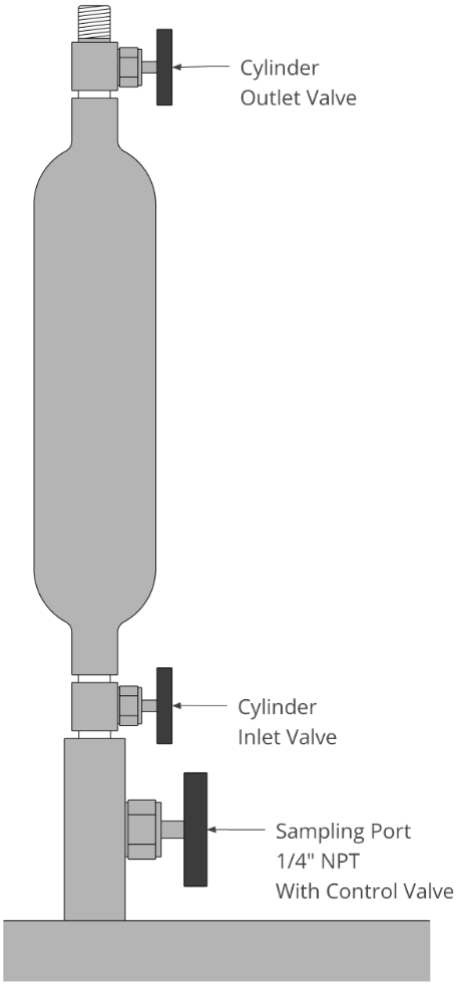
Collecting Gas Samples with Double-Ended Gas Cylinders

KNOW YOUR PRESSURES: Isotech's rental cylinders are rated for a maximum of 1800 psi. Before sampling, check the pressure at the sampling port with a reliable pressure gauge. If the pressure exceeds 1800 psi, STOP. A pressure regulator MUST be used to collect samples if the pressure at the sampling port exceeds 1800 psi.

Isotech does not accept gas samples containing hydrogen sulfide (H_2S, sour gas).

1. Remove the end caps from both ends of a cylinder and clean off the threads. Place 2 to 4 wraps of Teflon tape on the threads on one of the valves. DO NOT open the valves; the cylinder is evacuated.
2. Locate a valve or gauge port having a ¼" female NPT thread suitable for collecting the sample. Crack the control valve on the sampling port slightly so that you can hear a small amount of gas escaping.
3. With the gas still flowing slightly to purge the air from the valve, screw the taped end of the gas cylinder valve into the sampling port as shown on the drawing and snug it down with a wrench. The control valve can now be fully opened.
4. Carefully open the inlet valve on the cylinder and allow 5 or 10 seconds for the cylinder to become pressurized up to the well pressure.
5. Close the cylinder inlet valve and then open the outlet valve to vent the gas in the cylinder. Leave the outlet valve open only until you can no longer hear gas escaping, and then immediately close it.
6. Although these cylinders are fully evacuated before sending them to the field, it is advisable to repeat steps 4 and 5 once or twice more to ensure that all air contamination has been purged.
7. When the cylinder has been adequately flushed, check to see that the cylinder outlet valve is firmly closed and then open the inlet valve one more time. Allow 20 or 30 seconds for the cylinder to become pressurized and then close the inlet valve. **Do not use wrenches or pliers to close the valves. They have soft seats, and excessive force will ruin them.**
8. **Close the control valve on the well or pipeline** and remove the cylinder. Use an adjustable or open-ended wrench on the valve body ONLY; do NOT use a pipe wrench on the cylinder as this could loosen the valve from the cylinder. Clean the used Teflon tape off the threads.



9. Wrap the threads on both ends of the cylinder with new Teflon tape and replace the end caps. Use two wrenches to snug the end caps. This is important to ensure that the sample will not be lost if one of the valves were to leak or accidentally open in transit.
10. Record the well name or number, the sample pressure, and the sampling date on the cylinder tag and return the cylinder to the shipping carton. Also record sample information on a chain-of-custody form (Isotech provides a paper COC with cylinder shipments, and a printable and fillable version can be found at isotechlabs.com).

Shipping instructions for return shipping to the laboratory are included with the cylinders, and can also be found at isotechlabs.com.

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