

Cryogenic Vacuum Jacketed Automatic Valves



CryoPacific, Inc (CPI) Cryogenic Vacuum Jacketed Automatic Valves

CPI Cryogenic Vacuum Jacketed Automatic Valves incorporate the use of our efficient valve line combined with pneumatic actuators to provide reliable shut-down operation for your cryogenic application. CPI Cryogenic valves have very good flow characteristics combined with low heat-leak values to maximize both the hydraulic performance while minimizing heat load losses to the overall system. CPI valves are specifically designed for critical applications such as LH₂ and LHe service where low heat leak is of the utmost importance. A special extended valve bonnet design coupled with an open intermediate piece that separates the actuator from the cold-end of the valve allows the actuator to operate at normal atmospheric temperatures. This will lead to long actuator and valve seal life. A unique intermediate coupler design allows for the valve to actuator engagement for ease of maintenance and removal. All valves are Mass-spectrometer leak checked to ensure vacuum tight integrity. Both the actuator and valve are pressure tested to code standards.

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Cryogenic Valve Performance Data

Valve Model Number	Valve Size (NPS) Inner X Outer	CV Value	MAW P (PSI)	Cooldown Mass (lbs.)	Cooldown loss Heat Leak *		Steady-State Heat Leak **	
					80 ° K	20 ° K	80 ° K	20 ° K
CPI-A050	½ X 2	5	300	3.25	112	120	13.1	15.2
CPI-A100	1 X 3	13	300	4.70	130	139	13.8	15.3
CPI-A150	1 ½ X 3 ½	32	300	7.25	255	268	17.5	20.5
CPI-A200	2 x 4	53	300	10.50	291	408	23.5	26.8

*Note – Cool down loss data is from ambient to cryogenic temperature , in BTU's

**Note – Steady-State Heat leak is from ambient to cryogenic temperature in BTU's/hour

Valve Dimensional Data

Valve Model	Style	A	B	C	D	E	F	G	H	I	J (NPT)
CPI-A050	I	21.00	10.20	6.50	1.50	6.50	4.50	2.25	0.82	2.38	1/4
CPI-A100	I	23.50	12.20	9.25	2.50	7.00	5.00	2.50	1.20	3.50	3/8
CPI -A150	II	34.00	14.60	8.50	3.00	10.00	7.00	5.00	1.88	4.00	3/8
CPI -A200	II	34.00	14.60	8.50	3.50	10.00	7.00	5.00	2.37	4.50	3/8

- All dimensions are in inches

Pneumatic Actuator Data

Valve Model Number	Actuator Pressure (PSI)	Stem Travel (inches)	Operating Temp. Range (°F)
CPI-A050	30-60	0.62	-20 to 180
CPI-A100	30-60	1.01	-20 to 180
CPI -A150	30-150	1.50	-20 to 180
CPI - A200	30-150	1.50	-20 to 180

