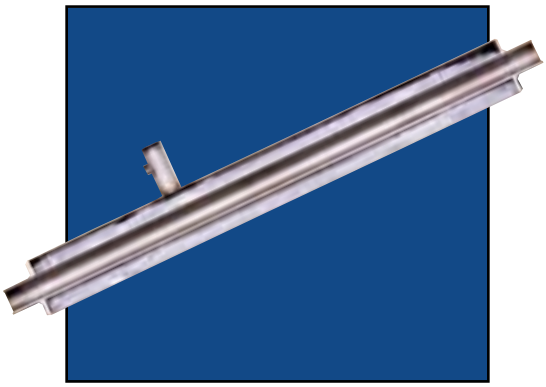
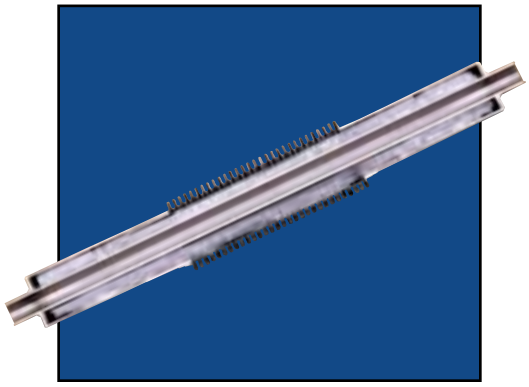
Vacuum Insulated Pipe



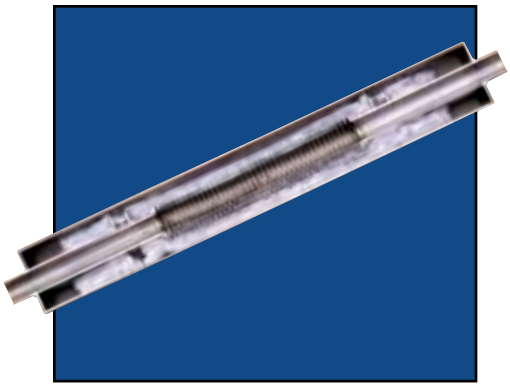
Invar Internal Pipe

Qualified in all respects to ASME Code, Section B31.3, chemical plant and petroleum refining piping for 105 psi. Extremely low contraction. No bellows or convoluted flex hose required. All-rigid construction means design simplicity and long-term integrity, as well as no extra weld fatigue from adding items for construction, less stress during over-the-road shipments and less damage during installation. Bayonet or field weld connectors. Standard sizes are 1/2”x1-1/2”, 1”x2-1/2”, 1-1/2”x 3”, 2”x 3-1/2”



T304 Stainless Inner-External Bellows Pipe

Qualified in all respects to ASME Code, Section B31.3, chemical plant and petroleum refining piping for 105 psi. External bellows makes repair or replacement easy. Convoluted flex hose installed to compensate for contraction. Very corrosion resistant material. Bayonet or field weld connectors. Standard sizes are 1/2”x1-1/2”, 1”x2-1/2”, 1-1/2”x3”, 2”x 3-1/2”, and 3”x 5”.



T304 Stainless Inner-Internal Bellows Pipe

Industrial/commercial grade, built to the same rigid requirements as ASME piping. Internal bellows means there is no contraction of the outer jacket. No convoluted hose required. Very corrosion-resistant material. Bayonet or field weld connectors. Standard sizes are 1/2”x2”, 1”x3”, 1-1/2” x 3-1/2”, 2” x 3-1/2”, and 3” x 5”.

Chart supplies state-of-the-art helium VIP meeting the stringent heat leak standards applied to the Superconducting Supercollider Program.

CHART

Vacuum Insulated Pipe

Only Chart Does It This Way

Chart has developed static vacuum insulated pipe with patented features that are far more efficient than a dynamic vacuum or foam insulated pipe.

In fact, when you compare utility costs, cooldown and static losses there is no comparison.

Vacuum insulated pipe is just one more good idea from a company known worldwide for its abilities to analyze your needs, provide conceptual designs, manufacture and install quality equipment, test the final system and provide follow-up service - in short, single source responsibility for turnkey systems.

We make everything from 2cc dewar flasks to 100,000-gallon cryogenic tanks.

And in all we do for you, Chart constantly looks for better ways to maintain critical temperatures approaching -200 degrees C. Which is why the inner pipe in our vacuum pipe systems is wrapped with multi-layer super insulation. And why we've pioneered bayonet-type connections for tighter seals using the patented Invar alloy in our design.

All adding up to less loss and more cost savings for you.

Let Us Do A System Comparison

At no obligation, we'll provide all the information you need to see the dollar payback for vacuum insulated pipe from Chart. This includes an estimated system cost and computer-generated comparison of liquid losses. Call our Toll Free Number to discover the savings available with vacuum insulated pipe. Tell us your layout and the length of your system and we will provide a cost/heat leak comparison and total price within 24 hours

Typical Operating Cost Comparison

	Cooldown Losses	Static Losses	Electrical Costs	Total Costs
MVE Static Vacuum Pipe	$21.28	$5.63	$0.00	$26.81
Dynamic Vacuum Pipe	$345.03	$449.44	$513.78	$1,309.25
Foam Insulated Pipe	$1,218.78	$2,739.98	$0.00	$3,958.76

CHART
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