








## VACUUM INSULATED FLEXIBLE HOSES

Vacuum Insulated Flexible Hoses are the most efficient way of delivering liquid nitrogen in situations where rigid SILV cannot be used. For example where equipment needs to move, has vibrating elements or in coupled systems at tank and use point end where these cannot be determined with sufficient accuracy prior to manufacture. We can make VI hoses to any length (with couplings) and with almost any end fitting you require.

### Key Features

-  Outer pipe remains ambient – no personnel hazard.
-  Braided stainless outer – gives superior durability.
-  Pipework has an indefinite lifetime with only minimal maintenance required.
-  Good bend radius even when cold, makes awkward installations more manageable.
-  Can be supplied with vacuum insulated couplings for longer lengths.
-  Small outer diameter in comparison to equivalent lagged lines.
-  Outer pipe remains a fixed length. All contraction is taken up in the inner pipe.

### Applications

Vacuum insulated flexibles are based on a pipe in pipe system. Made entirely of austenitic stainless steel, the liquid nitrogen is conveyed down the inner pipe whilst the outer pipe remains at ambient. A combination of vacuum, multi-layer super insulation, cryosorption material and low conductivity supports ensure that the heat transferred into the liquid remains at a minimum, thus providing the most efficient system possible.

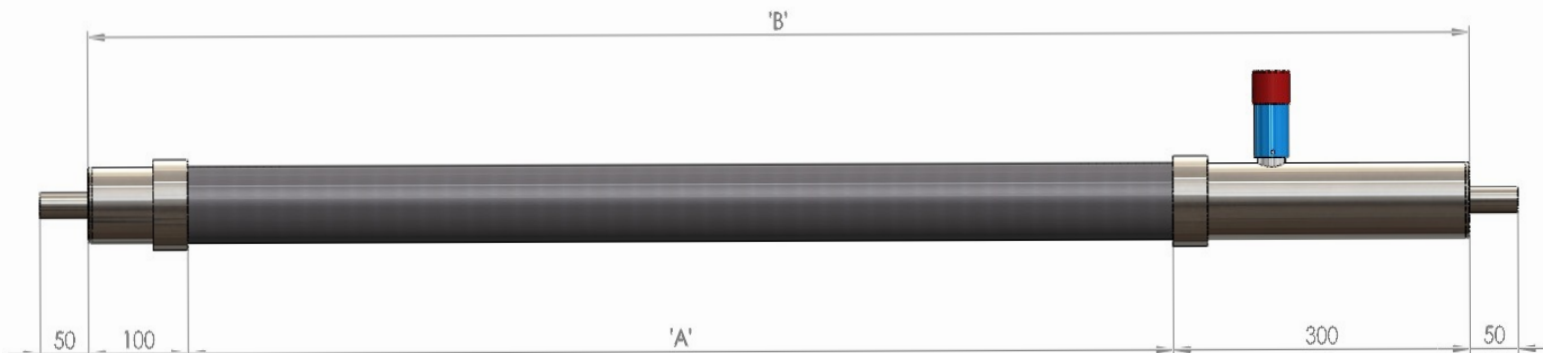
Designed to be supplied as either stand-alone items, or built-into complete systems either as a coupled flexible or flexibles lengths integrated into rigid sections, the use of VI flexibles allows for even the most complex of installations to be completed with ease.

Additionally, VI flexibles can also be used when the line needs to be disconnected for the use equipment, MBE equipment for example.

# VACUUM INSULATED FLEXIBLE HOSES



**THAMES CRYOGENICS LTD**  
Total Cryogenic Solutions



Inner	Outer	Outer Diam (mm)	Bend Radius	Flow Rate (L/H)
3/8"NB (DN10)	1 1/4"NB (DN32)	50.8	300	0-175
1/2"NB (DN12)	1 1/2"NB (DN40)	60.3	340	100-300
3/4"NB (DN20)	2"NB (DN50)	70	390	300-600
1"NB (DN25)	2 1/2"NB (DN65)	101.6	460	600-1200
1 1/4"NB (DN32)	3"NB (DN80)	101.6	660	1200-1800
1 1/2"NB (DN40)	4"NB (DN100)	130	750	1800-2600

## Flexible Hose Lengths

When asking for a quote for a flexible hose please specify a dimension either for 'A' or 'B'. End fittings can be added upon request. (See separate end fittings drawing under downloads)

If you require a size not listed here please contact us.

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