

Bubbler oil and test panel tubing

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ISU KLM group meeting

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Bubbler Oil

- Sumisawa-san emailed info about the current bubbler oil (NEOVAC MR-100 or MR-200.)
- It's sold as a vacuum pump oil

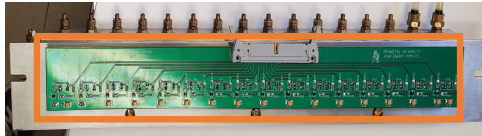
https://www.moresco.co.jp/en/products/vacuum_pump_oil.php

- Smallest size is 1 gallon for ~\$50
- Only available in Japan
- Ideally, we'd get 1 liter from a US distributor.
- Doesn't have to be the same brand, but should have similar properties (high flame point, viscosity, density, non-toxic, etc.)

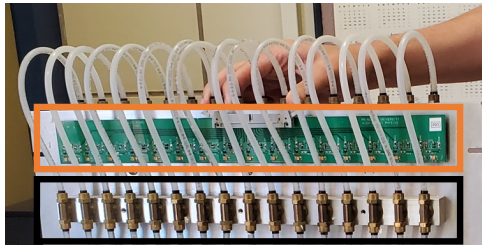


Bubbler panel tubing

Return bubbler
sensor circuit



Supply bubbler
sensor circuit

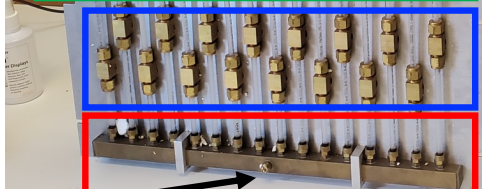


T-junction

Gas flow resistors



Input valves

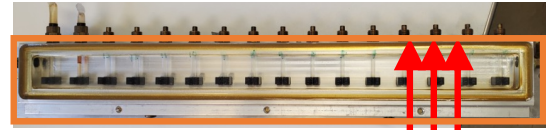


Gas inlet manifold

Input gas line needs
to be connected here

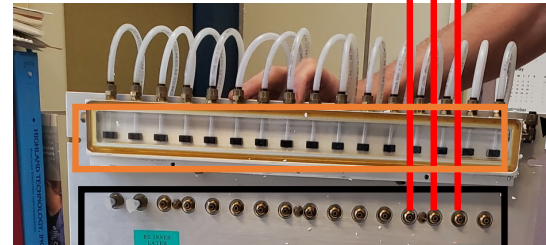


Backside



Return bubbler exhaust

Return bubbler



Supply bubbler exhaust

Supply bubbler
(relief valve)

T-junction fronts need to be
connected to return bubbler
inputs (on Belle II it goes to the
RPC, then to the return bubbler)



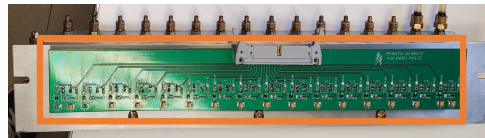
Normal gas flow indicated
with arrows

Frontside

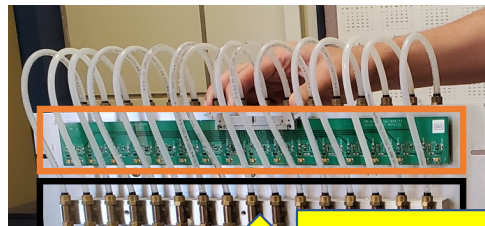
Bubbler panel gas flow (normal)

Gas flow indicated with yellow arrows

Return bubbler
sensor circuit

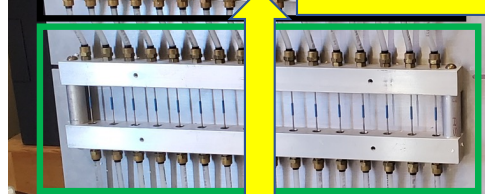


Supply bubbler
sensor circuit

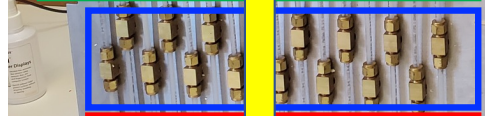


T-junction

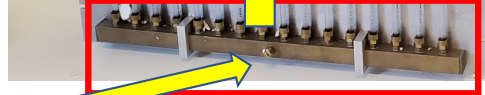
Gas flow resistors



Input valves



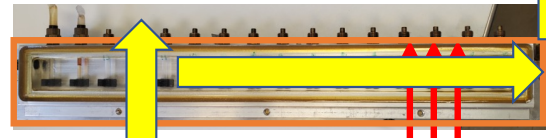
Gas inlet manifold



Dry air from inflow



Backside



Vent into room

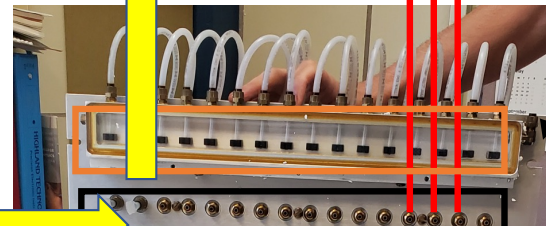
Return bubbler exhaust

Return bubbler

Supply bubbler exhaust

Supply bubbler
(relief valve)

T-junction front needs to be
connected to return bubbler
input (on Belle II it goes to the
RPC, then to the return bubbler)

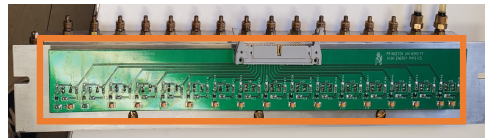


Frontside

Bubbler panel gas flow (clogged output)

Gas flow indicated with yellow arrows

Return bubbler
sensor circuit



Supply bubbler
sensor circuit

T-junction

Gas flow resistors

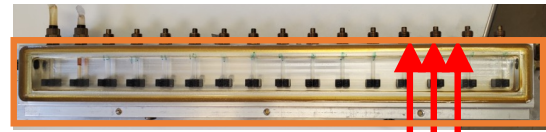
Input valves

Gas inlet manifold

Dry air from inflow

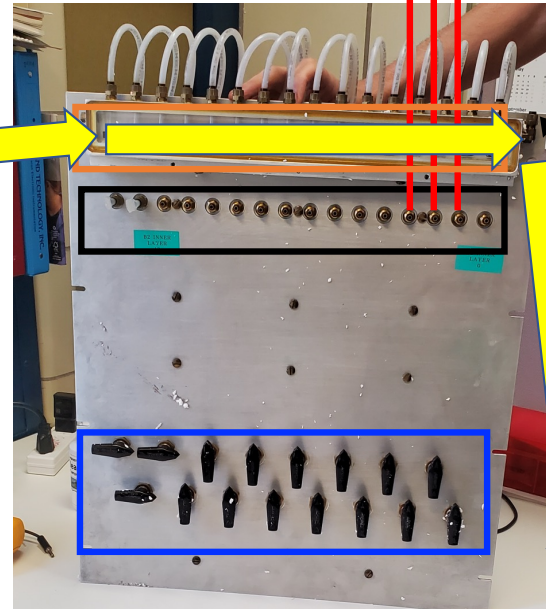


Backside



Return bubbler exhaust clogged

Return bubbler



Supply bubbler exhaust

Supply bubbler
(relief valve)

T-junction front needs to be
connected to return bubbler
input (on Belle II it goes to the
RPC, then to the return bubbler)

Vent into room

Frontside

Bubbler panel mounting frame

- In the IR, the bubbler panels are mounted on a frame
- We need something similar for the ISU lab

