

## INSTALLATION

No special site requirements are necessary other than a firm and level base. Installation must comply with the current British Standard and the Building Regulations. Oil storage tanks must be sited at least 1.8 metres from the module flue. Comprehensive technical information can be found in the installation manual which is supplied with every boiler.

## WATER CONNECTIONS

Flow and return connections are able to be run to the left, or right side of the modules. Alternatively, on freestanding applications pipes can be taken vertically through the base. On the 50/70 and 70/90 modules 3 x 1" and 1 x 3/4" tapping are provided for connection to the heating system. The 90/120 module has 3 x 1 1/4" and 1 x 3/4" tapping, whilst the 110/140 has 4 x 1 1/4" tappings.

All standard Outdoor Modules are suitable for gravity primary, or fully pumped applications and can be installed on pressurised systems using one of Grant's sealed system kits.

The Combi 90 Module has 2 x 15mm push-fit connections for hot and cold supplies, a 22mm push-fit connection for heating flow and a 22mm compression connection for heating return, and is designed for use on pressurised systems only.

## ELECTRICAL CONNECTIONS

Outdoor modules are supplied with a factory-fitted control panel, incorporating burner isolation switch, pump isolation switch, boiler and overheat thermostats and a frost thermostat pre-set to 5°C. A four core and earth cable connection is required providing a permanent live supply to the frost thermostat.

## SYSTEM PROTECTION

The fully weatherproofed outdoor modules have a high degree of insulation and are designed to cope with seasonal temperature variations. Whilst the boiler is supplied with a factory-fitted frost thermostat, consideration should be given to protection of the system as a whole against prolonged freezing conditions by the use of a suitable central heating system antifreeze.

## SEALED HEATING SYSTEM (COMBI MODULE)

Boiler thermostat range	75 to 85°C
Limit thermostat temp	111°C
Max operating pressure	2.5 bar
Max system pressure (cold)	1 bar
Min system pressure (cold)	0.5 bar
Expansion vessel capacity	12 litres

## DOMESTIC HOT WATER (COMBI MODULE)

### Flowrate

**Outdoor** Domestic hot water  
**Combi 90** fitted with restrictor set at 17 litres per minute.

(flow rate is dependent on mains pressure available)

### Typical hot water performance @ 15 litres per minute

**Outdoor Combi 90**  
33 gals (150 litres) at an average temperature of 48°C.

### Recovery

Typical recovery times between hot water draw offs (in hot water mode)

**Outdoor Combi 90:** 4 minutes approx

### Mains water pressure

Minimum	1.5 bar (22 psi)
Maximum	10 bar (145 psi)

## FUEL

Grant Outdoor Modules are supplied factory-set at the maximum stated boiler output for use with standard grade Kerosene - Class C2.

It is important that your fuel supplier is advised to deliver the correct grade of fuel.

Note: Outdoor Modules are not suitable for Class D gas oil.

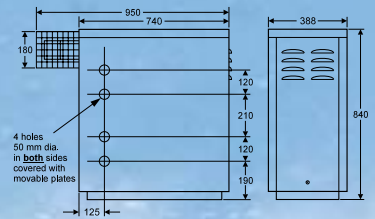
## GUARANTEES

The unique heat exchanger of the Grant Outdoor Module is covered by a 5-year guarantee. All other component parts of the boiler are guaranteed for 2 years from the date of purchase, subject to being installed in accordance with the manufacturers instructions. There is also an optional 3-year extended warranty scheme available. On completion of the installation all Outdoor Module boilers should be commissioned and the guarantee registration form returned to Grant UK.

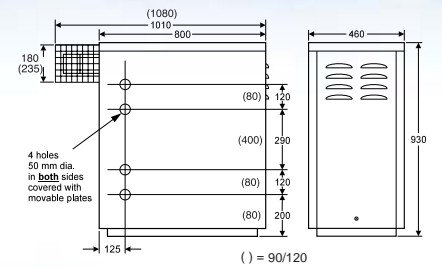
## AFTER SALES SERVICE

For peace of mind, all Grant central heating boilers are backed by a national network of independent service engineers. In the unlikely event of a problem occurring, your installer should telephone our Customer Service Department on: 0870 7775553.

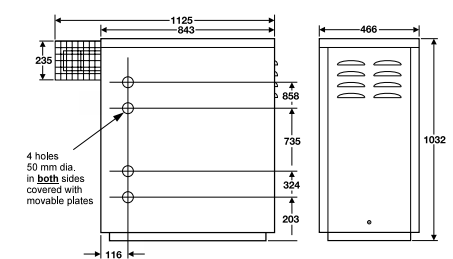
## The 50/70 Outdoor Module dimensions



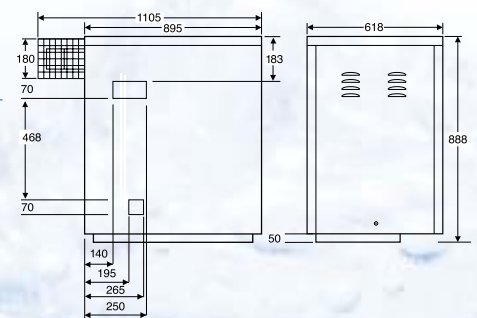
## The 70/90 & 90/120 Outdoor Module dimensions



## The 110/140 Outdoor Module dimensions



## Outdoor Combi 90 MkII Module dimensions



In accordance with our policy of continual improvement, we reserve the right to amend specifications without prior notice. Manufactured under I.S. EN ISO 9001.

Complies with the EC Low Voltage and Electromagnetic Compatibility and Boiler Efficiency Directives.

® Euroflame and Multi Pass are Registered Trade Marks of Grant Engineering Limited.

SEDBUK stands for 'Seasonal Efficiency of Domestic Boilers in the UK'.

\*Outdoor Combi is capped at 82.9% gross.



OFGERT  
License No's  
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# GRANT UK

# OUTDOOR MODULE RANGE

Outdoor Combi Range

Outdoor System Range

Outdoor Module Range



- All boilers supplied in a NEW high quality 'external' powder coated finish – on top of the existing galvanised casing
- Designed for efficiency (93-95% nett) SEDBUK 'C' 82.9 –85.7% Gross\*
- Four standard Outdoor Modules available with outputs from 50–140,000 Btu/h
- System boiler conversion kits available for all models
- Unique Outdoor Combi Module for heating and mains pressure hot water
- High domestic hot water flow rates with rapid recovery of heat store
- Modules are reversible for left, or right-hand applications
- Supplied with factory-fitted low level flue and frost thermostat
- Optional conventional flue offtake for vertical applications
- Lockable door and removable covers for ease of service
- Fitted with Riello Burner



**GRANT** UK  
OIL FIRED BOILERS

## THE UNIQUE MONEY-SAVING OUTDOOR MODULE

A new innovation in central heating, the Grant Outdoor Module cuts cost dramatically as little or no building work is necessary. It comes complete with a built-in low level flue and can be either fixed against any suitable external wall, or installed freestanding allowing for the necessary clearances around the flue terminal. A conventional flue adaptor is also available, allowing the flue to run vertically when siting conditions restrict low level applications.



## HIGH QUALITY EXTERNAL FINISH

To increase the versatility of the unique outdoor module range, a high quality 'external' powder coated paint finish is now applied to the existing galvanised steel casing, eliminating the need to prime or paint appliances on site. They are also insulated with 50mm foil-backed glassfibre which greatly reduces heat loss and gives added protection against frost. For cleaning and inspection, the top cover can be easily removed. There is also a lockable door which gives easy access to the burner and thermostat.

Space is provided within the boiler casing to accommodate a pump and sealed system kit which is available as a separate item for all four modules from Grant UK.

## GREATER EFFICIENCY

The Grant Outdoor Module Range of fully automatic pressure jet oil fired boilers have been designed and tested to comply with the OFTEC Standard OFS A100 (EN 303 Part 4), and meet the requirements of the new European Boiler Efficiency Regulations with a highly efficient heat exchange operation achieving around 93% – 95% nett thermal efficiency. Their advanced heat

exchanger design forces the hot gases through a patented baffle system for a distance of between 8.5 feet and 22 feet depending on the model, holding them in contact with the boiler surface area for longer. This process vastly increases the amount of heat transferred to the water jacket, enabling the boiler to operate continually at much higher efficiencies.

## SEALED SYSTEMS

As with all Grant boilers, Outdoor Modules are fitted with overheat thermostats making them suitable for use on sealed heating systems. Three pre-assembled sealed system kits are available to convert modules to sealed system operation – one kit to suit both the 50/70 and 70/90 modules one for the 90/120 and one for the 110/140 module.

The sealed system kit includes an expansion vessel, automatic air vent, a pressure relief valve and circulating pump, all of which are neatly housed within the enclosure of the module.

A filling loop and pressure gauge is also supplied as part of the kit, for fitting in a convenient location within the building, between the cold main and central heating system.



110/140 OUTDOOR MODULE WITH OPTIONAL SEALED SYSTEM KIT FITTED

## UNIQUE OUTDOOR MODULE COMBI

It is now possible to combine all of your hot water and heating requirements into one unique outdoor combination module. The Outdoor Combi 90 boiler utilises primary water stored in the boiler for a rapid response to a demand for hot water, whenever required – day or night. A factory-set thermostatic blending valve ensures a stable control



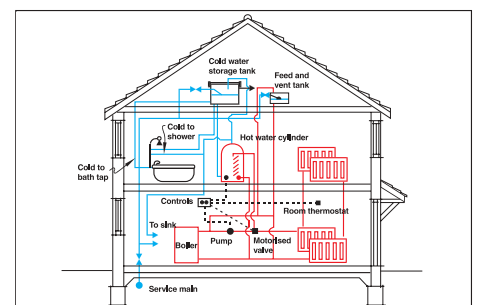
OUTDOOR COMBI 90 MkII

of the hot water temperature, minimising fluctuations caused by other taps being turned on!

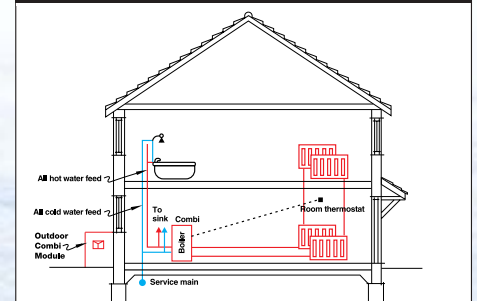
## ENJOYING THE TWIN BENEFITS OF THE COMBI SYSTEM

An oil combination boiler provides the benefits of highly efficient oil central heating, combined with instant hot water.

The savings are considerable – in cost and space. You save space because unlike a conventional system there is no need for a hot water cylinder in the airing cupboard, or cold water header tank in the loft (not forgetting all the extra pipework!). So you save money as there is no need to pay to store hot water. Furthermore with the Outdoor Module Combi all of your heating and hot water requirements are contained in one space-saving appliance – outside of the house.



TRADITIONAL SYSTEM



GRANT COMBI SYSTEM

## Grant 50/70 Outdoor Module

- 1 Control Panel (incorporating frost stat)
- 2 Boiler Thermostat
- 3 Overheat Thermostat
- 4 Riello RDB burner
- 5 New powder coated finish



Optional conventional flue offtake  
(available from Grant UK)



Factory-fitted  
Low level flue



(front view)

## Grant Outdoor Combi 90MkII



(rear view)

- 1 Low level flue
- 2 Pump isolating valve
- 3 Circulating pump
- 4 Flow switch
- 5 Domestic hot water heat exchanger
- 6 Blending valve
- 7 Primary return isolating valve
- 8 Heating return
- 9 New powder coated finish



Outdoor Combi 90 MkII  
(front view)



Remote Timer Kit  
(optional)



Frost Stat set to 5°C  
(inside control panel)