

Series 31 Standard 3-Piece

Full Port Ball Valves

1/4" – 4" (DN8 – DN100)
1000 psi (PN64)



Ball Valve Feature

3-Piece Design

DIE ERSTE's Series 31 ball valves are particularly designed to work in hydraulic, chemical, steam, oil/ gas, oxygen, and vacuum condition. To achieve such diverse requirements, DIE ERSTE offers the special design of valve body, stem, and sealing, to meet customer's need.

The Series 31 ball valves have a three pieces structure. The center piece can swing out of the pipeline, and thus, provides the ease of maintenance. As the result, the valve inner components can be replaced effortlessly because the side caps are still attached to the pipelines.

DIE ERSTE valve stem has several features as well. The standard blow-out proof stem design provides a safer valve when undergo unexpected events. Instead of insert the stem from the top, it is inserted from inside of valve to prevent shoot out during accidents. Also, the double-D shape stem design provides the easy of lever mounting.

DIE ERSTE provides solutions for valve sealing as well. All of our Series 31 valves are equipped with thrust washer and gland nuts for highest quality. The thrust washer not only prevents galling between ball and seat, it can be considered as a secondary stem seal and reduces torque. In addition, the gland nuts are sealed tightly to act as an additional third guard to prevent leakage. The Series 31 ball valves are accompanied with a wide range of seat materials to choose, as well as investment cast of valve body.

DIE ERTE offers flanged end connection for Series 31 ball valves. It has different specifications and limitations than the normal ball valves. Relevant information is attached along with the Series 31 ball valves data.

Swing- Out Center Piece Design

The center section is able to swing out after removing body bolts, which goes through the body hinge. This result prevents cutting the valve out of the pipeline system, and further provides the ease of maintenance.

Blowout-Proof Stem Design

Instead of inserting the stem from the top, the stem is installed from inside the valve. This special design prevents shoot out of stem when unexpected event occurs.

Pressure Rating

1000 psi (PN64) WOG, 150 psi (10 bar) with saturated steam

With Flanged End:

40 Bar for size 1/2" – 2"

16 Bar for size 2 1/2" – 4"

CE marking 0035

The whole series of ball valves are approved according to European Directive 97/23/EC.

Temperature Rating

-20°F to 400°F (equivalent to -28°C ~ 204°C) with PTFE and R.PTFE

End Connection

Threaded

Butt-welding

Socket-welding

Flange end connection

Body Material

The main types of material used are:

ASTM CF8M, CF8, WCB

(DIN 1.4408, 1.4308, and 1.0619)

Size Range

1/4" – 4" (DN8 ~ DN100)

With Flanged End:

1/2" – 4" (DN15 ~ DN100)

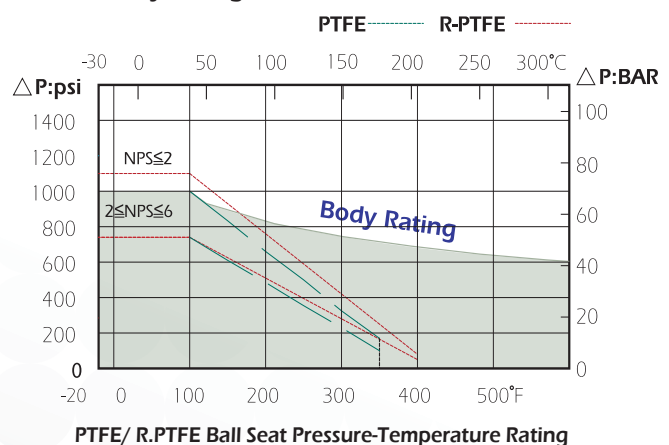
Standards and Specifications

Flanged end connection face to face dimension according to
DIN 3202 F1

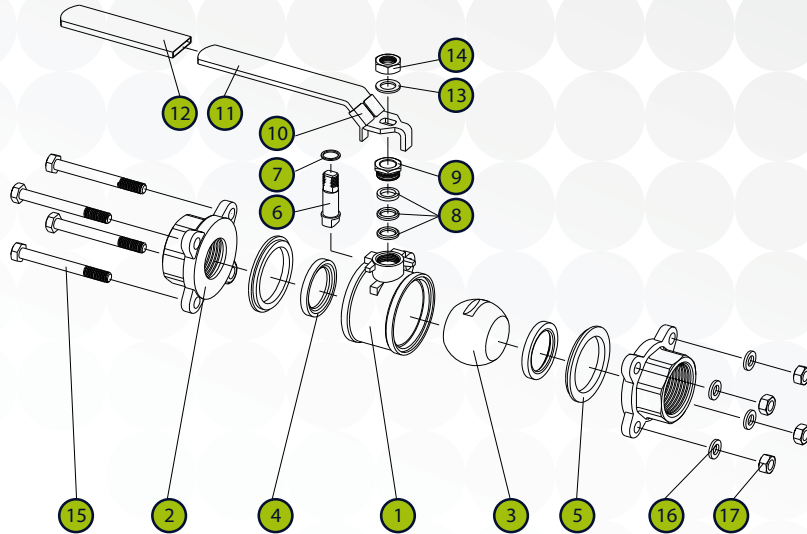
Flange end face dimension according to
DIN2633

Valve body and end cap connections are high quality investment cast, and designed to meet ASME regulations. Heat treatment can be provided as well upon request: stainless steel material can be solution annealed, and carbon steel can be normalized. Valve stems are designed to follow ASME/ANSI specifications. All valves are factory tested to meet API 598 and MSS SP-72.

Valve Body Rating with Seat Material Plot:



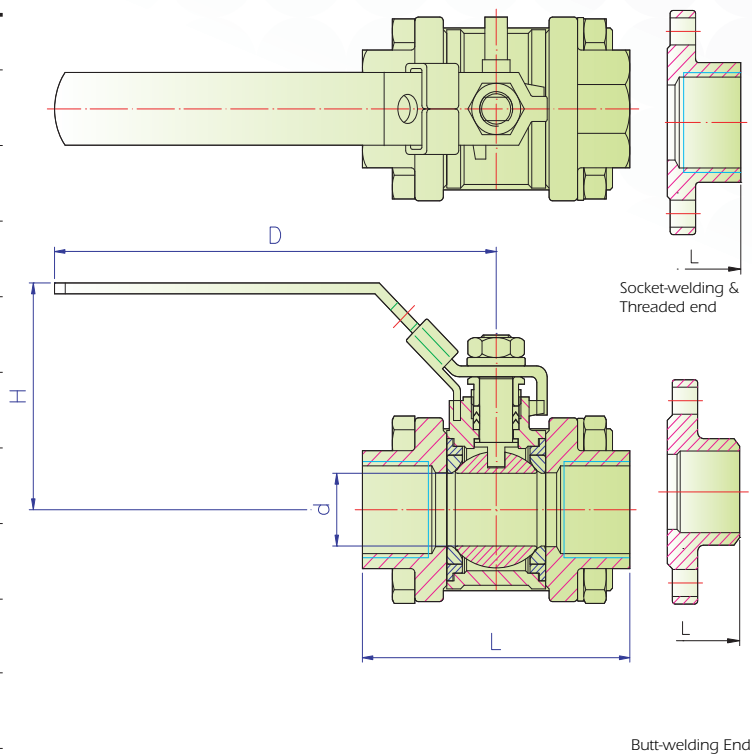
Series 31 3pc Ball Valve



NO	PART NAME	MATERIAL
1	BODY	CF8M / CF8/ WCB
2	END CAP	CF8M / CF8/ WCB
3	SOLID BALL	CF8M
4	BALL SEAT	PTFE
5	BODY SEAL	PTFE
6	STEM	SS 316
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	GLAND NUT	SS 304
10	LOCKING DEVICE	SS 304
11	HANDLE	SS 304
12	HANDLE SLEEVE	VINYL
13	WASHER	SS 304
14	HANDLE NUT	SS 304
15	BOLT	SS 304
16	WASHER	SS 304
17	NUT	SS 304

Dimensions inch/mm

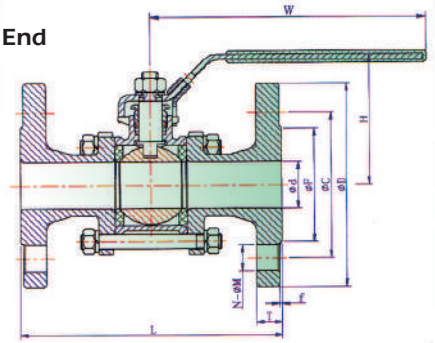
Size Inch DN	d	L	D	H	Cv/ Kv
1/4"	0.46	2.4	4.32	2.08	8
6	11.6	60	108	52	6.84
3/8"	0.51	2.4	4.32	2.08	10
10	12.7	60	108	52	8.54
1/2"	0.6	3	4.32	2.28	13
15	15	75	108	57	11.11
3/4"	0.8	3.12	5.28	2.36	50
20	20	78	132	59	42.73
1"	1	3.4	6.12	2.84	93
25	25	85	153	71	79.5
1-1/4"	1.28	4.16	6.12	3.12	170
32	32	104	153	78	145.3
1-1/2"	1.52	4.8	7.8	3.64	250
40	38	120	195	91	213.67
2"	2	5.2	7.8	3.68	450
50	50	130	195	92	384.6
2-1/2"	2.6	6.52	10.6	5.24	750
65	65	163	265	131	641
3"	3.2	7.28	10.6	5.6	1300
80	80	182	265	140	1111.1
4"	4	9.2	11.4	7	2400
100	100	230	285	175	2051.3



With Flanged End Connection inch/mm

SIZE Inch DN	d	D	C	F	T	f	M	N	L	H	W
1/2"	0.6	3.8	2.6	1.8	0.64	0.08	0.56	0.16	5.2	2.6	5
15	15	95	65	45	16	2	14	4	130	64.9	123.3
3/4"	0.8	4.2	3	2.3	0.7	0.08	0.56	0.16	6	3.2	5.3
20	20	105	75	58	18	2	14	4	150	80.3	133
1"	1	4.6	3.4	2.7	0.7	0.08	0.56	0.16	6.4	3.4	5.32
25	25	115	85	68	18	2	14	4	160	84.1	133
1 1/4"	1.3	5.6	4	3.1	0.7	0.08	0.73	0.16	7.2	3.7	7.6
32	32	140	100	78	18	2	18	4	180	91.7	190
1 1/2"	1.6	6	4.4	3.5	0.73	0.12	0.73	0.16	8	4	7.6
40	40	150	110	88	18	3	18	4	200	98	190
2"	2	6.6	5	4	0.8	0.12	0.73	0.16	9.2	4.1	7.6
50	50	165	125	102	20	3	18	4	230	102.6	190
2 1/2"	2.6	7.4	5.8	4.9	0.72	0.12	0.73	0.16	11.6	5.73	10.6
65	65	185	145	122	18	3	18	4	290	143	264
3"	3.2	8	6.4	5.6	0.8	0.12	0.73	0.32	12.4	6.2	10.6
80	80	200	160	138	20	3	18	8	310	154	264
4"	4	9	7.3	6.3	0.8	0.12	0.72	0.32	14	7.3	10.72
100	100	220	180	158	20	3	18	8	350	183	268

With Flange End Connection



Optional Accessories

Locking Devices

The valve handle has a locking devices option. By lifting the lock, the valve handle is free to move. DIE ERSTE also offers extra key lock, in which the original locking devices will be kept in locking/unlocking position securely to prevent unexpected accident.

Oval Handle

DIE ERSTE offers oval handle for Series 31 ball valves. The oval handles are used where the standard hand levers could be opened or closed by accident. The oval handle also allows user to identify the valve position. Lastly, it also slows down the valve close speed, which decrease the chances of water hammer on liquid

How to order

VALVE TYPE	PORT	BODY MATERIAL	SEAT	TRIM	TYPE OF CONNECTION	PRESSURE RATING	SPECIAL REQUEST	SIZE OF CONNECTION	OTHER
A	B	C	D	E	F	G	H	I	J



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