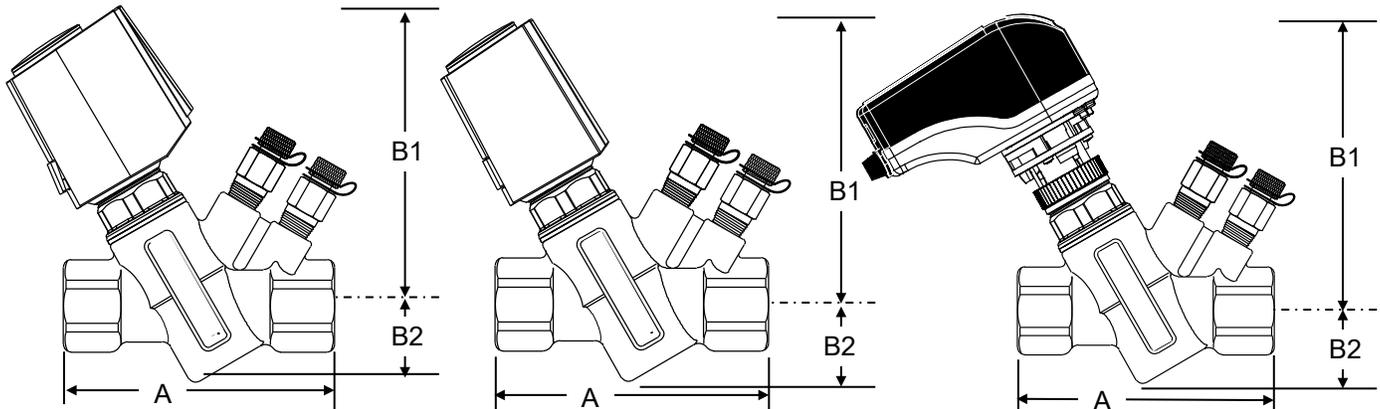




**SPECIFICATIONS**

**PSI / Temperature Rating:** 360 PSI / 248° F<sup>1</sup>  
**Actuator Ambient Temp.:** 34° F to 122° F  
**Flow Insert:** Glass reinforced PPS/POM/PSU/PC  
**Diaphragm:** 3/4": EPDM; 1" to 2": Hydrogenated acrylonitrile-butadiene-rubber  
**Body Material:** 1/2"-1", 1-1/4": DZR Brass (CuZn36Pb2As)  
 1"L, 1-1/2", 2": Brass (CuZn40Pb2)  
**End Connections:** Female NPT  
**O-Rings:** EPDM  
**Body Tappings:** P/T Test Valves on AB Valve Housing  
**Shut Off Leakage:** ANSI Class IV, IEC 60534-4 – Class IV  
**Maximum Close Off:** 116 PSID  
**Rangeability:** 100:1  
**Turn Down Ratio:** 100:1



AB Valve 1/2" (Shown with FT.0.2 actuator)

AB Valve 1/2" (Shown with FT.03/.04 actuator)

AB Valve 1/2" (Shown with FN.0X actuator)

**DIMENSIONS & WEIGHTS (NOMINAL)**

All dimensions are for planning purposes only and may change without notice.

SIZE	MODEL NO.	A	B1	B2 w/ FT.0.2	B2 w/ FT0.3/4	B2 w/ FN/H.0.x	B2 w/ FN/H.1.x	Cv <sup>2</sup>	WEIGHT <sup>3</sup> (LBS.)
1/2"	PNL_BE_	3.23	1.22	4.65	4.57	5.12	5.71	3.0	1.4
3/4"	PNL_BF_	3.70							
1"	PNL_BG_	4.02							
1"L	PNL_B2_	5.04	1.85	5.43	5.40	6.02	6.50	14.5	4.1
1-1/4"	PNL_BP_	7.5	3.95	N/A	N/A	7.7	8.16	39.6	10.1
1-1/2"	PNL_BQ_								
2"	PNL_BR_								

**NOTES**

<sup>1</sup> Temperature rating is defined due to no external spindle condensation.  
<sup>2</sup> Cvs are based on housing without cartridge. To calculate pressure drop use the formula  $\Delta P = (GPM/CV)^2$  and add the pressure drop to the cartridge PSID range.  
<sup>3</sup> Weight is valve only. Add Actuator weight on page 3 to get total weight.

**HIGH LIMIT FLOW RATES (+/-10%)**

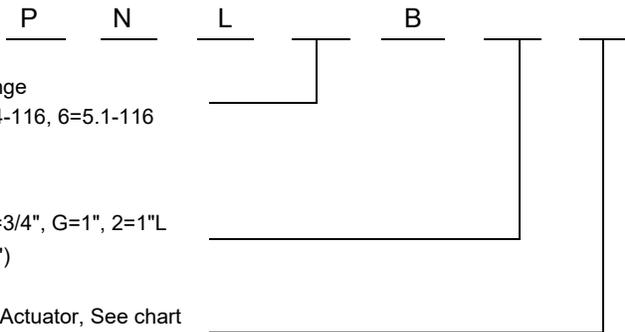
To correctly size your valve, select a high limit flow rate that is equal to or greater than the required flow rate.

GPM					SETTING
1/2"-1"		1"L-1-1/4"		1-1/2"-2"	
2.3-87 PSID <sup>4</sup>	4.4-116 PSID <sup>5</sup>	5.1-116 PSID <sup>5</sup>	2.3-116 PSID	2.3-116 PSID <sup>5</sup>	
-	0.282	-	3.81	8.36	1.0
0.163	0.624	-	4.46	10.0	1.1
0.370	0.920	-	5.10	11.7	1.2
0.510	1.18	-	5.72	13.3	1.3
0.664	1.41	-	6.32	15.0	1.4
0.792	1.61	2.73	6.90	16.7	1.5
0.902	1.80	3.17	7.47	18.3	1.6
1.03	1.96	3.61	8.02	20.0	1.7
1.14	2.12	4.10	8.56	21.6	1.8
1.24	2.27	4.67	9.08	23.2	1.9
1.33	2.42	5.15	9.59	24.8	2.0
1.41	2.56	5.55	10.1	26.4	2.1
1.49	2.69	5.95	10.6	28.0	2.2
1.55	2.82	6.28	11.0	29.6	2.3
1.63	2.95	6.61	11.5	31.2	2.4
1.68	3.08	6.96	11.9	32.7	2.5
1.73	3.21	7.27	12.4	34.2	2.6
1.79	3.33	7.62	12.8	35.7	2.7
1.82	3.45	7.93	13.2	37.2	2.8
1.88	3.56	8.28	13.6	38.6	2.9
1.93	3.68	8.59	14.0	40.0	3.0
1.98	3.79	8.72	14.4	41.4	3.1
2.02	3.89	8.85	14.7	42.8	3.2
2.06	3.99	8.99	15.1	44.1	3.3
2.10	4.08	9.12	15.5	45.4	3.4
2.14	4.17	9.25	15.8	46.6	3.5
2.17	4.25	9.47	16.1	47.8	3.6
2.21	4.32	9.69	16.5	49.0	3.7
2.25	4.39	9.91	16.8	50.2	3.8
2.28	4.46	10.1	17.1	51.3	3.9
2.31	4.51	10.4	17.4	52.3	4.0
2.34	4.57	10.5	17.7	53.3	4.1
2.37	4.61	10.6	18.1	54.3	4.2
2.39	4.66	10.7	18.4	55.2	4.3
2.42	4.70	10.9	18.7	56.0	4.4
2.43	4.73	11.0	19.0	56.8	4.5
2.46	4.77	11.1	19.2	57.6	4.6
2.48	4.80	11.3	19.5	58.3	4.7
2.50	4.83	11.4	19.8	58.9	4.8
2.51	4.86	11.5	20.1	59.5	4.9
2.53	4.89	11.7	20.4	60.0	5.0

**NOTES**

<sup>4</sup> If PSID is 29-87 PSID then accuracy is +/-20%.  
<sup>5</sup> If PSID is 58-116 PSID then accuracy is +/-20%.

**MODEL NUMBER SELECTION**



Select a PSID control range  
**(1/2"-1": 2=2.3-87, 4=4.4-116, 6=5.1-116**  
**1"L-1-1/4": 5=2.3-116**  
**1-1/2"-2": 2=2.3-116)**

Select a Size (E=1/2", F=3/4", G=1", 2=1"L  
 P=1-1/4", Q=1-1/2", R=2")

Select Actuator<sup>6</sup> (00=No Actuator, See chart  
 below for Model # Code)

**ACTUATOR SELECTION**

ACTUATOR	A=FT.0.2	B=FT.0.3	C=FT.0.4	D=FN.0.2	E=FNR.0.3	F=FN.0.4
Valve	1/2"-1"	1/2"-1"	1/2"-1"	1/2"-1-1/4"	1/2"-1-1/4"	1/2"-1-1/4"
Supply Voltage	24Vac -10%/+20% 50/60 Hz	230Vac +/-10% 50/60 Hz	24Vac/dc - 10%/+20% 50/60 Hz	24Vac/dc +/-10% 50/60 Hz	110/230Vac +/-10% 50/60 Hz	24Vac/dc +/-10% 50/60 Hz
Power Consumption	1.2 watt	1.2 watt	1.2 watt	5VA	1VA Standby 6VA Operating	5VA
Type	Thermal	Thermal	Thermal	Electrical	Electrical	Electrical
Control Signal	Modulating: 0-10 Vdc	On/Off	On/Off	Analog 0(2)-10Vdc	Digital (2 position / 3-point floating)	Digital (2 position / 3-point floating)
Feedback	No	No	No	Yes 0(2)-10Vdc	No	No
Failsafe	Yes (Normally Closed)	Yes (Normally Closed)	Yes (Normally Closed)	No	No	No
Operation Time	Approx. 4.5 min	Approx. 4.5 min	Approx. 4.5 min	Approx. 85 sec	Approx. 85 sec	Approx. 85 sec
Protection	IP54, Class III	IP54, Class II	IP54, Class III	IP54, Class II	IP54, Class II	IP54, Class II
Cable	Plug-in, 39"	Fixed, 39"	Fixed, 39"	Fixed, 39"	Fixed, 39"	Fixed, 39"
Weight (LBS) <sup>7</sup>	0.26	0.24	0.24	0.55	0.51	0.55

ACTUATOR	G=FNJ.1.2	K=FN.0.2-BUS	M=FNH-BUS	J=FNH	N=FNH.1		
Valve	1/2"-1-1/4"	1/2"-1-1/4"	1-1/2"-2"	1-1/2"-2"	1-1/2"-2"		
Supply Voltage	24Vac/dc +/-10% 50/60 Hz	24Vac/dc +/-10% 50/60 Hz	24Vac/dc +/-10% 50/60 Hz	24Vac/dc +/-10% 50/60 Hz	24Vac/dc +/-10% 50/60 Hz		
Power Consumption	2.5VA standby, 5VA peaks	2.1VA standby, 5.4VA peaks	AC: 2.1 VA DC: 5.4 W	AC: 8.5 VA DC: 4.1 W	AC: 9 VA DC: 4.5 W		
Type	Electrical	Electrical	Electrical	Electrical	Electrical		
Control Signal	Analog 0(2)- 10Vdc	0-100% BACnet or Modbus	0-100% BACnet or Modbus	Analog 0(2)- 10Vdc	Digital (2 position / 3-point floating)	Analog 0(2)- 10Vdc	Digital (2 position w/constant power)
Feedback	Yes 0(2)-10Vdc	Yes	Yes	Yes, Control Signal	Yes, 0-10Vdc (2- position only)	Yes, Control Signal	Yes, 0-10Vdc
Failsafe	Yes (closed)	No	No	No	No	Yes	Yes
Operation Time	Approx. 85 sec	Approx. 85 sec	Approx. 85 sec	Approx. 150 sec	Approx. 150 sec	Approx. 150 sec	Approx. 150 sec
Protection	IP54, Class II	IP54, Class II	IP54, Class III	IP54, Class III	IP54, Class III	IP54, Class III	IP54, Class III
Cable	Fixed, 39"	Fixed, 39"	Fixed, 39"	Fixed, 39"	Fixed, 39"	Fixed, 39"	Fixed, 39"
Weight (LBS) <sup>7</sup>	0.66	0.66	0.88	.67	.67	.75	.75

**NOTES**

<sup>6</sup> FT Actuators are not compatible with 1"L-1-1/4" valve. 1-1/2" and 2" valves require an FH actuator.

<sup>7</sup> Weight includes actuator, adapter ring and cable. Add this weight to valve weight for total weight.