

# TECHNICAL CHECKLIST INCH SIZE PLUMBING AND HEATING FITTINGS

Products listed on pages 4 to 7

**Fittings and pipe should be kept clean and undamaged before use.**

- **Sizes:** 1/2" to 1" CTS.
- **Pipes:** Speedfit fittings can be used with: PEX, Copper and CPVC Pipes conforming to ASTM Standards. Speedfit fittings cannot be used on stainless steel pipe.
- **Standards:** Speedfit products are designed and manufactured under a fully integrated system assessed by B.S.I. to BS EN ISO9001. Speedfit PEI Fittings and Speedfit PEX Pipe are also NSF-14 and NSF-61, IAPMO and ICC listed.
- **Do not use for gas, fuel oil or compressed air applications.**

• **Working pressures and temperatures:**

Application	Max. Pressure	Max. Temperature
Water	160 psi	73° F
Water	100 psi	180° F
Water	80 psi	200° F

- **Burst Pressure (fittings):** With copper or plastic pipe at 68°F, Speedfit fittings used with copper or Speedfit Pex Pipe will withstand pressures well in excess of normal service conditions.
- **Insulation:** Should comply with applicable standard for copper.
- **Minimum bend radius (PEX):**

Pipe diameter	1/2" CTS	3/4" CTS
Min radius	7"	9"

• **Clip spacing (in inches):**

For surface mounted pipes.

Clip Spacing		
Pipe Diameter	Horizontal Run	Vertical Run
1/2" CTS	16 inches	20 inches
3/4" CTS	20 inches	30 inches
1" CTS	30 inches	36 inches

- **Expansion (PEX Pipe):** 1% on length between 68°F and 180°F.
- **Flow rates:** Comparable with metal systems.
- **Cleaners, inhibitors and descalents:** For advice on the use of additives such as corrosion inhibitors, the additive manufacturers should be consulted.
- **Paint and Chemicals:** Use only water-based paint. **DO NOT ALLOW CONTACT WITH** jointing compounds, cellulose-based paints, paint thinners, paint strippers, solder flux, acid-based descalents or aggressive cleaning products.
- **Solder Flux:** No fluxes of any type should come into contact with Speedfit products. Extreme care should be taken to ensure that no such contact takes place.
- **Chlorine:** Speedfit is not suitable for use in systems where the water contains high levels of chlorine, e.g. swimming pools, fountains, etc.
- **Exposure to light:** Speedfit products, when used indoors, are not affected by sunlight. When used outdoors, protect from ultraviolet light by lagging or painting.

- **Pipe clips:** Pipe clips should not be fitted any closer than 2 1/2 inches from the end of the fitting. Pipe should be adequately supported by pipe clips to prevent undue stress (side load) on fittings.
- **Pipe inserts:**
  - Plumbing:** John Guest recommends the use of pipe inserts for PEX pipe connections with John Guest Speedfit products in Standard Residential Plumbing (hot and cold water) installations.
  - Heating:** John Guest requires the use of pipe inserts for PEX pipe connections with John Guest Speedfit products in all Heating installations.
- **Metal Joists:** When 'cabling' plastic pipe through metal joists, ensure rubber grommets are in place to prevent damage to the pipe.
- **Connection to boilers:** A minimum 36 inches run of copper pipe must be installed between the boiler and the Speedfit system.
- **Connection to copper pipe:** 18 inches is the minimum distance to make a solder connection on copper pipe inserted into a Speedfit fitting. Ensure that no solder flux comes into contact with the fitting.
- **Concrete and masonry:** Speedfit pipe and fittings can be laid in concrete and masonry providing they are installed in conduit pipe with access boxes for the fittings. This is to enable the pipe to expand and provide accessibility for both pipe and fittings. Fittings and pipe should be removable for possible replacement. Insulation is also recommended to protect against heat loss and the effects of frost. Fittings not to be used underground.
- **Electrical Continuity:** If Speedfit is used in an existing metal system, electrical continuity must be reinstated.
- **System Testing:** To ensure the pipework and fittings have been installed correctly, whether it be on a new or extended system, it is essential that the system be checked and hydraulically wet tested. Testing should be at 30 psi for 10 minutes and 150 psi for 10 minutes. This testing, combined with other relevant checks, should reveal installation problems and is regarded as good plumbing practice. However, system testing should not be regarded as a substitute for correct installation (see also "Making a Good Connection").
- **System flushing:** As is usual practice for any plumbing installation, flushing of the system prior to the use of Speedfit is recommended to remove any contaminants/chemical residue from elsewhere in the system.
- **Vermin:** Speedfit products will need special protection in vermin infested areas.

• **Tube Insertion Depths:**

Twist and Lock Fittings	1/2" CTS	3/4" CTS	1" CTS
Tube Insertion Depth	1 1/4"	1 5/8"	1 5/8"
End Caps	1/2" CTS	3/4" CTS	1" CTS
Tube Insertion Depth	1 1/8"	1 1/2"	1 1/2"
Brass Fittings	1/2" CTS	3/4" CTS	1" CTS
Tube Insertion Depth	1 1/8"	1 1/2"	1 1/2"

- **Side Loads:** Fittings should not be subject to excessive side loads and they should not be used as support brackets. Tubing should be adequately supported to prevent excessive side loading.

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