

# Single and Two Stage Regulators

Operating Instructions



## For Your Safety...PLEASE READ CAREFULLY!

### Keep These Instructions For Future Use

#### **WARNING**

DO NOT attempt to operate this regulator unless you have been trained in its proper use or under trained supervision.

#### **WARNING**

DO NOT attempt to use this apparatus unless you are trained in its proper use or under trained supervision. For your own safety, read and follow the safety and operating procedures described in the booklet every time you use the apparatus. Deviating from these procedures may result in fire, explosion, property damage and/or operator injury. If at any time the apparatus you are using does not perform in its usual manner, or you have any difficulty in the use of the apparatus, stop using it immediately. DO NOT use the apparatus until an authorized repair station corrects the problem. All operations must conform to any applicable Federal, State, County or City regulations for installation, operation, ventilation, fire prevention and protection of personnel.

#### **WARNING**

DO NOT use this regulator with gases other than those for which it is intended. Oxygen is not flammable; however, the presence of pure oxygen will drastically increase the speed and force with which burning takes place. Oxygen must never be allowed to contact oil, grease or other petroleum-based substances; therefore, use no oil or grease on the regulator, cylinder, valves or equipment. DO NOT use or store near excessive heat (125°F (51.5°C)) or open flame.

## Setting Up the Equipment

1. Secure cylinder(s) to a wall, stand or cart so it will not tip or fall over.
2. Remove the protective dust seal from the cylinder valve.
3. Inspect the cylinder valve for traces of dirt, dust oil or grease. Remove dirt and dust with a clean cloth. NOTE: If oil or grease is detected, DO NOT use the cylinder. (See warning note above.) Inform your gas supplier of this condition immediately.
4. Inspect the regulator for damaged threads, dirt, dust, oil or grease. Remove dirt or dust with a clean cloth. NOTE: If oil or grease is detected or if threads are damaged, DO NOT use the regulator. Have your distributor or an authorized repair station clean the regulator and/or repair the damage before using.

## Installing the Regulator

1. Make sure the regulator has the proper CGA inlet fitting to fit the cylinder valve. If the connection is so equipped, make sure the flat sealing washer is in place between the regulator and the cylinder valve outlet. Attach the regulator to the cylinder valve outlet. The threads may be either right hand or left hand depending on the cylinder and regulator connections. Regulator inlet connections with left hand threads have a “V” notch machine into the hex to signify a left hand thread. DO NOT install the regulator on a cylinder unless the proper inlet fitting is in place.
2. Tighten the regulator inlet nut securely.
3. Make proper connection to outlet of regulator valve or fitting.

## Turning on the Cylinder

1. Be sure that tension on the regulator adjusting spring is released. After all pressure has been drained, release all tension on the pressure, adjusting knob by turning it counterclockwise (DECREASE) until the knob turns freely. Stand so the cylinder valve is between you and the regulator. NOTE: DO NOT stand in front of or behind the regulator when opening the cylinder valve. Turn the cylinder valve handle SLOWLY in a counterclockwise direction until you hear the gas flowing into the regulator. Wait about 10 seconds, and turn the cylinder valve fully open.
2. Check for leaks by closing the cylinder valve and observing the high pressure gauge for five minutes. If the high pressure gauge reading drops, there is a leak in the cylinder valve, inlet fitting, high pressure gauge or regulator seat. If the high pressure gauge reading does drop, bleed off pressure and retighten the regulator-to-cylinder connection and repeat step 1. Should the high pressure gauge reading continue to drop after retightening the regulator-to-cylinder connection, the regulator must be removed and returned for service at an authorized repair station. DO NOT operate if leaks are detected.

### **WARNING**

DO NOT attempt to tighten the cylinder or any of its parts. If the cylinder valve is leaking, place the cylinder outdoors and notify the cylinder supplier immediately.

Cylinders are highly pressurized. ALWAYS handle with care. DO NOT drop, knock over or subject cylinder to excessive heat. When moving cylinders, always put the valve protection cap in place. Place the valve protection cap where it can be easily found. Replace it when the cylinder is empty.

3. Keep the cylinder valve closed at all times when the regulator is not in use.

## Adjusting Regulator Delivery Pressure and Flow

1. After the regulator has been securely attached to the cylinder and no leaks exist (see previous sections), adjust the delivery pressure to the desired pressure setting by turning the adjusting knob in a clockwise (INCREASE) direction until the desired pressure is reached.
2. If the regulator is equipped with an outlet valve, flow can be regulated by proper adjustment of the valve.