

# Flexible Transfer Lines

Lake Shore manufactures two families of vacuum-insulated liquid helium transfer lines. The first is the FHT-ST family, which is designed specifically for operation with the Lake Shore SuperTran and SuperTran-VP continuous flow cryostats. These are optimized for high efficiency, low-flow applications. The second is the FHT family, which is designed for the fast transfer of liquid helium into reservoir-style cryostats such as the SVT.

## Continuous flow flexible cryogen transfer lines

The FHT-ST high-efficiency transfer lines are compatible with both SuperTran and SuperTran-VP cryostats, and can be used with liquid helium or liquid nitrogen. A suitable pressurized cryogen storage Dewar with a port for the withdrawal leg is required for proper operation. The FHT-ST transfer lines include a built-in flow valve and a charcoal cryopump. These transfer lines are optimized for use with continuous flow style cryostats and are not suitable for transferring large volumes of liquid helium.

*If you are looking to transfer large volumes of liquid helium, see our FHT transfer lines.*

### Three available models

#### FHT-ST-25-56

Continuous flow flexible cryogen transfer line for use with ST-500 cryostats and ST-500-based probe stations, including:

- 20 in long, 0.25 in diameter delivery leg
- 56 in long, 0.5 in diameter withdrawal leg
- 72 in flexible section
- Anti-oscillation hole in withdrawal leg 33 in from end to prevent Taconis oscillations

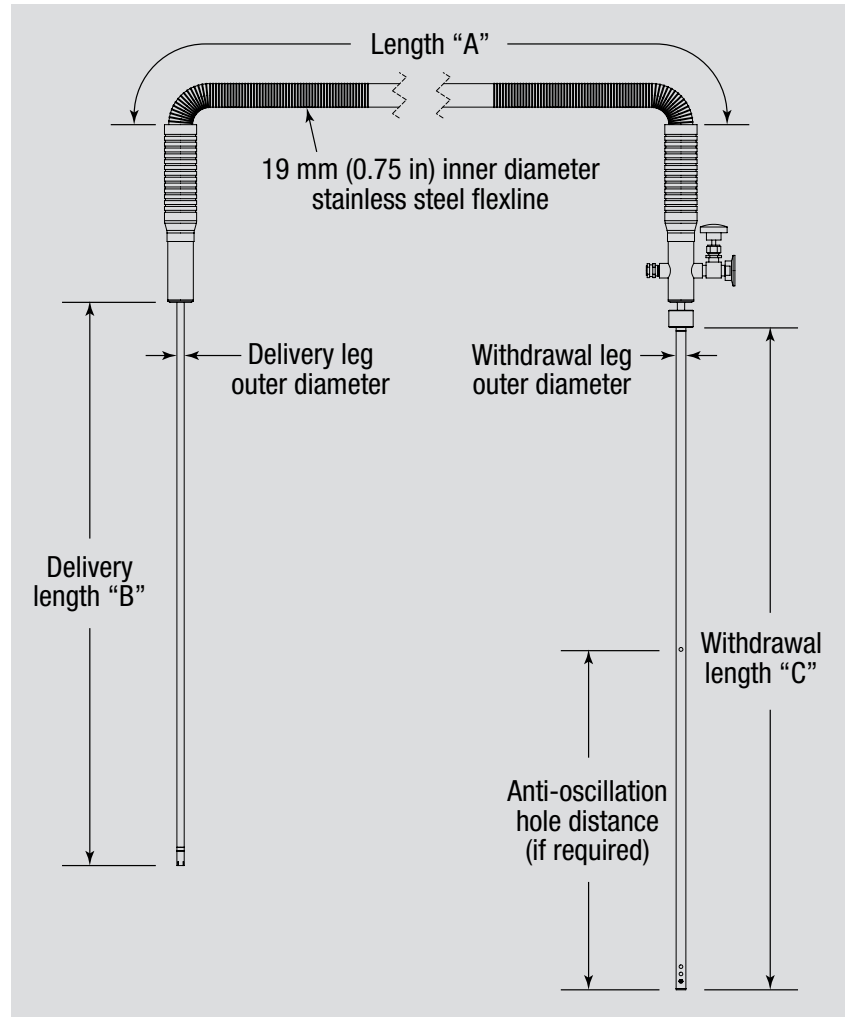
#### FHT-ST-38-56

Continuous flow flexible cryogen transfer line for use with all other ST and STVP cryostats (including the ST-500-C), including:

- 20 in long, 0.375 in diameter delivery leg
- 56 in long, 0.5 in diameter withdrawal leg
- 72 in flexible section
- Anti-oscillation hole in withdrawal leg 33 in from end to prevent Taconis oscillations

#### FHT-ST-CUSTOM

Continuous flow flexible cryogen transfer line with custom dimensions. Withdrawal and delivery leg length and diameter may be customized, and flexline lengths of 72 in, 96 in or 114 in are available. An elbow may be added to one or both legs. Other customizations are available upon request—consult Lake Shore for details.



## Flexible liquid helium transfer lines

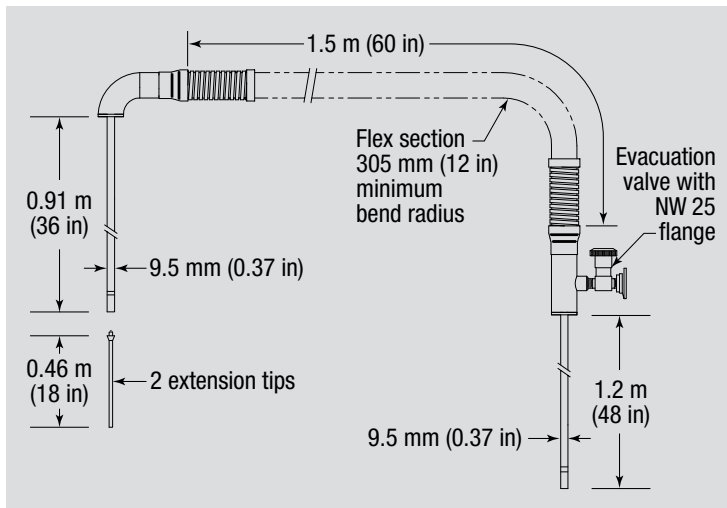
Lake Shore FHT Series flexible helium transfer lines provide a convenient and efficient method of cooling and filling most research cryostats. Inside each FHT is a length of flexible metal tubing surrounded by multiple radiation shields and vacuum insulation. Specially constructed spacers prevent the inner line from contacting the outer vacuum jacket. Each line is supplied with two uninsulated extension tips.

If you are looking for a replacement transfer line for your SuperTran or SuperTran-VP cryostat, see our FHT-ST transfer lines.

### Three available models

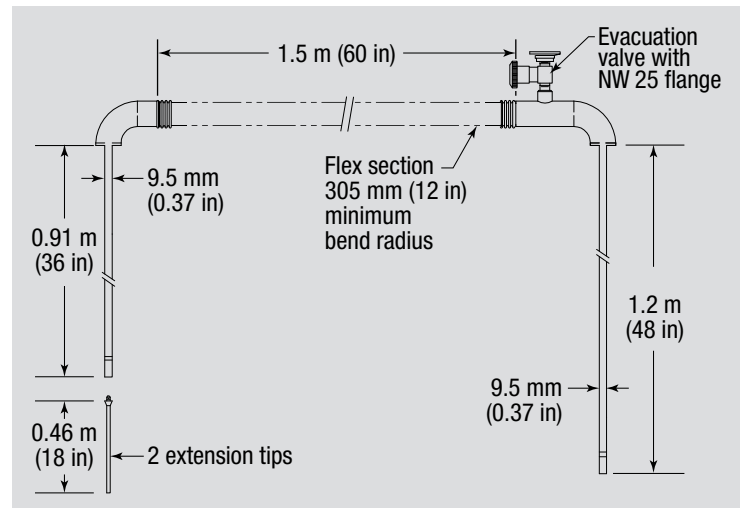
#### Standard FHT

The standard configuration has one elbow on the delivery leg. Custom dimensions are available upon request.



#### Double right angle (FHT-DRA)

Occasionally it is more convenient to have two rigid elbows. FHT-DRA adds a second elbow to the standard FHT configuration.



#### Bayonet (FHT-BAY)

For users who prefer a two-piece transfer line, FHT-BAY is available with a delivery section that is placed in the cryostat fill port.

