

TRSSK Trade-Tec Sealed System Kit



Introduction

There are very good reasons why sealed primary heating systems are the most common form of heating system used in Europe and the rest of the developed world.

The ease of installation is also an attractive option, as it eliminates the requirement for the feed and expansion tanks and their associated pipework.

For the user, there is the attraction of reduced noise, reduced risk of system corrosion and lower maintenance costs.

We recommend that the installation of any Inta product is carried out by an approved installer.

Technical Specification

Maximum working temperature:	99°C
Minimum working temperature:	4°C
Safety valve discharge Pressure:	3 bar
Maximum glycol concentration:	50%

Kit Content

- G24 compliant filling loop
- 3 bar safety relief valve including pressure gauge
- Quattro fitting
- Isolation valve
- Double check valve

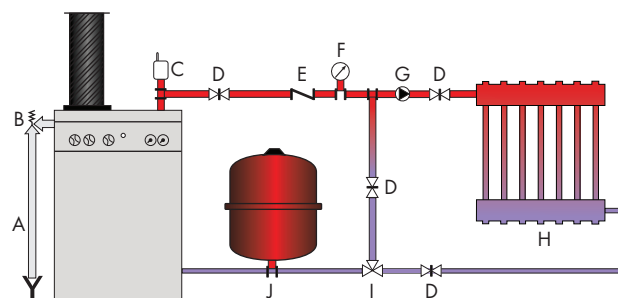
Expansion Vessel

If an existing sealed system is extended then an additional or larger vessel may be required.

The vessel pre-charge pressure should not be 20% more or less than the system cold fill pressure.

Use the Schrader valve on the vessel to increase or decrease the vessel pressure.

Typical System



- A - Drain from safety valve
- B - Pressure and temperature relief valve
- C - Air vent
- D - Isolation valve
- E - Backflow preventer (check valve)
- F - Pressure gauge
- G - Pump
- H - Heat emitter (radiator/UF coil)
- I - Mixing valve (where needed)
- J - Expansion vessel

Filling Loop

If converting an existing system, ensure that all existing components will cope with the higher pressures inherent in a sealed system.

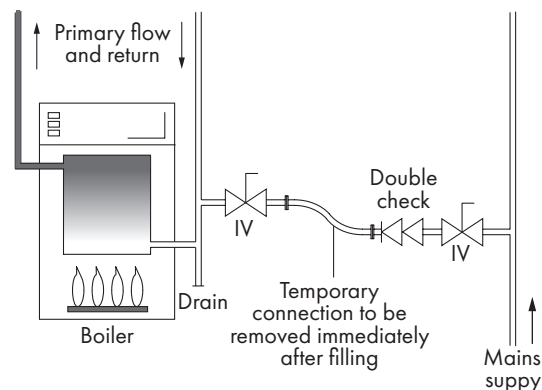
The boiler itself must also be compatible with unvented systems.

The filling loop assembly should be sited on the return leg of the central heating circuit, ideally within sight of a system pressure gauge.

Paying due attention to direction of flow arrows on the body of the assembly, the filling loop should be installed according to G24.1 & G24.2 of the Water Bylaws.

The double check valve assembly should be sited on the mains side of the assembly and the ball valve should be sited on the system side of the assembly.

N.B. The filling loop should be removed from the system after the initial filling and commissioning.



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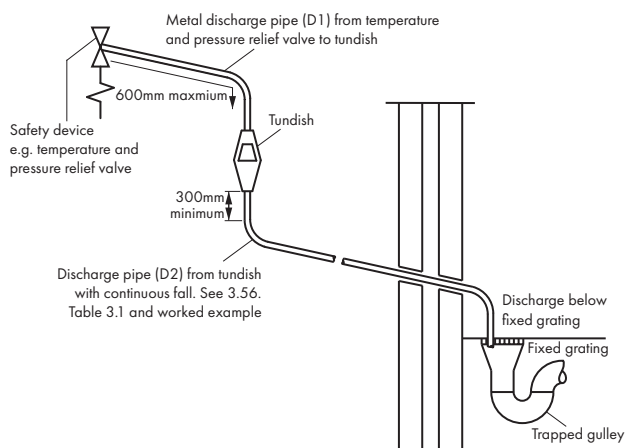
Pressure and Temperature Relief Valve

The valve must be fitted with the discharge pointing downwards to a suitable drain.

There must be no restriction or obstruction between the system and the valve.

The discharge pipework must be sited in accordance with Water Bylaws, paying particular attention to the siting of the tundish, sizing and routing of discharge pipework.

Water Outlet Size	Min. Size of Discharge Pipework (D1)	Mn. Size of Discharge Pipework from Tundish (D2)	Max Resistance Allowed Expressed as a Length of Pipe - No Elbows or Bends	Resistance Created by Each Elbow or Bend
G½	15mm	22mm	Up to 9m	0.8
		28mm	Up to 18m	1.0
		35mm	Up to 27m	1.4
G¾	22mm	28mm	Up to 9m	1.0
		35mm	Up to 18m	1.4
		42mm	Up to 27m	1.7
G1	28mm	35mm	Up to 9m	1.4
		42mm	Up to 18m	1.7
		54mm	Up to 27m	2.3

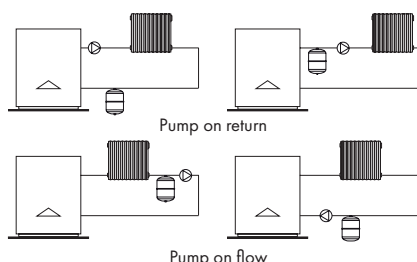


Key Components & their Locations

Although this kit is designed as an "all in one" solution, it is still possible to install the components separately if desired.

If so, the components must be installed according to best practice and the Water Bylaws.

The kit itself may be installed in the following generalised locations illustrated below.



Key Components & their Locations

Check the pressure gauge when the system is cold to identify any pressure loss below the set point.

A loss of pressure indicates either air venting or a system leak. Re-pressurise as required and continue to observe.

By applying a pressure gauge to the Schrader valve under the cap on the expansion vessel, the vessel pressure can be verified.

Only do this when the system is cold and de-pressurised

Increase the pressure if required by using a suitable pump.

Operate the lifter mechanism to confirm the correct operation of the safety valve.

Problem Solving

By reading this guide and adhering to the guidance, system faults should be minimal.

However, the following faults are among the most common you will encounter during installation.

System pressure too low when system is cold

- Air vented from system (particularly when new)
- System leakage
- Expansion vessel charge lost after initial fill.

Relief valve discharges water when system cold

- Safety valve seating clogged
- Filling loop still attached.

Relief valve discharges water when system hot

- Expansion vessel too small.
- Expansion vessel pre-charge set to incorrect value.
- Safety relief valve incorrectly sized.
- System pressure too high.

System pressure greater than 2.5 bar when hot

- Expansion vessel too small.
- Expansion vessel pre-charge set incorrectly.
- System pressure set incorrectly.

Vessel discharges liquid when air pressure is checked

- Membrane is ruptured and requires replacement.

Maintenance

Check the pressure gauge when the system is cold to identify any pressure loss below the set point.

A loss of pressure either indicates air venting or a system leak. Re-pressurise as needed and continue to observe.

A quick inspection of the s valve should be made at least every 12 months to ensure the compressed air cushion is still intact.

In this document we have endeavoured to make the information as accurate as possible. We cannot accept any responsibility should it be found that in any respect the information is inaccurate or incomplete or becomes so as a result of further developments or otherwise.

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