

John Guest USA, Inc. **Fluid System Products** **Operating and Installation Guide**

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" for proper installation instruction.

Working Pressure and Temperature Ranges

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

Acetal Fittings (PI, SI, SM, & PM)

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

Suitable for vacuum

Polypropylene Fittings (PP)

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) Intermittent Hot Water
	Min. 33°F/1°C

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 Tube Tolerances shown on the adjacent column. For soft or thin wall tube we recommend the use of tube inserts.

Braided Hose - Use of Tube to Hose Stems, as listed in our Fluid System Products Catalog is essential, when using braided hose. Use of clamps to retain braided hose on barb is recommended.

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

Metal Tube (hard) - John Guest products are not for use with chrome plated copper or hard polished metal tubes. For stainless steel tubes we recommend the use of **Superseal®** fittings. These are shown in our Fluid System Products Catalog.

It is essential that the 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.

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

Responsibility of Use

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

Due to the wide variety of operating conditions, applications and uses of our products, it is the user's (specifier's) responsibility, through their own testing and analysis, to ensure correct product selection for their application.

Installers of John Guest cartridge systems are fully responsible for the final product assembly, testing, quality and application.

Chemicals

For use with chemicals or other potentially aggressive liquids, please refer to our Chemical Compatibility Chart shown in our Fluid System Products Catalog, or consult our Technical Support Department.

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

Food Quality

All of the fittings shown in our Fluid System Products Catalog 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.



Materials of Construction

John Guest fittings are made up of three components:

Bodies are produced in acetal copolymer or polypropylene.

O-rings are in nitrile or EPDM

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

Thread Types:

NPTF, MFL, FFL, UNS, UN, BSP Tapered, and BSP Parallel.

Maximum Torque values for John Guest Plastic Threaded Fittings:

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

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

b. 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.

Cleaning and Sanitizing

For acetal fittings we recommend only the use of cleaners and sanitizing agents that are above pH4 and 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 Standards Products 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 than 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 as shown in our Fluid System Products Catalog.

The company has a policy of continuous research and product development and reserves the right to amend without notice the specifications and design of all John Guest products.

John Guest Fittings and related products are specifically designed and manufactured by John Guest to the Technical Specifications set forth in John Guest's 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 OWN CUSTOMERS WITH any relevant technical information about John Guest products IT SUPPLIES TO THEM. If you would like to request a copy of the Technical Specifications, or if you have any questions about those specifications, please contact John Guest USA at 1-(800)-945-4872, or visit John Guest's website at www.johnguest.com.

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 the Tube Square



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

2. Insert Tube



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

3. Push up to the 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 the 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.

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