

# DunsleyHeat



# LINK-UP BOILER SYSTEMS

**FOR MAXIMUM EFFICIENCY, FLEXIBILITY AND ECONOMY**

## The "C" Type Neutralizer

The "C" type Neutralizer is designed for installation below the hot water cylinder, and can be supplied with additional connections and capacity. This model can also be used for systems with two or more boilers. (Refer to installation instructions).



The "C" type is 450mm diameter and 166mm high. The standard Neutralizer has nine 28mm connections.

## THE TROUBLE FREE METHOD OF INTERLINKING TWO OR MORE BOILERS

## The "C" Type Neutralizer with built on cylinder stand

Designed for ease of installation with removable top access to make vent pipe connection. Saves building a platform or using timber to rest the cylinder on.

**PATENT NUMBER GB2521010B**



The "C" type with stand is 450mm diameter and 280mm high.

## The "R" Type Neutralizer

The "R" type Neutralizer is designed for wall mounting, adjacent to the hot water cylinder. The shape facilitates the fitting of neat pipework.



The "R" type is 200mm high, 150mm wide and 220mm long.



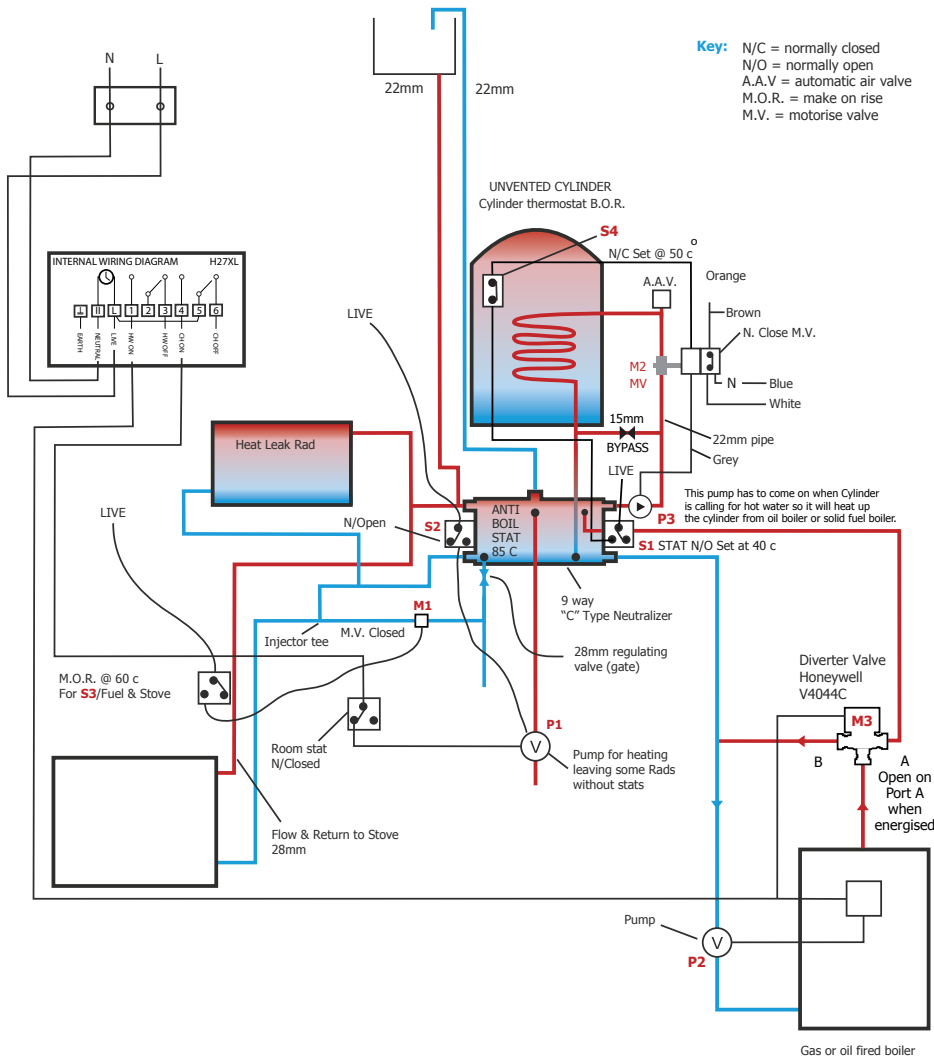
The "R" type Neutralizer is ideal for linking with our range of multifuel stoves [www.dunsleyheat.co.uk](http://www.dunsleyheat.co.uk)

## Layout 1 / SP

With time and temperature controls.  
Group 3 and 4 boilers operate on demand only.

## Dunsley Neutralizer System

Layout options for Link-up systems



### Gas or oil fired boiler only

Hot water only A on B off  
 Heating and hot water A on B on

### Solid fuel boiler only.

Heating and hot water A off B on  
 Hot water only or slumber A off B off

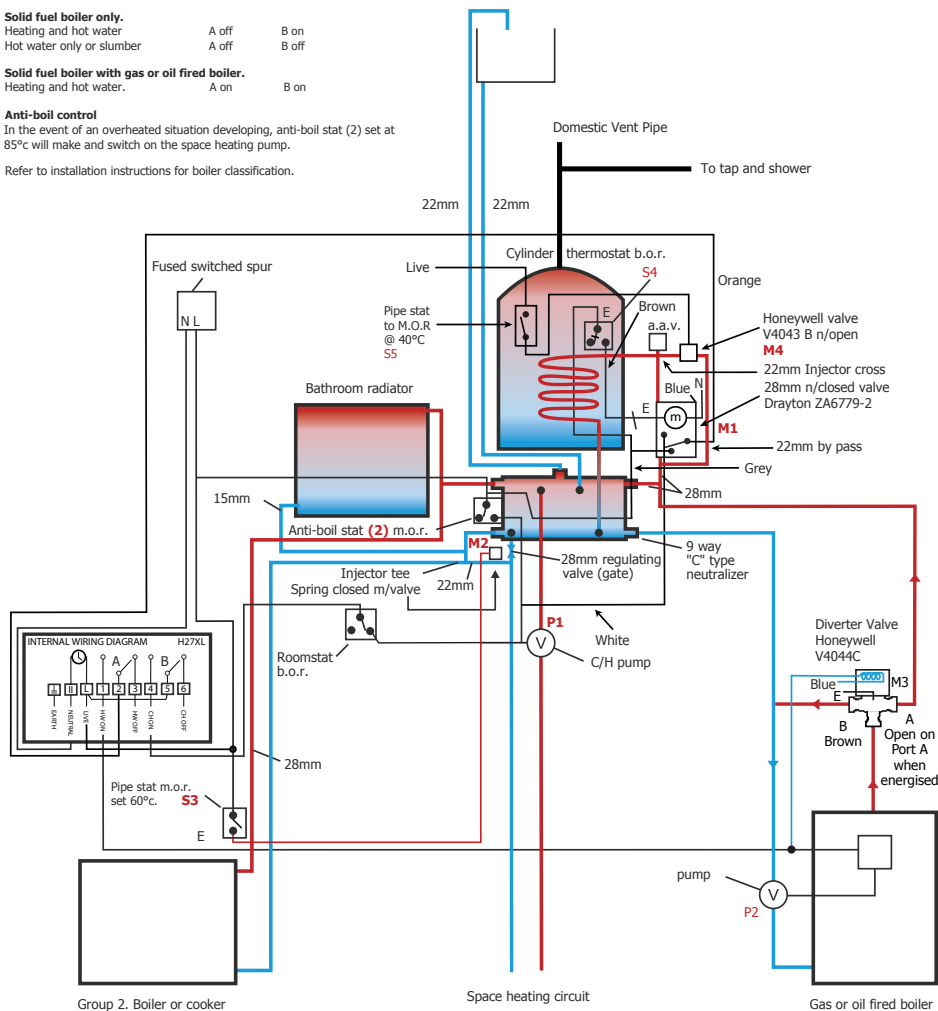
### Solid fuel boiler with gas or oil fired boiler.

Heating and hot water. A on B on

### Anti-boil control

In the event of an overheated situation developing, anti-boil stat (2) set at 85°C will make and switch on the space heating pump.

Refer to installation instructions for boiler classification.



## Layout 3

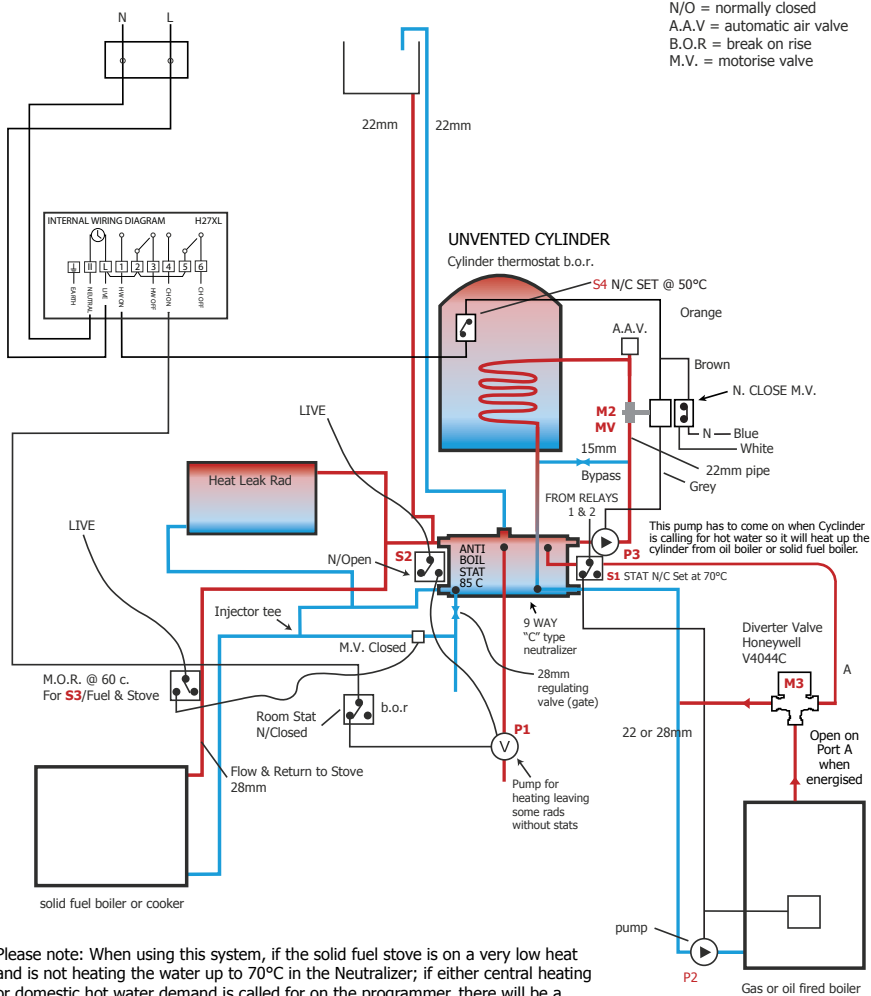
With time and temperature controls.  
Group 3 and 4 boilers operate on demand only.

KEY: N/C = normally closed  
 N/O = normally open  
 A.A.V = automatic air valve  
 B.O.R = break on rise  
 M.V. = motorise valve

## Layout 2 / SP

With time and temperature controls.  
 Group 3 and 4 boilers operate on demand only.

**Please note:** When using this system, if the solid fuel stove is on a very low heat and is not heating the water up to 70°C in the Neutralizer; if either Central Heating or Domestic Hot Water demand is called for on the programmer, there will be a demand on the Gas/Oil boiler at the same time.



Please note: When using this system, if the solid fuel stove is on a very low heat and is not heating the water up to 70°C in the Neutralizer; if either central heating or domestic hot water demand is called for on the programmer, there will be a demand on the gas/oil boiler at the same time.

### Gas or oil fired boiler only

Hot water only A on B off  
 Heating and hot water A on B on

### Solid fuel boiler only.

Heating and hot water A off B on  
 Hot water only or slumber A off B off

### Solid fuel boiler with gas or oil fired boiler.

Heating and hot water. A on B on

### Anti-boil control

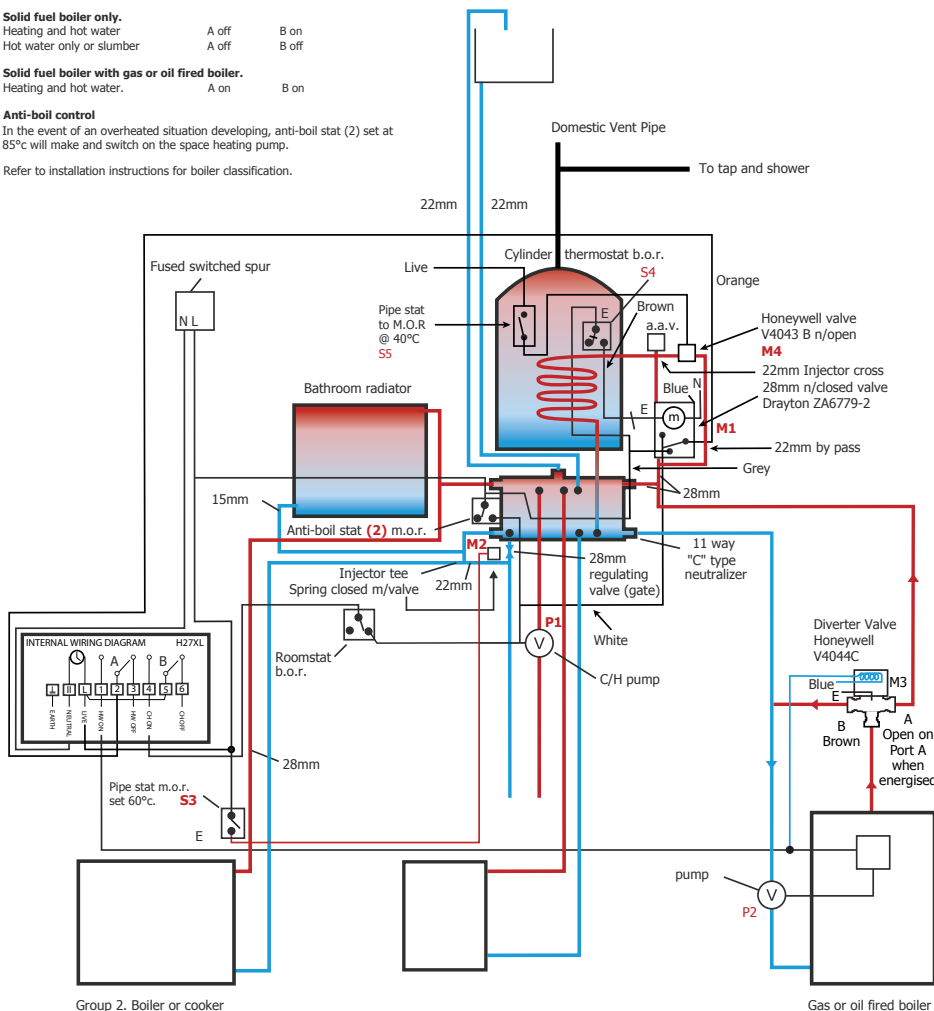
In the event of an overheated situation developing, anti-boil stat (2) set at 85°C will make and switch on the space heating pump.

Refer to installation instructions for boiler classification.

## Layout 3 / 3

With time and temperature controls.  
 Group 3 and 4 boilers operate on demand only.

The system layouts illustrated are a selection from our extensive range. Use in conjunction with the installation instructions supplied with the unit. For further information on system design, please visit the website: [www.dunsleyheat.co.uk](http://www.dunsleyheat.co.uk) or phone: 01484 682635



Group 2. Boiler or cooker

Gas or oil fired boiler

# The best of both worlds Link up with THE DUNSLEY NEUTRALIZER SYSTEM

Gives a trouble free method of interlinking two or more boilers to give economy and flexibility.

## HISTORICAL NOTE

For a period during the late 1960's early 1970's there was a tendency to do away with the open fire by building up the opening and depending on one boiler source for heating the dwelling.

In recent years the move has been to re-open the fireplace as an alternative source of heat and to give a focal point for relaxation plus the advantage of good ventilation.

With this has come the realisation of woodburning stoves or cooker with high output boiler would be very economical and versatile in use if it could be linked into the central heating system to supply, or assist to supply, the entire demand for heating and domestic hot water.

## TECHNICAL DIFFICULTIES

In principal the requirement to link two or more boilers into one heating system is relatively simple to arrange. In practice there are physical difficulties, possible dangers, and in many cases high financial cost to the householder. The difficulties lie in linking the boilers, so that one boiler when in operation does not supply the second boiler with hot water when it is not in operation. Attempts to link boilers in domestic situations have resulted in solutions which are either dangerous, unnecessarily complex, expensive or a combination of all three. Also in numerous systems an unacceptable degree of domestic upset is encountered during installation.

## DUNSLEY NEUTRALIZER

The use of a Dunsley Neutralizer offers a neat solution to all the problems highlighted above. The description 'Circuit Neutralizer' (also referred to as a neutralizing vessel or chamber) is intended to convey the fact that the Neutralizer fixes the neutral point location within the system. The cold feed and open vent are both connected to the system at the neutralizing chamber and provided that both boiler are only connected through this point then pumped or gravity circuits connected to the chamber can have no hydraulic interaction.

This means in effect that the pumped circuit from, say a gas or oil fired boiler will not induce flow through a solid fuel boiler via its gravity circuit. The solid fuel boiler will, however, feed hot water into the system, thus achieving the desired objective.

It must also be pointed out that whilst two boilers connected as above is the most common mode of system operation the Dunsley Neutralizer System lends itself easily to cope with more than two boilers on the one system and with a multiplicity of circuits making possible effective joining for increased controllability.

## NEUTRALIZER LOCATION

Two comments with reference to location:

1. In converting an existing system to a Dunsley Neutralizer system most of the work takes place within the hot cupboard area, thus avoiding general disruption within the premises.
2. Where the solid fuel appliances are on the same floor level as the neutralizing vessel elevation of the Neutralizer and hot water cylinder would be necessary in order to achieve (A) venting and (B) gravity circulation.

## DUNSLEY NEUTRALIZER SYSTEM

The concept of enlarging the 'neutral point' to the volume bound physically by the welded construction of the neutralizing chamber is the distinctive feature of the system and any configuration of pipework and components employing this concept is referred to as a Dunsley Neutralizer System, regardless of the number of boiler, pumps, circuits, etc.

## CONTINUED DEVELOPMENT

The sketches show some of the many arrangements possible in different circumstances where a Dunsley Neutralizer System will facilitate the interlinking of domestic boilers and suggestions are also indicated of suitable control systems.

We are continuing to produce updated information on system design and therefore, welcome requests for advice on situations which deviate from those described in this brochure.

The Dunsley Neutralizer System is manufactured by Dunsley Heat Ltd, Bridge Mills, Holmfirth, Huddersfield, England, HD9 3TW.

Patent number GB2521010B, covering England, Scotland, Wales, Northern Ireland, Isle of Man and Channel Isles.

# DunsleyHeat



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All products are manufactured by Dunsley Heat Ltd in Yorkshire