

GLOBE 3 WAY CONTROL VALVE SERIES-130

INTRODUCTION

Pneucon' 3 way control valves are used to combine two flows or to divert one flow into two outlets. They are designed to replace and perform the functions of two single ported control valves acting in opposite directions, in converging or diverging liquid flow. They can be used to control the circulation of water, oil, sea water or other liquid in heating or cooling applications involving heat exchanger bypass control. They can also be used in blending systems and on-off selector systems.

SPECIFICATIONS

- DESIGN** : ASME B16-34
- VALVE SIZE** : 15 to 350 mm (1/2" to 14")
- RATING** : ANSI 150 to 600 Equivalents to BS, DIN, IS, JIS, etc.
- FACE TO FACE** : ISA S.75.03 up to 600#
- END CONNECTION** : Flanged – 15mm to 350mm (1/2" to 14")
Screwed – 15mm to 50mm (1/2" to 2")
- BODY MATERIALS** : Carbon Steel, Chrome-moly Steel, Stainless Steel, Monel, Alloy20, Hastelloy B/C, Duplex Stainless Steel, Aluminum Bronze, PP, PTFE etc.
- BONNET** : Standard upto 250°C
: Normalizing (Finned) between 250°C to 500°C
: Extended cold service - 20°C to - 100°C
: Cryogenic - 100°C to - 250°C
: Bellows seals.
- GLAND PACKING** : Grafoil / PTFE V Rings, Low Emission
- TRIM DESIGNS** : Skirt Guided. Linear, Pressure Balance.
- TRIM MATERIALS** : Stainless Steel, Alloy20, Monel, Duplex Stainless Steel, 13% Chrome Steel Hastelloy B/C, Stellite (Alloy 6)
- CHARACTERISTICS** : Equal Percentage, Linear and Quick Opening.
- SEAT LEAKAGE** : As per ANSI/FCI-70-2 Class III, IV, V and VI (STANDARD LEAKAGE RATES) Metal to Metal Seating Class IV, Less than 0.01% of rated Cv. Metal to Soft Seating – Bubble tight (Zero Leakage)
- ACTUATOR TYPE** : Diaphragm, Piston or Electric.
- ACTUATOR ACTION** : Direct / Reverse Acting.
- DIAPHRAGM** : Nitrile / Neoprene.
- SPRING RANGES** : 3 – 15 PSIG (0.2 – 1.0 Kg/cm²)
: 6 – 30 PSIG (0.4 – 2.0 Kg/cm²)
- AIR SUPPLY** : 20 – 35 PSIG (1.4 – 2.5 Kg/cm²)
- AIR CONNECTION** : 1/ 4" or 1/ 2" NPT
- ACCESSORIES** : Valve Positioner - Pneumatic , Electro Pneumatic, Smart Positioner.
Instruments-
Airset, Solenoid Valve, Air Lock,
Volume Booster, Position Transmitter, Limit-Proximity Switches etc.
Features-
Top or Side Mounted handwheel, Limit Stops
Removable Blind Head, Steam Jacketing, etc.



**CONTROL VALVE WITH
STANDARD BONNET AND
REVERSE ACTUATOR**



**CONTROL VALVE WITH
FINNED BONNET AND
DIRECT ACTUATOR**

BUILT IN RELIABILITY

PVCT-130

DESIGN FEATURES

- >> High flow Valve capacity and rangeability.
- >> Heavy - Duty stem.
- >> Wide range of interchangeable trim sizes.
- >> Bellow seals available for positive stem sealing.
- >> Comprehensively designed and tested to ensure its optimum performance for the tough process parameters specified.
- >> Wide selection of actuator.

QUALITY AND PERFORMANCE GUARANTEE

- >> Produced with Quality Systems accredited to ISO 9001 : 2008 by Bureau Veritas and “CE” marked in accordance to Pressure Equipments Directive and Regulations by Lloyd’s Register.
- >> Full material certification available for all major component Parts.
- >> Full guarantee on design and Performance.
- >> All testing performed to the requirements of ASME B16.34.

RANGEABILITY

The Inherent rangeability of Pneucon standard trims is as given under.

TRIM SIZE	ins	mm	Rangeability
	1/4 to 3/4	6 to 20	35 : 1
1 to 3	25 to 80	50 : 1	
4 to 12	100 to 300	60 : 1	

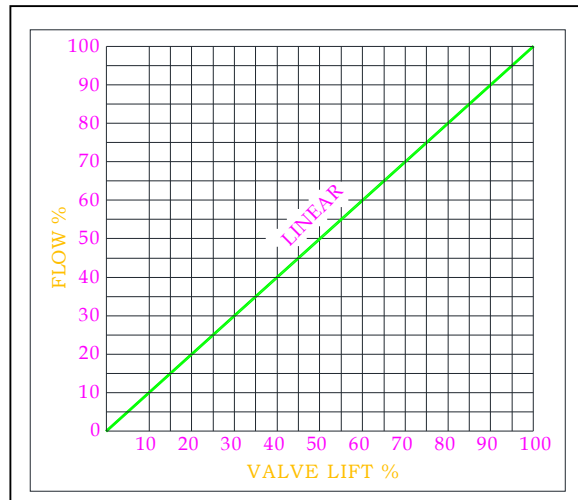
MAXIMUM RECOMMENDED VALVE BODY VELOCITY FOR LIQUID FLOWS

Trim style			Valve body material		
	ins	mm	Carbon Steel	Alloy Steel	Aluminium Bronze
			m/s	m/s	m/s
Linear	1 to 2	25 to 50	10.5	12.0	7.0
	3 to 8	80 to 200	9.0	10.0	6.5
	10 to 12	250 to 300	6.0	8.0	5.5

MAXIMUM RECOMMENDED VALVE BODY VELOCITY GAS/VAPOUR FLOWS

Valve Size		Maximum	Maximum	Maximum outlet mach No. for predicted noise level		
		Inlet velocity	Outlet velocity			
ins	mm	m/s	m/s	>95dBA	<95dBA	<85dBA
½ to 2	15 to 50	80	200	0.65	0.5	0.3
3 and 4	80 and 100	75	200	0.65	0.5	0.3
6 and 8	150 and 200	65	200	0.65	0.5	0.3
10 and 12	250 and 350	55	200	0.65	0.5	0.3

BUILT IN RELIABILITY



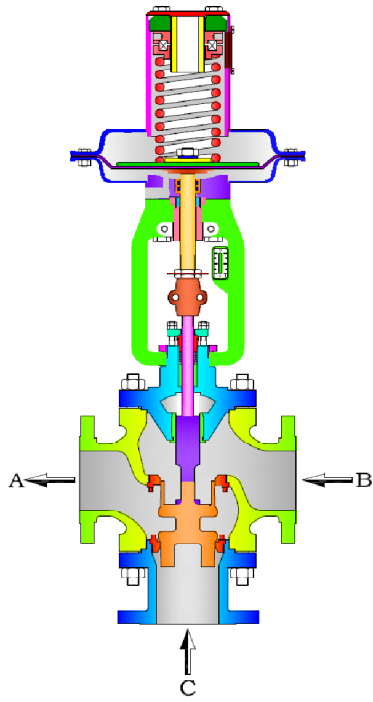
The Inherent flow characteristic of a control valve is the relationship between the flow and the lift of the plug at constant pressure drop.

The following characteristics are normally available.

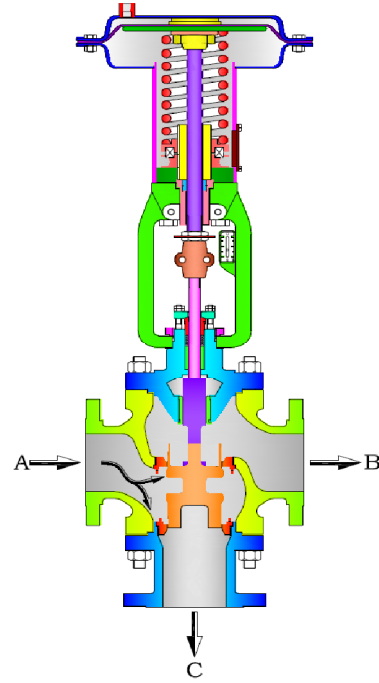
LINEAR:-Flow capacity increases linearly with valve travel.

Valve Size		Trim Size	CV Value
ins	mm	in	
1/2	15	1/2	5
		3/8	3.2
		1/4	2
3/4	20	3/4	8
		1/2	5
		3/8	3.2
		1/4	2
		1	11
		3/4	8
1	25	1/2	5
		3/8	3.2
		1/4	2
1.1/2	40	1.1/2	28
		1/1/4	17
2	50	2	42
		1.1/2	28
3	80	3	105
		2.1/2	70
4	100	4	185
		3	105
6	150	6	405
		5	275
8	200	8	605
		6	405
10	250	10	880
		8	605
12	300	12	1265
		10	880
14	350	14	1600
		12	1265

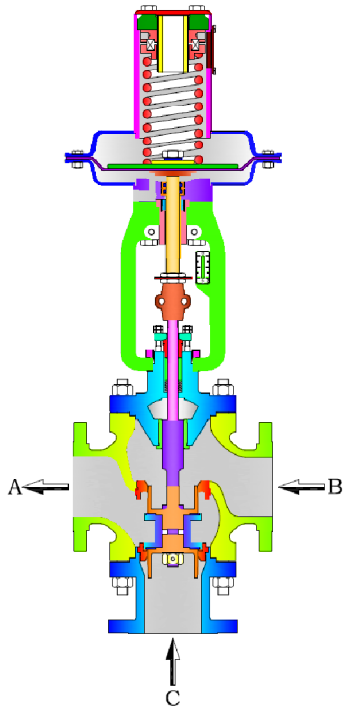
BUILT IN RELIABILITY



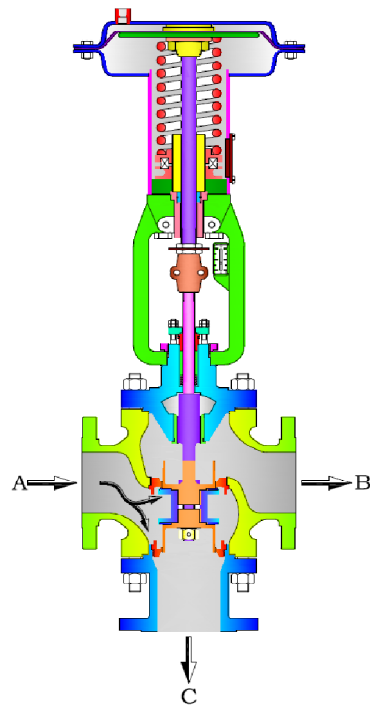
VALVE FOR MIXING SERVICE



VALVE FOR DIVERTING SERVICE

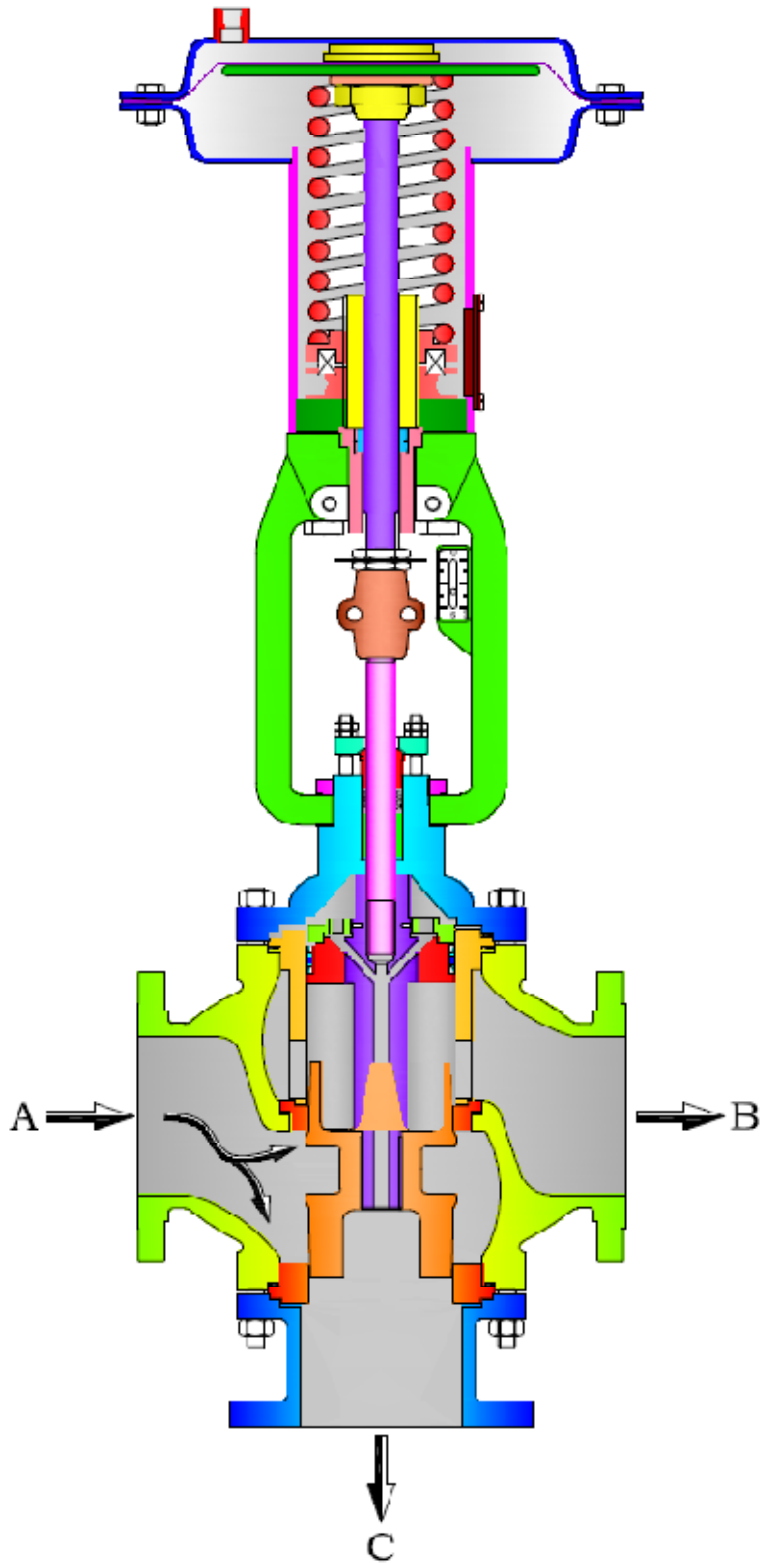


**VALVE WITH SOFT SEAT
MIXING SERVICE**



**VALVE WITH SOFT SEAT
DIVERTING SERVICE**

BUILT IN RELIABILITY

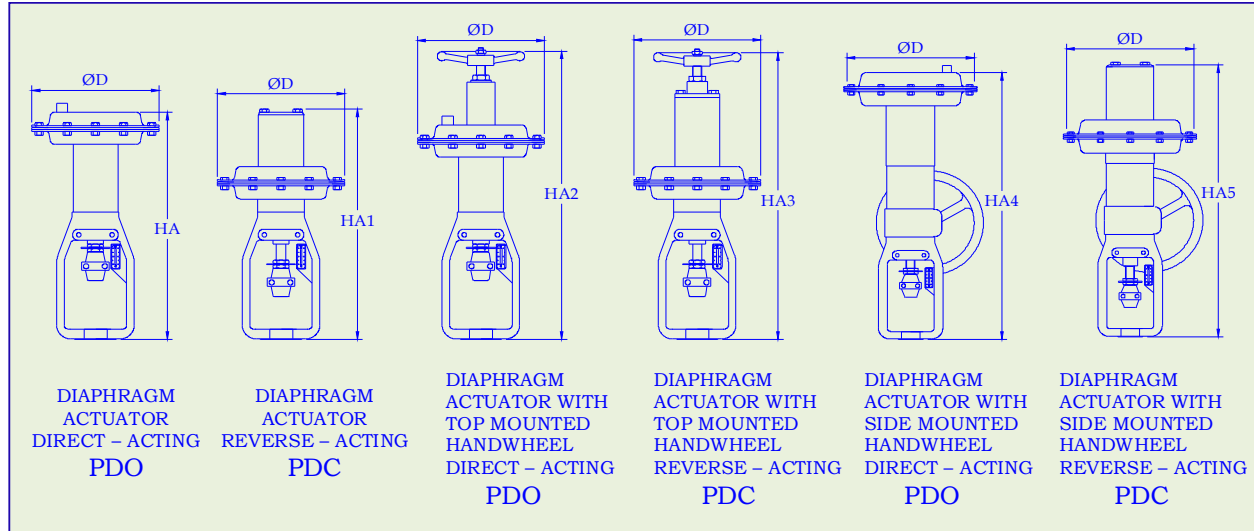


**VALVE WITH PRESSURE BALANCE TRIM
DIVERTING SERVICE**

BUILT IN RELIABILITY

PVCT-130

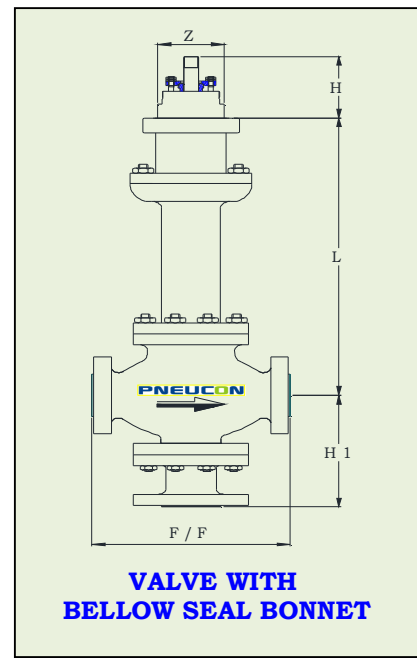
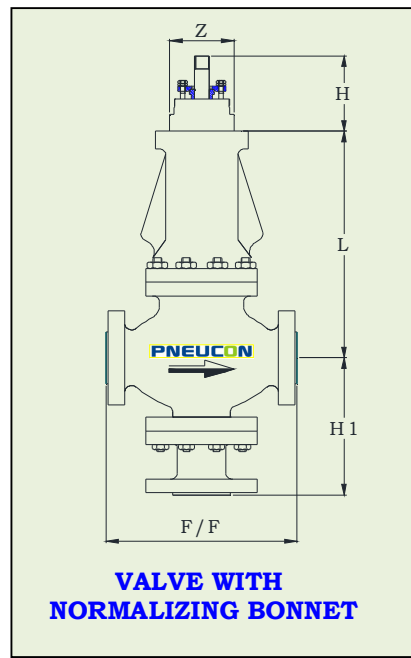
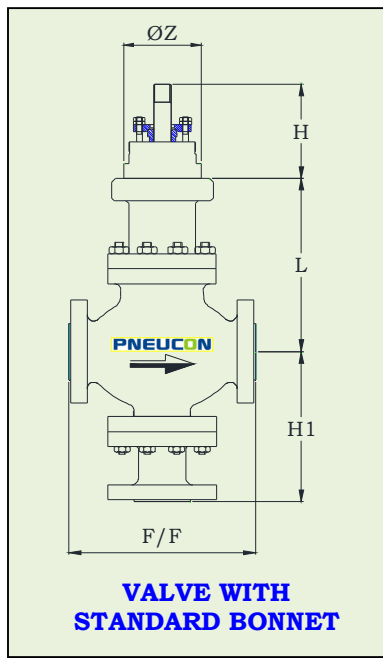
ACTUATOR DIMENSIONS



ACTUATOR MODEL	EFFECTIVE Inch ²	BONNET MOUNT DIA.	TRAVEL	ΦD	HA	HA1	HA2	HA3	HA4	HA5
PDC - 030	30	54	28	218	--	348	--	493	--	575
PDO - 030	30	54	28	218	363	--	518	--	564	--
PDC - 055	55	54	28	286	--	488	--	571	--	691
PDO - 055	55	54	28	286	471	--	678	--	673	--
PDC - 055	55	71.5	38	286	--	537	--	616	--	739
PDO - 055	55	71.5	38	286	519	--	727	--	721	--
PDC - 095	95	54	28	371	--	507	--	609	--	724
PDO - 095	95	54	28	371	502	--	709	--	705	--
PDC - 095	95	71.5	38	371	--	571	--	653	--	773
PDO - 095	95	71.5	38	371	552	--	759	--	754	--
PDC - 140	140	71.5	38	443	--	600	--	699	--	842
PDO - 140	140	71.5	38	443	572	--	858	--	820	--
PDC - 140	140	90.5	57	443	--	731	--	834	--	977
PDO - 140	140	90.5	57	443	707	--	994	--	955	--
PDC - 300	300	71.5	38	616	--	768	--	--	--	1092
PDO - 300	300	71.5	38	616	723	--	--	--	1098	--
PDC - 300	300	90.5	57	616	--	818	--	--	--	1142
PDO - 300	300	90.5	57	616	773	--	--	--	1098	--
PDC - 300	300	90.5	90	616	--	984	--	--	--	1303
PDO - 300	300	90.5	90	616	934	--	--	--	1262	--
PDC - 300	300	90.5	102	616	--	1030	--	--	--	1407
PDO - 300	300	90.5	102	616	1030	--	--	--	1414	--

- PDO - Direct Acting Actuator (used on supply failure Valve – Opens)
- PDC – Reverse Acting Actuator (used on supply failure Valve – Closes)
- All dimensions in mm.
- The Company’s policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice

BUILT IN RELIABILITY



VALVE SIZE		ANSI 150 (NP 10,16 BS-10- D,E)	ANSI 300 (NP 25,40 BS-10- F,H,J)	ANSI 600 (NP 64,100 BS-10-K,R)	STEM IN UP POSITION	BONNET MOUNT DIA	HEIGHT FROM CENTER LINE			CENTR LINE TO BASE	STEM TRAVEL
							STANDARD	NORMALIZING	BELLOW		
Inch	mm	FACE TO FACE (F/F)			H	Z	L			H1	
1/2	15	184	190	203	117	53.97	140	192	324	159	28
3/4	20	184	194	206	117	53.97	140	192	324	159	28
1	25	184	197	210	117	53.97	140	192	324	159	28
1.1/2	40	223	235	251	117	53.97	159	245	353	163	28
2	50	254	267	286	117	53.97	168	248	362	175	28
2.1/2	65	276	292	311	143	71.44	203	311	467	206	38
3	80	299	318	337	143	71.44	203	330	467	226	38
4	100	352	368	394	143	71.44	206	357	480	260	38
6	150	451	473	508	197	90.42	276	394	676	296	57
8	200	543	568	610	197	90.42	292	435	716	358	57
10	250	673	708	752	229	90.42	390	632	--	441	90
12	300	737	775	819	229	90.42	405	647	--	455	90



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