

3-Way Pneumatic Control Valves with Multispring Actuator for Mixing Duty -Thermic Fluid Application

DATA SHEET
PV-5116A/CSF

Available In 'A' port Closed Or 'B' Port Closed Configuration
(Normally Supplied In 'A' Port Closed Position)
(Field Reversible From 'A' Port Closed To 'B' Port Closed Design)

SPECIFICATION

Size	: 20 mm (3/4") to 100 mm (4").
Unified Flanges	: As per ANSI Cl. 150 and PN 16.
Pressure Rating	: As per ANSI Cl. 150, Cl. 300, PN 16 & PN 25.
Pressure Temp. Rating	: As per ASME B16.34..
Gland Packing	: Glass filled Graphited Teflon for 380°C with Cooling Finned Bonnet .
Design Standard	: ASME B16.34.
Leakage	: As per ANSI-FCI-70-2 Cl. IV(0.01% of Kv)
Face to Face	: As per DIN 3202. Part I Series F1. (All materials)
Testing Standard	: ANSI-FCI-70-2.
Type of Plug	: On-Off or Linear.
Seat	: Screwed type replaceable.
Body & Bonnet Material	: CS-ASTM A216 WCB (DIN 1.0619 GS-C 25). SS-ASTM A351CF8M(DIN1.4410) (G-X10 Cr.Ni MO189) SS-ASTM A351CF8(DIN1.4301)
Plug Material	: SS AISI 420/316.
Seat Ring	: SS AISI 420/316.
Spindle	: 410/316 Ground, Burnished And Hard Chromed.
Studs	: ASTM A193 Gr. B7.
Hex. Nuts	: ASTM A194 Gr. 2H.
Body Packing	: Cr. Ni Foil coated with graphite.
Rangeability	: Linear 50:1
Fluid	: Hot Thermic Fluid, Hot Water, Hot Steam, etc.



ACTUATOR

Pneumatic diaphragm type	Multi Spring Reversible.
Pressure chambers	: Steel pressing to IS 513CRCD.
Diaphragms	: Nylon inserted high Neoprene, rollform type.
Temperature	: -20°C to +80 °C
Springs	: EN 47 - Cr. V. Steel.
Max. Pres. Over diaphragm	: Upto 4.5 bar
Yoke	: Cast carbon steel castings one piece.
Spindle	: Guided through Teflon bearing, leakage prevented by Synthetic seal, protected by rubber bellow.
Note	: 5116A are Metal Seated Valves.

SPECIFICATION TABLE FOR TYPE 5116A-NORMALLY 'A' PORT CLOSED ALTERNATIVELY 'B' PORT CLOSED

Pressure Table									
Actuator Number	Spring Range	Control Pressure	Sizes (mm)						
			20	25	40	50	65	80	100
	Bar	Bar	Port sizes (mm)						
MSD -250	A - 0.2 - 1.0	1.2	21/25	27/27	40/40	50/50	65/60	80/75	101/101
	B - 0.4 - 1.2@	1.6	3.2	2.6	0.3	-	-	-	-
	C - 0.8 - 2.4@	2.7	12.6	10.6	3.8	2.1	0.8	0.3	-
	D - 1.5 - 2.5@	4.0	31.3	26.8	11.0	6.8	-	-	-
MSD-400	A - 0.2 - 1.0	1.2	40	40.0	23.5	19.7	-	-	-
	B - 0.4 - 1.2@	1.4	8.7	7.3	2.4	1.2	-	-	-
	C - 0.8 - 2.4@	2.7	23.7	20.2	8.1	4.9	2.5	1.4	-
	D - 1.5 - 3.0@	4.5	40.0	40.0	19.4	12.3	6.9	4.3	2.6
MSD-800	A - 0.2 - 1.0	1.2	-	-	-	-	14.8	9.5	5.9
	B - 0.4 - 1.2@	1.4	-	-	-	-	2.5	1.4	0.7
	C - 0.8 - 2.4@	2.7	-	-	-	-	7.0	4.4	2.6
	D - 1.5 - 3.0@	4.5	-	-	-	-	15.9	10.3	6.5
			-	-	-	-	40.0	29.6	19.0

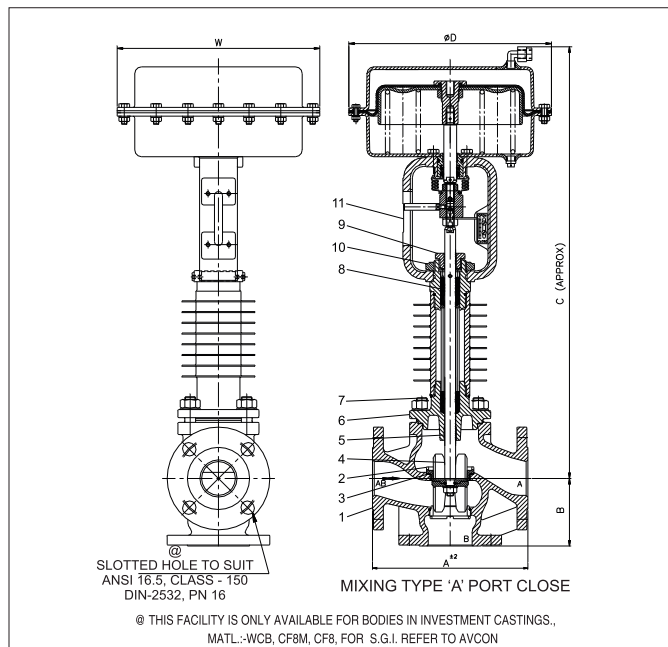
Note:(1) @VP(PTP),EVP(ETP) Plus FRG needed to be installed on the Valve.
(2) For Hot Thermic Fluid application, maximum working pressure limit is upto 10 bar only.
(3) 5116A/CSF Valve sizes upto 40 MM can be used for Diverting application. For sizes 50 MM and above use 5119A/CSF

3/2 WAY FINNED BONNET (CSF) PNEUMATIC CONTROL VALVES WITH MULTI SPRING DIAPHRAGM ACTUATOR (16).

BILL OF MATERIAL

Item	Parts	Material
1	Body	SS ASTM A351CF8/CF8M CS ASTM A216, Gr. WCB SGI
2	Seat	SS AISI 420/ SS AISI 316
3	Gasket	Cr.Ni Foil coated with graphite
4	Plug	SS AISI 420/ SS AISI 316
5	Duro Bush	PTFE Lined & coated, SS as backed.
6	Bonnet	SS ASTM A351CF8/CF8M CS ASTM A216, Gr. WCB SGI
7	Studs/ Nuts	IS 1363, ASTM A193, Gr.B7 IS 1363, ASTM A 194, Gr.2H
8	Gland Packing	Graphited PTFE
9	Gland Nut	SS AISI 304
10	Yoke Nut	CS ASTM A216, Gr. WCB
11	Actuator	Multi Spring* Pneumatic Diaphragm.

* Refer to actuator leaflet for details of components.



TECHNICAL DATA TABLE

Valve size in mm			20	25	40	50	65	80	100
5116 Mixing	Port size Dim. in mm	Upper 'A' Port	21	27	40	50	65	80	101
		Lower 'B' Port	25	27	40	50	60	75	101
	Kv. M ³ /hr.		6.3	10	25	40	63	100	160
Travel			20	20	20	30	30	30	30
					30				
Actuator MSD			250	250	250	400	400	800	800
					400				

DIMENSIONS (IN MM)

Catalogue Number	Size Inch	Pneumatic Actuator	A	B	C	ØD	W	Wt.Kg. (Approx.)	Envelop Size LxHxW (Approx.)	Box Wt. Kg. (Approx.)
5116A 205/CSF	3/4	250	150	70	445	250	250	14.5	540 x 275 x 275	18.0*
5116A255/CSF	1	250	160	75	500	250	250	16.5	600 x 275 x 275	22.5*
5116A355/CSF	1 ½	250	200	90	514	250	250	23.0	634 x 275 x 275	28.0*
5116A365/CSF	1 ½	400	200	90	600	350	350	30.0	725 x 380 x 380	38.0*
5116A505/CSF	2	400	230	100	615	350	350	35.0	750 x 380 x 380	46.0*
5116A655/CSF	2 ½	400	290	120	635	350	350	44.0	795 x 380 x 380	58.5*
5116A805/CSF	3	800	310	130	865	405	405	89.0	1035x450x450	105.0**
5116A1005/CSF	4	800	350	150	872	405	405	101.0	1065x450x450	112.0**

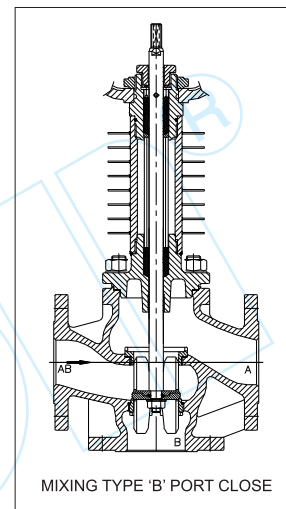
Note:

* Weight of cardboard + PUF Box Packing, Which may change for Export when packed in wooden box.

** Weight of Wooden Box Packing.

Note:

Technical specifications, details & dimensions are subject to change without prior notice. Dimensions in the table are approximate subject to final confirmation by AVCON.



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