

SERVICE NOTE

CS4/CS-L: Argon accessories

Prerequisites

Argon gas is used as the protective atmosphere during the high temperature measurements. Argon is also used during the low temperature measurements, for expelling of the liquid nitrogen from the cryostat. Purity of the gas is not critical, we recommend 99.5% and higher.

Interconnection scheme

Argon accessories for CS3/CS4 system consists of Argon bottle with reduction valve (**not included in equipment**) and flow meter (included) that is connected to the MFK1 Pick-up unit with appropriate tubing (included).

For low temperature measurements (CS-L), the Argon blow gun (included) is connected to the Argon bottle using special Y-piece nylon connector and appropriate tubing (included). Interconnection scheme of Argon accessories for both high and low temperature systems is shown in picture below.

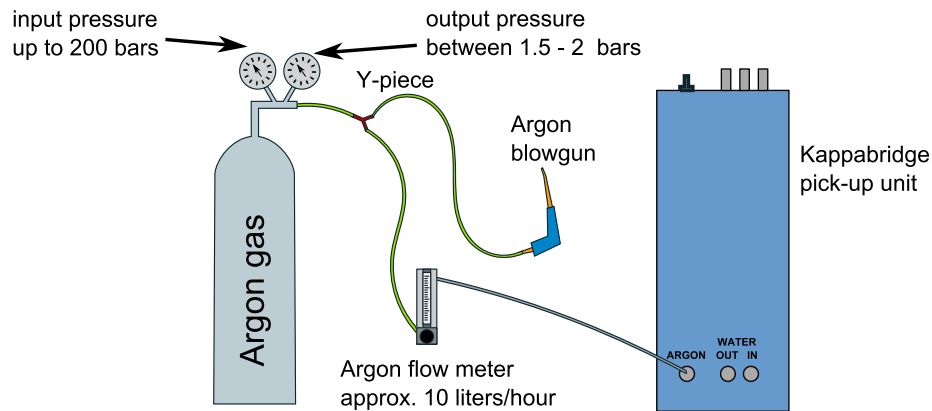


Figure 1: Interconnection scheme

Installation

1. Bottle with pressured Argon gas must be placed in proper distance from Pick-up unit (at least 1,5 m) and fixed to the wall with safety chain.
2. Reduction valve should have output pressure range from 0 to 10 bars, maximum value output pressure from the valve must be set to approx. 2 bars. Outer diameter of tube counterpiece is 8 mm (5/16 inch). Use the tightening ring to tighten the tube to the valve.



Figure 2: Reduction valve

3. Below is the detailed picture of the Y-piece nylon connector with outer diameter 8mm. All tubes are tightened to the connector with tightening rings.

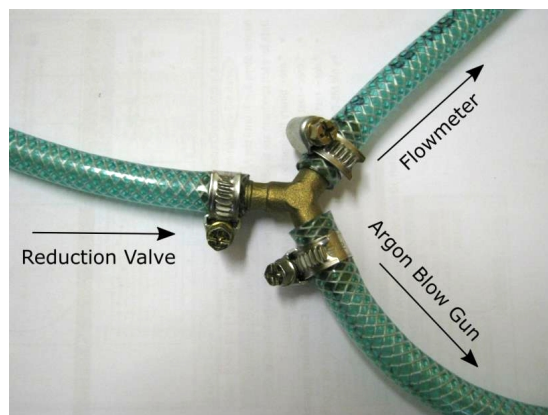


Figure 3: Y-piece nylon connector

4. First tube from the Y-piece is connected to the input of the flow meter, as it is shown on picture below. A silicone tube leads from flow meter output to the pick-up unit. Use tightening rings on both tubes. The appropriate flow is about 6 liters per hour, which corresponds to the sphere in the middle of the range (red arrow).

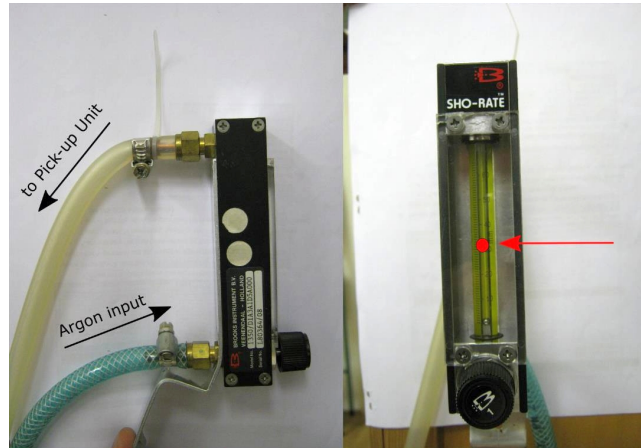


Figure 4: Flow meter

5. Silicone tube is connected to the pick-up unit of kappabridge and tightened by tightening ring. To use protective atmosphere during the high temperature measurements, connect blue silicone tube on upper part of pick-up unit to the furnace.



Figure 5: Tube to Pick-up unit

6. Argon blow Gun, for expelling liquid nitrogen from cryostat, is connected to the second tube from Argon bottle. Pressure of argon gas from gun must not be too high (max. 2 bars), because it can damage the cryostat.



Figure 6: Argon blow gun

Please do not hesitate to write to Agico (agico@agico.cz) with any question about the installation.