

BULKHEAD UNION



PART NO.	TUBE OD	MOUNTING HOLE DIA. (INCH)	BAG QTY	BOX QTY
PM1204S	5/32	0.67	10	200
PI1206S	3/16	0.67	10	200
PI1208S	1/4	0.67	10	200
PM1208S	5/16	0.83	10	100
PI1212S	3/8	0.83	10	100
PI1216S	1/2	1.06	5	50

REDUCING BULKHEAD UNION



PART NO.	TUBE OD	TUBE OD	MOUNTING HOLE DIA. (INCH)	BAG QTY	BOX QTY
NC392-02	1/2	1/4	0.83	150	150
PI121208S	3/8	1/4	0.83	10	150

• Bulk Packed

ENLARGER



PART NO.	STEM OD	TUBE OD	BAG QTY	BOX QTY
PI131012S	5/16	3/8	10	250
PI131216S	3/8	1/2	10	200

REDUCING UNION CONNECTOR



PART NO.	TUBE OD	TUBE OD	BAG QTY	BOX QTY
PI200806S	1/4	3/16	10	200
PM200804S	5/16	5/32	10	300
PI201006S	5/16	3/16	10	200
PI201008S	5/16	1/4	10	200
PI201206S	3/8	3/16	10	200
PI201208S	3/8	1/4	10	200
PI201210S	3/8	5/16	10	200
PI201608S	1/2	1/4	10	200
PI201610S	1/2	5/16	10	100
PI201612S	1/2	3/8	10	100

REDUCING ELBOW



PART NO.	TUBE OD	TUBE OD	BAG QTY	BOX QTY
PM210804S	5/16	5/32	10	300
PI211006S	5/16	3/16	10	200
PI211008S	5/16	1/4	10	200
PI211206S	3/8	3/16	10	200
PI211208S	3/8	1/4	10	200
PI211210S	3/8	5/16	10	200
PI211610S	1/2	5/16	10	100
PI211612S	1/2	3/8	10	100

PLUG IN ELBOW



PART NO.	STEM OD	TUBE OD	BAG QTY	BOX QTY
PM220404S	5/32	5/32	10	500
PI220606S	3/16	3/16	10	500
PI220808S	1/4	1/4	10	500
PM220808S	5/16	5/16	10	400
PI221206S	3/8	3/16	10	300
PI221208S	3/8	1/4	10	300
PI221210S	3/8	5/16	10	200
PI221212S	3/8	3/8	10	200
PI221616S	1/2	1/2	10	100

TWO-WAY DIVIDER



PART NO.	TUBE OD	BAG QTY	BOX QTY
PI2308S	1/4	10	150
PM2308S	5/16	10	100
PI2312S	3/8	10	100
PI2316S	1/2	5	100

UNEQUAL TWO-WAY DIVIDER



PART NO.	TUBE OD INLET	TUBE OD OUTLET	BAG QTY	BOX QTY
PI241210S	3/8	5/16	10	100

TUBE TO HOSE STEM



PART NO.	STEM OD	HOSE ID	BAG QTY	BOX QTY
PI250806S	1/4	3/16	10	500
PI250808S	1/4	1/4	10	500
PI250810S	1/4	5/16	10	500
PI251006S	5/16	3/16	10	500
PI251008S	5/16	1/4	10	500
PM250808S	5/16	5/16	10	500
PI251012S	5/16	3/8	10	400
PI251208S	3/8	1/4	10	400
PI251210S	3/8	5/16	10	400
PI251212S	3/8	3/8	10	400
PI251216S	3/8	1/2	10	300
PI251612S	1/2	3/8	10	300
PI251616S	1/2	1/2	10	200

TUBE TO HOSE STEM LONG VERSION



PART NO.	STEM OD	HOSE ID	BAG QTY	BOX QTY
PI251012SL	5/16	3/8	10	400
PI251212SL	3/8	3/8	10	400

TUBE TO HOSE ELBOW



PART NO.	STEM OD	HOSE ID	BAG QTY	BOX QTY
PI290808S	1/4	1/4	10	500
PI290810S	1/4	5/16	10	500
PI291008S	5/16	1/4	10	500
PM290808S	5/16	5/16	10	500
PI291208S	3/8	1/4	10	400
PI291210S	3/8	5/16	10	400

REDUCING TEE



PART NO.	TUBE OD ENDS	TUBE OD BRANCH	BAG QTY	BOX QTY
PI301208S	3/8	1/4	10	150
PI301612S	1/2	3/8	10	50

ACCESSORIES FOR PI FITTINGS ARE SHOWN ON PAGE 25.



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

		Temp. Pressure	
		Size	Size
		5/32" - 5/16" 4mm - 8mm	3/8" x 1/2" 10mm - 22mm
Air	-4°F	230 psi	150 psi
Potable	+33°F	230 psi	150 psi
Liquids and Air	+68°F	230 psi	150 psi
	+150°F	150 psi	100 psi

General Technical Specifications:

Also suitable for vacuum

For Polypropylene Working Pressure and Temperature Range, please refer to page 5.

Tube Types

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

Braided Tube - Use of Tube to Hose Stems listed on page 9 is essential when using braided tube or hose. The use of clamps to retain braided tube on barbs is recommended.

Metal Tube (soft) - Brass, copper or mild steel conforming to the tolerances below.

Metal Tube (hard) - We do not recommend Super Speedfit fittings for hard metal or chrome plated tubes.

For stainless steel and other polished metal tubes we recommend the use of Superseal fittings. These are shown on page 14 of this catalog.

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

Tube Tolerances

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

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

Installation and System Testing

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

All tube and fittings installations must be pressure tested after installation to ensure system integrity before handing over to the final user. Refer to "How to make a connection".

Chemicals

For use with chemicals or other potentially aggressive liquids, please contact our Technical Support Department.

Super Speedfit fittings are not recommended for use with explosive gases, 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. The cover is offered in a range of six colors. Please see page 25 of this catalog.

Food Quality



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

The wetted surfaces of John Guest PI, PM, SI, SM, CI, CM and NC plastic fittings, PPSV and ASV 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.

NSF International Standard 51 and 61.

Maximum Torque Values for Plastic Threads BSP, BSPT & NPT.

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

	Threads		
	1/8" - 1/4"	3/8" - 1/2"	3/4"
Maximum Torque	1.0ft lbs	2ft lbs	3ft lbs
	1.5Nm	3.0Nm	4.0Nm

John Guest recommends that OEM customers consider replacing threaded ports with the more modern Cartridge Systems.

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 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, discolored, heat distorted or corroded, they should be replaced. Any product that is or appears to be leaking should 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.

Cleaners and Sanitizing of Fittings

The external surfaces of John Guest products must not come into contact with oxidizing or acidic cleaners and sanitizing agents, for example (but not limited to) those below pH 4, high in sodium hypochlorite level (bleach) or containing hydrogen peroxide. Our plastic material suppliers recommend ECOLAB Oasis 133 as a suitable cleaner for the external surfaces of

products manufactured by John Guest. Several different methods exist for sanitizing the internal surfaces of fluid systems, including sodium hypochlorite, hydrogen peroxide, chlorine dioxide or ozone. It is entirely the responsibility of the end user to determine if the chosen method is suitable for use with John Guest products over the planned working life of the system. However, to avoid unnecessary early failure, John Guest requires that the disinfection solution must be immediately flushed out at all draw off points with fresh, wholesome water at the end of the disinfection period. **The solution must not be left in the system.** Disinfection solutions must only come into contact with the internal (fluid carrying) surfaces of the system. If any other surfaces of a fitting come into contact with disinfection solution **the whole fitting must be replaced immediately.** Polypropylene fittings offer greater resistance to aggressive chemicals but does not have the same mechanical properties as other materials. John Guest polypropylene fittings are generally designated by the part number prefix PP or PPM.

Our material suppliers recommend ECOLAB Oasis 133 as a suitable external cleaner for products manufactured by John Guest.

Responsibility of Use

While we give a warranty against defects in manufacture or materials, it is the responsibility of the user/installer to ensure that fittings and related products are suitable for their application. The installation must be carried out correctly in accordance with our recommendations, complying with recognized codes of practice and relevant national standards, and be properly maintained. Please refer to our terms and conditions of sale.

Side Load

Fittings should not be subject to excessive side loads and they should not be used as support brackets. Tubing and fittings should be adequately supported to prevent excessive side loading.

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 Catalog. 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, and 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 any relevant technical information about John Guest products it supplies 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 reserves the right to change the color and shape of products. Photographs are for illustration purposes only.

Subject to our Terms and Conditions of Sale shown on page 37-38.

John Guest USA, Inc. is not responsible for misprints or typographical errors.