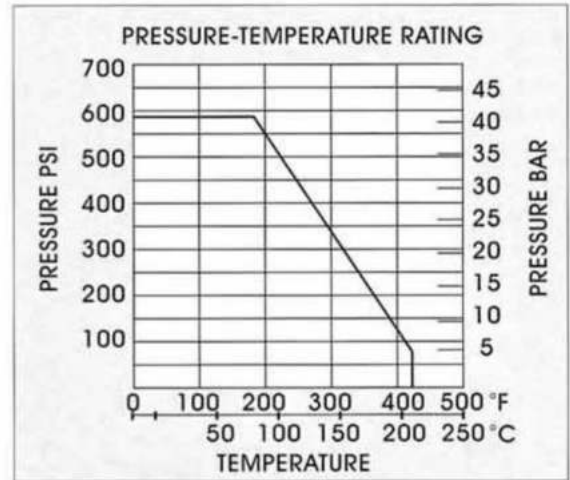


3-pc Investment Casting Ball Valve

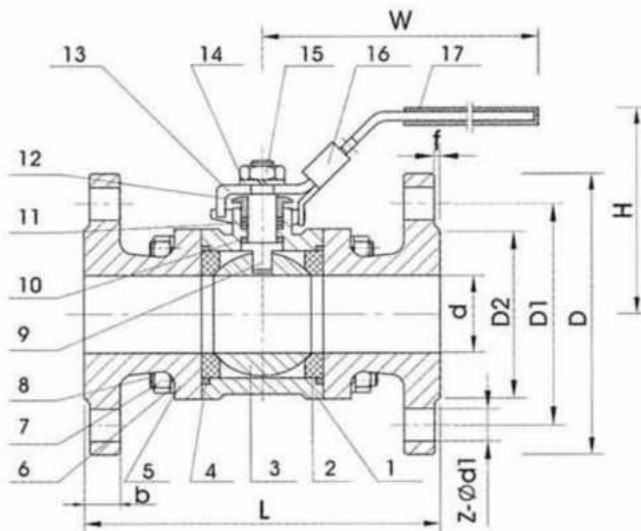
Full Port, Flanged End, PN40.

BS3-PN

- Investment Castings for Body and Cap
 - Flanged ends: DIN2545 GB/T9113.1
 - Face to Face: DIN3202-F1 GB/T12221
 - Internal entry blow-out proof stem
 - Pressure rating: PN40
 - Material: CF8M, CF8, CF3M, WCB
 - Pressure test: API 598
-
- PN40
 - DIN2545 GB/T9113.1
 - DIN3202-F1 GB/T12221
 - CF8M, CF8, CF3M, WCB



ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Ball Seat	R-PTFE(15%)	2
3	Ball	SS316	1
4	Body Gasket	PTFE	2
5	Cap	CF8M(1.4408)	1
6	Spring Washer	SS304	8(12)
7	Nut	SS304	8(12)
8	Bolt	SS304	4(6)
9	Stem	SS316	1
10	Thrust Washer	PTFE	1
11	Stem Packing	PTFE	1
12	Gland Nut	SS304	1
13	Handle	SS304	1
14	Spring Washer	SS304	1
15	Nut	SS304	1
16	Lock Device	SS304	1
17	Handle Cover	Plastic	1



SIZE	d	D	D1	D2	L	H	W	Z-Ød1	b	f	TORQUE(N·m)	WEIGHT(Kgs)
1/2 "	15	95	65	45	130	84	146	4-Ø14	16	2	5	2.05
3/4 "	20	105	75	58	150	87	146	4-Ø14	18	2	8	2.80
1 "	25	115	85	68	160	93	153	4-Ø14	18	2	10	3.35
1-1/4 "	32	140	100	78	180	99	153	4-Ø18	18	2	14	5.30
1-1/2 "	40	150	110	88	200	114	217	4-Ø18	18	3	18	6.50
2 "	50	165	125	102	230	122	217	4-Ø18	20	3	25	8.70
2-1/2 "	65	185	145	122	290	150	251	8-Ø18	22	3	48	15.20
3 "	80	200	160	138	310	161	251	8-Ø18	24	3	75	18.10
4 "	100	235	190	162	350	180	291	8-Ø22	24	3	110	26.90

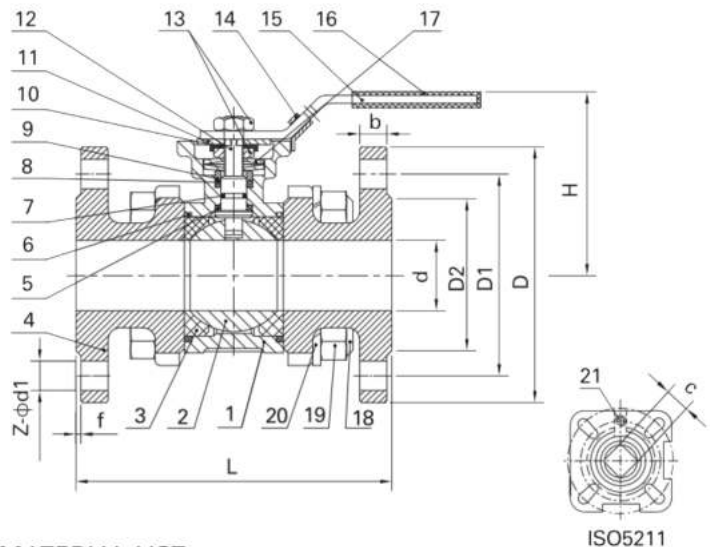


3-pc Investment Casting Ball Valve

Full Port, Mounting Flange PN10-PN40



(Option)

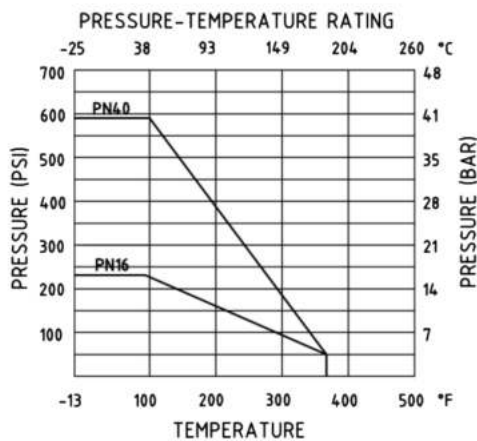


MATERIAL LIST

ITEM	PARTS	MATERIAL	QTY.
1	Body	CF8M	1
2	Ball	SS316	1
3	Ball Seat	R-PTFE(15%)	2
4	Cap	CF8M	2
5	Thrut Washer	PTFE	1
6	Body Gasket	PTFE	2
7	O-Ring	FKM	1
8	Stem Packing	PTFE	1
9	Stem Ring	SS316	1
10	Nut Stopper	SS304	1
11	Plate Washer	SS304	1
12	Stem	SS316	1
13	Nut	SS304	2
14	Lock Device	SS304	1
15	Handle	SS304	1
16	Handle Cover	PLASTIC	1
17	Belleville Washer	SS301	2
18	Bolt	SS304	4(6)
19	Nut	SS304	8(12)
20	Spring Washer	SS304	8(12)
21	Stop Pin	SS304	1

BS3M-PN

- Investment casting for body and cap
- Flanged ends: DIN EN 1092-1
- Face to face: EN558 Series1 DIN3202-F1
- Mounting pad: ISO 5211
- Pressure rating: PN10~40
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB



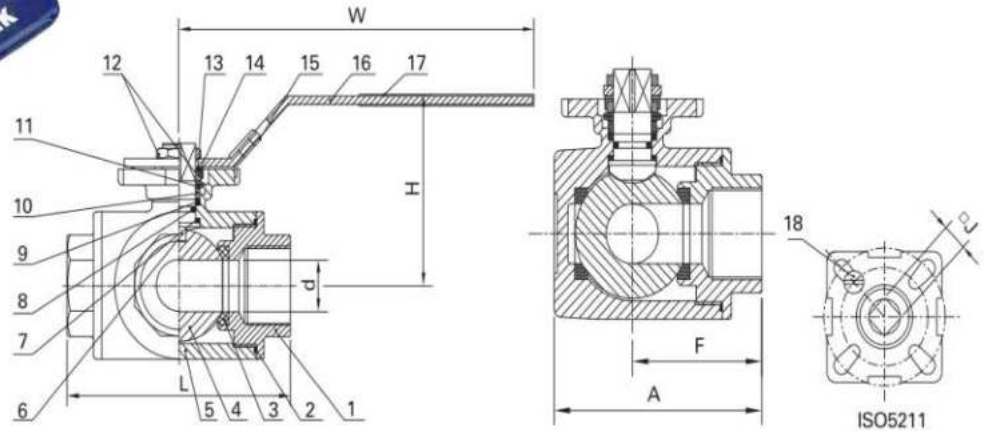
DIMENSION LIST

DN	PN	d	D	D1	D2	L	W	z-φd1	b	f	C	H
DN15	10~40	15	95	65	45	130	148	4-φ14	16	2	9	93
DN20	10~40	20	105	75	58	150	148	4-φ14	18	2	11	98
DN25	10~40	25	115	85	68	160	170	4-φ14	18	2	11	109
DN32	10~40	32	140	100	78	180	170	4-φ18	18	2	14	116
DN40	10~40	40	150	110	88	200	212	4-φ18	18	3	14	131
DN50	10~40	50	165	125	102	230	212	4-φ18	20	3	14	141
DN65	10/16	65	185	145	122	290	254	4-φ18	18	3	17	160
	8-φ18							22				
DN80	10/16	80	200	160	138	310	254	8-φ18	20	3	17	175
	25/40							24				
DN100	10/16	100	220	180	158	350	285	8-φ18	20	3	17	200
	25/40							24				
DN125	10/16	125	250	210	188	400	600	8-φ18	22	3	22	260
	25/40							26				
DN150	10/16	150	285	240	212	480	600	8-φ22	22	3	22	275
	25/40							28				



3 Way Investment Casting Ball Valve

Full Port, Screw BSPT L/ T Port Mouting



3T-3L

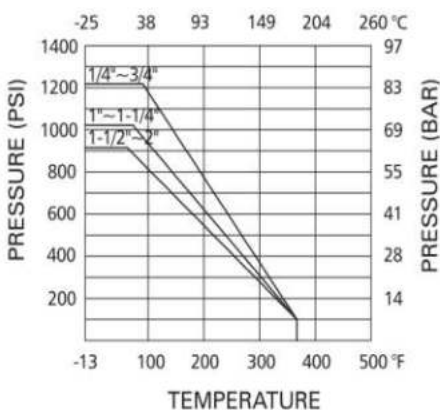
PORT \ TURN	0°	90°	180°	270°
T-BALL				
L-BALL				

- Investment casting for body and cap
- Full bore
- Thread: ISO, BS, DIN, JIS, ASME
- Mounting pad: ISO 5211
- Pressure rating: PN63 (1000PSI)
- Working temperature: -25°C~+ 180°C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

ITEM	PARTS	MATERIAL	QTY.
1	Cap	CF8M	3
2	Gasket	PTFE	3
3	Ball Seat	R-PTFE(15%)	4
4	Ball	SS316	1
5	Body	CF8M	1
6	Stem	SS316	1
7	Thrust Washer	PTFE	1
8	O-Ring	VITON	1
9	Stem Packing	PTFE	1
10	Stem Ring	SS316	1
11	Belleve Washer	SS301	2
12	Nut	SS304	2
13	Plate Washer	SS304	1
14	Nut Stopper	SS304	1
15	Lock Device	SS304	1
16	Handle	SS304	1
17	Handle Sleeve	PLASTIC	1
18	Stop Pin	SS304	1

PRESSURE-TEMPERATURE RATING



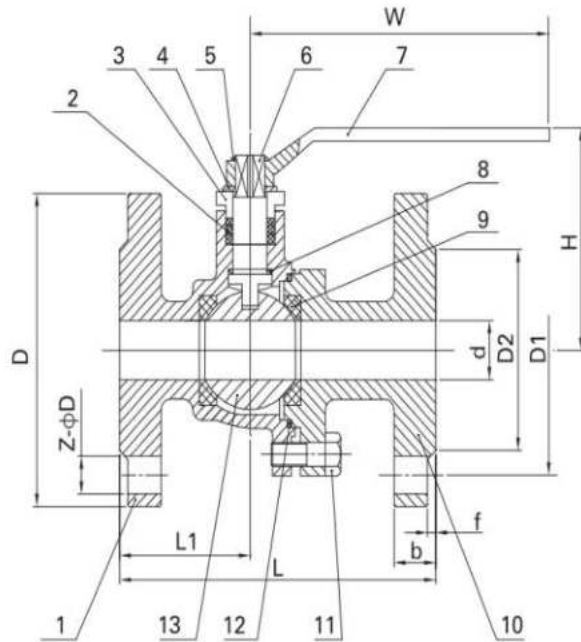
DIMENSION LIST

SIZE	d	L	H	W	F	A	J	ISO5211	N-m	Kgs(L)	Kgs(T)
1/4"	9.5	75	66	130	37.5	57.5	9	F03/F04	8	0.70	0.70
3/8"	11	75	66	130	37.5	57.5	9	F03/F04	8	0.67	0.67
1/2"	15	86	72	161	42.5	65.5	11	F04/F05	9	0.98	0.98
3/4"	20	93	77	161	50	79	11	F04/F05	15	1.52	1.50
1"	25	119	92	203	61	97	14	F05/F07	20	3.38	3.35
1-1/4"	32	131	96	203	65.5	106.5	14	F05/F07	30	4.13	4.07
1-1/2"	40	151.5	107	203	79	129	14	F05/F07	45	7.58	7.46
2"	50	174	135	254	89	145	17	F07/F10	70	9.46	9.25



2-pc Investment Casting Ball Valve

Full Port, Flange ANSI150, ANSI300, ANSI600

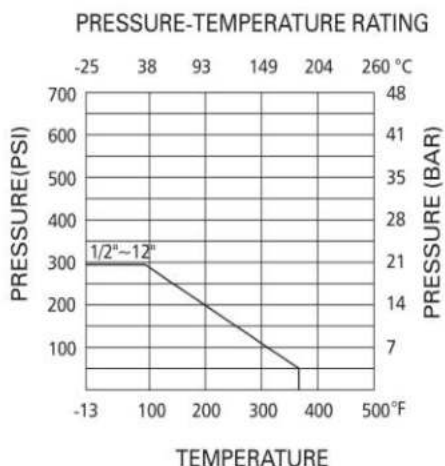


MV-24N

- Investment casting for body and cap
- Full bore
- Flanged ends: ANSI B16.5
- Face to Face: ANSI B16.10
- Pressure rating: 150Lb, 300Lb, 600Lb
- Working temperature: -25°C ~ +180°C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Stem Packing	PTFE	1
3	Gland	SS304	1
4	Plate Washer	SS304	1
5	Snap Ring	SS304	1
6	Stem	SS316	1
7	Handle	SS304	1
8	Thrust Washer	PTFE	1
9	Ball Seat	R-PTFE 15%	2
10	Cap	CF8M	1
11	Bolt	SS304	4/6/8/12
12	Body Gasket	PTFE	1
13	Ball	SS316	1



DIMENSION LIST (150Lb)

SIZE	d	L	D	D1	D2	b	f	Z-φd	H	W	Kgs
1/2"	15	108	89	60.5	35	11	2	4-φ15	65	120	2.00
3/4"	20	117	98	70	43	11	2	4-φ15	70	130	2.20
1"	25	127	108	79.5	51	12	2	4-φ15	85	130	2.50
1-1/4"	32	140	117	89	64	13	2	4-φ15	100	160	3.00
1-1/2"	40	165	127	98.5	73	15	2	4-φ15	120	205	5.69
2"	50	178	152	120.5	92	16	2	4-φ19	130	205	7.59
2-1/2"	65	190	178	139.5	105	18	2	4-φ19	140	210	12.18
3"	80	203	190	152.5	127	19	2	4-φ19	170	300	15.67
4"	100	229	229	190.5	157	24	2	8-φ19	205	300	23.72
5"	125	356	254	216	186	24	2	8-φ22	260	600	39.00
6"	150	394	279	241.5	216	26	2	8-φ22	350	600	58.00
8"	200	457	343	298.5	270	29	2	8-φ22	500	800	102.00
10"	250	533	406	355	324	31	2	12-φ26	550	-	150.00
12"	300	610	483	410	381	32	2	12-φ26	700	-	240.00



2-pc Investment Casting Ball Valve

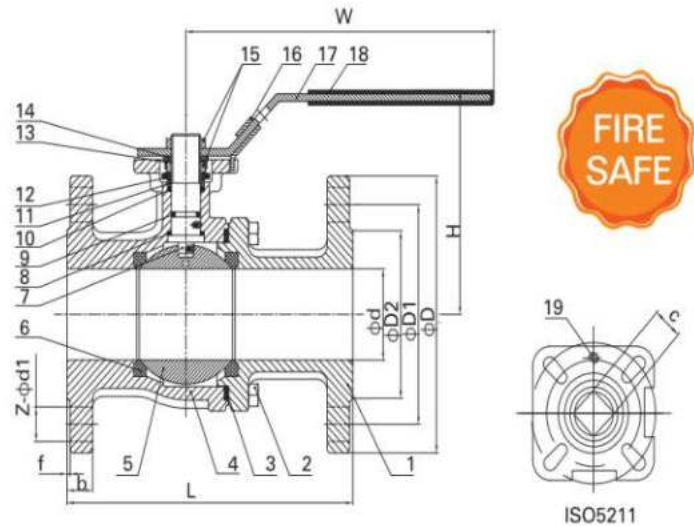
Full Port, Flange ANSI150, ANSI300



MV-24F

(5"~8")

- Investment casting for body and cap
- Fire-safe design (option)
- Flanged ends: ASME B16.5
- Face to face: ASME B16.10
- Mounting pad: ISO5211
- Pressure rating: 150Lb/300Lb
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB

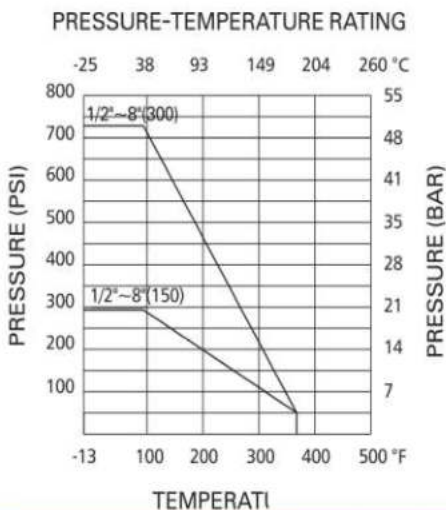


MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Cap	CF8M	1
2	Bolt	SS304	4/8/12
3	Body Gasket	PTFE	1
4	Body	CF8M	1
5	Ball	SS316	1
6	Ball Seat	R-PTFE(15%)	2
7	Stem	SS316	1
8	Thrust Washer	PTFE	1
9	O- Ring	VITON	1
10	Stem Packing	PTFE	1
11	Stem Ring	SS316	1
12	Belleville Washer	SS301	2
13	Nut Stopper	SS304	1
14	Plate Washer	SS304	1
15	Nut	SS304	2
16	Lock Device	SS304	1
17	Handle	SS304	1
18	Plastic Cover	PLASTIC	1
19	Stop Pin	SS304	1

DIMENSION LIST

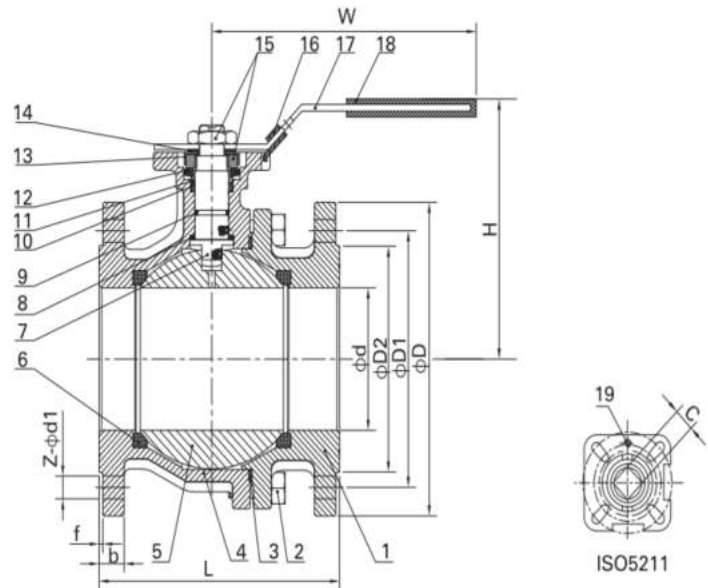
SIZE	CL	d	L	D	D1	D2	b	f	H	W	C	ISO5211	Z-φd1	N-m
1/2"	150Lb	15	108	89	60.5	35	11	2	82	117	9	F03/F04	4-φ15	5
	300Lb		140	95	66.5		14.5							
3/4"	150Lb	20	117	98	70	43	11	2	87	117	9	F03/F04	4-φ15	8
	300Lb		152	117	82.5		16						4-φ19	
1"	150Lb	25	127	108	79.5	51	12	2	90	164	11	F04/F05	4-φ15	10
	300Lb		165	124	89		17.5						4-φ19	
1-1/4"	150Lb	32	140	117	89	64	13	2	100	164	11	F04/F05	4-φ15	14
	300Lb		178	133	98.5		19.5						4-φ19	
1-1/2"	150Lb	40	165	127	98.5	73	15	2	116	203	14	F05/F07	4-φ15	18
	300Lb		190	156	114.5		21						4-φ22	
2"	150Lb	50	178	152	120.5	92	16	2	125	203	14	F05/F07	4-φ19	25
	300Lb		216	165	127		22.5						8-φ19	
2-1/2"	150Lb	65	190	178	139.5	105	18	2	164	255	17	F07/F10	4-φ19	48
	300Lb		241	190	149		25.5						8-φ22	
3"	150Lb	80	203	190	152.5	127	19	2	174	255	17	F07/F10	4-φ19	75
	300Lb		283	210	168.5		29						8-φ22	
4"	150Lb	100	229	229	190.5	157	24	2	200	302	17	F07/F10	8-φ19	110
	300Lb		305	254	200		32						8-φ22	
5"	150Lb	125	356	254	216	186	24	2	260	600	22	F10/F12	8-φ22	200
	300Lb		381	279	235		35						8-φ22	
6"	150Lb	150	394	279	241.5	216	26	2	278	600	22	F10/F12	8-φ22	300
	300Lb		403	318	270		37						12-φ22	
8"	150Lb	200	457	343	298.5	270	29	2	340	800	27	F13/F14	8-φ22	400





2-pc Investment Casting Ball Valve

Full Port, Flange PN10-PN40 Mouting



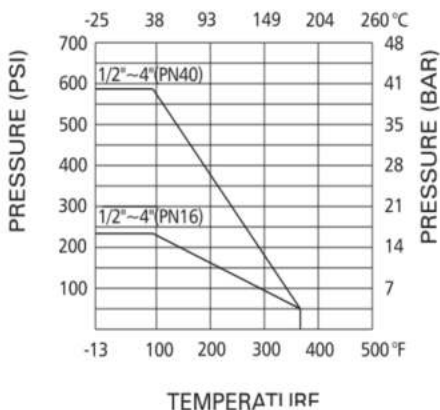
MV-24D (DN15~DN100)

- Investment casting for body and cap
- Flanged ends: DIN EN1092-1 PN10~PN40
- Face to Face: EN558 Series27
DIN3202 F4
- Mounting Pad: ISO5211
- Pressure rating: PN10~PN40
- Working temperature: -25°C~+ 180°C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Cap	CF8M	1
2	Bolt	SS304	4/6/8
3	Body Gasket	PTFE	1
4	Body	CF8M	1
5	Ball	SS316	1
6	Ball Seat	R-PTFE(15%)	2
7	Stem	SS316	1
8	Thrust Washer	PTFE	1
9	O- Ring	VITON	1
10	Stem Packing	PTFE	1
11	Stem Ring	SS316	1
12	Belleville Washer	SS301	2
13	Nut Stopper	SS304	1
14	Plate Washer	SS304	1
15	Nut	SS304	2
16	Lock Device	SS304	1
17	Handle	SS304	1
18	Plastic Cover	PLASTIC	1
19	Stop Pin	SS304	1

PRESSURE-TEMPERATURE RATING



DIMENSION LIST

SIZE	PN	d	L	D	D1	D2	b	f	H	W	C	ISO5211	Z-φd1	N-m
DN15	10~40	15	115	95	65	45	16	2	82	117	9	F03/F04	4-φ14	5
DN20	10~40	20	120	105	75	58	18	2	87	117	9	F03/F04	4-φ14	8
DN25	10~40	25	125	115	85	68	18	2	90	164	11	F04/F05	4-φ14	10
DN32	10~40	32	130	140	100	78	18	2	100	164	11	F04/F05	4-φ18	14
DN40	10~40	40	140	150	110	88	18	3	116	203	14	F05/F07	4-φ18	18
DN50	10~40	50	150	165	125	102	20	3	125	203	14	F05/F07	4-φ18	25
DN65	10/16	65	170	185	145	122	18	3	164	255	17	F07/F10	4-φ18	48
	25/40						22							
DN80	10/16	80	180	200	160	138	20	3	174	255	17	F07/F10	8-φ18	75
	25/40						24							
DN100	10/16	100	190	220	180	158	20	3	200	302	17	F07/F10	8-φ18	110
	25/40						24							



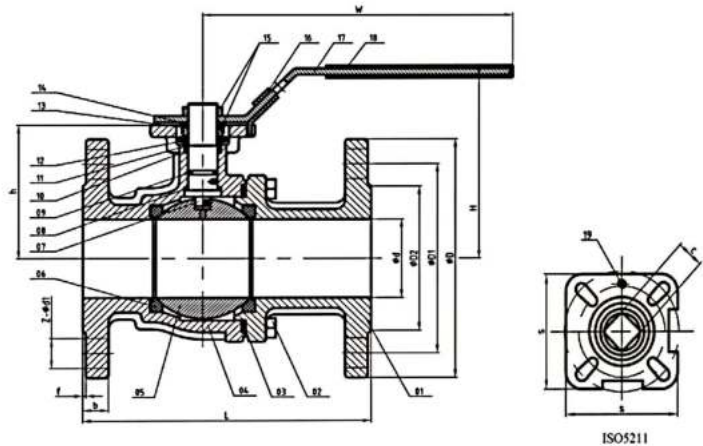
2-pc Investment Casting Ball Valve

Full Port, Flange JIS10K Mounting pad



MV-24J

- Investment casting for body and cap
- Flanged ends: JIS B2238
- Face to face: JIS B2002
- Mounting pad: ISO5211
- Pressure rating: 10K
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB



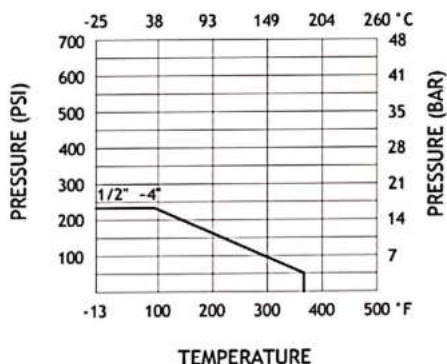
MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Cap	CF8M	1
2	Bolt	SS304	4/8/12
3	Body Gasket	PTFE	1
4	Body	CF8M	1
5	Ball	SS316	1
6	Ball Seat	R-PTFE(15%)	2
7	Stem	SS316	1
8	Thrust Washer	PTFE	1
9	O- Ring	FKM	1
10	Stem Packing	PTFE	1
11	Stem Ring	SS316	1
12	Belleville Washer	SS301	2
13	Nut Stopper	SS304	1
14	Plate Washer	SS304	1
15	Nut	SS304	2
16	Lock Device	SS304	1
17	Handle	SS304	1
18	Plastic Cover	PLASTIC	1
19	Stop Pin	SS304	1

DIMENSION LIST

SIZE	d	L	D	D1	D2	b	f	H	W	C	ISO5211	Z-Od1	s	N-m
1/2"	15	108	95	70	51	12	1	82	117	9	F03/F04	4-O15	42.6	5
3/4"	20	117	100	75	56	14	1	87	117	9	F03/F04	4-O15	42.6	8
1"	25	127	125	90	67	14	1	96	164	11	F04/F05	4-O19	50	10
1-1/4"	32	140	135	100	76	16	2	100	164	11	F04/F05	4-O19	50	14
1-1/2"	40	165	140	105	81	16	2	116	203	14	F05/F07	4-O19	64.5	18
2"	50	178	155	120	96	16	2	125	203	14	F05/F07	4-O19	64.5	25
2-1/2"	65	190	175	140	116	18	2	164	255	17	F07/F10	4-O19	93.6	48
3"	80	203	185	150	126	18	2	174	255	17	F07/F10	8-O19	93.6	75
4"	100	229	210	175	151	18	2	200	302	17	F07/F10	8-O19	93.6	110
5"	125	356	250	210	182	20	2	260	600	22	F10/F12	8-O22	114	200
6"	150	394	280	240	212	22	2	278	600	22	F10/F12	8-O22	114	300
8"	200	457	330	290	262	22	2	340	800	27	F12/F14	12-O22	131	400

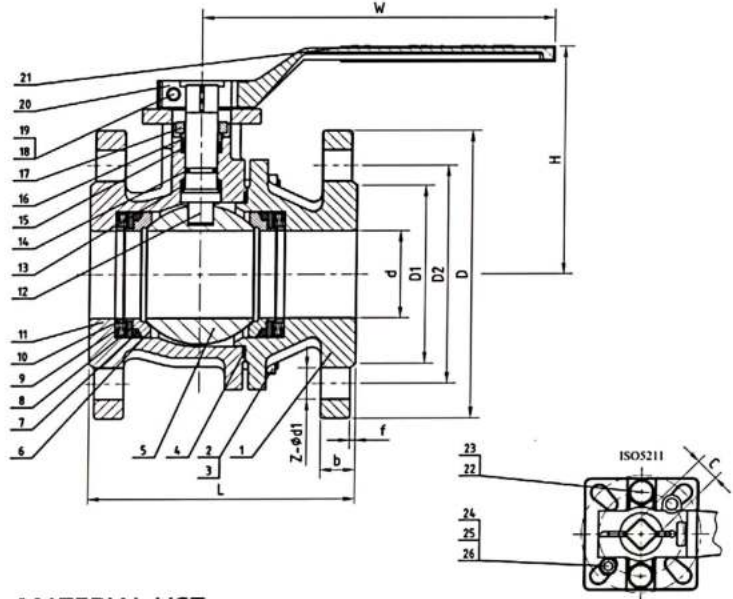
PRESSURE-TEMPERATURE RATING





2-pc Investment Casting Ball Valve Metal seal

Full Port, Flange PN16, PN40 Mounting pad

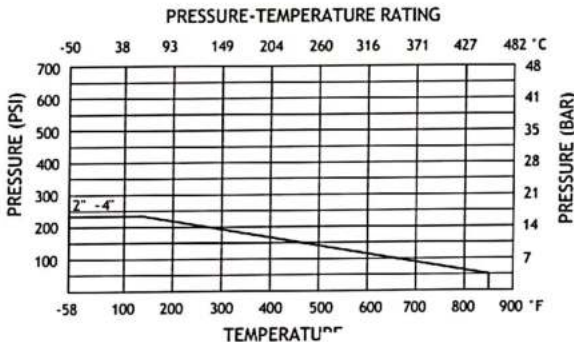


MV-28D

- Flanged ends: DIN EN1092-1 PN16
- Face to Face: DIN3202 F4 EN558 Series27
- Mounting Pad: ISO5211
- Pressure rating: DN50:PN16/25/40
DN65 ~ DN100:PN16
- Working temperature: -50°C ~ + 450°C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Cap	CF8M	1
2	Nut	SS304	6/8
3	Stud	SS304	6/8
4	Body Gasket	316+GRAFOIL	1
5	Ball	F316+STL	1
6	Ball Seat	SS316+STL	2
7	Seat Ring Seal	GRAFOIL	2
8	Plate Washer	SS316	2
9	Spring	INCONEL-750	16/24/28/32
10	Spring Carrier	SS316	2
11	Body	CF8M	1
12	Stem	SS316	1
13	Thrust Washer	R-PTFE 15%	1
14	O-Ring	FKM	1
15	Stem Packing	GRAFOIL	1
16	Stem Ring	SS316	1
17	Gland	CF8M	1
18, 24	Hexagon Socket Screw	SS304	2
19	Nut	SS304	1
20	Handle	CF8	1
21	Plastic Cover	PLASTIC	1
22	Hexagon Bolt	SS304	2
23	Nut	SS304	2
25	Nut	SS304	1
26	Spring Washer	SS304	1



DIMENSION LIST

SIZE	d	L	D	D1	D2	b	f	Z-φd	H	W	Kgs	C
DN50	50	150	165	125	102	20	3	4-φ18	130	203	10.50	14
DN65	65	170	185	145	122	18	3	8-φ18	170	255	15.60	17
DN80	80	180	200	160	138	20	3	8-φ18	180	255	19.85	17
DN100	100	190	220	180	158	20	3	8-φ18	205	302	28.50	17

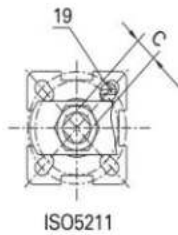
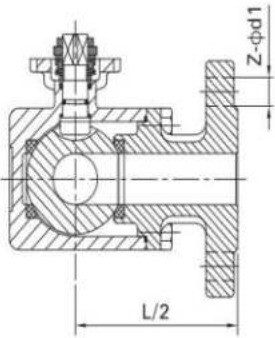


3 Way Investment Casting Ball Valve

Full Port, Flange ANSI150 Mounting pad



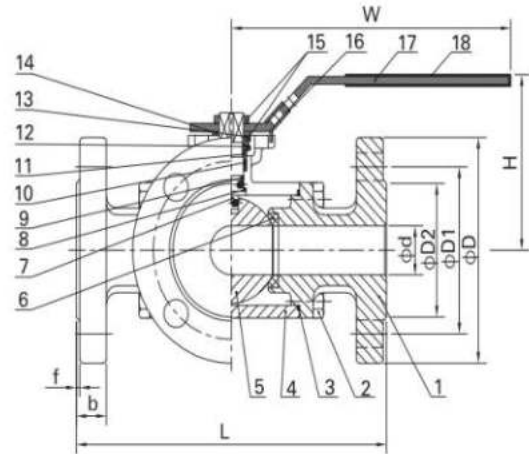
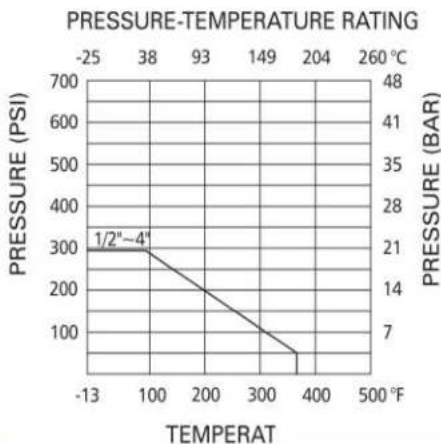
(2-1/2"~4")



ISO5211

MV-87F

- Investment casting for body and cap
- Flanged ends: ANSI B16.5
- Mounting pad: ISO 5211
- Pressure rating: 150Lb
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB



PORT	TURN	0°	90°	180°	270°
T-BALL					
L-BALL					

MATERIAL LIST

ITEM	PARTS	MATERIAL	QTY.
1	Cap	CF8M	3
2	Bolt	SS304	12
3	Body Gasket	PTFE	3
4	Body	CF8M	1
5	Ball	SS316	1
6	Ball Seat	R-PTFE(15%)	4
7	Stem	SS316	1
8	Thrust Washer	PTFE	1
9	O-Ring	VITON	1
10	Stem Packing	PTFE	1
11	Stem Ring	SS316	1
12	Belleville Washer	SS301	2
13	Nut Stopper	SS304	1
14	Plate Washer	SS304	1
15	Nut	SS304	2
16	Lock Device	SS304	1
17	Handle	SS304	1
18	Plastic Cover	PLASTIC	1
19	Stop Pin	SS304	1

DIMENSION LIST

SIZE	d	L	D	D1	D2	b	f	H	W	C	ISO5211	Z-φd1
1/2"	15	152	89	60.5	35	11	2	77	130	9	F03/F04	4-φ15
3/4"	20	167	98	70	43	11	2	84	161	11	F04/F05	4-φ15
1"	25	180	108	79.5	51	12	2	93	163	11	F04/F05	4-φ15
1-1/4"	32	190	117	89	64	13	2	113	209	14	F05/F07	4-φ15
1-1/2"	40	212	127	98.5	73	15	2	121	209	14	F05/F07	4-φ15
2"	49	230	152	120.5	92	16	2	126	209	14	F05/F07	4-φ19
2-1/2"	62	290	178	139.5	105	18	2	175	450	17	F07/F10	4-φ19
3"	75	310	190	152.5	127	19	2	188	500	17	F07/F10	8-φ19
4"	90	350	220	180	157	24	2	211	550	17	F07/F10	8-φ19

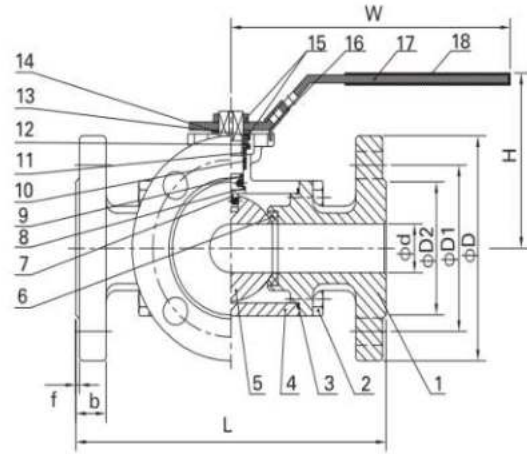
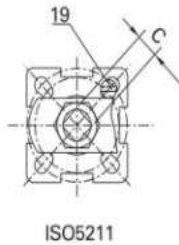
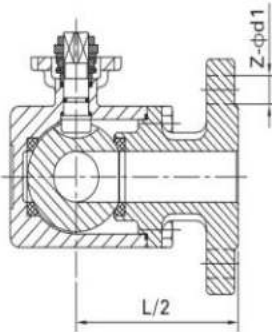


3 Way Investment Casting Ball Valve

Full Port, Flange PN16-PN40 Mouting pad



(DN65~DN100)

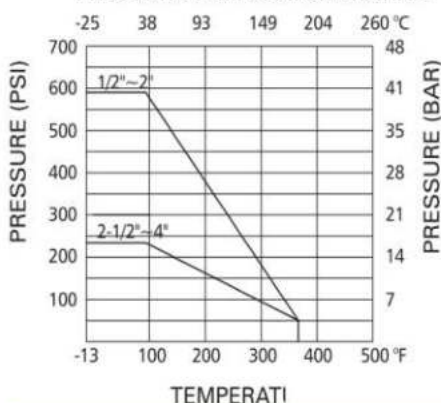


PORT	TURN	0°	90°	180°	270°
T-BALL					

MV-87D

- Investment casting for body and cap
- Flanged ends: DIN EN1092-1 PN10~PN40
- Mounting pad: ISO 5211
- Pressure rating: 1/2"~2" PN40
2 1/2"~4" PN16
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB

PRESSURE-TEMPERATURE RATING



MATERIAL LIST

ITEM	PARTS	MATERIAL	QTY.
1	Cap	CF8M	3
2	Bolt	SS304	12
3	Body Gasket	PTFE	3
4	Body	CF8M	1
5	Ball	SS316	1
6	Ball Seat	R-PTFE (15%)	4
7	Stem	SS316	1
8	Thrust Washer	PTFE	1
9	O-Ring	VITON	1
10	Stem Packing	PTFE	1
11	Stem Ring	SS316	1
12	Belleville Washer	SS301	2
13	Nut Stopper	SS304	1
14	Plate Washer	SS304	1
15	Nut	SS304	2
16	Lock Device	SS304	1
17	Handle	SS304	1
18	Plastic Cover	PLASTIC	1
19	Stop Pin	SS304	1

DIMENSION LIST

SIZE	d	L	D	D1	D2	b	f	H	W	C	ISO5211	Z-φd1
DN15	15	152	95	65	45	16	2	77	130	9	F03/F04	4-φ14
DN20	20	167	105	75	58	18	2	84	161	11	F04/F05	4-φ14
DN25	25	180	115	85	68	18	2	93	163	11	F04/F05	4-φ14
DN32	32	190	140	100	78	18	2	113	209	14	F05/F07	4-φ18
DN40	40	212	150	110	88	18	3	121	209	14	F05/F07	4-φ18
DN50	49	230	165	125	102	20	3	126	209	14	F05/F07	4-φ18
DN65	62	290	185	145	122	18	3	175	450	17	F07/F10	4-φ18
DN80	75	310	200	160	138	20	3	188	500	17	F07/F10	8-φ18

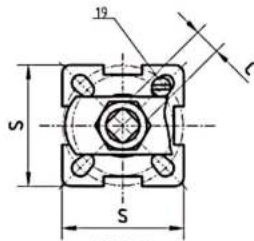
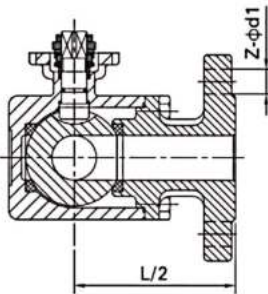


3 Way Investment Casting Ball Valve

Full Port, Flange JIS10K Mouting pad

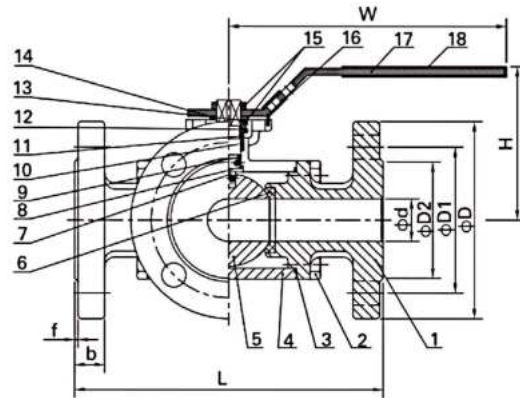


(2-1/2"~4")



MV-87J

- Investment casting for body and cap
- Flanged ends: JIS B2002
- Mounting pad: ISO 5211
- Pressure rating: 10K
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB

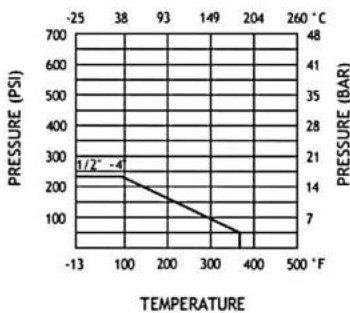


PORT	TURN	0°	90°	180°	270°
T-BALL					
L-BALL					

MATERIAL LIST

ITEM	PARTS	MATERIAL	QTY.
1	Cap	CF8M	3
2	Bolt	SS304	12
3	Body Gasket	PTFE	3
4	Body	CF8M	1
5	Ball	SS316	1
6	Ball Seat	R-PTFE(15%)	4
7	Stem	SS316	1
8	Thrust Washer	PTFE	1
9	O-Ring	FKM	1
10	Stem Packing	PTFE	1
11	Stem Ring	SS316	1
12	Belleville Washer	SS301	2
13	Nut Stopper	SS304	1
14	Plate Washer	SS304	1
15	Nut	SS304	2
16	Lock Device	SS304	1
17	Handle	SS304	1
18	Plastic Cover	PLASTIC	1
19	Stop Pin	SS304	1

PRESSURE-TEMPERATURE RATING



DIMENSION LIST

ITEM	d	D	L	D1	D2	b	f	H	W	C	ISO5211	Z-φd	h	s
15A	15	95	152	70	51	12	1	77	130	9	F03/F04	4-φ15	48	42.6
20A	20	100	167	75	56	14	1	84	161	11	F04/F05	4-φ15	53	50.4
25A	25	125	180	90	67	14	1	93	163	11	F04/F05	4-φ19	58.5	50.4
32A	32	135	190	100	76	16	2	113	209	14	F05/F07	4-φ19	71	66.5
40A	40	140	212	105	81	16	2	121	209	14	F05/F07	4-φ19	77.5	66.5
50A	49	155	230	120	96	16	2	126	209	14	F05/F07	4-φ19	85	66.5
65A	62	175	290	140	116	18	2	175	450	17	F07/F10	4-φ19	110	93.6
80A	75	185	310	150	126	18	2	188	500	17	F07/F10	8-φ19	122.5	93.6
100A	99	210	350	175	151	18	2	211	550	17	F07/F10	8-φ19	145.5	93.6



PROTEK





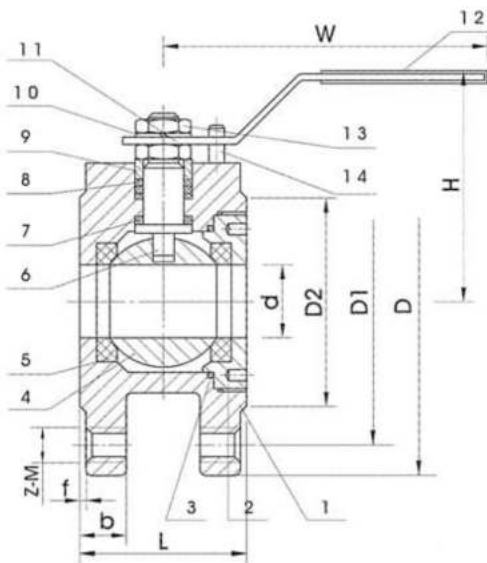
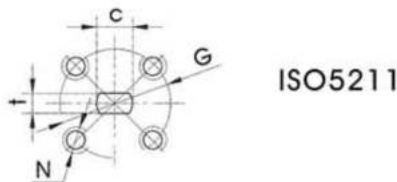
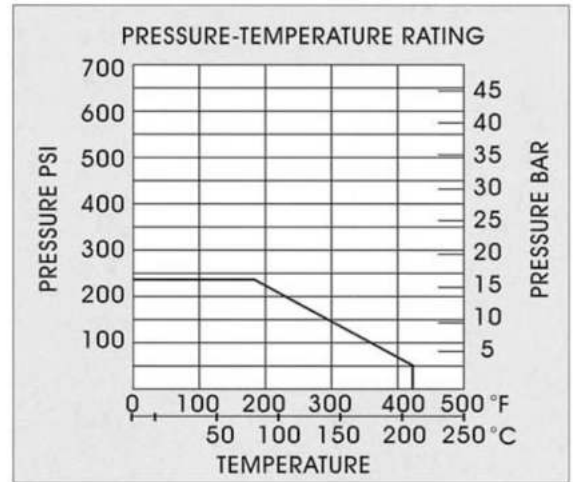
1-pc Investment Casting Ball Valve

Full bore, Wafer Flanged, PN16.

BW-FL

- Investment Castings for Body and Cap
- Pressure rating:PN16
- Material:CF8M,CF8,CF3M,WCB
- Pressure test: API 598
- Mounting Pad : ISO5211
- Flanged ends: DIN2543

- PN16 Option JIS 10K / ANSI 150
- DIN2543
- CF8M,CF8,CF3M,WCB



ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Cap	CF8M(1.4408)	1
3	Body Gasket	PTFE	1
4	Ball	SS316	1
5	Ball Seat	R-PTFE(15%)	2
6	Stem	SS316	1
7	Thrust Washer	PTFE	1
8	Stem Packing	PTFE	1
9	Gland	SS304	1
10	Spring Washer	SS304	1
11	Handle	SS304	1
12	Handle Cover	Plastic	1
13	Nut	SS304	2
14	Stop pin	SS304	1



SIZE	d	L	D	D1	D2	b	f	H	ISO5211	Z-M	C	t	G	N	W	TORQUE(N·m)	WEIGHT(Kgs)
1/2 "	15	37.5	95	65	45	14	2	62	F03	4-M12	10	6	36	M5	125	5	1.80
3/4 "	20	40	105	75	58	16	2	68	F03	4-M12	10	6	36	M5	125	8	2.20
1 "	25	44	115	85	68	16	2	80	F04	4-M12	12	8	42	M5	150	10	2.80
1-1/4 "	32	51	140	100	78	16	2	87	F04	4-M16	12	8	42	M5	150	14	4.00
1-1/2 "	40	63	150	110	88	16	3	98	F05	4-M16	16	10	50	M6	190	18	4.70
2 "	50	83	165	125	102	18	3	105	F05	4-M16	16	10	50	M6	190	25	6.65
2-1/2 "	65	107	180	145	122	18	3	123	F07	4-M16	20	14	70	M8	240	48	11.15
3 "	76	120	200	160	138	20	3	150	F07	8-M16	20	14	70	M8	240	75	14.00
4 "	94	152	220	180	158	20	3	164	F10	8-M16	24	18	102	M10	290	110	24.00

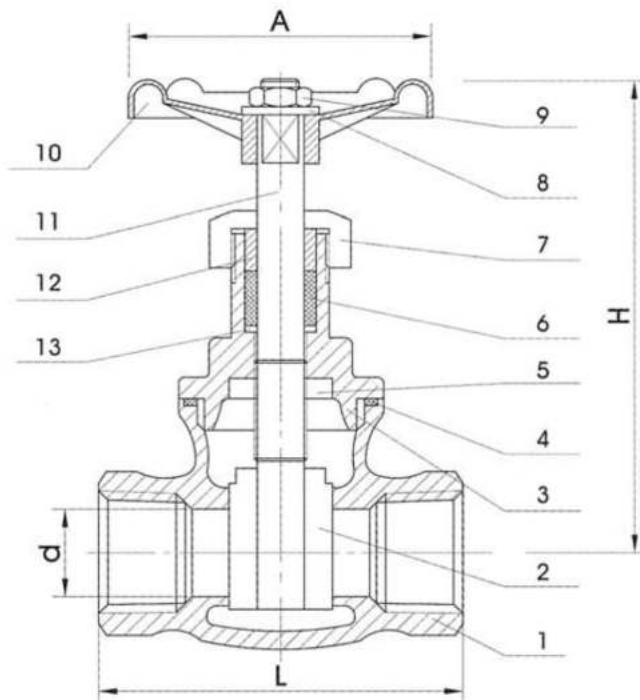
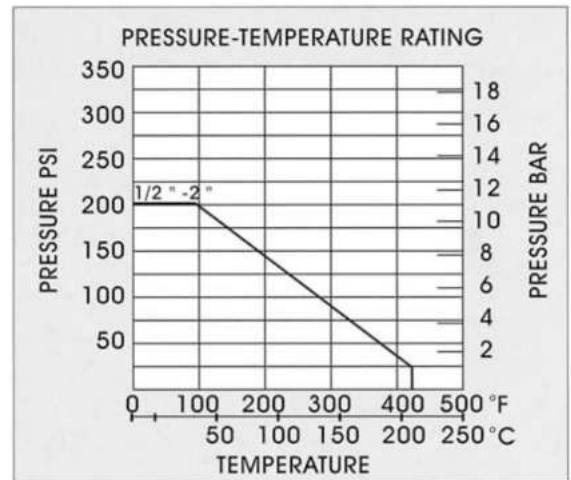


2-pc Investment Casting Gate Valve

Full Port, Screw End, 200 WOG.

SGT-200

- Investment Castings for Body
 - Threaded ends: ANSI B2.1, BS 21, DIN 259/2999
 - Internal entry blow-out proof stem
 - Pressure rating: 200PSI (PN16)
 - Material: CF8M, CF8, CF3M
 - Pressure test: API 598
-
- 200PSI (PN16)
 - ANSI B2.1, BS 21, DIN 259/2999
 - CF8M, CF8, CF3M



ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Disc	CF8M(1.4408)	1
3	Bonnet	CF8M(1.4408)	1
4	Gasket	PTFE	1
5	Snap Washer	SS316	1
6	Packing	PTFE	1
7	Packing Nut	SS316	1
8	Washer	SS304	1
9	Wheel Nut	SS304	1
10	Hand Wheel	Aluminum Alloy	1
11	Stem	SS316	1
12	Gland	SS304	1
13	Snap Washer	SS304	1



SIZE	d	L	H	A	WEIGHT(Kgs)
1/2 "	15	55	85	70	0.40
3/4 "	20	60	95	70	0.50
1 "	25	65	105	80	0.68
1-1/4 "	32	75	125	90	1.05
1-1/2 "	40	80	135	90	1.55
2 "	50	95	155	100	2.15

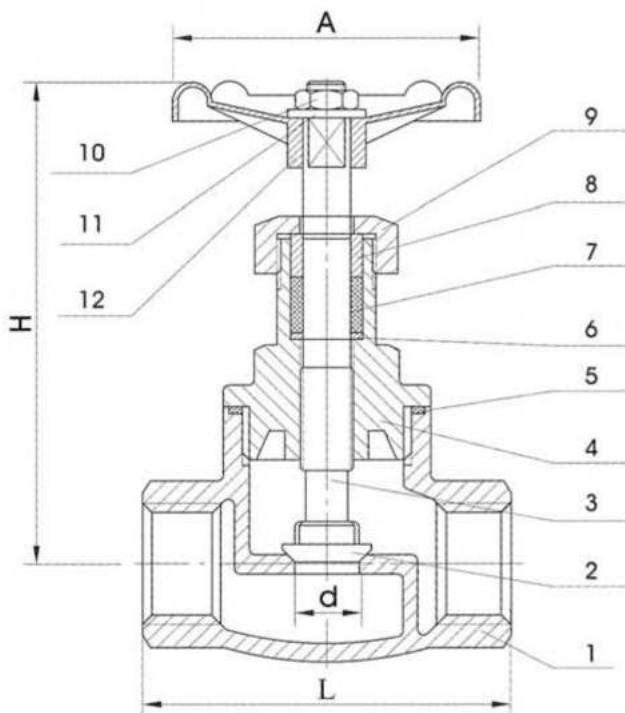
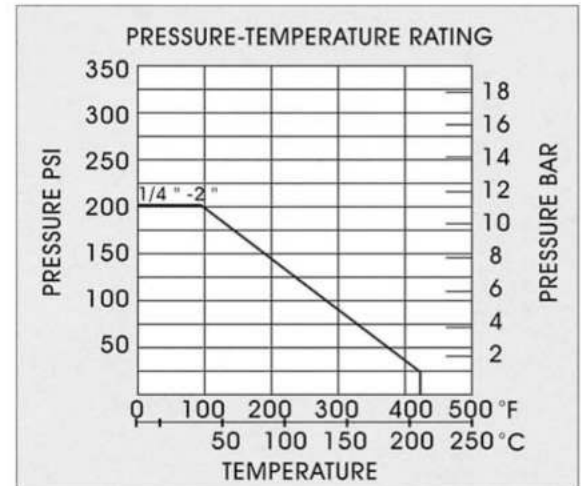


Investment Casting Globe Valve

Full Port, Screw End, 200 WOG.

SGL-200

- Investment Castings for Body
 - Threaded ends: ANSI B2.1, BS 21, DIN 259/2999
 - Internal entry blow-out proof stem
 - Pressure rating: 200 PSI (PN16)
 - Material: CF8M, CF8, CF3M
-
- 200PSI (PN16)
 - ANSI B2.1, BS 21, DIN 259/2999
 - CF8M, CF8, CF3M



ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Petal	SS316	1
3	Stem	SS316	1
4	Cap	CF8M(1.4408)	1
5	Gasket	PTFE	1
6	Washer	SS304	1
7	Stem Packing	PTFE	1
8	Ring	SS304	1
9	Gland Ring	SS304	1
10	Wheel Nut	SS304	1
11	Plate	SS304	1
12	Hand Wheel	Alumnum Alloy	1



SIZE	d	L	H	A	WEIGHT(Kgs)
1/4 "	10	65	85	70	0.38
3/8 "	12	65	85	70	0.37
1/2 "	15	65	85	70	0.35
3/4 "	20	80	95	70	0.55
1 "	25	90	105	80	0.85
1-1/4 "	32	105	125	90	1.40
1-1/2 "	40	120	135	90	1.98
2 "	50	140	155	100	2.75

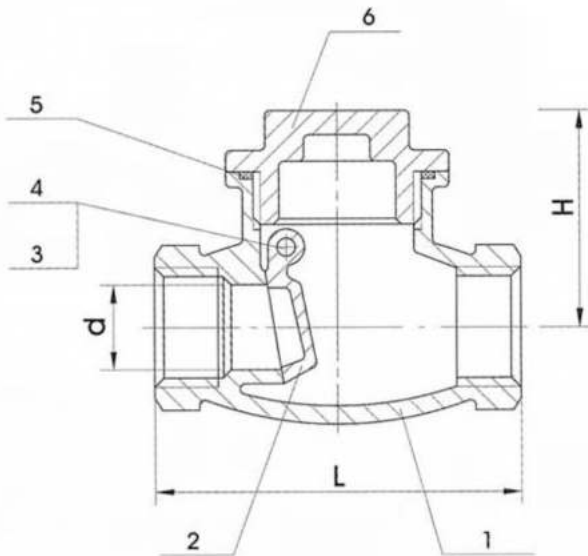
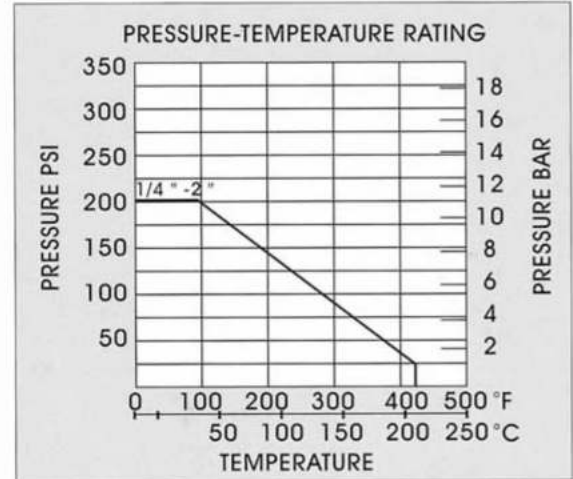


Investment Casting Swing Check Valve

Full Port, Screw End, 200 WOG.

SS200

- Investment Castings for Body and Bonnet
- Threaded ends:ANSI B2.1,BS 21,DIN 259/2999
- Pressure rating:200 PSI(PN16)
- Material:CF8M,CF8,CF3M
- 200PSI(PN16)
- ANSI B2.1,BS 21,DIN 259/2999
- CF8M,CF8,CF3M



ITEM	PART	MATERIAL	QTY.
1	Body	CF8M(1.4408)	1
2	Disc	CF8M(1.4408)	1
3	Pipe Plug	SS316	1
4	Plug Gasket	PTFE	1
5	Gasket	PTFE	1
6	Bonnet	CF8M(1.4408)	1



CE
0036

SIZE	d	L	H	WEIGHT(Kgs)
1/4 "	10	50	51	0.32
3/8 "	12	50	51	0.33
1/2 "	15	58	51	0.35
3/4 "	20	65	60	0.45
1 "	25	80	72	0.68
1-1/4 "	32	92	77	1.00
1-1/2 "	40	105	87	1.40
2 "	50	125	102	2.10



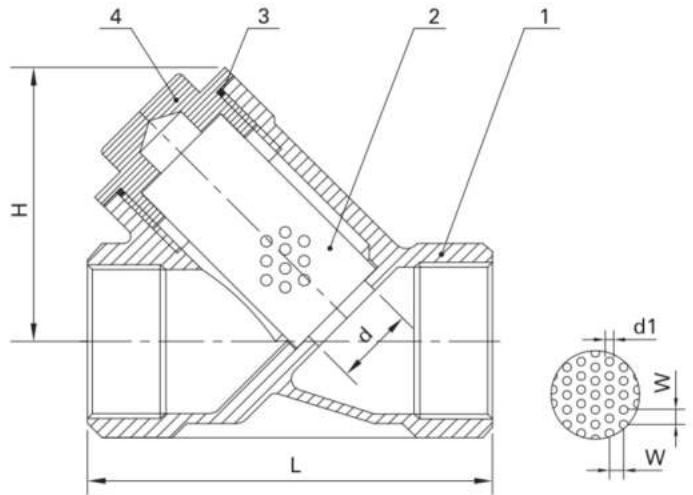
Investment Casting Y-Strainer

Full Port, Screw End, 800 WOG.



Y800

(With blow-off)



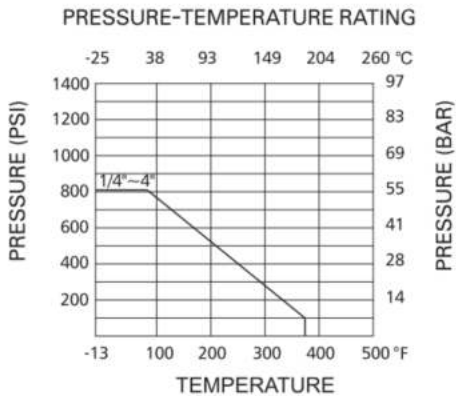
MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Screen	SS316	1
3	Body Gasket	PTFE	1
4	Bonnet	CF8M	1

- Investment casting for body and bonnet
- Thread: ISO, BS, DIN, JIS, ASME
- Pressure rating: 800PSI (PN40)
- Working temperature: -25°C ~ + 180°C
- Material: CF8M, CF8, CF3M

DIMENSION LIST

SIZE	d	L	H	W	d1	Kgs
1/4"	10	64	43	2	1	0.20
3/8"	12	64	43	2	1	0.20
1/2"	15	64	45	2	1	0.21
3/4"	20	80	52	2	1	0.34
1"	25	90	68	2	1	0.59
1-1/4"	32	106	70	2	1	0.80
1-1/2"	38	119	80	2	1	1.06
2"	50	140	98	2	1	1.61
2-1/2"	61	167	117	2	1	2.99
3"	75	198	137	2	1	4.74
4"	94	238	163	2	1	7.88



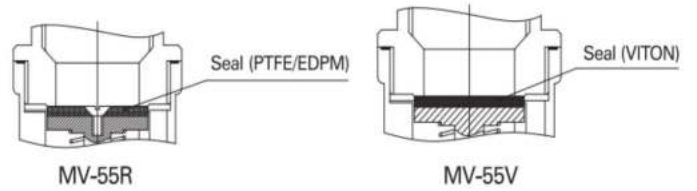
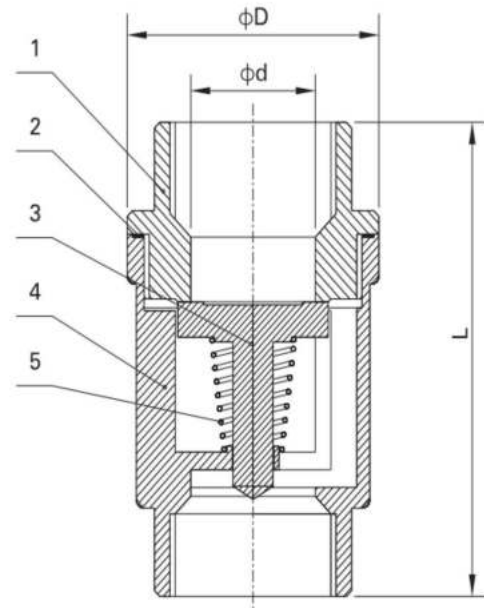


Vertical Spring Check Valve

Investment Casting

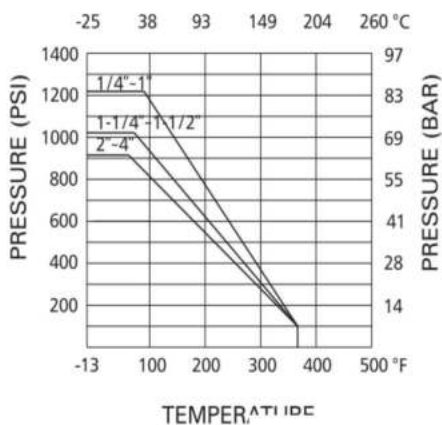


MV-55



- Investment casting for body, cap and disc
- Thread: ISO, BS, DIN, JIS, ASME
- Seal: Metal-to-metal / Soft
- Pressure rating: 1000PSI (PN63)
- Working temperature: $-25^{\circ}\text{C} \sim +180^{\circ}\text{C}$
- Material: CF8M, CF8, CF3M

PRESSURE-TEMPERATURE RATING



MATERIAL LIST

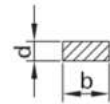
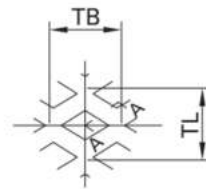
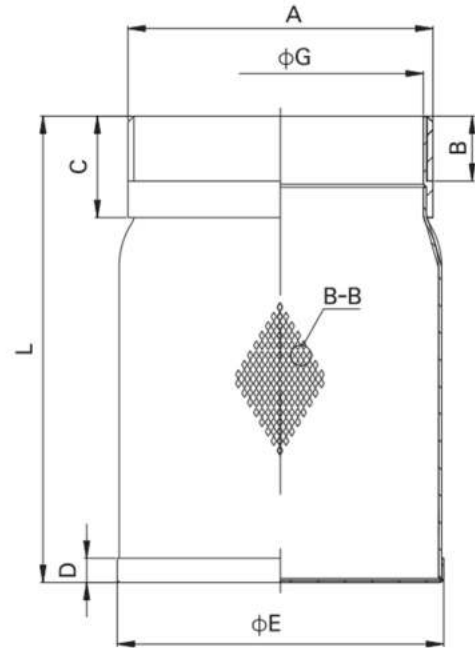
ITEM	PART	MATERIAL	QTY.
1	Cap	CF8M	1
2	Body Gasket	PTFE	1
3	Disc	CF8M	1
4	Body	CF8M	1
5	Spring	SS316	1

DIMENSION LIST

SIZE	d	D	L	Kgs
1/4"	8	30.5	53	0.17
3/8"	10	30.5	53	0.15
1/2"	15	37	56	0.21
3/4"	20	42	63	0.29
1"	25	48	74	0.40
1-1/4"	30	58	81	0.65
1-1/2"	38	70	91	0.98
2"	47	82	97	1.40
2-1/2"	61	102.5	118	2.44
3"	75	120	138	3.80
4"	94	150	158	6.60



Foot Valve Investment Casting



Detail B-B

A-A

MV-45

- Thread: ISO, BS, DIN, JIS, ASME
- Pressure rating: PN16
- Material: SS316, SS304, SS316L

DIMENSION LIST

SIZE	A	B	C	D	E	G	L	TB	TL	b	d
1/4"	8	13	4	16	10	46	4	2	0.6	0.5	
3/8"	8	13	4	19	14	46	4	2	0.6	0.5	
1/2"	10	15	4	23	17	56	4	2	0.6	0.5	
3/4"	10	15	4	29	22	62	4	2	0.6	0.5	
1"	10	15	4	37	28.5	71	4	2	0.6	0.5	
1-1/4"	14	20	5	44	36.5	80	4	2	0.6	0.5	
1-1/2"	14	20	5	49	42.5	90	4	2	0.6	0.5	
2"	14	20	5	62	54.5	102	4	2	0.6	0.5	
2-1/2"	16	25	6	81	70	111	4	2	0.6	0.5	
3"	16	25	6	93	82	125	4	2	0.6	0.5	
4"	16	25	6	117	107	144	4	2	0.6	0.5	



3-pc Spring Vertical Check Valve

Full Port, Threads, Socket weld, Butt weld



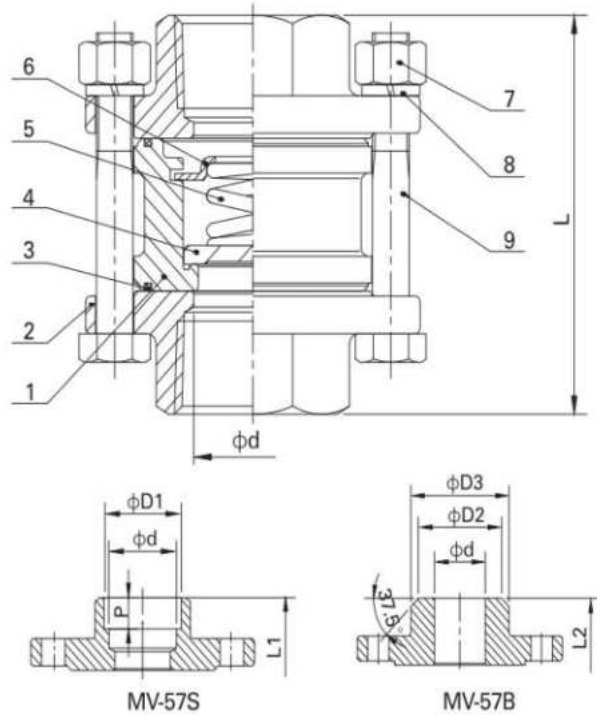
Threads



Socket-weld

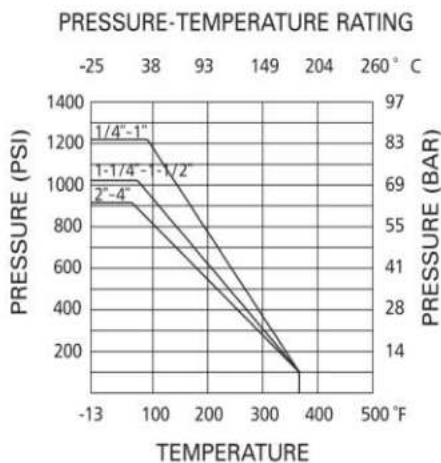


Butt-weld



DC100

- Investment casting for body, cap
- Threaded: ISO, BS, DIN, JIS, ASME
- Seal: Metal-to-metal
- Pressure rating: 1000PSI(PN63)
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB



MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Cap	CF8M	2
3	Seal	PTEE	2
4	Disc	CF8M	1
5	Spring	SS316	1
6	Stopper	SS304	1
7	Nut	SS304	4(6)
8	Washer	SS304	4(6)
9	Bolt	SS304	4(6)

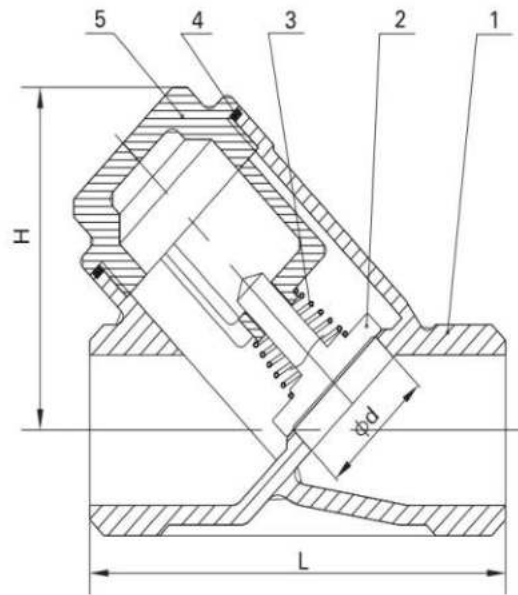
DIMENSION LIST

SIZE	d	L		L1	D1	P	L2	D2	D3
		BSP	NPT						
1/4"	11	49	49	49	14.1	10	45	13	18
3/8"	12.5	49	49	49	17.1	10	45	13	18
1/2"	15	56	56	56	21.7	10	56	17	22
3/4"	20	65	65	65	27.1	14	65	22	27
1"	25	74	74	74	33.8	14	74	28	34
1-1/4"	32	83	83	83	42.5	15	83	35	43
1-1/2"	40	91	91	91	48.6	15	91	43	49
2"	50	110	110	110	61.1	19	110	54	61
2-1/2"	65	126	116	126	73.8	21	126	70	76
3"	80	141	131	141	89.8	24	141	85	93
4"	100	162	145.5	162	115.2	24	162	105	116



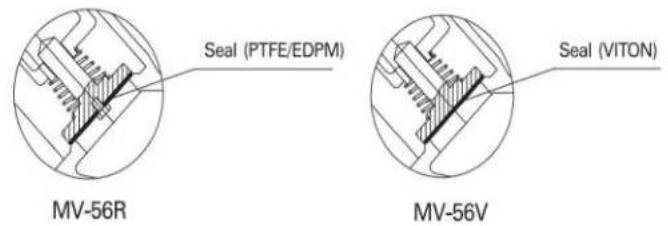
Investment Y-Type Check Valve

Class 800 PSI



MV-56

- Investment casting for body, cap and disc
- Thread: ISO, BS, DIN, JIS, ASME
- Seal: Metal-to-metal / Soft
- Pressure rating: 800PSI (PN40)
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M

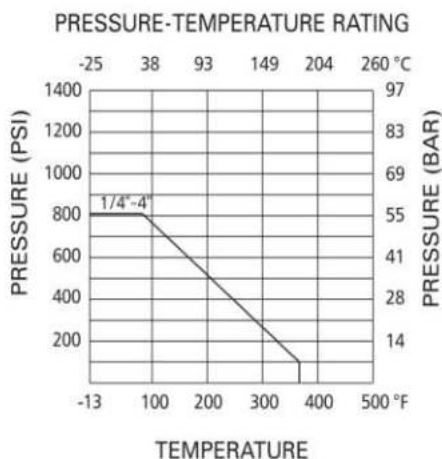


MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Disc	CF8M	1
3	Spring	SS316	1
4	Body Gasket	PTFE	1
5	Bonnet	CF8M	1

DIMENSION LIST

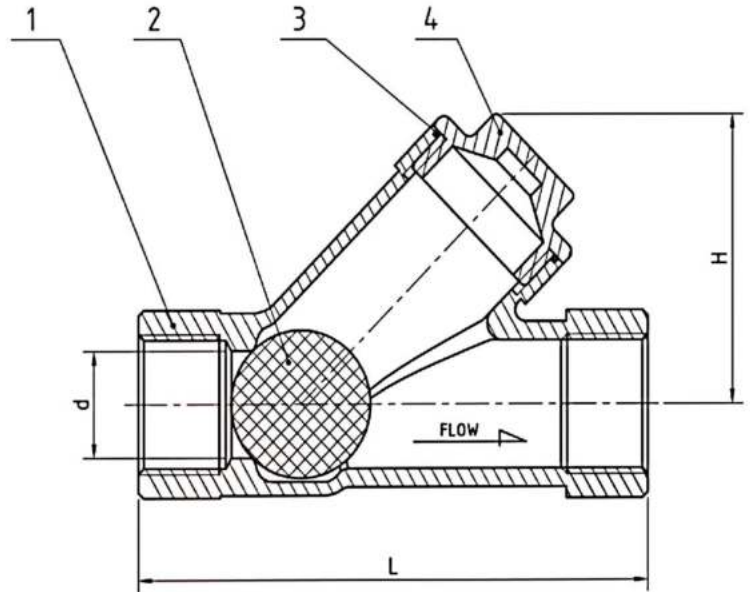
SIZE	d	L	H	Kgs
1/4"	9.5	64	43	0.21
3/8"	11.5	64	43	0.21
1/2"	15	64	45	0.22
3/4"	20	79	52	0.36
1"	25	90	68	0.61
1-1/4"	30	106	70	0.89
1-1/2"	38	119	80	1.15
2"	47	140	98	1.75
2-1/2"	61	167	117	3.24
3"	75	198	137	5.15
4"	94	238	163	8.54





Investment Y-Ball Check Valve

Class 800 PSI

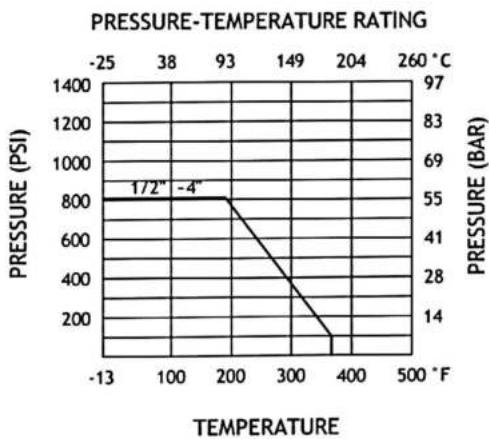


MV-51B

- Thread: ANSI B2.1, BS21, ISO7/1
- Length: DIN3202-M4
- Pressure rating: 800PSI (PN40)
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M

MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Ball	FKM/EPDM/PTFE	1
3	Body Gasket	PTFE	1
4	Bonnet	CF8M	1

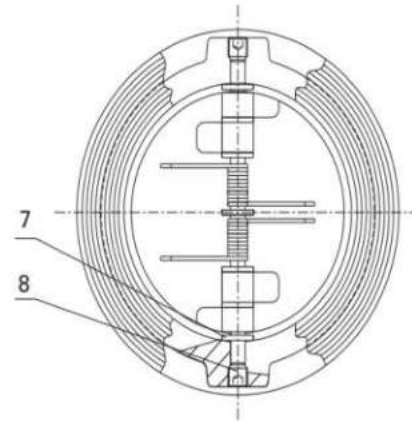
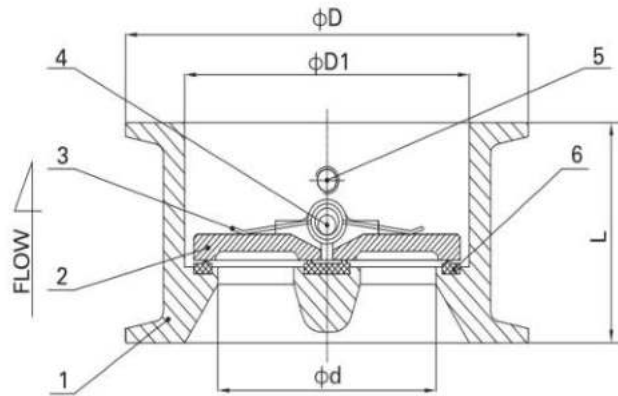


DIMENSION LIST

SIZE	d	L	H
1/2"	15	85	45
3/4"	20	90	52
1"	25	105	68
1-1/4"	32	120	70
1-1/2"	40	130	80
2"	50	150	98
2-1/2"	65	185	117
3"	80	205	137
4"	100	240	163



Dual Plate Wafer Check Valve



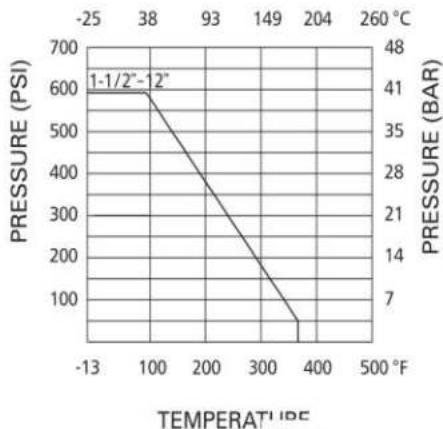
MV-52D

- Investment castings for body and disc
- Flanged ends: DIN EN1092-1 PN10~PN40
ANSI B16.5 Class150~Class300
- Face to face: EN558-1 (DIN3202-K3)
- Seal: Viton/EPDM/Metal-to-Metal
- Pressure rating: PN40
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Disc	CF8M	2
3	Spring	SS316	2
4	Axle	SS316	1
5	Disc Stopper	SS316	1
6	Seat	VITON	1
7	Washer	PTFE	7
8	Plug	SS316	4

PRESSURE-TEMPERATURE RATING



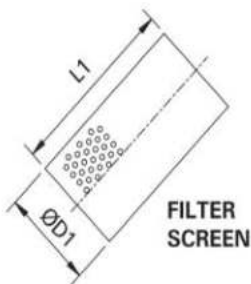
DIMENSION LIST

SIZE	φd	φD	φD1	L	Kgs
DN40	38	84	60	43	0.78
DN50	48	101	65	43	1.05
DN65	59	120	80	46	1.45
DN80	72	133	94	64	2.32
DN100	90	162	117	64	3.36
DN125	110	192	145	70	5.26
DN150	135	218	170	76	7.15
DN200	175	273	224	89	11.84
DN250	222	328	265	114	20.36
DN300	264	378	310	114	28.34

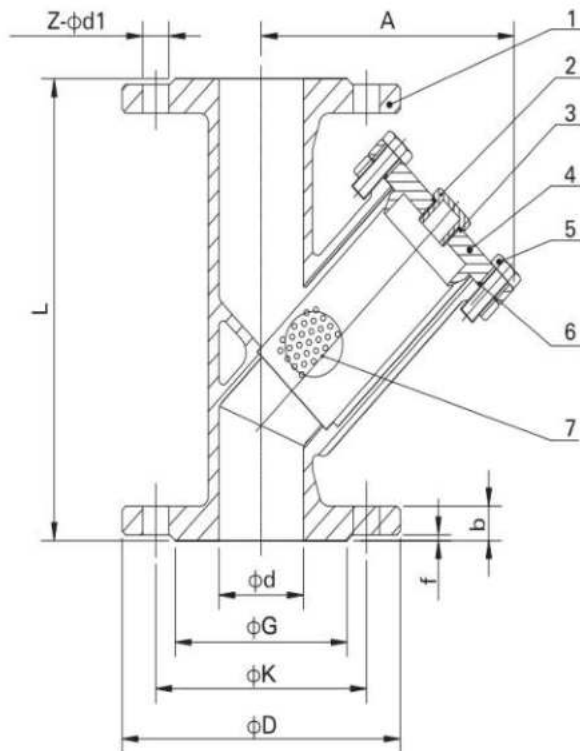
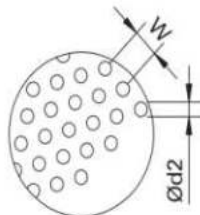


Investment Casting Y-Strainer

Flange ANSI150



FILTER SCREEN



MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Blow Off Plug	CF8M	1
3	Gasket A	PTFE	1
4	Cap	CF8M	1
5	Bolt	SS304	4/6/8/10
6	Gasket B	PTFE	1
7	Filter Screen	SS316	1

MV-41F(150)

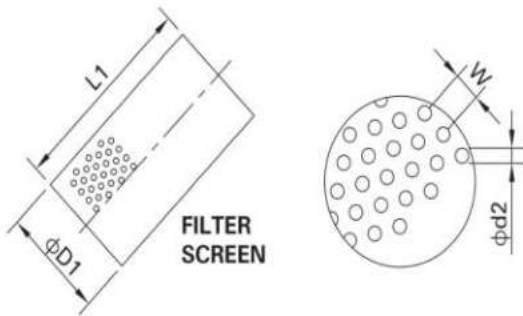
DIMENSION LIST

SIZE	d	G	K	D	L	A	b	f	D1	L1	W	d2	z-φd1
1/2"	15	35	60.5	89	120	75	12	2	22	58	2	1	4-φ15
3/4"	20	43	70	97	140	87	12	2	26	65	2	1	4-φ15
1"	25	51	79.5	108	150	100	12	2	32	72	2	1	4-φ15
1-1/4"	32	64	89	117	180	114	13	2	37	83	2	1	4-φ15
1-1/2"	40	73	98.5	127	190	135	15	2	47	95	2	1	4-φ15
2"	50	92	120.5	152	210	155	16	2	57	114	2	1	4-φ19
2-1/2"	65	105	139.5	178	250	189	18	2	69	152	3.5	2	4-φ19
3"	80	127	152.5	190	280	200	19	2	84	145	3.5	2	4-φ19
4"	100	157	190.5	229	340	232	24	2	105	180	3.5	2	8-φ19
5"	125	186	216	254	380	274	24	2	134	217	3.5	2	8-φ22
6"	150	216	241	279	420	326	26	2	164	226	3.5	2	8-φ22
8"	200	270	298.5	343	500	397	29	2	218	309	3.5	2	8-φ22

- Investment casting for body and bonnet
- Flange ends: ANSI B16.5
- Pressure rating: 150Lb
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB
- With blow-off from 1-1/4"

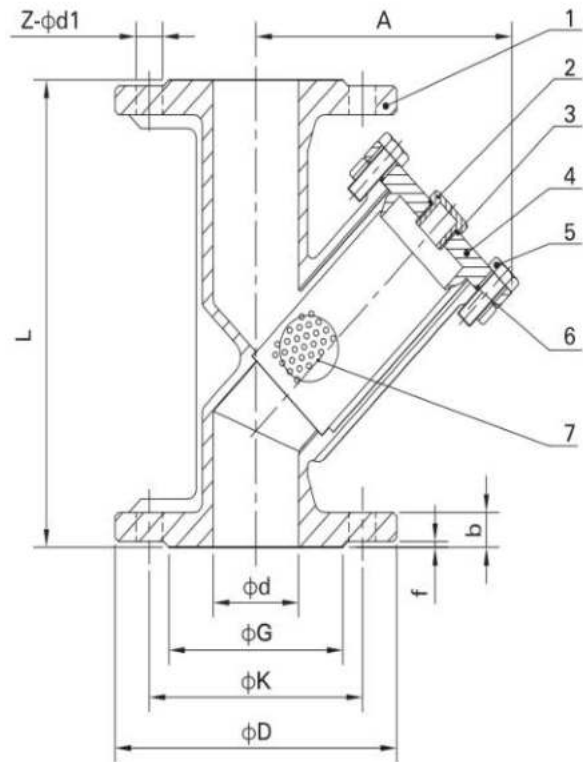


Investment Casting Y-Strainer Flange PN16



MV-41D (PN16)

- Investment casting for body and bonnet
- Flange ends: DIN EN1092-1
- Face to face: EN558 series 1
DIN3202-F1
- Pressure rating: PN16
- Working temperature: -25°C~+180°C
- Material: CF8M, CF8, CF3M, WCB
- With blow-off from DN32



MATERIAL LIST

ITEM	PART	MATERIAL	QTY.
1	Body	CF8M	1
2	Blow Off Plug	CF8M	1
3	Gasket A	PTFE	1
4	Cap	CF8M	1
5	Bolt	SS304	4/6/8/10
6	Gasket B	PTFE	1
7	Filter Screen	SS316	1

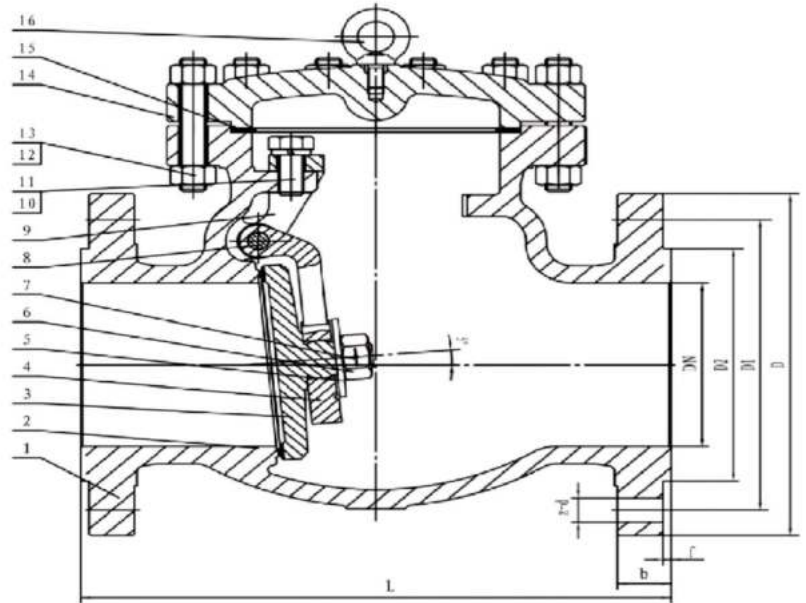
DIMENSION LIST

SIZE	d	G	K	D	L	A	b	f	D1	L1	W	d2	z-φd1	Kgs
DN15	15	45	65	95	130	75	14	2	22	58	2	1	4-φ14	1.79
DN20	20	58	75	105	150	90	16	2	26	65	2	1	4-φ14	2.57
DN25	25	68	85	115	160	100	16	2	32	72	2	1	4-φ14	3.60
DN32	32	78	100	140	180	115	16	2	37	83	2	1	4-φ18	4.72
DN40	40	88	110	150	200	130	16	3	47	95	2	1	4-φ18	6.02
DN50	50	102	125	165	230	150	18	3	57	114	2	1	4-φ18	9.00
DN65	65	122	145	185	290	190	18	3	69	152	3.5	2	4-φ18	12.81
DN80	80	138	160	200	310	225	20	3	84	176	3.5	2	8-φ18	17.36
DN100	100	158	180	220	350	230	20	3	105	180	3.5	2	8-φ18	20.03
DN125	125	188	210	250	400	280	22	3	134	217.5	3.5	2	8-φ18	30.00
DN150	150	212	240	285	480	300	22	3	164	216	3.5	2	8-φ22	40.50
DN200	200	268	295	340	605	400	24	3	218	282.5	3.5	2	12-φ22	76.90



Investment Swing Check Valve

Flange ANSI150



MV-51F(150)

- Investment casting for body and bonnet
- Flange ends: ASME B16.5
- Face to face: ASME B16.10
- Pressure rating: 150Lb
- Working temperature: -25 °C ~ +200 °C
- Material: CF8M, CF8, CF3M, WCB

MATERIAL LIST

No	Name	Material
1	Body	CF8M/CF8
2	Seat	SS316/SS304
3	Disc	CF8M/CF8
4	Rocker Arm	SS316/SS304
5	Gasket	SS316/SS304
6	Nut	A193 B8M
7	Split Pin	SS316/SS304
8	Parallel Pin	SS316/SS304
9	Pylons	SS316/SS304
10	Hexagonal Bolt	A193 B8M
11	Washer	SS316/SS304
12	Stud	A193 B8M
13	Hexagonal nut	A194 8M
14	Cap	CF8M/CF8
15	Spiral Wound Gasket	304+Graphite/PTFE
16	Ring Bolt	AISI 1025

DIMENSION LIST

DN	L	D	D1	D2	b	f	z-d
15	108	90	60.3	34.9	10	2	4-16
20	117	100	69.9	42.9	10.9	2	4-16
25	127	110	79.4	50.8	11.6	2	4-16
32	140	115	88.9	63.5	13.2	2	4-16
40	165	125	98.4	73.0	14.7	2	4-16
50	203	150	120.7	92.1	16.3	2	4-19
65	216	180	139.7	104.8	17.9	2	4-19
80	241	190	152.4	127.0	19.5	2	4-19
100	292	230	190.5	157.2	24.3	2	8-19
125	330	255	215.9	185.7	24.6	2	8-22
150	356	280	241.3	215.9	25.9	2	8-22
200	495	345	298.5	269.9	29	2	8-22
250	622	405	362	323.8	30.6	2	12-25
300	693	485	431.8	381.0	32.2	2	12-25
350	787	535	476.3	412.8	35.4	2	12-29
400	864	595	539.8	469.9	37	2	16-29
450	978	635	577.9	533.4	40.1	2	16-32
500	978	700	635	584.2	43.3	2	20-32



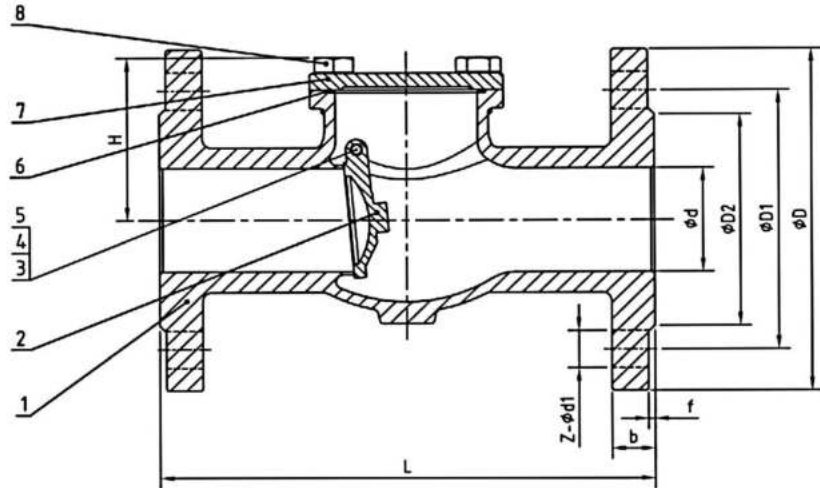
Investment Swing Check Valve

Flange PN16



MV-51D

- Investment castings for body and disc
- Flanged ends: DIN EN1092-1
- Face to face: EN558-1 (DIN3202-K3)
- Pressure rating: PN16
- Working temperature: -25°C~+200°C
- Material: CF8M, CF8, CF3M, WCB



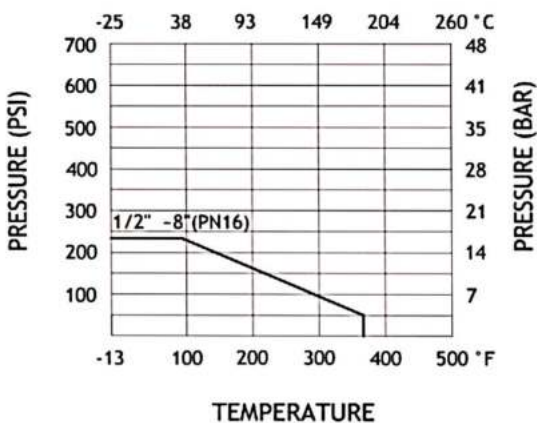
MATERIAL LIST

No	Name	Material
1	Body	1.4408/1.4301
2	Disc	SS304/SS316
3	Pipe Plug	SS304/SS316
4	Plug Gasket	PTFE
5	Plug Screw	SS304/SS316
6	Body Gasket	PTFE
7	Cap	1.4408/1.4301
8	Bolt	SS304/SS316

DIMENSION LIST

Size	d	D	D1	D2	b	f	H	L	Z-Ød1
DN15	15	95	65	45	16	2	40	130	4-Ø14
DN20	20	105	75	58	18	2	45	150	4-Ø14
DN25	25	115	85	68	18	2	50	160	4-Ø14
DN32	32	140	100	78	18	2	55	180	4-Ø18
DN40	40	150	110	88	18	3	68	200	4-Ø18
DN50	50	165	125	102	20	3	80	230	4-Ø18
DN65	65	185	145	122	18	3	96	290	8-Ø18
DN80	80	200	160	138	20	3	110	310	8-Ø18
DN100	100	220	180	158	20	3	115	350	8-Ø18
DN125	125	250	210	188	22	3	135	400	8-Ø18
DN150	150	285	240	212	22	3	155	480	8-Ø18
DN200	200	340	295	268	24	3	190	600	12-Ø22

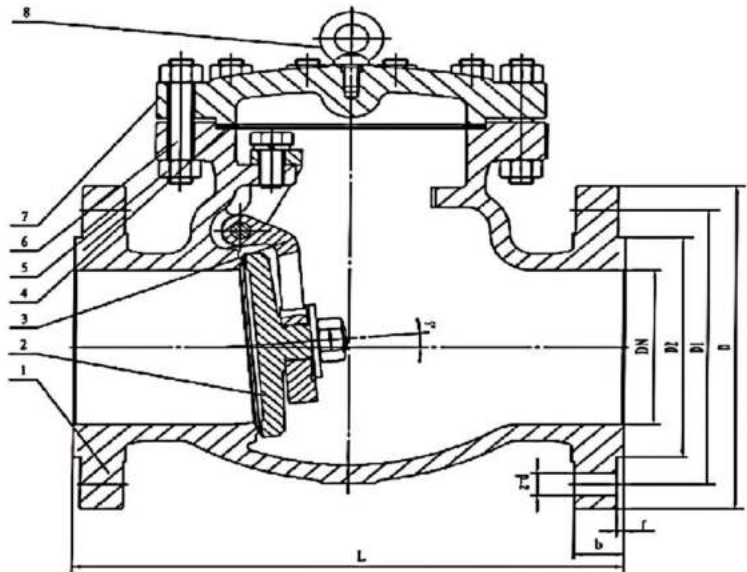
PRESSURE-TEMPERATURE RATING





Investment Swing Check Valve

Flange JIS10K



MV-51J (JIS)

Technical requirement

- Design and manufacture : JIS2074
- Face to Face : JIS B2002
- Flanged Ends : JIS B2220
- Testing and Checking : JIS B2003

Main Technical Parameters

- Nominal pressure 10K
- Strength Test 3.0 MPa
- Sealing test 2.2 MPa
- Sealing test / MPa
- Applicable Temperature < 200 C
- Applicable Media Corrosive medium

MATERIAL LIST

No	Name	Material
1	Body	SCS13 (CF8) / SCS14 (CF8M)
2	Disc	SCS13 (CF8) / SCS14 (CF8M)
3	Rocker Arm	SCS13 (CF8) / SCS14 (CF8M)
4	Gasket	304+Graphlte
5	Nut	A194 8
6	Stud	A193 B8
7	Bonnet	SCS13 (CF8) / SCS14 (CF8M)
8	Rings	A193 B8

DIMENSION LIST

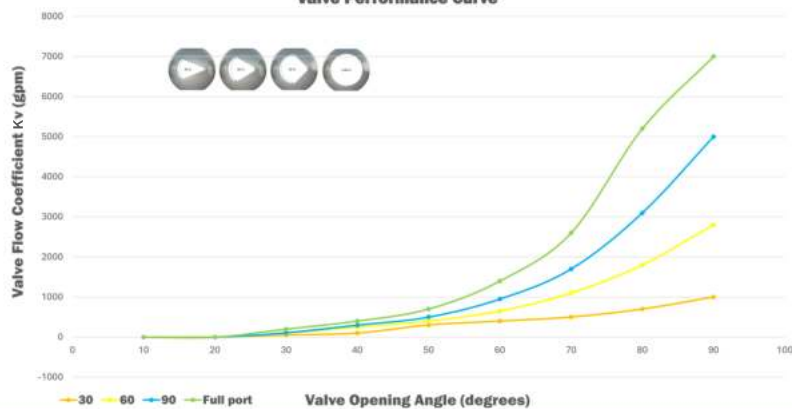
DN	L	D	D1	D2	b	f	z-d
15	108	95	70	51	12	2	4-15
20	117	100	75	56	14	2	4-15
25	127	125	90	67	14	2	4-19
32	140	135	100	76	16	2	4-19
40	165	140	105	81	16	2	4-19
50	203	155	120	96	16	2	4-19
65	216	175	140	116	18	2	4-19
80	241	185	150	126	18	3	8-19
100	292	210	175	151	18	3	8-19
125	330	250	210	182	20	3	8-23
150	356	280	240	212	22	3	8-23
200	495	330	290	262	22	3	12-23
250	622	400	355	324	24	3	12-25
300	698	445	400	368	24	3	16-25



KV of ball valve V-Port

Type	Size	"V" Port	Kv(cubic m ³ /h)									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
V-PORT	1/2"	30°	0	0	0.08	0.24	0.51	0.87	1.26	1.85	2.44	3.29
		60°	0	0	0.12	0.39	0.83	1.33	2.16	3.27	4.68	7.18
		90°	0	0	0.16	0.53	0.98	1.82	2.96	4.79	8.19	10.81
	3/4"	30°	0	0.01	0.18	0.48	0.97	1.75	2.61	3.66	4.83	6.2
		60°	0	0.01	0.27	0.76	1.55	2.63	4.13	6.27	9.13	13.69
		90°	0	0.02	0.33	0.97	2.01	3.44	5.53	8.92	14.74	22.28
	1"	30°	0	0.13	0.47	1	1.75	2.67	3.86	5.58	6.55	9.25
		60°	0	0.15	0.64	1.51	2.72	4.42	6.55	9.54	13.54	20.45
		90°	0	0.22	1.01	2.07	3.75	5.92	8.81	14.23	23.81	34.51
	1-1/4"	30°	0	0.25	0.78	1.65	2.87	4.41	6.25	7.94	10.53	13.75
		60°	0	0.31	1.16	2.54	4.55	7.12	10.42	15.32	20.31	31.8
		90°	0	0.36	1.88	3.38	5.84	9.85	14.98	21.54	32.61	52.9
	1-1/2"	30°	0	0.32	0.95	2.15	3.42	5.79	8.65	11.12	14.58	20.05
		60°	0	0.56	1.71	3.82	6.91	10.85	15.23	21.94	30.5	45.38
		90°	0	0.55	2.56	4.93	8.36	14.45	21.15	30.3	51.41	95.35
	2"	30°	0	0.62	2.07	4.21	6.94	10.29	14.51	19.28	24.9	31.65
		60°	0	0.89	3.25	6.47	10.91	16.69	24.68	31.55	49.61	68.44
		90°	0	1.23	4.32	8.69	13.95	21.54	33.59	45.43	74.58	68.44
	2-1/2"	30°	0	1.68	3.88	7.8	12.4	19.6	26.71	38.31	49.81	61.72
		60°	0	1.57	5.01	11.62	17.7	27.2	41.21	62.84	83.71	117.2
		90°	0	1.39	9.05	16.45	25.4	39.5	65.6	94.21	140.5	197
	3"	30°	0	1.5	3.9	9.45	15.2	23.3	33.4	45.21	62.71	81.22
		60°	0	1.15	10.5	12.31	21.52	42.12	64	87.3	105.9	148.1
		90°	0	1.62	9.2	17.3	29.9	50.2	77.4	122.5	182.5	302.7
3" (MV-14)	30°	0	1.4	3.71	8.97	14.2	22.1	31.5	43.2	59.56	77.15	
	60°	0	1.12	9.95	11.65	20.44	40.05	60.8	83.2	100.2	140.5	
	90°	0	1.54	8.75	16.44	28.34	47.7	73.52	116.38	173.38	286.87	
4"	30°	0	3.1	8.3	15.2	27.2	41.8	56.7	78.5	102.5	124.8	
	60°	0	5.1	11.9	19.2	40.3	63.2	92.5	135.9	189.9	258.6	
	90°	0	5.6	18.9	33.8	57.1	86.7	132.8	204.5	312.8	507.7	
4" (MV-14)	30°	0	2.92	7.81	14.28	25.6	39.3	53.25	73.8	96.35	117.31	
	60°	0	4.8	11.22	18.05	37.88	59.41	86.75	127.75	178.62	243.1	
	90°	0	5.26	17.77	31.78	53.66	81.51	124.85	192.25	294.11	477.22	
5"	30°	0	44	70.5	114	175	237	307	430	614	878	
	60°	0	75	120	180	300	420	570	750	0	1500	
	90°	0	98	155	235	394	550	745	980	1350	1970	
6"	30°	0	55	90	140	234	325	445	587	821	1174	
	60°	0	100	165	240	410	578	780	1030	1445	2065	
	90°	0	135	220	450	550	750	963	1375	1925	2754	
8"	30°	0	99.5	159	235	395	556	755	994	1390	1989	
	60°	0	165	260	400	674	940	1280	1685	2360	3373	
	90°	0	240	385	580	960	1356	1840	2420	3390	4844	

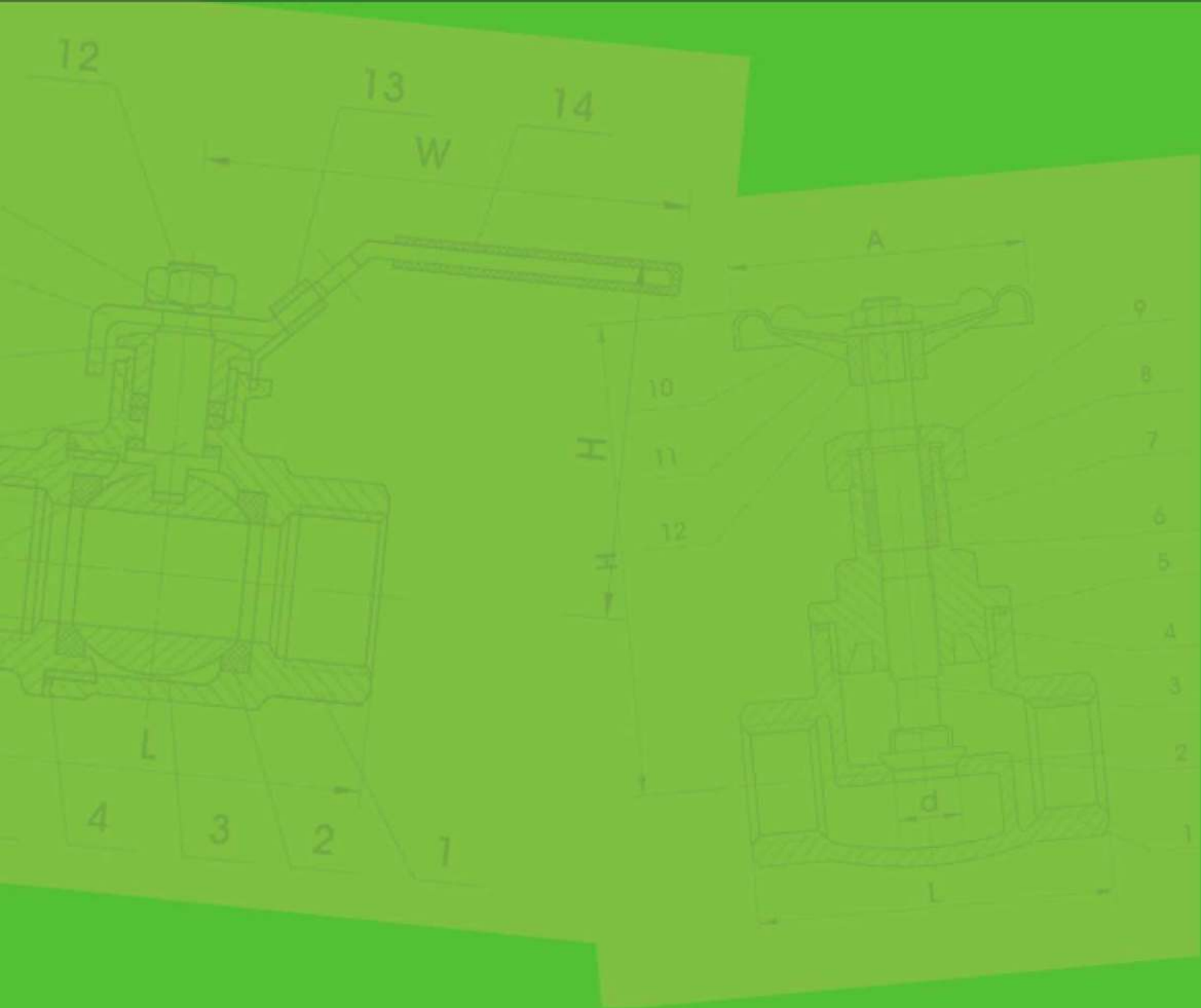
Valve Performance Curve





VALVE SEAT MATERIAL SELECTION GUIDE

Material	Description	Color
PTFE	This material is the basic seat material used in most Ball Valves. Its chemical compatibility is excellent for almost all media service applications. Temperature range 50° F to 320° F.	White
RTFE	This material is offered as the standard seal in most valves. 15% Glass Reinforced TFE rated suitable for temperatures 50 F to 360 F, chemical resistance is compatible to virgin TFE improved cycle life and greater pressure-temperature rating than PTFE.	Off white
PPL	CTFE 25% Carbon Graphite with 75% TFE, is good for temperature ranging form 50° F to 475° F. This material offers a wide temperature range with better cycle life than RTFE.	Black
TFM	TFM is chemically modified PTFE that fills the gap between conventional PTFE and melt-processable PFA. According to ASTM D 1600 and ISO Draft WDT 539-1.5, TFM is classified as a PTFE. Compared to conventional PTFE, TFM has lower permeability and much lower deformation under pressure (cold flow) at room and elevated temperature. Also they can be used at higher pressures. Temperature range 50° F to 370° F.	White
NYLON	Special Nylon seats are offered for higher pressure and lower temperature service. They can be used in high pressure air, oil, and other gas media but are not suited for strong oxidizing agents. Temperature range 30° F to 200° F.	Translucent white
PEEK	Polyether-ether-ketone high temperature semirigid elastomer. Best suited for high pressure and temperature service. Also offers very good corrosion resistance. Temperature range 70° F to 600° F.	Brown
Cavity Filler	Designed to reduce the possibility of contamination by entrapment of process fluids in the void normally found behind the ball and the valve body in conventionally designed ball valves. Ideal for application where cross contamination is a concern, such as paints and dyes.	White



✚ **PROTEK** ✚

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