

From the Help lines

In this feature, Registered Gas Engineer asks a manufacturer about the most common queries that engineers ask their technical help lines. This month Omega Flex, which makes TracPipe, takes the call.



How can corrugated stainless steel tube (CSST) be connected to traditional pipework such as steel and copper?

Although the connection to the CSST is specific to each individual manufacturer, there are several options available such as CSST to male or female BSP and CSST to copper compression. For TracPipe, the connection to the CSST itself is achieved with an AutoFlare fitting, which requires no specialist tools to form the joint. All you need is a wheeled tube cutter with a stainless steel wheel, a utility knife and correctly sized spanners.

The AutoFlare fitting forms a gas-tight metal-to-metal seal when correctly tightened, with no need for jointing compounds or tapes. CSST is available in longer lengths so one continuous piece of pipe can be used, reducing the need for joints and therefore increasing the speed of installation compared to traditional pipework such as rigid steel and copper.

Can CSST be used within a protected shaft?

CSST for natural gas installations can be used within a protected shaft containing stairs, lift or other means of fire escape, provided that it is in one continuous length without joints and the shaft is correctly ventilated. TracPipe has a fire resistance rating of 120 minutes and can be installed in any



location where gas pipes are allowed, including, for example, fire escape corridors and car parks.

Can CSST be buried externally?

CSST can be buried externally and normally without the need for additional corrosion protection. CSST manufactured to BS 7838 and/or BS EN 15266 is fitted with a yellow polyethylene jacket that protects it from corrosion. The polyethylene jacket should be closely inspected along the entire length of the pipework to check for any damage or voids in the jacket before it is buried.

When burying CSST externally for domestic natural gas applications, it should have a minimum depth of cover of

375mm when buried in open ground or below traffic. This can be reduced to 40mm if buried below concrete with pedestrian access only.

However, it is important to follow the correct installation standard, depending on the size of CSST being used, whether it is for natural gas or LPG, and domestic or non-domestic. It is also important to remember that joints must not be buried below ground.

Does CSST have to be sleeved where it passes through a wall?

Where CSST passes through a wall, floor or standing, it needs to be contained within a gas-tight sleeve which itself is ventilated to a safe position, preferably to open air. The sleeve should be made of a material that is itself capable of containing gas, for example, steel, copper or polyethylene. Any gap between the CSST and the sleeve should be sealed with a flexible fire-resistant sealant at one end only, to ensure that any gas escape cannot accumulate within

the sleeve. The sleeve itself should also be sealed to the structure using an appropriate building material such as cement mortar.

At what distances should CSST be supported?

CSST is very light compared to traditional pipework materials but it should still be supported at regular intervals and in accordance with the relevant installation Standard. The size of clip used will also be specified by the manufacturer, but typically you can use the next size up of clip when installing CSST. For example, if you were installing DN22 CSST (equivalent to 22mm) you would need to use a 28mm supporting clip. The reason for this is that CSST nominal sizing is based on internal diameter (ID) whereas copper is based on outside diameter (OD). ■

Editor's note: In future Standards, CSST is likely to be known as pliable corrugated tube (PCT).

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