

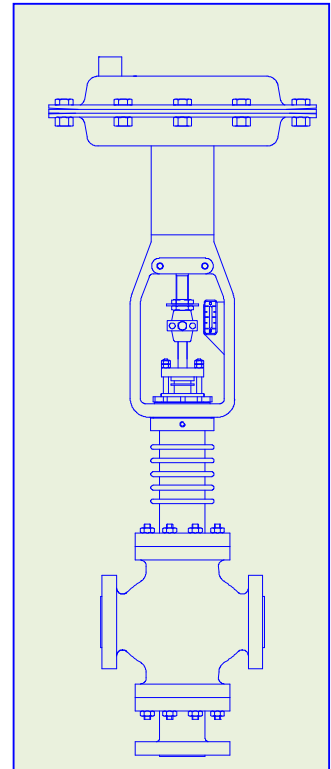
## GLOBE 3 WAY CONTROL VALVE SERIES - 130

### INTRODUCTION

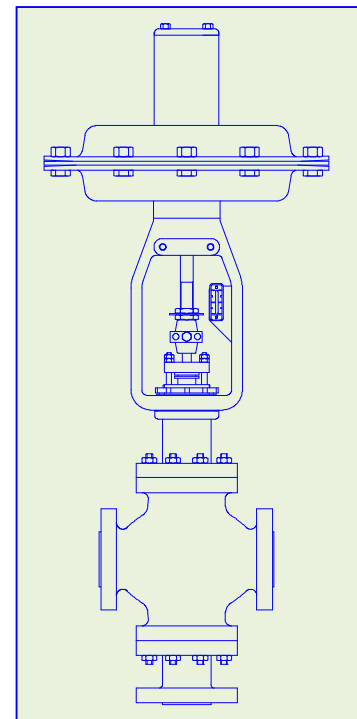
Pneucion' 3 way control valves are used to combine two flows or to divert one flow into two outlets. They are designed to replace and perform the functions of two single ported control valves acting in opposite directions, in converging or diverging liquid flow service. They can be used to control the 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

<b>DESIGN</b>	: ASME B16-34
<b>BODY DESIGN</b>	: Globe type with Tail piece to provide third port.
<b>VALVE SIZE</b>	: 15 to 300 mm ( 1/2" to 12" )
<b>RATING</b>	: ANSI 150 to 600 Equivalents to BS, DIN, IS, JIS, etc.
<b>END CONNECTION</b>	: Flanged – 15mm to 300mm ( 1/2" to 12" ) Screwed – 15mm to 50mm ( 1/2" to 2" )
<b>BODY MATERIALS</b>	: Carbon Steel, Stainless Steel, Monel, Alloy20, Hastelloy B/C etc.
<b>BONNET</b>	: Standard upto 250°C : Normalizing (Finned) between 250°C to 500°C : Extended cold service - 20°C to - 200°C : Extended Bellows seal.
<b>GLAND PACKING</b>	: Grafoil / PTFE V Rings.
<b>TRIM DESIGNS</b>	: Skirt Guided. Linear, Pressure Balance.
<b>TRIM MATERIALS</b>	: Stainless Steel, Alloy20, Monel, Hastelloy B/C, Stellite Hard facing.
<b>CHARACTERISTICS</b>	: Linear, On / Off.
<b>SEAT LEAKAGE</b>	: As per FCI-70-2 (ANSI B 16.104) Class IV, V and VI ( STANDARD LEAKAGE RATES ) Metal to Soft Seating – Bubble tight (Zero Leakage)
<b>ACTUATOR TYPE</b>	: Diaphragm, Cylinder or Electric.
<b>ACTUATOR ACTION</b>	: Direct / Reverse Acting. Direct acting air failure "Close" Top Port. Reverse acting air failure "Opens" Top Port.
<b>DIAPHRAGM</b>	: Nitrile / Neoprene.
<b>SPRING RANGES</b>	: 3 – 15 PSIG ( 0.2 – 1.0 Kg/cm <sup>2</sup> ) : 6 – 30 PSIG ( 0.4 – 2.0 Kg/cm <sup>2</sup> )
<b>AIR SUPPLY</b>	: 20 – 35 PSIG ( 1.4 – 2.5 Kg/cm <sup>2</sup> )
<b>AIR CONNECTION</b>	: 1/ 4" or 1/ 2" NPT
<b>HANDWHEEL</b>	: Top or Side Mounted Handwheel
<b>ACCESSORIES OPTIONAL</b>	: Valve Positioner - Pneumatic , Electro Pneumatic, Smart Positioner, Airset, Solenoid Valve, Air Lock, Volume Booster, I/P Converter, Position Transmitter, Limit – Proximity Switches etc.



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



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

***BUILT IN RELIABILITY***

### DESIGN FEATURES

- >> High rated Valve capacity and range ability.
- >> Heavy - Duty ground and polished stems.
- >> 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.

### QUALITY AND PERFORMANCE GUARANTEE

- >> Produced with Quality Systems accredited to ISO 9001: 2008  
By Bureau Veritas and "CE" 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 ANSI B16.34.

### RANGEABILITY

The Inherent rangeability of Pneucon Standard plugs are given as under.

TRIM SIZE	ins	mm	Rangeability
	1/4 to 3/4	6 to 20	33 : 1
	1 to 3	25 to 80	48 : 1
	4 to 12	100 to 300	65 : 1

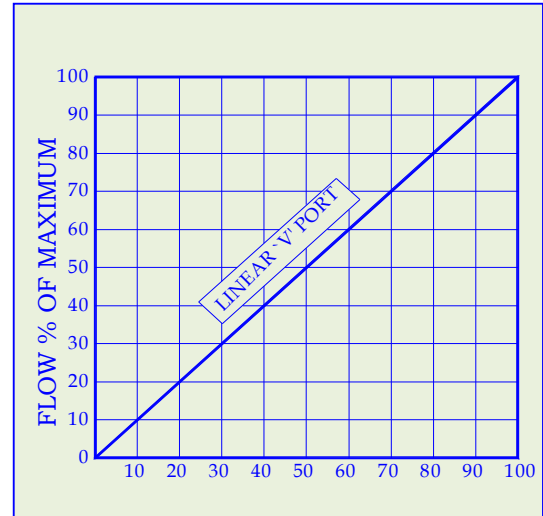
### VALVE SIZING CO-EFFICIENT $C_v$ RATING.

VALVE SIZE	Inch	1/2	3/4	1	1.1/2	2	2.1/2	3	4	6	8	10	12
	mm	15	20	25	40	50	65	80	100	150	200	250	300
$C_v$ Value		5	8	12	30	45	70	105	200	400	600	875	1250

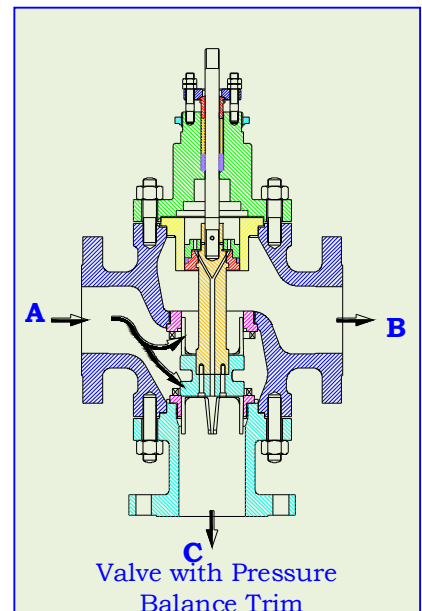
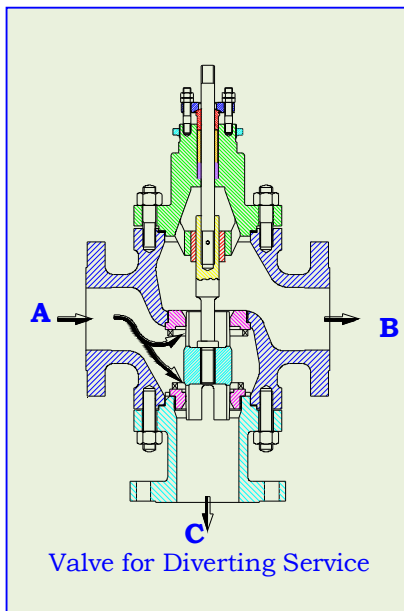
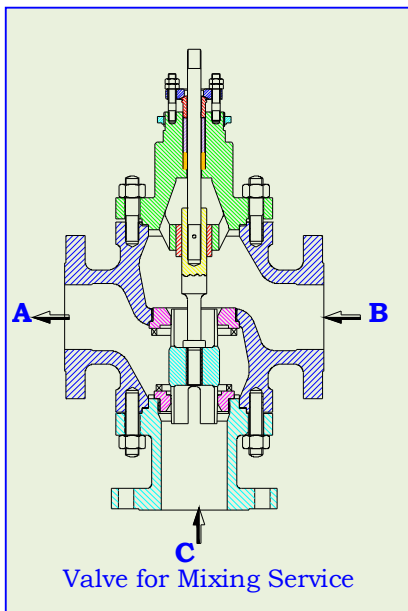
### PLUG CHARACTERISTIC CURVE

The inherent flow characteristic of the Control valve is the relationship between the flow and lift of the plug at a constant Pressure drop.

The Characteristic of the linear 'V' port Valve plug heads is shown here under.

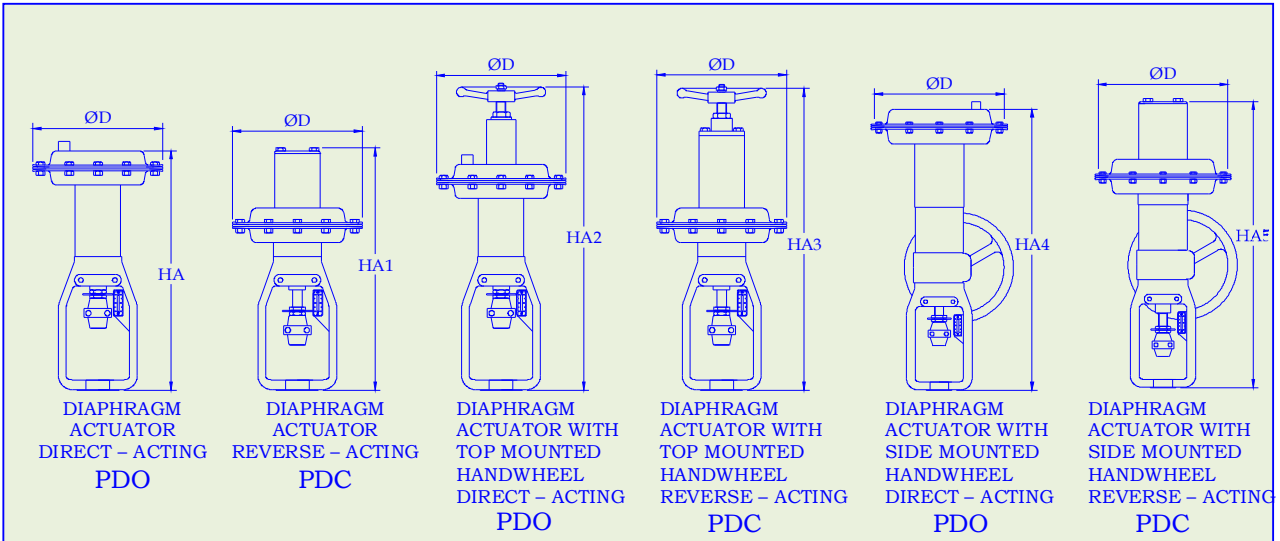


VALVE LIFT % OF FULL LIFT FLOW – LIFT CHARACTERISTIC LINEAR 'V' PORT.



**BUILT IN RELIABILITY**

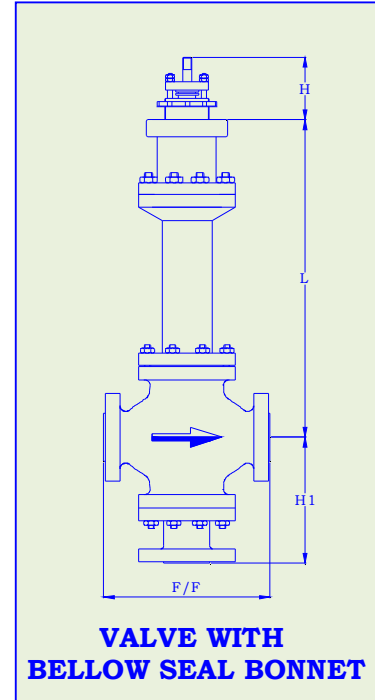
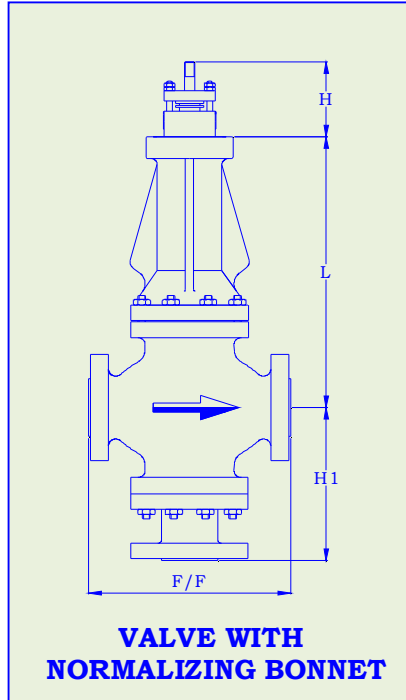
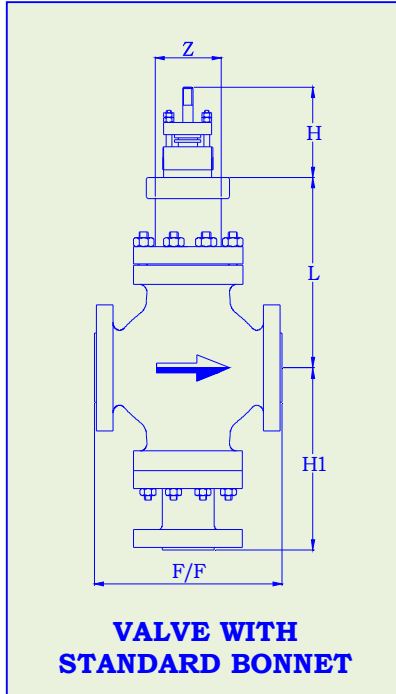
## ACTUATOR DIMENSIONS



ACTUATOR MODEL	EFFECTIVE Inch <sup>2</sup>	BONNET MOUNT DIA.	TRAVEL	ΦD	HA	HA1	HA2	HA3	HA4	HA5
PDC - 030	30	54	28	218	--	356	--	494	--	650
PDO - 030	30	54	28	218	372	--	529	--	650	--
PDC - 055	55	54	28	286	--	494	--	566	--	697
PDO - 055	55	54	28	286	471	--	678	--	673	--
PDC - 055	55	71.5	38	286	--	542	--	615	--	746
PDO - 055	55	71.5	38	286	520	--	727	--	722	--
PDC - 095	95	54	28	371	--	513	--	588	--	730
PDO - 095	95	54	28	371	505	--	711	--	707	--
PDC - 095	95	71.5	38	371	--	577	--	651	--	779
PDO - 095	95	71.5	38	371	555	--	760	--	756	--
PDC - 140	140	71.5	38	443	--	601	--	681	--	848
PDO - 140	140	71.5	38	443	573	--	852	--	821	--
PDC - 140	140	90.5	57	443	--	736	--	816	--	983
PDO - 140	140	90.5	57	443	708	--	988	--	956	--
PDC - 300	300	71.5	38	616	--	772	--	--	--	1098
PDO - 300	300	71.5	38	616	723	--	--	--	1075	--
PDC - 300	300	90.5	57	616	--	823	--	--	--	1149
PDO - 300	300	90.5	57	616	773	--	--	--	1075	--
PDC - 300	300	90.5	90	616	--	984	--	--	--	1312
PDO - 300	300	90.5	90	616	937	--	--	--	1239	--
PDC - 300	300	90.5	102	616	--	1030	--	--	--	1426
PDO - 300	300	90.5	102	616	1030	--	--	--	1550	--

- 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

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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	BELOW		
Inch	mm	FACE TO FACE (F/F)			H	Z	L			H1	
1/2	15	184	190	203	117	53.97	140	192	324	156	28
3/4	20	184	194	206	117	53.97	140	192	324	156	28
1	25	184	197	210	117	53.97	140	192	324	156	28
1.1/2	40	223	235	251	117	53.97	159	245	353	160	28
2	50	254	267	286	117	53.97	168	248	362	178	28
2.1/2	65	276	292	311	143	71.44	203	311	467	204	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	257	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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**BUILT IN RELIABILITY**

