

Technical Specification - Drinks Dispense and Pure Water Fittings

October 2004

NOTE: This specification refers principally, but not exclusively, to our range of acetal fittings prefixed PI and PM as well as our *Superseal* fittings prefixed SI and SM. Other fittings, valves, tube and ancillary products have their own Technical Specification.

Product Selection and Installation

John Guest fittings and related products are specifically designed and manufactured by John Guest to the Technical Specification set out in the John Guest Product Catalogues. 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 all relevant technical information about John Guest products it supplies them. If you have any questions about our technical specifications, please contact us.

For use with chemicals or other potentially aggressive liquids, please refer to our Customer Services Department.

Super Speedfit fittings and related products are not recommended for use with explosive gases, petroleum spirits, and other fuels or for central heating systems.

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, discoloured, 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.

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. See also "How to make a connection".

Working Pressure and Temperature Range

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

Temp.	<i>Pressure</i>	
	5/32" - 5/16" 4mm - 8mm	3/8" - 1/2" 10mm - 22mm
Air		
-20°C	16 Bar	10 Bar
Potable Liquids and Air		
+1°C	16 Bar	10 Bar
+23°C	16 Bar	10 Bar
+70°C	10 Bar	7 Bar

Also suitable for vacuum

Depending on the tube used, under certain conditions fittings may be used at higher pressures and temperatures. Please refer to our Customer Services Department for guidance.

Note: 1 Bar = 14.5 PSIG.

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 is essential when using tube. 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 tubes or chromium plated tubes.

For stainless steel and other polished metal tubes we recommend the use of **SuperSeal** fittings.

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

Collet Covers

Are available as additional security against removal of the tube or to provide a simple means of colour coding. The cover is offered in a range of six colours.

Food Quality

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



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

Plastic threads are not generally as strong as brass threads. Customers and end users should be aware of this when choosing products for their applications. Over-tightening of plastic threads will cause undue stress and eventual cracking and leakage. The maximum torque figures for BSP and BSPT threads used in John Guest fittings in mating threads conforming to the relevant BS or International thread standards are shown below.

	<i>Threads</i>		
	1/8 - 1/4	3/8 - 1/2	3/4
Max. Torque	1.5Nm	3.0Nm	4.0Nm

John Guest recommend OEM customers to 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.

Cleaners and Sanitising of Acetal Fittings

Our advise to customers is to use cleaners and sanitising agents that are above pH4 and low in hypochlorite level. Acetal fittings and parts that are cleaned and/or sanitised should be rinsed immediately with copious amounts of clean tap water to remove all traces of the cleaners. Details of which products are made from acetal are shown in our catalogues but generally John Guest products incorporating acetal are designated by the part number prefix PI, PM, CI, CM and RM. Polypropylene fittings offer greater resistance to aggressive chemicals than acetal fittings. Polypropylene does not have the same mechanical properties as acetal and John Guest polypropylene fittings are generally designated by the part number prefix PP and PPM.

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

Side Loads

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.

Warranty

Whilst we give a warranty against defects in manufacture or materials, it is the responsibility of the specifier 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 recognised codes of practice and relevant national standards, and be properly maintained. Please refer to our terms and conditions of sale.

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. John Guest reserve the right to change the colour and shape of products. Photographs are for illustration purposes only.