

# John Guest®

## Fluid System Products Fittings, Valves, Tubing Standard Products Catalog



 John Guest USA, Inc.  
September 2004



*Fast, Reliable Tubing Connections  
with No Tools!*

**John Guest** has a long established reputation as a world leading supplier of Fluid System Products. This reputation has been built by consistently producing high quality products with an ongoing commitment to growth and innovation. Combine these with our superior product reliability and customer service and you've got a partner you can really count on.

**John Guest** is an ISO 9001 registered company and is listed as a preferred supplier by many leading international companies.

### **Super Speedfit**<sup>®</sup> Push-In Fittings

This simple concept pioneered by John Guest over 30 years ago now embodies a comprehensive line of over 3,000 products addressing virtually every tubing connection requirement. Our **Super Speedfit**<sup>®</sup> range of push-in fittings is manufactured in acetal copolymer, polypropylene, and brass and are available in inch and metric sizes. They have been developed for applications involving foodstuff, potable liquids, air, inert gasses, CO<sub>2</sub> lines and pneumatic and vacuum systems.

In all applications **John Guest Super Speedfit**<sup>®</sup> fittings require no tools. Tubing is simply inserted into the fitting collet and past the 'o' ring to the tube stop to effect a secure connection. Whether plastic or soft metal tubing is used, the integrity of the connection is assured. **Super Speedfit**<sup>®</sup> push-in fittings afford the most reliable and cost effective solution to tubing connections.

### **Super Speedfit**<sup>®</sup> Shut-Off Valves

Our Shut-Off Valves feature the same simplicity as our fittings for providing a fast and secure way of connecting plastic and soft metal tubing while providing on/off capability. Our valves are suitable for use in potable water, water filtration, reverse osmosis, beverage dispensing, and other foodstuff applications. Our Shut-Off Valves are available in Polypropylene and Acetal. Acetal valves are also suitable for use with compressed air, CO<sub>2</sub> line, and pneumatic applications.

### **Superseal**<sup>®</sup> Push-In Fittings

Our **Superseal**<sup>®</sup> fittings are produced in acetal copolymer and have been designed to provide extra grip on hard steel, stainless steel, and other polished metal tubing. The **Superseal**<sup>®</sup> range is similar to our **Super Speedfit**<sup>®</sup> design but incorporates an additional hand tightened nut and wedge to the Collet and double 'o' rings to effect a leak proof installation.

### **Half Cartridges**

Now you can integrate the **Super Speedfit**<sup>®</sup> technology into your applications with the MI/MM and PI/PM Ranges of inch and metric size Half Cartridges. Our Half Cartridges provide a simple, cost effective, and trouble-free method for securing tubing into your products. Half Cartridges are designed for use with a wide variety of metal or plastic components.

### **LLDPE Tubing**

Our PE Range of Linear Low Density Polyethylene tubing provides the benefits of a wide range of temperature and pressure suitability, broad chemical compatibility, and is made from non-contaminating materials. Tubing is available in inch and metric sizes in a variety of colors, a valuable feature for applications where color coding is essential.

**John Guest** products are manufactured to the strictest tolerances. Our production process employs Statistical Process Control and consistent quality assurance measures. Our designs provide excellent flow characteristics, eliminate the need for sealant, and can be used repeatedly without the loss of connection integrity.

**John Guest** products are produced from FDA approved materials and are NSF 51 and 61 certified.

### **Application Adaptability**

With an annual output of over 100 million fittings, you can be confident that we have the right connector for your application needs. Since our fittings are modular in design, they can be coupled together to form new integral fittings, making complex connections quick and easy.

Whether your application is in Water Purification, Beverage Dispensing, Reverse Osmosis, Pneumatics, Plumbing, Spraying & Misting, R.V. & Marine, Vending & OCS, Refrigeration, Air Ring Mains, Plant Maintenance, Car Washing Systems, or Fiber Optics, you can be assured that with John Guest products your connections will be made right, the first time; every time.

We at **John Guest USA, Inc.**, pride ourselves on providing the highest value to our customers through quality products, customer satisfaction, and competitive pricing.

***To Order, Call 800-94 JG USA  
or Contact Your Local Distributor***

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## Materials of construction

The fittings are made up of three components:

**Bodies** are produced in acetal copolymer or polypropylene.

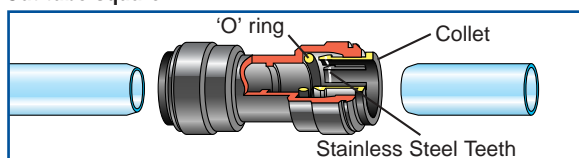
**'O' rings** are nitrile rubber or EPDM.

**Collets** are produced in acetal copolymer or polypropylene with stainless steel teeth.

## How to make a connection

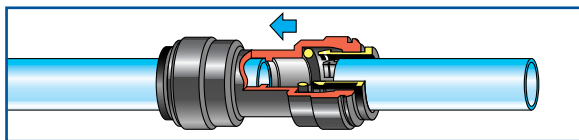
To make a connection, the tube is simply pushed in by hand. The unique patented John Guest collet locking system then holds the tube firmly in place without deforming it or restricting flow.

### 1 Cut tube square



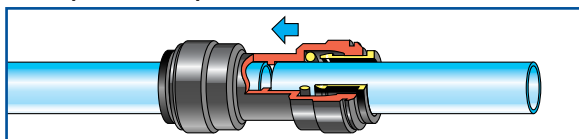
Cut the tube square. It is essential that the outside diameter be free of score marks and that burrs and sharp edges be removed before inserting into fitting. For soft or thin-walled plastic tubing we recommend the use of a tube insert.

### 2 Insert tube



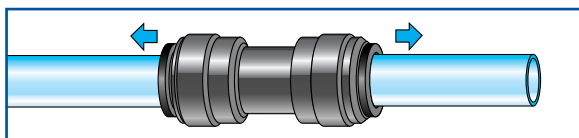
Fitting grips before it seals. Ensure tube is pushed into the tube stop.

### 3 Push up to tube stop



Push the tube into the fitting, to the tube stop. The collet (gripper) has stainless steel teeth, which hold the tube firmly in position, while the 'O' ring provides a permanent leak proof seal.

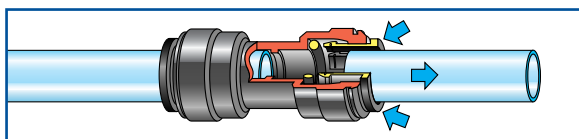
### 4 Pull to check secure



Pull on the tube to check that it is secure. It is a good practice to test the system prior to leaving site and/or before use.

## Disconnecting

### Push in collet and remove tube



To disconnect, ensure the system is depressurized before removing the tube. Push in collet squarely against face of fitting. With the collet held in this position, the tube can be removed. The fitting can then be re-used.

## Installation and System Testing

Fittings and tube should be kept clean and undamaged before use.

All tube fittings installations must be pressure tested after installation to ensure system integrity before handing over to the final user. Also refer to "How to Make a Connection" on this page.

## Working Pressure and Temperature Range for Acetal Fittings (PI, SI, SM & PM).

**Super Speedfit®** fittings are suitable for the following pressures and temperatures.

Temp.	Pressure	
	5/32" - 5/16" 4mm - 8mm	3/8" - 1/2" 10mm - 22mm
<b>Air</b>		
- 4°F	<b>230 psi</b>	<b>150 psi</b>
- 20°C	(16 Bar)	(10 Bar)
<b>Potable Liquids and Air</b>		
+ 33°F	<b>230 psi</b>	<b>150 psi</b>
+ 1°C	(16 Bar)	(10 Bar)
+ 73°F	<b>230 psi</b>	<b>150 psi</b>
+ 23°C	(16 Bar)	(10 Bar)
+ 158°F	<b>150 psi</b>	<b>100 psi</b>
+ 70°C	(10 Bar)	(7 Bar)

### Also suitable for vacuum

For Polypropylene Working Pressure and Temperature Range, please refer to page 10.

Depending on the tube used, under certain conditions fittings may be used at higher pressures and temperatures. Please consult our Technical Support Department for guidance.

**Super Speedfit®** Fittings and Shut-Off Valves are suitable for use with the following tube types:

**Plastic Tube** - Polyethylene, nylon, and polyurethane conforming to the tolerances shown on page 4. For soft or thin wall tube we recommend the use of tube inserts.

**Braided Hose** - Use of Tube to Hose Stems, listed on pages 7, 11 and 14, is essential, when using braided tube or hose. Use of clamps to retain braided tube on barbs is recommended.

**Metal Tube (soft)** - Brass, copper, or mild steel conforming to the tolerances shown on page 4.

**Metal Tube (hard)** - We do not recommend **Super Speedfit®** fittings for hard metal or chrome plated tubes. For stainless steel tube we recommend the use of **Superseal®** fittings. These are shown on page 11 of this brochure.

*It is essential that outside diameters be free from score marks and that the tube be deburred before inserting into the fitting.*

## Tube Tolerances

**Super Speedfit®** fittings are offered for tubes with outside diameters to the following tolerances.

<b>Size (inches)</b>	<b>5/32" - 3/16"</b>	<b>1/4" - 1/2"</b>
<b>Tolerance (inches)</b>	+0.001 / -0.003	+0.001 / -0.004
<b>Size (mm)</b>	<b>4mm - 5mm</b>	<b>6mm - 22mm</b>
<b>Tolerance (mm)</b>	+0.05 / -0.07	+0.05 / -0.10

## Responsibility of Use

While we warrant our products against defects in manufacture or materials, it is the responsibility of any user/installer to ensure that fittings and related products are suitable for their application, that the installation is carried out correctly, and that the installation is properly maintained.

## Chemicals

For use with chemicals or other potentially aggressive liquids, please refer to our Chemical Compatibility Chart shown on page 19 and 20, or consult our Technical Support Department.

**Super Speedfit®** fittings are not to be used with explosive gasses, petroleum spirits, and other fuels, or for central heating systems.

## Collet Covers

Are available as additional security against removal of the tube or to provide a simple means of color coding. Covers are offered in a range of six colors. Please see page 14 of this brochure.

## Food Quality

All the fittings in this brochure are produced with Food and Drug Administration (FDA) approved materials and are therefore suitable for food quality applications.

The wetted surfaces of John Guest PI, PM, SI, CI, PP and NC plastic fittings, PPSV and PISV Valves, and PE Tubing are in compliance with FDA requirements for direct contact with food as detailed in 21CFR part 177.2470 for the body and 177.2600 for the O-ring.

## Maximum Torque Values for John Guest Plastic Threaded Fittings:

Do not over-tighten plastic threaded fittings, as this could cause undue stress and eventual failure. Maximum recommended torque figures are shown below.

	<b>Threads</b>		
	<b>1/8" - 1/4"</b>	<b>3/8" - 1/2"</b>	<b>3/4"</b>
<b>Maximum Torque</b>	1.0ft lbs 1.5Nm	2.2ft lbs 3.0Nm	2.9ft lbs 4.0Nm

John Guest recommends that OEM customers consider replacing threaded ports with the more modern cartridge system.

It is recommended that all installations are checked prior to use to determine that a seal has been made.

The maximum torque figures quoted for use with **Super Speedfit®** fittings are dependent on the mating thread conforming to the relevant U.S., British, or International thread standard.

## Maintenance and replacement Intervals

John Guest products generally require little maintenance, but as a minimum we recommend routine visual inspection. Frequency of visual inspection will depend on severity of application and risk of failure. If after visual inspection John Guest products appear damaged, cracked, charred, heat distorted, or corroded, they should be replaced. Any product that is or appears to be leaking should also be replaced.

Product life is affected by the severity of the application, the hostility of the working environment, and contact with aggressive chemicals or liquids. It is, therefore, important that specific replacement intervals be considered by specifiers/users/customers based on previous service life or when failure could result in unacceptable downtime, damage, or injury risk.

## Cleaning and Sanitizing

For Acetal Fittings, we recommend only the use of cleaners and sanitizing agents that are above pH4 and are low in hypochlorite levels. Acetal fittings and parts that are cleaned and/or sanitized should be rinsed immediately with copious amounts of clean, neutral tap water to remove all traces of the cleaners. Details of which products are made from acetal are shown in our catalog, but generally, John Guest products incorporating acetal are designated by the part number prefixes "PI", "PM", "CI", "CM", and "RM". While polypropylene has different mechanical properties from acetal, John Guest Polypropylene Fittings and Valves, prefixes "PP" and "PPSV", offer greater resistance to aggressive chemicals and can be cleaned by the same process as Acetal Fittings. Our material suppliers recommend ECOLAB Oasis 133 as a suitable external cleaner for acetal products manufactured by John Guest. For more information please refer to our terms and conditions of sale on page 22.

*The company has a policy of continuous research and product development and reserves the right to amend without notice the specification and design of all products illustrated in this catalog.*

## The PI Range of Inch-Size Fittings

The PI Range of inch-size push-in fittings is offered for tube sizes 5/32" O.D. to 5/8" O.D. The fittings are manufactured in gray acetal copolymer with food grade nitrile 'o' ring, making them especially suitable for applications involving foodstuff and potable liquids. They are equally suitable for air and inert gasses and can therefore be used on CO<sub>2</sub> lines, pneumatic applications, and vacuum.

Technical Specifications shown on page 4.



MALE CONNECTOR		NPTF Thread	
PART NO.	TUBE OD	THREAD	NPTF
PM010421S	5/32	x	1/8
PM010422S	5/32	x	1/4
PI010621S	3/16	x	1/8
PI010821S	1/4	x	1/8
PI010822S	1/4	x	1/4
PI010823S	1/4	x	3/8
PM010821S	5/16	x	1/8
PM010822S	5/16	x	1/4
PM010823S	5/16	x	3/8
PI011221S	3/8	x	1/8
PI011222S	3/8	x	1/4
PI011223S	3/8	x	3/8
PI011224S	3/8	x	1/2
PI011623S	1/2	x	3/8
PI011624S	1/2	x	1/2
PI012026S	5/8	x	3/4

FLARE MALE CONNECTOR		MFL Thread	
PART NO.	TUBE OD	THREAD	MFL
PI0108F4S	1/4	x	1/4
PM0108F5S	5/16	x	5/16
PI0112F4S	3/8	x	1/4
PI0112F5S	3/8	x	5/16
PI0112F6S	3/8	x	3/8
PI0112F8S	3/8	x	1/2
PI0116F8S	1/2	x	1/2
PM0108C5S	5/16	x	1/2 - 16
PI0112C5S	3/8	x	1/2 - 16

1/4" (MFL) corresponds to a 7/16-20 UNF  
 5/16" (MFL) corresponds to a 1/2-20 UNF  
 3/8" (MFL) corresponds to a 5/8-18 UNF  
 1/2" (MFL) corresponds to a 3/4-16 UNF

STEM ADAPTER		NPTF Thread	
PART NO.	STEM OD	THREAD	NPTF
PM050421S	5/32	x	1/8
PM050422S	5/32	x	1/4
PI050621S	3/16	x	1/8
PI050821S	1/4	x	1/8
PI050822S	1/4	x	1/4
PI050823S	1/4	x	3/8
PM050821S	5/16	x	1/8
PM050822S	5/16	x	1/4
PM050823S	5/16	x	3/8
PI051222S	3/8	x	1/4
PI051223S	3/8	x	3/8
PI051623S	1/2	x	3/8
PI051624S	1/2	x	1/2

MALE CONNECTOR		BSPT Thread	
PART NO.	TUBE OD	THREAD	BSPT
PM010401S	5/32	x	1/8
PM010402S	5/32	x	1/4
PI010601S	3/16	x	1/8
PI010602S	3/16	x	1/4
PI010801S	1/4	x	1/8
PI010802S	1/4	x	1/4
PM010801S	5/16	x	1/8
PM010802S	5/16	x	1/4
PM010803S	5/16	x	3/8
PI011202S	3/8	x	1/4
PI011203S	3/8	x	3/8
PI011603S	1/2	x	3/8
PI011604S	1/2	x	1/2

UNION TEE		PART NO.	TUBE OD
		PM0204S	5/32
		PI0206S	3/16
		PI0208S	1/4
		PM0208S	5/16
		PI0212S	3/8
		PI0216S	1/2

STEM ADAPTER		BSPT Thread	
PART NO.	STEM OD	THREAD	BSPT
PM050401S	5/32	x	1/8
PM050402S	5/32	x	1/4
PI050601S	3/16	x	1/8
PI050801S	1/4	x	1/8
PI050802S	1/4	x	1/4
PM050801S	5/16	x	1/8
PM050802S	5/16	x	1/4
PM050803S	5/16	x	3/8
PI051202S	3/8	x	1/4
PI051203S	3/8	x	3/8
PI051603S	1/2	x	3/8
PI051604S	1/2	x	1/2

MALE CONNECTOR		BSPP Thread	
PART NO.	TUBE OD	THREAD	BSPP
PI010812S	1/4	x	1/4
PI011212S	3/8	x	1/4

UNION ELBOW		PART NO.	TUBE OD
		PM0304S	5/32
		PI0306S	3/16
		PI0308S	1/4
		PM0308S	5/16
		PI0312S	3/8
		PI0316S	1/2

STEM ADAPTER		BSPP Thread	
PART NO.	STEM OD	THREAD	BSPP
PM050812S	5/16	x	1/4
PI051212S	3/8	x	1/4
PI051213S	3/8	x	3/8

MALE CONNECTOR		BSPP Thread	
PART NO.	TUBE OD	THREAD	BSPP
NCPI011212S	3/8	x	1/4
NCPI011211S	3/8	x	1/8


*With special large seal for use with chamfered face ports.*

UNION CONNECTOR		PART NO.	TUBE OD
		PM0404S	5/32
		PI0406S	3/16
		PI0408S	1/4
		PM0408S	5/16
		PI0412S	3/8
		PI0416S	1/2

REDUCER		PART NO.	STEM OD	TUBE OD
		PI060605S	3/16	- 5/32
		PI061006S	5/16	- 3/16
		PI061008S	5/16	- 1/4
		PI061206S	3/8	- 3/16
		PI061208S	3/8	- 1/4
		PI061210S	3/8	- 5/16
		PI061610S	1/2	- 5/16
		PI061612S	1/2	- 3/8


# Inch-Size Push-in Fittings

### PLUG




PART NO.	STEM OD
PM0804S	5/32
PI0806S	3/16
PI0808S	1/4
PM0808S	5/16
PI0812S	3/8
PI0816S	1/2

### SWIVEL BRANCH TEE *Center Leg BSPT Thread*




PART NO.	TUBE OD	THREAD BSPT
PI100601S	3/16	x 1/8
PI100801S	1/4	x 1/8
PI100802S	1/4	x 1/4
PM100801S	5/16	x 1/8
PM100802S	5/16	x 1/4
PM100803S	5/16	x 3/8
PI101202S	3/8	x 1/4
PI101203S	3/8	x 3/8
PI101603S	1/2	x 3/8
PI101604S	1/2	x 1/2

### REDUCING BULKHEAD UNION




PART NO.	TUBE OD	TUBE OD	MOUNTING HOLE DIA. (INCH)
NC392-02	1/2	- 1/4	0.83
PI121208S	3/8	- 1/4	0.83

### SWIVEL ELBOW *NPTF Thread*




PART NO.	TUBE OD	THREAD NPTF
PM090421S	5/32	x 1/8
PM090422S	5/32	x 1/4
PI090621S	3/16	x 1/8
PI090821S	1/4	x 1/8
PI090822S	1/4	x 1/4
PM090821S	5/16	x 1/8
PM090822S	5/16	x 1/4
PM090823S	5/16	x 3/8
PI091221S	3/8	x 1/8
PI091222S	3/8	x 1/4
PI091223S	3/8	x 3/8
PI091622S	1/2	x 1/4
PI091623S	1/2	x 3/8
PI091624S	1/2	x 1/2

### SWIVEL MALE RUN TEE *NPTF Thread*




PART NO.	TUBE OD	THREAD NPTF
PM110421S	5/32	x 1/8
PM110422S	5/32	x 1/4
PI110621S	3/16	x 1/8
PI110821S	1/4	x 1/8
PI110822S	1/4	x 1/4
PM110821S	5/16	x 1/8
PM110822S	5/16	x 1/4
PM110823S	5/16	x 3/8
PI111222S	3/8	x 1/4
PI111223S	3/8	x 3/8
PI111623S	1/2	x 3/8
PI111624S	1/2	x 1/2

### ENLARGER




PART NO.	STEM OD	TUBE OD
PI131012S	5/16	- 3/8
PI131216S	3/8	- 1/2

### SWIVEL ELBOW *BSPT Thread*




PART NO.	TUBE OD	THREAD BSPT
PI090601S	3/16	x 1/8
PI090801S	1/4	x 1/8
PI090802S	1/4	x 1/4
PM090801S	5/16	x 1/8
PM090802S	5/16	x 1/4
PM090803S	5/16	x 3/8
PI091202S	3/8	x 1/4
PI091203S	3/8	x 3/8
PI091603S	1/2	x 3/8
PI091604S	1/2	x 1/2

### SWIVEL MALE RUN TEE *BSPT Thread*




PART NO.	TUBE OD	THREAD BSPT
PI110601S	3/16	x 1/8
PI110801S	1/4	x 1/8
PI110802S	1/4	x 1/4
PM110801S	5/16	x 1/8
PM110802S	5/16	x 1/4
PM110803S	5/16	x 3/8
PI111202S	3/8	x 1/4
PI111203S	3/8	x 3/8
PI111603S	1/2	x 3/8
PI111604S	1/2	x 1/2

### REDUCING UNION




PART NO.	TUBE OD	TUBE OD
PI200806S	1/4	- 3/16
PM200804S	5/16	- 5/32
PI201006S	5/16	- 3/16
PI201008S	5/16	- 1/4
PI201206S	3/8	- 3/16
PI201208S	3/8	- 1/4
PI201210S	3/8	- 5/16
PI201610S	1/2	- 5/16
PI201612S	1/2	- 3/8

### SWIVEL BRANCH TEE *Center Leg NPTF Thread*



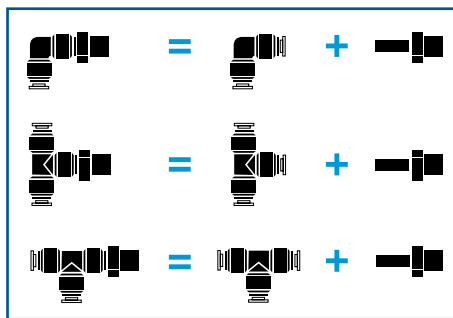
PART NO.	TUBE OD	THREAD NPTF
PM100421S	5/32	x 1/8
PM100422S	5/32	x 1/4
PI100621S	3/16	x 1/8
PI100821S	1/4	x 1/8
PI100822S	1/4	x 1/4
PM100821S	5/16	x 1/8
PM100822S	5/16	x 1/4
PM100823S	5/16	x 3/8
PI101222S	3/8	x 1/4
PI101223S	3/8	x 3/8
PI101623S	1/2	x 3/8
PI101624S	1/2	x 1/2

### BULKHEAD UNION



PART NO.	TUBE OD	MOUNTING HOLE DIA. (INCH)
PM1204S	5/32	0.67
PI1206S	3/16	0.67
PI1208S	1/4	0.67
PM1208S	5/16	0.83
PI1212S	3/8	0.83
PI1216S	1/2	1.06

**John Guest Adaptability**  
Standard *Super Speedfit*® products can be coupled together to form new integral fittings.



## REDUCING ELBOW



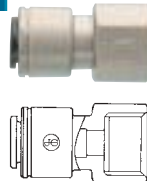
PART NO.	TUBE OD	TUBE OD
PM210804S	5/16	5/32
PI211006S	5/16	3/16
PI211008S	5/16	1/4
PI211206S	3/8	3/16
PI211208S	3/8	1/4
PI211210S	3/8	5/16
PI211610S	1/2	5/16
PI211612S	1/2	3/8

## TUBE TO HOSE STEM Long Version



PART NO.	STEM OD	HOSE ID
PI251012SL	5/16	3/8
PI251212SL	3/8	3/8

## FEMALE CONNECTOR NPTF Thread



PART NO.	TUBE OD	THREAD NPTF
PI450822S	1/4	x 1/4
PI451222S	3/8	x 1/4

## PLUG IN ELBOW



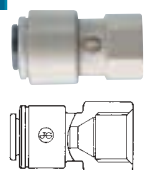
PART NO.	STEM OD	TUBE OD
PM220404S	5/32	5/32
PI220606S	3/16	3/16
PI220808S	1/4	1/4
PM220808S	5/16	5/16
PI221206S	3/8	3/16
PI221208S	3/8	1/4
PI221210S	3/8	5/16
PI221212S	3/8	3/8
PI221616S	1/2	1/2

## TUBE TO HOSE ELBOW



PART NO.	STEM OD	HOSE ID
PI290808S	1/4	1/4
PI290810S	1/4	5/16
PI291008S	5/16	1/4
PM290808S	5/16	5/16
PI291208S	3/8	1/4
PI291210S	3/8	5/16

## FEMALE CONNECTOR UN Thread



PART NO.	TUBE OD	THREAD UN
PM4508C5S	5/16	x 1/2 - 16
PI4512C5S	3/8	x 1/2 - 16
PI4516C5S	1/2	x 1/2 - 16

## TWO-WAY DIVIDER



PART NO.	TUBE OD
PI2308S	1/4
PM2308S	5/16
PI2312S	3/8
PI2316S	1/2

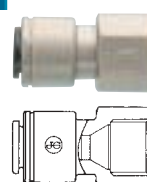


## REDUCING TEE



PART NO.	TUBE OD	TUBE OD BRANCH
PI301208S	3/8	1/4
PI301612S	1/2	3/8

## FEMALE FLARE CONNECTOR FFL Thread



PART NO.	TUBE OD	THREAD FFL
PM4508F4S	5/16	x 1/4
PI4512F4S	3/8	x 1/4
PI4512F6S	3/8	x 3/8

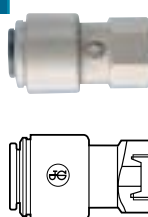
1/4 (FFL) corresponds to a 7/16-20 UNF  
3/8 (FFL) corresponds to a 5/8-18 UNF

## UNEQUAL TWO-WAY DIVIDER



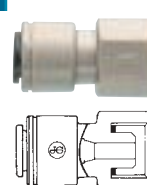
PART NO.	TUBE OD INLET	TUBE OD OUTLET
PI241210S	3/8	5/16

## FAUCET CONNECTOR UNS Thread



PART NO.	TUBE OD	THREAD UNS
CI3208U7S	1/4	x 7/16 - 24
CI3210U7S	5/16	x 7/16 - 24
CI3212U7S	3/8	x 7/16 - 24

## FEMALE CONNECTOR-Cone End BSPP Thread



PART NO.	TUBE OD	THREAD BSPP
PI451014CS	5/16	x 1/2
PI451015CS	5/16	x 5/8
PI451214CS	3/8	x 1/2
PI451215CS	3/8	x 5/8
PI451614CS	1/2	x 1/2
PI451615CS	1/2	x 5/8

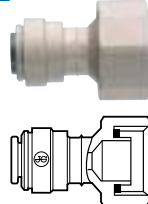


## TUBE TO HOSE STEM



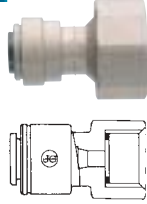
PART NO.	STEM OD	HOSE ID
PI250806S	1/4	3/16
PI250808S	1/4	1/4
PI250810S	1/4	5/16
PI251006S	5/16	3/16
PI251008S	5/16	1/4
PM250808S	5/16	5/16
PI251012S	5/16	3/8
PI251208S	3/8	1/4
PI251210S	3/8	5/16
PI251212S	3/8	3/8
PI251216S	3/8	1/2
PI251612S	1/2	3/8
PI251616S	1/2	1/2

## FAUCET CONNECTOR BSPP Thread



PART NO.	TUBE OD	THREAD BSPP
CI320814S	1/4	x 1/2
CI321214S	3/8	x 1/2

## FEMALE CONNECTOR-Flat End BSPP Thread



PART NO.	TUBE OD	THREAD BSPP
PI451014FS	5/16	x 1/2
PI451015FS	5/16	x 5/8
PI451213S	3/8	x 3/8
PI451214FS	3/8	x 1/2
PI451215FS	3/8	x 5/8
PI451613S	1/2	x 3/8
PI451615FS	1/2	x 5/8


## END STOP



PART NO.	TUBE OD
PI4608S	1/4
PI4612S	3/8


# Inch-Size Push-in Fittings

**CROSS**




PART NO.	TUBE OD
PI4712S	3/8

**DISPENSING VALVE ELBOW**




PART NO.	TUBE OD	STEM OD
NC356-02	3/8	3/8

**U-BEND**




PART NO.	TUBE OD
PIUB16S	1/2

**FIXED ELBOW** NPTF Thread

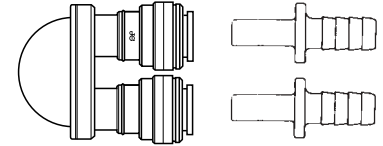


PART NO.	TUBE OD	THREAD NPTF
PI480821S	1/4	x 1/8
PI480822S	1/4	x 1/4
PI480823S	1/4	x 3/8
PI481222S	3/8	x 1/4
PI481223S	3/8	x 3/8
PI482024S	5/8	x 1/2

**DISPENSING VALVE STEM**




PART NO.	STEM OD
NC730-02	3/8




The U-Bend is offered for 1/2 inch OD tube sizes. Existing 1/2 inch ID lines can be accommodated by using a Standard Tube to Hose Stem (see page 7).

**THREE-WAY DIVIDER**




PART NO.	TUBE OD INLET	TUBE OD OUTLET
PI491612S	1/2	- 3/8

**OFF-SET CONNECTOR**



PART NO.	TUBE OD	TUBE OD
NC641	1/2	- 5/16

**CHECK VALVE**



PART NO.	TUBE OD
1/4SCV*	1/4
5/16SCV*	5/16
3/8SCV**	3/8

**Super Speedfit®** single check valves allow flow in one direction. **For Liquids only.**

## The MI Range of Brass Fittings

The **MI** Range of inch-size push-in fittings is offered for tube sizes 1/4" O.D. and 3/8" O.D. The fittings are manufactured in brass with a polypropylene collet and a food grade EPDM 'o' ring.

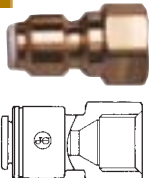
The fittings have been designed for use in Coffee Brewing Equipment, Beverage Dispensing, and Vending Machine applications.

### Working Pressures and Temperatures

Water	Max.	150 psi at 70°F (Max. 10 Bar at 20°C)
	Max.	60 psi at 140°F (Max. 4 Bar at 60°C)
	Min.	33°F/1°C




**BRASS FEMALE CONNECTOR** FFL Thread



PART NO.	TUBE OD	THREAD FFL
MI4508F4S	1/4	x 1/4
MI4512F4S	3/8	x 1/4
MI4512F6S	3/8	x 3/8


1/4 (FFL) corresponds to a 7/16-20 UNF

**BRASS FEMALE CONNECTOR**



PART NO.	TUBE OD	THREAD NH (National Hose)
NC2098	1/4	x 3/4

**NEW** **FEMALE NUT ASSEMBLY** BSP Thread



PART NO.	TUBE OD	THREAD BSP
NC2145	1/4	x 3/4
NC2249	3/8	x 3/4



### Helpful Hint:

For Vending and Office Coffee Services, Polypropylene Plug-In Elbows (shown on page 10) can be coupled with the above brass fittings to form 90° swivel fittings.

## The CI Range of Inch-Size Fittings

The CI Range of inch-size push-in fittings is offered for tube sizes 1/4" O.D. and 3/8" O.D. The fittings are manufactured in white acetal copolymer with food grade EPDM 'o' rings. They have been developed for the water industry but are equally suitable for other potable liquids. They are also suitable for intermittent hot water applications.

Selected items are available with red or blue collets.

The CI Range is NOT suitable for compressed air.

### Working Pressures and Temperatures

Water Max. 150 psi at 70°F (Max. 10 bar at 20°C)  
 Max. 100 psi at 150°F (Max. 7 bar at 65°C) intermittent hot water  
 Min. 33°F/1°C



**MALE CONNECTOR** NPTF Thread

PART NO.	TUBE OD	THREAD NPTF
CI010821W	1/4	x 1/8
CI010822W	1/4	x 1/4
CI010823W	1/4	x 3/8
CI011222W	3/8	x 1/4

**STEM ADAPTER** NPTF Thread

PART NO.	STEM OD	THREAD NPTF
CI050821W	1/4	x 1/8
CI050822W	1/4	x 1/4
CI051222W	3/8	x 1/4
CI051223W	3/8	x 3/8

**PLUG IN ELBOW**

PART NO.	STEM OD	TUBE OD
CI220808W	1/4	- 1/4
CI221208W	3/8	- 1/4
CI221212W	3/8	- 3/8

1/4" and 3/8" sizes are also available with blue or red collet. Suffix indicates color.  
 R = Red B = Blue

**UNION TEE**

PART NO.	TUBE OD
CI0208W	1/4
CI0212W	3/8

**REDUCER**

PART NO.	STEM OD	TUBE OD
CI061208W	3/8	- 1/4

**BARB CONNECTOR**

PART NO.	SUPERSEAL OD	HOSE ID
CI270808W	1/4	- 1/4

1/4" size also available with blue collet.  
 Use suffix B.

**UNION ELBOW**

PART NO.	TUBE OD
CI0308W	1/4
CI0312W	3/8

**BULKHEAD UNION**

PART NO.	TUBE OD	MOUNTING HOLE DIA.
CI1208W	1/4	0.67

**FIXED ELBOW** NPTF Thread

PART NO.	TUBE OD	THREAD NPTF
CI480821W	1/4	x 1/8
CI480822W	1/4	x 1/4
CI480823W	1/4	x 3/8
CI481222W	3/8	x 1/4

3/8" size also available with blue or red collet.  
 Suffix indicates color:  
 R = Red B = Blue

**UNION CONNECTOR**

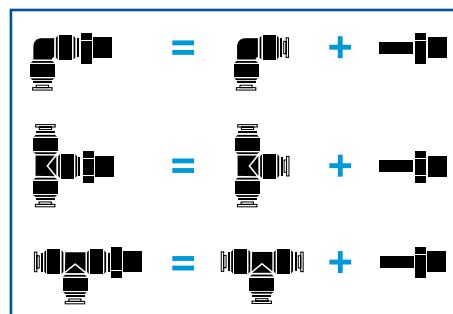
PART NO.	TUBE OD
CI0408W	1/4
CI0412W	3/8

**REDUCING ELBOW**

PART NO.	TUBE OD	TUBE OD
CI211206W	3/8	- 3/16

### John Guest Adaptability

Standard **Super Speedfit®** products can be coupled together to form new integral fittings.





## The PP Range of Polypropylene Fittings

The **PP** Range of inch-size push-in fittings is offered for tube sizes 1/4" O.D. to 1/2" O.D. The fittings are manufactured in white polypropylene with food grade EPDM 'o' rings. They have been developed to satisfy the compatibility needs for a wide range of applications.

### Working Pressures and Temperatures

Water    Max.    150 psi at 70°F (Max. 10 Bar at 20°C)  
              Max.    60 psi at 140°F (Max. 4 Bar at 60°C)  
              Min.    33°F/1°C



MALE CONNECTOR		NPTF Thread	
PART NO.	TUBE OD	THREAD	NPTF
PP010821W	1/4	x	1/8
PP010822W	1/4	x	1/4
PP010823W	1/4	x	3/8
PP011222W	3/8	x	1/4
PP011223W	3/8	x	3/8
PP011224W	3/8	x	1/2
PP011623W	1/2	x	3/8
PP011624W	1/2	x	1/2

REDUCER		
PART NO.	STEM OD	TUBE OD
PP061208W	3/8	- 1/4
PP061612W	1/2	- 3/8

REDUCING UNION		
PART NO.	TUBE OD	TUBE OD
PP201612W	1/2	x 3/8

UNION TEE	
PART NO.	TUBE OD
PP0208W	1/4
PPM0208W	5/16
PP0212W	3/8
PP0216W	1/2

PLUG	
PART NO.	STEM OD
PP0808W	1/4
PPM0808W	5/16
PP0812W	3/8
PP0816W	1/2

PLUG IN ELBOW		
PART NO.	STEM OD	TUBE OD
PP220808W	1/4	- 1/4
PPM220808W	5/16	- 5/16
PP221208W	3/8	- 1/4
PP221212W	3/8	- 3/8
PP221616W	1/2	- 1/2

UNION ELBOW	
PART NO.	TUBE OD
PP0308W	1/4
PPM0308W	5/16
PP0312W	3/8
PP0316W	1/2

SWIVEL ELBOW			NPTF Thread	
PART NO.	TUBE OD	THREAD	NPTF	
PP090821W	1/4	x	1/8	
PP090822W	1/4	x	1/4	
PP091222W	3/8	x	1/4	
PP091223W	3/8	x	3/8	

TUBE TO HOSE STEM			
PART NO.	TUBE OD	HOSE ID	
PP251212W	3/8	- 3/8	
PP251216W	3/8	- 1/2	
PP251612W	1/2	- 3/8	
PP251616W	1/2	- 1/2	

UNION CONNECTOR	
PART NO.	TUBE OD
PP0408W	1/4
PPM0408W	5/16
PP0412W	3/8
PP0416W	1/2

SWIVEL BRANCH TEE			Center Leg NPTF Thread	
PART NO.	TUBE OD	THREAD	NPTF	
PP100821W	1/4	x	1/8	
PP100822W	1/4	x	1/4	
PP101222W	3/8	x	1/4	
PP101223W	3/8	x	3/8	

REDUCING TEE				
PART NO.	TUBE OD RUN	TUBE OD RUN	TUBE OD BRANCH	
PP301208W	3/8	1/4	3/8	
PP30121208W	3/8	3/8	1/4	
PP301612W	1/2	1/2	3/8	

STEM ADAPTER			NPTF Thread	
PART NO.	STEM OD	THREAD	NPTF	
PP050821W	1/4	x	1/8	
PP050822W	1/4	x	1/4	
PP051222W	3/8	x	1/4	
PP051223W	3/8	x	3/8	
PP051623W	1/2	x	3/8	
PP051624W	1/2	x	1/2	

SWIVEL MALE RUN TEE			NPTF Thread	
PART NO.	TUBE OD	THREAD	NPTF	
PP110821W	1/4	x	1/8	
PP110822W	1/4	x	1/4	
PP111222W	3/8	x	1/4	
PP111223W	3/8	x	3/8	

FAUCET CONNECTOR			UNS Thread	
PART NO.	TUBE OD	THREAD	UNS	
PP3212U7W	3/8	x 7/16	- 24	
PP3208U7W	1/4	x 7/16	- 24	

BULKHEAD CONNECTOR	
PART NO.	TUBE OD
PP1208W	1/4
PP1212W	3/8
PP1216W	1/2

FIXED ELBOW			NPTF Thread	
PART NO.	TUBE OD	THREAD	NPTF	
PP480821W	1/4	x	1/8	
PP480822W	1/4	x	1/4	
PP480823W	1/4	x	3/8	
PP481222W	3/8	x	1/4	
PP481223W	3/8	x	3/8	

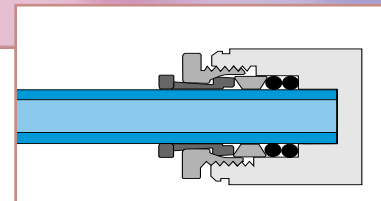
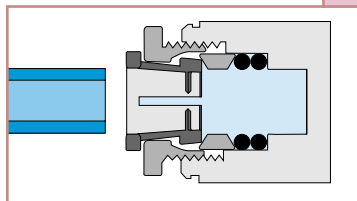
## The SI Range of *Superseal*® Fittings

### For use with Stainless Steel Tubing

The **SI** Range of inch-size push-in fittings is offered for tube sizes 1/4" O.D. to 3/8" O.D. The fittings have been especially designed to provide extra grip on stainless steel, and other polished metal tubing.

The *Superseal*® design features a collet with integrally molded stainless steel teeth similar to our standard *Super Speedfit*® design, but incorporating an additional hand-operated nut and wedge shaped plastic washer to apply extra pressure to the collet and double 'o' ring seals. This ensures that the collet teeth bite thoroughly into the tube to provide grip, while at the same time compressing the 'o' rings to further enhance sealing. Like other John Guest fittings, *Superseal*® is suitable for potable liquids and other food quality applications.

Technical Specifications shown on page 4.



**MALE CONNECTOR** *BSPT Thread*

PART NO.	SUPERSEAL OD	THREAD	BSPT
SM010802S	5/16	x	1/4

**UNION ELBOW** *Superseal x Speedfit*

PART NO.	SUPERSEAL OD	SPEEDFIT OD
SI030812S	1/4	- 3/8
SM030808S	5/16	- 5/16
SI031012S	5/16	- 3/8
SI031210S	3/8	- 5/16
SI031212S	3/8	- 3/8

**UNION ELBOW** *Superseal x Superseal*

PART NO.	SUPERSEAL OD	SUPERSEAL OD
SM400808S	5/16	- 5/16
SI401210S	3/8	- 5/16
SI401212S	3/8	- 3/8

**MALE CONNECTOR** *BSPP Thread*

PART NO.	SUPERSEAL OD	THREAD	BSPP
SM010812S	5/16	x	1/4

**UNION CONNECTOR** *Superseal x Speedfit*

PART NO.	SUPERSEAL OD	SPEEDFIT OD
SM040808S	5/16	- 5/16
SI041012S	5/16	- 3/8
SI041210S	3/8	- 5/16
SI041212S	3/8	- 3/8

**UNION CONNECTOR** *Superseal x Superseal*

PART NO.	SUPERSEAL OD	SUPERSEAL OD
SM410808E	5/16	- 5/16

**FLARE MALE CONNECTOR** *MFL Thread*

PART NO.	SUPERSEAL OD	THREAD	MFL
SM0108F4S	5/16	x	1/4
SM0108F6S	5/16	x	3/8

**BARB CONNECTOR**

PART NO.	SUPERSEAL OD	HOSE ID
SI270808S	1/4	- 1/4
SI271008S	5/16	- 1/4
SI271208S	3/8	- 1/4

**FLOW BEND CONNECTOR** *Superseal x Speedfit*

PART NO.	SUPERSEAL OD	SPEEDFIT OD
SM420808S	5/16	- 5/16
SI421012S	5/16	- 3/8
SI421210S	3/8	- 5/16
SI421212S	3/8	- 3/8

**SPANNER**

PART NO.	SIZE
SPAN1	5/16 & 3/8



## Metric to Imperial Fittings

**UNION CONNECTOR**

PART NO.	TUBE OD	TUBE OD
NC462	15	- 1/2

**TUBE TO HOSE STEM**

PART NO.	STEM OD	HOSE ID
NC932	15	- 1/2

**TEE ADAPTER**

PART NO.	TUBE OD END	TUBE OD BRANCH
NC869	15	- 3/8

**STEM TO TUBE ADAPTER**

PART NO.	STEM OD	TUBE OD
NC2164	15	- 3/8
NC2173	1/2	- 15
NC908	1/2	- 18

**BARB CONNECTOR**

PART NO.	STEM OD	HOSE ID
NC448	15	- 1/2

**STEM TO STEM ADAPTER**

PART NO.	STEM OD	STEM OD
NC478	15	- 3/8

# Inch- and Metric-Size Push-In Fittings

## The PM Range of Metric-Size Fittings

The **PM** Range of metric-size push-in fittings is offered for tube sizes 4mm O.D. to 12mm O.D. The fittings are manufactured in black acetal copolymer with food grade nitrile 'o' rings, making them especially suitable for applications involving foodstuff and potable liquids. They are equally suitable for air and inert gasses and can therefore be used on CO<sub>2</sub> lines, pneumatic applications, and vacuum.

Technical Specifications shown on page 4.



MALE CONNECTOR		BSPT Thread	
PART NO.	TUBE OD	THREAD	BSPT
PM010401E	4	x	1/8
PM010402E	4	x	1/4
PM010501E	5	x	1/8
PM010502E	5	x	1/4
PM010601E	6	x	1/8
PM010602E	6	x	1/4
PM010801E	8	x	1/8
PM010802E	8	x	1/4
PM010803E	8	x	3/8
PM011002E	10	x	1/4
PM011003E	10	x	3/8
PM011004E	10	x	1/2
PM011203E	12	x	3/8
PM011204E	12	x	1/2

UNION TEE		PART NO.	TUBE OD
		PM0204E	4
		PM0205E	5
		PM0206E	6
		PM0208E	8
		PM0210E	10
		PM0212E	12

STEM ADAPTER		BSPT Thread	
PART NO.	STEM OD	THREAD	BSPT
PM050401E	4	x	1/8
PM050402E	4	x	1/4
PM050501E	5	x	1/8
PM050502E	5	x	1/4
PM050601E	6	x	1/8
PM050602E	6	x	1/4
PM050801E	8	x	1/8
PM050802E	8	x	1/4
PM050803E	8	x	3/8
PM051002E	10	x	1/4
PM051003E	10	x	3/8
PM051004E	10	x	1/2
PM051203E	12	x	3/8
PM051204E	12	x	1/2

UNION ELBOW		PART NO.	TUBE OD
		PM0304E	4
		PM0305E	5
		PM0306E	6
		PM0308E	8
		PM0310E	10
		PM0312E	12

MALE CONNECTOR		BSPP Thread	
PART NO.	TUBE OD	THREAD	BSPP
PM010411E	4	x	1/8
PM010412E	4	x	1/4
PM010511E	5	x	1/8
PM010512E	5	x	1/4
PM010611E	6	x	1/8
PM010612E	6	x	1/4
PM010811E	8	x	1/8
PM010812E	8	x	1/4
PM010813E	8	x	3/8
PM011012E	10	x	1/4
PM011013E	10	x	3/8
PM011014E	10	x	1/2
PM011213E	12	x	3/8
PM011214E	12	x	1/2

UNION CONNECTOR		PART NO.	TUBE OD
		PM0404E	4
		PM0405E	5
		PM0406E	6
		PM0408E	8
		PM0410E	10
		PM0412E	12

STEM ADAPTER		BSPP Thread	
PART NO.	STEM OD	THREAD	BSPP
PM050411E	4	x	1/8
PM050412E	4	x	1/4
PM050511E	5	x	1/8
PM050512E	5	x	1/4
PM050611E	6	x	1/8
PM050612E	6	x	1/4
PM050811E	8	x	1/8
PM050812E	8	x	1/4
PM050813E	8	x	3/8
PM051012E	10	x	1/4
PM051013E	10	x	3/8
PM051014E	10	x	1/2
PM051213E	12	x	3/8
PM051214E	12	x	1/2

REDUCER			
PART NO.	STEM OD	TUBE OD	
PM060504E	5	-	4
PM060604E	6	-	4
PM060605E	6	-	5
PM060804E	8	-	4
PM060805E	8	-	5
PM060806E	8	-	6
PM061006E	10	-	6
PM061008E	10	-	8
PM061208E	12	-	8
PM061210E	12	-	10
PM061510E	15	-	10

SWIVEL ELBOW			
PART NO.	TUBE OD	THREAD BSPP	
PM090411E	4	x 1/8	
PM090412E	4	x 1/4	
PM090511E	5	x 1/8	
PM090512E	5	x 1/4	
PM090611E	6	x 1/8	
PM090612E	6	x 1/4	
PM090811E	8	x 1/8	
PM090812E	8	x 1/4	
PM090813E	8	x 3/8	
PM091012E	10	x 1/4	
PM091013E	10	x 3/8	
PM091014E	10	x 1/2	
PM091213E	12	x 3/8	
PM091214E	12	x 1/2	

SWIVEL MALE RUN TEE			
PART NO.	TUBE OD	THREAD BSPT	
PM110401E	4	x 1/8	
PM110402E	4	x 1/4	
PM110501E	5	x 1/8	
PM110502E	5	x 1/4	
PM110601E	6	x 1/8	
PM110602E	6	x 1/4	
PM110801E	8	x 1/8	
PM110802E	8	x 1/4	
PM110803E	8	x 3/8	
PM111002E	10	x 1/4	
PM111003E	10	x 3/8	
PM111004E	10	x 1/2	
PM111203E	12	x 3/8	
PM111204E	12	x 1/2	

PLUG		
PART NO.	STEM OD	
PM0804R	4	
PM0805R	5	
PM0806R	6	
PM0808R	8	
PM0810R	10	
PM0812R	12	

R – Denotes Red Color Plug

SWIVEL BRANCH TEE			
PART NO.	TUBE OD	THREAD BSPT	
PM100401E	4	x 1/8	
PM100402E	4	x 1/4	
PM100501E	5	x 1/8	
PM100502E	5	x 1/4	
PM100601E	6	x 1/8	
PM100602E	6	x 1/4	
PM100801E	8	x 1/8	
PM100802E	8	x 1/4	
PM100803E	8	x 3/8	
PM101002E	10	x 1/4	
PM101003E	10	x 3/8	
PM101004E	10	x 1/2	
PM101203E	12	x 3/8	
PM101204E	12	x 1/2	

SWIVEL MALE RUN TEE			
PART NO.	TUBE OD	THREAD BSPP	
PM110411E	4	x 1/8	
PM110412E	4	x 1/4	
PM110511E	5	x 1/8	
PM110512E	5	x 1/4	
PM110611E	6	x 1/8	
PM110612E	6	x 1/4	
PM110811E	8	x 1/8	
PM110812E	8	x 1/4	
PM110813E	8	x 3/8	
PM111012E	10	x 1/4	
PM111013E	10	x 3/8	
PM111014E	10	x 1/2	
PM111213E	12	x 3/8	
PM111214E	12	x 1/2	

SWIVEL ELBOW			
PART NO.	TUBE OD	THREAD BSPT	
PM090401E	4	x 1/8	
PM090402E	4	x 1/4	
PM090501E	5	x 1/8	
PM090502E	5	x 1/4	
PM090601E	6	x 1/8	
PM090602E	6	x 1/4	
PM090801E	8	x 1/8	
PM090802E	8	x 1/4	
PM090803E	8	x 3/8	
PM091002E	10	x 1/4	
PM091003E	10	x 3/8	
PM091004E	10	x 1/2	
PM091203E	12	x 3/8	
PM091204E	12	x 1/2	

SWIVEL BRANCH TEE			
PART NO.	TUBE OD	THREAD BSPP	
PM100411E	4	x 1/8	
PM100412E	4	x 1/4	
PM100511E	5	x 1/8	
PM100512E	5	x 1/4	
PM100611E	6	x 1/8	
PM100612E	6	x 1/4	
PM100811E	8	x 1/8	
PM100812E	8	x 1/4	
PM100813E	8	x 3/8	
PM101012E	10	x 1/4	
PM101013E	10	x 3/8	
PM101014E	10	x 1/2	
PM101213E	12	x 3/8	
PM101214E	12	x 1/2	

BULKHEAD UNION			
PART NO.	TUBE OD	MOUNTING HOLE DIA. (MM)	
PM1204E	4	16.5	
PM1205E	5	16.5	
PM1206E	6	16.5	
PM1208E	8	21.0	
PM1210E	10	21.0	
PM1212E	12	26.5	

ENLARGER			
PART NO.	STEM OD	TUBE OD	
PM130405E	4	-	5

# Metric- and Inch-Size Push-In Fittings

## REDUCING UNION



PART NO.	TUBE OD	TUBE OD
PM200604E	6	4
PM200804E	8	4
PM200806E	8	6
PM201004E	10	4
PM201006E	10	6
PM201008E	10	8
PM201208E	12	8
PM201210E	12	10

## TWO-WAY DIVIDER



PART NO.	TUBE OD
PM2304E	4
PM2308E	8

## OFFSET CONNECTOR



PART NO.	TUBE OD	TUBE OD
NC657	12	8

## REDUCING ELBOW



PART NO.	TUBE OD	TUBE OD
PM210604E	6	4
PM210804E	8	4
PM210806E	8	6
PM211004E	10	4
PM211006E	10	6
PM211008E	10	8
PM211208E	12	8
PM211210E	12	10

## TUBE TO HOSE STEM



PART NO.	STEM OD	HOSE ID
PM250604E	6	4
PM250806E	8	6
PM251008E	10	8

## U-BEND



PART NO.	TUBE OD
PMUB15E	15

## PLUG-IN ELBOW



PART NO.	STEM OD	TUBE OD
PM220404E	4	4
PM220505E	5	5
PM220606E	6	6
PM220808E	8	8
PM221010E	10	10
PM221212E	12	12

## FEMALE CONNECTOR



PART NO.	TUBE OD	THREAD
PM450411E	4	x 1/8 BSPP
PM450612E	6	x 1/4 BSPP
PM450812E	8	x 1/4 BSPP
PM4508F4S	8	x 1/4 FL
PM4508C5S	8	x 1/2-16 UN

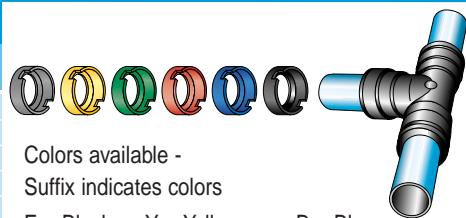
## Accessories

### COLLET COVERS



PART NO.	TUBE OD
PM1904S	5/32
PI1906S	3/16
PI1908S	1/4
PM1908S	5/16
PI1912S	3/8
PI1916S	1/2

The slip-on collet cover shown in the photograph prevents accidental removal or tampering with tubing. Tubing can be inserted with the collet cover already attached to the fittings or the cover can slide into position afterwards. The cover is easily removed when required and comes in a variety of colors for color coding.



Colors available -  
Suffix indicates colors

E = Black    Y = Yellow    B = Blue  
R = Red    S = Gray    G = Green

Please indicate by suffix which color is required or gray will be supplied.

**Also available in metric sizes.**

### COLLET LOCKING/RELEASE TOOL



PART NO.	SIZES INCLUDE
ICLT/2	3/16, 1/4, 5/16, 3/8, 1/2
TSPITool*	1/4, 3/8



### LOCKING CLIP



PART NO.	TUBE OD
PIC1808R	1/4
PIC1812R	3/8
PIC1816R	1/2

The Locking Clip secures the collet in its position to prevent an accidental disconnection of the tube. Locking Clips should be applied only after full tube insertion to prevent scraping or scoring of the tube. Locking Clips are not designed for use with John Guest Stem Adapters in swivel combinations.

### FLOW BEND CLIP



PART NO.	TUBE OD
PM2608S	5/16
PM2610S	3/8

### TUBE INSERT



PART NO.	TUBE OD	TUBE ID
TSI250S	5/16	- 1/4
TSI312S	3/8	- 5/16
TSI375S	1/2	- 3/8
TSM10N*	10	
TSM15N*	15	
TSM22N*	22	

### TUBE CUTTER



PART NO.
TSNP

## The MI/MM Range Of Metal Half Cartridges

The **MI/MM** Range of Half cartridge tube fittings is designed to provide a simple and cost-effective method of integrating the **Super Speedfit®** technology into components produced from a wide variety of materials. Customers should ensure cartridges are suitable for their applications, materials and operating conditions. Using the drawing shown on page 16, create the three-tiered cavity. Press the cartridge (brass or stainless steel) into the outer tier of the cavity. Insert the 'o' ring into the center tier. Snap the collet into the cartridge. For additional information, consult our Technical Support Department.



### Inch Series

BRASS BODY Nitrile 'o' ring		BRASS BODY EPDM 'o' ring	
PART NO.	TUBE OD	PART NO.	TUBE OD
MM2804N	5/32	CI2812N	3/8
MI2806N	3/16	CI2820N	5/8
MI2808N	1/4		
MM2808N	5/16		
MI2812N	3/8		
MI2816N	1/2		

For double 'o' rings use suffix 2  
(Example: MM2804N2).

### Metric Series

BRASS BODY Nitrile 'o' ring	
PART NO.	TUBE OD
MM2804N	4
MM2805N	5
MM2806N	6
MM2808N	8
MM2810N	10
MM2812N	12
CM2815N*	15
CM2822N*	22

\* EPDM 'o' ring

## The PI/PM Range of Plastic Half Cartridges

The **PI/PM** Range of Plastic Half Cartridges is similar to our Brass Half Cartridges but consists of a collet and body insert produced in food grade acetal with a nitrile 'o' ring. Our Plastic Half Cartridges have been designed with stainless steel teeth molded into the circumference of the body insert to provide superior gripping capability.

Our Plastic Half Cartridges are suitable for use in valves, pumps, manifolds, and many other components used in water purification, beverage dispensing, pneumatics, and other fluid system applications. They can be used with plastic or metal (copper or mild steel) tubing.

Customers should ensure cartridges are suitable for their applications, materials and operating conditions.



### Inch Series

PLASTIC BODY Nitrile 'o' ring		
PART NO.	TUBE OD	DESCRIPTION
PI2808S -B, -R, -W	1/4	Gray Body, Gray Collet Blue, Red or White Collet
PI2808W -B, -R	1/4	White Body, White Collet Blue or Red Collet
PM2808S -B, -R, -W	5/16	Gray Body, Gray Collet Blue, Red or White Collet
PM2808W -B, -R	5/16	White Body, White Collet Blue or Red Collet
PI2812S -B, -R, -W	3/8	Gray Body, Gray Collet Blue, Red or White Collet
PI2812W -B, -R	3/8	White Body, White Collet Blue or Red Collet
PI2816S	1/2	Gray Body, Gray Collet

S-denotes Gray bodies with Gray collets.

W-denotes White Bodies with White collets.

Inch size Plastic Half Cartridges are available in Gray bodies with Gray, Blue or Red collets or White bodies with White, Blue or Red collets. Please use suffix B, R, or W when ordering. Ex. PI2808S-B.

For additional sealing capability all variations are available with double 'o' rings. Please use suffix 2 (Example: PI2808S2).

### Metric Series

PLASTIC BODY Nitrile 'o' ring		
PART NO.	TUBE OD	DESCRIPTION
PM2806E	6	Black Body, Black Collet
PM2808E	8	Black Body, Black Collet
PM2810E	10	Black Body, Black Collet

E-denotes Black bodies with Black collets.

For additional sealing capability metric size Half Cartridges are available with double with double 'o' rings. Please use suffix 2 (Example: PM2806E2).

### Assembly Tool

PART NO.	FOR CARTRIDGE SIZE
AST-1/4	1/4" and 6mm
AST-3/8	3/8" and 10mm



A special hand 'Assembly Tool' is available for each size of Plastic Half Cartridge to ease the assembly process. These can be adapted by the customer to fit a simple bench press etc.

**\*For cavity dimensional details refer to the appropriate inch or metric drawing on page 16**

# Inch- and Metric-Size Metal and Plastic Half Cartridges

## Cartridge Assembly

**1**

Ensure that the cavity is clean and free from debris, burrs, score marks, etc.

**2**

Insert the cartridge down into the housing; ensure the cartridge is flush with the housing.

**3**

Insert the O-Ring

**4**

Insert Collet to complete assembly.

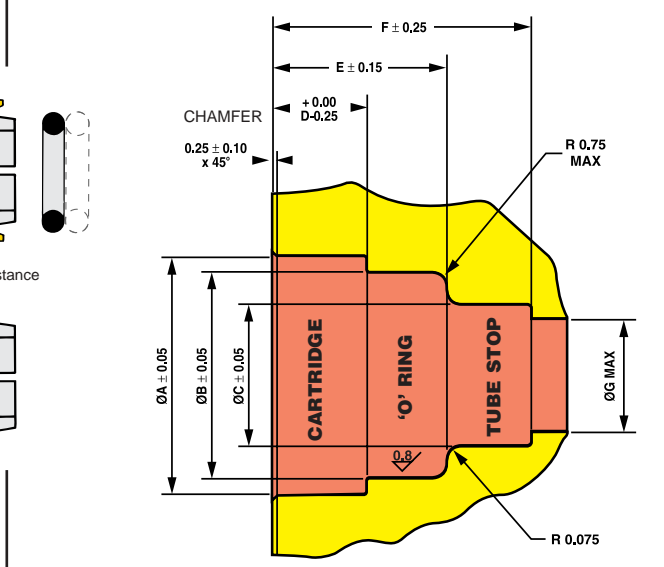
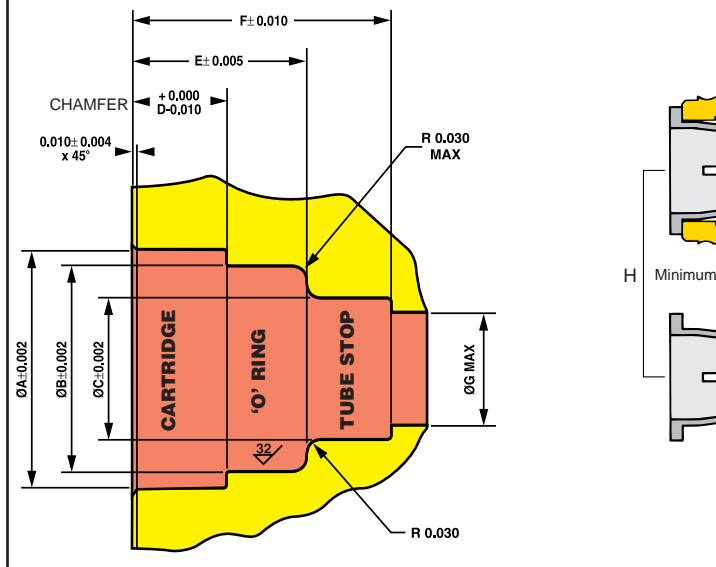
## Cavity Dimensional Details

INCH CARTRIDGE CAVITY DIMENSIONS										
TUBE OD	ØA	ØB	ØC	D	E1	E2	F1	F2	ØG	H
5/32	0.492	0.327	0.163	0.181	0.350	0.445	0.504	0.598	0.13	0.59
3/16	0.472	0.348	0.193	0.180	0.340	0.440	0.490	0.590	0.16	0.59
1/4	0.528	0.424	0.255	0.181	0.386	0.480	0.555	0.650	0.23	0.67
5/16	0.544	0.470	0.320	0.215	0.400	0.500	0.590	0.690	0.29	0.67
3/8	0.632	0.547	0.380	0.270	0.465	0.565	0.720	0.815	0.35	0.79
1/2	0.777	0.671	0.506	0.304	0.561	0.659	0.797	0.869	0.48	0.93
5/8	0.935	0.836	0.638	0.335	0.703	-	1.093	-	0.50	1.06

METRIC CARTRIDGE CAVITY DIMENSIONS (mm)										
TUBE OD	ØA	ØB	ØC	D	E1	E2	F1	F2	ØG	H
4	12.50	8.30	4.14	4.60	8.89	11.30	12.80	15.20	3.30	15.0
5	11.98	9.06	5.13	4.57	8.63	11.17	12.44	14.98	4.06	15.0
6	13.41	10.00	6.12	4.60	9.80	12.20	14.00	16.50	5.30	16.5
8	13.82	11.94	8.13	5.46	10.16	12.70	14.99	17.50	7.40	17.0
10	16.05	14.00	10.15	6.86	11.81	14.35	18.17	20.71	9.20	19.0
12	19.10	16.54	12.15	8.65	15.50	19.00	23.50	27.00	11.20	22.0
15	22.86	20.32	15.19	9.00	17.50	21.00	26.90	30.40	14.20	27.0
22	31.05	27.80	22.20	10.85	21.10	24.70	31.60	35.20	21.20	34.5

Columns E2 and F2 refer to double 'o' ring half cartridges.  
Half cartridges are also available with double 'o' rings. Please use suffix 2  
(Example: MM2804N2 for Metal and PI2808S2 for Plastic half cartridges).

Columns E2 and F2 refer to double 'o' ring half cartridges.  
Half cartridges are also available with double 'o' rings. Please use suffix 2  
(Example: MM2804N2 for Metal and PM2806E2 for Plastic half cartridges).



## The PPSV Range of Shut-Off Valves

The **PPSV** Range of inch-size Shut-Off Valves is offered for tube sizes 1/4" O.D. and 3/8" O.D. The valves are manufactured in white polypropylene with food grade EPDM 'o' rings for use with potable water. For use with other potable liquids, please refer to our Technical Support Department for guidance.

The valves are not to be used with compressed air, explosive gasses, petroleum spirits or other fuels, nor for heating systems.

### Working Pressures and Temperatures

Water Max. 150 psi at 70°F (Max. 10 Bar at 20°C)  
 Max. 60 psi at 140°F (Max. 4 Bar at 60°C)  
 Min. 33°F/1°C



#### SPEEDFIT TO MALE NPTF POLYPROPYLENE BODY

PART NO.	TUBE OD		THREAD NPTF
PPSV010822W	1/4	x	1/4
PPSV011223W	3/8	x	3/8

#### SPEEDFIT TO SPEEDFIT POLYPROPYLENE BODY

PART NO.	TUBE OD
PPSV040808W	1/4
PPSV041212W	3/8

#### SPEEDFIT TO FEMALE NPTF ELBOW POLYPROPYLENE BODY

PART NO.	TUBE OD		THREAD NPTF
PPSV500822W	1/4	x	1/4
PPSV501222W	3/8	x	1/4

## The PISV Range of Shut-Off Valves

The **PISV** Range of inch-size Shut-Off Valves is available in 3/8" tube O.D. size. The valve is manufactured in gray acetal copolymer with a nitrile 'o' ring.

The valves are available with long and short handles to operate a 1/4 turn off action.

Specifically designed for use with compressed air and potable liquids, the valves are ideal for CO<sub>2</sub> lines in beverage dispensing and for pneumatic applications.

*It is the customer's responsibility to ensure that the installation of John Guest fittings in CO<sub>2</sub> applications is performed in accordance with the relevant industry and government safety guidelines.*

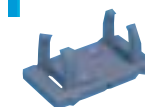
### Working Pressures and Temperatures

Air: 150 psi at -4°F (10 Bar at -20°C)  
 Air/Potable Liquids: 150 psi at +33°F (10 Bar at +1°C)  
 150 psi at +73°F (10 Bar at +23°C)  
 100 psi at +150°F (7 Bar at +65°C)



#### MOUNTING CLIP – Acetal

PART NO.
SVMC - 10



The mounting clip is designed to give a very firm grip. A twisting action is needed to remove the valve. The clip can be used with either shut-off valve. When used with the short handle version, valves can be banked together.

**Available for 3/8" O.D. valves.**

#### SPEEDFIT TO SPEEDFIT – Acetal BODY Long Handle

PART NO.	TUBE OD
PISV0412S	3/8
PISV0416S	1/2

#### SPEEDFIT TO SPEEDFIT – Acetal BODY Short Handle

PART NO.	TUBE OD
PISV0412CS	3/8

# Inch-Size Shut-Off Valves and Inch- and Metric-Size Tubing

## The PE Range of LLDPE Tubing

The PE Range of plastic tubing is available in inch and metric sizes in a variety of colors, produced in Linear Low Density Polyethylene.

Our tubing provides the benefits of a wide range of temperature and pressure suitability, broad chemical compatibility and is made from non-contaminating materials. Common applications are in water purification, water conditioners, ice makers, and misting systems. LLDPE is more robust than traditional low or medium density polyethylene and is recommended for use with cold and intermittent hot water.

Our tubing is made from FDA approved materials and is listed with NSF International Standard 51 & 61.

John Guest LLDPE Tubing provides excellent resistance to environmental stress cracking as measured by ASTM D-1693 (10% IGEPAL).

John Guest Polyethylene Tubing is designed for use with John Guest **Super Speedfit®** Push-in fittings, John Guest Shut-Off Valves, and virtually all standard tubing connectors.



SIZES AVAILABLE				
PART NO.	OD	ID	COIL LENGTH	MIN BEND RADIUS
PE-08-BI-0500F-N	1/4"(0.250")	0.170"	500 FT	1.00"
PE-08-BI-1000F-N	1/4"(0.250")	0.170"	1,000 FT	1.00"
PE-10-CI-0500F-N	5/16"(0.3125")	0.187"	500 FT	1.13"
PE-12-EI-0500F-N	3/8"(0.375")	0.250"	500 FT	1.25"
PE-16-GI-0250F-N	1/2"(0.500")	0.375"	250 FT	2.50"
PE-04025-0100M-N	4mm	2.5mm	100m	25mm
PE-0604-0100M-N	6mm	4mm	100m	25mm
PE-0806-100M-N	8mm	6mm	100m	30mm
PE-1007-100M-N	10mm	7mm	100m	32mm
PE-1209-100M-N	12mm	9mm	100m	63mm
PE-15115-0100-B	15mm	11.5mm	100m	100mm

N denotes natural color. To request other colors refer to table below, or contact our Customer Service Department.

COLORS AVAILABLE		SIZES									
SUFFIX	COLOR	1/4"	5/16"	3/8"	1/2"	4mm	6mm	8mm	10mm	12mm	15mm
N	NATURAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	○
W	WHITE	✓	○	✓	✓	○	○	✓	○	○	○
B	BLUE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E	*BLACK	✓	✓	✓	✓	✓	✓	✓	✓	✓	○
R	RED	✓	✓	✓	✓	✓	○	○	✓	✓	✓
O	ORANGE	✓	○	✓	○	○	○	○	○	○	○
V	VIOLET	✓	○	✓	○	○	○	○	○	○	○
G	GREEN	✓	○	✓	○	○	○	○	○	○	✓
Y	YELLOW	✓	○	✓	○	○	○	○	○	○	○

\* Black tubing is UV stabilized.

✓ Denotes standard colors available.

○ Denotes optional colors which may be available based on order quantity.

For quick, clean, and simple tube cutting, we recommend the John Guest Tube Cutter.



Tube Cutter Part No. TSNIP

## Working Temperatures and Pressures

Tube OD		Tube ID	Tube OD		Tube ID
1/4"	x	0.170"	1/2"	x	0.375"
5/16"	x	0.187"	8mm	x	6mm
3/8"	x	0.25"	10mm	x	7mm
4mm	x	2.5mm	12mm	x	9mm
6mm	x	4mm	15mm	x	11.5mm
230 psi @ 70°F 15 bar @ 20°C			150 psi @ 70°F 10 bar @ 20°C		
120 psi @ 150°F 8 bar @ 60°C			90 psi @ 150°F 6 bar @ 60°C		

Maximum Working Temperature 150°F at pressures shown in chart above.

Burst Pressures are approximately 3 times the maximum working pressure.

Please note maximum pressure rating for a 'system' depends on the lowest rated component, eg. most John Guest fittings have a different rating from the tube ratings shown above.

### Tube Inserts

If the tube is used in a warm water system a tube insert may be necessary.

#### TUBE INSERT

PART NO.	TUBE OD	TUBE ID
TSI250S	5/16"	1/4"
TSI312S	3/8"	5/16"
TSI375S	1/2"	3/8"

#### TUBE INSERT

PART NO.	TUBE OD
TSM10N	10
TSM15N	15
TSM22N	22

## Chemical Resistance

For use with chemicals or potentially aggressive liquids, please refer to our Technical Service Department.

When using John Guest LLDPE Tubing for pneumatic applications, ensure that the pressure does not exceed a maximum of 150 psi (10 bar) at 70°F (20°C). At elevated temperatures (above 120°F/50°C), mineral oil may degrade LLDPE Tubing, and therefore, LLDPE Tubing used in pneumatic circuits should be periodically checked and replaced as necessary.

## Tube Tolerances

1/4" to 1/2"	+0.001"/-0.004"
4mm to 6mm	+0.05/-0.07mm
8mm to 12mm	+0.05/-0.10mm
15mm	+0.10/-0.10mm

## Chemical Compatibility Chart

### Chemical Compatibility For Material Contact of Standard PM/PI Range, CM/CI Range and PP Range Fittings.

This chart describes the compatibility of the materials of construction for our standard PM/PI, CM/CI and PP ranges of fittings when in contact solely with the listed chemical substance. It is intended as a guide only and is not an assurance of suitability for any specific application. Customers are advised to conduct tests under actual service conditions to determine suitability for their application. For further details, please contact our Technical Support Department.

**IMPORTANT: SEE NOTES AT THE END OF THE FOLLOWING PAGE**

CHEMICAL	PM/PI Range	CM/CI Range	PP Range	CHEMICAL	PM/PI Range	CM/CI Range	PP Range
Acetaldehyde	UNSUITABLE	SATISFACTORY	NOT TESTED	Cane-Sugar Liquors	NOT TESTED	NOT TESTED	NOT TESTED
Acetate Solvents	NOT TESTED	NOT TESTED	NOT TESTED	Carbon Dioxide - dry	SATISFACTORY	SATISFACTORY	NOT TESTED
Acetic Acid 3%	SATISFACTORY	GOOD	GOOD	Carbon Dioxide - wet	SATISFACTORY	SATISFACTORY	NOT TESTED
Acetic Acid 20%	SATISFACTORY	NOT TESTED	NOT TESTED	Carbon Tetrachloride	UNSUITABLE	UNSUITABLE	UNSUITABLE
Acetic Acid 50%	SATISFACTORY	NOT TESTED	NOT TESTED	Chlorine - dry	UNSUITABLE	UNSUITABLE	UNSUITABLE
Acetone	UNSUITABLE	GOOD	GOOD	Chlorine - wet	UNSUITABLE	UNSUITABLE	UNSUITABLE
Acetophenone	UNSUITABLE	SATISFACTORY	NOT TESTED	Chloroform	UNSUITABLE	UNSUITABLE	UNSUITABLE
Acetylene	<b>NOT FOR USE WITH THIS SUBSTANCE</b>			Chromic Acid 3%	UNSUITABLE	UNSUITABLE	UNSUITABLE
Air	GOOD	GOOD	GOOD	Citric Acid 10%	SATISFACTORY	SATISFACTORY	SATISFACTORY
Alcohols 95%	NOT TESTED	GOOD	NOT TESTED	Coke Oven Gas	UNSUITABLE	SATISFACTORY	UNSUITABLE
Aluminum Chloride	UNSUITABLE	UNSUITABLE	NOT TESTED	Copper Salts	NOT TESTED	NOT TESTED	GOOD
Aluminum Sulfate	SATISFACTORY	SATISFACTORY	NOT TESTED	Copper Sulfate 10%	GOOD	GOOD	NOT TESTED
Alums	UNSUITABLE	UNSUITABLE	NOT TESTED	Cottonseed Oil	GOOD	GOOD	NOT TESTED
Ammonia - cold gas	GOOD	GOOD	GOOD	Creosote	SATISFACTORY	UNSUITABLE	UNSUITABLE
Ammonia - liquid	NOT TESTED	NOT TESTED	NOT TESTED	Cyclohexanol	SATISFACTORY	SATISFACTORY	SATISFACTORY
Ammonium Acetate	NOT TESTED	NOT TESTED	NOT TESTED	Cyclohexanone	UNSUITABLE	SATISFACTORY	SATISFACTORY
Ammonium Carbonate	UNSUITABLE	GOOD	GOOD	D.D.T.	NOT TESTED	NOT TESTED	NOT TESTED
Ammonium Chloride	UNSUITABLE	UNSUITABLE	GOOD	Detergent Solution	GOOD	GOOD	GOOD
Ammonium Hydroxide	UNSUITABLE	GOOD	NOT TESTED	Dibutyl Phthalate	UNSUITABLE	SATISFACTORY	NOT TESTED
Ammonium Nitrate	SATISFACTORY	SATISFACTORY	GOOD	Dichloroethylene	NOT TESTED	NOT TESTED	NOT TESTED
Ammonium Phosphate	NOT TESTED	NOT TESTED	NOT TESTED	Dimethylformamide	UNSUITABLE	SATISFACTORY	SATISFACTORY
Ammonium Sulfate 10% pH 5.8	GOOD	GOOD	GOOD	Dioxane	UNSUITABLE	SATISFACTORY	NOT TESTED
Amyl Acetate	UNSUITABLE	NOT TESTED	NOT TESTED	Ether (DAB 6)	NOT TESTED	NOT TESTED	NOT TESTED
Amyl Alcohol	SATISFACTORY	SATISFACTORY	SATISFACTORY	Ethyl Acetate	UNSUITABLE	SATISFACTORY	SATISFACTORY
Amyl Chloride	NOT TESTED	NOT TESTED	NOT TESTED	Ethyl Alcohol (50%)	GOOD	GOOD	GOOD
Aniline	UNSUITABLE	SATISFACTORY	SATISFACTORY	Ethyl Alcohol (95%)	GOOD	GOOD	GOOD
Asphalt	SATISFACTORY	UNSUITABLE	UNSUITABLE	Ethylene Glycol	GOOD	GOOD	NOT TESTED
Automatic Transmission Fluid	SATISFACTORY	UNSUITABLE	UNSUITABLE	Ferrox Inhibitor	<i>Refer to John Guest USA Inc.</i>		
Auto Rear End Lubricant	NOT TESTED	NOT TESTED	NOT TESTED	Ferric Chloride 10%	UNSUITABLE	UNSUITABLE	NOT TESTED
Barium Salts	NOT TESTED	NOT TESTED	NOT TESTED	Ferric Sulfate	NOT TESTED	NOT TESTED	NOT TESTED
Beer	GOOD	GOOD	GOOD	Ferrous Chloride	UNSUITABLE	UNSUITABLE	NOT TESTED
Beet-Sugar Liquors	NOT TESTED	NOT TESTED	NOT TESTED	Ferrous Sulfate	SATISFACTORY	SATISFACTORY	NOT TESTED
Benzaldehyde	UNSUITABLE	GOOD	GOOD	Formaldehyde 40%	UNSUITABLE	SATISFACTORY	SATISFACTORY
Benzene	UNSUITABLE	UNSUITABLE	UNSUITABLE	Formic Acid 10%	UNSUITABLE	UNSUITABLE	GOOD
Benzoic Acid	UNSUITABLE	UNSUITABLE	UNSUITABLE	Freon	<i>Refer to John Guest USA Inc.</i>		
Borax	SATISFACTORY	GOOD	GOOD	Gelatin	NOT TESTED	NOT TESTED	NOT TESTED
Boric Acid	GOOD	GOOD	GOOD	Glucose	GOOD	GOOD	GOOD
Brake Fluid	NOT TESTED	NOT TESTED	NOT TESTED	Glycerin	GOOD	GOOD	GOOD
Brandy	NOT TESTED	NOT TESTED	NOT TESTED	Heptane	NOT TESTED	NOT TESTED	NOT TESTED
Bromine Water	UNSUITABLE	UNSUITABLE	UNSUITABLE	Hydraulic Fluid	NOT TESTED	NOT TESTED	NOT TESTED
Buffer Solution pH 4.0	UNSUITABLE	UNSUITABLE	NOT TESTED	Hydraulic Fluid - Fire Resistant	NOT TESTED	NOT TESTED	NOT TESTED
Buffer Solution pH 7.0	NOT TESTED	NOT TESTED	NOT TESTED	Hydrobromide Acid (Hydrobromic Acid)	UNSUITABLE	UNSUITABLE	GOOD
Buffer Solution pH 10.0	NOT TESTED	NOT TESTED	NOT TESTED				
Butane	<b>NOT FOR USE WITH THIS SUBSTANCE</b>			Hydrochloric Acid 30%	UNSUITABLE	UNSUITABLE	SATISFACTORY
Butter	GOOD	GOOD	GOOD	Hydrochloric Acid 50%	UNSUITABLE	UNSUITABLE	NOT TESTED
Butyl Acetate	UNSUITABLE	SATISFACTORY	SATISFACTORY	Hydrocyanic Acid	NOT TESTED	NOT TESTED	NOT TESTED
Butyl Rubber	NOT TESTED	NOT TESTED	NOT TESTED	Hydrofluoric Acid - dilute	UNSUITABLE	UNSUITABLE	GOOD
Calcium Arsenate	NOT TESTED	NOT TESTED	NOT TESTED	Hydrofluoric Acid 40%	UNSUITABLE	UNSUITABLE	GOOD
Calcium Bisulfite	NOT TESTED	NOT TESTED	NOT TESTED	Hydrofluoric Acid 50%	UNSUITABLE	UNSUITABLE	NOT TESTED
Calcium Chloride	GOOD	GOOD	GOOD	Hydrogen Gas	<b>NOT FOR USE WITH THIS SUBSTANCE</b>		
Calcium Hypochlorite	UNSUITABLE	UNSUITABLE	GOOD	Hydrogen Fluoride	UNSUITABLE	UNSUITABLE	NOT TESTED
Calcium Salts	NOT TESTED	NOT TESTED	NOT TESTED	Hydrogen Peroxide 3%	NOT TESTED	UNSUITABLE	SATISFACTORY

# Chemical Compatibility Chart

## CHEMICAL COMPATIBILITY (continued)

CHEMICAL	PM/PI Range	CM/CI Range	PP Range	CHEMICAL	PM/PI Range	CM/CI Range	PP Range
Hydrogen Sulfide	UNSUITABLE	SATISFACTORY	GOOD	Shellac	NOT TESTED	NOT TESTED	NOT TESTED
Iodine (in Alcohol solution)	UNSUITABLE	UNSUITABLE	NOT TESTED	Silver Nitrate	SATISFACTORY	SATISFACTORY	NOT TESTED
Iso-Propanol	SATISFACTORY	GOOD	NOT TESTED	Soap Solution	GOOD	GOOD	GOOD
Kerosene	SATISFACTORY	UNSUITABLE	UNSUITABLE	Sodium Bicarbonate 10%	NOT TESTED	NOT TESTED	NOT TESTED
Lactic Acid 20%	SATISFACTORY	GOOD	GOOD	Sodium Bisulfate	UNSUITABLE	UNSUITABLE	NOT TESTED
Lead Acetate	SATISFACTORY	SATISFACTORY	NOT TESTED	Sodium Bisulfite	UNSUITABLE	UNSUITABLE	NOT TESTED
Lime Sulfur	NOT TESTED	NOT TESTED	NOT TESTED	Sodium Borate	GOOD	GOOD	NOT TESTED
Linseed Oil	GOOD	GOOD	GOOD	Sodium Carbonate 10%	GOOD	GOOD	GOOD
Lubrication Grease - with Molybdenum	NOT TESTED	NOT TESTED	NOT TESTED	Sodium Chlorate	NOT TESTED	NOT TESTED	NOT TESTED
Machine Oil	NOT TESTED	NOT TESTED	NOT TESTED	Sodium Chloride 10%	GOOD	GOOD	GOOD
Magnesium Chloride	SATISFACTORY	SATISFACTORY	NOT TESTED	Sodium Cyanide	SATISFACTORY	SATISFACTORY	NOT TESTED
Magnesium Hydroxide	SATISFACTORY	GOOD	NOT TESTED	Sodium Hydroxide (Caustic Soda Solution)	SATISFACTORY	GOOD	GOOD
Magnesium Sulfate	NOT TESTED	NOT TESTED	NOT TESTED	Sodium Hypochlorite (12.5% active Chlorine)	UNSUITABLE	UNSUITABLE	SATISFACTORY
Maleic Acid	UNSUITABLE	UNSUITABLE	UNSUITABLE	Sodium Metaphosphate	NOT TESTED	NOT TESTED	NOT TESTED
Manganese Salts	NOT TESTED	NOT TESTED	NOT TESTED	Sodium Nitrate 10% pH 8.8	GOOD	GOOD	GOOD
Mayonnaise	NOT TESTED	NOT TESTED	NOT TESTED	Sodium Perborate	NOT TESTED	NOT TESTED	NOT TESTED
Mercuric Chloride	UNSUITABLE	UNSUITABLE	NOT TESTED	Sodium Phosphate	NOT TESTED	NOT TESTED	NOT TESTED
Mercury	GOOD	GOOD	GOOD	Sodium Silicate	NOT TESTED	NOT TESTED	NOT TESTED
Methanol	NOT FOR USE WITH THIS SUBSTANCE			Sodium Sulfate	NOT TESTED	NOT TESTED	NOT TESTED
Methyl Chloride	UNSUITABLE	UNSUITABLE	UNSUITABLE	Sodium Sulfite	NOT TESTED	NOT TESTED	NOT TESTED
Milk	SATISFACTORY	SATISFACTORY	GOOD	Sodium Thiosulfate	NOT TESTED	NOT TESTED	NOT TESTED
Motor Oil	NOT TESTED	NOT TESTED	NOT TESTED	Stearic Acid	SATISFACTORY	SATISFACTORY	SATISFACTORY
Natural Gas	NOT FOR USE WITH THIS SUBSTANCE			Succinic Acid	NOT TESTED	NOT TESTED	NOT TESTED
Nickel Salts	NOT TESTED	NOT TESTED	GOOD	Sulfate Liquors	NOT TESTED	NOT TESTED	NOT TESTED
Nitric Acid 10%	UNSUITABLE	UNSUITABLE	SATISFACTORY	Sulfur	UNSUITABLE	SATISFACTORY	GOOD
Nitric Acid - concentrated	UNSUITABLE	UNSUITABLE	UNSUITABLE	Sulfur Chloride	UNSUITABLE	UNSUITABLE	UNSUITABLE
Nitrobenzene	UNSUITABLE	NOT TESTED	NOT TESTED	Sulfur Dioxide Gas	UNSUITABLE	UNSUITABLE	GOOD
Nitrogen Oxides	NOT TESTED	NOT TESTED	NOT TESTED	Sulfuric Acid 3%	NOT TESTED	GOOD	GOOD
Nitrous Acid	UNSUITABLE	UNSUITABLE	NOT TESTED	Sulfuric Acid 10%	NOT TESTED	SATISFACTORY	GOOD
Oleic Acid	SATISFACTORY	NOT TESTED	NOT TESTED	Sulfuric Acid - concentrated	UNSUITABLE	UNSUITABLE	UNSUITABLE
Olive Oil	GOOD	SATISFACTORY	SATISFACTORY	Sulfurous Acid	UNSUITABLE	UNSUITABLE	NOT TESTED
Oxalic Acid	SATISFACTORY	SATISFACTORY	GOOD	Tannic Acid	SATISFACTORY	SATISFACTORY	NOT TESTED
Oxygen	SATISFACTORY	SATISFACTORY	NOT TESTED	Tar	SATISFACTORY	UNSUITABLE	UNSUITABLE
Palmitic Acid	SATISFACTORY	SATISFACTORY	NOT TESTED	Tartaric Acid	UNSUITABLE	UNSUITABLE	SATISFACTORY
Perchloric Acid	UNSUITABLE	UNSUITABLE	NOT TESTED	Tetrahydrofuran	UNSUITABLE	NOT TESTED	NOT TESTED
Petroleum Oils	NOT TESTED	NOT TESTED	NOT TESTED	Tetralin	NOT TESTED	NOT TESTED	NOT TESTED
Petroleum - Refined	NOT TESTED	NOT TESTED	NOT TESTED	Thiophene	NOT TESTED	NOT TESTED	NOT TESTED
Petrol	SATISFACTORY	UNSUITABLE	UNSUITABLE	Toluene	UNSUITABLE	UNSUITABLE	UNSUITABLE
Phenol	UNSUITABLE	NOT TESTED	NOT TESTED	Tomatoes	NOT TESTED	NOT TESTED	NOT TESTED
Phosphoric Acid 20 - 25%	UNSUITABLE	GOOD	GOOD	Trichloroethane	UNSUITABLE	UNSUITABLE	UNSUITABLE
Phosphoric Acid - concentrated	UNSUITABLE	UNSUITABLE	SATISFACTORY	Turpentine	SATISFACTORY	UNSUITABLE	UNSUITABLE
Picric Acid - Molten	UNSUITABLE	UNSUITABLE	NOT TESTED	Urea	NOT TESTED	NOT TESTED	NOT TESTED
Picric Acid - Aqueous	UNSUITABLE	UNSUITABLE	NOT TESTED	Varnish	SATISFACTORY	UNSUITABLE	UNSUITABLE
Potable water	GOOD	GOOD	GOOD	Vegetable Oil	SATISFACTORY	SATISFACTORY	SATISFACTORY
Potassium Hydroxide 50%	SATISFACTORY	GOOD	GOOD	Vinegar	SATISFACTORY	SATISFACTORY	GOOD
Potassium Salts	NOT TESTED	NOT TESTED	NOT TESTED	Xylene	UNSUITABLE	UNSUITABLE	UNSUITABLE
Propane	NOT FOR USE WITH THIS SUBSTANCE			Zinc Acetate	SATISFACTORY	SATISFACTORY	NOT TESTED
Pyridine	UNSUITABLE	UNSUITABLE	SATISFACTORY	Zinc Chloride	UNSUITABLE	UNSUITABLE	NOT TESTED
Rosin, Light	NOT TESTED	NOT TESTED	NOT TESTED	Zinc Salts	NOT TESTED	NOT TESTED	GOOD
Salt Water	GOOD	GOOD	GOOD				

**GOOD:** Weight increase of less than 5%, or weight loss of less than 3%, and/or a change of the tensile properties of less than 25%.

**SATISFACTORY:** Weight increase 5% to 10% or weight loss 3% to 5% and/or a change of the tensile properties of 25% to 40%.

**NOT TESTED:** This combination has not been tested or reliable data is not available.

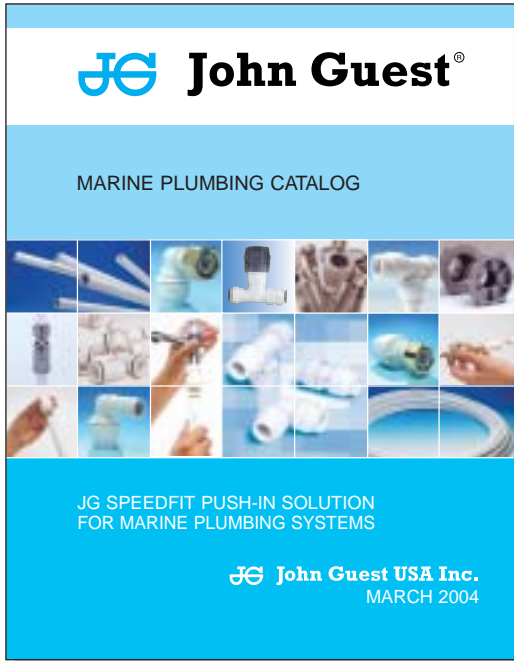
**UNSUITABLE:** The materials used in the fittings are not suitable for this chemical.

### MATERIALS USED IN THE CONSTRUCTION OF FITTINGS

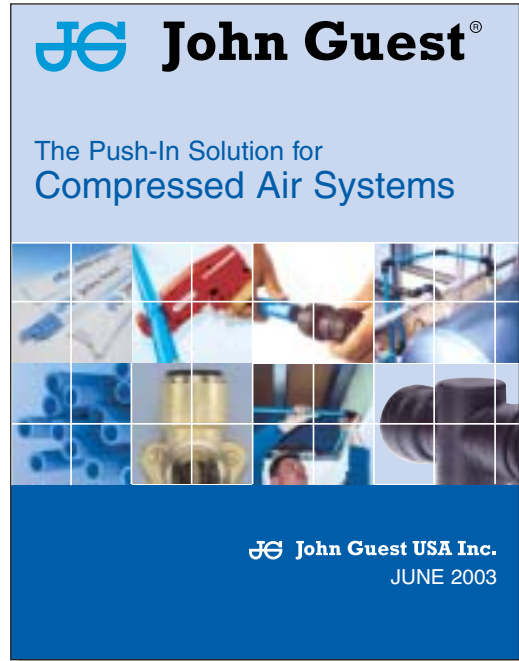
PM/PI RANGE	BODY—ACETAL	SEALS & 'O' RINGS—NITRILE	COLLETS—ACETAL & STAINLESS STEEL
CM/CI RANGE	BODY—ACETAL	SEALS & 'O' RINGS—EPDM	COLLETS—ACETAL & STAINLESS STEEL
PP RANGE	BODY—POLYPROPYLENE	SEALS & 'O' RINGS—EPDM	COLLETS—POLYPROPYLENE & STAINLESS STEEL

**Note:** Ratings used in the tables were generally assessed over a period of 30 days by our material suppliers and relate to the chemicals being at a temperature of 20°C (68°F)

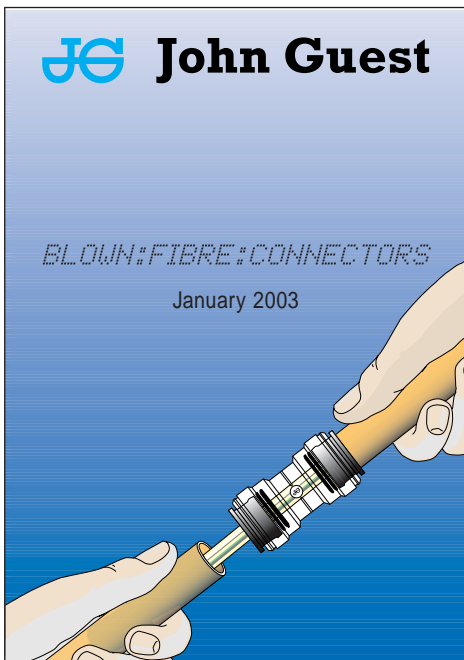
**Other John Guest Products:**



**RV and Marine Plumbing products**  
A push-in system of fittings and pipe designed for the plumbing of hot and cold water service.



**Compressed Air System Products**  
A push-in system of fittings and pipe developed to reduce downtime for installation and maintenance. Products are also suitable for food quality environments.



**Blown Fiber Products**  
Connectors specially designed and produced for blown fiber applications.



**Appliance Grade Fittings**  
Push-in fittings that have been specifically designed for the highest reliability as required by Appliance Manufacturers, Installers, and Service Technicians.

# Terms and Conditions

The products described in this document are hereby offered for sale to be established by John Guest (USA) Inc., its subsidiaries and its authorized distributors. This offer and its acceptance by any customer (the "Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any item described in this document, when communicated to John Guest (USA) Inc., its subsidiaries or an authorized distributor (the "Seller") verbally or in writing, shall constitute acceptance of this offer.

**1. Terms and Conditions of Sale.** All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of the Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein (the "Agreement"). The Buyer's acceptance of any offer to sell is limited to the terms and conditions in the Agreement. Any terms or conditions in addition to, or inconsistent with those stated in the Agreement, proposed by the Buyer in any acceptance of an offer by the Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the agreement between the Buyer and the Seller unless expressly accepted in writing by the Seller. The Seller's acceptance of any offer to purchase by the Buyer is expressly conditioned upon the Buyer's assent to all the terms and conditions in this Agreement, irrespective of any terms in addition to, or inconsistent with those contained in the Buyer's offer. Acceptance of the Seller's products shall in all events constitute such assent.

**2. Documents.** Unless provided otherwise in the Agreement, all catalog descriptions, illustrations, drawings and literature or independently submitted estimates of performance, weights and measurements or other specifications provided by the Seller are mere approximations and the Seller reserves the right to alter or amend the same at any time. The Seller reserves the right to correct clerical or technical errors in the contract documents. The Buyer shall furnish with his order all necessary specifications and information. The Seller takes no responsibility for goods manufactured, priced or delivered not in accordance with the order or the specifications unless the Buyer's order and specifications are clear and correct.

**3. Prices.** Unless otherwise provided, all prices contained in our quotations and written acceptances are ex works and do not include the cost of packing. All orders are accepted on the condition that all such prices are subject to revision by the Seller at any time before the goods are dispatched to take account of any price change. In the event that the Buyer does not place the entire order quoted by the Seller for the Buyer, the Seller reserves the right to revise its prices. The Seller also reserves the right to revise its prices if the Buyer modifies the specification or quantity of the goods, or the delivery requirements after the order has been accepted by the Seller.

**4. Advice.** All advice given in connection with the Seller's goods is provided without charge to the Buyer. Any advice and assistance given by the Seller to the Buyer is given at the Buyer's risk and the Seller shall not be liable for any loss, damage or claim arising therefrom.

**5. Payment.** (a) Unless otherwise provided in the Agreement, or explicitly agreed upon in writing by the Seller, payment is due in full 30 days from date of shipment of the items purchased herein under. (b) In the case of an installment contract, deliveries or parts, payment for each installment delivery or part shall be made under subclause (a) as if the same constituted a separate agreement. (c) Amounts not timely paid shall bear interest at the rate of 2-1/2% above the Seller's bank's prime rate from time to time in force. (d) In the event that the Buyer fails within one calendar month of the date for payment to effect any payment which may be due under the Agreement or any agreement with the Seller, or if the Buyer commits any breach of the Agreement, or if the Buyer becomes insolvent or commits any act of bankruptcy or contemplation of liquidation, the Seller will be entitled, without prejudice to the Seller's other rights, to terminate the Agreement or any unfulfilled part thereof, or at the Seller's option to make partial deliveries.

**6. Modifications and Cancellations.** This Agreement is not subject to oral modification or cancellation. A Buyer's request for modification or cancellation will not be incorporated into the Agreement unless the request is accepted by the Seller in a writing that amends the Agreement. Acceptance of any such requested modification or cancellation shall be at the Seller's discretion and shall be upon such terms and conditions as the Seller may require.

**7. Handling Charge.** Goods supplied in accordance with the Buyer's order may later be returned to the Seller at the Seller's discretion provided the return is pre-authorized, in writing and the merchandise is unused, in original packages, unaltered, clean and no older than 60 days from the date of shipment by the Seller. The Buyer will be required to pay to the Seller a handling charge of 15% of the purchase price of the returned goods. A copy of the original invoice for the merchandise must accompany all returns.

**8. Delivery.** (a) Any delivery dates quoted are approximate only and the Seller shall have no liability for any delays in delivery. (b) Unless provided otherwise, delivery of the goods shall be made when the Seller has notified the Buyer that the goods are ready for dispatch. Regardless of the method of delivery, delivery shall be made F.O.B. Seller's plant, where the risk of loss shall thereupon pass to the Buyer upon the Seller's delivery to a carrier. Notwithstanding that the Seller's prices are ex-works, the Seller is prepared by special contract to procure carriage or freight and insurance on behalf of the Buyer and at Buyer's cost in which event the Seller shall be under no liability for damage in transit or loss or damage to the goods beyond the point at which the Seller contracts to deliver the same. (c) Seller will not make drop shipments.

**9. Inspection and Rejection.** (a) The following provisions shall apply in relation to all deliveries of goods: the Seller shall not be held liable for any claims of damage in transit, shortage of delivery or loss of goods, unless in the case of shortage of delivery, a separate notice in writing is given to the carrier concerned and to the Seller within three (3) days of the receipt of the goods, followed by a complete claim in writing within five (5) days of receipt of the goods and in the case of loss of goods, a separate notice in writing is given to the carrier concerned and to the Seller and a complete claim in writing made within thirty (30) days of the date of consignment. The Buyer must inspect the goods on arrival from the carrier, however, where goods are accepted from the carrier concerned without being inspected, the delivery book of the carrier concerned must be signed "not examined". The Seller shall have the right to inspect the goods at the Buyer's premises in respect to any such claims made by the Buyer and the Buyer shall retain such goods until the Seller has inspected such goods or until the Seller has notified the Buyer that the Seller does not wish to inspect such goods. Any breach of these conditions in this provision shall serve as a waiver to any claim brought by the buyer. (b) Without prejudice to the Seller's other rights, should the Buyer fail for any reason to send the Seller forwarding instructions within ninety (90) days after the date of the Seller's notification that the goods are ready for dispatch or to accept delivery of the goods, the Seller shall be entitled at the Buyer's risk and expense to store the goods and/or to procure or effect storage of the goods elsewhere. Goods so stored shall be paid for as if they had been dispatched and/or accepted.

**10. Special Tooling.** Where it is necessary for the Seller to manufacture or to purchase special tooling, including without limitation tools, dies, jigs, mandrills, fixtures, molds, and patterns in order to execute a contract, the Buyer will be charged with a proportion of the cost of such special tools. Such special tooling shall be and remain the Seller's property notwithstanding payment of any charges made by the Buyer. In no event will the Buyer acquire any interest in apparatus belonging to the Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adopted for such manufacture and notwithstanding any charges paid by the Buyer therefor. Unless otherwise agreed, the Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

**11. Test and Performance.** (a) The Seller's goods are, where practicable, submitted to the Seller's standard test before delivery. If special tests are required, these shall be made at the Seller's premises unless otherwise agreed, and will be subject to an extra charge. (b) The Seller accepts no liability for failure to attain any performance figures quoted by the Seller unless the Seller specifically has guaranteed them with an agreed sum as liquidation damages and the Buyer has suffered actual loss by reason of the failure to attain the figures quoted. (c) Any particulars of weights and measurements, power and consumption, power output or performance relating to the goods and like matters furnished by the Seller to the Buyer in the Seller's catalogs, literature or otherwise, are approximate and are intended only to present a general idea of the goods to be supplied and unless previously agreed specifically in writing shall not form part of the Agreement.

**12. Buyer's Property.** Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished to the Seller by the Buyer, or any other items which become the Buyer's property, may be considered obsolete and may be destroyed by the Seller after two (2) consecutive years have elapsed without the Buyer placing an order for the items which are manufactured using such property. The Seller shall not be responsible for any loss or damage to such property while it is in the Seller's possession or control.

**13. Taxes.** Unless otherwise indicated, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by the Seller, or if the Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the item sold. The Buyer agrees to pay all such taxes or to reimburse the Seller therefor upon receipt of its invoice. If the Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, the Buyer shall promptly indemnify and hold the Seller harmless from and against any such tax, as well as any interest or penalties thereon which may be assessed if the items are held to be taxable.

**14. Warranty.** (a) The Seller warrants that the items sold hereunder shall be free from defects in material or workmanship at the time of shipment by the Seller. The Seller warrants that if within 12 months of delivery of the goods to the Buyer the Buyer returns immediately to the Seller's premises any of the said goods which the Buyer believes to be defective, carrier paid, properly packed and clearly marked with the Buyer's full name and address and any other information such as serial numbers which may be necessary to enable the goods to be identified, together with a complete description of the respects in which it is alleged that the goods are defective, they will be repaired or new goods will be supplied in exchange and the goods so repaired or such new goods will be delivered to the Buyer free of charge at the Seller's premises provided that the foregoing warranty shall only be applicable if upon demand by the Seller, the Buyer proves to the Seller's satisfaction: (i) that the defect was due solely to defective workmanship; (ii) that no alterations or repairs have been made to the goods except with the Seller's written consent; (iii) that the defect was not caused by any act of the Buyer or its agents; and (iv) that the defect was not caused by any matter beyond the reasonable control of the Seller, including, without limitation, accident or normal wear and tear. (b) All costs and expenses, including freight charges, customs duties, and insurance incurred in returning the goods to the Seller's premises in accordance with this provision shall be paid by the Buyer. The benefit of this warranty shall not be assignable by the Buyer. (c) The warranty contained in sub-paragraph (a) above does not extend to any goods not manufactured by the Seller even though supplied by the Seller nor does it extend to any second-hand or reconditioned goods nor does it extend to components manufactured by the Seller but installed, attached or welded by the Buyer or his customer on equipment not manufactured by the Seller. Goods not manufactured by the Seller carry only the warranty (if any) of their makers and the Buyer is entitled to the benefit thereof only so far as the Seller has the power to transfer it. (d) This warranty comprises the sole and entire warranty pertaining to items provided hereunder, the Seller makes no other warranty, guarantee, or representation of any kind whatsoever. All other warranties, including but not limited to, merchantability and fitness for purpose, whether expressed or implied, or arising by operation of law, trade usage, or course of dealing are hereby disclaimed. (e) Notwithstanding the foregoing, there are no warranties whatsoever on items built or acquired wholly or partially to the Buyer's designs or specifications.

**15. Limited Remedy.** The Seller's liability arising from or in any way connected with the items sold or this Agreement shall be limited exclusively to repair or replacement of the items sold. In no event shall the Seller be liable to the Buyer or any 3rd party for any incidental, consequential or special damages of any kind or nature whatsoever, including but not limited to lost profits arising from or in any way connected with this agreement or items sold hereunder, whether alleged to arise from breach of contract, express or implied warranty, or in tort, including without limitation, negligence, failure to warn or strict liability.

**16. Indemnity for Infringement of Intellectual Property Rights.** (a) The Buyer shall defend and indemnify the Seller against all actions, claims, demands, penalties and costs by 3rd parties in tort, or for infringement, or alleged infringement, of patents, trademarks, copyrights, trade dress, trade secret or other rights of any 3rd party resulting from the goods manufactured in accordance with the Buyer's specifications or based on any information provided by the Buyer. The Buyer will defend any action against the Seller for title, patent, trademark, copyright infringement, or other claimed by a 3rd party at the Buyer's sole cost and expense. (b) The Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this provision. The Seller will defend and indemnify the Buyer against allegations of infringement of US patents, US trademarks, copyrights, trade dress and trade secrets ("Intellectual Property Rights"). The Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against the Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a 3rd party. The Seller's obligation to defend and indemnify the Buyer is contingent on the Buyer notifying the Seller within 10 days after sole control over the defense of any allegations or actions, including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a 3rd party, the Seller may, at its sole expense and option, procure for the Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, the Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in combination or use in a system of any item sold hereunder. The foregoing in this provision shall constitute the Seller's sole and exclusive liability and the Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

**17. Lien.** In addition to any right of lien to which the Seller may by law be entitled, the Seller shall have a general lien on all goods of the Buyer in the Seller's possession (although such goods or some of them may have been paid for) for the unpaid price of any other goods sold and delivered to the Buyer by the Seller under the same or other contracts.

**18. Waiver.** The Seller's rights shall not be affected or restricted by any indulgence or forbearance granted to the Buyer. No waiver by the Seller of any breach shall operate as a waiver of any later breach.

**19. Force Majeure.** The Seller shall be excused from performing any of its obligations under this Agreement which are prevented or delayed by any occurrence not within the reasonable control of the Seller, including but not limited to, accidents, acts of God, destruction or damage to the goods or the Seller's manufacturing plant, delays or failures in delivery of carriers or suppliers, shortages of materials, strikes or other labor matters, floods, earthquakes, fire, riots, explosions, or any regulations, rules, ordinances or orders of any governmental authority, federal, state or local, whether such cause exists at the date of the order or not.

**20. Buyer's Representation of Solvency.** The Buyer hereby represents that as of the signing of this Agreement it was not insolvent within the meaning of the Uniform Commercial Code or the Bankruptcy Laws of the United States.

**21. Assignment and Delegation.** The rights and obligations of the parties under this Agreement may not be assigned or delegated, except on the express written consent of the other party to the assignment or delegation.

**22. Integration.** The rights and obligations of the parties and the terms and conditions set forth herein, together with any amendments, modifications and any different terms and conditions expressly accepted by the Seller in writing, shall constitute a complete and exclusive statement of the terms of this Agreement. This Agreement supersedes not only all prior agreements, but also oral agreements made contemporaneously with the execution of this Agreement. All such materials may not be used to supplement, explain, or contradict the terms of this Agreement.

**23. Severability.** If any of these conditions or any part thereof purports to exclude or restrict or limit any liability and such exclusion or restriction or limitation is prohibited or rendered void or unenforceable by any legislation to which it is subject, or is itself prohibited or rendered void or unenforceable by any legislation to which it is subject, then the exclusion restriction or limitation on the condition or part thereof in question shall be so prohibited or rendered void or unenforceable and the validity or enforceability of any other part of these provisions shall not thereby be affected.

**24. Governing Law/Limitation on Actions.** The terms, conditions, rights, and obligations under this Agreement shall be construed under the laws of the State of New York, without regard to principles of conflicts of laws. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by the Buyer more than two (2) years after such cause of action accrues.

## John Guest Companies



**John Guest USA**, a world-leading supplier of Fluid System Products, located in Northern New Jersey is part of a progressive and professional organization with multiple locations worldwide. For over 30 years the John Guest organization has built its reputation by providing high quality products and high levels of customer service.

Through a strong commitment to growth and innovation, John Guest USA will continue to serve its community and customers well into the future.

John Guest USA, Inc. distributes its products across North, Central, and South America, the Caribbean, and the US Virgin Islands.



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### **Product Selection and Installation**

John Guest fittings and related products are specifically designed and manufactured by John Guest to the Technical Specifications set out in the John Guest Product Catalogs. All John Guest fittings and related products should be selected, installed, used, and maintained in accordance with these Technical Specifications. It is the customer's/user's responsibility to ensure that John Guest fittings and related products are suitable for their intended applications, are properly installed and maintained, and are used in accordance with the Technical Specifications. It is also the customer's/user's responsibility to provide its customers with the relevant technical information about John Guest products it supplies to them.

The company has a policy of continuous research and development and reserves the right to amend without notice the specification and design of all products illustrated in this catalog. John Guest Speedfit reserves the right to change color and shape of products. Photographs are for illustration purposes only.

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