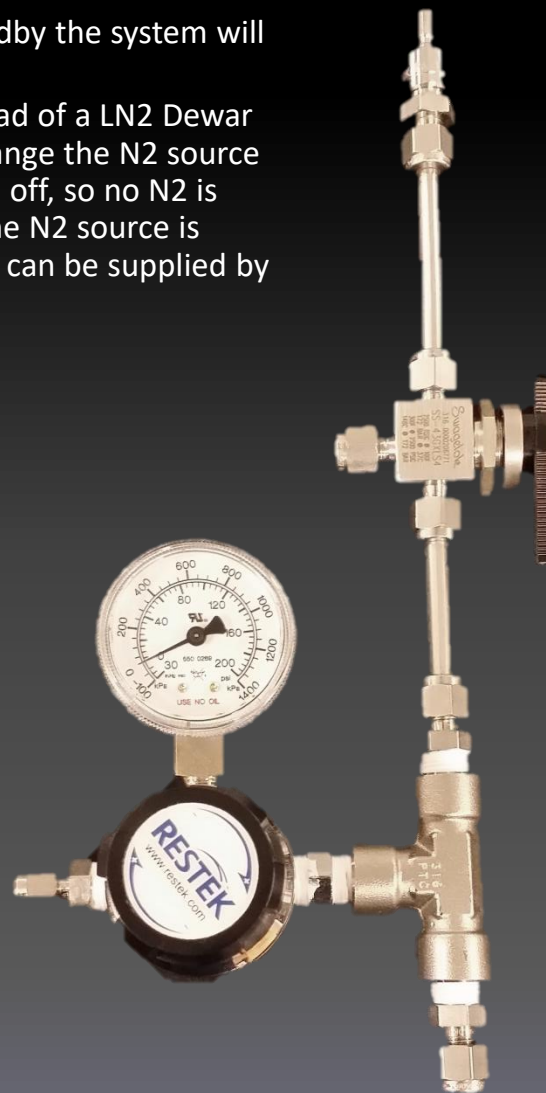
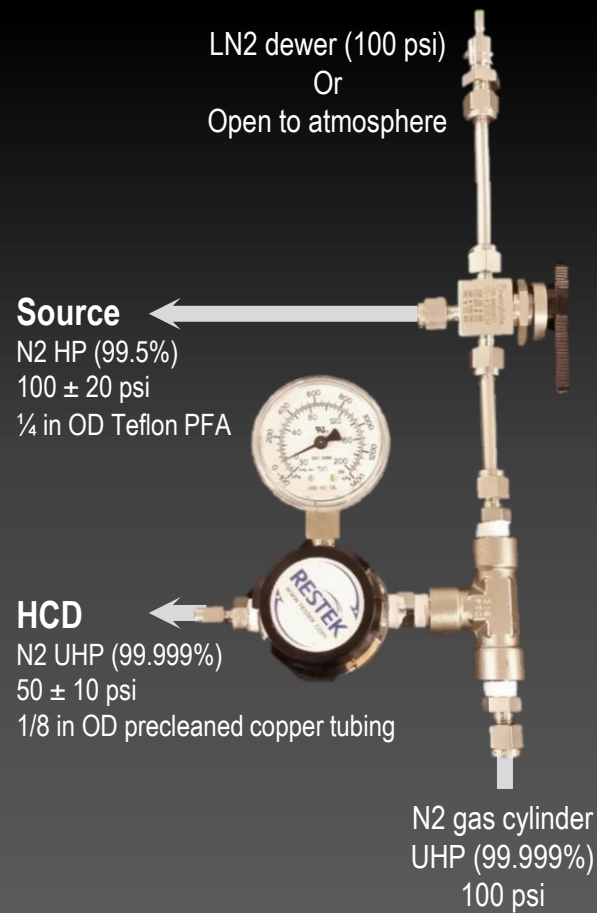
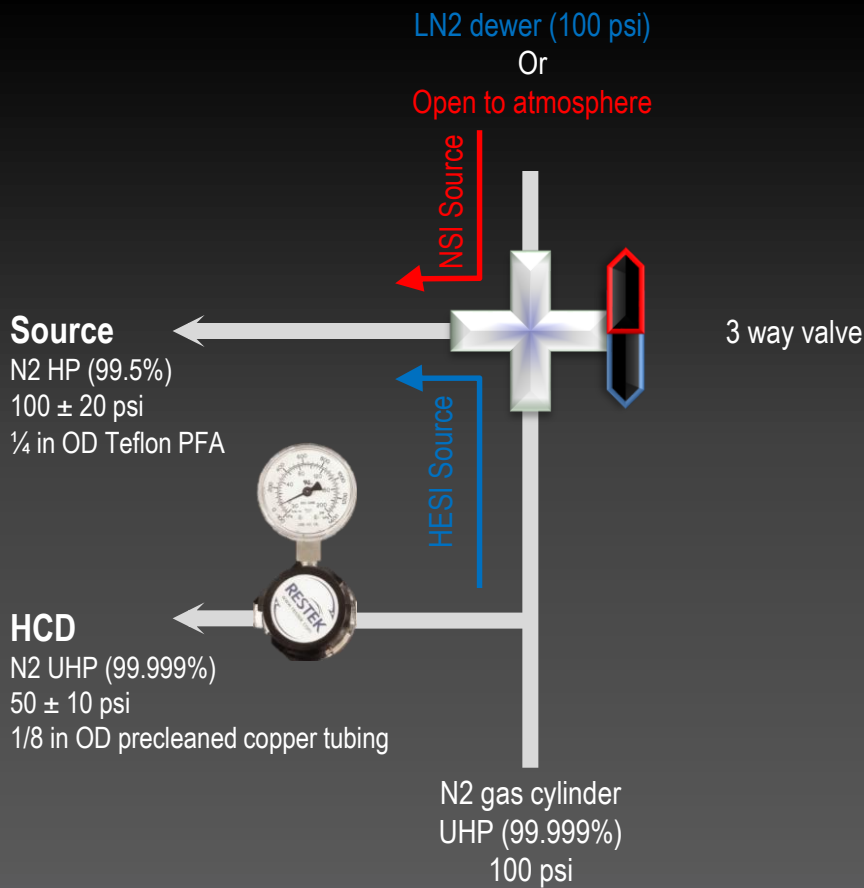


N2 gas switch for low flow applications

- The Fusion and Lumos use a lot of N2 gas for the HESI source, in standby the system will use a cylinder/day
- The NSI source doesn't use any N2 gas, so we use gas cylinders instead of a LN2 Dewar or N2 gas generator. We developed a switch system to be able to change the N2 source as needed. With the NSI source the N2 to the source can be switched off, so no N2 is consumed. For temporary use of the HESI source (e.g. calibrations) the N2 source is switched to the cylinder. For extended use of the HESI source the N2 can be supplied by LN2 Dewar or N2 generator.
- Slides 2-3 show a design we use on our Fusion and the Lumos
- Slides 4-5 show a design we use on our Exploris480
- We also adapted it to use it on our TSQ Altis, as described on slide 6



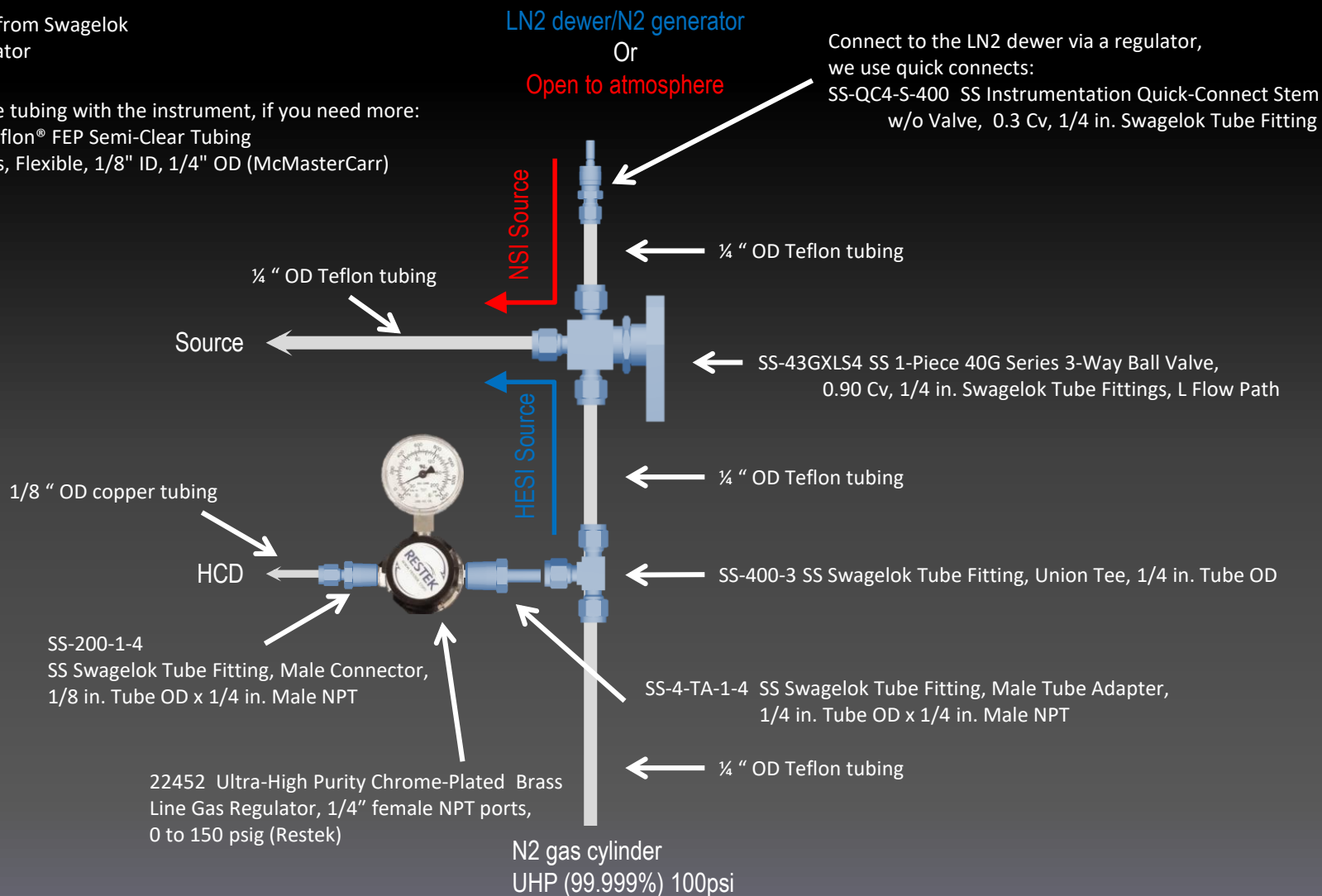
N2 gas switch for Fusion/Lumos



N2 gas switch for Fusion/Lumos Parts

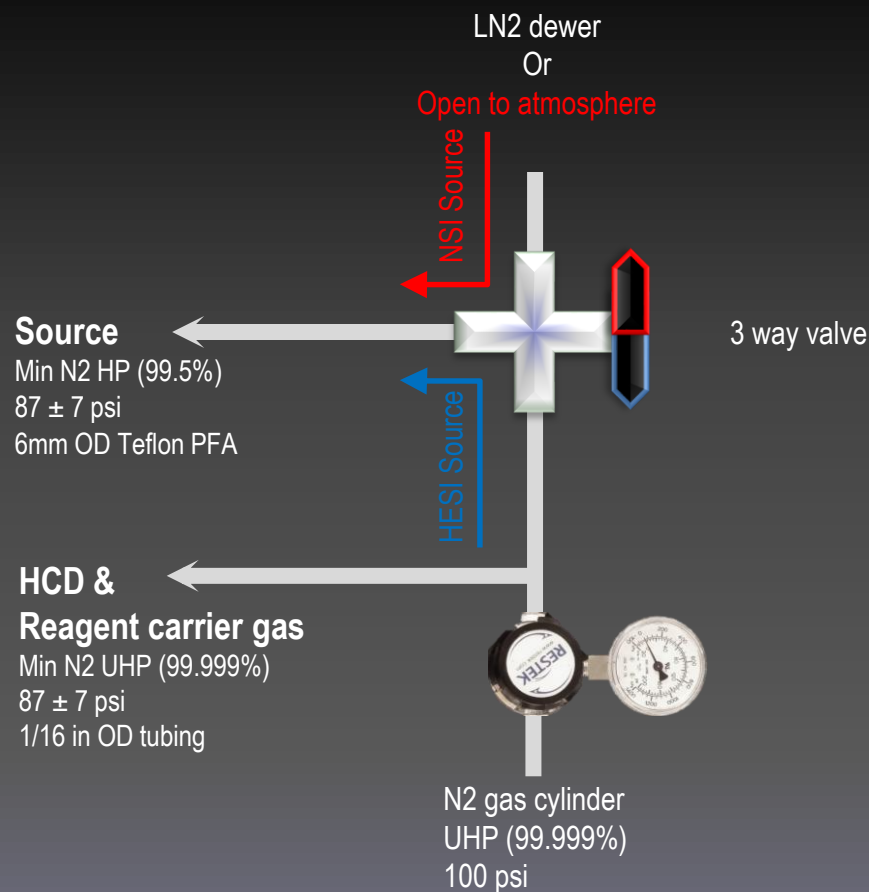
All parts are from Swagelok
Except regulator

You get some tubing with the instrument, if you need more:
52355K32 Teflon® FEP Semi-Clear Tubing
for Chemicals, Flexible, 1/8" ID, 1/4" OD (McMasterCarr)



N2 gas switch for Exploris Series

- The Exploris 480 uses a lot of N2 gas for the HESI source, in standby the system will use a cylinder/day
- Since we primarily use the NSI source we don't use that much N2 gas. So we developed a switch valve to be able to switch from an LN2 dewer (or atmosphere) to N2 cylinders, below is a design we use on our Exploris 480

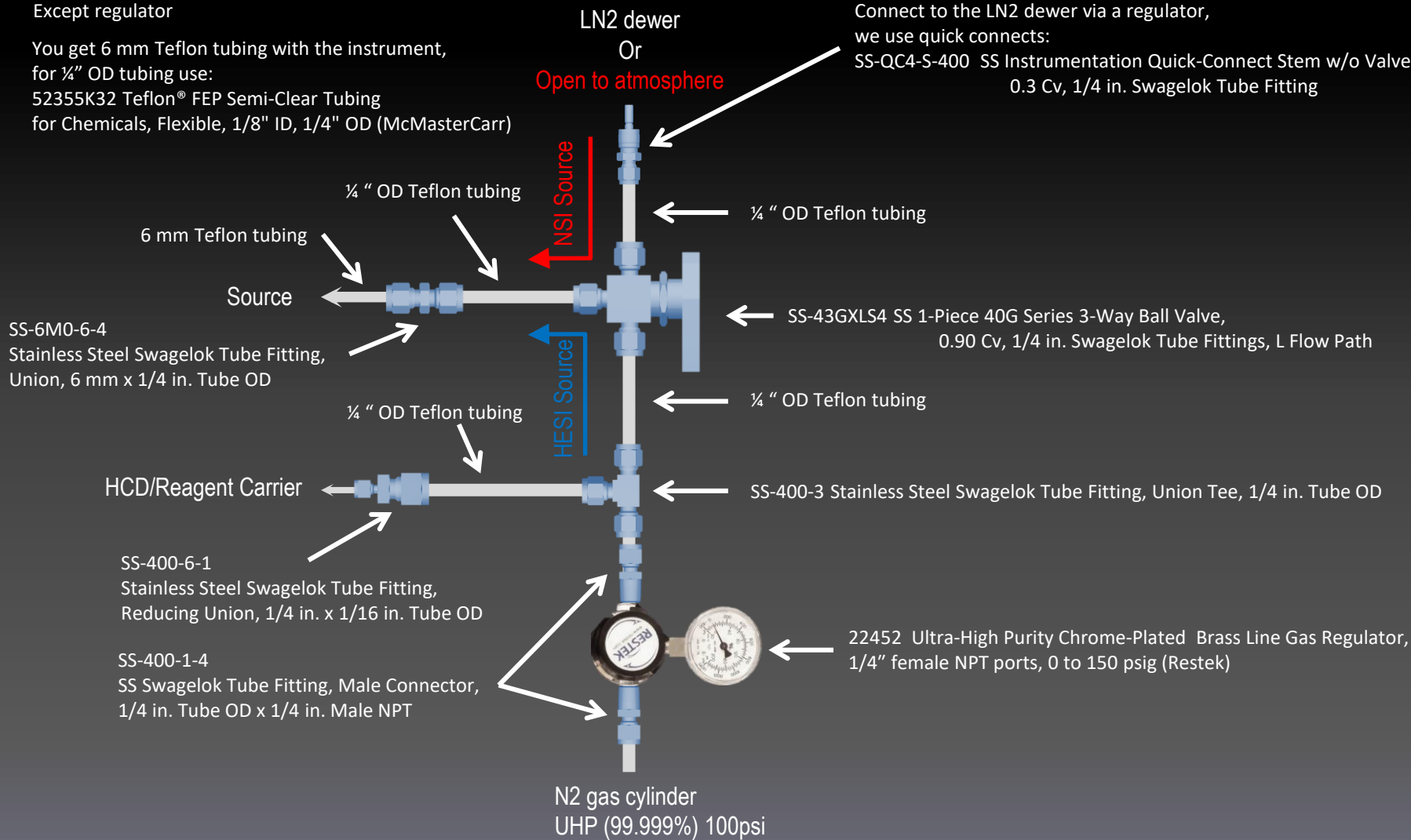


N2 gas switch for Exploris Series Parts

All parts are from Swagelok
Except regulator

You get 6 mm Teflon tubing with the instrument,
for 1/4" OD tubing use:
52355K32 Teflon® FEP Semi-Clear Tubing
for Chemicals, Flexible, 1/8" ID, 1/4" OD (McMasterCarr)

Connect to the LN2 dewer via a regulator,
we use quick connects:
SS-QC4-S-400 SS Instrumentation Quick-Connect Stem w/o Valve,
0.3 Cv, 1/4 in. Swagelok Tube Fitting



N2 gas switch for TSQAltis Parts

All parts are from Swagelok
Except regulator

You get some tubing with the instrument, if you need more:
52355K32 Teflon® FEP Semi-Clear Tubing
for Chemicals, Flexible, 1/8" ID, 1/4" OD (McMasterCarr)

Connect to the LN2 dewer via a regulator,
we use quick connects:
SS-QC4-S-400 SS Instrumentation Quick-Connect Stem w/o Valve,
0.3 Cv, 1/4 in. Swagelok Tube Fitting

