

## **71653 Gases for Medical Use**

### **(a)**

Provision shall be made for safe handling and storage of medical gas cylinders.

### **(b)**

Transfer of gas by hospital personnel from one cylinder to another is prohibited except when approved by the Department.

### **(c)**

Gases for medical use include carbon dioxide, cyclopropane, ethylene, helium, nitrous oxide, oxygen, helium-oxygen mixtures and carbon dioxide-oxygen mixtures.

### **(d)**

All anesthesia machines and related equipment shall be so constructed that connections for different gases are not interchangeable. These requirements shall be accomplished by installing permanent fittings as indicated below: (1) Yoke connections of anesthesia machines and flush outlet valves for small compressed gas cylinders (Style E and smaller) shall conform with the pin index and safety system contained in "V-1: Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections" 15th Edition (2021), by the Compressed Gas Association and the American National Standards Institute, hereby incorporated by reference. (2) Valve outlet connections for large cylinders (Style F and larger) for oxygen and nitrous oxide shall conform with the standards contained in "V-1: Standard for

Compressed Gas Cylinder Valve Outlet and Inlet Connections" 15th Edition (2021), by the Compressed Gas Association and the American National Standards Institute, hereby incorporated by reference. Standard connection No. 540 shall be used with oxygen cylinders and standard connection No. 326 shall be used with nitrous oxide cylinders. Cylinders for medical gases, other than oxygen and nitrous oxide used with anesthesia machines, shall be limited to Style E and smaller. (3) Removable exposed threaded connections, where employed in medical gas piping systems and equipment used in conjunction with resuscitators and oxygen therapy apparatus, shall be provided with noninterchangeable connections which conform with pamphlet "V-5: Diameter-Index Safety System (Noninterchangeable Low Pressure Connections for Medical Gas Applications)" 7th Edition (2019) by the Compressed Gas Association, hereby incorporated by reference. (4) Station outlets from piped oxygen and nitrous oxide systems shall conform with the standards contained in "NFPA 99: Health Care Facilities Code" (2012) by the National Fire Protection Association, hereby incorporated by reference. (5) Removable connection hoses from station outlets or cylinders to yokes of anesthesia machines shall be fitted with permanently connected fittings to match the standards listed above in paragraphs (1), (2), (3) and (4).

**(1)**

Yoke connections of anesthesia machines and flush outlet valves for small compressed gas cylinders (Style E and smaller) shall conform with the pin index and safety system contained in "V-1: Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections" 15th Edition (2021), by the Compressed Gas Association and the American National Standards Institute, hereby incorporated by reference.

**(2)**

Valve outlet connections for large cylinders (Style F and larger) for oxygen and nitrous

oxide shall conform with the standards contained in "V-1: Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections" 15th Edition (2021), by the Compressed Gas Association and the American National Standards Institute, hereby incorporated by reference. Standard connection No. 540 shall be used with oxygen cylinders and standard connection No. 326 shall be used with nitrous oxide cylinders. Cylinders for medical gases, other than oxygen and nitrous oxide used with anesthesia machines, shall be limited to Style E and smaller.

**(3)**

Removable exposed threaded connections, where employed in medical gas piping systems and equipment used in conjunction with resuscitators and oxygen therapy apparatus, shall be provided with noninterchangeable connections which conform with pamphlet "V-5: Diameter-Index Safety System (Noninterchangeable Low Pressure Connections for Medical Gas Applications)" 7th Edition (2019) by the Compressed Gas Association, hereby incorporated by reference.

**(4)**

Station outlets from piped oxygen and nitrous oxide systems shall conform with the standards contained in "NFPA 99: Health Care Facilities Code" (2012) by the National Fire Protection Association, hereby incorporated by reference.

**(5)**

Removable connection hoses from station outlets or cylinders to yokes of anesthesia machines shall be fitted with permanently connected fittings to match the standards listed above in paragraphs (1), (2), (3) and (4).

**(e)**

The piped oxygen or nitrous oxide system(s) shall be tested in accordance with the National Fire Protection Association bulletin, NFPA 99, referred to above, and a written report shall be maintained in each of the following instances. (1) Upon

completion of initial installation. (2) Whenever changes are made to a system. (3) Whenever the integrity of a system has been breached. (4) At least annually.

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**(3)**

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**(4)**

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**(f)**

Oxygen Equipment. (1) Vaporizer bottles shall be sterilized after each use. (2) Only sterile fluid shall be used in vaporizer bottles. (3) Vaporizer bottles shall be changed at least every 24 hours.

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