

PSL water-related tasks

– Front End

- Remove quick connects from Amp
- Install push to connect bulkhead fittings
- Trim and connect 6 mm dia. FE tubing with a 6mm tube to 8 mm stub adapter
- Remove flow regulating valve from supply side of circuit
- Move flow meter to return side
- Install 1/4" NPT to 5/16" push connect fitting in Supply side manifold
- Install 1/4" NPT to 5/16 push to connect fitting in flow sensor on return side
- Run 8 mm PUR-L tubing from Radar on both supply side and return side
- Issues/related tasks
 - Label, then remove, and cap four fibers to Amp
 - Note position of Amp (see if Jason, et al. want to try to set up pointing fiducial such as the Beam Scan
 - Re-install fibers

– 70-W amp

- Check height of spacer compared with existing amp height
- Block Amp location on PSL table
- If advisable, install new base while leaving fibers attached. Otherwise remove and cap fibers as for FE.
- Move into location dictated by blocks. Note: longitudinal position will be dictated by table hole locations. Note that Metric screws are (likely) required for attaching the base to the cooling plate underneath the amplifier head.
- Remove flow regulating valve from supply side of circuit
- Move flow sensor to return side
- Install short (~2 ft.) section of 6 mm hose at flow sensor using 1/4" NPT to 5/16" tubing adapter and 6 mm hose to 8 mm stub, then 6 mm hose, then 6 mm hose to 8 mm stub, then 8 mm coupling
- Issues/related tasks
 - The 2' of 6 mm tubing on the return side is just a guess. A longer length is likely to be required to balance the flows through the FE and 70-W amps. This cannot be switch on the chiller and assess flow rates

– Chiller pressure reduction

- Install throttling valve at the output of the chiller
 - Note that this may have to be a temporary solution until the BSPP to NPT adapter arrives in about 2 weeks.

- Open bypass valve on chiller room wall
- Close chiller internal bypass (no bypassing internally)
- Turn chiller on and note flow (expect about 35 rpm)
- Close throttling valve until flow is close to 10 rpm
- Adjust bypass valve on Chiller Room wall to give 1.5 lpm through the FE circuit
- Adjust flow restriction (with 6 mm tubing) in return side of 70-W circuit to achieve close to 1.5 rpm
- **HP shutter circuit** (low priority)
 - Note that we first need to make sure we have the right fittings for this task. Need to know the tubing diameter (1/4" vs 6 mm, or 8 mm?)
 - Move regulating valve from supply side
 - Move flow sensor to the return side
 - Install push-to-connect fittings on both the supply side and the flow sensor on the return side
 - Check flow when other modifications have been made and FE flow is set.
 - Adjust as necessary by adding 6 mm hose as done for 70W circuit
- **PM and BD circuit** (low priority)
 - Assess what would be required to move this circuit to the Crystal Chiller manifold
 - Note that cursory inspection indicated that at least some 1/4" lines are being used with the PM and BDs
 - Move to Crystal chiller circuit, similar to other circuits, but no flow meter on the return side, only flow sensors on the individual circuits. (not sensors should be on Return side, not Supply side.
 - Close valves on Diode chiller lines in Laser Room
 - When time allows, install valves high on wall in Chiller Room, downstream of Tee to Diode Room
 - Close valves in Chiller Room
 - Drain water from Diode Chiller lines at Laser Room end and dry lines.