Ecoplus
Performance & Efficiency

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Introduction

Thank you and congratulations on purchasing an Ecoplus quality product. Your Ecoplus PRT unit is covered by a Lloyds of London backed warranty for seven (7) years from the date of purchase.

This manual covers the installation of the Ecoplus PRT in the open vented and sealed water heating systems, using diagrams and written explanations.

Should you have any questions regarding installation, please contact Ecoplus on: Tel: +353667190350, Fax: +353667190357, e-mail: info@ecoplusprt.com or visit our website www.ecoplusprt.com.

Disclaimers

Please read all Disclaimer, Warranty, and Installation Instructions carefully before proceeding with the installation.

- Ecoplus PRT is a pressure reduction tank for use on a new or existing domestic central heating system. It can be used with gas, oil and solid fuel burning systems. Should you intend to use Ecoplus PRT in other circumstances, check with Ecoplus Limited if the PRT is suitable for the intended use before installing it.
- Ecoplus PRT should only be fitted by a qualified plumber. Fitting should be done in accordance with the printed instructions.
- You should ensure that you have read and that you understand this manual before proceeding with the installation. Should you have any queries regarding the installation, please contact Ecoplus Limited on +353667190350, by fax at +353667190357 or by e-mail at support@ecoplusprt.com .
- All information in this publication is based on the latest product information available at the time of printing. Ecoplus Limited reserves the right to make changes at any time without notice and without incurring any obligations.
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Warning and Notes

Throughout this manual, we draw your attention to specific issues with Warnings and Notes. Please pay special attention to statements preceeded by these icons.

Warning

Indicates a possibility of personal injury or equipment damage if instructions are not followed.

Note

Gives hints, tips and other helpful information.

Features of Ecoplus PRT

How Ecoplus PRT Works

Ecoplus PRT is a pressure reduction tank for new or existing domestic central heating systems. In heating systems, air pockets are caused by a build up of gases in the water. These lead to a number of inefficiencies such as uneven heat distribution, poor flow rate, noise and corrosion.

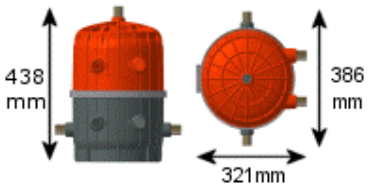
The Ecoplus PRT uses fluid dynamic principles to purify and reduce the gases in your central heating system thereby increasing its efficiency. Once installed, the Ecoplus PRT starts to reduce the gases in your system immediately and continues to do so during the life of your central heating system.

Here are some of the benefits of Ecoplus PRT:

- 25% immediate saving on your fuel bill
- 30% increase in flow rate
- Reduction in the corrosion of pipes, pumps and boilers
- All radiators achieve even and optimal heat
- No build-up of air in the system
- Reduction of CO^2 emissions
- Production is ISO 9001:2000, CE and QS compliant
- Boxes and pallets made of recyclable materials

The Ecoplus PRT is made of recyclable material and is manufactured in the E.U. in accordance with ISO, CE and QS Standards.

Technical Specification

Dimensions and Weight (including fittings)			
Approximate Weight	5Kg	11 lb	
Approximate Height	438mm	17.28”	
Approximate Width	386mm	15.21”	
Approximate Depth	321mm	12.65”	
Approximate Capacity	17 litres	3.74 gallons	
Material	Glass reinforced high performance polyamide resin		

Warning	Ecoplus PRT is designed for use with a domestic central heating system. Should you wish to use Ecoplus PRT for a different purpose, check with Ecoplus Limited if the PRT is suitable for your intended use before installing it.

Safety Statement

The PRT unit is intended to be professionally installed by a qualified plumber. Never disconnect the pipes from the ports when the water is hot. Always drain the system before disconnecting the pipes.

The PRT unit can become warm but when brass push-on fittings are used, care should be taken as these fittings can get hot.

Installation Instructions

Ecoplus PRT was designed with ease of installation in mind, and the compact size and push-on fittings ensure easy fitting in every system. In most cases, a professional plumber should be able to install Ecoplus PRT in a few hours.

Warning 	The installation of Ecoplus PRT must be carried out by a professional plumber. The warranty is void if defects result from failure to have this Ecoplus PRT installed by a qualified plumbing contractor.

With its unique patent pending design, Ecoplus PRT contains no moving parts and no filters. This design should remove the need for any maintenance of the Ecoplus PRT.

Before installation, we recommend that you flush the Ecoplus PRT unit with cold clean water to remove any residues.

The PRT Unit

The PRT Unit should always be placed on a solid flat surface and in an upright position, as shown in figure 1. The Ecoplus PRT is made up of two main sections the top section (red) and the bottom section (Black). The unit has 7 ports numbered 1 to 7 as shown in figure 1 below.

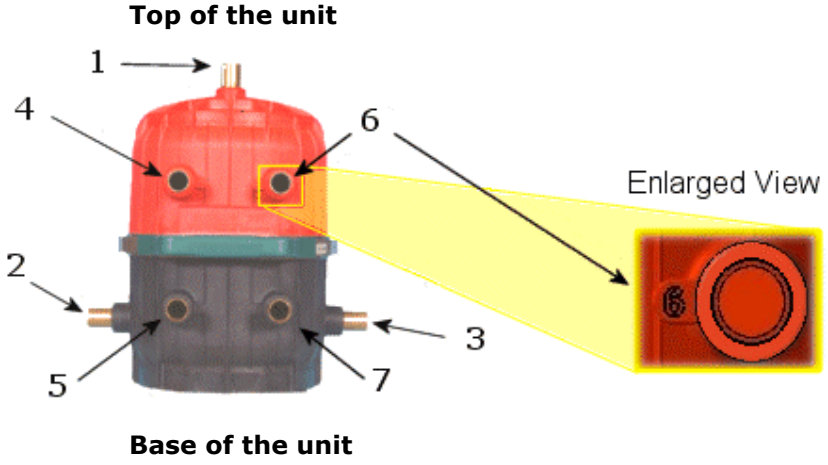


Figure 1

Function of the ports

Port Number	Purpose
1	Used to connect the flow from the boiler
2 or 3	Used for the return to the boiler (Only one of the two ports needs to be used) All unused ports should be sealed.
4 & 6	Used to connect the pipes for the flow to the radiators
5 & 7	Used to connect the return feed from the radiators

Fitting the pipes

Push-on fittings must be used to connect Ecoplus PRT to the heating system.

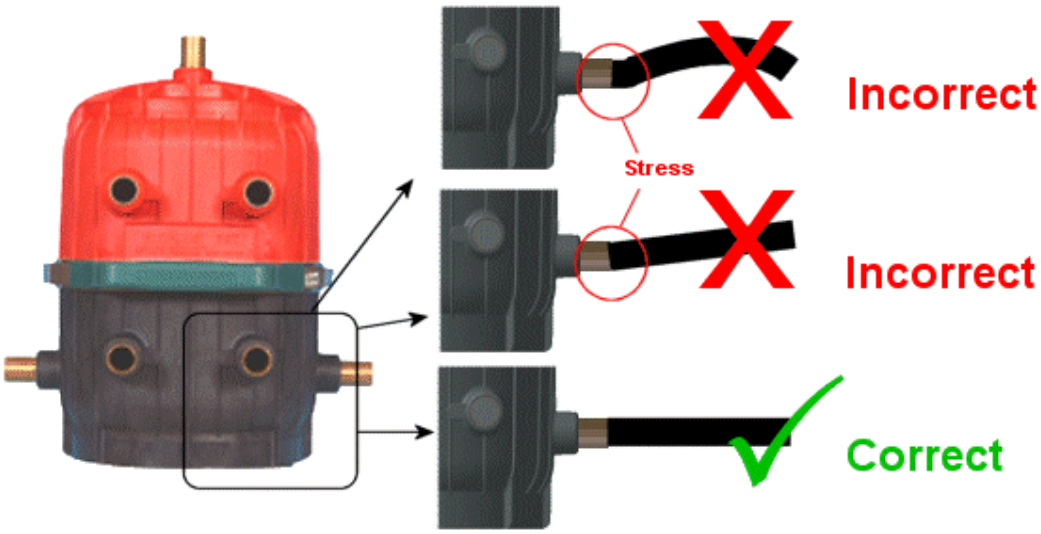
Push-on fittings are brass or plastic fittings. They enable fast, efficient jointing of plain and chrome plated copper tube and certain types of polybutylene and polyethylene plastic tube. These can be simply connected by pushing them into place removing the need for solder, compression or threaded fittings.

The PRT requires 28mm Push-on fittings. In the republic of Ireland, 'Acorn' push-on fittings are the most widely available brand but may still need to be ordered in advance from your plumbing supplier.

In the Republic of Ireland, a conversion kit is also required to connect to 1 inch (27.4mm) pipes.

Warning 	**In order to prevent any heat or torque damage, <u>solder or compression fittings must not be used to connect pipes to the outlets</u>.** The use of compression or solder fittings will damage the unit and invalidate your warranty. Please note that all unused ports must be sealed with a push on fitting before operating the unit.

You should avoid any stress on the pipes when they are connected to the unit. Pipes inserted into the unit at an angle can create stress cracks and damage the unit. The diagram below shows correct and incorrect ways of connecting the pipes.



Flow To and From the Boiler

The flow from the boiler goes to the cylinder first, and then enters the top of the Ecoplus PRT (port 1).

The ports number 2 and 3 are used for the return to the boiler. Only one of the two needs to be used. The unused port must be sealed with push-on fittings.

Ports number 4 and 6 (Red section of the PRT) are used for flow to the radiators.

Ports 5 and 7 (black section of the PRT) are used for the return from the radiators. The unused ports must be sealed with push-on fittings.

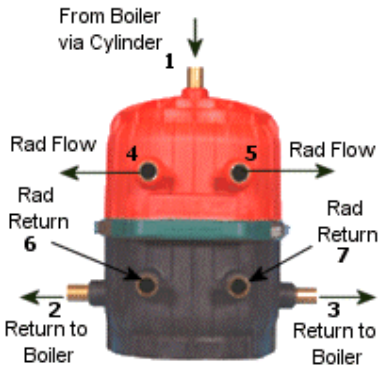


Figure 2

PRT Radiator Zones

The PRT can be used with up to two different zones as shown in this diagram. **Where more than one zone is required, each zone should be fitted with a separate pump.**

The ports in the red (upper) section are used for the flow to the radiators. The return from the radiators is connected in the ports in the black area (lower section).

All unused ports must be sealed with push-on fittings.

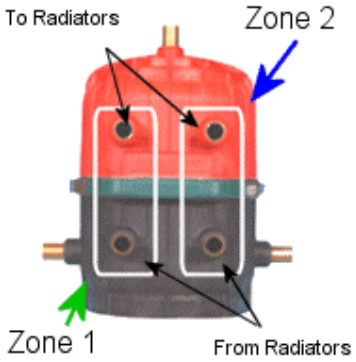


Figure 3

Warning 	When connecting the unit you should ensure that: • The flow from the boiler goes to the cylinder first then enters the top of the Ecoplus PRT (port 1) and returns to the boiler (ports 2 or 3). • The primary pump is set at its lowest setting (Normally 1). Please refer to your pump's instruction manual for details. • The air **must** have a direct way out from the top port marked 1 on the Ecoplus PRT either through an auto vent (fig 4) or a gravity rise through the copper cylinder. **In the case of pressurised systems, an auto vent must be fitted.**

Checklist prior to installation

Before beginning the installation, please ensure that:

- ✓ A pump is fitted for each zone.
- ✓ You have the required Push-on fittings.
- ✓ In the case of a pressurised system, an Auto vent is fitted over port 1 of the PRT as shown in figure 8 (page 9 of this manual).

Installation Diagrams

The Ecoplus PRT can be installed anywhere in the house provided that it allows easy access to the required pipes. In most cases, it is installed in the boiler-house or the airing cupboard. As the unit may become hot, the best position for the PRT is on the floor or resting on a flat surface.

The exact location of the unit will vary depending on the configuration of the central heating system in which it is being installed.

The diagrams in the following pages show <u>some</u> of the possible central heating system configurations and are designed to help you during installation. <u>They will not necessarily correspond to your configuration.</u>

If the configuration of the Central Heating system in which you are installing an Ecoplus PRT is not indicated in this manual or if you require clarification or further information, please contact Ecoplus Limited on Tel: +353667190350, Fax: +353667190357, e-mail: support@ecoplusprt.com or visit our website www.ecoplusprt.com/manual.asp.

Note	A 3 Bar safety valve should be fitted on the primary flow pipe of both an open vent system and sealed system and discharged safely. Thermostatic valves should be fitted on all radiators to conserve energy.

PLEASE NOTE THAT THE DIAGRAMS BELOW ARE NOT TO SCALE.

Scenario 1 - Combi Boiler Installation

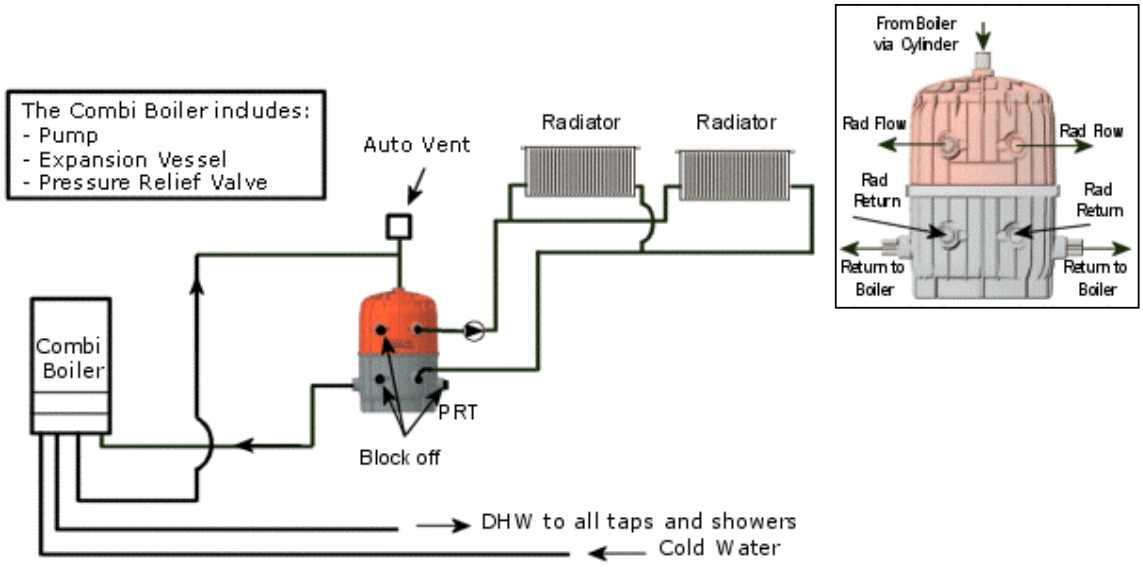


Figure 4

Scenario 2 - Single-Boiler heating system with one, or two zones

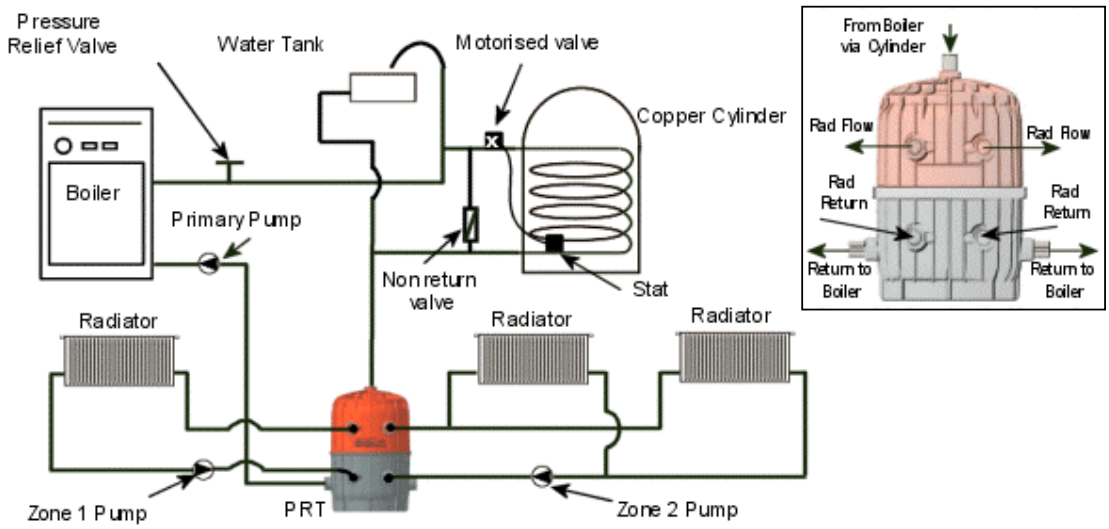


Figure 5

Note	The Primary Pump should be set at its lowest setting (normally 1). Pumps for Zone 1 and 2 should be electrically wired independently. The Primary Pump should be wired so that it starts with the burner.

Scenario 3 - Flow and return at high levels for the radiators through the attic.

This is a typical installation in cases where the heating system was installed after the house was built.

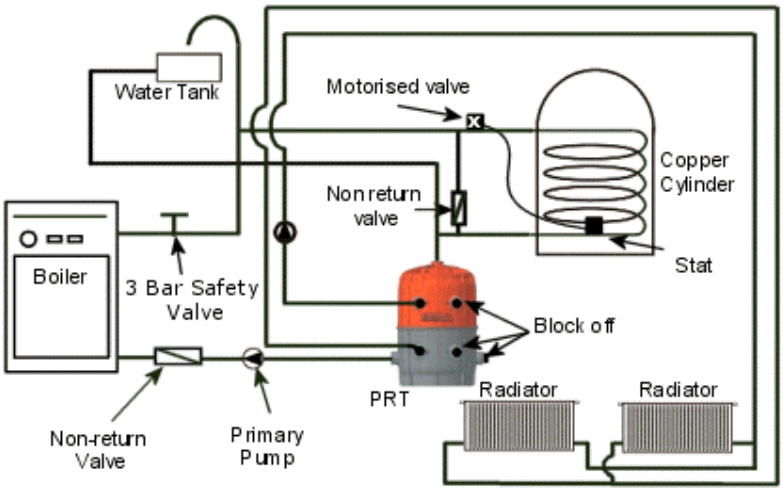


Figure 6

Scenario 4 - Flow and return at high levels to feed the copper cylinder.

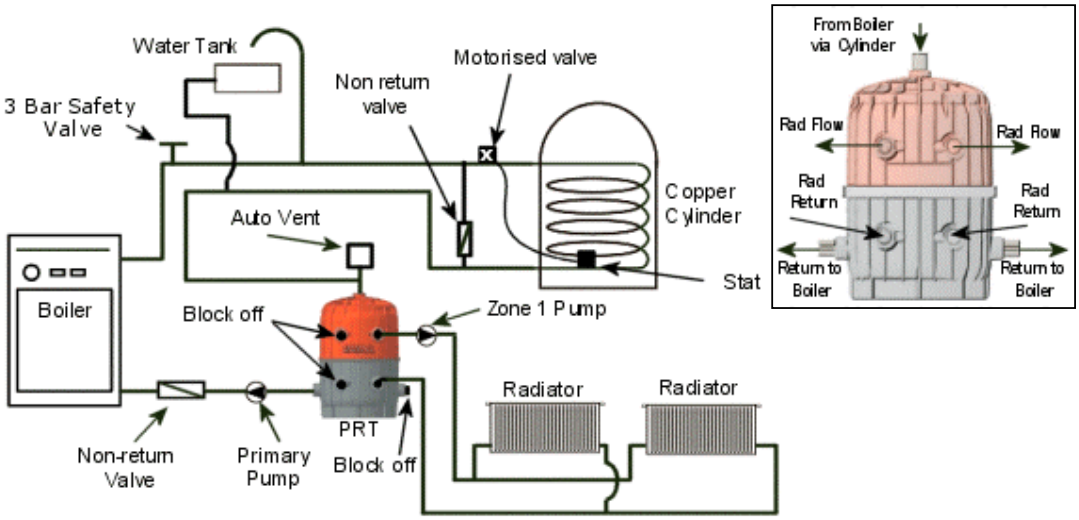


Figure 7

Note	The Auto vent is placed on the pipe connected above the PRT (port 1) so that gases can exhaust through this vent. To prevent gravity flow from cylinder when the system shuts down, place a non-return valve on the primary line.

Scenario 5 - Sealed system - flow and return taken at high levels (through an attic).

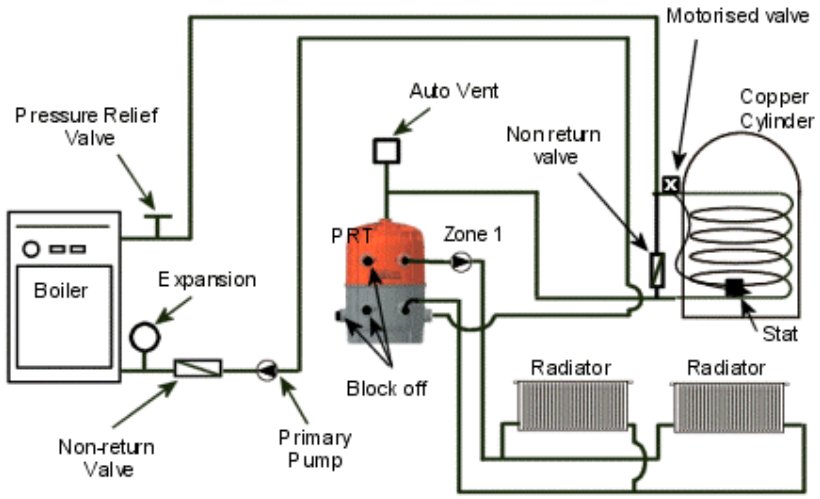
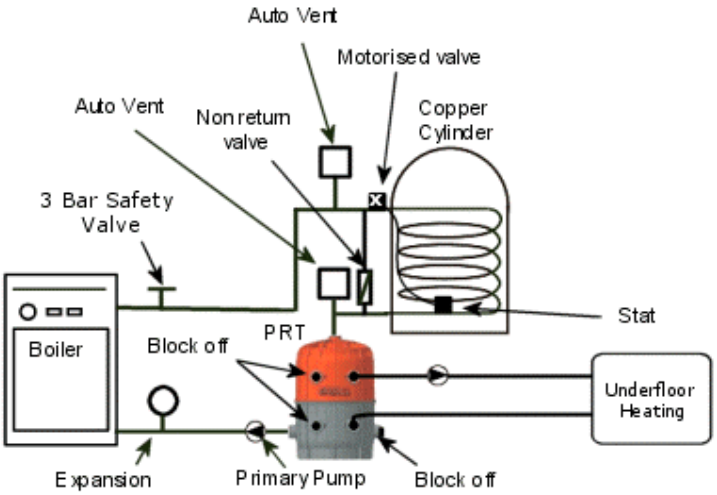


Figure 8

Note	To prevent gravity flow from cylinder when the system shuts down, place a non-return valve on the primary line.

Scenario 6 – Sealed system with underfloor heating



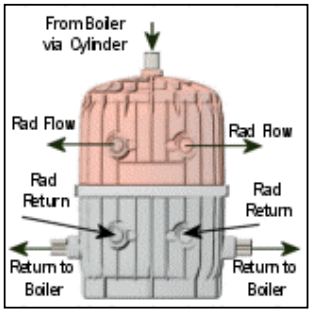


Figure 9

Scenario 7 – Combining Ecoplus PRTs for extra output

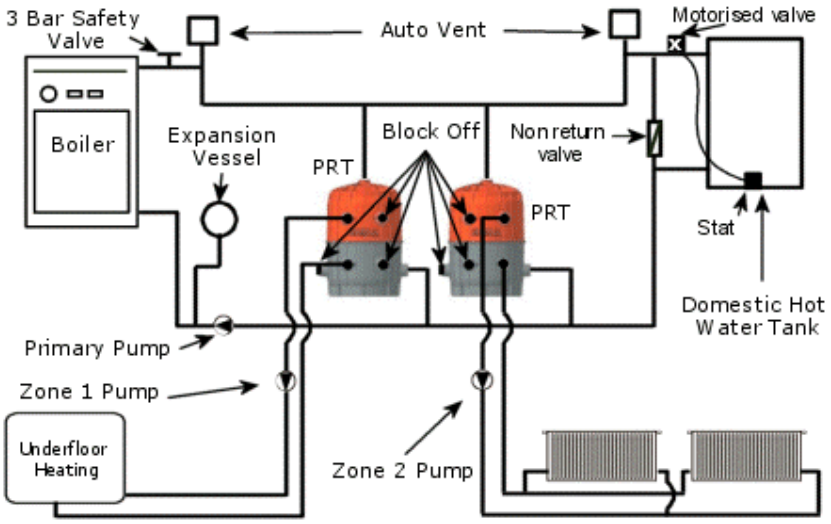


Figure 10

Scenario 8 – Dual heating systems

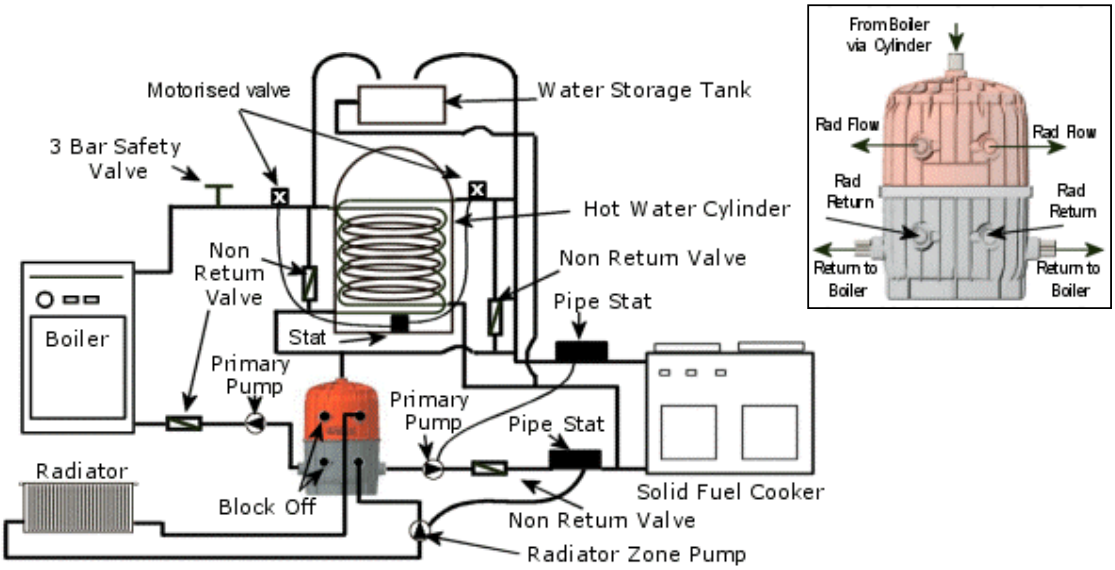


Figure 11

Technical Support

Before you ring technical support

Should you have any questions regarding the installation of your Ecoplus PRT, you can first look at our website for further information. The Frequently Asked Questions section (www.ecoplusprt.com/faq.asp) is updated regularly with information on the PRT.

Updated versions of this Installation Manual are also available online at www.ecoplusprt.com/manual.asp

Telephone numbers

If you have further questions in relation to the installation, you can contact Ecoplus Limited at the numbers below:

Tel: +353 66 7190350
Fax: +353 66 7190357
E-mail: support@ecoplusprt.com

Maintenance & Warranty

Maintenance

Because the PRT contains no moving parts or filters, there should be no maintenance required during the life cycle of your heating system.

Warranty

To underline its reliability, your Ecoplus PRT unit is covered by a Lloyds of London backed warranty for seven (7) years from the date of purchase. Each Ecoplus PRT unit is uniquely identified. In order to activate the unit's warranty, you must complete the online registration form on the Ecoplus website (www.ecoplusprt.com) or return the registration card included with the unit to:

Ecoplus Limited, InnovationWorks, Kerry Technology Park, Tralee, Co. Kerry

This warranty will not apply:

- To defects or malfunctions resulting from failure to properly install, operate, or maintain the unit in accordance with printed instructions;
- To failures resulting from abuse, accident, or negligence;
- To units which are not installed in accordance with applicable local codes, ordinances, and good trade practices;
- If the unit is used for purposes other than for what it was designed;
- If defects result from failure to have this Ecoplus PRT installed by a qualified plumbing contractor.

Ecoplus reserves the right to change or improve its products or any component at any time.

Ecoplus and the environment

Ecoplus PRT can help you contribute to the protection of the environment.

The increased efficiency of Ecoplus PRT reduces the amount of fuel required to produce the same heat therefore reducing CO^2 emissions. Furthermore, all materials and packaging, including the pallets are made of recyclable materials.

At Ecoplus, we are committed to the protection of the environment. As a sign of our commitment, Ecoplus Limited planted a tree in a mixed forest of broad leaves and conifers for each PRT that will be registered.

Because each Ecoplus PRT has a unique identification number, you can dedicate one of the trees planted to the child of your choice when you register your Ecoplus product.