



PISTON VALVE



→ Forged Steel Piston Valve

Technical Specification

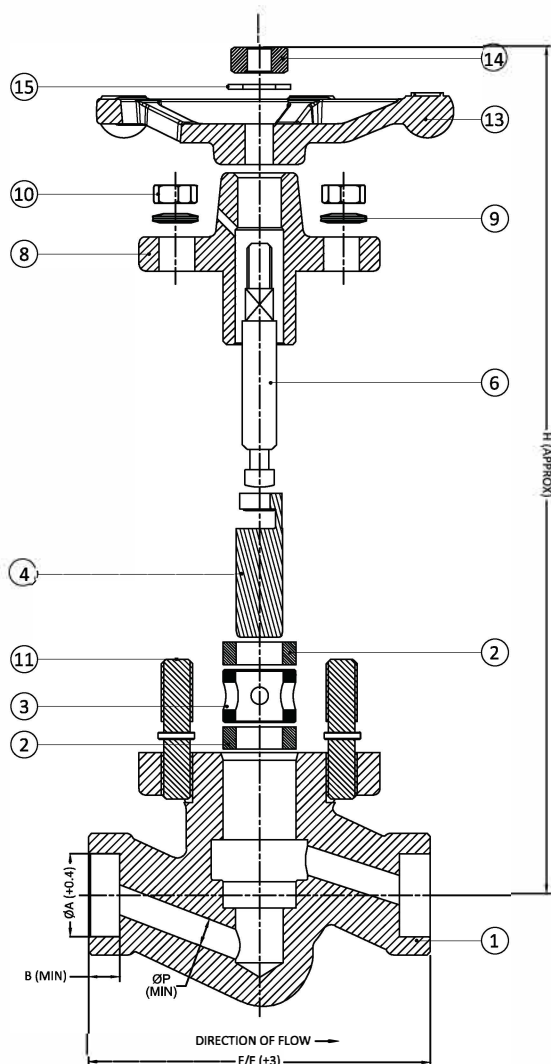
Design Standard	B16.34/EN12516.2
Testing Standard	API 598
Face to Face Standard	Manufacture's Standard
Socket Weld Standard	ASME B16.11
Screwed End Standard	ASME B1.20.1
Butt Weld Standard	ASME B16.25
Flange End Standard	ASME B16.5

Dimension Table

800#	15mm (1/2")	20mm (3/4")	25mm (1")	40mm (1-1/2")
F/F (mm)	110	110	126	165
Øp (mm)	9	12	17	28
H OPEN (mm)	130	130	171	235
H CLOSE (mm)	105	105	137	191
ØWh (mm)	86	86	116	150
B (mm)	9.5	12.5	12.5	12.5
ØA (mm)	21.8	27.2	33.9	48.8
Approx Weight (Kg)	1.9	1.9	4	5.3

Design Feature

- > VTZ VALVES™ Piston Valve is basically Seatless and Glandless Valve and by virtue of its design can replace both, the conventional type of Gate & Globe valves, with distinct advantages over them.
- > Piston Valve works on the principle of Resilient rings in conjunction with a Metallic Stainless Steel Piston, that moves vertically between the rings, giving a Seal that is both effective as well as Durable. This sealing system gives a bubble tight shut off.



Maximum Hydrostatic Testing Pressure

Pressure Rating for 800#

Hydro Test Pressure (Body) kg/cm ²	209
Pneumatic Test Pressure kg/cm ²	7

Material of Construction

15	NAME PLATE	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
14	HANDWHEEL NUT	ASTM A 194 GR. 2H	ASTM A 194 GR. B8	ASTM A 194 GR. B8M
13	HAND WHEEL	MI / SGIRON	MI / SGIRON	MI / SGIRON
12	HANDWHEEL WASHER	MS	MS	MS
11	STUD	ASTM A 193 GR. B7	ASTM A 193 GR. B8	ASTM A 193 GR. B8M
10	NUT	ASTM A 194 GR. 2H	ASTM A 194 GR. B8	ASTM A 194 GR. B8M
9	BELLEVILLE WASHER	50CR V4/ASTM240 Gr.302	50CR V4/ASTM240 Gr.302	50CR V4/ASTM240 Gr.302
8	BONNET	ASTM A 105	ASTM A 182 GR. F-304	ASTM A 182 GR. F-316
7	SPLIT NUT	BRASS IS319 GR.1	BRASS IS319 GR.1	BRASS IS319 GR.1
6	SPINDLE	ASTM A 276 TYPE SS 410	ASTM A 276 TYPE SS 304	ASTM A 276 TYPE SS 316
5	SPLIT NUT WASHER	BRASS	BRASS	BRASS
4	PISTON	ASTM A 276 TYPE SS 410	ASTM A 276 TYPE SS 304	ASTM A 276 TYPE SS 316
3	LANTERN BUSH	ASTM A 276 TYPE SS 410	ASTM A 276 TYPE SS 304	ASTM A 276 TYPE SS 316
2	SEALING RING	GRAPHITE WITH SS304 REINFORCED	GRAPHITE WITH SS304 REINFORCED	GRAPHITE WITH SS304 REINFORCED
1	BODY	ASTM A 105	ASTM A 182 GR. F-304	ASTM A 182 GR. F-316
DESCRIPTION		MATERIAL	MATERIAL	MATERIAL
		MOC A105	MOC F-304	MOC F-316

*Note : Alloy Steel, Stainless Steel, Duplex, Super Duplex is also available on request.



→ Cast Steel Piston Valve

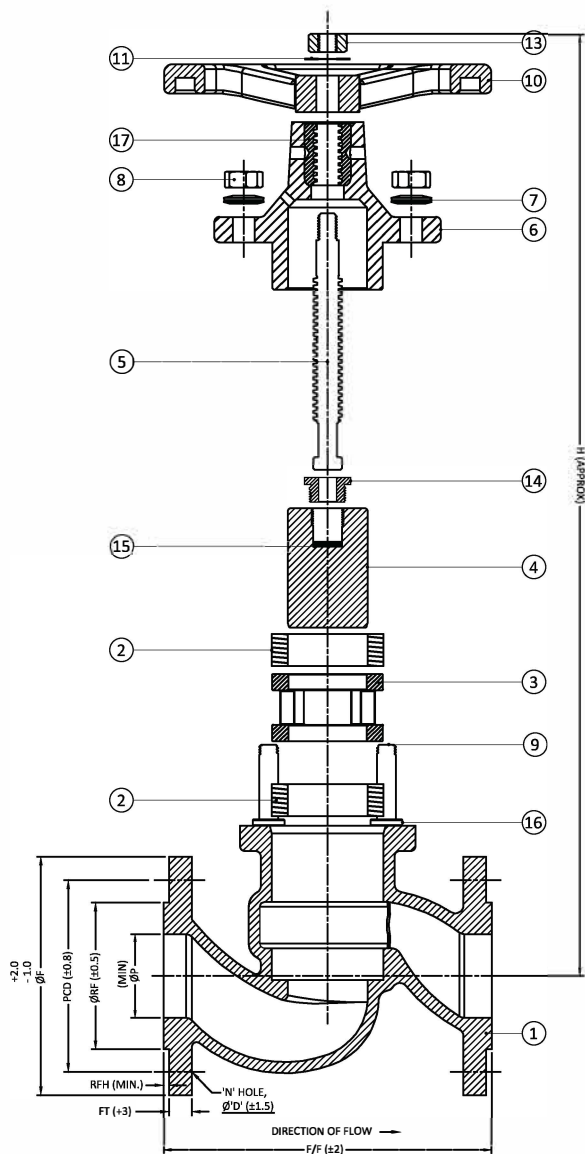
Technical Specification

Design Standard	B16.34/EN12516.2
Testing Standard	API 598
Face to Face Standard	ASME B 16.10
Flange End Standard	ASME B 16.5

Material of Construction

17	THREADED BUSH	BRASS IS319 GR.1	NA	NA	NA	1
16	GAP RING	ASTM A 276 TYPE SS 410	NA	NA	NA	4
15	SPLIT NUT WASHER	BRASS	NA	NA	1	1
14	SPLIT NUT	BRASS IS319 GR.1	NA	NA	1	1
13	HANDWHEEL NUT	ASTM A 194 GR. 2H	1	1	1	1
12	HANDWHEEL WASHER	MS	1	1	1	1
11	NAME PLATE	STAINLESS STEEL	1	1	1	1
10	HAND WHEEL	MI / SGIRON	1	1	1	1
9	STUD	ASTM A 193 GR. B7	2	4	4	4
8	NUT	ASTM A 194 GR. 2H	2	4	4	4
7	BELLEVILLE WASHER	50CR V4/ASTM240 Gr.302	4	8	8	8
6	BONNET	ASTM A 105	1	1	1	1
5	SPINDLE	ASTM A 276 TYPE SS 410	1	1	1	1
4	PISTON	ASTM A 276 TYPE SS 410	1	1	1	1
3	LANTERN BUSH	ASTM A 276 TYPE SS 410	1	1	1	1
2	SEALING RING	GRAPHITE WITH SS304 REINFORCED	2	2	2	2
1	BODY	ASTM A 216 GR. WCB	1	1	1	1
DESCRIPTION		MATERIAL	15-20 mm	25 mm	40 mm	50 mm

*Note : Alloy Steel, Stainless Steel, Duplex, Super Duplex is also available on request.



Maximum Operating Testing Pressure

Pressure Rating	150#	300#
Hydro Test Pressure (Body) kg/cm ²	32	78
Hydro Test Pressure (Seat) kg/cm ²	22	56
Pneumatic Test Pressure kg/cm ²	7	7

CLASS	150#					300#				
DIMENSION	15mm (1/2")	20mm (3/4")	25mm (1")	40mm (1-1/2")	50mm (2")	15mm (1/2")	20mm (3/4")	25mm (1")	40mm (1-1/2")	50mm (2")
F/F (mm)	108	117	127	165	203	152	178	203	229	267
ØP (mm)	15.7	20.9	25.0	40.0	50.0	15.7	20.9	25.0	40.0	50.0
H OPEN (mm)	127	127	176	240	270	127	127	176	240	270
H CLOSE (mm)	104	104	142	193	223	104	104	142	193	223
ØF (mm)	90	100	110	120	150	95	115	125	155	165
ØRF (mm)	34.9	42.9	50.8	73.0	92.1	34.9	42.9	50.8	73.0	92.1
FT (mm)	9.6	11.2	12.7	12.7	14.3	12.7	14.3	15.9	19.1	20.7
RFH (mm)	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
PCD (mm)	60.3	69.9	79.4	98.4	120.7	66.7	82.6	88.9	114.3	127.0
N	4	4	4	4	4	4	4	4	4	8
ØWH (mm)	86	86	116	150	200	86	86	116	150	200
ØD (mm)	15.9	15.9	15.9	15.9	19.0	15.9	19.0	19.0	22.2	19.0
WEIGHT APPROX (Kg)	1.6	1.9	3.1	6.7	10.5	1.9	2.6	4.7	8.7	12.2



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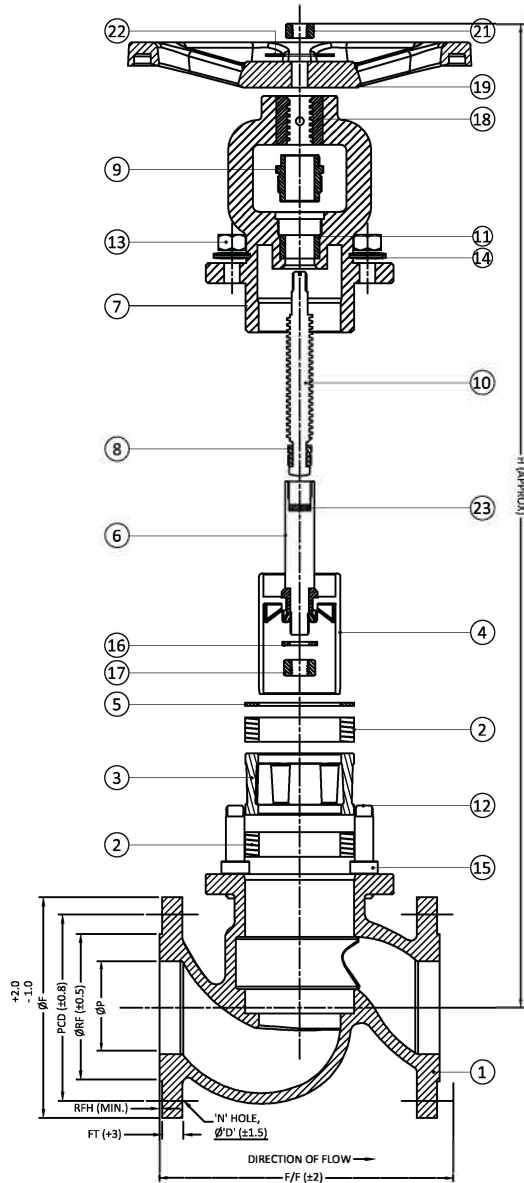
Technical Specification

Design Standard	B16.34/EN12516.2
Testing Standard	API 598
Face to Face Standard	ASME B 16.10
Flange End Standard	ASME B 16.5

Material of Construction

23	THRUST PLATE	ASTM A 276 TYPE SS 410	1	1	1	1
22	NAME PLATE	STAINLESS STEEL	1	1	1	1
21	HANDWHEEL NUT	ASTM A 194 GR. 2H	1	1	1	1
20	HANDWHEEL WASHER	MS	1	1	1	1
19	HANDWHEEL	MI / SGIRON	1	1	1	1
18	YOKE	BRONZE	1	1	1	1
17	SPINDLE NUT	ASTM A 194 GR. 2H	1	1	1	1
16	FLAT WASHER	ASTM A 276 TYPE SS 410	1	1	1	1
15	GAP RING	ASTM A 276 TYPE SS 410	3	4	4	4
14	BELLEVILLE WASHER	50CR V4/ASTM240 Gr.302	12	16	16	16
13	NUT	ASTM A 194 GR. 2H	6	8	8	8
12	STUD	ASTM A 193 GR. B7	6	8	8	8
11	STEM SEAL RING	GRAPHITE WITH SS304 REINFORCED	1	1	1	1
10	STEM	ASTM A 276 TYPE SS 410	1	1	1	1
9	GLAND NUT	ASTM A 276 TYPE SS 410	1	1	1	1
8	SPLIT NUT	BRASS IS319 GR.1	1	1	1	1
7	BONNET	ASTM A 105/ASTM A 216 GR. WCB	1	1	1	1
6	SPINDLE	ASTM A 276 TYPE SS 410	1	1	1	1
5	BONNET SEALING RING	GRAPHITE	1	1	1	1
4	PISTON	ASTM A 216 GR. WCB	1	1	1	1
3	LANTERN BUSH	ASTM A 276 TYPE SS 410	1	1	1	1
2	SEALING RING	GRAPHITE WITH SS304 REINFORCED	2	2	2	2
1	BODY	ASTM A 216 GR. WCB	1	1	1	1
DESCRIPTION			80mm	100mm	150mm	200mm

*Note : Alloy Steel, Stainless Steel, Duplex, Super Duplex is also available on request.



Maximum Operating Testing Pressure

Pressure Rating	150#	300#
Hydro Test Pressure (Body) kg/cm ²	32	78
Hydro Test Pressure (Seat) kg/cm ²	22	56
Pneumatic Test Pressure kg/cm ²	7	7

CLASS	150#				300#		
DIMENSION	80mm (3")	100mm (4")	150mm (6")	200mm (8")	80mm (3")	100mm (4")	150mm (6")
F/F (mm)	241	292	406	495	318	356	444
ØP (mm)	80	100	152	200	80	100	152
H OPEN (mm)	400	510	615	720	400	510	615
H CLOSE (mm)	330	420	495	575	330	420	495
ØF (mm)	190	230	280	245	210	255	320
ØRF (mm)	127.0	157.2	215.9	269.9	127.0	157.2	215.9
FT (mm)	17.5	22.3	23.9	27.0	27.0	30.2	35.0
RFH (mm)	1.7	1.7	1.7	1.7	1.7	1.7	1.7
PCD (mm)	152.4	190.5	241.3	298.5	168.3	200.0	269.9
N	4	8	8	8	8	8	12
ØWH (mm)	300	300	350	400	300	300	350
ØD (mm)	19.0	19.0	22.2	22.3	19.0	19.0	22.2
WEIGHT APPROX (Kg)	21.0	35.5	56.7	110.4	25.2	40.7	68.7



VTZ VALVES AND AUTOMATION

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