

## 6200E Installation Requirements

When purchasing a standalone 6200E unit with the calibrator, the analyzer will be supplied as three 19" rack mount units.

- Analyzer
- Converter
- Calibrator

Included with the unit are two lengths of Teflon tubing complete with Teflon connectors that are to be used to connect the analyzer and converter. While connecting the converter and the analyzer, please take care when connecting the tubing to the converter. The base of the bulkhead fitting should be secured while attaching the tubing so as to minimize any twisting of the fitting itself. If the fitting is twisted, it can apply force to the internal connections of the converter and cause internal leaks.

The analyzer requires tubing connections to the calibrator and the sample line. The use of 1/4" stainless steel fittings and 1/4" thick walled Teflon tubing is recommended for these connections. Stainless steel can be used for the other components as well.

Please refer to the 6200 Positive Pressure Piping Schematic for the recommended installation method. The incoming sample should be controlled at 35-40 psig from the sample point.

The analyzer section of the 6200 includes an internal sample pump that is used to draw the sample through the unit and to control the flow within the unit. **The design of the analyzer requires that the sample provided at the inlet of the analyzer should be at ambient pressure or as close as possible to ambient pressure.**

To achieve this condition, a pressure regulator, flowmeter with valve and sample tee as shown in the drawing must be used.

The pressure regulator should have a control range of 0-10 psig and the flowmeter should be 0-1500 cc/min range. These should be connected to the inlet of the analyzer via tubing tee. The inlet of the analyzer is 1/4" so using components with 1/4" tubing fittings is recommended. The analyzer section contains an internal pump and will draw sample at 700 cc/min into the analyzer. The flowmeter upstream of the tee should show a flow of 1000 cc/min so that approximately 300 cc/min bypass flow will go out the tee. It is recommended that the customer measure this flow routinely to make sure at all times there is at least 200cc/min flow out of this bypass. **If there is not this much flow, then the possibility exists that ambient air will be drawn in by the pump, thus giving false low readings.**

**Care needs to be taken to avoid pressurizing the inlet of the analyzer, where the suction action occurs. Follow and understand the attached flow schematic. If the inlet is pressurized above atmosphere, incorrect readings will also ensue.**

The positive flow out the tee will prevent the analyzer from drawing in ambient air. **Care must be taken to ensure that enough bypass flow occurs to prevent the unit from drawing in ambient air. We recommend a nominal flow rate out of the bypass vent to Atmospheric pressure of 300cc/m. Anything under 200ccm would be a cause of concern.**

The calibrator module has been provided to create ppb level span gas via dilution as it is very difficult and expensive to obtain ppb H<sub>2</sub>S in CO<sub>2</sub> background. The calibrator will allow the use of a span gas of 20-30 ppm H<sub>2</sub>S in nitrogen to be used as the calibrator will precisely dilute the span gas with sulfur free CO<sub>2</sub> diluent gas. The sample gas will be used to create the diluent gas for the calibrator. The sample gas at 35-40 psig pressure is to be run through the B68209G Sulfur Scrubber provided by Teledyne to create a sulfur free CO<sub>2</sub> diluent gas. A shut off valve should be installed between the main sample line and the scrubber to prevent unnecessary exposure to the sulfur in the sample gas as the gas through the scrubber is only required during calibration.

With regards to the span gas to be used, a cylinder of 20-30 ppm H<sub>2</sub>S in nitrogen should be used. A dual stage, stainless steel cylinder regulator should be used to control the pressure at the cylinder in the 35-50 psig range. Please note that the span gas inlet to the calibrator is 1/8" so if 1/4" tubing is being used a 1/8" to 1/4" adapter will be required.

Between the outlet of the calibrator and the span inlet of the analyzer, a sample tee will also need to be installed to achieve the same ambient type of conditions that are being used at the sample inlet of the analyzer.

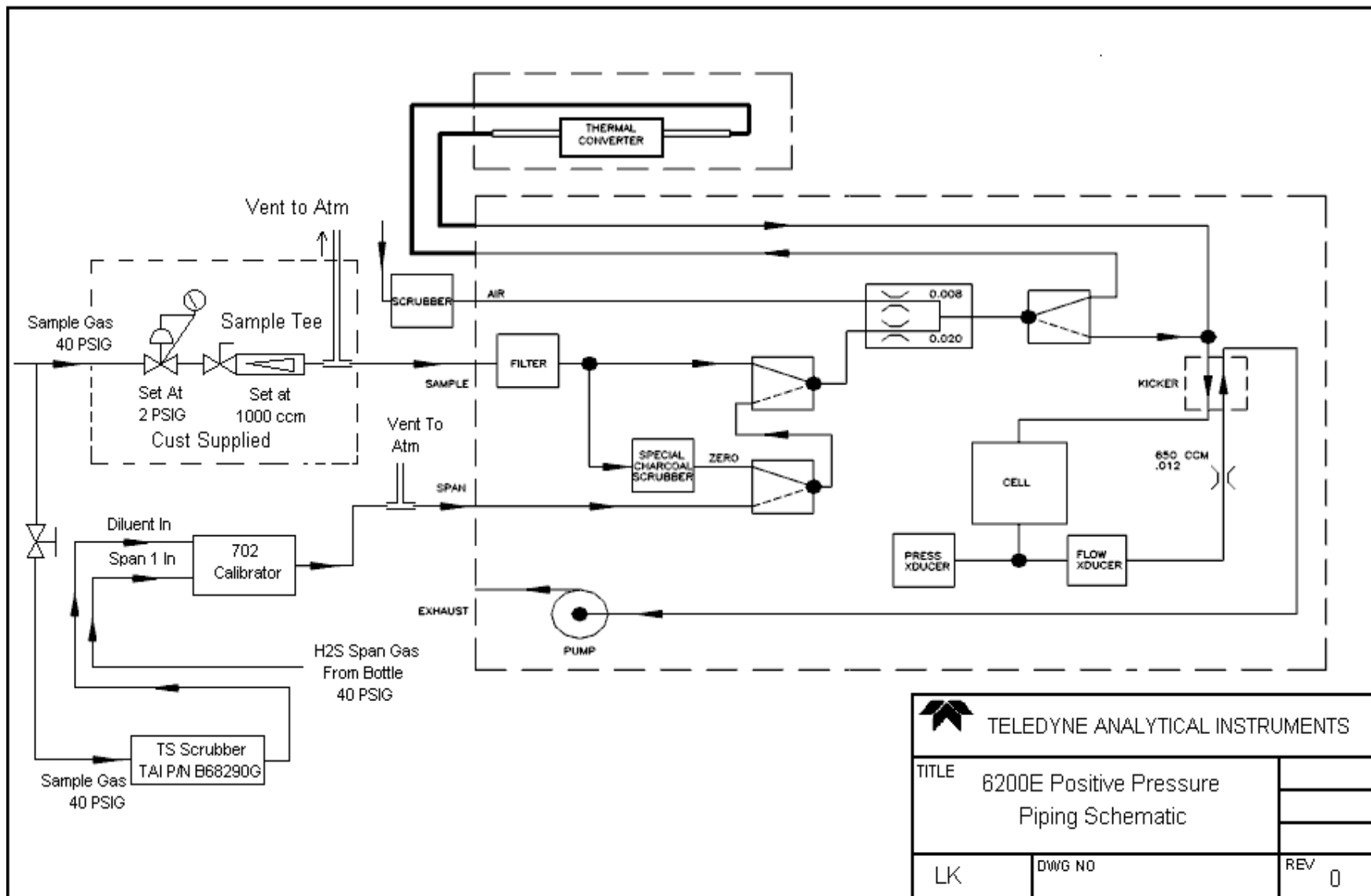
### **Components required**


- Two Sample Tees: Recommended 1/4" Tubing fitting. Example Swagelok SS-400-3
- Stainless Steel Pressure Regulator Control Range 0-10 psig, Example Go PR-1 Series PR1-1A11A3C111
- Shut off valve Recommended 1/4" Tubing fitting Example Swagelok SS-1GS4
- 1/4" to 1/8" adapter Example Swagelok SS-400-R-2 = 1/4" Tube fitting x 1/8" tube stub
- B68209G Sulfur Scrubber
- Flowmeter with Valve Example Brooks 1355EAA2-CNE1A

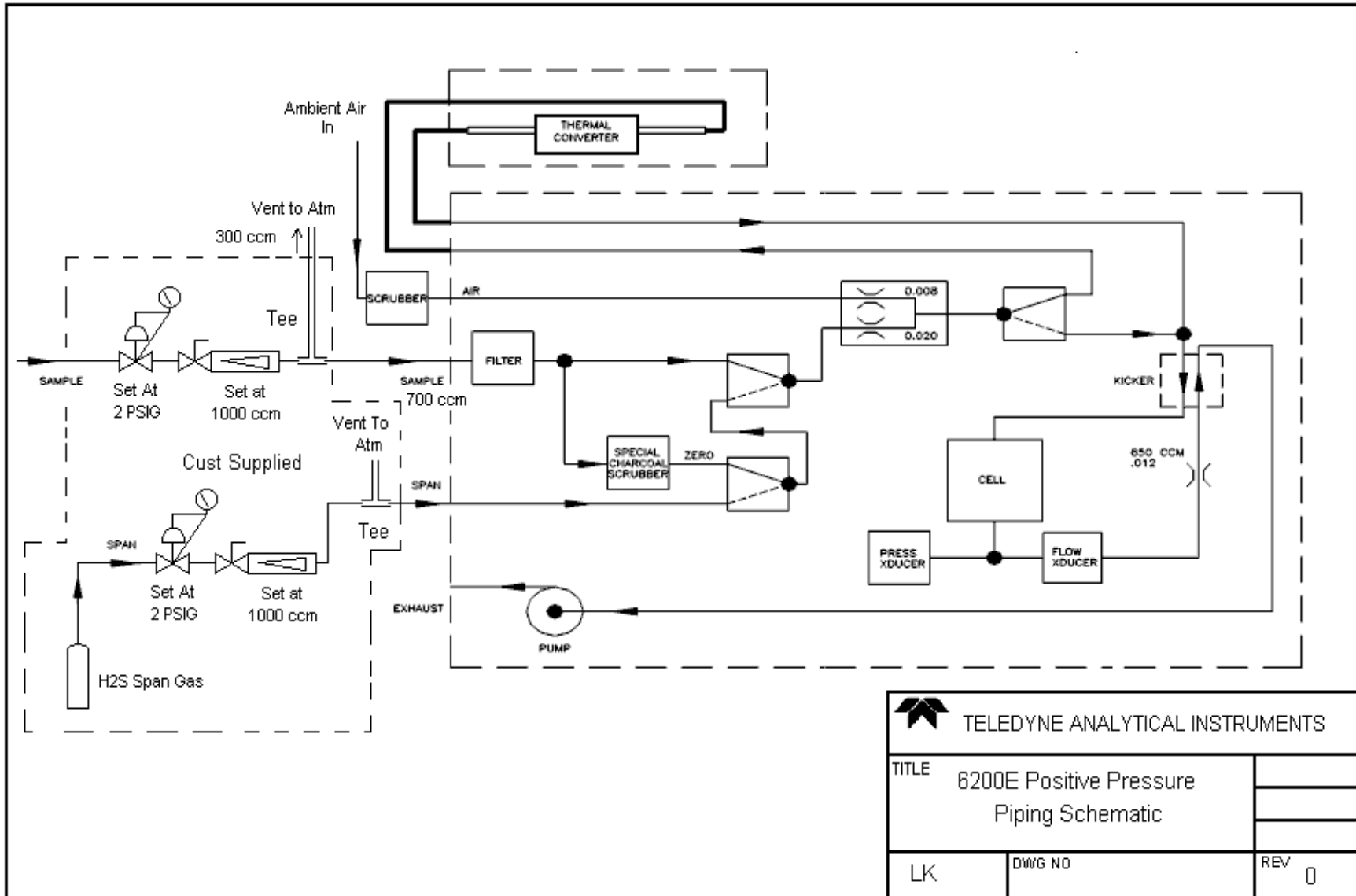
- Two ¼” Tubing Fitting Unions Example Swagelok SS-400-6
- One 1/8” Tubing Fitting Union Example Swagelok SS-200-6


The three unions are recommended as spares to be used if ferrules and nuts for other fittings are missing

A Full System Start Up DVD is available as well from TAI upon request.



 <b>TELEDYNE ANALYTICAL INSTRUMENTS</b>		
<b>TITLE</b> 6200E Positive Pressure Piping Schematic		
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