

Specialty Gases and Equipment

Contents

Introduction

General Information	GI6
Specialty Gas Cylinder Size Comparison Chart	GI7
Cylinder Identification	GI8

Pure Gases

Acetylene	P2
Air	P3
Ammonia	P5
Argon	P6
Boron Trichloride	P8
Boron Trifluoride	P8
1,3 – Butadiene	P9
n-Butane	P10
1-Butene	P11
2-Butene (cis)	P12
2-Butene (trans)	P12
Carbon Dioxide	P13
Carbon Monoxide	P14
Chlorine	P15
Dimethylamine	P16
Ethane	P17
Ethyl Chloride	P18
Ethylene	P18
Halocarbon-116	P20
Halocarbon-14	P21
Halocarbon-134a	P22
Halocarbon-218	P23
Halocarbon-22	P24
Halocarbon-23	P25
Halocarbon-C318	P26
Helium	P27
Hydrogen	P29
Hydrogen Chloride	P31
Hydrogen Sulfide	P32
Isobutane	P33
Isobutylene	P34
Krypton	P35
Methane	P36

Methyl Chloride	P37
Monomethylamine	P37
Neon	P38
Nitric Oxide	P38
Nitrogen	P39
Nitrous Oxide	P41
Oxygen	P42
Propane	P43
Propylene	P44
Sulfur Dioxide	P45
Sulfur Hexafluoride	P46
Trimethylamine	P47
Xenon	P48

Gas Mixtures

Ammonia	M4
Argon	M6
Benzene	M8
n-Butane	M9
Carbon Dioxide	M10
Carbon Monoxide	M13
Chlorine	M15
Ethane	M16
Ethylene	M18
Ethylene Oxide	M20
Helium	M22
Hexane	M23
Hydrogen	M24
Hydrogen Chloride	M26
Hydrogen Sulfide	M27
Isobutane	M29
Methane	M31
Nitric Oxide	M33
Nitrogen	M34
Nitrogen Dioxide	M36
Nitrous Oxide	M37
Oxygen	M38
Propane	M40
Propylene	M41
Sulfur Dioxide	M42

Sulfur Hexafluoride	M43	Flowmeter Regulators	E22
Toluene	M43	Single-Stage	E22
Vinyl Chloride	M44	Two-Stage	E23
Special Applications	SA1	High-Purity Pressure Regulators	E24
<i>BIP</i> ® Technology	SA2	Brass Line	E24
Analytical Instrumentation	SA4	Brass Single-Stage	E25
Flame Ionization Detector (FID)		Brass Two-Stage	E26
Zero Fuel Gases	SA4	Stainless Steel Line	E27
Leak Detection Gases	SA4	Stainless Steel Single-Stage	E28
Electron Capture Gases	SA5	Stainless Steel Two-Stage	
Nuclear Counter Gases	SA6	(threadless seat)	E29
Environmental Monitoring	SA7	Stainless Steel Positive-Seal	E30
EPA Protocol Gas Mixtures	SA8	Stainless Steel Two-Stage	
CEM Daily Calibration Standards	SA9	(threaded seat)	E31
Air Toxics Monitoring	SA10	Absolute Pressure	E32
Mobile Emissions Monitoring	SA11	E-Z Mount	E33
Laser Gases	SA12	Low-Flow	E34
Medical Gases & Biotechnology	SA14	High-Flow	E35
Refrigerant Gases	SA17	Mini Single-Stage	E36
Hydrocarbon Processing Gases	SA19	Mini Two-Stage	E37
Portable Cylinders	SA23	Back Pressure	E38
Process Chemicals	SA26	Disposable Cylinder Regulators	E39
Pressure Regulators	E6	Electronic Service Regulators	E39
General-Purpose Pressure Regulators	E6	Ultra-High-Purity Line	E40
Brass Line	E6	Ultra-High-Purity Single-Stage	E41
Brass Single-Stage	E7	Ultra-High-Purity Two-Stage	E42
Brass Two-Stage	E8	Point of Use	E43
Analytical Pressure Regulators	E9	Bench-Mount Point-of-Use	E43
Brass Line	E9	Panel-Mount Point-of-Use	E44
Brass Single-Stage	E10	Wall-Mount Point-of-Use	E45
Brass Two-Stage	E11	Corrosive Service	E44
Brass Dewar Service	E12	Economy	E46
GC Series Two-Stage	E13	Standard	E47
Brass Rear-Inlet	E14	Deluxe	E48
Analytical Tee Purge	E15	Cross Purge Assembly	E49
Smart Indicating Regulators	E16	Corrosive Tee Purge Assembly	E50
SIR Series Line	E17	Special Service Pressure Regulators	E51
SIR Series Brass Single-Stage	E18	Acetylene Service	E51
SIR Series Brass Two-Stage	E20	AA Acetylene Service	E52
		Oxygen Service	E53
		Fluorine Service	E54
		Ultra-Low Delivery	E55
		Ultra-Low Inlet Pressure	E56

Specialty Gases and Equipment

Contents

High Delivery Pressure	E57	Generators	E97
Heavy-Duty High-Pressure	E58	Hydrogen	E97
Vaporizing	E59	Chromatographic Air	E98
Laser	E60	FID Gas Station	E99
Change Over Panels	E61	TOC Air	E100
General Purpose 100 psig	E62	FT-IR Purge Gas	E101
General Purpose 10–200 psig	E63	Nitrogen	E102
High-Purity 150 psig Fixed Delivery	E64	Miscellaneous Equipment	E107
High-Purity 10–200 psig Delivery	E65	Cylinder Brackets/Clamps	E107
GC Series 100 psig Fixed Delivery	E66	Small Cylinder Bases/Stands	E108
Ultra-High-Purity	E67	Cylinder Racks & Ramp	E109
Fully Automatic	E68	Cylinder Carts and Trucks	E110
Liquid Cylinder Gas Phase	E71	Floor Savers	E111
500 psig Fixed Delivery	E72	Cylinder Wrenches	E112
High-Pressure (adjustable)	E73	Cylinder Scales	E113
Accessories	E74	Gas Filters-Economy	E114
Alarm Systems	E75	Flash Arrestors	E114
Manifolds	E76	High-Purity Non-Corrosive Filters	E115
Protocol Stations	E76	High-Purity Corrosive Filters	E116
SIR® Wall Mounted	E77	High-Performance Filters	E117
Headers	E79	Atomic Absorption Acetylene Filters	E118
Flowmeters	E80	Heaters	E119
Compatibility Chart	E81	Gas Leak Detectors	E120
150 mm	E82	Gas Sample Cylinders	E121
65 mm	E84	SFE/SFC Cylinder Connection Kit	E121
Pigtails & Hoses	E86	Cylinder Valve Fittings	E122
Flexible Metal Hoses	E86	Gas Cabinets	E125
Flexible Metal Pigtails	E87	Tubing and Fittings	E126
Synflex® Hoses and Pigtails	E88	Laboratory Safety Products	S1
Gauges	E90	Hand Protection	S3
Cryogenic Accessories	E91	Protective Clothing	S8
Valves	E92	Eye Protection	S12
Check	E92	Hearing Protection	S16
Safety Relief	E92	Head and Face Protection	S17
Diaphragm Packless	E93	First Aid	S18
Instrument	E94	Skin Care	S21
Lecture Bottle Control	E94	Eyewash and Showers	S22
Manual Flow Control	E95	Biosafety	S23
Shut Off	E96	Spill Control and Containment	S24
		Floor Mats	S25

Safety Cans	S26	Liqified Compressed Gases Information	A14
Flammable Products Storage	S27	Diaphragm Valve Procedures	A16
Fire Extinguishers	S28	Cryogenic Liquid Container Information	A17
Labeling Systems	S28	Material Compatilby Chart	A20
Respiratory Protection	S29	Physical Properties Information . .	A21
Appendix	A1	Conversion Tables and Dew Points	A22
Specialty Gas Cylinder Information	A2	Abbreviations and Symbols	A23
Specialty Gas Cylinder Dimensions	A3	Glossary	A26
How to Buy Gases	A6	Get Connected With www.airgas.com	A31
Gas Grade Selection Table for Gas Chromatography (GC)	A8		
Safe Handling and Use of Specialty Gases	A9		