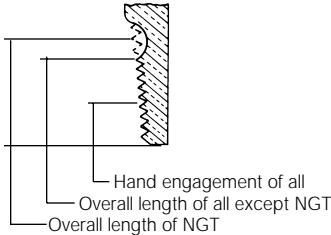


Thread Specifications

Cylinder Valve Threads

Because of the many thread forms available on equipment used in the LP-Gas industry today, the maze of letters, numbers and symbols which make up various thread specifications becomes confusing. To help eliminate some of this confusion, a brief explanation of some of the more widely used thread specifications is shown below.

Inlet Connections



NGT and NPT Threads

The NGT (National Gas Taper) thread is the commonly used valve-to-cylinder connection. The male thread on the valve has about two more threads at the large end than the NPT in order to provide additional fresh threads if further tightening is necessary. Additionally, the standard $\frac{3}{4}$ " NGT valve inlet provides the greater tightness at the bottom of the valve by making the valve threads slightly straighter than the standard taper of $\frac{3}{4}$ " per foot in NPT connections. In all other respects NPT and NGT threads are similar.

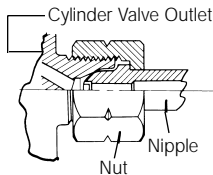
Outlet Connections

CGA Outlets

The CGA (Compressed Gas Association) outlets are standard for use with various compressed gases. The relation of one of these outlets to another is fixed so as to minimize undesirable connections. They have been so designed to prevent the interchange of connections which may result in a hazard.

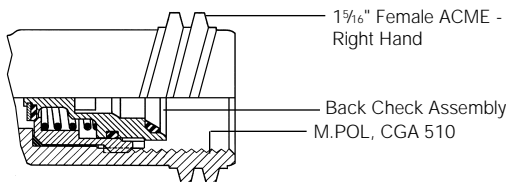
3/8"-18 NPT Thread Connection

This connection also is used for vapor or liquid withdrawal. It has a $\frac{3}{8}$ " diameter thread, and 18 threads per inch, National Pipe Taper Outlet form.



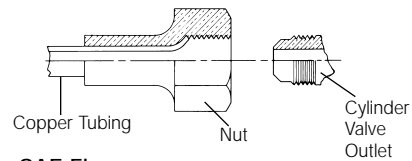
CGA 555

CGA 555 is the standard cylinder valve outlet connection for liquid withdrawal of butane and/or propane. Thread specification is .903" - 14 NGO - LH - EXT, which means .903" diameter thread, 14 threads per inch, National Gas Outlet form, left-hand external thread.



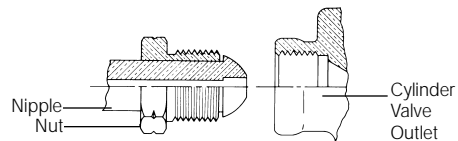
Type I Outlet

This connection is designed to mate with either a 1 5/16" Female ACME or a Male POL (CGA510). It complies with the ANSI Z21.58 Standard for Outdoor Cooking Appliances and the Can/CGA-1.6 Standard for Container Connections. A back check assembly in the outlet is designed to prevent gas flow until a leak free connection is made with an inlet adapter. These standards apply to barbecue grill cylinders manufactured after October 1994.



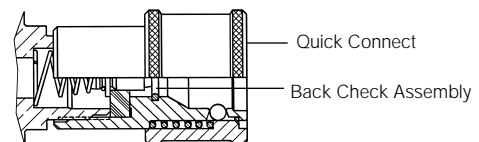
CGA 182, or SAE Flare

This connection assures a leak-tight joining of copper tubing to brass parts without need for brazing or silver soldering. The common size used on LP-Gas valves and fittings is $\frac{3}{8}$ " SAE (Society of Automotive Engineers) flare. Although this connection is referred to as a $\frac{3}{8}$ ", because $\frac{3}{8}$ " OD tubing is used, the thread actually measures $\frac{5}{8}$ ". The specifications are .625 - 18 UNF - 2A - RH - EXT, which means .625" diameter thread, 18 threads per inch, Unified Fine Series Class 2 Tolerances, right-hand, external thread.



CGA 510 or POL

Most widely used in this industry, POL is the common name for the standard CGA 510 connection. Thread specification is .885" - 14 NGO - LH - INT, meaning .885" diameter thread, 14 threads per inch, National Gas Outlet form, left-hand internal thread. ECII® POL outlet connections for LP-Gases conform to this standard.



Type II Outlet

This connection is designed to mate with the Quick Connect Male plug that complies with the ANSI Z21.58 Standard for Outdoor Cooking Appliances and the Can/CGA-1.6 Standard for Container connections. A back check assembly in the outlet is designed to prevent gas flow until a leak free connection is made with an inlet adapter. These standards apply to barbecue grill cylinders manufactured after October 1994.