

Intafil Plus Sealed System Kit

IFP

Installation and Maintenance Instructions



intafil

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In this procedure 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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Introduction

The Inta IFP Intafil sealed system kit is designed for unvented heating systems. They are not suitable for use on potable water applications or systems with an uncontrolled heat source such as solar thermal or wood-burners.

Zilmet pressurised expansion vessels (with fixed membrane) are manufactured in accordance with the safety essential requirements of 2014/68/EC pressure equipment directive.

These instructions cover the installation, operation and maintenance. Please read the enclosed instructions before commencing the installation of this product, please note;

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

Content of Kit

CAL-PRO Heating Vessel

SSK1 Sealed System Kit consisting of:

15mm filling loop - WRAS approved

Safety Relief Valve - 3 bar with 3/4" swivel nut

Pressure Gauge - 0 to 4 bar with 50 mm dial and back connection

Cross Tee piece

Sealing Washer - 24 mm OD x 18 mm ID x 2mm thick

Technical Specification

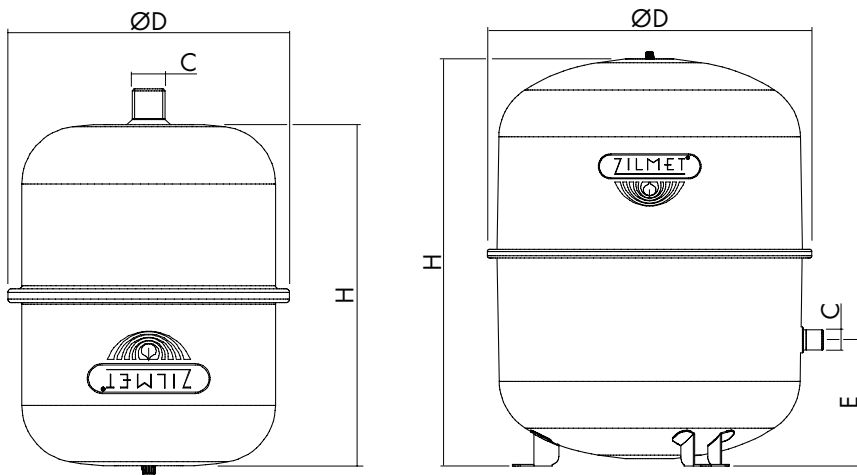
Sealed System kit

Max. working temperature:	99 °C
Min. working temperature:	-10 °C
Safety relief valve discharge pressure:	3 bar
Max. glycol solution:	50%

Expansion Vessel

Max. working temperature:	99 °C
Min. working temperature:	4 °C
Max. working pressure - 4 to 8 litre:	5 bar
12 to 50 litre:	4 bar
80 to 105 litre:	6 bar
Precharge Pressure- 4 to 50 litre:	1.5 bar
80 to 105 litre:	2 bar
Max. glycol solution:	50%

Dimensions



Code	Vol. - Ltrs	ØD	H	C	E
IFP4	4	225	195	G $\frac{3}{4}$	-
IFP8	8	220	295	G $\frac{3}{4}$	-
IFP12	12	294	281	G $\frac{3}{4}$	-
IFP18	18	290	375	G $\frac{3}{4}$	-
IFP24	24	324	415	G $\frac{3}{4}$	-
IFP35	35	404	387	G $\frac{3}{4}$	119
IFP50	50	407	507	G $\frac{3}{4}$	157
IFP105	105	500	665	G $\frac{3}{4}$	165

Technical Specification

Synthetic butyl rubber diaphragm (SBR) according to DIN 4807-3.

Carbon steel shell and connections.

MIG welding eliminates interior rough spots and sharp edges.

Epoxy - polyester powder finish.

Suitable for multiple types of heating systems.

Manufactured according to PED 2014/68/EU for centralised non potable water heating systems.

5 year warranty.

4 to 24 litre vessels supplied with wall bracket.

Siting and Assembly

The Expansion Vessel must be fitted to the **Return Side** of the central heating system and in such a way that there can at no time be an obstruction between the vessel and the system.

Mark the position for the wall bracket on the wall and the position for the fixing holes.

Drill the wall and insert the plastic wall plugs.

The system connection on the expansion vessel should point vertically upwards.

Assemble the wall bracket, cross tee using the sealing washer and pressure gauge to the expansion vessel.

Ensure the wall bracket is securely attached and the joints for the cross tee and pressure gauge are pressure tight.

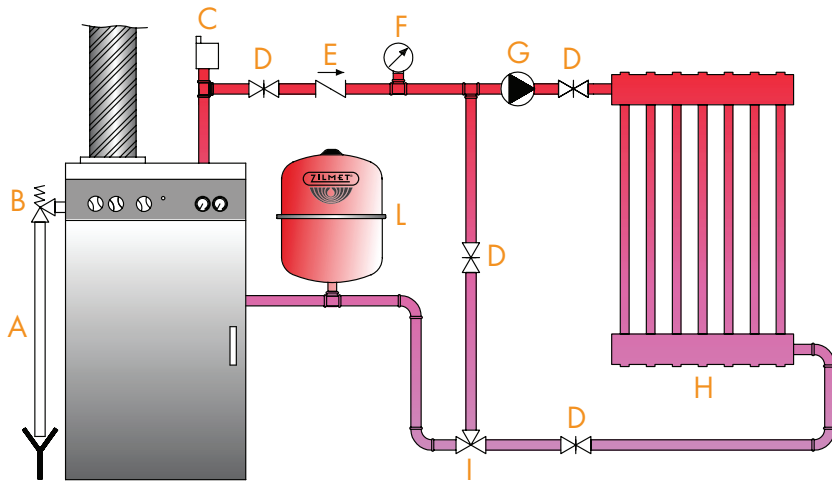
Connect the outlet from the cross tee to the heating system and the filling loop to the inlet connection and the other end to the cold water supply.

The filling loop should be installed according to G24.1 & G24.2 of the Water Bylaws.

Some provision for the prevention of air ingress into the vessel must also be made as this will degrade the vessel very quickly.

NOTE: the filling loop should be removed from the system following pressuring the system.

Typical Installation



- A Drain
- B Safety Relief Valve
- C Automatic air vent
- D Isolating valve
- E Backflow preventer
- F Pressure gauge
- G Pump
- H Radiator - fancoil
- I Cross tee
- L Expansion vessel

Pressure and Temperature Relief Valve

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

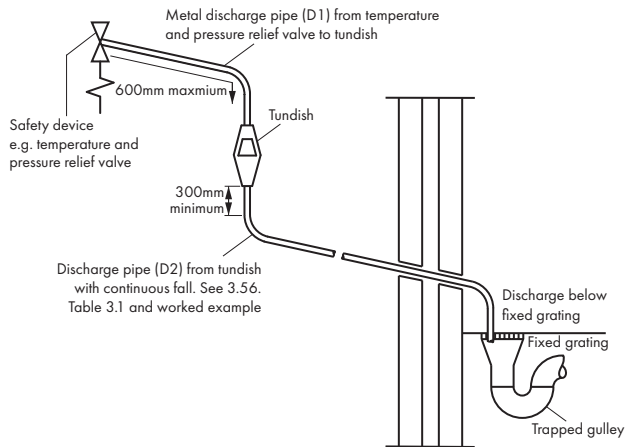
There must be no restriction or obstruction between the system and the valve.

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.

Never block the discharge port of the relief valve.

Pressure and Temperature Relief Valve Continued

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

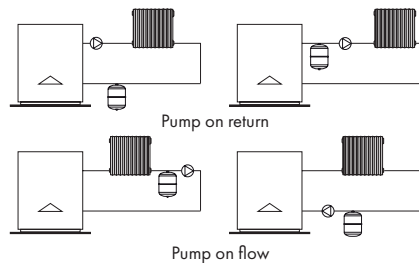


Key Components & their Locations

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.



Re-pressurising the Expansion Vessel

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 schrader valve should be made at least every 12 months to ensure the compressed air cushion is still intact.

To activate your product warranty please visit
www.intatec.co.uk
and click on Product Registration

Please leave this Manual for the User

intafil

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