Parker Industrial Hose

Catalog 4800 December 2020

Parker

ENGINEERING YOUR SUCCESS.

This QR tag enables you to see additional product and other content on the web using your mobile phone. You will need a QR reader to get started. Please visit www.mobile-barcodes.com/qr-code-software for more information and a list of QR code readers you can install at no cost.

⚠ WARNING – USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

⚠ Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings, Connectors, Conductors, Valves and Related Accessories

Parker Publication No. 4400-B.1

WARNING: Failure or improper selection or improper use of hose, tubing, fittings, assemblies, valves, connectors, conductors or related accessories ("Products") can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of these Products include but are not limited to:

- Fittings thrown off at high speed.
- High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- Electrocution from high voltage electric powerlines.
- Contact with suddenly moving or falling objects that are controlled by the conveyed fluid.
- Injections by high-pressure fluid discharge.
- Dangerously whipping Hose.
- Tube or pipe burst.
- Weld joint fracture.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity buildup or other sources of electricity.
- Sparking or explosion while spraying paint or flammable liquids.
- Injuries resulting from inhalation, ingestion or exposure to fluids.

Before selecting or using any of these Products, it is important that you read and follow the instructions in this Industrial Hose Catalog 4800 and the complete Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings, Connectors, Conductors, Valves and Related Accessories, Parker Publication No. 4400-B.1 (refer to the Safety & Technical Information section of this catalog). No product from any division in Parker Fluid Connectors Group is approved for in-flight aerospace applications. For hoses and fittings used in in-flight aerospace applications, please contact Parker Aerospace Group.

Offer of Sale

Parker Hannifin Corporation, its subsidiaries or its authorized distributors hereby offer the items described in this document for sale. The provisions in the "Offer of Sale" stated at the end of this catalog govern this offer and its acceptance.

Industrial Hose Products, Catalog 4800

Table of Contents

Hose Selector Guides at the beginning of each section identify products and provide product overviews.

Parker Industrial Hose

Parker industrial hose products are the preferred choice for transferring abrasive materials, acid and chemicals, air, compressed gases, food, fuel, oil, sanitary materials, steam, welding gases, water and many other materials. We manufacture a variety of hoses with covers that are resistant to abrasion, chemicals, flame, heat, oil, ozone, ultraviolet light and weathering. Our products provide value through robust performance and long service life.

Markets

- Agriculture
- Construction
- Food & Beverage
- General Industrial
- Marine
- Material Handling
- Military
- Mobile Equipment
- Oil and Gas
- Petrochemical
- Transportation

Market-Oriented Solutions

Parker penetrates new markets with new capabilities, products and services, leveraging our corporate economic power to pursue a program of aggressive, synergistic growth. These initiatives enable Parker to participate more fully in existing markets and establish a commanding position in emerging markets.

- Introduction of innovative products, such as ultra-flexible E-Z Form™ hose for coolant and oil suction/transfer service:
  - *Handles extreme bends while allowing full-flow, kink-free performance*
  - *Replaces formed hoses in many applications*
  - *Eliminates special tooling costs and orders for minimum production quantities*
  - *Minimizes potential leak points created by multiple hose/tubing system connections*
- Development of leading product solutions, such as the Twinhammer dual hose system for compliance with OSHA Respirable Crystalline Silica (RCS) safety standard:
  - *Delivers both air and water in a single, unitized configuration for silica dust suppression in pneumatic jackhammer applications*
  - *Provides easy and safe handling for operators*
  - *Color-coded hoses allow for quick identification of air and water lines*
  - *Features secure, maintenance-free connections with permanent crimp couplings*
- Institution of Select Hose Assembly Fabricator programs for anhydrous ammonia hose.

Your Partner for Motion Control Solutions

Parker Hannifin is a global Fortune 250 company and the world's leading supplier of motion control products, systems and solutions. The corporation posts over $14 billion in annual sales (fiscal year 2019) and delivers hydraulic, pneumatic, electro-mechanical, fluid connector and filtration technology to more than 13,000 worldwide distribution and MRO outlets.

Parker's extensive product lines encourage single-sourcing of fluid and material transfer, fluid power and motion control applications, and Parker's state-of-the-art solutions—such as integrated systems, kitting services and standard and customized products—are supported by superior application engineering and technical expertise.

With global headquarters in Cleveland, Ohio, and manufacturing and distribution facilities located strategically throughout North America, South America, Europe and Asia-Pacific, Parker is truly a global partner. Parker is listed on the New York Stock Exchange (NYSE) as PH.

Parker's industrial and transfer hoses are the preferred choice across diverse applications, industries and markets, from the global leader in hose manufacturing and design. Whatever the need, Parker has the right industrial hose for your job.

Circle of Safety

When hose assemblies must operate under high pressures or in critical applications, crimping is recommended over bands or clamps to attach couplings. The Circle of Safety program enables selection of the most appropriate hose, crimp couplings and fabrication methods to ensure that a hose assembly meets the maximum rated working pressure and design factor of the hose.

Parker tests and qualifies crimp specifications then enters them into CrimpSource®, a real-time online database accessible through www.parker.com/crimpsource. And as Parker adds new hoses to its product offering, they are tested, qualified with appropriate couplings then added to the CrimpSource database. Additional crimp specifications are established based upon an easy distributor-request procedure, also accessible through CrimpSource.

The Parker Circle of Safety program was the first to recognize and address the exorbitant costs of industrial hose litigation. Although organizations such as NAHAD, in cooperation with Parker and other industry leaders, have established basic hose assembly design and fabrication training programs, there are few comprehensive industrial hose assembly safety standards similar to those established for high-pressure hydraulic hose applications. Because many suppliers in this industry manufacture only one hose assembly component—hose, couplings or attachment devices—there is great risk for a hose assembly failure due to mismatched or unqualified components. The innovative Parker Circle of Safety program was the first to build a tested and validated link between the component supplier (Parker), the distributor/ fabricator and the end-user of the industrial hose assembly. No more mixing and matching of components means no more worries. Parker is the preferred single source for safe and reliable hose assembly solutions in a wide range of applications and markets.

Designed and built for long-lasting performance and superior value, Parker's industrial hoses are available in a wide variety of hose constructions and material options to meet tough performance criteria.

Industry Organizations

Parker is well represented and has a strong voice in key industrial hose organizations.

Association for Rubber Products Manufacturers (ARPM)
In 2010 Parker transferred its membership from the Rubber Manufacturers Association (RMA) when the Elastomerics Products Group of the RMA formed the ARPM, a separate and distinct organization focusing on hose, belting, molded products, seals and related rubber products and markets. Refer to the Safety and Technical Information section of this catalog for ARPM contact and ordering information.

NAHAD (Association for Hose and Accessories Distribution)
Parker continues a proud legacy, through acquisition of Dayco and Titan, as a charter member of NAHAD, one of the industry's oldest and most respected organizations. Parker supports the NAHAD Industrial Hose Assembly Specification Guidelines, which were established by NAHAD member volunteers. The guidelines provide performance recommendations for the specification, design and fabrication of hose assemblies and set a benchmark in our industry for quality, reliability and safety.

Parker industrial hoses are designed and constructed to withstand the demanding requirements of harsh fluids and extreme environments.

Not Sure Which Hose You Need?
Use the "STAMPED" Guide

Hose Selection

This catalog provides guidance for selecting the proper hose for the applications listed herein. It contains many cautions, descriptions, directions and warnings for the safe and proper use of Parker industrial hose. All aspects of hose selection criteria should be clearly understood before recommending, suggesting, specifying or using any hoses.

The hose listings in this catalog provide detailed information to help select the correct hose for most applications. Also refer to the *Safety and Technical* section of this catalog for general product information. The hose listings include recommended coupling styles. Refer to the *Couplings and Equipment* section of this catalog for specific product information.

When ordering, use this guide to assist in determining the correct hose, coupling and attachment method.

SIZE	Hose inside diameter, outside diameter and overall length
TEMPERATURE	Maximum temperature of the material being conveyed and of the application environment
APPLICATION	External conditions/environment such as abrasion, bend radius, climate/temperature, crushing, color, conductivity/nonconductivity, flexing, industry or regulatory specifications, kinking and exposure to chemicals, oil, ozone and ultraviolet light
MEDIA	Type and concentration of material being conveyed and compatibility with the hose
PRESSURE	Maximum system pressure, including pressure spikes, suction/vacuum
ENDS	Style, type, attachment method, pressure rating and material compatibility of end couplings & connections
DELIVERY	Testing, packaging and delivery requirements

Need Additional Help?

If you can't determine the appropriate or suitable hose or have special requirements, call Parker Customer Service at (440) 943-5700.

⚠ **WARNING!** Failure to follow recommended application information and recommended procedures for selection, installation, care, maintenance and storage of hose, couplings or hose assemblies may result in failure of the product to perform properly and may result in damage to property, serious bodily injury or death. Make sure that hose selected for any application is appropriate and suitable for that service. Application information is given with each hose listed in this Parker catalog. Refer to the Safety and Technical Data section of this catalog for information regarding safety, care, maintenance and storage. Contact Parker or your local Parker distributor for assistance.

⚠ **WARNING!** Product pages may contain comparisons to competitor products. These are provided as a tool to identify parts similar in form, fit, or function and are not intended as direct cross-references or direct interchanges to Parker products. The user must take care to compare any variances in materials and constructions between manufacturers, and to ensure the selected hose does not constitute a safety risk or change in required performance.

Making Safe Hose Assemblies

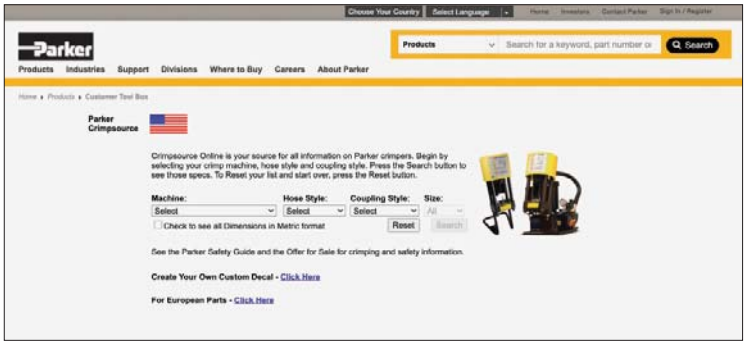
CrimpSource® Industrial Hose Crimp Specification System

The Parker **CrimpSource** system provides validated crimp specifications for permanent fittings used as components of industrial hose assemblies.

The Parker CrimpSource crimp specification system provides:

- Live, online, real-time access to current crimp specification data
- Crimp specifications based on actual physical testing/data, not mathematical calculations
- Data for hoses from 1/4" ID to 10" ID

Industrial hose frequently conveys harsh fluids that can be dangerous and challenging if a leak or spill occurs. Parker industrial hose assemblies that incorporate permanent crimped-on fittings applied to CrimpSource specifications provide an extra measure of performance, reliability and safety for workers and the environment.



*To access CrimpSource for industrial hose, visit **parker.com/crimpsource.***

Customer Service, Sales and Online Support

Parker offers a variety of avenues to support your needs. Our customer service team is available 12 hours a day to assist with your product questions or order inquiries. Our Industrial Hose Specialists are a specialized sales force trained in industrial applications and are available to collaborate on any project you may have. Visit our website to learn more about our products and access additional product literature for download.

Customer Service	**Email**	**Website**
(440) 943-5700	HPD.Support@support.parker.com	parker.com/safehose

Additional Support

Parker's product experts have developed additional market specific resources as a commitment to our customers and an important part of our value-added service.

Please visit the following:

Blogs: parker.com/HPD_Blogs
Product Videos: solutions.parker.com/HPD-product-videos
CAD: parker.com/HPD_CAD

Hose visual index

Air & Multipurpose Hose	7092 -19 	7093 -21 	7031R -22 
7057 -23 	7096 -23 	7322 -24 	7323 -24 
7094 -25 	7095 -25 	7396 -27 	7212 -28 
7107 -29 	7102 -30 	7187 -31 	7137 -32 
7308E -33 	SW360 -34 	7251 -35 	7284 -36 
7081 -40 	7082 -41 	7083 -41 	7084 -39 
7337 -42 	7337M -43 	***Chemical Hose***	7373T -45 
SWC693 -46 	7374 -47 	7108 -48 	SWC683 -49 
SWC683G -49 	SWC693B -51 	***Coolant & Engine Hose***	7395 -53 
7219 -55 	7399 -57 	389 -58 	397 -59 
395 60 	7181 -61 	7186 -62 	6722 -63 

(Continued on the following page)

Hose visual index

6723 -64 	6724 -65 	6750 -66 	6823 -67 
6621 -68 	7116M -69 	SW569 -70 	SS269 -72 
7165 -73 	*Fuel Dispenser Hose*	7280 -75 	7282 -76 
7124 -77 	7114 -78 	7175 -79 	*LPG/Propane Hose & Assemblies*
7132 -81 	7132XTC -83 	7232 -85 	SS106 -87 
7122 -88 	SS25UL/7243 -89 	*Material Handling Hose*	7204 -91 
SW387 -92 	SS111 -93 	7234 -94 	7331XT -95 
7244 -96 	7363 -97 	8341 -98 	8341HD -99 
SS135 -100 	SS247 -101 	SW409 -102 	*Oil Field Hose*
7213E -104 	7301 -105 	7311N -106 	7311NXT -106 
Petroleum Transport Hose	7216E -108 	SWC609 -109 	SWC609R -109 

(Continued on the following page)

Hose visual index

HOSE OVERVIEW CHART

	Hose Size	Hose Construction	Pressure PSI -3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	4"	5"	6"	>6"	Standard Temp. Range °F	Standards	Page
Air / Multipurpose	7092		200	200-300	200-300	200-300	200-300	200-300	200-300	200-300	200	200	200							–40/+212		19
	7093		200	200-300	200-300	200-300	200-300	200-300	200-300	200-300	200	200	200							–40/+212		21
	7031								300+											–40/+212	ARPM IP-7	22
	7057						250		300											–40/+212		21
	7096								300											–40/+212		23
	7322										200	200	200							–40/+212		24
	7323										200	200	200							Air -20 / -158 Other -20/+212		24
	7094			200-300	300	200-300	200-300	300	200-300	200-300	200	200								Air -20 / -158 Other -20/+212	Electrically nonconductive*	25
	7095			200-300	300	200-300	200-300	300	200-300	200-300	200	200								Air -20 / -158 Other -20/+212	Electrically nonconductive*	25
	7396										300	300	300							Air -20 / -158 Other -20/+212	Electrically nonconductive*, MSHA	27
	7212			300		300	300	300	300											Air -20 / -158 Other -20/+212	MSHA	28
	7107			500		500	500		500	500	500	500	500							Air -40 / -158 Other -40/+212	Electrically nonconductive*, MSHA	29
	7102					300	300		300	300	300	300								Air -70 / -158 Other -70/+212		30
	7187		250	250		300														Air -20 / -158 Other -20/+212		31
	7137			200	200															Air -40 / -158 Other -40/+212		32
	7308E												300							-20 / +212		33
	SW360											200	200		200	125		100		–40/+350		34
	7251											600	600	500	500	400				–20/+212	MSHA	35
	7284					1500	1000		1000											–20/+212	MSHA	36
	7081								200											–40/+212		40
	7082								300											–40/+212		41

(*min. resistance of one megaohm p/in. at 1000 volts DC)

HOSE OVERVIEW CHART

	Hose Size	Hose Construction	Pressure PSI -3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	4"	5"	6"	>6"	Standard Temp. Range °F	Standards	Page
Air / Multipurpose	7083								300											–40/+212		41
	7084								300											–40/+212		39
	7337**											N/A	N/A	N/A	N/A	N/A				–30/+180	MSHA	42
	7337M**						N/A	N/A	N/A	N/A	N/A									–30/+180	MSHA	43
Chemical	7373T								200	200	200	200	200		200	200				–40/+180		45
	SWC693									250	250	250	250		200	200				–40/+180		46
	7374									600	400	400	400							–40/+180		47
	7108			500		500														0/ +200		48
	SWC683-SWC683G †SWC683 Only									250		250	250		200	175		125†		-40/+250		49
	SWC693B									250	250	250	250		200	200				-40/+180		51
Coolant & Engine Hose	7395**						75	75	75	75	75	75	75	75	75	75				-50/+257	SAE J20R2-D1 performance	53
	7219**						75	75	75	75	75*	75*	75*	75*	75*	75*				-30/+212*/+257		55
	7399**						150	150	150	150										-40/+257		57
	389		100	100	100	100	100	100	100											–40/+257	SAEJ30R7 & R14 T2	58
	397		100	100	100	100	100	35	35													59
	395		75	50	50	50	35															60
	7181			65	65	65	65	65	50	45										–40/+257	SAEJ20R3 D-2	61
	7186						125	90	70											-40/+212		62
	6722			83	83	83	83	83	83	83										–65/+350	SAEJ20R3 Class A	63
	6723					83	83	83	83	83										–65/+350		64

**See product page for additional sizes

HOSE OVERVIEW CHART

	Hose Size	Hose Construction	Pressure PSI -3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	4"	5"	6"	>6"	Standard Temp. Range °F	Standards	Page
Coolant & Engine Hose	6724			83		83														–65/+500		65
	6750						142		108	100	92	83	67	50	29	17	17			–65/+350		66
	6823														27	27				–65/+500		67
	6621									225	225		225							–76/+392	SAE J20R2 Class A and TMC	68
	7116M					150	150		150	150										-40/+212		69
	SW569**					75	75	75		75	75	50	50	50	40	40				-20/+212	ABYC H-24, NMMA, SAE J1527 A1/A2, SAE J1942 Code: F / VW / NVW, SAE J2006 R2, SAE J20R2 B, SAE J20R4 B, SAE J20R5 B, SAE J30R5, ISO 7840:2004 A2, ISO 8469 B1, USCG	70
	SS269**									50	50	50	50	25	25	25	25			-40/+200	ABYC, USCG/SAE J2006R1	72
	7165			100	100	100	100	75												-20/+212	ABYC, CARB, CE, EPA, ISO 7840 A1, NMMA, SAE J1527, A1-15, USCG A1	73
Fuel Dispenser Hose	7280							50	50	50										-40/+180	UL330/ULC; NFPA 30A; UL30N4 (factory assemblies)	75
	7282							150	150	150										-40/+180	CARB CP-206; UL330/ULC; NFPA 30A (factory assemblies)	76
	7124							50	50	50										-40/+180	UL330/ULC; NFPA 30A; UL30N4 (factory assemblies)	77
	7114							50	50	50										-40/+180	UL330/ULC; NFPA 30A; UL30N4 (factory assemblies)	78
	7175								50	50										-40/+180		79
LPG/Propane Hose & Assemblies	7132			350		350	350		350	350										-40/+180*		81
	7132XTC									350										-65/+180*	UL21; CSA 8.1 Type I; optional DOT factory hose assembly testing and marking available for sizes smaller than 3/4"	83
	7232										350	350	350							-40/+180*	UL21; CSA 8.1 Type I; optional DOT factory hose assembly testing and marking available	85

**See product page for additional sizes

* (working pressures are at +68, higher temps reduce the available working pressure)

HOSE OVERVIEW CHART

	Hose Size	Hose Construction	Pressure PSI -3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	4"	5"	6"	>6"	Standard Temp. Range °F	Standards	Page
LPG/Propane Hose & Assemblies	SS106														350					-22/+158*	ISO 2928-1986 (E)	87
	7122					125														-20/+160		88
	SS25UL/ 7243				350	350	350	350												-40/+180*	UL21	89
Material Handling	7204								1000	1000										Air -20/+158; Steam -20/+368 (saturated steam to 150 psi max); Other -20/+300		91
	SW387											150	150	150	150	150				-40/+350		92
	SS111												55	55	55	55	35	35		-40/+180		93
	7234												3000							–40/+200		94
	7331/ 7331XT †7331XT only												400		400	400		400		-40/+200		95
	7244						50		50	50	50	50								-20/+160		96
	7363											100		100	100	100	100			-40/+160		97
	8341										75	75		75	75		75	75		-40/+180		98
	8341HD																	75				99
	SS135**														100	100	100			-40/+180		100
	SS247**														100	100	100	100		-40/+180		101
	SW409											200		175	150	100	100			-40/+180		102

**See product page for additional sizes

HOSE OVERVIEW CHART

	Hose Size	Hose Construction	Pressure PSI -3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	4"	5"	6"	>6"	Standard Temp. Range °F	Standards	Page
Oil Field	7213E											150	150	150	150	150				-22/+185		104
	7301											2250								-40/+275		105
	7311N											400	400		400	400		400		-40/+200		106
	7311NXT														400	400				-40/+200		106
Petroleum Transport Hose	7216E											150	150	150	150	150				-22/+185		108
	SWC609/ SCW609R †SWC609 only										250	250	250	200	200	150		150†	150† (8")	–40/+200		109
	SWC325											150	150	150	150	150		125		–67/+180		110
	7705									200	200	200	200	200	200	200				–20/+180		111
PVC Hose and Tubing	100		55-60	55-60	50-55	45-55	30-45	25-45	35	25-30												113
	GPH		300	300	300	300	300	300	300	250										–15/+150*	Electrically nonconductive**	115
	125		250	250	250	225	200	200	150	125	100	100	75							–25/+150*	FDA; EU	117
	126			350	275	250	250		200	150	125	100								–25/+150*	FDA; EU	117
	7541											70	70	60	60	60		45	45 (8")	–5/+170*		119
	7542											150	150	150	150	140		100	80 (8")	–5/+170*	MSHA	120
Steam Hose	7285						261		261	261										-40/+406 saturated steam; +450 super-heated steam	ISO 6134 Type2	122
	7263C						261			261										-40/+406 saturated steam; +450 super-heated steam	ISO 6134 Type2	123
	7264C								261											-40/+406 saturated steam; +450 super-heated steam	ISO 6134 Type2	124
	7264						261		261	261	261	261	261							-40/+406 saturated steam; +450 super-heated steam	ISO 6134 Type2	125
	7263E								261											-40/+406 saturated steam; +450 super-heated steam	ISO 6134 Type2	126
	7288						261		261											-40/+406 saturated steam; +450 super-heated steam	ISO 6134 Type2	127
	7200								350	350										-20/+300;+350 intermittent		128

* (working pressures are at +68, higher temps reduce the available working pressure)

WARNING: The products described in this brochure can expose you to Carbon Black, DEHP, Ethylene Thiourea, and Lead, which are known to the State of California to cause cancer, and DBP, DEHP, Ethylene Thiourea, and Lead which is known to the State of California to cause birth defect or other reproductive harm. For more information go to www.p65warnings.ca.gov.

HOSE OVERVIEW CHART

	Hose Size	Hose Construction	Pressure PSI -3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	4"	5"	6"	>6"	Standard Temp. Range °F	Standards	Page
Water Hose & Assembly	7392E											150	150	150	150	150		150		-40/+180		130
	SS122										500	500	500	500	500	500				-40/+180		131
	7268E								1000	1000	1000	1000	1000							-20/+212	MSHA	132
	7258			3000		3000	2500													–40/+250		133
	7258BK			3000		3000	2500													–40/+250		134
	7143					1500														–40/+250		135
	7079								150											–40/+212		136
	7080								300											–40/+212		137
	7360								150											–20/+212		138
	7055							100	100											–40/+180		139
	7093CW								200											–40/+180		139
	7385						150		150	150	150	150	150							-20/+212 (internal) +572 (external)		140
	7306E											100	100	100	100	100				-20/+180		141

HOSE OVERVIEW CHART

	Hose Size	Hose Construction	Pressure PSI																	Standard Temp. Range °F	Standards	Page
			-3	–4	–5	–6	–8	–10	–12	–16	–20	–24	–32	–40	–48	4”	5”	6”	>6”			
Welding Hose and Assembly	7109		200	200		200														-40/+200	ARMP IP-7; CGA E-1	145
	7141/ 7142 *7141 only		200	200		200	200*		200*											-40/+200	ARMP IP-7; CGA E-1	146
	7126		200	200		200														-40/+200	ARMP IP-7	148
	7120/ 7121/ 7031 *7031 only		200	200		200	200		300*											-40/+200	ARMP IP-7	149
	7123			200																-40/+200	CGA E-1 color requirements	151
	7172		200	200	200	200														-20/+212	Noncunductive	152
	7293						500		500	500	500	500	500							-22/+176		153