Other Products:

- Gate Valves
- Globe Valves
- Check Valves
- Piston Valves
- Forged Valves
- Automatic Control Valves
- Pressure Regulating Valves
- Industrial Gas Regulators
- PTFE / PFA / FEP lined valves & Piping system

Clients who make us proud

THERMAX
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GUJARAT STATE FERTILIZERS & CHEMICALS LIMITED
Atul touching lives...
बी एच ई एल BHEL
Brightech® Fluid Control Solutions

Brightech Valves and Controls Pvt. Ltd.

Survey No. 98, Near Water Tank, Kubadthal-Lalpur road, Village: Kubadthal, Taluka: Daskroi, District: Ahmedabad-382 430

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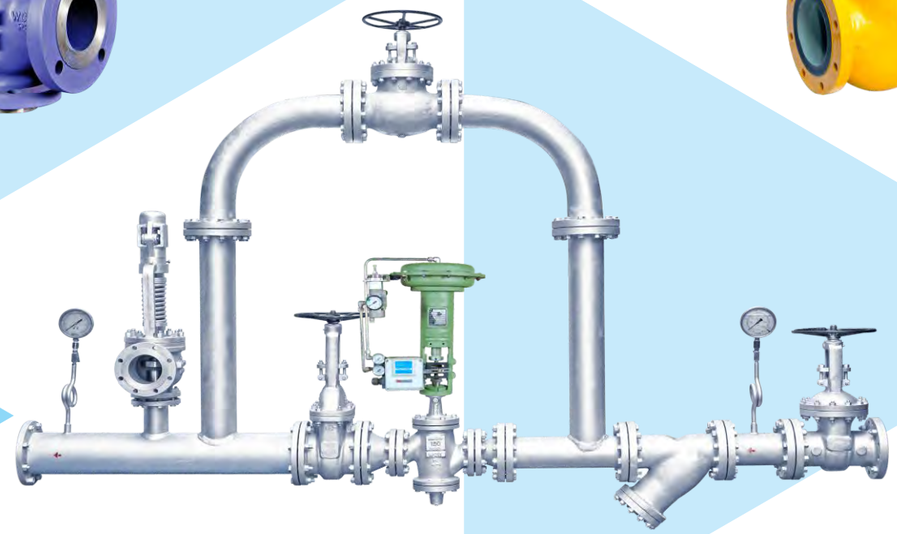
Brightech®
Fluid Control Solutions

Reliability & Safety... You can Trust



Efficient Steam Control – Brightech way.!!

Celebrating 20 YEARS OF ENGINEERING EXCELLENCE
Built with Passion for Technology & Innovation

Brightech®
Fluid Control Solutions

STORY OF A RELENTLESS JOURNEY

“The one most responsive to change, thrives."

Equipped with nothing but knowledge, Brightech® began its journey in 2000, with a desire to make a difference in the spectrum of fluid control systems. Faced with the daunting challenge of establishing its name in a monopolised marked, Brightech utilised constant innovation and product development to turn the wheels in its favour.

Each product from the Brightech® brand has been developed following intensive processes utilizing differentiating technologies that are a result of industry expertise, constant research and a tradition of answering instrumentation valve needs over a decade.

Today, 20 years later Brightech® boasts an extensive range of products for various applications and an all-inclusive manufacturing unit with a product development lab where some of its most significant products were designed and developed. Brightech's wide-ranging line of products have earned the seal of approval from reputed national as well as international bodies, including the **ISO 9001 Certification; Indian Boiler Regulations (IBR); Petroleum and Explosives Safety Organization (PESO) approvals.**

Brightech® has been a pioneer in India for instrumentation valve needs with being the first and only Indian company

- To have Steam Live Test for Safety Valve carried out on Boiler under the witness of Indian Boiler Regulations (IBR) authority to practically derive the constant value “C”
- To manufacture PTFE Lined Safety Relief Valves
- To provide a Comprehensive Range of fluid control solutions

As India begins to capitalize its own manufacturing potential, a world of opportunities are opening up and Brightech® plans to ride the wave of this modern industrial revolution with passion for innovation and obsession towards delivering quality. Under the Make in India paradigm Brightech® will be indigenising an array of valves that were until now produced only by western counterparts. This opportunity not only gives the industry the much needed impetus but also helps Brightech®showcase its capabilities to full extent.

Over the years, Brightech® has expanded operations and today, the company has spread its wings over the overseas markets as well enabling it to boast of a wide and diverse client base.

STEERING THE WHEEL

Brightech® is run by qualified & experienced professionals - Mr. Hitesh Shah and Mr. Sanjeev Shah, both having excellent engineering backgrounds and expertise in manufacturing of Industrial valves and controls for more than two decade. Driven by high ethical standards, reliability, closeness to customers and full dedication to engineering standards are the cutting-edge assets of these dynamic entrepreneurs.

To accomplish these aims, Brightech® works concertedly towards its goals with focused dedication.

With a track record of over 25 years and a rich engineering experience, Brightech's top echelon technical executives comprise of qualified engineers who pay as much attention to inspection and testing individual products as to R & D.

By far, it is Brightech's clients who have shaped the standards and technical solutions by demanding specific features, configuration and detail that crown its products with quality.

Government Endorsed Quality Standard & Approvals

IBR Approved

ISO 9001 Certified

PESO Approved

MECON Registered

एफ. सी. आर. आई. FCRI Tested & Calibrated

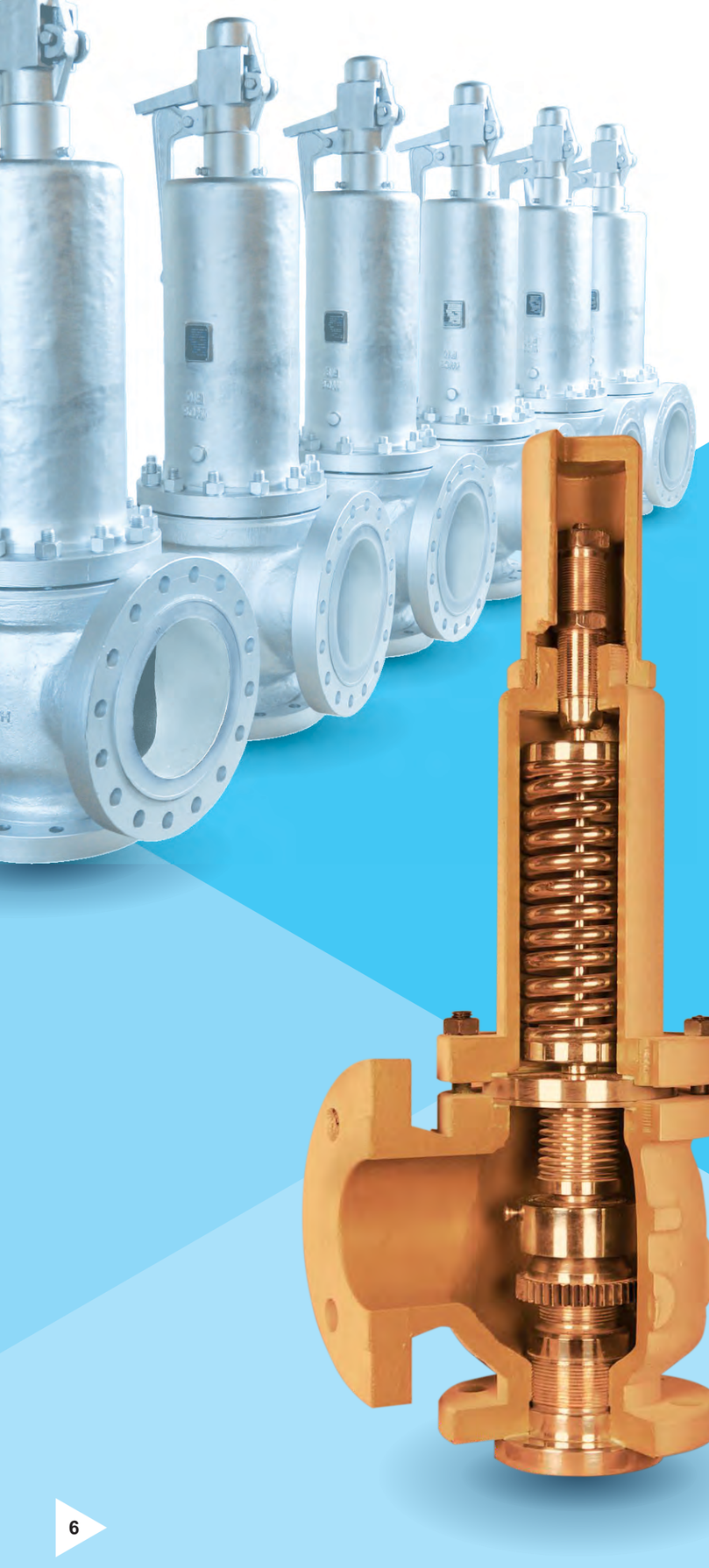
पी डी आई एल PDIL Enlisted

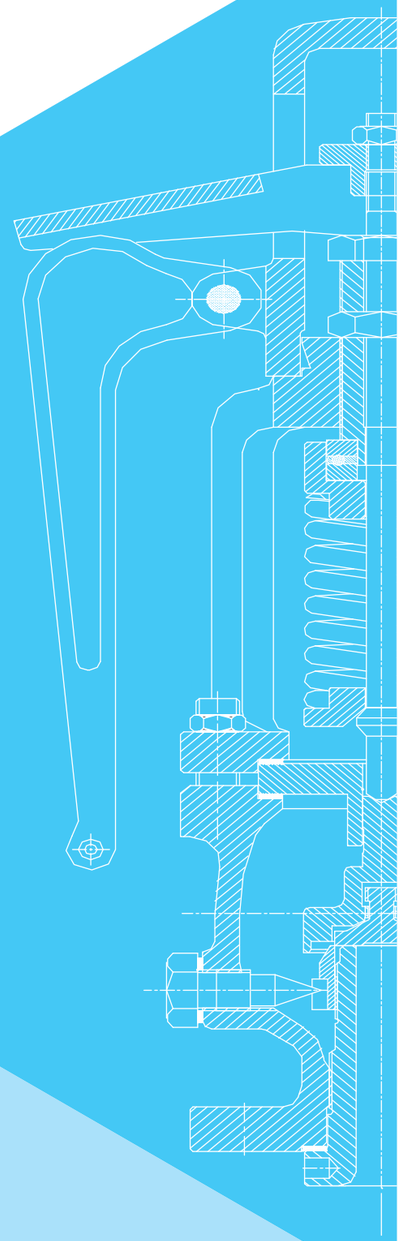
एन एस आई सी NSIC Registered

Technical Development committee Registered

D&B Credit Rated

INDEX





Safety Relief Valve

- BTS-50 SERIES
- BTS-10 SERIES
- BTS-11 SERIES

UNIQUE QUALITIES

The ONLY INDIAN COMPANY who practically derived constant "C" value on boiler with live steam test under witness of IBR authority.

- Full compliance with ASME Section VIII division 1 & Section I of Boiler & Pressure Vessels Code and IBR 1950 / API standards.
- Superior mirror finished lapping surfaces ensure tight shut-off & zero leakage during non operative conditions.
- Optional Design: Balance Bellows / Pilot Operated.
- High performance spring: Sharp Popping action & repeatability ensure life long operations.
- Rugged Nozzle ring design ensures precise blow down as per the IBR / ASME code & standards.
- Thrust bearing for easy change of set pressure helps to avoid any damages on the contact surfaces.
- Correct selection of material & treatment for longer life of trims and internals.
- Superior Quality of finished components and best workmanship.
- 100% spares interchangeability.
- High temperature resistant Aluminum paint on both the sides of safety valve to avoid corrosion and scaling from insides.
- Small size screwed / flange connection design safety valves for SIB.
- Stainless steel hardened trims (optional) for longer life.
- Each SRV is correctly sized with advance sizing selection software for accurate controlled performance.

Safe-Flow®
BTS-50
SERIES

Product description:

Angle Discharge, Spring Loaded, Full Lift, Full Nozzle, Conventional type Flange End Pressure / Safety Relief Valve with Open Bonnet, Open (bolted) Cap & Plain Lever.

Design:

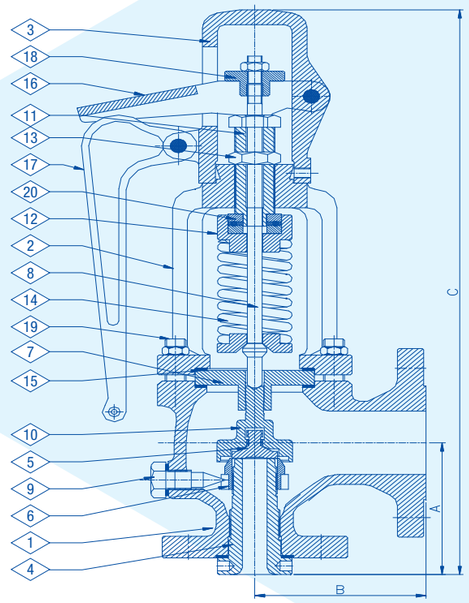
- BTS-50 Series Safety Relief Valves are top guided with an unobstructed seat bore.
- BTS-50 Series Safety Valves are Single Spring full lift, giving max. discharge capacity.

Features:

- High discharge capacity.
- Accurate setting for correct blow off pressure.
- "Repeatability" of spring for set / reset pressure with high accuracy.
- Mirror polished finish metal to metal seat.
- Precision lapped valves disc & seat (Nozzle).
- Stellited trims (Optional)
- Set / Reset Pressure Accuracy as per ASME / IBR code.
- Each Valve Individually tested with compressed Air.

Technical Specifications

Size Range	25 mm X 50 mm to 250 mm X 350 mm
Pressure Rating	150# To 2500# BS 10 Table-H x E
Facing	Raise Face (R.F), Flat Face (F.F), Ring Type Joint (RTJ)
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel
Trims	CF8 / 8M / SS 304 / 316
Orifice (seat) Dia.	19.0 mm to 190 mm
End Connection	Flange End & Butt Weld



Dimensions (mm)

SIZE	A ±3.0	B ±3.0	C ±100.0
25X50	105	115	456
40X50	124	120	490
40X65	126	124	560
40X80	126	124	560
50X80	133	124	575
65X100	136	143	586
80X100	155	162	674
100X150	181	229	940
150X200	240	241	1090
150X250	240	266	1090
200X250	276	280	1190
250X350	395	370	1580

Application

The **Safe-Flow** BTS-50 Series are Certified to IBR, having adjustable blow down are ideally suitable for application on steam & hot water Boilers, Autoclaves or Steam Pipelines where blow down tolerance are critical.

Material Specifications

SR.NO.	Part Name	Material
1	Body	ASTM A216 GR. WCB/ A217 GR WC6 / WC9 / A351 GR CF8 / CF8M
2	Open Bonnet	ASTM A216 GR. WCB / S.G.IRON / A217 GR WC6 / WC9 / A351 GR CF8 / CF8M
3	Open Cap	ASTM A216 GR. WCB / S.G.IRON / SS
4	Nozzle	ASTM A351 GR. CF8 / CF8M
5	Disc	SS 304 / SS 316
6	Nozzle Ring	ASTM A351 GR. CF8 / CF8M
7	Guide	ASTM A351 GR. CF8 / CF8M
8	Stem	SS 410
9	Lock Screw	SS 304
10	Disc Holder	ASTM A351 GR. CF8 / CF8M
11	Adjusting Screw	SS 410
12	Spring Washer	Mild Steel
13	Adj. Screw Nut	SS 304 / SS 410
14	Setting Spring	Carbon Steel / Alloy Steel / SS 302 / Inconel
15	Gasket	Aramid Fiber (Non-Asbestos)
16	Fork	ASTM A216 GR. WCB / S.G. IRON / SS
17	Lever	ASTM A216 GR. WCB / S.G. IRON / SS
18	Stem Nut	Mild Steel
19	Studs & Nuts	A193 GR. B7 / A 194 2H
20	Thrust Bearing	Hardcrome Iron

Ordering / Sizing Information:

- Fluid / State
- Flow Rate
- Set Pressure
- Working Pressure
- Back Pressure
- Operating Temperature
- End Connection

Quick Sizing for Safety Valve

Discharge Capacity Chart (BTS-50) Saturated Steam - without over Pressure

Valve Size	25X50	25X50	25X50	40X50	40X50	40X50	40X50	40X80	40X80	50X80	50X80	65X100
Orifice Designation	F	G	G1	F	G	G1	H	H	J	J	K	J
Orifice(Seat) Dia.	19mm	23mm	25mm	19mm	23mm	25mm	28mm	28mm	31.8mm	32.5mm	36mm	32.5mm
Area cm²	2.83385	4.154	4.90625	2.83385	4.154	4.90625	6.154	6.154	7.942	8.301	10.178	8.301
Set Pres.Kg/cm²(g)	**Discharge Capacity kg/hr - Constant - 24**											
1.00	137.0	200.8	237.1	137.0	200.8	237.1	297.4	297.4	383.8	401.2	491.9	401.2
1.50	170.3	249.6	294.8	170.3	249.6	294.8	369.8	369.8	477.3	498.9	611.7	498.9
2.00	203.7	298.5	352.6	203.7	298.5	352.6	442.3	442.3	570.7	596.5	731.4	596.5
3.00	270.3	396.3	468.1	270.3	396.3	468.1	587.1	587.1	757.7	791.9	971.0	791.9
3.50	303.7	445.2	525.8	303.7	445.2	525.8	659.5	659.5	851.1	889.6	1090.8	889.6
4.00	337.0	494.1	583.5	337.0	494.1	583.5	731.9	731.9	944.6	987.3	1210.5	987.3
5.00	403.7	591.8	699.0	403.7	591.8	699.0	876.8	876.8	1131.5	1182.7	1450.1	1182.7
5.50	437.1	640.7	756.7	437.1	640.7	756.7	949.2	949.2	1225.0	1280.3	1569.9	1280.3
6.00	470.4	689.6	814.5	470.4	689.6	814.5	1021.6	1021.6	1318.4	1378.0	1689.6	1378.0
7.00	537.1	787.4	929.9	537.1	787.4	929.9	1166.5	1166.5	1505.4	1573.4	1929.2	1573.4
7.50	570.5	836.2	987.7	570.5	836.2	987.7	1238.9	1238.9	1598.8	1671.1	2049.0	1671.1
8.00	603.8	885.1	1045.4	603.8	885.1	1045.4	1311.3	1311.3	1692.3	1768.8	2168.7	1768.8
8.50	637.2	934.0	1103.2	637.2	934.0	1103.2	1383.7	1383.7	1785.7	1866.5	2288.5	1866.5
9.00	670.5	982.9	1160.9	670.5	982.9	1160.9	1456.1	1456.1	1879.2	1964.1	2408.3	1964.1
10.00	737.2	1080.7	1276.4	737.2	1080.7	1276.4	1601.0	1601.0	2066.1	2159.5	2647.8	2159.5
10.25	753.9	1105.1	1305.2	753.9	1105.1	1305.2	1637.2	1637.2	2112.9	2208.4	2707.7	2208.4
10.40	763.9	1119.8	1322.6	763.9	1119.8	1322.6	1658.9	1658.9	2140.9	2237.7	2743.6	2237.7
10.54	773.2	1133.5	1338.7	773.2	1133.5	1338.7	1679.2	1679.2	2167.1	2265.0	2777.2	2265.0
11.00	803.9	1178.4	1391.8	803.9	1178.4	1391.8	1745.8	1745.8	2253.0	2354.9	2887.4	2354.9
11.25	820.6	1202.9	1420.7	820.6	1202.9	1420.7	1782.0	1782.0	2299.8	2403.7	2947.3	2403.7
12.00	870.6	1276.2	1507.3	870.6	1276.2	1507.3	1890.7	1890.7	2440.0	2550.3	3126.9	2550.3
12.50	904.0	1325.1	1565.1	904.0	1325.1	1565.1	1963.1	1963.1	2533.4	2647.9	3246.7	2647.9
13.00	937.3	1374.0	1622.8	937.3	1374.0	1622.8	2035.5	2035.5	2626.9	2745.6	3366.5	2745.6
14.00	1004.0	1471.7	1738.3	1004.0	1471.7	1738.3	2180.3	2180.3	2813.8	2941.0	3606.0	2941.0
14.06	1008.0	1477.6	1745.2	1008.0	1477.6	1745.2	2189.0	2189.0	2825.0	2952.7	3620.4	2952.7
15.00	1070.7	1569.5	1853.7	1070.7	1569.5	1853.7	2325.2	2325.2	3000.7	3136.4	3845.6	3136.4
15.25	1087.4	1594.0	1882.6	1087.4	1594.0	1882.6	2361.4	2361.4	3047.5	3185.2	3905.5	3185.2
16.00	1137.4	1667.3	1969.2	1137.4	1667.3	1969.2	2470.0	2470.0	3187.7	3331.8	4085.1	3331.8
17.00	1204.1	1765.0	2084.7	1204.1	1765.0	2084.7	2614.9	2614.9	3374.6	3527.1	4324.7	3527.1
17.58	1242.8	1821.8	2151.7	1242.8	1821.8	2151.7	2698.9	2698.9	3483.0	3640.4	4463.6	3640.4
18.00	1270.8	1862.8	2200.2	1270.8	1862.8	2200.2	2759.7	2759.7	3561.5	3722.5	4564.2	3722.5
18.25	1287.5	1887.3	2229.0	1287.5	1887.3	2229.0	2795.9	2795.9	3608.2	3771.3	4624.1	3771.3
18.50	1304.2	1911.7	2257.9	1304.2	1911.7	2257.9	2832.1	2832.1	3655.0	3820.2	4684.0	3820.2
19.00	1337.5	1960.6	2315.6	1337.5	1960.6	2315.6	2904.5	2904.5	3748.4	3917.9	4803.8	3917.9
20.00	1404.2	2058.4	2431.1	1404.2	2058.4	2431.1	3049.4	3049.4	3935.3	4113.2	5043.3	4113.2
20.75	1454.2	2131.7	2517.7	1454.2	2131.7	2517.7	3158.0	3158.0	4075.5	4259.8	5223.0	4259.8
21.00	1470.9	2156.1	2546.6	1470.9	2156.1	2546.6	3194.2	3194.2	4122.3	4308.6	5282.9	4308.6
22.00	1537.6	2253.9	2662.0	1537.6	2253.9	2662.0	3339.1	3339.1	4309.2	4504.0	5522.4	10653.1
23.00	1604.3	2351.7	2777.5	1604.3	2351.7	2777.5	3483.9	3483.9	4496.1	4699.4	5762.0	4699.4
24.00	1671.0	2449.4	2893.0	1671.0	2449.4	2893.0	3628.7	3628.7	4683.0	4894.7	6001.5	4894.7
25.00	1737.7	2547.2	3008.5	1737.7	2547.2	3008.5	3773.6	3773.6	4870.0	5090.1	6241.1	5090.1

Valve Size	65X100	65X100	65X100	80X100	80X100	100X150	100X150	100X150	150X200	150X200	200X250	250X350
Orifice Designation	K	K1	L	K1	L	M	N	P	Q	R	T	V
Orifice (Seat)Dia.	36mm	41.5mm	50mm	41.5mm	50mm	56mm	60mm	72.5mm	95.3mm	115mm	146mm	190mm
Area cm²	10.178	13.526	19.634	13.526	19.634	24.63	28	41.282	71.3	103.91	167.74	283.385
Set Pres.Kg/cm²(g)	**Discharge Capacity kg/hr - Constant - 24**											
1.00	491.9	653.7	948.9	653.7	948.9	1190.3	1353.2	1995.1	3445.8	5021.8	4158.6	22825.7
1.50	611.7	812.9	1179.9	812.9	1179.9	1480.2	1682.7	2480.9	4284.8	6244.6	4158.6	28383.8
2.00	731.4	972.0	1411.0	972.0	1411.0	1770.0	2012.2	2966.7	5123.9	7467.4	4158.6	33941.9
3.00	971.0	1290.4	1873.1	1290.4	1873.1	2349.7	2671.2	3938.3	6802.0	9913.0	4158.6	45058.2
3.50	1090.8	1449.6	2104.1	1449.6	2104.1	2639.5	3000.7	4424.1	7641.1	11135.8	4158.6	50616.3
4.00	1210.5	1608.7	2335.2	1608.7	2335.2	2929.4	3330.2	4909.9	8480.1	12358.6	4158.6	56174.4
5.00	1450.1	1927.1	2797.3	1927.1	2797.3	3509.1	3989.2	5881.5	10158.2	14804.2	4158.6	67290.6
5.50	1569.9	2086.2	3028.3	2086.2	3028.3	3798.9	4318.7	6367.3	10997.3	16027.1	4158.6	72848.7
6.00	1689.6	2245.4	3259.4	2245.4	3259.4	4088.8	4648.2	6853.1	11836.4	17249.9	4158.6	78406.8
7.00	1929.2	2563.8	3721.5	2563.8	3721.5	4668.5	5307.2	7824.7	13514.5	19695.5	4158.6	89523.1
7.50	2049.0	2722.9	3952.6	2722.9	3952.6	4958.3	5636.7	8310.5	14353.5	20918.3		95081.2
8.00	2168.7	2882.1	4183.6	2882.1	4183.6	5248.2	5966.2	8796.4	15192.6	22141.1	4158.6	100639.3
8.50	2288.5	3041.3	4414.7	3041.3	4414.7	5538.0	6295.7	9282.2	16031.6	23363.9	4158.6	106197.4
9.00	2408.3	3200.5	4645.7	3200.5	4645.7	5827.8	6625.2	9768.0	16870.7	24586.7	4158.6	111755.5
10.00	2647.8	3518.8	5107.8	3518.8	5107.8	6407.5	7284.2	10739.6	18548.8	27032.4	4158.6	122871.8
10.25	2707.7	3598.4	5223.3	3598.4	5223.3	6552.5	7449.0	10982.5	18968.3	27643.8	4158.6	125650.8
10.40	2743.6	3646.1	5292.7	3646.1	5292.7	6639.4	7547.8	11128.2	19220.1	28010.6	4158.6	127318.3
10.54	2777.2	3690.7	5357.4	3690.7	5357.4	6720.6	7640.1	11264.2	19455.0	28353.0	4158.6	128874.5
11.00	2887.4	3837.2	5569.9	3837.2	5569.9	6987.2	7943.3	11711.2	20226.9	29478.0	4158.6	133988.0
11.25	2947.3	3916.7	5685.4	3916.7	5685.4	7132.1	8108.0	11954.1	20646.5	30089.4	4158.6	136767.1
12.00	3126.9	4155.5	6032.0	4155.5	6032.0	7566.9	8602.3	12682.8	21905.0	31923.6	4158.6	145104.2
12.50	3246.7	4314.7	6263.1	4314.7	6263.1	7856.8	8931.8	13168.6	22744.1	33146.4	4158.6	150662.3
13.00	3366.5	4473.9	6494.1	4473.9	6494.1	8146.6	9261.3	13654.4	23583.2	34369.2	4158.6	156220.5
14.00	3606.0	4792.2	6956.2	4792.2	6956.2	8726.3	9920.3	14626.0	25261.3	36814.8	4158.6	167336.7
14.06	3620.4	4811.3	6984.0	4811.3	6984.0	8761.1	9959.8	14684.3	25362.0	36961.6	4158.6	168003.7
15.00	3845.6	5110.5	7418.3	5110.5	7418.3	9306.0	10579.3	15597.6	26939.4	39260.5	4158.6	178452.9
15.25	3905.5	5190.1	7533.9	5190.1	7533.9	9450.9	10744.0	15840.5	27358.9	39871.9	4158.6	181232.0
16.00	4085.1	5428.9	7880.4	5428.9	7880.4	9885.7	11238.3	16569.2	28617.5	41706.1	4158.6	189569.1
17.00	4324.7	5747.2	8342.6	5747.2	8342.6	10465.4	11897.3	17540.9	30295.6	44151.7	4158.6	200685.4
17.58	4463.6	5931.9	8610.6	5931.9	8610.6	10801.6	12279.5	18104.4	31268.9	45570.2	4158.6	207132.8
18.00	4564.2	6065.6	8804.7	6065.6	8804.7	11045.1	12556.3	18512.5	31973.7	46597.3	4158.6	211801.6
18.25	4624.1	6145.2	8920.2	6145.2	8920.2	11190.0	12721.1	18755.4	32393.2	47208.7	4158.6	214580.7
18.50	4684.0	6224.8	9035.7	6224.8	9035.7	11334.9	12885.8	18998.3	32812.8	47820.1	4158.6	217359.7
19.00	4803.8	6383.9	9266.8	6383.9	9266.8	11624.8	13215.3	19484.1	33651.8	49042.9	4158.6	222917.8
20.00	5043.3	6702.3	9728.9	6702.3	9728.9	12204.4	13874.3	20455.7	35329.9	51488.6	4158.6	234034.1
20.75	5223.0	6941.0	10075.4	6941.0	10075.4	12639.2	14368.6	21184.4	36588.5	53322.8	4158.6	242371.2
21.00	5282.9	7020.6	10191.0	7020.6	10191.0	12784.1	14533.3	21427.3	37008.1	53934.2	4158.6	245150.3
22.00	4504.0	5522.4	7339.0	10653.1	7339.0	13363.8	15192.3	22398.9	38686.2	56379.8	4158.6	256266.5
23.00	5762.0	7657.3	11115.2	7657.3	11115.2	13943.5	15851.3	23370.5	40364.3	58825.4	4158.6	267382.8
24.00	6001.5	7975.7	11577.3	7975.7	11577.3	14523.2	16510.3	24342.1	42042.4	61271.1	4158.6	278499.0
25.00	6241.1	8294.0	12039.4	8294.0	12039.4	15102.9	17169.3	25313.8	43720.5	63716.7	4158.6	289615.2

1- Discharge Capacity Calculation as per IBR Formula

E = CAP = 24 x Area x ((Set Pressure x 0.980) + 1.033)

2- Constant (C) Standard by IBR is '24'

C = Constant 24   P = Set Pressure in kg/cm²(g)

A = Area in cm²   E = Discharge Capacity in kg/hr

Quick Sizing for Safety Valve

Discharge Capacity Chart (BTS-50) Saturated Steam - without over Pressure

Valve Size	25X50	25X50	25X50	40X50	40X50	40X50	40X50	40X80	40X80	50X80	50X80	65X100
Orifice Designation	F	G	G1	F	G	G1	H	H	J	J	K	J
Orifice (Seat) Dia.	19mm	23mm	25mm	19mm	23mm	25mm	28mm	28mm	31.8mm	32.5mm	36mm	32.5mm
Area cm²	2.83385	4.154	4.90625	2.83385	4.154	4.90625	6.154	6.154	7.942	8.301	10.178	8.301
Set Pres.Kg/cm²(g)	**Discharge Capacity kg/hr - Constant - 40**											
1.00	228.3	334.6	395.2	228.3	334.6	395.2	495.7	495.7	639.7	668.6	819.8	668.6
1.50	283.8	416.1	491.4	283.8	416.1	491.4	616.4	616.4	795.5	831.4	1019.4	831.4
2.00	339.4	497.5	587.6	339.4	497.5	587.6	737.1	737.1	951.2	994.2	1219.1	994.2
3.00	450.6	660.5	780.1	450.6	660.5	780.1	978.5	978.5	1262.8	1319.9	1618.3	1319.9
3.50	506.2	742.0	876.3	506.2	742.0	876.3	1099.2	1099.2	1418.5	1482.7	1817.9	1482.7
4.00	561.7	823.4	972.5	561.7	823.4	972.5	1219.9	1219.9	1574.3	1645.5	2017.5	1645.5
5.00	672.9	986.4	1165.0	672.9	986.4	1165.0	1461.3	1461.3	1885.9	1971.1	2416.8	1971.1
5.50	728.5	1067.9	1261.2	728.5	1067.9	1261.2	1582.0	1582.0	2041.6	2133.9	2616.4	2133.9
6.00	784.1	1149.3	1357.5	784.1	1149.3	1357.5	1702.7	1702.7	2197.4	2296.7	2816.0	2296.7
7.00	895.2	1312.3	1549.9	895.2	1312.3	1549.9	1944.1	1944.1	2508.9	2622.3	3215.3	2622.3
7.50	950.8	1393.7	1646.1	950.8	1393.7	1646.1	2064.8	2064.8	2664.7	2785.1	3414.9	2785.1
8.00	1006.4	1475.2	1742.4	1006.4	1475.2	1742.4	2185.5	2185.5	2820.5	2948.0	3614.5	2948.0
8.50	1062.0	1556.7	1838.6	1062.0	1556.7	1838.6	2306.2	2306.2	2976.2	3110.8	3814.2	3110.8
9.00	1117.6	1638.2	1934.8	1117.6	1638.2	1934.8	2426.9	2426.9	3132.0	3273.6	4013.8	3273.6
10.00	1228.7	1801.1	2127.3	1228.7	1801.1	2127.3	2668.3	2668.3	3443.5	3599.2	4413.0	3599.2
10.25	1256.5	1841.9	2175.4	1256.5	1841.9	2175.4	2728.6	2728.6	3521.4	3680.6	4512.9	3680.6
10.54	1288.7	1889.1	2231.2	1288.7	1889.1	2231.2	2798.6	2798.6	3611.8	3775.0	4628.6	3775.0
11.00	1339.9	1964.1	2319.7	1339.9	1964.1	2319.7	2909.7	2909.7	3755.1	3924.8	4812.3	3924.8
11.25	1367.7	2004.8	2367.9	1367.7	2004.8	2367.9	2970.0	2970.0	3833.0	4006.2	4912.1	4006.2
11.55	1401.0	2053.7	2425.6	1401.0	2053.7	2425.6	3042.5	3042.5	3926.4	4103.9	5031.9	4103.9
12.00	1451.0	2127.0	2512.2	1451.0	2127.0	2512.2	3151.1	3151.1	4066.6	4250.4	5211.5	4250.4
12.50	1506.6	2208.5	2608.4	1506.6	2208.5	2608.4	3271.8	3271.8	4222.4	4413.2	5411.2	4413.2
13.00	1562.2	2290.0	2704.6	1562.2	2290.0	2704.6	3392.5	3392.5	4378.2	4576.1	5610.8	4576.1
13.50	1617.8	2371.4	2800.9	1617.8	2371.4	2800.9	3513.2	3513.2	4533.9	4738.9	5810.4	4738.9
14.00	1673.4	2452.9	2897.1	1673.4	2452.9	2897.1	3633.9	3633.9	4689.7	4901.7	6010.0	4901.7
14.06	1680.0	2462.7	2908.7	1680.0	2462.7	2908.7	3648.4	3648.4	4708.4	4921.2	6034.0	4921.2
15.00	1784.5	2615.9	3089.6	1784.5	2615.9	3089.6	3875.3	3875.3	5001.2	5227.3	6409.3	5227.3
15.25	1812.3	2656.6	3137.7	1812.3	2656.6	3137.7	3935.6	3935.6	5079.1	5308.7	6509.1	5308.7
15.50	1840.1	2697.3	3185.8	1840.1	2697.3	3185.8	3996.0	3996.0	5157.0	5390.1	6608.9	5390.1
16.00	1895.7	2778.8	3282.0	1895.7	2778.8	3282.0	4116.7	4116.7	5312.8	5552.9	6808.5	5552.9
17.00	2006.9	2941.7	3474.5	2006.9	2941.7	3474.5	4358.1	4358.1	5624.3	5878.5	7207.8	5878.5
17.58	2071.3	3036.3	3586.1	2071.3	3036.3	3586.1	4498.1	4498.1	5805.0	6067.4	7439.3	6067.4
18.00	2118.0	3104.7	3666.9	2118.0	3104.7	3666.9	4599.5	4599.5	5935.8	6204.2	7607.0	6204.2
18.25	2145.8	3145.4	3715.0	2145.8	3145.4	3715.0	4659.8	4659.8	6013.7	6285.6	7706.8	6285.6
18.50	2173.6	3186.2	3763.2	2173.6	3186.2	3763.2	4720.2	4720.2	6091.6	6367.0	7806.6	6367.0
19.00	2229.2	3267.6	3859.4	2229.2	3267.6	3859.4	4840.9	4840.9	6247.4	6529.8	8006.3	6529.8
20.00	2340.3	3430.6	4051.8	2340.3	3430.6	4051.8	5082.3	5082.3	6558.9	6855.4	8405.5	6855.4
20.75	2423.7	3552.8	4196.2	2423.7	3552.8	4196.2	5263.3	5263.3	6792.6	7099.6	8705.0	7099.6
21.00	2451.5	3593.5	4244.3	2451.5	3593.5	4244.3	5323.7	5323.7	6870.5	7181.0	8804.8	7181.0
22.00	2562.7	3756.5	4436.7	2562.7	3756.5	4436.7	5565.1	5565.1	7182.0	7506.6	9204.0	7506.6
23.00	2673.8	3919.4	4629.2	2673.8	3919.4	4629.2	5806.5	5806.5	7493.5	7832.3	9603.3	7832.3
24.00	2785.0	4082.4	4821.7	2785.0	4082.4	4821.7	6047.9	6047.9	7805.1	8157.9	10002.5	8157.9
25.00	2896.2	4245.3	5014.1	2896.2	4245.3	5014.1	6289.3	6289.3	8116.6	8483.5	10401.8	8483.5

Valve Size	65X100	65X100	65X100	80X100	80X100	100X150	100X150	100X150	150X200	150X200	200X250	250X350
Orifice Designation	K	K1	L	K1	L	M	N	P	Q	R	T	V
Orifice (Seat)Dia.	36mm	41.5mm	50mm	41.5mm	50mm	56mm	60mm	72.5mm	95.3mm	115mm	146mm	190mm
Area cm²	10.178	13.526	19.634	13.526	19.634	24.63	28	41.16	71.30	103.91	167.74	283.385
Set Pres.Kg/cm²(g)	**Discharge Capacity kg/h - Constant - 40**											
1.00	819.8	1089.5	1581.5	1089.5	1581.5	1983.9	2255.3	3325.1	5743.0	8369.6	6931.0	22825.7
1.50	1019.4	1354.8	1966.5	1354.8	1966.5	2466.9	2804.5	4134.8	7141.4	10407.6	6931.0	28383.8
2.00	1219.1	1620.1	2351.6	1620.1	2351.6	2950.0	3353.6	4944.5	8539.8	12445.6	6931.0	33941.9
3.00	1618.3	2150.6	3121.8	2150.6	3121.8	3916.2	4452.0	6563.8	11336.7	16521.7	6931.0	45058.2
3.50	1817.9	2415.9	3506.9	2415.9	3506.9	4399.2	5001.2	7373.5	12735.1	18559.7	6931.0	50616.3
4.00	2017.5	2681.2	3892.0	2681.2	3892.0	4882.3	5550.3	8183.2	14133.5	20597.7	6931.0	56174.4
5.00	2416.8	3211.8	4662.2	3211.8	4662.2	5848.5	6648.7	9802.5	16930.4	24673.7	6931.0	67290.6
5.50	2616.4	3477.1	5047.2	3477.1	5047.2	6331.5	7197.9	10612.2	18328.8	26711.8	6931.0	72848.7
6.00	2816.0	3742.4	5432.3	3742.4	5432.3	6814.6	7747.0	11421.9	19727.3	28749.8	6931.0	78406.8
7.00	3215.3	4272.9	6202.5	4272.9	6202.5	7780.8	8845.4	13041.2	22524.1	32825.8	6931.0	89523.1
7.50	3414.9	4538.2	6587.6	4538.2	6587.6	8263.8	9394.5	13850.9	23922.5	34863.8		95081.2
8.00	3614.5	4803.5	6972.7	4803.5	6972.7	8746.9	9943.7	14660.6	25321.0	36901.8	6931.0	100639.3
8.50	3814.2	5068.8	7357.8	5068.8	7357.8	9230.0	10492.9	15470.3	26719.4	38939.9	6931.0	106197.4
9.00	4013.8	5334.1	7742.9	5334.1	7742.9	9713.1	11042.1	16279.9	28117.8	40977.9	6931.0	111755.5
10.00	4413.0	5864.7	8513.0	5864.7	8513.0	10679.2	12140.4	17899.3	30914.7	45053.9	6931.0	122871.8
10.25	4512.9	5997.3	8705.6	5997.3	8705.6	10920.8	12415.0	18304.1	31613.9	46072.9	6931.0	125650.8
10.54	4628.6	6151.2	8928.9	6151.2	8928.9	11200.9	12733.5	18773.7	32425.0	47255.0	6931.0	128874.5
11.00	4812.3	6395.3	9283.2	6395.3	9283.2	11645.4	13238.8	19518.6	33711.5	49130.0	6931.0	133988.0
11.25	4912.1	6527.9	9475.7	6527.9	9475.7	11886.9	13513.3	19923.5	34410.8	50149.0	6931.0	136767.1
11.55	5031.9	6687.1	9706.8	6687.1	9706.8	12176.8	13842.8	20409.3	35249.8	51371.8	6931.0	140101.9
12.00	5211.5	6925.8	10053.4	6925.8	10053.4	12611.5	14337.1	21138.0	36508.4	53206.0	6931.0	145104.2
12.50	5411.2	7191.1	10438.5	7191.1	10438.5	13094.6	14886.3	21947.7	37906.8	55244.0	6931.0	150662.3
13.00	5610.8	7456.4	10823.6	7456.4	10823.6	13577.7	15435.4	22757.4	39305.3	57282.0	6931.0	156220.5
13.50	5810.4	7721.7	11208.6	7721.7	11208.6	14060.8	15984.6	23567.0	40703.7	59320.0	6931.0	161778.6
14.00	6010.0	7987.0	11593.7	7987.0	11593.7	14543.8	16533.8	24376.7	42102.1	61358.1	6931.0	167336.7
14.06	6034.0	8018.8	11639.9	8018.8	11639.9	14601.8	16599.7	24473.9	42269.9	61602.6	6931.0	168003.7
15.00	6409.3	8517.6	12363.9	8517.6	12363.9	15510.0	17632.1	25996.1	44899.0	65434.1	6931.0	178452.9
15.25	6509.1	8650.2	12556.4	8650.2	12556.4	15751.5	17906.7	26400.9	45598.2	66453.1	6931.0	181232.0
15.50	6608.9	8782.9	12749.0	8782.9	12749.0	15993.1	18181.3	26805.7	46297.4	67472.1	6931.0	184011.0
16.00	6808.5	9048.2	13134.1	9048.2	13134.1	16476.1	18730.5	27615.4	47695.8	69510.1	6931.0	189569.1
17.00	7207.8	9578.7	13904.3	9578.7	13904.3	17442.3	19828.8	29234.8	50492.7	73586.2	6931.0	200685.4
17.58	7439.3	9886.5	14351.0	9886.5	14351.0	18002.6	20465.9	30174.0	52114.9	75950.3	6931.0	207132.8
18.00	7607.0	10109.3	14674.4	10109.3	14674.4	18408.4	20927.2	30854.1	53289.5	77662.2	6931.0	211801.6
18.25	7706.8	10242.0	14867.0	10242.0	14867.0	18650.0	21201.8	31259.0	53988.7	78681.2	6931.0	214580.7
18.50	7806.6	10374.6	15059.5	10374.6	15059.5	18891.5	21476.3	31663.8	54688.0	79700.2	6931.0	217359.7
19.00	8006.3	10639.9	15444.6	10639.9	15444.6	19374.6	22025.5	32473.5	56086.4	81738.2	6931.0	222917.8
20.00	8405.5	11170.5	16214.8	11170.5	16214.8	20340.7	23123.9	34092.8	58883.2	85814.3	6931.0	234034.1
20.75	8705.0	11568.4	16792.4	11568.4	16792.4	21065.3	23947.6	35307.3	60980.9	88871.3	6931.0	242371.2
21.00	8804.8	11701.1	16985.0	11701.1	16985.0	21306.9	24222.2	35712.2	61680.1	89890.3	6931.0	245150.3
22.00	9204.0	12231.6	17755.1	12231.6	17755.1	22273.0	25320.5	37331.5	64477.0	93966.4	6931.0	256266.5
23.00	9603.3	12762.2	18525.3	12762.2	18525.3	23239.2	26418.9	38950.9	67273.8	98042.4	6931.0	267382.8
24.00	10002.5	13292.8	19295.5	13292.8	19295.5	24205.3	27517.2	40570.2	70070.7	102118.4	6931.0	278499.0
25.00	10401.8	13823.4	20065.7	13823.4	20065.7	25171.5	28615.6	42189.6	72867.5	106194.5	6931.0	289615.2

Consult Factory for detail sizing calculation for more than 25 kg or any specific set pressure requirement

1- Discharge Capacity Calculation as per IBR Formula

E = CAP = 40 x Area x ((Set Pressure x 0.980) + 1.033)

2- Constant (C) Standard by IBR is '40'

C = Constant 40   P = Set Pressure in kg/cm²(g)

A = Area in cm²   E = Discharge Capacity in kg/hr

Thermo-Safe®
BTS-10
SERIES

Product description:

Angle Discharge, Spring Loaded, Full Lift, Modified Nozzle, Conventional Type, Flange End Thermal / Pressure / Safety Relief Valve with Close / Open Bonnet, Open Cap & Plain Lever.

Design:

The Combination of top guiding unobstructed seat bore and full lift capability produces a safety valve having max. discharge capacity.

Features:

- Top guide design ensures freedom of operation.
- Accurate setting for correct blow off pressure.
- Mirror polished finish metal to metal seat.
- Precision lapped valves disc & seat (Nozzle).
- Stellited trims (Optional)
- Min. Spring Stock required.
- Each Valve Individually tested with compressed Air.

Technical Specifications

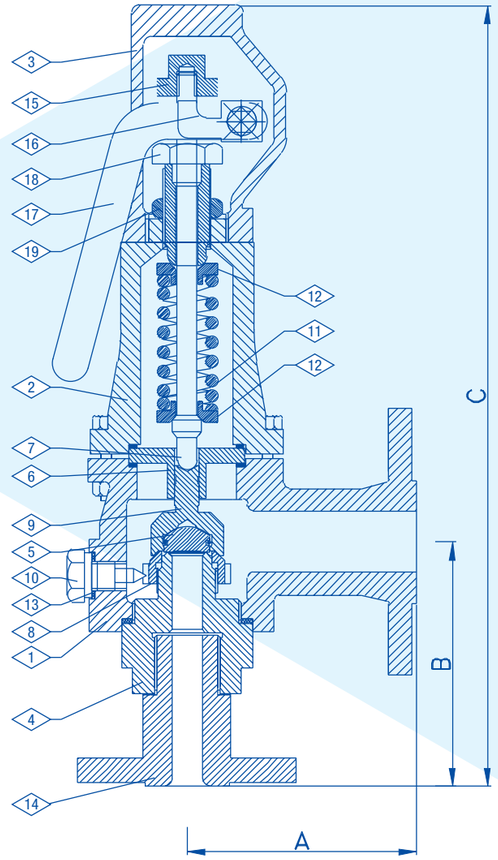
Size Range	20 mm x 25 mm to 50 mm x 50 mm
Pressure Rating	150# & 300# BS 10 Table - H x E
Facing	Raise Face (R.F) , Flat Face (F.F),
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel.
Trims	CF8 / 8M / SS 304 / 316
Orifice (seat) Dia.	12.7 mm to 19.0 mm
End Connection	Flange End

Application

The **Thermo-Safe** BTS-10 Series safety Valves are Suitable for a Variety of duties Including Protection of Steam Pipe Lines ,Small Industrial Boilers [SIB] and Thermal Expansion.

Ordering / Sizing Information:

- Fluid / State
- Flow Rate
- Set Pressure
- Back Pressure
- Operating Temp.
- End Connection



Material Specifications

SR.NO.	Part Name	Material
1	Body	ASTM A216 GR. WCB
2	Bonnet	ASTM A216 GR. WCB
3	Cap	ASTM A216 GR. WCB
4	Nozzle	ASTM A351 GR. CF8 / CF8M
5	Disc	SS 304 / SS 316
6	Guide	ASTM A351 GR. CF8 / CF8M
7	Stem	SS 304 / SS 316
8	Nozzle Ring	ASTM A351 GR. CF8 / CF8M
9	Disc Holder	ASTM A351 GR. CF8 / CF8M
10	Lock Screw	SS 304 / SS 316
11	Spring	Carbon Steel / Alloy Steel / SS 302
12	Spring Washer	Mild Steel
13	Gasket	ARAMID FIBER (NON-ASBESTOS)
14	Collar Flange	ASTM A216 GR. WCB
15	Stem Nut	SS 304
16	Fork	ASTM A216 GR. WCB
17	Lever	ASTM A216 GR. WCB
18	Adjusting Screw	SS 304 / SS 316
19	Adjusting Screw Nut	SS 304 / SS 316

Dimensions (mm)

SIZE	A ±3.0	B ±3.0	C ±100.0
20X25	95	112	330
25X25	95	112	330
25X40	95	112	330
40X50	110	131	400
50X50	110	131	400

Discharge Capacity Chart (BTS-10) Saturated Steam - without over Pressure

Quick Sizing for Safety Valve

Valve Size	20X25	20X25	25X25	25X25	25X40	25X40	40X50	50X50
Orifice Designation	E	F	E	F	E	F	F	F
Orifice (seat) Dia. mm	**12.7**	**19**	**12.7**	**19**	**12.7**	**19**	**19**	**19**
Area cm^2	1.2645	2.83385	1.2645	2.83385	1.2645	2.83385	2.83385	2.83385
Set Pres.$Kg/cm^2(g)$	**Discharge Capacity kg/hr - Constant - 24**							
1.00	61.1	137.0	61.1	137.0	61.1	137.0	137.0	137.0
1.50	76.0	170.3	76.0	170.3	76.0	170.3	170.3	170.3
2.00	90.9	203.7	90.9	203.7	90.9	203.7	203.7	203.7
3.00	120.6	270.3	120.6	270.3	120.6	270.3	270.3	270.3
3.50	135.5	303.7	135.5	303.7	135.5	303.7	303.7	303.7
4.00	150.4	337.0	150.4	337.0	150.4	337.0	337.0	337.0
5.00	180.2	403.7	180.2	403.7	180.2	403.7	403.7	403.7
5.50	195.0	437.1	195.0	437.1	195.0	437.1	437.1	437.1
6.00	209.9	470.4	209.9	470.4	209.9	470.4	470.4	470.4
7.00	239.7	537.1	239.7	537.1	239.7	537.1	537.1	537.1
7.50	254.6	570.5	254.6	570.5	254.6	570.5	570.5	570.5
8.00	269.4	603.8	269.4	603.8	269.4	603.8	603.8	603.8
8.50	284.3	637.2	284.3	637.2	284.3	637.2	637.2	637.2
9.00	-	670.5	-	670.5	-	670.5	670.5	670.5
10.00	-	737.2	-	737.2	-	737.2	737.2	737.2
10.25	-	753.9	-	753.9	-	753.9	753.9	753.9
10.54	-	773.2	-	773.2	-	773.2	773.2	773.2
11.00	-	803.9	-	803.9	-	803.9	803.9	803.9
11.25	-	820.6	-	820.6	-	820.6	820.6	820.6
12.00	-	870.6	-	870.6	-	870.6	870.6	870.6
12.50	-	904.0	-	904.0	-	904.0	904.0	904.0

Consult Factory for detail sizing calculation for any specific set pressure requirement

1- Discharge Capacity Calculation as per IBR Formula

E = CAP = 24 x Area x ((Set Pressure x 0.980) + 1.033)

2- Constant (C) Standard by IBR is '24'

C = Constant 24 A = Area in cm^2 P = Set Pressure in $kg/cm^2(g)$ E = Discharge Capacity in kg/hr

Thermo-Safe®
BTS-11
SERIES

Product description:

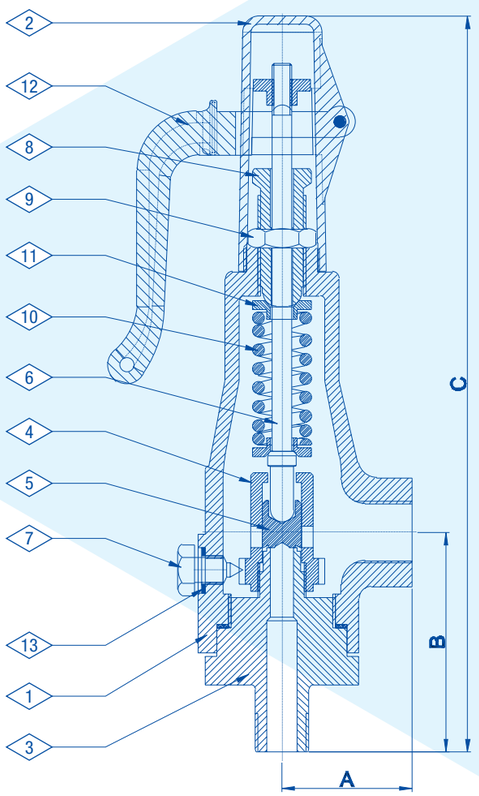
Angle Discharge, Spring Loaded, Full Lift, Modified Nozzle, Conventional Type, Screwed End Thermal / Pressure / Safety Relief Valve with Open Cap & Plain Lever.

Design:

The Combination of top guiding unobstructed seat bore and full lift capability produces a safety valve having max. discharge capacity.

Features:

- Top guide design ensures freedom of operation.
- Accurate setting for correct blow off pressure.
- Mirror polished finish metal to metal seat.
- Precision lapped valves disc & seat (Nozzle).
- Stellited trims (Optional)
- Min. spring stock required.
- Each Valve Individually tested with compressed Air.



Material Specifications

SR.NO.	Part Name	Material
1	Body	ASTM A216 GR. WCB
2	Cap	ASTM A216 GR. WCB
3	Nozzle	ASTM A351 GR. CF8 / CF8M
4	Nozzle Ring	ASTM A351 GR. CF8 / CF8M
5	Disc	SS 304 / SS 316
6	Stem	SS 304 / SS 316
7	Lock Screw	SS 304 / SS 316
8	Adjusting Screw	SS 304 / SS 316
9	Adjusting Screw Nut	SS 304 / SS 316
10	Setting Spring	Carbon Steel / Alloy Steel / SS 302
11	Spring Washer	Mild Steel
12	Lever	ASTM A216 GR. WCB
13	Gasket	Aramid Fiber (Non-Asbestos)

Dimensions (mm)

SIZE	A ±3.0	B ±3.0	C ±100.0
20X25	55	92	311
25X25	55	92	311
25X40	67	92	360
40X50	67	92	360
50X50	67	92	360

Technical Specifications

Size Range	20 mm x 25 mm to 50 mm x 50 mm
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel.
Trims	CF8 / 8M / SS 304 / 316
Orifice (seat) Dia.	12.7 mm & 19.0 mm
Pressure Limit	8.5 Kg/cm^{2}g. Max.
End Connection	Screwed BSP (M/F) / NPT (M/F) .

Application:

The **Thermo-Safe** BTS-11 Series safety Valves are Suitable for a Variety of duties Including Protection of Steam Pipe Lines ,Small Industrial Boilers [SIB] and Thermal Expansion.

Discharge Capacity Chart (BTS-11)
Saturated Steam - without over Pressure

Quick Sizing for Safety Valve

Valve Size	20X25	20X25	25X25	25X25
Orifice Designation	E	F	E	F
Orifice (seat) Dia. mm.	**12.7**	**19**	**12.7**	**19**
Area cm²	1.2645	2.83385	1.2645	2.83385
Set Pres. Kg/cm²(g)	**Discharge Capacity kg/hr - Constant - 24**			
1.0	61.1	137.0	61.1	137.0
1.5	76.0	170.3	76.0	170.3
2.0	90.9	203.7	90.9	203.7
2.5	105.8	237.0	105.8	237.0
3.0	120.6	270.3	120.6	270.3
3.5	135.5	303.7	135.5	303.7
4.0	150.4	337.0	150.4	337.0
4.5	165.3	370.4	165.3	370.4
5.0	180.2	403.7	180.2	403.7
5.5	195.0	437.1	195.0	437.1
6.0	209.9	470.4	209.9	470.4
6.5	224.8	503.8	224.8	503.8
7.0	239.7	537.1	239.7	537.1
7.5	254.6	570.5	254.6	570.5
8.0	269.4	603.8	269.4	603.8
8.5	284.3	637.2	284.3	637.2

Consult Factory for detail sizing calculation for any specific set pressure requirement

Ordering / Sizing Information:

- Fluid / State
- Flow Rate
- Set Pressure
- Back Pressure
- Operating Temperature

1- Discharge Capacity Calculation as per IBR Formula

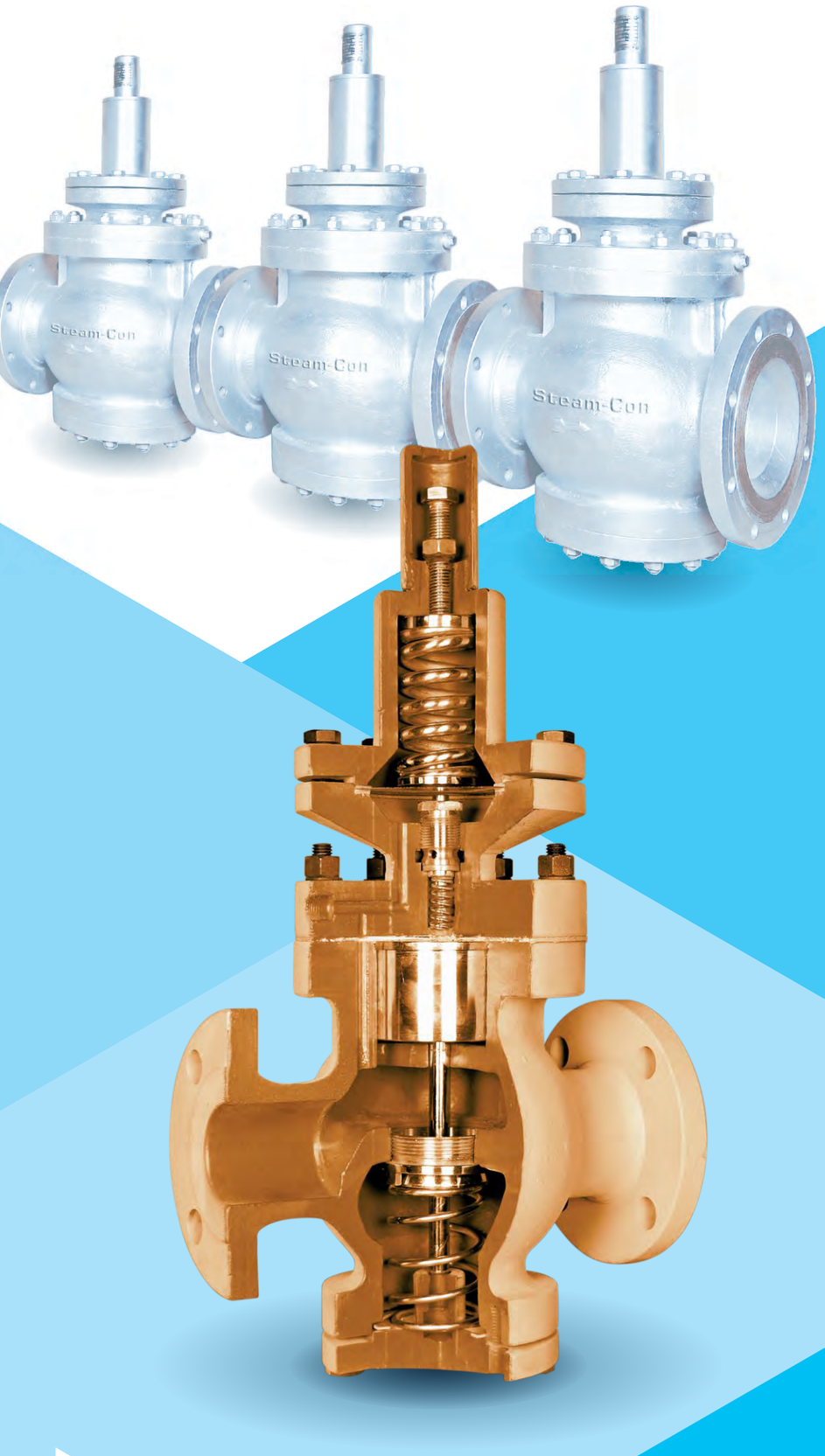
E = CAP = 24 x Area x ((Set Pressure x 0.980) + 1.033)

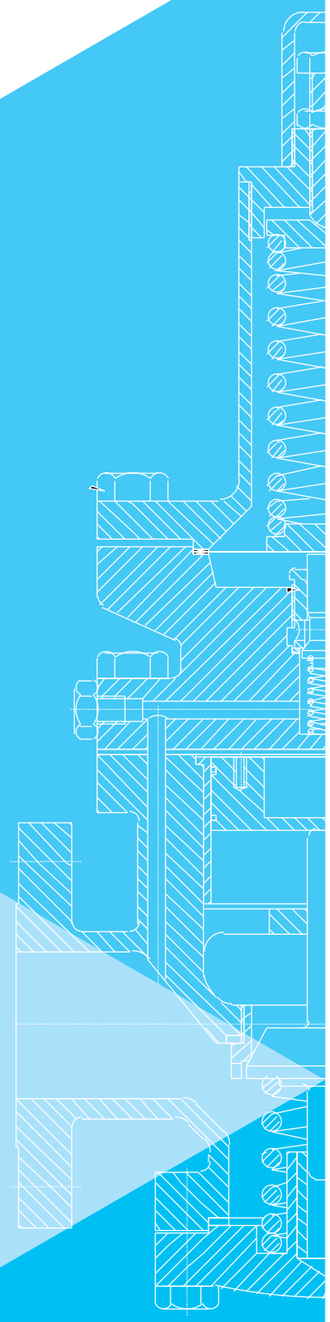
2- Constant (C) Standard by IBR is '24'

C = Constant 24 P = Set Pressure in kg/cm²(g)

A = Area in cm² E = Discharge Capacity in kg/hr

NOTE : - Orifice Dia 12.7mm Only for SIB.





Pressure Reducing Valve

- **PRV-100 SERIES**
  (Self Actuating-Mechanical Type)
- **RCV-100 SERIES**
  (Roboter Operated)
- **PCV-100 SERIES**
  (Pneumatic / Motorized Operated)

UNIQUE QUALITIES

- The “Steam-Con” series PRV-100, Internally Pilot & Piston operated pressure reducing valves are very compact in design & versatile type for accurate regulation with the widest possible range of flow.
- The full lift type main valve assembly & globe type body design is capable of delivering very high flow rates with greater accuracy.
- The internally Pilot controlled pressure reducing valves are best suitable for use in continuous distribution application.
- The constant outlet pressure (downstream pressure) is accurately maintained right up to maximum rated discharge capacity of the valve and is unaffected by changes in inlet pressure or flow rate.
- A positive tight shut off ensured by accurate guiding of the Pilot & the main valve assembly.
- RCV-100 Series Roboter operated pressure reducing Valve is high in demand where accurate down stream pressure control is required with high flow.
- PCV-100 Series Pneumatic / Motorized operated pressure reducing valve is high in demand where accurate down stream high pressure control with high flow is required.
- Correct selection of material & treatment for longer life of trims and internals.
- Superior Quality of finished components and best workmanship.
- 100% spares interchangeability.
- Different types / models of pressure reducing valves are available as per the different applications required by the industries
- Each PRV is correctly sized with advance sizing selection software for accurate controlled performance.

Steam-Con

Self Actuating-Mechanical Type Pressure Reducing Valve

PRV-100 SERIES

PRV-100 F

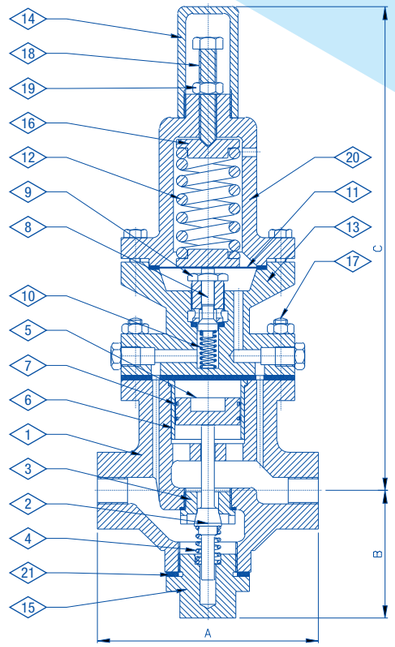
Product description:

Self Actuating, Internally Sensed Pilot & Piston operated, Direct Spring & Diaphragm Actuated, Top & Bottom Guided Pressure Reducing Valve with screwed / Flanged End connection.

Design:

- PRV-100 Series type PRV consisting of two Valves - an internal Pilot & Main Valve
- Highly Sensitive Pilot
- This Valve Operates on Spring & Diaphragm Balance Principal
- Very High flow Rate due to full lift of main Valve and Body design
- Extremely compact & Light weight design
- The Internal Pilot design eliminates external Piping Sense

PRV-100 T



Dimensions (mm)

SIZE	A ±2.0	B ±5.0	C ±10.0
15	160	92	350
20	160	92	350
25	200	79	350

Material Specifications

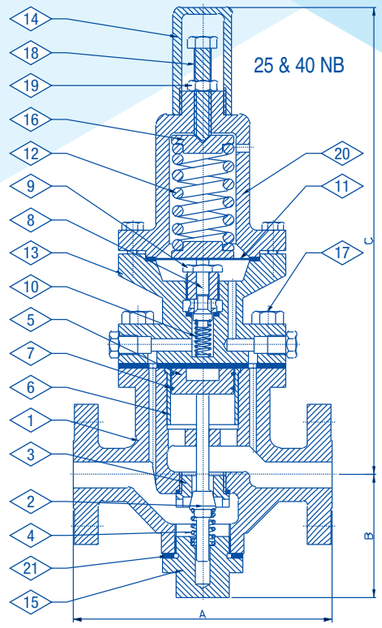
SR.NO.	Part Name	Material
1	Body	ASTM A216 GR. WCB
2	Main Valve	ASTM A351 GR. Cf8
3	Main Valve Seat	ASTM A351 GR. Cf8
4	Main Valve Spring	SS 302
5	Piston	SS 304 / SS 316
6	Sleeve	ASTM A351 GR.CF8
7	Piston Ring	Hard Chrome Iron
8	Pilot Valve	SS 304 / SS 316
9	Pilot Valve Seat	SS 304 / SS 316
10	Pilot Valve Spring	SS 302
11	Diaphragm	SS 316
12	Setting Spring	Carbon Steel
13	Pilot Valve Housing	ASTM A216 GR.WCB
14	Cap	ASTM A216 GR.WCB
15	Bottom Plug/Cover	M.S./ASTM A216 GR.WCB
16	Spring Washer	Mild Steel
17	Bolts	ASTM A193 GR.B7
18	Adjusting Screw	M.S./ASTM A193 GR. B7
19	Adjusting Screw Nut	M.S./ASTM A193 GR. 2H
20	Spring Housing	ASTM A216 GR.WCB
21	Gasket	Aramid Fiber (Non-Asbestos)
22	Spring Housing Cover	Mild Steel

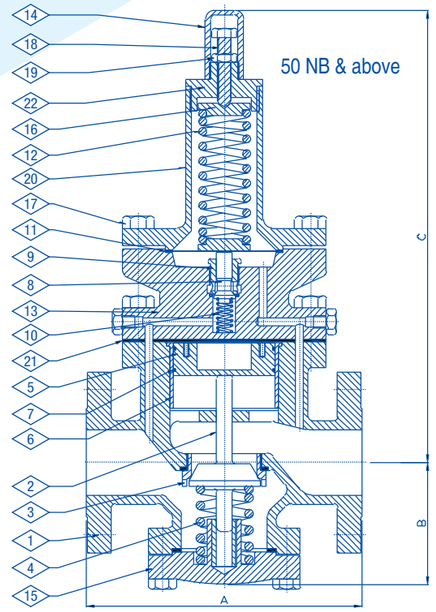
Features:

- Compact & Versatile design for accurate regulation with widest possible range of flow.
- High flow rate with greater accuracy due to full lift design.
- Stallited trims for high pressure & temperature.
- A positive tight shut off by accurate guiding of pilot & main valve assembly.
- Constant Outlet pressure is accurately maintain without unaffecting by changes in inlet pressure or flow rate.
- Stainless Steel Diaphragm & Harden internal parts provide high performance over long period & trouble free service life.
- Non metallic trims to give dead tight shut off on air & non corrosive gas application

Note : *We Recommend to Provide External Balance Pipe when the Reduced Pressure is Below 55% of the Inlet Pressure

PRV-100 F





Dimensions (mm)

	SIZE	A ±2.0	B ±5.0	C ±10.0
150#	25	194	79	350
	40	210	102	365

	SIZE	A ±2.0	B ±5.0	C ±10.0
300#	25	206	79	350
	40	214	102	365

	SIZE	A ±2.0	B ±5.0	C ±10.0
Table H	25	194	79	350
	40	210	102	365

Dimensions (mm)

	SIZE	A ±2.0	B ±5.0	C ±10.0
150#	50	254	121	378
	80	311	140	520
	100	347	147	565
	150	433	210	595

	SIZE	A ±2.0	B ±5.0	C ±10.0
300#	50	260	121	378
	80	320	140	520
	100	363	147	565
	150	455	210	595

	SIZE	A ±2.0	B ±5.0	C ±10.0
Table H	50	254	121	378
	80	308	140	520
	100	351	147	565
	150	439	210	595

Technical Specifications

Size Range	15 mm to 25 mm (Screwed End) 25 mm to 150 mm (Flanged End)
Pressure Rating	150# & 300# / BS 10 Table H
Facing	Raise Face (R.F) , Flat Face (F.F)
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel.
Trims	CF8 / 8M / SS 304 / 316
Leakage	Class IV
Pressure Reduction	20:1
Min.Differential	7 psig.

Application:

Steam-Con PRV-100 Series of Internally Pilot & Piston Operated Pressure Reducing Valve Provide Extremely accurate levels of Pressure Regulation for Steam, air and Industrial gas application. This is accomplished with a highly sensitive pilot which continuously monitors both inlet & outlet Pressure simultaneously. The result is a constant pressure irrespective of erratic inlet pressure of system demand.

Ordering / Sizing Information:

- Fluid/State
- Flow Rate
- Inlet Pressure
- Outlet Pressure
- Operating Temp.
- Line Size

Discharge Capacity Chart (PRV-100 T & PRV-100 F) Saturated Steam (kg/hr)

Quick Sizing for Pressure Reducing Valve

Inlet Pr. [PSIG]	Outlet Pr. [PSIG]	Nominal Valve Size (mm)							
		15	20	25	40	50	80	100	150
Valve CV		5	6.5	10	18.5	32	70	108	250
10	1	41	83	136	299	529	-	-	-
	3	39	79	127	282	485	-	-	-
	5	35	70	114	251	432	-	-	-
15	1	52	105	171	379	661	1322	2358	-
	3	52	105	171	379	661	1322	2358	4850
	5	48	101	163	361	617	1234	2248	4629
	10	37	75	127	277	485	-	-	-
20	1	57	114	189	414	727	1432	2579	-
	5	61	123	202	440	771	1521	2755	5731
	10	52	110	180	392	683	1366	2447	5070
	15	41	83	136	299	529	-	-	-
25	1	61	123	202	440	749	1521	2645	-
	5	70	136	224	485	859	1719	3086	6393
	10	66	136	224	485	837	1697	3064	6393
	15	61	123	198	436	749	1499	2711	5511
	20	48	92	154	335	573	-	-	-
35	1	66	132	216	485	815	1631	2954	-
	5	74	154	251	551	947	1895	3439	7054
	10	88	176	286	639	1080	2160	3902	7936
	15	88	176	286	639	1080	2160	3902	7936
	25	70	136	229	507	859	1719	3130	6393
	30	52	105	171	383	661	-	-	-
50	1	74	141	242	529	925	1829	3306	-
	5	83	171	282	617	1058	2116	3813	7936
	10	97	193	317	705	1212	2402	4320	8818
	20	114	228	379	837	1432	2843	5070	10581
	30	105	207	343	749	1300	2601	4629	9700
	40	79	158	264	573	1014	1851	3350	6834
	45	57	114	189	414	705	-	-	-
60	1	74	150	246	529	925	1851	3328	-
	5	88	176	295	639	1102	2204	3990	8156
	10	101	246	335	749	1278	2535	4629	9479
	20	127	251	414	903	1565	3130	5731	11684
	30	132	260	432	947	1631	3262	5952	11904
	45	105	211	348	749	1300	2557	4629	9479
	50	88	176	291	639	1102	-	-	-
80	1	83	163	268	595	1036	2050	3703	-
	5	92	189	308	683	1168	2336	4210	8818
	10	110	220	357	793	1366	2733	4850	10140
	20	141	277	462	1014	1741	3483	6172	12786
	35	167	334	551	1212	2094	4188	7495	15431
	50	154	308	507	1124	1917	3857	6834	14329
	65	119	233	388	837	1455	2711	4850	10140
	70	97	198	326	705	1234	-	-	-
100	1	88	176	291	639	1102	2204	3924	-
	5	101	198	330	727	1234	2491	4409	9259
	10	114	229	388	859	1477	2932	5290	10802
	25	149	295	485	1080	1851	3703	6613	13668
	35	185	374	617	1366	2336	4629	8377	17195
	50	202	405	661	1477	2535	5070	9038	18738
	70	176	352	573	1278	2204	4409	7936	16313
	85	136	264	440	970	1675	3042	5511	11684
	90	110	224	370	815	1388	-	-	-
120	5	110	220	361	793	1366	2733	4850	-
	10	127	251	418	925	1587	3152	5731	11684
	20	154	308	507	1124	1940	3880	7054	14329
	30	185	409	595	1322	2292	4629	8156	16975
	50	229	462	771	1675	2887	5731	10361	21384
	75	220	440	727	1609	2755	5511	9920	20502
	105	149	295	485	1080	1851	3086	5511	11463
	110	123	242	396	881	1521	-	-	-

Discharge Capacity Chart (PRV-100 T & PRV-100 F) Saturated Steam (kg/hr)

Quick Sizing for Pressure Reducing Valve

Inlet Pr. [PSIG]	Outlet Pr. [PSIG]			Nominal Valve Size (mm)					
		15	20	25	40	50	80	100	150
Valve CV		5	6.5	10	18.5	32	70	108	250
150	1	88	176	291	639	1102	2204	3924	-
	5	110	220	365	793	1388	2755	5070	-
	10	132	268	440	970	1675	3306	5952	12345
	15	149	340	485	1080	1851	3703	6613	13668
	25	180	365	595	1300	2248	4409	8156	16754
	50	255	510	815	1807	3130	6172	11243	23147
	75	291	575	970	2116	3637	7275	13006	26895
	100	264	530	881	1917	3306	6613	11904	24250
	120	220	440	727	1609	2755	5290	9479	19400
	135	167	340	551	1234	2116	3483	6172	12786
	140	136	285	462	1014	1741	-	-	-
180	10	141	285	462	1014	1763	3350	6393	-
	25	189	380	617	1366	2358	4629	8597	17415
	50	268	530	881	1940	3350	6613	12125	24911
	75	326	660	1080	2358	4078	8156	14550	30202
	100	343	685	1146	2491	4298	8597	15431	31745
	120	313	620	1036	2270	3902	7936	14109	28879
	150	242	485	793	1741	2998	5511	10581	21604
	165	180	360	595	1300	2226	3615	6834	14109
200	10	141	321	485	1036	1807	3615	6393	-
	25	202	396	661	1432	2469	4850	8818	18297
	50	273	595	903	1984	3417	6834	12345	25131
	75	339	685	1124	2469	4012	8597	15431	31525
	100	379	750	1256	2755	4850	9479	16975	35098
	120	365	730	1212	2667	4629	9259	16534	33950
	150	317	640	1036	2270	3924	7936	14109	29100
	185	189	380	617	1366	2380	3791	7275	14770
250	15	167	334	551	1212	2116	4188	7583	-
	50	299	595	992	2182	3747	6850	13447	27777
	75	365	725	1212	2645	4629	9126	16313	33729
	100	427	858	1410	3086	5290	10581	19179	39240
	150	462	902	1499	3284	5731	11243	20502	42988
	175	414	836	1366	3020	5290	10361	18738	38579
	200	361	725	1190	2601	4409	8818	16093	32406
	220	291	572	947	2094	3637	6393	11463	26013
	235	207	409	683	1499	2579	4100	7230	14770
300	20	189	378	617	1366	2358	-	-	-
	50	313	616	1036	2248	3880	7715	13888	-
	75	388	770	1278	2821	4850	9700	17415	35934
	100	462	925	1565	3350	5731	11463	20722	42547
	150	551	1100	1807	3990	6834	13668	24690	50704
	175	551	1100	1807	3990	6834	13668	24690	50704
	200	507	1035	1697	3747	6393	12786	23147	47618
	220	462	946	1565	3417	5952	11904	21163	43650
	250	401	792	1322	2910	5070	9479	16975	34831
	285	238	484	793	1741	2976	4188	7715	15872
350	40	282	572	925	2028	3549			-
	90	440	880	1477	3218	6393	11022	19840	-
	120	529	1055	1763	3880	6613	13447	24911	49381
	150	595	1188	1984	4342	7495	14990	26895	55554
	180	639	1275	2116	4629	8156	16093	28879	59522
	210	639	1254	2094	4629	7936	15872	28218	58200
	240	595	1188	1962	4298	7495	14770	26675	54672
	270	529	1055	1741	3835	6613	13227	23588	48500
	300	436	880	1455	3174	5511	10140	18297	37477

Consult Factory for detail sizing calculation for any specific inlet & outlet pressure requirement

Note :- 15mm & 20mm Size Only For Model No. PRV-100-T.

Bri-Con®

Roboter Operated Pressure Reducing Valve

RCV-100

Product description:

Globe Type, Single Seated, Top & Bottom Guided, Single Spring & Diaphragm Actuated, Roboter Operated Pressure Reducing Valve

Design:

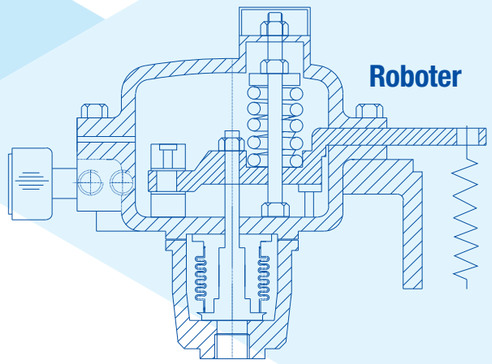
- Roboter operated pressure reducing valve is high in demand where accurate down stream pressure control is required with high flow
- Top & Bottom guided design for high stability and accurate pressure control

Features:

- Top & Bottom guiding provides maximum support to the plug for it's stability and eliminates the side thrust effect of pressure drop across the plug.
- This valves are designed to control fluid flow at high pressure
- This valves does not require external Instrumentation or Electrical signal
- Accurate down stream pressure control with high flow rate
- Turn down ratio for pressure is 20: 1

Technical Specifications

Size Range	25 mm to 150 mm
Pressure Rating	150# to 600# / BS 10 Table H
Facing	Raise Face (R.F) , Flat Face (F.F)
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel.
Trims	CF8 / 8M / SS 304 / 316
Characteristics	Linear / Equal% / Quick Open
Outlet Pressure	up to 14 kg / cm^2
End Connection	Flange End / Butt Welded

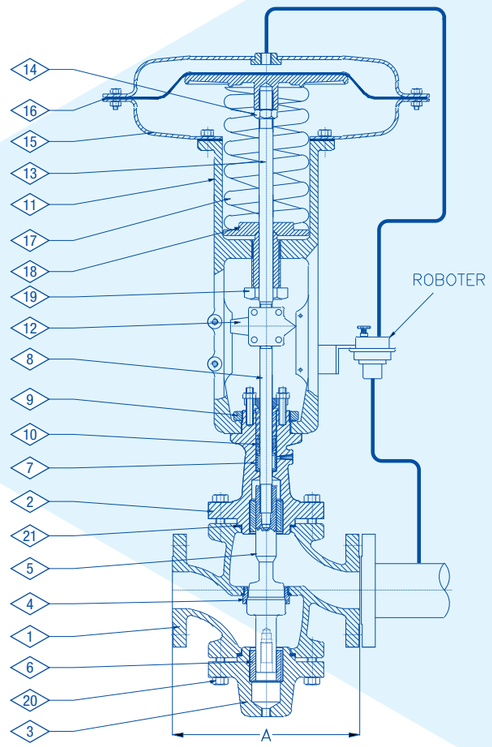


Roboter Pressure Range

Outlet Pressure Range	Bellows Type
0.5 - 2.0 kg/cm^2	A
2.0 - 8.0 kg/cm^2	B
8.0 - 14 kg/cm^2	C

Application:

Bri-Con Roboter operated pressure reducing valve can be used for many Industrial application where reducing pressure of steam, gases and other fluids to be kept constant with high flow.



Dimensions (mm)

150#		300#		600#	
SIZE	A ±2.0	SIZE	A ±2.0	SIZE	A ±2.0
25	184	25	196	25	209
40	222	40	234	40	250
50	254	50	266	50	285
65	276	65	292	65	311
80	298	80	317	80	336
100	352	100	368	100	393
150	451	150	473	150	508

Valve Cv Chart

SIZE	Cv (GPM)		
	Equal%	Linear	Quick Open
25 mm	13.9	16.8	16.3
40 mm	30.4	30.2	30.9
50 mm	55.2	55.4	58.7
65 mm	77.0	76.0	82.8
80 mm	102.0	118.0	120.0
100 mm	170.0	166.0	155.0
150 mm	372.0	377.0	369.0

Material Specifications

SR.NO.	Part Name	Material
1	Body	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
2	Top Bonnet	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
3	Bottom Bonnet	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
4	Seat Ring	SS 304 / SS 316 / CF8 / 8M
5	Plug	SS 304 / SS 316
6	Guide Bush	SS 410
7	Spring (Bonnet)	SS 302
8	Lower Stem	SS 304 / SS 316
9	Lock Nut	Mild Steel
10	Gland Packing	Grafoil Ring
11	Yoke	S.G. Iron
12	Connector	ASTM A 216 GR. WCB
13	Upper Stem	SS 304 / SS 316
14	Upper Stem Nut	SS 304 / SS 316
15	Casing	Press Steel
16	Diaphragm	Buna-N Rubber with Nylon Rainforce
17	Actuator Spring	Carbon Steel
18	Spring Washer	Mild Steel
19	Adjusting Screw	Mild Steel
20	Fastners	ASTM A 193 GR. B7 / 2H
21	Gasket	Aramid Fiber (Non-Asbestos)

Standards Followed

ASME B16.34	Pressure Temperature Rating
ANSI B 16.5	Flange Dimension
ASTM	Material Selection
ISA – S75.01	Control Valve Sizing
ISA – S75.02	Flow Capacity Test
ISA – S75.03/ ISA – S75.15	Face to Face Dimension
API 598	Testing Standards
FCI 70.2	Control Valve Leak Test

Accessories :

- Air Filter Regulator [AFR]
- Extended / Finned bonnet
- Bellows Seal
- Manual Override : Hand wheel

Ordering / Sizing Information:

- Fluid / State
- Flow Rate
- Inlet Pressure
- Outlet Pressure
- Operating Temperature
- End Connection

Bri-Con®

Pneumatic / Motorized Operated Pressure Reducing Valve

PCV-100

Technical Specifications

Size Range	25 mm to 150 mm
Pressure Rating	150# to 600# / BS 10 Table H
Facing	Raise Face (R.F) , Flat Face (F.F)
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel.
Trims	CF8 / 8M / SS 304 / 316
Characteristics	Linear / Equal% / Quick Open
End Connection	Flange End / Butt Welded

Application:

Bri-Con Pneumatic / Motorized operated pressure reducing valve can be used for many Industrial application where reducing high pressure of steam, gases and other fluids to be kept constant with high pressure & high flow.

Product description:

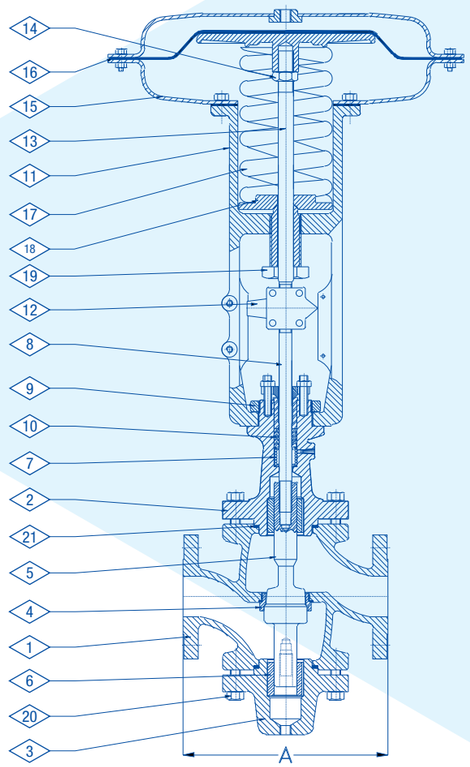
Globe Type, Single Seated, Top & Bottom Guided, Single Spring & Diaphragm Actuated, Pneumatic / Motorized Operated Pressure Reducing Valve

Design:

- PCV-100 series Pneumatic / Motorized operated pressure reducing valve is high in demand where accurate down stream high pressure control with high flow is required.
- Top & Bottom guided design for high stability & accurate pressure control
- Cage guided design is offered for high-pressure requirement.

Features:

- Top & Bottom guiding provides maximum support to the plug for it's stability and eliminates the side thrust effect of pressure drop across the plug.
- This valves are designed to control fluid flow at high pressure
- Up stream & Down stream pressure control for Air / Gas / Steam / Liquid.
- This design provides tight shutoff capability for such processes.



Dimensions (mm)

150#

SIZE	A ±2.0
25	184
40	222
50	254
65	276
80	298
100	352
150	451

300#

SIZE	A ±2.0
25	196
40	234
50	266
65	292
80	317
100	368
150	473

600#

SIZE	A ±2.0
25	209
40	250
50	285
65	311
80	336
100	393
150	508

Valve Cv Chart

SIZE	Cv (GPM)		
	Equal%	Linear	Quick Open
25 mm	13.9	16.8	16.3
40 mm	30.4	30.2	30.9
50 mm	55.2	55.4	58.7
65 mm	77.0	76.0	82.8
80 mm	102.0	118.0	120.0
100 mm	170.0	166.0	155.0
150 mm	372.0	377.0	369.0

Material Specifications

SR.NO.	Part Name	Material
1	Body	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
2	Top Bonnet	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
3	Bottom Bonnet	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
4	Seat Ring	SS 304 / SS 316 / CF8 / 8M
5	Plug	SS 304 / SS 316
6	Guide Bush	SS 410
7	Spring (Bonnet)	SS 302
8	Lower Stem	SS 304 / SS 316
9	Lock Nut	Mild Steel
10	Gland Packing	Grafoil Ring
11	Yoke	S.G. IRON
12	Connector	ASTM A 216 GR. WCB
13	Upper Stem	SS 304 / SS 316
14	Upper Stem Nut	SS 304 / SS 316
15	Casing	Press Steel
16	Diaphragm	Buna-N Rubber with Nylon Rainforce
17	Actuator Spring	Carbon Steel
18	Spring Washer	Mild Steel
19	Adjusting Screw	Mild Steel
20	Fastners	ASTM A 193 GR. B7 / 2H
21	Gasket	SS 316 Spiral wound with Graphite Filler

Standards Followed

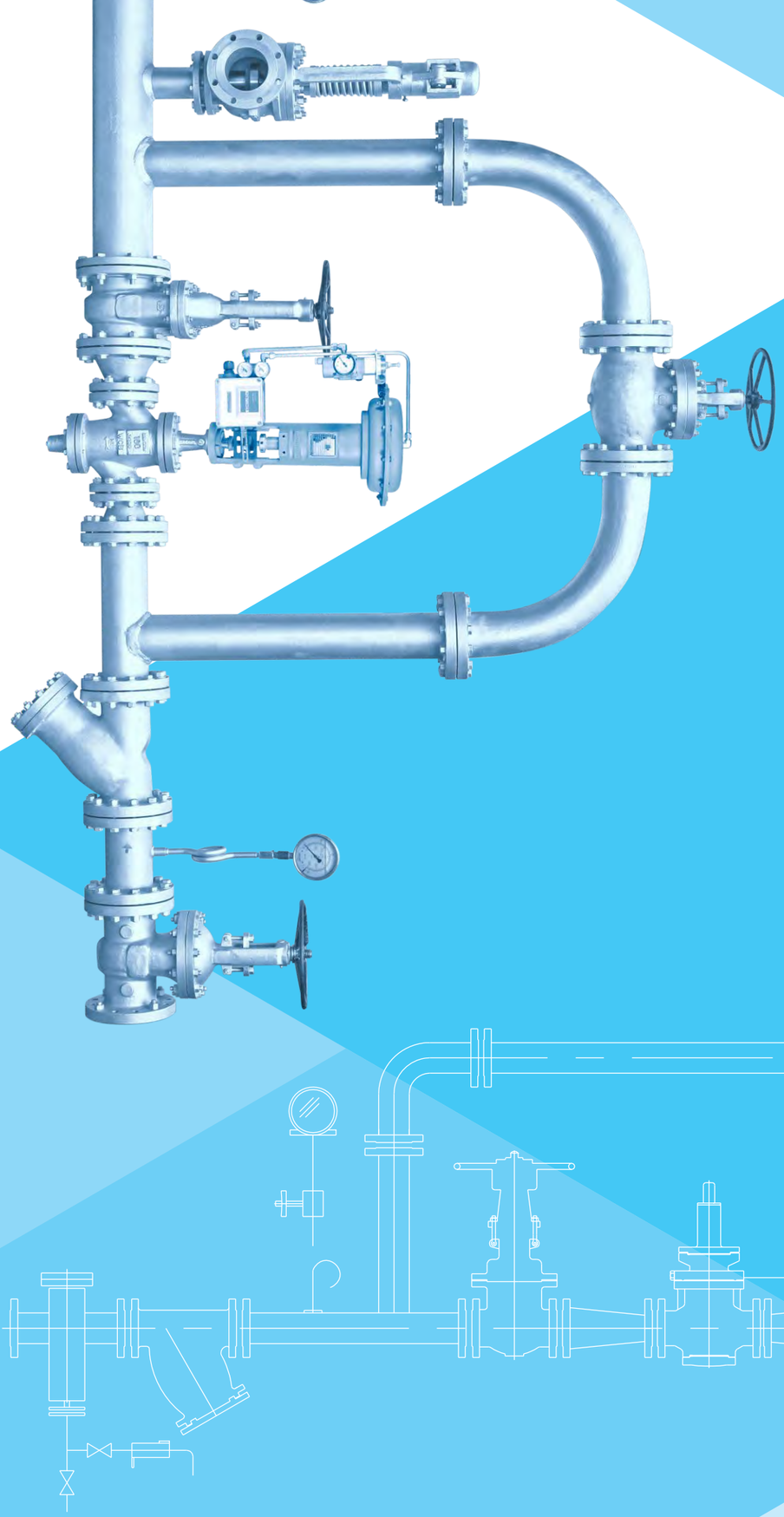
ASME B16.34	Pressure Temperature Rating
ANSI B 16.5	Flange Dimension
ASTM	Material Selection
ISA – S75.01	Control Valve Sizing
ISA – S75.02	Flow Capacity Test
ISA – S75.03/ ISA – S75.15	Face to Face Dimension
API 598	Testing Standards
FCI 70.2	Control Valve Leak Test

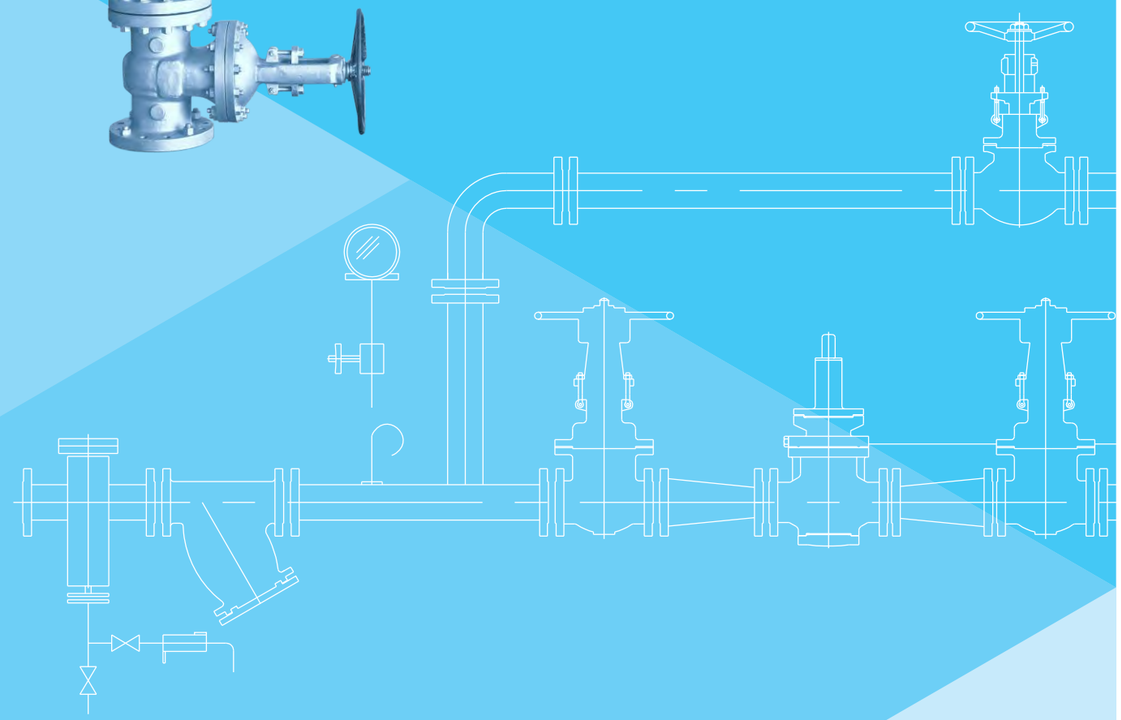
Accessories :

- Pressure Transmitter
- P.I.D. Controller
- Air Filter Regulator (AFR)
- Positioner
- Quick Exhaust
- Volume Booster
- Extended / Finned Bonnet
- Bellows Seal
- Hand Wheel

Ordering / Sizing Information:

- Fluid / State
- Flow Rate
- Inlet Pressure
- Outlet Pressure
- Operating Temperature
- End Connection
- Fail Position





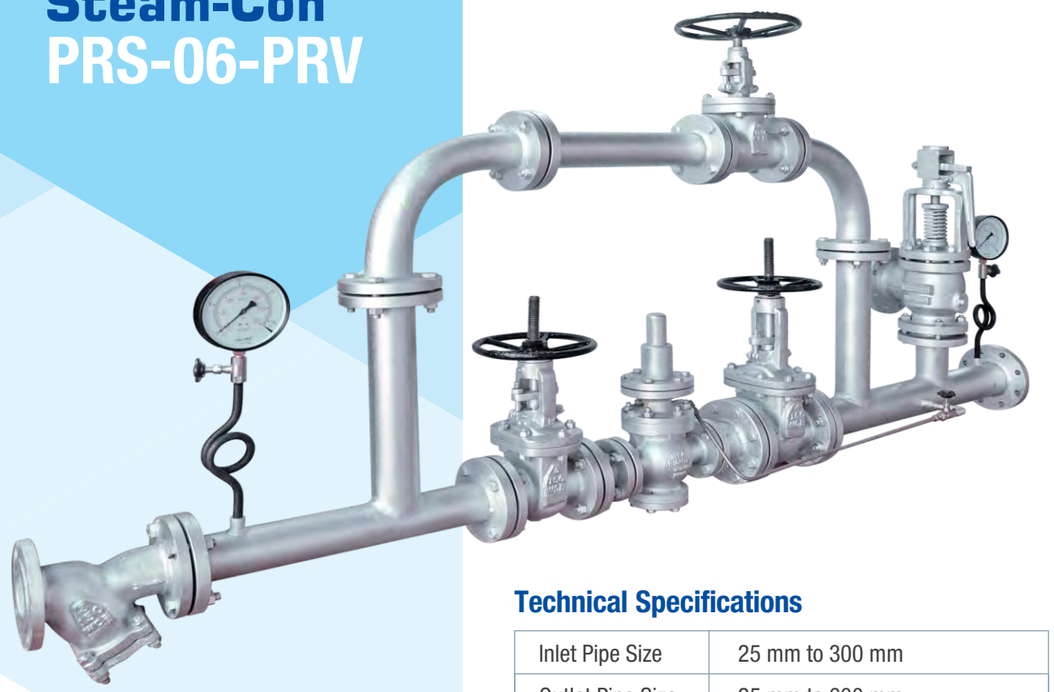
Pressure Reducing & Desuperheating Station (PRDS)

- PRS-06-PRV
- PRS-06-PCV
- PRS-06-RO
- PRS-06-DSH
- DSH Series

UNIQUE QUALITIES

- Completely customized design and manufactured to suit typical process plant pressure temperature requirement.
- Selection of main pressure reducing valve based on technical suitability. [having three different types of design available]
- Steam Separator with drain assembly and Strainer are provided at the inlet side for better steam quality and trouble-free operation of PRV.
- Correct sizing selection of valves & piping system for the given parameters with advance sizing selection software for accurate controlled performance.
- Separate or combined systems based on technical feasibility.
- Multistage pressure reduction to bring down noise level to accepted norms.
- Various designs of De-super heaters to get turn down up to 40:1.
- Correct selection of material & treatment for longer life of trims and internals.
- Superior Quality of finished components and best workmanship.
- Provision of standby pressure reduction & Desuperheating system during main PRDS system is under shutdown.
- Temperature reduction up to saturation + 5^0 C.
- Multistep trim realizes sub critical pressure reduction for all stages.
- The design assure controlled water injection with the controlled movement of the trim
- Ease of Maintenance – Pressure reducing & Desuperheating control valve can be service online without removing from line.
- Provided with all accessories [optional] and Microprocessor based control instrumentation.

Steam-Con
PRS-06-PRV



Technical Specifications

Inlet Pipe Size	25 mm to 300 mm
Outlet Pipe Size	25 mm to 600 mm
Pressure Rating	150 # & 300#
Material	Carbon Steel / Alloy Steel
End Connection	Flanged End

Product description:

Complete Pressure Reducing Station / System (PRS) consisting of

- Steam Separator with drain assembly.
- " Y" type Strainer
- Pressure Reducing Valve- Self Actuating- Mechanical Type
- Safety Valve -Angle Discharge, Spring Loaded, Full Lift, Conventional type.
- Isolation Valve (Gate valve / Piston valve) OS & Y type, H / W Operated, for Inlet, Outlet & By Pass valve (Globe valve / Piston valve)
- Pressure gauge with Syphon cock for Inlet & Outlet Pressure Reading

completely fabricated with Seamless pipes, fittings and flanges with bypass line dully assembled / testing & certified with IBR form III-A

Material Specifications

SR.NO.	Part Name	QTY.	Material
1	Steam Saperator	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
2	Strainer	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
3	Gate / Piston Valve-Inlet	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
4	Reducer / Distance Piece	1	A 234 Gr. WPB/A 106 Gr.B/ASTM A335P11
5	Pressure Reducing Valve (Self Actuating Mechanical Type)	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
6	Expander / Distance	1	A 234 Gr. WPB / A 106 Gr. B/ASTM A335 P11
7	Gate / Piston Valve-Outlet	1	ASTM A216 Gr. WCB / ASTM A 217 GR WC6 / WC9
8	Globe / Piston Valve-Bypass	1	ASTM A216 Gr. WCB / ASTM A 217 GR WC6 / WC9
9	Safety Valve	1	ASTM A216 Gr. WCB / ASTM A 217 GR WC6 / WC9
10	Pressure Gauge	2	Standard
11	Inlet Pipe	1	A 106 Gr. B/ASTM A335 P11
12	Outlet Pipe	1	A 106 Gr. B/ASTM A335 P11
13	Bypass Pipe	1	A 106 Gr. B/ASTM A335 P11
14	Bend	2	A 234 Gr. WPB
15	Drain Assly	1 Set	F.S / CA 40

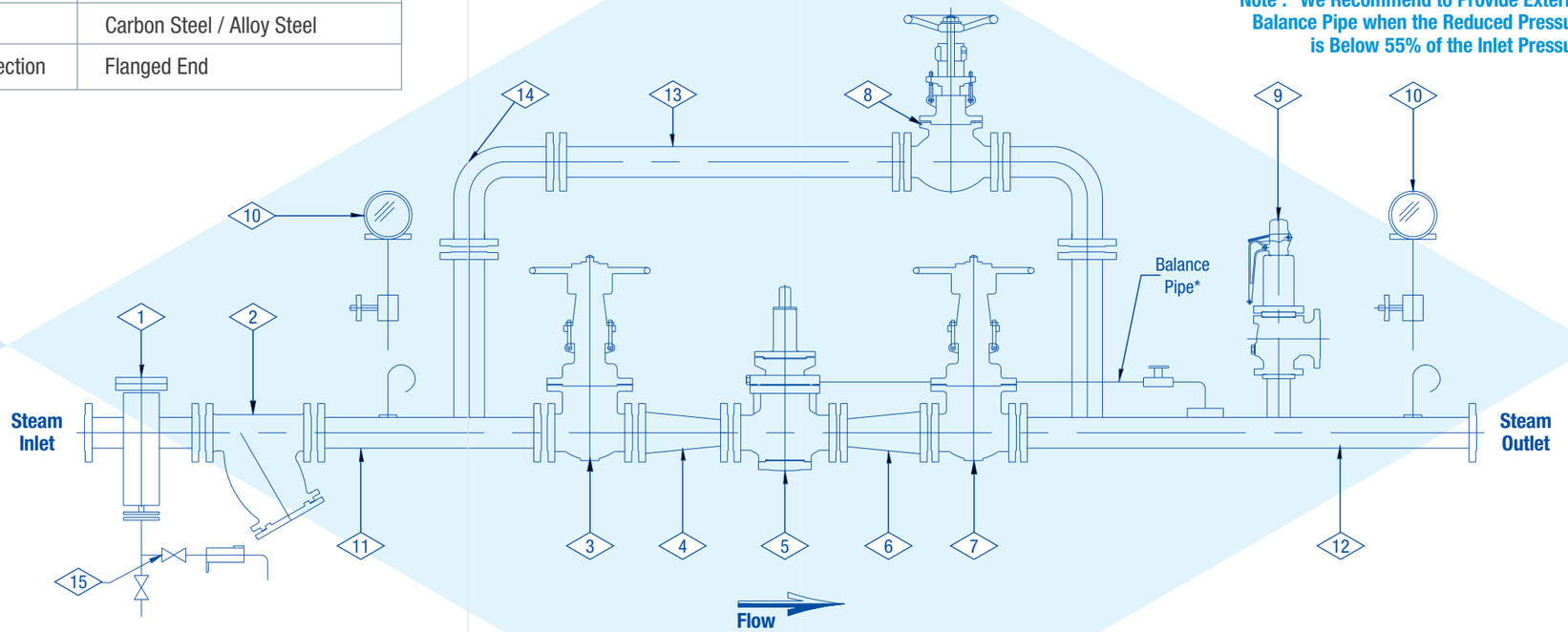
Features:

- All Inlet & Outlet Isolation, bypass Valves [Gate / Globe / Piston], PRV, SRV, Strainers, Separator are in house manufacturing products.
- All Piping / SRV / PRV are correctly Sized with Sizing Selection Programme for Accurate Controlled Performance.
- Complete PRS is in house Fabricated with high skill IBR approved welder with seamless pipes, fittings and flanges with bypass line dully assembled and finally tested and certified with IBR form III-A.
- Hydro Testing of PRS and Final Pressure setting is done with air before dispatch.

Application:

- PRS for process heating applications in sugar, food, textile, paper, chemical, pharma etc.
- Deaerator, Ejector PRS for boiler
- Turbine bypass / Exahust / Bleed PRS

Note : *We Recommend to Provide External Balance Pipe when the Reduced Pressure is Below 55% of the Inlet Pressure

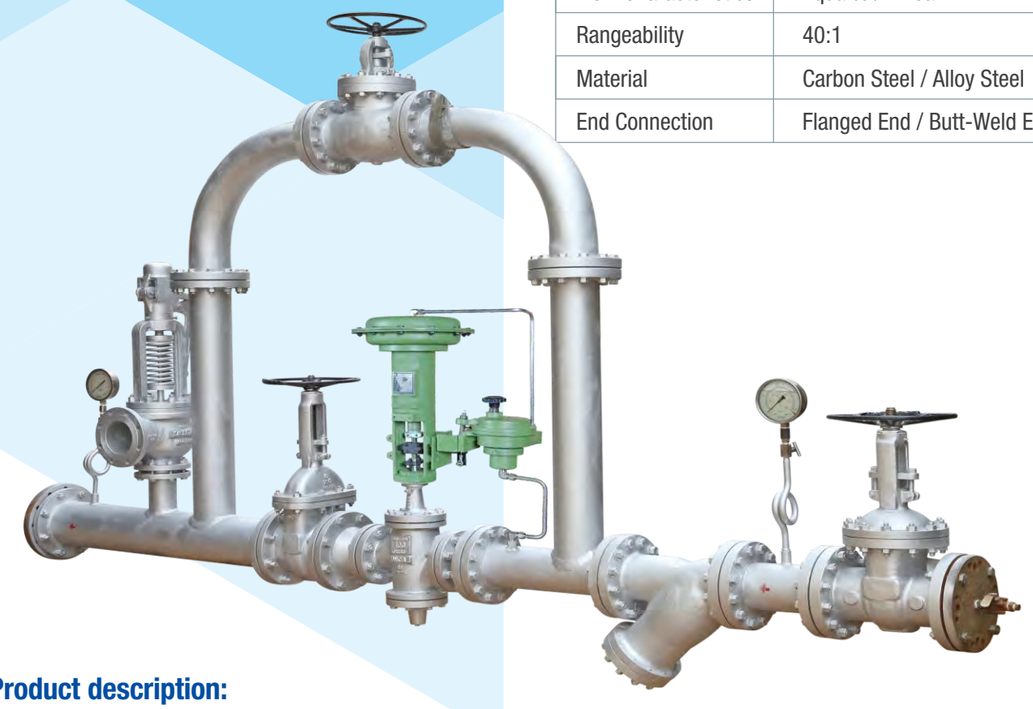


Ordering / Sizing Information:

- Steam Flow Rate
- Steam Inlet Pressure , Kg/cm^2
- Steam Outlet Pressure in Kg./cm^2
- Steam Inlet temperature in Deg. C

Pressure Reducing Station (PRS) with Self Actuating (Mechanical Type) Pressure Reducing Valve (PRV)

Steam-Con
PRS-06-RCV



Technical Specifications

Inlet Pipe Size	25 mm to 300 mm
Outlet Pipe Size	25 mm to 600 mm
Pressure Rating	150 # & 300#
Flow Characteristics	Equal% / Linear
Rangeability	40:1
Material	Carbon Steel / Alloy Steel
End Connection	Flanged End / Butt-Weld End

Material Specifications

SR.NO.	Part Name	QTY.	Material
1	Steam Saperator	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
2	Strainer	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
3	Gate / Piston Valve-Inlet	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
4	Reducer / Distance Piece	1	A 234 Gr. WPB/A 106 Gr.B/ASTM A335P11
5	Pressure Reducing Valve (Roboter Type)	1	ASTM A216 Gr. WCB / ASTM A217 GR WC6 / WC9
6	Expander / Distance	1	A 234 Gr. WPB / A 106 Gr. B/ASTM A335 P11
7	Gate / Piston Valve-Outlet	1	ASTM A216 Gr. WCB / ASTM A 217 GR WC6 / WC9
8	Globe / Piston Valve-Bypass	1	ASTM A216 Gr. WCB / ASTM A 217 GR WC6 / WC9
9	Safety Valve	1	ASTM A216 Gr. WCB / ASTM A 217 GR WC6 / WC9
10	Pressure Gauge	2	Standard
11	Inlet Pipe	1	A 106 Gr. B/ASTM A335 P11
12	Outlet Pipe	1	A 106 Gr. B/ASTM A335 P11
13	Bypass Pipe	1	A 106 Gr. B/ASTM A335 P11
14	Bend	2	A 234 Gr. WPB
15	Drain Assly	1 Set	F.S / CA 40

Features:

- All Inlet & Outlet Isolation, bypass Valves [Gate / Globe / Piston], PRV, SRV, Strainers, Separator are in house manufacturing products.
- All Piping / SRV / PRV are correctly Sized with Sizing Selection Programme for Accurate Controlled Performance.
- Complete PRS is in house Fabricated with high skill IBR approved welder with seamless pipes, fittings and flanges with bypass line dully assembled and finally tested and certified with IBR form III-A.
- Hydro Testing of PRS and Final Pressure setting is done with air before dispatch.

Application:

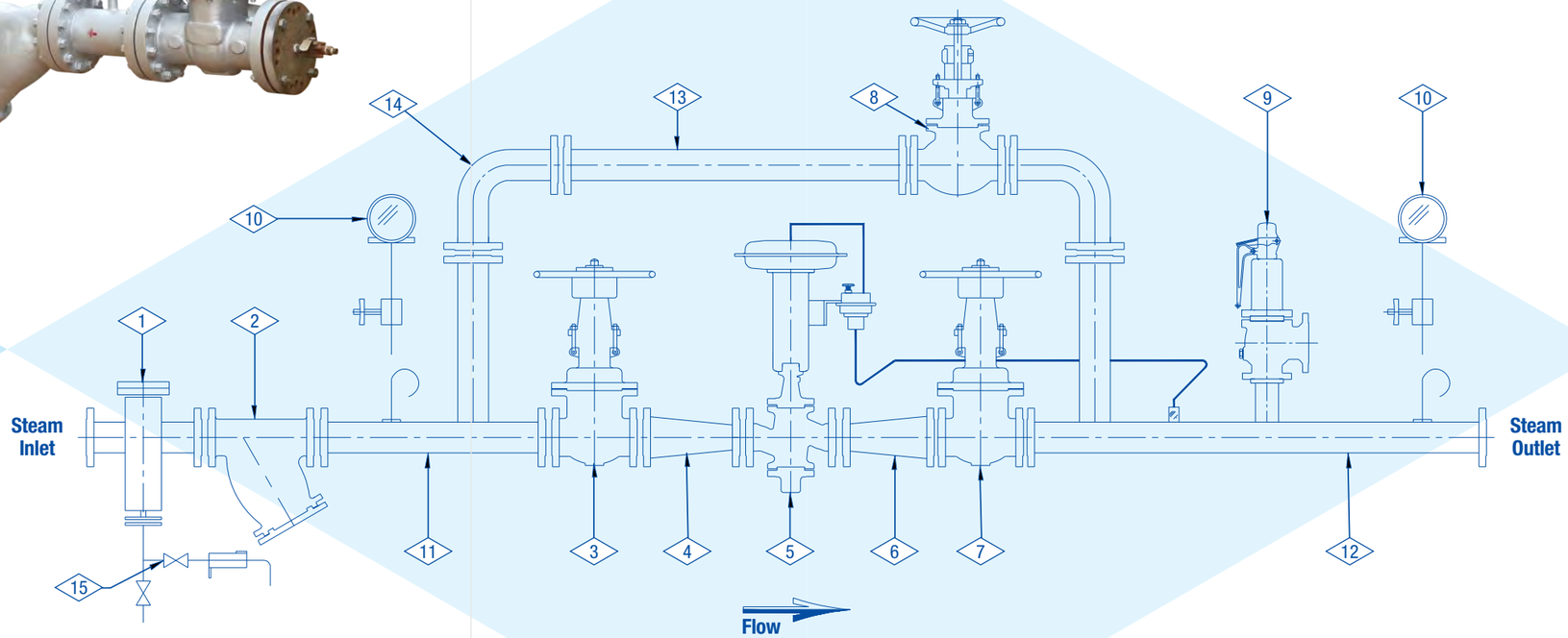
- PRS for process heating applications in sugar, food, textile, paper, chemical, pharma etc.
- Deaerator, Ejector PRS for boiler
- Turbine bypass / Exahust / Bleed PRS

Product description:

Complete Pressure Reducing Station / System (PRS) consisting of

- Steam Separator with drain assembly.
- " Y" type Strainer
- Pressure Reducing Valve-Roboter Operated
- Safety Valve-Angle Discharge, Spring Loaded, Full Lift, Conventional type.
- Isolation Valve (Gate valve / Piston valve) OS & Y type, H / W Operated, for Inlet, Outlet & By Pass valve (Globe valve / Piston valve)
- Pressure gauge with Syphon cock for Inlet & Outlet Pressure Reading

completely fabricated with Seamless pipes , fittings and flanges with bypass line dully assembled / testing & certified with IBR form III-A

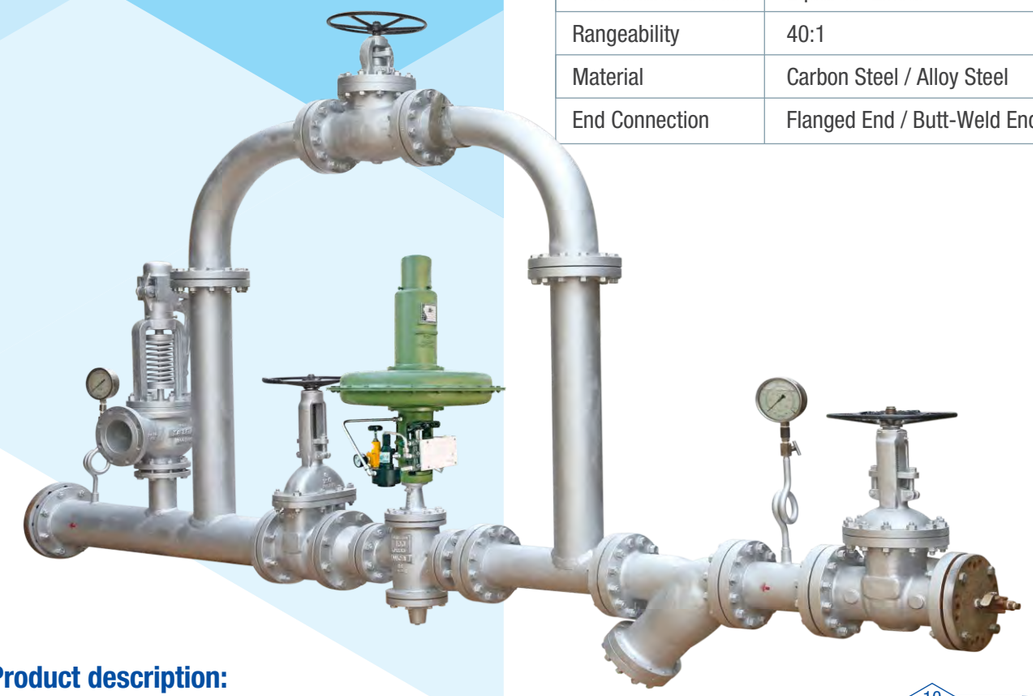


Ordering / Sizing Information:

- Steam Flow Rate
- Steam Inlet Pressure , Kg/cm^2
- Steam Outlet Pressure in Kg./cm^2
- Steam Inlet temperature in Deg. C

Pressure Reducing Station (PRS) with Roboter Operated Pressure Reducing Valve (PRV)

Steam-Con
PRS-06-PCV



Technical Specifications

Inlet Pipe Size	25 mm to 300 mm
Outlet Pipe Size	25 mm to 600 mm
Pressure Rating	150 #, 300# , 600#, 900#, 1500#
Flow Characteristics	Equal% / Linear
Rangeability	40:1
Material	Carbon Steel / Alloy Steel
End Connection	Flanged End / Butt-Weld End

Material Specifications

SR.NO.	Part Name	QTY.	Material
1	Steam Saperator	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / Wc9
2	Strainer	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / Wc9
3	Gate / Piston Valve-Inlet	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / Wc9
4	Reducer / Distance Piece	1	A 234 Gr. WPB/A 106 Gr.B/ASTM A335P11
5	Pneumatic Control Valve	1	ASTM A216 Gr. WCB/ASTM A217 GR WC6/WC9
6	Expander / Distance Piece	1	A 234 Gr. WPB / A 106 Gr. B/ASTM A335 P11
7	Gate / Piston Valve-Outlet	1	ASTM A216 Gr. WCB/ASTM A 217 GR WC6/WC9
8	Globe / Piston Valve-Bypass	1	ASTM A216 Gr. WCB/ASTM A 217 GR WC6/WC9
9	Safety Valve	1	ASTM A216 Gr. WCB/ASTM A 217 GR WC6/WC9
10	PR. Gauge with Needle Valve & Siphon Cock	2	Standard
11	Inlet Pipe	1	A 106 Gr. B/ASTM A335 P11
12	Outlet Pipe	1	A 106 Gr. B/ASTM A335 P11
13	Bypass Pipe	1	A 106 Gr. B/ASTM A335 P11
14	Bend	2	A 234 Gr. WPB
15	Drain Assly	1 Set	F.S / CA 40
16	Isolation Valve (FGLV)	1	ASTM A 105 /ASTM A182 F11

Features:

- All Inlet & Outlet Isolation, bypass Valves [Gate / Globe / Piston], PRV, SRV, Strainers, Separator are in house manufacturing products.
- All Piping / SRV / PRV are correctly Sized with Sizing Selection Programme for Accurate Controlled Performance.
- Complete PRS is in house Fabricated with high skill IBR approved welder with seamless pipes, fittings and flanges with bypass line dully assembled and finally tested and certified with IBR form III-A.
- Hydro Testing of PRS and Final Pressure setting is done with air before dispatch.

Application:

- PRS for process heating applications in sugar, food, textile, paper, chemical, pharma etc.
- Deaerator, Ejector PRS for boiler
- Turbine bypass / Exahust / Bleed PRS

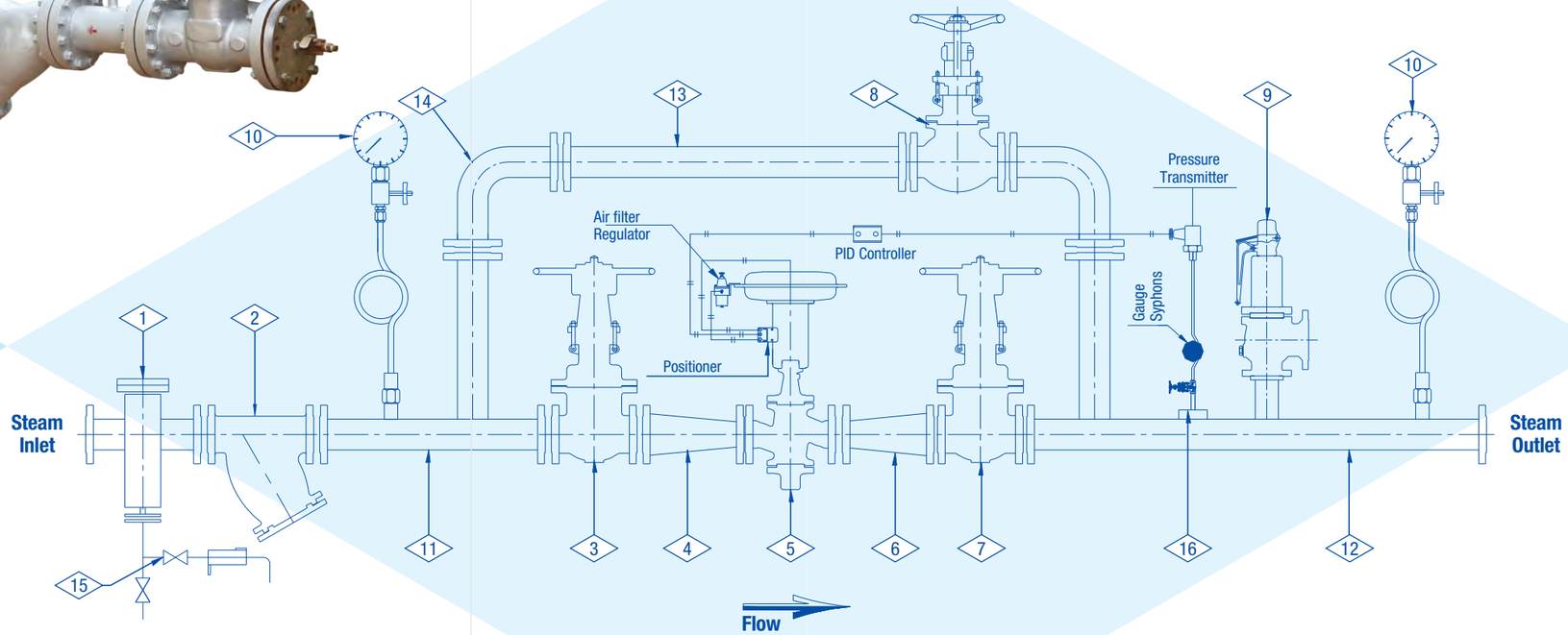
Product description:

Complete Pressure Reducing Station / System (PRS) consisting of

- Steam Separator with drain assembly.
- " Y" type Strainer
- Pressure Reducing Valve (Pneumatic / Motorized Type)
- Safety Valve-Angle Discharge, Spring Loaded, Full Lift, Conventional type.
- Isolation Valve (Gate valve / Piston valve) OS & Y type, H / W Operated, for Inlet, Outlet & By Pass valve (Globe valve / Piston valve)
- Pressure gauge with Syphon cock for Inlet & Outlet Pressure Reading
- Accessories (optional)

  * Pressure Transmitter * P.I.D. Controller

completely fabricated with Seamless pipes , fittings and flanges with bypass line dully assembled / testing & certified with IBR form III-A



Ordering / Sizing Information:

- Steam Flow Rate
- Steam Inlet Pressure , Kg/cm^2
- Steam Outlet Pressure in Kg./cm^2
- Steam Inlet temperature in Deg. C .

Pressure Reducing Station (PRS) with Pneumatic / Motorized Operated Pressure Reducing Valve (PRV)

Steam-Con
PRS-06-DSH

Product description:

Complete Pressure Reducing &
De-Superheating Station (PRDS) consisting of

- Pressure Reducing Valve – (Self Actuating / Pneumatic / Motorized Type)
- Safety Valve-Angle Discharge, Spring Loaded, Full Lift, Conventional type.
- Isolation Valve (Gate valve / Piston valve) -OS & Y type, H / W Operated, for Inlet, Outlet & By Pass valve (Globe valve / Piston valve)
- Pressure gauge with Syphon cock for Inlet & Outlet Pressure Reading
- De-Superheating station / system

completely fabricated with seamless pipes, fittings and flanges with bypass line dully assembled / testing & certified with IBR form III-A

Technical Specifications

	PRS	DSH
Inlet Pipe Size	25 mm to 300 mm	25 mm to 80 mm
Outlet Pipe Size	25 mm to 600 mm	25 mm to 80 mm
Pressure Rating	150 #, 300# , 600#, 900#, 1500#	150#, 300#, 600#
Flow Characteristics	Equal% / Linear	Equal% / Linear
Rangeability	40:1	40:1
Material	Carbon Steel / Alloy Steel	Carbon Steel / Alloy Steel
End Connection	Flanged End / Butt-Weld End	Flanged End

Application:

- PRDS for process heating applications in sugar, food, textile, paper, chemical, pharma etc.
- Deaerator, Ejector PRDS for boiler
- Turbine bypass / Exahust / Bleed PRDS

Material Specifications

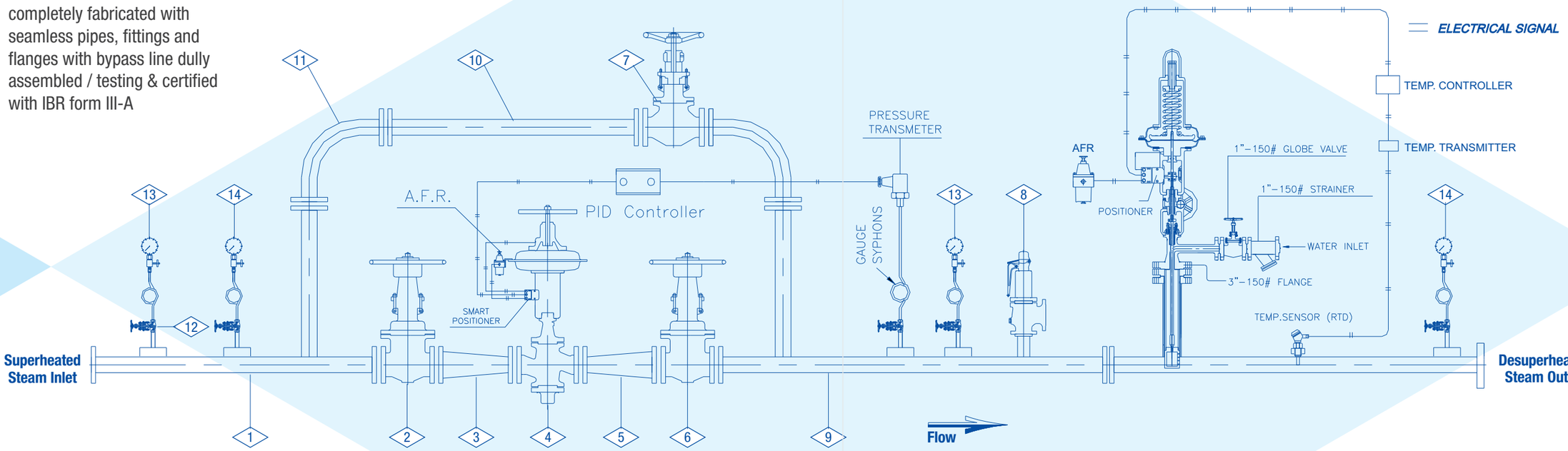
SR.NO.	Part Name	QTY.	Material
1	Inlet Pipe	1	A 106 Gr.B/ASTM A335 P11
2	Gate / Piston Valve-Inlet	1	ASTM A216 GR. WCB / ASTM A217 GR WC6 / Wc9
3	Reducer / Distance Piece	1	A 234 Gr. WPB/A 106 Gr.B/ASTM A335 P11
4	Pressure Control Valve	1	ASTM A 216 Gr. WCB/ ASTM A 217 GR WC6 / Wc9
5	Expander/Distance Piece	1	A 234 Gr. WPB/A 106 Gr.B/ASTM A335 P11
6	Gate / Piston Valve-Outlet	1	ASTM A 216 Gr. WCB/ ASTM A 217 GR WC6 / Wc9
7	Globe / Piston Valve-Bypass	1	ASTM A 216 Gr. WCB/ ASTM A 217 GR WC6/WC9
8	Safety Valve	1	ASTM A 216 Gr. WCB/ ASTM A 217 GR WC6/WC9
9	Outlet Pipe	1	A 106 Gr. B/ASTM A335 P11
10	Bypass Pipe	1	A 106 Gr. B/ASTM A335 P11
11	Bend	2	A 234 Gr. WPB
12	Isolation Valve (FGLV)	5	ASTM A 105 / ASTM A 182 F11
13	Pressure Gauge with Needle Valve & Syphon Cock	3	Standard
14	Pressure Gauge with Needle Valve & Syphon Cock	2	Standard

Features:

- All Inlet & Outlet Isolation, bypass Valves [Gate / Globe / Piston], PRV, Desuperheater Control Valve, SRV are in house manufacturing products.
- All Piping / SRV / PRV / DSH are correctly Sized with Sizing Selection Programme for Accurate Controlled Performance.
- Complete PRDS is in house Fabricated with high skill IBR approved welder with seamless pipes, fittings and flanges with bypass line dully assembled and finally tested and certified with IBR form III-A.
- Hydro Testing of PRDS and Final Pressure setting is done with air before dispatch.

Ordering / Sizing Information:

- Steam Flow Rate
- Steam Inlet Pressure, Kg/cm^2
- Steam Outlet Pressure in Kg./cm^2
- Steam Inlet temp. in Deg. C
- Steam Outlet temp. in Deg. C
- Spray Water
- Water Pressure in Kg./cm2
- Water Temperature in Deg. c

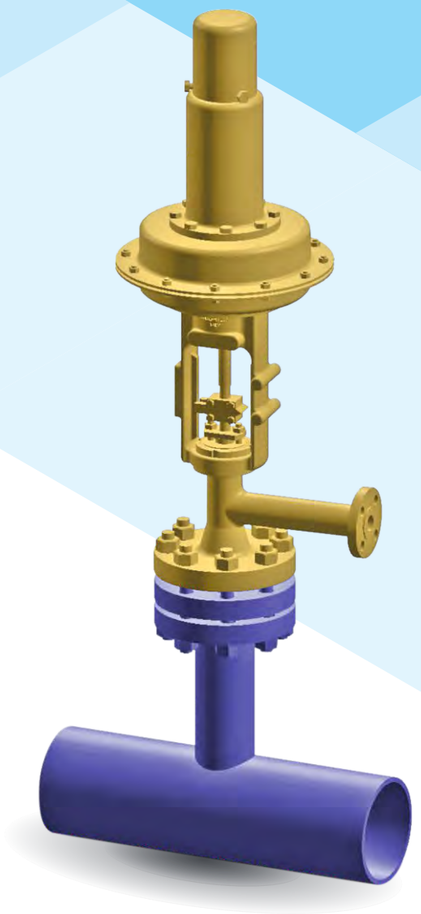


Pressure Reducing & De-Superheating Station (PRDS)

Bri-Con®

DE-SUPERHEATING CONTROL VALVES & STATIONS

DSH SERIES



Technical specification

Steam Line Size	25 mm to 400 mm NB
Connection Size	Steam Side Mounting Flange - 80 NB
Water Side Flange	25 mm , 40 mm NB
Pressure Rating	150# to 2500#
Body MOC	Carbon Steel / Alloy steel / Stainless Steel
Nozzle MOC	SS 316 (Stellited optional)
Actuator	Pneumatic / Electrical
Rangeability	40 : 1
End Connections	Flanged

Working Principle:

DSH series Desuperheater control valve reduces the superheated steam temperature by injecting cooling water in to it. Due to heat transfer principle the water absorb sufficient heat for vaporization to maintain temperature close to that of saturation.

The operation is quite simple , The spray water quantity is controlled with an external control valve. Spray nozzle which received the feedback / signals from controller and downstream temperature sensor. Temperature reduction occurs due to disperse of the minute water particle and atomizing steam counter to the flow of superheated steam , enabling the fine mist to be easily evaporated.

Performance & Design Features:

Fixed Nozzle type

- Used for application with near constant load
- Most simple & economical Desuperheater
- Capable of maintaining final temp. of 5^0 C
- Used when pressure difference between steam line and spray water is high.
- Maximum turndown 3:1

Venturi Nozzle type

- Compact & Economical in design.
- Difference between spray water and stem line is minimal
- Better mixing of spray water
- final temp. up to 6^0C of saturation
- Maximum turndown 10:1

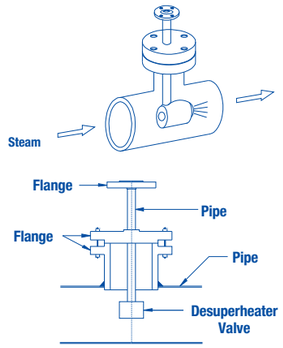
Variable type

- Best design among all de-superheater Valve
- Widely used for application with high load fluctuations
- High performance of spray nozzle assembly.
- Excellent down stream temp. control
- High turn down ration of 16:1

Application:

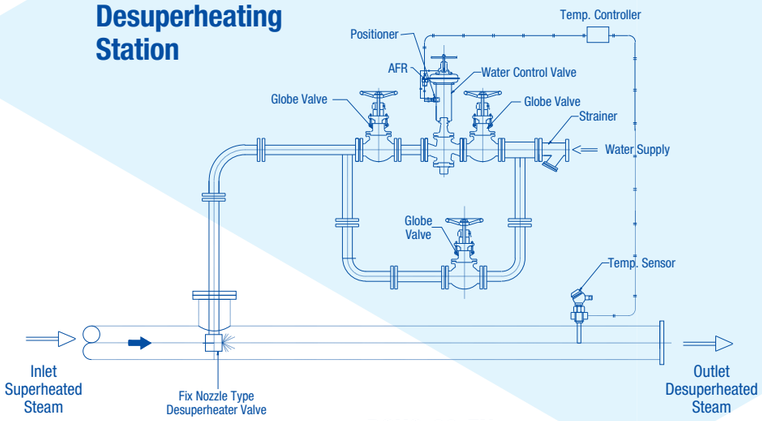
Mechanical atomizing type Desuperheaters are generally used to lowering the temperature of superheated steam to the required set point by injecting atomized water in to the superheated steam flow with spray Nozzle.

Fix Nozzle Type Desuperheater Valve



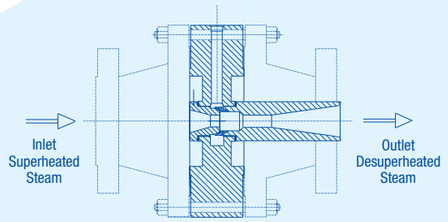
DSHV-99-FN

Fix Nozzle Type Desuperheating Station



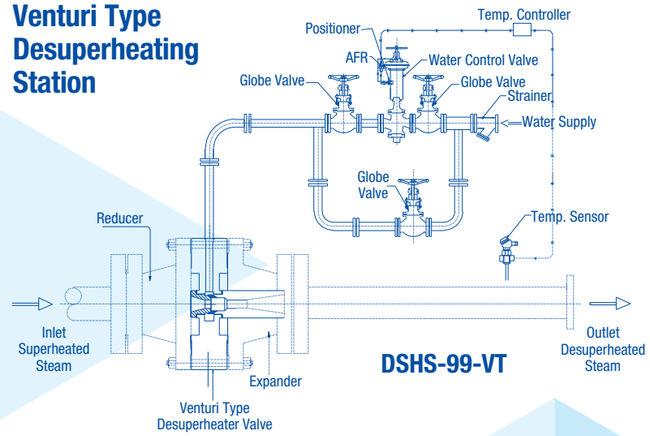
DSHS-99-FN

Venturi Type Desuperheater Valve



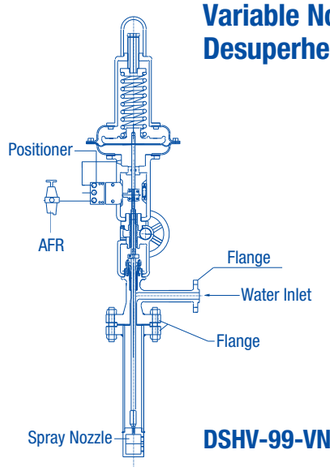
DSHV-99-VT

Venturi Type Desuperheating Station



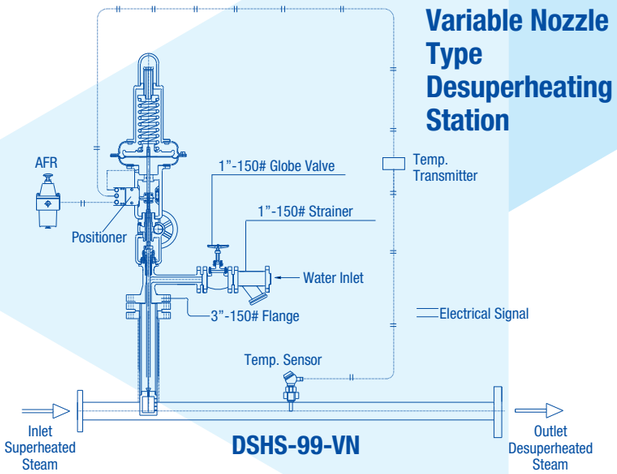
DSHS-99-VT

Variable Nozzle Type Desuperheater Valve

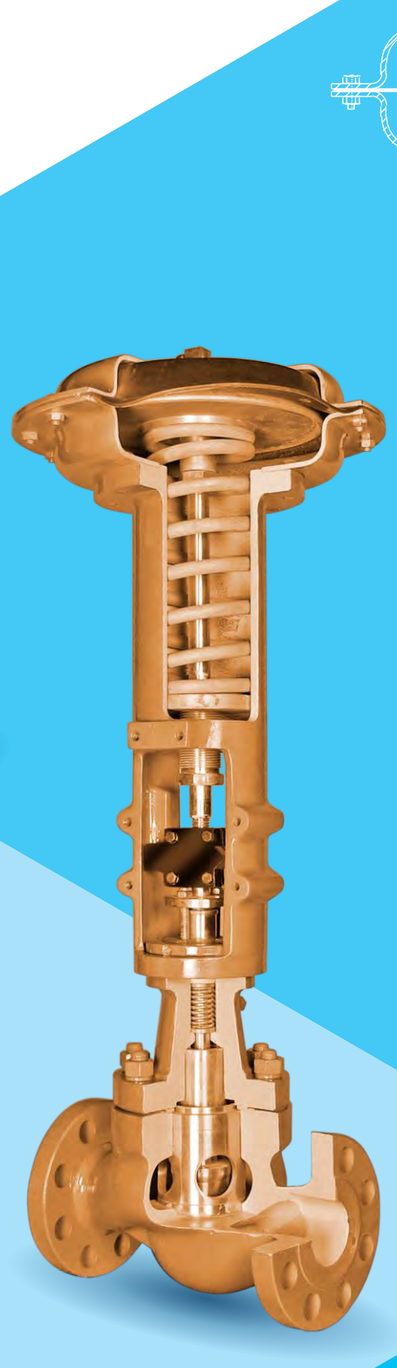


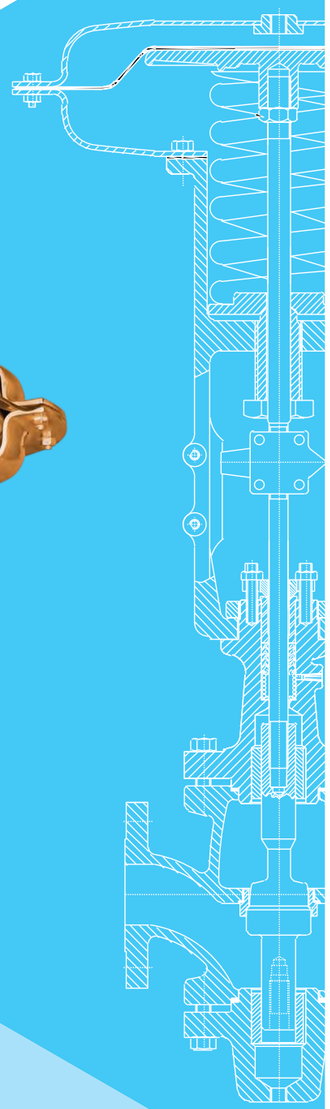
DSHV-99-VN

Variable Nozzle Type Desuperheating Station



DSHS-99-VN





Pneumatic / Motorized Control Valve

- PCV SERIES
- MCV SERIES

UNIQUE QUALITIES

- Top & Bottom guided design provide max. stability of the valve operation under high differential pressure.
- Body contours are developed to provide improved valve capacity, rangeability and stability.
- Various types of plug contours such as Equal Percentage, Linear and Quick Opening to suit specific requirements.
- Correct selection of material & treatment for longer life of trims and internals.
- Superior Quality of finished components and best workmanship.
- 100% spares interchangeability.
- The valve design is suitable for Pneumatic & Electrical Actuator.
- This valve can be used for On-Off or Throttling Service.
- The valve is available with DIRECT (Air to close) and REVERSE (Air to open) Actuator.
- Field reversible without additional parts.
- Meeting all National & International standards of Design, Material, Mfg. & Testing like ASME / ASTM / ANSI . ISA , IEC, IBR etc.
- Supply with all required optional Instrumentation accessories.
- Quite suitable for precise control of Water, Gas, Steam, Thermic Fluid etc.
- Each control valve is correctly sized with advanced sizing selection software for accurate controlled performance.

Bri-Con®

Pneumatic Control Valve

PCV SERIES

PCV 79
Two Way Control Valve

Product description:

Globe type, Single / Double Seated, Top & Bottom / Skirt guided, Single Spring & Diaphragm actuated, throttling / on-off Two-way & Tree-way type Pneumatic Control Valve.

Design:

- Top & Bottom guided design for high stability and accurate Pressure Control.
- This design Provides tight shutoff capability.
- Cage guided design is offered for High-Pressure requirement.

Features:

- Top & Bottom guiding provides maximum support to the plug for it's stability and eliminates the side thrust effect of pressure drop across the plug.
- This Valves are designed to control fluid flow at high pressure
- Temperature control / Pressure control / Flow control / Level control for Air / Gas / Steam/ Liquid.

Technical Specifications

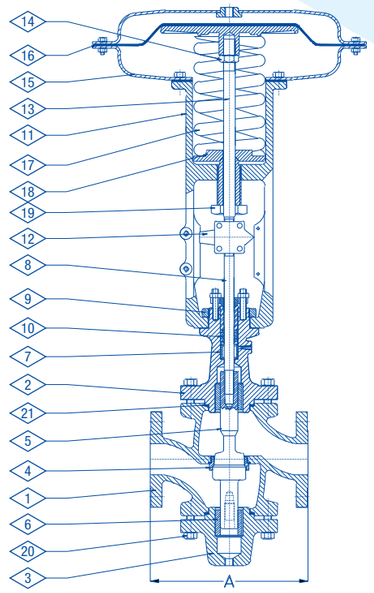
Size Range	25 mm to 500 mm
Pressure Rating	150#, 300#, 600#, 900#, 1500#
Facing	Raise Face (R.F), Flat Face (F.F), Ring Joint (R.T.J.)
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel.
Trims	CF8 / 8M / SS 304 / 316
Characteristics	Linear / Equal% / Quick Open
End Connection	Flange End / Butt weld

Application:

This model can be used in throttling or on-off services to control air water, steam, gas, oil, thermic fluid and other fluids in processes having wide flow range requirement.

PCV 97
Three Way Control Valve

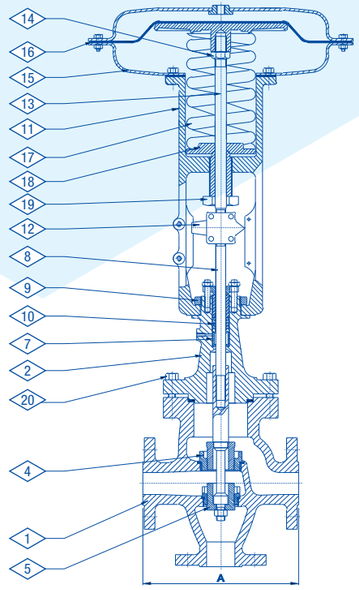
PCV 79
Two Way Control Valve



Material Specifications

SR.NO.	Part Name	Material
1	Body	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
2	Top Bonnet	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
3	Bottom Bonnet	ASTM A216 GR. WCB / ASTM A217 GR WC6 / WC9
4	Seat Ring	SS 304 / SS 316
5	Plug / Skirt	SS 304 / SS 316
6	Guide Bush	SS 410
7	Spring (Bonnet)	SS 302
8	Lower Stem	SS 304 / SS 316
9	Lock Nut	Mild Steel
10	Gland Packing	Grafoil Ring
11	Yoke	S.G. IRON
12	Connector	ASTM A 216 GR. WCB
13	Upper Stem	SS 304 / SS 316
14	Upper Stem Nut	SS 304 / SS 316
15	Casing	Press Steel
16	Diaphragm	Buna-N with Nylon Reinforce
17	Actuator Spring	Carbon Steel
18	Spring Washer	Mild Steel
19	Adjusting Screw	Mild Steel
20	Bolts	ASTM A 193 GR. B7
21	Gasket	SS 316 SPW with Graphite Filler

PCV 97
Three Way Control Valve



Dimensions (mm)

150#

SIZE	A ±2.0
25	184
40	222
50	254
65	276
80	298
100	352
150	451

300#

SIZE	A ±2.0
25	196
40	234
50	266
65	292
80	317
100	368
150	473

600#

SIZE	A ±2.0
25	209
40	250
50	285
65	311
80	336
100	393
150	508

Valve Cv Chart

SIZE	Cv (GPM)		
	Equal%	Linear	Quick Open
25 mm	13.9	16.8	16.3
40 mm	30.4	30.2	30.9
50 mm	55.2	55.4	58.7
65 mm	77.0	76.0	82.8
80 mm	102.0	118.0	120.0
100 mm	170.0	166.0	155.0
150 mm	372.0	377.0	369.0

Ordering / Sizing Information:

- Fluid / State
- Flow Rate
- Inlet Pressure
- Outlet Pressure
- Operating Temperature
- End Connection
- Fail Position

Accessories:

- Extended / Finned bonnet
- Bellows seal
- Valve Positioner
- Air filter regulator (AFR)
- Limit Switch
- Air lock Relay
- Volume Booster
- Quick Exhaust
- Solenoid Valve
- Hand Wheel

Other Models

PCV 77	Top guided unbalance design
PCV 77 B	Cage guided balance design
PCV 87	Top & Bottom guided double port design
PCV 88	Dump type control valve

Standards Followed

ASME B16.34	Pressure Temperature Rating
ANSI B 16.5	Flange Dimension
ASTM	Material Selection
ISA – S75.01	Control Valve Sizing
ISA – S75.02	Flow Capacity Test
ISA – S75.03/ ISA – S75.15	Face to Face Dimension
API 598	Testing Standards
FCI 70.2	Control Valve Leak Test

Bri-Con®

Motorized Control Valve

MCV SERIES

MCV 79
Two Way Control Valve

Product description :

Globe type, Top & Bottom and Skirt guided, Single / Double seated, Motorized Operated, Two-way & Three-way (Mixing & Diverting type) Control Valve.

Features:

- The model MCV-97, Three-way valves are used mainly for mixing of two fluid media.
- One medium enters the valve body above the upper seat ring, the second below the
- lower seat ring. Percentage of each medium is controlled by varying the position of the inner valve. As the inner valve approaches a seat ring the flowing area is reduced. Mixed media flows out of the valve through a common port.
- It is also used as diverting [by passed] the excess flow of thermic fluid, Steam, Cooling water etc.

Technical Specifications

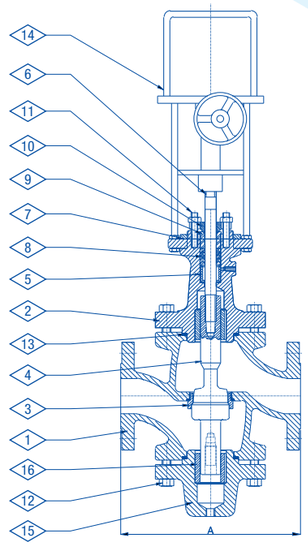
Size Range	25 mm to 500 mm
Pressure Rating	150#, 300#, 600#, 900#, 1500#
Facing	Raise Face (R.F), Flat Face (F.F), Ring Joint (R.T.J.)
Body M.O.C	Carbon Steel / Alloy Steel / Stainless Steel.
Trims	CF8 / 8M / SS 304 / 316
Characteristics	Linear / Equal% / Quick Open
End Connection	Flange End / Butt weld

Application:

This model can be used in throttling or on-off services to control air water, steam, gas, oil, thermic fluid and other fluids in processes having wide flow range requirement.

MCV 97
Three Way Control Valve

MCV 79
Two Way Control Valve



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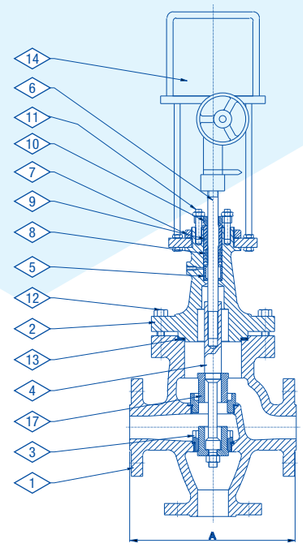
4	Plug	SS 304/SS 316
5	Spring (Bonnet)	SS 302
6	Lower Stem	SS 304 / SS 316
7	Lock Nut	Mild Steel
8	Gland Packing	PTFE “V” Ring /Grafoil Ring
9	Follower Packing	SS 304
10	Hold Down Plate	Mild Steel
11	Bonnet Stud & Nut	A 193 B7 / A 194 2H
12	Bolts	A 193 B7
13	Gasket	SS 316 Spiral Wound with Graphite Filler
14	Actuator	Electrical Actuator
15	Bottom Bonnet	ASTM A 216 GR. WCB / ASTM A217 GR WC6/WC9
16	Guide Bush	SS 410
17	Skirt	SS 304 / SS 316

MCV 97
Three Way Control Valve



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150	473

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Ordering / Sizing Information:

- Fluid / State
- Flow Rate
- Inlet Pressure
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Other Models

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Standards Followed

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