Title:	How do I connect CO2	ID:
		0122

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Q:

How do we connect co2 to the incubators? Special tubing? Interfacing connnectors? There seems to be a pressure fitting there but is missing the internal ferrule or maybe it doesn't need one???

A:

Tube is 4x6mm. Pressure should be ~2 bars (1..4 is ok). The pressure regulator behind the connector is not really needed as long as pressure stays below ~6 bar. See also the manual Pg45.

System Installation

On installations preferably choose pressurized cylinders rather then gas wall outlets. The use of cylinders will limit the amount of gas being spilled in case of fatal failure. Whenever a wall outlet installation is chosen, make sure that there is a remote shut off valve installed outside the room where the gas is used.

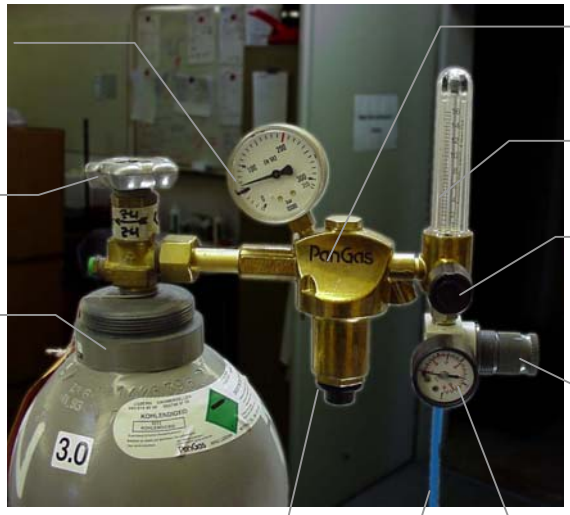
Place the cylinder in an easily accessible and visible place next to the incubator. Remember that the cylinder will have to be replaced routinely. As the operator will have to check the cylinder routinely it should be clearly visible to all personnel during routine work.

Install the instrument in a room with a glass door or a window that will allow a good view of the instrument and gas connection from outside the room. Often major defects can easily be detected by visible vapor clouds or icy tubes without the risk of entering a contaminated room.

Before installation make sure that the maximum specified inlet pressure is never exceeded. Always install a main shut-off valve that will cut gas flow as close to the source as possible. Secure cylinder when in use.

WARNING!
➢ Gas cylinders are under extremely high pressure that must be reduced for use with a StoreX incubator
➢ Use a pressure-reducing regulator when connecting to lower pressure piping system
➢ Never exceed maximum specified inlet pressure
➢ Never connect StoreX gassing inlet directly to a pressurized cylinder or wall outlet

Use a two stage pressure regulator with indicating valves. The high pressure gauge should have an indicating range of 0 to ~200 atm (0..3000 psi) to monitor the pressure or the gas source. For CO2 a scale of 0..100 atm (0..2000psi) is sufficient. The low pressure gauge should have an indicating range of 0..4 bar (0..60 psi) and will monitor the input pressure to the StoreX. A flow meter is recommend since it will show correct operation of the system.



Two-stage pressure regulators are available from gas suppliers or laboratory accessories suppliers. The picture above shows an example of an installation. There is a wide variety of different models available. Your equipment may look different. The gas inlet of the StoreX is located on the back of the instrument. Attach the CO2 low pressure hose securely to the fitting. Always use the security nut. Never operate the unit without the security nut being tightly fit.

Security nut

StoreX gas

Low pressure

Use 4x6mm PUR, PVC, Neoprene or Nylon tube for the low pressure connection. Do not use Silicon or natural rubber tubing. Make the low pressure tube long enough to allow a minimum of movement of the StoreX for cleaning and maintenance work. For longer length of tubing, copper or other metal tubing should be considered. Foresee flexible tubing next to the instrument.
Be prepared for the following gas consumption values. These values may vary significantly over time since they depend on the instruments use.