Single Flow Meter

Meter to control gas flow into hypoxia incubator chamber

Catalog # 27311 1 Meter

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Product Description

Single Flow Meter allows for precise control of gas flow to generate a hypoxic environment for tissue culture using the Hypoxia Incubator Chamber (Catalog #27310). Features of the Single Flow Meter include:
- Same precision as flow meters used for full size, continuous flow carbon dioxide incubator chambers
- Calibrated for 5 - 50 liters per minute (LPM)

Properties

Storage: Store at 15 - 25°C.
Shelf Life: Not applicable.

Handling / Directions For Use

1. Attach air filter (white) to the flow meter inlet (bottom) Tygon® tubing only. Do not put an air filter on the flow meter outlet (top) Tygon® tubing.
2. Ensure both inlet and outlet ports (Tygon® tubing with white plastic clamps) on the Hypoxia Incubator Chamber are open.
3. Open the gas tank regulator to allow minimum gas flow.
4. Attach the flow meter inlet tubing (bottom tubing) to the gas tank.
   NOTE: Rate of flow is read at the point of maximum horizontal width for spherical floats, or at the top of the largest diameter for non-spherical floats. Control valves are turned clockwise to reduce flow, counterclockwise to increase flow. A nylon insert is provided in the threaded section of the valve stem to give a firm touch to the valve and to prevent change of setting due to vibration.
5. Connect the gas outlet tubing (top tubing) of the flow meter to the Hypoxia Incubator Chamber. Adjust both the flow meter and the gas tank regulator to allow a flow rate of 20 LPM as indicated on the flow meter. Flush the system with the gas for 4 - 5 minutes. The pressure release value (in line with the flow meter) will open if the safe flow rate or back pressure is exceeded. The pressure release valve will automatically close when pressure is safe.
   WARNING: Excessive pressure and/or flow rate will circumvent safety features of the system and could result in damage to the system and personal injury. Do not exceed 2 psi above atmospheric pressure inside the Hypoxia Incubator Chamber.
6. After the chamber has been purged, disconnect the incubator from the gas source.
7. Seal the incubator by closing the (white) plastic clamps of the gas inlet and outlet ports on the incubator.

WARNING: Do not completely unscrew valve stem unless flow meter is depressurized. Removal while in use will allow gas to flow out the front of the valve body and could result in serious personal injury.

Notes and Tips

MAINTENANCE: Occasional cleaning is required to assure reliable operation and good float visibility.

DISASSEMBLY: The flow meter can be disassembled for cleaning by simply disconnecting the tubing, dismounting the unit from the panel and removing the top plug-ball stop. Take out the ball or float by inverting the body and allowing the float to fall in your hand.
NOTE: Cover the discharge port to avoid losing the float through it.

CLEANING: The flow tubing and flow meter body can be cleaned with a small amount of pure soap and water. Use of a bottle-brush or other soft brush will aid the cleaning. Avoid benzene, acetone, carbon tetrachloride, alkaline detergents, caustic soda, and liquid soaps (which may contain chlorinated solvents). Avoid prolonged immersion.

RE-ASSEMBLY: Reinstall the float, remount, connect and place the unit back in service. A small amount of stopcock grease or petroleum jelly on the O-rings will help to maintain a good seal as well as facilitate assembly.

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