8800 Series
Changeover Valve

The Total Valve Systems 8800 Series and 8000 Series(1/2" - 1") Changeover Valves are designed to incorporate two safety relief valves installed on a single vessel system to protect in an overpressure emergency. Only one safety relief valve is in operation at a time while the other is installed as an interactive backup. If a problem occurs, such as a leak, simply switch to the other safety relief valve and remove the faulty valve to make repairs. The 8800 Series ensures one safety relief valve is in operation at all times which yields minimal interruptions to process operations during an unplanned outage.

Features:

Optimized flow coefficient (Cv) to ensure less than 3% pressure drop per API RP520 Part II.

Designed for gas/vapor, liquid, mixed phase and steam service including ASME BPVC Section I boiler applications.

Low profile design for easy installation in tight areas.

Designed to API 622 and API 624 standards for low fugitive emissions.

Pressure bleed valves installed at both outlets to bleed away process fluid as well as in-line valve testing capability.

Engineered, manufactured and tested in Broken Arrow, Oklahoma, USA.

Technical:

8000 Sizes:	NPS 1/2" - 1"
8800 Sizes:	NPS 2" - 10"
Service Media:	Gas/Vapor, Liquid, Steam, Mixed Phase
End Connections:	RFFE, RTJ, BWE, SWE, MNPT, FNPT
Pressure Classes:	ANSI 150-2500
Temperature:	-250°F to 1200°F
Actuation:	Manual, Pneumatic, Electric, Hydraulic
Materials:	A216 WCB, A351 CF8M, A352 LCC, Monel, Hastelloy
Soft Goods:	Buna, EPDM, Neoprene, FKM, Silicon, PTFE, FFKM
Approvals:	API RP520 Part II, ASME BPVC Section VIII,ASME BPVC Section I Code Case 2254, ASME B16.34, API 598, API 622, API 624

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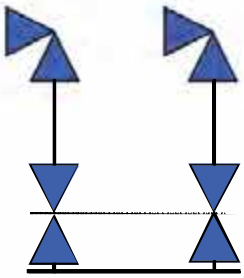
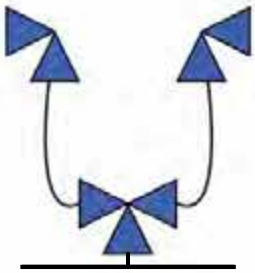
The 8800 Series Changeover Valve was created in response to the demand for cost effective changeover devices for relief valve installations. This device allows for easy switching from one relief valve to another, in the occurrence that the first relief valve fails or needs maintenance.

In the past, the only options for changeover valves were designed as big and bulky systems They required two separate vessel penetrations with linked block valves or three-way block valve which typically results in pressure loss or an excess of turbulence in the relief device.

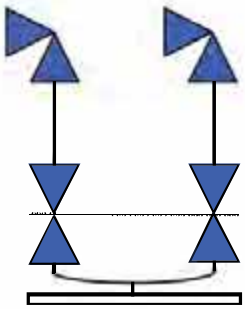
With a much more practical and easy to install design, the 8800 Series Changeover valve solves the problems from previous changeover valve designs used in the industry. This system allows less than 3% pressure drop to the active pressure in the relief valve.



Interlocking block valve
with two vessel penetrations



Three way block valve
with pipe elbows



Interlocking block valve
with elbows and pipe tee

Operation:

The changeover valve body houses a unique switching mechanism. The internal rotary arm diverts flow smoothly to the pressure relief device in service - which may be direct spring operated valves, pilot operated valves or rupture discs. The inactive relief device is completely isolated by external adjustment. No special tool is required for switching the changeover valve to the other relief valve. To change to the other device, the locking nut is loosened, and the handle is simply turned to the open position for the new relief device, the locking nut is then tightened to seal the previous device so it can be safely removed for service or maintenance.

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Specifications:

Size	Flow Efficiency (Cv)	Max Pressure Rating (psig) at 100°F		Soft Goods Max Temperature rating (°F)				
		CS & LTCS Body[a]	SS Body[a]	FKM	BUNA	PTFE	ValvChem™	Graphite
2”	258	1480	1440	400	250	400	600	800
3”	619	1480	1440	400	250	400	600	800
4”	1072	1480	1440	400	250	400	600	800
6”	2741	1480	1440	400	250	400	600	800
8”	4558	740	720	400	250	400	600	800
10”	7000	740	720	400	250	400	600	800

[a] - Temperature range is limited according to the body material of construction as follows:

CS : -20°F to 800°F

LTCS & SS: -50°F to 800°F

Applications:

Liquid, or two phase service changeover valves can be used in gas/vapor, steam, liquid or two-phase service. Section 1 steam service: ASME Section I Boiler and Pressure Vessel Code Case 2254, the 8800 series changeover valve can be installed to provide a back-up safety valve for boilers with a maximum allowable working pressure (MAWP) up to 800 psig. This code case requires that the changeover device must provide: positive locking, external bleed valves and certified Cv values. The 8800 series will provide the highest flow efficiency (Cv) of any switchover device in the same nominal pipe size, enabling it to be used with most manufacturers’ flanged Section I Boiler valves. To ensure complete compliance with the code case, the model number and set pressure of the safety valves to be used must be provided.

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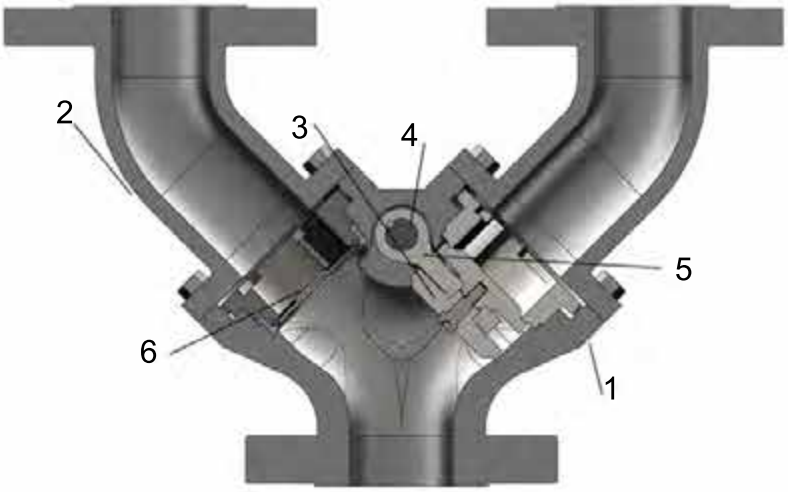

Materials of Construction:

Description	Material	
	CS	SS
1 Body	SA216-WCB CS	SA351-CF8M SS
2 Elbow	SA216-WCB CS	SA351-CF8M SS
3 Disc	SA479-316 SS	SA479-316 SS
4 Stem	17-4 SS	17-4 SS
5 Rotary Arm	17-4 SS	17-4 SS
6 Seat	SA479-316 SS	SA479-316 SS

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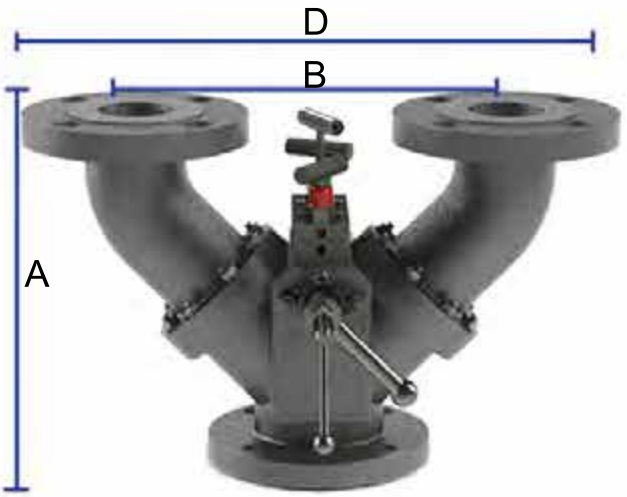
Weights & Dimensions:

Class	Dimensions	Detail	2”	3”	4”	6”	8”	10”
150	A	RF	9.68	13.25	16	20	24.5	30
	A	RTJ	10.06	13.625	16.375		24.875	30.375
	B		10.06	12	14.5	17	19.5	19.5
	D		16.06	19.5	23.5	28	33	35.5
300	A	RF	10.30	13.25	16.5	21	25.63	30.75
	A	RTJ	10.80	13.75	17	21.5	26.13	31.25
	B		10.06	12	14.5	17	19.5	19.5
	D		16.56	20.25	24.5	12.5	34.5	37
600	A	RF	10.78	14	17.5	22.25	-	-
	A	RTJ	10.80	14.125	18	22.75	-	-
	B		10.06	12	14.5	17	-	-
	D		16.56	20.25	25.25	31	-	-

*Higher Pressure Classes: Consult TVS Engineered Products

**Non Listed Dimensions: Consult TVS Engineered Products

***TVS Engineered Products reserves the right to modify or change dimensions in this data sheet without notification.



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