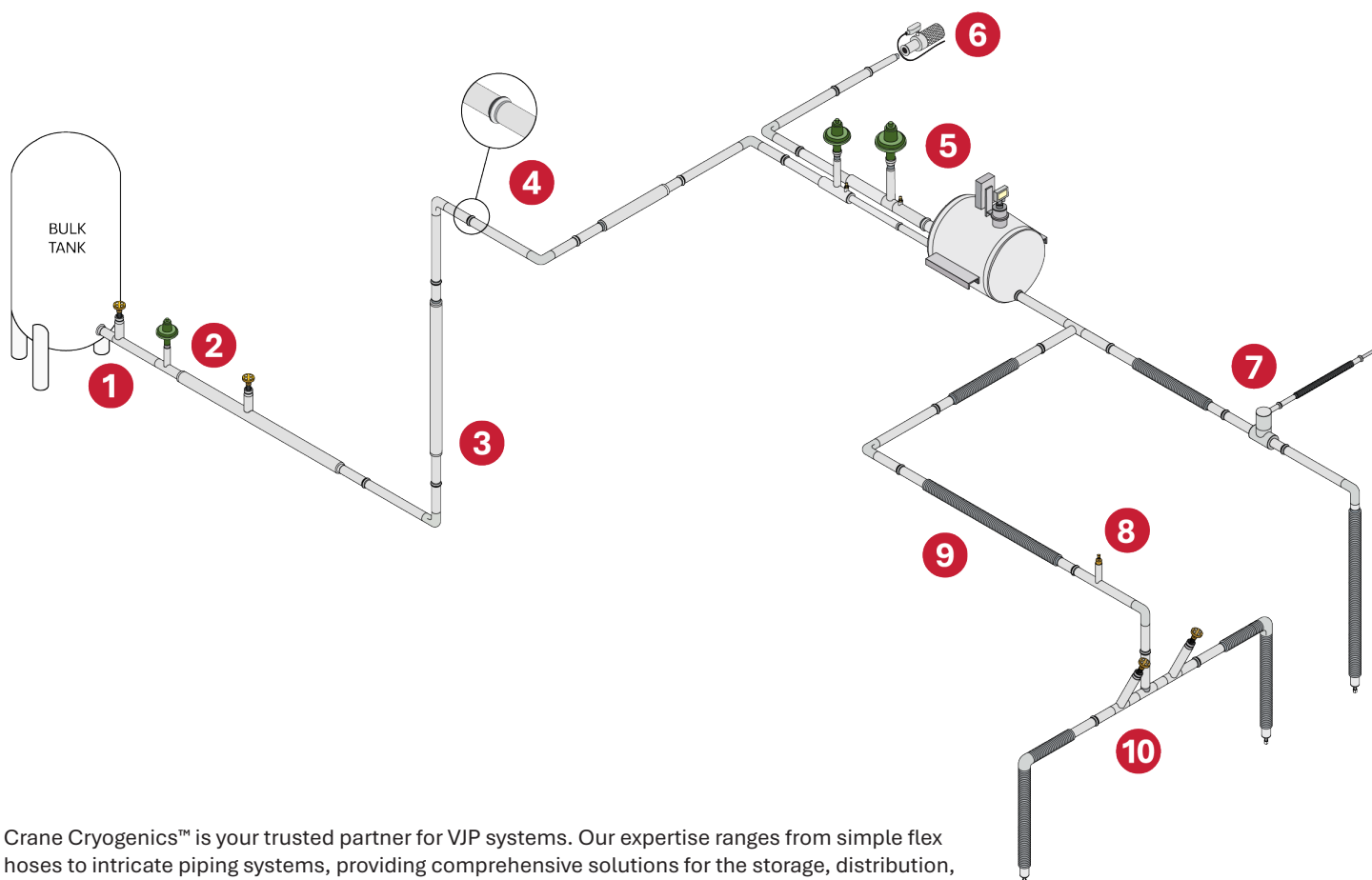


VACUUM-JACKETED PIPING SYSTEMS

CRYOGENIC EQUIPMENT ENGINEERING, MANUFACTURING, AND INSTALLATION



Crane Cryogenics™ is your trusted partner for VJP systems. Our expertise ranges from simple flex hoses to intricate piping systems, providing comprehensive solutions for the storage, distribution, and transfer of all cryogenic fluids.

- | | |
|---------------------------------|----------------------------------|
| 1. Cryogenic withdrawal valve | 6. VJ vent pipe with heater |
| 2. Emergency shut-off valve | 7. Gas vent with vent hose |
| 3. Rigid vacuum-jacketed pipe | 8. Safety relief valve |
| 4. Close-fit bayonet connection | 9. Flexible vacuum-jacketed pipe |
| 5. Phase Separator (PS-22) | 10. Vacuum-jacketed valve |

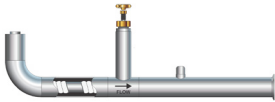
*All equipment shown not available for use with all liquid cryogenics. Contact us for more information.

We Specialize In:



www.cranecryogenics.com

VACUUM-JACKETED Piping Systems

1		CRYOGENIC WITHDRAWAL VALVE - Reduces two-phase flow for better equipment operation. - Stops ice balls, keeping valve handle free for easier shut-off.	Available in all sizes that Techniguard Vacuum Jacketed Pipe can be made.
2		EMERGENCY STOP VALVE - Designed to quickly stop the flow of fluid in event of an emergency. - Pneumatic or electric actuators	Can be incorporated in to BMS or stand alone. Various E-Stop Buttons available.
3		RIGID VACUUM-JACKETED PIPE 1/2" to 30" NPS - Down to -452°F (-269°C/ 4K) 300 Series Stainless Steel	- End connections: Bayonet, Welded, Threaded, Flanged - Options include: Valves, Gas Traps, Vents, Thermocouple Vacuum Gauge Tubes
4		CLOSE-FIT BAYONET CONNECTIONS 5/8" to 4" IPS - Down to -452°F (-269°C/ 4K) 300 Series Stainless Steel, Viton O-Ring, V-Band Clamp	- Standard - up to 150 PSI. Custom pressures available on request - Leak tested: x 10⁻⁸ Helium Mass Spectrometer
5		PHASE SEPARATOR - PLC Controlled - Down to -452°F (-269°C/ 4K) 300 Series Stainless Steel	- Outlets: 1,2,4,6,8,10,12 - Options: Several models available, Overflow Protection, Vertical Orientation, Oxygen and Facility Monitor integration
6		VJ VENT PIPE WITH HEATER 1/2" to 10" ID - Down to -452°F (-269°C/ 4K) 300 Series Stainless Steel	- End connections: Bayonet, Field Joint, Mechanical Fitting - Rigid and Flexible options
7		GAS VENT WITH VENT HOSE - Up to 150 PSI - Down to -452°F (-269°C/ 4K) 300 Series Stainless Steel	Available in End-of-Line, Inline, and Vertical configurations
8		SAFETY RELIEF VALVE - Can be incorporated in to BMS or stand alone. Various E-Stop Buttons available. - VJ Stand off can be used to reduce frosting and icing.	- Sized to meet your code requirements. - Can be incorporated with all sizes and types of Crane Cryogenic vacuum jacketed piping
9		FLEXIBLE VACUUM-JACKETED PIPE 1/2" to 10" ID - Down to -452°F (-269°C/ 4K) 300 Series Stainless Steel	- End connections: Bayonet, Field Joint, Mechanical Fitting - Outer covering options: Heat Shrink, Armor, Braided
10		VACUUM-JACKETED VALVES 1/2" – 12" NPS - Down to -452°F (-269°C/ 4K) 300 Series Stainless Steel	- T-Globe, Y-Globe, Angle, Check - Pneumatic or electric actuation - Linear Flow Plug, Shutoff Valves (Modular and Integrated)

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Crane ChemPharma & Energy, CRANE CRYOGENICS™

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