



CGA E-11—2015
STATIONARY COMPRESSED
GAS CYLINDER DISCHARGING
MANIFOLDS FOR WORKING
PRESSURES UP TO 3000 PSI

THIRD EDITION

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Industrial Gases Apparatus Committee

NOTE—Technical changes from the previous edition are underlined.

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Contents	Page
1 Scope	1
2 Definitions.....	1
3 Description	1
4 Materials, construction, and design.....	2
4.1 Design requirements for all gases.....	2
4.2 Additional design requirements for specific gases or groups of gases	3
5 Production tests.....	4
6 Marking.....	4
7 Instructions for operating and maintenance	4
8 References	4
Figure	
Figure 1—Typical discharging manifolds	2

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1 Scope

These requirements are for stationary cylinder discharging manifolds for compressed gases for industrial use. Manifolds are used to connect compressed gas cylinders together to supply a distribution system with a particular gas at a selected distribution pressure. The requirements cover manifolds complete to the point where they connect to a distribution system.

Three basic gas groupings are covered:

- Fuel gases (grouped as acetylene, liquefied fuel gases, and nonliquefied fuel gases)—maximum 3000 psi (20 684 kPa) at 70 °F (21.1 °C)^{1, 2};
- Oxygen and air—maximum 3000 psi (20 684 kPa) at 70 °F (21.1 °C); and
- Carbon dioxide, nitrogen, and inert gases—maximum 3000 psi (20 684 kPa) at 70 °F (21.1 °C).

Manifolds for gases used in oxy-fuel gas systems should be installed as outlined in NFPA 51, *Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes* [2].

This publication does not cover manifolds for medical gas cylinders, for charging cylinders, or for gas or liquid withdrawal from portable cryogenic containers (DOT 4L/TC-4LM).

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.

3 Description

The basic manifold may consist of some or all of the following components:

- connections to the cylinders;
- cylinder leads, flame arrestors;
- reverse flow check valves;
- manifold header valve(s);
- manifold header(s);

¹ kPa shall indicate gauge pressure unless otherwise noted as (kPa, abs) for absolute pressure or (kPa, differential) for differential pressure. All kPa values are rounded off per CGA P-11, *Metric Practice Guide for the Compressed Gas Industry* [1].

² References are shown by bracketed numbers and are listed in order of appearance in the reference section.