

## VACUUM JACKETED TRANSFER HOSE ASSEMBLIES

**Dura-Vac**™ flexible vacuum jacketed (vacuum insulated) hoses from Duraflex, Inc.™ are the perfect solution for cost-efficient transfer of liquid nitrogen. **Dura-Vac**™ hoses offer substantial cost savings over non-insulated hoses. Safety is also improved with **Dura-Vac**™ by eliminating frosty and dripping conditions, which present safety hazards. Hose assemblies are available in double or triple configuration—with a variety of custom size arrays, coverings, and end fittings.

### DURA-VAC™ CONSTRUCTION

**Dura-Vac**™ hoses incorporate a vacuum chamber super-insulated with alternate layers of aluminum foil and spacer material. A special chemical gettering added to the vacuum chamber extends the service life of the hose. The hose material chemistry is composition balanced to preclude austenitic to martensitic phase changes at cryogenic temperatures. This feature provides longer fatigue life and maintains overall hose flexibility.

The standard outer covering of the **Dura-Vac**™ vacuum jacketed hose assembly is made of interlocking stainless steel which, due to its light weight and flexibility, allows a minimum bend radius of only 4.5" on 1/4" inside diameter hose.

To ensure superior quality and safety, every **Dura-Vac**™ hose is flow-tested and leak-tested using helium mass spectrometer to  $1 \times 10^{-9}$  std. cc/sec, as well as equipped with a tamperproof evacuation valve. (Each hose component is pre-tested to the same vacuum level prior to assembly fabrication).



### STANDARD DIMENSION

Inner Diameter	Outer Diameter	OD w/ Armor	Static Bend Radius	M.A.W.P. (psi)
1/4"	1.11"	1.3"	4.5"	150
3/8"	1.37"	1.5"	5.5"	150
1/2"	1.71"	1.8"	7.0"	150
1"	2.55"	3.0"	11.0"	75

*Other diameters and pressure ratings are available upon request.*

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24/7 Emergency Service: 847-337-9459

[www.duraflexinc.com](http://www.duraflexinc.com)



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### STANDARD LENGTHS OF DURAVAC™ HOSES

Custom assemblies can be fabricated up to 60' in overall length.

- 4 ft.
- 6 ft.
- 8 ft.
- 10 ft.
- 12 ft.

### DURA-VAC™ VACUUM JACKETED HOSE COMPONENTS

- Flexible annular corrugated sections
- Vacuum jacketed shut-off valves
- Inner diameters 1/4" to 3"
- Elbows - 45° and 90°
- Tees
- Fittings - CGA, JIC, MPT and FPT
- Special fittings and mating vessel hardware available upon request.

Standard **Dura-Vac™** hoses are designed for LN2 use. Hoses for other cryogenic liquids such as oxygen, helium and argon are available upon request.

Heat Leak comparisons of Alternative Piping Based on 1" Inner Pipe	
Bare Copper Pipe	200.00
Foam Insulated Pipe	20.00
Bare Vacuum Pipe	4.00
Dynamic Vacuum Pipe	2.00
Rigid Vacuum Jacketed Pipe from <b>Duraflex.</b>	0.47

### SYSTEM DESIGN

Regardless of the size, complexity or location you require, **Duraflex Inc.™** can design the exact configuration and system for your installation. Contact the factory if you need further assistance.

