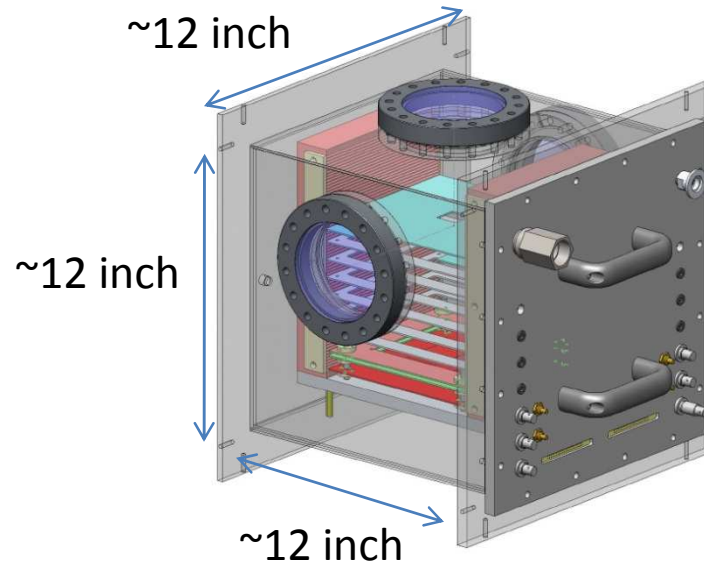


Standard operating condition



Volume ~ 28 L

Gas

P10, **Isobutane, H, D**

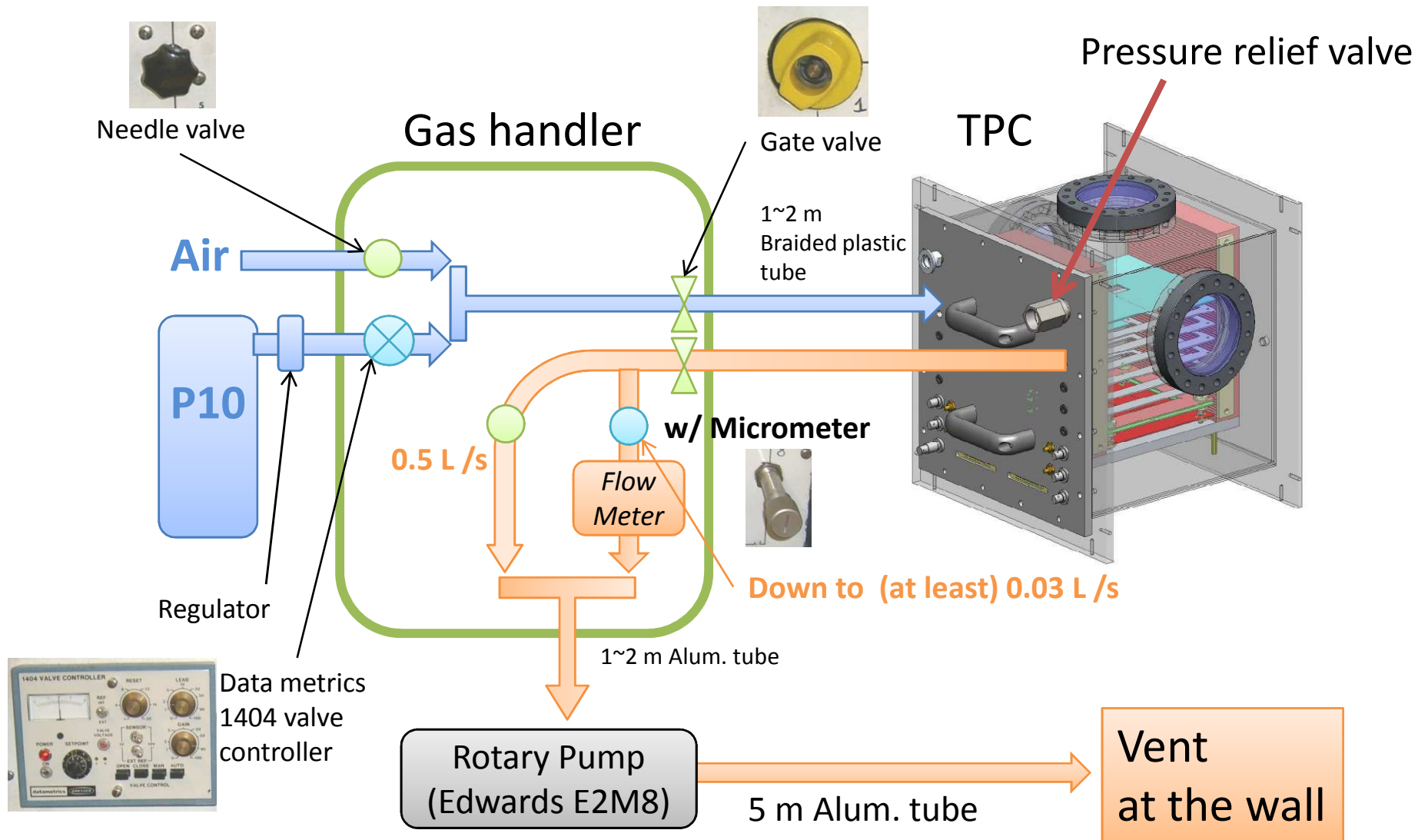
Pressure

0.1 – 1 atm

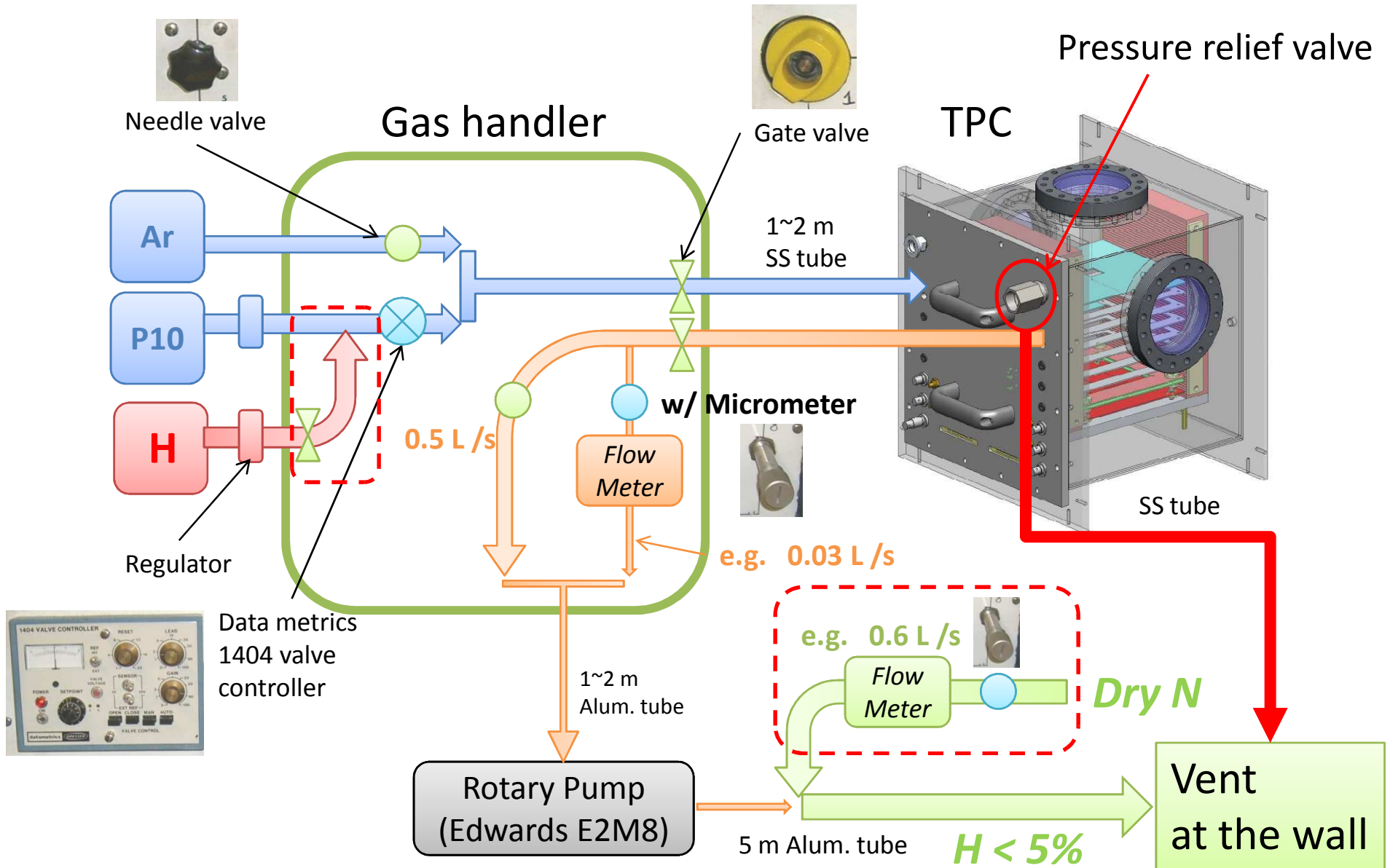
Gas handler



Current gas flow scheme



New gas flow scheme



Filling procedure

1. Pumping down the TPC (~ 0.1 Torr)
2. Fill up the TPC with Ar (~ 1 atm)
3. Pumping down again
4. Fill up with a flammable gas.
 - Pressures of 0.1-1.0 atm
 - We can make a gas mixture at this stage (e.g. Ar+H).
5. Close the valve

Vent procedure

We use the micrometer-needle valve line for evacuation.

1. Control the flow of Dry N and H
(Set appropriate values of the micrometers.)
2. Open the pump valve.

Comments

- Interlock system for possible flash-back is needed
- All flexible hoses and piping systems must be electrically grounded.
- Remove the combustible materials (e.g., plastic tube).
- Ignition sources should be put away from the chamber, or on the floor.
- Relief valve should be connected to the vent.
- What is the threshold pressure of the relief valve ?

- Read the reference “Hydrogen gas safety”(Los Alamos)
- Prepare precaution labels
- Flammable gas detector will be placed at the ceiling.

- Once the new system will be completed, we will perform a drive run with He.