CGA V-9—2012

COMPRESSED GAS ASSOCIATION STANDARD FOR COMPRESSED GAS CYLINDER VALVES

SEVENTH EDITION

COMPRESSED GAS ASSOCIATION, INC.

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Work Item 12-052
Cylinder Valve Committee

NOTE—Technical changes from the previous edition are underlined.

NOTE—Appendices A, B, and C (Informative) are for information only.

NOTE—Appendices D and E (Normative) are a requirement.

SEVENTH EDITION: 2012
SIXTH EDITION: 2009
FIFTH EDITION: 2005
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1 Introduction

The Compressed Gas Association, Inc. (CGA) has long recognized the need to promote public safety in the use of cylinder valves. This standard defines factors that contribute to the safe design, manufacture, and use of cylinder valves for compressed gases.

Compressed gases supplied in cylinders are diverse in their chemical composition and properties. Some are oxidizers, some are flammables, some are inert, etc. Gases vary in degrees of corrosivity, toxicity, and pressure and exist not only in the pure state but also in a variety of mixtures. Thus it becomes a primary safety requirement of the cylinder valve that it must be appropriate for its intended use. The intended use must be identified, and the cylinder valve must incorporate proper pressure capability as well as functional reliability for safe operation.

2 Scope

This standard serves to inform cylinder valve users, buyers, sellers, manufacturers, and others in the safe and proper use of cylinder valves.

This standard covers cylinder valve design, manufacture, and use including performance requirements such as operating temperature limits, pressure range, and flow capabilities. It also includes requirements such as materials, inlet and outlet connections, cleaning, qualification and production testing, maintenance, and reconditioning. This standard also includes guidelines and requirements for the design, material selection, testing, and marking of cylinder valve protective caps. Except as noted in the last paragraph of this section, this standard is intended for valves for compressed gases packaged in U.S. Department of Transportation (DOT) and Transport Canada (TC) cylinders.

This standard provides information on valve selection, valve use guidelines, and valve protection caps (see Appendix A, Appendix B, and Section 10, respectively).

Standards incorporated by reference in this publication include the referenced document's procedures, criteria, and other requirements unless otherwise noted.

This standard does not prejudice the continued use of valves in service or in inventory at a manufacturer's or user's site that were manufactured before the effective date of this standard provided the valves are identifiable to the original valve manufacturer and traceable to a manufacturing period. The identifying marks shall be permanent and visible on an installed valve.

The effective date of this standard is three years from the date of the publication of this edition, which was May 4, 2012. Valves manufactured on and after the effective date of this standard shall be in compliance with this standard.

With the exception of post-type medical valves, this standard also does not prejudice the use of valves that are Listed® or in compliance with both ISO 10297, *Transportable gas cylinders—Cylinder valves—Specification and type testing*, and ISO 14246, *Transportable gas cylinders—Gas cylinder valves—Manufacturing tests and inspections*, excluding Section 4.4, "Revalidation tests", of ISO 14246-2001 [1, 2].[1]

This standard does not apply to:

- cylinder valves used with nonrefillable cylinders (such as DOT-39, TC-39M, and nonrefillable cylinders manufactured under special permits or permits of equivalent level of safety);
- cylinder valves used in DOT-2P and DOT-2Q (TC-2P and TC-2Q) cylinders;
- cylinder valves with an integrated pressure regulator (VIPR);
- cylinder valves on DOT-4L (TC-4LM) cylinders;

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