

# Introduction

## Cylinder Information

The drawings of valve outlets and connections shown on pages xviii - xix are those now in use by Matheson Tri-Gas and in common use by the compressed gas industry. Whenever possible, valve outlets standardized by the Compressed Gas Association are used.

| Gas                 | CGA Valve Outlet & Conn. No. CGA/UHP CGA |
|---------------------|--|
| Acetylene           | 510                                      |
| Air, Breathing      | 346                                      |
| Air, Industrial     | 590*                                     |
| Allene              | 510**                                    |
| Ammonia, Anhydrous  | 705**                                    |
| Ammonia, Electronic | 660/720                                  |
| Argon               | 580*/718                                 |
| Argon-3500 psig     | 680***                                   |
| Argon-6000 psig     | 677                                      |
| Arsine              | 350/632                                  |
| Boron Trichloride   | 660**/634                                |
| Boron Trifluoride   | 330**/642                                |
| 1,3-Butadiene       | 510*                                     |
| Butane              | 510*                                     |
| Butenes             | 510*                                     |
| Carbon Dioxide      | 320*/716                                 |
| Carbon Monoxide     | 350*/724                                 |
| Carbonyl Fluoride   | 660                                      |
| Carbonyl Sulfide    | 330**                                    |
| Chlorine            | 660/728**                                |
| Cyanogen            | 660                                      |
| Cyanogen Chloride   | 660                                      |
| Cyclopropane        | 510*                                     |
| Deuterium           | 350*                                     |
| Dichlorosilane      | 678/636                                  |
| Dimethylamine       | 705**                                    |
| Dimethyl Ether      | 510*                                     |
| 2,2-Dimethylpropane | 510                                      |
| Disilane            | 350/632*                                 |
| Ethane              | 350*                                     |
| Ethyl Chloride      | 300*                                     |
| Ethylene            | 350*                                     |
| Ethylene Oxide      | 510**                                    |
| Fluorine            | 679                                      |

| Gas   | CGA Valve Outlet & Conn. No. CGA/UHP CGA |
|---|--|
| Germane   | 350/632                                  |
| Halocarbon 12<br>(Dichlorodifluoromethane)        | 660*/716                                 |
| Halocarbon 13<br>(Chlorotrifluoromethane)         | 660/716                                  |
| Halocarbon 13B1<br>(Bromotrifluoromethane)        | 660                                      |
| Halocarbon 14<br>(Tetrafluoromethane)             | 320*/716                                 |
| Halocarbon 23 (Fluoroform)                        | 660/716                                  |
| Halocarbon 114<br>(2,2-Dichlorotetrafluoroethane) | 660*/716                                 |
| Halocarbon 115<br>(Chloropentafluoroethane)       | 660*/716                                 |
| Halocarbon 116<br>(Hexafluoroethane)              | 660/716                                  |
| Halocarbon 142B<br>(1-Chloro-1,1-difluoroethane)  | 510                                      |
| Halocarbon 1113<br>(Chlorotrifluoroethylene)      | 510                                      |
| Helium-3500 psig                                  | 680***                                   |
| Helium  | 580*/718                                 |
| Hexafluoropropylene                               | 660*                                     |
| Hydrogen  | 350*/724                                 |
| Hydrogen-3500 psig                                | 695***                                   |
| Hydrogen Bromide                                  | 330**/634                                |
| Hydrogen Chloride                                 | 330**/634                                |
| Hydrogen Fluoride                                 | 660**/638                                |
| Hydrogen Selenide                                 | 350/632                                  |
| Hydrogen Sulfide                                  | 330**/722                                |
| Isobutane   | 510*                                     |
| Isobutylene                                       | 510*                                     |
| Krypton   | 580/718                                  |

| Gas                        | CGA Valve Outlet & Conn. No. CGA/UHP CGA |
|----------------------------|--|
| "Manufactured Gas B"       | 350                                      |
| Methane                    | 350*                                     |
| Methyl Bromide             | 330                                      |
| 3-Methyl-1-butene          | 510                                      |
| Methyl Chloride            | 660*                                     |
| Methyl Fluoride            | 350                                      |
| Methyl Mercaptan           | 330**                                    |
| Monomethylamine            | 705**                                    |
| Neon                       | 580*/718                                 |
| Nitric Oxide               | 660/712                                  |
| Nitrogen                   | 580*/718                                 |
| Nitrogen-3500 psig         | 680***                                   |
| Nitrogen-6000 psig         | 677                                      |
| Nitrogen Dioxide           | 660                                      |
| Nitrogen Trioxide          | 660                                      |
| Nitrous Oxide              | 326*/712                                 |
| Octafluorocyclobutane      | 660*                                     |
| Oxygen                     | 540*/714                                 |
| Oxygen Mixtures Over 23.5% | 296                                      |
| Perfluoropropane           | 660*/716                                 |
| Phosgene                   | 660                                      |
| Phosphine                  | 350/632                                  |
| Phosphorus Pentafluoride   | 660**                                    |
| Propane                    | 510*                                     |
| Propylene                  | 510*                                     |
| Silane (High Pressure)     | 350/632                                  |
| Silicon Tetrafluoride      | 330**/642                                |
| Sulfur Dioxide             | 660**                                    |
| Sulfur Hexafluoride        | 590*/716                                 |
| Trimethylamine             | 705**                                    |
| Vinyl Bromide              | 510                                      |
| Vinyl Methyl Ether         | 510                                      |
| Xenon                      | 580**/718                                |

\*Lecture bottles use CGA No. 170

\*\*Lecture bottles use CGA No. 180

\*\*\*For information on CGA 680 and 695 connections contact your nearest Matheson Tri-Gas office.

\*, \*\*NOTE: The CGA 170 is authorized for non-corrosive gases packaged in lecture bottles. The CGA 180 is authorized for all gases packaged in lecture bottles.