



CGA V-14—2018
PERFORMANCE STANDARD
FOR SEALING GASKETS
USED ON CGA 870
CONNECTIONS FOR MEDICAL
OXYGEN SERVICE AT A
MAXIMUM SERVICE
PRESSURE OF 2216 PSI

SECOND EDITION

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Work Item 17-049
Cylinder Valve Committee

NOTE—Technical changes from the previous edition are underlined.

NOTE—Appendix A (Normative) is a requirement.

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1 Scope

This publication covers the performance standards required for crush-style and encircled elastomeric gaskets used in medical oxygen service up to 2216 psi. Sealing gaskets designed to be used with a CGA connection no. 870 shall be qualified at the time of design by the manufacturer in accordance with this performance standard.

For additional information, see CGA TB-29, *Use of Gaskets in High Pressure Medical Oxygen Cylinder Service* [1].¹

2 Definitions

For the purpose of this publication, the following definitions apply.

2.1 Publication terminology

2.1.1 **Shall**

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

2.1.2 **Should**

Indicates that a procedure is recommended.

2.1.3 **May**

Indicates that the procedure is optional.

2.1.4 **Will**

Is used only to indicate the future, not a degree of requirement.

2.1.5 **Can**

Indicates a possibility or ability.

2.2 Technical definitions

2.2.1 **Compressive force**

Load expressed in pounds of force placed on the sealing gasket as a result of tightening the yoke or regulator T-screw handle.

2.2.2 **Gasket**

O-shaped object made of an elastomer or other material placed between the valve face and the regulator inlet connection to provide a gas-tight seal.

NOTE—A gasket is sometimes also incorrectly referred to as a washer.

2.2.3 **Side load**

Vertical or horizontal force placed on a sealing gasket when an attached regulating device leans against a stationary object, is bumped, or is used as a carrying handle; all of which can cause leakage between the sealing surfaces.

3 Dimensions

Sealing gaskets shall be manufactured within the minimum and maximum dimensional tolerance levels specified in the CGA connection no. 860 in CGA V-1, *Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections* [2]. The connection no. 860 drawing forms the dimensional basis for CGA connection no. 870. Specific dimensional requirements include the outside diameter, inside diameter, and thickness of each gasket.

¹ References are shown by bracketed numbers and are listed in order of appearance in the reference section.