



## Yoke Block Instruction Manual



## **WARNING**

### **IMPORTANT:**

#### **READ MANUAL COMPLETELY BEFORE OPERATING THIS DEVICE**

This manual contains instructions on periodically required checks to be performed by the user. These checks are necessary to insure the proper performance of this device and its safety features.

RETAIN THIS MANUAL FOR FUTURE REFERENCE

**CAUTION:** Federal law requires this device for use by or on the order of a physician or dentist.

**CAUTION:** Do not attempt to repair or alter this device. Unauthorized repair, alteration or misuse of this device is likely to adversely affect the performance and will void the warranty.

**CAUTION:** Never oil or grease any part of this system.

The National Institute for Occupational Safety and Health has issued a warning for dental workers exposed to N<sub>2</sub>O during administration of N<sub>2</sub>O/O<sub>2</sub> conscious sedation analgesia. NIOSH has recommended that exposures should be minimized. Contact NIOSH to receive NIOSH Publications on Control of Nitrous Oxide in Dental Operatories at 1-800-232-4036. Exposure can be minimized by effective controls, including System Maintenance, Ventilation, and Work Practices can effectively reduce N<sub>2</sub>O concentrations in dental operations. A scavenger system is a significant part of exposure control.

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## Attachment of 4 Cylinder Yoke Block

Slide yoke block onto column from tapered end of column to a point 2" from top of column to the top of block. Tighten the two cap nuts on front of the yoke block (figure 2).

Attach to base: Push tapered end of column into center hole of base (figure 2).

Flowmeter attachment: Screw 1/2" height adjustment rod into adapter located on bottom of flowmeter head until it bottoms against flowmeter. Hold adjustment rod with hand while tightening nut on adjustment rod with 3/4" open end wrench. Slide adjustment rod into opening in top of column. Tighten the toggle at desired height.

Attach hose: Connect DISS fittings on yoke block to DISS fittings on bottom of flowmeter head (figure 5-6).

Attach rubber goods: Connect breathing bag to bottom of bag tee. Connect corrugated breathing tube to front of tee and nasal inhaler to the other end of the breathing tube.

Attach cylinder wrench with chain to yoke block so that it will reach to all cylinders. Cylinder plug may be attached to yoke block or stored away as desired.

Attach cylinders to yoke blocks, making sure that appropriate cylinders match gases of yoke.

Test machine for proper operation.



figure 1

## 4 Cylinder Yoke Block Mounting Arrangement



figure 2

Clamp yoke block 2" down from top of pole

## Attachment of 2 Cylinder Yoke Block

Slide yoke block onto column from tapered end of column to a point 2" from top of column to top of block. Tighten the two cap nuts on front of the yoke block.

Attach to base: Push tapered end of the column into center hole in base (figure 4).

Flowmeter attachment: Screw 1/2" height adjustment rod into adapter located on bottom of flowmeter head until it bottoms against flowmeter. Hold adjustment rod with hand while tightening nut on adjustment rod with 3/4" open end wrench. Slide adjustment rod into opening in top of column. Tighten the toggle at desired height.

Attach hose: Connect DISS fittings on yoke block to DISS fittings on bottom of flowmeter head (figure 5-6).

Attach rubber goods: Connect breathing bag to bottom of bag tee. Connect corrugated breathing tube to front of tee and nasal inhaler to the other end of the breathing tube.

Attach cylinder wrench with chain to yoke block so that it will reach to all cylinders. Cylinder plug may be attached to yoke block or stored away as desired.

Attach cylinders to yoke block, making sure that appropriate cylinders match gases of yoke.

Test machine for proper operation.

figure 3



## 2 Cylinder Yoke Block Mounting Arrangement



## Supply Hose Connections

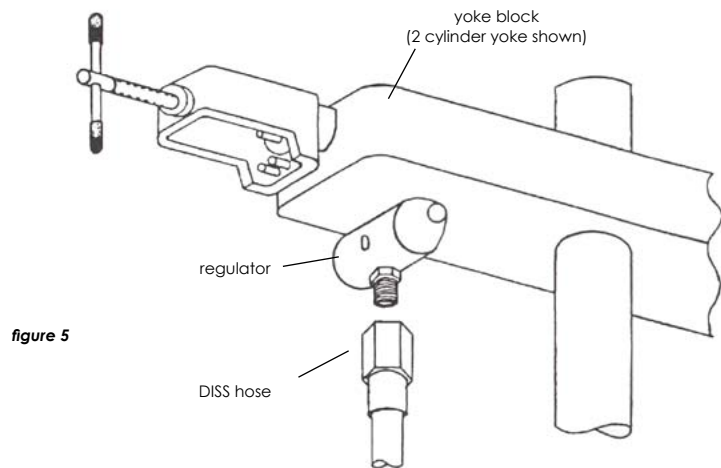


figure 5

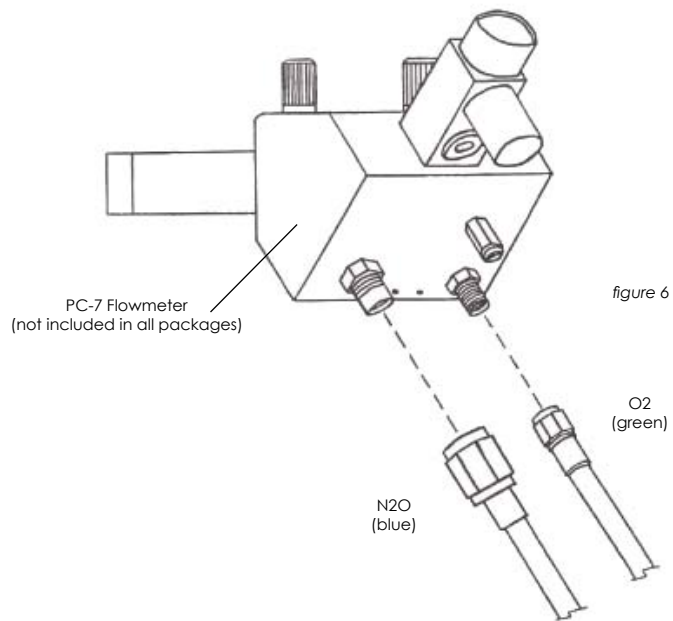


figure 6

## Cylinder Attachment to Yoke Block

Introduce "E" cylinder into yoke, making sure that the gas and yoke are the same. Note the two index pin holes are facing in, towards yoke block; match the pins in yoke to holes in cylinder valve and push against seal in yoke.

Tighten cylinder into yoke by turning yoke tee handle clockwise. Complete this procedure with any additional cylinders if necessary.

Using cylinder wrench supplied with yoke block, attach to oblong shaped tip located on top of cylinder valve. Turn 1/2 turn counter-clockwise (left) to open (a clockwise turn to right will close cylinder valve).

Flowmeter is now ready to operate. Always turn cylinder valves off when not using machine.

Replace O2 cylinders when gauge pressure is 200psi (Full cylinder pressure is approx. 2000psi.)

Replace N2O cylinders when gauge pressure is 500psi. (Full N2O cylinder pressure is 750psi.)

In the event only one cylinder of gas is used, a plug is supplied, to be used in yoke, in place of the cylinder.

(Refer to figures 8-12.)

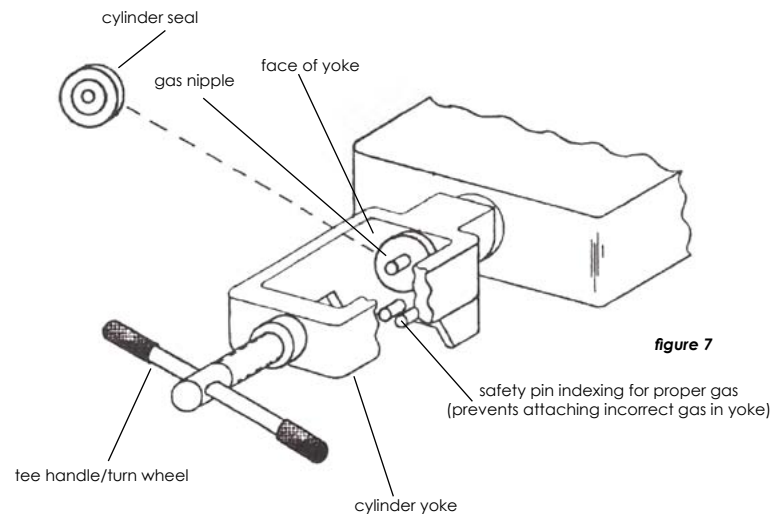


figure 7

## Cylinder Seals



**\*\*\*FDA and NIOSH have recommended that plastic crush gaskets never be reused.\*\*\***

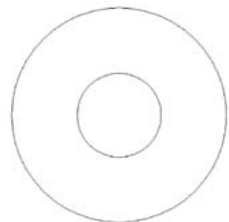
FDA and NIOSH have also issued the following general safety precautions to avoid explosions, tank ruptures, and fires from oxygen regulators.

1. Always "crank" cylinder valves (open the valve just enough to allow gas to escape for a very short time) before attaching regulators in order to expel foreign matter from the outlet port of the valve.
2. Always follow the regulator's manufacturer instructions for attaching the regulator to an oxygen cylinder.
3. Always use the sealing gasket specified by the regulator manufacturer.
4. Always inspect the yoke to insure it is in good condition and equipped with only one integral metal and rubber seal that is in good condition. **AVOID PLASTIC SEALS.**
5. Tighten the T-handle or turn wheel firmly by hand, but **DO NOT** use wrenches or other hand tools that may over-torque the handle.
6. Open the post valve slowly, while maintaining a grip on the valve wrench so that it can be closed quickly if gas escapes at the juncture of the seal and valve.

It is our recommendation that plastic seals be avoided. Plastic seals of this type may have been supplied with small cylinders. **DO NOT USE THESE SEALS.**

An alternate seal of metal/Viton configuration is recommended for all applications and is available under our part # 5014-35. All Belmed, Inc. yoke blocks are equipped with this seal.

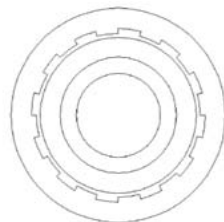
To order metal/Viton washers please contact your dealer.



Improper Nylon Washer

figure 8

9



Metal/Viton Washer  
Part # 5014-35

## Cylinder Detail

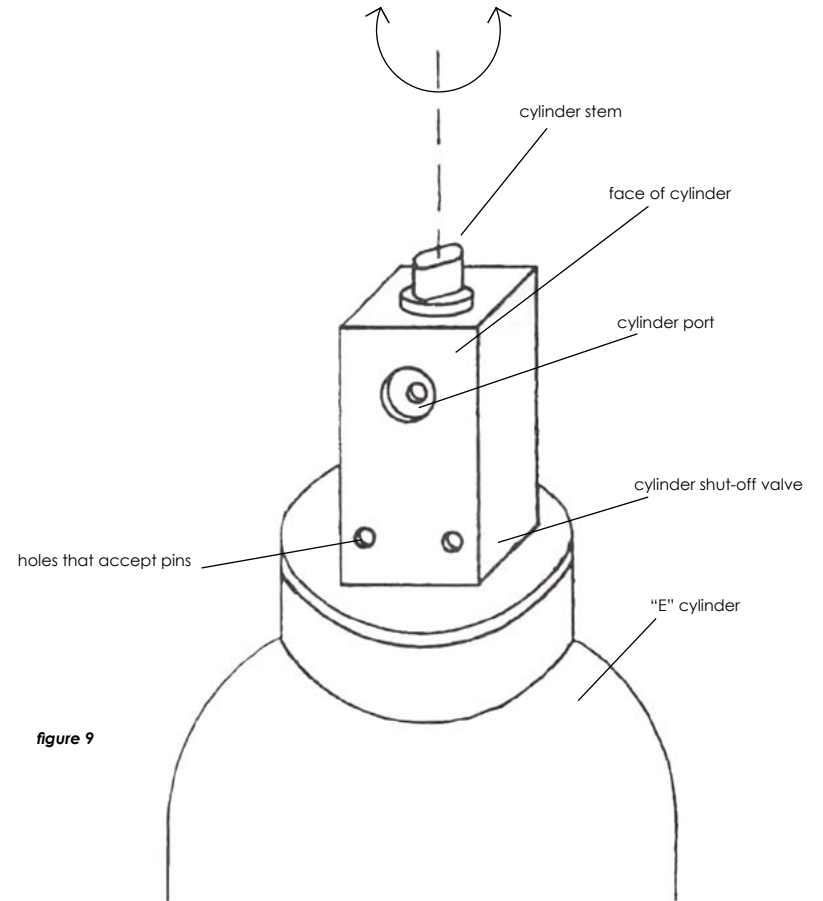


figure 9

10

## Turning the Cylinder On/Off

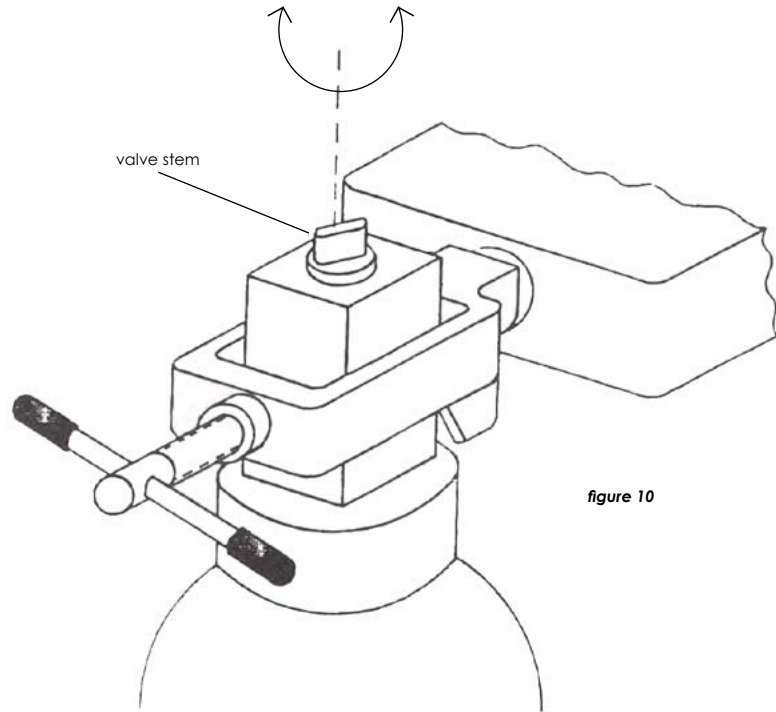


figure 10

Place cylinder wrench on stem. Turn counter clockwise for on and clockwise for off.  
Note: Make sure cylinder is tight in yoke

## Pin Safety System

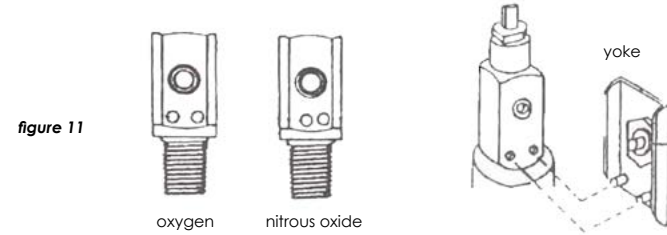


figure 11

Small cylinder non-interchangeability is accomplished with the Pin Index System. This system uses two positioning holes on the cylinder valve and two corresponding pins on the yoke.

## Yoke Block Leak Test

Start test with no pressure in system, gauge on yoke block at zero and flowmeter turned off. Make sure supplied cylinder seals are in place and cylinders are tight in yokes. Quickly open cylinder valve, tapping gas in lines. Observe gauge pressure for line being tested. Gauge pressure should remain constant with no pressure drop. If gauge pressure drops, recheck all connections for tightness. To isolate leaks, we recommend oxygen sage liquid leak detector available from a plumbing supply or hardware store. Use as directed on all connections, fittings, ect. Relieve system pressure and repeat procedure with other cylinder(s).









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