Pneumatic Automation Connectors Products and Custom Solutions

Catalog 3570PNA | May 2018

Parker

ENGINEERING YOUR SUCCESS.

OTSEGO, MICHIGAN

TIJUANA, MEXICO

ALBION, INDIANA

LAKEVIEW, MICHIGAN

KENT, OHIO

MESA, ARIZONA

⚠ 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.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document entitled "Offer of Sale".

Safe Drinking Water Act

In accordance with 42 USC § 300g-6, parts in this catalog are to be used exclusively for nonpotable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption. The only exceptions are parts described explicitly as "low lead" or suitable for potable water.

Directives and Regulations

Parker complies with the directives and regulations listed below and goes beyond its statutory obligations for the ranges in question.

D.O.T. FMVSS 571.106
Fittings comply with the performance requirements

Fittings meet the requirements of the specific SAE standard called out in the product sections

DIN 74324
Fittings comply with the performance requirements

Fittings are listed under 1 of 3 categories depending on the application. Fittings meet dimensional and testing requirements as specified by Underwriter Laboratories and carry the UL symbol.

ISO 6149-3
Fittings meet the dimensional requirements

Gold Seal Program
Fittings comply with the ANSI standards and approved by WQA for contact with drinks and foodstuffs.

REACH regulation: no. 1907/2006
As product manufacturer, we are subject to article 33 of the regulation which defines a duty to inform when a candidate substance is present at more than 0.1% weight for weight.

European RoHS directives: 2011/65/EC
Relating to the limitation of the use of 6 hazardous substances in electrical and electronic equipment (mercury, lead, cadmium, hexavalent chromium, PBB and PBDE).

CFR 21: Code of Federal Regulation Title 21: Food and Drugs
This code consists of lists of prohibited substances for materials intended to come into contact with foodstuffs.

Regulation 1935/2004
This framework regulation relates to materials and objects designed to come into contact with foodstuffs. It describes specific measures per product group (Art. 5).

NSF 51: NSF / ANSI-51
Fittings and tubes complying with this standard are tested and approved by NSF for contact with drinks and foodstuffs.

NSF 61: NSF / ANSI-61
Fittings and tubes complying with this standard are tested and approved by NSF for contact with drinking water.

NSF 42 and 58: NSF/ANSI-42/58
Tubes complying with this standard are tested and approved by NSF for drinking water treatment systems.

WRAS: Water Regulations Advisory Scheme
(UK) Fittings approved by this programme are declared compliant for water supply by WRc - NSF.

WHAT DOWNTIME?

THE QUALITY OF YOUR CONNECTORS MAKES A DIFFERENCE

When a line or machine stops due to a defective part, the cost of the downtime is greater than the cost of all the connectors. That's why we guarantee the quality and traceability of every connector we sell. And why our products meet or exceed both national and international standards.

It's what keeps your employees safe, your lines and machines running, and your productivity high.

WHY PARKER
FOR FLUID SYSTEM CONNECTORS

More Selection

More Materials
Materials suited to your application, including plastic, composite, brass, stainless steel, and plated brass.

More Connector Styles
Choose from push-to-connect, compression, barbed, flare, and pipe fittings, as well as flow controls, ball valves, angle stops, manifolds, and cartridges in both inch and metric sizes from 1/8" to 1-1/2".

Customized Solutions
Don't be boxed in by conventional thinking or the conventional parts that go with it. Whether you need a valve, fitting or manifold, we can produce it in any quantity or configuration, with any connector end.

For prototypes, one-of-a-kind pieces, and emergency repair parts to small or large production runs, our customized solutions can reduce lead times as well as the price of lower-volume components. Three of our locations now specialize in non-standard service, ensuring you get what you need ASAP. Plus they comply with SAE, ISO, DIN, JIS, ASTM, and MIL standards.

Lower Overall Product Cost
Due to tested and approved products with longer life

Find Your Fittings Solution. Fast.
The FittingFinder app helps identify replacement fittings, pull specs and dimensions, locate nearby distributors and more.

THE PARKER BINS PROGRAM

A line of bins and cabinets used for bin fill placements at OEM and MRO accounts. Sizes and styles range from scoop boxes to open bins and a rolling pneumatic cabinet for storage flexibility. Bins provide increased visibility of Parker products and centralize all fittings needed in one location. When paired with Parker's Bin Labeling Program, distributors can offer customers the benefits of simple part identification and easy restocking.

Reliable System Solutions
Fittings, valves, and manifolds engineered to work together to provide easy-to-assemble, leak-free connections.

Reduced Time to Market
Our ability to design, prototype, and manufacture world-wide will shorten your design cycle, improve production efficiency, and simplify procurement procedures.

The Power of Partnership

13,000
distributors, sales offices, and MRO outlets – instant access to parts, products, maintenance, service, and solutions.

Global and Local Support
Your language, your time zone, your currency.
No matter where you develop, assemble, manufacture or install, Parker is there.

WHY PARKER FOR FLUID SYSTEM CONNECTORS

EDI Transmission
Computerized data exchange to increase productivity and speed communication.

Improved Stock Management
Packaging, barcodes, and customized labels according to your needs.

E-Catalog
Integration of our product data into your information systems (e-procurement, e-commerce site, etc.)

Communication Tools

We can provide you with any promotional sales material you might need, from brochures and flash animations to sample kits.

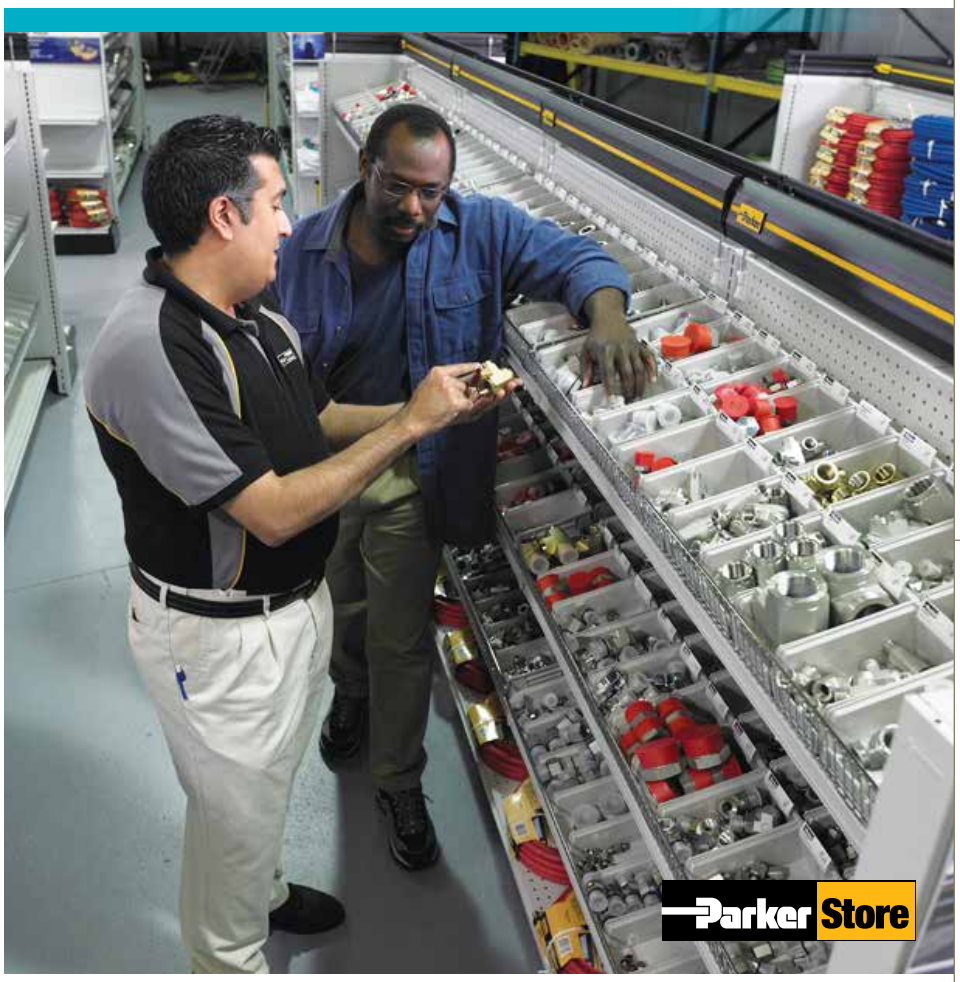
PRODUCTS FOR NEWLY MANDATED POTABLE WATER SYSTEMS

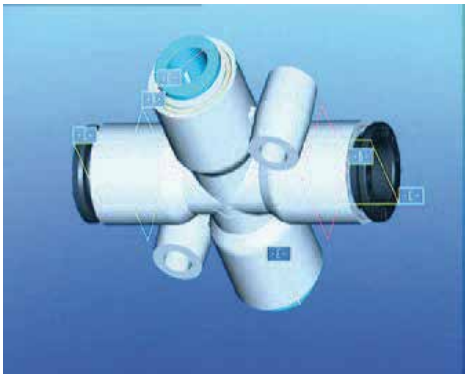
Effective on January 4, 2014, amendments to the Safe Drinking Water Act (42 USC § 300g-6) now limit the lead content of components installed in potable water systems to 0.25% weighted average. Potable water systems are systems that provide water suitable for human ingestion i.e., drinking, food preparation, dishwashing, and maintaining oral hygiene.

The good news? Our LIQUIfit™ and TrueSeal™ fittings, valves, angle stops, and cartridges are already NSF and FDA approved and conform to the new "lead free" standard. In addition, we offer pipe and compression products in "lead free" brass and can quote "lead free" fittings as a special.

ParkerStores

Around the corner and around the world, ParkerStores meet customer needs to stay productive by providing the broadest range of products and service choices. Whether for individual parts or entire system solutions, the professionals at the ParkerStore are here to help. Visit us online at **www.parkerstore.com**.





CAD Library
Available online at www.parker.com. Dimensional drawings of every product in various industry formats to help in the design process.

PARKER TRAINING AND CERTIFICATION DEVELOPMENT

P-Tech
Through education and technical training on FCG products and safe practices, the Parker Training and Certification (P-TAC) program is designed to improve the professionalism and technical skills of participating distributors and Parker employees.

Kitting
Multiple components in a customized kit with a single part number for easier order processing and assembly.

MEETING STRINGENT SANITARY AND ASEPTIC STANDARDS IN FOOD PROCESSING AND PACKAGING

Connecting you to reduced downtime, increased throughput, and lower maintenance costs

Market research firm RTS Resource says natural highs, one-step convenience, foraged ingredients, flavor-full benefits, and next generation proteins are the five key food and drink trends to watch in the future.

Innova Market Insights has also highlighted the key issues of reducing waste and regaining consumer trust as top food industry trends to look out for. Plus the need for food safety will remain paramount.

FOOD PROCESSING AND PACKAGING

APPLICATIONS

Mixing | Baking | Cooling | Packaging | Filling | Washing | Labeling | Conveying

PERFORMANCE EXPECTATIONS

- FDA compliance
- Hygienic design
- Compact
- Highly reliable
- Ability to work in a vacuum
- Wide range of chemical compatibility
- Ability to withstand high temperatures
- Detectability

APPLICABLE PRODUCTS

Prestolok® PLM Metal Fittings

Prestolok® PLS Stainless Steel Fittings

LIQUIfit™ Fittings

Flow Controls

Stainless Steel Flow Controls

ENGINEERING DURABILITY

Withstanding harsh washdown chemicals

Situation: A food processing equipment manufacturer was receiving customer complaints about fittings that degraded when exposed to harsh washdown chemicals in food processing plants.

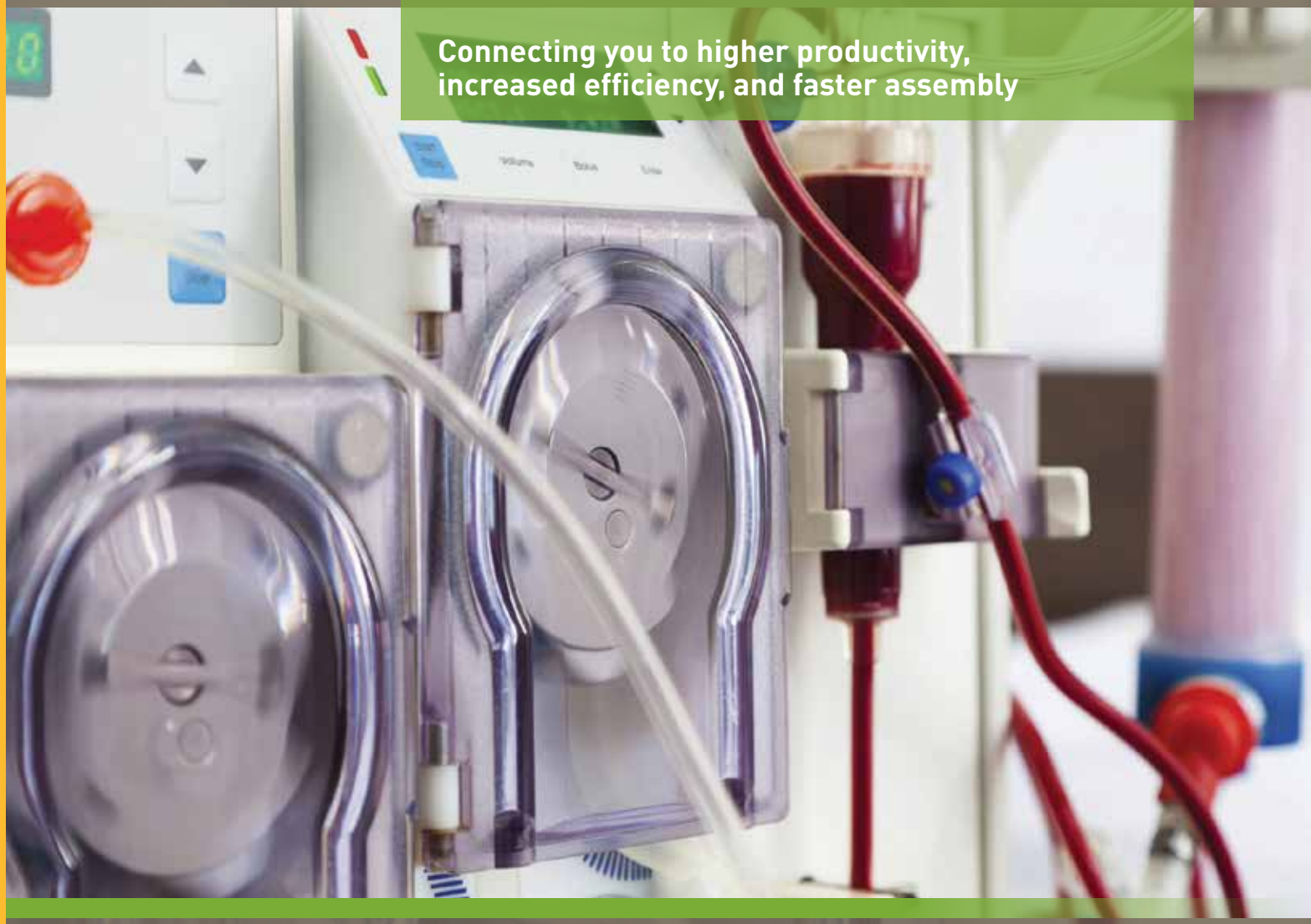
Solution: Parker's Prestolok® Composite fittings. Manufactured from an engineered grade of glass-filled nylon, the fittings withstood exposure to the aggressive washdown chemicals. Additionally, the compact fittings, available in a wide variety of configurations, maintained full airflow throughout the system, which allowed the equipment designers to optimize the routings.

Benefits: Reduced warranty service • Reduced component quantity • Reduced energy consumption due to full-flow design

FDA RoHS 2002/95/EC NSF C HOT NSF NSF 51 WRAS APPROVED PRODUCT

COLLABORATING FOR LEAK-FREE INNOVATION IN LIFE SCIENCE

Connecting you to higher productivity, increased efficiency, and faster assembly



According to Deloitte, a changing health care landscape, expiring patents, generic competition, pricing pressures, heightened regulatory scrutiny, expansion into emerging markets, increasing alliances and acquisitions, and a persistent economic slowdown are prompting global life sciences companies to adopt new business models designed to counter slowing sales growth and declining profitability, deliver better patient outcomes at lower cost, and position them for success.

APPLICATIONS

Oxygen Transfer | Fluid Transfer | Dispensing | Cleaning and Sterilization | Pneumatic Circuits

PERFORMANCE EXPECTATIONS

- Quality traceability
- Cleanliness
- Compact design
- Suitable for use with O_2
- High reliability
- Installation flexibility

APPLICABLE PRODUCTS

Prestolok® PLM Metal Fittings

Prestolok® PLS Stainless Steel Fittings

LIQUIfit™ Fittings

Stainless Steel Flow Controls

ENGINEERING INTEGRATED ASSEMBLIES

Single-piece solution simplifies, speeds, and economizes

Situation: A major medical OEM was using a very labor-intensive, six-step assembly process for an oxygen service connection.

Solution: Working with a distributor, Parker developed a customized, single-piece filtering cartridge, cleaned for oxygen use. The OEM was able to eliminate five components and five assembly steps, saving $19.88 per unit. With 3,000 units annually, the OEM was able to reduce total costs by $59,640.

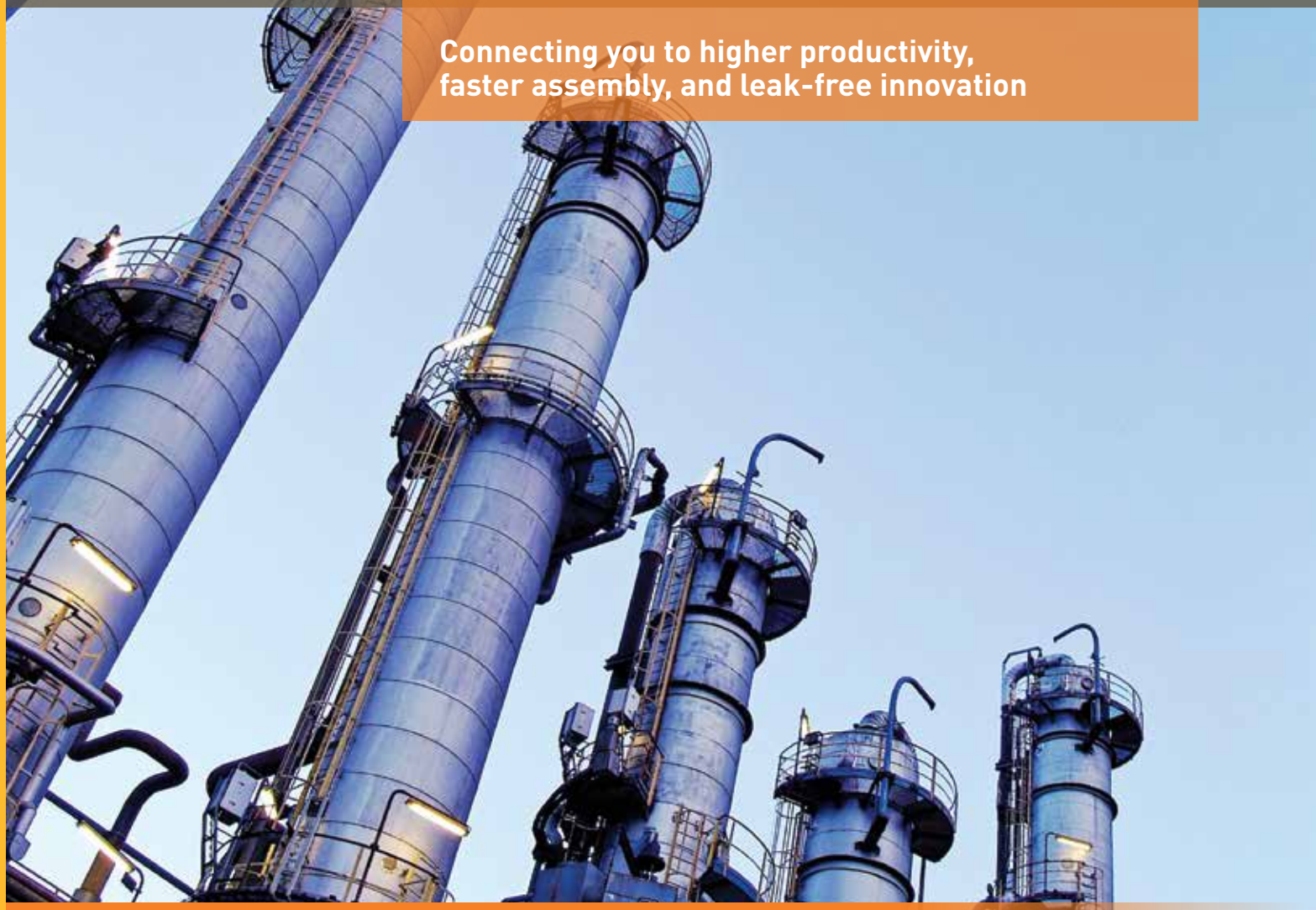
Benefits: Reduced assembly time and installation labor costs • Reduced type and quantity of components • Reduced potential leak points • Reduced total product costs

FDA

RoHS 2002/95/EC

IMPROVING DURABILITY, LESSENING RISK IN PETROCHEMICAL MANUFACTURING

Connecting you to higher productivity, faster assembly, and leak-free innovation



The Institute for Trend Research predicted 2014 would be a growth year for North American petrochemical manufacturers. Abundant gas, tight oil, and potential energy self-sufficiency would spur investments in the U.S. and Canada. Overseas opportunities from emerging countries would also increase. This very strong growth is predicted to continue the following year. As a result, companies should focus now on cutting costs, right-sizing, creating new products, and hiring good people to take advantage of the upswing.

PETROCHEMICAL MANUFACTURING

APPLICATIONS

Processing | Transferring | Pneumatic Circuits | Cooling | Measuring

PERFORMANCE EXPECTATIONS

- High chemical resistance
- Robust design
- Excellent chemical compatibility
- Wide temperature range
- Quality traceability

APPLICABLE PRODUCTS

Prestolok® PLM Metal Fittings
Prestolok® PLS Stainless Steel Fittings
Prestolok® PLP Metal Fittings
Stainless Steel Check Valves
Stainless Steel Flow Controls
TrueSeal™ Kynar® Fittings

CASE STUDY:

TrueSeal™ Kynar® Thermoplastic Fittings

Polyvinylidene fluoride, or PVDF – also known as Kynar – is a fluorocarbon that has excellent abrasion resistance, dielectric properties, and mechanical strength. In the area of chemical compatibility, Kynar is highly resistant to wet or dry chlorine, bromine, and other halogens, alcohols, strong acids, aliphatics, aromatics, and chlorinated solvents.

That makes our TrueSeal Kynar fittings an excellent choice for chemical processing, as well as manufacturing involving exposure to chlorine, solvents, and UV-sensitive chemicals.

FDA RoHS 2002/95/EC

Kynar® is a registered trademark of Arkema Group.

INCREASING PERFORMANCE, STANDARDIZING INVENTORY IN FACTORY / PROCESS AUTOMATION

Connecting you to increased efficiency, improved throughput, and bottom line benefits

According to IMS research, the global industrial automation market will profit from improved economies worldwide. Frost and Sullivan predicts factories will utilize cloud computing, cyber security and mobile communication technologies to evolve into information and data hubs providing interaction between the factory floor and the enterprise across all end users. Asset management and flexible manufacturing will also play a role in driving factory-enterprise integration.

APPLICATIONS

Processing | Transferring | Pneumatic Circuits | Cooling | Measuring

ENGINEERING PRODUCTION THROUGHPUT

Higher flow and more accurate speed control enhance process automation for a faster production rate

Situation: A food packaging integrator built a custom piece of equipment to transfer uncooked product in and out of curing ovens. The rodless cylinder used to shuttle racks from the conveyor into the ovens was not moving fast enough to keep up with the anticipated production rate.

Solution: Parker replaced the rodless cylinder with a smaller Parker Legris flow control, creating faster rack movement and finer speed adjustment. The advanced flow control is now standard for the company's pneumatic cylinders.

Benefits: Optimal flow • Finer speed adjustment • Enhanced production rate

PERFORMANCE EXPECTATIONS

- Compact design
- Weld spatter resistance
- Robustness
- Vacuum performance
- High reliability
- Mechanical resistance
- Installation flexibility

APPLICABLE PRODUCTS

Prestolok® PLP Metal Fittings

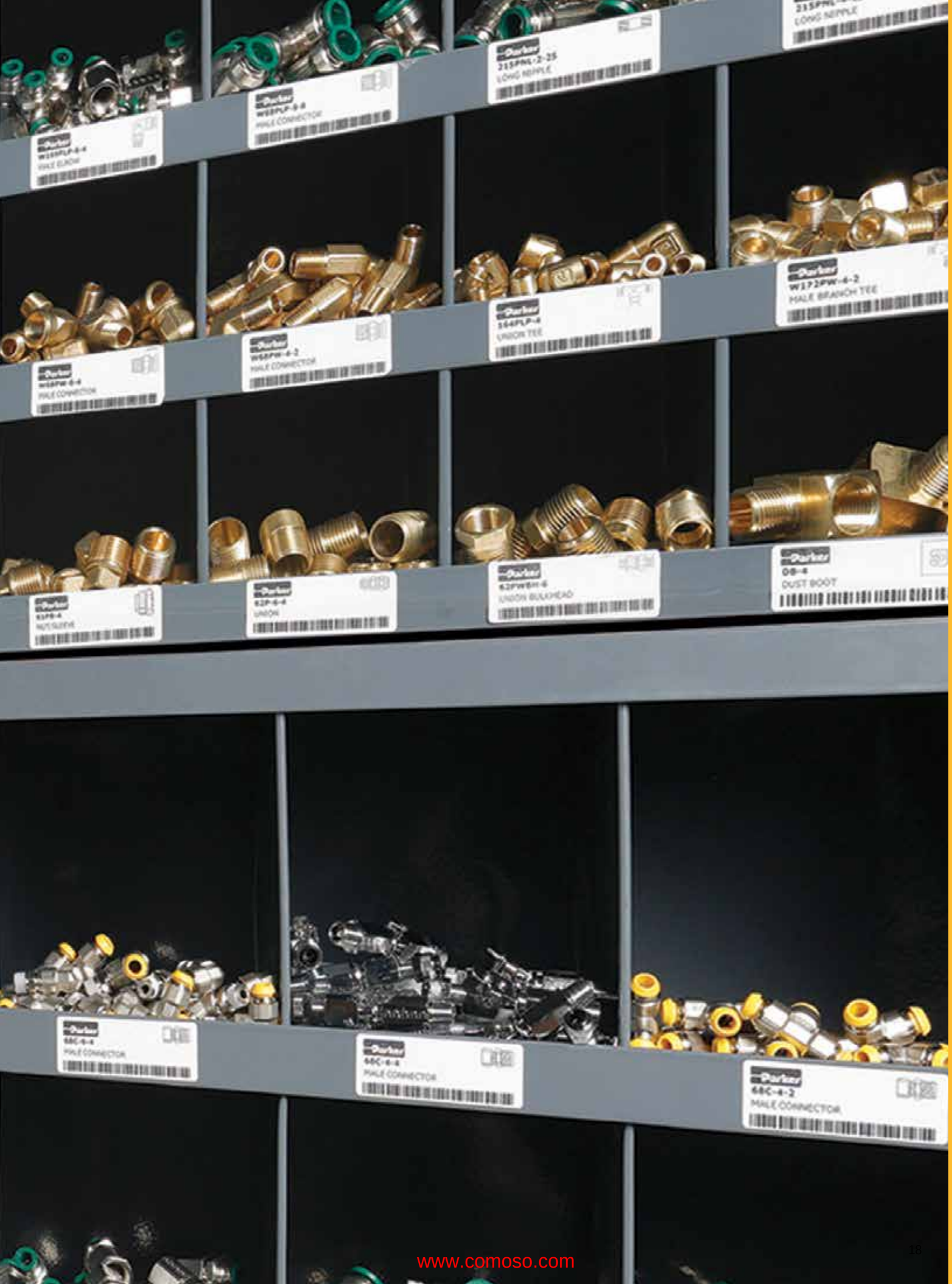
Prestolok® PLP Composite Fittings

Prestolok® PLM Metal Fittings

Flow Controls

FDA RoHS 2002/95/EC

Product	Type	Body Material	Temperature		Maximum Pressure		Tubing Size	
			MIIN.	MAX.	PSI	BAR	IN.	MM
Pneumatic								
Prestolok Metal	Push-to-Connect	Nickel Plated Brass	0	200	300	21	1/8 - 1/2	4 - 14
Prestolok Composite	Push-to-Connect	Glass Filled Nylon	-4	175	290	20	1/8 - 1/2	3 - 14
Prestolok PLM	Push-to-Connect	Nickel Plated Brass	-4	250	290	20	5/32 - 1/2	4 - 14
Prestolok PLS	Push-to-Connect	Stainless Steel	-4	245	290	20	5/32 - 1/2	4 - 12
Flow controls	Function	Nylon/Treated Brass	30	160	145	10	1/8 - 1/2	4 - 14
Blocking Valves	Function	Treated Brass	-4	160	145	10	1/8 - 3/8	4 - 14
Slow Start Valve	Function	Nickel Plated Brass	5	140	150	10	1/4 - 3/8	4 - 6
Threshold Sensor	Function	Polymer	5	140	115	8	5/32	4
Check Valve	Function	Nylon/Nickel Plated Brass	34	150	145	10	5/32 - 3/8	4 - 12
Cartridges								
Carstick	Push-to-Connect	Polymer	-4°F (-20°C)	+175°F (+79°C)	290	20	1/8 - 3/8	4 - 8
PLM/PLS	Push-to-Connect	Brass/ Stainless	-4°F (-20°C)	+175°F (+150°C)	435	30	-	4 - 14
Industrial Compression Style								
Compression	Compression	Brass	-65˚ F (-54˚ C)	+250˚ F (+121˚ C)	400	27	1/8 - 7/8	
Compress-Align	Compression	Brass	-65˚ F (-54˚ C)	+250˚ F (+121˚ C)	2800	193	1/8 - 1	
Poly-Tite	Compression	Brass	0˚ F (-18˚ C)	+150˚ F (+65˚ C)	150	10	1/4 - 1/2	
Industrial Barbed Fittings								
Dubl-Barb	Barbed	Brass	-65˚ F (-54˚ C)	(1/4-3/8) - +90˚F (+32˚C) (1/2) - +100˚ F (+37˚ C)	(1/4 - 3/8) 150 (1/2) 100	(1/4 - 3/8) 10 (1/2) 7		
Hose Barbs	Barbed	Brass	-40˚ F (-40˚ C)	+160˚ F (+71˚ C)	150	10	1/4 - 1	
Industrial Adapters								
Pipe	Threaded	Brass	-65˚ F (-54˚ C)	+250˚ F (+121˚ C)	1,000	69	1/8 - 1	
Industrial Ball Valves								
500 Series	Female/Female	Brass	0˚ F (-18˚ C)	+350˚ F (+176˚ C)	600	41		
501 Series	Female/Male	Brass	0˚ F (-18˚ C)	+350˚ F (+176˚ C)	600	41		
502 Series	Panel Mounted	Brass	0˚ F (-18˚ C)	+350˚ F (+176˚ C)	600	41		
520 Series	Female/Female	Brass	0˚ F (-18˚ C)	+350˚ F (+176˚ C)	600	41		
600 Series	Six Port Diversion	Brass	0˚ F (-18˚ C)	+250˚ F (+121˚ C)	150	10		
501SS	Male/ Female	Stainless Steel	0˚ F (-18˚ C)	+400˚ F (+204˚ C)	2,000	137		
502SS	Female/Female	Stainless Steel	0˚ F (-18˚ C)	+400˚ F (+204˚ C)	2,000 (1/4 - 1) 1,500 (1 1/4 - 2)	137 (1/4 - 1) 103 (1 1/4 - 2)		
708 Series	Male/Female	Brass	-35˚ F (-37˚ C)	+300˚ F (+148˚ C)	500	34		
709 Series	Female/Female	Brass	-35˚ F (-37˚ C)	+300˚ F (+148˚ C)	500	34		
200 Series	Female/Female	Chrome Plated Brass	0˚ F (-18˚ C)	+200˚ F (+93˚ C)	200	13		
608 Series	Male/Female	Brass	0˚ F (-18˚ C)	+200˚ F (+93˚ C)	450	31		
609 Series	Female/Female	Brass	0˚ F (-18˚ C)	+200˚ F (+93˚ C)	450	31		



Pneumatic: Push to Connect

Prestolok PLP Push-to-Connect Fittings

Prestolok PLP Composite Push-to-Connect Fittings

Prestolok PLM Metal Push-to-Connect Fittings

Prestolok PLS Stainless Steel Push-to-Connect Fittings

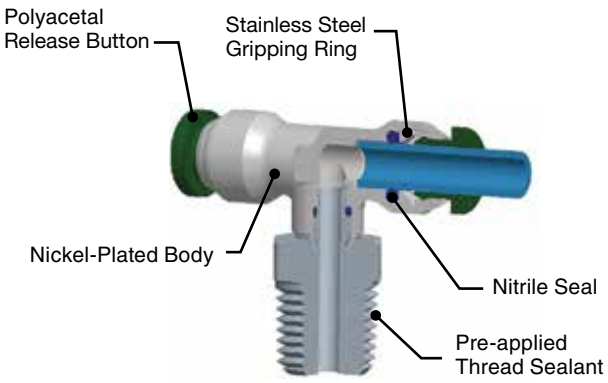
Oscillating Elbows

Prestolok PLP Push-to-Connect Fittings

Prestolok PLP push-to-connect metal fittings with its wide variety configurations allows you to find the perfect product to meet your needs, optimizing the use of your equipment.

Product Features:

- Stainless steel grab ring
- Nickel-plated brass body
- Nitrile seal
- Polyacetal release button
- Corrosion resistance
- NPT threads



Markets:

- Industrial
- Automotive
- Climate Control
- Welding
- Packaging

Applications:

- Air
- Oil
- Inert Gases
- Vacuum

Specifications:

Pressure Range	Up to 300 PSI (20.6 bar) depending on tubing
Temperature Range	0˚ to +200˚ F (-17.7° to 93.3° C)

Note: Vacuum applications are dependent upon temperature and type of tubing used

Compatible Tubing:

- Polyethylene
- Polypropylene
- Plasticized Nylon
- Unplasticized Nylon
- Polyurethane 90 Durometer Shore A
- Polyurethane 94 Duromete Shore A

Tube to Male NPTF

68PLPR
Male Connector
Round Body

W169PLP
Male Elbow Swivel

W169PLPNS
Male Elbow

W171PLP
Male Run Tee Swivel

W172PLP
Male Branch Tee
Swivel

W68PLP
Male Connector

Tube to Tube

164PLP
Union Tee

165PLP
Union Elbow

62PLP
Union

Tube to Female NPTF

66PLP
Female Connector

Bulkhead Unions

62PLPBH
Bulkhead Union

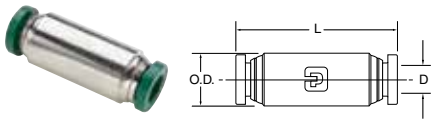
66PLPBH
Female Bulkhead
Union

Tube to Straight Thread

68PLP
Male Connector

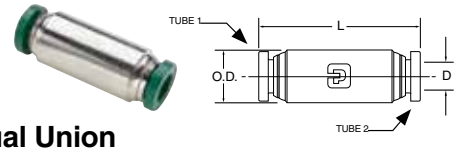
Tube to Male BSPP

PLPHBF4-B
Male Connector



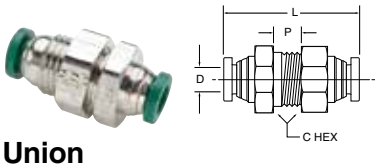
62PLP Union

PART NO.	TUBE SIZE IN	O.D.	L	FLOW DIA. D
62PLP-2	1/8	.375	1.40	.094
62PLP-3	3/16	.437	1.41	.156
62PLP-5/32	5/32	.375	1.41	.125
62PLP-4	1/4	.500	1.43	.188
62PLP-5	5/16	.562	1.65	.250
62PLP-6	3/8	.625	1.66	.312
62PLP-8	1/2	.750	1.82	.375



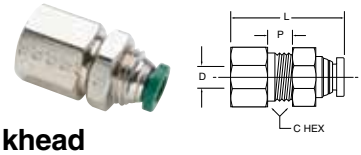
62PLP Unequal Union

PART NO.	TUBE 1 SIZE IN	TUBE 2 SIZE IN	O.D.	L	FLOW DIA. D
62PLP-5/32-2	5/32	1/8	.375	1.41	.094
62PLP-4-2	1/4	1/8	.500	1.43	.094
62PLP-4-5/32	1/4	5/32	.500	1.43	.125
62PLP-4-6	1/4	3/8	.625	1.66	.188
62PLP-6-8	3/8	1/2	.750	1.82	.312



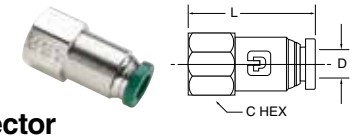
62PLPBH Bulkhead Union

PART NO.	TUBE SIZE IN	BULKHEAD HOLE DIA. B	C HEX	P MAX.	L	D
62PLPBH-2	1/8	7/16	9/16	.39	1.40	.094
62PLPBH-5/32	5/32	7/16	9/16	.39	1.41	.125
62PLPBH-4	1/4	9/16	11/16	.29	1.43	.188
62PLPBH-5	5/16	5/8	3/4	.60	1.65	.250
62PLPBH-6	3/8	3/4	7/8	.54	1.66	.312
62PLPBH-8	1/2	7/8	1	.66	2.04	.375



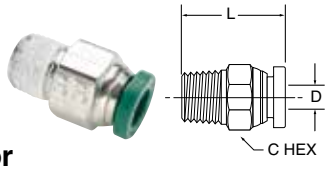
66PLPBH Female Bulkhead

PART NO.	TUBE SIZE IN	PIPE THD NPTF	C HEX	P MAX.	L	FLOW DIA. D	BKHD HOLE DIA.
66PLPBH-5/32-4	5/32	1/4	11/16	.19	1.39	.125	1/2
66PLPBH-4-4	1/4	1/4	11/16	.24	1.35	.188	9/16
66PLPBH-6-6	3/8	3/8	1	.22	1.47	.312	7/8
66PLPBH-8-6	1/2	3/8	1	.35	1.56	.344	7/8



66PLP Female Connector

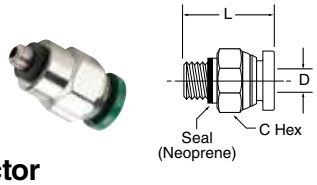
PART NO.	TUBE SIZE IN	PIPE THREAD NPTF	C HEX	L	FLOW DIA. D
66PLP-2-2	1/8	1/8	9/16	1.17	.094
66PLP-2-4	1/8	1/4	11/16	1.34	.094
66PLP-3-2	3/16	1/8	9/16	1.13	.156
66PLP-5/32-2	5/32	1/8	9/16	1.17	.125
66PLP-5/32-4	5/32	1/4	11/16	1.38	.125
66PLP-4-2	1/4	1/8	9/16	1.17	.188
66PLP-4-4	1/4	1/4	11/16	1.38	.188
66PLP-5-2	5/16	1/8	9/16	1.25	.250
66PLP-5-4	5/16	1/4	11/16	1.45	.250
66PLP-6-4	3/8	1/4	11/16	1.46	.312
66PLP-6-6	3/8	3/8	13/16	1.51	.312



W68PLP Male Connector

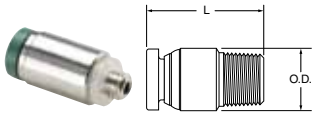
PART NO.	TUBE SIZE IN	PIPE THD NPTF	C HEX	L	FLOW DIA. D
W68PLP-2-1	1/8	1/16	3/8	.79	.094
W68PLP-2-2	1/8	1/8	7/16	.79	.094
W68PLP-2-4	1/8	1/4	9/16	1.02	.094
W68PLP-3-2	3/16	1/8	7/16	.85	.156
W68PLP-3-4	3/16	1/4	9/16	1.01	.156
W68PLP-5/32-1	5/32	1/16		.88	.940
W68PLP-5/32-2	5/32	1/8	7/16	.80	.125
W68PLP-5/32-4	5/32	1/4	9/16	1.03	.125
W68PLP-4-1	1/4	1/16	1/2	1.07	.141
W68PLP-4-2	1/4	1/8	1/2	.89	.188
W68PLP-4-4	1/4	1/4	9/16	1.00	.188
W68PLP-4-6	1/4	3/8	3/4	1.04	.188
W68PLP-5-2	5/16	1/8	9/16	1.18	.250
W68PLP-5-4	5/16	1/4	9/16	1.04	.250
W68PLP-5-6	5/16	3/8	11/16	1.04	.250
W68PLP-6-2	3/8	1/8	5/8	1.21	.250
W68PLP-6-4	3/8	1/4	5/8	1.08	.312
W68PLP-6-6	3/8	3/8	11/16	1.02	.312
W68PLP-6-8	3/8	1/2	7/8	1.28	.312
W68PLP-8-4	1/2	1/4	13/16	1.44	.344
W68PLP-8-6	1/2	3/8	13/16	1.24	.344
W68PLP-8-8	1/2	1/2	7/8	1.35	.375
68PLP-5/32-4LT*	5/32	1/4-28	7/16	.88	.093

*SAE-LTThreads



68PLP-X-0 Male Connector

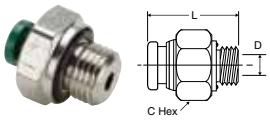
PART NO.	TUBE SIZE IN	PIPE THREAD NPTF	C HEX	L	FLOW DIA. D
68PLP-2-0	1/8	10X32	3/8	.92	.094
68PLP-5/32-0	5/32	10X32	3/8	.90	.090
68PLP-4-0	1/4	10X32	1/2	.96	.094



68PLPR Round Body Male Connector

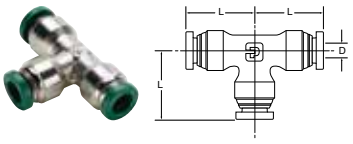
PART NO.	TUBE SIZE IN	THREAD SIZE NPTF	INTERNAL HEX BROACH	BODY DIA. O.D.	L	FLOW DIA.
68PLPR-2-0*	1/8	10-32	3/32	3/8"	.89	.094
68PLPR-5/32-0*	5/32	10-32	3/32	3/8"	.91	.094
68PLPR-4-0*	1/4	10-32	3/32	1/2"	.95	.094
W68PLPR-5/32-1	5/32	1/16	1/8	7/16"	.87	.125
W68PLPR-5/32-2	5/32	1/8	1/8	7/16"	.79	.125
W68PLPR-4-1	1/4	1/16	5/32	1/2"	1.06	.156
W68PLPR-4-2	1/4	1/8	3/16	1/2"	.88	.188
W68PLPR-4-4	1/4	1/4	3/16	5/8"	.99	.188

*10-32 seal is neoprene



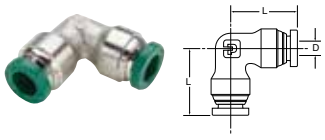
PLPHBF4-B Male Connector BSPP

PART NO.	TUBE SIZE IN	PIPE THD BSPP	C HEX	L	FLOW DIA. D
3-1/8PLPHBF4-B	3/16	1/8-28	11/16	.96	.156
3-1/4PLPHBF4-B	3/16	1/4-19	3/4	.97	.156
4-1/8PLPHBF4-B	1/4	1/8-28	11/16	1.13	.188
4-1/4PLPHBF4-B	1/4	1/4-19	3/4	1.13	.188
4-3/8PLPHBF4-B	1/4	3/8-19	7/8	1.13	.188
6-1/4PLPHBF4-B	3/8	1/4-19	3/4	1.26	.256
6-3/8PLPHBF4-B	3/8	3/8-19	7/8	1.26	.312
6-1/2PLPHBF4-B	3/8	1/2-14	1-1/16	1.26	.312
8-3/8PLPHBF4-B	1/2	3/8-19	7/8	1.41	.452
8-1/2PLPHBF4-B	1/2	1/2-14	1-1/16	1.37	.452



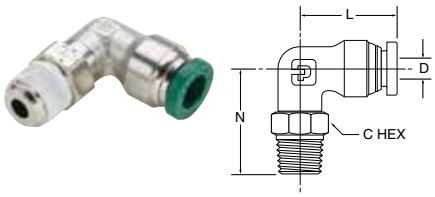
164PLP Union Tee

PART NO.	TUBE SIZE IN	L	FLOW DIA. D
164PLP-2	1/8	.74	.094
164PLP-3	3/16	.82	.156
164PLP-5/32	5/32	.77	.125
164PLP-4	1/4	.85	.188
164PLP-5	5/16	.97	.250
164PLP-6	3/8	1.01	.250
164PLP-8	1/2	1.15	.375



165PLP Union Elbow

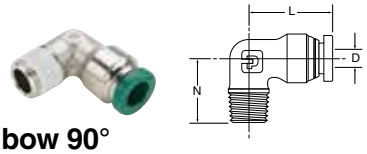
PART NO.	TUBE SIZE IN	L	FLOW DIA. D
165PLP-2	1/8	.74	.094
165PLP-5/32	5/32	.77	.125
165PLP-4	1/4	.85	.188
165PLP-5	5/16	.97	.250
165PLP-6	3/8	1.01	.312
165PLP-8	1/2	1.15	.375



W169PLP Male Elbow Swivel 90°

PART NO.	TUBE SIZE IN	PIPE THREAD NPTF	C HEX	L	N	FLOW DIA. D
W169PLP-2-1	1/8	1/16	3/8	.74	.93	.160
W169PLP-2-2	1/8	1/8	7/16	.74	.92	.094
169PLP-2-0*	1/8	10-32	3/8	.74	.74	.080
W169PLP-2-4	1/8	1/4	9/16	.74	1.10	.094
W169PLP-3-2	3/16	1/8	7/16	.82	.92	.156
W169PLP-5/32-1	5/32	1/16	3/8	.84	.93	.160
W169PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W169PLP-5/32-4	5/32	1/4	9/16	.77	1.10	.125
169PLP-5/32-0*	5/32	10-32	3/8	.85	.74	.080
W169PLP-4-1	1/4	1/16	3/8	.84	.93	.160
W169PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W169PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W169PLP-4-6	1/4	3/8	11/16	.85	1.19	.156
169PLP-4-0*	1/4	10-32	3/8	.85	.74	.080
W169PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W169PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W169PLP-6-2	3/8	1/8	9/16	1.01	1.02	.250
W169PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W169PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W169PLP-6-8	3/8	1/2	7/8	1.01	1.48	.250
W169PLP-8-4	1/2	1/4	9/16	1.15	1.28	.312
W169PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W169PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312

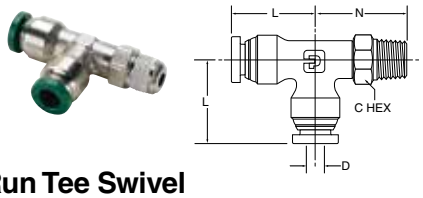
*10-32 seal is neoprene



W169PLPNS Male Elbow 90°

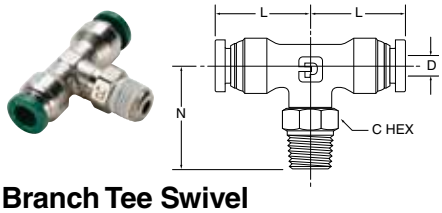
PART NO.	TUBE IN	PIPE THD NPTF	L	N	FLOW DIA. D
W169PLPNS-2-2	1/8	1/8	.74	.67	.094
W169PLPNS5/32-2	5/32	1/8	.77	.67	.125
W169PLPNS5/32-4	5/32	1/4	.77	.87	.125
W169PLPNS-4-2	1/4	1/8	.85	.67	.188
W169PLPNS-4-4	1/4	1/4	.85	.87	.188
W169PLPNS-5-2	5/16	1/8	.97	.75	.234
W169PLPNS-5-4	5/16	1/4	.97	.94	.250
W169PLPNS-6-4	3/8	1/4	1.01	.94	.312
W169PLPNS-6-6	3/8	3/8	1.01	1.01	.312
W169PLPNS-6-8	3/8	1/2	1.01	1.27	.312
W169PLPNS-8-6	1/2	3/8	1.15	1.00	.375
W169PLPNS-8-8	1/2	1/2	1.15	1.27	.375
169PLPNS532-4LT*	5/32	1/4-28	.60	.48	.090

* SAE-LT Threads



W171PLP Male Run Tee Swivel

PART NO.	TUBE SIZE IN	PIPE THREAD NPTF	C HEX	L	N	FLOW DIA. D
W171PLP-2-2	1/8	1/8	7/16	.74	.92	.094
W171PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W171PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W171PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W171PLP-4-6	1/4	3/8	11/16	.85	1.24	.156
W171PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W171PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W171PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W171PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W171PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W171PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312



W172PLP Male Branch Tee Swivel

PART NO.	TUBE SIZE IN	PIPE THREAD NPTF	C HEX	L	N	FLOW DIA. D
W172PLP-2-2	1/8	1/8	7/16	.74	.92	.094
W172PLP-3-2	3/16	1/8	7/16	.82	.92	.156
W172PLP-5/32-2	5/32	1/8	7/16	.77	.92	.125
W172PLP-4-2	1/4	1/8	7/16	.85	.92	.156
W172PLP-4-4	1/4	1/4	9/16	.85	1.10	.156
W172PLP-4-6	1/4	3/8	11/16	.85	1.10	.156
W172PLP-5-2	5/16	1/8	9/16	.97	1.02	.250
W172PLP-5-4	5/16	1/4	9/16	.97	1.24	.250
W172PLP-6-4	3/8	1/4	9/16	1.01	1.24	.250
W172PLP-6-6	3/8	3/8	11/16	1.01	1.24	.250
W172PLP-6-8	3/8	1/2	7/8	1.00	1.48	.250
W172PLP-8-4	1/2	1/4	9/16	1.15	1.30	.312
W172PLP-8-6	1/2	3/8	11/16	1.15	1.31	.312
W172PLP-8-8	1/2	1/2	7/8	1.15	1.52	.312

Prestolok PLP Composite Push-to-Connect Fittings

Prestolok push-to-connect composite fittings with its wide variety configurations allows you to find the perfect product to meet your needs, optimizing the use of your equipment.

Product Features:

- Stainless steel grab ring
- Glass-reinforced nylon 6.6 body
- Nitrile D-seal
- Nylon release button
- Corrosion and chemical resistance
- NPT, BSPT, BSPP, and metric threads

Compatible Tubing:

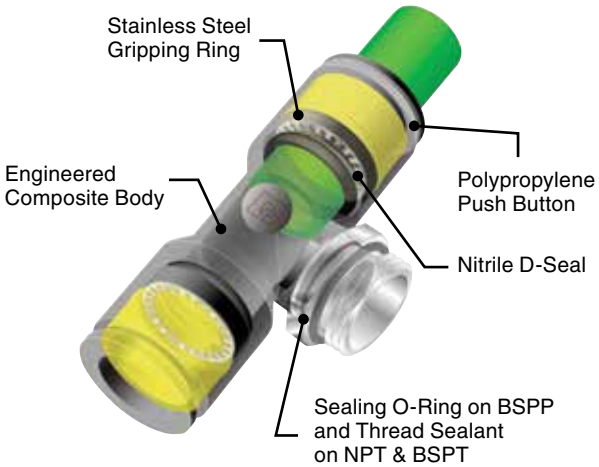
- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer

Markets:

- Pneumatic
- Industrial
- Robotic
- Automation
- Printing
- Packaging
- Textile

Applications:

- Air
- Cutting Fluids
- Inert Gases
- Vacuum



Specifications:

Pressure Range	Up to 290 PSI (19.9 bar) depending on tubing (3/16” size only)
	Up to 260 PSI (17.9 bar) depending on tubing
Temperature Range	-4˚ to +175˚ F (-20° to +79.4° C) (3/16” size only)
	5˚ to +155˚ F (-15° to +68.3° C)
Vacuum Capability	28” Hg

Tube to Male NPTF

W369PLP
Male Elbow

W369PLPX
Extended Male Elbow

W379PLP
45° Male Elbow

W372PLP
Male Branch Tee

W371PLP
Male Run Tee

W368PLP
Male Y Connector

W369PLPBJ
Single Banjo

W369PLPTJ
Twin Banjo

W68LF
Male Connector

Tube to Male BSPT

W369PLP
Male Elbow

W372PLP
Male Branch Tee

W369PLPBJ
Single Banjo

W68LF
Male Connector

Tube to Female NPTF

66LF
Female Connector

377PLP
Female Branch Tee

370PLP
Female Elbow

Tube to Straight Thread

68LFR
Male Connector

Tube to Tube

32PLP
Union

365PLP
Union Elbow

364PLP
Union Tee

362PLP
Union Y

362PLPD
Double Y

24PLP
Multiple Tee

24PLPD
Double Multiple Tee

347PLP
Cross

32PLPRC
Connector for 2 Tubes

Tube to Metric Tube

32PLP
Converter Union

Bulkhead Unions

32PLPBH
Bulkhead Union

365PLPBH
Bulkhead Elbow

32PLPBHP
Plug-in Bulkhead Union

Standpipes

W68PLPSP
Male Standpipe NPTF

W68PLPSP
Male Standpipe BSPT

W68PLPSP
Male Standpipe BSPP

Plug-ins

369PLPSP
Plug-In Elbow

369PLPSPX
Extended Plug-In Elbow

379PLPSP
Plug-In 45° Elbow

372PLPSP
Plug-In Branch Tee

371PLPSP
Plug-In Run Tee

362PLPSP
Plug-In Y

67PLP
Tube Reducer

32PLPSP
Tube Expander

322PLPSP
Barbed Connector

Auxiliary Component

63PLP
Double Male Union

639PLP
Plug

Clip

3151
End Cap

3110-3330
End Cap

Metric Tube to Male BSPT

W68LF
Male Connector

W369PLP
Male Elbow

W369PLPX
Extended Male Elbow

W379PLP
45° Male Elbow

W372PLP
Male Branch Tee

W371PLP
Male Run Tee

W368PLP
Male Y Connector

W369PLPBJ
Single Banjo

Metric Tube to Male BSPP

68LF
Male Connector

369PLP
Male Elbow

369PLPX
Extended Male Elbow

379PLP
45° Male Elbow

372PLP
Male Branch Tee

371PLP
Male Run Tee

368PLP
Male Y Connector

368PLPD
Double Y Male Connector

Metric Tube to NPTF

W68LF
Male Connector

W369PLP
Male Elbow

W372PLP
Male Branch Tee

Metric Tube to Female BSPP

66LF
Female Connector

370PLP
Female Elbow

Metric Tube to Metric Straight Thread

68LFR
Male Connector

Metric Tube to Metric Tube

32PLP
Union

365PLP
Union Elbow

364PLP
Union Tee

362PLP
Union Y

362PLPD
Double Union Y

24PLP
Multiple Tee

24PLPD
Double Multiple Tee

347PLP
Cross

32PLPRC
Connector for 2 Tubes

32PLPDRC
Connectoer for 3 Tubes

Metric Bulkhead Unions

32PLPBH
Bulkhead Union

365PLPBH
Bulkhead Elbow

Metric Plug-ins

369PLPSP
Plug-In Elbow

369PLPSPX
Extended Plug-In Elbow

379PLPSP
Plug-In 45° Male Elbow

372PLPSP
Plug-In Branch Tee

371PLPSP
Plug-In Run Tee

362PLPSP
Plug-In Y

362PLPSPD
Double Plug-In Y

67PLP
Tube Reducer

32PLPSP
Tube Expander

32PLPSP
Tube Converter

322PLPSP
Barbed Connector

Metric Banjo Fittings

369PLPBJ
Single Banjo

369PLPBJB
Single Banjo Body

32PLPDJB
Double Banjo Body

369PLPTJB
Twin Banjo Body

68BJB
Single Banjo Bolt

68BJBD
Double Banjo Bolt

68BJBT
Triple Banjo Bolt

66BJB
Female Banjo Bolt

376PLPBJ
Banjo with Female Bolt

369PLPTJ
Twin Banjo

32PLPDJ
Double Banjo

Auxiliary Component

63PLP
Double Male Union

639PLP
Plug

Clip

3151
End Cap

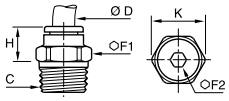
3110-3330
End Cap

66LF Female Connector BSPP

PART NO.	TUBE SIZE MM	THREAD BSPP	E MM	F MM	H MM
66LF-4M-M5	4	M5X0.8	6.5	8	19.5
66LF-4M-2G	4	1/8	9.5	13	22.5
66LF-4M-4G	4	1/4	13.5	16	26.5
66LF-6M-2G	6	1/8	9.5	13	24.5
66LF-6M-4G	6	1/4	13.5	16	28.5
66LF-8M-2G	8	1/8	9.5	13	29.0
66LF-8M-4G	8	1/4	13.5	16	33.0
66LF-8M-6G	8	3/8	14.0	19	34.0
66LF-10M-4G	10	1/4	13.5	16	36.0
66LF-10M-6G	10	3/8	14.0	19	36.0
66LF-10M-8G	10	1/2	19.5	24	41.5
66LF-12M-4G	12	1/4	14.0	19	39.5
66LF-12M-6G	12	3/8	14.0	19	40.0
66LF-12M-8G	12	1/2	19.5	24	45.5
66LF-14M-6G	14	3/8	14.0	22	42.5
66LF-16M-8G	16	1/2	15.0	27	49.0

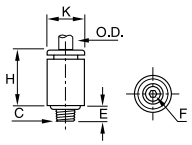
66LF Female Connector NPT

PART NO.	TUBE SIZE IN	THREAD NPT	F MM	G IN	H IN	E IN
66LF-2-2	1/8	1/8	13	.43	.87	.37
66LF-2-4	1/8	1/4	16	.43	1.05	.55
66LF-4M-2	5/32 (4MM)	1/8	13	.33	.89	.37
66LF-4M-4	5/32 (4MM)	1/4	16	.33	1.06	.55
66LF-4-2	1/4	1/8	13	.42	.98	.37
66LF-4-4	1/4	1/4	16	.42	1.16	.55
66LF-8M-2	5/16 (8MM)	1/8	13	.53	1.14	.37
66LF-8M-4	5/16 (8MM)	1/4	16	.53	1.32	.55
66LF-6-2	3/8	1/8	16	.61	1.22	.37
66LF-6-4	3/8	1/4	16	.61	1.40	.55
66LF-6-6	3/8	3/8	22	.61	1.52	.65
66LF-8-4	1/2	1/4	20	.84	1.73	.47
66LF-8-6	1/2	3/8	22	.85	1.81	.65
66LF-8-8	1/2	1/2	24	.85	1.93	.77



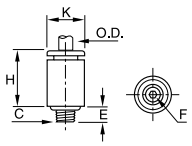
W68LF Male Connector NPT

PART NO.	TUBE SIZE IN	C NPT	F1 MM	F2 IN	H IN	K IN
W68LF-2-1	1/8	1/16	10	.07	.413	.433
W68LF-2-2	1/8	1/8	11	.07	.283	.472
W68LF-2-4	1/8	1/4	14	.07	.315	.591
W68LF-4M-2	5/32 (4MM)	1/8	11	.11	.334	.472
W68LF-4M-4	5/32 (4MM)	1/4	14	.11	.275	.590
W68LF-4-2	1/4	1/8	11	.16	.472	.472
W68LF-4-4	1/4	1/4	14	.16	.374	.590
W68LF-4-6	1/4	3/8	18	.19	.295	.767
W68LF-8M-2	5/16 (8MM)	1/8	13	.19	.787	.551
W68LF-8M-4	5/16 (8MM)	1/4	14	.25	.661	.590
W68LF-8M-6	5/16 (8MM)	3/8	18	.25	.464	.767
W68LF-6-2	3/8	1/8	16	.16	.894	.689
W68LF-6-4	3/8	1/4	16	.28	.807	.689
W68LF-6-6	3/8	3/8	18	.28	.689	.767
W68LF-6-8	3/8	1/2	22	.28	.610	.945
W68LF-8-4	1/2	1/4	22	.25	1.100	.945
W68LF-8-6	1/2	3/8	22	.28	1.100	.945
W68LF-8-8	1/2	1/2	22	.28	1.100	.945



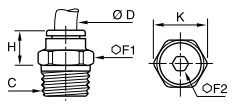
68LFR Male Connector UNF

PART NO.	TUBE SIZE IN	C UNF	E IN	F MM	H IN	K IN
68LFR-2-0	1/8	10-32	.13	2.0	.49	.32
68LFR-4M-0	5/32 (4MM)	10-32	.13	2.0	.54	.34
68LFR-4-1	1/4	1/16	-	3.0	.63	.42
68LFR-4-0	1/4	10-32	.13	2.0	.64	.46
68LFR-4-M5	1/4	M5	.14	2.5	.65	.41
68LFR-4-M7	1/4	M7	.18	4.0	.65	.41



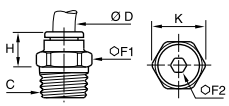
68LFR Male Connector Metric Straight Thread

PART NO.	TUBE SIZE MM	C UNF	E MM	F MM	H MM	K MM
68LFR-4M-M7	4	M7X1	4.6	3	14	9.95
68LFR-4M-M5	4	M5X0.8	3.5	2.5	14.5	8.50
68LFR-6M-M7	6	M7X1	4.6	3	16	9.90



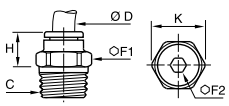
W68LF Male Connector BSPT

PART NO.	TUBE SIZE IN	C BSPT	F1 MM	F2 MM	H IN	K IN
W68LF-2-2R	1/8	1/8	10	2	.335	.433
W68LF-5/32-2R	5/32	1/8	10	3	.370	.430
W68LF-5/32-4R	5/32	1/4	14	3	.260	.590
W68LF-3-2R	3/16	1/8	11	3	.610	.510
W68LF-3-4R	3/16	1/4	14	3	.590	.650
W68LF-4-2R	1/4	1/8	11	4	.472	.472
W68LF-4-4R	1/4	1/4	14	4	.374	.591
W68LF-5-2R	5/16	1/8	13	5	.790	.550
W68LF-5-4R	5/16	1/4	14	6	.670	.590
W68LF-5-6R	5/16	3/8	17	6	.510	.730
W68LF-5-8R	5/16	1/2	21	6	.470	.910
W68LF-6-4R	3/8	1/4	16	7	.807	.689
W68LF-6-6R	3/8	3/8	17	7	.650	.728
W68LF-6-8R	3/8	1/2	21	7	.551	.906
W68LF-8-4R	1/2	1/4	22	6	1.060	.945
W68LF-8-6R	1/2	3/8	22	7	1.020	.945
W68LF-8-8R	1/2	1/2	24	7	.807	1.020



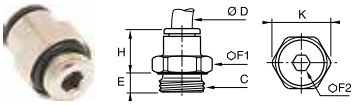
W68LF Male Connector Metric to NPT

PART NO.	TUBE SIZE MM	C NPT	F1 MM	F2 IN	H IN	K IN
W68LF-4M-2	4	1/8	11	3	.33	.47
W68LF-4M-4	4	1/4	14	3	.28	.59
W68LF-6M-2	6	1/8	11	4	.45	.47
W68LF-6M-4	6	1/4	14	4	.33	.59
W68LF-8M-2	8	1/8	13	5	.79	.55
W68LF-8M-4	8	1/4	14	6	.66	.59
W68LF-8M-6	8	3/8	18	6	.46	.77
W68LF-10M-4	10	1/4	16	7	.79	.69
W68LF-10M-6	10	3/8	18	8	.65	.77
W68LF-10M-8	10	1/2	22	8	.55	.95
W68LF-12M-6	12	3/8	19	9	.95	.83
W68LF-12M-8	12	1/2	22	10	.77	.95



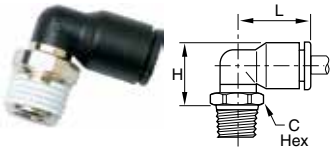
W68LF Male Connector Metric to BSPT

PART NO.	TUBE SIZE MM	C BSPT	F1 MM	F2 MM	H MM	K MM
W68LF-4M-2R	4	1/8	10	3	9.5	11.0
W68LF-4M-4R	4	1/4	14	3	6.5	15.0
W68LF-4M-6R	4	3/8	17	3	8.0	18.5
W68LF-6M-2R	6	1/8	11	4	11.5	11.0
W68LF-6M-4R	6	1/4	14	4	8.5	15.0
W68LF-6M-6R	6	3/8	17	4	8.5	18.5
W68LF-6M-8R	6	1/2	21	4	9.0	23.0
W68LF-8M-2R	8	1/8	13	5	20.0	14.0
W68LF-8M-4R	8	1/4	14	6	17.0	15.0
W68LF-8M-6R	8	3/8	17	6	13.0	18.5
W68LF-8M-8R	8	1/2	21	6	12.0	23.0
W68LF-10M-2R	10	1/8	16	5	22.5	17.5
W68LF-10M-4R	10	1/4	16	7	20.0	17.5
W68LF-10M-6R	10	3/8	17	8	16.5	18.5
W68LF-10M-8R	10	1/2	21	8	14.0	23.0
W68LF-12M-4R	12	1/4	19	7	26.5	21.0
W68LF-12M-6R	12	3/8	19	9	24.0	21.0
W68LF-12M-8R	12	1/2	21	9	19.5	23.0
W68LF-14M-6R	14	3/8	22	9	28.5	24.0
W68LF-14M-8R	14	1/2	24	10	23.5	26.0



68LF Male Connector Metric to BSPP

PART NO.	TUBE SIZE MM	C BSPP	E MM	F1 MM	F2 MM	H MM	K MM
68LF 3M-M3	3	M3X0.5	2.50	8	-	12.5	8.5
68LF-3M-M5	3	M5X0.8	3.50	8	2.5	12.5	8.5
68LF-4M-M3	4	M3X0.5	2.50	8	-	14.5	8.5
68LF-4M-M5	4	M5X0.8	3.50	8	2.5	14.0	8.5
68LF-4M-M7	4	M7X1	5.00	10	2.5	14.0	11.0
68LF-4M-2G	4	1/8	4.50	13	3.0	11.5	14.0
68LF-4M-4G	4	1/4	5.50	16	3.0	10.5	17.5
68LF-6M-M5	6	M5X0.8	3.50	10	2.5	16.0	11.0
68LF-6M-M7	6	M7X1	5.00	10	3.0	16.0	11.0
68LF-6M-M10	6	M10X1	5.00	13	4.0	13.0	14.0
68LF-6M-M12	6	M12X1.5	5.50	15	4.0	13.0	16.0
68LF-6M-2G	6	1/8	4.50	13	4.0	13.0	14.0
68LF-6M-4G	6	1/4	5.50	16	4.0	12.5	17.5
68LF-6M-6G	6	3/8	5.50	20	4.0	13.0	22.0
68LF-6M-8G	6	1/2	7.50	24	4.0	20.0	26.0
68LF-8M-M10	8	M10X1	5.00	13	5.0	21.0	14.0
68LF-8M-M12	8	M12X1.5	5.50	15	5.0	21.0	16.0
68LF-8M-2G	8	1/8	4.50	13	5.0	20.5	14.0
68LF-8M-4G	8	1/4	5.50	16	6.0	19.5	17.5
68LF-8M-6G	8	3/8	5.50	20	6.0	18.0	22.0
68LF-8M-8G	8	1/2	7.50	24	6.0	16.5	26.0
68LF-10M-4G	10	1/4	5.50	16	7.0	23.0	17.5
68LF-10M-6G	10	3/8	5.50	20	8.0	19.5	22.0
68LF-10M-8G	10	1/2	7.50	24	8.0	18.5	26.0
68LF-12M-4G	12	1/4	5.50	19	7.0	27.5	21.0
68LF-12M-6G	12	3/8	5.50	20	9.0	27.0	22.0
68LF-12M-8G	12	1/2	7.00	24	10.0	22.5	26.0
68LF-14M-6G	14	3/8	5.50	22	9.0	29.5	24.0
68LF-14M-8G	14	1/2	7.00	24	11.0	28.0	26.0

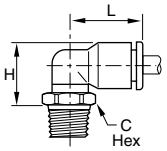


W369PLP Male Elbow - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	L	H
369PLP-2-0	1/8	10-32	8	.57	.52
W369PLP-2-1	1/8	1/16	10	.57	.53
W369PLP-2-2	1/8	1/8	11	.57	.53
W369PLP-2-4	1/8	1/4	14	.57	.55
369PLP-4M-0	5/32 (4MM)	10-32	8	.55	.53
W369PLP-4M-2	5/32 (4MM)	1/8	11	.55	.53
W369PLP-4M-4	5/32 (4MM)	1/4	14	.55	.55
W369PLP-3-2	3/16	1/8	11	.85	.67
369PLP-4-0	1/4	10-32	11	.71	.63
W369PLP-4-2	1/4	1/8	11	.71	.67
W369PLP-4-4	1/4	1/4	14	.71	.63
W369PLP-4-6	1/4	3/8	18	.71	.65
W369PLP-8M-2	5/16 (8MM)	1/8	11	.91	.75
W369PLP-8M-4	5/16 (8MM)	1/4	14	.91	.71
W369PLP-8M-6	5/16 (8MM)	3/8	18	.91	.73
W369PLP-6-2	3/8	1/8	15	1.08	.91
W369PLP-6-4	3/8	1/4	15	1.08	.91
W369PLP-6-6	3/8	3/8	18	1.08	.87
W369PLP-6-8	3/8	1/2	22	1.08	.91
W369PLP-8-4	1/2	1/4	20	1.38	1.22
W369PLP-8-6	1/2	3/8	20	1.38	1.22
W369PLP-8-8	1/2	1/2	24	1.38	1.12

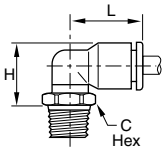
W369PLP Male Elbow - BSPT

PART NO.	TUBE SIZE IN	THREAD BSPT	C HEX MM	L	H
W369PLP-2-2R	1/8	1/8	10	.57	.53
W369PLP-4M-2R	5/32 (4M)	1/8	10	.55	.53
W369PLP-4M-4R	5/32 (4M)	1/4	14	.55	.55
W369PLP-3-2R	3/16	1/8	11	.85	.67
W369PLP-4-2R	1/4	1/8	10	.71	.67
W369PLP-4-4R	1/4	1/4	14	.71	.63
W369PLP-8M-2R	5/16 (8M)	1/8	10	.91	.75
W369PLP-8M-4R	5/16 (8M)	1/4	14	.91	.71
W369PLP-8M-6R	5/16 (8M)	3/8	17	.91	.71
W369PLP-8M-8R	5/16 (8M)	1/2	21	.91	.77
W369PLP-6-4R	3/8	1/4	15	1.04	.87
W369PLP-6-6R	3/8	3/8	17	1.04	.87
W369PLP-8-4R	1/2	1/4	20	1.38	1.22
W369PLP-8-6R	1/2	3/8	20	1.38	1.22
W369PLP-8-8R	1/2	1/2	24	1.38	1.12



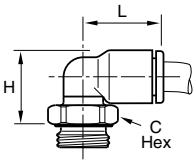
W369PLP Male Elbow - NPT

PART NO.	TUBE SIZE MM	THREAD NPT	C HEX MM	H	L
W369PLP-4M-2	4	1/8	11	.53	.55
W369PLP-4M-4	4	1/4	14	.55	.55
W369PLP-6M-2	6	1/8	11	.61	.63
W369PLP-6M-4	6	1/4	14	.63	.63
W369PLP-8M-2	8	1/8	11	.75	.91
W369PLP-8M-4	8	1/4	14	.71	.91
W369PLP-8M-6	8	3/8	18	.73	.91
W369PLP-10M-4	10	1/4	15	.91	1.04
W369PLP-10M-6	10	3/8	18	.87	1.04
W369PLP-10M-8	10	1/2	22	.91	1.04
W369PLP-12M-6	12	3/8	18	.98	1.22
W369PLP-12M-8	12	1/2	22	1.02	1.22



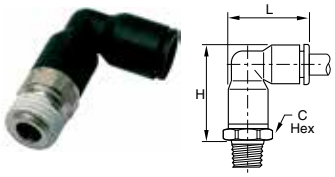
W369PLP Male Elbow - BSPT

PART NO.	TUBE SIZE MM	THREAD BSPT	C HEX MM	H	L
W369PLP-4M-2R	4	1/8	10	13.5	14.0
W369PLP-4M-4R	4	1/4	14	14.0	14.0
W369PLP-4M-6R	4	3/8	17	13.5	14.0
W369PLP-6M-2R	6	1/8	10	15.5	16.0
W369PLP-6M-4R	6	1/4	14	16.0	16.0
W369PLP-6M-6R	6	3/8	17	16.0	16.0
W369PLP-6M-8R	6	1/2	21	16.5	16.0
W369PLP-8M-2R	8	1/8	10	19.0	23.0
W369PLP-8M-4R	8	1/4	14	18.0	23.0
W369PLP-8M-6R	8	3/8	17	18.0	23.0
W369PLP-8M-8R	8	1/2	21	19.5	23.0
W369PLP-10M-2R	10	1/8	15	23.0	26.5
W369PLP-10M-4R	10	1/4	15	22.0	26.5
W369PLP-10M-6R	10	3/8	17	22.0	26.5
W369PLP-10M-8R	10	1/2	21	22.0	26.5
W369PLP-12M-4R	12	1/4	15	25.0	31.0
W369PLP-12M-6R	12	3/8	17	25.0	31.0
W369PLP-12M-8R	12	1/2	21	25.0	31.0
W369PLP-14M-6R	14	3/8	20	30.5	35.5
W369PLP-14M-8R	14	1/2	24	28.5	35.5
W369PLP-16M-6R	16	3/8	27	53	39.0
W369PLP-16M-8R	16	1/2	27	53	39.0



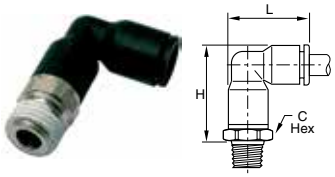
369PLP Male Elbow - BSPP

PART NO.	TUBE SIZE MM	BSPP / METRIC	C HEX MM	H	L
369PLP-3M-M3	3	M3X0.5	8	15.0	14.5
369PLP-3M-M5	3	M5X0.8	8	13.5	14.5
369PLP-4M-M3	4	M3X0.5	8	15.0	14.5
369PLP-4M-M5	4	M5X0.8	8	13.5	14.0
369PLP-4M-2G	4	1/8	13	13.0	14.0
369PLP-4M-4G	4	1/4	16	13.0	14.0
369PLP-6M-M5	6	M5X0.8	8	15.5	16.0
369PLP-6M-M7	6	M7X1	10	17.5	16.0
369PLP-6M-M10	6	M10X1	13	15.0	14.0
369PLP-6M-M12	6	M12X1.5	15	15.0	16.0
369PLP-6M-2G	6	1/8	13	15.0	16.0
369PLP-6M-4G	6	1/4	16	15.0	16.0
369PLP-6M-6G	6	3/8	20	15.5	16.0
369PLP-6M-8G	6	1/2	24	16.0	16.0
369PLP-8M-M10	8	M10X1	13	20.5	23.0
369PLP-8M-M12	8	M12X1.5	15	19.5	23.0
369PLP-8M-2G	8	1/8	13	20.5	23.0
369PLP-8M-4G	8	1/4	16	18.5	23.0
369PLP-8M-6G	8	3/8	20	18.5	23.0
369PLP-8M-8G	8	1/2	24	19.0	23.0
369PLP-10M-4G	10	1/4	16	23.5	26.5
369PLP-10M-6G	10	3/8	20	22.0	26.5
369PLP-10M-8G	10	1/2	24	22.0	26.5
369PLP-12M-4G	12	1/4	16	26.5	31.0
369PLP-12M-6G	12	3/8	20	25.0	31.0
369PLP-12M-8G	12	1/2	24	25.0	31.0
369PLP-14M-6G	14	3/8	20	32.5	35.5
369PLP-14M-8G	14	1/2	24	27.0	35.5
369PLP-16M-6G	16	3/8	27	54.5	39
369PLP-16M-8G	16	1/2	27	54.5	39



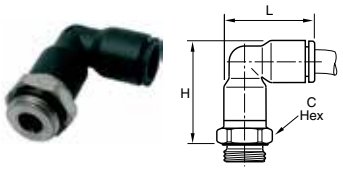
W369PLPX Extended Male Elbow - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	H	L
369PLPX-2-0	1/8	10-32	8	.91	.75
W369PLPX-2-2	1/8	1/8	11	.91	.75
W369PLPX-2-4	1/8	1/4	14	.93	.75
369PLPX-4M-0	5/32 (4MM)	10-32	8	.91	.75
W369PLPX-4M-2	5/32 (4MM)	1/8	11	.91	.75
W369PLPX-4M-4	5/32 (4MM)	1/4	14	.93	.75
369PLPX-4-0	1/4	10-32	11	1.10	.93
369PLPX-4-M7	1/4	M7	9	1.17	.93
W369PLPX-4-2	1/4	1/8	11	1.12	.93
W369PLPX-4-4	1/4	1/4	14	1.08	.93
W369PLPX-4-6	1/4	3/8	17	1.12	.93
W369PLPX-8M-2	5/16 (8MM)	1/8	13	1.32	1.16
W369PLPX-8M-4	5/16 (8MM)	1/4	14	1.28	1.16
W369PLPX-6-2	3/8	1/8	17	1.40	1.34
W369PLPX-6-4	3/8	1/4	17	1.41	1.33
W369PLPX-6-6	3/8	3/8	18	1.45	1.33



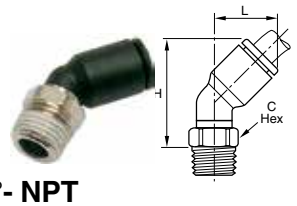
W369PLPX Extended Male Elbow - BSPT

PART NO.	TUBE SIZE MM	THREAD BSPT	C HEX MM	H	L
W369PLPX-4M-2R	4	1/8	10	23.0	19.0
W369PLPX-4M-4R	4	1/4	14	23.5	19.0
W369PLPX-6M-2R	6	1/8	10	27.0	22.5
W369PLPX-6M-4R	6	1/4	14	27.5	22.5
W369PLPX-8M-2R	8	1/8	13	34.5	29.5
W369PLPX-8M-4R	8	1/4	14	32.5	29.5
W369PLPX-8M-6R	8	3/8	17	33.0	29.5
W369PLPX-10M-4R	10	1/4	15	39.5	34.5
W369PLPX-10M-6R	10	3/8	17	39.5	34.5
W369PLPX-10M-8R	10	1/2	21	39.5	34.5
W369PLPX-12M-4R	12	1/4	19	45.5	40.5
W369PLPX-12M-6R	12	3/8	19	45.5	40.5
W369PLPX-12M-8R	12	1/2	21	45.5	40.5
W369PLPX-14M-6R	14	3/8	21	51.5	46.5
W369PLPX-14M-8R	14	1/2	21	51.5	46.5



369PLPX Extended Male Elbow - BSPP

PART NO.	TUBE SIZE MM	BSPP / METRIC	C HEX MM	H
369PLPX-4M-M5	4	M5X0.8	8	23.0
369PLPX-4M-M7	4	M7X1	10	22.5
369PLPX-4M-2G	4	1/8	13	22.5
369PLPX-4M-4G	4	1/4	16	22.5
369PLPX-6M-M5	6	M5X0.8	10	27.5
369PLPX-6M-M7	6	M7X1	10	26.0
369PLPX-6M-2G	6	1/8	13	27.0
369PLPX-6M-4G	6	1/4	16	27.0
369PLPX-8M-2G	8	1/8	13	36.0
369PLPX-8M-4G	8	1/4	16	33.0
369PLPX-8M-6G	8	3/8	20	33.0
369PLPX-10M-4G	10	1/4	16	40.5
369PLPX-10M-6G	10	3/8	20	40.5
369PLPX-10M-8G	10	1/2	24	40.5
369PLPX-12M-4G	12	1/4	19	44.5
369PLPX-12M-6G	12	3/8	20	42.0
369PLPX-12M-8G	12	1/2	24	42.0
369PLPX-14M-6G	14	3/8	22	51.0
369PLPX-14M-8G	14	1/2	24	48.5

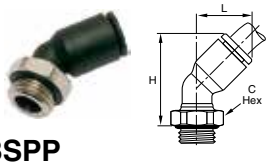


W379PLP Male Elbow 45°- NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	H	L
379PLP-2-0	1/8	10-32	8	.91	.49
W379PLP-2-2	1/8	1/8	11	.81	.49
W379PLP-4-2	1/4	1/8	11	.98	.57
W379PLP-4-4	1/4	1/4	14	.98	.57
W379PLP-4-M7	1/4	M7	9	1.14	.57
W379PLP-6-4	3/8	1/4	17	1.36	.91
W379PLP-6-6	3/8	3/8	18	1.36	.91

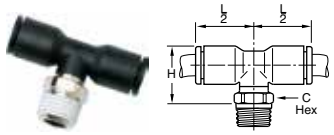
W379PLP 45° Male Elbow - BSPT

PART NO.	TUBE SIZE MM	BSPT	C HEX MM	H	L
W379PLP-4M-2R	4	1/8	10	24.5	13.0
W379PLP-6M-2R	6	1/8	10	28.0	14.5
W379PLP-6M-4R	6	1/4	14	30.0	14.5
W379PLP-8M-2R	8	1/8	10	33.5	19.5
W379PLP-8M-4R	8	1/4	14	33.5	19.5
W379PLP-8M-6R	8	3/8	17	33.5	19.5
W379PLP-10M-4R	10	1/4	15	38.5	23.0
W379PLP-10M-6R	10	3/8	17	39.0	23.0
W379PLP-10M-8R	10	1/2	21	40.5	23.0
W379PLP-12M-4R	12	1/4	15	44.0	26.0
W379PLP-12M-6R	12	3/8	17	44.0	26.0
W379PLP-12M-8R	12	1/2	21	46.0	26.0



379PLP 45° Male Elbow - BSPP

PART NO.	TUBE SIZE MM	BSPP / M5	C HEX MM	H	L
379PLP-4M-M5	4	M5X0.8	8	23.0	13.0
379PLP-4M-2G	4	1/8	13	25.0	13.0
379PLP-6M-M5	6	M5X0.8	8	30.0	14.5
379PLP-6M-2G	6	1/8	13	28.5	14.5
379PLP-6M-4G	6	1/4	16	29.5	14.5
379PLP-8M-2G	8	1/8	13	36.0	19.5
379PLP-8M-4G	8	1/4	16	34.5	19.5
379PLP-8M-6G	8	3/8	20	34.5	19.5
379PLP-10M-4G	10	1/4	16	40.5	23.0
379PLP-10M-6G	10	3/8	20	39.0	23.0
379PLP-10M-8G	10	1/2	24	41.0	23.0
379PLP-12M-4G	12	1/4	16	46.0	26.0
379PLP-12M-6G	12	3/8	20	44.5	26.0
379PLP-12M-8G	12	1/2	24	46.0	26.0



W372PLP Male Branch Tee - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	L/2	H
372PLP-2-0	1/8	10-32	8	.57	.61
W372PLP-2-1	1/8	1/16	10	.57	.61
W372PLP-2-2	1/8	1/8	11	.57	.61
W372PLP-2-4	1/8	1/4	14	.57	.63
372PLP-4M-0	5/32 (4MM)	10-32	8	.55	.71
W372PLP-4M-4	5/32 (4MM)	1/4	14	.55	.63
W372PLP-3-2	3/16	1/8	11	.85	.67
W372PLP-4-2	1/4	1/8	11	.71	.67
W372PLP-4-4	1/4	1/4	14	.71	.63
W372PLP-4-6	1/4	3/8	18	.71	.65
W372PLP-5-2	5/16	1/8	11	.91	.87
W372PLP-5-4	5/16	1/4	14	.91	.83
W372PLP-5-6	5/16	3/8	18	.91	.85
W372PLP-6-2	3/8	1/8	15	1.04	.99
W372PLP-6-4	3/8	1/4	15	1.04	.99
W372PLP-6-6	3/8	3/8	18	1.04	.95
W372PLP-6-8	3/8	1/2	22	1.04	.98
W372PLP-8-4	1/2	1/4	20	1.38	1.22
W372PLP-8-6	1/2	3/8	20	1.38	1.22
W372PLP-8-8	1/2	1/2	24	1.38	1.21

W372PLP Male Branch Tee - BSPT

PART NO.	TUBE SIZE IN	THREAD BSPT	C HEX MM	L/2	H
W372PLP-2-2R	1/8	1/8	10	.55	.61
W372PLP-4M-2R	5/32 (4MM)	1/8	10	.55	.61
W372PLP-4M-4R	5/32 (4MM)	1/4	14	.55	.63
W372PLP-3-2R	3/16	1/8	11	.85	.67
W372PLP-3-4R	3/16	1/4	14	.85	.67
W372PLP-4-2R	1/4	1/8	10	.71	.67
W372PLP-4-4R	1/4	1/4	14	.71	.63
W372PLP-8M-2R	5/16 (8MM)	1/8	10	.91	.87
W372PLP-8M-4R	5/16 (8MM)	1/4	14	.91	.83
W372PLP-8M-6R	5/16 (8MM)	3/8	17	.91	.83
W372PLP-6-4R	3/8	1/4	15	1.04	.95
W372PLP-6-6R	3/8	3/8	17	1.04	.95
W372PLP-8-4R	1/2	1/4	20	1.38	1.24
W372PLP-8-6R	1/2	3/8	20	1.38	1.22

W372PLP Male Branch Tee - NPT

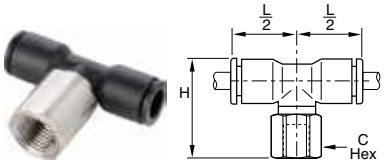
PART NO.	TUBE SIZE MM	NPT	C HEX MM	H	L/2
W372PLP-4M-2	4	1/8	11	.61	.55
W372PLP-4M-4	4	1/4	14	.63	.55
W372PLP-6M-2	6	1/8	11	.69	.63
W372PLP-6M-4	6	1/4	14	.71	.63
W372PLP-8M-2	8	1/8	11	.87	.91
W372PLP-8M-4	8	1/4	14	.83	.91
W372PLP-8M-6	8	3/8	18	.85	.91
W372PLP-10M-4	10	1/4	15	.98	1.04
W372PLP-10M-6	10	3/8	18	.95	1.04
W372PLP-10M-8	10	1/2	22	.98	1.04
W372PLP-12M-6	12	3/8	18	1.06	1.22
W372PLP-12M-8	12	1/2	22	.98	1.22

W372PLP Male Branch Tee - BSPT

PART NO.	TUBE SIZE MM	BSPT	C HEX MM	H	L/2
W372PLP-4M-2R	4	1/8	10	15.5	14.0
W372PLP-4M-4R	4	1/4	14	16.0	14.0
W372PLP-6M-2R	6	1/8	10	17.5	16.0
W372PLP-6M-4R	6	1/4	14	18.0	16.0
W372PLP-8M-2R	8	1/8	10	22.0	23.0
W372PLP-8M-4R	8	1/4	14	21.0	23.0
W372PLP-8M-6R	8	3/8	17	21.0	23.0
W372PLP-10M-4R	10	1/4	15	24.0	26.5
W372PLP-10M-6R	10	3/8	17	24.0	26.5
W372PLP-10M-8R	10	1/2	21	24.0	26.5
W372PLP-12M-4R	12	1/4	15	27.0	31.0
W372PLP-12M-6R	12	3/8	17	27.0	31.0
W372PLP-12M-8R	12	1/2	21	27.0	31.0
W372PLP-14M-6R	14	3/8	20	30.5	35.5
W372PLP-14M-8R	14	1/2	24	28.5	35.5
W372PLP-16M-6R	16	3/8	27	53.0	38.5
W372PLP-16M-8R	16	1/2	27	53.0	38.5

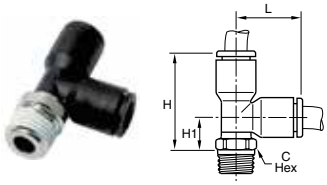
372PLP Male Branch Tee - BSPP

PART NO.	TUBE SIZE MM	BSPP / M5	C HEX MM	H	L/2
372PLP-4M-M5	4	M5X0.8	8	17.5	14.0
372PLP-4M-2G	4	1/8	13	15.0	14.0
372PLP-4M-4G	4	1/4	16	15.0	14.0
372PLP-6M-M5	6	M5X0.8	8	19.5	16.0
372PLP-6M-2G	6	1/8	13	17.0	16.0
372PLP-6M-4G	6	1/4	16	17.0	16.0
372PLP-8M-2G	8	1/8	13	23.5	23.0
372PLP-8M-4G	8	1/4	16	21.5	23.0
372PLP-8M-6G	8	3/8	20	21.5	23.0
372PLP-10M-4G	10	1/4	16	26.0	26.5
372PLP-10M-6G	10	3/8	20	24.0	26.5
372PLP-10M-8G	10	1/2	24	24.0	26.5
372PLP-12M-4G	12	1/4	16	29.0	31.0
372PLP-12M-6G	12	3/8	20	27.0	31.0
372PLP-12M-8G	12	1/2	24	27.0	31.0
372PLP-14M-6G	14	3/8	20	32.5	35.5
372PLP-14M-8G	14	1/2	24	27.0	35.5
372PLP-16M-6G	16	3/8	27	54.5	38.5
372PLP-16M-8G	16	1/2	27	54.5	38.5



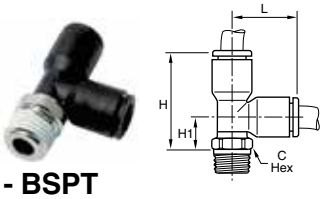
377PLP Female Branch Tee - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	L/2	H
377PLP-2-2	1/8	1/8	13	.57	.99
377PLP-4M-2	5/32 (4MM)	1/8	13	.55	.91
377PLP-4M-4	5/32 (4MM)	1/4	16	.55	1.08
377PLP-4-2	1/4	1/8	13	.71	1.02
377PLP-4-4	1/4	1/4	16	.71	1.18
377PLP-8M-2	5/16 (8MM)	1/8	13	.91	1.24
377PLP-8M-4	5/16 (8MM)	1/4	16	.91	1.40
377PLP-6-4	3/8	1/4	16	1.04	1.60
377PLP-8-6	1/2	3/8	22	1.38	1.88



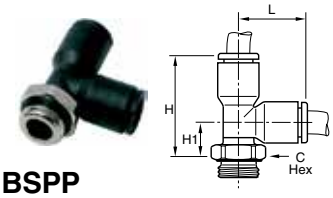
W371PLP Male Run Tee - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	L	H	H1
371PLP-2-0	1/8	10-32	8	.57	.92	.35
W371PLP-2-1	1/8	1/16	10	.57	.93	.35
W371PLP-2-2	1/8	1/8	11	.57	.93	.35
371PLP-4M-0	5/32 (4MM)	10-32	8	.57	1.02	.45
W371PLP-4M-2	5/32 (4MM)	1/8	11	.57	.93	.53
W371PLP-4M-4	5/32 (4MM)	1/4	14	.57	.94	.37
W371PLP-3-2	3/16	1/8	11	.85	1.31	.45
W371PLP-4-2	1/4	1/8	11	.69	1.16	.45
W371PLP-4-4	1/4	1/4	14	.69	1.12	.41
W371PLP-4-6	1/4	3/8	18	.69	1.14	.43
W371PLP-8M-2	5/16 (8MM)	1/8	11	.91	1.38	.49
W371PLP-8M-4	5/16 (8MM)	1/4	14	.91	1.34	.45
W371PLP-8M-6	5/16 (8MM)	3/8	18	.91	1.36	.47
W371PLP-6-2	3/8	1/8	15	1.04	1.63	.60
W371PLP-6-4	3/8	1/4	15	1.04	1.63	.60
W371PLP-6-6	3/8	3/8	18	1.04	1.60	.55
W371PLP-6-8	3/8	1/2	22	1.04	1.63	.59
W371PLP-8-4	1/2	1/4	20	1.38	2.17	.79
W371PLP-8-6	1/2	3/8	20	1.38	2.17	.79
W371PLP-8-8	1/2	1/2	24	1.38	2.07	.79



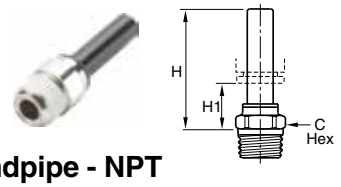
W371PLP Male Run Tee - BSPT

PART NO.	TUBE SIZE MM	THREAD BSPT	C HEX MM	H	H1	L
W371PLP-4M-2R	4	1/8	10	23.5	9.0	14.5
W371PLP-4M-4R	4	1/4	14	24.0	9.5	14.5
W371PLP-6M-2R	6	1/8	10	27.5	10.0	17.5
W371PLP-6M-4R	6	1/4	14	28.0	10.5	17.5
W371PLP-8M-2R	8	1/8	10	35.0	12.0	23.0
W371PLP-8M-4R	8	1/4	14	34.0	11.0	23.0
W371PLP-8M-6R	8	3/8	17	34.0	11.0	23.0
W371PLP-10M-4R	10	1/4	15	40.5	14.0	26.5
W371PLP-10M-6R	10	3/8	17	40.5	14.0	26.5
W371PLP-10M-8R	10	1/2	21	40.5	14.0	26.5
W371PLP-12M-4R	12	1/4	15	46.5	15.5	31.0
W371PLP-12M-6R	12	3/8	17	46.5	15.5	31.0
W371PLP-12M-8R	12	1/2	21	46.5	15.5	31.0
W371PLP-14M-8R	14	1/2	24	52.5	17.5	35.5
W371PLP-16M-6R	16	3/8	27	38.5	78	39.5
W371PLP-16M-8R	16	1/2	27	38.5	78	39.5



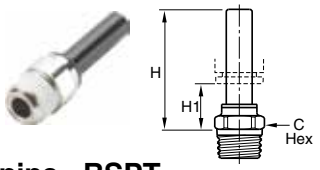
371PLP Male Run Tee - BSPP

PART NO.	TUBE SIZE MM	BSPP / M5	C HEX MM	H	H1	L
371PLP-4M-M5	4	M5X0.8	8	26.0	11.5	14.5
371PLP-4M-2G	4	1/8	13	23.0	8.5	14.5
371PLP-4M-4G	4	1/4	16	23.0	8.5	14.5
371PLP-6M-M5	6	M5X0.8	8	29.5	12.5	17.5
371PLP-6M-2G	6	1/8	13	27.0	10.0	17.5
371PLP-6M-4G	6	1/4	16	27.0	10.0	17.5
371PLP-8M-2G	8	1/8	13	36.5	14.0	23.0
371PLP-8M-4G	8	1/4	16	34.5	12.0	23.0
371PLP-8M-6G	8	3/8	20	34.5	12.0	23.0
371PLP-10M-4G	10	1/4	16	42.0	15.5	26.5
371PLP-10M-6G	10	3/8	20	40.5	14.0	26.5
371PLP-10M-8G	10	1/2	24	40.5	14.0	26.5
371PLP-12M-4G	12	1/4	16	48.0	17.0	31.0
371PLP-12M-6G	12	3/8	20	46.5	15.5	31.0
371PLP-12M-8G	12	1/2	24	46.5	15.5	31.0
371PLP-14M-6G	14	3/8	20	56.5	21.5	35.5
371PLP-14M-8G	14	1/2	24	51.0	16.0	35.5
371PLP-16M-6G	16	3/8	27	38.5	79.5	41
371PLP-16M-8G	16	1/2	27	38.5	79.5	41



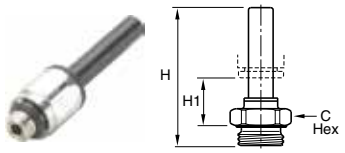
W68PLPSP Male Standpipe - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	H	H1
68PLPSP-4M-0	5/32 (4MM)	10-32	8	1.24	
W68PLPSP-4M-2	5/32 (4MM)	1/8	11	1.02	.57
W68PLPSP-4M-4	5/32 (4MM)	1/4	14	1.04	.59
W68PLPSP-4-2	1/4	1/8	11	1.18	.61
W68PLPSP-4-4	1/4	1/4	14	1.12	.57
W68PLPSP-8M-2	5/16 (8MM)	1/8	11	1.16	.43
W68PLPSP-8M-4	5/16 (8MM)	1/4	14	1.12	.39
W68PLPSP-6-2	3/8	1/8	15	1.75	.65
W68PLPSP-6-4	3/8	1/4	15	1.42	.67
W68PLPSP-6-6	3/8	3/8	17	1.42	.61
W68PLPSP-8-6	1/2	3/8	17	1.44	.37
W68PLPSP-8-8	1/2	1/2	21	1.46	.39



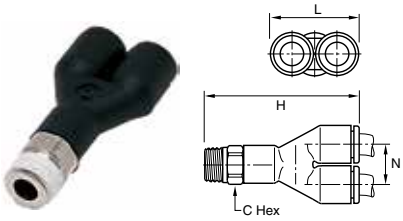
W68PLPSP Male Standpipe - BSPT

PART NO.	TUBE SIZE MM	BSPT	C HEX MM	H	H1
W68PLPSP-4M-2R	4	1/8	10	26.0	14.0
W68PLPSP-4M-4R	4	1/4	14	26.5	14.5
W68PLPSP-6M-2R	6	1/8	10	28.0	14.0
W68PLPSP-6M-4R	6	1/4	14	28.5	14.5
W68PLPSP-8M-2R	8	1/8	10	29.5	11.0
W68PLPSP-8M-4R	8	1/4	14	28.5	10.0
W68PLPSP-10M-4R	10	1/4	15	36.0	15.5
W68PLPSP-10M-6R	10	3/8	17	36.0	15.5
W68PLPSP-10M-8R	10	1/2	21	36.0	15.5
W68PLPSP-12M-6R	12	3/8	17	36.5	12.0
W68PLPSP-12M-8R	12	1/2	21	36.5	12.0



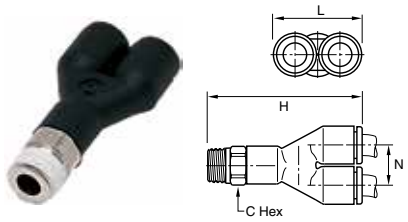
68PLPSP Male Standpipe - BSPP

PART NO.	TUBE SIZE MM	BSPP	C HEX MM	H	H1
68PLPSP-4M-M5	4	M5X0.8	8	31.0	16.0
68PLPSP-4M-2G	4	1/8	13	30.0	13.5
68PLPSP-4M-4G	4	1/4	16	31.0	13.5
68PLPSP-6M-2G	6	1/8	13	32.0	13.5
68PLPSP-6M-4G	6	1/4	16	33.0	13.5
68PLPSP-8M-2G	8	1/8	13	35.5	12.5
68PLPSP-8M-4G	8	1/4	16	34.5	10.5
68PLPSP-8M-6G	8	3/8	20	34.5	10.5
68PLPSP-10M-4G	10	1/4	16	43.5	17.5
68PLPSP-10M-6G	10	3/8	20	41.5	15.5
68PLPSP-10M-8G	10	1/2	24	41.5	15.5
68PLPSP-12M-6G	12	3/8	20	42.0	12.0
68PLPSP-12M-8G	12	1/2	24	43.5	12.0
68PLPSP-14M-6G	14	3/8	20	46.5	14.0
68PLPSP-14M-8G	14	1/2	24	48.0	13.5



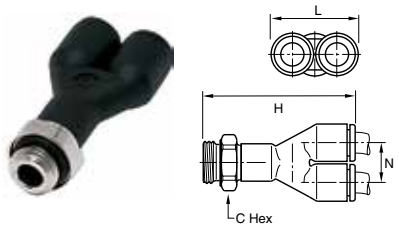
W368PLP Male Y Connector - NPT

PART NO.	TUBE SIZE IN	THREAD NPT	C HEX MM	H	L	N
W368PLP-4M-2	5/32 (4MM)	1/8	11	1.28	.69	.35
W368PLP-4M-4	5/32 (4MM)	1/4	14	1.30	.69	.35
W368PLP-4-2	1/4	1/8	11	1.61	.87	.45
W368PLP-4-4	1/4	1/4	14	1.56	.87	.45
W368PLP-6-4	3/8	1/4	17	2.24	1.30	.67
W368PLP-6-6	3/8	3/8	18	2.28	1.30	.67



W368PLP Male Y Connector - BSPT

PART NO.	TUBE SIZE MM	BSPT	C HEX MM	H	L	N
W368PLP-4M-2R	4	1/8	10	32.5	17.5	9.0
W368PLP-4M-4R	4	1/4	14	33.0	17.5	9.0
W368PLP-6M-2R	6	1/8	10	39.5	21.5	1.0
W368PLP-6M-4R	6	1/4	14	40.0	21.5	1.0
W368PLP-8M-2R	8	1/8	13	56.5	28.0	14.5
W368PLP-8M-4R	8	1/4	14	55.5	28.0	14.5
W368PLP-8M-6R	8	3/8	16	48.5	28.0	14.5
W368PLP-10M-4R	10	1/4	14	60.0	39.0	20.0
W368PLP-10M-6R	10	3/8	16	60.5	39.0	20.0
W368PLP-10M-8R	10	1/2	24	61.0	39.0	20.0
W368PLP-12M-6R	12	3/8	19	66.0	39.0	20.0
W368PLP-12M-8R	12	1/2	21	66.0	39.0	20.0



368PLP Male Y Connector - BSPP

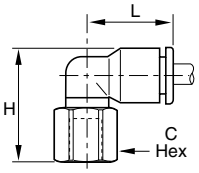
PART NO.	TUBE SIZE MM	BSPP / M5	C HEX MM	H	L	N
368PLP-4M-M5	4	M5X0.8	8	32.5	17.5	9.0
368PLP-4M-2G	4	1/8	13	32.0	17.5	9.0
368PLP-4M-4G	4	1/4	16	32.0	17.5	9.0
368PLP-6M-M5	6	M5X0.8	10	39.5	21.5	11.0
368PLP-6M-2G	6	1/8	13	39.0	21.5	11.0
368PLP-6M-4G	6	1/4	16	39.0	21.5	11.0
368PLP-8M-2G	8	1/8	13	56.0	28.0	14.5
368PLP-8M-4G	8	1/4	16	55.0	28.0	14.5
368PLP-8M-6G	8	3/8	19	54.0	28.0	14.5
368PLP-10M-4G	10	1/4	16	63.5	33.0	17.0
368PLP-10M-6G	10	3/8	20	63.5	33.0	17.0
368PLP-10M-8G	10	1/2	20	65.0	33.0	17.0
368PLP-12M-6G	12	3/8	19	68.0	39.0	20.0
368PLP-12M-8G	12	1/2	24	70.0	39.0	20.0

368PLPD Double Y Male Connector - BSPP

PART NO.	TUBE SIZE MM	BSPP	C HEX MM	H	L	M	N	MOUNTING HOLE DIA
368PLPD-4M-2G	4	1/8	13	25.5	41.0	21.0	10.0	3.7
368PLPD-4M-4G	4	1/4	16	25.5	40.0	21.0	10.0	3.7
368PLPD-6M-2G	6	1/8	19	31.5	52.5	26.5	12.0	3.7
368PLPD-6M-4G	6	1/4	19	31.5	53.5	26.5	12.0	3.7

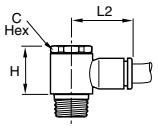
370PLP Female Elbow Swivel - NPT

PART NO.	TUBE SIZE IN	THREAD NPT	C HEX MM	L	H
370PLP-2-2	1/8	1/8	13	.57	.91
370PLP-4M-2	5/32 (4MM)	1/8	13	.55	.91
370PLP-4M-4	5/32 (4MM)	1/4	16	.55	1.08
370PLP-4-2	1/4	1/8	13	.71	1.02
370PLP-4-4	1/4	1/4	16	.71	1.18
370PLP-8M-2	5/16 (8MM)	1/8	13	.91	1.12
370PLP-8M-4	5/16 (8MM)	1/4	16	.91	1.28
370PLP-6-2	3/8	1/8	16	1.04	1.52
370PLP-6-4	3/8	1/4	16	1.04	1.52
370PLP-8-6	1/2	3/8	22	1.38	1.88



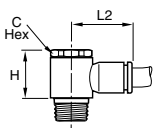
370PLP Female Elbow - BSPP

PART NO.	TUBE SIZE MM	BSPP	C HEX MM	H	L
370PLP-4M-2G	4	1/8	13	23.0	14.0
370PLP-4M-4G	4	1/4	16	27.0	14.0
370PLP-6M-2G	6	1/8	13	25.0	16.0
370PLP-6M-4G	6	1/4	16	29.0	16.0
370PLP-8M-2G	8	1/8	13	28.0	23.0
370PLP-8M-4G	8	1/4	16	32.0	23.0
370PLP-8M-6G	8	3/8	19	33.0	23.0
370PLP-10M-4G	10	1/4	16	34.5	26.5
370PLP-10M-6G	10	3/8	19	35.0	26.5
370PLP-10M-8G	10	1/2	24	41.0	26.5
370PLP-12M-4G	12	1/4	16	38.0	30.5
370PLP-12M-6G	12	3/8	19	38.5	30.5
370PLP-12M-8G	12	1/2	24	43.5	30.5



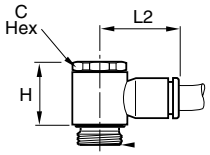
W369PLPBJ Banjo - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	H	L2
369PLPBJ-2-0	1/8	10-32		.79	.65
369PLPBJ-4M-0	5/32 (4MM)	10-32		.79	.65
W369PLPBJ-4M-2	5/32 (4MM)	1/8	13	.73	.73
369PLPBJ-4-0	1/4	10-32		.79	.73
W369PLPBJ-4-2	1/4	1/8	13	.73	.83
W369PLPBJ-4-4	1/4	1/4	17	.89	.91
W369PLPBJ-4-6	1/4	3/8	21	1.04	1.12
W369PLPBJ-6-4	3/8	1/4	17	.89	1.12
W369PLPBJ-6-6	3/8	3/8	21	1.04	1.20



W369PLPBJ Banjo - BSPT

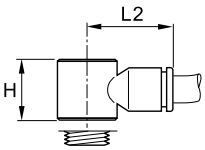
PART NO.	TUBE SIZE MM	BSPT	C HEX MM	H	L2
W369PLPBJ-6M-2R	6	1/8	13	18.5	20.0
W369PLPBJ-6M-4R	6	1/4	17	22.5	22.0
W369PLPBJ-8M-2R	8	1/8	13	18.5	25.0
W369PLPBJ-8M-4R	8	1/4	17	22.5	27.0
W369PLPBJ-10M-4R	10	1/4	17	22.5	29.0
W369PLPBJ-10M-6R	10	3/8	21	26.5	31.0
W369PLPBJ-12M-4R	12	1/4	21	26.5	34.5
W369PLPBJ-12M-6R	12	3/8	21	26.5	34.5



369PLPBJ Banjo - BSPP

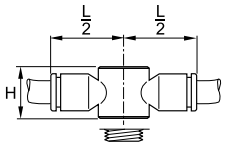
PART NO.	TUBE SIZE MM	BSPP / METRIC	C HEX MM	H	L2
369PLPBJ-3M-M3*	3	M3X0.5		13.0	16.0
369PLPBJ-4M-M5*	4	M5X0.8		13.0	16.0
369PLPBJ-4M-2G	4	1/8	13	17.0	18.5
369PLPBJ-6M-M5*	6	M5X0.8		13.0	18.5
369PLPBJ-6M-2G	6	1/8	13	17.0	20.0
369PLPBJ-6M-4G	6	1/4	17	21.0	22.0
369PLPBJ-8M-2G	8	1/8	13	16.5	25.0
369PLPBJ-8M-4G	8	1/4	17	21.0	27.0
369PLPBJ-8M-6G	8	3/8	20	24.5	29.0
369PLPBJ-10M-4G	10	1/4	17	21.0	29.0
369PLPBJ-10M-6G	10	3/8	20	24.5	31.0
369PLPBJ-10M-8G	10	1/2	25	27.5	36.5
369PLPBJ-12M-6G	12	3/8	20	24.5	34.5
369PLPBJ-12M-8G	12	1/2	25	27.5	36.5

*With screwdriver slot



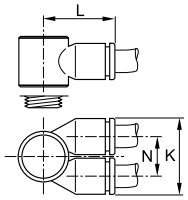
369PLPBJB Banjo Bodies

PART NO.	TUBE SIZE MM	BSPP / M5	H	L2
369PLPBJB-4M-M5	4	M5X0.8	13.0	16.0
369PLPBJB-4M-2G	4	1/8	14.5	18.5
369PLPBJB-6M-M5	6	M5X0.8	13.0	18.5
369PLPBJB-6M-2G	6	1/8	14.5	20.0
369PLPBJB-6M-4G	6	1/4	18.0	22.0
369PLPBJB-8M-2G	8	1/8	14.5	25.0
369PLPBJB-8M-4G	8	1/4	18.0	27.0
369PLPBJB-8M-6G	8	3/8	21.5	29.0
369PLPBJB-10M-4G	10	1/4	18.0	29.0
369PLPBJB-10M-6G	10	3/8	21.5	31.0
369PLPBJB-12M-6G	12	3/8	21.5	34.5



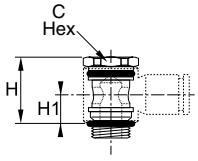
32PLPDJB Double Banjo Bodies

PART NO.	TUBE SIZE MM	BSPP / M5	H	L/2
32PLPDJB-6M-2G	6	1/8	14.4	20.0
32PLPDJB-6M-4G	6	1/4	18.0	26.0
32PLPDJB-8M-4G	8	1/4	18.0	27.0



369PLPTJB Twin Banjo Bodies

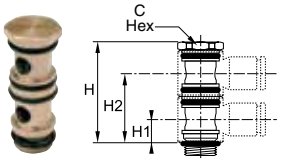
PART NO.	TUBE SIZE MM	BSPP / M5	K	L	N
369PLPTJB-4M-4G	4	1/4	28.0	25.0	14.5
369PLPTJB-6M-2G	6	1/8	22.5	20.5	12.0
369PLPTJB-6M-4G	6	1/4	28.0	25.0	14.5
369PLPTJB-6M-6G	6	3/8	33.0	28.5	17.0
369PLPTJB-8M-4G	8	1/4	28.0	26.0	14.5
369PLPTJB-8M-6G	8	3/8	33.0	29.5	17.0



68BJB Single Banjo Bolt

PART NO.	BSPP / M5	C HEX MM	H	H1
68BJB-M5*	M5X0.8		17.0	7.5
68BJB-2G	1/8	13	17.0	7.5
68BJB-4G	1/4	17	21.0	9.5
68BJB-6G	3/8	20	24.5	11.0

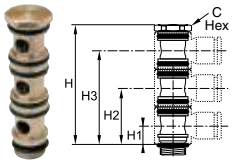
*With screwdriver slot



68BJBD Double Banjo Bolt

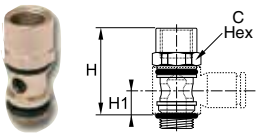
PART NO.	BSPP / M5	C HEX MM	H	H1	H2
68BJBD-M5*	M5X0.8		24.5	7.5	18.5
68BJBD-2G	1/8	13	31.0	7.5	22.0
68BJBD-4G	1/4	17	39.0	9.5	27.5
68BJBD-6G	3/8	20	46.0	11.0	32.5

*With screwdriver slot



68BJBT Triple Banjo Bolt

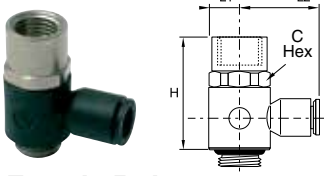
PART NO.	BSPP	C HEX MM	H	H1	H2	H3
68BJBT-2G	1/8	13	45.5	7.5	22.0	36.0
68BJBT-4G	1/4	17	54.0	9.5	27.5	45.5
68BJBT-6G	3/8	20	67.5	11.0	32.5	54.0



66BJB Female Threaded Banjo Bolt

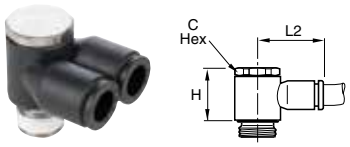
PART NO.	1 BSPP / M5	2 BSPP / M5	C HEX MM	H	H1
66BJB-2G	1/8	1/8	13	24.5	7.5
66BJB-4G	1/4	1/4	17	33.0	9.5
66BJB-6G	3/8	3/8	20	37.5	11.0
66BJB-8G	1/2	1/2	25	42.0	11.5

*With screwdriver slot



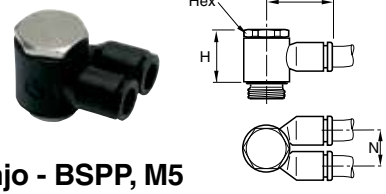
376PLPBJ Banjo with Female Bolt

PART NO.	TUBE SIZE MM	BSPP / M5	C HEX MM	H	L1	L2
376PLPBJ-4M-2G	4	1/8	13	25.5	7.0	18.5
376PLPBJ-6M-4G	6	1/4	17	33.0	9.0	22.0
376PLPBJ-8M-6G	8	3/8	20	37.5	11	29.0



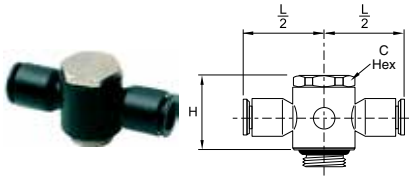
W369PLPTJ Twin Banjo - NPT

PART NO.	TUBE SIZE IN	THREAD NPT / UNF	C HEX MM	H	L2
369PLPTJ-4M-0	5/32 (4MM)	10-32		.63	.61
W369PLPTJ-4M-2	5/32 (4MM)	1/8	13	.73	.73
W369PLPTJ-4-2	1/4	1/8	13	.73	.73
W369PLPTJ-4-4	1/4	1/4	17	.89	1.04
W369PLPTJ-6-4	3/8	1/4	21	1.04	1.22
W369PLPTJ-6-6	3/8	3/8	21	1.04	1.22



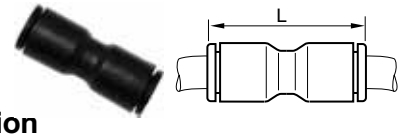
369PLPTJ Twin Banjo - BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	C HEX MM	H	L2	N
369PLPTJ-4M-M5	4	M5X0.8		13.0	16.0	9.0
369PLPTJ-4M-2G	4	1/8	13	16.5	18.5	11.5
369PLPTJ-6M-2G	6	1/8	13	16.5	18.5	11.5
369PLPTJ-6M-4G	6	1/4	17	21.0	27.0	14.5
369PLPTJ-8M-4G	8	1/4	17	21.0	27.0	14.5
369PLPTJ-8M-6G	8	3/8	20	24.5	31.0	17.0
369PLPTJ-10M-6G	10	3/8	20	24.5	31.0	17.0



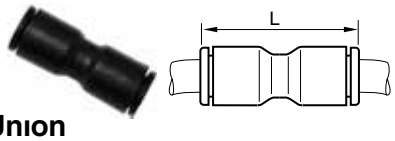
32PLPDJ Double Banjo - BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	C HEX MM	H	L/2
32PLPDJ-4M-M5	4	M5X0.8		13.0	16.0
32PLPDJ-6M-2G	6	1/8	13	17.0	20.0
32PLPDJ-6M-4G	6	1/4	17	21.0	26.5
32PLPDJ-8M-4G	8	1/4	17	21.0	27.0
32PLPDJ-8M-6G	8	3/8	20	24.5	30.5



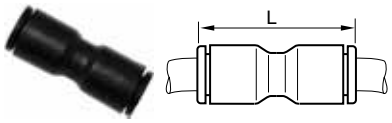
32PLP Equal Union

PART NO.	TUBE SIZE IN	L
32PLP-2	1/8	.97
32PLP-3	3/16	1.44
32PLP-4	1/4	1.16
32PLP-6	3/8	1.65
32PLP-8	1/2	2.17



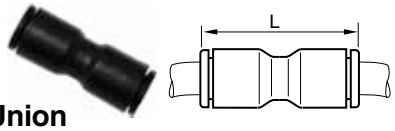
32PLP Unequal Union

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	L
32PLP-4M-2	5/32 (4M)	1/8	0.96
32PLP-4M-4	5/32 (4M)	1/4	1.16
32PLP-4-2	1/4	1/8	1.32
32PLP-8M-4	5/16 (8M)	1/4	1.44
32PLP-6-4	3/8	1/4	1.61
32PLP-6-8	3/8	1/2	2.17



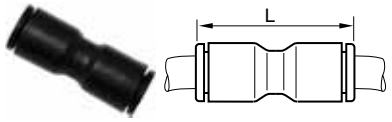
32PLP Union

PART NO.	TUBE SIZE MM	L
32PLP-3M	3	25.0
32PLP-4M	4	25.0
32PLP-6M	6	28.5
32PLP-8M	8	38.0
32PLP-10M	10	42.0
32PLP-12M	12	50.5
32PLP-14M	14	56.0
32PLP-16M	16	60.5



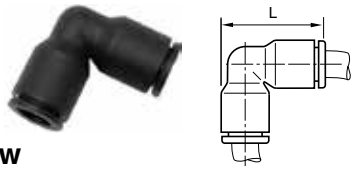
32PLP Unequal Union

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	L
32PLP-3M-4M	3	4	25.0
32PLP-6M-4M	6	4	28.0
32PLP-8M-4M	8	4	28.0
32PLP-8M-6M	8	6	38.0
32PLP-10M-6M	10	6	42.0
32PLP-10M-8M	10	8	42.0
32PLP-12M-8M	12	8	50.5
32PLP-12M-10M	12	10	50.5
32PLP-12M-14M	12	14	56.0
32PLP-12M-16M	16	12	61.0



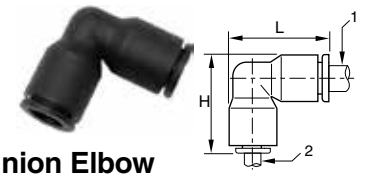
32PLP Converter

PART NO.	TUBE SIZE IN	TUBE SIZE MM	L
32PLP-6M-4	1/4	6	1.18
32PLP-10M-6	3/8	10	1.99
32PLP-12M-8	1/2	12	2.25



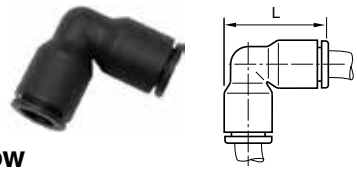
365PLP Union Elbow

PART NO.	TUBE SIZE IN	L
365PLP-2	1/8	.71
365PLP-3	3/16	1.07
365PLP-4	1/4	.93
365PLP-6	3/8	1.33
365PLP-8	1/2	1.38



365PLP Unequal Union Elbow

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	L	H
365PLP-2-4	1/8	1/4	.93	.93
365PLP-4M-4	5/32 (4M)	1/4	.93	.93
365PLP-6-4	3/8	1/4	1.33	1.30
365PLP-6-8	3/8	1/2	1.81	1.81

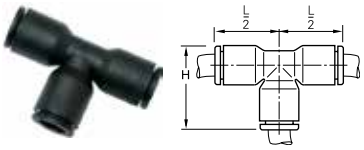


365PLP Union Elbow

PART NO.	TUBE SIZE MM	L
365PLP-4M	4	19.0
365PLP-6M	6	22.5
365PLP-8M	8	29.5
365PLP-10M	10	34.5
365PLP-12M	12	40.5
365PLP-14M	14	46.5
365PLP-16M	16	52.0

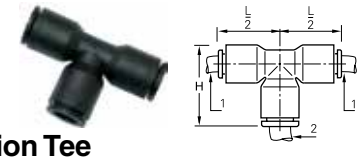
365PLP Unequal Union Elbow

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	L
365PLP-4M-6M	4	6	22.5
365PLP-6M-8M	6	8	29.5
365PLP-8M-10M	8	10	34.5
365PLP-10M-12M	10	12	40.5



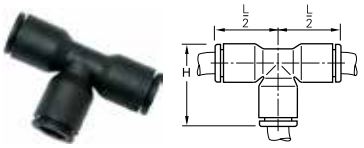
364PLP Union Tee

PART NO.	TUBE SIZE IN	L/2	H
364PLP-2	1/8	.57	.75
364PLP-3	3/16	.85	1.07
364PLP-4	1/4	.71	.92
364PLP-6	3/8	1.02	1.34
364PLP-8	1/2	1.38	1.81



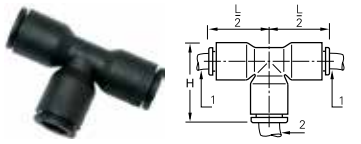
364PLP Unequal Union Tee

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	L/2	H
364PLP-2-4	1/8	1/4	.71	.93
364PLP-4M-4	5/32 (4MM)	1/4	.71	.93
364PLP-4-2	1/4	1/8	.73	.93
364PLP-4-4M	1/4	5/32 (4MM)	.73	.93
364PLP-4-6	1/4	3/8	.96	1.32
364PLP-6-4	3/8	1/4	1.00	1.28
364PLP-6-8	3/8	1/2	1.38	1.81
364PLP-8-4	1/2	1/4	1.38	1.81
364PLP-8-6	1/2	3/8	1.38	1.81



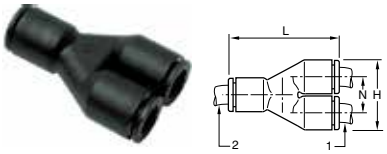
364PLP Union Tee

PART NO.	TUBE SIZE MM	H	L/2
364PLP-3M	3	19.0	14.5
364PLP-4M	4	19.0	14.5
364PLP-6M	6	23.5	18.0
364PLP-8M	8	29.5	23.0
364PLP-10M	10	34.5	26.5
364PLP-12M	12	40.5	31.0
364PLP-14M	14	46.0	35.5
364PLP-16M	16	52.0	39.0



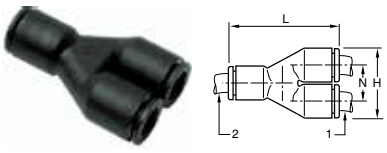
364PLP Unequal Union Tee

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	L/2
364PLP-4M-6M	4	6	22.5	17.5
364PLP-6M-4M	6	4	22.5	17.5
364PLP-6M-8M	6	8	29.5	23.0
364PLP-8M-6M	8	6	29.5	23.0
364PLP-8M-10M	8	10	34.5	26.5
364PLP-10M-12M	10	12	34.5	26.5
364PLP-10M-8M	10	8	40.5	31.0
364PLP-12M-10M	12	10	40.5	31.0
364PLP-14M-8M	14	8	46.0	35.5
364PLP-16M-12M	16	12	39.0	



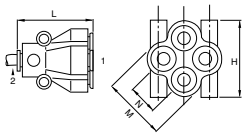
362PLP Union Y

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	L	H	N
362PLP-2	1/8	1/8	1.12	.69	.35
362PLP-2-4	1/8	1/4	1.42	.87	.45
362PLP-4M-4	5/32 (4MM)	1/4	1.42	.87	.45
362PLP-4	1/4	1/4	1.42	.87	.45
362PLP-4-6	1/4	3/8	2.02	1.30	.67
362PLP-6	3/8	3/8	2.09	1.30	.67



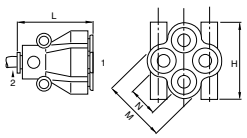
362PLP Union Y

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE (M)	H	L	N
362PLP-4M	4	4	17.5	28.5	9.0
362PLP-6M	6	6	21.5	35.0	11.0
362PLP-8M	8	8	28.0	45.0	14.5
362PLP-10M	10	10	33.0	53.0	17.0
362PLP-12M	12	12	39.0	57.0	20.0
362PLP-4M-6M	4	6	17.5	33.0	9.0
362PLP-6M-8M	6	8	22.5	41.0	11.5
362PLP-8M-10M	8	10	28.0	47.0	14.5
362PLP-10M-12M	10	12	33.0	57.0	17.0

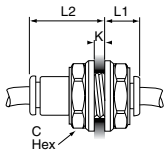
362PLPD Double Y Connector

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	L	M	N	MOUNTING HOLE DIA.
362PLPD-4M-4	5/32 (4MM)	1/4	1.00	1.18	.83	.39	.15

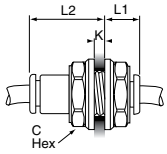
362PLPD Double Y Connector

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	L	M	N	MOUNTING HOLE DIA
362PLPD-4M	4	4	25.5	30.5	21.0	10.0	3.7
362PLPD-6M	6	6	31.5	37.5	26.5	12.0	3.7
362PLPD-4M-6M	4	6	25.5	30.5	21.0	10.0	3.7
362PLPD-6M-8M	6	8	31.5	38.0	26.5	12.0	3.7

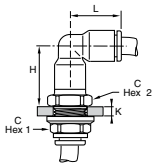
32PLPBH Bulkhead Union

PART NO.	TUBE SIZE IN	C HEX MM	K MAX	L1	L2	BULKHEAD THREAD	BULKHEAD HOLE DIA.
32PLPBH-2	1/8	13	.22	.37	.61	M10 X 1	12MM
32PLPBH-4	1/4	16	.35	.37	.81	M15 X 1	16MM
32PLPBH-6	3/8	22	.57	.51	1.18	M18 X 1.5	24MM
32PLPBH-8	1/2	29	.81	.67	1.61	M25 X 1.5	26MM

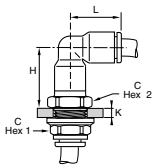
32PLPBH Bulkhead Union

PART NO.	TUBE SIZE MM	C HEX MM	K MAX	L1	L2	BULKHEAD THREAD	BULKHEAD HOLE DIA.
32PLPBH-4M	4	13	5.5	15.0	10.0	M12 X 1	12MM
32PLPBH-6M	6	15	8.5	18.0	10.5	M14 X 1	14MM
32PLPBH-8M	8	18	14.5	25.0	13.5	M16 X 1	16MM
32PLPBH-10M	10	22	14.5	27.5	15.5	M22 X 1.5	22MM
32PLPBH-12M	12	26	18.5	33.0	18.0	M24 X 1.5	24MM
32PLPBH-14M	14	29	20.5	37.5	20.5	M26 X 1.5	26MM

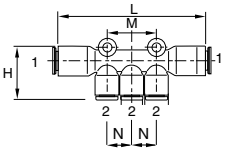
365PLPBH Equal Bulkhead Elbow

PART NO.	TUBE SIZE IN	C1 HEX	C2 HEX	K MAX	H	L	BULKHEAD THREAD	BHD HOLE DIA.
365PLPBH-2	1/8	13	13	.28	.71	.57	M10 X 1	10MM
365PLPBH-4M	5/32(4MM)		13	.26	.83	.67	M12 X 1	12MM
365PLPBH-4	1/4	18	17	.32	.87	.71	M15 X 1	15MM
365PLPBH-8M	5/16(8MM)		18	.31	1.22	.94	M16 X 1	16MM
365PLPBH-6	3/8	22	22	.33	1.08	1.00	M18 X 1.5	18MM
365PLPBH-8	1/2	29	27	.41	1.54	1.38	M25 X 1.5	25MM

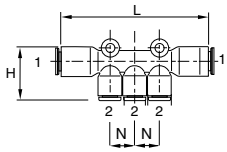
365PLPBH Equal Bulkhead Elbow

PART NO.	TUBE SIZE MM	C1 HEX	C2 HEX	K MAX	H	L	BULKHEAD THREAD	BULKHEAD HOLE DIA.
365PLPBH-4M	4	13	13	6.5	21.0	17.0	M12 X 1	12MM
365PLPBH-6M	6	15	15	7.0	24.5	19.5	M14 X 1	14MM
365PLPBH-8M	8	18	18	8.0	31.0	24.0	M16 X 1	16MM
365PLPBH-10M	10	22	22	8.5	36.0	28.0	M22 X 1.5	22MM
365PLPBH-12M	12	26	26	8.5	42.0	33.0	M24 X 1.5	24MM

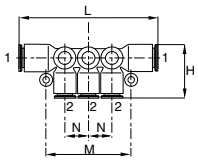
24PLP Multiple Tee

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	L	M	N	MTG HOLE DIA.
24PLP-4-4M	1/4	5/32(4MM)	0.97	2.81	.90	.45	.17
24PLP-4-4	1/4	1/4	1.22	3.14	1.21	.61	.17
24PLP-6-4	3/8	1/4	1.34	3.21	1.22	.61	.17

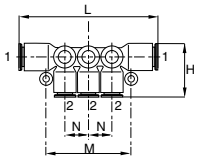
24PLP Multiple Tee

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE (M)	H	L	N	MOUNTING HOLE DIA.
24PLP-6M-4M	6	4	24.5	74	11.5	4.2
24PLP-8M-4M	8	4	24.5	74	11.5	4.2
24PLP-8M-6M	8	6	24.5	74	11.5	4.2
24PLP-10M-6M	10	6	36.0	81	15.5	4.2
24PLP-10M-8M	10	8	36.0	81	15.5	4.2



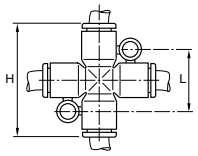
24PLPD Double Multiple Tee

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	L	M	N	MOUNTING HOLE DIA.
24PLPD-4-4M	1/4	5/32(4MM)	.73	2.84	1.69	.45	.17
24PLPD-4-4	1/4	1/4	.73	2.84	1.69	.45	.17
24PLPD-6-4	3/8	1/4	.91	3.31	2.05	.57	.17



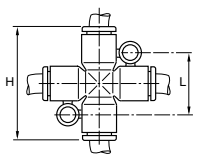
24PLPD Double Multiple Tee

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	L	M	N	MOUNTING HOLE DIA.
24PLPD-6M-4M	6	4	18.5	72.0	43.0	11.5	4.2
24PLPD-8M-4M	8	4	18.5	73.0	43.0	11.5	4.2
24PLPD-8M-6M	8	6	18.5	73.0	43.0	11.5	4.2
24PLPD-10M-6M	10	6	23.0	84.0	52.0	14.5	4.2
24PLPD-10M-8M	10	8	23.5	84.0	52.0	14.5	4.2



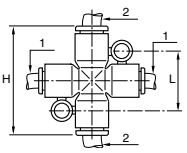
347PLP Equal Cross

PART NO.	TUBE SIZE IN	H	L	MOUNTING HOLE DIA.
347PLP-4	1/4	1.40	.79	.17



347PLP Equal Cross

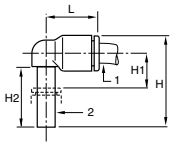
PART NO.	TUBE SIZE MM	H	L	MOUNTING HOLE DIA.
347PLP-4M	4	36	20.0	4.2
347PLP-6M	6	36	20.0	4.2
347PLP-8M	8	46	22.5	4.2



347PLP Unequal Cross

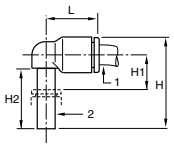
PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	L	MOUNTING HOLE DIA.
347PLP-4M-6M	4	6	36	20.0	4.2
347PLP-6M-4M*	6	4	36	20.0	4.2
347PLP-6M-8M	6	8	46	22.5	4.2
347PLP-8M-6M*	8	6	46	22.5	4.2

*This model provides 3 outlines of "TUBE1" and 1 outlet of "TUBE 2".



369PLPSP Plug-In Elbow

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	H1	H2	L
369PLPSP-2	1/8	1/8	.92	.31	.64	.57
369PLPSP-4M-4	5/32(4MM)	1/4	1.08	.30	.71	.71
369PLPSP-4	1/4	1/4	1.20	.43	.83	.73
369PLPSP-4-6	1/4	3/8	1.52	.35	.96	.98
369PLPSP-6	3/8	3/8	1.52	.35	.96	1.02
369PLPSP-8	1/2	1/2	2.00	.51	1.12	1.38



369PLPSP Plug-In Elbow

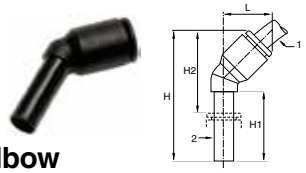
PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	H1	H2	L
369PLPSP-4M	4	4	23.0	6.0	15.5	14.0
369PLPSP-6M	6	6	26.5	7.0	17.0	16.0
369PLPSP-8M	8	8	33.5	8.0	21.5	23.0
369PLPSP-10M	10	10	39.0	9.5	24.5	23.5
369PLPSP-12M	12	12	44.5	10.0	27.5	31.0
369PLPSP-4M-6M	4	6	26.5	7.0	17.0	16.0
369PLPSP-6M-4M	6	4	24.5	7.0	15.5	16.0
369PLPSP-6M-8M	6	8	33.5	8.0	21.5	22.0
369PLPSP-8M-10M	8	10	39.0	8.5	24.5	26.5
369PLPSP-10M-12M	10	12	44.5	10.0	27.5	31.0

369PLPSPX Extended Plug-In Elbow

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	H1	H2	L
369PLPSPX-2	1/8	1/8	1.26	.65	.98	.57
369PLPSPX-4	1/4	1/4	1.56	.77	1.18	.71
369PLPSPX-6	3/8	3/8	2.19	1.02	1.63	1.02

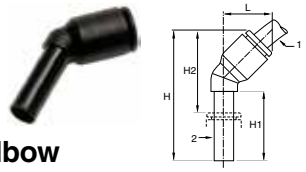
369PLPSPX Extended Plug-In Elbow

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	H1	H2	L
369PLPSPX-4M	4	4	32.5	15.5	25.0	14.0
369PLPSPX-6M	6	6	38.5	19.0	29.0	16.0
369PLPSPX-8M	8	8	49.0	23.5	37.0	23.0
369PLPSPX-10M	10	10	56.0	26.5	41.5	26.5
369PLPSPX-12M	12	12	62.5	28.0	45.5	31.0
369PLPSPX-4M-6M	4	6	38.5	19.0	29.0	16.0
369PLPSPX-6M-8M	6	8	49.0	23.5	37.0	23.0
369PLPSPX-8M-10M	8	10	56.0	26.5	41.5	26.5
369PLPSPX-10M-12M	10	12	62.5	28.0	45.5	31.0



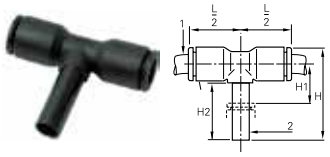
379PLPSP 45° Plug-In Elbow

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	H1	H2	L
379PLPSP-2	1/8	1/8	1.14	.59	.69	.47
379PLPSP-4	1/4	1/4	1.44	.71	.87	.57
379PLPSP-6	3/8	3/8	2.00	.96	1.16	.91



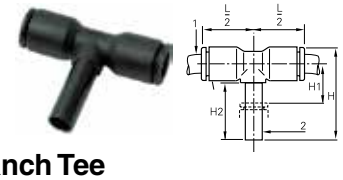
379PLPSP 45° Plug-In Elbow

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	H1	H2	L
379PLPSP-4M	4	4	33.5	19.0	21.0	13.0
379PLPSP-6M	6	6	39.0	21.0	25.0	14.5
379PLPSP-8M	8	8	44.0	21.5	25.5	19.5
379PLPSP-10M	10	10	53.0	27.0	32.5	23.0
379PLPSP-12M	12	12	58.5	27.5	34.0	26.5



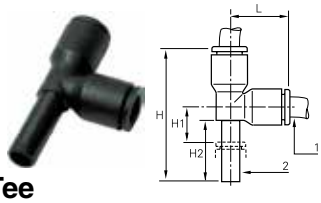
372PLPSP Plug-In Branch Tee

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	H1	H2	L/2
372PLPSP-2	1/8	1/8	.95	.26	.59	.57
372PLPSP-4	1/4	1/4	.98	.43	.77	.73
372PLPSP-6	3/8	3/8	1.61	.35	.96	.98
372PLPSP-8	1/2	1/2	2.01	.51	1.12	1.38



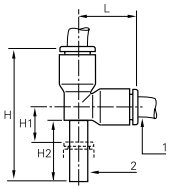
372PLPSP Plug-In Branch Tee

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	H1	H2	L/2
372PLPSP-4M	4	4	23.0	6.0	15.5	14.5
372PLPSP-6M	6	6	26.5	7.0	17.0	16.0
372PLPSP-8M	8	8	33.5	8.0	21.5	23.0
372PLPSP-10M	10	10	39.0	9.5	24.5	26.5
372PLPSP-12M	12	12	44.5	10.0	27.5	31.0
372PLPSP-4M-6M	4	6	26.5	7.0	17.0	16.0
372PLPSP-6M-8M	6	8	33.5	8.0	21.5	23.0
372PLPSP-8M-10M	8	10	39.0	9.5	24.5	26.5
372PLPSP-10M-12M	10	12	44.5	10.0	27.5	31.0



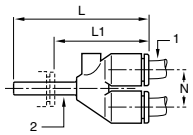
371PLPSP Plug-In Run Tee

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	H	H1	H2	L
371PLPSP-4	1/4	1/4	1.69	.43	.83	.73
371PLPSP-6	3/8	3/8	2.23	.33	.96	1.00
371PLPSP-8	1/2	1/2	2.86	.51	1.12	1.38

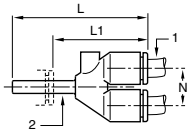
371PLPSP Plug-In Run Tee

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	H1	H2	L
371PLPSP-4M	4	4	33.0	6.0	15.5	14.5
371PLPSP-6M	6	6	38.5	7.0	17.0	17.5
371PLPSP-8M	8	8	49.0	8.0	21.5	23.0
371PLPSP-10M	10	10	57.0	10.5	24.5	26.5
371PLPSP-12M	12	12	65.5	10.5	27.5	31.0
371PLPSP-4M-6M	4	6	10.5	7.0	17.0	17.5
371PLPSP-6M-8M	6	8	13.5	8.0	21.5	23.0
371PLPSP-8M-10M	8	10	16.0	10.5	24.5	26.5
371PLPSP-10M-12M	10	12	19.0	10.5	27.5	31.0

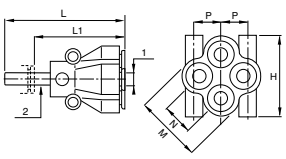
362PLPSP Plug-In Y

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	L	L1	N
362PLPSP-2	1/8	1/8	1.36	1.00	.35
362PLPSP-4	1/4	1/4	1.60	1.02	.45
362PLPSP-6	3/8	3/8	2.23	1.42	.67

362PLPSP Plug-In Y

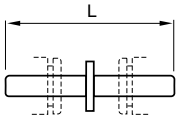
PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	L	L1	N
362PLPSP-4M	4	4	34.0	21.5	9.0
362PLPSP-6M	6	6	39.5	25.5	11.0
362PLPSP-8M	8	8	50.5	32.0	14.5
362PLPSP-10M	10	10	57.5	36.0	17.0
362PLPSP-12M	12	12	66.0	41.0	20.0
362PLPSP-4M-6M	4	6	35.5	21.5	9.0
362PLPSP-6M-8M	6	8	44.0	25.5	11.0
362PLPSP-8M-10M	8	10	53.5	32.0	14.5
362PLPSP10M-12M	10	12	60.0	35.0	17.0

362PLPDSP Plug-In Multiple Y

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	H	L	L1	M	N
362PLPDSP-4M-6M	4	6	25.5	45.0	31.0	21.0	10.0
362PLPDSP-4M-8M	4	8	25.5	49.5	31.0	21.0	10.0
362PLPDSP-6M-8M	6	8	31.5	59.5	41.0	26.5	12.0

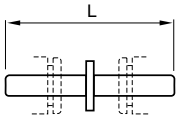
*Aluminum tail piece

63PLP Double Male Union

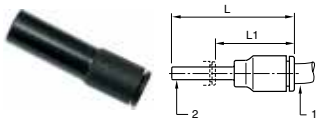
PART NO.	TUBE SIZE IN	L
63PLP-4	1/4	1.52
63PLP-6	3/8	2.03

*Nickel-plated brass

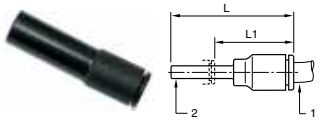
63PLP Double Male Union

PART NO.	TUBE SIZE MM	L
63PLP-4M	4	34 1/2
63PLP-6M	6	38 1/2
63PLP-8M	8	41
63PLP-10M	10	51 1/2
63PLP-12M	12	60
63PLP-14M	14	69 1/2



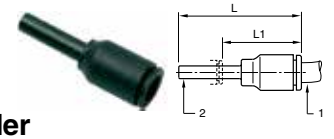
67PLP Tube Reducer

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	L	L1
67PLP-2-4M	1/8	5/32 (4M)	1.79	1.32
67PLP-2-3	1/8	3/16	1.79	1.14
67PLP-2-4	1/8	1/4	1.79	1.22
67PLP-4M-3	5/32 (4MM)	3/16	1.48	.83
67PLP-4M-4	5/32 (4MM)	1/4	1.48	.91
67PLP-4M-6	5/32 (4MM)	3/8	1.61	.81
67PLP-3-8M	3/16	5/16 (8M)	1.79	1.06
67PLP-3-4	3/16	1/4	1.79	1.22
67PLP-4-8M	1/4	5/16 (8M)	1.61	.89
67PLP-4-6	1/4	3/8	1.61	.81
67PLP-4-8	1/4	1/2	1.97	.98
67PLP-8M-6	5/16 (8MM)	3/8	1.93	1.12
67PLP-8M-8	5/16 (8MM)	1/2	2.01	1.02
67PLP-6-8	3/8	1/2	2.01	1.04



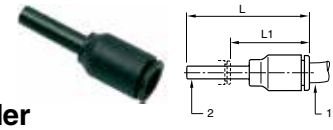
67PLP Tube Reducer

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	L	L1
67PLP-4M-6M	4	6	37.5	23.5
67PLP-4M-8M	4	8	37.5	19.0
67PLP-6M-8M	6	8	36.0	20.5
67PLP-4M-10M	4	10	44.0	22.5
67PLP-6M-10M	6	10	38.0	17.5
67PLP-8M-10M	8	10	49.0	28.5
67PLP-10M-12M	10	12	56.5	33.5
67PLP-6M-12M	6	12	46.0	23.0
67PLP-8M-12M	8	12	49.0	24.5
67PLP-10M-14M	10	14	58.5	33.5
67PLP-12M-14M	12	14	58.5	33.5
67PLP-6M-14M	6	14	48.0	23.0
67PLP-8M-14M	8	14	48.0	23.0



32PLPSP Tube Expander

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE IN	L	L1
32PLPSP-4-2	1/4	1/8	1.61	1.16
32PLPSP-4-6M	1/4	6M	1.75	1.02
32PLPSP-4-4M	1/4	5/32 (4M)	1.61	1.14
32PLPSP-4-3	1/4	3/16	1.61	1.00
32PLPSP-6-4	3/8	1/4	1.58	1.00

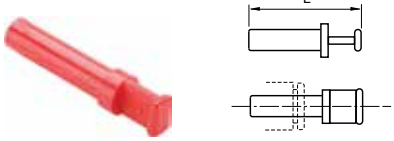


32PLPSP Tube Expander

PART NO.	1 TUBE SIZE MM	2 TUBE SIZE MM	L	L1
32PLPSP-6M-4M	6	4	35.0	23.0
32PLPSP-8M-6M	8	6	45.0	31.5
32PLPSP-10M-8M	10	8	42.5	21.0
32PLPSP-12M-10M	12	10	49.0	24.5

32PLPSP Tube Converter

PART NO.	1 TUBE SIZE IN	2 TUBE SIZE MM	L	L1
32PLPSP-4M-2	1/8	4M	1.61	1.16
32PLPSP-8M-4	1/4	8M	1.58	1.00



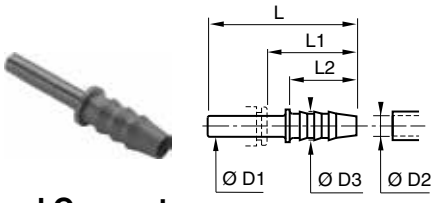
639PLP Plug Inch

PART NO.	TUBE SIZE	L
639PLP-2	1/8	1.30
639PLP-3	3/16	1.36
639PLP-4	1/4	1.44
639PLP-6	3/8	1.67
639PLP-8	1/2	1.91

639PLP Plug Metric

PART NO.	TUBE SIZE	L
639PLP-3M	3	25
639PLP-4M	4	30
639PLP-6M	6	33
639PLP-8M	8	33
639PLP-10M	10	42
639PLP-12M	12	45
639PLP-14M	14	49
639PLP-16M*	16	57

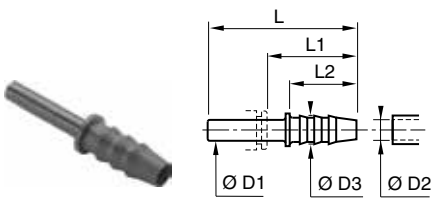
* Nickel Plated Brass



322PLPSP Barbed Connector

PART NO.	OD 1	OD 2	OD 3	L	L1	L2
322PLPSP-4M-2	5/32(4MM)	.120	.20	1.46	.98	.67
322PLPSP-4M-5M	5/32(4MM)	.200	.28	1.46	.98	.67
322PLPSP-4-3*	1/4	3/16		1.65	1.00	
322PLPSP-8M-4	5/16(8MM)	.250	.34	1.55	.83	.67
322PLPSP-8M-8M	5/16(8MM)	.320	.39	1.75	1.02	.87
322PLPSP-6-8M	3/8	.320	.39	1.97	1.16	.87
322PLPSP-8-6*	1/2	.375	.57	2.28	1.34	.87

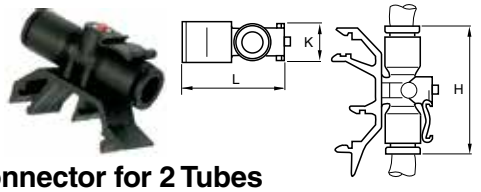
*Nickel-plated brass. Dimensions for OD2 are I.D. of the tube.



322PLPSP Barbed Connector

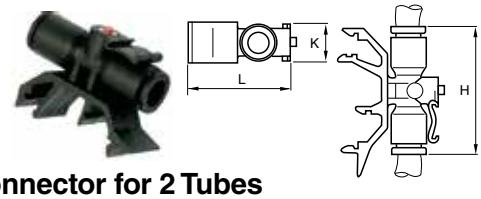
PART NO.	OD 1	OD 2	OD 3	L	L1	L2
322PLPSP-4M-3M	4	3.2	5.0	37.0	25.0	17.0
322PLPSP-4M-5M	4	5.0	7.0	37.0	25.0	17.0
322PLPSP-6M-5M	6	5.0	7.0	39.0	25.0	17.0
322PLPSP-8M-6M	8	6.3	8.5	39.5	21.0	17.0
322PLPSP-8M-8M	8	8.0	10.0	44.5	26.0	22.0
322PLPSP-10M-6M	10	6.3	8.0	45.0	24.5	17.0
322PLPSP-10M-8M	10	8.0	10.0	50.0	29.5	22.0
322PLPSP-12M-8M	12	8.0	10.0	50.0	26.0	22.0
322PLPSP-12M-10M	12	10.0	12.0	48.5	25.5	22.5
322PLPSP-12M-12M	12	12.5	14.5	57.0	34.0	22.5
322PLPSP-14M-12M	14	12.5	14.5	59.5	34.5	22.5

*Nickel-plated brass. Dimensions for OD2 are I.D. of the tube.



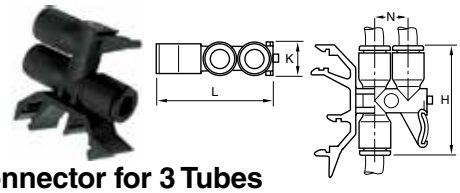
32PLPRC Connector for 2 Tubes

PART NO.	TUBE SIZE IN	H	K	L
32PLPRC-4	1/4	1.44	.47	1.18



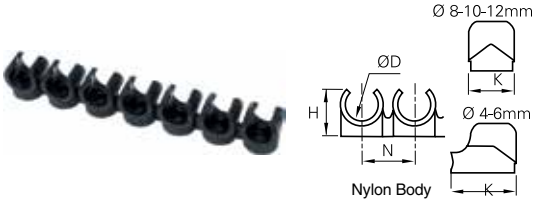
32PLPRC Connector for 2 Tubes

PART NO.	TUBE SIZE MM	H	K	L
32PLPRC-4M	4	36.5	11.0	39.5
32PLPRC-6M	6	36.5	11.0	39.5
32PLPRC-8M	8	46.0	13.0	44.5



32PLPDRC Connector for 3 Tubes

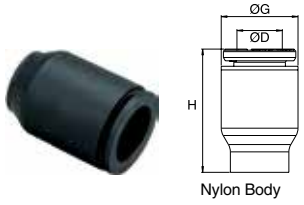
PART NO.	TUBE SIZE MM	H	K	L	N
32PLPDRC-4M	4	36.5	11.0	39.5	
32PLPDRC-6M	6	36.5	11.0	39.5	
32PLPDRC-8M	8	46.0	13.0	14.5	



Clip Strips for Tubing and Fittings

PART NO.	D TUBE	LF3000 TO BE CLIPPED	H MM	K MM	N MM	NO. PER STRIP
CLIP 04 00	5/32, 4MM	–	9	13.5	10.5	8
CLIP 06 00	1/4, 3/16, 6MM	–	10.5	13	10.5	8
CLIP 08 00	5/16, 8MM	5/32, 4MM	12.5	10.5	12	7
CLIP 10 00	3/8, 10MM	1/4, 6MM	14	12	15	6
CLIP 12 00	1/2, 12MM		16.5	14	16.5	5
CLIP 14 00	14MM	5/16, 8MM	18	16	20.5	4

Clip strips come complete with screws of .375 inches in length.

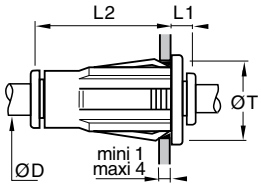


3151 End Caps

PART NO.	D IN	G MM	H MM
3151 53 00	1/8	.33	.55
3151 04 00	5/32	.33	.55
3151 56 00	1/4	.41	.64
3151 08 00	5/16	.53	.86
3151 60 00	3/8	.53	.86

3151 End Caps

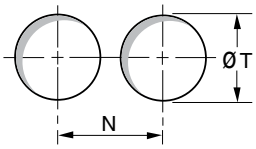
PART NO.	D MM	G MM	H MM
3151 04 00	4	8.5	14.7
3151 06 00	6	10.5	16.9
3151 08 00	8	13.5	21.9
3151 10 00	10	16	22.2
3151 12 00	12	19	27.7



32PLPBHP Plug-in Bulkhead Union

PART NO.	TUBE SIZE IN	L1	L2	ØT
32PLPBHP-4M	5/32 (4MM)	.26	1.080	.62
32PLPBHP-4	1/4	.26	1.240	.75
32PLPBHP-8M	5/16 (8MM)	.30	1.280	.87
32PLPBHP-6	3/8	.30	1.630	1.12
32PLPBHP-8	1/2	.30	1.710	1.25

Minimum distance between fittings.
Diameter of fixing hole.



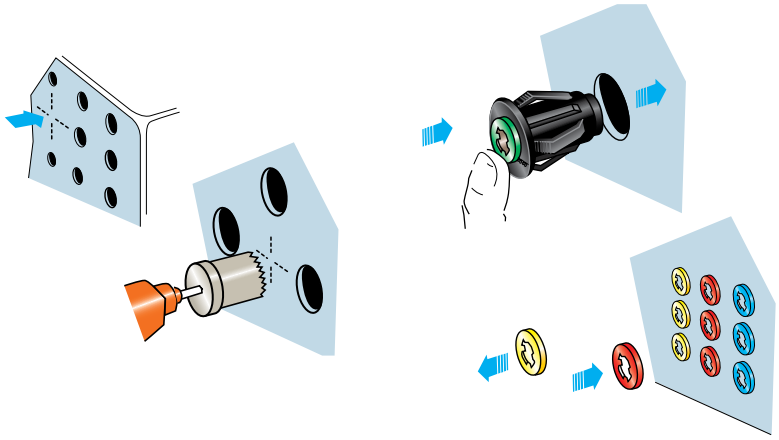
Fixing Hole

D		5/32	1/4	5/16	3/8	1/2
T	inches	5/8"	3/4"	7/8"	1 1/8"	1 1/4"
	mm	15.87	19.05	22.22	28.57	31.75
N	in	.89	1.00	1.08	1.34	1.50

Tolerance T: +0.3 -0.1

Installation

1. Mark out the fixing hole
2. Make hole in panel
3. Simply push the fitting into place
4. To complete the installation
5. To identify circuits simply remove the black release button and replace with colored one



In all sizes of the LF3000 fittings, except 3/16, the push button is an integral part of the design which makes it non-removable, and comes standard in black. For identification of the circuits, colored caps (p/n 3110) fit over the black push button.

On the 3/16 sizes, the buttons are removable and can be replaced with a button of another color (p/n 3330).

Six colors are available which allow color coding of the fitting, in association with tubes of the same color.

3110 - 3330 Caps Manual Release Button - Inch

TUBE O.D.	WHITE PART NO.	BLACK PART NO.	GREEN PART NO.	RED PART NO.	BLUE PART NO.	YELLOW PART NO.
1/8	3110 53 00	-	3110 53 02	3110 53 03	3110 53 04	3110 53 05
5/32	3110 04 00	3330 04 01	3110 04 02	3110 04 03	3110 04 04	3110 04 05
3/16	3330 55 00	3330 55 01	3330 55 02	3330 55 03	3330 55 04	3330 55 05
1/4	3110 56 00	3330 56 01	3110 56 02	3110 56 03	3110 56 04	3110 56 05
5/16	3110 08 00	-	3110 08 02	3110 08 03	3110 08 04	3110 08 05
3/8	3110 60 00	-	3110 60 02	3110 60 03	3110 60 04	3110 60 05
1/2	3110 62 00	3330 62 01	3110 62 02	3110 62 03	3110 62 04	3110 62 05

3110 - 3330 Caps Manual Release Button - Metric

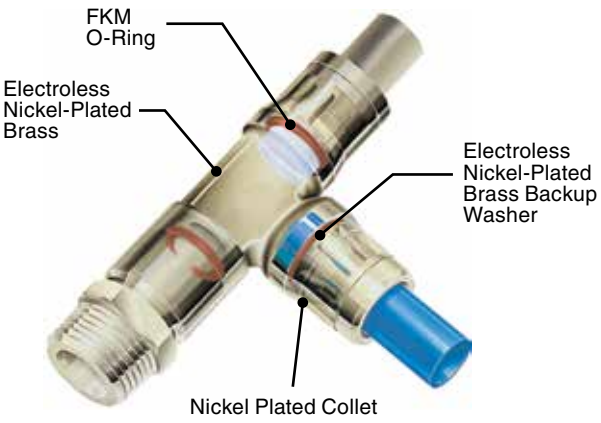
TUBE MM	WHITE PART NO.	BLACK PART NO.	GREEN PART NO.	RED PART NO.	BLUE PART NO.	YELLOW PART NO.
4	3110 04 00	3330 04 01	3110 04 02	3110 04 03	3110 04 04	3110 04 05
6	3110 06 00	3330 06 01	3110 06 02	3110 06 03	3110 06 04	3110 06 05
8	3110 08 00	-	3110 08 02	3110 08 03	3110 08 04	3110 08 05
10	3110 10 00	-	3110 10 02	3110 10 03	3110 10 04	3110 10 05
12	3110 12 00	-	3110 12 02	3110 12 03	3110 12 04	3110 12 05
14	3110 14 00	-	3110 14 02	3110 14 03	3110 14 04	3110 14 05

Prestolok PLM Metal Push-to-Connect Fittings

To meet your technical and environment requirements, Parker's Prestlok PLM fittings offers the robustness, reliability and resistance to industrial fluids for the most demanding environments.

Product Features:

- High phosphorous, FDA-compliant, chemical resistant, nickel-plated collet and body
- FKM seal
- Chemical, corrosion, and abrasion resistance
- NPT, BSPT, BSPP, and metric threads



Markets:

- Industrial
- Chemical
- Life Science
- Automation
- Food Processing

Applications:

- Food fluids
- harsh Detergents
- Cleaning In Cold/ Hot Water
- Steam
- Oils

Specifications:

Pressure Range	7 to 290 PSI (0.4 to 19.9 bar)
Temperature Range	-4˚ to +302˚ F (-20° to +150° C)

Note: Max. pressure and temperature rangedepend on the type of tubing used.

Compatible Tubing:

- Polyethylene
- Polyurethane 95 Durometer Shore A
- FEP
- Nylon

Tube to Male NPT

68PLM
Male Connector

169PLM
Male Elbow

171PLM
Male Run Tee

172PLM
Male Branch Tee

Tube to Tube

62PLM
Union

165PLM
Union Elbow

164PLM
Union Tee

Bulkhead Union

62PLMBH
Bulkhead Union

Male Standpipes

68PLMSP
Male Standpipe to BSPT

68PLMSP
Male Standpipe to BSPP

Metric Tube to Male BSPT

68PLM
Male Connector

169PLM
Male Elbow

169PLMX
Extended Male Elbow

171PLM
Male Run Tee

172PLM
Male Branch Tee

Metric Tube to Male BSPP

68PLM
Male Connector

169PLM
Male Elbow

169PLMX
Extended Male Elbow

171PLM
Male Run Tee

172PLM
Male Branch Tee

Metric Tube to Female BSPP

66PLM
Female Connector

Metric Tube to Metric Tube

62PLM
Union

165PLM
Union Elbow

164PLM
Union Tee

Metric Bulkhead Unions

62PLMBH
Bulkhead Union

66PLMBH
Female Bulkhead

165PLMBH
Bulkhead Union

Metric Plug-in

67PLM
Tube Reducer

62PLMSP
Tube Expander

62PLMSP
Tube Converter

122PLMSP
Barbed Connector

Metric Banjo Fitting

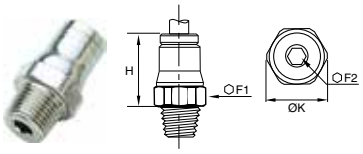
169PLMBJ
Single Banjo

Metric Auxiliary Components

639PLM
Plug

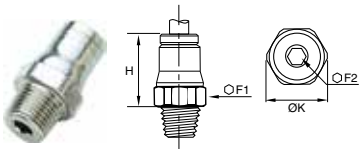
PLMC
Cartridge

63PLM
Double Male Union



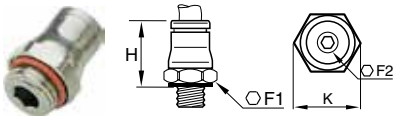
68PLM Male Connector Inch Tube to NPT/UNF

PART NO.	TUBE SIZE IN	NPT/UNF	F1 MM	F2 MM	H IN	K IN
68PLM-4M-0	5/32(4MM)	10-32	10	2.5	.61	.43
68PLM-4M-2	5/32(4MM)	1/8	11	3.0	.59	.47
68PLM-4M-4	5/32(4MM)	1/4	14	3.0	.59	.59
68PLM-4-0	1/4	10-32	13	2.5	.75	.55
68PLM-4-2	1/4	1/8	13	4.0	.67	.55
68PLM-4-4	1/4	1/4	14	4.0	.67	.59
68PLM-4-6	1/4	3/8	18	5.0	.67	.77
68PLM-6-2	3/8	1/8	18	4.0	.97	.77
68PLM-6-4	3/8	1/4	18	7.0	.95	.77
68PLM-6-6	3/8	3/8	18	8.0	.91	.77
68PLM-6-8	3/8	1/2	22	8.0	.95	.94
68PLM-8-6	1/2	3/8	22	9.0	.95	.94
68PLM-8-8	1/2	1/2	22	10.0	.95	.94



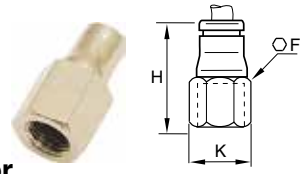
68PLM Male Connector Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F1 MM	F2 MM	H MM	K MM
68PLM-4M-2R	4	1/8	10	3	15.00	11.00
68PLM-4M-4R	4	1/4	14	3	15.00	15.00
68PLM-6M-2R	6	1/8	13	4	17.00	14.00
68PLM-6M-4R	6	1/4	14	4	17.00	15.00
68PLM-8M-2R	8	1/8	15	5	19.00	16.00
68PLM-8M-4R	8	1/4	15	6	18.00	16.00
68PLM-8M-6R	8	3/8	17	6	18.50	18.50
68PLM-10M-4R	10	1/4	18	7	23.00	19.50
68PLM-10M-6R	10	3/8	18	8	22.50	19.50
68PLM-10M-8R	10	1/2	22	8	22.50	24.00
68PLM-12M-4R	12	1/4	20	7	25.50	22.00
68PLM-12M-6R	12	3/8	20	9	24.00	22.00
68PLM-12M-8R	12	1/2	22	10	23.00	24.00
68PLM-14M-6R	14	3/8	22	9	27.00	24.00
68PLM-14M-8R	14	1/2	24	11	26.00	26.00



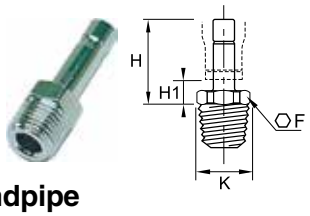
68PLM Male Connector Tube to UNF, BSPP or Metric

PART NO.	TUBE SIZE MM	BSPP/ METRIC	F1 MM	F2 MM	H MM	K MM
68PLM-4M-M5	4	M5X0.8	10	2.50	15.50	11.00
68PLM-4M-M6	4	M6X1	13	3.00	14.50	14.00
68PLM-4M-2G	4	1/8	10	3.00	16.00	11.00
68PLM-4M-4G	4	1/4	16	3.00	14.50	17.50
68PLM-4M-M8	4	M8X1	11	3.00	14.50	12.00
68PLM-6M-M5	6	M5X0.8	13	2.50	19.00	14.00
68PLM-6M-2G	6	1/8	13	4.00	17.50	14.00
68PLM-6M-M10	6	M10X1	13	4.00	17.50	14.00
68PLM-6M-4G	6	1/4	16	4.00	17.00	17.50
68PLM-8M-2G	8	1/8	15	5.00	20.00	16.00
68PLM-8M-4G	8	1/4	16	6.00	18.00	17.50
68PLM-8M-6G	8	3/8	20	6.00	19.00	22.00
68PLM-10M-4G	10	1/4	18	7.00	25.00	19.50
68PLM-10M-6G	10	3/8	20	8.00	22.50	22.00
68PLM-10M-8G	10	1/2	24	8.00	22.50	26.00
68PLM-12M-4G	12	1/4	20	7.00	27.00	22.00
68PLM-12M-6G	12	3/8	20	9.00	26.00	22.00
68PLM-12M-8G	12	1/2	24	10.00	23.50	26.00
68PLM-14M-6G	14	3/8	22	9.00	28.00	24.00
68PLM-14M-8G	14	1/2	24	11.00	26.50	26.00



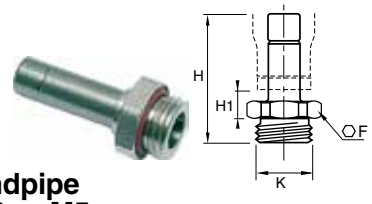
66PLM Female Connector Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	K MM
66PLM-4M-M5	4	M5X0.8	10	22.00	11.00
66PLM-4M-2G	4	1/8	14	25.00	15.00
66PLM-4M-4G	4	1/4	17	29.00	18.50
66PLM-6M-2G	6	1/8	14	27.50	15.00
66PLM-6M-4G	6	1/4	17	31.50	18.50
66PLM8M-2G	8	1/8	15	28.50	16.00
66PLM-8M-4G	8	1/4	17	32.50	18.50
66PLM-10M-6G	10	3/8	22	38.00	24.00
66PLM-12M-6G	12	3/8	22	39.00	24.00
66PLM-12M-8G	12	1/2	24	43.50	26.00



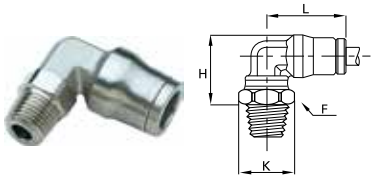
68PLMSP Male Stud Standpipe Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	H1 MM	K MM
68PLMSP-4M-2R	4	1/8	10	21.00	7.00	11.00
68PLMSP-6M-2R	6	1/8	10	23.50	6.50	11.00
68PLMSP-6M-4R	6	1/4	10	23.50	6.50	15.00
68PLMSP-8M-2R	8	1/8	10	24.00	6.50	11.00
68PLMSP-8M-4R	8	1/4	14	24.00	6.50	15.00
68PLMSP-10M-4R	10	1/4	14	22.00	6.50	15.00
68PLMSP-10M-6R	10	3/8	17	30.00	7.50	18.50
68PLMSP-12M-6R	12	3/8	17	31.00	7.50	18.50
68PLMSP-12M-8R	12	1/2	22	38.00	7.50	24.00
68PLMSP-14M-8R	14	1/2	22	33.00	8.00	24.00



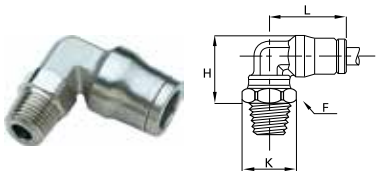
68PLMSP Male Standpipe Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	H1 MM	K MM
68PLMSP-4M-M5	4	M5X0.8	13	25.50	7.00	14.00
68PLMSP-4M-2G	4	1/8	16	26.50	7.00	17.50
68PLMSP-4M-4G	4	1/4	8	25.00	7.50	8.70
68PLMSP-6M-2G	6	1/8	13	28.00	6.50	14.00
68PLMSP-6M-4G	6	1/4	16	29.00	6.50	17.50
68PLMSP-8M-2G	8	1/8	13	28.50	6.50	14.00
68PLMSP-8M-4G	8	1/4	16	29.50	6.50	17.50
68PLMSP-8M-6G	8	3/8	20	30.50	7.50	22.00
68PLMSP-10M-4G	10	1/4	16	34.50	6.50	17.50
68PLMSP-10M-6G	10	3/8	20	35.50	7.50	22.00
68PLMSP-10M-8G	10	1/2	24	37.00	7.50	26.00
68PLMSP-12M-6G	12	3/8	20	36.50	7.50	22.00
68PLMSP-12M-8G	12	1/2	24	38.00	7.50	26.00
68PLMSP-14M-8G	14	1/2	24	40.00	8.00	26.00



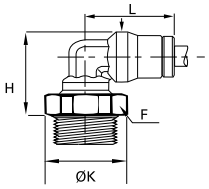
169PLM Male Elbow Inch Tube to NPT, UNF

PART NO.	TUBE SIZE IN	NPT/UNF	F MM	H IN	K IN	L IN
169PLM-4M-0	5/32(4MM)	10-32	10	0.71	0.43	.71
169PLM-4M-2	5/32(4MM)	1/8	11	.59	.47	.71
169PLM-4M-4	5/32(4MM)	1/4	14	.67	.60	.71
169PLM-4-2	1/4	1/8	11	.69	.47	.87
169PLM-4-4	1/4	1/4	14	.75	.60	.87
169PLM-4-6	1/4	3/8	18	.75	.77	.87
169PLM-6-4	3/8	1/4	15	.93	.63	1.14
169PLM-6-6	3/8	3/8	18	1.02	.77	1.14
169PLM-6-8	3/8	1/2	22	1.06	.94	1.14
169PLM-8-6	1/2	3/8	18	1.14	.77	1.22
169PLM-8-8	1/2	1/2	22	1.14	.94	1.22



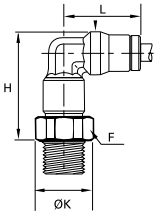
169PLM Male Elbow Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	K MM	L MM
169PLM-4M-2R	4	1/8	11	15.00	12.00	18.00
169PLM-4M-4R	4	1/4	14	17.00	15.00	18.00
169PLM-6M-2R	6	1/8	11	17.50	12.00	21.50
169PLM-6M-4R	6	1/4	14	19.00	15.00	21.50
169PLM-8M-2R	8	1/8	11	19.50	12.00	23.50
169PLM-8M-4R	8	1/4	14	21.00	15.00	23.50
169PLM-8M-6R	8	3/8	17	21.00	18.50	23.50
169PLM-10M-4R	10	1/4	15	23.50	16.00	29.00
169PLM-10M-6R	10	3/8	17	25.50	18.50	29.00
169PLM-12M-4R	12	1/4	15	26.00	16.00	31.00
169PLM-12M-6R	12	3/8	17	28.50	18.50	31.00
169PLM-12M-8R	12	1/2	21	28.50	23.00	31.00
169PLM-14M-6R	14	3/8	19	29.00	21.00	34.00
169PLM-14M-8R	14	1/2	24	30.00	26.00	34.00



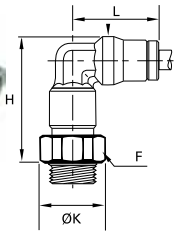
169PLM Male Elbow Tube to BSPP, Metric

PART NO.	TUBE SIZE MM	BSPP/ METRIC	F MM	H MM	K MM	L MM
169PLM-4M-M5	4	M5X0.8	10	18.00	11.00	18.00
169PLM-4M-2G	4	1/8	13	17.00	14.00	18.00
169PLM-4M-M6	4	M6X1	10	18.00	11.00	18.00
169PLM-4M-4G	4	1/4	16	17.50	17.50	18.00
169PLM-4M-M8	4	M8X1	11	18.00	12.00	18.00
169PLM-6M-2G	6	1/8	13	19.00	14.00	21.50
169PLM-6M-M10	6	M10X1	13	19.00	14.00	21.50
169PLM-6M-4G	6	1/4	16	19.50	17.50	21.50
169PLM-8M-2G	8	1/8	13	20.50	14.00	23.50
169PLM-8M-4G	8	1/4	16	21.50	17.50	23.50
169PLM-8M-6G	8	3/8	20	21.50	22.00	23.50
169PLM-10M-4G	10	1/4	16	27.00	17.50	29.00
169PLM-10M-6G	10	3/8	20	25.50	22.00	29.00
169PLM-12M-4G	12	1/4	16	29.50	17.50	31.00
169PLM-12M-6G	12	3/8	20	28.50	22.00	31.00
169PLM-12M-8G	12	1/2	24	28.50	26.00	31.00
169PLM-14M-6G	14	3/8	20	29.00	22.00	34.00
169PLM-14M-8G	14	1/2	24	29.50	26.00	34.00



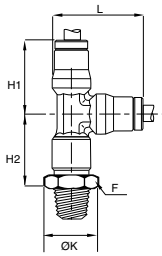
169PLMX Extended Male Elbow Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	K MM	L MM
169PLMX-4M-2R	4	1/8	10	24.50	11.00	18.00
169PLMX-6M-2R	6	1/8	13	29.50	14.00	21.50
169PLMX-6M-4R	6	1/4	14	30.50	15.00	21.50
169PLMX-8M-2R	8	1/8	14	32.50	15.00	23.50
169PLMX-8M-4R	8	1/4	14	34.00	15.00	23.50
169PLMX-10M-4R	10	1/4	18	39.00	19.50	29.00



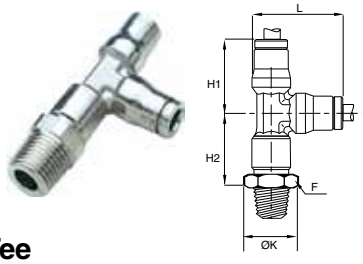
169PLMX Extended Male Elbow Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	K MM	L MM
169PLMX-4M-M5	4	M5X0.8	10	27.50	11.00	18.00
169PLMX-4M-2G	4	1/8	13	25.50	14.00	18.00
169PLMX-6M-2G	6	1/8	13	31.00	14.00	18.00
169PLMX-6M-4G	6	1/4	16	30.50	17.50	21.50
169PLMX-8M-2G	8	1/8	14	33.50	15.00	23.50
169PLMX-8M-4G	8	1/4	16	34.00	17.50	23.50
169PLMX-10M-4G	10	1/4	18	42.00	19.50	29.00
169PLMX-10M-6G	10	3/8	20	41.00	22.00	29.00
169PLMX-12M-4G	12	1/4	20	47.00	22.00	31.00
169PLMX-12M-6G	12	3/8	20	46.00	22.00	31.00
169PLMX-14M-8G	14	1/2	24	49.00	26.00	34.00



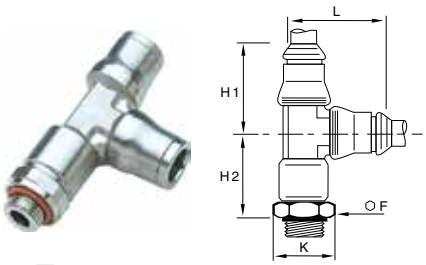
171PLM Male Run Tee Inch Tube to Tube to NPT, UNF

PART NO.	TUBE SIZE IN	NPT/ UNF	F MM	H1 IN	H2 IN	K IN	L IN
171PLM-4M-2	5/32(4MM)	1/8	11	.71	.77	.47	.91



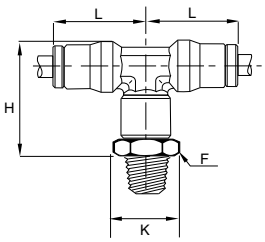
171PLM Male Run Tee
Metric Tube To Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H1 MM	H2 MM	K MM	L MM
171PLM-4M-2R	4	1/8	10	18.00	19.50	11.00	23.00
171PLM-6M-2R	6	1/8	13	21.50	23.50	14.00	28.00
171PLM-6M-4R	6	1/4	14	21.50	24.50	15.00	28.00
171PLM-8M-2R	8	1/8	14	23.50	25.00	15.00	31.00
171PLM-8M-4R	8	1/4	14	23.50	26.50	15.00	31.00
171PLM-10M-4R	10	1/4	18	29.00	30.50	19.50	37.50
171PLM-10M-6R	10	3/8	18	29.00	32.50	19.50	37.50
171PLM-12M-6R	12	3/8	21	31.00	36.50	23.00	40.50
171PLM-14M-8R	14	1/2	22	34.00	40.00	24.00	45.00



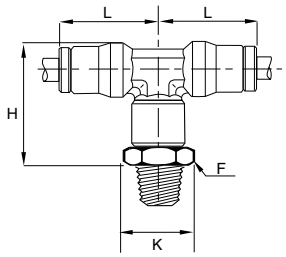
171PLM Male Run Tee
Tube To Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/ M5	F MM	H1 MM	H2 MM	K MM	L MM
171PLM-4M-M5	4	M5X0.8	10	18.00	22.50	11.00	23.00
171PLM-6M-2G	6	1/8	13	21.50	25.00	14.00	28.00
171PLM-6M-4G	6	1/4	16	21.50	24.50	17.50	28.00
171PLM-8M-2G	8	1/8	14	23.50	26.50	15.00	31.00
171PLM-8M-4G	8	1/4	16	23.50	26.50	17.50	31.00
171PLM-10M-4G	10	1/4	18	29.00	33.00	19.50	37.50
171PLM-12M-6G	12	3/8	21	31.00	36.50	23.00	40.50
171PLM-14M-8G	14	1/2	24	34.00	38.50	26.00	45.00



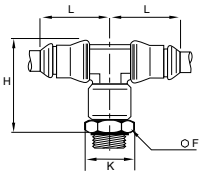
172PLM Male Branch Tee
Inch Tube to NPT to tube

PART NO.	TUBE SIZE IN	NPT/UNF	F MM	H IN	K IN	L IN
172PLM-4M-0	5/32(4MM)	10-32	10.00	1.00	.47	.71



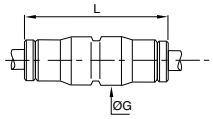
172PLM Male Branch Tee
Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	K MM	L MM
172PLM-4M-2R	4	1/8	10	24.50	11.00	18.00
172PLM-6M-2R	6	1/8	13	29.50	14.00	21.50
172PLM-6M-4R	6	1/4	14	30.50	15.00	21.50
172PLM-8M-2R	8	1/8	14	32.50	15.00	23.50
172PLM-8M-4R	8	1/4	14	34.00	15.00	23.50
172PLM-10M-4R	10	1/4	18	39.00	19.50	29.00
172PLM-10M-6R	10	3/8	18	41.00	19.50	29.00
172PLM-12M-6R	12	3/8	21	46.50	23.00	31.00
172PLM-14M-8R	14	1/2	22	50.50	24.00	34.00



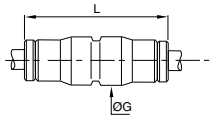
172PLM Male Branch Tee Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/M5	F MM	H MM	K MM	L MM
172PLM-4M-M5	4	M5X0.8	10	27.50	11.00	18.00
172PLM-4M-2G	4	1/8	13	25.50	14.00	18.00
172PLM-6M-2G	6	1/8	13	31.00	14.00	21.50
172PLM-6M-4G	6	1/4	16	30.50	17.50	21.50
172PLM-8M-2G	8	1/8	14	33.50	15.00	23.50
172PLM-8M-4G	8	1/4	16	34.00	17.50	23.50
172PLM-10M-4G	10	1/4	18	42.00	19.50	29.00
172PLM-12M-6G	12	3/8	21	46.00	23.00	31.00
172PLM-14M-8G	14	1/2	24	49.00	26.00	34.00



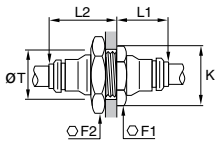
62PLM Straight Union Inch Tube to Tube

PART NO.	TUBE SIZE IN	G IN	L IN
62PLM-4	1/4	.49	1.44
62PLM-6	3/8	.67	1.87
62PLM-8	1/2	.79	1.89



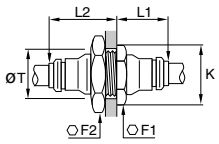
62PLM Straight Union Metric Tube to Tube

PART NO.	TUBE SIZE MM	G MM	L MM
62PLM-4M	4MM(5/32)	10.00	30.50
62PLM-6M	6	12.00	36.50
62PLM-8M	8MM(5/16)	15.00	37.50
62PLM-10M	10	17.50	47.50
62PLM-12M	12	19.50	50.00
62PLM-14M	14	21.50	52.50



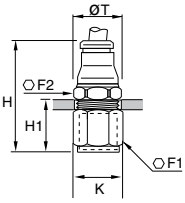
62PLMBH Bulkhead Connector Inch Tube to Tube

PART NO.	TUBE SIZE IN	F1 MM	F2 MM	K IN	L1 IN	L2 IN	T IN
62PLMBH-4	1/4	16	17	.69	.67	.89	.59
62PLMBH-6	3/8	22	27	.95	.87	1.10	.85
62PLMBH-8	1/2	24	24	1.16	.89	1.14	1.04



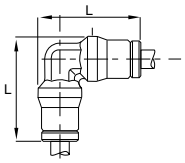
62PLMBH Bulkhead Connector Metric Tube to Tube

PART NO.	TUBE SIZE MM	F1 MM	F2 MM	K MM	L1 MM	L2 MM	T MM
62PLMBH-4M	4MM(5/32)	13	14	14.00	14.00	20.00	12.50
62PLMBH-6M	6	16	17	17.50	17.00	22.00	15.00
62PLMBH-8M	8MM(5/16)	18	19	19.50	18.50	23.50	17.00
62PLMBH-10M	10	22	27	24.00	21.50	26.50	21.00
62PLMBH-12M	12	24	24	26.00	23.00	27.00	23.00
62PLMBH-14M	14	27	27	29.50	25.50	29.50	25.00



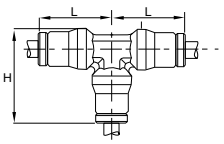
66PLMBH Female Bulkhead Connector Metric Tube to BSPP

PART NO.	TUBE SIZE MM	BSPP	F1 MM	F2 MM	H MM	H1 MM	K MM	T MM
66PLMBH-4M-2G	4	1/8	14	14	30.50	11.00	15.00	13
66PLMBH-6M-2G	6	1/8	17	17	32.50	11.00	18.50	15
66PLMBH-6M-4G	6	1/4	17	17	37.00	15.00	18.50	15
66PLMBH-8M-2G	8	1/8	19	19	34.00	10.50	21.00	17
66PLMBH-8M-4G	8	1/4	19	19	38.00	14.50	21.00	17
66PLMBH-10M-6G	10	3/8	22	27	42.50	16.00	24.00	21
66PLMBH-12M-6G	12	3/8	24	24	43.00	16.00	26.00	23
66PLMBH-12M-8G	12	1/2	27	24	48.50	21.50	29.50	23

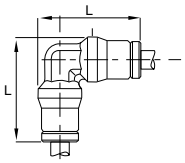
165PLM Union Elbow Inch Tube

PART NO.	TUBE SIZE IN	L IN
165PLM-4	1/4	1.12
165PLM-6	3/8	1.48
165PLM-8	1/2	1.61

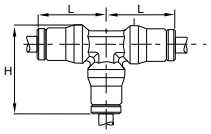
164PLM Union Tee Inch Tube

PART NO.	TUBE SIZE IN	H IN	L IN
164PLM-4	1/4	1.12	.87
164PLM-6	3/8	1.48	1.14
164PLM-8	1/2	1.61	1.22

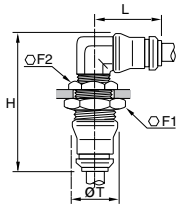
165PLM Union Elbow Metric Tube

PART NO.	TUBE SIZE MM	L MM
165PLM-4M	4MM(5/32)	23.00
165PLM-6M	6	28.00
165PLM-8M	8MM(5/16)	31.00
165PLM-10M	10	37.50
165PLM-12M	12	40.50
165PLM-14M	14	45.00

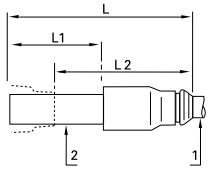
164PLM Union Tee Metric Tube

PART NO.	TUBE SIZE MM	H MM	L MM
164PLM-4M	4MM(5/32)	23.00	18.00
164PLM-6M	6	28.00	21.50
164PLM-8M	8MM(5/16)	31.00	23.50
164PLM-10M	10	37.50	29.00
164PLM-12M	12	40.50	31.00
164PLM-14M	14	45.00	34.00

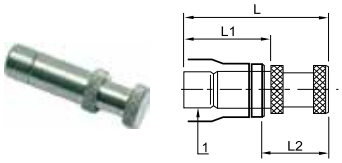
165PLMBH Bulkhead Elbow Metric Tube

PART NO.	TUBE SIZE MM	F1 MM	F2 MM	H MM	L MM	T MM
165PLMBH-4M	4	13	14	35.00	18.00	12.50
165PLMBH-6M	6	16	17	40.50	21.50	15.00
165PLMBH-8M	8	18	19	44.00	23.50	17.00
165PLMBH-10M	10	22	27	51.00	29.00	21.00
165PLMBH-12M	12	24	24	55.00	31.00	23.00
165PLMBH-14M	14	27	27	59.00	34.00	25.00

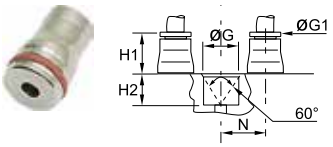
67PLM Plug-In Reducer Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	L MM	L1 MM	L2 MM
67PLM-4M-6M	4	6	34.50	19.00	17.50
67PLM-4M-8M	4	8	35.50	20.00	18.00
67PLM-6M-8M	6	8	37.00	20.00	19.50
67PLM-6M-10M	6	10	43.50	25.00	21.00
67PLM-8M-10M	8	10	44.00	25.00	21.50
67PLM-8M-12M	8	12	45.00	26.00	21.50
67PLM-10M-12M	10	12	50.00	26.00	26.50
67PLM-12M-14M	12	14	53.00	28.00	28.50



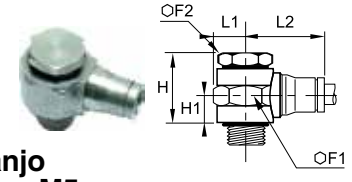
639PLM Plug Metric

PART NO.	TUBE 1 SIZE MM	L MM	L1 MM	L2 MM
639PLM-4M	4	25.50	17.00	11.50
639PLM-6M	6	30.50	19.50	13.50
639PLM-8M	8	33.00	20.00	16.00
639PLM-10M	10	40.00	25.00	18.00
639PLM-12M	12	43.00	26.00	20.00
639PLM-14M	14	47.00	28.00	22.50



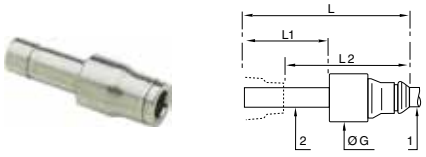
PLMC Cartridge

PART NO.	TUBE SIZE MM	G +.1 - 0	H1 MM	H2 MM	N MM
PLMC-4M	4	10.00	9.00	8.50	11.00
PLMC-6M	6	12.00	11.00	8.50	13.50
PLMC-8M	8	15.00	12.50	8.50	16.00
PLMC-10M	10	17.50	14.50	10.50	20.00
PLMC-12M	12	19.50	15.00	10.50	22.50
PLMC-14M	14	21.50	16.50	12.00	25.00



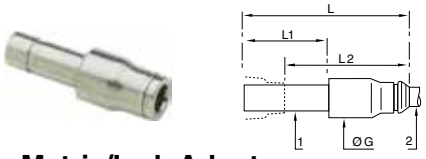
169PLMBJ Single Banjo Metric Tube to BSPP or M5

PART NO.	TUBE SIZE MM	BSPP/ M5	F1 MM	F2 MM	H MM	H1 MM	L1 MM	L2 MM
169PLMBJ-4M-M5	4	M5X0.8	10	8	14.50	6.50	6.00	18.50
169PLMBJ-4M-2G	4	G1/8	17	14	23.00	9.50	10.00	20.50
169PLMBJ-6M-M5	6	M5X0.8	10	8	15.00	7.00	6.00	22.50
169PLMBJ-6M-2G	6	G1/8	17	14	23.00	9.50	10.00	23.50
169PLMBJ-6M-4G	6	G1/4	22	17	22.00	9.00	13.00	25.50
169PLMBJ-8M-2G	8	G1/8	17	14	23.00	9.50	10.00	26.00
169PLMBJ-8M-4G	8	G1/4	22	17	22.00	9.00	13.00	27.50
169PLMBJ-10M-6G	10	G3/8	22	22	33.00	14.00	13.00	32.00



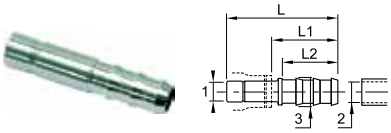
62PLMSP Plug-In Expander Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	G MM	L MM	L1 MM	L2 MM
62PLMSP-4-6	6	4	17	42	22	28



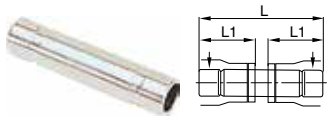
62PLMSP Plug-In Metric/Inch Adapter

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE IN	G MM	L MM	L1 MM	L2 MM
62PLMSP-6M-4	6	1/4	12.50	38.00	19.00	20.50
62PLMSP-10M-6	10	3/8	17.00	49.50	25.00	27.00
62PLMSP-12M-8	12	1/2	20.00	51.00	26.00	27.50



122PLMSP Plug-In Barbed Connector Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	TUBE 3 SIZE MM	L MM	L1 MM	L2 MM
122PLMSP-4M-3M	4	3.20	5.00	40.50	27.00	22.50
122PLMSP-4M-5M	4	5.00	7.00	40.50	27.00	22.50
122PLMSP-6M-5M	6	5.00	7.00	43.00	27.00	22.50
122PLMSP-8M-6M	8	6.30	8.30	42.00	25.00	22.50
122PLMSP-8M-8M	8	8.00	10.00	44.00	27.00	22.50
122PLMSP-10M-6M	10	6.30	8.30	47.50	25.50	22.50
122PLMSP-10M-8M	10	8.00	10.00	47.50	25.50	22.50
122PLMSP-12M-8M	12	8.00	10.00	48.50	25.50	22.50
122PLMSP-12M10M	12	10.00	12.00	48.50	25.50	22.50
122PLMSP-12M12M	12	12.50	14.50	57.00	34.00	29.50
122PLMSP-14M12M	14	12.50	14.50	57.50	33.00	29.50
122PLMSP-14M14M	14	14.00	16.00	59.50	35.00	29.50



63PLM Double Male Union Metric

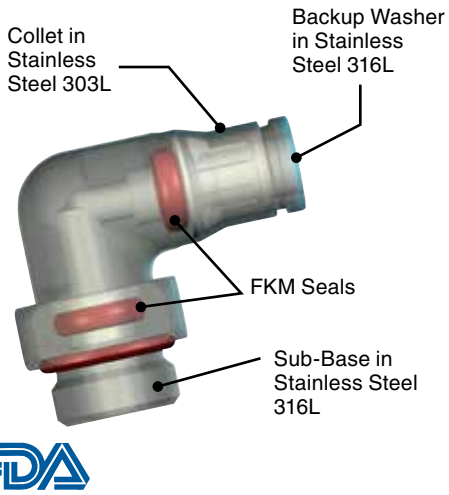
PART NO.	TUBE SIZE MM	L MM	L1 MM
63PLM-4M	4	31.00	14.00
63PLM-6M	6	36.50	17.00
63PLM-8M	8	37.50	17.50
63PLM-10M	10	47.50	22.50
63PLM-12M	12	49.50	23.50
63PLM-14M	14	53.00	25.00

Prestolok PLS Stainless Steel Push-to-Connect Fittings

Parker's Prestolok PLS fittings are ideal for conveying corrosive fluids in aggressive environments. Prestolok PLS fittings provide corrosion resistance and a hygienic external design.

Product Features:

- Stainless steel 303L collet
- Stainless steel 316L body
- FKM seal
- Stainless steel 316L backup washer
- Chemical, corrosion, and abrasion resistance
- Hygienic design reduces retention zones for
- easy cleaning
- NPT, BSPT, BSPP, and metric threads



Markets:

- Petrochemical
- Life Science
- Pulp and Paper
- Food Processing
- Wash Down

Applications:

- Food Fluids
- Chemicals
- Cleaning Agents

Specifications:

Pressure Range	Up to 290 PSI (19.9 bar) depending on type of tubing
Temperature Range	-4° to +302° F (-20° to +150° C)
Vacuum Capability	28" Hg

Compatible Tubing:

- Semi-rigid nylon
- Polyethylene
- Polyurethane 95 Durometer Shore A
- Stainless Steel (grooved)
- Copper (grooved)

Tube to Male NPT

68PLS Male Connector

169PLS Male Elbow

171PLS Male Run Tee

172PLS Male Branch Tee

Tube to Tube

62PLS Union

165PLS Union Elbow

164PLS Union Tee

Bulkhead Union

62PLSBH Bulkhead Union

Standpipe to NPT

68PLSSP Male Standpipe

Metric Tube to Male BSPT

68PLS Male Connector

169PLS Male Elbow

169PLSX Extended Male Elbow

Metric Tube to Male BSPP

68PLS Male Connector

169PLS Male Elbow

169PLSX Extended Male Elbow

171PLS Male Run Tee

172PLS Male Branch Tee

Metric Tube to Male NPT

68PLS Male Connector

169PLS Male Elbow

169PLSX Extended Male Elbow

171PLS Male Run Tee

172PLS Male Branch Tee

Metric Tube to Metric Tube

62PLS Union

165PLS Union Elbow

164PLS Union Tee

Metric Bulkhead Union

62PLSBH Bulkhead Union

Metric Standpipes

68PLSSP Male Standpipe to NPT

68PLSSP Male Standpipe to BSPT

68PLSSP Male Standpipe to BSPP

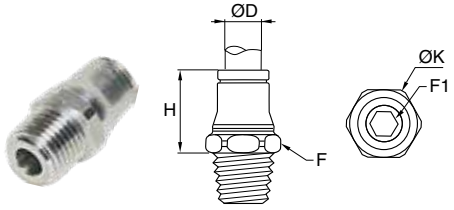
Metric Plugin

67PLS Tube Reducer

Metric Auxiliary Components

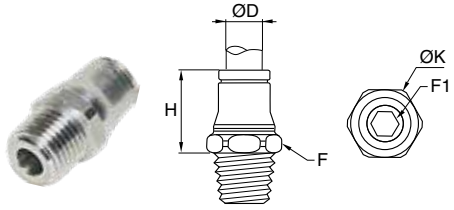
639PLS Plug

PLSC Cartridge



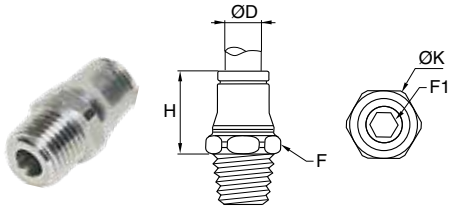
68PLS Male Connector - Inch Tube to NPT,UNF

PART NO.	TUBE SIZE IN	NPT / UNF	F MM	F1 MM	H IN	K IN
68PLS-4M-0	5/32(4MM)	10-32	10	2.5	.59	.43
68PLS-3-2	3/16	1/8	10	3	.61	.43
68PLS-4-2	1/4	1/8	13	4	.75	.55
68PLS-4-4	1/4	1/4	14	4	.69	.59
68PLS-6-4	3/8	1/4	19	6	.98	.83
68PLS-6-6	3/8	3/8	19	7	.94	.83
68PLS-8-4	1/2	1/4	22	7	1.02	.94
68PLS-8-6	1/2	3/8	22	8	.98	.94
68PLS-8-8	1/2	1/2	22	10	.98	.94



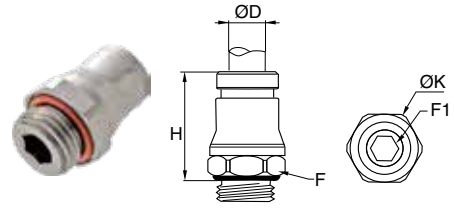
68PLS Male Connector - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	F1 MM	H MM	K MM
68PLS-4M-2R	4	1/8	10	3	14.50	11.00
68PLS-4M-4R	4	1/4	14	3	14.50	15.00
68PLS-6M-2R	6	1/8	13	4	18.00	14.00
68PLS-6M-4R	6	1/4	14	4	16.50	15.00
68PLS-8M-2R	8	1/8	15	5	20.50	16.50
68PLS-8M-4R	8	1/4	15	5	19.00	16.50
68PLS-8M-6R	8	3/8	17	6	19.00	18.50
68PLS-10M-4R	10	1/4	19	6	24.00	21.00
68PLS-10M-6R	10	3/8	19	7	22.50	21.00
68PLS-12M-4R	12	1/4	22	7	25.00	24.00
68PLS-12M-6R	12	3/8	22	8	24.00	24.00
68PLS-12M-8R	12	1/2	22	10	23.00	24.00



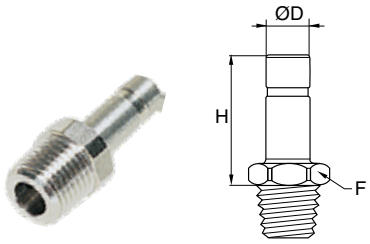
68PLS Male Connector - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	F1 MM	H MM	K MM
68PLS-4M-2	4MM(5/32)	1/8	11	3	14.50	12.00
68PLS-6M-2	6	1/8	13	4	18.00	14.00
68PLS-6M-4	6	1/4	14	4	16.50	15.00
68PLS-8M-2	8MM(5/16)	1/8	15	5	19.00	16.50
68PLS-8M-4	8MM(5/16)	1/4	15	6	18.00	16.50
68PLS-10M-4	10	1/4	19	6	24.00	21.00
68PLS-10M-6	10	3/8	19	7	22.50	21.00
68PLS-12M-4	12	1/4	22	7	25.00	24.00
68PLS-12M-6	12	3/8	22	8	24.00	24.00
68PLS-12M-8	12	1/2	22	10	23.00	24.00



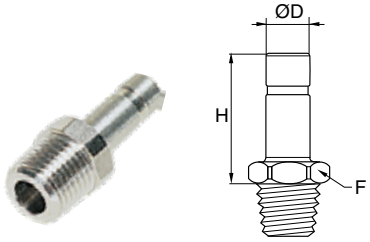
68PLS Male Connector - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	F1 MM	H MM	K MM
68PLS-4M-M5	4	M5X0.8	10	2.5	16.00	11.00
68PLS-4M-2G	4	1/8	13	3	15.00	14.00
68PLS-6M-M5	6	M5X0.8	13	2.5	20.50	14.00
68PLS-6M-2G	6	1/8	13	4	18.00	14.00
68PLS-6M-4G	6	1/4	17	4	18.00	18.50
68PLS-8M-2G	8	1/8	15	5	19.00	16.50
68PLS-8M-4G	8	1/4	17	5	20.50	18.50
68PLS-8M-6G	8	3/8	21	6	20.00	23.00
68PLS-10M-4G	10	1/4	18	7	25.00	19.50
68PLS-10M-6G	10	3/8	21	7	25.00	23.00
68PLS-12M-4G	12	1/4	21	7	27.00	23.00
68PLS-12M-6G	12	3/8	21	9	26.50	23.00



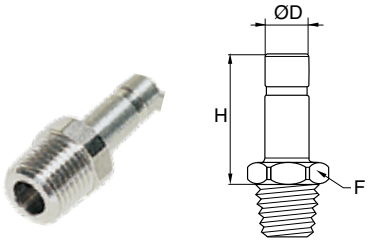
68PLSSP Male Standpipe - Inch Tube to NPT

PART NO.	TUBE SIZE IN	NPT	F IN	H IN
68PLSSP-4-2	1/4	1/8	0.39	1.02
68PLSSP-4-4	1/4	1/4	0.55	1.06
68PLSSP-6-4	3/8	1/4	0.75	1.26
68PLSSP-6-6	3/8	3/8	0.75	1.26
68PLSSP-8-4	1/2	1/4	0.75	1.42
68PLSSP-8-6	1/2	3/8	0.75	1.46
68PLSSP-8-8	1/2	1/2	0.87	1.46



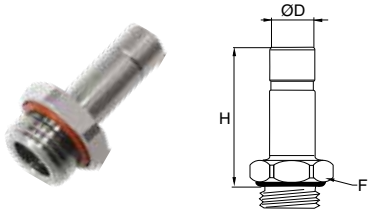
68PLSSP Male Standpipe - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM
68PLSSP-4M-2	4MM(5/32)	1/8	11	21
68PLSSP-6M-2	6	1/8	11	23
68PLSSP-6M-4	6	1/4	14	24
68PLSSP-8M-2	8MM(5/16)	1/8	14	24
68PLSSP-8M-4	8MM(5/16)	1/4	14	25
68PLSSP-10M-4	10	1/4	14	30
68PLSSP-10M-6	10	3/8	17	30
68PLSSP-12M-4	12	1/4	14	31



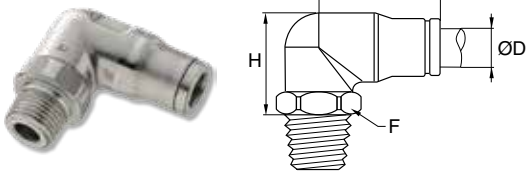
68PLSSP Male Standpipe - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM
68PLSSP-4M-2R	4	1/8	10	21
68PLSSP-6M-2R	6	1/8	10	23
68PLSSP-6M-4R	6	1/4	14	24
68PLSSP-8M-2R	8	1/8	10	24
68PLSSP-8M-4R	8	1/4	14	25
68PLSSP-10M-4R	10	1/4	14	30
68PLSSP-10M-6R	10	3/8	17	30
68PLSSP-12M-4R	12	1/4	14	31
68PLSSP-12M-6R	12	3/8	17	31
68PLSSP-12M-8R	12	1/2	22	32



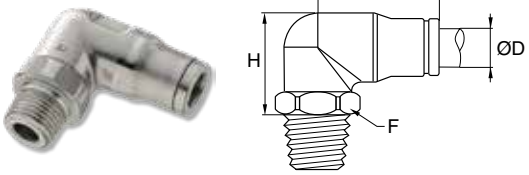
68PLSSP Male Standpipe - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H MM
68PLSSP-4M-M5	4	M5X0.8	7	23.50
68PLSSP-4M-2G	4	1/8	13	22.00
68PLSSP-6M-2G	6	1/8	13	24.00
68PLSSP-6M-4G	6	1/4	17	24.00
68PLSSP-8M-2G	8	1/8	13	25.00
68PLSSP-8M-4G	8	1/4	17	27.00
68PLSSP-8M-6G	8	3/8	21	27.00
68PLSSP-10M-4G	10	1/4	17	32.00
68PLSSP-10M-6G	10	3/8	21	27.00
68PLSSP-12M-4G	12	1/4	17	33.00
68PLSSP-12M-6G	12	3/8	21	33.00



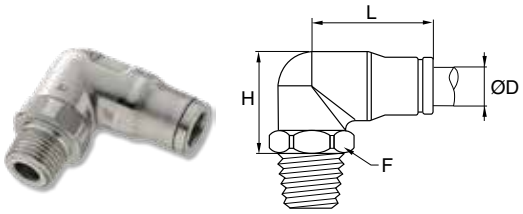
169PLS Male Elbow - Inch Tube to NPT, UNF

PART NO.	TUBE SIZE IN	NPT / UNF	F MM	H IN	L IN
169PLS-4M-0	5/32(4MM)	10-32	10	.98	.77
169PLS-4-2	1/4	1/8	13	.85	.91
169PLS-4-4	1/4	1/4	14	.85	.91
169PLS-6-4	3/8	1/4	17	1.12	1.20
169PLS-6-6	3/8	3/8	19	1.12	1.20
169PLS-8-4	1/2	1/4	22	1.34	1.30
169PLS-8-6	1/2	3/8	22	1.34	1.30
169PLS-8-8	1/2	1/2	22	1.34	1.30



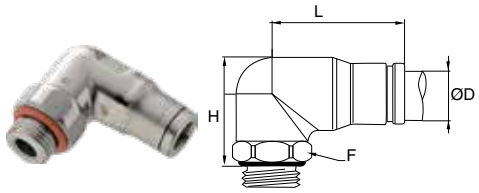
169PLS Male Elbow - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	L MM
169PLS-4M-2R	4	1/8	13	18.00	19.00
169PLS-4M-4R	4	1/4	14	18.00	19.00
169PLS-6M-2R	6	1/8	13	20.00	24.00
169PLS-6M-4R	6	1/4	14	20.00	23.00
169PLS-8M-2R	8	1/8	13	24.50	32.00
169PLS-8M-4R	8	1/4	14	23.50	24.00
169PLS-8M-6R	8	3/8	19	23.00	25.00
169PLS-10M-4R	10	1/4	17	27.00	31.00
169PLS-10M-6R	10	3/8	19	26.00	31.00
169PLS-12M-4R	12	1/4	22	31.50	33.00
169PLS-12M-6R	12	3/8	22	32.50	33.00
169PLS-12M-8R	12	1/2	22	27.50	33.00



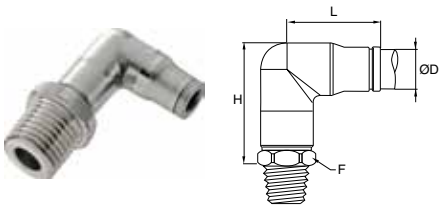
169PLS Male Elbow - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM	L MM
169PLS-6M-2	6	1/8	13	20.00	22.50
169PLS-6M-4	6	1/4	14	20.00	22.50
169PLS-8M-2	8MM(5/16)	1/8	13	25.00	24.00
169PLS-8M-4	8MM(5/16)	1/4	14	24.00	24.00
169PLS-10M-4	10	1/4	17	27.50	27.50
169PLS-10M-6	10	3/8	19	28.50	26.50
169PLS-12M-4	12	1/4	22	31.50	32.50
169PLS-12M-6	12	3/8	22	32.50	32.50
169PLS-12M-8	12	1/2	22	27.50	32.50



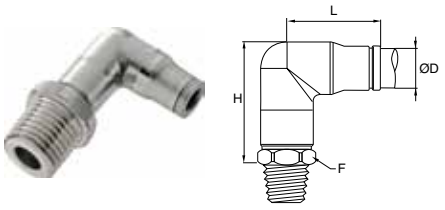
169PLS Male Elbow - Metric Tube to BSPP

PART NO.	TUBE SIZE MM	BSPP	F MM	H MM	L MM
169PLS-4M-2G	4	1/8	10	22	19
169PLS-4M-4G	4	1/4	17	20	19
169PLS-6M-2G	6	1/8	13	24	24
169PLS-6M-4G	6	1/4	17	22	24
169PLS-8M-2G	8	1/8	13	25	25
169PLS-8M-4G	8	1/4	17	25	25
169PLS-8M-6G	8	3/8	21	23	25
169PLS-10M-4G	10	1/4	18	43	31
169PLS-10M-6G	10	3/8	21	40	31
169PLS-12M-4G	12	1/4	17	33	33
169PLS-12M-6G	12	3/8	21	33	33
169PLS-12M-8G	12	1/2	24	30	33



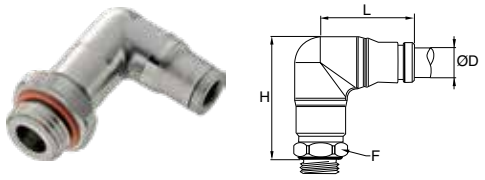
169PLSX Extended Male Elbow - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM	L MM
169PLSX-4M-2	4	1/8	11	25.5	18.5
169PLSX-6M-2	6	1/8	13	29	22.5
169PLSX-6M-4	6	1/4	14	29	22.5
169PLSX-8M-2	8	1/8	14	34	24
169PLSX-8M-4	8	1/4	14	34	24
169PLSX-10M-4	10	1/4	19	39.5	30
169PLSX-10M-6	10	3/8	19	39.5	30



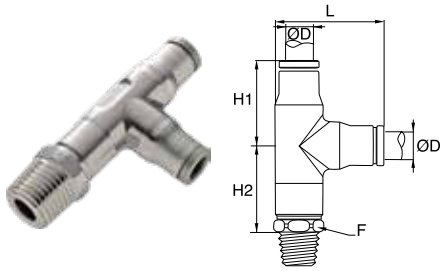
169PLSX Extended Male Elbow - Metric Tube to BSPT

PART NO.	TUBE SIZE MM	BSPT	F MM	H MM	L MM
169PLSX-4M-2R	4	1/8	10	25	19.00
169PLSX-4M-4R	4	1/4	14	26	19.00
169PLSX-6M-2R	6	1/8	13	30	24.00
169PLSX-6M-4R	6	1/4	14	30	24.00
169PLSX-8M-2R	8	1/8	14	34	24.90
169PLSX-8M-4R	8	1/4	14	34	24.90
169PLSX-10M-4R	10	1/4	19	39	31.00
169PLSX-10M-6R	10	3/8	19	39	31.00



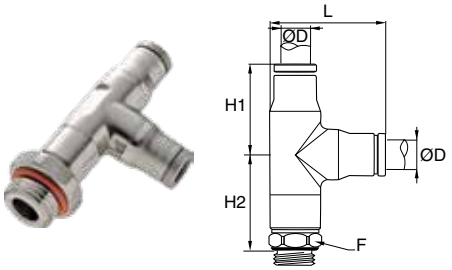
169PLSX Extended Male Elbow - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H MM	L MM
169PLSX-4M-M5	4	M5X0.8	10	27.00	19
169PLSX-4M-2G	4	1/8	13	27.00	19
169PLSX-4M-4G	4	1/4	17	27.00	19
169PLSX-6M-M5	6	M5X0.8	13	33.00	24
169PLSX-6M-2G	6	1/8	13	33.00	24
169PLSX-6M-4G	6	1/4	17	32.00	24
169PLSX-8M-2G	8	1/8	14	35.00	25
169PLSX-8M-4G	8	1/4	17	35.00	25
169PLSX-8M-6G	8	3/8	21	34.50	25
169PLSX-10M-4G	10	1/4	18	43.00	31
169PLSX-10M-6G	10	3/8	21	42.00	31



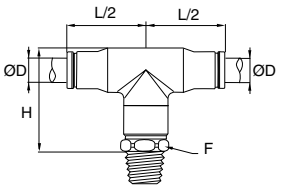
171PLS Male Run Tee - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H1 MM	H2 MM	L MM
171PLS-4M-2	4MM(5/32)	1/8	11	19.00	21.00	25.00
171PLS-8M-2	8MM(5/16)	1/8	14	24.00	26.50	30.50



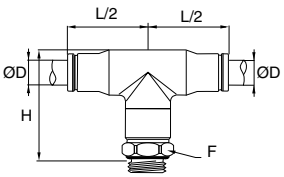
171PLS Male Run Tee - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H1 MM	H2 MM	L MM
171PLS-8M-6G	8	3/8	21	25.00	27.30	35.50
171PLS-10M-4G	10	1/4	18	31.00	35.60	39.60

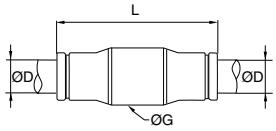
172PLS Male Branch Tee - Metric Tube to NPT

PART NO.	TUBE SIZE MM	NPT	F MM	H MM	L/2 MM
172PLS-8M-2	8MM(5/16)	1/8	14	34.00	24.00
172PLS-8M-4	8MM(5/16)	1/4	14	34.00	24.00
172PLS-10M-4	10	1/4	19	40.00	29.50
172PLS-10M-6	10	3/8	19	40.00	29.50

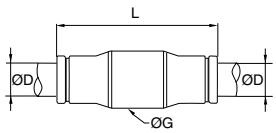
172PLS Male Branch Tee - Metric Tube to BSPP, M5

PART NO.	TUBE SIZE MM	BSPP / M5	F MM	H MM	L/2 MM
172PLS-4M-M5	4	M5X0.8	10	26.80	19
172PLS-6M-M5	6	M5X0.8	13	33.50	24
172PLS-8M-4G	8	1/4	17	35.00	25
172PLS-10M-4G	10	1/4	18	43.20	31

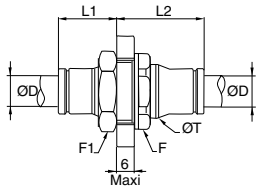
62PLS Union - Inch Tube

PART NO.	TUBE SIZE IN	G IN	H IN
62PLS-3	3/16	.39	1.18
62PLS-4	1/4	.47	1.38
62PLS-6	3/8	.69	1.81
62PLS-8	1/2	.79	1.89

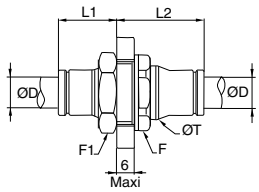
62PLS Union - Metric Tube

PART NO.	TUBE SIZE MM	G MM	H MM
62PLS-4M	4MM(5/32)	10.00	30.00
62PLS-6M	6	12.00	37.00
62PLS-8M	8MM(5/16)	15.00	38.00
62PLS-10M	10	17.00	49.00
62PLS-12M	12	19.50	49.50

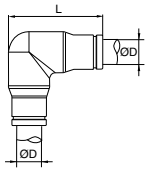
62PLSBH Bulkhead Union - Inch Tube

PART NO.	TUBE SIZE IN	F MM	F1 MM	L1 IN	L2 IN	T IN
62PLSBH-3	3/16	17	13	.59	.83	.49
62PLSBH-4	1/4	19	17	.67	.89	.57
62PLSBH-6	3/8	27	22	.87	1.08	.81
62PLSBH-8	1/2	27	27	.94	1.14	.79

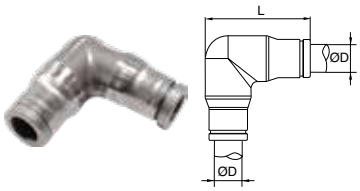
62PLSBH Bulkhead Union - Metric Tube

PART NO.	TUBE SIZE MM	F MM	F1 MM	L1 MM	L2 MM	T MM
62PLSBH-4M	4MM(5/32)	14	13	15	18	13
62PLSBH-6M	6	17	17	19	21	15
62PLSBH-8M	8MM(5/16)	19	19	20	22	17
62PLSBH-10M	10	22	22	24	26	21
62PLSBH-12M	12	24	24	25	26	23

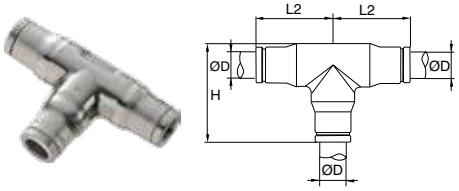
165PLS Union Elbow - Inch Tube

PART NO.	TUBE SIZE IN	L IN
165PLS-4	1/4	1.14
165PLS-6	3/8	1.56
165PLS-8	1/2	1.61



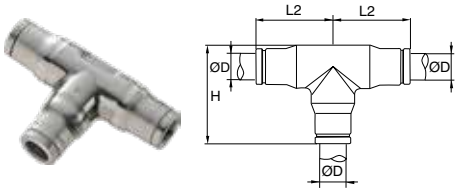
165PLS Union Elbow - Metric Tube

PART NO.	TUBE SIZE MM	L MM
165PLS-4M	4MM(5/32)	24.00
165PLS-6M	6	30.00
165PLS-8M	8MM(5/16)	32.20
165PLS-10M	10	39.00
165PLS-12M	12	43.00



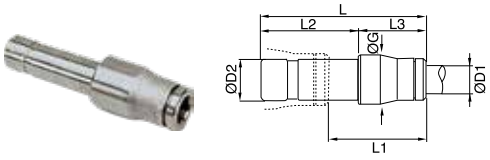
164PLS Union Tee - Inch Tube

PART NO.	TUBE SIZE IN	H IN	L2 IN
164PLS-4	1/4	1.06	.83
164PLS-6	3/8	1.48	1.12
164PLS-8	1/2	1.61	1.22



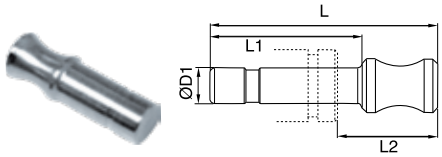
164PLS Union Tee - Metric Tube

PART NO.	TUBE SIZE MM	H MM	L2 MM
164PLS-4M	4MM(5/32)	24	19
164PLS-6M	6	30	24
164PLS-8M	8MM(5/16)	32	25
164PLS-10M	10	39	31
164PLS-12M	12	43	33



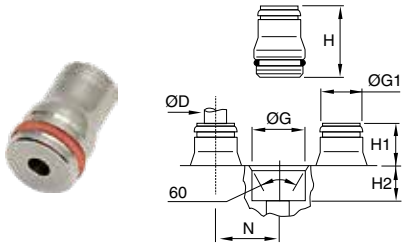
67PLS Tube Reducer - Metric

PART NO.	TUBE 1 SIZE MM	TUBE 2 SIZE MM	G MM	L MM	L1 MM	L2 MM	L3 MM
67PLS-4M-6M	4	6	10	35	19.0	19	16
67PLS-4M-8M	4	8	10	34	17.0	20	14
67PLS-6M-8M	6	8	12	42	24.0	23	19
67PLS-6M-10M	6	10	12	42	19.0	25	17
67PLS-8M-10M	8	10	15	45	22.5	25	19
67PLS-8M-12M	8	12	15	43	20.0	26	17
67PLS-10M-12M	10	12	17	51	23.0	26	25



639PLS Plug - Metric

PART NO.	TUBE 1 SIZE MM	L MM	L1 MM	L2 MM
639PLS-4M	4	25.40	17.00	11.10
639PLS-6M	6	30.40	19.50	13.50
639PLS-8M	8	33.00	20.00	14.40
639PLS-10M	10	40.00	25.00	17.00
639PLS-12M	12	43.00	26.00	18.70



PLSC Cartridge - Metric

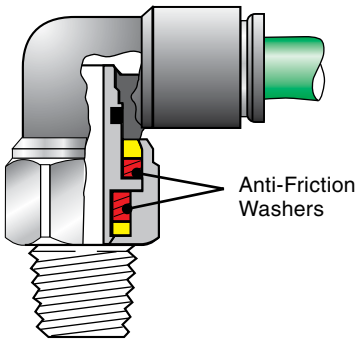
PART NO.	TUBE SIZE MM	G +.1 - 0 MM	G1 MM	H MM	H1 MM	H2 MM	N MM
PLSC-4M	4	9.80	8	18.00	9.50	8.50	11.00
PLSC-6M	6	12.10	10	20.00	11.50	8.50	13.50
PLSC-8M	8	14.80	13	22.00	13.50	8.50	16.00
PLSC-10M	10	17.50	15	25.50	15.00	10.50	20.00

Oscillating Elbows

Parker's oscillating fittings are designed to satisfy the requirements of industrial automation and robotics. The oscillating fitting features low-friction washers enabling the fitting to rotate in conjunction with The stroke of the cylinder piston.

Product Features:

- Glass reinforced nylon 6.6 body
- Nylon collar
- Stainless Steel gripping ring
- Nitrile D seal
- Nitrile o-ring
- Nickel-plated brass threads

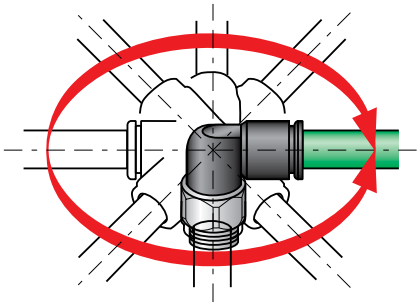


Markets:

- Robotics
- Pneumatics
- Textile
- Packaging
- Semi-conductors

Applications:

- Air
- Cutting Fluids
- Inert Gases



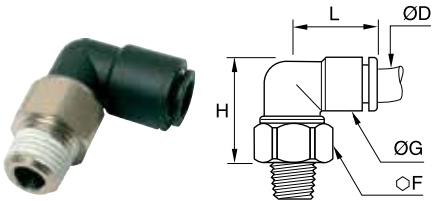
Specifications:

Pressure Range	Up to 290 PSI (19.9 bar) depending on tubing
Temperature Range	-4˚ to +175˚ F (-20° to +79.4° C)

Compatible Tubing:

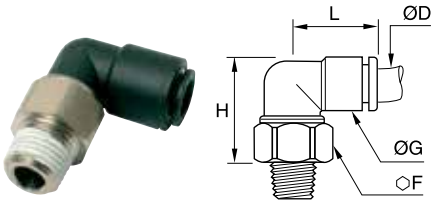
- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer

O.D. TUBE INCH & MM	5/32 & 4	1/4 & 6	8	10	12
"MAXIMUM ROTATION SPEED IN RADIAN/SECOND"	190	160	120	90	80



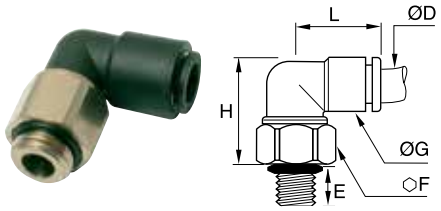
W369PLPO Oscillating Compact Elbow - NPT

PART NO.	TUBE SIZE IN	NPT	F	G	H	L
W369PLPO-4M-2	5/32(4MM)	1/8	12	.43	.85	.69
W369PLPO-4-2	1/4	1/8	14	.55	1.04	.81
W369PLPO-4-4	1/4	1/4	14	.55	1.04	.81



W369PLPO Oscillating Compact Elbow - BSPT

PART NO.	TUBE SIZE MM	BSPT	F	G	H	L
W369PLPO-4M-2R	4	1/8	12	11.0	22.0	17.5
W369PLPO-6M-2R	6	1/8	14	14.0	26.5	20.5
W369PLPO-6M-4R	6	1/4	14	14.0	23.5	20.5
W369PLPO-8M-2R	8	1/8	17	16.0	32.0	23.5
W369PLPO-8M-4R	8	1/4	17	16.0	29.0	23.5
W369PLPO-8M-6R	8	3/8	17	16.0	25.0	23.5
W369PLPO-10M-4R	10	1/4	19	19.5	37.5	29.0
W369PLPO-10M-6R	10	3/8	19	19.5	33.5	29.0
W369PLPO-12M-4R	12	1/4	21	22.0	44.5	33.5
W369PLPO-12M-6R	12	3/8	21	22.0	41.0	33.5



369PLPO Oscillating Compact Elbow - BSPP, M5

PART NO.	TUBE SIZE MM	M5/ BSPP	E	F	G	H	L
369PLPO-4M-M5	4	M5X0.8	3.0	12	11.0	24.5	17.5
369PLPO-4M-2G	4	1/8	5.0	13	11.0	23.0	17.5
369PLPO-6M-M5	6	M5X0.8	3.0	12	14.0	27.5	20.5
369PLPO-6M-2G	6	1/8	5.0	14	14.0	27.0	20.5
369PLPO-6M-4G	6	1/4	5.5	16	14.0	25.5	20.5
369PLPO-8M-2G	8	1/8	5.0	17	16.0	33.5	23.5
369PLPO-8M-4G	8	1/4	5.5	17	16.0	31.0	23.5
369PLPO-8M-6G	8	3/8	5.5	20	16.0	29.5	23.5
369PLPO-10M-4G	10	1/4	5.5	19	19.5	50.0	29.0
369PLPO-10M-6G	10	3/8	5.5	20	19.5	37.0	29.0
369PLPO-12M-4G	12	1/4	5.5	21	22.0	46.5	33.5
369PLPO-12M-6G	12	3/8	5.5	21	22.0	45.5	33.5

Pneumatic: Integrated Fittings

Compact Flow Controls

Miniature Flow Controls

Swivel Outlet Flow Controls

Plug-In Flow Controls

In-Line Flow Controls

Metal Flow Controls

Stainless Steel Flow Controls

In-Line Check Valves

Stainless Steel Check Valves

Piloted Operated Check Valves

Pneumatic Slide Valves

Quick Exhaust Valve

Blocking Valves

Slow Start Valves

Threshold Sensor Fittings

Mini Ball Valves

Compact Flow Controls

FCC731
Meter Out

FCC731
Meter Out - BSPT

FCC731
Meter Out - BSPP

FCCI731
Meter In

FCCI731
Meter In - BSPT

FCCI731
Meter In - BSPP

FCCB731
Bi-Directional

FCCB731
Bi-Directional - BSPT

FCCB731
Bi-Directional - BSPP

FCKC731
Meter Out Knobless

FCKC731
Meter Out Knobless - BSPP

FCKCI731
Meter In Knobless

FCKCI731
Meter In Knobless - BSPP

FCKCB731
Bi-directional Knobless - BSPP

FCK701C
Knobless Compression Metal - BSPP

Miniature Flow Controls

FCM731
Meter Out

FCMI731
Meter In

FCM731
Meter Out - BSPT

FCMI731
Meter In - BSPT

FCM731
Meter Out - BSPP

FCMI731
Meter In - BSPP

FCMB731
Bi-directional - BSPP

FCMK731
Meter Out Knobless

Swivel Outlet Flow Controls

FCCS731
Meter Out

FCMS731
Meter Out Miniature

FCMS731
Meter Out Miniature - BSPT

FCMS731
Meter Out Miniature - BSPP

FCMSI731
Meter In Miniature - BSPP

FCCS731
Meter Out - BSPP

Plug-In Flow Controls

FCMSP731
Meter Out miniature

FCMSPI731
Meter In Miniature

FCMSP701
Meter Out miniature

FCMSPI731
Meter In Miniature

FCCSP731
Meter Out Compact

FCCSPI731
Meter In Compact

In-Line Flow Controls

FC832
In-Line

FCB832
Bi-directional

FC832
In-Line Metric

FCB832
Bi-directional Metric

FCPM832
Panel Mountable

FC836
Threaded In-Line

FC836
Threaded In-Line Metric

Metal Flow Controls

FC705
Meter Out

FC701
Meter Out - BSPP

FCI701
Meter In - BSPP

FC708
Meter Out

FC702
Meter Out - BSPP

Stainless Steel Flow Controls

FCI702
Meter In - BSPP

7810
Meter Out - BSPP

7812
Bi-directional BSPP

7810,7815
Meter Out - NPT

7812, 7817
Bi-directional NPT

7835
Meter Out NPT

Check Valves

32PLCK
In-Line

32PLCK
In-Line - Metric

W68PLCK
Meter Out

W68PLCKI
Meter In

W68PLCK
Meter Out - BSPT

W68PLCKI
Meter In - BSPT

68PLCK
Meter Out - BSPP

68PLCKI
Meter In - BSPP

VC
Check Valve

Stainless Steel Check Valves

4890
Unidirectional BSPP

4895
Unidirectional NPT

4891
Male x Female BSPP

4892
Female x Male BSPP

Pilot Operated Check Valves

7892
BSPP

7894
Regulator & Exhaust BSPP

Pneumatic Slide Valves

0660
Female NPT

0661
Male x Female NPT

0669
Female BSPP

Quick Exhaust

7982
NPT

Blocking Valves

FC601
Lock Out

FC601
Lock Out - BSPT

FC601
Lock Out - BSPP

FC602
Lock Out

FC608
Lock Out - BSPT

FC608
Lock Out - BSPP

Slow Start Valves

FC908
System Isolating

FC908
Isolated Component - BSPP

FCIC908
Isolated Component - BSPP

Threshold Sensor

PSBJ731
Pneumatic 5/32 Pilot

PSBJ731
Pneumatic 4mm Pilot

PSPJ731
Pneumatic 10-32 Pilot

PSBJ708
Pneumatic M5 Pilot

PSPE731
Pneumatic / Electric - BSPP

Mini Ball Valve

MVV309
Push-to-Connect Ports

MV308
Male BSPP

MV309
Push-to-Connect Ports, Vented

MVV308
Male BSPP, Vented

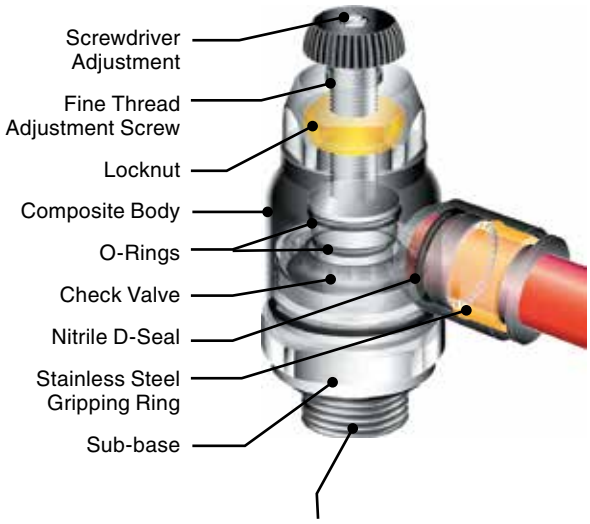
MVV308
Male NPT, Vented

Compact Flow Controls

Parker's compact flow controls ensure excellent performance of flow and are perfectly suited for reduced spaces due to their small size.

Product Features:

- Glass reinforced nylon 6.6 body
- Stainless steel gripping ring
- Nickel-plated brass adjustment screw
- Nickel-plated brass locking nut
- Nickel-plated brass threads
- Nitrile D seal
- NPT
- BSPT
- BSPP
- Metric threads



Sealing O-ring on BSPP
Thread Sealant on NPT/BSPT

Markets:

- Factory/Process Automation
- Life Science
- Food Processing
- Water And Beverage
- Petrochemical

Applications:

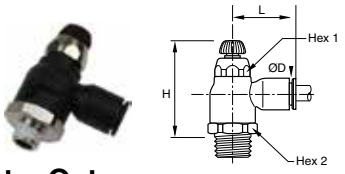
- Packaging
- Filling
- Dispensing
- Bottling
- Pneumatic Circuits

Specifications:

Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+30˚ to +160˚ F (-1.1 to +71.1° C)

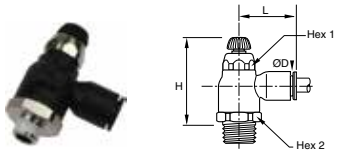
Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer



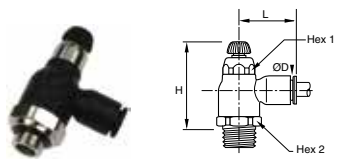
FCC731 Compact Meter Out

PART NO.	TUBE SIZE IN	NPT	HEX 1	HEX 2	H OPEN	H CLOSED	L
FCC731-4M-2	5/32(4MM)	1/8	.63	.39	1.67	1.44	.85
FCC731-4M-4	5/32(4MM)	1/4	.63	.39	1.67	1.44	.85
FCC731-4-2	1/4	1/8	.63	.39	1.67	1.44	.85
FCC731-4-4	1/4	1/4	.63	.39	1.67	1.44	.85
FCC731-6-4	3/8	1/4	.91	.67	2.03	1.71	1.22
FCC731-6-6	3/8	3/8	.91	.67	2.03	1.71	1.22
FCC731-6-8	3/8	1/2	.67	.91	2.03	1.71	1.22
FCC731-8-8	1/2	1/2	.67	.91	2.03	1.71	1.22



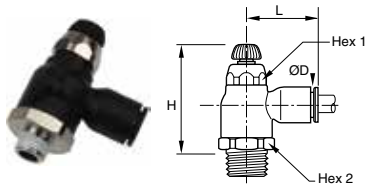
FCC731 Compact Meter Out - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCC731-6M-2R	6	1/8	16	10	36.5	42.5	22.0
FCC731-8M-2R	8	1/8	19	14	40.0	45.0	27.0
FCC731-8M-4R	8	1/4	19	14	40.0	45.0	27.0
FCC731-10M-4R	10	1/4	23	17	43.5	51.5	31.5
FCC731-10M-6R	10	3/8	23	17	43.5	51.5	31.5
FCC731-10M-8R	10	1/2	23	17	43.5	51.5	31.5
FCC731-12M-4R	12	1/4	23	17	43.5	51.5	35.0
FCC731-12M-6R	12	3/8	23	17	43.5	51.5	35.0
FCC731-12M-8R	12	1/2	23	17	43.5	51.5	35.0



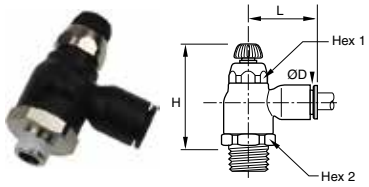
FCC731 Compact Meter Out - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCC731-4M-2G	4	1/8	10	16	38.0	44.0	22.0
FCC731-6M-2G	6	1/8	10	16	38.0	44.0	22.0
FCC731-6M-4G	6	1/4	10	16	36.5	42.5	22.0
FCC731-8M-2G	8	1/8	14	19	41.5	48.0	28.0
FCC731-8M-4G	8	1/4	14	19	41.5	48.0	28.0
FCC731-8M-6G	8	3/8	14	19	41.5	48.0	28.0
FCC731-10M-4G	10	1/4	17	23	45.5	53.5	31.5
FCC731-10M-6G	10	3/8	17	23	45.5	54.0	31.5
FCC731-12M-6G	12	3/8	17	23	45.5	54.0	35.0
FCC731-12M-8G	12	1/2	17	24	45.5	54.0	35.0



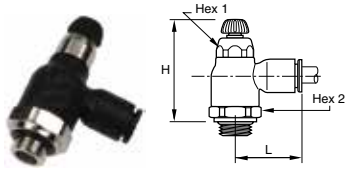
FCCI731 Compact Meter In Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1	HEX 2	H OPEN	H CLOSED	L
FCCI731-4M-2	5/32(4MM)	1/8	.63	.39	1.67	1.44	.85
FCCI731-4M-4	5/32(4MM)	1/4	.63	.39	1.67	1.44	.85
FCCI731-4-2	1/4	1/8	.63	.39	1.67	1.44	.85
FCCI731-4-4	1/4	1/4	.63	.39	1.67	1.44	.85



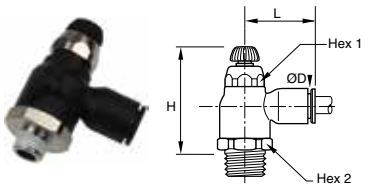
FCCI731 Compact Meter In Flow Control - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCI731-10M-4R	10	1/4	23	17	43.5	51.5	31.5
FCCI731-10M-8R	10	1/2	23	17	43.5	51.5	31.5



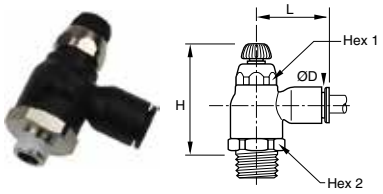
FCCI731 Compact Meter In Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCI731-4M-2G	4	1/8	10	16	38.0	44.0	22.0
FCCI731-6M-2G	6	1/8	10	16	38.0	44.0	22.0
FCCI731-6M-4G	6	1/4	10	16	36.5	42.5	22.0
FCCI731-8M-2G	8	1/8	14	19	41.5	48.0	28.0
FCCI731-8M-4G	8	1/4	14	19	41.5	48.0	28.0
FCCI731-8M-6G	8	3/8	14	19	41.5	48.0	28.0
FCCI731-10M-4G	10	1/4	17	23	45.5	53.5	31.5
FCCI731-10M-6G	10	3/8	17	23	45.5	54.0	31.5
FCCI731-12M-8G	12	1/2	17	24	45.5	54.0	35.0



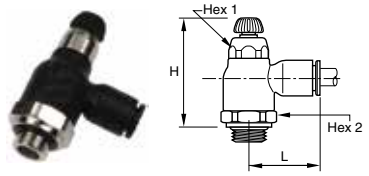
FCCB731 Compact Bi-Directional Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1	HEX 2	H OPEN	H CLOSED	L
FCCB731-4M-2	5/32(4MM)	1/8	.63	.39	1.67	1.44	.85
FCCB731-4-2	1/4	1/8	.63	.39	1.67	1.44	.85
FCCB731-4-4	1/4	1/4	.63	.39	1.67	1.44	.85



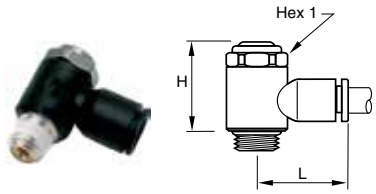
FCCB731 Compact Bi-directional Flow Control - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCB731-4M-2R	4	1/8	16	10	36.5	42.5	22.0
FCCB731-6M-2R	6	1/8	16	10	36.5	42.5	22.0
FCCB731-6M-4R	6	1/4	16	10	36.5	42.5	22.0
FCCB731-8M-2R	8	1/8	19	14	40.0	45.0	27.0
FCCB731-8M-4R	8	1/4	19	14	40.0	45.0	27.0
FCCB731-8M-6R	8	3/8	19	14	40.0	45.0	27.0



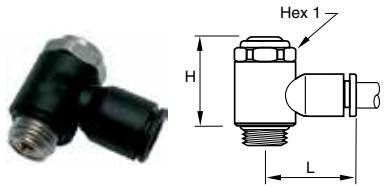
FCCB731 Compact Bi-directional Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCCB731-4M-2G	4	1/8	10	16	38.0	44.0	22.0
FCCB731-6M-2G	6	1/8	10	16	38.0	44.0	22.0
FCCB731-6M-4G	6	1/4	10	16	36.5	42.5	22.0
FCCB731-8M-2G	8	1/8	14	19	41.5	48.0	28.0
FCCB731-8M-4G	8	1/4	14	19	41.5	48.0	28.0
FCCB731-8M-6G	8	3/8	14	19	41.5	48.0	28.0



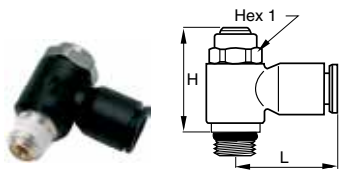
FCKC731 Knobless Meter Out Flow Control

ART NO.	TUBE SIZE IN	NPT / UNF	HEX 1 MM	H	L
FCKC731-2-0	1/8	10-32		.69	.65
FCKC731-2-2	1/8	1/8	13	.79	.75
FCKC731-4M-0	5/32(4MM)	10-32		.69	.65
FCKC731-4M-2	5/32(4MM)	1/8	13	.79	.75
FCKC731-4-0	1/4	10-32		.69	.77
FCKC731-4-2	1/4	1/8	13	.79	.85
FCKC731-4-4	1/4	1/4	17	1.04	.89
FCKC731-8M-2	5/16(8MM)	1/8	13	.79	1.02
FCKC731-8M-4	5/16(8MM)	1/4	17	1.04	1.06
FCKC731-6-4	3/8	1/4	17	1.04	1.14
FCKC731-6-6	3/8	3/8	20	1.14	1.36



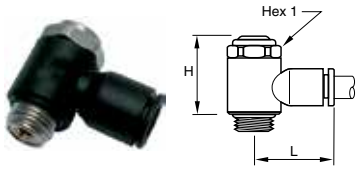
FCKC731 Knobless Compact Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP / M5	HEX 1	H	L
FCKC731-4M-M5	4	M5X0.8	8.0	17.5	17.0
FCKC731-4M-2G	4	1/8	13.0	25.0	19.0
FCKC731-6M-M5	6	M5X0.8	8.0	17.5	19.0
FCKC731-6M-2G	6	1/8	13.0	25.0	21.0
FCKC731-6M-4G	6	1/4	17.0	26.5	22.0
FCKC731-8M-2G	8	1/8	13.0	25.0	26.0
FCKC731-8M-4G	8	1/4	17.0	26.5	27.0
FCKC731-8M-6G	8	3/8	20.0	37.5	29.0
FCKC731-10M-4G	10	1/4	17.0	26.5	29.0
FCKC731-10M-6G	10	3/8	20.0	37.5	31.0
FCKC731-10M-8G	10	1/2	23.0	43.0	37.0
FCKC731-12M-6G	12	3/8	20.0	37.5	6.8
FCKC731-12M-8G	12	1/2	23.0	43.0	37.0



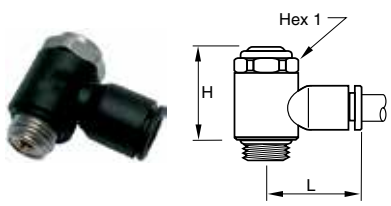
FCKCI731 Knobless Meter In Flow Control

PART NO.	TUBE SIZE IN	NPT / UNF	HEX 1 MM	H	L
FCKCI731-4M-0	5/32(4MM)	10-32	8	.69	.65
FCKCI731-4M-2	5/32(4MM)	1/8	13	.79	.75
FCKCI731-4-0	1/4	10-32	8	.69	.77
FCKCI731-4-2	1/4	1/8	13	.79	.85
FCKCI731-4-4	1/4	1/4	17	1.04	.89



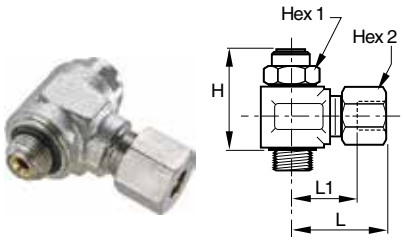
FCKCI731 Knobless Compact Meter In Flow Control-BSPP

PART NO.	TUBE SIZE MM	BSPP / M5	HEX 1	H	L
FCKCI731-4M-M5	4	M5X0.8	8.0	17.5	17.0
FCKCI731-4M-2G	4	1/8	13.0	25.0	19.0
FCKCI731-6M-M5	6	M5X0.8	8.0	17.5	19.0
FCKCI731-6M-2G	6	1/8	13.0	25.0	21.0
FCKCI731-6M-4G	6	1/4	17.0	26.5	22.0
FCKCI731-8M-2G	8	1/8	13.0	25.0	26.0
FCKCI731-8M-4G	8	1/4	17.0	26.5	27.0
FCKCI731-8M-6G	8	3/8	20.0	37.5	29.0
FCKCI731-10M-4G	10	1/4	17.0	26.5	29.0
FCKCI731-10M-6G	10	3/8	20.0	37.5	31.0



FCKCB731 Knobless Bi-directional Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP / M5	HEX 1	H	L
FCKCB731-4M-M5	4	M5X0.8	8	17.5	17.0
FCKCB731-4M-2G	4	1/8	13	25.0	19.0
FCKCB731-6M-M5	6	M5X0.8	8	17.5	19.0
FCKCB731-6M-2G	6	1/8	13	25.0	21.0
FCKCB731-6M-4G	6	1/4	17	26.5	22.0
FCKCB731-8M-2G	8	1/8	13	25.0	26.0
FCKCB731-8M-4G	8	1/4	17	26.5	27.0
FCKCB731-8M-6G	8	3/8	20	37.5	29.0



FCK701C Knobless Compression Metal Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	HEX 2	H	L	L1
FCK701C-4M-2G	4	1/8	13	10	26.0	25.5	14.5
FCK701C-6M-2G	6	1/8	13	13	26.0	25.5	14.5
FCK701C-6M-4G	6	1/4	17	13	31.5	28.5	17.5
FCK701C-8M-2G	8	1/8	13	14	26.0	29.5	15.5
FCK701C-8M-4G	8	1/4	17	14	31.5	31.0	17.0
FCK701C-10M-4G	10	1/4	17	19	31.5	35.0	19.0
FCK701C-10M-6G	10	3/8	20	19	44.5	37.5	19.0
FCK701C-10M-8G	10	1/2	23	19	50.0	37.5	19.0
FCK701C-12M-8G	12	1/2	23	22	50.0	38.0	21.5

Miniature Flow Controls

Parker's miniature flow controls ensure excellent performance of flow and are perfectly suited for reduced spaces due to their small size.

Product Features:

- Glass reinforced nylon 6.6 body
- Stainless steel gripping ring
- Nickel-plated brass adjustment screw
- Nickel-plated brass locking nut
- Nickel-plated brass threads
- Nitrile D seal
- NPT, BSPT, BSPP, Metric threads

Markets:

- Factory/Process Automation
- Life Science
- Food Processing
- Water And Beverage
- Petrochemical

Applications:

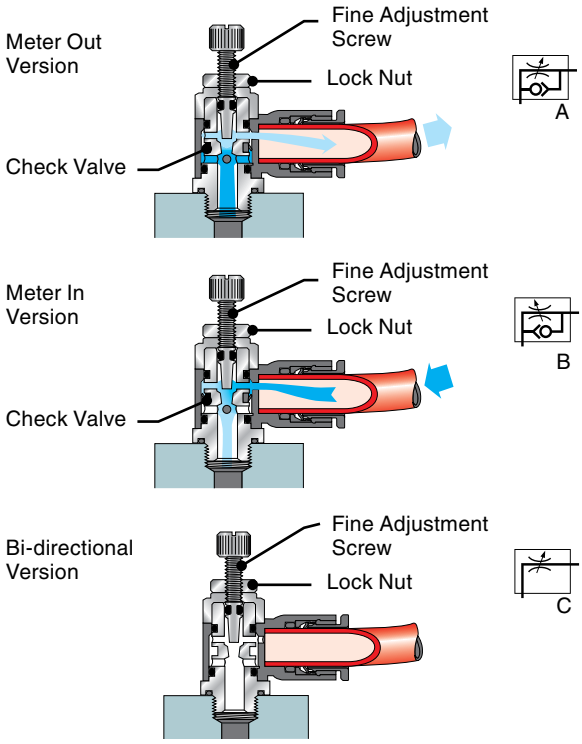
- Packaging
- Filling
- Dispensing
- Bottling
- Pneumatic Circuits

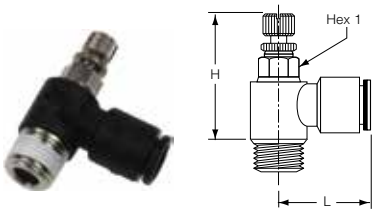
Specifications:

Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+30˚ to +160˚ F (-1.1 to +71.1° C)

Compatible Tubing:

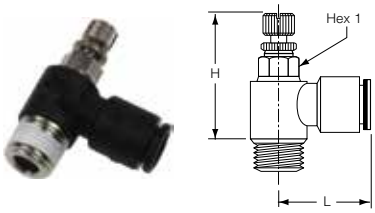
- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer





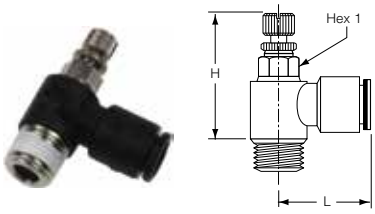
FCM731 Miniature Meter Out Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1 MM	H OPEN	H CLOSED	L
FCM731-2-0	1/8	10-32	6	1.14	.91	.67
FCM731-2-2	1/8	1/8	7	1.41	1.26	.69
FCM731-5/32-0	5/32	10-32	6	1.02	.93	.67
FCM731-5/32-2	5/32	1/8	7	1.16	1.06	.71
FCM731-4-0	1/4	10-32	6	1.02	.93	.73
FCM731-4-2	1/4	1/8	7	1.16	1.06	.75
FCM731-4-4	1/4	1/4	8	1.28	1.18	.77



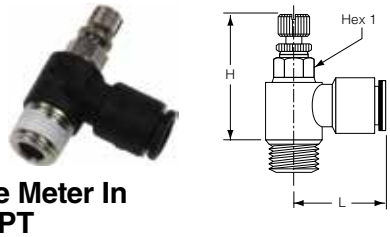
FCMI731 Miniature Meter In Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1 MM	H OPEN	H CLOSED	L
FCMI731-2-0	1/8	10-32	6	1.14	.91	.67
FCMI731-5/32-0	5/32	10-32	6	1.02	.93	.67
FCMI731-5/32-2	5/32	1/8	7	1.16	1.06	.71
FCMI731-4-0	1/4	10-32	6	1.02	.93	.73
FCMI731-4-2	1/4	1/8	7	1.16	1.06	.75
FCMI731-4-4	1/4	1/4	8	1.28	1.18	.77



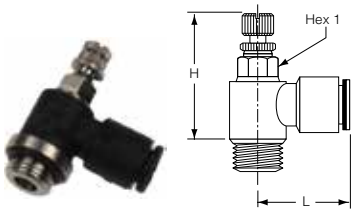
FCM731 Miniature Meter Out Flow Control - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	H CLOSED	H OPEN	L
FCM731-4M-2R	4	1/8	7	25.0	27.5	18.0
FCM731-6M-2R	6	1/8	7	25.0	27.5	18.5
FCM731-6M-4R	6	1/4	8	27.5	30.0	19.0
FCM731-6M-6R	6	3/8	17	31.5	34.0	19.0
FCM731-8M-2R	8	1/8	13	28.5	33.0	26.0
FCM731-8M-4R	8	1/4	16	31.0	35.0	27.5
FCM731-8M-6R	8	3/8	20	36.0	42.0	29.0



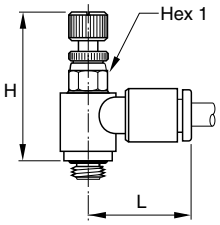
FCMI731 Miniature Meter In Flow Control - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	H CLOSED	H OPEN	L
FCMI731-4M-2R	4	1/8	7	25.0	27.5	18.0
FCMI731-6M-2R	6	1/8	7	25.0	27.5	18.5
FCMI731-6M-4R	6	1/4	8	27.5	30.0	19.0
FCMI731-8M-2R	8	1/8	13	28.5	33.0	26.0
FCMI731-8M-4R	8	1/4	16	31.0	35.0	27.5
FCMI731-8M-6R	8	3/8	20	36.0	42.0	29.0



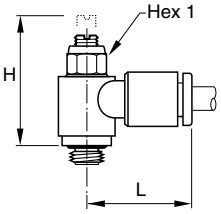
FCM731 Miniature Meter Out Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H CLOSED	H OPEN	L
FCM731-3M-M3	3	M3X0.5	6	23.5	26.0	17.0
FCM731-3M-M5	3	M5X0.8	6	23.5	26.0	17.0
FCM731-4M-M3	4	M3X0.5	6	23.5	26.0	16.5
FCM731-4M-M5	4	M5X0.8	6	23.5	26.0	17.0
FCM731-4M-2G	4	1/8	7	27.0	29.5	18.0
FCM731-6M-M5	6	M5X0.8	6	23.5	26.0	18.0
FCM731-6M-2G	6	1/8	7	27.0	29.5	18.5
FCM731-6M-4G	6	1/4	8	30.0	32.5	19.0
FCM731-8M-2G	8	1/8	13	26.5	31.0	26.0
FCM731-8M-4G	8	1/4	16	29.0	34.0	27.5
FCM731-8M-6G	8	3/8	20	36.0	42.0	29.0



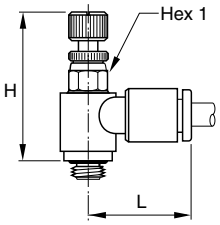
FCMI731 Miniature Meter In Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H CLOSED	H OPEN	L
FCMI731-3M-M3	3	M3X0.5	6	23.5	26.0	17.0
FCMI731-3M-M5	3	M5X0.8	6	23.5	26.0	17.0
FCMI731-4M-M5	4	M5X0.8	6	23.5	26.0	17.0
FCMI731-4M-2G	4	1/8	7	27.0	29.5	18.0
FCMI731-6M-M5	6	M5X0.8	6	23.5	26.0	18.0
FCMI731-6M-2G	6	1/8	7	27.0	29.5	18.5
FCMI731-6M-4G	6	1/4	8	30.0	32.5	19.0
FCMI731-8M-2G	8	1/8	13	26.5	31.0	26.0
FCMI731-8M-4G	8	1/4	16	29.0	34.0	27.5
FCMI731-8M-6G	8	3/8	20	36.0	42.0	29.0



FCMK731 Knobless Mini Meter Out Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1 MM	H OPEN	H CLOSED	L
FCMK731-2-0	1/8	10-32	6	.79	.65	.65
FCMK731-2-2	1/8	1/8	6	.85	.71	.71
FCMK731-5/32-0	5/32	10-32	6	.79	.65	.65
FCMK731-5/32-2	5/32	1/8	6	.85	.71	.71
FCMK731-4-0	1/4	10-32	6	.79	.65	.65
FCMK731-4-2	1/4	1/8	6	.85	.71	.73
FCMK731-4-4	1/4	1/4	6	.97	.83	.73



FCMB731 Miniature Bi-directional Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H CLOSED	H OPEN	L
FCMB731-4M-M5	4	M5X0.8	6	23.5	26.0	16.5
FCMB731-4M-2G	4	1/8	7	27.0	29.5	17.0
FCMB731-6M-M5	6	M5X0.8	6	23.5	26.0	18.0
FCMB731-6M-2G	6	1/8	7	27.0	29.5	18.0
FCMB731-6M-4G	6	1/4	8	30.0	32.5	18.5

Swivel Outlet Flow Controls

Parker's swivel outlet flow controls are designed to allow a vertical or angled tube exit where access is restricted.

Product Features:

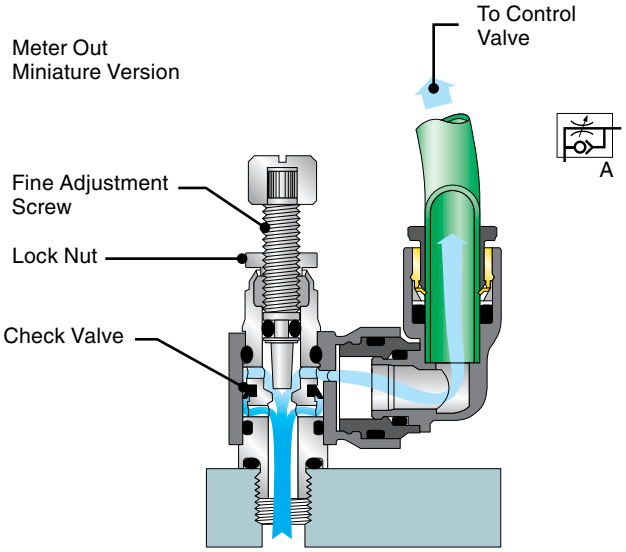
- Glass reinforced nylon 6.6 body
- Stainless steel gripping ring
- Nickel-plated brass adjustment screw
- Nickel-plated brass locking nut
- Nickel-plated brass threads
- Nitrile D seal
- NPT, BSPT, BSPP, Metric threads

Markets:

- Factory/Process Automation
- Life Science
- Food Processing
- Water And Beverage
- Petrochemical

Applications:

- Packaging
- Filling
- Dispensing
- Bottling
- Pneumatic Circuits

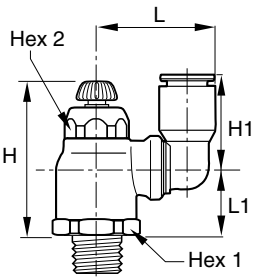


Specifications:

Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+30˚ to +160˚ F (-1.1 to +71.1° C)

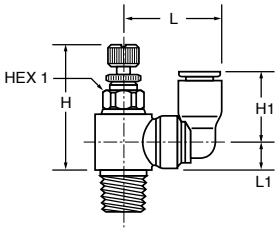
Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer



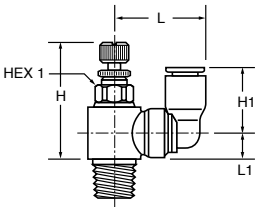
FCCS731 Compact Swivel Outlet Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	H1	L	L1
FCCS731-4-2	1/4	1/8	19	10	1.87	2.09	.63	.93	.65
FCCS731-4-4	1/4	1/4	19	14	1.79	1.99	.73	1.00	.89
FCCS731-6-4	3/8	1/4	23	17	1.93	2.20	1.04	1.34	.97
FCCS731-6-6	3/8	3/8	23	17	1.93	2.20	1.04	1.34	.97



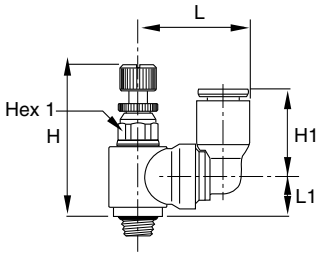
FCMS731 Mini Swivel Outlet Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1 MM	H CLOSED	H OPEN	H1	L	L1
FCMS731-5/32-0	5/32	10-32	6	.96	1.08	.55	0.73	0.26
FCMS731-5/32-2	5/32	1/8	8	1.08	1.20	.55	0.73	0.33



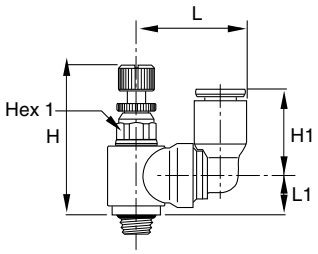
FCMS731 Miniature Swivel Outlet Flow Control - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	H CLOSED	H OPEN	H1	L	L1
FCMS731-6M-2R	6	1/8	7	25	28.5	16.0	11.5	6.0



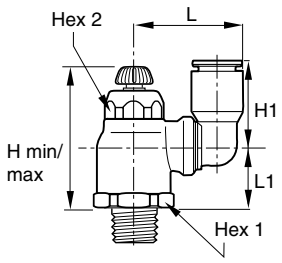
FCMS731 Miniature Swivel Outlet - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H CLOSED	H OPEN	H1	L	L1
FCMS731-4M-M5	4	M5X0.8	6	24.5	27.5	14.5	19.5	6.5
FCMS731-4M-2G	4	1/8	7	27.5	31.0	14.5	20.0	8.5
FCMS731-6M-M5	6	M5X0.8	6	24.5	27.5	16.0	21.5	6.5
FCMS731-6M-2G	6	1/8	7	27.5	31.0	16.0	22.0	8.5



FCMSI731 Miniature Swivel Outlet Meter In - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H CLOSED	H OPEN	H1	L	L1
FCMSI731-4M-M5	4	M5X0.8	6	24.5	27.5	14.5	19.5	6.5
FCMSI731-4M-2G	4	1/8	7	27.5	31.0	14.5	20.0	8.5
FCMSI731-6M-M5	6	M5X0.8	6	24.5	27.5	16.0	21.5	6.5
FCMSI731-6M-2G	6	1/8	7	27.5	31.0	16.0	22.0	8.5



FCCS731 Compact Swivel Outlet - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	H1	L	L1
FCCS731-6M-2G	6	1/8	16	10	38.0	44.0	16.0	23.5	18.0
FCCS731-6M-4G	6	1/4	16	10	36.5	42.5	16.0	23.5	16.5
FCCS731-8M-2G	8	1/8	19	14	41.5	48.0	23.0	28.0	19.0
FCCS731-8M-4G	8	1/4	19	14	41.5	48.0	23.0	28.0	19.5
FCCS731-8M-6G	8	3/8	19	14	41.5	48.0	23.0	28.0	17.5
FCCS731-10M-4G	10	1/4	23	17	45.5	53.5	26.5	35.0	21.0
FCCS731-10M-6G	10	3/8	23	17	45.5	54.0	26.5	35.0	21.5
FCCS731-12M-6G	12	3/8	23	17	45.5	54.0	31.0	38.0	21.5
FCCS731-12M-8G	12	1/2	23	17	45.5	54.0	31.0	38.0	21.0

Plug-In Flow Controls

Parker's Plug-in flow controls can be directly mounted into existing fittings and allow very compact installations. They are particularly suited for mounting in manifolds using cartridges.

Product Features:

- Glass reinforced nylon 6.6 body
- Stainless steel gripping ring
- Nickel-plated brass adjustment screw
- Nickel-plated brass locking nut
- Nickel-plated tailpiece
- Nitrile D seal

Markets:

- Factory/Process Automation
- Life Science
- Food Processing
- Water And Beverage
- Petrochemical

Applications:

- Packaging
- Filling
- Dispensing
- Bottling
- Pneumatic Circuits

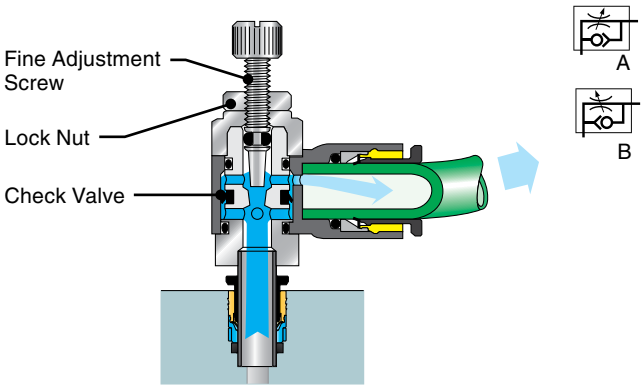
Specifications:

Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+30˚ to +160˚ F (-1.1 to +71.1° C)

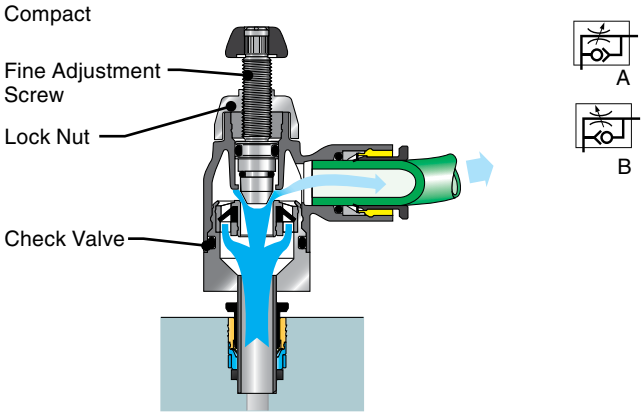
Compatible Tubing:

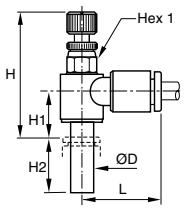
- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer

Miniature



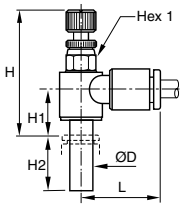
Compact





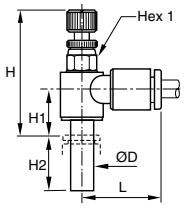
FCMSP731 Plug-In Mini Meter Out Flow Control

PART NO.	TUBE SIZE IN	HEX 1 MM	H OPEN	H CLOSED	H1	H2	L
FCMSP731-2	1/8	6	1.04	.94	.12	.59	0.67
FCMSP731-4	1/4	7	1.18	1.08	.12	.73	0.73



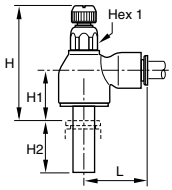
FCMSPI731 Plug-In Mini Meter In Flow Control

PART NO.	TUBE SIZE MM	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCMSPI731-4M (5/32)	4	6	25.5	28.0	9.5	15.5	17.0
FCMSPI731-6M	6	7	27.5	29.0	10.5	17.0	18.5



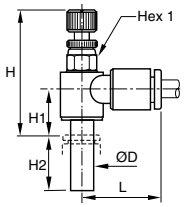
FCMSPI731 Plug-In Mini Meter In Flow Control

PART NO.	TUBE SIZE IN	HEX 1 MM	H OPEN	H CLOSED	H1	H2	L
FCMSPI731-2	1/8	6	1.04	.94	.12	0.59	0.67
FCMSPI731-4	1/4	7	1.18	1.08	.12	0.73	0.73



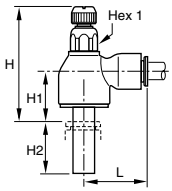
FCCSP731 Plug-In Compact Meter Out Flow Control

PART NO.	TUBE SIZE MM	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCCSP731-6M	6	10	35.0	41.0	14.0	17.0	22.0
FCCSP731-8M	8	14	39.5	46.5	16.0	21.5	28.0
FCCSP731-12M	12	17	43.0	51.0	17.0	27.0	31.5



FCMSP731 - Plug-In Miniature Meter Out Flow Control

PART NO.	TUBE SIZE MM	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCMSP731-4M (5/32)	4	6	25.5	28.0	9.5	15.5	17.0
FCMSP731-6M	6	7	27.5	29.0	10.5	17.0	18.5



FCCSPI731 Plug-In Compact Meter-In Flow Control

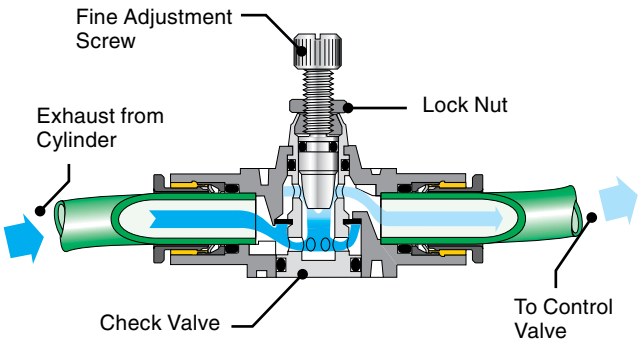
PART NO.	TUBE SIZE MM	HEX 1	H CLOSED	H OPEN	H1	H2	L
FCCSPI731-6M	6	10	35.0	41.0	14.0	17.0	22.0
FCCSPI731-8M	8	14	39.5	46.5	16.0	21.5	28.0
FCCSPI731-12M	12	17	43.0	51.0	17.0	27.0	31.5

In-Line Flow Controls

Parker's In-Line flow controls are unidirectional. An arrow on the body indicates the direction of controlled flow. They can be used individually or stacked together using joining clips.

Product Features:

- Glass reinforced nylon 6.6 body
- Stainless steel gripping ring
- Nickel-plated brass adjustment screw
- Nickel-plated brass locking nut
- Nickel-plated threads
- Nitrile D seal
- Panel mountable



Markets:

- Factory/Process Automation
- Life Science
- Food Processing
- Water And Beverage
- Petrochemical

Applications:

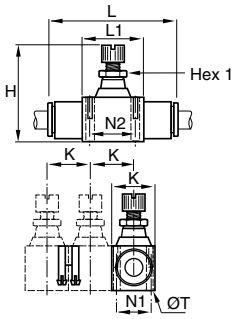
- Packaging
- Filling
- Dispensing
- Bottling
- Pneumatic Circuits

Specifications:

Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+30˚ to +160˚ F (-1.1 to +71.1° C)

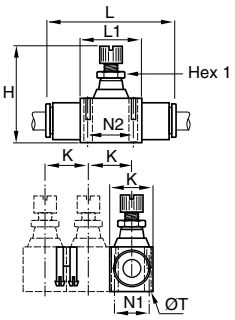
Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer



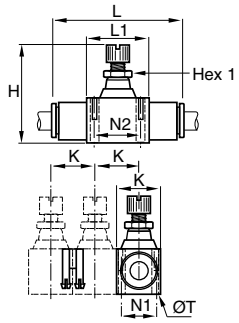
FC832 In-Line Flow Control

PART NO.	TUBE SIZE IN	HEX 1 MM	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FC832-4	1/4	8	1.54	1.74	.66	2.00	.90	.43	.66	.12
FC832-6	3/8	14	2.03	2.38	.94	2.87	1.29	.62	1.01	1.60
FC832-8	1/2	14	2.24	2.63	1.09	3.35	1.37	.78	1.07	.16



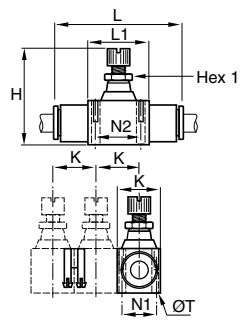
FCB832 In-Line Bi-directional Flow Control

PART NO.	TUBE SIZE IN	HEX 1 MM	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FCB832-4	1/4	8	1.54	1.74	.66	2.00	.90	.43	.66	.12



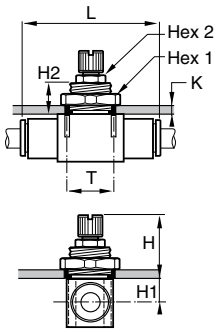
FC832 In-Line Flow Control

PART NO.	TUBE SIZE MM	HEX 1	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FC832-6M	6	8	40.5	44.5	17.0	51.0	23.0	11.0	17.0	3.2
FC832-8M (5/16)	8	11	44.0	50.0	18.5	60.5	26.0	12.5	20.0	3.2
FC832-10M	10	14	52.0	61.0	24.0	76.0	33.0	16.0	26.0	4.2
FC832-12M	12	14	57.5	67.5	28.0	86.0	35.0	20.0	27.5	4.2



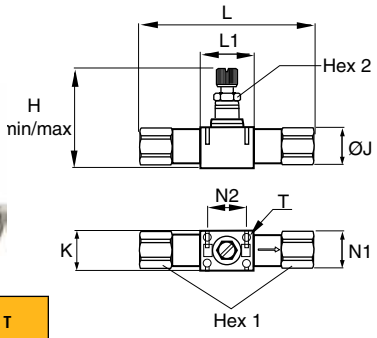
FCB832 In-Line Bi-directional Flow Control

PART NO.	TUBE SIZE MM	HEX 1	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FCB832-4M (5/32)	4	5	29.5	33.5	12.0	36.0	15.0	8.0	11.0	2.2
FCB832-6M	6	8	40.0	44.5	17.0	51.0	23.0	11.0	17.0	3.2
FCB832-8M (5/16)	8	11	44.0	50.0	18.5	60.5	26.0	12.5	20.0	3.2



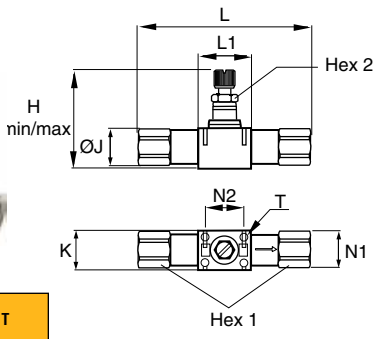
FCPM832 In-Line Panel Mountable Flow Control

PART NO.	TUBE SIZE MM	HEX 1	HEX 2	H CLOSED	H OPEN	K	L	H1	H2	T
FCPM832-4M	4	14		21.5	25.5	6.0	36.0	6.5	11.0	10.5
FCPM832-6M	6	19		27.5	32.5	7.0	51.0	7.5	13.5	16.5
FCPM832-8M	8	24	11	28.5	34.5	7.0	60.5	9.0	13.5	18.5
FCPM832-10M	10	30	14	29.5	38.5	7.0	76.0	11.5	13.5	24.5
FCPM832-12M	12	32	14	32.0	42.0	8.0	86.0	12.5	15.5	27.5



FC836 Threaded In-Line Flow Control

PART NO.	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	K	L	L1	N1	N2	T
FC836-2	1/8	13	8.00	1.56	1.75	.67	2.70	.91	.43	.67	.12
FC836-4	1/4	16	11.00	1.73	1.97	.73	3.27	1.02	.49	.79	.12
FC836-6	3/8	22	14.00	2.05	2.40	.94	3.82	1.30	.63	1.02	.16
FC836-8	1/2	24	14.00	2.26	2.66	1.10	4.76	1.38	.79	1.08	.16



FC836 Threaded In-Line Flow Control - BSPP

PART NO.	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	K	L	N1	N2	T
FC836-2G	1/8	13	8	39.5	44.5	17.0	68.5	11.0	17.0	3.2
FC836-4G	1/4	16	11	44.0	50.0	18.5	83.0	12.5	20.0	3.2
FC836-6G	3/8	19	14	52.0	61.0	24.0	97.0	16.0	26.0	4.2
FC836-8G	1/2	24	14	57.5	67.5	28.0	121.0	20.0	27.5	4.2

Metal Flow Controls

Parker's Metal flow controls are suited for use in severe conditions (temperatures, sparks, abrasion, etc.). Adjustment can be made with a screwdriver and locking by use of a wrench.

Product Features:

- Treated brass body
- Stainless steel gripping ring
- Nickel-plated brass adjustment screw
- Nickel-plated brass locking nut
- Nickel-plated threads
- Nitrile D seal

Markets:

- Factory/Process Automation
- Petrochemical
- Automotive Process

Applications:

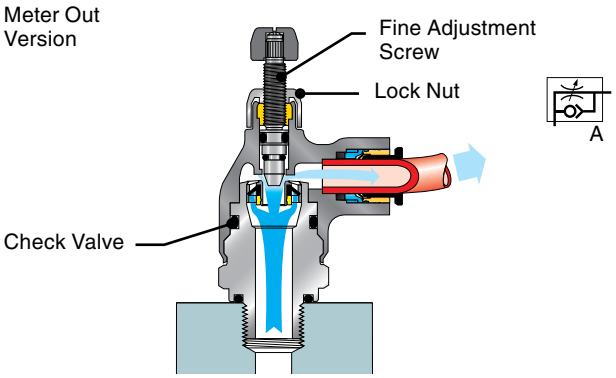
- Robotics
- Packaging
- Textile

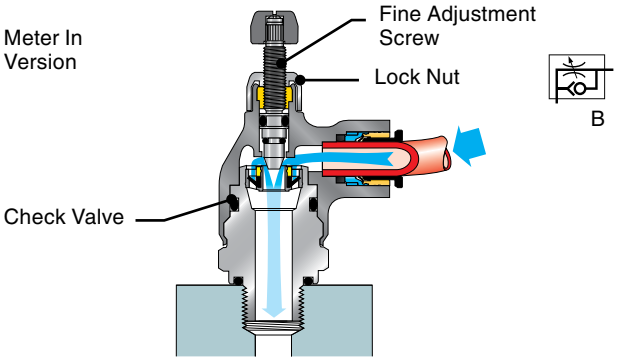
Specifications:

Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+30˚ to +160˚ F (-1.1 to +71.1° C)

Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer





FC705 Push-to-Connect Meter Out Metal Flow Control

PART NO.	TUBE SIZE IN	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	L
FC705-5/32-2	5/32	1/8	19	10	1.79	2.01	0.85
FC705-4-2	1/4	1/8	19	10	1.79	2.01	0.97
FC705-4-4	1/4	1/4	19	10	1.79	2.01	0.97
FC705-6-4	3/8	1/4	19	14	1.91	2.11	1.14
FC705-6-6	3/8	3/8	25	17	2.15	2.40	1.40

FC701 Push-to-Connect Meter Out Metal Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FC701-4M-2G	4	1/8	10	19	47.0	53.0	21.0
FC701-6M-2G	6	1/8	10	19	47.0	53.0	24.5
FC701-6M-4G	6	1/4	10	19	47.5	53.0	24.5
FC701-8M-2G	8	1/8	14	19	50.0	55.0	29.0
FC701-8M-4G	8	1/4	14	19	50.0	56.0	29.0
FC701-8M-6G	8	3/8	17	25	56.0	62.0	30.5
FC701-10M-4G	10	1/4	14	19	50.0	56.0	35.0
FC701-10M-6G	10	3/8	17	25	56.0	62.0	35.0
FC701-12M-6G	12	3/8	17	25	56.0	62.0	38.0
FC701-12M-8G	12	1/2	17	25	55.0	62.0	38.0
FC701-14M-8G	14	1/2	17	25	55.0	62.0	41.0

FCI701 Push-to-Connect Meter In Metal Flow Control - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCI701-4M-2G	4	1/8	10	19	47.0	53.0	21.0
FCI701 -6M-2G	6	1/8	10	19	47.0	53.0	24.5
FCI701 -6M-4G	6	1/4	10	19	47.5	53.0	24.5
FCI701 -8M-2G	8	1/8	14	19	50.0	55.0	29.0
FCI701 -8M-4G	8	1/4	14	19	50.0	56.0	29.0
FCI701 -8M-6G	8	3/8	17	25	56.0	62.0	30.5

FC708 Threaded Port Meter Out Flow Control

PART NO.	NPT	HEX 1 MM	HEX 2 MM	H CLOSED	H OPEN	L
FC708-2	1/8	19	10	1.79	2.01	.89
FC708-4	1/4	19	14	1.91	2.11	1.28
FC708-6	3/8	25	17	2.15	2.40	1.36
FC708-8	1/2	25	17	2.15	2.40	1.50

FC702 Threaded Port Meter Out Metal Flow Control - BSPP

PART NO.	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FC702-2G	1/8	10	19	47.0	52.5	22.5
FC702-4G	1/4	14	19	50.5	55.5	32.0
FC702-6G	3/8	17	25	56.0	62.0	34.5
FC702-8G	1/2	17	25	55.0	62.0	37.5

FCI702 Threaded Port Meter In Metal Flow Control - BSPP

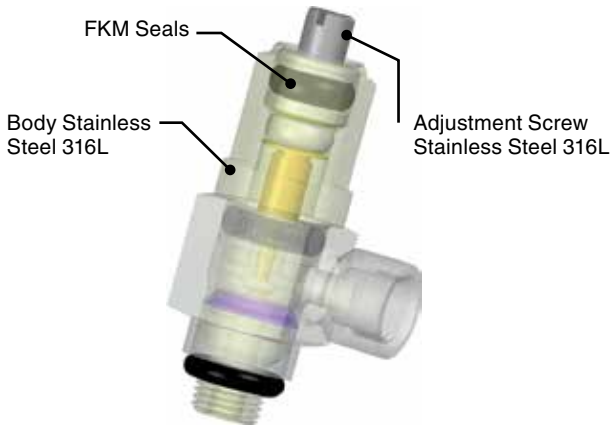
PART NO.	BSPP	HEX 1	HEX 2	H CLOSED	H OPEN	L
FCI702-2G	1/8	10	19	47.0	52.5	22.5
FCI702-4G	1/4	14	19	50.5	55.5	32.0

Stainless Steel Flow Controls

Parker's Stainless Steel Flow Controls are used to regulate the speed of a cylinder rod as well as flow in environments with high mechanical or chemical constraints.

Product Features:

- Suitable for corrosive environments
- Excellent mechanical and chemical resistance
- 100% leak tested in production
- Smooth external surfaces to facilitate cleaning
- Suitable for food applications



Markets:

- Factory/Process Automation
- Life Science
- Food Processing
- Water And Beverage
- Petrochemical

Applications:

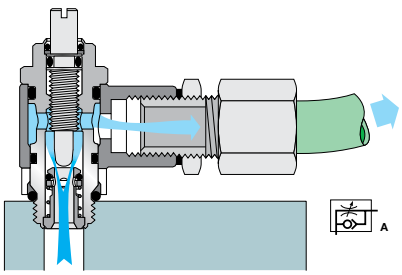
- Packaging
- Filling
- Dispensing
- Bottling,
- Pneumatic Circuits
- Semi-Conductors

Specifications:

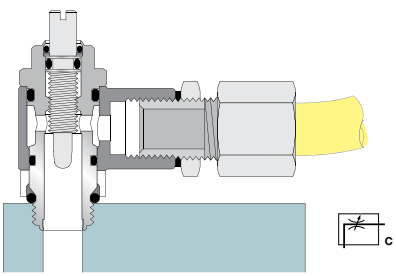
Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+30˚ to +160˚ F (-1.1 to +71.1° C)

Operation

Exhaust Model with External Adjustment

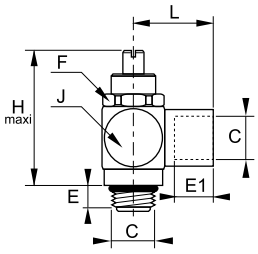


Bi-Directional Model with External Adjustment



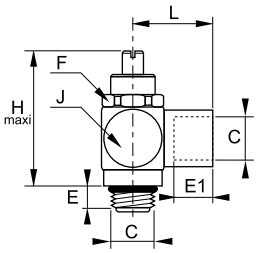
7810, 7812, 7815, 7817 Threaded Port Knobless Stainless Steel Flow Control - NPT, UNF

PART NO. METER OUT	PART NO. BI-DIRECTIONAL	C	E	E1	F	H	J	L	WT. OZ.
7810 20 20	7812 20 20	10-32	.16	.16	8	.94	.35	.43	.95
7815 11 11	7817 11 11	1/8	.20	.31	13	1.50	.59	.67	1.23
7815 14 14	7817 14 14	1/4	.31	.47	17	1.38	.71	.94	1.69
7815 18 18	7817 18 18	3/8	.28	.55	20	1.89	.87	1.06	2.08
7815 22 22	7817 22 22	1/2	.31	.59	23	2.52	1.10	1.22	2.68



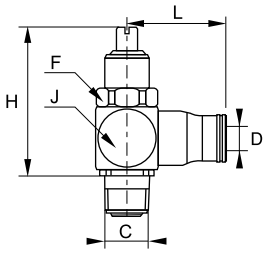
7810, 7812, Threaded Port Knobless Stainless Steel Flow Control - BSPP Metric

PART NO. METER OUT	PART NO. BI-DIRECTIONAL	C	E	E1	F	H	J	L	WT. KG.
7810 19 19	7812 19 19	M5X0.8	4	4	8	24	10	11	.027
7810 10 10	7812 10 10	G1/8	5	8	13	38	15	17	.035
7810 13 13	7812 13 13	G1/4	8	12	17	40	18	24	.048
7810 17 17	7812 17 17	G3/8	7	12	20	53	22	24	.059
7810 21 21	7812 21 21	G1/2	8	15	23	69	28	31	.076



7835 Push-to-Connect Knobless Stainless Steel Flow Control Tube to NPT

PART NO. METER OUT	D	C	F MM	H	J	L	WT. OZ.
7835 04 11	5/32	1/8	13	1.30	.59	.79	1.23
7835 04 14	5/32	1/4	17	1.38	.71	.87	1.54
7835 56 11	1/4	1/8	13	1.30	.59	.87	1.69
7835 56 14	1/4	1/4	17	1.38	.71	.95	1.82
7835 60 14	3/8	1/4	17	1.38	.71	1.18	2.08
7835 60 18	3/8	3/8	20	1.89	.87	1.26	2.68



In-Line Check Valves

Parker's In-Line Check Valves allows air to pass in one direction while blocking flow in the other direction. The body of the fitting contains an arrow to indicate the direction of flow.

Product Features:

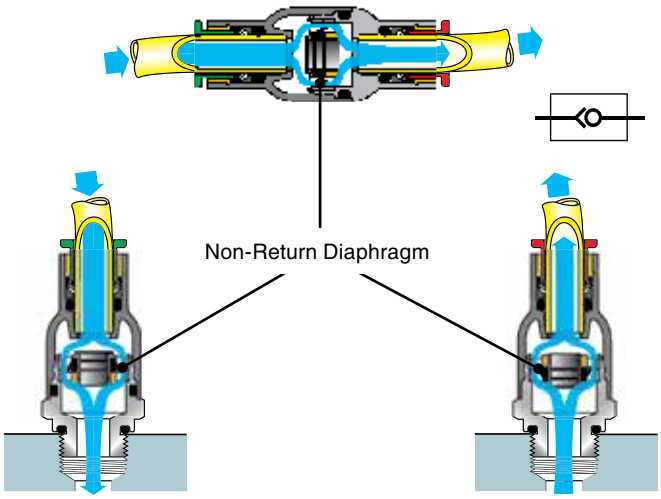
- Nylon/Nickel-plated brass body
- VC – Acetal body
- Stainless steel gripping ring
- Nickel-plated brass threads
- Nitrile O-ring
- EPDM O-ring (VC)

Markets:

- Factory/Process Automation
- Packaging
- Petrochemical
- Pneumatics
- Semi-Conductor

Applications:

- Robotics
- Packaging
- Textile
- Machine Tools
- Pneumatic Systems
- Vacuum

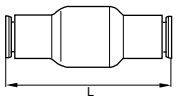


Specifications:

Pressure Range	15 to 145 psi (1.0 to 9.9 bar)
Temperature Range	+34˚ to +150˚ F (+1.1° to 65.5° C)
Cracking Pressure	PLCK – 7 PSI (0.4 bar), VC – 1/3 PSI (0.02 bar)

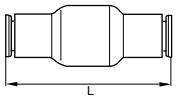
Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer



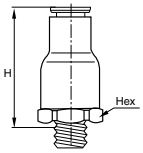
32PLCK In-Line Check Valve

PART NO.	TUBE SIZE IN	L
32PLCK-4	1/4	1.61
32PLCK-6	3/8	2.50



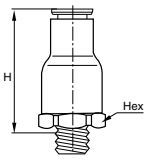
32PLCK In-Line Check Valve

PART NO.	TUBE SIZE MM	L
32PLCK-4M (5/32)	4	38.5
32PLCK-6M	6	41.0
32PLCK-8M (5/16)	8	51.5
32PLCK-10M	10	63.5
32PLCK-12M	12	66.5



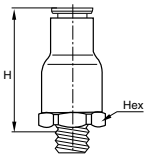
W68PLCK Male Check Valve

PART NO.	TUBE SIZE IN	NPT / UNF	HEX MM	H
W68PLCK-5/32-2	5/32	1/8	16	1.12
W68PLCK-4-2	1/4	1/8	19	1.42
W68PLCK-4-4	1/4	1/4	19	1.42
W68PLCK-6-4	3/8	1/4	23	1.65
W68PLCK-6-6	3/8	3/8	23	1.65



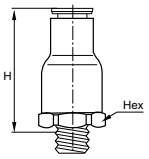
W68PLCKI Male Check Valve Meter In

PART NO.	TUBE SIZE IN	NPT / UNF	HEX MM	H
68PLCKI-5/32-0	5/32	10-32	9	1.26
W68PLCKI-5/32-2	5/32	1/8	16	1.12
W68PLCKI-4-2	1/4	1/8	19	1.42
W68PLCKI-4-4	1/4	1/4	19	1.42
W68PLCKI-6-4	3/8	1/4	23	1.65
W68PLCKI-6-6	3/8	3/8	23	1.65



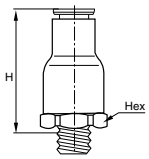
W68PLCK Male Check Valve Meter Out - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	H
W68PLCK-4M-2R	4	1/8	16	28.5
W68PLCK -6M-2R	6	1/8	16	30.5
W68PLCK -6M-4R	6	1/4	16	30.5
W68PLCK -8M-2R	8	1/8	19	36.0
W68PLCK -8M-4R	8	1/4	19	36.0
W68PLCK -10M-6R	10	3/8	23	42.0
W68PLCK -12M-6R	12	3/8	23	42.0



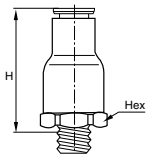
W68PLCKI Male Check Valve Meter In - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX 1	H
W68PLCKI-4M-2R	4	1/8	16	28.5
W68PLCKI -6M-2R	6	1/8	16	30.5
W68PLCKI -6M-4R	6	1/4	16	30.5
W68PLCKI -8M-2R	8	1/8	19	36.0
W68PLCKI -8M-4R	8	1/4	19	36.0



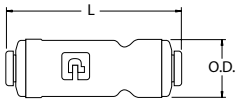
68PLCK Male Check Valve Meter Out - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H
68PLCK-4M-M5	4	M5X0.8	9	32.0
68PLCK-6M-2G	6	1/8	16	30.5
68PLCK-6M-4G	6	1/4	16	30.5
68PLCK-8M-2G	8	1/8	19	36.0
68PLCK-8M-4G	8	1/4	19	36.0



68PLCKI Male Check Valve Meter In - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H
68PLCKI-6M-2G	6	1/8	16	30.5
68PLCKI-8M-2G	8	1/8	19	36.0
68PLCKI-8M-4G	8	1/4	19	36.0
68PLCKI-12M-6G	12	3/8	23	42.0
68PLCKI-12M-8G	12	1/2	23	44.0



VC – Check Valve

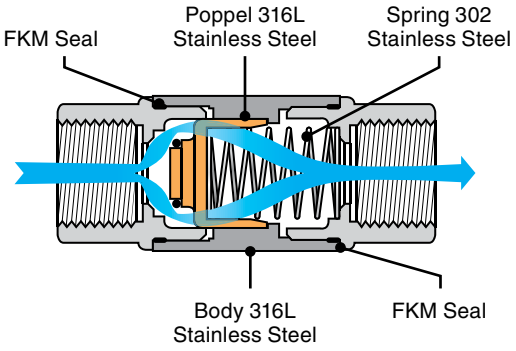
PART NO.	TUBE SIZE IN	L	O.D.
A4VC4-MG	1/4	2.00	.66
A5VC5-MG	5/16	2.10	.70
A6VC6-MG	3/8	2.15	.80

Stainless Steel Check Valves

Parker's Stainless Steel Check Valves are ideally suited to harsh environments and for conveying industrial fluids. These check valves allow fluids to flow in one direction and prevent them from flowing in the other.

Product Features:

- 316L Stainless Steel Body & Poppet
- 302 Stainless Steel Spring
- FKM Seals
- Smooth external surfaces contribute to equipment cleanliness
- Suitable for use in corrosive environments



Markets:

- Factory/Process Automation
- Life Science
- Food Processing
- Water And Beverage
- Petrochemical

Applications:

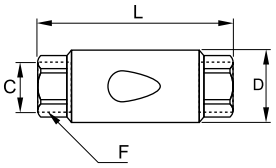
- Pneumatics
- Machine Tools
- Processing
- Chemical
- Printing

Specifications:

Pressure Range	7 to 580 PSI (0.4 to 39.9 bar)
Cracking Pressure	3.6 PSI (0.2 bar)
Temperature Range	-4˚ to +356˚ F (-20° to +180° C)

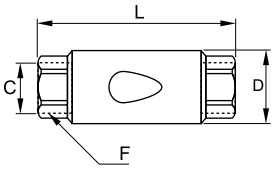
Flow Characteristics

MODEL	WATER FLOW AT 90 PSI	KV
1/8	.67 SCFM	1.60
1/4	.70 SCFM	1.69
3/8	1.26 SCFM	3.01
1/2	1.29 SCFM	3.10
3/4	2.33 SCFM	5.59
1	3.27 SCFM	7.86



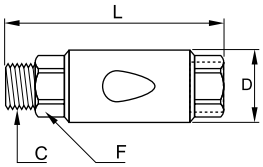
4890 Unidirectional Female - BSPP

PART NO.	C	DN	D MM	F MM	L MM	WT. KG.
4890 10 10	G1/8	10	22	17	50	.084
4890 13 13	G1/4	10	22	17	50	.074
4890 17 17	G3/8	15	30	22	67	.182
4890 21 21	G1/2	15	30	25	71	.196
4890 27 27	G3/4	20	42	32	84	.288
4890 34 34	G1	25	42	38	90	.416



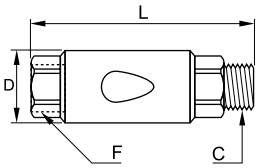
4895 Unidirectional Female - NPT

PART NO.	C	DN	D MM	F MM	L MM	WT. KG.
4895 11 11	1/8	10	22	18	50	.084
4895 14 14	1/4	10	22	18	54	.080
4895 18 18	3/8	15	30	22	73	.198
4895 22 22	1/2	15	30	25	77	.213



4891 Unidirectional Male to Female - BSPP

PART NO.	C	DN	D MM	F MM	L MM	WT. KG.
4891 10 10	G1/8	10	22	17	56	.086
4891 13 13	G1/4	10	22	17	58	.082
4891 17 17	G3/8	15	30	22	75	.190
4891 21 21	G1/2	15	30	25	79	.280
4891 27 27	G3/4	20	42	32	98	.302
4891 34 34	G1	25	42	38	104	.424



4892 Unidirectional Female to Male - BSPP

PART NO.	C	DN	D MM	F MM	L MM	WT. KG.
4892 10 10	G1/8	10	22	17	56	.086
4892 13 13	G1/4	10	22	17	58	.082
4892 17 17	G3/8	15	30	22	75	.190
4892 21 21	G1/2	15	30	25	79	.280
4892 27 27	G3/4	20	42	32	98	.302
4892 34 34	G1	25	42	38	104	.424

Piloted Operated Check Valves

Parker's Piloted Operated Check Valves are designed to protect installations. If the compressed air supply is removed they lock the air supply to the cylinder, maintaining it in position.

Product Features:

- Orientable and adjustable through 3 axis
- Can be integrated into any installation configuration
- Vent saves time on restart after maintenance operations
- Multi-purpose fitting
  - Piloted non-return valve
  - Flow control regulator
  - Manual exhaust

Markets:

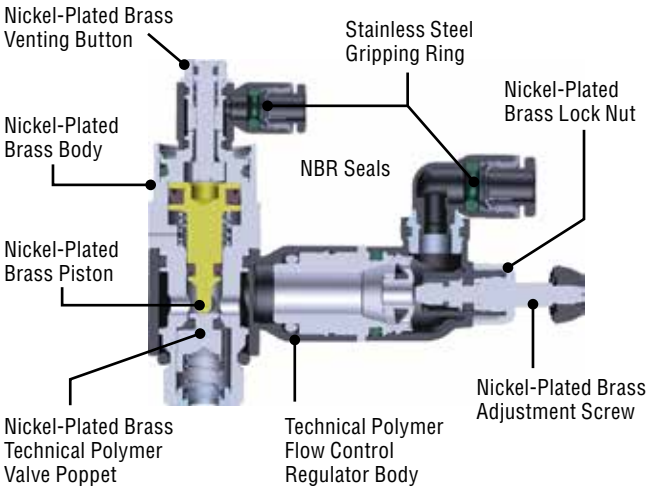
- Factory/Process Automation
- Food Processing
- Pneumatics
- Automotive

Applications:

- Pneumatics
- Machine Tools
- Processing
- Packaging
- Assembly

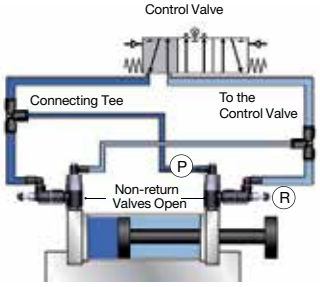
Specifications:

Pressure Range	14 to 145 PSI (0.9 to 9.9 bar)
Cracking Pressure	4.3 PSI (0.2 bar)
Temperature Range	+23˚ to +140˚ F (-5° to 60° C)



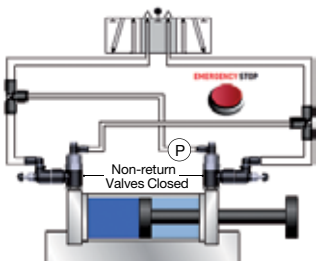
Operation

Normal Operation



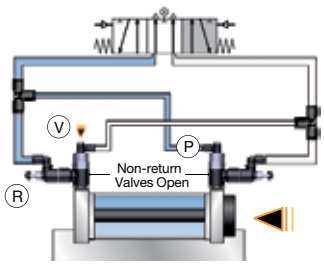
Pilot signal (P)
Regulation of cylinder rod speed (R)

Emergency Stop or Pressure Drop



Drop/removal of pilot pressure (P) = cylinder rod locked

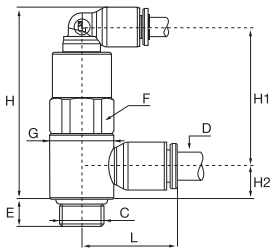
Venting Operation



Venting (V) returns the cylinder rod to the to start position, emptying the pressure chamber through the flow regulator (R) and pilot line (P)

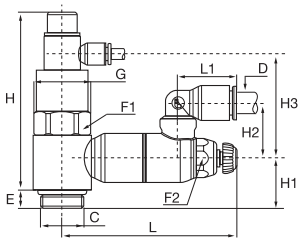
7892 Piloted Non-Return Valve - BSPP

PART NO.	D MM	C	E MM	F MM	G MM	H MM	H1 MM	H2 MM	L MM	WT. KG.
7892 06 10	6	G1/8	6	13	14	42	30	7	21	.028
7892 06 13	6	G1/4	9	17	18.5	45	32	9	23	.049
7892 08 10	8	G1/8	6	13	14	42	29	9	25	.029
7892 08 13	8	G1/4	9	17	18.5	45	32	9	27	.051
7892 08 17	8	G3/8	6	20	22.5	57	41	11	28	.093
7892 10 17	10	G3/8	6	20	22.5	57	41	11	31	.094
7892 10 21	10	G1/2	10	24	28	63	47	16	36	.172
7892 12 21	12	G1/2	10	24	28	63	47	16	36	.162



7894 Piloted Non-Return Valve with Flow Regulator and Exhaust - BSPP

PART NO.	D MM	C	E MM	F1 MM	F2 MM	G MM	H MM	H1 MM	H2 MM	H3 MM	L MIN	L MAX	L MM	WT. KG.
7894 06 10	6	G1/8	6	13	8	14	46	7	24	31	48.5	51	16	.049
7894 06 13	6	G1/4	9	17	10	18.5	49	11	18	31	59.5	65	17	.081
7894 08 10	8	G1/8	6	13	8	14	46	7	27	31	48.5	51	22	.050
7894 08 13	8	G1/4	9	17	10	18.5	49	11	23	31	59.5	65	23	.084
7894 08 17	8	G3/8	6	20	14	22.5	69	13	21	40	67.5	73	23	.148
7894 10 17	10	G3/8	6	20	14	22.5	69	13	29	40	67.5	73	26	.152
7894 10 21	10	G1/2	10	24	17	28	76	12.5	26	47	74	81	26	.234
7894 12 21	12	G1/2	10	24	17	28	76	12.5	27	47	74	81	30	.236

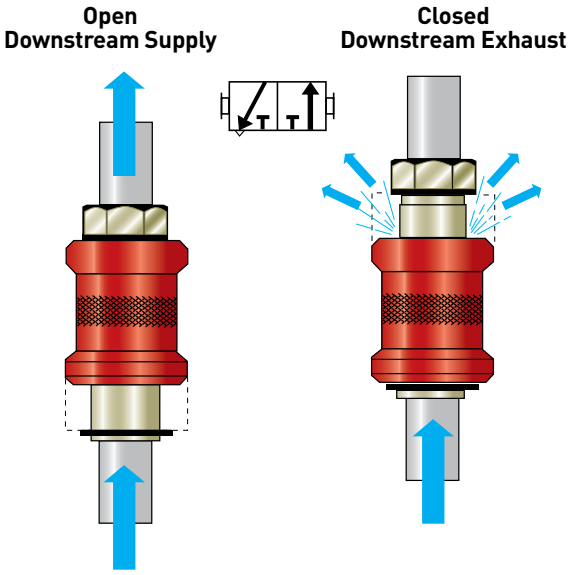


Pneumatic Slide Valves

Parker's Slide Valves may be used to effect an immediate isolation of the air line by venting the system to atmosphere. By moving the sleeve in one direction, the air is free to pass through the slide valve to the system. By moving it in the opposite direction, the supply is shut off and the downstream air is allowed to exhaust to the atmosphere.

Product Features:

- Lightweight due to use of aluminum
- Nitrile Seals
- Immediate identification of the venting system by the color (red)
- Uni-directional use ensures the downstream circuit is vented
- Operated in the plane of the tube



Markets:

- Factory/Process Automation
- Food Processing
- Packaging

Applications:

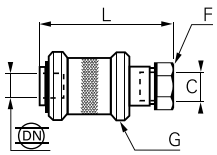
- Pneumatics
- Conveyors
- Packaging
- Textile
- Plastics Engineering

Specifications:

Pressure Range	Up to 230 PSI (15.8 bar)
Temperature Range	+15˚ to +175˚ F (-9.4° to +79.4° C)

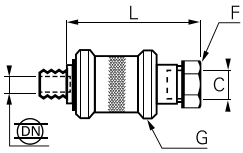
0660 Female Slide Valve - NPT

PART NO.	C	DN	F	G	L	WT. OZ.
0660 04 11	1/8	.16	.55	.98	1.89	2.12
0660 07 14	1/4	.27	.67	1.18	2.28	3.71
0660 10 18	3/8	.39	.87	1.38	2.68	6.18
0660 14 22	1/2	.55	1.06	1.57	3.15	9.53



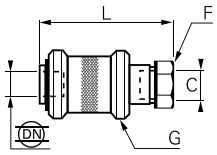
0661 Male to Female Slide Valve - NPT

PART NO.	C	DN	F	G	L	WT. OZ.
0661 04 11	1/8	.16	.55	.98	2.19	2.47
0661 07 14	1/4	.27	.67	1.18	2.75	4.59
0661 10 18	3/8	.39	.87	1.38	3.21	7.59
0661 14 22	1/2	.55	1.06	1.57	3.75	11.30



0669 Female Slide Valve - BSPP

PART NO.	C	DN	F MM	G MM	L MM	WT. KG.
0669 02 19	M5X0.8	2	10	14	30.5	.045
0669 04 10	G1/8	4	14	25	48	.051
0669 07 13	G1/4	7	19	30	58	.084
0669 10 17	G3/8	10	22	35	68	.153
0669 14 21	G1/2	14	27	40	80	.227
0669 19 27	G3/4	19	32	50	83	.242



Quick Exhaust Valve

Parker's Quick Exhaust Valve increases the return speed of the cylinder rod by allowing the exhaust to pass directly to atmosphere.

Product Features:

- Nickel plated brass body
- Nylon seal
- Polyurethane piston
- Reduction in cycle times: return speed improved
- Excellent exhaust capacity
- Ideal for applications in restrictive environments

Markets:

- Factory/Process Automation
- Packaging
- Industrial
- Pulp & Paper

Applications:

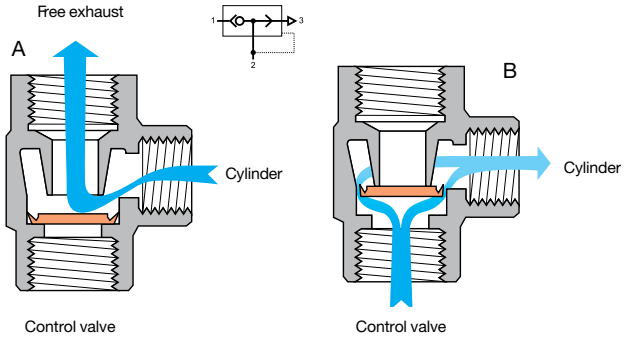
- Pneumatics
- Conveyors
- Packaging
- Textile
- Plastics Engineering

Specifications:

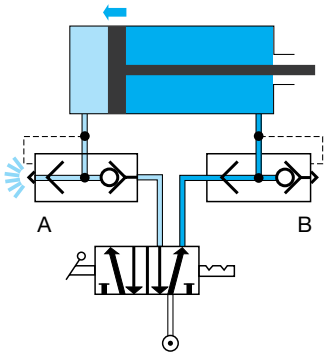
Pressure Range	10 to 150 PSI (0.6 to 10.3 bar)
Temperature Range	0˚ to +160˚ F (-17.7 to +71.1° C)

Operation

Mounted on Cylinder

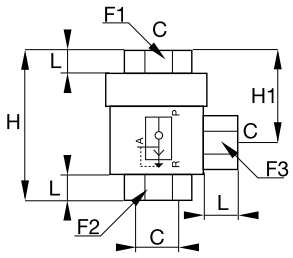


Installation Diagram



7982 Quick Exhaust Valve Threaded Ports - NPT

PART NO.	C	F1	F2	F3	H	H1	L	WT. OZ.
7982 11 11	1/8	14	14	15	1.69	1.10	.28	2.97
7982 14 14	1/4	19	19	19	2.11	1.38	.37	5.18
7982 18 18	3/8	20	21	21	2.19	1.42	.35	5.64
7982 22 22	1/2	26	26	26	2.83	1.77	.55	11.29

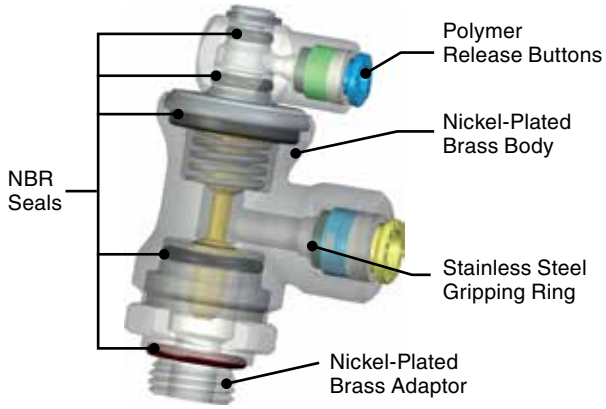


Blocking Valves

Parker's Blocking Valves prevents damage to work and equipment in the event of a loss of pressure. Blocking valves which are mounted in pairs on a cylinder lock the piston by simultaneously cutting off the supply and exhaust.

Product Features:

- Treated brass body
- Stainless steel gripping ring
- Nickel-plated brass threads
- NBR seals
- Silicone free



Markets:

- Factory/Process Automation
- Packaging
- Petrochemical
- Automotive Process

Applications:

- Robotics
- Packaging
- Textile
- Machine Tools

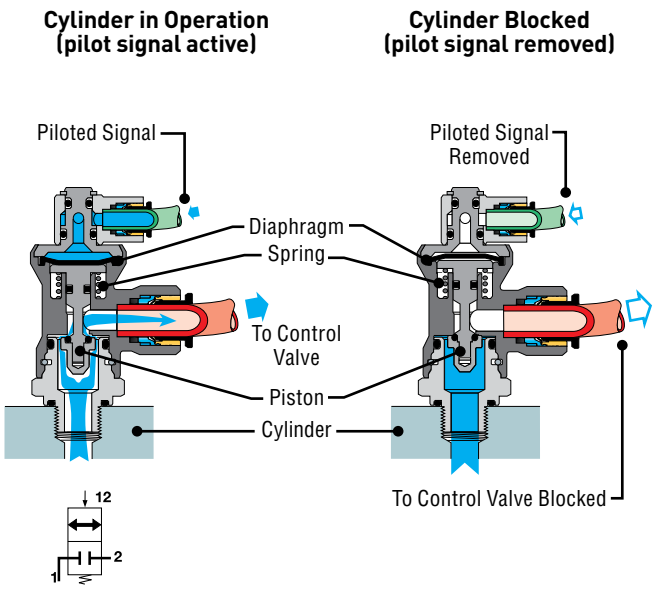
Specifications:

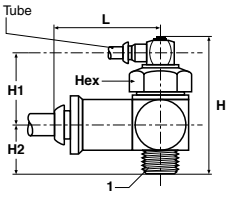
Pressure Range	15 to 145 PSI (1.0 to 9.9 bar)
Temperature Range	-4˚ to +160˚ F (-20° to +71.1° C)
Leak Rate	<3.2CCM
Number of Cycles	>10 Million at 68˚F and 1 HZ

Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer

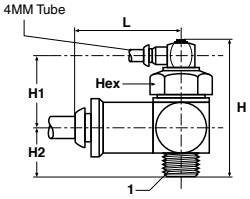
Operation





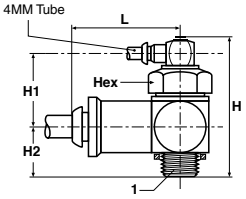
FC601 Push-to-Connect Lock Out Valves

PART NO.	TUBE SIZE IN	NPT	HEX MM	H	H1	H2	L
FC601-4-2	1/4	1/8	21	2.03	1.24	.79	1.10
FC601-4-4	1/4	1/4	21	2.03	1.24	.79	1.10
FC601-6-6	3/8	3/8	24	2.19	1.14	1.04	1.38
FC601-8-8	1/2	1/2	24	2.19	1.14	1.04	1.69



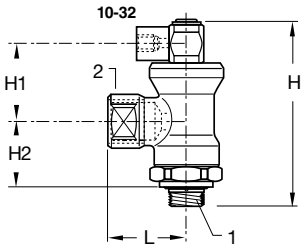
FC601 Push-to-Connect Lock-Out Valve - BSPT

PART NO.	TUBE SIZE MM	BSPT	HEX	H	H1	H2	L
FC601-6M-2R	6	1/8	21	53	24.5	21.0	28.0
FC601-6M-4R	6	1/4	21	53	24.5	21.0	28.0
FC601-8M-4R	8	1/4	21	53	24.5	21.0	28.0
FC601-8M-6R	8	3/8	24	56	25.0	23.0	34.5
FC601-10M-6R	10	3/8	24	56	25.0	23.0	35.0
FC601-12M-8R	12	1/2	24	56	25.0	23.0	37.5



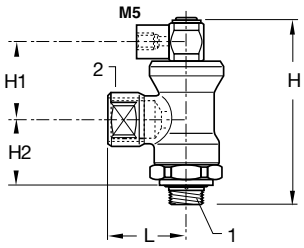
FC601 Push-to-Connect Lock-Out Valve - BSPP

PART NO.	TUBE SIZE MM	BSPP	HEX	H	H1	H2	L
FC601-6M-2G	6	1/8	21	53	24.5	21.0	28.0
FC601-6M-4G	6	1/4	21	53	24.5	21.0	28.0
FC601-8M-4G	8	1/4	21	53	24.5	21.0	28.0
FC601-8M-6G	8	3/8	24	56	25.0	23.0	34.5
FC601-10M-6G	10	3/8	24	56	25.0	23.0	35.0
FC601-12M-8G	12	1/2	24	56	25.0	23.0	37.5



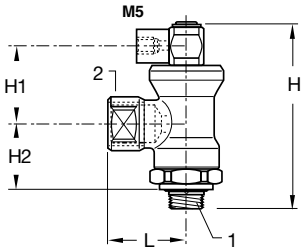
FC602 Threaded Port Lock Out Valves

PART NO.	1 NPT	2 NPT	HEX MM	H	H1	H2	L
FC602-2	1/8	1/8	21	2.03	1.24	.79	1.04
FC602-4	1/4	1/4	21	2.03	1.24	.79	1.04
FC602-6	3/8	3/8	24	2.19	1.14	1.04	1.34
FC602-8	1/2	1/2	24	2.19	1.14	1.04	1.57



FC608 Threaded Port Lock-Out Valve - BSPT

PART NO.	BSPT 1	BSPT 2	HEX	H	H1	H2	L
FC608-4R-2R	1/4	1/8	21	51.5	31.5	20.0	26.5
FC608-4R-4R	1/4	1/4	21	51.5	31.5	20.0	26.5
FC608-6R-6R	3/8	3/8	24	55.5	29.0	26.5	34.0
FC608-8R-8R	1/2	1/2	24	55.5	29.0	26.5	40.0



FC608 Threaded Port Lock-Out Valve - BSPP

PART NO.	BSPP 1	BSPP 2	HEX	H	H1	H2	L
FC608-4G-2G	1/8	1/4	21	53	24.5	21.0	28.0
FC608-4G-4G	1/4	1/4	21	53	24.5	21.0	28.0
FC608-6G-6G	3/8	3/8	24	56	25.0	23.0	34.0
FC608-8G-8G	1/2	1/2	24	56	25.0	23.0	41.0

Slow Start Valves

Parker's Slow Start Valves enables you to control the rate supply pressures introduced into your system after it has been vented (e.g. at the end of the work day, emergency stops, or adjustments. Slow start valves gradually returns cylinders to the position they were in before the system was vented.

Product Features:

- Nickel-plated brass body
- Stainless steel gripping ring
- Nickel-plated brass threads
- Nitrile seals
- Silicone free

Markets:

- Factory/Process Automation
- Packaging
- Petrochemical
- Pneumatics

Applications:

- Robotics
- Packaging
- Textile
- Machine Tools
- Pneumatic Systems

Specifications:

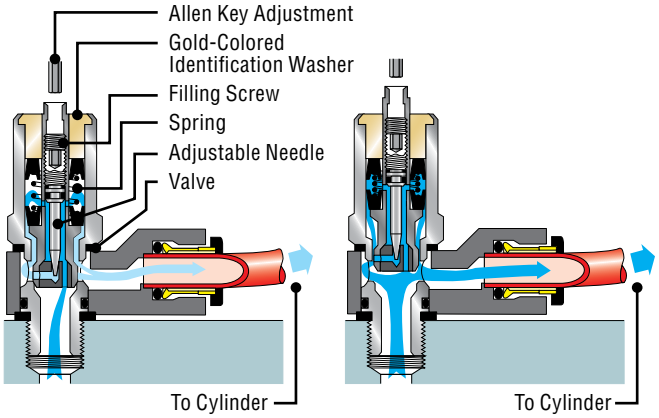
Pressure Range	40 to 145 PSI (2.7 to 9.9 bar)
Temperature Range	+5˚ to +140˚ F (-15° to +60° C)

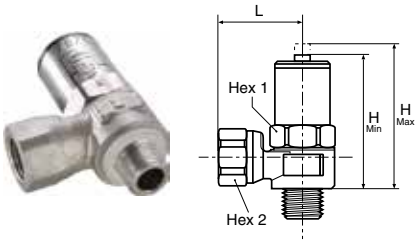
Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer

Operation

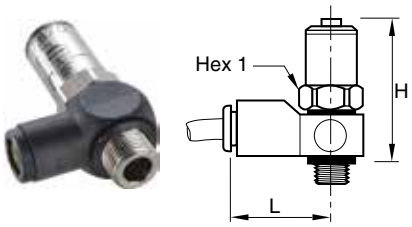
Filter, Regulator, Lubricator





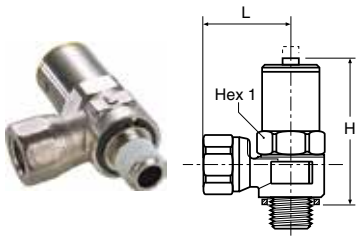
FC908 Slow Start Valve for System Isolating

PART NO.	NPT	HEX 1 MM	HEX 2 MM	H MIN	H MAX	L
FC908-4	1/4	7/8	3/4	2.17	2.44	1.22
FC908-6	3/8	7/8	3/4	2.17	2.44	1.36



FC908 Push-to-Connect Slow Start Valve - BSPP for Isolated Component

PART NO.	TUBE SIZE MM	BSPP	HEX 1	H CLOSED	H OPEN	L
FC908-8M-4G	8	1/4	17	54	61	35
FC908-10M-4G	10	1/4	22	55	62	41
FC908-10M-6G	10	3/8	22	55	62	41



FCIC908 Slow Start Valve - BSPP for Isolated Component

PART NO.	BSPP	HEX 1	H CLOSED	H OPEN	L
FCIC908-6G	3/8	22	55	62	31

Threshold Sensor Fittings

Parker's Threshold Senor Fitting detects the pressure drop when a cylinder reaches the end of its stroke. They produce a pneumatic or electrical output signal when the pressure drop in the exhaust chamber of the cylinder goes below their back pressure threshold.

Product Features:

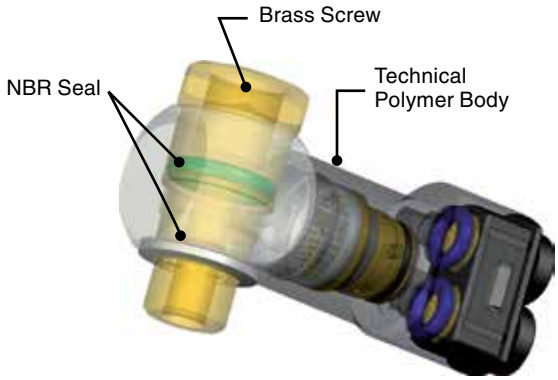
- Polymer body
- Brass screw
- NBR seal

Markets:

- Factory/Process Automation
- Packaging
- Pneumatics
- Semi-Conductor

Applications:

- Robotics
- Packaging
- Textile
- Machine Tools
- Pneumatic Systems



Specifications:

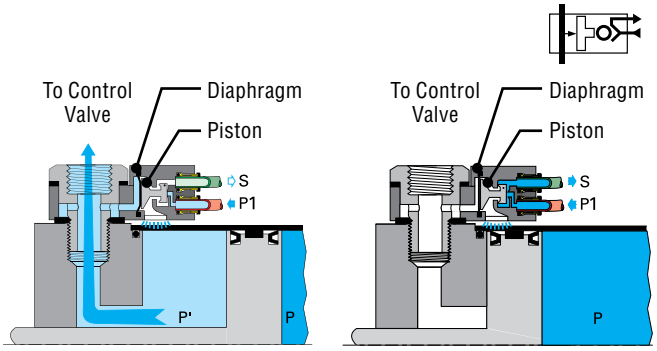
Model PSBJ,PSPJ

Pressure Range	45 to 115 PSI (3.1 to 7.9 bar)
Temperature Range	+5˚ to +140˚ F (-15° to +60° C)
Breaking Pressure	8.5 PSI (0.5 bar)
Response Time	3 MS

Model PSPE

Pressure Range	45 to 115 PSI (3.1 to 7.9 bar)
Breaking Pressure	8.5 PSI (0.5 bar)
Current Rating	5A/250VAC – 5W/48VDC

Operation

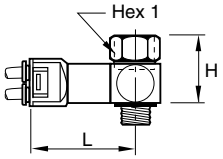


P' - Exhaust Back Pressure
P - Dynamic Pressure

P1 - Sensor Supply Pressure
S - Output Signal

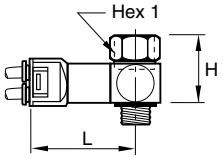
Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer

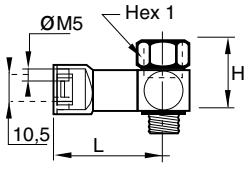
PSBJ731 Pneumatic Threshold Sensor - 5/32 Pilot

PART NO.	NPT / UNF	HEX MM	H	L
PSBJ731-0	10-32	5/16	.62	1.70
PSBJ731-2	1/8	9/16	.90	1.74
PSBJ731-4	1/4	5/8	1.09	1.81
PSBJ731-6	3/8	7/8	1.13	1.91
PSBJ731-8	1/2	1	1.17	2.05

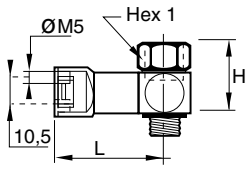
PSBJ731 Pneumatic Threshold Sensor - 4mm Pilot

PART NO.	BSPP	HEX 1	H	L
PSBJ731-M5	M5X0.8	8	16	43.5
PSBJ731-2G	1/8	14	23	44.5
PSBJ731-4G	1/4	17	28	46.5
PSBJ731-6G	3/8	22	29	49.0
PSBJ731-8G	1/2	27	30	52.5

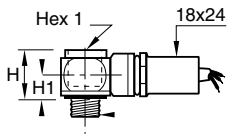
PSPJ731 Pneumatic Threshold Sensor - 10-32 Pilot

PART NO.	NPT	HEX 1 MM	H	L
PSPJ731-2	1/8	9/16	.90	1.58
PSPJ731-4	1/4	5/8	1.09	1.66
PSPJ731-6	3/8	7/8	1.13	1.76

PSBJ708 Pneumatic Threshold Sensor - M5 Pilot

PART NO.	BSPP	HEX 1	H	L
PSBJ708-2G	1/8	14	23	40.5
PSBJ708-4G	1/4	17	28	42.5

PSPE731 Pneumatic / Electric Threshold Sensor - BSPP

PART NO.	BSPP	HEX 1	H	H1	L
PSPE731-M5	M5X0.8	8	20	10	49
PSPE731-2G	1/8	6	20	10	52
PSPE731-4G	1/4	8	20	10	54
PSPE731-6G	3/8	10	22	12	57
PSPE731-8G	1/2	12	26	14	58

Mini Ball Valves

Parker's Mini Ball Valves enable in-line opening and closing of a pneumatic circuit. Handles are color coded and marked with the corresponding pneumatic symbol, in order to enable immediate identification by the user.

Product Features:

- Nylon body
- Brass stem
- Stainless steel gripping ring
- NBR stem seal
- NBR o-ring
- Nylon Handle
- Lightweight and compact

Markets:

- Factory/Process Automation
- Packaging
- Petrochemical
- Pneumatics
- Semi-Conductor

Applications:

- Robotics
- Packaging
- Textile
- Machine Tools
- Pneumatic Systems
- Vacuum

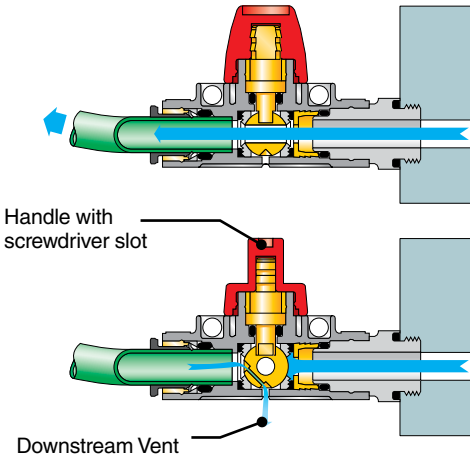
Specifications:

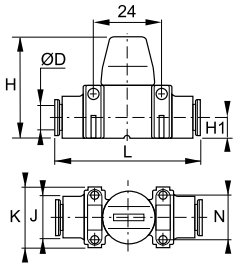
Pressure Range	145 PSI (9.9 bar)
Temperature Range	-4˚ to 175˚ F (-20° to +79.4° C)
Vacuum Capability	28" Hg

Compatible Tubing:

- Semi-rigid nylon
- Polyurethane 95 Durometer Shore A
- Nylon
- Fluoropolymer

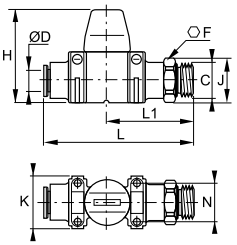
Operation





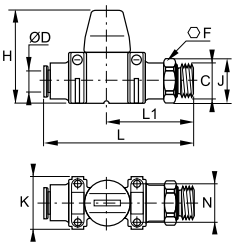
MVV309 Mini Ball Valve
Vented Push-To-Connect Ports

PART NO.	TUBE SIZE IN	H	H1	J	K	L	N
MVV309-4	1/4	1.46	.30	.59	.87	2	.64
MVV309-6	3/8	1.69	.43	.79	1.18	2.6	.87
METRIC							
MVV309-4M (5/32)	4	37.00	7.50	15.00	22.00	51	16.20
MVV309-6M	6	37.00	7.50	15.00	22.00	52	16.20
MVV309-8M (5/16)	8	37.00	7.50	15.00	22.00	52	16.20
MVV309-10M	10	43.00	11.00	20.00	30.00	66	22.00
MVV309-12M	12	43.00	11.00	20.00	30.00	66	22.00



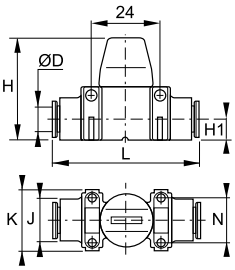
MVV308 Mini Ball Valve
Vented NPT to Push-To-Connect Port

PART NO.	TUBE SIZE IN	NPT	F	H	J	K	L	L1	N
MVV308-5/32-2	5/32	1/8	13	1.46	.55	.87	2.44	1.46	.64
MVV308-4-2	1/4	1/8	13	1.46	.55	.87	2.44	1.46	.64
MVV308-4-4	1/4	1/4	14	1.46	.59	.87	2.44	1.38	.64
MVV308-5-4	5/16	1/4	14	1.46	.59	1.18	2.40	1.61	.64
MVV308-6-4	3/8	1/4	16	1.69	.69	1.18	2.40	1.65	.87
MVV308-6-6	3/8	3/8	18	1.69	.77	1.18	2.91	1.65	.87



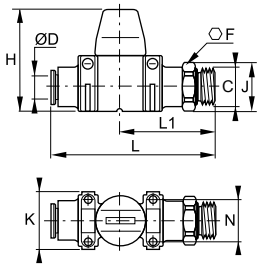
MVV308 Mini Ball Valve
Vented BSPP to Push-To-Connect Port

PART NO.	TUBE SIZE MM	BSPP	F	H	J	K	L	L1	N
MVV308-6M-2G	6	G1/8	13	37	14.00	22	62	37	16.20
MVV308-8M-4G	8	G1/4	16	37	17.50	22	61	35	16.20
MVV308-10M-6G	10	G3/8	20	43	22.00	30	74	41	22.00



MV309 Mini Ball Valve
Push-To-Connect Ports

PART NO.	TUBE SIZE IN	H	H1	J	K	L	N
MV309-4	1/4	1.46	.30	.59	.87	2.05	.64
MV309-6	3/8	1.69	.43	.79	1.18	2.60	.64
METRIC							
MV309-4M (5/32)	4	37.00	7.50	15.00	22.00	51.00	16.20
MV309-6M	6	37.00	7.50	15.00	22.00	52.00	16.20
MV309-8M (5/16)	8	37.00	7.50	15.00	22.00	52.00	16.20
MV309-10M	10	43.00	11.00	20.00	30.00	66.00	16.20
MV309-12M	12	43.00	11.00	20.00	30.00	66.00	16.20



MV308 Mini Ball Valve
BSPP to Push-To-Connect Port

PART NO.	TUBE SIZE MM	BSPP	F	H	J	K	L	L1	N
MV308-6M-2G	6	G1/8	13	37	14	22	62	37	16.20
MV308-10M-6G	10	G3/8	20	43	22	30	74	41	16.20
MV308-12M-8G	12	G1/2	24	43	26	30	75	42	16.20

Cartridges

Carstick® Cartridges

PLM/PLS Cartridges

Cartridges

Parker has developed a range of cartridges guaranteeing the integrity of the sealing system before and after assembly in non-threaded cavities. The compact design of the one-piece cartridges enables automation of your manufacturing process and improves the reliability of your system.

Product Features:

- Self-centering of the cartridge in the cavity
- Push-in connection
- Designed for automation assembly process
- SAE & NSF cartridges available

Markets:

- Industrial
- Pneumatic
- Filtration
- Semi-Conductor
- Life Science
- Automation

Applications:

- Air
- Packaging
- Labeling

Specifications:

	Pressure	Temperature
Carstick	Up to 290 PSI (20 bar)	-4˚ to +175˚ F (-20° to +79.4° C)
PLM/PLS	Up to 435 PSI (30 bar)	-4˚ to +302˚ F (-20° to +150° C)

Cartridge

3100
Carstick® Cartridge
Brass

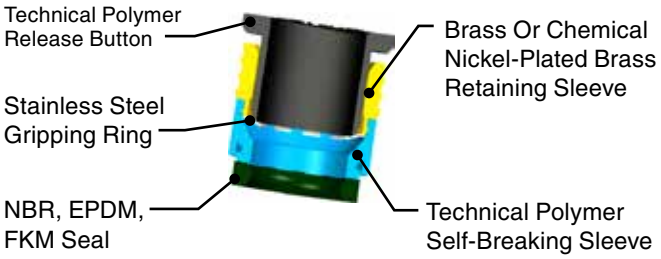
3100
Carstick® Cartridge
Nickel-Plated Brass

PLMC
Cartridge

PLSC
Cartridge

Carstick® Cartridges

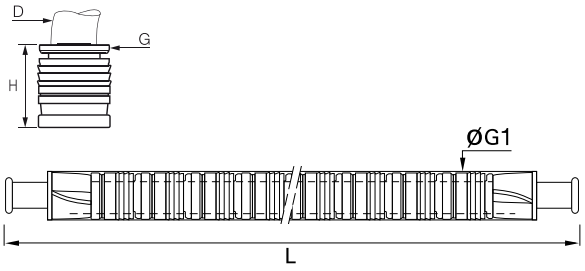
Component Materials



3100 Carstick® Cartridge Brass

PART NO.	OD	G	G1	H	L	KG
3100 04 00	4	8	11	10	554	.001
3100 06 00	6	10	14.5	11.5	629	.002
3100 08 00	8	13	15	15	794	.002
3100 10 00	10	15.5	19.5	17	930	.005
3100 12 00	12	19.5	21	19.5	1038	.010

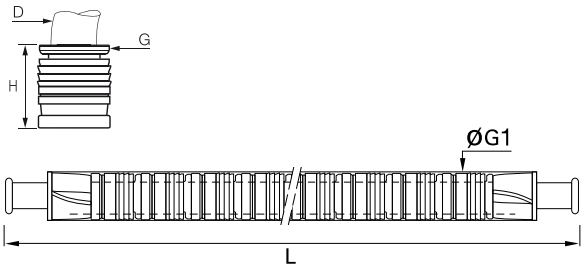
50 cartridges per Carstick®



3100 Carstick® Cartridge Nickel-Plated Brass Inch

PART NO.	OD	G	G1	H	L	KG
3100 53 00 99	1/8	7	10	9	508	.002
3100 56 00 99	1/4	10.5	14.5	12	600	.003
3100 60 00 99	3/8	15.5	19	16.5	930	.006

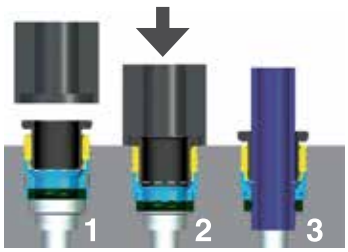
50 cartridges per Carstick®
5/32" (4mm) and 5/16" (8mm) also available



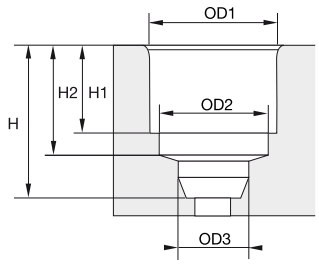
Installation

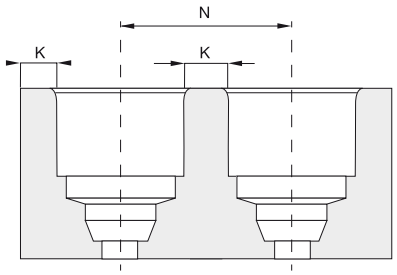
1. Self-centering of the cartridge in the cavity.
2. The seal protection is broken. The seal slides into the cavity. The cartridge is in place.
3. Tube connection.

Assembly Tool: For details on the assembly tool, please contact us.



Carstick® Cavity Dimensions





Please consult us for detailed drawings of cavity dimensions and tolerances. All our dimensions are in millimeters.

Carstick® & Quick Fitting Metric

CAVITY	OD3	H	H1	H2
4	4.1	10	6	8.15
6	6.1	12	7.5	9.65
8	8.15	15.5	9.9	12.45
10	10.25	19	11.7	14.35
12	12.17	22	13.9	16.75

Carstick® Inch

CAVITY	OD3	H	H1	H2
1/8	3.25	9.5	5.3	7.45
5/32 *	4.1	10	6	8.15
1/4	6.45	12.5	8	10.15
5/16 *	8.15	15.5	9.9	12.45
3/8	9.65	19	11.7	14.35

Polyamide Cavity

CAVITY	OD1	OD2	N*	K
4	8.25	7.05	9.8	1.5
6	10.2	9.15	12.2	2
8	12.15	10.85	14.2	2
10	14.8	13.2	16.8	2
12	17.5	15.5	20	2.5

CAVITY	OD1	OD2	N	K
1/8	7.05	6.02	8.6	1.5
5/32*	8.25	7.05	9.75	1.5
1/4	10.55	9.35	12.6	2
5/16*	12.15	10.85	14.2	2
3/8	14.8	13.1	16.8	2

Aluminum Cavity

CAVITY	OD1	OD2	N*	K
4	8.25	7.5	11.5	3
6	10.3	9.15	13.5	3
8	12.2	10.85	15.2	3
10	15.05	13.2	17.1	2
12	17.5	15.5	20	2.5

CAVITY	OD1	OD2	N	K
1/8	7.1	6.2	8.6	1.5
5/32*	8.25	7.05	11.25	3
¼	10.6	9.35	12.65	2
5/16*	12.2	10.85	15.2	3
3/8	15.05	13.1	17.1	2

Brass Cavity

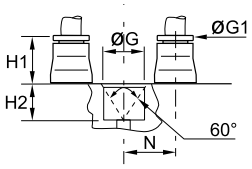
CAVITY	OD1	OD2	N*	K
4	8.25	7.05	10.25	2
6	10.25	9.1	12.25	2
8	12.2	10.85	14.25	2
10	15.05	13.2	17.1	2
12	17.65	15.5	20	2.5

CAVITY	OD1	OD2	N	K
1/8	7.1	6.2	8.6	1.5
5/32*	8.25	7.05	10.25	2
¼	10.6	9.35	12.65	2
5/16*	12/2	10.85	14.25	2
3/8	10.05	13.1	17.1	2

* Carstick®

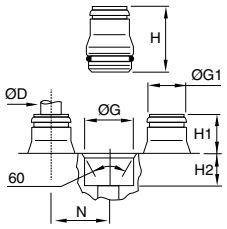
*5/32"=4mm and 5/16"=8mm

PLM/PLS Cartridges



PLMC Cartridge

PART NO.	TUBE SIZE MM	G +.1 - 0	H1 MM	H2 MM	N MM
PLMC-4M	4	10.00	9.00	8.50	11.00
PLMC-6M	6	12.00	11.00	8.50	13.50
PLMC-8M	8	15.00	12.50	8.50	16.00
PLMC-10M	10	17.50	14.50	10.50	20.00
PLMC-12M	12	19.50	15.00	10.50	22.50
PLMC-14M	14	21.50	16.50	12.00	25.00



PLSC Cartridge - Metric

PART NO.	TUBE SIZE MM	G +.1 - 0 MM	G1 MM	H MM	H1 MM	H2 MM	N MM
PLSC-4M	4	9.80	8	18.00	9.50	8.50	11.00
PLSC-6M	6	12.10	10	20.00	11.50	8.50	13.50
PLSC-8M	8	14.80	13	22.00	13.50	8.50	16.00
PLSC-10M	10	17.50	15	25.50	15.00	10.50	20.00

Industrial Compression Style Fittings

Compression Fittings

Compress-Align® Fittings

Brass Metric Compression

Poly-Tite Fittings

Tube to Male NPTF

68C Male Connector

169C-269C Male Elbow

171C Male Run Tee

172C Male Branch Tee

176C Adaptor

179C 45° Male Elbow

682C Tank Fitting

68CA Male Connector

169CA-269CA Male Elbow

171CA Male Run Tee

172CA Male Branch Tee

176CA Adaptor

179CA 45° Male Elbow

682CA Tank Fitting

68P Male Connector

169P-269P Male Elbow

169LP Long Elbow

169PS Male Elbow Swivel

171P Male Run Tee

172P Male Branch Tee

NV311P Needle Valve

NV312P Needle Valve

Tube to Female NPT

66C Female Connector

170C-270C Female Elbow

177C Female Branch Tee

66CA Female Connector

170CA-270CA Female Elbow

177CA Female Branch Tee

66P Female Connector

170P Female Elbow

177P Female Branch Tee

66HD Female Connector

170HD Female Elbow

177HD Female Branch Tee

Tube to Tube

62C Union

164C-264C Union Tee

165C-265C Union Elbow

62CA Union

62PCA Union

164CA-264CA Union Tee

165CA-265CA Union Elbow

62P Union

62PCA Union

97P Tube Reducer

164P Union Tee

Bulkhead Union

62CBH
Bulkhead Union

62CABH
Bulkhead Union

62PCABH
Bulkhead Union

62PBH
Bulkhead Union

62PCABH
Bulkhead Union

62PTBH
Bulkhead Union

Couplers

391P
Coupler Body

391PSS
Coupler Body

392P
Bulkhead Body

392PSS
Bulkhead Body

393P
Through Insert

393PSS
Through Insert

393PD
Shutoff Insert

393PDSS
Shutoff Insert

394P
Single Shutoff

394PSS
Single Shutoff

394PD
Double Shutoff

394PDSS
Double Shutoff

398P
Single Shutoff

398PSS
Single Shutoff

398PD
Double Shutoff

398PDSS
Double Shutoff

Auxiliary Component

60C
Sleeve

60PT
Plastic Sleeve

61C
Nut

61CL
Long Nut

63PT
Tube Support

639C
Seal Plug

59CA
Plug

61CA
Nut/Sleeve

639CA
Seal Plug

56PSG
Spring guard

59P
Plug

60P
Plastic Sleeve

60PB
Brass Sleeve

61P
Nut/Plastic Sleeve

61PB
Nut/Brass Sleeve

61PN
Nut Only

61PSGN
Spring Guard Nut

61HD
Nut

59HD
Plug

0124
Metric Sleeve

0124 40
Metric Steel Sleeve

0111
Metric Sleeve

0110
Metric Nut

0110 40
Metric Nut

0110 60
Metric Nut

0110 70
Metric Nut Sleeve

0127
Metric Tube Support

0125
Metric End Plug

0220
Metric Male Plug

Metric Tube to NPT

0105 Male Connector

0109 Male Elbow

Metric Tube to BSPT

0105 Male Connector

0109 Male Elbow

0108 Male Branch Tee

0103 Male Run Tee

Male BSPP to Female BSPP

0168 Reducer

Metric Tube to BSPP

0101 Male Elbow

0199 Male Elbow

Metric Tube to Metric Straight Thread

0101 Male Connector

Metric Tube to Female BSPP

0114 Female Connector

Metric Tube to Metric Tube

0106 Union

0102 Union Elbow

0104 Union Tee

0142 Union Y

0107 Union Cross

Metric Bulkhead Union

0116 Bulkhead Union

Metric Banjo

0118 Single Banjo

0119 Double Banjo

Compression Fittings

Parker's Compression Fittings provide users with an economical choice with numerous connection options for a wide variety of tube materials without the need for flaring, soldering or other tube preparation necessary to assemble.

Product Features:

- Meets functional requirements of SAE J-512
- UL Listed for flammable liquid
- Brass or acetal sleeve available
- No tube preparation
- Forged and extruded shapes

Markets:

- Industrial
- Packaging
- Pneumatic
- Printing

Applications:

- Air lines
- Lubrication Lines
- Cooling lines
- Industry
- Machinery
- Compressors
- Fluid transfer

Compatible Tubing:

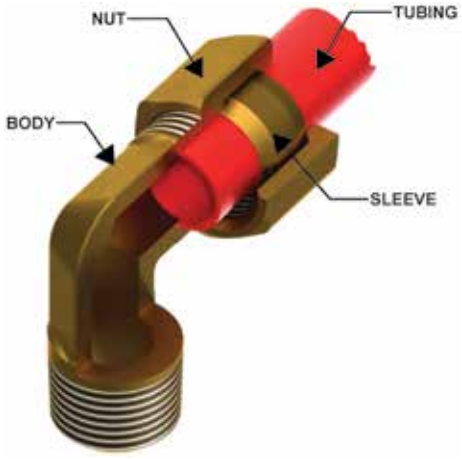
- Copper
- Aluminum
- Thermoplastic tubing

Specifications:

Temperature Range: -65˚ to +200˚ F (- 53.8° to +93.3° C)

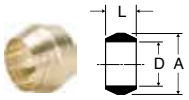
Pressure Range:

TUBE SIZE	PSI	bar	TUBE SIZE	PSI	bar
1/8	400	27.5	1/2	200	13.7
3/16	400	27.5	5/8	150	10.3
1/4	300	20.6	3/4	100	6.8
5/16	300	20.6	7/8	75	5.1
3/8	200	13.7			



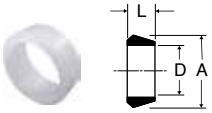
Sleeve 60C

REF. SAE 060115



PART NO.	TUBE SIZE	A	D	L
60C-2	1/8	.187	.130	.19
60C-3	3/16	.266	.192	.22
60C-4	1/4	.344	.255	.25
60C-5	5/16	.406	.318	.25
60C-6	3/8	.469	.382	.25
60C-7	7/16	.531	.444	.31
60C-8	1/2	.594	.507	.38
60C-10	5/8	.719	.632	.38
60C-12	3/4	.875	.758	.44
60C-14	7/8	1.000	.883	.41

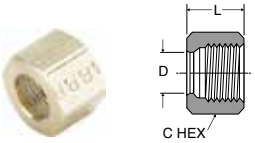
Acetal Sleeve 60PT



PART NO.	PLASTIC TUBE WALL	TUBE WALL	A	D	L
60PT-4	1/4	.040	.375	.254	.19
60PT-5	5/16	.062	.438	.317	.19
60PT-6	3/8	.062	.500	.379	.19
60PT-8	1/2	.062	.631	.507	.25
60PT-10	5/8	.062	.747	.632	.22

Nut 61C

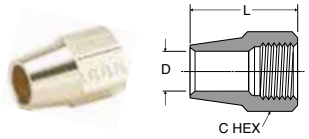
REF. SAE 060110



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61C-2	1/8	5/16-24	3/8	.130	.38
61C-3	3/16	3/8-24	7/16	.192	.41
61C-4	1/4	7/16-24	1/2	.255	.44
61C-5	5/16	1/2-24	9/16	.318	.44
61C-6	3/8	9/16-24	5/8	.382	.47
61C-7	7/16	5/8-24	11/16	.444	.50
61C-8	1/2	11/16-20	13/16	.507	.62
61C-10	5/8	13/16-18	15/16	.632	.62
61C-12	3/4	1-18	1-3/16	.758	.69
61C-14	7/8	1-1/8-18	1-1/4	.890	.62

Long Nut 61CL

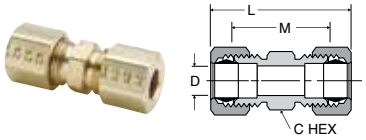
REF. SAE 060111



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CL-4	1/4	7/16-24	1/2	.255	.75
61CL-5	5/16	1/2-24	9/16	.318	.84
61CL-6	3/8	9/16-24	5/8	.382	.97
61CL-8	1/2	11/16-20	13/16	.507	1.06
61CL-10	5/8	13/16-18	15/16	.632	1.19
61CL-12	3/4	1-18	1-3/16	.758	1.38

Union 62C

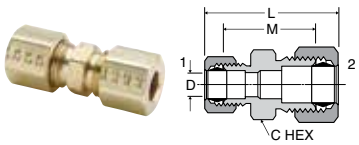
REF. SAE 060101 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62C-2	1/8	5/16-24	5/16	1.05	.64	.094
62C-3	3/16	3/8-24	3/8	1.21	.72	.125
62C-4	1/4	7/16-24	7/16	1.33	.79	.188
62C-5	5/16	1/2-24	1/2	1.39	.85	.250
62C-6	3/8	9/16-24	9/16	1.52	.97	.312
62C-7	7/16	5/8-24	5/8	1.70	1.02	.312
62C-8	1/2	11/16-20	11/16	1.90	1.08	.406
62C-10	5/8	13/16-18	13/16	2.06	1.23	.500
62C-12	3/4	1-18	1	2.37	1.41	.562
62C-14	7/8	1-1/8-18	1-1/8	2.07	1.19	.766

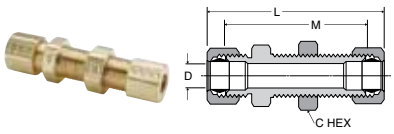
Union Reducers 62C

REF. SAE 060101 BA



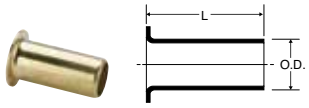
PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62C-4-3	3/16	1/4	3/8-24	7/16-24	7/16	1.29	.78	.125
62C-6-4	1/4	3/8	7/16-24	9/16-24	9/16	1.46	.91	.188
62C-8-6	3/8	1/2	9/16-24	11/16-20	11/16	1.71	1.03	.312
62C-10-6	3/8	5/8	9/16-24	13/16-18	13/16	1.82	1.13	.312

Bulkhead Union 62CBH



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62CBH-4	1/4	7/16-24	9/16	2.29	1.75	7/16	.188
62CBH-6	3/8	9/16-24	11/16	2.42	1.88	9/16	.312

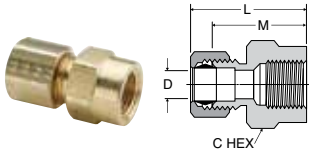
Brass Insert 63PT



PART NO.	TUBE O.D.	TUBE WALL	L	O.D.
63PT-2-16	1/8	.016	.46	.080
63PT-2-23	1/8	.023	.45	.073
63PT-3-25	3/16	.025	.45	.135
63PT-3-40	3/16	.040	.52	.095
63PT-4-40	1/4	.040	.50	.163
63PT-4-62	1/4	.062	.33	.110
63PT-5-40	5/16	.040	.50	.232
63PT-5-62	5/16	.062	.53	.187
63PT-6-62	3/8	.062	.56	.250
63PT-8-62	1/2	.062	.72	.370
63PT-10-62	5/8	.062	.72	.483

Female Connector 66C

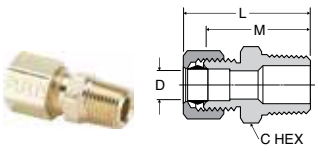
REF. SAE 060103 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66C-2-2	1/8	1/8	5/16-24	9/16	.95	.75	.094
66C-3-2	3/16	1/8	3/8-24	9/16	1.02	.78	.125
66C-3-4	3/16	1/4	3/8-24	11/16	1.20	.96	.125
66C-4-2	1/4	1/8	7/16-24	9/16	1.02	.78	.188
66C-4-4	1/4	1/4	7/16-24	11/16	1.24	1.00	.188
66C-5-2	5/16	1/8	1/2-24	9/16	1.07	.81	.250
66C-5-4	5/16	1/4	1/2-24	11/16	1.29	1.03	.250
66C-6-2	3/8	1/8	9/16-24	9/16	1.06	.78	.312
66C-6-4	3/8	1/4	9/16-24	11/16	1.34	1.06	.312
66C-6-6	3/8	3/8	9/16-24	13/16	1.34	1.06	.312
66C-6-8	3/8	1/2	9/16-24	1	1.54	1.27	.312
66C-7-6	7/16	3/8	5/8-24	13/16	1.43	1.09	.312
66C-8-4	1/2	1/4	11/16-20	11/16	1.49	1.09	.406
66C-8-6	1/2	3/8	11/16-20	13/16	1.52	1.12	.406
66C-8-8	1/2	1/2	11/16-20	1	1.71	1.31	.406
66C-10-8	5/8	1/2	13/16-18	1	1.80	1.38	.500

Male Connector 68C

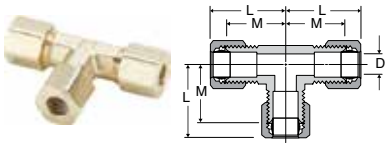
REF. SAE 060102 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68C-2-1	1/8	1/16	5/16-24	3/8	.99	.78	.095
68C-2-2	1/8	1/8	5/16-24	7/16	.97	.77	.094
68C-3-1	3/16	1/16	3/8-24	3/8	1.08	.84	.125
68C-3-2	3/16	1/8	3/8-24	7/16	1.08	.84	.125
68C-3-4	3/16	1/4	3/8-24	9/16	1.27	1.03	.125
68C-4-2	1/4	1/8	7/16-24	7/16	1.10	.86	.188
68C-4-4	1/4	1/4	7/16-24	9/16	1.30	1.06	.188
68C-4-6	1/4	3/8	7/16-24	11/16	1.27	1.03	.188
68C-4-8	1/4	1/2	7/16-24	7/8	1.55	1.31	.188
68C-5-2	5/16	1/8	1/2-24	1/2	1.15	.89	.234
68C-5-4	5/16	1/4	1/2-24	9/16	1.33	1.07	.250
68C-6-2	3/8	1/8	9/16-24	9/16	1.25	.97	.250
68C-6-4	3/8	1/4	9/16-24	9/16	1.42	1.14	.312
68C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.312
68C-6-8	3/8	1/2	9/16-24	7/8	1.53	1.25	.312
68C-7-4	7/16	1/4	5/8-24	5/8	1.50	1.17	.312
68C-8-4	1/2	1/4	11/16-20	11/16	1.60	1.20	.312
68C-8-6	1/2	3/8	11/16-20	11/16	1.60	1.20	.406
68C-8-8	1/2	1/2	11/16-20	7/8	1.71	1.31	.406
68C-10-6	5/8	3/8	13/16-18	13/16	1.73	1.31	.406
68C-10-8	5/8	1/2	13/16-18	7/8	1.90	1.48	.500
68C-10-12	5/8	3/4	13/16-18	1-1/16	1.98	1.56	.500
68C-12-8	3/4	1/2	1-18	1	2.05	1.60	.562
68C-12-12	3/4	3/4	1-18	1-1/16	2.08	1.63	.656
68C-14-12	7/8	3/4	1-1/8-18	1-1/8	1.76	1.41	.750

Union Tee 164C-264C

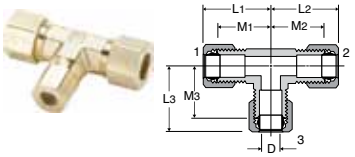
REF. SAE 060401 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
164C-2	1/8	5/16-24	.82	.61	.094
264C-3	3/16	3/8-24	.84	.60	.125
164C-4	1/4	7/16-24	.86	.63	.188
264C-4	1/4	7/16-24	.84	.60	.188
164C-5	5/16	1/2-24	.98	.71	.250
164C-6	3/8	9/16-24	1.03	.74	.312
164C-8	1/2	11/16-20	1.34	.93	.406
164C-10	5/8	13/16-18	1.54	1.08	.500
164C-12	3/4	1.00-18	1.65	1.17	.563

Union Tee 164C-264C Combination Sizes

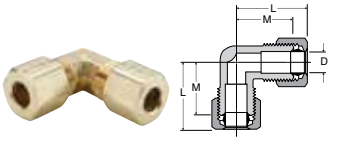
REF. SAE 060401 BA



PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
164C-6-4-4	3/8	1/4	1/4	1.03	.96	.96	.75	.72	.72	.188
164C-6-6-4	3/8	3/8	1/4	1.03	.96	.96	.75	.75	.72	.188
164C-8-8-6	1/2	1/2	3/8	1.34	1.16	1.16	.94	.94	.88	.312

Union Elbow 165C-265C

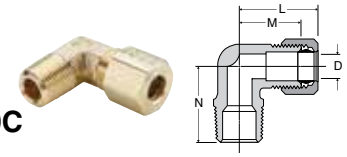
REF. SAE 060201 BA



PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
165C-2	1/8	5/16-24	.82	.61	.094
165C-3	3/16	3/8-24	.87	.61	.125
165C-4	1/4	7/16-24	.88	.61	.188
265C-4	1/4	7/16-24	.84	.60	.188
165C-5	5/16	1/2-24	.95	.71	.250
165C-6	3/8	9/16-24	1.03	.74	.312
165C-7	7/16	5/3-24	1.16	.82	.312
165C-8	1/2	11/16-20	1.34	.93	.406
165C-10	5/8	13/16-18	1.48	1.05	.500
165C-12	3/4	1-18	1.65	1.17	.563

Male Elbow 169C-269C

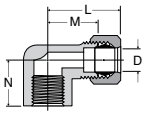
REF. SAE 060202 BA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
169C-2-1	1/8	1/16	5/16-24	.81	.60	.67	.095
269C-2-2	1/8	1/8	5/16-24	.80	.60	.67	.094
169C-3-1	3/16	1/16	3/8-24	.85	.61	.67	.126
169C-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
269C-3-2	3/16	1/8	3/8-24	.84	.60	.67	.125
169C-3-4	3/16	1/4	3/8-24	.86	.64	.93	.125
169C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
269C-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
169C-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
269C-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
169C-4-6	1/4	3/8	7/16-24	.93	.68	1.00	.188
169C-5-2⁺	5/16	1/8	1/2-24	.88	.61	.74	.234
269C-5-2⁺	5/16	1/8	1/2-24	.86	.60	.73	.250
169C-5-4	5/16	1/4	1/2-24	.95	.71	.93	.250
269C-5-4	5/16	1/4	1/2-24	.93	.67	.82	.250
169C-5-6	5/16	3/8	1/2-24	1.01	.75	1.00	.250
169C-6-2⁺	3/8	1/8	9/16-24	1.03	.74	.74	.234
269C-6-2⁺	3/8	1/8	9/16-24	.97	.69	.75	.220
169C-6-4	3/8	1/4	9/16-24	1.03	.74	.93	.312
269C-6-4	3/8	1/4	9/16-24	1.01	.73	.92	.312
169C-6-6	3/8	3/8	9/16-24	1.03	.75	1.00	.312
269C-6-6	3/8	3/8	9/16-24	1.12	.84	.97	.312
169C-6-8	3/8	1/2	9/16-24	1.22	.94	1.27	.312
269C-7-6	7/16	3/8	5/8-24	1.16	.82	.98	.312
169C-8-4⁺	1/2	1/4	11/16-20	1.34	.94	1.00	.312
169C-8-6	1/2	3/8	11/16-20	1.34	.93	1.11	.406
169C-8-8	1/2	1/2	11/16-20	1.48	1.00	1.37	.406
169C-10-8	5/8	1/2	13/16-18	1.48	1.06	1.31	.500
169C-12-8	3/4	1/2	1-18	1.64	1.18	1.49	.562
169C-12-12	3/4	3/4	1-18	1.70	1.27	1.58	.562

⁺ For these parts the pipe thread through hole is smaller than the through hole on the flare end.

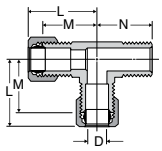
Female Elbow 170C-270C



REF. SAE 060203 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170C-2-2	1/8	1/8	5/16-24	.89	.69	.56	.094
170C-3-2	3/16	1/8	3/8-24	.98	.69	.56	.125
170C-4-2	1/4	1/8	7/16-24	.93	.69	.56	.188
270C-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170C-4-4	1/4	1/4	7/16-24	1.02	.78	.67	.188
170C-6-4	3/8	1/4	9/16-24	1.06	.79	.73	.312
170C-6-6	3/8	3/8	9/16-24	1.22	.89	.69	.312
170C-7-4	7/16	1/4	5/8-24	1.27	.93	.73	.312
170C-8-6	1/2	3/8	11/16-20	1.34	1.00	.69	.406
170C-8-8	1/2	1/2	11/16-20	1.56	1.15	.97	.408
170C-12-12	3/4	3/4	1-18	2.06	1.58	1.58	.563

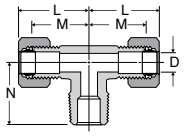
Male Run Tee 171C



REF. SAE 060424 BA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171C-2-2	1/8	1/8	5/16-24	.82	.61	.67	.094
171C-3-2	3/16	1/8	3/8-24	.86	.61	.67	.125
171C-4-2	1/4	1/8	7/16-24	.90	.64	.75	.188
171C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171C-6-4	3/8	1/4	9/16-24	1.09	.81	1.03	.312

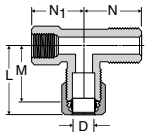
Male Branch Tee 172C



REF. SAE 060425 BA

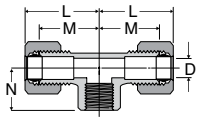
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172C-2-2	1/8	1/8	5/16-24	.82	.61	.67	.094
172C-3-2	3/16	1/8	3/8-24	.86	.61	.67	.125
172C-4-2	1/4	1/8	7/16-24	.86	.61	.74	.188
172C-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172C-6-2	3/8	1/8	9/16-24	1.03	.75	.75	.234
172C-6-4	3/8	1/4	9/16-24	1.09	.77	.92	.312
172C-6-6	3/8	3/8	9/16-24	1.09	.81	1.00	.312
172C-8-6	1/2	3/8	11/16-20	1.34	.93	1.10	.406

Adapter Tee 176C



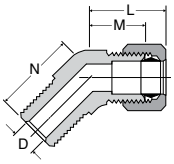
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
176C-4-2	1/4	1/8	7/16-24	.93	.69	.75	.66	.188

Female Branch Tee 177C



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
177C-4-2	1/4	1/8	7/16-24	.86	.63	.53	.188

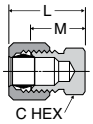
45° Elbow 179C



Compression to male pipe

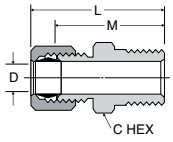
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179C-4-2	1/4	1/8	7/16-24	.90	.66	.56	.188
179C-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179C-6-2	3/8	1/8	9/16-24	.90	.63	.65	.234
179C-6-4	3/8	1/4	9/16-24	.90	.63	.84	.312
179C-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179C-8-6	1/2	3/8	11/16-24	1.15	.81	.95	.406

Seal Plug 639C



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639C-4	1/4	7/16-24	7/16	.74	.50

Straight Through Tank Fitting 682C



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
682C-3-2	3/16	1/8	3/8-24	7/16	1.06	.84	.195
682C-6-6	3/8	3/8	9/16-24	11/16	1.44	1.16	.387
682C-8-8	1/2	1/2	11/16-20	7/8	1.90	1.31	.516

Compress-Align® Fittings

Parker's Compress-Align Fittings are pre-assembled with a captive sleeve, always oriented for a faster installation. The design of the captive sleeve aligns to seal even out-of-round tubing.

Product Features:

- Self-aligning captive sleeve
- 2-piece fitting – Less inventory
- Visible inspection before and after installation
- 1/8" – 1" Sizes
- No flaring, soldering or other tube preparation
- Forged and extruded shapes

Markets:

- Industrial
- Packaging
- Pneumatic
- Printing
- Chemical

Applications:

- Air lines
- Lubrication Lines
- Cooling lines
- Industry
- Machinery
- Chemical Dispensing
- Compressors
- Fluid transfer

Compatible Tubing:

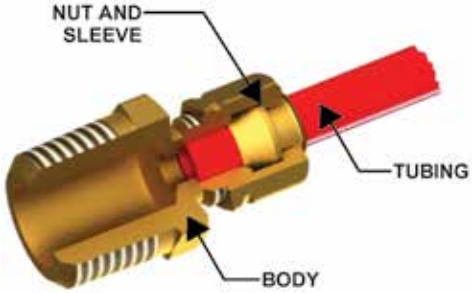
- Copper, Aluminum
- Thermoplastic tubing
- TFE, FEA, PFA

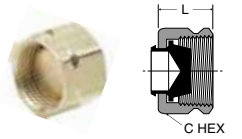
Specifications:

Temperature Range: -65˚ to +200˚ F (-53.8° to +93.3° C)

Pressure Range:

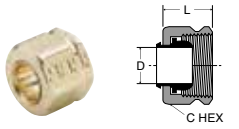
TUBE SIZE	PSI	bar	TUBE SIZE	PSI	bar
1/8	2800	193.0	1/2	750	51.7
3/16	1900	131.0	5/8	650	44.8
1/4	1400	96.5	3/4	550	37.9
5/16	1200	82.7	7/8	450	31.0
3/8	1000	68.9	1	350	24.1





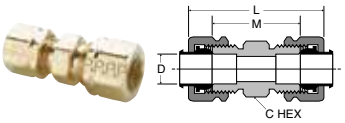
Plug 59CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
59CA-4	1/4	7/16-24	1/2	.40
59CA-6	3/8	9/16-24	5/8	.45
59CA-8	1/2	11/16-20	13/16	.50



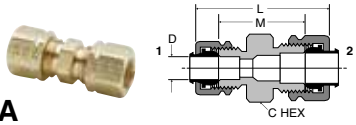
Nut and Sleeve Assembly 61CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61CA-2	1/8	5/16-24	3/8	.130	.36
61CA-3	3/16	3/8-24	7/16	.194	.38
61CA-4	1/4	7/16-24	1/2	.255	.40
61CA-5	5/16	1/2-24	9/16	.318	.45
61CA-6	3/8	9/16-24	5/8	.382	.45
61CA-8	1/2	11/16-20	13/16	.507	.50
61CA-10	5/8	13/16-18	15/16	.632	.53
61CA-12	3/4	1-18	1-3/16	.760	.56
61CA-14	7/8	1-1/8-18	1-3/8	.885	.68
61CA-16	1	1-1/4-18	1-1/2	1.012	.63



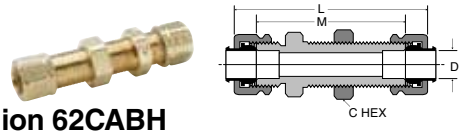
Union 62CA

PART NO.	SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62CA-2	1/8	5/16-24	5/16	1.12	.64	.094
62CA-3	3/16	3/8-24	3/8	1.19	.72	.125
62CA-4	1/4	7/16-24	7/16	1.26	.79	.188
62CA-5	5/16	1/2-24	1/2	1.32	.85	.250
62CA-6	3/8	9/16-24	9/16	1.42	.97	.312
62CA-8	1/2	11/16-20	11/16	1.53	1.08	.406
62CA-10	5/8	13/16-18	13/16	1.71	1.23	.500
62CA-12	3/4	1-18	1	2.20	1.41	.562
62CA-14	7/8	1-1/8-18	1-1/8	2.08	1.19	.766



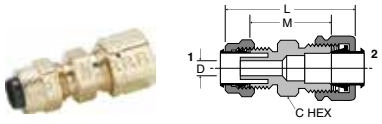
Union Reducers 62CA

PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62CA-4-3	3/16	1/4	3/8-24	7/16-24	7/16	1.25	.78	.125
62CA-6-4	1/4	3/8	7/16-24	9/16-24	9/16	1.37	.91	.188
62CA-8-6	3/8	1/2	9/16-24	11/16-20	11/16	1.48	1.03	.312
62CA-10-6	3/8	5/8	9/16-24	13/16-18	13/16	1.59	1.13	.312



Bulkhead Union 62CABH

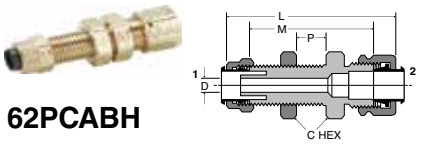
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62CABH-4	1/4	7/16-24	9/16	2.22	1.75	7/16	.188
62CABH-6	3/8	9/16-24	11/16	2.32	1.88	9/16	.312



Union 62PCA

(Poly-Tite to Compress-Align)

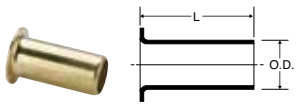
PART NO.	TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.24	.89	.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.26	.92	.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.32	.98	.204



Bulkhead Union 62PCABH

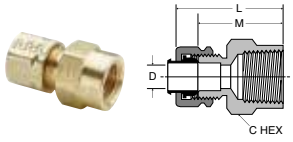
(Poly-Tite to Compress-Align)

PART NO.	TUBE SIZE	1 STR THD	2 STR THD	C HEX	P MAX	L	M	FLOW BKHD DIA.	FLOW DIA. D
62PCABH-4	1/4	3/8-24	7/16-24	9/16	.38	1.80	1.45	3/8	.125
62PCABH-6	3/8	1/2-24	9/16-24	11/16	.47	1.98	1.64	1/2	.204



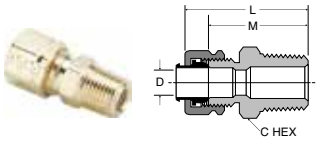
Brass Insert 63PT

PART NO.	TUBE SIZE	TUBE WALL	L	O.D.
63PT-2-16	1/8	.016	.46	.080
63PT-2-23	1/8	.023	.45	.073
63PT-3-25	3/16	.025	.45	.135
63PT-3-40	3/16	.040	.52	.095
63PT-4-40	1/4	.040	.50	.163
63PT-4-62	1/4	.062	.33	.110
63PT-5-40	5/16	.040	.50	.232
63PT-5-62	5/16	.062	.53	.187
63PT-6-62	3/8	.062	.56	.250
63PT-8-62	1/2	.062	.72	.370
63PT-10-62	5/8	.062	.72	.483



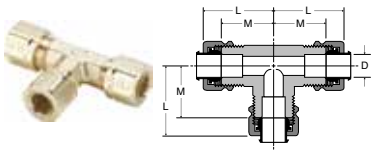
Female Connector 66CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66CA-2-2	1/8	1/8	5/16-24	9/16	.99	.75	.094
66CA-3-2	3/16	1/8	3/8-24	9/16	1.01	.78	.125
66CA-3-4	3/16	1/4	3/8-24	11/16	1.19	.96	.125
66CA-4-2	1/4	1/8	7/16-24	9/16	1.02	.78	.188
66CA-4-4	1/4	1/4	7/16-24	11/16	1.24	1.00	.188
66CA-5-2	5/16	1/8	1/2-24	9/16	1.05	.81	.250
66CA-5-4	5/16	1/4	1/2-24	11/16	1.27	1.03	.250
66CA-6-2	3/8	1/8	9/16-24	9/16	1.00	.78	.312
66CA-6-4	3/8	1/4	9/16-24	11/16	1.28	1.06	.312
66CA-6-6	3/8	3/8	9/16-24	13/16	1.29	1.06	.312
66CA-6-8	3/8	1/2	9/16-24	1	1.49	1.27	.312
66CA-8-4	1/2	1/4	11/16-20	11/16	1.32	1.09	.406
66CA-8-6	1/2	3/8	11/16-20	13/16	1.35	1.12	.406
66CA-8-8	1/2	1/2	11/16-20	1	1.54	1.31	.406
66CA-10-8	5/8	1/2	13/16-18	1	1.62	1.38	.500



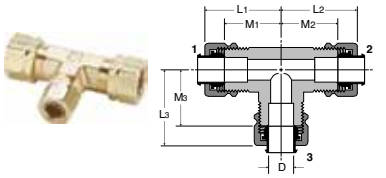
Male Connector 68CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68CA-2-1	1/8	1/16	5/16-24	3/8	1.02	.78	.095
68CA-2-2	1/8	1/8	5/16-24	7/16	1.01	.77	.094
68CA-3-1	3/16	1/16	3/8-24	3/8	1.07	.84	.125
68CA-3-2	3/16	1/8	3/8-24	7/16	1.07	.84	.125
68CA-3-4	3/16	1/4	3/8-24	9/16	1.26	1.03	.125
68CA-4-2	1/4	1/8	7/16-24	7/16	1.10	.86	.188
68CA-4-4	1/4	1/4	7/16-24	9/16	1.31	1.06	.188
68CA-4-6	1/4	3/8	7/16-24	11/16	1.28	1.03	.188
68CA-4-8	1/4	1/2	7/16-24	7/8	1.56	1.31	.188
68CA-5-2	5/16	1/8	1/2-24	1/2	1.13	.89	.234
68CA-5-4	5/16	1/4	1/2-24	9/16	1.35	1.07	.250
68CA-6-2	3/8	1/8	9/16-24	9/16	1.19	.97	.250
68CA-6-4	3/8	1/4	9/16-24	9/16	1.36	1.14	.312
68CA-6-6	3/8	3/8	9/16-24	11/16	1.43	1.16	.312
68CA-6-8	3/8	1/2	9/16-24	7/8	1.52	1.25	.312
68CA-8-4	1/2	1/4	11/16-20	11/16	1.45	1.22	.312
68CA-8-6	1/2	3/8	11/16-20	11/16	1.43	1.20	.406
68CA-8-8	1/2	1/2	11/16-20	7/8	1.54	1.31	.406
68CA-10-6	5/8	3/8	13/16-18	13/16	1.55	1.31	.406
68CA-10-8	5/8	1/2	13/16-18	7/8	1.72	1.48	.500
68CA-10-12	5/8	3/4	13/16-18	1-1/16	1.80	1.56	.500
68CA-12-8	3/4	1/2	1-18	1	1.99	1.60	.562
68CA-12-12	3/4	3/4	1-18	1-1/16	2.02	1.63	.656
68CA-14-12	7/8	3/4	1-1/8-18	1-1/8	1.85	1.41	.750
68CA-16-12	1	3/4	1-1/4-18	1-1/4	1.83	1.39	.750
68CA-16-16	1	1	1-1/4-18	1-3/8	2.02	1.58	.875



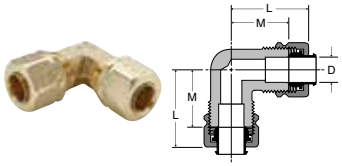
Union Tee 164CA-264CA

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
164CA-2	1/8	5/16-24	.84	.61	.093
264CA-3	3/16	3/8-24	.83	.60	.125
164CA-4	1/4	7/16-24	.84	.63	.188
264CA-4	1/4	7/16-24	.84	.60	.188
164CA-5	5/16	1/2-24	.95	.71	.250
164CA-6	3/8	9/16-24	.96	.74	.312
164CA-8	1/2	11/16-20	1.15	.93	.406
164CA-10	5/8	13/16-18	1.32	1.08	.500
164CA-12	3/4	1.00-18	1.56	1.17	.562



Union Tee 164CA combination sizes

PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L1	L2	L3	M1	M2	M3	FLOW DIA. D
164CA-6-4-4	3/8	1/4	1/4	.97	.96	.96	.75	.72	.72	.188
164CA-6-6-4	3/8	3/8	1/4	.97	.97	.96	.75	.75	.72	.188
164CA-8-8-6	1/2	1/2	3/8	1.17	1.17	1.10	.94	.94	.88	.312



Union Elbow 165CA-265CA

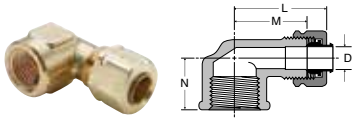
PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA. D
165CA-2	1/8	5/16-24	.84	.61	.094
165CA-3	3/16	3/8-24	.84	.61	.125
165CA-4	1/4	7/16-24	.84	.61	.188
265CA-4	1/4	7/16-24	.84	.60	.188
165CA-5	5/16	1/2-24	.94	.71	.250
165CA-6	3/8	9/16-24	.96	.74	.312
165CA-8	1/2	11/16-20	1.15	.93	.406
165CA-10	5/8	13/16-18	1.29	1.05	.500
165CA-12	3/4	1-18	1.56	1.17	.562
165CA-16	1	1-1/4-18	1.63	1.19	.877

Male Elbow 169CA-269CA

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
169CA-2-1	1/8	1/16	5/16-24	.84	.60	.67	.095
269CA-2-2	1/8	1/8	5/16-24	.84	.60	.67	.094
169CA-3-1	3/16	1/16	3/8-24	.84	.61	.67	.126
169CA-3-2	3/16	1/8	3/8-24	.84	.61	.69	.125
269CA-3-2	3/16	1/8	3/8-24	.83	.60	.67	.125
169CA-3-4	3/16	1/4	3/8-24	.87	.64	.93	.125
169CA-4-2	1/4	1/8	7/16-24	.84	.61	.74	.188
269CA-4-2	1/4	1/8	7/16-24	.84	.60	.73	.188
169CA-4-4	1/4	1/4	7/16-24	.86	.62	.94	.188
269CA-4-4	1/4	1/4	7/16-24	.84	.60	.79	.188
169CA-4-6	1/4	3/8	7/16-24	.92	.68	1.00	.188
169CA-5-2 +	5/16	1/8	1/2-24	.84	.61	.74	.234
269CA-5-2 +	5/16	1/8	1/2-24	.84	.60	.73	.250
169CA-5-4	5/16	1/4	1/2-24	.94	.71	.93	.250
269CA-5-4	5/16	1/4	1/2-24	.91	.67	.82	.250
169CA-5-6	5/16	3/8	1/2-24	.99	.75	1.00	.250
169CA-6-2 +	3/8	1/8	9/16-24	.96	.74	.74	.234
269CA-6-2 +	3/8	1/8	9/16-24	.96	.69	.75	.220
169CA-6-4	3/8	1/4	9/16-24	.96	.74	.93	.312
269CA-6-4	3/8	1/4	9/16-24	.95	.73	.92	.312
169CA-6-6	3/8	3/8	9/16-24	.97	.75	1.00	.312
269CA-6-6	3/8	3/8	9/16-24	1.06	.84	.97	.312
169CA-6-8	3/8	1/2	9/16-24	1.16	.94	1.27	.312
169CA-8-4 +	1/2	1/4	11/16-20	1.17	.94	1.00	.312
169CA-8-6	1/2	3/8	11/16-20	1.15	.93	1.11	.406
169CA-8-8	1/2	1/2	11/16-20	1.23	1.00	1.37	.406
169CA-10-6 +	5/8	3/8	13/16-18	1.30	1.06	1.15	.406
169CA-10-8	5/8	1/2	13/16-18	1.30	1.06	1.31	.500
169CA-12-8	3/4	1/2	1-18	1.57	1.18	1.49	.562
169CA-12-12	3/4	3/4	1-18	1.66	1.27	1.58	.562
169CA-16-12 +	1	3/4	1-1/4-18	1.63	1.19	1.60	.875

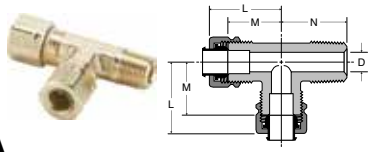
+ For these parts the pipe thread through hole is smaller than the through hole on the tube end.

Female Elbow 170CA-270CA



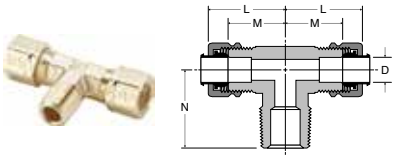
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
170CA-2-2	1/8	1/8	5/16-24	.93	.69	.56	.094
170CA-3-2	3/16	1/8	3/8-24	.98	.69	.56	.125
170CA-4-2	1/4	1/8	7/16-24	.98	.69	.56	.188
270CA-4-2	1/4	1/8	7/16-24	.91	.67	.54	.188
170CA-4-4	1/4	1/4	7/16-24	1.02	.78	.67	.188
170CA-6-4	3/8	1/4	9/16-24	1.09	.79	.73	.312
170CA-6-6	3/8	3/8	9/16-24	1.16	.89	.69	.312
170CA-8-6	1/2	3/8	11/16-20	1.23	1.00	.69	.406
170CA-8-8	1/2	1/2	11/16-20	1.38	1.15	.97	.408
170CA-12-12	3/4	3/4	1-18	1.97	1.58	1.58	.563

Male Run Tee 171CA



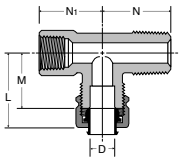
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
171CA-2-2	1/8	1/8	5/16-24	.84	.61	.67	.094
171CA-3-2	3/16	1/8	3/8-24	.83	.61	.67	.125
171CA-4-2	1/4	1/8	7/16-24	.88	.64	.75	.188
171CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
171CA-6-4	3/8	1/4	9/16-24	1.03	.81	1.03	.312

Male Branch Tee 172CA



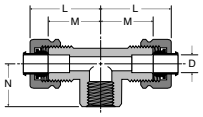
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
172CA-2-2	1/8	1/8	5/16-24	.84	.61	.67	.093
172CA-3-2	3/16	1/8	3/8-24	.83	.61	.67	.125
172CA-4-2	1/4	1/8	7/16-24	.84	.61	.74	.188
172CA-4-4	1/4	1/4	7/16-24	.93	.69	.92	.188
172CA-6-2	3/8	1/8	9/16-24	.97	.75	.75	.234
172CA-6-4	3/8	1/4	9/16-24	.99	.77	.92	.312
172CA-6-6	3/8	3/8	9/16-24	1.07	.81	1.00	.312
172CA-8-6	1/2	3/8	11/16-20	1.15	.93	1.10	.406
172CA-12-12	3/4	3/4	1-18	1.67	1.27	1.50	.562

Adapter Tee 176CA



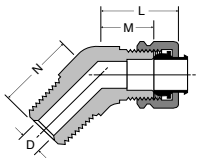
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	N1	FLOW DIA. D
176CA-4-2	1/4	1/8	7/16-24	.92	.69	.75	.66	.188

Female Branch Tee 177CA



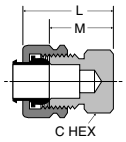
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
177CA-4-2	1/4	1/8	7/16-24	.86	.63	.53	.188

45° Elbow 179CA



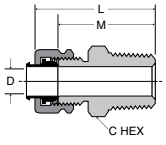
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA. D
179CA-4-2	1/4	1/8	7/16-24	.89	.66	.56	.188
179CA-4-4	1/4	1/4	7/16-24	.80	.56	.84	.188
179CA-6-2	3/8	1/8	9/16-24	.85	.63	.65	.234
179CA-6-4	3/8	1/4	9/16-24	.85	.63	.84	.312
179CA-6-6	3/8	3/8	9/16-24	.97	.75	.95	.312
179CA-8-6	1/2	3/8	11/16-20	1.03	.81	.95	.406

Seal Plug 639CA



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M
639CA-4	1/4	7/16-24	7/16	.74	.50

Straight Through Tank Fitting 682CA



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
682CA-3-2	3/16	1/8	3/8-24	7/16	1.07	.84	.194

Brass Metric Compression

Parker's Metric Compression Fittings provide users with an economical choice with numerous connection options for a wide variety of tube materials without the need for flaring, soldering or other tube preparation necessary to assemble.

Product Features:

- 4mm – 28mm tube sizes
- NPT, BSPT, BSPP, Metric Threads
- NBR seal
- Silicone free

Markets:

- Factory/Process Automation
- Automotive Process
- Packaging
- Pneumatic
- Printing

Applications:

- Air lines
- Lubrication Lines
- Cooling lines
- Water
- Machinery
- Compressors
- Fluid transfer

Compatible Tubing:

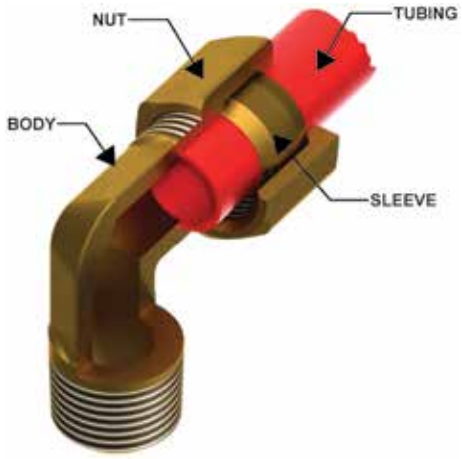
- Copper
- Aluminum
- Thermoplastic tubing

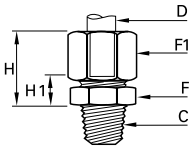
Specifications:

Temperature Range: -40˚ to +250˚ F (-40° to +121.1° C)

Pressure Range:

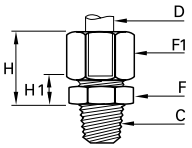
TUBE SIZE MM	PSI	bar	TUBE SIZE MM	PSI	bar
4	3335	229.9	14	652	44.9
6	2175	149.9	16	580	39.9
8	1450	99.9	18	536	36.9
10	1087	74.9	20	507	34.9
12	797	54.9	22	435	29.9





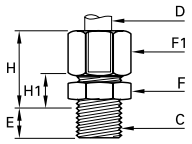
0105 Male Connector BSPT

PART NO.	OD	C	F	F1	H MAX	H1	KG
0105 04 10	4	R1/8	10	10	17	7	.012
0105 05 10	5	R1/8	11	12	17.5	7.5	.016
0105 05 13	5	R1/4	14	12	17.5	7.5	.022
0105 06 10	6	R1/8	11	13	18	7.5	.017
0105 06 13	6	R1/4	14	13	18	7.5	.024
0105 06 17	6	R3/8	17	13	18	8.5	.031
0105 08 10	8	R1/8	13	14	19.5	7	.020
0105 08 13	8	R1/4	14	14	19.5	7	.025
0105 08 17	8	R3/8	17	14	20.5	8	.032
0105 10 10	10	R1/8	17	19	24	9	.043
0105 10 13	10	R1/4	17	19	24	9	.047
0105 10 17	10	R3/8	17	19	24	9	.048
0105 10 21	10	R1/2	22	19	25	10	.067
0105 12 13	12	R1/4	19	22	24	9	.059
0105 12 17	12	R3/8	19	22	24	9	.060
0105 12 21	12	R1/2	22	22	25	10	.076
0105 14 13	14	R1/4	22	24	25	8	.068
0105 14 17	14	R3/8	22	24	25	8	.068
0105 14 21	14	R1/2	22	24	26	9	.080
0105 14 27	14	R3/4	27	24	27	10	.107
0105 15 17	15	R3/8	22	24	25	8	.065
0105 15 21	15	R1/2	22	24	26	9	.076
0105 16 13	16	R1/4	24	27	27	9.5	.092
0105 16 17	16	R3/8	24	27	27	9.5	.092
0105 16 21	16	R1/2	24	27	27	9.5	.099
0105 16 27	16	R3/4	27	27	28	10.5	.123
0105 18 21	18	R1/2	27	30	30	10.5	.127
0105 18 27	18	R3/4	27	30	30	10.5	.138
0105 20 21	20	R1/2	30	32	32	11	.148
0105 20 27	20	R3/4	30	32	32	11	.157
0105 22 21	22	R1/2	32	36	33	11	.187
0105 22 27	22	R3/4	32	36	33	11	.196
0105 22 34	22	R1	36	36	33	11	.227
0105 25 27	25	R3/4	36	41	36	11	.261
0105 25 34	25	R1	36	41	36	11	.278
0105 28 27	28	R3/4	41	42	36	11	.274
0105 28 34	28	R1	41	42	36	11	.283



0105 Male Connector NPT

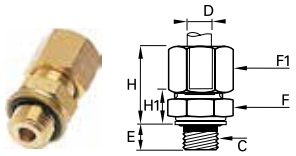
PART NO.	OD	C	F	F1	H MAX	H1	KG
0105 06 11	6	NPT1/8	11	13	18	7.5	.018
0105 06 14	6	NPT1/4	14	13	18	7.5	.027
0105 08 11	8	NPT1/8	13	14	21	7	.021
0105 08 14	8	NPT1/4	14	14	18.5	7	.026
0105 10 14	10	NPT1/4	17	19	24	9	.048
0105 10 18	10	NPT3/8	17	19	24	9	.048
0105 10 22	10	NPT1/2	22	19	25	10	.066



0101 Male Connector with Captive Sealing Washer Male BSPP

PART NO.	OD	C	E	F	F1	H MAX	H1	KG
0101 04 19	4	M5X0.8	5	10	10	16.5	8	.011
0101 04 10	4	G1/8	6.5	13	10	16.5	8	.016
0101 05 10	5	G1/8	6.5	13	12	17.5	8.5	.018
0101 06 10	6	G1/8	6.5	13	13	18	8.5	.020
0101 06 13	6	G1/4	8	17	13	18	9.5	.030
0101 08 10	8	G1/8	6.5	13	14	19	8.5	.021
0101 08 13	8	G1/4	8	17	14	19.5	9	.032
0101 08 17	8	G3/8	11	22	14	20	10.5	.044
0101 10 13	10	G1/4	8	17	19	24	11	.049
0101 10 17	10	G3/8	11	22	19	24	11.5	.061
0101 12 13	12	G1/4	8	19	22	24	11	.062
0101 12 17	12	G3/8	11	22	22	24	11.5	.069
0101 12 21	12	G1/2	12	27	22	24	12	.089
0101 14 17	14	G3/8	11	22	24	25	10.5	.074
0101 14 21	14	G1/2	12	27	24	25	11	.094
0101 15 17	15	G3/8	11	22	24	25	10.5	.071
0101 15 21	15	G1/2	12	27	24	25	11	.093
0101 16 17	16	G3/8	11	22	27	27	12	.092
0101 16 21	16	G1/2	12	27	27	27	12.5	.109
0101 18 21	18	G1/2	12	27	30	29.5	12.5	.128
0101 18 27	18	G3/4	13	32	30	29.5	13	.152
0101 20 27	20	G3/4	13	32	32	31	13	.164
0101 22 27	22	G3/4	13	32	36	32	13	.195
0101 22 34	22	G1	15	41	36	31	13.5	.259
0101 25 27	25	G3/4	13	36	41	35.5	13	.261
0101 25 34	25	G1	15	41	41	35.5	13	.169
0101 28 34	28	G1	15	41	42	35.5	13.5	.300

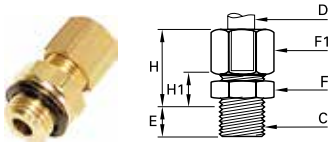
With pre-assembled captive polymer sealing washer



0101 Male Connector with Bi-Material Seal Male BSPP

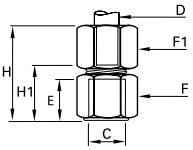
PART NO.	OD	C	E	F	F1	H MAX	H1	KG
0101 04 10 39	4	G1/8	5.5	13	10	17.5	9	.016
0101 05 10 39	5	G1/8	5.5	13	12	18.5	9.5	.019
0101 06 10 39	6	G1/8	5.5	13	13	19	9.5	.020
0101 06 13 39	6	G1/4	7	17	13	19	10.5	.030
0101 08 10 39	8	G1/8	5.5	13	14	20	9.5	.022
0101 08 13 39	8	G1/4	7	17	14	20.5	10	.032
0101 08 17 39	8	G3/8	9.5	22	14	21.5	12	.045
0101 10 13 39	10	G1/4	7	17	19	25	12	.048
0101 10 17 39	10	G3/8	9.5	22	19	25.5	13	.062
0101 12 13 39	12	G1/4	7	19	22	25	12	.063
0101 12 17 39	12	G3/8	9.5	22	22	25	13	.071
0101 12 21 39	12	G1/2	10.5	27	22	25	13.5	.091
0101 14 17 39	14	G3/8	9.5	22	24	26.5	12	.075
0101 14 21 39	14	G1/2	10.5	27	24	26.5	12.5	.095
0101 15 17 39	15	G3/8	9.5	22	24	26.5	12	.073
0101 15 21 39	15	G1/2	10.5	27	24	26.5	12.5	.095
0101 16 17 39	16	G3/8	9.5	22	27	28.5	13.5	.092
0101 16 21 39	16	G1/2	10.5	27	27	28.5	14	.111
0101 18 21 39	18	G1/2	10.5	27	30	31	14	.129
0101 18 27 39	18	G3/4	11.5	32	30	31	14.5	.155
0101 20 27 39	20	G3/4	11.5	32	32	32.5	14.5	.164
0101 22 27 39	22	G3/4	11.5	32	36	32.5	14.5	.197
0101 22 34 39	22	G1	13	41	36	33	15.5	.259
0101 25 34 39	25	G1	13	41	41	37.5	15.5	.309
0101 28 34 39	28	G1	13	41	42	37.5	15.5	.301

Zinc plated steel with NBR seal



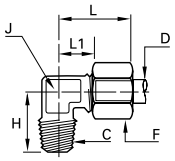
0101 Male Connector Metric Thread

PART NO.	OD	C	E	F	F1	H MAX	H1	KG
0101 04 55	4	M7X1	6.5	10	10	16.5	7.5	.012
0101 04 56	4	M8X1	6.5	11	10	16.5	7.5	.013
0101 05 56	5	M8X1	6.5	11	12	17.5	8	.016
0101 05 60	5	M10X1	6.5	14	12	17.5	8.5	.020
0101 06 60	6	M10X1	6.5	14	13	18	8.5	.021
0101 06 62	6	M10X1.5	6.5	14	13	18	8.5	.021
0101 08 65	8	M12X1	8	17	14	19.5	9	.029
0101 08 66	8	M12X1.25	8	17	14	19.5	9	.029
0101 08 68	8	M13X1.25	8	17	14	19.5	9	.030
0101 10 70	10	M14X1.25	8	17	19	24	11	.047
0101 10 71	10	M14X1.5	8	17	19	24	11	.047
0101 10 74	10	M16X1.25	9	19	19	24	11	.051
0101 10 75	10	M16X1.5	9	19	19	24	11	.051
0101 10 78	10	M18X1.5	9	22	19	24	11.5	.060
0101 12 74	12	M16X1.25	9	19	22	24	11	.061
0101 12 75	12	M16X1.5	9	19	22	24	11	.061
0101 12 78	12	M18X1.5	9	22	22	24	11.5	.070
0101 14 78	14	M18X1.5	9	22	24	25	10.5	.077
0101 14 80	14	M20X1.5	10	24	24	25	11	.084
0101 15 78	15	M18X1.5	9	22	24	25	10.5	.071
0101 16 80	16	M20X1.5	10	24	27	27	12.5	.102
0101 16 82	16	M22X1.5	10	27	27	27	12.5	.111
0101 18 82	18	M22X1.5	10	27	30	29.5	12.5	.129
0101 18 83	18	M24X1.5	11	30	30	29.5	13	.142



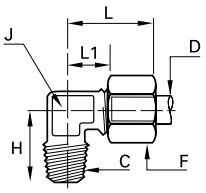
0114 Female Connector BSPP

PART NO.	OD	C	E	F	F1	H MAX	H1	KG
0114 04 10	4	G1/8	9.5	14	10	26	16.5	.020
0114 04 13	4	G1/4	13.5	17	10	30	20.5	.030
0114 05 10	5	G1/8	9.5	14	12	28	17	.023
0114 05 13	5	G1/4	13.5	17	12	31	21	.033
0114 06 10	6	G1/8	9.5	14	13	28	17	.025
0114 06 13	6	G1/4	13.5	17	13	32	21	.034
0114 06 17	6	G3/8	14	22	13	32	21.5	.051
0114 08 10	8	G1/8	9.5	14	14	29	16.5	.026
0114 08 13	8	G1/4	13.5	17	14	33	20.5	.036
0114 08 17	8	G3/8	14	22	14	34	21	.052
0114 10 13	10	G1/4	13.5	17	19	37	21.5	.052
0114 10 17	10	G3/8	14	22	19	37	22	.068
0114 10 21	10	G1/2	18.5	27	19	42	26.5	.099
0114 12 13	12	G1/4	13.5	19	22	36	20.5	.069
0114 12 17	12	G3/8	14	22	22	37	22	.078
0114 12 21	12	G1/2	18.5	27	22	42	26.5	.109
0114 14 13	14	G1/4	13.5	22	24	36	18.5	.085
0114 14 17	14	G3/8	14	22	24	38	21	.048
0114 14 21	14	G1/2	18.5	27	24	43	25.5	.113
0114 15 17	15	G3/8	14	22	24	38	21	.078
0114 15 21	15	G1/2	18.5	27	24	43	25.5	.109
0114 16 13	16	G1/4	13.5	24	27	36	18	.107
0114 16 17	16	G3/8	14	24	27	38	20.5	.106
0114 16 21	16	G1/2	18.5	27	27	44	26	.127
0114 18 17	18	G3/8	14	27	30	39	19.5	.140
0114 18 21	18	G1/2	18.5	27	30	45	26	.144
0114 18 27	18	G3/4	19.5	32	30	46	27	.165
0114 20 17	20	G3/8	14	30	32	38	18	.161
0114 20 21	20	G1/2	18.5	30	32	44.5	24	.173
0114 20 27	20	G3/4	19.5	32	32	47	26.5	.170
0114 22 27	22	G3/4	19.5	32	36	48	26.5	.204
0114 25 27	25	G3/4	19.5	36	41	50.5	26	.297



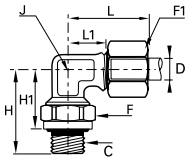
0109 Male Elbow BSPT

PART NO.	OD	C	F	H	J	L MAX	L1	KG
0109 04 10	4	R1/8	10	17	8	19	9.5	.016
0109 04 13	4	R1/4	10	20	10	19	11	.026
0109 05 10	5	R1/8	12	17.5	8	21	11	.019
0109 05 13	5	R1/4	12	21.5	10	22	12	.028
0109 06 10	6	R1/8	13	18	8	22	11	.021
0109 06 13	6	R1/4	13	21.5	10	22	12	.031
0109 08 10	8	R1/8	14	18.5	10	28	15	.028
0109 08 13	8	R1/4	14	22	10	28	15	.033
0109 08 17	8	R3/8	14	24	12	28	15	.044
0109 10 13	10	R1/4	19	25	12	30	14.5	.052
0109 10 17	10	R3/8	19	25.5	12	30	14.5	.060
0109 10 21	10	R1/2	19	32	19	36	21	.109
0109 12 13	12	R1/4	22	26	15	30	15	.074
0109 12 17	12	R3/8	22	27	15	30	15	.077
0109 12 21	12	R1/2	22	32	19	36	21	.116
0109 14 17	14	R3/8	24	30	19	35	18	.105
0109 14 21	14	R1/2	24	32	19	35	18	.112
0109 15 17	15	R3/8	24	30	19	35	18	.099
0109 15 21	15	R1/2	24	32	19	35	18	.106
0109 16 17	16	R3/8	27	30	19	39	21	.120
0109 16 21	16	R1/2	27	33.5	19	39	21	.130
0109 16 27	16	R3/4	27	36.5	23	41	23	.189
0109 18 21	18	R1/2	30	35.5	23	41	21.5	.182
0109 18 27	18	R3/4	30	36.5	23	41	21.5	.199
0109 20 21	20	R1/2	32	36.5	23	42	21.5	.181
0109 20 27	20	R3/4	32	38	23	42	21.5	.200
0109 22 27	22	R3/4	36	40	27	50	30	.288
0109 22 34	22	R1	36	44	27	50	30	.342
0109 25 27	25	R3/4	41	43	27	54	30	.325
0109 25 34	25	R1	41	44	27	54	30	.367
0109 28 27	28	R3/4	42	46	32	54	30	.402
0109 28 34	28	R1	42	48	32	54	30	.384



0109 Male Elbow NPT

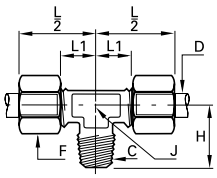
PART NO.	OD	C	F	H	J	L MAX	L1	KG
0109 06 11	6	1/8	13	18	8	22	11	.021
0109 06 14	6	1/4	13	21.5	10	22	12	.030
0109 08 11	8	1/8	14	18.5	10	28	15	.028
0109 08 14	8	1/4	14	22	10	28	15	.033
0109 10 14	10	1/4	19	25	12	30	14.5	.053



0199 Adjustable Male Elbow BSPP

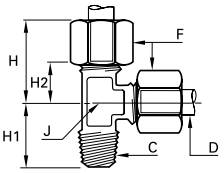
PART NO.	OD	C	F	F1	H	H1	H1 MAX	J	L MAX	L1	KG
0199 04 10	4	G1/8	14	10	23	16	17	8	19	9.5	.023
0199 04 13	4	G1/4	19	10	30.5	22	23.5	10	19	11	.043
0199 06 10	6	G1/8	14	13	23	16	17	8	22	11	.027
0199 06 13	6	G1/4	19	13	30.5	22	23.5	10	22	12	.047
0199 08 10	8	G1/8	14	14	24	17	18	10	28	15	.033
0199 08 13	8	G1/4	19	14	30.5	22	23.5	10	28	15	.051
0199 08 17	8	G3/8	22	14	33.5	24	25.5	12	28	15	.065
0199 10 13	10	G1/4	19	19	31	22.5	24	12	30	14.5	.068
0199 10 17	10	G3/8	22	19	33.5	24	25.5	12	30	14.5	.079
0199 10 21	10	G1/2	27	19	40	29.5	31	19	37	22	.138
0199 14 17	14	G3/8	22	24	35.5	26	27.5	19	35	18	.119
0199 14 21	14	G1/2	27	24	40	29.5	31	19	35	18	.141
0199 18 21	18	G1/2	27	30	40	29	30.5	23	41	21.5	.187
0199 18 27	18	G3/4	32	30	43.5	32	33.5	23	41	21.5	.222
0199 22 27	22	G3/4	32	36	45.5	34	36	32	51	31	.382
0199 22 34	22	G1	41	36	54	40.5	43	32	51	31	.408
0199 28 34	28	G1	41	42	54	40.5	43	32	54	30	.420

The body will orientate for positioning purposes



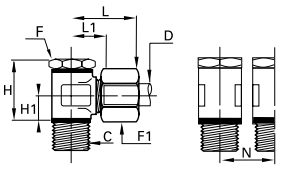
0108 Male Branch Tee Male BSPT

PART NO.	OD	C	F	H	J	L1	L2	KG
0108 04 10	4	R1/8	10	17	8	9.5	19	.025
0108 05 10	5	R1/8	12	17.5	8	11	21	.017
0108 06 10	6	R1/8	13	18	8	11	22	.032
0108 06 13	6	R1/4	13	21.5	10	16	27	.047
0108 08 10	8	R1/8	14	18.5	10	15	28	.045
0108 08 13	8	R1/4	14	22	10	15	28	.050
0108 08 17	8	R3/8	14	24	12	15	28	.061
0108 10 13	10	R1/4	19	25	12	14.5	30	.084
0108 10 17	10	R3/8	19	25.5	12	14.5	30	.090
0108 12 13	12	R1/4	22	26	15	15	30	.116
0108 12 17	12	R3/8	22	27	15	15	30	.117
0108 14 17	14	R3/8	24	30	19	18	35	.153
0108 14 21	14	R1/2	24	32	19	18	35	.168
0108 15 17	15	R3/8	24	30	19	18	35	.145
0108 15 21	15	R1/2	24	32	19	18	35	.155
0108 16 17	16	R3/8	27	30	19	21	39	.190
0108 16 21	16	R1/2	27	33.5	19	21	39	.203
0108 18 21	18	R1/2	30	35.5	23	21.5	41	.265
0108 18 27	18	R3/4	30	36.5	23	21.5	41	.292
0108 20 27	20	R3/4	32	38	23	21.5	42	.298
0108 22 27	22	R3/4	36	40	27	29	50	.435
0108 22 34	22	R1	36	44	27	29	50	.466



0103 Male Run Tee BSPT

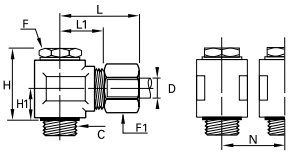
PART NO.	OD	C	F	H MAX	H1	H2	J	KG
0103 04 10	4	R1/8	10	19	17	9.5	8	.025
0103 05 10	5	R1/8	12	21	17.5	11	8	.030
0103 06 10	6	R1/8	13	22	18	11	8	.033
0103 06 13	6	R1/4	13	27	21.5	16	10	.048
0103 08 10	8	R1/8	14	28	18.5	15	10	.045
0103 08 13	8	R1/4	14	28	22	15	10	.050
0103 08 17	8	R3/8	14	28	24	15	12	.061
0103 10 13	10	R1/4	19	30	25	14.5	12	.084
0103 12 13	12	R1/4	22	30	26	15	15	.114
0103 12 17	12	R3/8	22	30	27	15	15	.120
0103 14 17	14	R3/8	24	35	30	18	19	.161
0103 14 21	14	R1/2	24	35	32	18	19	.169
0103 15 17	15	R3/8	24	35	30	18	19	.148
0103 15 21	15	R1/2	24	35	32	18	19	.158
0103 16 17	16	R3/8	27	39	30	21	19	.192
0103 16 21	16	R1/2	27	39	33.5	21	19	.199
0103 18 21	18	R1/2	30	41	35.5	21.5	23	.269
0103 18 27	18	R3/4	30	41	36.5	21.5	23	.282
0103 20 27	20	R3/4	32	42	38	21.5	23	.298
0103 22 27	22	R3/4	36	50	40	29	27	.435
0108 22 34	22	R1	36	44	27	29	50	.466



0118 Single Banjo with Captive Sealing Washer Maple BSPP

PART NO.	OD	C	F	F1	H	H1	L1 MAX	L1	N	KG
0118 04 10	4	G1/8	14	10	24	9.5	24	14.5	17.5	.038
0118 05 10	5	G1/8	14	12	24	9.5	25	14.5	17.5	.041
0118 05 13	5	G1/4	17	12	25	10	26	16	21	.058
0118 06 10	6	G1/8	14	13	24	9.5	25	14.5	17.5	.041
0118 06 13	6	G1/4	17	13	25	10	26	16	21	.056
0118 08 10	8	G1/8	14	14	24	9.5	28	15.5	17.5	.054
0118 08 13	8	G1/4	17	14	25	10	28	15.5	21	.057
0118 08 17	8	G3/8	22	14	32	13	30	18	26.5	.111
0118 10 13	10	G1/4	17	19	31	13	34	19	23	.120
0118 10 17	10	G3/8	22	19	32	13	34	19	26.5	.129
0118 12 13	12	G1/4	17	22	34	14.5	34	19	23	.126
0118 12 17	12	G3/8	22	22	35	14.5	34	19	26.5	.133
0118 14 13	14	G1/4	17	24	37	16	37	20.5	28	.154
0118 14 17	14	G3/8	22	24	38	16	37	20.5	28	.195
0118 14 21	14	G1/2	27	24	40	16	38	20.5	32.5	.208
0118 15 17	15	G3/8	22	24	38	16	37	20.5	28	.190
0118 15 21	15	G1/2	27	24	40	16	38	20.5	32.5	.198
0118 16 21	16	G1/2	27	27	42	16	38	21	32.5	.221
0118 18 21	18	G1/2	27	30	46	19.5	43	24.5	36	.366
0118 20 27	20	G3/4	32	32	49	20	44	24.5	39	.403
0118 22 27	22	G3/4	32	36	53	22	45	24.5	39	.459

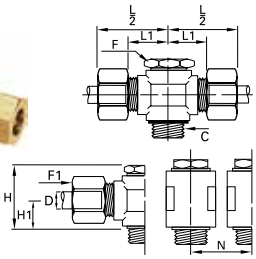
With pre-assembled captive polymer sealing washer



0118 Single Banjo with Bi-Material Seal Male BSPP

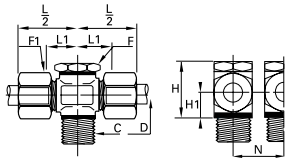
PART NO.	OD	C	F	F1	H	H1	L1 MAX	L1	N	KG
0118 04 10 39	4	G1/8	14	10	23	9.5	24	14.5	17.5	.038
0118 05 10 39	5	G1/8	14	12	23	9.5	25	14.5	17.5	.041
0118 05 13 39	5	G1/4	17	12	24	10	26	16	21	.064
0118 06 10 39	6	G1/8	14	13	23	9.5	25	14.5	17.5	.042
0118 06 13 39	6	G1/4	17	13	24	10	26	16	21	.057
0118 08 10 39	8	G1/8	14	14	23	9.5	28	15.5	17.5	.055
0118 08 13 39	8	G1/4	17	14	24	10	28	15.5	21	.058
0118 08 17 39	8	G3/8	22	14	31.5	13.5	30	18	26.5	.113
0118 10 13 39	10	G1/4	17	19	30	13	34	19	23	.118
0118 10 17 39	10	G3/8	22	19	31.5	13.5	34	19	26.5	.128
0118 12 13 39	12	G1/4	17	22	33	14.5	34	19	23	.128
0118 12 17 39	12	G3/8	22	22	34.5	15	34	19	26.5	.140
0118 14 13 39	14	G1/4	17	24	36	16	37	20.5	28	.189
0118 14 17 39	14	G3/8	22	24	37.5	16.5	37	20.5	28	.198
0118 14 21 39	14	G1/2	27	24	39	16.5	38	20.5	32.5	.205
0118 15 17 39	15	G3/8	22	24	37.5	16.5	37	20.5	28	.389
0118 15 21 39	15	G1/2	27	24	40	16.5	38	20.5	32.5	.202
0118 16 21 39	16	G1/2	27	27	40	16.5	38	21	32.5	.225
0118 18 21 39	18	G1/2	27	30	47	20	43	24.5	36	.369
0118 20 27 39	20	G3/4	32	32	50	20.5	44	24.5	39	.394
0118 22 27 39	22	G3/4	32	36	54	22.5	45	24.5	39	.462

Zinc plated steel with NBR seal



0119 Double Banjo with Bi-Material Seal Male BSPP

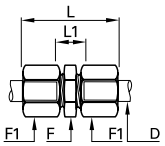
PART NO.	OD	C	F	F1	H	H1	L1	L2	N	KG
0119 04 10 39	4	G1/8	14	10	23	9.5	14.5	24	17.5	.050
0119 05 10 39	5	G1/8	14	12	23	9.5	14.5	25	17.5	.049
0119 05 13 39	5	G1/4	17	12	24	10	126	26	21	.072
0119 06 10 39	6	G1/8	14	13	23	9.5	14.5	25	17.5	.056
0119 06 13 39	6	G1/4	17	13	24	10	16	26	21	.071
0119 08 10 39	8	G1/8	14	14	23	9.5	15.5	28	17.5	.072
0119 08 13 39	8	G1/4	17	14	24	10	15.5	28	21	.080
0119 08 17 39	8	G3/8	22	14	31.5	13.5	18	30	26.5	.118
0119 10 13 39	10	G1/4	17	19	30	13	19	34	23	.156
0119 10 17 39	10	G3/8	22	19	31.5	13.5	19	34	26.5	.167
0119 12 13 39	12	G1/4	17	22	33	14.5	19	34	23	.180
0119 12 17 39	12	G3/8	22	22	34.5	15	19	34	26.5	.183
0119 14 13 39	14	G1/4	17	24	36	16	20.5	37	28	.248
0119 14 17 39	14	G3/8	22	24	37.5	16.5	20.5	37	28	.247
0119 14 21 39	14	G1/2	27	24	39	16.5	20.5	38	32.5	.262
0119 15 17 39	15	G3/8	22	24	37.5	16.5	20.5	37	28	.246
0119 15 21 39	15	G1/2	27	24	40	16.5	20.5	38	32.5	.251
0119 18 21 39	18	G1/2	27	30	47	20	24.5	43	36	.469
0119 20 27 39	20	G3/4	32	32	50	20.5	24.5	44	39	.638
0119 22 27 39	22	G3/4	32	36	54	22.5	24.5	45	39	.610



0119 Double Banjo with Captive Sealing Washer Male BSPP

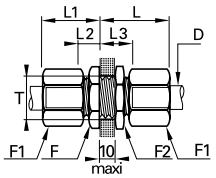
PART NO.	OD	C	F	F1	H	H1	L1	L2	N	KG
0119 04 10	4	G1/8	14	10	24	9.5	14.5	24	17.5	.049
0119 06 10	6	G1/8	14	13	24	9.5	14.5	25	17.5	.056
0119 06 13	6	G1/4	17	13	25	10	16	26.5	21	.038
0119 08 10	8	G1/8	14	14	24	9.5	15.5	28	17.5	.069
0119 08 13	8	G1/4	17	14	25	10	15.5	28	21	.074
0119 08 17	8	G3/8	22	14	32	13	18	30.5	26.5	.140
0119 10 13	10	G1/4	17	19	31	13	19	34	23	.156
0119 10 17	10	G3/8	22	19	32	13	19	34	26.5	.165
0119 12 13	12	G1/4	17	22	34	14.5	19	34	23	.180
0119 12 17	12	G3/8	22	22	35	14.5	19	34	26.5	.182
0119 14 13	14	G1/4	17	24	37	16	20.5	37.5	28	.246
0119 14 17	14	G3/8	22	24	38	16	20.5	37.5	28	.247
0119 14 21	14	G1/2	27	24	40	16	20.5	38	32.5	.219

Zinc plated steel with NBR seal. Thread with pre-assembled polymer washer



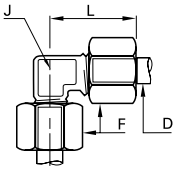
0106 Equal Tube-to-Tube Connector

PART NO.	OD	F	F1	L MAX	L1	KG
0106 04 00	4	10	10	28	10	.016
0106 05 00	5	11	12	31	11	.023
0106 06 00	6	11	13	32	11	.026
0106 08 00	8	13	14	36	10	.031
0106 10 00	10	17	19	42	13	.070
0106 12 00	12	19	22	42	13	.092
0106 14 00	14	22	24	45	11	.104
0106 15 00	15	22	24	45	11	.097
0106 16 00	16	24	27	48	13	.141
0106 18 00	18	27	30	53	14	.186
0106 20 00	20	30	32	56	14	.211
0106 22 00	22	32	36	60	14	.283
0106 25 00	25	36	41	64	14	.396
0106 28 00	28	41	42	64	14	.399



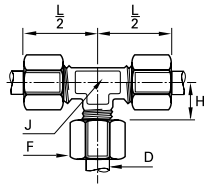
0116 Bulkhead Union

PART NO.	OD	F	F1	F2	L MAX	L1 MAX	L2	L3	OT MIN	KG
0116 04 00	4	10	10	13	27	17	7	17	8.3	.024
0116 05 00	5	13	12	14	28	18	7.5	17.5	10.3	.035
0116 06 00	6	13	13	14	28	19	7.5	17.5	10.3	.037
0116 08 00	8	14	14	17	29	20	7	17	12.3	.045
0116 10 00	10	19	19	22	33	25	9	19	16.5	.101
0116 12 00	12	22	22	22	33	25	9	19	18.5	.121
0116 14 00	14	24	24	24	35	25	8	18	20.5	.145
0116 15 00	15	24	24	24	35	25	8	18	20.5	.134
0116 16 00	16	27	27	27	36	28	9.5	19.5	22.5	.189
0116 18 00	18	27	30	30	40	30	10.5	20.5	24.5	.237
0116 20 00	20	32	30	32	41	31	11	21	27.5	.274
0116 22 00	22	36	36	36	42	32	11	21	30.5	.372
0116 25 00	25	36	41	38	46	36	11	21	33.5	.469



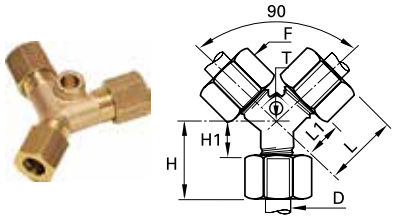
0102 Union Elbow

PART NO.	OD	F	J	L MAX	KG
0102 04 00	4	10	5	19	.016
0102 05 00	5	12	8	21	.024
0102 06 00	6	13	8	22	.027
0102 08 00	8	14	10	28	.038
0102 10 00	10	19	12	30	.073
0102 12 00	12	22	15	30	.098
0102 14 00	14	24	19	35	.133
0102 15 00	15	24	19	35	.122
0102 16 00	16	27	19	39	.164
0102 18 00	18	30	23	41	.231
0102 20 00	20	32	23	42	.233
0102 22 00	22	36	27	50	.371
0102 25 00	25	41	27	54	.446
0102 28 00	28	42	32	54.5	.478



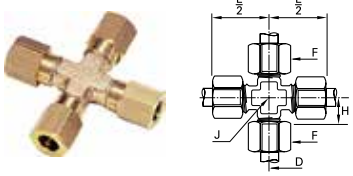
0104 Union Tee

PART NO.	OD	F	H	J	L 2	KG
0104 04 00	4	10	9.5	8	19	.028
0104 05 00	5	12	11	8	21	.036
0104 06 00	6	13	11	8	22	.040
0104 08 00	8	14	15	10	28	.055
0104 10 00	10	19	14.5	12	30	.105
0104 12 00	12	22	15	15	30	.142
0104 14 00	14	24	18	19	35	.190
0104 15 00	15	24	18	19	35	.175
0104 16 00	16	27	21	19	39	.239
0104 18 00	18	30	21.5	23	41	.330
0104 20 00	20	32	21.5	23	42	.330
0104 22 00	22	36	29	27	50	.518
0104 25 00	25	41	29	27	54	.630
0104 28 00	28	42	30	32	55	.660



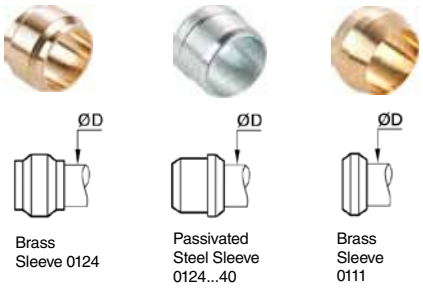
0142 Union Y with Mounting Boss

PART NO.	OD	F	H MAX	H1	L MAX	L1	OT	KG
0142 04 00	4	10	16.5	7	26.5	17	4.2	.032
0142 06 00	6	13	19.5	8.5	28	17	4.2	.049
0142 08 00	8	14	21	8	30	17	6.2	.061
0142 10 00	10	19	24.5	9	37.5	22	6.2	.128
0142 12 00	12	22	26	11	38	23	6.2	.110
0142 14 00	14	24	28	11	41.5	24.5	6.2	.201
0142 15 00	15	24	28	11	41.5	24.5	6.2	.204
0142 16 00	16	27	30	12	43	25	6.2	.252
0142 18 00	18	30	31.5	12	50.5	31	10.2	.220
0142 25 00	25	41	39	14	59	34	10.2	.728



0107 Union Cross

PART NO.	OD	F	H	J	L2	KG
0107 04 00	4	10	9.5	8	19	.035
0107 05 00	5	12	11	8	21	.047
0107 06 00	6	13	11	8	22	.052
0107 08 00	8	14	15	11	28	.073
0107 10 00	10	19	14.5	14	30	.142
0107 12 00	12	22	15	15	35	.096
0107 14 00	14	24	18	20	35	.246
0107 15 00	15	24	18	20	35	.227
0107 16 00	16	27	21	20	39	.312
0107 18 00	18	30	21.5	25	41	.426
0107 20 00	20	32	21.5	25	42	.429
0107 22 00	22	36	29	27	50	.676
0107 25 00	25	41	29	27	50	.819



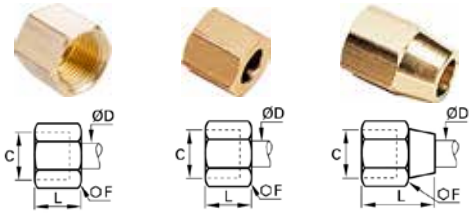
Brass Sleeve 0124

Passivated Steel Sleeve 0124...40

Brass Sleeve 0111

0124 Suffix 40, 0111 Sleeves

OD MM	PART NO.	WT	PART NO.	WT	PART NO.	WT
4	0124 04 00	.001	0124 04 40	.001	0111 04 00	.001
5	0124 05 00	.001	0124 05 40	.001	0111 05 00	.001
6	0124 06 00	.001	0124 06 40	.001	0111 06 00	.001
8	0124 08 00	.002	0124 08 40	.002	0111 08 00	.002
10	0124 10 00	.003	0124 10 40	.003	0111 10 00	.002
12	0124 12 00	.004	0124 12 40	.004	0111 12 00	.003
14	0124 14 00	.004	0124 14 40	.005	0111 14 00	.003
15	0124 15 00	.004	0124 15 40	.005	0111 15 00	.003
16	0124 16 00	.006	0124 16 40	.006	0111 16 00	.004
18	0124 18 00	.007	0124 18 40	.008	-	-
20	0124 20 00	.009	0124 20 40	.008	-	-
22	0124 22 00	.012	0124 22 40	.010	-	-
25	0124 25 00	.017	0124 25 40	.015	-	-
28	0124 28 00	.017	-	-	-	-



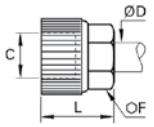
Brass Nut 0110

Passivated Steel Sleeve 0110...40

Brass Nut 0110...60

0110, 0110 Suffix 40, 0110 Suffix 60 Nuts

OD MM	C	PART NO.	WT	PART NO.	WT	PART NO.	WT
4	M8X1	0110 04 00	.005	0110 04 00 40	.004	0110 04 00 60	.006
5	M10X1	0110 05 00	.006	0110 05 00 40	.006	0110 05 00 60	.009
6	M10X1	0110 06 00	.008	0110 06 00 40	.008	0110 06 00 60	.011
8	M12X1	0110 08 00	.008	0110 08 00 40	.009	0110 08 00 60	.012
10	M16X1.5	0110 10 00	.019	0110 10 00 40	.019	0110 10 00 60	.027
12	M18X1.5	0110 12 00	.026	0110 12 00 40	.027	0110 12 00 60	.041
14	M20X1.5	0110 14 00	.029	-	-	-	-
15	M20X1.5	0110 15 00	.028	0110 15 00 40	.030	0110 15 00 60	.050
16	M22X1.5	0110 16 00	.043	0110 16 00 40	.043	0110 16 00 60	.072
18	M24X1.5	0110 18 00	.059	0110 18 00 40	.057	-	-
20	M27X1.5	0110 20 00	.057	-	-	-	-
22	M30X1.5	0110 22 00	.079	0110 22 00 40	.084	-	-
25	M33X1.5	0110 25 00	.121	-	-	-	-
28	M36X1.5	0110 28 00	.109	-	-	-	-

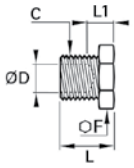



Engineering Plastic

0110 Suffix 70 Nut Sleeve

OD MM	C	PART NO.	F MM	L MM	WT
4	M8X1	0110 04 00 70	8	13	.001
6	M10X1	0110 06 00 70	11	15	.002
8	M12X1	0110 08 00 70	13	16	.002
10	M16X1.5	0110 10 00 70	17	19	.004
12	M18X1.5	0110 12 00 70	19	19	.005
14	M20X1.5	0110 14 00 70	22	20	.007
16	M22X1.5	0110 16 00 70	24	21	.009

Plastic nut-sleeve should not be used on metal tubes.

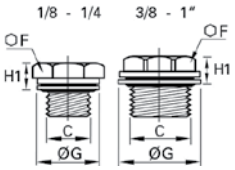



0125 End Plug Metric

OD MM	C	PART NO.	F MM	L MM	L1 MM	WT
4	M8X1	0125 04 00	10	12	8	.006
6	M10X1	0125 06 00	11	13.5	9.5	.009
8	M12X1	0125 08 00	14	14	9	.012
10	M16X1.5	0125 10 00	17	18	11	.025
12	M18X1.5	0125 12 00	19	18	11	.031
14	M20X1.5	0125 14 00	22	19	11	.039

The plug enables unused tubes to be blanked off. The male thread on the plug has the same pitch as the female thread on the nut of a standard Legris fitting. Therefore, the plug screwed into the nut blanks off the tube.

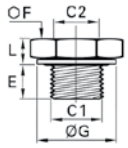
To reopen the passage, simply unscrew the plug and fit the required connector. No further treatment of the tube is required.

Brass with
Bi-Material Seal

0220 Male Plug BSPP

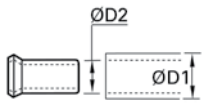
C BSPP	PART NUMBER	F MM	G MM	H1 MM	WT
G 1/8	0220 10 00 39	14	14	6.5	.005
G 1/4	0220 13 00 39	17	17	6.5	.016
G 3/8	0220 17 00 39	17	22	8	.021
G 1/2	0220 21 00 39	22	26	9	.045
G 3/4	0220 27 00 39	22	32	10	.053
G 1	0220 34 00 39	27	39.5	10.5	.067

Brass with
Bi-Material Seal

0168 Reducer Male To Female BSPP

C1 BSPP	C2 BSPP	PART NO.	E MM	F MM	G MM	L MM	WT
G 1/8	M5X.8	0168 10 19 39	8	14	14	4.5	.010
G 1/4	M5X.8	0168 13 19 39	8	17	17	5	.012
G 1/4	G 1/8	0168 13 10 39	8	17	17	5	.020
G 3/8	G 1/8	0168 17 10 39	10	19	22	5	.028
G 3/8	G 1/4	0168 17 13 39	10	19	22	5	.035
G 1/2	G 1/8	0168 21 10 39	12	24	26	7.5	.039
G 1/2	G 1/4	0168 21 13 39	12	24	26	7.5	.056
G 1/2	G 3/8	0168 21 17 39	12	24	26	7.5	.062
G 3/4	G 1/4	0168 27 13 39	12	32	32	9.5	.067
G 3/4	G 3/8	0168 27 17 39	12	32	32	9.5	.097
G 3/4	G 1/2	0168 27 21 39	12	32	32	9.5	.116

0127 Tube Support for Plastic Tube

OD1 MM	OD2 MM	PART NO.	WT
4	2	0127 04 00	.001
4	2.7	0127 04 27	.001
5	3	0127 05 03	.001
5	3.3	0127 05 00	.001
6	4	0127 06 00	.001
8	5.5	0127 08 55	.001
8	6	0127 08 00	.001
10	7	0127 10 07	.002
10	7.5	0127 10 75	.002
10	8	0127 10 00	.002
12	8	0127 12 08	.002
12	9	0127 12 09	.002
12	10	0127 12 00	.002
14	11	0127 14 11	.003
14	12	0127 14 00	.003
15	12	0127 15 12	.003
16	13	0127 16 13	.003
18	14	0127 18 14	.004
20	15	0127 20 15	.004
22	16	0127 22 16	.005
25	19	0127 25 19	.005

At high temperature and pressure or during oscillating movements, the use of tube supports prevents distortion of the tube and guarantees effective gripping and sealing.

Poly-Tite Fittings

Parker's Poly-Tite Fittings are compact, pre-assembled compression style fittings designed for fast assembly. An exclusive acetal copolymer sleeve has superior resilience to resist creeping and stress caused from compression.

Product Features:

- Self aligning captive sleeve
- Built-in tube support
- Knurled nuts for hand tightening
- Plastic and brass sleeves available
- Chrome plated and stainless steel side latch couplers available

Markets:

- Dental
- Packaging
- Machine Tools
- Car Wash
- Printing

Applications:

- Pneumatic Systems
- Water Lines
- Dental Equipment

Specifications:

Pressure Range	Up to 150 PSI (10.3 bar)
Temperature Range	0˚ to +150˚ F (-17.7° to +65.5° C)
O-rings	Buna N on chrome plated couplers Fluorocarbon on Stainless Steel couplers

Compatible Tubing:

- Polyethylene
- Nylon
- Polypropylene
- Vinyl

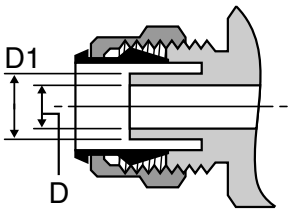
Assembly Instructions

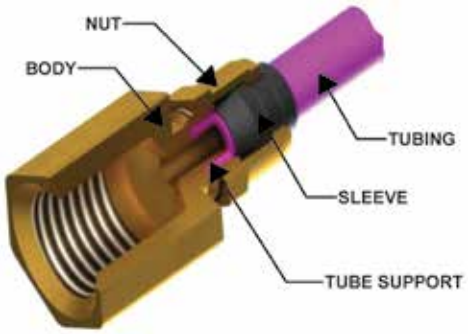
Polyethylene, polypropylene and vinyl tubing:

1. Cut tubing squarely–maximum of 15° angle allowable.
2. Check that port or mating part is clean and free of debris.
3. Insert tube end until it bottoms in the Poly-Tite fitting and tighten knurl/hex nut finger-tight — plus one wrench turn.

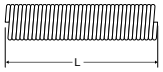
Tube Support O.D.

TUBE SIZE INCHES	* D1 TUBE SUPPORT O.D.
1/4	.168
5/16	.185
3/8	.248
1/2	.373





Spring Guard 56PSG

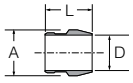



PART NO.	TUBE O.D.	L
56PSG-4	1/4	3.000
56PSG-5	5/16	3.000
56PSG-6	3/8	3.000

Plastic Cap 59P

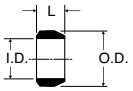

PART NO.	TUBE SIZE	A	L
59P-4	1/4	.247	.50
59P-6	3/8	.372	.56
59P-8	1/2	.497	.63

Acetal Plastic Sleeve 60P

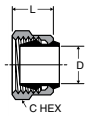
PART NO.	TUBE SIZE	A	D	L
60P-4	1/4	.334	.261	.338
60P-5	5/16	.405	.321	.340
60P-6	3/8	.465	.381	.367
60P-8	1/2	.628	.514	.399

Sleeve 60PB

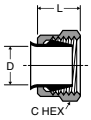
PART NO.	L	O.D.	I.D.
60PB-4	.187	.336	.255
60PB-5	.187	.400	.318
60PB-6	.218	.460	.382
60PB-8	.250	.620	.507

Nut and Plastic Sleeve Assembly 61P

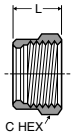
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61P-4	1/4	3/8-24	7/16	.261	.38
61P-5	5/16	7/16-24	1/2	.321	.34
61P-6	3/8	1/2-24	9/16	.380	.38
61P-8	1/2	11/16-20	3/4	.514	.44

Nut and Brass Sleeve Assembly 61PB

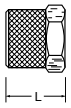
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	D	L
61PB-4	1/4	3/8-24	7/16	.255	.38
61PB-5	5/16	7/16-24	1/2	.318	.34
61PB-6	3/8	1/2-24	9/16	.382	.38
61PB-8	1/2	11/16-20	3/4	.507	.44

Nut 61PN

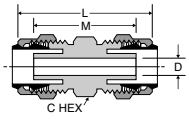
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L
61PN-4	1/4	3/8-24	7/16	.38
61PN-5	5/16	7/16-24	1/2	.34
61PN-6	3/8	1/2-24	9/16	.38
61PN-8	1/2	11/16-20	3/4	.44

Nut only for use with Spring Gaurd 61PSGN

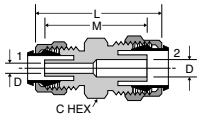
PART NO.	TUBE O.D.	L	C HEX
61PSGN-4	1/4	.625	.437
61PSGN-5	5/16	.625	.500
61PSGN-6	3/8	.656	.562

Union 62P

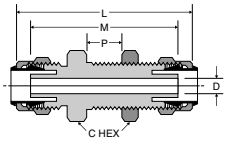



PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62P-4	1/4	3/8-24	3/8	1.17	.96	.125
62P-5	5/16	7/16-24	7/16	1.16	.96	.144
62P-6	3/8	1/2-24	1/2	1.23	.99	.204
62P-8	1/2	11/16-20	11/16	1.47	1.24	.323

Union Reducer 62P



PART NO.	1 TUBE SIZE	2 TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62P-6-4	1/4	3/8	3/8-24	1/2-24	1/2	1.22	.99	.125

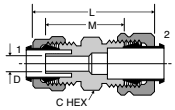


Bulkhead Union 62PBH

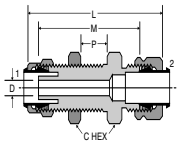
PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX.	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62PBH-4	1/4	3/8-24	9/16	.38	1.75	1.53	3/8	.125
62PBH-5	5/16	7/16-24	5/8	.38	1.71	1.52	7/16	.144
62PBH-6	3/8	1/2-24	11/16	.47	1.89	1.65	1/2	.204
62PBH-8	1/2	11/16-20	7/8	.63	2.28	2.05	11/16	.323

Union 62PCA

(Tube to Compress-Align)



PART NO.	TUBE SIZE	1 STRAIGHT THREAD	2 STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
62PCA-4	1/4	3/8-24	7/16-24	7/16	1.25	.89	.125
62PCA-5	5/16	7/16-24	1/2-24	1/2	1.30	.92	.144
62PCA-6	3/8	1/2-24	9/16-24	9/16	1.37	.98	.204



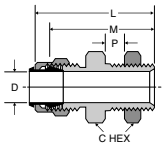
Bulkhead Union 62PCABH

(Tube to Compress-Align)

PART NO.	TUBE SIZE	1 STR THD	2 STR THD	C HEX	P MAX	L	M	BLKHD HOLE DIA.	FLOW DIA. D
62PCABH-4	1/4	3/8-24	7/16-24	9/16	.38	1.81	1.45	3/8	.125
62PCABH-6	3/8	1/2-24	9/16-24	11/16	.47	2.03	1.64	1/2	.204

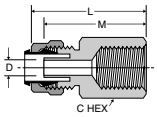
Bulkhead Union 62PTBH

(Straight Through)

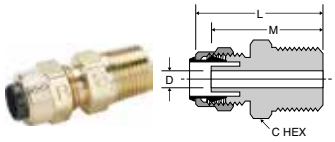


PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX.	L	M	BULKHEAD HOLE DIA.	FLOW DIA. D
62PTBH-4	1/4	3/8-24	9/16	.31	1.19	.93	3/8	.260
62PTBH-5	5/16	7/16-24	5/8	.31	1.19	.93	7/16	.323
62PTBH-6	3/8	1/2-24	11/16	.34	1.26	.99	1/2	.387

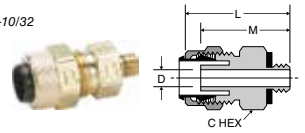
Female Connector 66P



PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
66P-4-2	1/4	1/8	3/8-24	9/16	.97	.86	.125
66P-4-4	1/4	1/4	3/8-24	5/8	1.18	1.07	.125
66P-5-2	5/16	1/8	7/16-24	9/16	.97	.86	.144
66P-6-4	3/8	1/4	1/2-24	5/8	1.18	1.07	.204
66P-8-6	1/2	3/8	11/16-20	13/16	1.31	1.20	.323

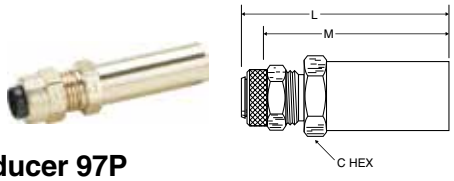


68P-X-10/32



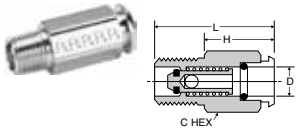
Male Connector 68P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA. D
68P-4-1	1/4	1/16	3/8-24	3/8	1.06	.95	.125
68P-4-10X32	1/4	10-32	3/8-24	3/8	.86	.75	.094
68P-4-2	1/4	1/8	3/8-24	7/16	1.06	.95	.125
68P-4-4	1/4	1/4	3/8-24	9/16	1.25	1.14	.125
68P-4-6	1/4	3/8	3/8-24	11/16	1.28	1.17	.125
68P-5-2	5/16	1/8	7/16-24	7/16	1.05	.95	.144
68P-5-4	5/16	1/4	7/16-24	9/16	1.24	1.14	.144
68P-6-2	3/8	1/8	1/2-24	1/2	1.10	.98	.204
68P-6-4	3/8	1/4	1/2-24	9/16	1.29	1.17	.204
68P-6-6	3/8	3/8	1/2-24	11/16	1.29	1.17	.204
68P-8-4	1/2	1/4	11/16-20	11/16	1.46	1.29	.320
68P-8-6	1/2	3/8	11/16-20	11/16	1.37	1.29	.323



Tube End Reducer 97P

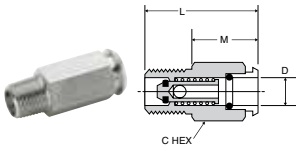
PART NO.	TUBE O.D.	L	M	C HEX
97P-4-6	3/8 X 1/4	1.718	1.625	.437
97P-6-8	1/2 X 3/8	1.875	1.781	.562



Pipe Coupler Body 391P

(Chrome Plated)

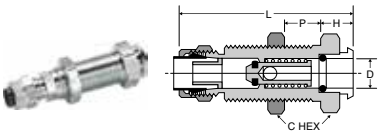
PART NO.	D-INSERT DIA.	PIPE THREAD	C HEX	H	L
391P-4-2	1/4	1/8	1/2	.91	1.29
391P-4-4	1/4	1/4	9/16	.73	1.29
391P-6-4	3/8	1/4	11/16	.85	1.41



Pipe Coupler Body 391PSS

(Stainless Steel)

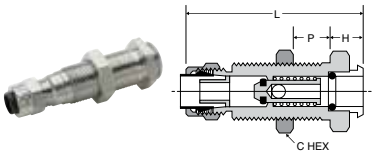
PART NO.	D INSERT DIA.	PIPE THREAD	L	C HEX	M
391PSS-4-2	1/4	1/8	1.271	.500	.900
391PSS-4-4	1/4	1/4	1.271	.562	.710
391PSS-6-4	3/8	1/4	1.40	.625	.840



Bulkhead Coupler Body 392P

(Chrome Plated)

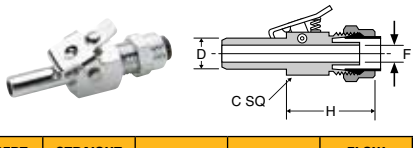
PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C HEX	P MAX.	H	L	BULKHEAD HOLE DIA.
392P-4-4	1/4	1/4	1/2-24	5/8	.84	.39	2.13	1/2
392P-6-6	3/8	3/8	11/16-24	13/16	.93	.37	2.01	11/16



Bulkhead Coupler Body 392PSS

(Stainless Steel)

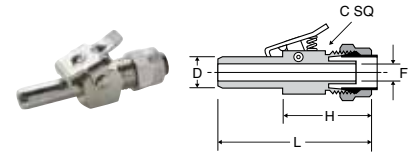
PART NO.	TUBE O.D.	BULKHEAD THREAD	L	C HEX	H	P MAX	BULKHEAD HOLE DIA.
392PSS-4-4	1/4	1/2-24	2.03	.625	.28	.84	1/2
392PSS-6-6	3/8	11/16-24	2.20	.812	.31	.93	11/16



Through Type Insert 393P

(Chrome Plated)

PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C SQUARE	H	FLOW DIA.F
393P-4-4	1/4	1/4	3/8-24	7/16	1.12	.125
393P-6-6	3/8	3/8	1/2-24	1/2	1.34	.203

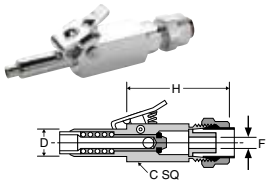


Through Type Insert 393PSS

(Stainless Steel)

PART NO.	TUBE O.D.	D-INSERT DIA.	L	C SQUARE	H	FLOW DIA.F
393PSS-4-4	1/4	1/4	1.677	7/16	.99	.125
393PSS-6-6	3/8	3/8	2.030	1/2	1.27	.203

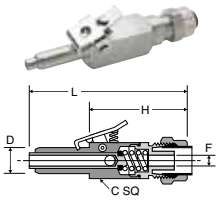
Shutoff Type Insert 393PD



(Chrome Plated)

PART NO.	TUBE SIZE	D-INSERT DIA.	STRAIGHT THREAD	C SQUARE	H	FLOW DIA.F
393PD-4-4	1/4	1/4	3/8-24	7/16	1.61	.110
393PD-6-6	3/8	3/8	1/2-24	1/2	1.45	.187

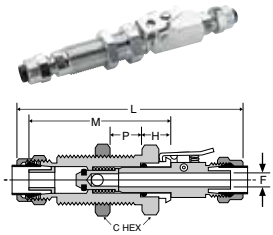
Shut-Off Type Insert 393PDSS



(Stainless Steel)

PART NO.	TUBE O.D.	D-INSERT DIA.	L	C SQUARE	H	FLOW DIA.F
393PDSS-4-4	1/4	1/4	2.46	.500	1.62	.116
393PDSS-6-6	3/8	3/8	2.60	.500	1.67	.157

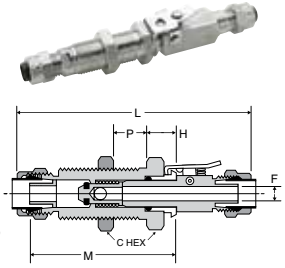
Single End Shutoff Bulkhead Quick Coupler 394P



(Chrome Plated)

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX	H	L	M	BULKHEAD HOLE DIA.	FLOW DIA.F
394P-4-4	1/4	1/2-24	5/8	.84	.39	3.28	2.13	1/2	.125
394P-6-6	3/8	11/16-24	13/16	.93	.37	3.41	2.01	11/16	.203

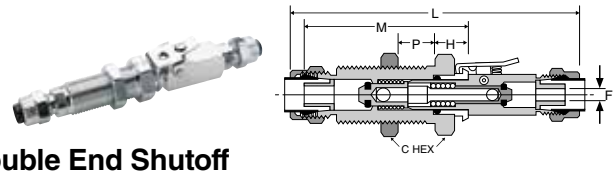
Coupler Single End Shut-Off Bulkhead 394PSS



(Stainless Steel)

PART NO.	TUBE O.D.	BULKHEAD THREAD	L	M	C HEX	H	P MAX	FLOW DIA. F
394PSS-4-4	1/4	1/2-24	3.05	2.06	.625	.31	.84	.125
394PSS-6-6	3/8	11/16-24	3.50	2.23	.812	.34	.93	.203

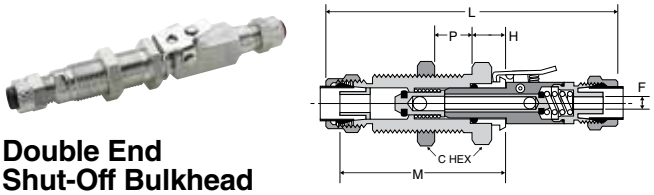
Double End Shutoff Bulkhead Quick Coupler 394PD



(Chrome Plated)

PART NO.	TUBE SIZE	STRAIGHT THREAD	C HEX	P MAX	H	L	M	BULKHEAD HOLE DIA.	FLOW DIA.F
394PD-4-4	1/4	1/2-24	5/8	.84	.39	3.77	2.13	1/2	.125
394PD-6-6	3/8	11/16-24	13/16	.93	.37	3.48	2.01	11/16	.204

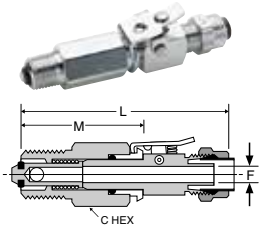
Double End Shut-Off Bulkhead Quick Coupler 394PDSS



(Stainless Steel)

PART NO.	TUBE O.D.	BULKHEAD THREAD	L	M	C HEX	H	P MAX	FLOW DIA. F
394PDSS-4-4	1/4	1/2-24	3.69	2.67	.625	.32	.84	.125
394PDSS-6-6	3/8	11/16-24	3.91	2.24	.812	.34	.93	.203

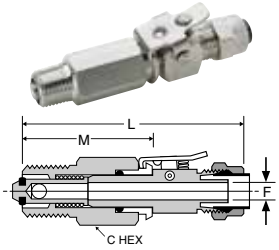
Single End Shutoff Pipe Connector Quick Coupler 398P



(Chrome Plated)

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.F
398P-4-2	1/4	1/8	3/8-24	1/2	2.45	1.32	.125
398P-4-4	1/4	1/4	3/8-24	9/16	2.45	1.32	.125
398P-6-4	3/8	1/4	1/2-24	5/8	2.80	1.46	.203

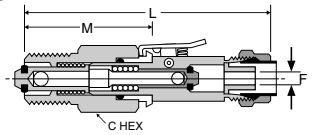
Single End Shut-Off Connector Quick Coupler 398PSS



(Stainless Steel)

PART NO.	TUBE O.D.	PIPE THREAD	L	M	C HEX	FLOW DIA. F
398PSS-4-2	1/4	1/8	2.30	1.32	.500	.125
398PSS-4-4	1/4	1/4	2.30	1.32	.562	.125
398PSS-6-4	3/8	1/4	2.70	1.43	.625	.203

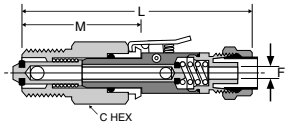
Double End Shutoff Pipe Connector Quick Coupler 398PD



(Chrome Plated)

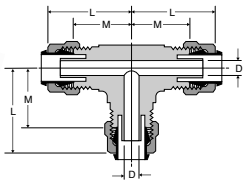
PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.F
398PD-4-2	1/4	1/8	3/8-24	1/2	2.93	1.31	.125
398PD-4-4	1/4	1/4	3/8-24	9/16	2.93	1.32	.125
398PD-6-4	3/8	1/4	1/2-24	5/8	2.88	1.43	.204

Double End Shut-Off Pipe Connector Quick Coupler 398PDSS



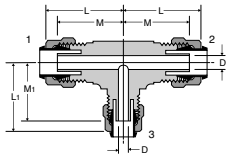
(Stainless Steel)

PART NO.	TUBE O.D.	PIPE THREAD	L	M	C HEX	FLOW DIA. D
398PDSS-4-2	1/4	1/8	2.93	1.31	.500	.125
398PDSS-4-4	1/4	1/4	2.93	1.31	.562	.125
398PDSS-6-4	3/8	1/4	3.10	1.43	.625	.125



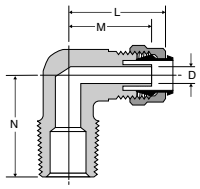
Union Tee 164P

PART NO.	TUBE SIZE	STRAIGHT THREAD	L	M	FLOW DIA.D
164P-4	1/4	3/8-24	.84	.73	.125
164P-5	5/16	7/16-24	.83	.73	.144
164P-6	3/8	1/2-24	.98	.86	.203
164P-8	1/2	11/16-20	1.12	1.04	.323



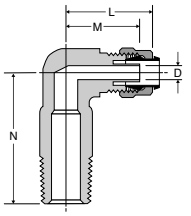
Union Tee 164P combination size

PART NO.	1 TUBE SIZE	2 TUBE SIZE	3 TUBE SIZE	L	L1	M	M1	FLOW DIA.D
164P-6-4	3/8	3/8	1/4	.98	.90	.86	.79	.125



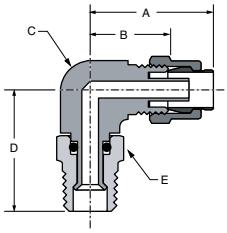
Male Elbow 169P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
169P-4-1	1/4	1/16	3/8-24	.92	.58	.67	.130
169P-4-2	1/4	1/8	3/8-24	.84	.73	.75	.121
169P-4-4	1/4	1/4	3/8-24	.90	.79	.92	.125
169P-4-6	1/4	3/8	3/8-24	.93	.84	1.08	.125
169P-5-2	5/16	1/8	7/16-24	.87	.73	.68	.144
169P-6-2	3/8	1/8	1/2-24	.93	.81	.73	.203
169P-6-4	3/8	1/4	1/2-24	.98	.86	1.05	.203
169P-6-6	3/8	3/8	1/2-24	.98	.86	1.08	.203
169P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323



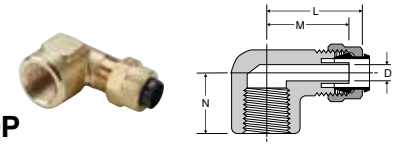
Long Male Elbow 169LP

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
169LP-4-4	1/4	1/4	3/8-24	.90	.79	1.38	.125



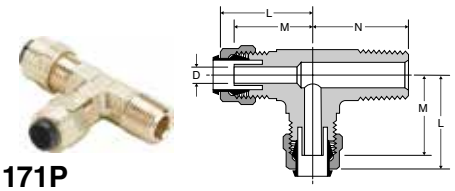
Male Elbow Swivel 169PS

PART NO.	TUBE O.D.	PIPE THREAD	A	B	C HEX	D	E
169PS-4-2	1/4	1/8	.812	.594	.375	.862	.437
169PS-4-4	1/4	1/4	.906	.688	.562	1.218	.562
169PS-6-2	3/8	1/8	.875	.625	.437	.904	.437
169PS-6-4	3/8	1/4	.937	.685	.562	1.218	.562
169PS-6-6	3/8	3/8	.859	.602	.562	1.190	.687
169PS-8-6	1/2	3/8	1.031	.782	.500	1.218	.687



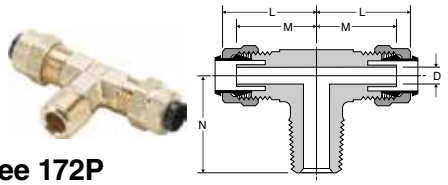
Female Elbow 170P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
170P-4-2	1/4	1/8	3/8-24	.90	.79	.56	.125
170P-4-4	1/4	1/4	3/8-24	1.00	.89	.69	.125
170P-6-4	3/8	1/4	1/2-24	1.01	.89	.69	.204
170P-8-6	1/2	3/8	11/16-20	1.19	1.11	1.13	.323



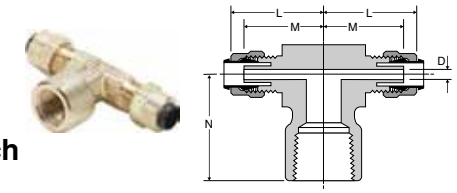
Male Run Tee 171P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
171P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
171P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
171P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
171P-6-4	3/8	1/4	1/2-24	.98	.86	1.03	.203
171P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323



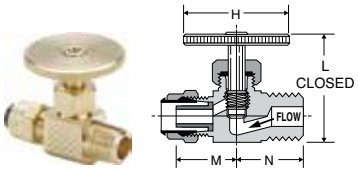
Male Branch Tee 172P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
172P-4-2	1/4	1/8	3/8-24	.84	.73	.72	.125
172P-4-4	1/4	1/4	3/8-24	.92	.81	.92	.125
172P-5-2	5/16	1/8	7/16-24	.83	.73	.72	.144
172P-6-2	3/8	1/8	1/2-24	.88	.86	.74	.204
172P-6-4	3/8	1/4	1/2-24	.98	.86	1.03	.204
172P-8-6	1/2	3/8	11/16-20	1.12	1.04	1.13	.323



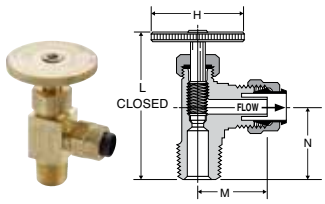
Female Branch Tee 177P

PART NO.	TUBE SIZE	PIPE THREAD	STRAIGHT THREAD	L	M	N	FLOW DIA.D
177P-4-2	1/4	1/8	3/8-24	.92	.81	.88	.125
177P-4-4	1/4	1/4	3/8-24	.92	.81	1.03	.125
177P-4-6	1/4	3/8	3/8-24	1.03	.92	1.13	.125



Needle Valve NV311P

PART NO.	TUBE SIZE	PIPE THREAD	H	L OPEN	L CLOSED	M	N
NV311P-4-2	1/4	1/8	1.06	1.36	1.16	.64	.63
NV311P-4-4	1/4	1/4	1.06	1.38	1.18	.64	.72
NV311P-6-4	3/8	1/4	1.06	1.38	1.18	.64	.72



Angle Needle Valve NV312P

PART NO.	TUBE SIZE	PIPE THREAD	H	L OPEN	L CLOSED	M	N
NV312P-4-2	1/4	1/8	1.06	1.70	1.50	.63	.68
NV312P-4-4	1/4	1/4	1.06	2.07	1.82	.71	.86
NV312P-6-4	3/8	1/4	1.06	2.00	1.75	.74	.86

Industrial Barbed Fittings

Dubl-Barb® Fittings

Hose Barb Fittings

Barb to Male NPT

28 Male Connector

228 Gauge Tee

229 Male Elbow

231 Run Tee

232 Branch Tee

68HB Male Connector

125HB Male Connector

125HBL Male Connector

125HBLSV Swivel Connector

127HB Ball-End Adapter

129HB Male Elbow

139HB 45° Male Elbow

171HB Run Tee

179HB 45° Male Elbow

269HB Male Elbow

279HB 45° Male Elbow

Barb to Straight Thread

27 Male Connector

685HB Male Connector

1295HB Male Elbow

1695HB Male Elbow

1725HB Tee

1795HB 45° Male Elbow

Barb to Metric Straight Thread

68HB-X-MIX Male Connector

169HB-X-MIX Male Elbow

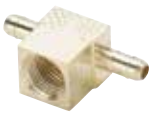
179HB-X-MIX 45° Male Elbow

Barb to Female NPT

26 Female Connector

230 Female Elbow

237 Female Tee



126HBL Female Connector

Barb to Barb

22 Union

224 Union Tee

225 Union Elbow

122HBL Union

Bulkhead Union

22BH Bulkhead Union

22CABH Bulkhead Union

Swivel

128HBLSV Female Ball-End

146HBLFSV 45° Female Flare

Adapters

22CA Mixed Union

220 Adapter Tee

233 Mixed Tee

238 Solder Connector

Metric Hose to BSPT

0123 Male Connector

Auxiliary Component

20 Plug

p. I6

97HC Clamp

0136 Metric Hose to BSPT

0931 Metric Hose to BSPP

0191 Metric Hose to BSPP

Dubl-Barb® Fittings

Parker's Dubl-Barb Fittings are an economical one piece, push-on brass barbed fitting that does not require any type of clamp. These fittings are a quick way to connect polyethylene tubing.

Product Features:

- Compact
- One piece
- No clamp required
- Good vibration resistance

Markets:

- Pneumatic
- Environmental control

Applications:

- Pneumatic Systems
- Climate Control
- Humidifiers
- Filters

Compatible Tubing:

- Polyethylene

Specifications:

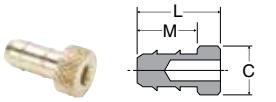
Pressure Range:

TUBE SIZE	PSI	bar	TUBE SIZE	PSI	bar
5/32	150	10.3	3/8	150	10.3
1/4	150	10.3	1/2	100	6.8

Temperature Range:

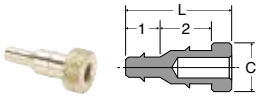
TUBE SIZE	TEMPERATURE IN FAHRENHEIT	TEMPERATURE IN CELSIUS
5/32	-65˚ to +90˚ F	-53.8° to +32.2° C
1/4	-65˚ to +90˚ F	-53.8° to +32.2° C
3/8	-65˚ to +90˚ F	-53.8° to +32.2° C
1/2	-65˚ to +75˚ F	-53.8° to +23.8° C

Plug 20



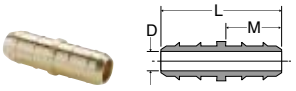
PART NO.	TUBE O.D.	TUBE I.D.	C DIA.	L	M
20-4	1/4	.170	.32	.56	.41
20-6	3/8	.250	.390	.68	.44
20-8	1/2	.377	.577	.81	.56

Plug Adapter 20



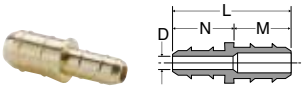
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	C DIA.	L
20-4-5/32	5/32	.096	1/4	.170	.32	.65

Union 22



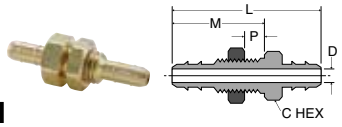
PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
22-5/32	5/32X5/32	.096X.096	.59	.28	.062
22-4	1/4X1/4	.170X.170	.84	.41	.120
22-6	3/8X3/8	.250X.250	.94	.44	.187
22-8	1/2X1/2	.375X.375	1.19	.56	.312

Union Reducer 22



PART NO.	TUBE O.D.	TUBE I.D.	L	M	N	FLOW DIA. D
22-4-5/32	1/4X5/32	.170X.096	.72	.41	.28	.062
22-4-6	1/4X3/8	.170X.250	.88	.44	.41	.120
22-4-8	1/4X1/2	.170X.375	1.06	.56	.41	.120
22-6-8	3/8X1/2	.250X.375	1.06	.56	.44	.187

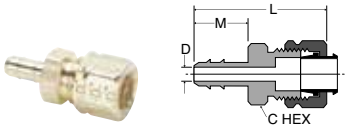
Bulkhead Union 22BH



PART NO.	TUBE O.D.	TUBE I.D.	ST. THD.	C HEX	P MAX.	L	M	FLOW DIA. D	BLKHD HOLE DIA.
22BH-4-4	1/4	.170	5/16-24	7/16	.219	1.38	.78	.120	5/16
22BH-6-6	3/8	.250	3/8-24	7/16	.375	1.63	1.00	.187	3/8

Union 22CA

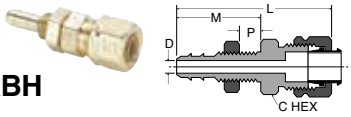
Tube to Compress-Align



PART NO.	TUBE O.D.	TUBE I.D.	CA TUBE	C HEX	L	M	FLOW DIA. D
22CA-4-4	1/4	.170	1/4	7/16	1.15	.41	.120

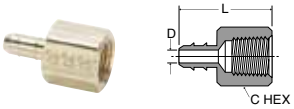
Bulkhead Union 22CABH

Tube to Compress-Align



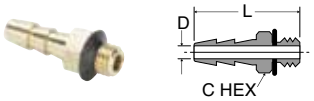
PART NO.	TUBE O.D.	TUBE I.D.	CA TUBE	ST. THD.	C HEX	P MAX	L	M	FLW DIA. D	BKHD HOLE DIA.
22CABH-4-4	1/4	.170	1/4	5/16-24	7/16	.219	1.53	.78	.120	5/16
22CABH-6-6	3/8	.250	3/8	3/8-24	9/16	.375	1.87	1.00	.187	3/8

Female Connector 26



PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
26-5/32-2	5/32	.096	1/8	1/2	.79	.062
26-4-2	1/4	.170	1/8	1/2	.91	.120
26-6-2	3/8	.250	1/8	1/2	.93	.187
26-6-4	3/8	.250	1/4	11/16	1.06	.187

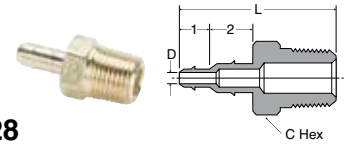
Male Connector 27



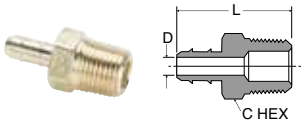
PART NO.	TUBE O.D.	TUBE I.D.	STRAIGHT THREAD	C HEX	L	FLOW DIA. D
27-1*	1/8	.062	10-32	1/4	.61	.052
27-2*	1/4	.125	10-32	1/4	.74	.093

*For vinyl tubing only.

Barb-to-Pipe Adapter 28



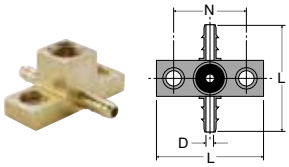
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	PIPE THD.	C HEX	L	FLOW DIA. D
28-4-5/32-2	5/32	.096	1/4	.170	1/8	7/16	1.07	.062



Male Connector 28

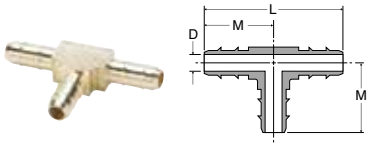
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	C HEX	L	FLOW DIA. D
28-5/32-2	5/32	.096	1/8	7/16	.84	.062
28-4-1	1/4	.170	1/16	3/8	.93	.120
28-4-2	1/4	.170	1/8	7/16	.97	.120
28-4-4	1/4	.170	1/4	9/16	1.09	.120
28-4-10X32*	1/4	.170	10-32	1/4	.71	.093
28-6-2	3/8	.250	1/8	7/16	1.00	.187
28-6-4	3/8	.250	1/4	9/16	1.13	.187
28-8-4	1/2	.375	1/4	9/16	1.25	.312
28-8-6	1/2	.375	3/8	11/16	1.28	.312
28-8-8	1/2	.375	1/2	7/8	1.44	.312

*Straight thread



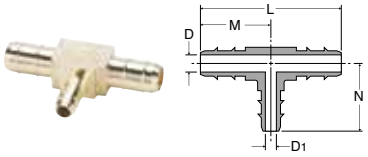
Adapter Tee 220

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	N	FLOW DIA. D
220-4-2	1/4	.170	1/8	1.50	1.00	.120



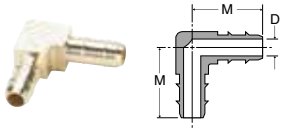
Union Tee 224

PART NO.	TUBE O.D.	TUBE I.D.	L	M	FLOW DIA. D
224-5/32	5/32	.096	1.00	.50	.062
224-4	1/4	.170	1.25	.63	.120
224-6	3/8	.250	1.38	.69	.187
224-8	1/2	.375	1.63	.81	.312



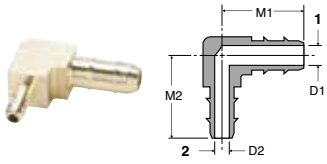
Union Tee 224 Combination Sizes

PART NO.	TUBE O.D.	TUBE I.D.	L	M	N	FLOW DIA. D	FLOW DIA. D1
224-4-4-5/32	1/4X5/32	.170X.096	1.25	.63	.50	.120	.062
224-6-6-5/32	3/8X5/32	.250X.096	1.38	.69	.50	.187	.062
224-6-6-4	3/8X1/4	.250X.170	1.38	.69	.62	.187	.120
224-8-8-4	1/2X1/4	.375X.170	1.62	.81	.65	.312	.120
224-8-8-6	1/2X3/8	.375X.250	1.62	.81	.69	.312	.187



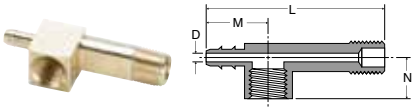
Union Elbow 225

PART NO.	TUBE O.D.	TUBE I.D.	M	FLOW DIA. D
225-5/32	5/32	.096	.50	.062
225-4-4	1/4	.170	.63	.120
225-6-6	3/8	.250	.63	.187
225-8-8	1/2	.375	.81	.312



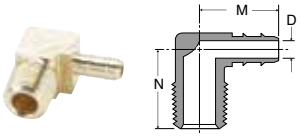
Union Elbow 225 Combination Size

PART NO.	TUBE O.D. 1	TUBE O.D. 2	TUBE I.D. 1	TUBE I.D. 2	M1	M2	FLOW DIA. D1	FLOW DIA. D2
225-4-5/32	1/4	5/32	.170	.096	.63	.50	.120	.062



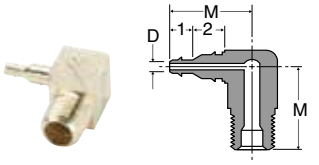
Gauge Tee 228

PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
228-4-2	1/4	.170	1/8	1.91	.66	.44	.120



Male Elbow 229

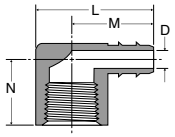
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	M	N	FLOW DIA. D
229-5/32-2	5/32	.096	1/8	.56	.63	.062
229-4-1	1/4	.170	1/16	.62	.60	.120
229-4-2	1/4	.170	1/8	.69	.63	.120
229-4-4	1/4	.170	1/4	.72	.72	.120
229-6-2	3/8	.250	1/8	.69	.69	.187
229-6-4	3/8	.250	1/4	.75	.75	.187
229-8-4	1/2	.375	1/4	.94	.74	.312
229-8-6	1/2	.375	3/8	.94	.81	.312



90° Elbow Barb Adapter 229

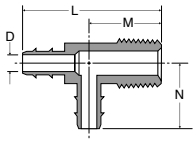
PART NO.	TUBE O.D. 1	TUBE I.D. 1	TUBE O.D. 2	TUBE I.D. 2	PIPE THREAD	M	FLOW DIA. D
229-4-5/32-2	5/32	.096	1/4	.170	1/8	.78	.062

Female Elbow 230



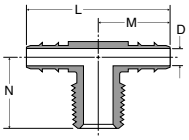
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
230-4-2	1/4	.170	1/8	.91	.66	.44	.120
230-6-4	3/8	.250	1/4	1.12	.78	.63	.187

Male Run Tee 231



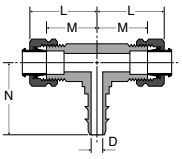
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
231-4-2	1/4	.170	1/8	1.28	.66	.69	.120
231-6-2	3/8	.250	1/8	1.38	.69	.69	.187
231-6-4	3/8	.250	1/4	1.44	.75	.75	.187

Male Branch Tee 232



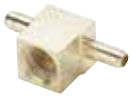
PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
232-4-1	1/4	.170	1/16	1.33	.66	.65	.120
232-4-2	1/4	.170	1/8	1.38	.69	.66	.120
232-6-2	3/8	.250	1/8	1.38	.69	.69	.187
232-6-4	3/8	.250	1/4	1.50	.75	.75	.187

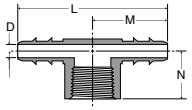
Tee 233



PART NO.	TUBE O.D.	TUBE I.D.	COMB. TUBE	L	M	N	FLOW DIA. D
233-4-4-4	1/4	.170	1/4	.73	.53	.74	.120
233-6-6-4	1/4	.170	3/8	.87	.59	.80	.120

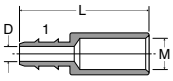
Female Branch Tee 237





PART NO.	TUBE O.D.	TUBE I.D.	PIPE THREAD	L	M	N	FLOW DIA. D
237-5/32-2	5/32	.096	1/8	1.06	.53	.44	.062
237-4-2	1/4	.170	1/8	1.34	.67	.49	.120

Solder Connector 238



PART NO.	TUBE O.D. 1	TUBE I.D. 1	L	M	FLOW DIA. D
238-4-4	1/4	.170	.91	.25	.120

Hose Barb Fittings

Parker's Hose Barb Fittings are an economical choice for general purpose fluid handling and pneumatics. Manufactured in both regular hose barb and beaded hose barb styles. Fittings are intended for use with 97HC hose clamps, similar type clamp or a crimped ferrule.

Product Features:

- All brass construction
- Fluorocarbon O-rings
- NPTF, SAE straight thread, metric thread ends
- Reusable
- Clamp required

Markets:

- Industrial
- Construction
- Heavy duty truck
- Mobile

Applications:

- Air Lines
- Water Line
- Cooling Lines

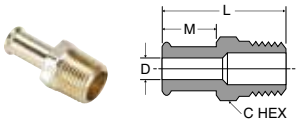
Specifications:

Pressure Range	Up to 150 PSI (10.3 bar)
Temperature Range	-40˚ to +160˚ F (-40° to +71.1° C)

Compatible Tubing:

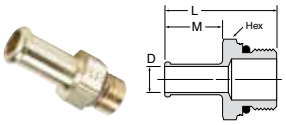
- Rubber Hose
- GPH Hose

Beaded Hose Barb to Male Pipe 68HB



PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	FLOW DIA.D
68HB-6-6	3/8	3/8	11/16	1.53	.78	.281
68HB-8-4	1/2	1/4	5/8	1.56	.78	.375
68HB-8-6	1/2	3/8	11/16	1.53	.78	.406
68HB-8-8	1/2	1/2	7/8	1.73	.78	.406
68HB-10-6	5/8	3/8	3/4	1.62	.88	.501
68HB-10-8	5/8	1/2	7/8	1.92	.88	.501
68HB-12-8	3/4	1/2	7/8	1.98	.88	.564
68HB-12-12	3/4	3/4	1 1/16	2.04	.97	.625
68HB-16-12	1	3/4	1 1/8	2.12	1.00	.750
68HB-16-16	1	1	1.38	2.31	1.00	.812

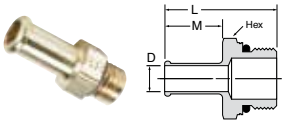
Beaded Hose Barb to SAE Straight Thread 685HB



PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	FLOW DIA.D
685HB-4-4	1/4	7/16-20	9/16	1.40	.78	.18
685HB-6-4	3/8	7/16-20	9/16	1.39	.78	.18
685HB-8-8	1/2	3/4-16	7/8	1.48	.78	.40
685HB-10-8	5/8	3/4-16	7/8	1.56	.78	.40
685HB-12-8	3/4	3/4-16	7/8	1.75	.97	.40
685HB-12-12	3/4	1 1/16-12	1 1/4	1.82	.97	.62
685HB-16-8	1	3/4-16	1 1/8	1.79	.97	.40
685HB-16-12	1	1 1/16-12	1 1/4	1.99	.97	.62

Note: Fluorocarbon o-ring is standard

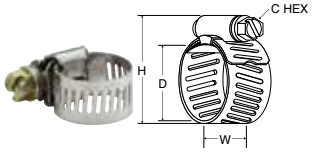
Hose Barb to Metric Adaptor 68HB-X-MIX



PART NUMBER	I.D. HOSE SIZE	METRIC THREAD	HEX	L	M	D
68HB-6-MI12	3/8	M12 X 1.5	11/16	1.50	.78	.24
68HB-6-MI14	3/8	M14 1.5	3/4	1.51	.78	.29
68HB-8-MI12	1/2	M12 X 1.5	11/16	1.50	.78	.24

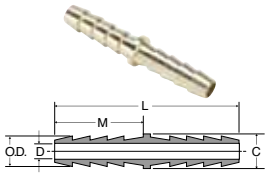
Note: Fluorocarbon o-ring is standard

Stainless Steel Worm Drive Clamp 97HC



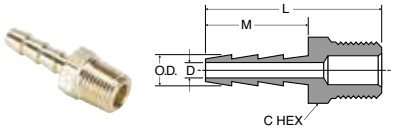
PART NO.	D MAX.	D MIN.	C HEX	H MAX.	W
97HC-3	.62	.25	.25	1.00	.31
97HC-6	.87	.38	.31	1.40	.50
97HC-8	1.00	.44	.31	1.53	.50
97HC-12	1.25	.50	.31	1.80	.50

Hose Mender 122HBL



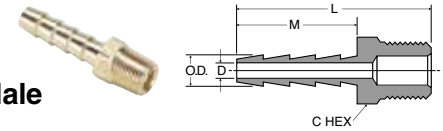
PART NO.	I.D. HOSE SIZE	C DIA.	L	M	O.D.	FLOW DIA. D
122HB-3	3/16	5/16	1.44	.69	.227	.125
122HBL-4	1/4	3/8	2.00	.97	.290	.187
122HBL-5	5/16	7/16	2.00	.97	.353	.250
122HBL-6	3/8	1/2	2.00	.97	.415	.281
122HBL-8	1/2	5/8	2.00	.97	.530	.375
122HBL-12	3/4	7/8	2.00	.97	.790	.562

Hose Barb to Male Pipe 125HB

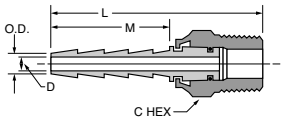


PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HB-2-2	1/8	1/8	7/16	1.07	.50	.185	.093
125HB-3-2	3/16	1/8	7/16	1.25	.69	.227	.125
125HB-3-4	3/16	1/4	9/16	1.44	.69	.227	.125

Hose Barb to Male Pipe 125HBL

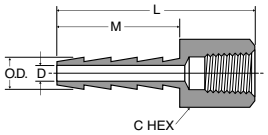


PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HBL-4-2	1/4	1/8	7/16	1.54	.97	.290	.187
125HBL-4-4	1/4	1/4	9/16	1.72	.97	.290	.187
125HBL-4-6	1/4	3/8	11/16	1.77	.97	.290	.187
125HBL-5-2	5/16	1/8	7/16	1.54	.97	.353	.250
125HBL-5-4	5/16	1/4	9/16	1.72	.97	.353	.250
125HBL-5-6	5/16	3/8	11/16	1.77	.97	.353	.250
125HBL-6-2	3/8	1/8	7/16	1.54	.97	.415	.281
125HBL-6-4	3/8	1/4	9/16	1.72	.97	.415	.281
125HBL-6-6	3/8	3/8	11/16	1.77	.97	.415	.281
125HBL-6-8	3/8	1/2	7/8	1.97	.97	.415	.281
125HBL-8-4	1/2	1/4	9/16	1.72	.97	.530	.375
125HBL-8-6	1/2	3/8	11/16	1.77	.97	.530	.375
125HBL-8-8	1/2	1/2	7/8	1.97	.97	.530	.375
125HBL-8-12	1/2	3/4	1-1/16	1.98	.97	.530	.375
125HBL-10-6	5/8	3/8	11/16	1.77	.97	.645	.468
125HBL-10-8	5/8	1/2	7/8	1.97	.97	.645	.468
125HBL-10-12	5/8	3/4	1-1/16	1.98	.97	.645	.468
125HBL-12-8	3/4	1/2	7/8	1.97	.97	.790	.562
125HBL-12-12	3/4	3/4	1-1/16	1.98	.97	.790	.562
125HBL-16-12	1	3/4	1-1/16	2.18	1.17	1.02	.750
125HBL-16-16	1	1	1-3/8	2.36	1.17	1.02	.875

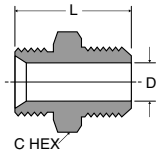
Male Swivel Hose Barb 125HBLSV

PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
125HBLSV-4-4	1/4	1/4	11/16	2.14	.97	.290	.187
125HBLSV-6-4	3/8	1/4	11/16	2.14	.97	.415	.250
125HBLSV-6-6	3/8	3/8	11/16	2.14	.97	.415	.250
125HBLSV-8-8	1/2	1/2	7/8	2.48	.97	.530	.375

Hose Barb to Female Pipe 126HBL

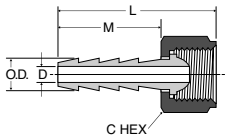
PART NO.	I.D. HOSE SIZE	PIPE THREAD	C HEX	L	M	O.D.	FLOW DIA. D
126HBL-4-2	1/4	1/8	1/2	1.47	.97	.290	.187
126HBL-4-4	1/4	1/4	11/16	1.66	.97	.290	.187
126HBL-5-4	5/16	1/4	11/16	1.58	.97	.353	.250
126HBL-6-2	3/8	1/8	1/2	1.47	.97	.415	.281
126HBL-6-4	3/8	1/4	11/16	1.66	.97	.415	.281
126HBL-6-6	3/8	3/8	13/16	1.69	.97	.415	.281
126HBL-8-6	1/2	3/8	13/16	1.69	.97	.530	.375
126HBL-8-8	1/2	1/2	1	1.73	.97	.530	.375
126HBL-12-12	3/4	3/4	1-1/4	1.92	.97	.790	.562

Ball-End Joint Adapter to Male Pipe 127HB

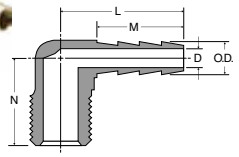
For use with 128HBLSV

PART NO.	MALE N.P.S.M. THREAD	MALE N.P.T. THREAD	C HEX	L	FLOW FLOW DIA. D
127HB-4-2	1/4	1/8	9/16	.91	.219
127HB-4-4	1/4	1/4	9/16	1.10	.281
127HB-6-4	3/8	1/4	11/16	1.10	.312
127HB-6-6	3/8	3/8	11/16	1.15	.406
127HB-8-6	1/2	3/8	7/8	1.25	.406
127HB-8-8	1/2	1/2	7/8	1.50	.531

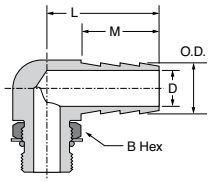
Hose Barb to Swivel Female Ball-End 128HBLSV

PART NO.	I.D. HOSE SIZE	FEMALE N.P.S.M. THREAD	C HEX	L	M	O.D.	FLOW DIA. D
128HBLSV-4-4	1/4	1/4	5/8	1.50	.97	.290	.187
128HBLSV-5-4	5/16	1/4	5/8	1.50	.97	.353	.250
128HBLSV-6-4	3/8	1/4	5/8	1.63	.97	.415	.250
128HBLSV-6-6	3/8	3/8	3/4	1.50	.97	.415	.281
128HBLSV-8-8	1/2	1/2	29/32	1.52	.97	.530	.375

Hose Barb 90° Elbow to Male Pipe 129HB

PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	O.D.	FLOW DIA. D
129HB-3-2	3/16	1/8	.97	.69	.66	.227	.173
129HB-4-2	1/4	1/8	1.04	.76	.66	.290	.187
129HB-4-4	1/4	1/4	1.06	.76	.82	.290	.187
129HB-4-6	1/4	3/8	1.19	.76	.84	.290	.187
129HB-5-2	5/16	1/8	1.06	.76	.66	.353	.234
129HB-5-4	5/16	1/4	1.12	.76	.84	.353	.234
129HB-5-6	5/16	3/8	1.19	.76	.84	.353	.234
129HB-6-2	3/8	1/8	1.32	.97	.75	.415	.219
129HB-6-4	3/8	1/4	1.32	.97	.94	.415	.281
129HB-6-6	3/8	3/8	1.50	.97	1.06	.415	.281
129HB-6-8	3/8	1/2	1.52	.97	1.25	.415	.281
129HB-8-4	1/2	1/4	1.53	.97	1.06	.530	.375
129HB-8-6	1/2	3/8	1.53	.97	1.06	.530	.375
129HB-8-8	1/2	1/2	1.53	.97	1.25	.530	.375
129HB-12-12	3/4	3/4	1.33	.79	1.27	.790	.562

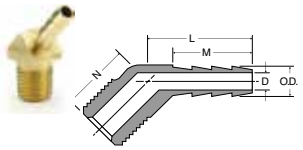



Hose Barb Elbow to SAE Straight Thread 1295HB

PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	B HEX	L	M	O.D.	FLOW DIA. D
1295HB-6-6	3/8	9/16-18	11/16	1.10	1.11	.410	.270

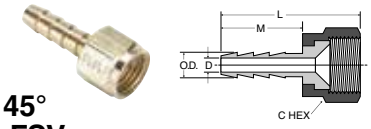
Note: Fluorocarbon o-ring is standard

Hose Barb 45° Elbow to Male Pipe 139HB



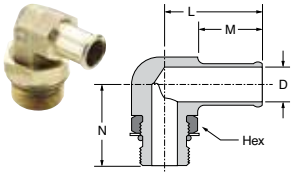
PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	O.D.	FLOW DIA. D
139HB-4-2	1/4	1/8	.91	.76	.68	.290	.187
139HB-4-4	1/4	1/4	1.00	.76	.68	.290	.187
139HB-6-4	3/8	1/4	1.00	.76	.68	.415	.281

Hose Barb to Swivel 45° Female Flare 146HBLFSV



PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	O.D.	FLOW DIA. D
146HBLFSV-4-4	1/4	7/16-20	9/16	1.55	.97	.290	.187
146HBLFSV-4-6	1/4	5/8-18	3/4	1.72	.97	.290	.187
146HBLFSV-6-6	3/8	5/8-18	3/4	1.72	.97	.415	.281

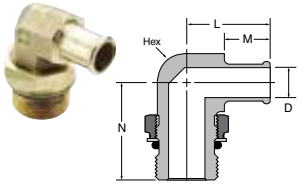
Beaded Hose Barb Elbow to SAE Straight Thread 1695HB



PART NUMBER	HOSE SIZE	STRAIGHT THREAD	HEX	L	M	N	D
1695HB-6-4	3/8	7/16-20	9/16	1.09	.78	1.10	.18
1695HB-8-6	1/2	9/16-18	9/16	1.10	.78	1.11	.30
1695HB-8-8	1/2	3/4-16	7/8	1.28	.78	1.47	.40
1695HB-10-8	5/8	3/4-16	7/8	1.47	.88	1.47	.40
1695HB-10-10	5/8	7/8-14	1	1.41	.88	1.60	.50
1695HB-12-8	3/4	3/4-16	7/8	1.47	.97	1.47	.40
1695HB-12-10	3/4	7/8-14	1	1.60	.97	1.62	.50
1695HB-12-12	3/4	1 1/16-12	1	1.60	.97	1.64	.62
1695HB-16-12	1	1 1/16-12	1 1/4	1.60	.97	1.75	.60

Note: Fluorocarbon o-ring is standard

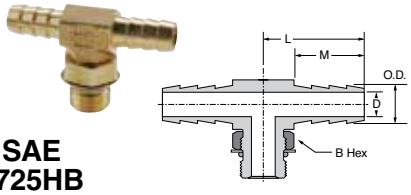
Beaded Elbow to Metric Adaptor 169HB-X-MIX



PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
169HB-10-MI27	5/8	M27 X 2.0	7/8	1.41	.78	1.63	.50
169HB-16-MI27	1	M27 X 2.0	1	1.67	.97	1.68	.71
169HB-16-MI33	1	M33 X 2.0	1 5/16	1.75	.97	1.90	.84

Note: Fluorocarbon o-ring is standard

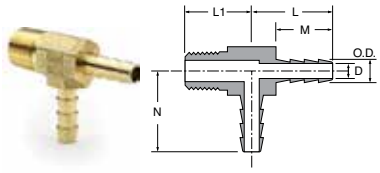
Hose Barb Tee to SAE Straight Thread 1725HB



PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	B HEX	L	M	O.D.	FLOW DIA. D
1725HB-6-6	3/8	9/16-18	11/16	1.10	.76	.420	.280

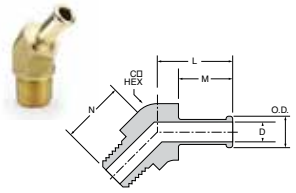
Note: Fluorocarbon o-ring is standard

Hose Barb Tee to Male Pipe 171HB



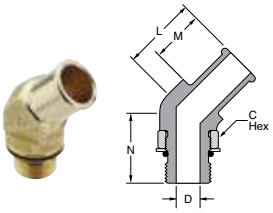
PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	L1	M	N	O.D.	FLOW DIA. D
171HB-4-4	1/4	1/4	1.10	.85	.76	1.10	.290	.187

Beaded Hose Barb 45° Elbow Tube to Male Pipe 179HB



PART NO.	I.D. HOSE SIZE	NPTF THREAD	C HEX	L	M	N	O.D.	FLOW DIA. D
179HB-6-4	3/8	1/4-18	.75	1.09	.78	.93	.45	.28
179HB-6-6	3/8	3/8-18	.75	1.09	.78	.93	.45	.28
179HB-10-8	5/8	1/2-14	.81	1.19	.78	1.13	.70	.50
179HB-12-8	3/4	1/2-14	.81	1.19	.78	1.13	.83	.56

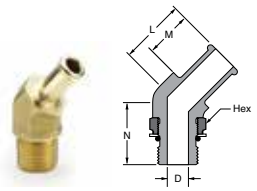
Beaded Hose Barb 45° Elbow Tube to Straight Thread 1795HB



PART NO.	I.D. HOSE SIZE	STRAIGHT THREAD	C HEX	L	M	N	FLOW DIA. D
1795HB-8-8	1/2	3/4-16	7/8	1.12	.78	1.16	.400
1795HB-10-8	5/8	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-12-8	3/4	3/4-16	7/8	1.22	.88	1.16	.398
1795HB-12-12	3/4	1 1/16-12	1 1/4	1.35	.97	1.65	.620
1795HB-16-12	1	1 1/16-12	1 1/4	1.38	.97	1.47	.620
1795HB-16-14	1	1 3/16-12	1 3/8	1.25	.97	1.80	.720

Note: Fluorocarbon o-ring is standard

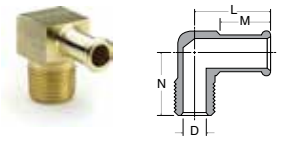
Beaded Hose Barb 45 Elbow to Metric Thread 179HB-X-MIX



PART NUMBER	HOSE SIZE	METRIC THREAD	HEX	L	M	N	D
179HB-12-MI18	3/4	M18 X 1.5	13/16	1.15	.78	1.16	.44
179HB-16-MI27	1	M27 X 2.0	1 1/16	1.51	.97	1.71	.71

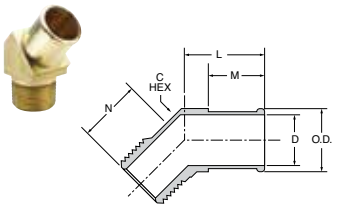
Note: Fluorocarbon o-ring is standard

Beaded Hose Barb 90° Elbow Tube to Male Pipe 269HB

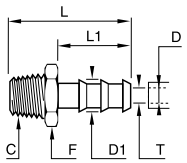


PART NO.	I.D. HOSE SIZE	PIPE THREAD	L	M	N	FLOW DIA. D
269HB-6-6	3/8	3/8	1.19	.78	.88	.281
269HB-8-4	1/2	1/4	1.16	.78	.99	.310
269HB-8-6	1/2	3/8	1.16	.78	1.08	.406
269HB-8-8	1/2	1/2	1.28	.78	1.25	.406
269HB-10-4	5/8	1/4	1.13	.78	.99	.312
269HB-10-6	5/8	3/8	1.16	.78	.99	.406
269HB-10-8	5/8	1/2	1.28	.78	1.25	.501
269HB-12-8	3/4	1/2	1.28	.78	1.25	.563
269HB-12-12	3/4	3/4	1.33	.78	1.27	.625

Beaded Hose Barb 45° Elbow Tube to Male Pipe 279HB

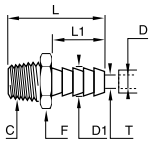


PART NO.	I.D. HOSE SIZE	NPTF THREAD	C HEX	L	M	N	O.D.	FLOW DIA. D
279HB-16-12	1	3/4-14	1.12	1.38	.97	1.13	1.06	.720



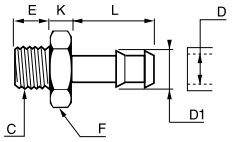
0123 Barbed Adapter for Rubber Hose BSPT

PART NO.	D MM	C BSPT	D1 MM	F MM	L MM	L1 MM	T MIN MM	WT. KG
0123 04 10	4	R1/8	6	10	34	22.5	3.3	.008
0123 06 10	6	R1/8	8	10	34	22.5	5	.009
0123 07 10	7	R1/8	9	10	34	22.5	5	.009
0123 07 13	7	R1/4	9	14	38.5	22.5	6	.018
0123 07 17	7	R3/8	9	17	39	22.5	6	.023
0123 10 10	10	R1/8	12.2	13	34	22.5	5	.014
0123 10 13	10	R1/4	12.2	14	38.5	22.5	7	.021
0123 10 17	10	R3/8	12.2	17	39	22.5	9.5	.023
0123 12 17	12	R3/8	14	17	46	29.5	11	.026
0123 13 13	13	R1/4	15	17	45.5	29.5	7	.027
0123 13 17	13	R3/8	15	17	46	29.5	11	.027
0123 13 21	13	R1/2	15	22	50.5	29.5	12	.047
0123 16 17	16	R3/8	18.5	19	54.5	38	11	.040
0123 16 21	16	R1/2	18.5	22	59	38	14	.056
0123 16 27	16	R3/4	18.5	27	62	38	15	.082
0123 19 17	19	R3/8	21.5	22	54.5	38	11	.046
0123 19 21	19	R1/2	21.5	22	59	38	14	.058
0123 19 27	19	R3/4	21.5	27	62	38	18	.083
0123 25 27	25	R3/4	26.7	27	62	38	18	.083
0123 25 34	25	R1	27	36	65	38	24	.124
0123 32 34	32	R1	34.5	36	70	43	24	.144



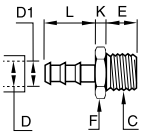
0136 Barbed Adapter for Nylon Tube BSPT

PART NO.	D MM	C BSPT	D1 MM	F MM	L MM	L1 MM	T MIN MM	WT. KG
0136 06 10	6	R1/8	6.4	10	26.5	15	4	.007
0136 06 13	6	R1/4	6.4	14	31	15	4	.015
0136 06 17	6	R3/8	6.4	17	31.5	15	4	.020
0136 08 13	8	R1/4	8.4	14	31	15	6	.016
0136 08 17	8	R3/8	8.4	17	31.5	15	6	.020
0136 08 21	8	R1/2	8.4	22	36	15	6	.039
0136 10 13	10	R1/4	10.7	14	36	20	7	.019
0136 10 17	10	R3/8	10.7	17	36.5	20	8	.023
0136 10 21	10	R1/2	10.7	22	41	20	8	.040
0136 12 13	12	R1/4	12.7	14	36	20	7	.019
0136 12 17	12	R3/8	12.7	17	36.5	20	10	.023
0136 12 21	12	R1/2	12.7	22	41	20	10	.042
0136 12 27	12	R3/4	12.7	27	44	20	10	.072
0136 13 17	13	R3/8	13.7	17	36.5	20	11	.023
0136 13 21	13	R1/2	13.7	22	41	20	11	.041
0136 13 27	13	R3/4	13.7	27	44	20	11	.071



0931 Nickel Plated Hose to Male BSPP

PART NO.	D MM	C BSPP	D1 MM	E MM	F MM	K MM	L MM	WT. KG
0931 06 10	6	G1/8	7	6	12	4	20	0.008
0931 06 13	6	G1/4	7	8	14	5	20	0.013
0931 07 10	7	G1/8	8	6	12	4	20	0.009
0931 07 13	7	G1/4	8	8	14	5	20	0.017
0931 07 17	7	G3/8	8	9	19	5	20	0.022
0931 08 10	8	G1/8	9	6	12	4	20	0.009
0931 08 13	8	G1/4	9	8	14	5	20	0.014
0931 08 17	8	G3/8	9	9	19	5	20	0.022
0931 10 13	10	G1/4	12	8	14	5	20	0.016
0931 10 17	10	G3/8	12	9	19	5	20	0.023
0931 10 21	10	G1/2	12	10	22	6	22	0.032
0931 15 17	15	G3/8	17	9	19	6	24	0.030
0931 15 21	15	G1/2	17	10	22	6	24	0.036
0931 18 21	18	G1/2	20	10	22	6	24	0.043



0191 Nickel Plated Hose to Male BSPP

PART NO.	D MM	C BSPP	D1 MM	E MM	F MM	K MM	L MM	WT. KG
0191 04 13	4	G1/4	6	9.5	17	5	22.5	.019
0191 07 13	7	G1/4	9	9.5	17	5	22.5	.021
0191 07 21	7	G1/2	9	11	27	7	29.5	.065
0191 10 13	10	G1/4	12.2	9.5	17	5	22.5	.021
0191 10 21	10	G1/2	12.2	11	27	7	29.5	.060
0191 13 13	13	G1/4	15.2	9.5	17	5	22.5	.023
0191 13 21	13	G1/2	15.2	11	27	7	29.5	.058
0191 16 21	16	G1/2	18.5	11	27	7	36.5	.069

Industrial Adapters

Pipe Fittings

Metric Adapters

Nickel Plated Metric Adapters

Male Pipe to Male Pipe

215PN
Close Nipple

215PNL
Long Nipple

216P
Hex Nipple

1204P
Male Elbow

Male Pipe to Female Pipe

209P
Bushing

222P
Adapter

1202P-2202P
Street Elbow

2224P
Male Branch tee

2225P
Street Tee

2214P
45° Street Elbow

Male BSPT to Female BSPP

0144
Street Elbow

0158
Male Branch Tee

0163
Bushing

0913/0921
Street Elbow

0911
Y Connector

0916/0923
Male Branch Tee

0917/0924
Male Run Tee

0928
Female Branch Tee

0909
Cross

0904
Bushing

Male NPT to Male BSPT

0121
Hex Nipple

Female BSPP to Male BSPP

0169
Adapter

0903
Adapter Reducer

0905
Bushing

0906
Adapter

0907
Extended Adapter

Male NPT to Female BSPP

0164
NPT-Female BSPP

Male BSPT to Female NPT

F3HG
Adapter - Male BSPT

Male BSPT

0152
Union Elbow

0929
3 Piece Adapter

0914/0922
Union Elbow

0927
Union Tee

0900
Hex Nipple

Male BSPT to Male BSPP

0192
Hex Nipple

Male BSPP

0901
Hex Nipple

Female Pipe to Female Pipe

207ACBH
Anchor Coupling

207P
Coupling

208P
Reducer Coupling

212P
Union

1200P-2200P
Union Elbow

1203P-2203P
Union Tee

2200PDE
Drop-Ear Elbow

1201-2201P
45° Female Elbow

2205P
Cross

Female BSPP

0143
Union Elbow

0145
Union Tee

0117
Bulkhead

0155
Coupling

0168
Adapter

0912
Union Elbow

0910
Union Y

0915
Union Tee

0908
Cross

0920
Bulkhead

0902
Coupling

Auxiliary Component

210P
Lock Nut

211P
Square Head Plug

213P
Cap

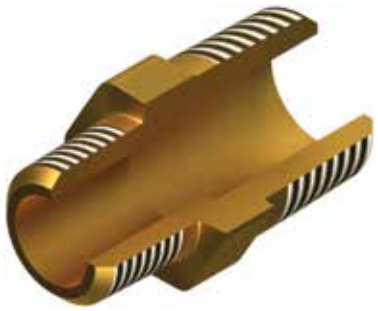
218P
Hex Head Plug

219P
Countersunk Plug

220P
Slotted Head Plug

Pipe Fittings

Parker's Pipe Fittings meet all functional requirements of SAE J530 and SAE J531. All threads on the pipe fittings are made to dryseal standards.



Product Features:

- All brass construction
- Meets functional requirements of SAE J530 and SAE J531
- Threads made to dryseal standards
- Both forgings and extrusions available

Markets:

- Industrial
- Construction
- Heavy duty truck
- Mobile
- Factory/process automation

Applications:

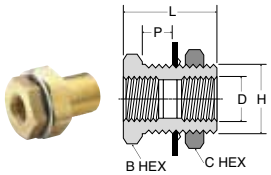
- Air Lines
- Water Line
- Cooling Lines

Specifications:

Pressure Range	Up to 1000 PSI (68.9 bar)
Temperature Range	-65˚ to +250˚ F (-18.3° to +121.1° C)

Compatible Tubing:

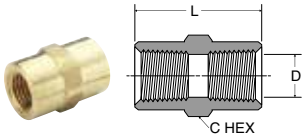
- Copper
- Brass
- Iron Pipe



Anchor Coupling 207ACBH

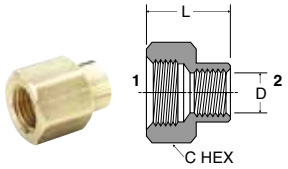
PART NO.	FEAMLE PIPE THREAD	STRAIGHT THREAD	MAX . BULK HEAD P	B HEX	C HEX	L	BLKHD HOLE DIA. H	FLOW DIA. D
207ACBH-2	1/8	5/8-18	.89	7/8	15/16	1.50	5/8	.339
207ACBHS-2	1/8	5/8-18	.35	7/8	15/16	.96	5/8	.339
207ACBH-4	1/4	3/4-16	.81	1	1-1/8	1.50	3/4	.441
207ACBHS-4	1/4	3/4-16	.26	1	1	.94	3/4	.441
207ACBH-6	3/8	1-14	.62	1-1/8	1-1/4	1.31	1	.571
207ACBH-8	1/2	1-1/8-14	.75	1-1/4	1-3/8	1.50	1-1/8	.703
207ACBH-12	3/4	1-5/16-12	.65	1-1/2	1-1/2	1.50	1-5/16	.906
207ACBH-16*	1	1-5/8-14	1.00	2	2	1.68	1-5/8	1.140

*Lock Washer not Available



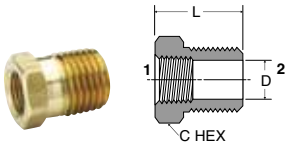
Coupling 207P

PART NO.	PIPE THREAD	C HEX	L	FLOW DIA. D
207P-2	1/8	9/16	.75	.339
207P-4	1/4	3/4	1.12	.441
207P-6	3/8	7/8	1.12	.571
207P-8	1/2	1-1/16	1.50	.703
207P-12	3/4	1-3/8	1.53	.906



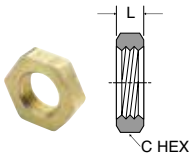
Reducer Coupling 208P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW FLOW DIA. D
208P-4-2	1/4	1/8	3/4	.97	.339
208P-6-4	3/8	1/4	7/8	1.16	.441
208P-8-4	1/2	1/4	1-1/16	1.28	.441
208P-8-6	1/2	3/8	1-1/16	1.38	.571
208P-12-6	3/4	3/8	1-3/8	1.32	.571
208P-12-8	3/4	1/2	1-3/8	1.50	.703



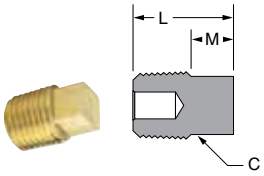
Bushing 209P

PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW FLOW DIA. D
209P-4-2	1/8	1/4	9/16	.75	.339
209P-6-2	1/8	3/8	11/16	.75	.339
209P-6-4	1/4	3/8	3/4	.75	.441
209P-8-2	1/8	1/2	7/8	1.00	.339
209P-8-4	1/4	1/2	7/8	1.00	.441
209P-8-6	3/8	1/2	7/8	1.00	.571
209P-12-2	1/8	3/4	1-1/8	1.00	.339
209P-12-4	1/4	3/4	1-1/8	1.00	.441
209P-12-6	3/8	3/4	1-1/8	1.00	.571
209P-12-8	1/2	3/4	1-1/8	1.00	.703
209P-16-8	1/2	1	1-3/8	1.31	.703
209P-16-12	3/4	1	1-3/8	1.31	.906



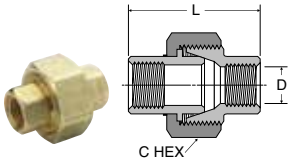
Lock Nut 210P

PART NO.	PIPE THREAD	C HEX	L
210P-2	1/8 NPSL	11/16	.19
210P-4	1/4 NPSL	7/8	.25
210P-6	3/8 NPSL	1	.25
210P-8	1/2 NPSL	1-1/8	.25



Square-Head Plug 211P

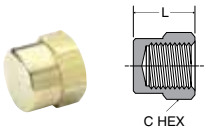
PART NO.	PIPE THREAD	C	L	M
211P-2	1/8	9/32	.59	.25
211P-4	1/4	3/8	.80	.29
211P-6	3/8	7/16	.83	.32
211P-8	1/2	9/16	1.07	.39
211P-12	3/4	5/8	1.14	.45



Union 212P

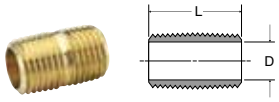
PART NO.	PIPE THREAD	C HEX	L	D
212P-4	1/4	1-3/16	1.54	.441
212P-6	3/8	1-1/4	1.76	.571

Cap 213P



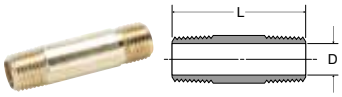
PART NO.	PIPE THREAD	C HEX	L
213P-2	1/8	9/16	.50
213P-4	1/4	11/16	.63
213P-6	3/8	13/16	.63
213P-8	1/2	1-1/16	.87
213P-12	3/4	1-1/4	.89

Close Nipple 215PN



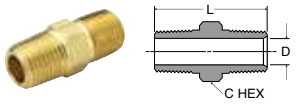
PART NO.	PIPE THREAD	L	FLOW DIA.D
215PN-2	1/8	.75	.281
215PN-4	1/4	.88	.375
215PN-6	3/8	1.00	.500
215PN-8	1/2	1.13	.625
215PN-12	3/4	1.31	.750

Long Nipple 215PNL



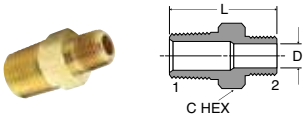
PART NO.	PIPE THREAD	L	FLOW DIA.D
215PNL-2-15	1/8	1-1/2	.250
215PNL-4-15	1/4	1-1/2	.375
215PNL-6-15	3/8	1-1/2	.500
215PNL-8-15	1/2	1-1/2	.625
215PNL-2-20	1/8	2	.250
215PNL-4-20	1/4	2	.375
215PNL-6-20	3/8	2	.500
215PNL-8-20	1/2	2	.625
215PNL-2-25	1/8	2-1/2	.250
215PNL-4-25	1/4	2-1/2	.375
215PNL-6-25	3/8	2-1/2	.500
215PNL-8-25	1/2	2-1/2	.625
215PNL-2-30	1/8	3	.250
215PNL-4-30	1/4	3	.375
215PNL-6-30	3/8	3	.500
215PNL-8-30	1/2	3	.625
215PNL-2-35	1/8	3-1/2	.250
215PNL-4-35	1/4	3-1/2	.375
215PNL-6-35	3/8	3-1/2	.500
215PNL-8-35	1/2	3-1/2	.625

Hex Nipple 216P



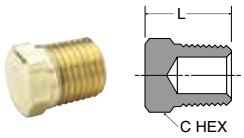
PART NO.	PIPE THREAD	C HEX	L	FLOW DIA.D
216P-2	1/8	7/16	.97	.220
216P-4	1/4	9/16	1.38	.314
216P-6	3/8	11/16	1.41	.440
216P-8	1/2	7/8	1.81	.564
216P-12	3/4	1-1/16	1.81	.752

Hex Nipple Reducers 216P



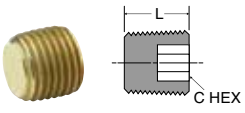
PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
216P-4-2	1/4	1/8	9/16	1.19	.220
216P-6-2	3/8	1/8	11/16	1.22	.220
216P-6-4	3/8	1/4	11/16	1.41	.314
216P-8-4	1/2	1/4	7/8	1.62	.314
216P-8-6	1/2	3/8	7/8	1.62	.440
216P-12-8	3/4	1/2	1-1/16	1.80	.564

Hex-Head Plug 218P



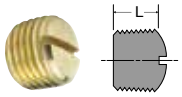
PART NO.	PIPE THREAD	C HEX	L
218P-2	1/8	7/16	.560
218P-4	1/4	9/16	.747
218P-6	3/8	11/16	.780
218P-8	1/2	7/8	.970
218P-12	3/4	1-1/16	1.054

Countersunk Hex-Head Plug 219P



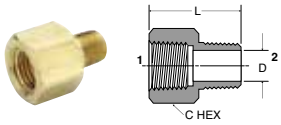
PART NO.	PIPE THREAD	C HEX	L
219P-2	1/8	3/16	.30
219P-4	1/4	1/4	.46
219P-6	3/8	5/16	.46
219P-8	1/2	3/8	.61
219P-12	3/4	9/16	.62

Slotted-Head Plug 220P



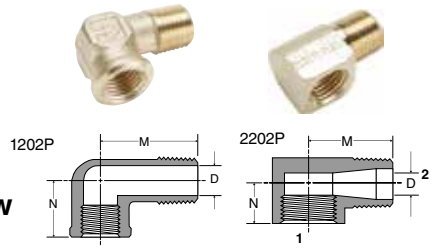
PART NO.	PIPE THREAD	L
220P-2	1/8	.31
220P-4	1/4	.42
220P-6	3/8	.43

Adapter 222P



PART NO.	1 PIPE THREAD	2 PIPE THREAD	C HEX	L	FLOW DIA. D
222P-2-2	1/8	1/8	9/16	.88	.220
222P-4-2	1/4	1/8	3/4	1.06	.220
222P-4-4	1/4	1/4	3/4	1.25	.314
222P-6-2	3/8	1/8	7/8	1.10	.220
222P-6-4	3/8	1/4	7/8	1.25	.314
222P-6-6	3/8	3/8	7/8	1.25	.440
222P-8-4	1/2	1/4	1	1.47	.314
222P-8-6	1/2	3/8	1-1/16	1.47	.440
222P-8-8	1/2	1/2	1-1/16	1.66	.564
222P-12-6	3/4	3/8	1-3/8	1.50	.440
222P-12-8	3/4	1/2	1-3/8	1.69	.564
222P-12-12	3/4	3/4	1-3/8	1.69	.752

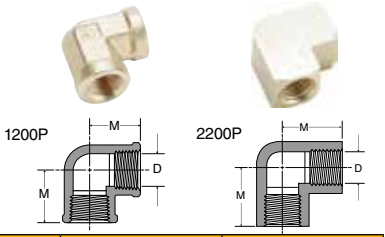
90° Street Elbow 1202P-2202P



PART NO.	1 PIPE THREAD	2 PIPE THREAD	M	N	FLOW DIA. D
1202P-2-2	1/8	1/8	.81	.56	.22
2202P-2-2	1/8	1/8	.62	.48	.22
2202PA-2-2*	1/8	1/8	.66	.48	.22
2202P-4-2	1/4	1/8	.72	.45	.23
1202P-4-4	1/4	1/4	1.08	.69	.31
2202P-4-4	1/4	1/4	.91	.45	.34
2202PA-4-4*	1/4	1/4	.91	.72	.31
2202P-4-6	1/4	3/8	.97	.78	.43
1202P-6-4	3/8	1/4	1.25	.78	.31
1202P-6-6	3/8	3/8	1.25	.78	.42
2202P-6-6	3/8	3/8	.98	.54	.41
2202PA-6-6*	3/8	3/8	.97	.78	.43
1202P-6-8	3/8	1/2	1.53	1.01	.56
1202P-8-6	1/2	3/8	1.25	.97	.42
2202P-8-8	1/2	1/2	1.25	1.03	.56
2202P-12-8	3/4	1/2	1.39	1.10	.56
2202P-12-12	3/4	3/4	1.39	1.10	.75

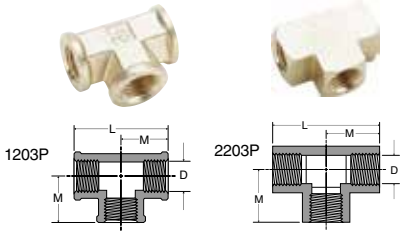
*Meets SAE Dimensions

90° Union Elbow 1200P-2200P

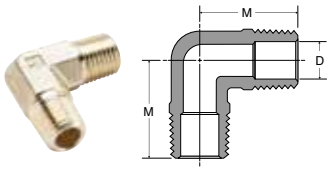


PART NO.	PIPE THREAD	M	FLOW DIA. D
1200P-2-2	1/8	.56	.329
2200P-2-2	1/8	.55	.339
1200P-4-4	1/4	.81	.441
2200P-4-4	1/4	.78	.441
1200P-6-6	3/8	.84	.571
2200P-6-6	3/8	.84	.571
2200P-8-8	1/2	1.07	.703

Union Tee 1203P-2203P

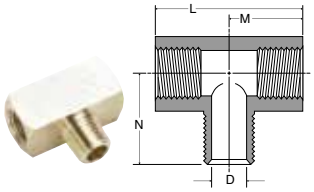


PART NO.	PIPE THREAD	L	M	FLOW DIA.D
1203P-2	1/8	1.12	.56	.339
2203P-2	1/8	1.06	.53	.339
1203P-4	1/4	1.38	.69	.441
2203P-4	1/4	1.52	.76	.441
2203P-6	3/8	1.68	.84	.571
1203P-8	1/2	2.14	1.07	.703
2203P-8	1/2	2.14	1.07	.703
2203P-12	3/4	2.28	1.14	.906



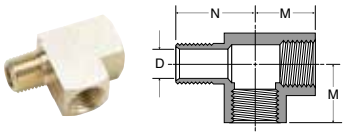
Male Elbow 1204P

PART NO.	PIPE THREAD	M	FLOW DIA.D
1204P-2	1/8	.71	.220
1204P-4	1/4	1.09	.312
1204P-6	3/8	1.09	.408
1204P-8	1/2	1.41	.502



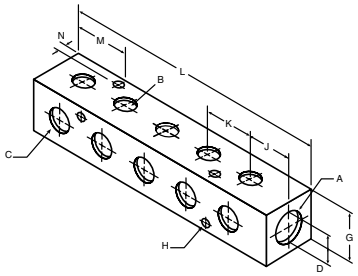
Male Branch Tee 2224P

PART NO.	PIPE THREAD	L	M	N	FLOW DIA.D
2224P-2	1/8	1.06	.53	.66	.220
2224P-4	1/4	1.52	.76	.91	.314
2224P-6	3/8	1.68	.84	.97	.440
2224P-8	1/2	2.18	1.09	1.25	.564
2224P-12	3/4	2.32	1.16	1.38	.752



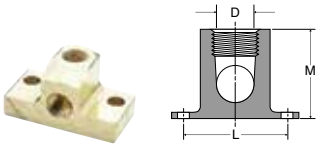
Street Tee 2225P

PART NO.	PIPE THREAD	M	N	DIA.D
2225P-2	1/8	.53	.66	.220
2225P-4	1/4	.76	.91	.314
2225P-6	3/8	.84	.98	.440
2225P-8	1/2	1.07	1.26	.564
2225P-12	3/4	1.14	1.38	.752



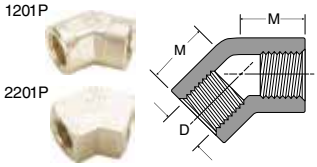
Brass Manifold 255M

PART NO.	PIPE THREAD A	PIPE THREAD B	PIPE THREAD C	G	MOUNTING HOLE DIA. H	J	K	L	M	N	D
255MP-6-4-2	3/8	1/8	1/4	1.25	.22	.88	1.13	6.25	1.45	.25	.25



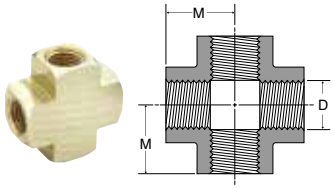
Drop-ear 90° Elbow 2200PDE

PART NO.	PIPE THREAD	L	M	FLOW DIA.D
2200PDE-2	1/8	1.38	1.00	.339



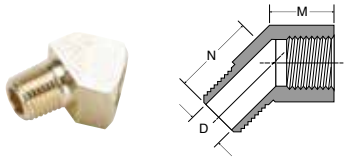
45° Female Elbow 1201P-2201P

PART NO.	PIPE THREAD	M	FLOW DIA. D
2201P-2-2	1/8	.43	.339
1201P-8-8	1/2	.89	.703



Cross 2205P

PART NO.	PIPE THREAD	M	FLOW DIA. D
2205P-2	1/8	.53	.339
2205P-4	1/4	.75	.441
2205P-6	3/8	.81	.571
2205P-8	1/2	1.07	.703
2205P-12	3/4	1.14	.906



45° Street Elbow 2214P

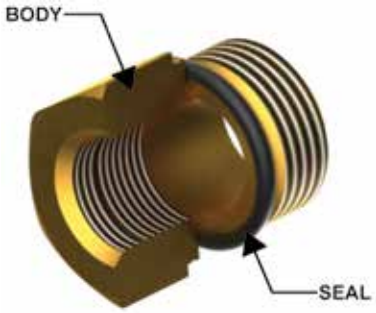
PART NO.	PIPE THREAD	M	N	FLOW DIA.D
2214P-2-2	1/8	.38	.50	.220
2214P-4-4	1/4	.54	.70	.314
2214P-6-6	3/8	.56	.78	.440
2214P-8-8	1/2	.73	1.00	.564
2214P-12-12	3/4	.75	1.35	.750

Metric Adapters

Parker's Metric Adapters offers a comprehensive range of NPT, BSPT, BSPP and metric pipe threads. Metric adapters are produced in both forgings and extrusions.

Product Features:

- All brass construction
- Nickel plated adapters
- Robust design
- Reusable



Markets:

- Industrial
- Construction
- Heavy duty truck
- Mobile
- Factory/process automation

Applications:

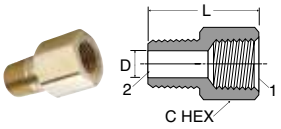
- Air Lines
- Water Line
- Cooling Lines

Specifications:

	Pressure Range	Temperature Range
Brass	1000 PSI (68.9 bar)	-40˚ to +302˚ F (-40° to +150° C)
Nickel-plated	870 PSI (59.9 bar)	-4˚ to +176˚ F (-20° to +80° C)

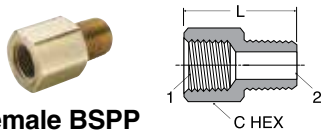
Compatible Tubing:

- Copper
- Brass
- Iron Pipe



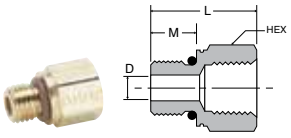
F3HG Adapter NPTF Male BSPT

PART NO.	NPTF 1	BSPT 2	C HEX	L	FLOW D
1/8F3HG-B	1/8	1/8	9/16	.93	.22
1/4F3HG-B	1/4	1/4	3/4	1.35	.31
3/8F3HG-B	3/8	3/8	7/8	1.35	.44
1/2F3HG-B	1/2	1/2	1-1/16	1.76	.56



0164 Adapter Male NPT/Female BSPP

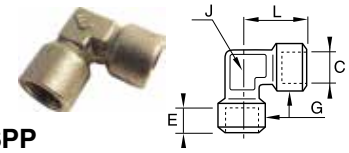
PART NO.	BSPP 1	NPTF 2	C HEX	L
0164 11 10	1/8	1/8	14	20
0164 14 13	1/4	1/4	17	27.5
0164 18 17	3/8	3/8	22	28.5
0164 22 21	1/2	1/2	27	36.5
0164 28 27	3/4	3/4	32	38.5



Pipe to Metric Adaptor 222P-X-MIX

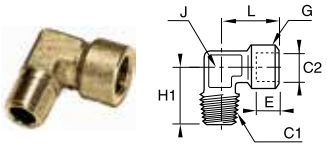
PART NO.	NPTF	METRIC THREAD	HEX	L	M	D
222P-2-MI10	1/8-27	M10 X 1.0	9/16	.75	.34	.18
222P-2-MI14	1/8-27	M14 X 1.5	3/4	.91	.43	.30
222P-4-MI12	1/4-18	M12 X 1.5	11/16	1.09	.43	.24
222P-6-MI16	3/8-18	M16 X 1.5	7/8	1.10	.45	.35
222P-6-MI22	3/8-18	M22 X 1.5	1 1/16	1.05	.37	.47
222P-8-MI27	1/2-14	M27 X 2.0	1 1/4	1.32	.63	.60

Note: Fluorocarbon o-ring is standard



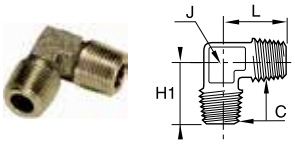
0143 90° Union Elbow BSPP

PART NO.	C BSPP	E MM	G MM	J MM	L MM	WT. KG
0143 10 10	G1/8	7.5	16.5	12	22.5	.042
0143 13 13	G1/4	11	18.5	15	26.5	.055
0143 17 17	G3/8	11.5	23.5	19	31.5	.098
0143 21 21	G1/2	15	28	23	35.5	.158
0143 27 27	G3/4	16.5	34	27	43.5	.256



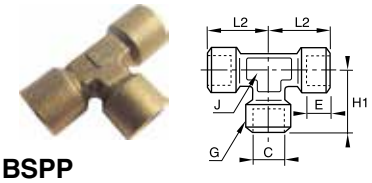
0144 Street Elbow Female BSPP to Male BSPT

PART NO.	C1 BSPT	C2 BSPP	E MM	G MM	H1 MM	J MM	L MM	WT. KG
0144 10 10	R1/8	G1/8	7.5	16.5	23	12	22.5	.033
0144 13 13	R1/4	G1/4	11	18.5	26	15	26.5	.050
0144 17 17	R3/8	G3/8	11.5	23.5	30	19	31.5	.085
0144 21 21	R1/2	G1/2	15	28	35	23	34.5	.138
0144 27 27	R3/4	G3/4	16.5	34	40	27	43.5	.229



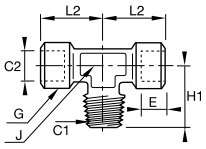
0152 Union Elbow Male BSPT

PART NO.	C BSPT	H1 MM	J MM	L MM	WT. KG
0152 10 10	R1/8	19.5	10	19.5	.018
0152 13 13	R1/4	25	15	25	.045
0152 17 17	R3/8	26.5	15	26.5	.056
0152 21 21	R1/2	31.5	19	31.5	.087
0152 27 27	R3/4	35.5	23	35.5	.153



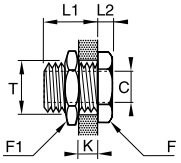
0145 Female Union Tee BSPP

PART NO.	C BSPP	E MM	G MM	H1 MM	J MM	L2 MM	WT. KG
0145 10 10	G1/8	7.5	16.5	22.5	12	22.5	.051
0145 13 13	G1/4	11	18.5	26.5	15	26.5	.074
0145 17 17	G3/8	11.5	23.5	31	19	31	.147
0145 21 21	G1/2	15	28	38	23	38	.231
0145 27 27	G3/4	16.5	34	47.5	27	47.5	.381



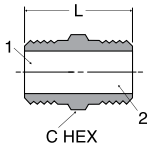
0158 Branch Tee Female BSPP to Male BSPT

PART NO.	C1 BSPT	C2 BSPP	E MM	G MM	H1 MM	J MM	L2 MM	WT. KG
0158 10 10	R1/8	G1/8	7.5	16.5	21.5	12	21.5	.045
0158 13 13	R1/4	G1/4	11	18.5	26	15	26	.071
0158 17 17	R3/8	G3/8	11.5	23.5	30	19	30	.118
0158 21 21	R1/2	G1/2	15	28	36	23	36	.203
0158 27 27	R3/4	G3/4	16.5	34	44	27	44	.320



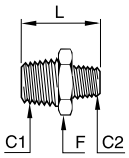
0117 Bulkhead BSPP and M5

PART NO.	C BSPP/M5	F MM	F1 MM	K MAX MM	L1 MM	L2 MM	T MAX MM	WT. KG
0117 00 19	M5X0.8	14	14	7	10.5	3.5	10.5	.013
0117 00 10	G1/8	19	22	9	14	4	16.5	.033
0117 00 13	G1/4	24	27	15	21	4	20.5	.057
0117 00 17	G3/8	30	32	14	21	5	26.5	.096
0117 00 21	G1/2	32	36	20	27	6	28.5	.117
0117 00 27	G3/4	41	41	22.5	30	6	34.5	.162
0117 00 34	G1	46	50	24.5	34	8	42.5	.270
0117 00 42	G1-1/4	55	55	29.5	39	8	49.5	.300
0117 00 49	G1-1/2	60	60	29.5	39	8	54.5	.306



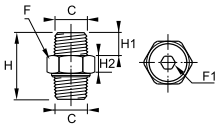
0121 Hex Nipple NPT/BSPT

PART NO.	NPTF 1	BSPT 2	C HEX	L
0121 11 10	1/8	1/8	11	19
0121 14 13	1/4	1/4	14	27
0121 18 17	3/8	3/8	17	28
0121 22 21	1/2	1/2	22	36
0121 28 27	3/4	3/4	27	40



0121 Hex Nipple Male BSPT

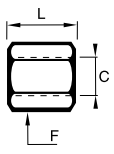
PART NO.	C1 BSPT	C2 BSPT	F MM	L MM	WT. KG
0121 10 10	R1/8	R1/8	11	19	.009
0121 13 13	R1/4	R1/4	14	27	.021
0121 13 10	R1/4	R1/8	14	23.5	.021
0121 17 17	R3/8	R3/8	17	28	.025
0121 17 13	R3/8	R1/4	17	27.5	.024
0121 17 10	R3/8	R1/8	17	24	.022
0121 21 21	R1/2	R1/2	22	36	.053
0121 21 17	R1/2	R3/8	22	32.5	.045
0121 21 13	R1/2	R1/4	22	32	.045
0121 21 10	R1/2	R1/8	22	28.5	.041
0121 27 27	R3/4	R3/4	27	40	.092
0121 27 21	R3/4	R1/2	27	39	.084
0121 27 17	R3/4	R3/8	27	35.5	.076
0121 27 13	R3/4	R1/4	27	35	.079
0121 34 34	R1	R1	36	46	.156
0121 34 27	R1	R3/4	36	43	.143
0121 34 21	R1	R1/2	36	42	.133
0121 34 17	R1	R3/8	36	38.5	.126
0121 42 42	R1-1/4	R1-1/4	46	53	.233
0121 42 34	R1-1/4	R1	46	50.5	.237
0121 42 27	R1-1/4	R3/4	46	47.5	.229
0121 42 21	R1-1/4	R1/2	46	46.5	.219



0929 3 Piece Adapter Double Male BSPT

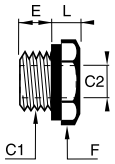
PART NO.	C BSPT	F MM	F1 MM	H MM	H1 MM	H2 MM	WT. KG
0929 00 10	R1/8	15	5	27	9	8.5	0.181
0929 00 13	R1/4	19	6	33.5	11.5	9.5	0.100
0929 00 17	R3/8	22	8	36.5	13	10	0.010
0929 00 21	R1/2	27	12	45	15.5	12	0.088

Note: This connection accessory makes assembly easier thanks to its 3-piece design. To join the 2 threaded components, simply push together and tighten the nut.



0155 Coupling BSPP

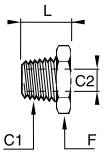
PART NO.	C BSPP	F MM	L MM	WT. KG
0155 10 10	G1/8	14	17	.015
0155 13 13	G1/4	17	24	.025
0155 17 17	G3/8	22	25	.045
0155 21 21	G1/2	27	32	.084
0155 27 27	G3/4	32	35	.109



0168 Adapter Reducer Female BSPP to Male BSPP

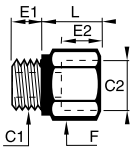
PART NO.	C1 BSPP	C2 BSPP	E MM	F MM	L MM	WT. KG
0168 10 19	G1/8	M5X0.8	7	14	6	.008
0168 13 19	G1/4	M5X0.8	7	17	7	.010
0168 13 10	G1/4	G1/8	7	17	7	.010
0168 17 10	G3/8	G1/8	9	19	6	.020
0168 17 13	G3/8	G1/4	9	19	6	.013
0168 21 10	G1/2	G1/8	11	24	10	.046
0168 21 13	G1/2	G1/4	11	24	10	.038
0168 21 17	G1/2	G3/8	11	24	10	.026
0168 27 13	G3/4	G1/4	11	32	12	.090
0168 27 17	G3/4	G3/8	11	32	12	.078
0168 27 21	G3/4	G1/2	11	32	12	.058

* With captive polymer seal



0163 Adapter Reducer Female BSPP to Male BSPT

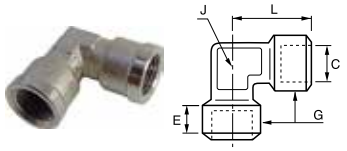
PART NO.	C1 BSPT	C2 BSPP	F MM	L MM	WT. KG
0163 13 10	R1/4	G1/8	14	16	.009
0163 17 10	R3/8	G1/8	17	16.5	.020
0163 17 13	R3/8	G1/4	17	16.5	.012
0163 21 10	R1/2	G1/8	22	21	.047
0163 21 13	R1/2	G1/4	22	21	.038
0163 21 17	R1/2	G3/8	22	21	.025
0163 27 13	R3/4	G1/4	27	24	.086
0163 27 17	R3/4	G3/8	27	24	.069
0163 27 21	R3/4	G1/2	27	24	.048



0169 Expander Female BSPP to Male BSPP

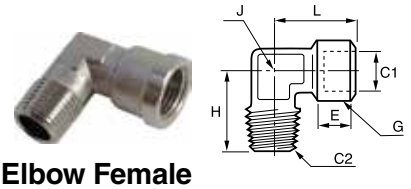
PART NO.	C1 BSPP	C2 BSPP	E1 MM	E2 MM	F MM	L MM	WT. KG
0169 10 13	G1/8	G1/4	5	11	17	16	.020
0169 10 17	G1/8	G3/8	5	14	22	19.5	.038
0169 13 17	G1/4	G3/8	7	14	22	19.5	.042
0169 13 21	G1/4	G1/2	7	14.5	27	20.5	.061
0169 17 21	G3/8	G1/2	8	14.5	27	20.5	.062
0169 17 27	G3/8	G3/4	8	15.5	32	22	.082
0169 21 27	G1/2	G3/4	9.5	15.5	32	22.5	.088

Nickel Plated Metric Adapters



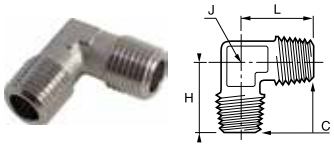
0912 Female Elbow BSPP and M5

PART NO.	C BSPP/M5	E MM	G MM	J MM	L MM	WT. KG
0912 00 19	M5	4	8	9	11	.037
0912 00 10	G1/8	8	13	10	21	.042
0912 00 13	G1/4	11	17	13	25.5	.055
0912 00 17	G3/8	11.5	21	17	28	.098
0912 00 21	G1/2	14	26	21	33.5	.158
0912 00 27	G3/4	15	31	27	36.5	.256



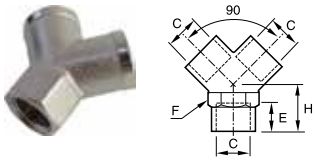
0913 / 0921 Street Elbow Female BSPP to Male BSPT and M5

PART NO.	C1 BSPP/ M5	C2 BSPT	E MM	G MM	H MM	J MM	L MM	WT. KG
0921 00 19	M5		4	8	11	9	11	.037
0913 00 10	G1/8	R1/8	8	13	18.5	10	21	.033
0913 00 13	G1/4	R1/4	11	17	23.5	13	25.5	.050
0913 00 17	G3/8	R3/8	11.5	21	26	17	28	.085
0913 00 21	G1/2	R1/2	14	26	31	21	33.5	.138
0913 00 27	G3/4	R3/4	15	31	35	27	36.5	.229



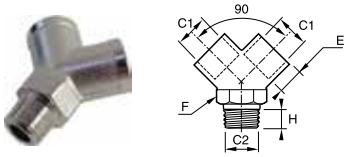
0914 / 0922 Equal Elbow Male BSPT or M5

PART NO.	C BSPT/M5	H MM	J MM	L MM	WT. KG
0922 00 19	M5	11	9	11	.037
0914 00 10	R1/8	18.5	10	18.5	.018
0914 00 13	R1/4	23.5	13	23.5	.045
0914 00 17	R3/8	26	17	26	.056
0914 00 21	R1/2	31	21	31	.087
0914 00 27	R3/4	35	27	35	.153



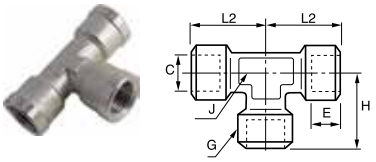
0910 "Y" Connector Female BSPP

PART NO.	C BSPP	E MM	F MM	H MM	WT. KG
0910 00 10	1/8	8	13	12	.055
0910 00 13	1/4	11	17	14	.081
0910 00 17	3/8	11.5	20	16	.128
0910 00 21	1/2	14	25	19	.213



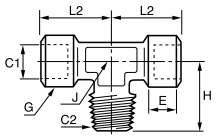
0911 "Y" Connector Female BSPP to Male BSPT

PART NO.	C1 BSPP	C2 BSPT	E	F	H	WT.
0911 00 10	G1/8	R1/8	8	13	12	.055
0911 00 13	G1/4	R1/4	11	17	14	.081
0911 00 17	G3/8	R3/8	11.5	20	16	.128
0911 00 21	G1/2	R1/2	14	25	19	.213



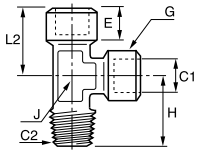
0915 Female Tee BSPP or M5

PART NO.	C BSPP/ M5	E MM	G MM	H MM	J MM	L2 MM	WT. KG
0915 00 19	M5	4	8	11	9	11	.047
0915 00 10	G1/8	8	13	21	10	21	.051
0915 00 13	G1/4	11	17	25.5	13	25.5	.074
0915 00 17	G3/8	11.5	21	28	17	28	.147
0915 00 21	G1/2	14	26	33.5	21	33.5	.231
0915 00 27	G3/4	15	31	36.5	27	36.5	.381



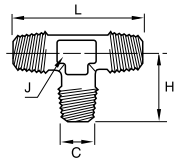
0916 / 0923 Branch Tee Female BSPP to Male BSPT

PART NO.	C1 BSPP/ M5	C2 BSPT	E MM	G MM	H MM	J MM	L2 MM	WT. KG
0923 00 19	M5		4	8	11	9	11	.040
0916 00 10	G1/8	R1/8	8	13	18.5	10	21	.045
0916 00 13	G1/4	R1/4	11	17	23.5	13	25.5	.071
0916 00 17	G3/8	R3/8	11.5	21	26	17	28	.118
0916 00 21	G1/2	R1/2	14	26	31	21	33.5	.203
0916 00 27	G3/4	R3/4	15	31	36.5	27	36.5	.320



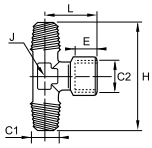
0917 / 0924 Run Tee Female BSPP to Male BSPT or M5

PART NO.	C1 BSPP/ M5	C2 BSPT	E MM	G MM	H MM	J MM	L2 MM	WT. KG
0924 00 19	M5		4	8	11	9	11	.040
0917 00 10	G1/8	R1/8	8	13	18.5	10	21	.045
0917 00 13	G1/4	R1/4	11	17	23.5	13	25.5	.071
0917 00 17	G3/8	R3/8	11.5	21	26	17	28	.118
0917 00 21	G1/2	R1/2	14	26	31	21	33.5	.203
0917 00 27	G3/4	R3/4	15	31	36.5	27	36.5	.320



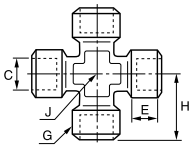
0927 Equal Male Tee BSPT

PART NO.	C BSPT	H MM	J MM	L MM	WT. KG
0927 00 10	R1/8	18.5	10	37	.017
0927 00 13	R1/4	23.5	13	47	.038
0927 00 17	R3/8	26	17	52	.057
0927 00 21	R1/2	31	21	62	.093



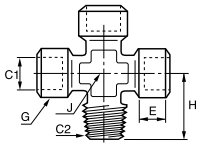
0928 Male Stud Branch Tee BSPT Female BSPP

PART NO.	C1 BSPT	C2 BSPP	E MM	H MM	J MM	L MM	WT. KG
0928 00 10	R1/8	G1/8	8	37	10	21	0.021
0928 00 13	R1/4	G1/4	11	47	13	25.5	0.044
0928 00 17	R3/8	G3/8	11.5	52	17	28	0.066
0928 00 21	R1/2	G1/2	14	62	21	33.5	0.109



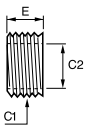
0908 Cross Female BSPP

PART NO.	C BSPP	E MM	G MM	H MM	J MM	WT. KG
0908 00 10	G1/8	8	13	21	10	.055
0908 00 13	G1/4	11	17	25.5	13	.081
0908 00 17	G3/8	11.5	21	28	17	.128
0908 00 21	G1/2	14	26	33.5	21	.213



0909 Cross Female BSPP to Male BSPT

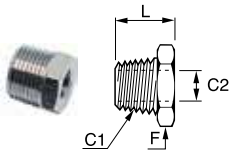
PART NO.	C1 BSPP	C2 BSPT	E MM	G MM	H MM	J MM	WT. KG
0909 00 10	G1/8	R1/8	8	13	18.5	10	.055
0909 00 13	G1/4	R1/4	11	17	23.5	13	.081
0909 00 17	G3/8	R3/8	11.5	21	26	17	.128
0909 00 21	G1/2	R1/2	14	26	31	21	.213



0903 Adapter Reducer BSPP

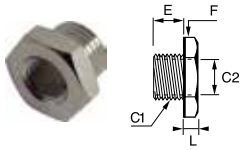
PART NO.	C1 BSPP	C2 BSPP	E MM	WT. KG
0903 10 13	G1/4	G1/8	8	.009
0903 13 17	G3/8	G1/4	9	.020
0903 17 21	G1/2	G3/8	10	.025
0903 21 27	G3/4	G1/2	14	.048
0903 27 34	G1"	G3/4	20	.060

0904 Adapter Reducer Female BSPP to Male BSPT



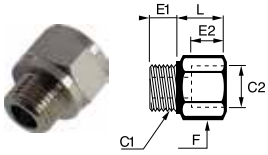
PART NO.	C1 BSPT	C2 BSPP	F MM	L MM	WT. KG
0904 10 13	R1/4	G1/8	14	16	.009
0904 10 17	R3/8	G1/8	17	16.5	.020
0904 13 17	R3/8	G1/4	17	16.5	.012
0904 13 21	R1/2	G1/4	22	19.5	.038
0904 17 21	R1/2	G3/8	22	19.5	.025
0904 17 27	R3/4	G3/8	27	23.5	.069
0904 21 27	R3/4	G1/2	27	23.5	.048

0905 Adapter Reducer Male BSPP to Female BSPP or M5



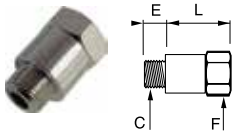
PART NO.	C1 BSPP	C2 BSPP M5	E MM	F MM	L MM	WT. KG
0905 19 10	G1/8	M5	6	14	4.5	.009
0905 10 13	G1/4	G1/8	8	17	5	.009
0905 10 17	G3/8	G1/8	9	19	5	.020
0905 13 17	G3/8	G1/4	9	19	5	.012
0905 13 21	G1/2	G1/4	10	24	5.5	.038
0905 17 21	G1/2	G3/8	10	24	5.5	.025
0905 17 27	G3/4	G3/8	12	30	5.5	.069
0905 21 27	G3/4	G1/2	12	30	5.5	.048

0906 Expander Female BSPP to Male BSPP



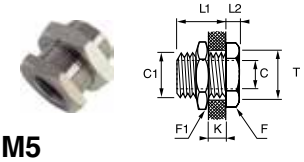
PART NO.	C1 BSPP/ M5	C2 BSPP	E1 MM	E2 MM	F MM	L MM	WT. KG
0906 10 19	M5	G1/8	4	8	14	10	.009
0906 00 10	G1/8	G1/8	6	8.5	14	10	.009
0906 10 13	G1/8	G1/4	6	11.5	17	14	.020
0906 10 17	G1/8	G3/8	6	11.5	22	14.5	.038
0906 00 13	G1/4	G1/4	8	11.5	17	14	.040
0906 13 17	G1/4	G3/8	8	11.5	22	14.5	.042
0906 13 21	G1/4	G1/2	8	15	27	18	.061
0906 00 17	G3/8	G3/8	9	11.5	22	14.5	.061
0906 17 21	G3/8	G1/2	9	15	27	18	.062
0906 00 21	G1/2	G1/2	10	15	27	18	.070

0907 Extended Adapter BSPP



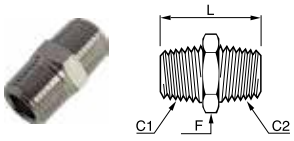
PART	C BSPP	E MM	F MM	L MM	WT. KG
0907 00 10	G1/8	6	14	16	.009
0907 00 10 01	G1/8	6	14	36	.009
0907 00 13	G1/4	8	17	23	.020
0907 00 13 01	G1/4	8	17	43	.020

0920 Bulkhead BSPP and M5

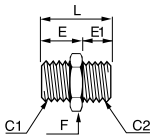


PART NO.	C1 METRIC	C BSPP M5	F MM	F1 MM	K MAX MM	L1 MM	L2 MM	T MIN MM	WT. KG
0920 00 19	M10X1	M5	14	14	7	10.5	3.5	10.5	.013
0920 00 10	M16X1.5	G1/8	19	22	9	14	4	16.5	.033
0920 00 13	M20X1.5	G1/4	24	27	15	21	4	20.5	.057
0920 00 17	M26X1.5	G3/8	30	32	14	21	5	26.5	.096
0920 00 21	M28X1.5	G1/2	32	36	20	27	6	28.5	.117

0900 Male Straight Adapter BSPT

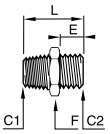


PART NO.	C1 BSPT	C2 BSPT	F MM	L MM	WT. KG
0900 00 10	R1/8	R1/8	12	19.5	.009
0900 10 13	R1/8	R1/4	14	23.5	.021
0900 00 13	R1/4	R1/4	14	27	.021
0900 10 17	R1/8	R3/8	17	24	.022
0900 13 17	R1/4	R3/8	17	27.5	.024
0900 00 17	R3/8	R3/8	17	28	.025
0900 13 21	R1/4	R1/2	22	30.5	.045
0900 17 21	R3/8	R1/2	22	31	.045
0900 00 21	R1/2	R1/2	22	33.5	.055
0900 21 27	R1/2	R3/4	27	37.5	.084
0900 00 27	R3/4	R3/4	27	40	.092
0900 27 34	R3/4	R1	34	43	.143
0900 00 34	R1	R1	34	45.5	.156



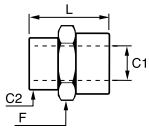
0901 Male Straight Adapter M5 or BSPP

PART NO.	C1 BSPP M5	C2 BSPP M5	E MM	E1 MM	F MM	L MM	WT. KG
0901 00 19	M5	M5	4	4	8	11.5	.002
0901 19 10	M5	G1/8	4	6	14	14.5	.008
0901 00 10	G1/8	G1/8	6	6	14	16.5	.008
0901 10 13	G1/8	G1/4	6	8	17	19	.014
0901 00 13	G1/4	G1/4	8	8	17	21	.016
0901 13 17	G1/4	G3/8	8	9	19	22	.021
0901 00 17	G3/8	G3/8	9	9	19	23	.024



0192 Male Straight Adapter BSPT to BSPP

PART NO.	C1 BSPT	C2 BSPP	E MM	F MM	L MM	WT. KG
0192 10 13	R1/8	G1/4	9.5	17	23.5	.019
0192 13 13	R1/4	G1/4	9.5	17	27.5	.024
0192 13 21	R1/4	G1/2	27	27	31.5	.067
0192 17 13	R3/8	G1/4	9.5	17	45	.025
0192 17 21	R3/8	G1/2	27	27	31.5	.061
0192 21 21	R1/2	G1/2	27	27	34	.060



0902 Female Sleeve BSPP and M5

PART NO.	C1 BSPP/M5	C2 BSPP/M5	F MM	L MM	WT. KG
0902 00 19	M5	M5	8	11	.009
0902 19 10	M5	G1/8	14	13	.009
0902 00 10	G1/8	G1/8	14	15	.015
0902 10 13	G1/8	G1/4	17	19.5	.020
0902 00 13	G1/4	G1/4	17	22	.025
0902 10 17	G1/8	G3/8	22	20	.030
0902 13 17	G1/4	G3/8	22	23	.040
0902 00 17	G3/8	G3/8	22	24	.045
0902 13 21	G1/4	G1/2	27	27	.050
0902 17 21	G3/8	G1/2	27	27.5	.060
0902 00 21	G1/2	G1/2	27	30	.084
0902 21 27	G1/2	G3/4	30	30	.090
0902 00 27	G3/4	G3/4	30	32	.109

Industrial Valves

Ball Valves

Replacement Componentry

Ball Valve Stem Extensions Series STX

Female Ports

V500P Female-Female

V502P Panel Mount

V520P Economy Series

V502SS Panel Mount Stainless

MV709 Micro Valve

MV200 Mini Valve

Male-Female Ports

MV609 Mini Valve

4203 Axial Valve-NPT

4202 Axial Valve-BSPP

PV609 Plug Valve

V501P Male-Female

V501SS Stainless Steel

Male-Male Ports

MV708 Micro Valve

MV608 Mini Valve

PV608 Plug Valve

PV607 Plug Valve

Padlocking

VP500P Female Ports

VP501P Male - Female

VP502P Panel Mount

VP502SS Stainless Steel

Vented

VV500P Female Ports

VV501P Male-Female

VV502P Panel Mount

Vented-Padlocking

VVP500P Female Ports

VVP501P Male-Female

VVP502P Panel Mount

Tee Handle

V500P-X-04 Female Ports

V501P-X-04 Male - Female

V502P-X-04 Panel Mount

Oval Handle

V500P-X-21 Female Ports

V501P-X-21 Male - Female

V502P-X-21 Panel Mount

V510P-X-21 Straight Thread

V502SS-X-21 Oval Handle

Short Handle

V502SS-X-20 Panel Mount

Metric Female Ports

BVGL Female Ports Long

BVGTL Female Ports Long

MBVG Compact

Metric Padlocking

BVG4PLOCK
Female Ports

Needle Valves

NV101F
Female - Male

NV102F
Flare

NV103F
Flare - Male Pipe

NV104C-NV104CA
Compression - Pipe

NV105C-NV105CA
Compression

NV106C-NV106CA
Compression - Pipe

NV107P
Pipe

NV108P
Female - Male

NV109P
Female

NV311P
Poly-Tite

NV312P
Poly-Tite

Shutoff Valves

V203F
Flare

V204F
Flare - Pipe

V303C-V303CA
Compression

V304C-V304CA
Compression - Pipe

V401P
Pipe

V402P
Female - Pipe

V403P
Female

V406P
3 Way

V407P
4 Way

DC601
Pipe

Drain Cocks

DCR601
Internal Seal

DC602
Internal Seal

DC603
Internal Seal

DC604
External Seal

DC606
External Seal

DC607
Bib Drain

Auxiliary

V502P-X-ACT
Actuator

V502SS-X-ACT
Actuator

V502P-X-SUB
Sub-Assembly

V502SS-X-SUB
Sub-Assembly

ACT-P-X-KIT
Brass Actuator kit

ACT-SS-X-KIT
Stainless Actuator Kit

STX-P
Stem Extension

PVMB-001
Mounting Bracket

HV104C-KIT
Humidifier Valve Kit

SPV104C-KIT
Self Piercing Kit

HV104C
Humidifier Valve

Ball Valves
Brass Series 500

Parker's industrial ball valves are intended for general purpose use. Ball valves are intended for use in the fully open or closed positions. Throttling of the valve may result in premature seal failure and/or inability to turn the valve handle.

Product Features:
- Forged brass body
- Chrome plated brass ball
- PTFE seats/seals
- Steel handle

Style:
- V-Valve
- VP-Valve, padlocking handle
- VV-Valve, vented
- VVP-Valve, vented, padlocking handle

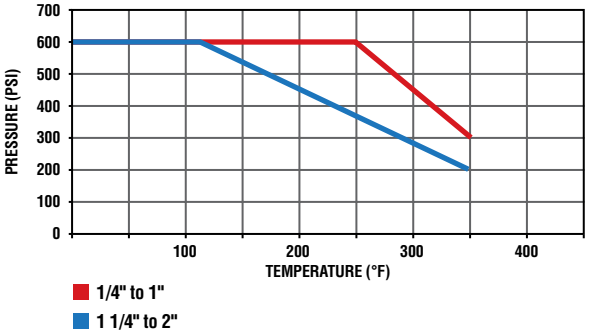
Type:
- 500-Female/Female PTF ports

Material:
- P-Brass
- PN-Nickel plated

Options:
- 01-Stainless Steel Ball & Stem
- 02-Stainless Steel Handle & Nut
- 03-Stainless Steel Ball, Stem, Handle & Nut
- 04-Tee Handle
- 08-Unmarked yellow vinyl handle cover
- 21-Oval Handle

Specifications:
Pressure Range:
- 600 WOG , Cold Non-shock
- Saturated Steam up to 150 PSI (10.3 bar)
- Vacuum Service to 29 Inches Hg
- Vented up to 250 PSI (17.2 bar)

Temperature Range
- 0˚ to +350˚ F (-17.7° to +176.6° C)

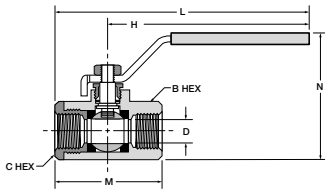


FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	5.8
1/2	12.0
3/4	25.0
1	35.0
1-1/4*	57.0
1-1/2*	92.0
2*	224.0

*For these part numbers only the * options are available.

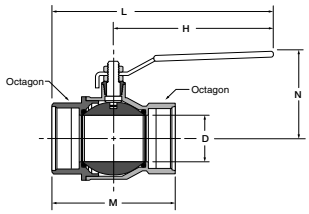
Female-Female Pipe Ends V500P

PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	FLOW DIA.D
V500P-4	1/4	15/16	15/16	3.96	4.90	2.03	2.47	.375
V500P-6	3/8	15/16	15/16	3.96	4.90	2.03	2.47	.375
V500P-8	1/2*	1-1/16	1-1/16	3.96	5.00	2.20	2.58	.500
V500P-12	3/4**	1-1/4	1-5/16	3.96	5.25	2.42	2.81	.685
V500P-16	1**	1-1/2	1-9/16	3.96	5.34	2.75	3.08	.875



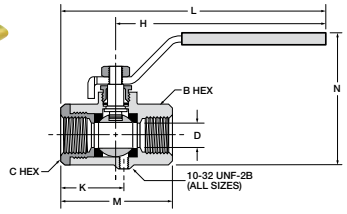
Female-Female Pipe Ends V500P-20, V500P-24, V500P-32

PART NO.	PIPE THREAD [NPT]	OCTAGON	H	L	M	N	FLOW DIA.D
V500P-20	1-1/4	1.93	6.22	8.05	3.66	3.01	1.18
V500P-24	1-1/2	2.13	6.22	8.23	4.02	3.25	1.50
V500P-32	2	2.69	6.22	8.58	4.76	3.52	1.89



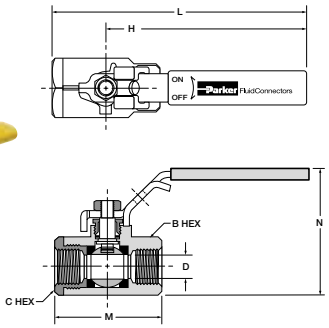
Vented, Female Pipe Ends VV500P

PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
VV500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
VV500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
VV500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
VV500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
VV500P-16	1**	1-1/2	1-9/16	1.58	3.96	5.34	2.75	3.08	.875



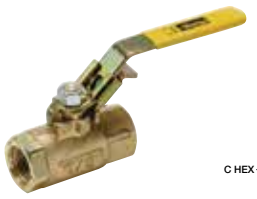
Locking Handle, Female Pipe Ends VP500P

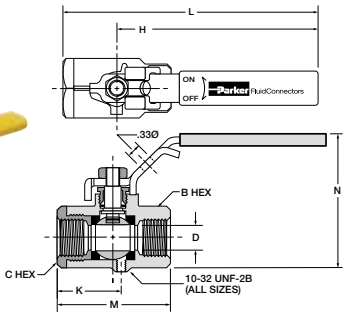
PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
VP500P-4	1/4	15/16	15/16	3.96	4.90	2.03	2.47	.375
VP500P-6	3/8	15/16	15/16	3.96	4.90	2.03	2.47	.375
VP500P-8	1/2*	1-1/16	1-1/16	3.96	5.00	2.20	2.58	.500
VP500P-12	3/4**	1-1/4	1-5/16	3.96	5.25	2.42	2.81	.685
VP500P-16	1**	1-1/2	1-9/16	3.96	5.34	2.75	3.08	.875
FOR USE WITH 5/16" Ø SHANK LOCK; .33Ø								
VP500P-20	1-1/4	1-15/16	1-15/16	6.22	8.05	3.66	4.04	1.180
VP500P-24	1-1/2	2-1/8	2-1/8	6.22	8.23	4.02	4.52	1.500
VP500P-32	2	2-11/16	2-11/16	6.22	8.60	4.76	5.07	1.890
FOR USE WITH 9/32" Ø SHANK LOCK; .31Ø								



OSHA 29 CFR Part 1910 Vented, Locking Handle, Female Pipe Ends VVP500P

PART NO.	PIPE THD [PTF]	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
VVP500P-4	1/4	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
VVP500P-6	3/8	15/16	15/16	1.11	3.96	4.90	2.03	2.47	.375
VVP500P-8	1/2*	1-1/16	1-1/16	1.23	3.96	5.00	2.20	2.58	.500
VVP500P-12	3/4**	1-1/4	1-5/16	1.45	3.96	5.25	2.42	2.81	.685
VVP500P-16	1**	1-1/2	1-9/16	1.58	3.96	5.34	2.75	3.08	.875
FOR USE WITH 5/16" Ø SHANK LOCK									

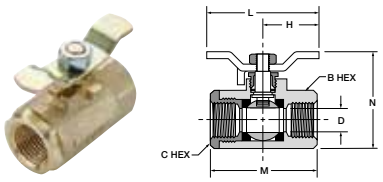




*PTF Special Short. **PTF SPL Extra Short

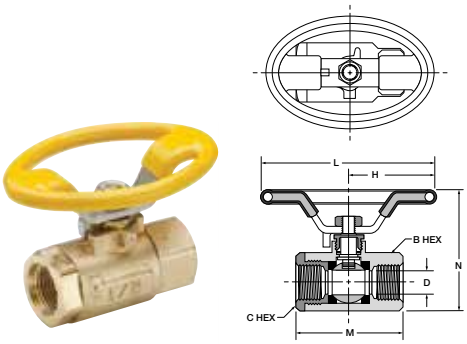
Tee Handle, Female Pipe Ends V500P-X-04

PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
V500P-4-04	1/4	15/16	15/16	1.25	2.50	2.03	1.87	.375
V500P-6-04	3/8	15/16	15/16	1.25	2.50	2.03	1.87	.375
V500P-8-04	1/2*	1-1/16	1-1/16	1.25	2.50	2.20	1.98	.500
V500P-12-04	3/4**	1-1/4	1-5/16	1.25	2.50	2.42	2.20	.685
V500P-16-04	1**	1-1/2	1-9/16	1.25	2.50	2.75	2.48	.875



Oval Handle, Female Pipe Ends V500P-X-21

PART NO.	PIPE THREAD [PTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
V500P-4-21	1/4	15/16	15/16	1.74	3.49	2.03	2.38	.375
V500P-6-21	3/8	15/16	15/16	1.74	3.49	2.03	2.38	.375
V500P-8-21	1/2*	1-1/16	1-1/16	1.74	3.49	2.20	2.49	.500
V500P-12-21	3/4**	1-1/4	1-5/16	1.74	3.48	2.42	2.71	.685
V500P-16-21	1**	1-1/2	1-9/16	1.74	3.48	2.75	2.99	.875



*PTF Special Short. **PTF SPL Extra Short

Ball Valves
Brass Series 501

Product Features:
- Forged brass body
- Chrome plated brass ball
- PTFE seats/seals
- Steel handle

Style:
- V-Valve
- VP-Valve, padlocking handle
- VV-Valve, vented
- VVP-Valve,vented, padlocking handle

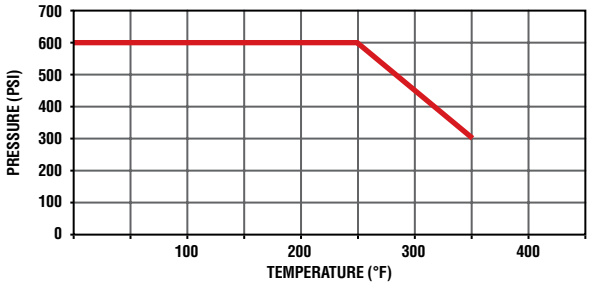
Type:
- 501-Male/Female PTF ports

Material:
- P-Brass
- PN-Nickel plated

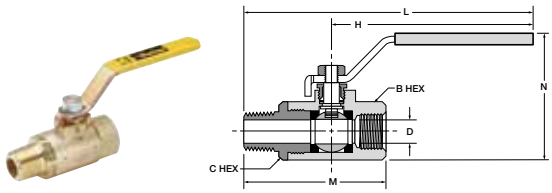
Options:
- 01-Stainless Steel Ball & Stem
- 02-Stainless Steel Handle & Nut
- 03-Stainless Steel Ball, Stem, Handle & Nut
- 04-Tee Handle
- 08-Unmarked yellow vinyl handle cover
- 21-Oval Handle

Specifications:
Pressure Range:
- 600 WOG , Cold Non-shock
- Saturated Steam up to 150 PSI (10.3 bar)
- Vacuum Service to 29 Inches Hg
- Vented up to 250 PSI (17.2 bar)

Temperature Range
- 0˚ to +350˚ F (-17.7° to +176.6° C)

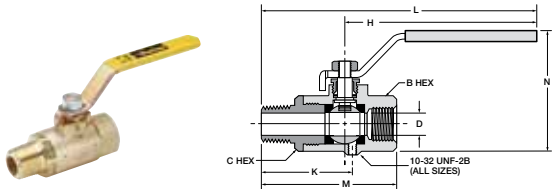


FLOW DATA	
VALVE SIZE	CV
1/4	6.3
3/8	5.7
1/2	10.0
3/4	25.0
1	35.0



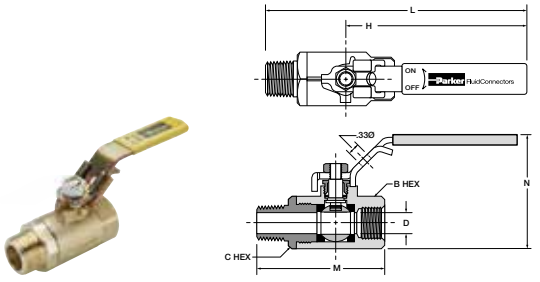
Male-Female Pipe Ends V501P

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
V501P-4	1/4	1/4	15/16	15/16	3.96	5.46	2.59	2.47	.344
V501P-6	3/8	3/8	15/16	15/16	3.96	5.46	2.59	2.47	.375
V501P-8	1/2*	1/2	1-1/16	1-1/16	3.96	5.75	2.94	2.58	.500
V501P-12	3/4**	3/4*	1-1/4	1-5/16	3.96	5.83	3.00	2.81	.685
V501P-16	1**	1*	1-1/2	1-9/16	3.96	6.19	3.60	3.08	.875



Vented, Male-Female Pipe Ends VV501P

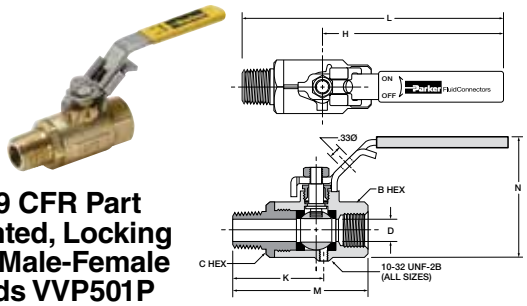
PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
VV501P-4	1/4	1/4	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.344
VV501P-6	3/8	3/8	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.375
VV501P-8	1/2*	1/2	1-1/16	1-1/16	1.98	3.96	5.75	2.95	2.58	.500
VV501P-12	3/4**	3/4*	1-1/4	1-5/16	2.03	3.96	5.83	3.00	2.81	.685
VV501P-16	1**	1*	1-1/2	1-9/16	2.43	3.96	6.19	3.60	3.08	.875



Locking Handle, Male-Female Pipe Ends VP501P

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
VP501P-4	1/4	1/4	15/16	15/16	3.96	5.46	2.59	2.47	.344
VP501P-6	3/8	3/8	15/16	15/16	3.96	5.46	2.59	2.47	.375
VP501P-8	1/2*	1/2	1-1/16	1-1/16	3.96	5.75	2.95	2.58	.500
VP501P-12	3/4**	3/4*	1-1/4	1-5/16	3.96	5.83	3.00	2.81	.685
VP501P-16	1**	1*	1-1/2	1-9/16	3.96	6.19	3.60	3.08	.875

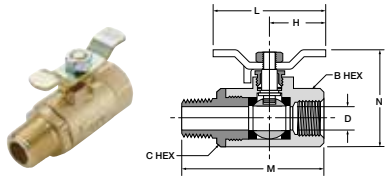
For use with 5/16" Ø shank lock



OSHA 29 CFR Part 1910 Vented, Locking Handle, Male-Female Pipe Ends VVP501P

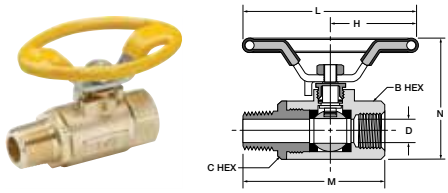
PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	K	H	L	M	N	D FLOW Ø
VVP501P-4	1/4	1/4	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.344
VVP501P-6	3/8	3/8	15/16	15/16	1.67	3.96	5.46	2.59	2.47	.375
VVP501P-8	1/2*	1/2	1-1/16	1-1/16	1.98	3.96	5.75	2.95	2.58	.500
VVP501P-12	3/4**	3/4	1-1/4	1-5/16	2.03	3.96	5.83	3.00	2.81	.685
VVP501P-16	1**	1	1-1/2	1-9/16	2.43	3.96	6.19	3.60	3.08	.875

For use with 5/16" Ø shank lock



Tee Handle, Male-Female Pipe Ends V501P-X-04

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
V501P-4-04	1/4	1/4	15/16	15/16	1.25	2.50	2.59	1.87	.344
V501P-6-04	3/8	3/8	15/16	15/16	1.25	2.50	2.59	1.87	.375
V501P-8-04	1/2*	1/2	1-1/16	1-1/16	1.25	2.50	2.95	1.98	.500
V501P-12-04	3/4**	3/4	1-1/4	1-5/16	1.25	2.50	3.00	2.20	.685
V501P-16-04	1**	1	1-1/2	1-9/16	1.25	2.50	3.60	2.48	.875



Oval Handle, Male-Female Pipe Ends V501P-X-21

PART NO.	FEMALE PIPE THRD [PTF]	MALE PIPE THRD [NPTF]	B HEX	C HEX	H	L	M	N	D FLOW Ø
V501P-4-21	1/4	1/4	15/16	15/16	1.74	3.49	2.59	2.38	.344
V501P-6-21	3/8	3/8	15/16	15/16	1.74	3.49	2.59	2.38	.375
V501P-8-21	1/2*	1/2	1-1/16	1-1/16	1.74	3.49	2.95	2.49	.500
V501P-12-21	3/4**	3/4	1-1/4	1-5/16	1.74	3.48	3.00	2.71	.685
V501P-16-21	1**	1	1-1/2	1-9/16	1.74	3.48	3.60	2.99	.875

*PTF Special Short. **PTF SPL Extra Short

Ball Valves
Brass Series 520

Product Features:
- Forged brass body
- Chrome plated brass ball
- PTFE seats/seals
- Fluorocarbon Stem O-rings
- Steel handle

Style:
- V-Valve

Type:
- 520-Female/Female NPT Ports

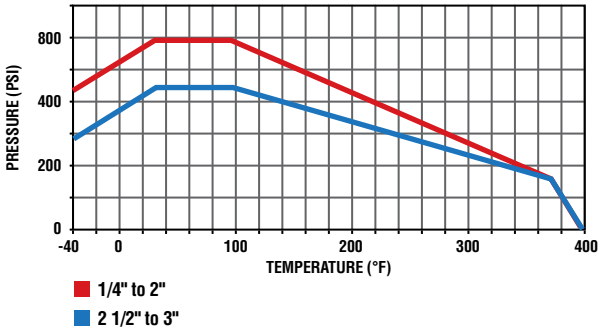
Material:
- P-Brass

Options:
- 04-Tee Handle

Specifications:
Pressure Range:
- 600 WOG Cold Non-shock 1/4" – 2"
- 450 WOG, Cold Non-shock 2 1/2" – 3"
- Saturated Steam up to 150 PSI (10.3 bar)
- Vacuum Service to 29 Inches Hg

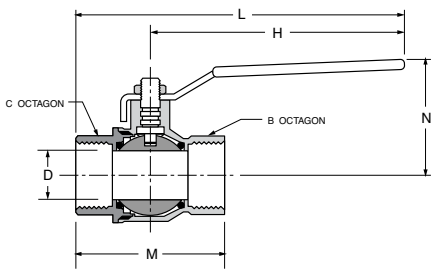
Temperature Range
- -40˚ to +350˚ F (-40° to +176.6° C)

U.L. LISTED	
CATEGORY	
YSDT	LP-GAS SHUT-OFF VALVES
YRBX	FLAMMABLE LIQUID SHUT-OFF VALVES
YRPV	GAS SHUT-OFF VALVES
YQNZ	COMPRESSED GAS SHUT-OFF VALVES



Brass Ball Valve V520P

PART NO.	PIPE THREAD [NPT]	B OCTAGON	C OCTAGON	H	L	M	N	D FLOW Ø
V520P-4	1/4-18	.79	.79	3.94	4.83	1.77	1.50	.310
V520P-6	3/8-18	.79	.79	3.94	4.83	1.77	1.50	.400
V520P-8	1/2-14	.98	.98	3.94	5.10	2.32	1.69	.600
V520P-12	3/4-14	1.22	1.22	4.72	5.98	2.52	1.97	.790
V520P-16	1-11.5	1.57	1.57	4.72	6.32	3.19	2.13	1.000
V520P-20	1-1/4	1.93	1.93	6.22	8.05	3.66	2.82	1.180
V520P-24	1-1/2	2.13	2.13	6.22	8.23	4.02	3.06	1.570
V520P-32	2	2.69	2.69	6.22	8.58	4.76	3.33	2.000
V520P-40	2-1/2	3.35	3.35	10.04	13.11	6.14	5.20	2.520
V520P-48	3	3.89	3.89	10.04	13.52	6.97	5.51	3.000



Ball Valves
Stainless Steel Series 501SS

Product Features:
- CF-8M Stainless Steel body
- Stainless Steel ball
- PTFE Seats/Seals
- Stainless Steel handle
- Silicone Free

Style:
- V-Valve

Type:
- 501-Male/Female NPT Ports

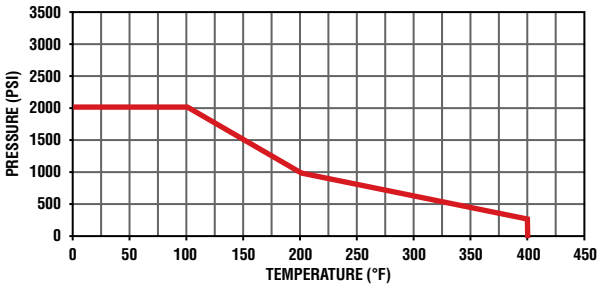
Material:
- SS – Stainless Steel

Options
- 20-Short Handle
- 21-Oval Handle
- 35-Welded Retainer Nut

Specifications:
Pressure Range:
- 2000 PSI (137.8 bar)
- Vacuum service 28 inches Hg

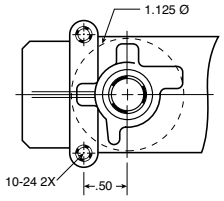
Temperature Range
- 0˚ to +400˚ F (-17.7° to +204.4° C)

Approvals
- Meets material requirements of NACE MR-01-75



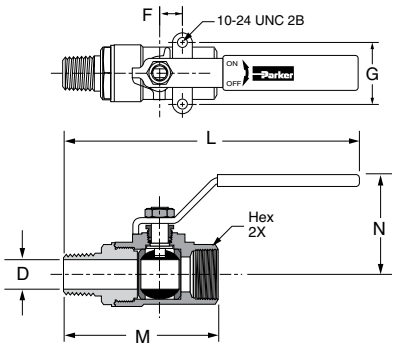
FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0

Mounting Detail



Male-Female Pipe Ends V501SS

PART NO.	PIPE THREAD [NPT]	HEX	F	G	L	M	N	D FLOW Ø
V501SS-4	1/4	15/16	.50	1.12	5.60	2.65	1.97	.280
V501SS-6	3/8	15/16	.50	1.12	5.60	2.65	1.97	.375
V501SS-8	1/2	1-1/16	.50	1.12	5.85	3.05	2.00	.500
V501SS-12	3/4	1-3/8	.88	1.37	7.27	3.85	2.55	.720
V501SS-16	1	1-5/8	.88	1.37	7.48	4.25	2.68	.940



Ball Valves
Stainless Steel Series 502SS

Product Features:
- CF-8M Stainless Steel body
- Stainless Steel ball
- PTFE Seats/Seals
- Stainless Steel handle
- Silicone Free

Style:
- V-Valve
- VP-Valve, Padlocking

Type:
- 502-Panel Mount Female/ Female NPT Ports

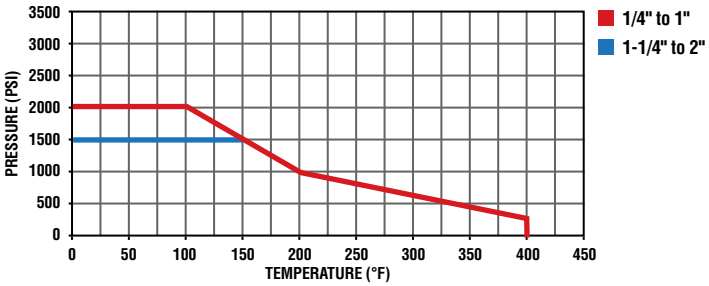
Material:
- SS – Stainless Steel

Options
- 20-Short Handle
- 21-Oval Handle
- 35-Welded Retainer Nut

Specifications:
Pressure Range:
- 1/4" – 1": 2000 PSI (137.8 bar)
- 1 1/4" – 2": 1500 PSI (103.4 bar)
- Vacuum service 28 inches Hg

Temperature Range
- 0˚ to +400˚ F (-17.7° to +204.4° C)

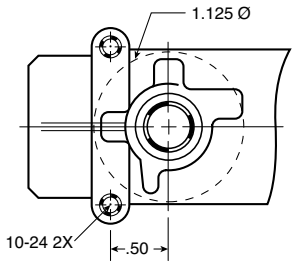
Approvals
- Meets material requirements of NACE MR-01-75



FLOW DATA	
VALVE SIZE	CV
1/4	4.0
3/8	6.0
1/2	14.0
3/4	35.0
1	54.0
1 1/4	74.0
1 1/2	120.0
2	226.0

MOUNTING HOLE DIAMETER	
VALVE SIZE	DIA. IN.
1/4	1.125
3/8	1.125
1/2	1.125
3/4	1.500
1	1.500
1 1/4	1.875
1 1/2	1.875
2	1.875

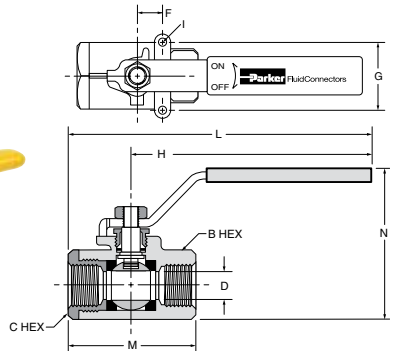
Mounting Detail



Note: Periodically check the adjustable packing nut and tighten as required.

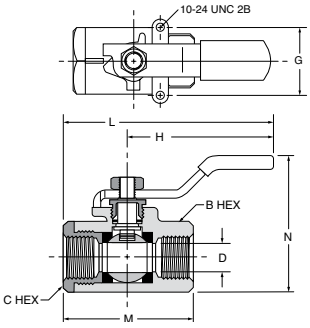
Female Pipe Ends, Panel Mount V502SS

PART NO.	PIPE THD (NPT)	B/C HEX	F	G	H	I THREAD	L	M	N	PANEL FLOW DIA. D	HOLE DIA.
V502SS-4	1/4	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
V502SS-6	3/8	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
V502SS-8	1/2	1-1/16	.500	1.125	4.00	10-24 UNC	5.13	2.27	2.65	.500	1.125
V502SS-12	3/4	1-3/8	.875	1.375	5.00	10-24 UNC	6.67	3.35	3.46	.790	1.500
V502SS-16	1	1-5/8	.875	1.375	5.00	10-24 UNC	6.77	3.54	3.74	1.000	1.500
V502SS-20	1-1/4	2	1.000	1.500	7.00	1/4-20 UNC	9.00	4.00	4.55	1.250	2.000
V502SS-24	1-1/2	2-3/8	1.000	1.500	7.00	1/4-20 UNC	7.19	4.38	5.42	1.500	2.000
V502SS-32	2	3	1.000	1.500	7.00	1/4-20 UNC	9.75	5.50	5.68	2.000	2.000



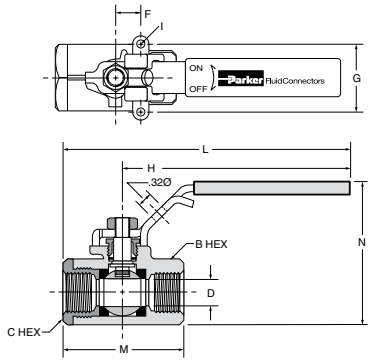
Short Handle, Female Pipe Ends, Panel Mount V502SS-X-20

PART NO.	PIPE THREAD [NPT]	B/C HEX	G	H	L	M	N	FLOW DIA. D
V502SS-4-20	1/4	15/16	1.12	2.28	3.32	2.07	2.53	.375
V502SS-6-20	3/8	15/16	1.12	2.28	3.32	2.07	2.53	.375
V502SS-8-20	1/2	1-1/16	1.12	2.22	3.37	2.25	2.63	.500



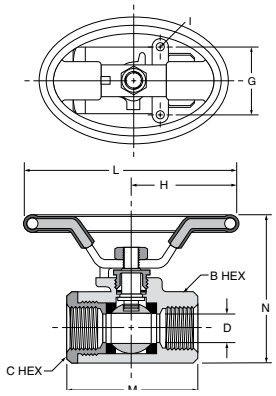
Locking Handle, Female Pipe Ends, Panel Mount VP502SS

PART NO.	PIPE THD (NPT)	B/C HEX	F	G	H	I THREAD	L	M	N	PANEL FLOW DIA. D	HOLE DIA.
VP502SS-4	1/4	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
VP502SS-6	3/8	15/16	.500	1.125	4.00	10-24 UNC	5.03	2.07	2.52	.380	1.125
VP502SS-8	1/2	1-1/16	.500	1.125	4.00	10-24 UNC	5.13	2.27	2.65	.500	1.125
VP502SS-12	3/4	1-3/8	.875	1.375	5.00	10-24 UNC	6.67	3.35	3.46	.790	1.500
VP502SS-16	1	1-5/8	.875	1.375	5.00	10-24 UNC	6.77	3.54	3.74	1.000	1.500
VP502SS-20	1-1/4	2	1.000	1.500	7.00	1/4-20 UNC	9.00	4.00	4.55	1.250	2.000
VP502SS-24	1-1/2	2-3/8	1.000	1.500	7.00	1/4-20 UNC	7.19	4.38	5.42	1.500	2.000
VP502SS-32	2	3	1.000	1.500	7.00	1/4-20 UNC	9.75	5.50	5.68	2.000	2.000



Oval Handle, Female Pipe Ends, Panel Mount V502SS-X-21

PART NO.	PIPE THD (NPT)	B/C HEX	G	H	L	I THREAD	M	N	PANEL FLOW DIA. D	HOLE DIA.
V502SS-4-21	1/4	15/16	1.125	1.74	3.48	10-24 UNC	2.07	2.43	.380	1.125
V502SS-6-21	3/8	15/16	1.125	1.74	3.48	10-24 UNC	2.07	2.43	.380	1.125
V502SS-8-21	1/2	1-1/16	1.125	1.74	3.48	10-24 UNC	2.27	2.54	.500	1.125
V502SS-12-21	3/4	1-3/8	1.375	2.68	5.36	10-24 UNC	3.35	3.45	.790	1.500
V502SS-16-21	1	1-5/8	1.375	2.68	5.36	10-24 UNC	3.54	3.74	1.000	1.500



Ball Valves
Micro Series 708/709

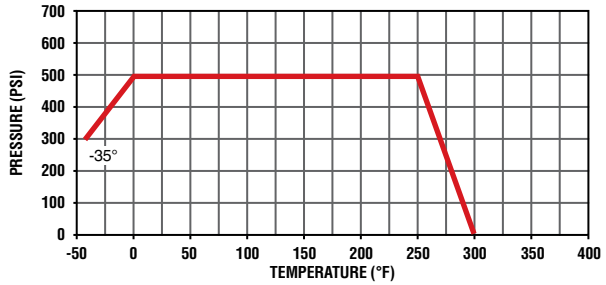
Product Features:
- Brass Body
- Chrome Plated Brass Ball
- PTFE Seats/Seals
- Nitrile Stem Seal
- Chrome Plated Steel Handle

Style:
- MV-Micro Valve

Type:
- 708-Male/Female
- 709-Female/Female

Specifications:
Pressure Range:
- Up to 500 PSI (34.4 bar)
- Vacuum service 29 inches Hg

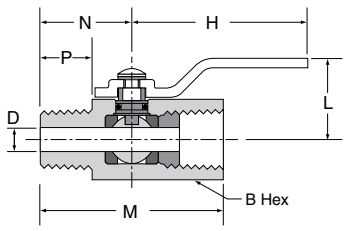
Temperature Range
- -35˚ to +300˚ F (-37.2 to +148.8° C)



FLOW DATA		
VALVE SIZE	MV708 CV	MV709 CV
1/4	.95	.95

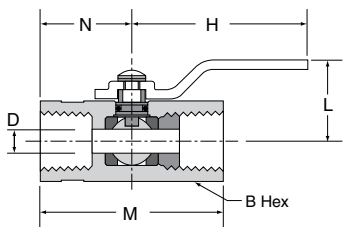
Male-Female Pipe Ends, Mini Ball Valve MV708

PART NO.	PIPE THREAD	B HEX	H	L	M	N	P	FLOW DIA. D
MV708-2	1/8	9/16	1.18	.63	1.62	.93	.38	.180
MV708-4	1/4	11/16	1.52	.70	1.57	.79	.50	.210



Female Pipe Ends, Mini Ball Valve MV709

PART NO.	PIPE THREAD	B HEX	H	L	M	N	FLOW DIA. D
MV709-2	1/8	9/16	1.18	.63	1.52	.68	.180
MV709-4	1/4	11/16	1.52	.70	1.57	.76	.210



Ball Valves
Mini Series 200/608/609

Product Features:
- Chrome Plated Brass Body
- Chrome Plated Brass Ball
- PTFE Seats/Seals
- Fluorocarbon Stem Seal
- 608/609 Polyamide Wedge Handle
- 200 Polyamide Lever Handle

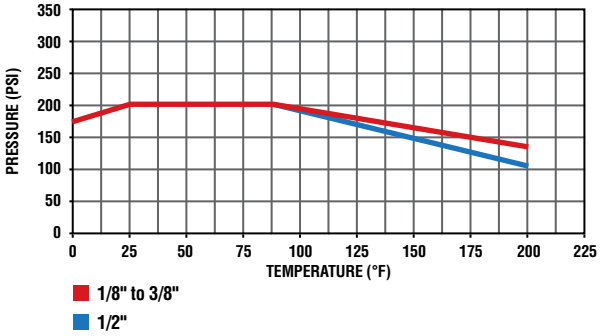
Style:
- MV-Mini Valve

Type:
- 608-Male/Female
- 609-Female/Female
- 200-Female/Female
- 21-Oval Handle

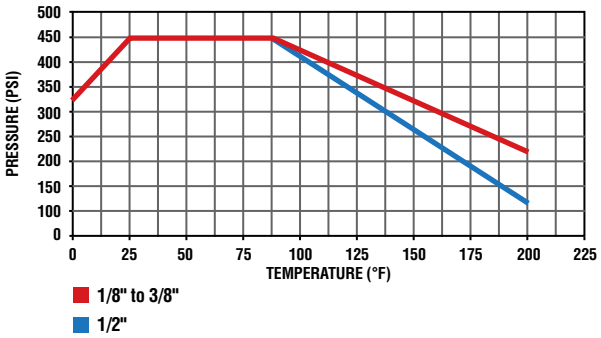
Specifications:
Pressure Range:
- MV200: 200 PSI (13.7 bar)
- MV608/609: Vacuum Service 28 Inches Hg
- MV608/609: 450 PSI (31.0 bar)

Temperature Range
- 0˚ to +200˚ F (-17.7° to +93.3° C)

MV200 Pressure and Temperature



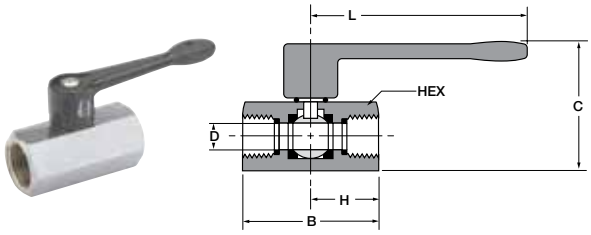
MV608/609 Pressure and Temperature



FLOW DATA			
VALVE SIZE	MV200 CV	MV608 CV	MV609 CV
1/8	1.3	1.2	1.4
1/4	4.0	5.8	4.3
3/8	3.7	3.9	3.6
1/2	5.8	5.6	6.0

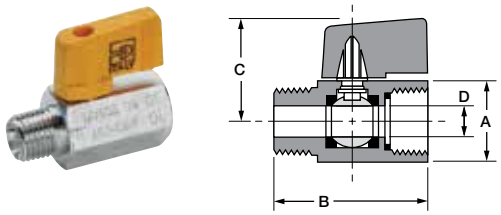
Female Pipe Ends, Lever Handle, Mini Ball Valve MV200

PART NO.	PIPE THREAD	HEX	B	C	H	L	FLOW DIA.D
MV200-2	1/8	.83	1.71	1.20	.91	2.83	.31
MV200-4	1/4	.83	1.71	1.20	.91	2.83	.31
MV200-6	3/8	.83	1.71	1.20	.91	2.83	.31
MV200-8	1/2	.98	2.11	1.28	1.10	2.83	.39



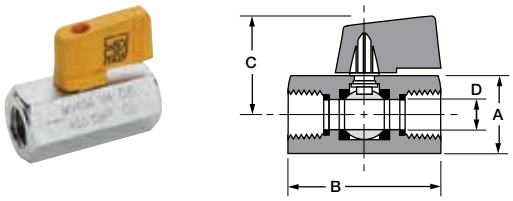
Male-Female Pipe Ends, Compact Handle, Mini Ball Valve MV608

PART NO.	PIPE THREAD	A HEX	B	C	FLOW DIA.D
MV608-2	1/8	.83	1.72	1.22	.20
MV608-4	1/4	.83	1.72	1.22	.31
MV608-6	3/8	.83	1.72	1.22	.31
MV608-8	1/2	.98	2.11	1.30	.39



Female Pipe Ends, Compact Handle, Mini Ball Valve MV609

PART NO.	PIPE THREAD	A HEX	B	C	FLOW DIA.D
MV609-2	1/8	.83	1.71	1.22	.24
MV609-4	1/4	.83	1.71	1.22	.31
MV609-6	3/8	.83	1.71	1.22	.31
MV609-8	1/2	.98	2.11	1.30	.39
MV609-6-4	3/8X1/4	.83	1.71	1.22	.31



Ball Valves
Rotary Actuator Series ACT

Product Features:

- One Piece Aluminum Extrusion Body
- PTFE Seals
- Stainless Steel Shaft
- Self Lubricated Vane Seal
- Anodized Aluminum Extrusion Vane

Specifications:

Pressure Range:

- 150 PSI (10.3 bar) Maximum Air Pressure to Actuator
- Vacuum service 28 inches Hg

Temperature Range

- -40˚ to +180˚ F (-40° to +82.2° C)

How Do Vane Actuators Work?

Parker vane actuators provide the maximum amount of output torque from the smallest possible envelope size. They convert fluid power pressure into rotary motion for a wide variety of industrial applications. Double vane units produce twice the torque output of single vane actuators from identical envelope dimensions and have a maximum rotation of 95°.

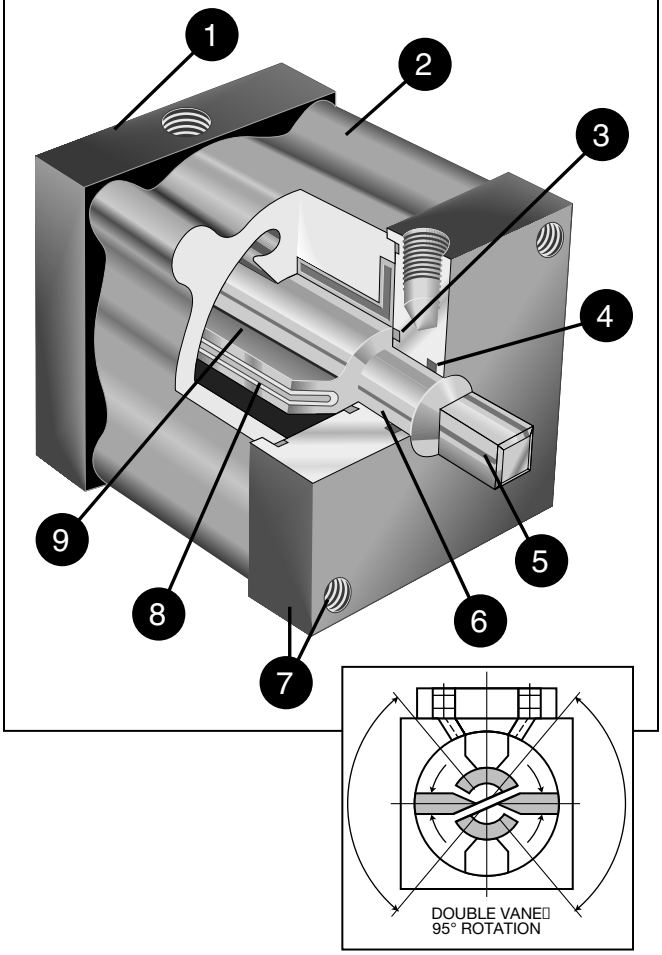
A short cylindrical chamber encloses a vane attached to a central shaft. Fluid pressure differential is applied through a stationary barrier (stator) within the cylinder to one side of the vane. The opposite side of the vane is connected to exhaust through the stator. This pressure differential produces rotation of the vane and central shaft. Due to vane actuator design there will always be some internal bypass in these units.

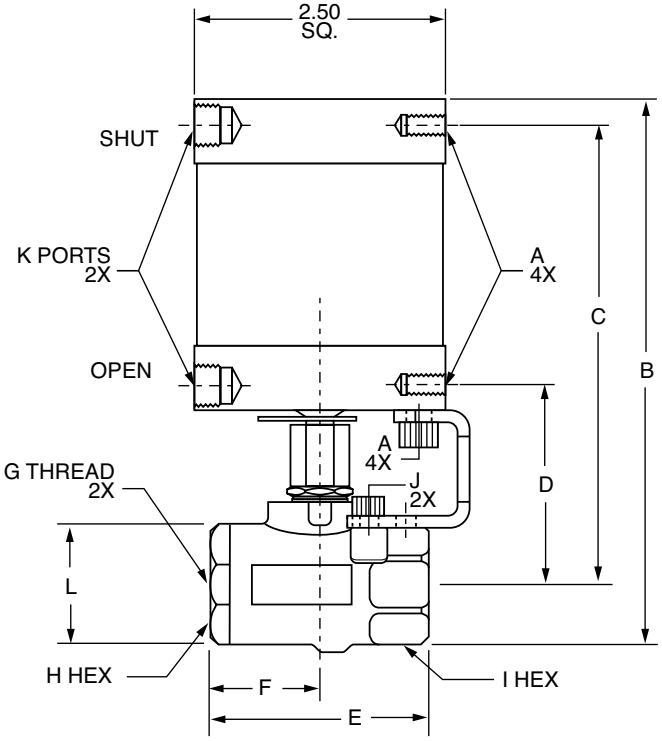
Rotary Actuator Series ACT Features

(See figure 1, next page)

1. **Heads**-are precision machined from aluminum, then hard-coat anodized and PTFE impregnated to ensure long seal life and low breakaway pressure.
2. **Body** - is machined from a one-piece aluminum extrusion that incorporates the stator for superior rigidity. The extrusion is hard-coat anodized and PTFE impregnated, resulting in a smooth, slick seal surface which guarantees long seal life and low breakaway pressure.
3. **Shoulder Seal** - a nitrile-energized, PTFE seal is used to reduce bypass flow and friction, providing superior performance and long life.
4. **Shaft Seal** - the high-quality, self-lubricated, abrasion-resistant nitrile seal is a multiple lobe construction for leakfree operation and greater reliability.
5. **Shaft** - stainless steel provides high strength and corrosion resistance for the most demanding applications.
6. **Bearings** - hard-coat anodized aluminum-bearing surface with permanent solid film lubricant provides substantial shaft support and wear resistance, ensuring continuous lubrication, high performance, and long life.
7. **Mounting** - combination face and base mounting offer flexibility in application and design.
8. **Vane Seal** - a special self-lubricated, abrasion-resistant nitrile compound is molded into a one-piece vane seal, providing low breakaway pressure and long life, even with no lubrication. The vane seal is also removable so that field repairs can be made, if necessary.
9. **Vane** - a hard-coat anodized aluminum extrusion permanently affixed to shaft, forming a structurally sound assembly. The light weight also reduces inertia allowing faster operating speeds.

Rotary Actuator Series ACT Features Figure 1





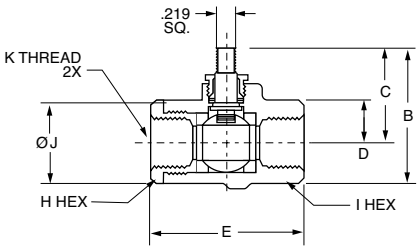
Rotary Actuator, Female Pipe Ends V502P-X-ACT

PART NO.	SIZE	A MTG. HOLES	B	C	D	E	F	G	H HEX	I HEX	J UNC	K NPTF	L	FLOW DIA.	FLOW CV	MIN. ACT PRESSURE (PSI)
V502P-4-ACT	1/4	1/4-20 UNC	5.25	4.47	1.91	2.03	1.00	1/4-18PTF	15/16	15/16	10-24	1/8-27	1.06	.375	4.0	50
V502P-6-ACT	3/8	1/4-20 UNC	5.25	4.47	1.91	2.03	1.00	3/8-18PTF	15/16	15/16	10-24	1/8-27	1.06	.375	5.8	50
V502P-8-ACT	1/2	1/4-20 UNC	5.38	4.54	1.98	2.20	1.09	1/2-14PTF*	1-1/16	1-1/16	10-24	1/8-27	1.19	.500	12.0	50
V502P-12-ACT	3/4	1/4-20 UNC	5.57	4.63	2.07	2.42	1.29	3/4-14PTF**	1-5/16	1-1/4	10-24	1/8-27	1.38	.685	25.0	75
V502P-16-ACT	1	1/4-20 UNC	5.85	4.76	2.20	2.75	1.38	1-11.5PTF**	1-9/16	1-1/2	10-24	1/8-27	1.67	.875	35.0	75

Stainless Steel Rotary Actuator, Female Pipe Ends V502SS-X-ACT

PART NO.	SIZE	A MTG. HOLES	B	C	D	E	F	G	H / I HEX	J	K NPTF	L	FLOW DIA.	FLOW CV
V502SS-4-ACT	1/4	1/4-20 UNC	5.41	4.61	2.05	2.07	1.04	1/4-18 NPT	15/16	10-24	1/8-27	1.10	.375	4.0
V502SS-6-ACT	3/8	1/4-20 UNC	5.41	4.61	2.05	2.07	1.04	3/8-18 NPT	15/16	10-24	1/8-27	1.10	.375	6.0
V502SS-8-ACT	1/2	1/4-20 UNC	5.53	4.64	2.08	2.27	1.17	1/2-14 NPT	1 1/16	10-24	1/8-27	1.28	.500	14.0

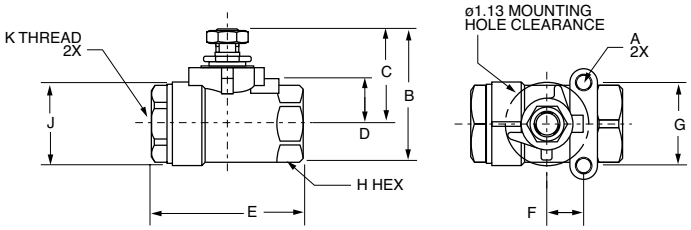
*Ptf Special Short. **Ptf Special Extra Short



Actuator Sub-Assembly V502P-X-SUB

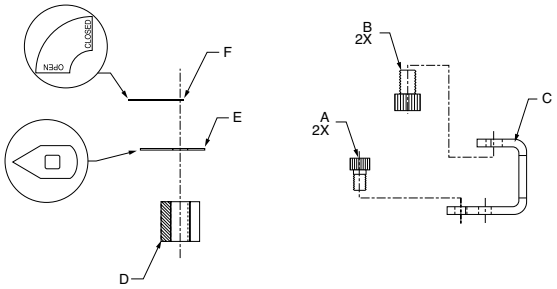
PART . NO	SIZE	A UNC	B	C	D	E	F	G	H HEX	I HEX	J	K
V502P-4-SUB	1/4	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	1/4-18 PTF
V502P-6-SUB	3/8	10-24	1.68	1.15	.495	2.03	.50	1.12	15/16	15/16	1.06	3/8-18 PTF
V502P-8-SUB	1/2	10-24	1.78	1.19	.565	2.20	.50	1.12	1-1/16	1-1/16	1.19	1/2-14 PTF*
V502P-12-SUB	3/4	10-24	2.09	1.40	.655	2.42	.87	1.37	1-5/16	1-1/4	1.38	3/4-14 PTF**
V502P-16-SUB	1	10-24	2.38	1.54	.785	2.75	.87	1.37	1-9/16	1-1/2	1.67	1-11.5 PTF**

* PTF Special Short
** PTF Special Extra Short



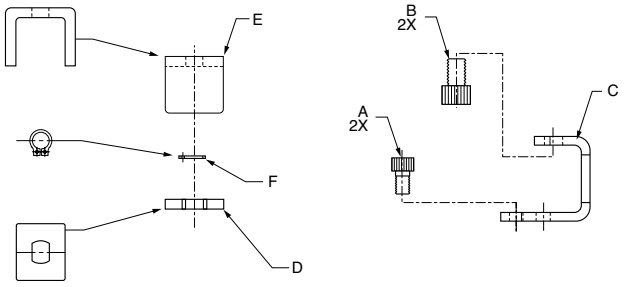
Actuator Sub-Assembly V502SS-X-SUB

PART . NO	SIZE	A UNC	B	C	D	E	F	G	H HEX	J	K
V502SS-4-SUB	1/4	10-24	1.88	1.32	.63	2.07	.50	1.12	15/16	1.10	1/4-18 NPT
V502SS-6-SUB	3/8	10-24	1.88	1.32	.63	2.07	.50	1.12	15/16	1.10	3/8-18 NPT
V502SS-8-SUB	1/2	10-24	2.00	1.35	.66	2.27	.50	1.12	1-1/16	1.28	1/2-14 NPT



ACT-P-X-KIT

PART NO.	FOR USE WITH	A	B	C	D	E	F
ACT-P-1-KIT	V502P-4, 6, 8-ACT	10-24 UNC	1/4-20 UNC	BRACKET	.60 LONG COUPLING	POSITION INDICATOR	POSITION LABEL
ACT-P-2-KIT	V502P-12, 16-ACT	10-24 UNC	1/4-20 UNC	BRACKET	.55 LONG COUPLING	POSITION INDICATOR	POSITION LABEL



ACT-SS-X-KIT

PART NO.	FOR USE WITH	A	B	C	D	E	F
ACT-SS-1-KIT	V502SS-4, 6, 8-ACT	10-24 UNC	1/4-20 UNC	BRACKET	CLIP	HANDLE YOKE	SNAP RING

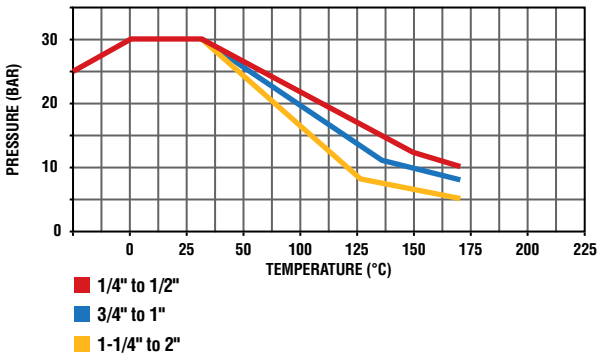
Ball Valve Series BVGL

Product Features:

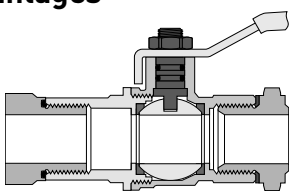
- Nickel plated brass body
- Chrome plated brass ball
- PTFE seats/seals
- Fluorocarbon stem seal

Specifications:

- Female threads manufactured in accordance to DIN 2999/ISO 228

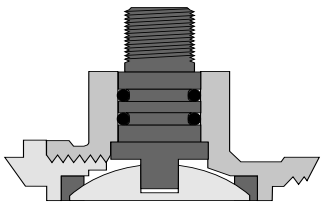


Advantages



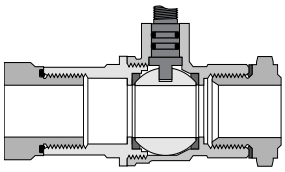
Long female threads

BVGL series valves are manufactured with long female threads in accordance to DIN 2999/ISO 228. This enables the valves to be used with Prestolok and brass adaptors but also Parker's range of steel hydraulic fittings, e.g. Triple-Lok, O-Lok, EO, and BSPP coned adaptors.



Anti extrusion stem

The BVGL series ball valves are fitted with an anti extrusion stem to prevent blow out in the case of pressure peaks. The stem is sealed with two Fluorocarbon O-rings for maximum safety and performance.

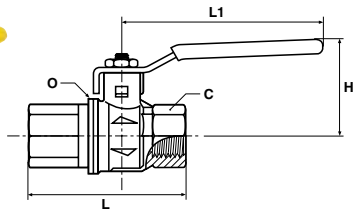


Full flow

All BVGL series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.

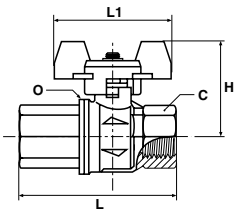
BVGL BSPP Female/Female Valve with Lever Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVG4-1/4L	8	1/4	20	38	50	82	25.0
BVG4-3/8L	10	3/8	20	38	60	82	25.0
BVG4-1/2L	15	1/2	25	43	75	100	32.5
BVG4-3/4L	20	3/4	32	50	80	120	39.0
BVG4-1L	25	1	41	54	90	120	47.5
BVG4-1.1/4L	32	1 1/4	50	73	110	158	59.0
BVG4-1.1/2L	40	1 1/2	55	79	120	158	71.5
BVG4-2L	50	2	70	86	140	158	86.0



BVGTL BSPP Female/Female Valve with Compact Handle

PART NO.	DN MM	THREAD BSPP	C	H	L	L1	O
BVGT4-1/4L	8	1/4	20	39	50	50	25.0
BVGT4-3/8L	10	3/8	20	39	60	50	25.0
BVGT4-1/2L	15	1/2	25	43	75	50	32.5
BVGT4-3/4L	20	3/4	32	47	80	60	39.0
BVGT4-1L	25	1	41	51	90	60	47.5



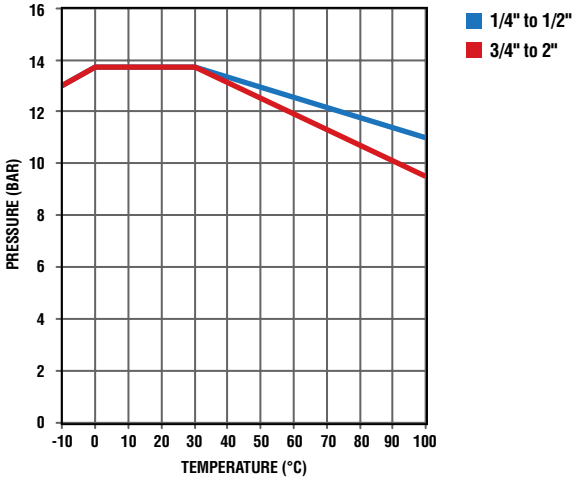
Ball Valve
Series BVGLOCK

Product Features:

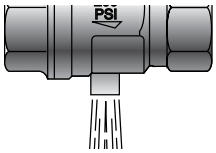
- Nickel plated brass body
- Chrome plated brass ball
- PTFE seats /seals
- PTFE packing gland
- Carbon steel handle

Specifications:

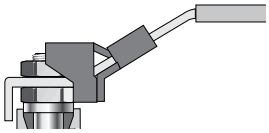
- Meets the requirements of European directive DI 89/392/ CEE relating to the isolation of power supply and to meet the health and safety requirements for machines and materials in paragraphs L233-5 of the code DU Travail.



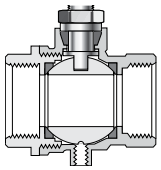
Advantages



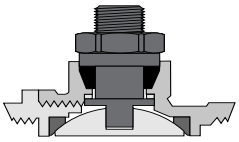
Threaded Exhaust
BVGLOCK series ball valves are manufactured with an exhaust port, this safety feature enables the downstream air pressure to be vented when the valve is closed. 1/4-1" have M5 thread. 1.1/4 and larger are not threaded.



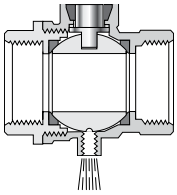
Lockable Handle
The BVGLOCK series ball valves are fitted with a handle that can be locked in the closed position with a padlock. This safety feature ensures the valve cannot be accidentally opened, and only authorized personnel can operate the valve.



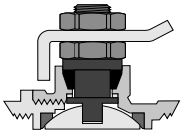
DIN 2999 / ISO 228 Female Threads
BVGLOCK series valves are manufactured with long female threads in accordance to DIN2999/ ISO228. This enables the valves to be used with Prestolok and brass adaptors but also Parker's range of steel hydraulic fittings and EO-fittings form "A" or "C" to DIN 3852.



Anti Extrusion Stem
The BVGLOCK series ball valves are fitted with an anti-extrusion stem to prevent blow out in the case of pressure peaks.



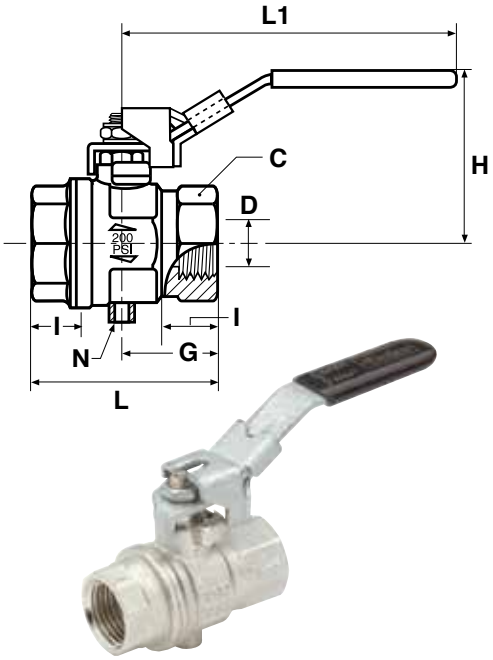
Full Flow
All BVGLOCK series valves are full-flow. This limits the turbulence created by the passage of fluid across the valve, minimizing pressure drop.



Adjustable Packing
The PTFE packing gland and adjustable washer are designed to give longer service like and lower operating torques.

BVG4PLOCK BSPP Female/Female, Vented, Locking Handle

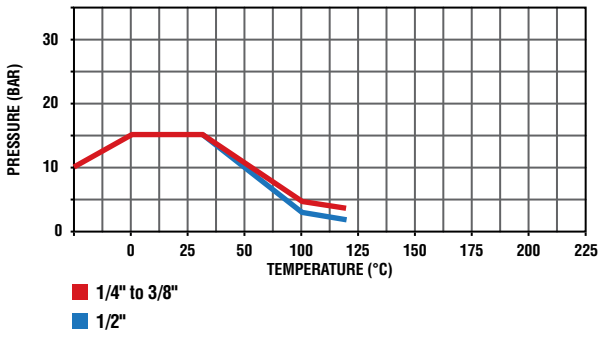
PART NO.	D FLOW Ø	THREAD BSPP	C	G	H	I	L	L1	N
BVG4P-1/4 LOCK	8.0	1/4	20	22.5	47.5	12.0	45	96	M5
BVG4P-3/8 LOCK	9.5	3/8	20	22.5	47.5	12.0	45	96	
BVG4P-1/2 LOCK	15.0	1/2	25	29.5	52.0	15.5	59	96	
BVG4P-3/4 LOCK	19.0	3/4	31	32.0	59.5	17.0	64	117	
BVG4P-1 LOCK	24.0	1	40	40.5	63.5	21.0	81	117	
BVG4P-1.1/4LOCK	32.0	1-1/4	49	46.5	76.5	23.0	93	158	G1/4
BVG4P-1.1/2LOCK	40.0	1-1/2	54	51.0	82.5	23.0	102	158	
BVG4P-2LOCK	50.0	2	69	60.5	89.5	26.5	121	158	



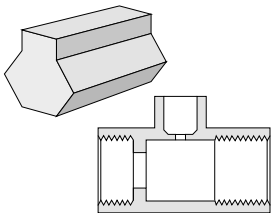
Ball Valve Series MBVG

Product Features:

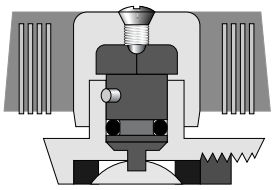
- Chrome plated brass body
- Chrome plated brass ball
- PTFE seats/seals
- Fluorocarbon stem seal
- Polyamide handle



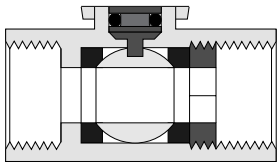
Advantages



Design of the body
The valve is manufactured from a solid section which incorporates the stem housing in the body. This design allows excellent guidance of the stem, which increases its lifespan.



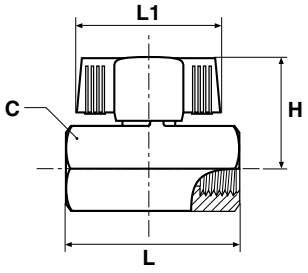
Stem tightness
A Fluorocarbon O-Ring assembled under compression automatically compensates for minute friction wear. Thus a high standard of seal is attained.



Tightness of the seals
The perfect tightness of the seals on the casing is obtained by the preset force of the nut, adjusted during assembly.

MBVG BSPP Female/Female Valve

PART NO.	DN MM	THREAD BSPP	C	H	L	L1
MBVG4-1/4	8	1/4	21	31.5	41.5	39
MBVG4-3/8	8	3/8	21	31.5	41.5	39
MBVG4-1/2	10	1/2	25	33.5	48.0	39



Axial Valves

Parker's Axial Valve incorporates both the valve and actuation function. With pneumatic or electro-pneumatic control, it avoids many of the restrictions associated with traditional actuators.

Product Features:

- Compact, up to 50% smaller than valves with separate actuators
- Simple to install
- Common sub-base for solenoid control
- Automation of the open/close function
- Operation independent of the upstream and downstream pressure in the circuit

Applications:

- Injection Molding
- Pneumatics
- Packaging
- Textile
- Printing
- Robotics

Specifications:

Pressure Range:

- Up to 150 PSI (10.3 bar)

Vacuum Service:

- 29 in Hg

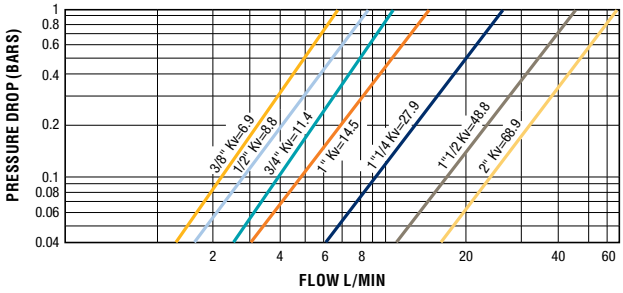
Pilot Pressure:

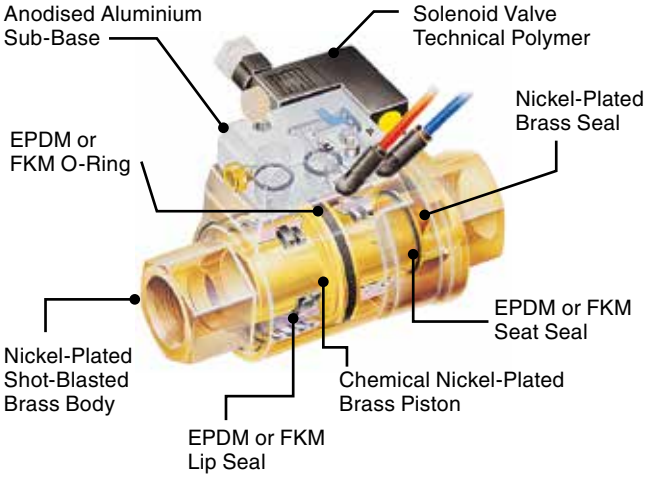
- NC: 60 to 115 PSI (4.1 to 7.9 bar)

Temperature Range:

- -4˚ to +275˚ F (-20° to +135° C)

Water at ambient temperature under a 1 bar differential pressure.

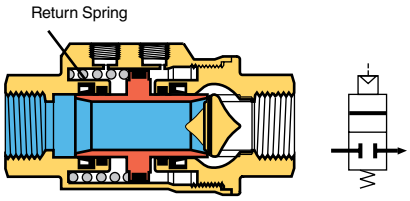




Operation

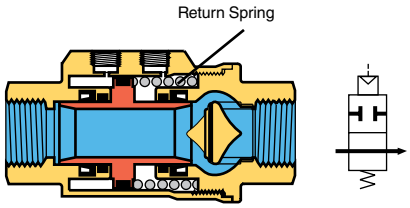
Depending on operational requirement, air is passed into the actuation chamber to open or close the valve.

Normally Closed Axial Valve (NC)



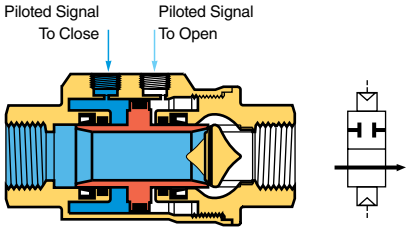
Rest State (Valve Closed)

Normally Open Axial Valve (NO)

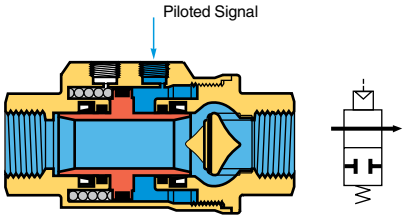


Rest State (Valve Open)

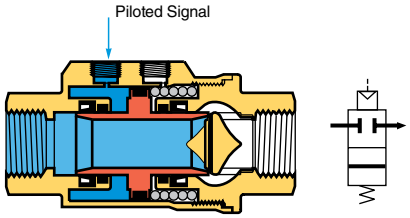
Double-Acting Axial Valve (DE)



Piloted State (Valve Closed)



Piloted State (Valve Open)



Piloted State (Valve Closed)

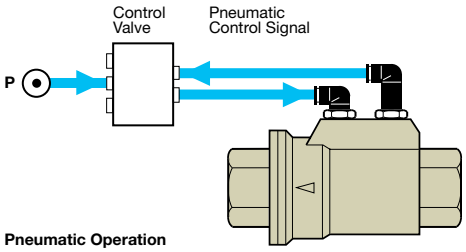
Installation Options

The Parker axial valve offers 3 different control methods dependant on the requirements of the installation:

Pneumatic Control

Example: Double-acting axial valve 4222

- Local compressed air control
- For repetitive on/off cycles
- Remote control where access to the machine is difficult
- For explosive or explosion prevention areas

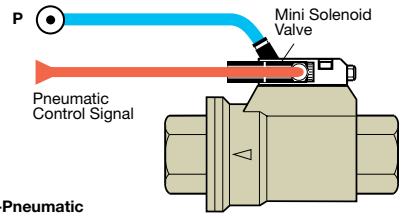


Pneumatic Operation

Electro-Pneumatic Control

Example: Normally closed axial valve 4202

- Sub-base and mini-solenoid valve 4298
- For automated industrial systems requiring remote control
- Namur seating plane solenoid valve

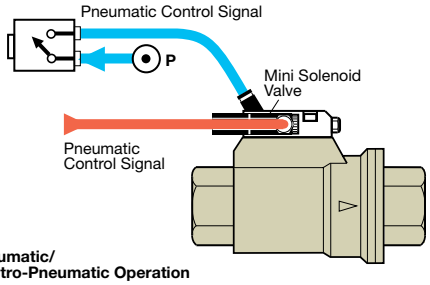


Electro-Pneumatic Operation

Dual Pneumatic and Electro-Pneumatic Control

Example: Normally open axial valve 4212

- Sub-base and mini-solenoid valve 4298
- Pneumatic push-button 4299
- Dual control structure
- For increased safety: prevents localised operating errors
- Namur seating plane solenoid valve

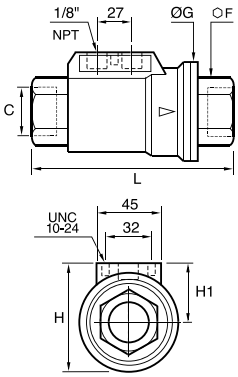


Pneumatic/ Electro-Pneumatic Operation

4203 Normally Closed, Double Female – NPT

PART NO.	C NPT	DN	F MM	G IN	H IN	H1 IN	L IN	LB.
4203 10 18 20	3/8	10	22	1.81	2.12	1.21	3.60	1.79
4203 15 22 20	1/2	15	27	2.03	2.33	1.31	4.13	2.39
4203 20 28 20	3/4	20	33	2.50	2.76	1.51	4.92	3.60
4203 25 35 20	1	25	41	2.72	2.99	1.63	5.31	4.46
4203 32 43 20	1 1/4	32	50	3.39	3.59	1.90	6.02	7.28
4203 40 50 20	1 1/2	40	60	3.78	4.01	2.12	6.67	9.22
4203 50 44 20	2	50	75	4.29	4.50	2.35	7.39	14.02

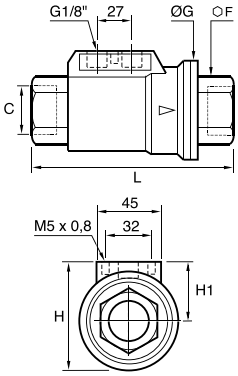
Pilot port: 1/8 - 27 NPT Complete with 1/8 NPT silencer



4202 Normally Closed, Double Female – BSPP

PART NO.	C BSPP	DN	F MM	G IN	H IN	H1 IN	L IN	KG.
4202 10 17 20	G3/8	10	22	46	54	31	98	.814
4202 15 21 20	G1/2	15	27	52	60	35	112	1.085
4202 20 27 20	G3/4	20	33	64	70	38	135	1.634
4202 25 34 20	G1	25	41	69	76	41.5	143	2.024
4202 32 42 20	G1 1/4	32	50	86	91	48	165	3.301
4202 40 49 20	G1 1/2	40	60	96	102	54	180	4.180
4202 50 48 20	G2	50	75	109	115	60.5	207	6.360

Pilot port: 1/8 BSPP Complete with 1/8 BSPT silencer



Replacement Handles

	VALVE	PLATED STEEL LEVER W/COVER	S.S. LEVER (NO COVER)	S.S. LEVER W/COVER	TEE (NO COVER)	OVAL (W/COVER)	SHORT LEVER (NO COVER)	PLATED STEEL LKG. LEVER W/COVER	S.S. LOCKING LEVER W/COVER
V500P (501, 502, 506, 510, 590, 591)	-4	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
	-6	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
	-8	2560-10082	2566-00105		2566-00147	2566-00215	2566-00231	2560-10080	2560-10081
	-10	2560-10097	2566-00178		2566-00179			2566-10100	
	-12	2560-10097	2566-00178		2566-00179	2566-00180	—	2560-10100	2560-10101
	-16	2560-10097	2566-00178		2566-00179	2566-00180	—	2560-10100	2560-10101
	-20	2566-00143	2566-00153			—	2566-00142	2566-00135	—
	-24	2566-00143	2566-00153			—	2566-00142	2566-00135	—
	-32	2566-00143	2566-00153			—	2566-00142	2566-00135	—
V501SS & V502SS	-4	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
	-6	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
	-8	—		2566-00132	—	2566-00108	2566-00146	—	2566-00138
	-12	—		2566-00133	—	2566-00109	—	—	2566-00184
	-16	—		2566-00133	—	2566-00109	—	—	2566-00184
V502SS	-20	—		2566-00134	—		—	—	2566-00185
	-24	—		2566-00134	—		—	—	2566-00185
	-32	—		2566-00134	—		—	—	2566-00185
V520P	-4				2566-00277			2566-00262	
	-6				2566-00277			2566-00262	
	-8				2566-00277			2566-00262	
	-12				2566-00280			2566-00261	
	-16				2566-00280			2566-00261	
	-20	2566-00143	2566-00153					2566-00135	
	-24	2566-00143	2566-00153					2566-00135	
	-32	2566-00143	2566-00153					2566-00135	
	40	2566-00253							
	48	2566-00253							

Replacement Handle Nuts

VALVE	PLATED STEEL	STAINLESS STEEL
V500P-4	2567-00020	2567-00023
V500P-6	2567-00020	2567-00023
V500P-8	2567-00020	2567-00023
V500P-12	2567-00055	2567-00057
V500P-16	2567-00055	2567-00057
V500P-20	2567-00051	2567-00052
V500P-24	2567-00051	2567-00052
V500P-32	2567-00051	2567-00052
V500CS-4	2567-00020	2567-00023
V500CS-6	2567-00020	2567-00023
V500CS-8	2564-00020	2567-00023

Replacement Handle Covers

VALVE	LEVER	SHORT LEVER	TEE
V500P-4	2569-00108	2569-00342	2569-00155
V500P-6	2569-00108	2569-00342	2569-00155
V500P-8	2569-00108	2569-00342	2569-00155
V500P-12	2569-00296		2569-00155
V500P-16	2569-00296		2569-00155
V500P-20	2569-00229	2569-00234	
V500P-24	2569-00229	2569-00234	
V500P-32	2569-00229	2569-00234	
V502SS-4		2569-00203	
V502SS-6		2569-00203	
V502SS-8		2569-00203	

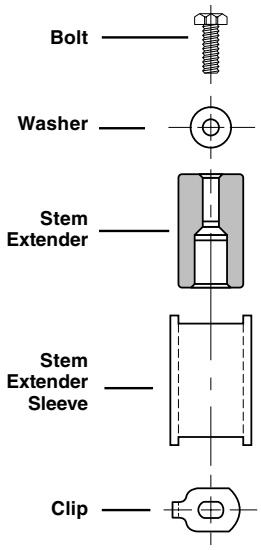
[A] Locking kit for use with standard handles

STX	Stem Extension Kit
P	For use on Brass Ball Valves
1	1: 1/4" thru 1/2" valves 2: 3/4" thru 1" valves
125	125: 1-1/4" extension length 225: 2-1/4" extension length

STX	Stem Extension Kit
SS	For use on Stainless Steel Ball Valves
1	1: 1/4" thru 1/2" valves 2: 3/4" thru 1" valves 3: 1-1/4"-2" valves
125	125: 1-1/4" extension length 225: 2-1/4" extension length

All stem extension kit componentry is made from high quality, corrosion resistant stainless steel

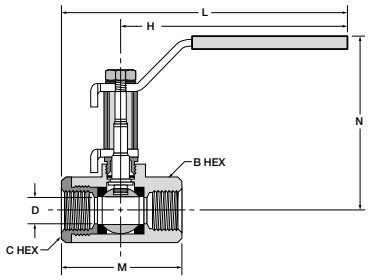
Note: Stem extensions cannot be used with series 509 and series 520.



Brass Valve Extension Dimensions STX-P-1-125

PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-P-1-125	1/4	15/16	15/16	3.96	4.96	2.03	3.73	.375
STX-P-1-125	3/8	15/16	15/16	3.96	4.96	2.03	3.73	.375
STX-P-1-125	1/2	1-1/16	1-1/16	3.96	5.05	2.20	3.84	.500
STX-P-2-125	3/4	1-1/4	1-5/16	3.96	5.25	2.42	4.06	.685
STX-P-2-125	1	1-1/2	1-9/16	3.96	5.89	2.75	4.33	.875

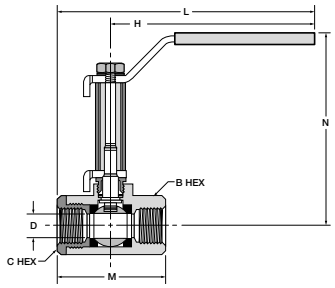
Note: Drawing shows STX-P assembled to XV500P series-not included



Brass Valve Extension Dimensions STX-P-1-225

PART NO.	VALVE SIZE	B HEX	C HEX	H	L	M	N	D FLOW Ø
STX-P-1-225	1/4	15/16	15/16	3.96	4.96	2.03	4.73	.375
STX-P-1-225	3/8	15/16	15/16	3.96	4.96	2.03	4.73	.375
STX-P-1-225	1/2	1-1/16	1-1/16	3.96	5.05	2.20	4.84	.500
STX-P-2-225	3/4	1-1/4	1-5/16	3.96	5.25	2.42	5.06	.685
STX-P-2-225	1	1-1/2	1-9/16	3.96	5.89	2.75	5.33	.875

Note: Drawing shows STX-P assembled to XV500P series-not included



Accessories

Blow Guns

Silencers

Bins, Bags & Copper Tubing

Blow Guns

410-S
Controlled Pressure

410-SV
Controlled Pressure

415-S
Controlled Pressure

400-S-TIP
Replacement Tip

410
Full Pressure

410-N
Full Pressure

415-N
Full Pressure

BG441-NBL
BG Series

BG442-SBL
BG Series

BG443-NBL
BG Series

BG444-SBL
BG Series

0653
NPT/BSPP

0652-0655
BSPP

Nozzles

0656-0657
Angled Nozzle

0690 03
Straight Tube Nozzle Long

0690 04
Straight Tube Nozzle Short

0690 05
Angled Tube Nozzle Long

0690 06
Angled Tube Nozzle Short

0690 08
Coanda Effect Nozzle

0690 09
Air Screen Nozzle

0690 10
Booster Nozzle

0690 11
Booster Nozzle with Air Screen

Silencers

0673 0610 0670
Threaded Silencer UNF, NPT or BSPP

0673
Compact Threaded Silencer Male BSPP, M5

0677
Miniature Silencer BSPP

0671
Plug-In Silencer

0614 0672
Flow Control Silencer Male NPT, BSPP

0611 0674
Threaded Silencer NPT, BSPP,M5

0676
Flow Control Silencer BSPP

0682
Stainless Steel Threaded Silencer Male BSPP

0683
Stainless Steel Threaded Silencer Male NPT

Bins

16-CB
16 Compartment

24-CB
24 Compartment

ADJ-CB
Adjustable Compartments

4CB-SR
Slide Rack

LSR-STAND
Stand

9-DC
9 Drawer

18-DC
18 Drawer

24B-CABINET
24 Opening

40B-CABINET
40 Opening

PNEU-CAB
Mobile Cabinet

Bags

4X6PSB
Clear Plastic Bag

6X8PSB
Clear Plastic Bag

Copper Tubing

X50CT
Coiled Copper Tubing

Blow Guns

Controlled Pressure Blow Guns

Parker Controlled Pressure Blow Guns meet OSHA requirements (section 29 CFR 1910.242 paragraph b), and directive #100-1. “Compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi, and then only with effective chip guarding and personal protective equipment.”

Parker Controlled Pressure Blow Guns have a black epoxy coated zinc body and vented nozzles to prevent pressure build-up when dead ending occurs up to 150 PSI (10.3 bar).

SPECIFICATIONS		
PART NO.	MAXIMUM PRESSURE PSI (BAR)	WT. (LB) P/PIECE
410-S	150 (10.3)	.50
410-SV	150 (10.3)	.53
415-S	150 (10.3)	.48

410-S

Parker Controlled Pressure Blow Guns features thumb lever valve actuator and brass nozzle. Inlet port is 1/4” NPT.

410-SV

Parker Venturi Nozzle Controlled Pressure Blow Gun with thumb lever valve and large venturi side ports for high volume flow. Inlet port is 1/4” NPT.

415-S

Parker Controlled Pressure Blow Guns features push button valve actuator and brass nozzle. Inlet port is 1/4” NPT.

400-S-TIP

Blow Gun Replacement Tip

Full Pressure Blow Guns

The following Parker Blow Guns must have a pressure regulator setting below 30 psi to conform to OSHA safety requirements 29 CFR 1910.242 Paragraph b.

SPECIFICATIONS		
PART NO.	MAXIMUM PRESSURE PSI (BAR)	WT. (LB) P/PIECE
410	150 (10.3)	.48
410-N	150 (10.3)	.51
415-N	150 (10.3)	.49

410

Parker two way thumb lever valve has a zinc body with 1/4” NPT inlet and 1/8” NPSF outlet.

Note: Standard Gun without nozzle.

410-N

Parker thumb lever style Blow Gun features a zinc body, brass nozzle, and 1/4” NPT female inlet.

415-N

Parker Blow Gun features a push button style actuator, zinc body with a brass nozzle and 1/4” NPT female inlet.

BG Series Blow Guns

Made from impact resistant plastic, BG Series blow guns are durable and versatile. Extended nozzles allow air to be directed where it is required. The pistol grip trigger allows greater control over the amount of air delivered. Combined, these two features provide superior performance in a light weight, ergonomically designed package.

Nozzles are available in short and extended versions and most models meet OSHA directives on the use of compressed air for cleaning purposes. OSHA directive #100-1 states that "when dead ending occurs a static pressure at the main orifice shall not exceed 30 psi." For those blow guns that do not meet this requirement, OSHA requires that "compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi, and then only with effective chip guarding and personal protective equipment" (section 29 CFR 1910.242 paragraph b). Please refer to the blow gun descriptions below for compatibility with OSHA directive #100-1.

Nozzle configurations are designed for maximum flexibility. Applications with special requirements may find the BG443-NBL with a 1/8" NPT fitting convenient for adapting existing nozzles or extra-long extensions. For information on specials or made-to-order blow gun nozzles, please contact the Quick Coupling Division.

- Easy to control variable flow pistol grip trigger.
- Nozzles available that meet OSHA requirements.
- Lightweight ergonomical design.
- Bodies are constructed of impact resistant plastic.

SPECIFICATIONS	
RATED PRESSURE PSI	175 (12.0 bar)
TEMPERATURE RANGE	TO +120° F (+48.8° C)
INLET PORT	1/4" NPTF

NOMENCLATURE	
EXAMPLE: BG442-SBL	**ATTRIBUTE:**
BG	BG SERIES BLOW GUN
4	INLET PORT IN 16THS
42	NOZZLE STYLE 41 - EXTENDED 42 - EXTENDED (OSHA) 43 - 1/8" FNPT 44 - SHORT (OSHA)
S	MEETS OSHA REQUIREMENTS S - YES N - NO
BL	COLOR BL - BLACK

BG441-NBL BG Series Blow Gun

PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG441-NBL	EXTENDED	NO

BG443-NBL BG Series Blow Gun

PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG443-NBL	1/8" FEMALE NPT	NO

BG442-SBL BG Series Blow Gun

PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG442-SBL	EXTENDED	YES

BG444-SBL BG Series Blow Gun

PART NO.	NOZZLE	MEETS OSHA REQUIREMENTS
BG444-SBL	VORTEC	YES

New "Energy Saving" Flow Reducer System

- The flow reducer system allows for 40% savings in air consumption and guarantees stable flow, max 120 Nl/min
- Can be adapted to all available interchangeable nozzles
- Available in a lower connection, threaded 1/4 NPT or 1/4 BSPP
- When combined with a specific interchangeable nozzle, the "energy saving" blow gun complies to OSHA 1910.242(b) nozzle and or OSHA 1910.95(b), addressing reduced pressure when in close proximity to an obstacle, chip guarding and noise level.

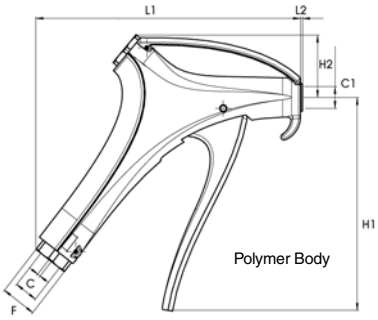
0653 Flow Reducer Blowgun NPT/BSPP

PART NO.	C NPT	C1	F IN	H1 IN	H2 IN	L1 IN	L2 IN	WT OZ
0653 66 14	1/4	M12X1.25	.79	4.60	1.34	5.78	.060	6.35

PART NO.	C BSPP	C1	F IN	H1 IN	H2 IN	L1 IN	L2 IN	WT KG
0653 66 13	G1/4	M12X1.25	20	117	34	147	1.5	.180

Combined with the osha 1910.242(B) nozzle, when in close proximity to an obstacle, the flow is deviated to reduce pressure to 0.5 Bar at the end of the nozzle.

The flow reducer system allows for 40% savings in air consumption and guarantees stable flow max 120 nl/m

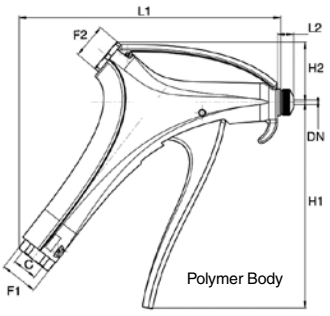


0652-0655 Progressive Control Blowgun BSPP

PART NO.	C BSPP	C1	F MM	H1 MM	H2 MM	L1 MM	L2 MM	WT KG
0652 66 13	G1/4	M12X1.25	17	128	14	120	1.5	.161
0655 66 13	G1/4	M12X1.25	20	117	37	145	2	.014

Choose from the wide range of interchangeable nozzles to have the right tool for the job - please refer to pages L8 and L9

0652 66 13 - lower connection
0655 66 13 - upper connection

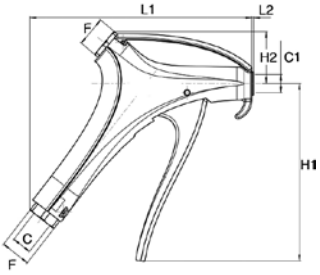


0656-0657 Progressive Control Blowgun Short Angled Nozzle NPT/BSPP

PART NO.	C NPT	C1	F IN	H1 IN	H2 IN	L1 IN	L2 IN	WT OZ
0656 66 13	1/4	M12X1.25	17	4.99	.55	4.68	.06	5.97

PART NO.	C BSPP	C1	F IN	H1 IN	H2 IN	L1 IN	L2 IN	WT KG
0657 66 13	G1/4	M12X1.25	17	128	14	120	1.5	.169

0656 66 13 - lower connection
0657 66 13 - upper connection

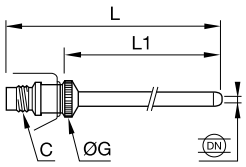


Polymer Body Nickel Plated Nozzle

0690 03 Straight Tube Nozzle Long

PART NO.	C METRIC	DN	G IN	L IN	L1 IN	WT OZ
0690 03 00	M12X1.25	2.5	.59	13	12	2.09

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
21°	365 NI/MIN	83 dBA

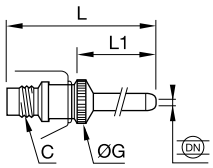


- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

0690 04 Straight Tube Nozzle Short

PART NO.	C METRIC	DN	G IN	L IN	L1 IN	WT OZ
0690 04 00	M12X1.25	2.5	.59	4	3	1.13

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
21°	385 NI/MIN	82 dBA

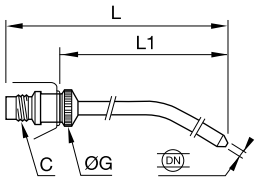


- OSHA 1910.242 (b) conforming
- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

0690 05 Angled Tube Nozzle Long

PART NO.	C METRIC	DN	G IN	L IN	L1 IN	WT OZ
0690 05 00	M12X1.25	2.5	.59	12.4	11.5	2.09

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
21°	330 NI/MIN	82 dBA

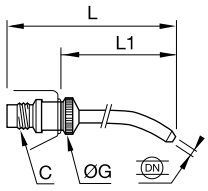


- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

0690 06 Angled Tube Nozzle Short

PART NO.	C METRIC	DN	G IN	L IN	L1 IN	WT OZ
0690 06 00	M12X1.25	2.5	.59	3.7	2.75	1.13

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
21°	565 NI/MIN	86 dBA



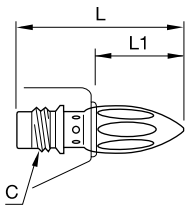
- OSHA 1910.242 (b) conforming
- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

* Hearing protectors should always be worn when exposure to noise lasts longer than 8 hours.

0690 08 Coanda Effect Nozzle

PART NO.	C METRIC	L IN	L1 IN	WT OZ
0690 08 00	M12X1.25	1.87	1.02	1.06

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
20°	240 NI/MIN	73 dBA

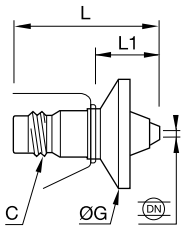


- OSHA 1910.242 (b) conforming
- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

0690 09 Air Screen Nozzle

PART NO.	C METRIC	DN	G IN	L IN	L1 IN	WT OZ
0690 09 00	M12X1.25	2	1.18	1.59	.73	.68

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
JET 24° SCREEN 140°	650 NI/MIN	86 dBA

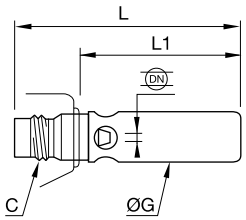


- OSHA 1910.242 (b) conforming
- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

0690 10 Booster Nozzle

PART NO.	C METRIC	DN	G IN	L IN	L1 IN	WT OZ
0690 10 00	M12X1.25	2.5	.59	2.52	1.65	1.22

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
28°	335 NI/MIN	99 dBA

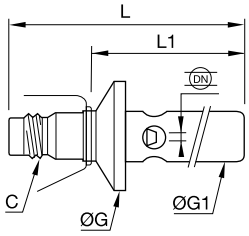


- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

0690 11 Booster Nozzle with Air Screen

PART NO.	C METRIC	DN	G IN	G1 IN	L IN	L1 IN	WT OZ
0690 11 00	M12X1.25	2.5	1.18	.59	2.99	2.13	1.48

SPREAD OF CONE	MAX FLOW TOLLERANCE ± 10%	NOISE LEVEL ISO15744
JET 26° SCREEN 140°	625 NI/MIN	86 dBA



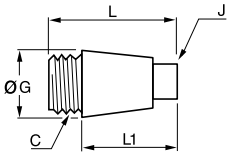
- OSHA 1910.242 (b) conforming
- OSHA 1910.95 (b) conforming
- Directive 2003/10/EC*

* Hearing protectors should always be worn when exposure to noise lasts longer than 8 hours.

Silencers

Technical Specification of Silencers:

MATERIAL	WORKING PRESSURE	WORKING TEMPERATURE
SINTERED BRONZE	175 PSI (12.0 bar)	-4° to +300° F (-20° to +148.8° C)
POLYETHYLENE	145 PSI (9.9 bar)	-14° to +175° F (-25.5° to +79.4° C)
STAINLESS STEEL	175 PSI (12.0 bar)	-4° to +355° F (-20° to +179.4° C)



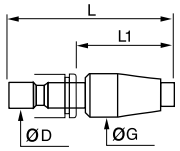
Sintered Bronze

0673 0610 0670 Threaded Silencer UNF, NPT or BSPP

PART NO.	C UNF/NPT	J IN	G IN	L IN	L1 IN	WT OZ
0673 00 20*	10-32	.27	.31	.34	.18	.07
0610 00 11	1/8	.31	.42	.89	.71	.21
0610 00 14	1/4	.39	.59	1.10	.87	.46
0610 00 18	3/8	.51	.75	1.42	1.14	.85
0610 00 22	1/2	.59	.91	1.73	1.42	1.48

PART NO.	C BSPP	J MM	G MM	L MM	L1 MM	WT KG
0670 00 10	G1/8	7	12	20.5	15	.007
0670 00 13	G1/4	8	15	24.5	18.5	.013
0670 00 17	G3/8	10	19	37	29	.033
0670 00 21	G1/2	14	23	40	31	.049
0670 00 27	G3/4	16.5	29.5	51	40.5	.092
0670 00 34	G1	20	36	60	49.5	.140

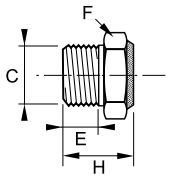
* Brass Body



Body Nickel Plated Brass
Sintered Bronze

0671 Plug-In Silencer

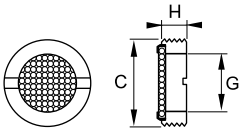
PART NO.	C	G MM	L MM	L1 MM	WT OZ
0671 04 00	4	13	41.5	24.5	.015
0671 06 00	6	15	48	29	.023
0671 08 00	8	15	49.5	29.5	.024
0671 10 00	10	19.5	68	43.5	.054
0671 12 00	12	20	68.5	43	.055



Body Nickel Plated Brass
Sintered Bronze

0673 Compact Threaded Silencer Male BSPP, M5

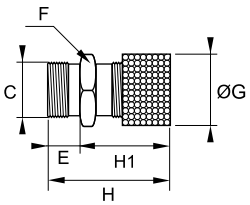
PART NO.	C	E MM	F MM	H MM	WT OZ
0673 00 10	G1/8	4	13	12	.006
0673 00 13	G1/4	6	16	16	.012
0673 00 17	G3/8	8	19	17	.022
0673 00 19	M5X0.8	8	8	8.5	.001
0673 00 20	UNF 10-32	4	6	11	.006
0673 00 21	G1/2	9	24	18	.037



Body Nickel Plated Brass
Sintered Bronze

0677 Miniature Silencer BSPP

PART NO.	C	G MM	H MM	WT OZ
0677 00 10	G1/8	5.5	4	.002
0677 00 13	G1/4	6	4.5	.003
0677 00 17	G3/8	9.5	5	.006
0677 00 21	G1/2	12.5	5.5	.012
0677 00 27	G3/4	19	6	.014
0677 00 34	G1	24	7	.025



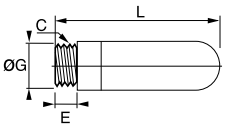
Brass Body
Silencer Sintered Bronze

0614 0672 Flow Control Silencer Male NPT, BSPP

PART NO.	C NPT	E	F MM	G	H MIN	H MAX	H1	WT OZ
0614 00 11	1/8	.31	14	.55	.94	1.06	.71	.42
0614 00 14	1/4	.31	17	.67	.98	1.10	.75	.81
0614 00 18	3/8	.39	22	.87	1.18	1.30	.94	1.16
0614 00 22	1/2	.47	27	1.06	1.54	1.65	1.30	1.55

PART NO.	C BSPP	E MM	F MM	G MM	H MIN	H MAX	H1 MM	WT KG
0672 00 10	1/8	8	14	14	24	27	18	.012
0672 00 13	1/4	8	17	17	25	28	19	.023
0672 00 17	3/8	10	22	22	30	33	24	.033
0672 00 21	1/2	12	27	27	39	42	33	.044

Consult us for flow characteristics



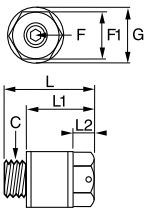
Polyethylene Body
Plastic Thread

0611 0674 Threaded Silencer NPT, BSPP,M5

PART NO.	C NPT	E IN	G IN	L IN	WT OZ
0611 00 11	1/8	.24	.49	1.34	.07
0611 00 14	1/4	.28	.61	1.67	.11
0611 00 18	3/8	.45	.73	2.66	.21
0611 00 22	1/2	.43	.93	3.07	.35

PART NO.	C BSPP	E MM	G MM	L MM	WT OZ
0674 00 19	M5X0.8	4	6.5	23	.001
0674 00 10	G1/8	6	12.5	34	.002
0674 00 13	G1/4	7	15.5	42.5	.003
0674 00 17	G3/8	11.5	18.5	67.5	.006
0674 00 21	G1/2	11	23.5	78	.010
0674 00 27	G3/4	15.5	38.5	131	.040
0674 00 34	G1	19.5	49	160	.050

Polyethylene/Plastic

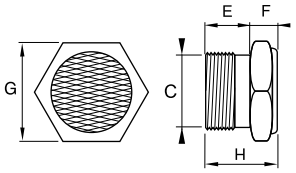


0676 Flow Control Silencer BSPP

PART NO.	C BSPP	F MM	F1 MM	G MM	L MM	L1 MM	L2 MM	WT OZ
0676 00 10	G1/8	2.5	13	15	20.5	14.5	5	.002
0676 00 13	G1/4	4	15	18	29	22	7	.007

FLOW SCFM AT 87 PSI											NOISE LEVEL dBA*
NO. OF TURNS	0	1	2	3	4	5	6	7	8	9	
0676 00 10	0	1.06	3.2	7.4	11.8	13	13.8	13.8	13.9	13.9	82
0676 00 13	0	.78	.88	1.77	12	26.5	33	34.6	35.3	36	84

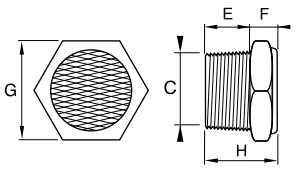
* dBA at 87 PSI and 12 SCFM



body stainless steel 316L

0682 Stainless Steel Threaded Silencer Male BSPP

PART NO.	C BSPP	E MM	F MM	G MM	H MM	WT KG
0682 00 10	G1/8	8	7	14	15	.009
0682 00 13	G1/4	8	7	17	15	.013
0682 00 17	G3/8	10	8	22	18	.020
0682 00 21	G1/2	12	10	27	22	.038
0682 00 27	G3/4	15	12	32	27	.066
0682 00 34	G1	18	14	38	32	.118



body stainless steel 316L

0683 Stainless Steel Threaded Silencer Male NPT

PART NO.	C NPT	E IN	F IN	G MM	H IN	WT KG
0683 00 11	1/8	.28	.28	14	.55	.35
0683 00 14	1/4	.43	.28	17	.71	.53
0683 00 18	3/8	.43	.31	22	.75	.81
0683 00 22	1/2	.59	.39	27	.98	1.55

16 Compartment Large Scoop Box

- Prime cold rolled steel outer shell
- High impact styrene insert with 16 compartments
- Scooped bottom compartments for easy part removal
- Full piano hinge on cover provides rigidity
- Positive pull-down catch keeps cover tightly closed to prevent part migration
- Handle allows for easy transport
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
16-CB	18	12	3

24 Compartment Large Scoop Box

- Prime cold rolled steel outer shell
- High impact styrene insert with 24 compartments
- Scooped bottom compartments for easy part removal
- Full piano hinge on cover provides rigidity
- Positive pull-down catch keeps cover tightly closed to prevent part migration
- Handle allows for easy transport
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
24-CB	18	12	3

ADJ-CB

- Prime cold rolled steel outer shell
- High impact styrene insert with 4 fixed vertical compartments and 9 moveable dividers adjustable on 1" centers
- Full piano hinge on cover provides rigidity
- Positive pull-down catch keeps cover tightly closed to prevent part migration
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)			COMPARTMENTS
	WIDTH	DEPTH	HEIGHT	
ADJ-CB	18	12	3	ADJUSTABLE

Easy Glide Slide Rack (Holds 4 16-CB or 24-CB per rack)

- Sturdy construction using prime cold-rolled steel
- Each cradle holds up to 40 lbs
- Easy glide slides allow boxes to move in and out smoothly
- Center braces on cradles provide extra rigidity
- Reinforced rack keeps boxes level
- Boxes can be easily removed for transport to work areas
- Base and locking hinge are available as accessories
- Durable gray powder coat finish

PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
4CB-SR	20	15.75	15

LSR-Stand

- Sturdy all steel construction
- Raises units 15 inches off the floor
- Legs attach easily using fasteners provided
- Durable gray powder finish

PART NUMBER	DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT
LSR-STAND	20 5/8	16 1/4	15 5/8

9 Drawer Cabinet

- Prime cold rolled steel construction
- High density drawer cabinet, easy to store large quantities of small parts
- Drawers feature interlocking design for superior strength
- Drawers have full width handles and easy glide runners
- Each drawer includes 2 easy label dividers, which are adjustable on 1" centers
- Cabinets can be stacked using mounting holes
- Durable gray powder coat finish
- Ships fully assembled

PART NUMBER	DIMENSIONS (IN.)			DRAWER DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
9-DC	17.25	11.625	10.875	5.375	11.25	2.75

18 Drawer Cabinet

- Prime cold rolled steel construction
- High density drawer cabinet, easy to store large quantities of small parts
- Drawers feature interlocking design for superior strength
- Drawers have full width handles and easy glide runners
- Each drawer includes 2 easy label dividers, which are adjustable on 1" centers
- Cabinets can be stacked using mounting holes
- Durable gray powder coat finish
- Ships fully assembled

PART NUMBER	DIMENSIONS (IN.)			DRAWER DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
18-DC	17.25	11.625	21.25	5.375	11.25	2.75

24 Opening Bin

- All welded, prime cold rolled steel
- Fully hemmed 1 1/8" bin fronts to hold labels and retain parts
- Roll-formed sides for increased strength and stability
- Ribbed and hemmed dividers provide added strength
- Modular with most 12" deep bins and drawer cabinets; mounting holes are located at both the top and bottom
- Durable gray powder coat finish
- Ships fully assembled

PART NUMBER	DIMENSIONS (IN.)			BIN DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
24B-CABINET	33.75	12	23.875	5.375	11.875	5.5

40 Opening Bin

- All welded, prime cold rolled steel
- Fully hemmed 1 1/8" bin fronts to hold labels and retain parts
- Roll-formed sides for increased strength and stability
- Ribbed and hemmed dividers provide added strength
- Modular with most 12" deep bins and drawer cabinets; mounting holes are located at both the top and bottom
- Durable gray powder coat finish
- Ships fully assembled

PART NUMBER	DIMENSIONS (IN.)			BIN DIMENSIONS (IN.)		
	WIDTH	DEPTH	HEIGHT	WIDTH	DEPTH	HEIGHT
40B-CABINET	35.25	12	21.50	4	11.875	4.5

Pneumatic Cabinet

- High quality all-steel construction
- Partitioning slots provide flexibility for customization
- Drawer locks limit access to prevent loss and improve safety when moved
- Drawer interlock prevent opening multiple drawers that could cause accidental tip over
- Available fitting and connector labels with photos make easy selection and restock easy
- Locking 4" heavy-duty casters
- Retainer top with a non-skid mat work surface

PART NUMBER	DIMENSIONS (IN.)			
	WIDTH	DEPTH	HEIGHT	DRAWERS
PNEU-CAB	22.1875	28.5	39.5	**5-3" AND** 1-9"

Clear Plastic Shipping Bags PSB

Reusable, clear polyethylene, zip-lock style bags with panels for marking part number, quantity, and availability information. Features easy visual part identification. Ideal for custom packaging of less than box quantities.

PART NO.	SIZE
4X6PSB	4" X 6"
6X8PSB	6" X 8"

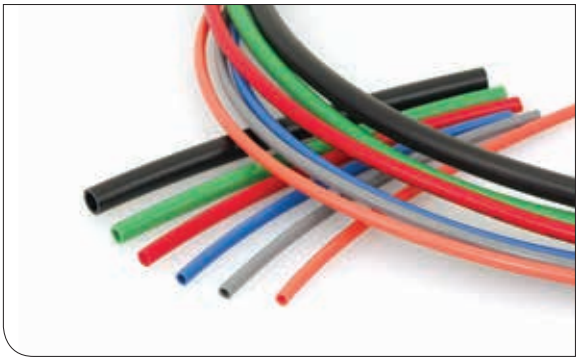
Copper Tubing

Copper tubing meets A.S.T.M. specification B-280 (copper tube for refrigeration field service)

PART NO.	TUBE O.D.	TUBE I.D.	WALL THICKNESS	FEET PER COIL
50CT-2-30	1/8	.065	.030	50
50CT-3-30	3/16	.128	.030	50
50CT-4-30	1/4	.190	.030	50
50CT-5-32	5/16	.249	.032	50
50CT-6-32	3/8	.311	.032	50
50CT-8-32	1/2	.436	.032	50

Polyethylene Tubing

Series E: Instrument Grade – FDA, NSF Listed
Series EB: Ultraviolet Light Resistant



Features

- Made from 100% virgin resin material
- Chemically resistant and flexible
- High molecular weight resin provides increased dimensional stability, uniformity and long-term strength
- Economical system solution

Certifications

- FDA compliant for food contact
- ASTM D-1693 (10% IGEPAL) for stress crack resistance
- NSF – 51
- NSF – 61

Applications/Markets

- Potable water
- Chemical transfer
- Low-pressure pneumatics

Part Number	Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Package Quantity	Minimum Bend Radius		Weight	
#	#											Package quantities vary by size and color			lbs	kgs
Natural	Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
E-43-XXXX	EB-43-XXXX	1/4	6.4	.170	4.3	.040	1.0	120	8.3	480	33.1	0100, 0500, 1000	1.00	25.4	.011	.016
E-53-XXXX	EB-53-XXXX	5/16	7.9	.187	4.8	.062	1.6	145	10.0	580	40.0	0100, 0500	1.13	28.7	.020	.030
E-64-XXXX	EB-64-XXXX	3/8	9.5	.250	6.4	.062	1.6	125	8.6	500	34.5	0100, 0500	1.25	31.8	.025	.037
E-86-XXXX	EB-86-XXXX	1/2	12.7	.375	9.5	.062	1.6	90	6.2	360	24.8	0100, 0500	2.50	63.5	.034	.051
E-108-XXXX	EB-108-XXXX	5/8	15.9	.500	12.7	.062	1.6	70	4.8	280	19.3	0100	4.00	101.6	.044	.065

Standard black is not NSF approved.

Order Information

Example: E-64-Y-0500

E-64-Y-0500 – **Polyethylene**

E-**6**4-Y-0500 – **Tube O.D.** in sixteenths of an inch **(3/8")**

E-6**4**-Y-0500 – **Tube I.D.** in sixteenths of an inch **(.250")**

E-64-**Y**-0500 – **Color,** i.e. **Yellow** (Omit for Natural and Black)
E-64-0500 – Natural Polyethylene
EB-64-0500 – Black Polyethylene

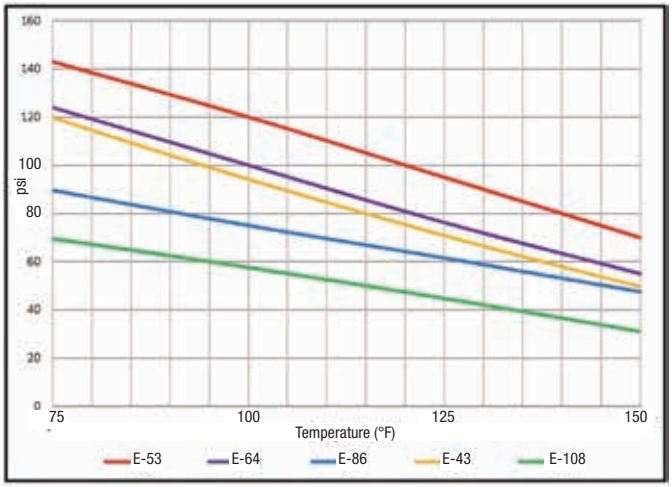
E-64-Y-**0500** – **Package Quantity** in feet **(500')**

Available in black as well as nine other colors, as suggested by the Instrument Society of America

Color Code		
	-	Natural
	-	Black
	B	Blue
	G	Green
	O	Orange
	P	Purple
	R	Red
	GRA	Gray
	Y	Yellow
	WHT	White

Polyethylene Tubing (Series E)

Maximum Working Pressure (psig)



Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Compression
- Compress-Align®
- Poly-Tite
- Hi-Duty
- Fast & Tite
- Flow Controls
- Prestolok Brass
- Prestolok Composite
- Prestolok Stainless
- Prestolok All-Metal
- Liquifit
- TrueSeal™
- Dubl-Barb®

For tube support use, reference Tubing/Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

- E series natural and colored tubing meet FDA, NSF-51 requirements for food contact applications and NSF-61 for potable water
- FDA, NSF-51 and NSF-61 compliant black polyethylene tubing is also available.
  Add -NSF suffix to the EB part number
  (ie. EB-64-0500-NSF)
- Resistant to environmental stress cracking exceeding that of ordinary polyethylene tubing as measured by ASTM D-1693 (10% IGEPAL)
- Black (EB) tubing is suggested for use in sunlit areas and in close proximity to high ultraviolet light sources
- All tubing conforms to ASTM D-1248, Type I, Class A, Category 4, Grade E5
- The operating temperature range for service at rated pressures with compatible fluids is -80˚F (-62˚C) to +150˚F (66˚C)

Colors

- See Color Code Table

Metric Polyethylene Tubing

Series E: Instrument Grade – FDA, NSF Listed
Series EB: Ultraviolet Light Resistant

Features

- Made from 100% virgin resin material
- Chemically resistant and flexible
- High molecular weight resin provides increased dimensional stability, uniformity and long-term strength
- Economical system solution

Certifications

- FDA compliant for food contact
- ASTM D-1693 (10% IGEPAL) for stress crack resistance
- NSF – 51
- NSF – 61

Applications/Markets



- Potable water
- Chemical transfer
- Low-pressure pneumatics

Part Number	Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Package Quantity	Minimum Bend Radius		Weight	
#	#														kgs	lbs
Natural	Black	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	mm	inch	kg./mtr.	lbs./ft.
E-6X1-0100	EB-6X1-0100	6	.236	4	.157	1.00	.039	8.6	125	34.5	500	0100	25	1.00	.019	.013
E-8X1-0100	EB-8X1-0100	8	.315	6	.236	1.00	.039	6.9	100	27.6	400	0100	38	1.50	.021	.014
E-10X1.5-0100	EB-10X1.5-0100	10	.393	7	.276	1.50	.059	8.6	125	34.5	500	0100	38	1.50	.039	.026
E-12X1.5-0100	EB-12X1.5-0100	12	.472	9	.354	1.50	.059	6.2	100	24.8	400	0100	63	2.50	.048	.032

Standard black is not NSF approved.

Order Information

Example: E-8x1-0100

E-8x1-0100 – **Metric Polyethylene (Natural)**
EB-8x1-0100 – Metric Polyethylene (Black)

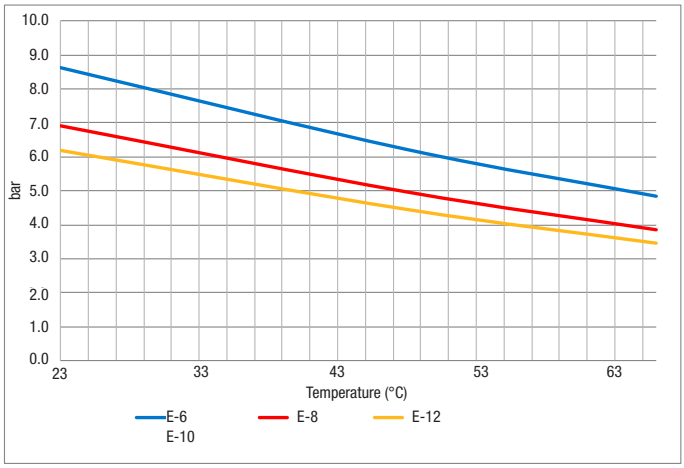
E-8x1-0100 – **Tube O.D.** in millimeters **(8 mm)**

E-8x**1**-0100 – **Tube Wall Thickness** in millimeters **(1 mm)**

E-8x1-**0100** – **Package Quantity** in feet **(100')**

Metric Polyethylene Tubing (Series E)

Maximum Working Pressure (bar)



Fitting Recommendations

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Compression Metric
- Flow Controls
- Prestolok Composite
- Prestolok All-Metal
- Prestolok Stainless
- Liquifit

For tube support use, reference Tubing/Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

- E series natural tubing listed below meet FDA, NSF-51 requirements for food contact applications and NSF-61 for potable water
- FDA, NSF-51 and NSF-61 compliant black polyethylene tubing is also available.
  Add -NSF suffix to the EB part number
  (ie. EB-64-0500-NSF)
- Resistant to environmental stress cracking exceeding that of ordinary polyethylene tubing as measured by ASTM D-1693 (10% IGEPAL)
- Black (EB) tubing is suggested for use in sunlit areas and in close proximity to high ultraviolet light sources
- All tubing conforms to ASTM D-1248, Type I, Class A, Category 4, Grade E5
- The operating temperature range for service at rated pressures with compatible fluids is -85˚F (-65˚C) to +150˚F (66˚C)

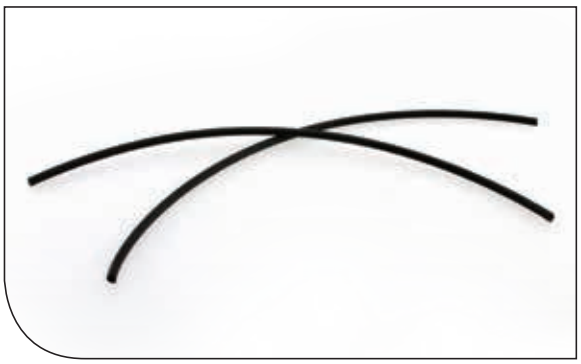
Colors

○ Natural

● Black

Polyethylene Tubing

Series PEFR: Flame Resistant



Features

- Excellent stress crack resistance

Certifications

- UL 94 V-2
- ASTM D-1693 (10% IGEPAL) for stress crack resistance

Applications/Markets

- Pneumatic controls in HVAC applications

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Package Quantity	Minimum Bend Radius		Weight	
#														lbs	kg
Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
PEFR-2.5-XXXX	5/32	4.0	.096	2.4	.030	0.76	185	12.8	740	51.0	0500	.50	12.7	.006	.009
PEFR-4-XXXX	1/4	6.4	.170	4.3	.040	1.0	140	9.7	560	38.6	0500, 1000	.75	17.4	.012	.018
PEFR-6-XXXX	3/8	9.5	.250	6.4	.062	1.6	155	10.7	620	42.8	0500	1.50	36.1	.029	.043
PEFR-8-XXXX	1/2	12.7	.375	9.5	.062	1.6	100	6.9	400	27.6	0250	1.75	39.1	.041	.061

Order Information

Example: PEFR-4-0500

PEFR-4-0500 – **Flame Resistant Polyethylene**

PEFR-**4**-0500 – **Tube O.D.** in sixteenths of an inch **(1/4")**

PEFR-4-**0500** – **Package Quantity** in feet **(500')**

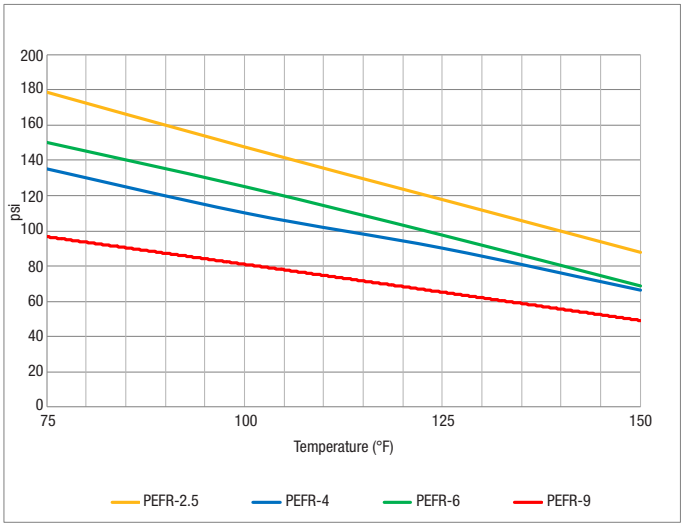
Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

- FSC Product Families:
- Compression
- Compress-Align
- Hi-Duty
- Fast & Tite®
- Prestolok® Brass
- Dubl-Barb®

For tube support use, reference Tubing/Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Flame Resistant Polyethylene Tubing (Series PEFR) Maximum Working Pressure (psig)



Notes

Using the same base linear low-density polyethylene (LLDPE) as the E-Series tubing, Parker Hannifin, Parflex Division's PEFR tubing has the following advantages:

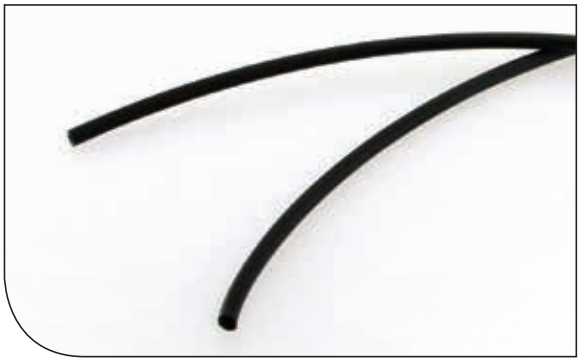
- Resistant to environmental stress cracking exceeding that of ordinary polyethylene tubing as measured by ASTM D-1693 (10% IGEPAL)
- The operating temperature range for service at rated pressures with compatible fluids is -85°F (-65°C) to +150°F (66°C)

Colors

- Black

Polyethylene Tubing

Series HDPE: High Density



Features

- Manufactured from high strength, high density polyethylene
- Semi-rigid tubing that is inherently resistant to most chemicals, less easily cut or damaged and has a higher burst pressure rating than Series E tubing
- Economical system solution

Applications/Markets



- Chemical transfer
- Low-pressure pneumatics

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Package Quantity	Minimum Bend Radius		Weight	
#														lbs	kgs
Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
HDPE-43-XXXX	1/4	6.4	.170	4.3	.040	1.0	300	20.7	1200	82.7	0250, 0500	1.50	38.1	.011	.016
HDPE-64-XXXX	3/8	8.5	.250	6.4	.062	1.6	300	20.7	1200	82.7	0250, 0500	2.50	63.5	.025	.037

Only available in black.

Order Information

Example: HDPE-43-0500

HDPE-43-0500 – **High Density Polyethylene**

HDPE-**4**3-0500 – **Tube O.D.** in sixteenths of an inch **(1/4")**

HDPE-4**3**-0500 – **Tube I.D.** in sixteenths of an inch **(.170")**

HDPE-43-**0500** – **Package Quantity** in feet **(500')**

Fittings

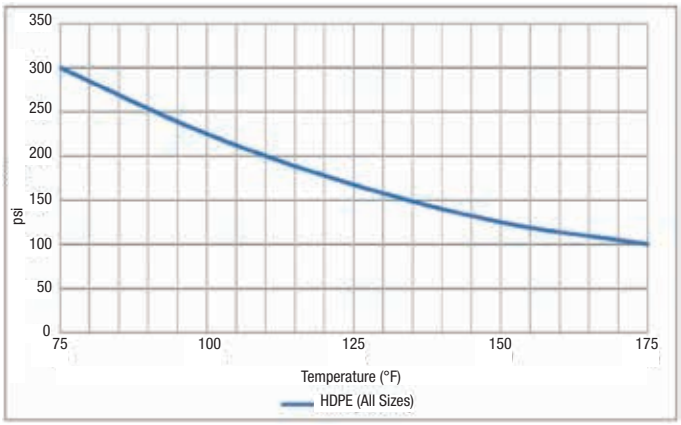
Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

- Compression
- Compress-Align
- Hi-Duty
- Fast & Tite®
- Prestolok® Brass
- Dubl-Barb®

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

High Density Polyethylene Tubing (Series HDPE)

Maximum Working Pressure (psig)



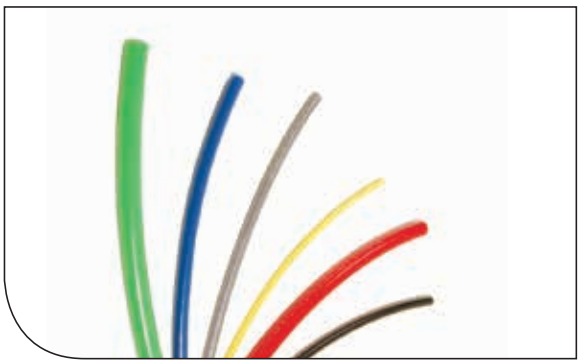
Notes

- Recommended operating temperature range for service at rated pressures with compatible fluids is -80°F (-62°C) to +175°F (80°C)

Colors

- Black

Nylon Tubing
Series N: Flexible



Features

- Flexible nylon tubing uses high-grade resins for strength and flexibility for routing in tight spaces
- Made from abrasion-resistant, heat and light-stabilized nylon
- Exhibits low-level water absorption
- Chemically resistant

Contact Customer Service for Retail Packaging Options

EZ Pack 100 foot boxes available for some sizes.

Applications/Markets

- Robotics
- Machine tool
- General pneumatics
- Lubrication
- Petroleum-based chemical transfer
- Pest control lines

Part Number	Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Minimum Bend Radius		Weight	
#	#														lbs	kg
Natural	Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
NN-2-016	NB-2-016	1/8	3.2	.093	2.4	.016	0.41	250	17.2	1000	69.0	0100, 0250	.25	4.6	.003	.005
NN-2-031	NB-2-031	1/8	3.2	.064	1.6	.031	0.79	500	34.5	2000	137.9	0100, 0250	.25	4.6	.004	.006
NN-2.5-025	NB-2.5-025	5/32	4.0	.106	2.7	.025	0.64	300	20.7	1200	82.7	0100, 0250	.50	12.7	.005	.007
NN-3-025	NB-3-025	3/16	4.8	.138	3.5	.025	0.64	250	17.2	1000	69.0	0100, 0250	.63	16.0	.006	.009
NN-3-046	NB-3-046	3/16	4.8	.096	2.4	.046	1.2	500	34.5	2000	137.9	0100, 0250	.44	11.2	.009	.013
NN-4-035	NB-4-035	1/4	6.4	.180	4.6	.035	0.89	250	17.2	1000	69.0	0100, 0250	.88	22.4	.011	.016
NN-4-040	NB-4-040	1/4	6.4	.170	4.3	.040	1.0	310	21.4	1250	86.2	0100, 0250	.88	22.4	.012	.018
NN-4-062	NB-4-062	1/4	6.4	.127	3.2	.062	1.6	500	34.5	2000	137.9	0100, 0250	.50	12.7	.017	.025
NN-5-040	NB-5-040	5/16	7.9	.233	5.9	.040	1.0	250	17.2	1000	69.0	0100, 0250	1.13	28.7	.016	.024
NN-6-050	NB-6-050	3/8	9.5	.275	7.0	.050	1.3	250	17.2	1000	69.0	0100, 0250	1.13	28.7	.023	.034
NN-6-093	NB-6-093	3/8	9.5	.190	4.8	.093	2.4	500	34.5	2000	137.9	0100, 0250	.75	19.0	.038	.056
NN-8-062	NB-8-062	1/2	12.7	.375	9.5	.062	1.6	250	17.2	1000	69.0	0100, 0250	1.25	31.8	.039	.058
NN-8-124	NB-8-124	1/2	12.7	.253	6.4	.124	3.2	500	34.5	2000	137.9	0100, 0250	1.00	25.4	.067	.099

Order Information

Example: N-2-016-RED-0100

N-2-016-RED-0100 – **Tube**

N-**2**-016-RED-0100 – **Tube O.D.** in sixteenths of an inch **(1/8")**

N-2-**016**-RED-0100 – **Wall Thickness** in inches **(.016")**

N-2-016-**RED**-0100 – **Colors** (Omit for Natural and Black)
NN-2-016-0100 - Natural Nylon
NB-2-016-0100 - Black Nylon

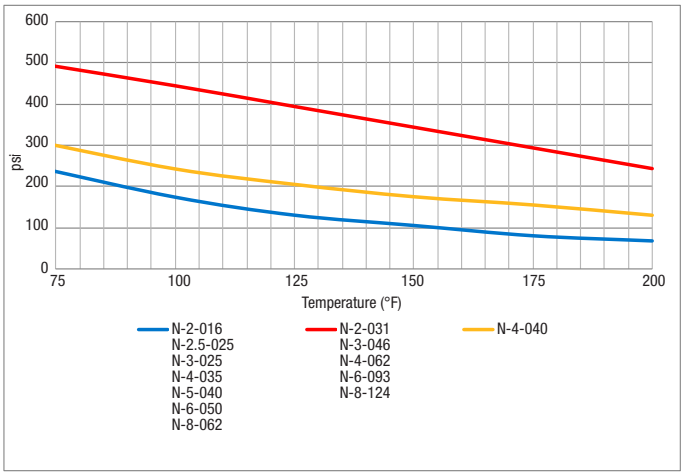
N-2-016-RED-**0100** – **Package Quantity** in feet **(100')**

(Omit quantity number after color for 250' reel length)

Color Code		
○	NN	Natural
●	NB	Black
●	BLU	Blue
●	GRN	Green
●	RED	Red
●	YEL	Yellow

Nylon Tubing (Series N)

Maximum Working Pressure (psig)



Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Compression
- Compress-Align®
- Poly-Tite
- Hi-Duty
- Fast & Tite
- Flow Controls
- Prestolok Brass
- Prestolok Composite
- Prestolok All-Metal
- Prestolok Stainless
- TrueSeal™
- NTA®
- Transmission

For tube support use, reference Tubing/Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

- The operating temperature range for service at rated pressures with compatible fluids, depending upon conditions, is -65°F (-54°C) to +200°F (93°C)
- Black tubing suggested for use in sunlit areas and in close proximity to high ultraviolet light sources

Colors

- See Color Code Table

Metric Nylon Tubing

Series N: Flexible

Features

- Flexible nylon tubing uses high-grade resins for strength and flexibility for routing in tight spaces
- Made from abrasion-resistant, heat and light-stabilized nylon
- Exhibits low-level water absorption
- Chemically resistant

Applications/Markets

- Robotics
- Machine tool
- General pneumatics
- Lubrication
- Petroleum-based chemical transfer
- Pest control lines

Part Number	Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Minimum Bend Radius		Weight	
#	#														kg	lbs
Natural	Black	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	mm	inch	kg./mtr.	lbs./ft.
NN4X.65	NB4X.65	4	.157	2.7	.107	0.65	.026	20.7	300	82.7	1200	100	14	0.55	.007	.005
NN6X1	NB6X1	6	.236	4.0	.157	1.00	.039	23.5	341	94	1363	100	22	0.87	.016	.011
NN8X1	NB8X1	8	.315	6.0	.236	1.00	.039	17.0	247	68	986	100	29	1.14	.024	.016
NN10X1	NB10X1	10	.393	8.0	.315	1.00	.039	12.5	181	50	725	100	34	1.34	030	.020
NN12X1	NB12X1	12	.472	10.0	.393	1.00	.039	11.0	160	44	638	100	45	1.77	.036	.024
NN14X1.5	NB14X1.5	14	.551	11.0	.433	1.50	.059	15.0	218	60	870	100	57	2.24	.063	.042
NN16X1.5	NB16X1.5	16	.630	13.0	.512	1.50	.059	12.5	181	50	725	100	74	2.91	.073	.049
NN18X1.5	NB18X1.5	18	.709	15.0	.591	1.50	.059	10.5	152	42	609	100	92	3.62	.082	.055
NN20X1.5	NB20X1.5	20	.787	17.0	.669	1.50	.059	9.5	138	38	551	100	112	4.41	.092	.062

Order Information

Example: NN4x.65

NN4x.65 – **Natural Nylon**

NN**4**x.65 – **Tube O.D.** in millimeters **(4mm)**

NN4x**.65** – **Wall Thickness** in millimeters **(0.65mm)**

Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

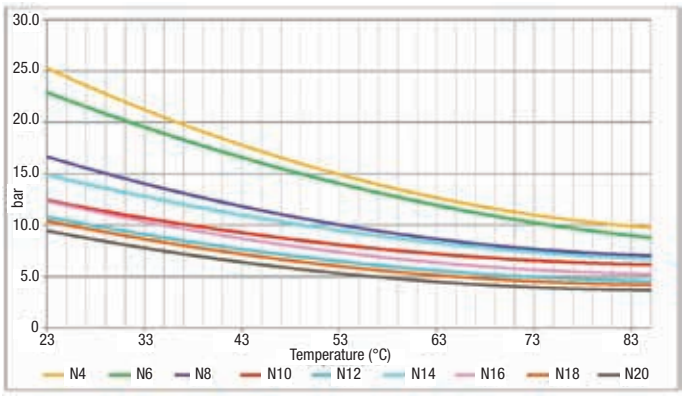
FSC Product Families:

- Metric Compression
- Flow Controls
- Prestolok Composite
- Prestolok All-Metal
- Prestolok Stainless

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Metric Nylon Tubing (Series N)

Maximum Working Pressure (bar)



Notes

- The operating temperature range for service at rated pressures with compatible fluids, depending upon conditions, is -65°F (-54°C) to +200°F (93°C)
- Black tubing suggested for use in sunlit areas and in close proximity to high ultraviolet light sources

Colors

○ Natural

● Black

Nylon Tubing

Series NR: Semi-rigid High Strength

Features

- High grade nylon resins without the addition of plasticizers for higher pressure tubing applications
- Chemical resistant, good resistance to high ambient temperature and low moisture absorption
- High tensile strength and excellent coupling retention in high pressure, temperature and vibration environments
- Better dimensional stability at elevated temperatures than N Series

Applications/Markets

- High-pressure pneumatics and oils
- Lubrication systems
- Marine control systems
- Process lines for chemicals

Part Number	Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Minimum Bend Radius		Weight	
#	#														lbs	kg
Natural	Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
NNR-2-017	NBR-2-017	1/8	3.2	.091	2.3	.017	0.43	425	29.3	1700	117.2	0100, 0500	.50	12.7	.003	.005
NNR-2-026	NBR-2-026	1/8	3.2	.073	1.9	.026	0.66	625	43.1	2500	172.4	0100, 0500	.38	9.7	.004	.006
NNR-3-024	NBR-3-024	3/16	4.8	.140	3.6	.024	0.61	425	29.3	1700	117.2	0100, 0500	.75	19.0	.006	.009
NNR-3-039	NBR-3-039	3/16	4.8	.110	2.8	.039	0.99	625	43.1	2500	172.4	0100, 0500	.63	16.0	.008	.012
NNR-4-035	NBR-4-035	1/4	6.4	.180	4.6	.035	0.89	425	29.3	1700	117.2	0100, 0250	1.00	25.4	.011	.016
NNR-4-050	NBR-4-050	1/4	6.4	.150	3.9	.050	1.3	625	43.1	2500	172.4	0100, 0250	.88	22.3	.014	.021
NNR-5-040	NBR-5-040	5/16	7.9	.233	5.9	.040	1.0	425	29.3	1700	117.2	0100, 0250	1.50	38.1	.015	.022
NNR-6-048	NBR-6-048	3/8	9.5	.279	7.1	.048	1.2	425	29.3	1700	117.2	0100, 0250	1.75	44.5	.022	.033
NNR-6-075	NBR-6-075	3/8	9.5	.225	5.7	.075	1.9	625	43.1	2500	172.4	0100, 0250	1.50	38.1	.032	.048
NNR-8-062	NBR-8-062	1/2	12.7	.375	9.5	.062	1.6	375	26	1500	103.4	0100, 0250	2.38	60.5	.038	.057
NNR-8-075	NBR-8-075	1/2	12.7	.350	8.9	.075	1.9	625	43.1	2500	172.4	0100, 0250	2.50	63.5	.045	.067

Order Information

Example: NBR-2-017-0100

NBR-2-017-0100 – **Nylon**

N**B**R-2-017-0100 – **Color** (Black)

NB**R**-2-017-0100 – **Rigid**

NBR-**2**-017-0100 – **Tube O.D.** in sixteenths of an inch **(1/8")**

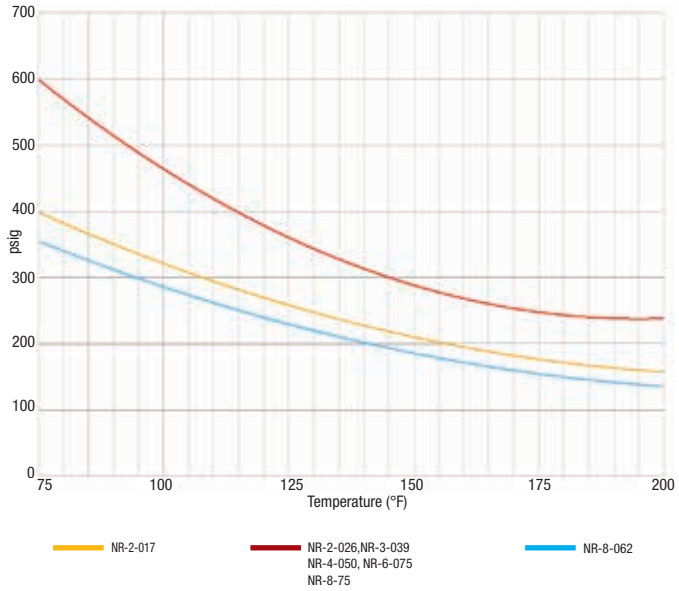
NBR-2-**017**-0100 – **Wall Thickness** in inches **(.017")**

NBR-2-017-**0100** – **Package Quantity** in feet **(100')**

(Omit for other package quantities)

Semi-rigid Nylon Tubing (Series NR)

Maximum Working Pressure (psig)



Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Compress-Align®
- Compression
- Fast & Tite®
- Flow Controls
- Hi-Duty
- Prestolok® All-Metal
- Prestolok® Brass
- Prestolok® Composite
- Prestolok® Stainless
- TrueSeal™

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

- The operating temperature range for service at rated pressures with compatible fluids is -60°F (-51°C) to +200°F (93°C)

Colors

○ Natural

● Black

Nylon Tubing

Series NTNA: Semi-rigid Nylon Tubing

Features

- High grade nylon resins without the addition of plasticizers
- High tensile strength and excellent coupling retention in high pressure, temperature and vibration environments
- Excellent chemical resistance
- Rugged construction resists vermin attack

Certifications

- NSF-51

Applications/Markets

- Instrumentation lines
- Lubrication systems
- Process piping systems
- Refrigerant lines

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Minimum Bend Radius		Weight	
#														lbs	kg
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
22NTNA	1/8	3.2	.091	2.3	.017	0.4	375	25.9	1,500	103.4	500	0.50	12.7	.003	.005
532NTNA	5/32	4.0	.113	2.9	.022	0.6	375	25.9	1,500	103.4	500	0.63	16.0	.004	.006
33NTNA	3/16	4.8	.139	3.5	.024	0.6	375	25.9	1,500	103.4	350	0.75	19.0	.006	.009
44NTNA	1/4	6.4	.184	4.7	.033	0.8	375	25.9	1,500	103.4	200	1.00	25.4	.010	.015
55NTNA	5/16	7.9	.232	5.8	.040	1.0	375	25.9	1,500	103.4	150	1.50	38.1	.015	.022
66NTNA	3/8	9.5	.282	7.1	.048	1.2	375	25.9	1,500	103.4	100	1.75	44.4	.022	.033
88NTNA	1/2	12.7	.375	9.5	.062	1.6	375	25.9	1,500	103.4	100	2.38	60.5	.032	.048

Order Information

Example: 44NTNA

44NTNA – **Tube O.D.** in sixteenths of an inch **(1/4")**

44**NT**NA – **Nylon Tubing**

44NT**NA** – **Color** (Natural)

Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

Notes

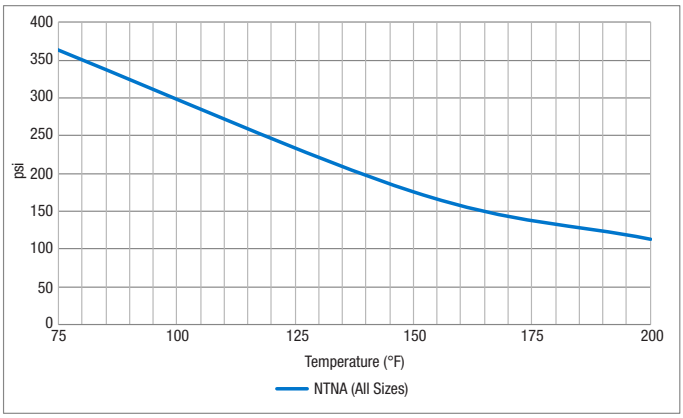
- The operating temperature range for service at rated pressures with compatible fluids is -60°F (-51°C) to +212°F (100°C)

Colors

○ Natural

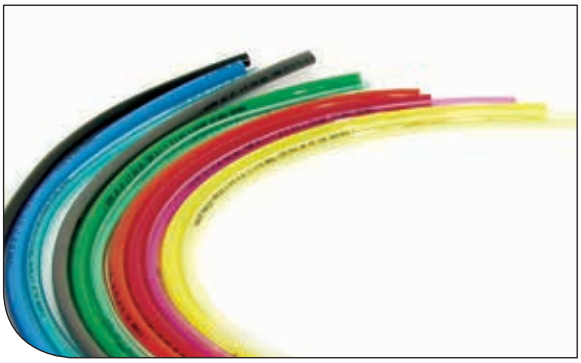
Semi-rigid Nylon Tubing (Series NTNA)

Maximum Working Pressure (psig)



Polyurethane Tubing

Series U: Polyether Base



Features

- 90 to 95 Shore A durometer
- Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

Applications/Markets

- Pneumatic controls
- Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Weight	
#												lbs	kg
Natural	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	lbs./ft.	kg./mtr.
U-21-XXXX	1/8	3.2	.063	1.6	.031	0.79	125	8.6	375	25.9	0050, 0250, 0500, 1000	.005	.007
U-32-XXXX	3/16	4.8	.125	3.2	.031	0.79	125	8.6	375	25.9	0050, 0250, 0500	.008	.012
U-42-XXXX	1/4	6.4	.125	3.2	.063	1.6	125	8.6	375	25.9	0050, 0250, 0500, 1000	.018	.027
U-64-XXXX	3/8	9.5	.250	6.4	.063	1.6	125	8.6	375	25.9	0050, 0250, 0500, 1000	.030	.045
U-85-XXXX	1/2	12.7	.328	8.3	.086	2.2	125	8.6	375	25.9	0050, 0250, 0500	.044	.065
U-86-XXXX	1/2	12.7	.375	9.5	.063	1.6	85	5.9	255	17.6	0050, 0250, 0500	.042	.062
U-96-XXXX	9/16	14.3	.375	9.5	.094	2.4	125	8.6	375	25.9	0050, 0100	.068	.101
U-128-XXXX	3/4	19.1	.500	12.7	.125	3.2	125	8.6	375	25.9	0050, 0100	.120	.179

Also available in coils

Contact Customer Service for Retail Packaging Options

EZ Pack 100 foot boxes available for some sizes.

Order Information

Example: U-21-BLK-0500

U-21-BLK-0500 – **Polyurethane**

U-**2**1-BLK-0500 – **Tube O.D.** in sixteenths of an inch **(1/8")**

U-2**1**-BLK-0500 – **Tube I.D.** in sixteenths of an inch **(.063")**

U-21-**BLK**-0500 – **Color (Black)** (Omit for Natural)

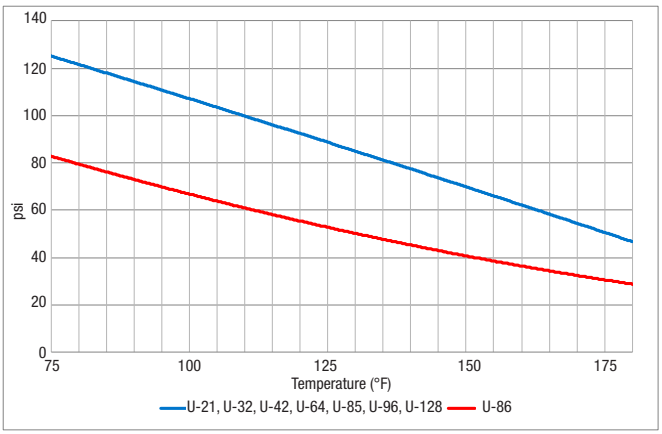
U-21-BLK-**0500** – **Package Quantity** in feet **(500')**

Opaque Color Code		
○	-	Natural
●	BLK	Black
●	BLU	Blue
●	GRA	Gray
●	GRN	Green
●	ORG	Orange
●	RED	Red
○	WHT	White
●	YEL	Yellow

Transparent Color Code		
●	TBLU	Transparent Blue
●	TGRN	Transparent Green
●	TORG	Transparent Orange
●	TRED	Transparent Red
●	TYEL	Transparent Yellow

Polyurethane Tubing (Series U)

Maximum Working Pressure (psig)



Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Fast & Tite
- TrueSeal™
- Par-Barb®

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

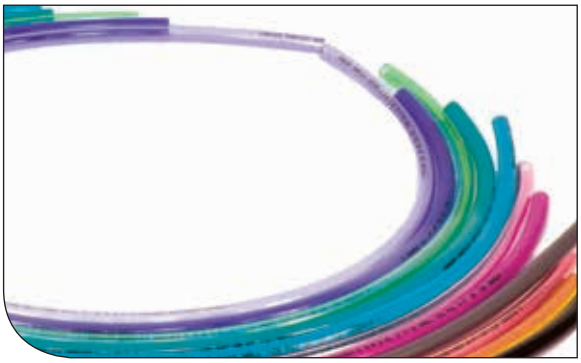
- The operating temperature range for service at rated pressures with compatible fluids is -40°F (-40°C) to +180°F (82°C)

Colors

- See Color Code Table

Metric Polyurethane Tubing

Series UM: Polyether Base



Features

- 90 to 95 Shore A durometer
- Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

Applications/Markets

- Pneumatic controls
- Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Weight	
#													
Natural	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	kg./mtr.	lbs./ft.
UM4x2.5-XXXX	4	.157	2.5	.098	0.75	.030	9.0	131	26.0	377	0100, 0250, 0500	.009	.006
UM6x4-XXXX	6	.236	4.0	.157	1.00	.039	9.0	131	26.0	377	0100, 0250, 0500	.018	.012
UM8x5-XXXX	8	.315	5.0	.196	1.50	.059	9.0	131	26.0	377	0100, 0250, 0500	.036	.024
UM10x6.5-XXXX	10	.393	6.5	.256	1.75	.069	9.0	131	26.0	377	0100, 0250	.053	.036
UM12x8-XXXX	12	.472	8.0	.315	2.00	.079	9.0	131	26.0	377	0100, 0250	.073	.049

Order Information

Example: UM6x4-BLK-0100

UM6X4-BLK-0100 – **Polyurethane Metric**

UM**6**X4-BLK-0100 – **Tube O.D.** in millimeters **(6 mm)**

UM6X**4**-BLK-0100 – **Tube I.D.** in millimeters **(4 mm)**

UM6X4-**BLK**-0100 – **Color (Black)** (Omit for Natural)

UM6X4-BLK-**0100** – **Package Quantity** in feet **(100')**

Opaque Color Code		
○	-	Natural
●	BLK	Black
●	BLU	Blue
●	GRA	Gray
●	GRN	Green
●	ORG	Orange
●	RED	Red
●	YEL	Yellow

Transparent Color Code		
●	TBLU	Transparent Blue
●	TGRN	Transparent Green
●	TORG	Transparent Orange
●	TRED	Transparent Red
●	TYEL	Transparent Yellow

Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Prestolok Brass
- Par-Barb

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

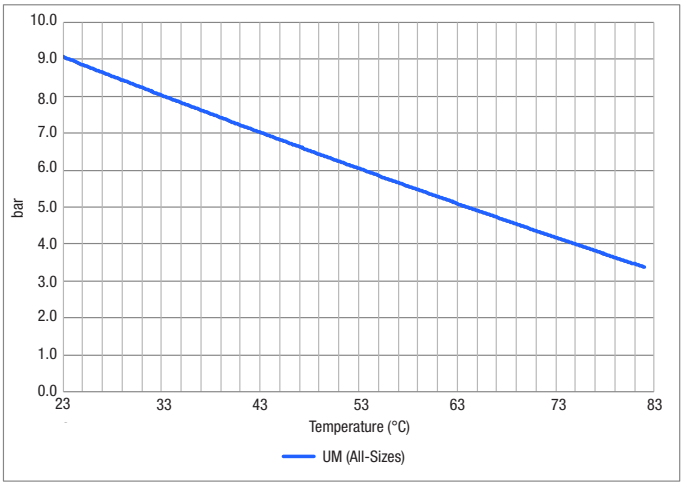
- The operating temperature range for service at rated pressures with compatible fluids is -40°F (-40°C) to +180°F (82°C)

Colors

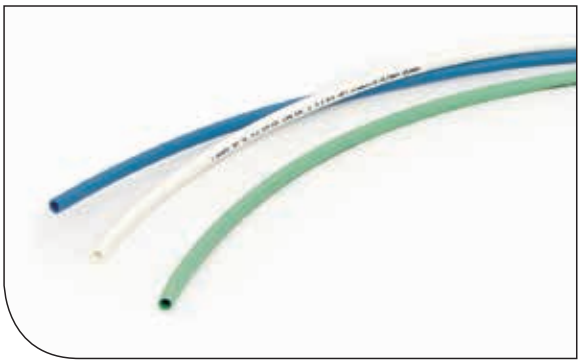
- See Color Code Table

Metric Polyurethane Tubing (Series UM)

Maximum Working Pressure (bar)



HUFR MicroWeld™ Tubing



Features

- Mono-wall construction eliminates the need for skiving tools or knives, reducing installation time
- Excellent abrasion resistance
- Silicone and halogen free
- Weighs 36% less than equivalent covered tubing

Certifications

- UL 94 V2 compliant

Applications/Markets

- Robotics
- Welding
- General automation

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Minimum Bend Radius		Weight	
#														lbs	kg
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
HUFR-4-045-XX-0500	1/4	6.4	.160	4.1	.045	1.1	175	12.1	525	36.2	0500	.50	12.7	.016	.024
HUFR-6-062-XX-0500	3/8	9.5	.251	6.4	.062	1.6	150	10.3	450	31.0	0500	.75	19.1	.033	.049
HUFR-8-090-XX-0250	1/2	12.7	.320	8.1	.090	2.3	160	11.0	475	32.7	0250	1.00	25.4	.063	.094

Order Information

Example: HUFR-4-045-BL-0500

HUFR-4-045-BL-0500 – **MicroWeld™ Polyurethane**

HUFR-**4**-045-BL-0500 – **Tube O.D.** in sixteenths of an inch **(1/4")**

HUFR-4-**045**-BL-0500 – **Wall Thickness** in inches **(.045")**

HUFR-4-045-**BL**-0500 – **Color (Blue)**

HUFR-4-045-BL-**0500** – **Package Quantity** in feet **(500')**

Color Code		
●	BK	Black
●	BL	Blue
●	GN	Green
●	RD	Red
○	WH	White

Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Prestolok All-Metal
- Prestolok Stainless

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

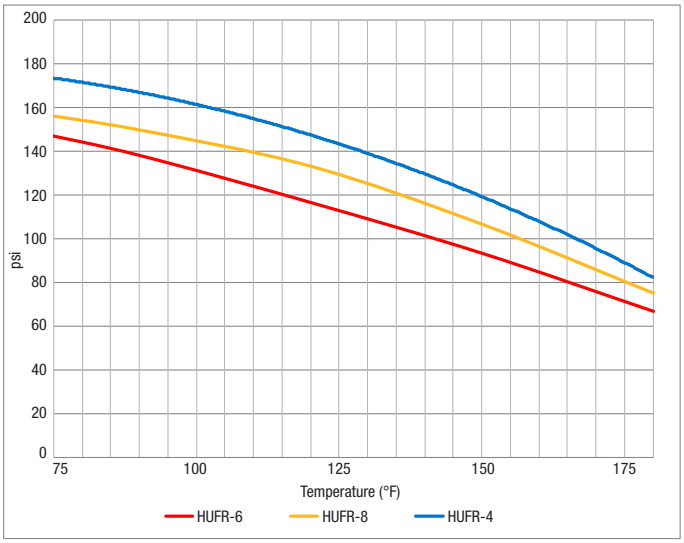
- The operating temperature range for service at rated pressures with compatible fluids is -40°F (-40°C) to +180°F (82°C)

Colors

- See Color Code Table

MicroWeld™ Tubing (Series HUFR)

Maximum Working Pressure (psig)



Polyurethane Tubing

Series HU: High Durometer Polyether Base

Features

- 95 Shore A durometer or greater
- Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

Applications/Markets

- Pneumatic controls
- Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Weight	
#													
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	lbs./ft.	kg./mtr.
HU-2-XXXX	1/8	3.2	.063	1.6	.031	0.79	300	20.7	900	62.1	0100, 0250, 0500	.005	.007
HU-2.5-XXXX	5/32	4.0	.094	2.4	.031	0.79	210	14.5	630	43.4	0100, 0500	.006	.009
HU-4-XXXX	1/4	6.4	.160	4.1	.045	1.1	180	12.4	540	37.2	0100, 0500	.014	.021
HU-6-XXXX	3/8	9.5	.250	6.4	.062	1.6	180	12.4	540	37.2	0100, 0500	.030	.045
HU-8-XXXX	1/2	12.7	.320	8.1	.090	2.3	180	12.4	540	37.2	0100, 0250	.057	.085
HU-12-XXXX	3/4	19.1	.467	11.9	.142	3.6	180	12.4	540	37.2	0100, 0250	.133	.198

Order Information

Example: HU-2-BLK-0500

HU-2-BLK-0500 – **High Durometer Polyurethane**

HU-**2**-BLK-0500 – **Tube O.D.** in sixteenths of an inch **(1/8")**

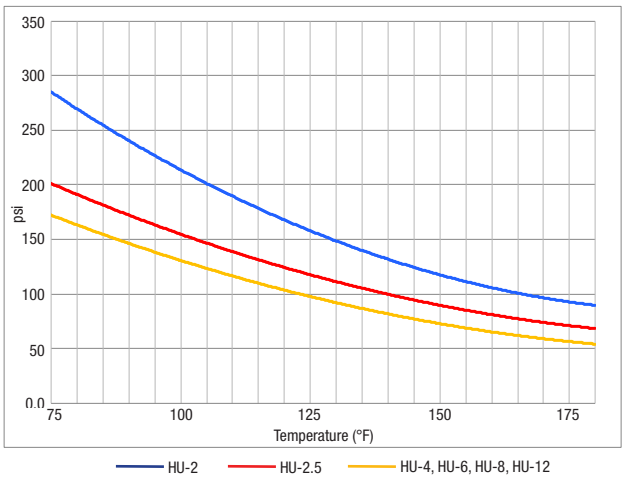
HU-2-**BLK**-0500 – **Color (Black)**

HU-2-BLK-**0500** – **Package Quantity** in feet **(500')**

Color Code		
●	BLK	Black
●	BLU	Blue
●	DBL	Dark Blue
●	RED	Red
●	YEL	Yellow

Polyurethane Tubing (Series HU)

Maximum Working Pressure (psig)



Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Metric Compression
- Fast & Tite
- Flow Controls
- Prestolok Brass
- Prestolok Composite
- Prestolok All-Metal
- Prestolok Stainless
- TrueSeal™

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

- The operating temperature range for service at rated pressures with compatible fluids is -40°F (-40°C) to +180˚F (82˚C)

Colors

- See Color Code Table

Metric Polyurethane Tubing

Series HUM: High Durometer (Metric) Polyether Base

Features

- 95 Shore A durometer or greater
- Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

Applications/Markets

- Pneumatic controls
- Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Weight	
#													
	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	kg./mtr.	lbs./ft.
HUM-4-XXXX	4	.157	2.4	.094	0.80	.031	12.4	180	37.2	540	0100, 0500	.009	.006
HUM-6-XXXX	6	.236	4.0	.157	1.00	.039	12.4	180	37.2	540	0100, 0500	.018	.012
HUM-8-XXXX	8	.315	5.0	.196	1.50	.059	12.4	180	37.2	540	0100, 0500	.036	.024
HUM-10-XXXX	10	.393	6.5	.256	1.75	.069	12.4	180	37.2	540	0100, 0250	.053	.036
HUM-12-XXXX	12	.472	8.0	.315	2.00	.079	12.4	180	37.2	540	0100, 0250	.073	.049

Order Information

Example: HUM-6-BLK-0100

HUM-6-BLK-0100 – **High Durometer Metric Polyurethane**

HUM-**6**-BLK-0100 – **Tube O.D.** in millimeters **(6mm)**

HUM-6-**BLK**-0100 – **Color (Black)**

HUM-6-BLK-**0100** – **Package Quantity** in feet **(100')**

Fittings

Parker fittings available from:
Fluid System Connectors Division
Otsego, MI
(269) 692-6555
(269) 694-4614 FAX

FSC Product Families:

- Metric Compression
- Flow Controls
- Prestolok Composite
- Prestolok All-Metal
- Prestolok Stainless

For tube support use, reference Tubing/ Fitting Compatibility Chart (pg. B-8/B-9) or contact Fluid System Connectors Division (269) 692-6555

Notes

- The operating temperature range for service at rated pressures with compatible fluids is -40°F (-40°C) to +180°F (82°C)

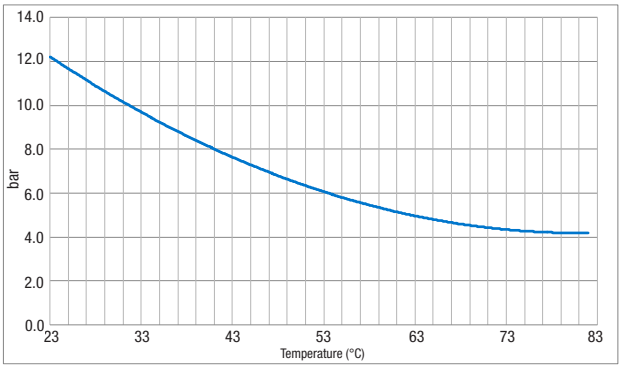
Colors

○ Natural

● Black

Metric Polyurethane Tubing (Series HUM)

Maximum Working Pressure (bar)



HUM (All Sizes)

General Technical


Parker
34
45°
25 SEAT
2X

Tubing Compatibility Chart

Nomenclature

- PS Plastic Sleeve & Tube Support Recommended
- TS Tube Support Is Recommended
- BS Brass Sleeve Recommended
- CL Clamp Required
- MG Metal Gripper Collet Recommended
- Tube/Fitting Combination Compatible
- Tube/Fitting Combination Not Compatible

	Product Sizes (inch)	Soft Metal Tubing			Parflex Thermoplastic Tubing											
					Industrial Tubing Series (Outside Diameter Shown)											
		Copper	Aluminum	Steel	Polyethylene E & EB Inch (4,5,6,8,10) Metric (6,8,10,12)	Polyethylene PEFR Inch (2.5,4,6,8)	Polyethylene HDPE Inch (4,6)	Nylon N Inch (2,2.5,3,4,5,6,8) Metric (4mm - 20mm)	Nylon PAT Inch (2,4,6,8,10,12)	Nylon NR Inch (2,3,4,5,6,8)	Nylon NTNA Inch (2,2.5,3,4,5,6,8)	Polypropylene PP & PPB Inch (2,3,4,5,6,8,10)	Polyurethane U & UM (90 - 95 Shore A) Inch (2,3,4,6,8,9,12) Metric (4,6,8,10,12)	Polyurethane HU & HUM (>95 Shore A) Inch (2,2.5,4,6,8,12) Metric (4,6,8,10,12)	Polyurethane HUFR (Weld Tubing) Inch (4,6,8)	Clear Vinyl Inch (1/8" - 2 1/2")
Compression & Flare	Compression Inch (2,3,4,5,6,7,8,10,12)	BS	BS		PS TS	PS TS	PS TS	PS TS	PS TS	PS TS		PS TS				
	Compress-Align Inch (2,3,4,5,6,8,10,12,14,16)				TS	TS	TS	TS	TS	TS		TS				
	Metric Compression Metric (4,5,6,8,10,12,14,16,18,20,22,25,28)				TS			TS		TS		TS		TS		
	Poly-Tite Inch (4,5,6,8)	BS						BS				BS				
	Hi-Duty Inch (2,3,4,5,6,8,10)				TS	TS	TS	TS	TS	TS		TS				
	45 degree flare Inch (2,3,4,5,6,8,10,12,14)															
	Inverted Flare Inch (2,3,4,5,6,8,10,12)															
	Fast & Tite Inch (4,5,6,8,10)												TS	TS		TS
Push-to-Connect	Flow Controls Inch (2,2.5,4,5,6,8) Metric (4,6,8,10,12)															
	Prestolok Brass Inch (2,2.5,3,4,5,6,8)															
	Prestolok Composite Inch (2,2.5,3,4,5,6,8,10) Metric (3,4,6,8,10,12,14,16)															
	Prestolok All-Metal Inch (2.5,4,5,6,8) Metric (4,6,8,10,12,14)															
	Prestolok Stainless Inch (2.5,3,4,5,6,8) Metric (4,6,8,10,12)															
	Liquifit Inch (2.5,4,6,8) Metric (4,6,8,10,12)															
	TrueSeal Inch (4,5,6,8)	MG								MG			TS	TS		TS
Barb	Par-Barb Inch (2,3,4,5,6,8,10,12,16,20,24) Inside Diameter												CL			CL
	Dubl-Barb Inch (2.5,4,6,8)															
	Hose Barb Inch (2,3,4,5,6,8,10,12,16) Inside Diameter															CL
	Garden Hose															CL
DOT Transportation	NTA Inch (3,4,6,8,10,12)															
	Transmission Fittings Inch (2,2.5)															
	Air Brake Inch (4,6,8,10,12,16)															
	Air Brake Hose Inch (6,8)															
	Vibra-Lok Inch (2,3,4,5,6,8,10,12)															
	Prestomatic Inch (4,6,8,10) Metric (6,8,10,12,16)															
	PTC Inch (2.5,3,4,6,8,10,12)															
	SAE Cartridges Inch (4,6,8,10)															

Tubing Compatibility Chart

Parflex Thermoplastic Tubing								IHP/HPD Hose			
Transportation Tubing				Fluoropolymer Tubing							
PFT Air Brake (SAE J844) Inch (2,2.5,3,4,5,6,8,10,12)	Air Brake DIN 74324 (Nylon 12) Metric (4,6,8,10,12,15,16,18)	PFT Diesel Fuel Sizes 4,6,8,10,12	HTFL Diesel Fuel Sizes 4,6,8,10,12	PFA Inch (3/32" - 1") Metric (4mm - 12mm)	FEP Inch (1/8" - 1") Metric (3mm - 12mm)	PTFE Inch (3/32" - 1.1") Metric (3mm - 16mm)	PVDF Inch (2,3,4,5,6,8,10,12,16)	GPH General Purpose Inch (3,4,6,8,12) Inside Diameter	Parker 271 hose (SAE J1402) Inch (6.8) Inside Diameter	Product Sizes (inch)	
				PS TS	PS TS	PS TS	PS TS			Compression Inch (2,3,4,5,6,7,8,10,12)	Compression & Flare
				TS	TS	TS	TS			Compress-Align Inch (2,3,4,5,6,8,10,12,14,16)	
				TS	TS	TS	TS			Metric Compression Metric (4,5,6,8,10,12,14,16,18,20,22,25,28)	
										Poly-Tite Inch (4,5,6,8)	
										Hi-Duty Inch (2,3,4,5,6,8,10)	
										45 degree flare Inch (2,3,4,5,6,8,10,12,14)	
										Inverted Flare Inch (2,3,4,5,6,8,10,12)	
										Fast & Tite Inch (4,5,6,8,10)	
										Flow Controls Inch (2,2.5,4,5,6,8) Metric (4,6,8,10,12)	Push-to-Connect
										Prestolok Brass Inch (2,2.5,3,4,5,6,8)	
										Prestolok Composite Inch (2,2.5,3,4,5,6,8,10) Metric (3,4,6,8,10,12,14,16)	
										Prestolok All-Metal Inch (2.5,4,5,6,8) Metric (4,6,8,10,12,14)	
										Prestolok Stainless Inch (2.5,3,4,5,6,8) Metric (4,6,8,10,12)	
										Liquifit Inch (2.5,4,6,8) Metric (4,6,8,10,12)	
				MG	MG	MG	MG			TrueSeal Inch (4,5,6,8)	
								CL		Par-Barb Inch (2,3,4,5,6,8,10,12,16,20,24) Inside Diameter	Barb
										Dubl-Barb Inch (2.5,4,6,8)	
								CL		Hose Barb Inch (2,3,4,5,6,8,10,12,16) Inside Diameter	
								CL		Garden Hose	
										NTA Inch (3,4,6,8,10,12)	DOT Transportation
										Transmission Fittings Inch (2,2.5)	
TS										Air Brake Inch (4,6,8,10,12,16)	
										Air Brake Hose Inch (6,8)	
										Vibra-Lok Inch (2,3,4,5,6,8,10,12)	
										Prestomatic Inch (4,6,8,10) Metric (6,8,10,12,16)	
										PTC Inch (2.5,3,4,6,8,10,12)	
										SAE Cartridges Inch (4,6,8,10)	

Nomenclature

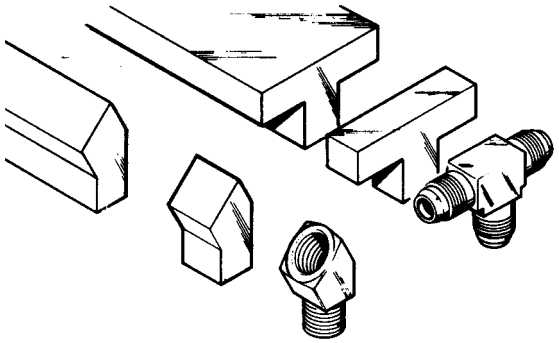
- PS Plastic Sleeve & Tube Support Recommended
- TS Tube Support Is Recommended
- BS Brass Sleeve Recommended
- CL Clamp Required
- MG Metal Gripper Collet Recommended
- Tube/Fitting Combination Compatible
- Tube/Fitting Combination Not Compatible

Manufacturing Techniques

Parker Extruded fittings

Hexagon, round and shaped bars are extruded in the configuration required, drawn to size, cut to length and straightened. First a solid round billet (8 to 12 inches in diameter) is heated to the pliable state and forced by pressure of approximately 80,000 pounds per square inch through a die. The resulting continuous length of bar is cooled and then drawn through dies to the desired external size. (The drawing process also controls the temper.) After straightening, the bar is ready for machining.

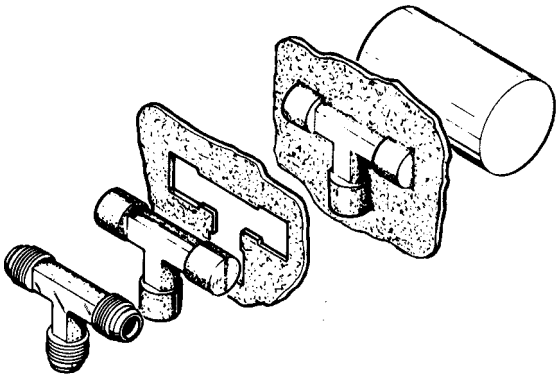
The process produces a dense, nonporous material somewhat stronger in the longitudinal direction due to an orientated flow of the grain.



Material used for Parker Brass Fittings

(Reference SAE J461)

Straight bodies:	barstock CA 360 or CA 345
Shape bodies:	extruded barstock CA 360
Shape bodies:	forged CA 377
Nuts:	barstock CA 360
Nuts:	forged CA 377



Parker Forged Fittings

Material for forgings is extruded in round bars, cut to length and straightened. (At this point in the process, forging rod differs from round extruded machinable bars only in temper and chemical properties.) After straightening, the bars are cut again into slugs (short lengths), reheated to the pliable state and pressed under a pressure of approximately 25,000 pounds per square inch between upper and lower die cavities. After cooling the flash is trimmed away and the forging blank is ready for machining.

This process of forming under extreme pressure produces a uniformly dense material of exceptional strength. Because grain flow follows the contour, the fitting has high impact strength and is more resistant to mechanical shock and vibration.

Of the major brass fittings producers, only Parker offers elbows and tees machined from both extruded and forged shapes.

Tube Line Fabrication Guide for Leak Free Systems

Every hydraulic, pneumatic and lubrication system requires some form of tube line fabrication and fitting installation for completion. Proper fabrication and installation are essential for the overall efficiency, leak free performance, and general appearance of any system.

Start by planning ahead. After sizing the tube lines and selecting the appropriate style of fitting, consider the following in the design of your system:

1. Accessibility of joints
2. Proper routing of lines
3. Adequate tube line supports
4. Available fabricating tools

Routing of Lines

Routing of lines is probably the most difficult yet most significant of these system design considerations. Proper routing involves getting a connecting line from one point to another through the most logical path.

Always try to leave fitting joints as accessible as possible. Hard to reach joints are hard to assemble and tighten properly. Inaccessible joints are also more difficult and time consuming to service.

The most logical path should have the following characteristics:

- **Avoid excessive strain on joint** — A strained joint will eventually leak. (See Figures A14 through A21.)
- **Allow for expansion and contraction** — Use a “U” bend or a hose in long lines to allow for expansion and contraction. (See Figure A22.)
- **Allow for motion under load** — Even some apparently rigid systems do move under load. (See Figure A23.)
- **Get around obstructions without using excessive amount of 90° bends** — Pressure drop due to one 90° bend is greater than that due to two 45° bends. (See Figures A24 and A25.)
- Keep tube lines away from components that require regular maintenance. (See Figures A26 and A27.)
- Have a neat appearance and allow for easy troubleshooting, maintenance and repair. (See Figures A28 and A29.)

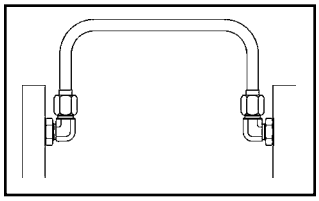


Fig. A14 — Correct Routing

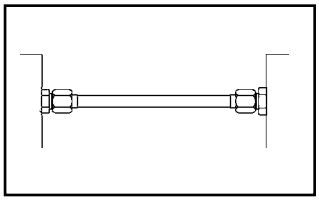


Fig. A15 — Incorrect Routing

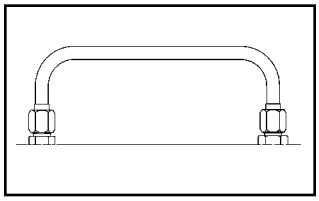


Fig. A18 — Correct Routing

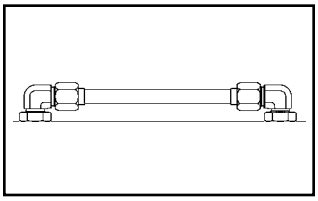


Fig. A19 — Incorrect Routing

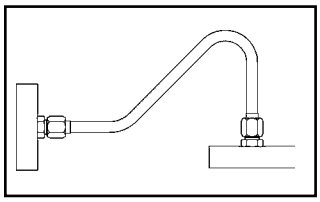


Fig. A16 — Correct Routing

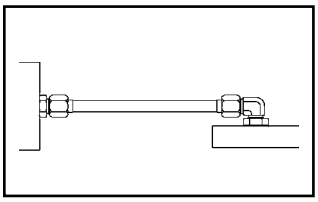


Fig. A17 — Incorrect Routing

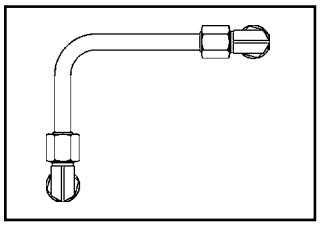


Fig. A20 — Correct Routing

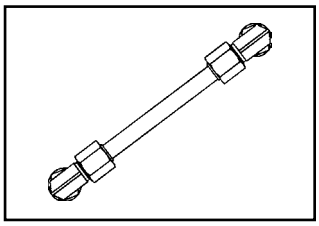


Fig. A21 — Incorrect Routing

(continued next page)

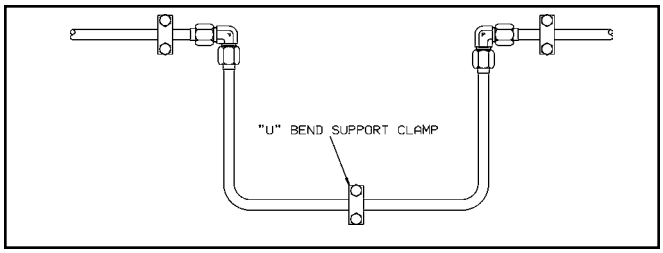


Fig. A22 — U-Bend Allowing Expansion and Contraction

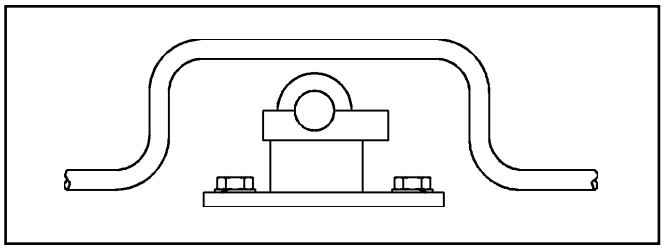


Fig. A25 — Incorrect

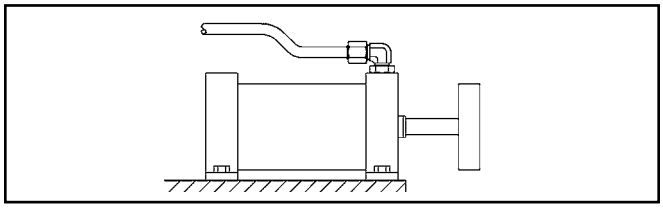


Fig. A23 — Bent Tube Allowing for Motion Under Load

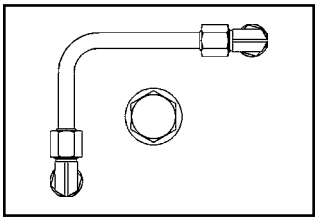


Fig. A26 — Correct

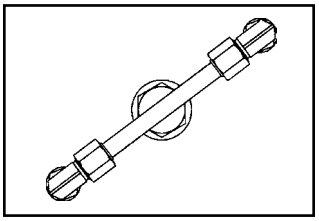


Fig. A27 — Incorrect

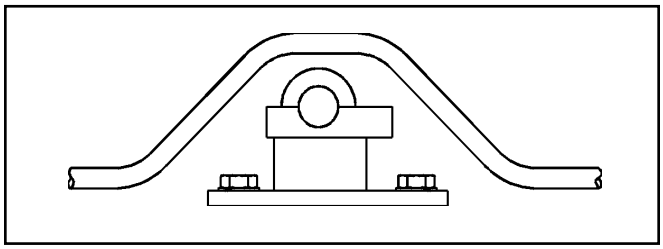


Fig. 24 — Correct

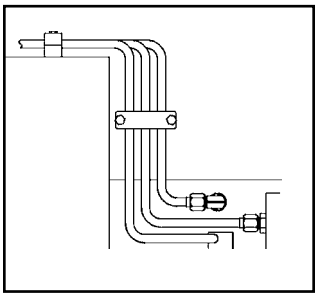


Fig. A28 — Correct

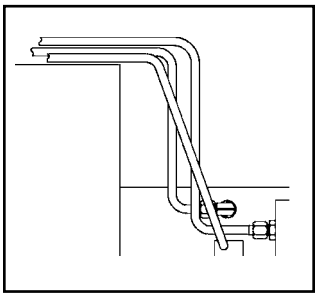


Fig. A29 — Incorrect

Thread Specifications

Dryseal Pipe Threads
All dryseal pipe threads are manufactured in accordance with the American National Standards Institute (ANSI) B1.20.3 specification and designed to seal pressure tight joints. The threads may incorporate the NPTF (National Standard Pipe Taper Fuel and Oil), PTF-SAE Short, PTF-SPL Short or PTF-SPL Extra Short form. Dryseal threads are used on brass products found within this catalog. Use of a thread sealant is recommended.

Non-Dryseal Pipe Threads
All non-dryseal pipe threads are manufactured in accordance with the American National Standards Institute (ANSI) B1.20.1 specification. These tapered pipe threads are used on our carbon and stainless steel products. Use of a thread sealant is recommended.

Nickel Plating
Nickel Plating is optional on standard product. Specifications for plating are not considered when standard product is manufactured. Since plating will alter thread pitch diameters, all plated threads should be qualified by functional fit with mating parts and not by standard thread gauging. Consult factory on plated product that will be qualified by standard thread gauging. These should be ordered as non-standards so product can be machined to pre-plated specifications.

Nickel plating provides a corrosion resistant coating which is desirable in many applications. Electrolytic nickel plating is the standard plating supplied unless otherwise specified. This will provide a uniform coverage of external surfaces; however, internal surfaces may be uncoated.

Unified Threads
All threads in the columns headed “Straight Thread” found within this catalog are manufactured in accordance with the American National Standards Institute (ANSI) B1.1 specification.

British Standard Pipe Threads BSPT and BSPP

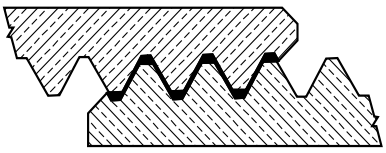
Pressure Tight
The British pipe threaded products found within this catalog intended for use where pressure tight joints are made on the threads are manufactured in accordance with British Standard (BS) 21 and International Standards Organization (ISO) 7-1. The threads are designated as follows:

Rp: Internal parallel
Rc: Internal taper
Rs: Special external parallel
R: External taper

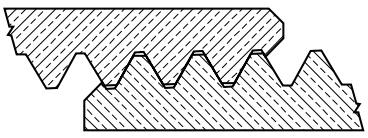
Use of a thread sealant is recommended with the R series thread. An elastomeric peripheral seal should be used with the Rs thread.

Non-Pressure Tight
All British Standard parallel pipe threads manufactured in this catalog according to BS2779 and ISO 228-1 are intended for use where pressure tight joints are not made on the threads. An elastomeric peripheral seal should be used. These threads are designated as follows:

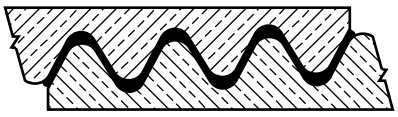
G: Internal Thread
GA, External thread, tight tolerance classification
GB, External thread, general purpose and assumed if no classification designation is given



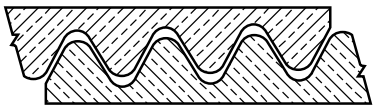
Dryseal Pipe Thread
Metal to metal contact. Crests of thread are crushed by the roots when wrench-tightened to form seal.



Non-Dryseal Pipe Thread
Flanks are in contact with possible clearance between the roots and crests. Will not prevent spiral leakage



BS21 British Standard Pipe Thread for Pressure Tight Joints
Metal to metal contact provides seal as tapered thread is wrench-tightened.



BS2779 British Standard Pipe Thread for Non-Pressure Tight Joints
Thread tolerances allow for possible clearance between threads. Will not prevent leakage paths.

Pipe Thread Assembly

The two British Standard pipe thread forms used for Parker's standard product are manufactured in a tighter tolerance range than required by the standards in order to facilitate the assembly and mating of fittings produced by the two different standards. In general, BS21 threads do not necessarily mate with BS2779 threads at tolerance overlap conditions, but fittings located within this catalog can be assembled as follows:

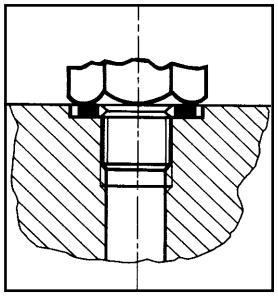
External Thread	Mating Internal Thread
G-BS2779 (parallel)	G-BS2779 (parallel) Rp-BS21* (parallel)
Rs-BS21 (parallel)	Rp-BS21 (parallel) G-BS2779 (parallel)
R-BS21 (taper)	Rp-BS21 (parallel) Rc-BS21 (taper) G-BS2779 (parallel)

*This thread must be manufactured within a reduced tolerance range to always assemble with the G series external thread.

British Standard ISO Metric Screw Threads

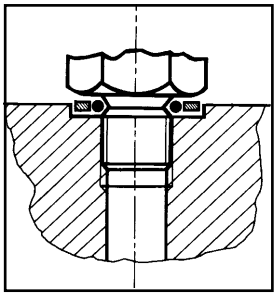
They are commonly used in miniature pneumatic applications because of the availability of small thread diameters and are also used extensively in the automotive industry. There are two forms of sealing on metric screw threads.

- O-ring sealing into a profiled port in accordance with ISO 6149.
- Peripheral sealing with a copper or bonded washer in accordance with ISO 261 and 262.



Peripheral sealing of parallel threads

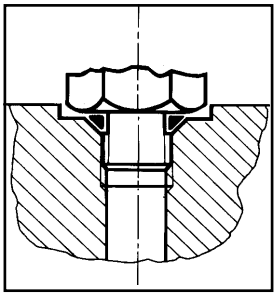
Pressure-tight joints of screwed connections with parallel threads are achieved by placing a seal between the two machined faces



Flat seals

Washers and rings are manufactured in many different materials including copper, aluminium, fiber, plastics, etc.

The tightening torque at assembly must be carefully selected so as to avoid compressing the seal to the point of extrusion. As a general rule, the fitting should be tightened with an additional 1/4 wrench turn from the fingertight position.



O-rings

Depending upon the configuration of the female port or male thread, O-Ring seals are fitted with or without back-up washers, and can be fully retained in a captive seal.

Pressure Conversions

KILOPASCALS (KPA)	MEGAPASCALS (MPA)	BAR (bar)	KILOGRAMS PER SQUARE CENTIMETER (KGF/CM2)	POUNDS PER SQUARE INCH(PSI)
100	1.0	1	1.02	14.50
200	.2	2	2.04	29.00
300	.3	3	3.06	43.50
400	.4	4	4.08	58.00
500	.5	5	5.10	72.50
600	.6	6	6.12	87.00
700	.7	7	7.14	101.50
800	.8	8	8.16	116.00
900	.9	9	9.18	130.50
1000	1.0	10	10.20	145.00
2000	2.0	20	20.40	290.10
3000	3.0	30	30.60	435.10
4000	4.0	40	40.80	580.20
5000	5.0	50	51.00	725.20
6000	6.0	60	61.20	870.20
7000	7.0	70	71.40	1015.30
8000	8.0	80	81.60	1160.30
9000	9.0	90	91.80	1305.30
10000	10.0	100	102.00	1450.00
20000	20.0	200	204.00	2901.00
30000	30.0	300	306.00	4351.00
40000	40.0	400	408.00	5802.00
50000	50.0	500	510.00	7252.00
60000	60.0	600	612.00	8702.00
70000	70.0	700	714.00	10153.00
80000	80.0	800	816.00	11603.00
90000	90.0	900	918.00	13053.00
100000	100.0	1000	1020.00	14504.00
200000	100.0	2000	2040.00	29008.00
300000	300.0	3000	3060.00	43511.00

POUNDS PER SQUARE INCH(PSI)	KILOPASCALS (KPA)	MEGAPASCALS (MPA)	BAR (bar)	KILOGRAMS PER SQUARE CENTIMETER (KGF/CM2)
10	68.90	.07	.70	.70
20	137.90	.14	1.41	1.41
30	206.80	.21	2.10	2.11
40	275.80	.28	2.80	2.81
50	344.70	.34	3.40	3.52
60	413.70	.41	4.10	4.22
70	482.60	.48	4.80	4.92
80	551.60	.55	5.50	5.63
90	620.50	.62	6.20	6.33
100	689.00	.70	6.90	7.00
200	1379.00	1.40	13.80	14.10
300	2068.00	2.10	20.70	21.10
400	2758.00	2.80	27.60	28.10
500	3447.00	3.40	34.50	35.20
600	4137.00	4.10	41.40	42.20
700	4826.00	4.80	48.30	49.20
800	5516.00	5.50	55.20	56.30
900	6205.00	6.20	62.10	63.30
1000	6895.00	6.90	68.90	70.30
2000	13790.00	13.80	137.90	140.70
3000	20684.00	20.70	206.80	211.00
4000	27579.00	27.60	275.80	281.30
5000	34474.00	34.50	344.70	351.60
6000	41369.00	41.40	413.70	421.90
7000	48263.00	48.30	482.60	492.30
8000	55158.00	55.20	551.60	562.60
9000	62053.00	62.10	620.50	632.90
10000	68948.00	68.90	689.00	703.00
20000	137895.00	137.90	1379.00	1406.00
30000	206843.00	206.80	2068.00	2110.00
40000	275790.00	275.80	2758.00	2813.00

English/Metric Conversions

Inches x 25.4 = Millimeters (mm)
Inches x 2.54 = Centimeters (cm)
Inches x .254 = Decimeters (dm)
Feet x .3048 = Meters (m)
Yards x .9144 = Meters (m)
PSI x .0689 = Bars (bar)
Bars x 100 = Kilopascals (kPa)
PSI x .0069 = Megapascals (MPa)
Pound Inches x .113 = Newton Meters (N•m)
Pound Feet x 1.356 = Newton Meters (N•m)
Millimeters x .0394 = Inches
Centimeters x .3937 = Inches
Meters x 3.281 = Feet
Meters x 1.0936 = Yards
Bars x 14.5 = PSI Megapascals x 145 = PSI
Newton Meters x 8.85 = Pound Inches
Newton Meters x .737 = Pound Feet

Millimeters to Fractions to Decimals

MM	INCHES	
	FRACTION	DECIMAL
.3969	1/64	.0156
.7938	1/32	.0312
1.1906	3/64	.0468
1.5875	1/16	.0625
1.9844	5/64	.0781
2.3812	3/32	.0937
2.7781	7/64	.1093
3.1750	1/8	.1250
3.5719	9/64	.1406
3.9688	5/32	.1562
4.3656	11/64	.1718
4.7625	3/16	.1875
5.1594	13/64	.2031
5.5562	7/32	.2187
5.9531	15/64	.2343
6.3500	1/4	.2500

MM	INCHES	
	FRACTION	DECIMAL
6.7469	17/64	.2656
7.1438	9/32	.2812
7.5406	19/64	.2968
7.9375	5/16	.3125
8.3344	21/64	.3281
8.7312	11/32	.3437
9.1281	23/64	.3593
9.5250	3/8	.3750
9.9219	25/64	.3906
10.3188	13/32	.4062
10.7156	27/64	.4218
11.1125	7/16	.4375
11.5094	29/64	.4531
11.9062	15/32	.4687
12.3031	31/64	.4843
12.7000	1/2	.5000

MM	INCH	
	FRACTION	DECIMAL
13.0969	33/64	.5156
13.4938	17/32	.5312
13.8906	35/61	.5468
14.2875	9/16	.5625
14.6844	37/64	.5781
15.0812	19/32	.5937
14.4781	39/64	.6093
15.8750	5/8	.6250
16.2719	41/64	.6406
16.6688	21/32	.6562
17.0656	43/64	.6718
17.4625	11/16	.6875
17.8594	45/64	.7031
18.2562	23/32	.7187
18.6531	47/64	.7343
19.0500	3/4	.7500

MM	INCH	
	FRACTION	DECIMAL
19.4469	49/64	.7656
19.8438	25/32	.7812
20.2406	51/64	.7968
20.2375	13/16	.8125
21.0344	53/64	.8281
21.4312	27/32	.8437
21.8281	55/64	.8593
22.2250	7/8	.8750
22.6219	57/64	.8906
23.0188	29/32	.9062
23.4156	59/64	.9218
23.8125	15/16	.9375
24.2094	61/64	.9531
24.6062	31/32	.9687
25.0031	63/64	.9843
25.4000	1	1.0000

Assembly Guides

Push-to-Connect Fittings

- Prestolok PLP Metal
- Prestolok PLP Composite
- Prestolok PLM
- Prestolok PLS
- Oscillating Elbows
- LIQUIFit
- TrueSeal
- Flow Controls
- Prestomatic
- PTC
- Metric Prestomatic
- PMH
- Transmission
- Polypropylene Ball Valves

1. Cut tubing squarely – maximum of 15˚ angle allowable.
2. Check that port or mating part is clean and free of debris.
3. Insert tubing until it bottoms
4. Pull on tubing to verify it is fully inserted
5. To disassemble, simply press release button, hold against body and pull tubing out of fitting.

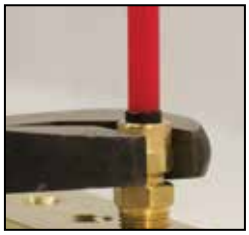
Compression

1. Slide nut then sleeve onto tubing. The thread end of the nut must face out.
2. Insert tube and bottom on the fitting shoulder
3. Assemble nut to body and tighten “hand tight”. Then wrench tighten the number of turns indicated in the table.

FITTING SIZE	TUBE SIZE	TURNS REQUIRED TO SEAL FROM HAND-TIGHT	
		60C WITH SOFT METAL TUBING	60PT WITH THERMOPLASTIC TUBING
2	1/8	1-1/4	—
3	3/16	1-1/4	—
4	1/4	1-1/4	2
5	5/16	1-1/4	2
6	3/8	2-1/4	2
8	1/2	2-1/4	2
10	5/8	2-1/4	2
12	3/4	2-1/4	2
14	7/8	2-1/4	—

Poly-Tite

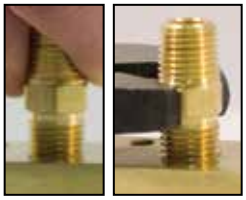
1. Cut tubing squarely – maximum of 15° angle allowable.
2. Check that port or mating part is clean and free of debris.
3. Insert tube end until it bottoms in the Poly-Tite fitting and tighten knurl/ hex nut finger-tight, plus one wrench turn.



Pipe Fittings

Straight Fittings

1. Hand tighten external thread into internal thread
2. Tighten an additional 2 turns with a wrench up to 1/2" male pipe thread.
3. Above 1/2" 1 1/2 to 2 1/2 turns.



Elbow or Tee Fittings

1. Hand tighten external thread into internal thread
2. Tighten an additional 1 to 1 1/2 turns with a wrench
3. Tighten fitting, clockwise to align with tubing. (Never counter clockwise)

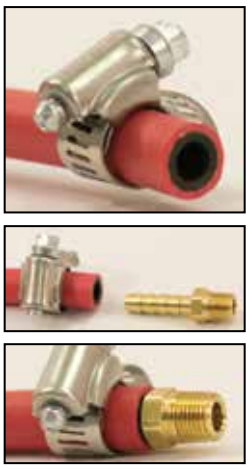
Note: To minimize the possibility of a leaking threaded joint after assembling Male to female pipe threads, neither end should be backed out (loosened) Once the assembly has been made.

Dubl-Barb

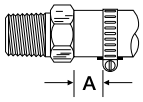
Cut tube squarely and simply push tube over the two barbs

Hose Barbs

1. Cut hose cleanly and squarely to length.
2. Slide clamp on hose.
3. Lubricate hose. Push hose on fitting until bottomed against stop ring or hex.
4. Position hose clamp as shown and secure with a screwdriver or wrench. Maintain "A" dimension for proper clamp positioning.



HOSE SIZE	HOSE CLAMP	A
3/16	97 HC-3	1/4
1/4	97 HC-3	1/4
5/16	97 HC-6	1/4
3/8	97 HC-6	1/8
1/2	97 HC-8	1/8
5/8	97 HC-12	1/8
3/4	97 HC-12	1/8



Fluid Compatibility Guide

The following pages list general recommendations for the selection of valve materials. For specific cases, and for those not included in the Fluid Compatibility Chart, it is advisable to check with your Parker representative.

There are many specific environmental factors which might affect corrosion rate such as temperature, solution, concentration and presence of impurities. Therefore, we suggest that the information be used as a rough guide to material selection. If any questions exist regarding the expected performance of a material in a given application, actual tests should be performed to determine the suitability of the materials in question.

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
ACETALDEHYDE	P	G	E	P	G	G	P	E	U	
ACETAMINE	G	G	G	E	G			E		
ACETATE SOLVENTS	E	E	E	P			U	E	U	
ACETIC ACID VAPORS	U		U	U				E		
ACETIC ACID (10%)	P	P	E	U	P	G	U	E	U	U
ACETIC ACID (80%)	P	P	E	U	U	P	U	E	U	U
ACETIC ACID (AERATED)	P	P	E	G	G		P	E	U	
ACETIC ACID (AIR FREE)	P	P	E	G	G		U	E	U	
ACETIC ACID (CRUDE)	P	P	E	U	U		U	E	U	
ACETIC ACID (GLACIAL)			U	U	P	G	P	E		U
ACETIC ACID (PURE)	P	U	E	U	U		U	E	U	
ACETIC ANHYDRIDE	U	U	G	U	P	P	U	E	U	U
ACETONE	E	E	E	U	U	E	U	E	E	E
ACETOPHENONE	G	G	G	U	U	E	U			
ACETYL CHLORIDE	E	G	P	U	U	U	U	E		
ACETYLENE	G	E	E	G	P	E	E	E	E	
ACID FUMES	U	U	G	P	G			E		
ACRYLONITE	E	E	E	U	U	U	P	E		
AIR	E	E	E	E	E	E	E	E	E	
ALCOHOL, AMYL	G	G	E	P	P	E	G	E	E	
ALCOHOL, BUTYL	G	G	E	G	G	P	E	E	E	
ALCOHOL, DIACETONE	E	E	E	U	P	G	U	E		
ALCOHOL, ETHYL	G	G	G	E	G	E	E	E	E	
ALCOHOL, ISOPROPYL	G	G	G	P	G	E	E	E	E	
ALCOHOL, METHYL	E	G	E	G	E	E	P	E		E
ALCOHOL, PROPYL	E	G	E	G	G	E	E	E		
ALCOHOLS, FATTY	G	G	E	G	G			E		
ALUM	U		G	G	G		G	E		
ALUMINA	U		E	E	E	E		E		
ALUMINUM ACETATE	G		E	U	U	E	U	E		
ALUMINUM BROMIDE				E	E	E	E			
ALUMINUM CHLORIDE DRY	U	P	P	G	G	E	E	E	E	
ALUMINUM CHLORIDE SOLUTION			U	G	G		E	E		U
ALUMINUM FLUORIDE	U	U	P	E	E	E	E	E		U
ALUMINUM HYDROXIDE	E	U	E	E	E	E	E	E		
ALUMINUM NITRATE	U	U	P	G	G	G	U	E		
ALUMINUM OXALATE			U					E		
ALUMINUM SALTS				E	E	E	E			
ALUMINUM SULFATE	P	U	G	E	E	E	E	E	E	P
AMINES	G	G	E	U	U	P	U	E	E	
AMLY CHLORIDE	G		E	U	P	U	U	E		
AMMOMIUM BICARBONATE	G	P	G	G	E	E	E	E	E	
AMMONIA, ALUM			E	G	G			E		
AMMONIA, ANHYDROUS LIQUID	U	E	E	G	P	G	U	E		
AMMONIA, AQUEOUS	U	E	E	G	G		E	E		
AMMONIA, GAS, HOT	U	G	E	P	E	E	U	E		
AMMONIA LIQUOR			E					E		
AMMONIA SOLUTIONS	U	G	E	G	G	G	U	E		
AMMONIUM ACETATE	U		G	G	G	E	U	E		
AMMONIUM BROMIDE 5%			G					E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
AMMONIUM CARBONATE	G	G	G	P	E	E	G	E	E	
AMMONIUM CHLORIDE	U	U	P	G	E	E	E	E	E	U
AMMONIUM HYDROXIDE 28%	U	P	G	G	E	G	E	E		
AMMONIUM HYDROXIDE CONC.	U	P	G	P	E	E	E	E	E	
AMMONIUM MONOSULFATE			E					E		
AMMONIUM NITRATE	U	U	E	E	E	E	E	E	E	U
AMMONIUM OXALATE 5%			E					E		
AMMONIUM PERSULFATE	P	U	E	U	P	G	G	E		U
AMMONIUM PHOSPHATE	U	U	G	E	E	E	E	E	G	P
AMMONIUM PHOSPHATE DI-BASIC	P	U	G	E	E		E	E	E	
AMMONIUM PHOSPHATE TRI-BASIC	P	U	G	E	E		E	E	E	
AMMONIUM SULFATE	P	P	G	E	E	E	G	E	E	U
AMMONIUM SULFIDE	U	U	G	E	G	E	U	E		
AMMONIUM SULFITE	P	P	E	G	E	G	E	E	E	
AMYL ACETATE	G	P	G	U	U	G	U	E	G	P
AMYL BORATE				E	E	U	E			
AMYL CHLORONAPHTHALENE				U	U	U	E			
AMYL NAPTHHALENE				U	U	U	E			
ANILINE	U	P	G	U	U	P	P	E	E	P
ANILINE DYES	P	P	E	P	P	P	G	E	E	
ANIMAL OIL	G	G	G	E	G	G	E			
ANTIMONY TRICHLORIDE	U	U	U	P			G	E		
APPLE JUICE	P	U	G	E	E	G	E	E		
AQUA REGIA (STRONG ACID)	U	U	G	U	U	U	U	E		U
AROCLOR 1248	G	U	U	U	U	G	E			
AROCLOR 1254	G	U	U	U	U	G	E			
AROCLOR 1260	G	U	U	E	E		E			
AROMATIC SOLVENTS	E	P	E	U	U	U		E		
ARSENIC ACID	U	U	G	E	E	G	E	E	E	U
ASPHALT EMULSION	E	G	E	U	P	U	E	E	E	
ASPHALT LIQUID	E	G	E	P	P	U	E	E	E	
ASTM OIL, NO. 1	E	E	E	E	E	U	E			
ASTM OIL, NO. 2	E	E	E	E	G	U	E			
ASTM OIL, NO. 3	E	E	E	E	U	U	E			
ASTM OIL, NO. 4	E	E	E	G	U	U	E			
ASTM REFERENCE FUEL A	U	G	E	E	G	U	E			
ASTM REFERENCE FUEL B	U	G	E	E	U	U	E			
ASTM REFERENCE FUEL C	U	G	E	G	U	U	E			
BARIUM CARBONATE	G	G	G	G	E	E	E	E	E	
BARIUM CHLORIDE	G	P	G	E	E	E	E	E	E	E
BARIUM CYANIDE	P		G	G	G	G	G	E		
BARIUM HYDRATE	U		E					E		
BARIUM HYDROXIDE	P	P	G	E	E	G	E	E	E	
BARIUM NITRARE			E		G			E		
BARIUM SALTS				E	E	E	E			
BARIUM SULFATE	P	P	E	E	E	G	E	E	E	E
BARIUM SULFIDE	U	P	G	E	G	E	E	E	E	
BEER	G	U	E	G	G	G	E	E	E	U
BEET SUGAR LIQUORS	E	G	E	E	E	G	E	E	E	
BENZALDEHYDE	E	E	E	U	U	E	U	E	E	E
BENZENE	G	G	G	U	U	U	G	E		E
BENZENESULFONIC ACID, 10%	U	U	U	U	G	U	E			
BENZLY CHLORIDE	U	U	G	U	U	U	E			
BENZOIC ACID	G	U	G	P	P	U	G	E		P
BENZYL ALCOHOL		U	E	U	G	G	E			
BERRYLLIUM	G		G	G	G	G	G	E		
BLEACH LIQUOR				U	G	E	E			
BLEACHING POWDER WET	G		P	U	E	G	G	E		
BLOOD	G		E	G	G	G	G	E		
BORAX	U	P	E	G	U	E	E	E	E	E
BORAX LIQUORS	E	P	G		P	E	E	E	E	
BORDEAUX MIXTURE			E					E		
BORIC ACID	P	U	G	G	G	G	E	E	E	G
BRAKE FLUID	G		G	U	P	G	U	E		
BRINES, SATURATED	G	U	G	E	G	E	E	E	E	
BROMINE, DRY	G	U	U	U	U	U	G	E		
BROMINE, WET	U	U	U	U	U		G	E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
BUNKER OILS (FUEL)	G	G	E	G	G		E	E	E	
BUTADIENE	P	G	E	P	P	P	G	U		
BUTANE	E	G	E	G	G	U	E	E	E	
BUTTER	G	U	E	G	G			E		
BUTTERMILK	U	U	E	E	E	G	E	E	E	
BUTYL ACETATE	G		G	U	U	U	U	E		E
BUTYL ALCOHOL	E	P	E	G	G		G	E		
BUTYL AMINE	G	G	E	U	U		U	E		
BUTYL BUTYRATE				U	U	E	E			
BUTYL CARBITOL	E	P	E	U	U		U	E		
BUTYL CELLOSOLVE	E	P	E	U	U		G	E		
BUTYL STEARATE				G	U	U	E			
BUTYLENE	E	E	E	U	U	U	U	E		
BUTYRIC ACID	P	U	G	P	P	P	P	E	E	U
CALCINE LIQUORS				E		E	E			
CALCIUM ACETATE				G	G	E	U			
CALCIUM BISULFITE	P	U	G	E	E	U	E	E	E	
CALCIUM CARBONATE	P	U	G	E	E	G	E	E	E	
CALCIUM CHLORATE	U		G	G	G	G	G	E		
CALCIUM CHLORIDE	G	P	G	E	E	G	E	E	E	U
CALCIUM HYDROXIDE	P	P	G	E	G	E	E	E	E	
CALCIUM HYPOCHLORITE	U	U	P	P	P		E	E		U
CALCIUM NITRATE			G	G	G	G		E		
CALCIUM PHOSPHATE	P		G	G	G	G	G	E		
CALCIUM SALTS				E	E	E	E			
CALCIUM SILICATE	P		G	G	G	G	G	E		
CALCIUM SULFATE	P	P	G	E	E	G	E	E	E	U
CALCIUM SULFIDE	U	U	G	E	E	E	E			
CALICHE LIQUOR		G	E	G	G			E		
CAMPHOR	P		G	G	G	G	G	E		
CANE SUGAR LIQUORS	G	G	E	G	G	G	G	E		
CARBOLIC ACID	U	U	G	G	G	G	E	E	U	
CARBON BISULFIDE	P	G	G	U	U	U	E	E	E	
CARBON DIOXIDE, DRY	E	E	E	P	G	G	G	E		
CARBON DISULFIDE	U	P	E	U	U		E	E		
CARBON MONOXIDE	E	E	E	G	U	G	G	E		
CARBON TETRACHLORIDE, DRY	P	G	E	U	U	U	G	E	E	
CARBON TETRACHLORIDE, WET	U	U	G	U	U	U	G	E	E	
CARBONATED BEVERAGE	G	U	G	G	G	G	G	G		E
CARBONATED WATER	G	G	E	E	E	E	E	E	E	
CASEIN	P			G	G	G	G	G	E	
CASTER OIL	E	G	E	E	G	G	E	E	E	
CAUSTIC POTASH			E	G	G			E		
CAUSTIC SODA		G	E	P		G	G	E		
CELLULOSE ACETATE	G		G	U	U	G	U	E		
CELLULUBE	E	P	E	U	U		U	E		
CHINA WOOD OIL	P	P	E	E	G	U	E	E	E	
CHLORACETIC ACID	P	U	U	U	P		P	E		U
CHLORINATED SOLVENTS	P	P	E	U	U	U	P	E	E	
CHLORINATED WATER	U	P	G	E		E	E	E	U	U
CHLORINE, WET	U	U	U	U	U			E		
CHLORINE GAS	P	G	G	P	U	U	G	E	E	
CHLORO BROMO METHANE	G	U	G	U	U		G	E		
CHLOROBENZENE, DRY	G	G	E	U	U	U	E	E	E	E
CHLOROBUTADIENE				U	U	U	E			
CHLOROFORM, DRY	G	G	E	U	U	U	G	E	E	U
CHLOROPHYLL, DRY	G		G	G	G	G	G	E		
CHLOROSULFONIC ACID, DRY	P	G	G	U	U	U	U	E		U
CHLOROSULFONIC ACID, WET	U	U	U	U	U		P	E		
CHLORPHENOL				U	U	U	E			
CHROME ALUM	P	G	E	G	G	G	G	E		
CHROMIC ACID <50%	U	U	P	U	U	P	P	E	U	U
CHROMIC ACID >50%	U	U	P	U	U	P	P	E	U	
CHROMIUM SULFATE	P		G	G	G	G	G	E		
CIDER			E					E		
CITRIC ACID	P	U	G	G	E	G	E	E		P
CITRUS JUICES	G	U	G	E	E		E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
COCA-COLA SYRUP			E	G	G		G	E		
COCONUT OIL	G	P	G	E	P	E	E	E	E	
COFFEE	E		E	E	E	E	E	G		
COFFEE EXTRACTS, HOT	G	P	E					E		
COKE OVEN GAS	P	G	E	P	U	U	G	E		
COOKING OIL	G	G	E	E	G	U	E	E	E	
COPPER ACETATE	U	U	E	P	P	G	U	E		
COPPER CARBONATE			E					E		
COPPER CHLORIDE	U	U	P	G	G		E	E		U
COPPER CYANIDE	U		E	E	E	G	G	E		E
COPPER NITRATE	U	U	G	E	E	G	E	E	E	U
COPPER SALTS					E	E	E	E		
COPPER SULFATE	U	U	G	E	E	E	E	E	E	P
CORN OIL	G	P	G	E	P	P	E	E	E	
COTTONSEED OIL	G	P	G	E	G	P	G	E	E	
CREOSOTE OIL	G	G	G	P	U	U	E	E		U
CREOSOLS	U	G	G	U	U	U	U	E		
CRESYLIC ACID	P	P	G	U	U	U	G	E	U	U
CRUDE OIL, SOUR	P	G	E	E	G	U	E	E		
CRUDE OIL, SWEET	G	G	E	E	G		E	E		
CUPRIC NITRATE			E					E		
CUTTING OILS, WATER EMULSIONS	E	G	E	E	G		E	E		E
CYANIDE PLATING SOLUTION	U		G	G	G	G	G	E		
CYCLOHEXANE	E	E	E	P	U	U	E	E	E	
CYCLOHEXANONE	G		E	U	U			E		
DECANE				E	U	U	E			
DENATURED ALCOHOL				E	E	E	E			
DETERGENTS, SYNTHETIC	G	U	G	G	G	G	E	E		
DEXTRIN	G		G	G	G	G	G	E		
DIACETONE ALCOHOL	E	E	E	U	P			E		
DICHLOROETHANE			P	U	U	U		E		
DICHLOROETHYL ETHER	G		G	U	U	U	U	E		
DIESEL OIL FUELS	E	E	E	E	P	U	E	E		
DIETHYL BENZENE			G	U	U	U		E		
DIETHYL SULFATE	G		G	P	P	P	G	E		
DIETHYLAMINE	G	E	E	G	P	P	U	E		
DIETHYLENE GLYCOL	G	E	E	E	E	E	G	E		
DIMETHLY FORMAMIDE	G		E	G	U	U	U	E		
DIMETHYL PHTHALATE			U	G	G		U	E		
DIOCTYL PHTHALATE	E		E	P	U		P	E		
DIOXANE	G		G	U	U	P	U	E		
DIPENTANE	E		E	G	U	U	G	E		
DISODIUM PHOSPHATE			G	G	G		G	E		
DOW CHEMICAL HD50-4					G	E	U			
DOW CORNING 200, 510, 550				G	E	E	E			
DOWTHERM	E	G	E	U	U	U	E	E	E	
DRILLING MUD	G	G	E	E	P	E	E	E	E	
DRY CLEANING FLUIDS	P	G	E	U	U		G	E	E	
DRYING OIL	P	P	G	E	G			E	E	
ENAMEL	E		E	G	G	U		E		
EPSOM SALTS	G	P	G	E	E		E	E	E	
ETHANE	G	P	G	E	G	U	E	E	E	
ETHANOL	E	U	U	U	E	E	U			
ETHANOLAMINE	U	G	E	G	P		U	E		
ETHERS	G	E	E	U	U	P	P	E	P	
ETHYL ACETATE	P	G	G	U	U	P	U	E	E	E
ETHYL ACRYLATE	G	P	E	U	U	P	U	E		
ETHYL ALCOHOL	G	G	G	E	E		E	E		
ETHYL BENZENE			G	P	U	U		E	E	
ETHYL BROMIDE	E		G	G	G	G	G	E		
ETHYL CHLORIDE, DRY	G	G	E	P	P	P	G	G	E	E
ETHYL CHLORIDE, WET	P	U	G	P	P	G	G	E		
ETHYL ETHER	G		E	U	U	U	U	E		
ETHYL HEXANOL				E	E	E	E			
ETHYL SILICATE	G		G	G	P	G	G	E		
ETHYL SULFATE			G	G	G	P	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
ETHYLENE CHLORIDE			E	U	E		U	E		
ETHYLENE DICHLORIDE	U	U	G	U	U	U	U	E		
ETHYLENE GLYCOL	G	G	G	E	G	E	E	E		
ETHYLENE OXIDE	P	G	G	U	U	U	U	E		
FATTY ACIDS	P	U	E	G	G	U	E	E	E	U
FERRIC CHLORIDE	U	U	U	E	U		E	E		U
FERRIC HYDROXIDE			E	G				E		
FERRIC NITRATE	U	U	P	E	E	E	E	E	E	U
FERRIC SULFATE	U	U	G	E	E	E	E	E	E	U
FERROUS AMMONIUM CITRATE			G					E		
FERROUS CHLORIDE	G	U	U	E	E	E	E	E	E	U
FERROUS SULFATE	G	U	G	E	E	E	E	E	E	U
FERROUS SULFATE, SATURATED	P	P	E	P	P	G	G	E		
FERTILIZER SOLUTIONS	P	G	G	G	G			E	G	
FISH OILS	G	G	E	E	G	U	E	E	G	
FLUE GASES	G		E	P	P	U	P	E	P	
FLUOBORIC ACID			G	E	G			E		U
FLUORINE, DRY	U		U	U					E	
FLUOROSILICIC ACID	G	U	G	P	P	P	P	E		U
FOOD FLUIDS & PASTES	G	P	E	G	E			E		
FORMALDEHYDE, COLD	E	E	E	G	P	G	U	E	E	U
FORMALDEHYDE, HOT	G	U	P	G	G			E	E	U
FORMIC ACID, COLD	G	U	G	U	G		G	E	U	E
FORMIC ACID, HOT	G	U	G	U	E		E	E	U	
FRUIT JUICES	G	U	E	E	E	E	E	E	E	
FUEL OIL	G	G	E	E	P	U	E	E	E	
FUMARIC ACID				G	G			E		
FURFURAL	E	E	E	U	P	P	U	E	E	E
GALIC ACID 5%	P	U	G	G	G	P	E	E	E	
GAS, NATURAL	G	G	E	E	E	U	E	E	E	
GAS, ODORIZERS	E	G	G	G	G		E	E	E	
GAS MFG.	G	G	G	E			E	E	E	
GASOLINE, AVIATION	E	E	E	P	U		E	E		E
GASOLINE, LEADED	E	E	E	P	U		E	E	E	
GASOLINE, MOTOR	E	E	E	P	U	U	E	E	E	
GASOLINE, REFINED	G	G	E	P	P	U	E	E		
GASOLINE, SOUR	G	G	E	P	U	U	E	E	E	
GASOLINE, UNLEADED	E	E	E	P	U		E	E	E	E
GELATIN	E	U	E	E	E	E	E	E	E	
GLUCOSE	E	G	E	E	E	E	E	E	E	
GLUG	E	G	E	E	G	E	E			
GLYCERINE	G	P	E	P	U	E	G	E	P	E
GLYCOL	G	P	G	G	E	E	E	E	P	
GLYCOL AMINE	U		G	E		U	U			
GRAPHITE	G		G	G	G	G	G	E		
GREASE	P	E	E	E	G	U	E	E		
GULF-FR FLUID, EMULSION				E	G	U	E			
GULF-FR FLUID G				E	E	E	E			
GULF-FR FLUID P				U	U	G	G			
HELIUM GAS	G	E	E	G	G	G	G	E		
HEPTANE	E	G	E	E	G	U	E	E	E	
HEXANE	G	G	E	E	P	U	E	E	E	E
HEXANOL, TERTIARY	E	E	E	E	P	U	G	E		
HEXYL ALCOHOL	E	P	E	U	P		E	E		
HYDRAULIC OIL, PETROLEUM BASE	G	E	E	E	G	U	E	E	E	
HYDRAZINE	U	U	G	P	P	G	U	E		
HYDRIGEN SULFIDE, DRY	P	G	E	P	E	E	E	E		
HYDROCHLORIC ACID, AIR FREE	U	U	U	G	P		E	E		U
HYDROCYANIC ACID	U	U	E	G	G	G	E	E	U	
HYDROFLUORIC ACID	U	U	U		G					U
HYDROFLUOSILICIC ACID	E	U	P	G	G	G	E	E		U
HYDROGEN GAS, COLD	G	G	E	G	G	G	E	E		
HYDROGEN GAS, HOT	G	G	G	G	G		E			
HYDROGEN PEROXIDE, CONCENTRATED	U	U	G	U	U	G	G	E		U
HYDROGEN PEROXIDE, DILUTE	P	U	G	E	G	G	E	E	G	U
HYDROGEN SULFIDE, WET	U	P	G	P	G	G	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
HYDROLUBE				E	G	E	E			
HYPO (SODIUM THIOSULFATE)	P	U	G	E	E	E	E	E	E	
HYPOCHLORITES, SODIUM	U	U	P	P			E	E		
ILLUMINATING GAS	E	E	E	P	P	U	E	E		
INK, NEWSPRINT	P	U	E	E	G	G	E	E	E	
IODINE, WET	U	U	U	G			E	E		
IODOFORM	P	G	E				E	E	E	
ISOPROPYL ACETATE			G	U	U	U		E		
ISOPROPYL ALCOHOL	G	G	G	P	G		E	E		
ISOPROPYL ETHER	E	E	E	P	P	U	U	E		
ISO-BUTANE			G	G	U	U		E		
ISO-OCTANE	E	E	E	E	P	U	E	E		E
J P-4 FUEL	E	E	E	E	P		E	E	E	
J P-5 FUEL	E	E	E	G	P		E	E	E	
J P-6 FUEL	E	E	E	E	P		E	E	E	
KEROSENE	E	G	E	E	P	U	E	E	E	
KETCHUP	U	U	E	E	E		E	E	E	
KETONES	E	E	E	U	U	U	U	E	E	
LACTIC ACID, CONC. COLD	U	U	E	G	E	G	E	E	U	U
LACTIC ACID, CONC. HOT	U	U	G	P	P	G	G	E	U	U
LACTIC ACID, DILUTE COLD	U	U	E	G	E	G	E	E	U	U
LACTIC ACID, DILUTE HOT	U	U	E	P	U		U	E	U	U
LACTOSE	G		G	G	P	G	G	E		
LAQUER	E	P	E	U	U	U	U	E	E	E
LARD	G	E	E	G	P	P		E		
LARD OIL	G	P	G	E	G	G	E	E	E	
LEAD ACETATE	P	U	G	E	G	G	G	E	E	E
LEAD SULFATE	P		G	G	G	G	G	E		
LECITHIN	P		G	U	U	U	G	E		
LINOLEIC ACID	G	G	E	G	G	U	G	E	E	
LINSEED OIL	G	E	E	E	P	U	E	E	E	
LITHIUM CHLORIDE	G		G	G	G	G	G	E		
LPG	E	G	G	E	G	U	E	E	E	
LUBRICATING OIL	G	E	E	E	G	U	E	E	E	
LUDOX	U		G	G	G	G	G	E		
MAGNESIUM BISULFATE	G	G	E	G	G	G	G	E		
MAGNESIUM BISULFIDE	U		G	G	G	G	G	E		
MAGNESIUM CARBONATE	G		E	G	G	G	G	E		
MAGNESIUM CHLORIDE	G	P	G	E	E	E	E	E	E	E
MAGNESIUM HYDROXIDE	G	G	E	E	E	E	E	E	E	
MAGNESIUM HYDROXIDE HOT	U	G	E	G	G		E	E	E	
MAGNESIUM NITRATE			E	G	E		G	E		E
MAGNESIUM SALTS				E	E	E	E			
MAGNESIUM SULFATE	G	G	E	E	E	E	E	E	E	E
MALEIC ACID	G	G	G	G	G	U	E	E	E	
MALEIC ANHYDRIDE	G		G	U	U	U	G	E		
MALIC ACID	G	U	G	E	G		E	E	E	
MALT BEVERAGES			E	E	E	G	E	E		
MANGANESE CARBONATE			G	G				E		
MANGANESE SULFATE	G		E	G	G	G	G	E		
MAYONNAISE	U	U	E	E	E		E	E	E	
MEAT JUICES	U		E	G	G			E		
MELAMINE RESINS			P	G	G			E		
MERCURIC CHLORIDE	U	U	G	E	G	E	E	E		
MERCURIC CYANIDE	U	U	E	E	G	E	E	E		
MERCUROUS NITRATE	U		E				G	E		
MERCURY	U	E	E	E	E	E	E	E		E
METHANE	E	G	E	E	G		E	E	E	
METHANOL	E	E		E	E	E	U			
METHANOL	G		E	G	G	U	G	E		
METHYL ACETATE	E	G	E	U	U	G	U	E		
METHYL ACETONE	E	E	E	U	U	E	U	E		
METHYL ALCOHOL	G	G	G	E	G		P	E		E
METHYL BROMIDE 100%	P	G	G	G	U	U	G	E		
METHYL CELLOSOLVE	E	G	E	P	U	G	U	E		
METHYL CELLULOSE			E	U	U			E		
METHYL CHLORIDE	G	G	E	U	U	U	G	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
METHYL ETHER				E	U	U	E			
METHYL ETHYL KETONE	E	E	E	U	U	G	U	E	E	E
METHYL FORMATE	E	P	G	U	G	G	U	E		
METHYL ISOBUTYLE KETONE			E	U	U			E		
METHYLAMINE	U	G	E	U	U	G	U	E		
METHYLENE CHLORIDE	E	G	E	U	U	U	P	E		U
MILK & MILK PRODUCTS	G	U	E	E	E	E	E	E	E	
MIL-F-81912, JP-9	E	E	E	U	U	U	E			
MIL-H-5606	E	E	E	E	G	U	E			
MIL-H-6083	E	E	E	E	E	U	E			
MIL-H-7083	E	E	E	E	G	E	G			
MIL-H-8446	G	E	E	G	E	U	E			
MIL-L-2104 &2104B	E	E	E	E	G	U	E			
MIL-L-7808	U	G	E	G	U	U	E			
MINE WATERS, ACID	P	U	P	E			E	E		
MINERAL OILS	G	G	E	E	G	U	E	E	E	
MINERAL SPIRITS	G	G	G	E	P		E	E	E	
MIXED ACIDS, COLD	U	P	G	U	U	U	G	E	U	
MLO-7277 & MLO-7557	G	E	E	U	U	U	E			
MOBILE HF	E	E	E	E	G	U	E			
MOLASSES, CRUDE	E	E	E	E	E		E	E	E	
MOLASSES, EDIBLE	E	P	E	E	E		E	E	E	
MOLYBDIC ACID			E					E		
MONOCHLORO BENZENE DRY			G	U	U			E		
MONOMETHYL HYDRAZINE				G	G	E				
MORPHOLINE	G		E	U	U	G	U	E		
MURIATIC ACID	U	U	U	G			E	E		
MUSTARD	E	G	E	E	E		E	E	E	
NAPHTHENIC ACID	G	E	G	G	U	U	E			
NAPTHA	G	G	G	G	P	U	E	E	E	
NAPTHALENE	G	G	G	U	U	U	E	E	E	
NATURAL GAS, SOUR	G	G	E	E	E	U	E	E		
NEATSFOOT OIL				E	U	G	E			
NICKEL ACETATE	U	G	E	G	G	E	U			
NICKEL AMMONIUM SULFATE	U	U	E	E	G	G	U	E		
NICKEL CHLORIDE	U	U	G	E	E	G	E	E	E	E
NICKEL NITRATE	U	U	G	E	E	E	E	E	E	
NICKEL SALTS				E	G	E	E			
NICKEL SULFATE	U	U	G	E	E	G	E	E	E	E
NITRIC ACID 100%	U	U	E	U	U	U	G	E	U	U
NITRIC ACID 10%	U	U	E	P	G		E	E	U	U
NITRIC ACID 30%	U	U	E	P	P	G	E	E	U	U
NITRIC ACID 80%	U	U	P	U	U	U	G	E	U	U
NITRIC ACID ANHYDROUS	U	U	E	U	U	U	E	E		
NITROBENZENE	U	G	E	U	U	P	P	E		E
NITROGEN	E	E	E	E	E	G	E	E	E	
NITROUS ACID 10%	U	U	G	P	E		E	E		
NITROUS GASES	U	G	E					E		
NITROUS OXIDE	G	G	G	G	G		E	E		
NOCOTINIC ACID	E	G	E	U	U	U	G	E		
OCTYL ALCOHOL	E	E	E	G	G	U	E			
OILS, ANIMAL	E	E	E	E	G	G	G	E		
OILS, PETROLEUM REFINED	G	E	E	E	G	U	E	E	E	
OILS, PETROLEUM SOUR	P	G	E	G	G	U	E	E		
OILS, WATER MIXTURE	E	G	E	E	G		E	E	E	
OILS & FATS			E	G		U		E		
OLAIC ACID			G	U	U		P	E		
OLEIC ACID	G	P	G	G	P	U	E	E	E	
OLEUM	P	G	G	U	U	U	P	E	U	
OLEUM SPIRITS	U		G	P	U	U	E	E		
OLIVE OIL	P	G	E	E	G	G	E	E	E	
ORTHO-DICHLOROBENZENE	G	G	G	U	U	U	E			
OTHER KETONES	E	E	E	U	U	U	U	E		
OXALIC ACID	G	U	G	P	G	G	E	E	P	U
OXYGEN	E	G	E	G	G	E	E	E	U	
OZONE, DRY	E	E	E	U	U	E	G	E		
OZONE, WET	G	P	E	U	U	G	G	E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
PAINTS & SOLVENTS	E	E	E	U	U	U	G	E		
PALM OIL	G	P	G	G	G	U	E	E	E	
PALMITIC ACID	G	P	G	G	G	G	E	E	E	
PAPER PULP	G		E	G	G	G	G	E		
PARAFFIN	E	G	E	E	P	U	E	E	E	
PARAFORMALDEHYDE	G	G	G	G	G	U		E	E	
PARALDEHYDE			G	G	G	U		E		
PARA-DICHLOROBENZENE	G	E	E	U	U	U			E	
PARKER O LUBE	E	E	E	E	E	U	E			
PEANUT OIL	G	E	E	E	U	U	E			
PENTANE	E	G	E	E	G	U	E	E	E	
PERCHLORETHYLENE, DRY	P	G	E	U	U	U	E	E		
PERCHLORIC ACID-2N	U	U	G	U	G	G			E	
PETROLATUM (PETROLEUM JELLY)	G	P	G	E	G		E	E	E	
PHENOL	G	U	E	U	U	U	G	E	U	E
PHOSPHATE ESTER	U	E	E	U		E		E		
PHOSPHORIC ACID 10%	U	U	U	G	E	G	E	E	U	U
PHOSPHORIC ACID 50% COLD	U	U	G	G	G	G	E	E	U	U
PHOSPHORIC ACID 50% HOT	U	U	U	G	G	G	E	E	U	U
PHOSPHORIC ACID 85% COLD	G	G	E	P	P		G	E	U	U
PHOSPHORIC ACID 85% HOT	P	P	G	P	P			E	U	U
PHOSPHORIC ANHYDRIDE			E	U	U		G	E	G	
PHOSPHOROUS TRICHLORIDE	U	G	E	U	U	G	G	E		
PHTHALIC ACID	G	P	G	P	P		E	E	E	
PHTHALIC ANHYDRIDE	G	P	G	P	P		E	E	E	
PICRIC ACID	P	U	G	P	E	G	G	E		
PINE OIL	G	G	E	E	U	U	E	E	E	
PINEAPPLE JUICE	P	P	E	E	E		E	E	E	
PITCH			E	P	P	U		E		
PLATING SOLUTIONS, CHROME	E	U	E		U	E	E			
PLATING SOLUTIONS, OTHER		E	E	E	U	E	E			
PNEUMATIC SERVICE	E	E	E	E	E	E	E	E		
POLYSULFIDE LIQUOR	U		G	G	G	G	G	E		
POLYVINYL ACETATE	G		G		P	G		E		
POLYVINYL CHLORIDE	G		G		P	G		E		
POTASSIUM ACETATE	G	E	G	G	G	E	U			
POTASSIUM BICARBONATE			E	G				E		E
POTASSIUM BICHROMATE			E	G	G		G	E	G	
POTASSIUM BISULFATE			E	G	G		E	E		
POTASSIUM BISULFITE	P	U	G	E	E	G	E	E	E	
POTASSIUM BROMIDE	P	U	E	E	E	G	E	E	E	P
POTASSIUM CARBONATE	G	G	G	E	E	G	E	E	E	E
POTASSIUM CHLORATE	G	G	G	E	E	G	E	E	E	P
POTASSIUM CHLORIDE	P	P	G	E	E	E	E	E	E	P
POTASSIUM CHROMATE	G		G	G	E	G	G	E		
POTASSIUM CYANIDE	U	G	G	E	E	E	E	E	E	E
POTASSIUM DICHROMATE	U	P	G	E	E	G	E	E	E	U
POTASSIUM DIPHOSPHATE	G	E	E	E			E	E		
POTASSIUM FERRICYANIDE	U	P	E	E	E	G	E	E	E	
POTASSIUM FERROCYANIDE	G	P	G	E	E		E	E	E	
POTASSIUM HYDROXIDEDILUTE COLD	U	E	G	E	G		U	E		E
POTASSIUM HYDROXIDE DILUTE HOT	U	G	G	G	G			E		
POTASSIUM HYDROXIDE TO 70% COLD										
POTASSIUM HYDROXIDE TO 70% HOT	U	E	G	P	G	E			E	
POTASSIUM HYDROXIDE TO 70% HOT	U	E	G	P	G	E		E		
POTASSIUM IODIDE	U	P	G	E	E	G	E	E	E	
POTASSIUM NITRATE	G	G	G	E	E	G	E	E	E	P
POTASSIUM OXALATE			E					E		
POTASSIUM PERMANGANATE	G	G	G	E	E	G	E	E	E	U
POTASSIUM PHOSOHATE	P		G	E	E	E	E	E		
POTASSIUM PHOSPHATE DI-BASIC	G	E	E	E	E	G	E	E	E	
POTASSIUM PHOSPHATE TRI-BASIC		E	G	G	G	G		E		
POTASSIUM SALTS				E	E	E	E			
POTASSIUM SULFATE	G	G	E	E	E	E	E	E	E	P
POTASSIUM SULFIDE	G	G	E	E	G	G	G	E		
POTASSIUM SULFITE	G	G	E	G	G	E	G	E		
PRODUCER GAS	G	G	G	E	G	U	E	E	E	

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
PROPANE GAS	E	G	G	E	G	U	E	E	E	
PROPYL ACETATE	U	E	E	U	U	G	U			
PROPYL ALCOHOL	E	G	G	E	E		E	E		
PROPYL BROMIDE	G		G	G	G	G	G	E		
PROPYLENE	E	E	E	U	U	U	E			
PROPYLENE GLYCOL	G	G	G	E	E	G	E	E	P	
PYDRAUL	E	P	E	U	U		G	E		
PYRIDINE			G	U	U		U	E		
PYROGARD 42, 43, 53, 55				U	U	E	E			
PYROGARD D				E	G	E	E			
PYROLGALIC ACID	G	G	G	E	E		E	E	E	
QUENCH OIL	G	G	E	E	G		E	E	E	
QUININE, SULFATE, DRY			E					E		
R P-1 FUEL	E	E	E	G	P		E	E	E	
RESINS & ROSINS	E	P	E	P	P		E	E		
RESORCINOL			G					E		
ROAD TAR	E	E	E	G	P	U	E	E	E	
ROOF PITCH	E	E	E	G	P		E	E	E	
ROSIN EMULSION	G	P	E	U	P		G	E		
RUBBER LATEX EMULSIONS	E	G	E				E	E	E	
RUBBER SOLVENTS	E	E	E	U	P		U	E	P	
SALAD OIL	G	P	G	E	E	G	E	E	E	
SALICYLIC ACID	P	U	E	E	E	G	E	E	E	
SALT	G	P	G	E	E		E	E	E	
SALT BRINE	G		G	E	U	G	G	E		
SAUERKRAUT ARINE			G					E		
SEA WATER	P	U	G	E	E	E	E	E	E	
SEWAGE	P	P	G	E	P	G	G	E		
SHELL IRUS 905				E	G	U	E			
SHELLAC	E	E	E	E	E			E		
SILICONE FLUIDS	G		G	G	G		G	E		
SILVER BROMIDE										
SILVER CYANIDE	U		E	G	G		G	E		
SILVER NITRATE	U	U	E	P	P	E	E	E	E	
SILVER PLATING SOL.			E		G			E		
SKYDROL 500	E	G	E	U	U		U	E		
SKYDROL 7000, TYPE 2	U	E	E	U	U	E	G			
SOAP SOLUTIONS	E	E	E	E	G	E	E	E		
SODIUM ACETATE	G	P	G	G	G	G	E	E	E	E
SODIUM ALUMINATE	G	P	E	E	E	G	E	E	E	
SODIUM BENZOATE			G					E		
SODIUM BICARBONATE	G	P	G	E	E	E	E	E	E	E
SODIUM BICHROMATE			G	U				E		
SODIUM BISULFATE 10%	G	U	E	E	E	G	E	E	E	P
SODIUM BISULFITE 10%	G	U	E	E	E	G	E	E	E	P
SODIUM BORATE	G	P	G	E	E	G	E	E	E	
SODIUM BROMIDE 10%	G	P	G	E	E	G	E	E	E	
SODIUM CARBONATE	G	G	E	E	E	G	E	E	E	E
SODIUM CHLORATE	G	P	G	E	E	G	E	E	E	P
SODIUM CHLORIDE	G	P	G	E	E	G	E	E	E	E
SODIUM CHROMATE	P	G	E	E	E	G	E	E	E	
SODIUM CITRATE			G					E		
SODIUM CYANIDE	U	G	E	E	E	G	E	E	E	E
SODIUM FERRICYANIDE			E					E		
SODIUM FLUORIDE	P	U	G	E	E	G	E	E	E	
SODIUM HYDROXIDE 20% COLD	E	E	E	E	E	G	G	E		E
SODIUM HYDROXIDE 20% HOT	E	G	E	G	G	G	P	E		
SODIUM HYDROXIDE 50% COLD	E	E	E	E	E	G	P	E		E
SODIUM HYDROXIDE 50% HOT	E	G	E	G	G		P	E		
SODIUM HYDROXIDE 70% COLD	E	E	E	G	P	G	P	E		
SODIUM HYDROXIDE 70% HOT	G	G	E	U	U	G	P	E		
SODIUM HYPOCHLORITE (BLEACH)	U	U	U				E	E		U
SODIUM HYPOSULFITE			G					E		
SODIUM LACTATE			E					E		
SODIUM METAPHOSPHATE	P	G	G	E	E	G		E		
SODIUM METASILICATE COLD	G	P	E	G	E		G	E		
SODIUM METASILICATE HOT	G	U	E					E		

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
SODIUM NITRATE	G	G	E	P	G	G	E	E	E	E
SODIUM NITRITE			G	P	U	E	G	E	G	
SODIUM PERBORATE	G	G	G	P	G	E	E	E	E	
SODIUM PEROXIDE	U	P	G	P	G	E	E	E	E	
SODIUM PHOSPHATE	P	P	G	G	P	E	E	E	G	
SODIUM PHOSPHATE DI-BASIC	P	P	G	E	E	E	E	E	E	
SODIUM PHOSPHATE TRI-BASIC	P	P	G	G	G	E	E	E	E	
SODIUM POLYPHOSPHATE			G	G	G	E		E		
SODIUM SALICYLATE			E					E		
SODIUM SALTS										
SODIUM SILICATE	G	G	G	E	E	G	E	E	E	E
SODIUM SILICATE, HOT	P	P	G			G		E		
SODIUM SULFATE	G	G	E	E	E	E	E	E		E
SODIUM SULFIDE	U	G	G	E	E	G	E	E	E	E
SODIUM SULFITE	P		E	E	E	G	G	E		
SODIUM TETRABORATE			E	E	E	G		E		
SODIUM THIOSULFATE	P	G	G	E	E	E	E	E	E	
SOYBEAN	G	P	E	E	G	G	E	E	E	
STANNIC CHLORIDE	P	U	U	E	E		E	E		
STARCH	G	P	G	E	E	P	E	E	E	
STEAM (212 F)	E	E	E	U	U	G	P	E	U	
STEARIC ACID	P	P	G	E	P	G	E	E	E	
STODDARD SOLVENT	G	E	E	E	G	U	E			
STYRENE	E	E	E	U	U	U	G	E		
SUCROSE SOLUTIONS	E	E	E	E	G	E	E			
SUGAR, SYRUPS & JAM	G		E		G			E		
SUGAR LIQUIDS	E	G	E	E	E	G	E	E	E	
SULFATE, BLACK LIQUOR	P	P	G	P	G	G	P	E	E	
SULFATE, GREEN LIQUOR	P	P	G	P	G		P	E	E	
SULFATE, WHITE LIQUOR	P	P	G	P	G		P	E	E	
SULFUR	U	P	G	U	P	G	G	E	E	
SULFUR, MOLTEN	U	P	G	U	P	G	G	E		
SULFUR CHLORIDES	G	U	U	U	U	P	E	E	E	
SULFUR DIOXIDE, DRY	G	G	E	U	U	E	E	E	E	
SULFUR DIOXIDE, WET	U		E	U	U	G		E		
SULFUR HEXAFLUORIDE	G		E		G			E		
SULFUR TRIOXIDE	G	G	G	U	U		G	E		
SULFUR TRIOXIDE, DRY	G	G	G	U	U	G	E	E		
SULFURIC ACID 0 TO 77%	P	U	P	G	G		E	E	P	U
SULFURIC ACID 100%	P	P	E	U	U	P	G	E	U	U
SULFUROUS ACID	U	U	G	P	P	P	E	E	P	
SUNSAFE	U	E	E	E	G	U	E			
TALL OIL	G	G	G	G	G	U	E	E		
TANNIC ACID	G	P	G	G	G	G	E	E	E	U
TANNING LIQUORS			G	G	U			E		
TAR & TAR OILS	E	E	E	P	U	U	E	E		
TARTARIC ACID	G	U	E	P	G	G	E	E	E	
TERPINEOL				G	U	U	E			
TERTIARY BUTYL ALCOHOL	E	E	E	G	G	G	E			
TETRACHLOROETHANE		G	E	U	U	U	E			
TETRACHLOROETHYLENE	U	G	U	U	U	E				
TETRAETHYL LEAD	G	P	G					E	E	
TITANIUM TETRACHLORIDE	G	E	G	G	U	U	E			
TOLUOL (TOLUENE)	E	E	E	U	U	U	G	E	E	E
TOMATO JUICE	P	P	E	E	E		E	E		E
TRANSFORMER OIL	G	E	E	E	G		E	E	E	
TRANSMISSION FLUID, TYPE A	E	E	E	E	G	U	E			
TRIBUTYL PHOSPHATE	E	E	E	U	U	G	U	E		
TRICHLORETHYLENE	G	G	G	U	U	U	G	E	E	U
TRICHLOROACETIC ACID	G		U	P	U		U	E		
TRICHLOROETHANE		G	E	U	U	U	E			
TRICRESYL PHOSPHATE		E	G	U	U	E	G			
TRIETHANOLAMINE			G	P	G	G		E		
TRIETHYLAMINE	G		G	G	G			E		
TRISODIUM PHOSPHATE			G	E	E	G	G	E		
TUNG OIL	G	G	E	E	G	U	E	E	E	
TURBINE OIL #15		G	E	G	U	U	E			

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

FLUID	BRASS	CARBON STEEL	316 S.S.	BUNA N (NILTRILE)	NEOPRENE	EPR	FLUORO-CARBON	PTFE	ACETAL	NYLON
TURPENTINE	G	G	G	G	U	U	E	E	E	E
UREA	U	P	G	P	G	G	U	E	E	
URIC ACID			E					E		
VARNISH	E	P	E	P	G	U	G	E	E	
VEGETABLE OILS	G	G	E	E	G	U	E	E	E	
VINEGAR	G	U	E	U	U	E	U	E		E
VINYL ACETATE	G		G		G	E		E		
WATER, ACID MINE	U	U	G	G	E	E	U	E		
WATER, DISTILLED	U	U	E	P	G	G	E	E	E	
WATER, FRESH	P	P	E	P	G	G	E	E	E	
WAXES	E	E	E	E	G	P	E	E	E	
WHISKEY & WINES	G	U	E	G	G	E	E	E	E	
XYLENE (XYLOL), DRY	E	G	E	U	U	U	G	E	E	E
ZINC BROMIDE	G		G	G	G	G	G	E		
ZINC CHLORIDE	U	U	U	G	G		E	E		U
ZINC HYDROSULFITE	P	E	E	E	E	E	E	E	E	
ZINC SULFATE	G	U	G	E	E	E	E	E	E	P

E-EXCELLENT **G-GOOD** **P-POOR** **U-UNSATISFACTORY**

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 below. No product from any division in Fluid Connector Group is approved for in-flight aerospace applications. For hoses and fittings used in in-flight aerospace applications, please contact Parker Aerospace Group

GENERAL INSTRUCTIONS

1.0 Scope: This safety guide provides instructions for selecting and using (including assembling, installing, and maintaining) these Products. For convenience, all rubber and/or thermoplastic products commonly called "hose" or "tubing" are called "Hose" in this safety guide. Metallic tube or pipe are called "tube". All assemblies made with Hose are called "Hose Assemblies". All assemblies made with Tube are called "Tube Assemblies". All products commonly called "fittings", "couplings" or "adapters" are called "Fittings". Valves are fluid system components that control the passage of fluid. Related accessories are ancillary devices that enhance or monitor performance including crimping, flaring, flanging, presetting, bending, cutting, deburring, swaging machines, sensors, tags, lockout handles, spring guards and associated tooling. This safety guide is a supplement to and is to be used with the specific Parker publications for the specific Hose, Fittings and Related Accessories that are being considered for use. Parker publications are available at www.parker.com. SAE J1273 (www.sae.org) and ISO 17165-2 (www.ansi.org) also provide recommended practices for hydraulic Hose Assemblies, and should be followed.

1.1 Fail-Safe: Hose, Hose Assemblies, Tube, Tube Assemblies and Fittings can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of the Hose, Hose Assembly, Tube, Tube Assembly or Fitting will not endanger persons or property.

1.2 Distribution: Provide a copy of this safety guide to each person responsible for selecting or using Hose, Tube and Fitting products. Do not select or use Parker Hose, Tube or Fittings without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the Products.

1.3 User Responsibility: Due to the wide variety of operating conditions and applications for Hose, Tube and Fittings. Parker does not represent or warrant that any particular Hose, Tube or Fitting is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the Products.
- Assuring that the user's requirements are met and that the application presents no health or safety hazards.
- Following the safety guide for Related Accessories and being trained to operate Related Accessories.
- Providing all appropriate health and safety warnings on the equipment on which the Products are used.
- Assuring compliance with all applicable government and industry standards.

1.4 Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the Products being considered or used, or call 1-800-CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

2.0 HOSE, TUBE AND FITTINGS SELECTION INSTRUCTIONS

2.1 Electrical Conductivity: Certain applications require that the Hose be nonconductive to prevent electrical current flow. Other applications require the Hose and the Fittings and the Hose/Fitting interface to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting Hose, Tube and Fittings for these or any other applications in which electrical conductivity or nonconductivity is a factor.

The electrical conductivity or nonconductivity of Hose, Tube and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the Hose and the Fittings, Fitting finish (some Fitting finishes are electrically conductive while others are nonconductive), manufacturing methods (including moisture control), how the Fittings contact the Hose, age and amount of deterioration or damage or other changes, moisture content of the Hose at any particular time, and other factors.

The following are considerations for electrically nonconductive and conductive Hose. For other applications consult the individual catalog pages and the appropriate industry or regulatory standards for proper selection.

2.1.1 Electrically Nonconductive Hose: Certain applications require that the Hose be nonconductive to prevent electrical current flow or to maintain electrical isolation. For applications that require Hose to be electrically nonconductive, including but not limited to applications near high voltage electric lines, only special nonconductive Hose can be used. The manufacturer of the equipment in which the nonconductive Hose is to be used must be consulted to be certain that the Hose, Tube and Fittings that are selected are proper for the application. Do not use any Parker Hose or Fittings for any such application requiring nonconductive Hose, including but not limited to applications near high voltage electric lines or dense magnetic fields, unless (i) the application is expressly approved in the Parker technical publication for the product, (ii) the Hose is marked "nonconductive", and (iii) the manufacturer of the equipment on which the Hose is to be used specifically approves the particular Parker Hose, Tube and Fittings for such use.

2.1.2 Electrically Conductive Hose: Parker manufactures special Hose for certain applications that require electrically conductive Hose. Parker manufactures special Hose for conveying paint in airless paint spraying applications. This Hose is labeled "Electrically Conductive Airless Paint Spray Hose" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in all airless paint spraying applications. Do not use any other Hose for airless paint spraying, even if electrically conductive. Use of any other Hose or failure to properly connect the Hose can cause a fire or an explosion resulting in death, personal injury, and property damage. All hoses that convey fuels must be grounded. Parker manufactures a special Hose for certain compressed natural gas ("CNG") applications where static electricity buildup may occur. Parker CNG Hose assemblies comply with the requirements of ANSI/IAS NGV 4.2; CSA 12.52, "Hoses for Natural Gas Vehicles and Dispensing Systems" (www.ansi.org). This Hose is labeled "Electrically Conductive for CNG Use" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in, for example, high velocity CNG dispensing or transfer. Do not use any other Hose for CNG applications where static charge buildup may occur, even if electrically conductive. Use of other Hoses in CNG applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury, and property damage. Care must also be taken to protect against CNG permeation through the Hose wall. See section 2.6, Permeation, for more information. Parker CNG Hose is intended for dispenser and vehicle use within the specified temperature range. Parker CNG Hose should not be used in confined spaces or unventilated areas or areas exceeding the specified temperature range. Final assemblies must be tested for leaks. CNG Hose Assemblies should be tested on a monthly basis for conductivity per ANSI/IAS NGV 4.2; CSA 12.52. Parker manufactures special Hose for aerospace in-flight applications. Aerospace in-flight applications employing Hose to transmit fuel, lubricating fluids and hydraulic fluids require a special Hose with a conductive inner tube. This Hose for in-flight applications is available only from Parker's Stratoflex Products Division. Do not use any other Parker Hose for in-flight applications, even if electrically conductive. Use of other Hoses for in-flight applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury and property damage. These Hose assemblies for in-flight applications must meet all applicable aerospace industry, aircraft engine and aircraft requirements.

2.2 Pressure: Hose, Tube and Fitting selection must be made so that the published maximum working pressure of the Hose, Tube and Fittings are equal to or greater than the maximum system pressure. The maximum working pressure of a Hose, or Tube Assembly is the lower of the respective published maximum working pressures of the Hose, Tube and the Fittings used. Surge pressures or peak transient pressures in the system must be below the published maximum working pressure for the Hose, Tube and Fitting. Surge pressures and peak pressures can usually only be determined by sensitive electrical instrumentation that measures and indicates pressures at millisecond intervals. Mechanical pressure gauges indicate only average pressures and cannot be used to determine surge pressures or peak transient pressures. Published burst pressure ratings for Hose is for manufacturing test purposes only and is no indication that the Product can be used in applications at the burst pressure or otherwise above the published maximum recommended working pressure.

2.3 Suction: Hoses used for suction applications must be selected to insure that the Hose will withstand the vacuum and pressure of the system. Improperly selected Hose may collapse in suction application.

2.4 Temperature: Be certain that fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the Hose, Tube, Fitting and Seals. Temperatures below and above the recommended limit can degrade Hose, Tube, Fittings and Seals to a point where a failure may occur and release fluid. Tube and Fittings performances are normally degraded at elevated temperature. Material compatibility can also change at temperatures outside of the rated range. Properly insulate and protect the Hose Assembly when routing near hot objects (e.g. manifolds). Do not use any Hose in any application where failure of the Hose could result in the conveyed fluids (or vapors or mist from the conveyed fluids) contacting any open flame, molten metal, or other potential fire ignition source that could cause burning or explosion of the conveyed fluids or vapors.

2.5 Fluid Compatibility: Hose, and Tube Assembly selection must assure compatibility of the Hose tube, cover, reinforcement, Tube, Plating and Seals with the fluid media used. See the fluid compatibility chart in the Parker publication for the product being considered or used. This information is offered only as a guide. Actual service life can only be determined by the end user by testing under all extreme conditions and other analysis. Hose, and Tube that is chemically compatible with a particular fluid must be assembled using Fittings and adapters containing likewise compatible seals. Flange or flare processes can change Tube material properties that may not be compatible with certain requirements such as NACE

2.6 Permeation: Permeation (that is, seepage through the Hose or Seal) will occur from inside the Hose or Fitting to outside when Hose or Fitting is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials as helium, diesel fuel, gasoline, natural gas, or LPG). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid. Dangerous explosions, fires, and other hazards can result when using the wrong Hose for such applications. The system designer must take into account the fact that this permeation will take place and must not use Hose or Fitting if this permeation could be hazardous. The system designer must take into account all legal, government, insurance, or any other special regulations which govern the use of fuels and refrigerants. Never use a Hose or Fitting even though the fluid compatibility is acceptable without considering the potential hazardous effects that can result from permeation through the Hose or Tube Assembly. Permeation of moisture from outside the Hose or Fitting to inside the Hose or Fitting will also occur in Hose or Tube assemblies, regardless of internal pressure. If this moisture permeation would have detrimental effects (particularly, but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used. The sudden pressure release of highly pressurized gas could also result in Explosive Decompression failure of permeated Seals and Hoses.

2.7 Size: Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.

2.8 Routing: Attention must be given to optimum routing to minimize inherent problems (kinking or flow restriction due to Hose collapse, twisting of the Hose, proximity to hot objects or heat sources). For additional routing recommendations see SAE J1273 and ISO 17165-2. Hose Assemblies have a finite life and should be installed in a manner that allows for ease of inspection and future replacement. Hose because of its relative short life, should not be used in residential and commercial buildings inside of inaccessible walls or floors, unless specifically allowed in the product literature. Always review all product literature for proper installation and routing instructions.

2.9 Environment: Care must be taken to insure that the Hose, Tube and Fittings are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, sunlight, heat, ozone, moisture, water, salt water, chemicals and air pollutants can cause degradation and premature failure.

2.10 Mechanical Loads: External forces can significantly reduce Hose, Tube and Fitting life or cause failure. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type Fittings or adapters may be required to insure no twist is put into the Hose. Use of proper Hose or Tube clamps may also be required to reduce external mechanical loads. Unusual applications may require special testing prior to Hose selection.

2.11 Physical Damage: Care must be taken to protect Hose from wear, snagging, kinking, bending smaller that minimum bend radius and cutting, any of which can cause premature Hose failure. Any Hose that has been kinked or bent to a radius smaller than the minimum bend radius, and any Hose that has been cut or is cracked or is otherwise damaged should be removed and discarded. Fittings with damages such as scratches on sealing surfaces and deformation should be replaced.

2.12 Proper End Fitting: See instructions 3.2 through 3.5. These recommendations may be substantiated by testing to industry standards such as SAE J517 for hydraulic applications, or MIL-A-5070, AS1339, or AS3517 for Hoses from Parker's Stratoflex Products Division for aerospace applications.

2.13 Length: When determining the proper Hose or Tube length of an assembly, be aware of Hose length change due to pressure, Tube length change due to thermal expansion or contraction, and Hose or Tube and machine tolerances and movement must be considered. When routing short hose assemblies, it is recommended that the minimum free hose length is always used. Consult the hose manufacturer for their minimum free hose length recommendations. Hose assemblies should be installed in such a way that any motion or flexing occurs within the same plane.

2.14 Specifications and Standards: When selecting Hose, Tube and Fittings, government, industry, and Parker specifications and recommendations must be reviewed and followed as applicable.

2.15 Hose Cleanliness: Hose and Tube components may vary in cleanliness levels. Care must be taken to insure that the Hose and Tube Assembly selected has an adequate level of cleanliness for the application.

2.16 Fire Resistant Fluids: Some fire resistant fluids that are to be conveyed by Hose or Tube require use of the same type of Hose or Tube as used with petroleum base fluids. Some such fluids require a special Hose, Tube, Fitting and Seal, while a few fluids will not work with any Hose at all. See instructions 2.5 and 1.5. The wrong Hose, Tube, Fitting or Seal may fail after a very short service. In addition, all liquids but pure water may burn fiercely under certain conditions, and even pure water leakage may be hazardous.

2.17 Radiant Heat: Hose and Seals can be heated to destruction without contact by such nearby items as hot manifolds or molten metal. The same heat source may then initiate a fire. This can occur despite the presence of cool air around the Hose or Seal. Performance of Tube and Fitting subjected to the heat could be degraded.

2.18 Welding or Brazing: When using a torch or arc welder in close proximity to hydraulic lines, the hydraulic lines should be removed or shielded with appropriate fire resistant materials. Flame or weld spatter could burn through the Hose or Seal and possibly ignite escaping fluid resulting in a catastrophic failure. Heating of plated parts, including Hose Fittings and adapters, above 450°F (232°C) such as during welding, brazing or soldering may emit deadly gases. Any elastomer seal on fittings shall be removed prior to welding or brazing, any metallic surfaces shall be protected after brazing or welding when necessary. Welding and brazing filler material shall be compatible with the Tube and Fitting that are joined.

2.19 Atomic Radiation: Atomic radiation affects all materials used in Hose and Tube assemblies. Since the long-term effects may be unknown, do not expose Hose or Tube assemblies to atomic radiation. Nuclear applications may require special Tube and Fittings.

2.20 Aerospace Applications: The only Hose, Tube and Fittings that may be used for in-flight aerospace applications are those available from Parker's Stratoflex Products Division. Do not use any other Hose or Fittings for in-flight applications. Do not use any Hose or Fittings from Parker's Stratoflex Products Division with any other Hose or Fittings, unless expressly approved in writing by the engineering manager or chief engineer of Stratoflex Products Division and verified by the user's own testing and inspection to aerospace industry standards.

2.21 Unlocking Couplings: Ball locking couplings or other Fittings with quick disconnect ability can unintentionally disconnect if they are dragged over obstructions, or if the sleeve or other disconnect member, is bumped or moved enough to cause disconnect. Threaded Fittings should be considered where there is a potential for accidental uncoupling.

3.0 HOSE AND FITTINGS ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1 Component Inspection: Prior to assembly, a careful examination of the Hose and Fittings must be performed. All components must be checked for correct style, size, catalog number, and length. The Hose must be examined for cleanliness, obstructions, blisters, cover looseness, kinks, cracks, cuts or any other visible defects. Inspect the Fitting and sealing surfaces for burrs, nicks, corrosion or other imperfections. Do NOT use any component that displays any signs of nonconformance.

3.2 Hose and Fitting Assembly: Do not assemble a Parker Fitting on a Parker Hose that is not specifically listed by Parker for that Fitting, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. Do not assemble a Parker Fitting on another manufacturer's Hose or a Parker Hose on another manufacturer's Fitting unless (i) the engineering manager or chief engineer of the appropriate Parker division approves the Assembly in writing or that combination is expressly approved in the appropriate Parker literature for the specific Parker product, and (ii) the user verifies the Assembly and the application through analysis and testing. For Parker Hose that does not specify a Parker Fitting, the user is solely responsible for the selection of the proper Fitting and Hose Assembly procedures. See instruction 1.4. To prevent the possibility of problems such as leakage at the Fitting or system contamination, it is important to completely remove all debris from the cutting operation before installation of the Fittings. The Parker published instructions must be followed for assembling the Fittings on the Hose. These instructions are provided in the Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CPARKER, or at www.parker.com.

3.3 Related Accessories: Do not crimp or swage any Parker Hose or Fitting with anything but the listed swage or crimp machine and dies in accordance with Parker published instructions. Do not crimp or swage another manufacturer's Fitting with a Parker crimp or swage die unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.

3.4 Parts: Do not use any Parker Fitting part (including but not limited to socket, shell, nipple, or insert) except with the correct Parker mating parts, in accordance with Parker published instructions, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.

3.5 Field Attachable/Permanent: Do not reuse any field attachable Hose Fitting that has blown or pulled off a Hose. Do not reuse a Parker permanent Hose Fitting (crimped or swaged) or any part thereof. Complete Hose Assemblies may only be reused after proper inspection under section 4.0. Do not assemble Fittings to any previously used hydraulic Hose that was in service, for use in a fluid power application.

3.6 Pre-Installation Inspection: Prior to installation, a careful examination of the Hose Assembly must be performed. Inspect the Hose Assembly for any damage or defects. DO NOT use any Hose Assembly that displays any signs of nonconformance.

3.7 Minimum Bend Radius: Installation of a Hose at less than the minimum listed bend radius may significantly reduce the Hose life. Particular attention must be given to preclude sharp bending at the Hose to Fitting juncture. Any bending during installation at less than the minimum bend radius must be avoided. If any Hose is kinked during installation, the Hose must be discarded.

3.8 Twist Angle and Orientation: Hose Assembly installation must be such that relative motion of machine components does not produce twisting.

3.9 Securement: In many applications, it may be necessary to restrain, protect, or guide the Hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.

3.10 Proper Connection of Ports: Proper physical installation of the Hose Assembly

requires a correctly installed port connection insuring that no twist or torque is transferred to the Hose when the Fittings are being tightened or otherwise during use.

3.11 External Damage: Proper installation is not complete without insuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage or damage to sealing surfaces are corrected or eliminated. See instruction 2.10.

3.12 System Checkout: All air entrapment must be eliminated and the system pressurized to the maximum system pressure (at or below the Hose maximum working pressure) and checked for proper function and freedom from leaks. Personnel must stay out of potential hazardous areas while testing and using.

3.13 Routing: The Hose Assembly should be routed in such a manner so if a failure does occur, the escaping media will not cause personal injury or property damage. In addition, if fluid media comes in contact with hot surfaces, open flame or sparks, a fire or explosion may occur. See section 2.4.

3.14 Ground Fault Equipment Protection Devices (GFEPDs): WARNING! Fire and Shock Hazard. To minimize the danger of fire if the heating cable of a Multitube bundle is damaged or improperly installed, use a Ground Fault Equipment Protection Device. Electrical fault currents may be insufficient to trip a conventional circuit breaker. For ground fault protection, the IEEE 515: (www.ansi.org) standard for heating cables recommends the use of GFEPDs with a nominal 30 milliampere trip level for "piping systems in classified areas, those areas requiring a high degree of maintenance, or which may be exposed to physical abuse or corrosive atmospheres".

4.0 TUBE AND FITTINGS ASSEMBLY AND INSTALLATION INSTRUCTIONS

4.1 Component Inspection: Prior to assembly, a careful examination of the Tube and Fittings must be performed. All components must be checked for correct style, size, material, seal, and length. Inspect the Fitting and sealing surfaces for burrs, nicks, corrosion, missing seal or other imperfections. Do NOT use any component that displays any signs of nonconformance.

4.2 Tube and Fitting Assembly: Do not assemble a Parker Fitting with a Tube that is not specifically listed by Parker for that Fitting, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. The Tube must meet the requirements specified to the Fitting. The Parker published instructions must be followed for assembling the Fittings to a Tube. These instructions are provided in the Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CPARKER, or at www.parker.com.

4.3 Related Accessories: Do not preset or flange Parker Fitting components using another manufacturer's equipment or procedures unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. Tube, Fitting component and tooling must be check for correct style, size and material. Operation and maintenance of Related Accessories must be in accordance with the operation manual for the designated Accessory.

4.4 Securement: In many applications, it may be necessary to restrain, protect, or guide the Tube to protect it from damage by unnecessary flexing, pressure surges, vibration, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.

4.5 Proper Connection of Ports: Proper physical installation of the Tube Assembly requires a correctly installed port connection insuring that no torque is transferred to the Tube when the Fittings are being tightened or otherwise during use.

4.6 External Damage: Proper installation is not complete without insuring that tensile loads, side loads, flattening, potential abrasion, thread damage or damage to sealing surfaces are corrected or eliminated. See instruction 2.10.

4.7 System Checkout: All air entrapment must be eliminated and the system pressurized to the maximum system pressure (at or below the Tube Assembly maximum working pressure) and checked for proper function and freedom from leaks. Personnel must stay out of potential hazardous areas while testing and using.

4.8 Routing: The Tube Assembly should be routed in such a manner so if a failure does occur, the escaping media will not cause personal injury or property damage. In addition, if fluid media comes in contact with hot surfaces, open flame or sparks, a fire or explosion may occur. See section 2.4.

5.0 HOSE AND FITTING MAINTENANCE AND REPLACEMENT INSTRUCTIONS

5.1 Even with proper selection and installation, Hose life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a possible Hose failure, and experience with any Hose failures in the application or in similar applications should determine the frequency of the inspection and the replacement for the Products so that Products are replaced before any failure occurs. Certain products require maintenance and inspection per industry requirements. Failure to adhere to these requirements may lead to premature failure. A maintenance program must be established and followed by the user and, at minimum, must include instructions 5.2 through 5.7

5.2 Visual Inspection Hose/Fitting: Any of the following conditions require immediate shut down and replacement of the Hose Assembly:
- Fitting slippage on Hose;
- Damaged, cracked, cut or abraded cover (any reinforcement exposed);
- Hard, stiff, heat cracked, or charred Hose;
- Cracked, damaged, or badly corroded Fittings;
- Leaks at Fitting or in Hose;
- Kinked, crushed, flattened or twisted Hose; and
- Blistered, soft, degraded, or loose cover.

5.3 Visual Inspection All Other: The following items must be tightened, repaired, corrected or replaced as required:
- Leaking port conditions;
- Excess dirt buildup;
- Worn clamps, guards or shields; and
- System fluid level, fluid type, and any air entrapment.

5.4 Functional Test: Operate the system at maximum operating pressure and check for possible malfunctions and leaks. Personnel must avoid potential hazardous areas while testing and using the system. See section 2.2.

5.5 Replacement Intervals: Hose assemblies and elastomeric seals used on Hose Fittings and adapters will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Hose Assemblies and elastomeric seals should be inspected and replaced at specific replacement intervals, based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk. See section 1.2. Hose and Fittings may be subjected to internal mechanical and/or chemical wear from the conveying fluid and may fail without warning. The user must determine the product life under such circumstances by testing. Also see section 2.5.

5.6 Hose Inspection and Failure: Hydraulic power is accomplished by utilizing high pressure fluids to transfer energy and do work. Hoses, Fittings and Hose Assemblies all contribute to this by transmitting fluids at high pressures. Fluids under pressure can be dangerous and potentially lethal and, therefore, extreme caution must be exercised when working with fluids under pressure and handling the Hoses transporting the fluids. From time to time, Hose Assemblies will fail if they are not replaced at proper time intervals. Usually these failures are the result of some form of misapplication, abuse, wear or failure to perform proper maintenance. When Hoses fail, generally the high pressure fluids inside escape in a stream which may or may not be visible to the user. Under no circumstances should the user attempt to locate the leak by "feeling" with their hands or any other part of their body. High pressure fluids can and will penetrate the skin and cause severe tissue damage and possibly loss of limb. Even seemingly minor hydraulic fluid injection injuries must be treated immediately by a physician with knowledge of the tissue damaging properties of hydraulic fluid. If a Hose failure occurs, immediately shut down the equipment and leave the area until pressure has been completely released from the Hose Assembly. Simply shutting down the hydraulic pump may or may not eliminate the pressure in the Hose Assembly. Many times check valves, etc., are employed in a system and can cause pressure to remain in a Hose Assembly even when pumps or equipment are not operating. Tiny holes in the Hose, commonly known as pinholes, can eject small, dangerously powerful but hard to see streams of hydraulic fluid. It may take several minutes or even hours for the pressure to be relieved so that the Hose Assembly may be examined safely. Once the pressure has been reduced to zero, the Hose Assembly may be taken off the equipment and examined. It must always be replaced if a failure has occurred. Never attempt to patch or repair a Hose Assembly that has failed. Consult the nearest Parker distributor or the appropriate Parker division for Hose Assembly replacement information. Never touch or examine a failed Hose Assembly unless it is obvious that the Hose no longer contains fluid under pressure. The high pressure fluid is extremely dangerous and can cause serious and potentially fatal injury.

5.7 Elastomeric seals: Elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Elastomeric seals should be inspected and replaced.

5.8 Refrigerant gases: Special care should be taken when working with refrigeration systems. Sudden escape of refrigerant gases can cause blindness if the escaping gases contact the eye and can cause freezing or other severe injuries if it contacts any other portion of the body.

5.9 Compressed natural gas (CNG): Parker CNG Hose Assemblies should be tested after installation and before use, and at least on a monthly basis per instructions provided on the Hose Assembly tag. The recommended procedure is to pressurize the Hose and check for leaks and to visually inspect the Hose for damage and to perform an electrical resistance test. Caution: Matches, candles, open flame or other sources of ignition shall not be used for Hose inspection. Leak check solutions should be rinsed off after use.

6.0 HOSE STORAGE

6.1 Age Control: Hose and Hose Assemblies must be stored in a manner that facilitates age control and first-in and first-out usage based on manufacturing date of the Hose and Hose Assemblies. Unless otherwise specified by the manufacturer or defined by local laws and regulations:

6.1.1 The shelf life of rubber hose in bulk form or hose made from two or more materials is 28 quarters (7 years) from the date of manufacture, with an extension of 12 quarters (3 years), if stored in accordance with ISO 2230;

6.1.2 The shelf life of thermoplastic and polytetrafluoroethylene hose is considered to be unlimited;

6.1.3 Hose assemblies that pass visual inspection and proof test shall not be stored for longer than 2 years.

6.1.4 Storage: Stored Hose and Hose Assemblies must not be subjected to damage that could reduce their expected service life and must be placed in a cool, dark and dry area with the ends capped. Stored Hose and Hose Assemblies must not be exposed to temperature extremes, ozone, oils, corrosive liquids or fumes, solvents, high humidity, rodents, insects, ultraviolet light, electromagnetic fields or radioactive materials.

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PARKER-HANNIFIN CORPORATION
OFFER OF SALE

1. **Definitions**. As used herein, the following terms have the meanings indicated.

   Buyer: means any customer receiving a Quote for Products from Seller.

   Goods: means any tangible part, system or component to be supplied by the Seller.

   Products: means the Goods, Services and/or Software as described in a Quote provided by the Seller.

   Quote: means the offer or proposal made by Seller to Buyer for the supply of Products.

   Seller: means Parker-Hannifin Corporation, including all divisions and businesses thereof.

   Services: means any services to be supplied by the Seller.

   Software: means any software related to the Products, whether embedded or separately downloaded.

   Terms: means the terms and conditions of this Offer of Sale or any newer version of the same as published by Seller electronically at www.parker.com/saleterms.

2. **Terms**. All sales of Products by Seller are contingent upon, and will be governed by, these Terms and, these Terms are incorporated into any Quote provided by Seller to any Buyer. Buyer's order for any Products whether communicated to Seller verbally, in writing, by electronic date interface or other electronic commerce, shall constitute acceptance of these Terms. Seller objects to any contrary or additional terms or conditions of Buyer. Reference in Seller's order acknowledgement to Buyer's purchase order or purchase order number shall in no way constitute an acceptance of any of Buyer's terms of purchase. No modification to these Terms will be binding on Seller unless agreed to in writing and signed by an authorized representative of Seller.

3. **Price; Payment**. The Products set forth in Seller's Quote are offered for sale at the prices indicated in Seller's Quote. Unless otherwise specifically stated in Seller's Quote, prices are valid for thirty (30) days and do not include any sales, use, or other taxes or duties. Seller reserves the right to modify prices at any time to adjust for any raw material price fluctuations. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2010). All sales are contingent upon credit approval and payment for all purchases is due thirty (30) days from the date of invoice (or such date as may be specified in the Quote). Unpaid invoices beyond the specified payment date incur interest at the rate of 1.5% per month or the maximum allowable rate under applicable law.

4. **Shipment; Delivery; Title and Risk of Loss**. All delivery dates are approximate. Seller is not responsible for damages resulting from any delay. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placement of the Products with the shipment carrier at Seller's facility. Unless otherwise agreed, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyers' request beyond the respective indicated shipping date will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions.

5. **Warranty**. The warranty related to the Products is as follows: (i) Goods are warranted against defects in material or workmanship for a period of twelve (12) months from the date of delivery or 2,000 hours of use, whichever occurs first; (ii) Services shall be performed in accordance with generally accepted practices and using the degree of care and skill that is ordinarily exercised and customary in the field to which the Services pertain and are warranted for a period of six (6) months from the completion of the Services by Seller; and (iii) Software is only warranted to perform in accordance with applicable specifications provided by Seller to Buyer for ninety (90) days from the date of delivery or, when downloaded by a Buyer or end-user, from the date of the initial download. All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer:

   DISCLAIMER OF WARRANTY: THIS WARRANTY IS THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING DESIGN, NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. SELLER DOES NOT WARRANT THAT THE SOFTWARE IS ERROR-FREE OR FAULT-TOLERANT, OR THAT BUYER'S USE THEREOF WILL BE SECURE OR UNINTERRUPTED. BUYER AGREES AND ACKNOWLEDGES THAT UNLESS OTHERWISE AUTHORIZED IN WRITING BY SELLER THE SOFTWARE SHALL NOT BE USED IN CONNECTION WITH HAZARDOUS OR HIGH RISK ACTIVITIES OR ENVIRONMENTS. EXCEPT AS EXPRESSLY STATED HEREIN, ALL PRODUCTS ARE PROVIDED "AS IS".

6. **Claims; Commencement of Actions**. Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to the Seller within ten (10) days of delivery. Buyer shall notify Seller of any alleged breach of warranty within thirty (30) days after the date the non-conformance is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

7. **LIMITATION OF LIABILITY.** IN THE EVENT OF A BREACH OF WARRANTY, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE THE NON-CONFORMING PRODUCT, RE-PERFORM THE SERVICES, OR REFUND THE PURCHASE PRICE PAID WITHIN A REASONABLE PERIOD OF TIME. **IN NO EVENT IS SELLER LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON- DELIVERY, SERVICING, NON-COMPLETION OF SERVICES, USE, LOSS OF USE OF, OR INABILITY TO USE THE PRODUCTS OR ANY PART THEREOF, LOSS OF DATA, IDENTITY, PRIVACY, OR CONFIDENTIALITY, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS**.

8. **Loss to Buyer's Property**. Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which are or become Buyer's property, will be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer ordering the Products manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. **Special Tooling**. Special Tooling includes but is not limited to tooling, jigs, fixtures and associated manufacturing equipment acquired or necessary to manufacture Products. A tooling charge may be imposed for any Special Tooling. Such Special Tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in Special Tooling belonging to Seller that is utilized in the manufacture of the Products, even if such Special Tooling has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller has the right to alter, discard or otherwise dispose of any Special Tooling or other property in its sole discretion at any time.

10. **Security Interest**. To secure payment of all sums due, Seller retains a security interest in all Products delivered to Buyer and, Buyer's acceptance of these Terms is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest.

11. **User Responsibility**. The Buyer through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. The Buyer must analyze all aspects of the application and follow applicable industry standards, specifications, and other technical information provided with the Product. If Seller provides Product options based upon data or specifications provided by the Buyer, the Buyer is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products. In the event the Buyer is not the end-user, Buyer will ensure such end-user complies with this paragraph.

12. **Use of Products, Indemnity by Buyer**. Buyer shall comply with all instructions, guides and specifications provided by Seller with the Products. Unauthorized Uses. If Buyer uses or resells the Products for any uses prohibited in Seller's instructions, guides or specifications, or Buyer otherwise fails to comply with Seller's instructions, guides and specifications, Buyer acknowledges that any such use, resale, or non-

compliance is at Buyer's sole risk. Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, intellectual property infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, application, design, specification or other misuse of Products provided by Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, tooling, equipment, plans, drawings, designs or specifications or other information or things furnished by Buyer; (d) damage to the Products from an external cause, repair or attempted repair by anyone other than Seller, failure to follow instructions, guides and specifications provided by Seller, use with goods not provided by Seller, or opening, modifying, deconstructing or tampering with the Products for any reason; or (e) Buyer's failure to comply with these Terms. Seller shall not indemnify Buyer under any circumstance except as otherwise provided in these Terms.

13. **Cancellations and Changes**. Buyer may not cancel or modify any order for any reason, except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller, at any time, may change Product features, specifications, designs and availability.

14. **Limitation on Assignment**. Buyer may not assign its rights or obligations without the prior written consent of Seller.

15. **Force Majeure**. Seller does not assume the risk and is not liable for delay or failure to perform any of Seller's obligations by reason of events or circumstances beyond its reasonable control ("Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's reasonable control.

16. **Waiver and Severability**. Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of these Terms by legislation or other rule of law shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.

17. **Termination**. Seller may terminate any agreement governed by or arising from these Terms for any reason and at any time by giving Buyer thirty (30) days prior written notice. Seller may immediately terminate, in writing, if Buyer: (a) breaches any provision of these Terms (b) appoints a trustee, receiver or custodian for all or any part of Buyer's property (c) files a petition for relief in bankruptcy on its own behalf, or one if filed by a third party (d) makes an assignment for the benefit of creditors; or (e) dissolves its business or liquidates all or a majority of its assets.

18. **Ownership of Software**. Seller retains ownership of all Software supplied to Buyer hereunder. In no event shall Buyer obtain any greater right in and to the Software than a right in the nature of a license limited to the use thereof and subject to compliance with any other terms provided with the Software.

19. **Indemnity for Infringement of Intellectual Property Rights**. Seller is not liable for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights ("Intellectual Property Rights") except as provided in this Section. Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on a third party claim that one or more of the Products sold hereunder infringes the Intellectual Property Rights of a third party in the country of delivery of the Products by the Seller to the Buyer. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of any such claim, and Seller having sole control over the defense of the claim including all negotiations for settlement or compromise. If one or more Products sold hereunder is subject to such a claim, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Products, replace or modify the Products so as to render them non-infringing, or offer to accept return of the Products and refund the purchase price less a reasonable allowance for depreciation. Seller has no obligation or liability for any claim of infringement: (i) arising from information provided by Buyer; or (ii) directed to any Products provided hereunder for which the designs are specified in whole or part by Buyer; or (iii) resulting from the modification, combination or use in a system of any Products provided hereunder. The foregoing provisions of this Section constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for such claims of infringement of Intellectual Property Rights.

20. **Governing Law**. These Terms and the sale and delivery of all Products are deemed to have taken place in, and shall be governed and construed in accordance with, the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to the sale and delivery of the Products.

21. **Entire Agreement.** These Terms, along with the terms set forth in the main body of any Quote, forms the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. In the event of a conflict between any term set forth in the main body of a Quote and these Terms, the terms set forth in the main body of the Quote shall prevail. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter shall have no effect. These Terms may not be modified unless in writing and signed by an authorized representative of Seller.

22. **Compliance with Laws.** Buyer agrees to comply with all applicable laws, regulations, and industry and professional standards, including those of the United States of America, and the country or countries in which Buyer may operate, including without limitation the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.S. Anti-Kickback Act ("Anti- Kickback Act"), U.S. and E.U. export control and sanctions laws ("Export Laws"), the U.S. Food Drug and Cosmetic Act ("FDCA"), and the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), each as currently amended. Buyer agrees to indemnify, defend, and hold harmless Seller from the consequences of any violation of such laws, regulations and standards by Buyer, its employees or agents. Buyer acknowledges that it is familiar with all applicable provisions of the FCPA, the Anti-Kickback Act, Export Laws, the FDCA and the FDA and certifies that Buyer will adhere to the requirements thereof and not take any action that would make Seller violate such requirements. Buyer represents and agrees that Buyer will not make any payment or give anything of value, directly or indirectly, to any governmental official, foreign political party or official thereof, candidate for foreign political office, or commercial entity or person, for any improper purpose, including the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller. Buyer further represents and agrees that it will not receive, use, service, transfer or ship any Product from Seller in a manner or for a purpose that violates Export Laws or would cause Seller to be in violation of Export Laws.

Parker's Motion & Control Product Groups

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 1 800 C-Parker (1 800 272 7537).

Aerospace

Key Markets

Aftermarket services
Commercial transports
Engines
General & business aviation
Helicopters
Launch vehicles
Military aircraft
Missiles
Power generation
Regional transports
Unmanned aerial vehicles

Key Products

Control systems & actuation products
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Thermal management
Wheels & brakes

Automation

Key Markets

Alternative energy
Conveyor & material handling
Factory automation
Food & beverage
Life sciences & medical
Machine tools
Packaging machinery
Paper machinery
Plastics machinery
Primary metals
Safety & security
Semiconductor & electronics
Transportation & automotive

Key Products

AC/DC drives & systems
Air preparation
Electric actuators, gantry robots & slides
Human machine interfaces
Inverters
Manifolds
Miniature fluidics
Pneumatic actuators & grippers
Pneumatic valves & controls
Rotary actuators
Stepper motors, servo motors, drives & controls
Structural extrusions
Vacuum generators, cups & sensors

Climate & Industrial Controls

Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO_2 controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves

Filtration

Key Markets

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation & renewable energy
Process
Transportation
Water Purification

Key Products

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters & systems

Fluid Connectors

Key Markets

Aerial lift
Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Connectors for low pressure fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems & power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings

Hydraulics

Key Markets

Aerial lift
Agriculture
Alternative energy
Construction machinery
Forestry
Industrial machinery
Machine tools
Marine
Material handling
Mining
Oil & gas
Power generation
Refuse vehicles
Renewable energy
Truck hydraulics
Turf equipment

Key Products

Accumulators
Cartridge valves
Electrohydraulic actuators
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
Hydrostatic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators
Sensors

Instrumentation

Key Markets

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

Key Products

Analytical Instruments
Analytical sample conditioning products & systems
Chemical injection fittings & valves
Fluoropolymer chemical delivery fittings, valves & pumps
High purity gas delivery fittings, valves, regulators & digital flow controllers
Industrial mass flow meters/ controllers
Permanent no-weld tube fittings
Precision industrial regulators & flow controllers
Process control double block & bleeds
Process control fittings, valves, regulators & manifold valves

Seal

Key Markets

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation

Key Products

Dynamic seals
Elastomeric o-rings
Electro-medical instrument design & assembly
EMI shielding
Extruded & precision-cut, fabricated elastomeric seals
High temperature metal seals
Homogeneous & inserted elastomeric shapes
Medical device fabrication & assembly
Metal & plastic retained composite seals
Shielded optical windows
Silicone tubing & extrusions
Thermal management
Vibration dampening

Parker

ENGINEERING YOUR SUCCESS.

Parker Fluid Connectors Group
North American Divisions & Distribution Service Centers

Your complete source for quality tube fittings, hose & hose fittings, brass & composite fittings, quick-disconnect couplings, valves and assembly tools, locally available from a worldwide network of authorized distributors.

Fittings:
Available in inch and metric sizes covering SAE, BSP, DIN, GAZ, JIS and ISO thread configurations, manufactured from steel, stainless steel, brass, aluminum, nylon and thermoplastic.

Hose, Tubing and Bundles:
Available in a wide variety of sizes and materials including rubber, wire-reinforced, thermoplastic, hybrid and custom compounds.

Worldwide Availability:
Parker operates Fluid Connectors manufacturing locations and sales offices throughout North America, South America, Europe and Asia-Pacific.

For information, call toll free...

1-800-C-PARKER
(1-800-272-7537)

North American Divisions

Fluid System Connectors Division
Otsego, MI
phone 269 692 6555
fax 269 694 4614

Hose Products Division
Wickliffe, OH
phone 440 943 5700
fax 440 943 3129

Industrial Hose Division
Wickliffe, OH
phone 440 833 2120
fax 440 833 2230

Parflex Division
Ravenna, OH
phone 330 296 2871
fax 330 296 8433

Quick Coupling Division
Minneapolis, MN
phone 763 544 7781
fax 763 544 3418

Tube Fittings Division
Columbus, OH
phone 614 279 7070
fax 614 279 7685

Distribution Service Centers

Buena Park, CA
phone 714 522 8840
fax 714 994 1183

Conyers, GA
phone 770 929 0330
fax 770 929 0230

Louisville, KY
phone 502 937 1322
fax 502 937 4180

Portland, OR
phone 503 283 1020
fax 503 283 2201

Toledo, OH
phone 419 878 7000
fax 419 878 7001
fax 419 878 7420
(FCG Kit Operations)

Canada
Grimsby, ONT
phone 905 945 2274
fax 905 945 3945
(Contact Grimsby for other Service Center locations.)

Mexico
Toluca, MEX
phone (52) 722 2754 200
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