

CGA

Compressed Gas Association

The Standard For Safety Since 1913

**CGA E-17-2021
STANDARD FOR HOSE LINE
QUICK-CONNECT COUPLINGS
FOR WELDING, CUTTING, AND
ALLIED PROCESSES**

THIRD EDITION

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NOTE—Technical changes from the previous edition are underlined

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1 Introduction

The Compressed Gas Association (CGA) has long recognized the need to promote safety in the use of gases and equipment for welding, cutting, and allied processes. Hose line quick-connect couplings are commonly used in these processes as an alternative to the traditional threaded hose line connections.

The gases used in these processes can vary in composition and properties (including oxidizers, flammables, inerts, and gas mixtures) which could include toxic or corrosives. This has the potential to create various negative effects on materials, equipment, and the surrounding atmosphere. Thus, it becomes a primary safety requirement that these hose line quick-connections are appropriate for their intended use.

This standard is intended to inform users, buyers, sellers, manufacturers, and others in the safe and proper application and use of lower pressure (up to 200 psi [1380 kPa]) welding equipment quick-connect couplings.²

2 Scope

This publication applies to quick-connect couplings with integral CGA E-1, *Standard for Rubber Welding Hose and Hose Connections for Gas Welding, Cutting, and Allied Processes*, or ISO/TR 28821 *Gas welding equipment — Hose connections for equipment for welding, cutting and allied processes — Listing of connections which are either standardised or in common use*, connections used between regulators, torches, and/or other gas welding equipment, sometimes referred to as hose-type quick-connects, for pressure up to 200 psi (1380 kPa) [2, 3]. This publication covers requirements and considerations for design and maintenance of indexed pin-type noninterchangeable welding quick-action couplings. It is the intention of this publication to provide some guidance because of the various designs that exist.

NOTE—Standard pneumatic quick-connectors should not be used for welding, cutting, or allied processes with gases that are flammable or are classified as oxidizers. Only quick-connects specifically designed for the gas service and application should be used.

WARNING: *Pneumatic quick-connectors shall never be used for flammable and oxidizer gases used for welding, cutting, or allied processes. Misconnections can cause hazardous mixed gas conditions which increase the risk of fire and/or explosion resulting in property damage and/or personal injury.*

This publication does not replace or overrule the connection requirements of CGA E-1 or ISO/TR 28821 [2, 3].

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.

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, *Guideline for Metric Practice in the Compressed Gas Industry* [1].

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