



CGA G-6.6—2015
STANDARD FOR
CARBON DIOXIDE BULK
TRANSFER HOSES

FOURTH EDITION

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NOTE—Technical changes from the previous edition are underlined.

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1 Introduction

This publication establishes specifications for flexible hoses used as a temporary connection for filling or unloading bulk liquid or gaseous carbon dioxide.

2 Scope

This publication covers flexible hoses with nominal diameters of 1 in (25 mm) through 4 in (102 mm). Hoses for these applications have a normal operating pressure between 125 psi and 400 psi (860 kPa and 2760 kPa) and a maximum allowable working pressure (MAWP) of at least 450 psi (3100 kPa). These hoses shall be designed to operate in a temperature range between -65 °F and 125 °F (-54 °C and 51.7 °C).^{1,2}

This publication is prepared as a guide for manufacturers and users of carbon dioxide hoses and represents the best currently available industry practice. Information on carbon dioxide can be found in CGA G-6, *Carbon Dioxide* [2].

NOTE—This publication does not include hoses used for filling uninsulated cylinders (e.g., DOT 3A), insulated cylinders (e.g., DOT 4L), or small stationary insulated containers (i.e., mini-bulk).

3 Definitions

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

3.1 Publication terminology

3.1.1 Shall

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

3.1.2 Should

Indicates that a procedure is recommended.

3.1.3 May

Indicates that the procedure is optional.

3.1.4 Will

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

3.1.5 Can

Indicates a possibility or ability.

4 General

Hoses are used to transfer liquid and gaseous carbon dioxide between storage containers, cargo tanks, and tank cars. They are frequently connected and disconnected, pressurized and depressurized, subjected to physical abuse, and a wide range of temperatures.

Hoses with an inside diameter of 1/4 in (6.4 mm) or smaller are typically used for filling uninsulated cylinders (e.g., DOT 3A). See CGA E-9, *Standard for Flexible, PTFE-Lined Pigtails for Compressed Gas Service* [3].

Hoses with an inside diameter of less than 1 in (25 mm) are typically used for filling small stationary insulated containers (i.e., mini-bulk) or portable insulated carbon dioxide cylinders (e.g., DOT 4L). See CGA G-6.5,

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 the order of appearance in the reference section.