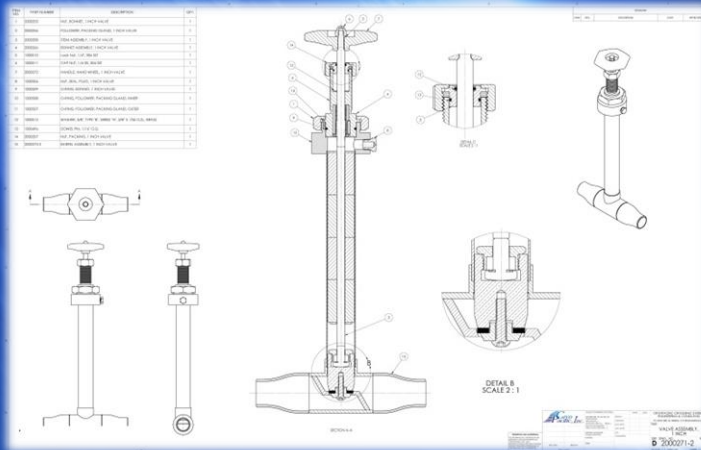
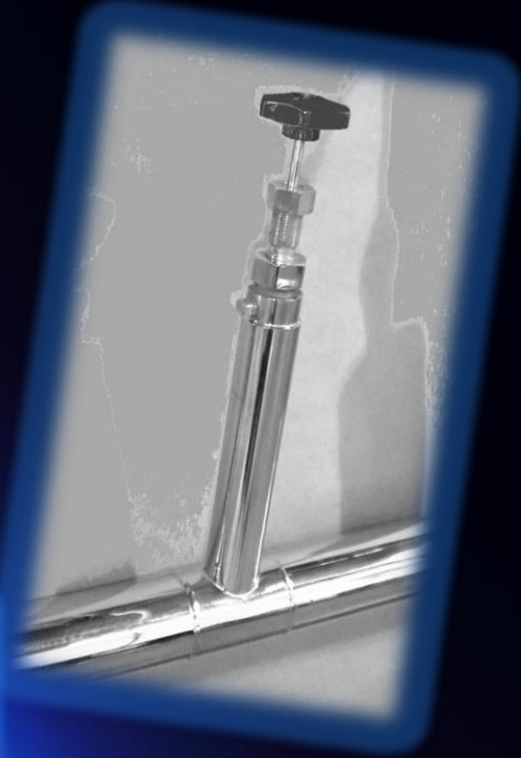
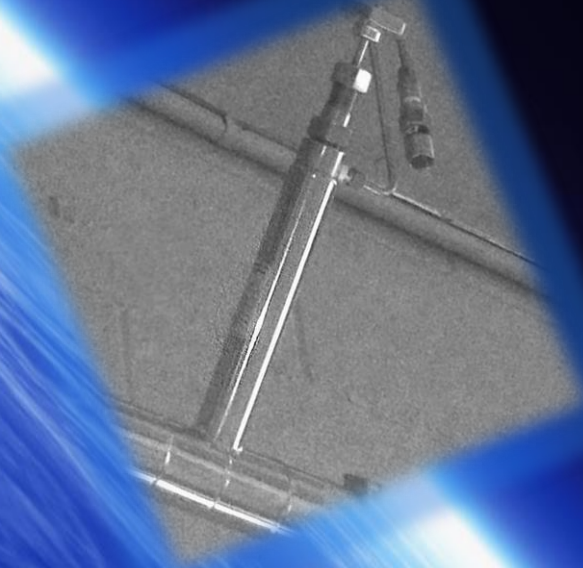


# Cryogenic Vacuum Jacketed Valves

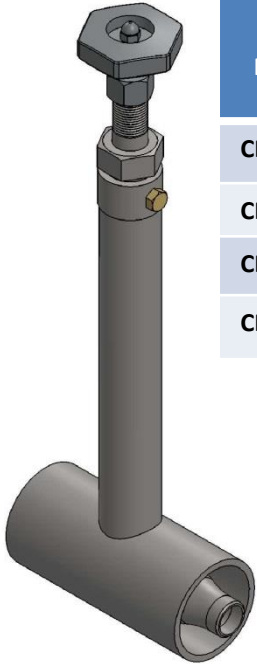


## CryoPacific, Inc (CPI) Cryogenic Vacuum Jacketed Valves

**CPI** cryogenic vacuum jacketed valves have excellent flow characteristics and are built to provide extremely low heat leak. These valves combine to have low thermal mass and high structural integrity for efficient operation at cryogenic temperatures. The bonnet extension member is long, thin walled, and precision machined to limit the conductive heat transfer. CPI valves are specifically designed for critical LH2 and LHe service where low heat leak is of the utmost importance. A dual aligned stem seal located in the extended valve bonnet assembly helps minimize the cold transference to the warm packing section which yields long packing and soft seal life. The valve head has a spring loaded swivel stabilizer design to prevent valve seat damage while seating. All moving and contacting parts have closely held tolerances for effective operation. The valve stem has thermal spacers that have a tight clearance to the barrel housing which allows for creation of a gas pocket. This feature allows the valve to be mounted in various angles off of the horizontal. The valve body has a port to provide for purging or a thermal relief connection source. All valves are Mass-spectrometer leak checked, proof pressure tested, and positive seating inspected for bubble tight shut-off. All of these features provides for the most reliable valve operation in the industry.

# Cryogenic Vacuum Jacketed Valves

## Cryogenic Valve Performance Data



Valve Model Number	Valve Size (NPS) Inner X Outer	CV Value	MAWP (PSI)	Cooldown Mass (lbs.)	Cooldown loss Heat Leak *		Steady -State Heat Leak **	
					80 ° K	20 ° K	80 ° K	20 ° K
CPI-M050	½ X 2	5	300	3.25	112	120	13.1	15.2
CPI-M100	1 X 3	13	300	4.70	130	139	13.8	15.3
CPI-M150	1 ½ X 3 ½	32	300	7.25	255	268	17.5	20.5
CPI-M200	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	A	B	C	D	E	F	G	H	I
CPI-M050	14.50	10.20	11.50	1.50	4.00	3.00	1.50	0.82	2.38
CPI-M100	17.40	12.20	14.00	2.50	7.00	5.00	2.50	1.20	3.50
CPI-M150	20.50	14.60	15.50	3.00	10.00	7.00	5.00	1.88	4.00
CPI-M200	20.50	14.60	15.50	3.50	10.00	7.00	5.00	2.37	4.50

- All dimensions are in inches

