

6.1.5 Mounting the radiation shield (optional)

- 1) Clean the radiation shield with isopropyl alcohol.
- 2) Apply a small amount of Apiezon® N grease or pure Indium foil on the shield mating surface. Attach the radiation shield with brass screws. Tighten it evenly to the first stage heat exchanger.

6.1.6 Connect the remote motor assembly's flex line

- 1) Remove the dust plug from the Aeroquip® fitting attached to the end of the remote motor's flexible line and place in the tool kit for future use.
- 2) Remove the dust cap from the cold head's mating Aeroquip® fitting (labeled "Motor") and place in the tool kit for future use.
- 3) Make certain the flat gasket is present and properly seated in the cold head's Aeroquip® fitting.
- 4) With a dry, clean lint-free cloth remove any visible particles from the ends of the Aeroquip® couplings.



IMPORTANT

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When connecting or disconnecting the flex lines, Cryomech recommends using a small amount of Teflon spray lubricant. A can of lubricant is included with each system. Before using the lubricant, you must read the instructions for its use. Instructions are packaged with the lubricant and included in Appendix B of this manual.



CAUTION

Follow the procedure carefully when connecting and disconnecting the helium flex lines. Failure to follow the procedure can cause accidental coupling disassembly, destruction of the sealing O-ring, and helium loss.



CAUTION

Do not allow the flex lines to come into contact with corrosives or any type of commercial cleaning agent. *Helium leaks caused by exposure to corrosives or commercial cleaning agents will not be covered under warranty.*



CAUTION

Do not bend the flex lines to less than 10 inch (25 cm) radius or permanent damage may occur. *This type of damage is not covered under the warranty.*

- 5) With the wrenches supplied in the tool kit, connect the Aeroquip® fittings until a positive stop is felt.



Figure 6-3: Connecting the remote motor assembly's flex line to the PT 403/5/7 cold head

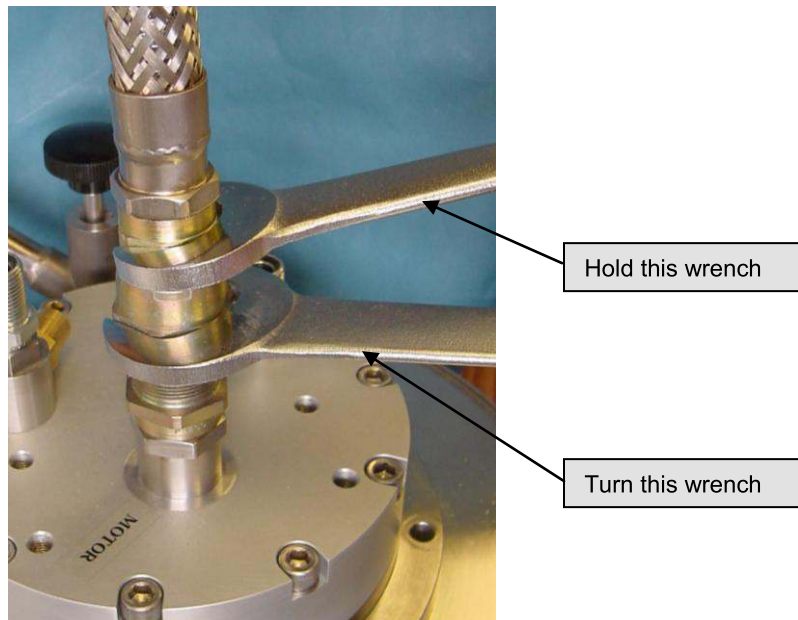


Figure 6-4: Connecting the remote motor assembly's flex line to the PT 410/15 cold head

6.1.7 Attaching the external reservoirs (if applicable)

- 1) Remove the dust plugs from the external reservoirs' Aeroquip® fittings and place in the tool kit for future use.
- 2) Remove the dust caps from the cold head's Aeroquip® fittings and place in the tool kit for future use.
- 3) Make certain the flat gaskets are present and properly seated in the cold head's Aeroquip® fittings.
- 4) With a dry, clean lint-free cloth remove any visible particles from the ends of the Aeroquip® couplings.

- 5) Using the wrenches supplied in the tool kit, connect the Aeroquip® fittings until a positive stop is felt. The external reservoirs are identical and therefore, interchangeable.

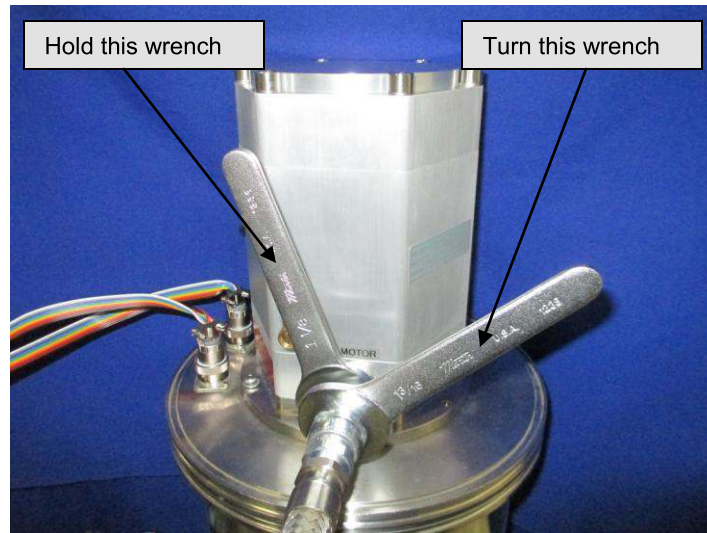


Figure 6-5: Connecting the external reservoir flex line to the PT 403/5/7 cold head

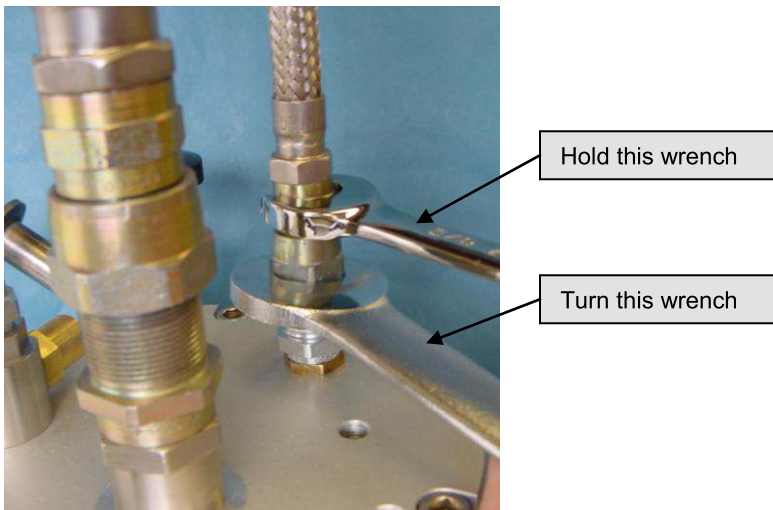


Figure 6-6: Connecting the external reservoir flex line to the PT 410/15 cold head

6.2 Compressor installation

The entire section on compressor installation should be reviewed before installing the compressor package.



CAUTION

Failure to follow these installation guidelines could result in voiding the warranty.

6.2.1 Prepare the compressor package location

- Confirm that the physical space containing the compressor package has an ambient temperature in the range 45 to 100°F (7 to 38°C).
- Place the compressor package in a level position. For the compressor package to operate under optimal conditions, it must be oriented within 5° of being level.



WARNING

The compressor package must be positioned to provide easy access to the front-panel mounted circuit breaker.

- Position the compressor package so there is sufficient space around it for changing the adsorber. If the compressor package cannot be moved easily to an open area, leave approximately 2 additional feet (0.6 m) clearance above and to the left and right of it.
- In addition to the above requirements, CP800 Series air cooled models require 2 feet (0.6m) of clearance in front and in back of the unit to ensure proper air flow. CP900 Series air cooled models require 2 feet (0.6m) of clearance around all four sides and 3 feet (1m) of clearance above for proper air flow.

6.2.2 Connect the water lines to the compressor



CAUTION

Cooling water must meet the requirements in Section 5. *If water that does not meet the cooling water specifications in Section 5 is introduced into the system, even for cleaning purposes, it will void the warranty.*



CAUTION

Do not apply heat to the cooling water inlet and outlet connectors located on the front panel of the compressor.

- 1) Make sure that the cooling water supply is turned OFF.
- 2) Apply Teflon tape or pipe sealant to the threads on the male pipe thread (MPT) fittings that you provide to connect to the compressor's cooling water inlet connection and the cooling water outlet connection.
 - CP900 and CP800 Series Compressors require 1/4 MPT (1/4" Male National Pipe Thread) fittings.
 - CP2800 and CP1000 Series Compressors require 3/8 MPT (3/8" Male National Pipe Thread) fittings.
- 3) Attach the fittings to the compressor's cooling water inlet and outlet connections. Turning the fitting clockwise, first hand-tighten the connection. Use a wrench to keep the compressor's cooling water connections from turning, and use another wrench to tighten fittings until snug.