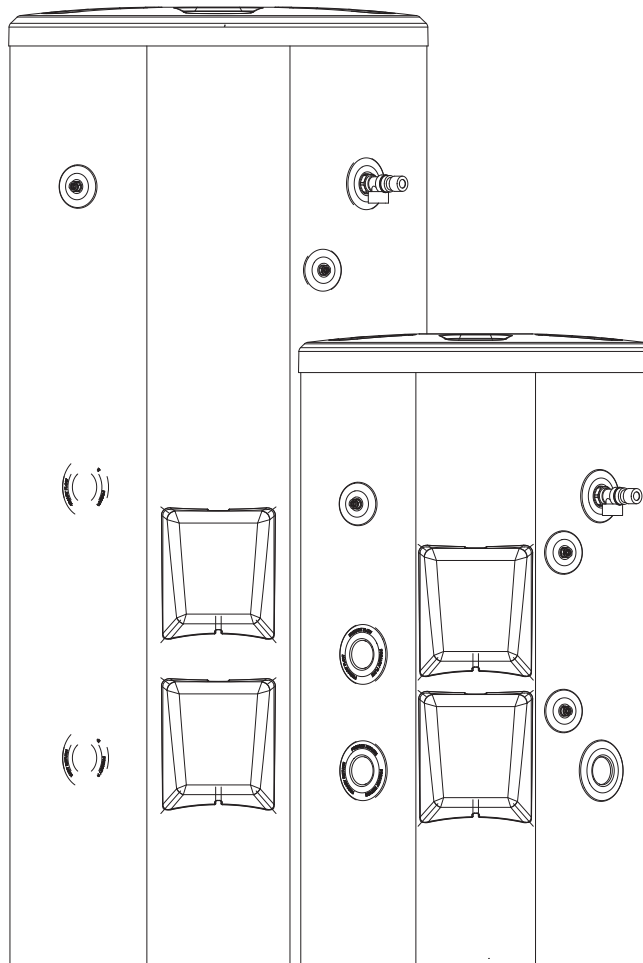




MegaFlo Flexistor

Unvented hot water cylinders

(400L - 2500L)



Important

Please read & understand all these instructions before commencing installation.

This cylinder range does not incorporate an internal heat exchanger.

Please leave this manual with the customer for future reference.

MegaFlo Commercial Flexistor Product Guide

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THE BENCHMARK™ SCHEME

Benchmark™ places responsibilities on both manufacturers and installers. The purpose is to ensure that customers are provided with the correct equipment for their needs, that it is installed, commissioned and serviced in accordance with the manufacturer's instructions by competent persons and that it meets the requirements of the appropriate Building Regulations. The Benchmark™ Checklist can be used to demonstrate compliance with Building Regulations and should be provided to the customer for future reference. Installers are required to carry out installation, commissioning and servicing work in accordance with the Benchmark™ Code of Practice which is available from the Heating and Hotwater Industry Council who manage and promote the Scheme. Visit www.centralheating.co.uk for more information.



IMPORTANT NOTE TO USER: PLEASE REFER TO THE USER GUIDE SECTION ON PAGES 34 FOR IMPORTANT INFORMATION WITH RESPECT TO THE BENCHMARK SCHEME

Product specification

Introduction

Congratulations on your purchase of a Megaflo Commercial Flexistor unvented water heater. The Megaflo Commercial Flexistor products are manufactured in the UK from top quality materials and meets all the latest relevant safety and constructional standards. The high grade Duplex stainless steel cylinder offers exceptional strength and corrosion resistance which is backed by a 30 year warranty*. Its performance and insulation levels exceed the latest requirements of Building Regulation Part L. The Megaflo Commercial Flexistor unvented water heater can be fed directly from the cold water mains supply to the property without the need for separate feed cisterns or vent pipes. It is supplied complete with all its necessary inlet and safety controls.

The Megaflo Commercial Flexistor cylinder range all require a separate expansion vessel to accommodate any expanded water.

General Requirements

IMPORTANT: Please read and understand this product guide before installing the Megaflo Commercial Flexistor water heater. Incorrect installation may invalidate the warranty*.

The Megaflo Commercial Flexistor must be Installed, Commissioned and Maintained by a competent installer in accordance with Building Regulation G3 (England and Wales), Technical Standard P3 (Scotland) or Building Regulation P5 (Northern Ireland) and the Water Fitting Regulations (England and Wales) or Water Byelaws (Scotland).

*** See Terms and Conditions of warranty**

THIS APPLIANCE CAN BE USED BY CHILDREN AGED FROM 8 YEARS AND ABOVE AND PERSONS WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES OR LACK OF EXPERIENCE AND KNOWLEDGE IF THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING USE OF THE APPLIANCE IN A SAFE WAY AND UNDERSTAND THE HAZARDS INVOLVED. CHILDREN SHALL NOT PLAY WITH THE APPLIANCE. CLEANING AND USER MAINTENANCE SHALL NOT BE MADE BY CHILDREN WITHOUT SUPERVISION

WARNING: Do not switch on if there is a possibility that the water in the heater is frozen.

Also:

- water may drip from the discharge pipe of the pressure-relief device and this pipe must be left open to the atmosphere; (see page 19 for more details)
- the pressure-relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked; (see page 23 for more details)
- how hot water can be drained. (see page 23 for more details)
- A discharge pipe connected to the pressure-relief device is to be installed in a continuously downward direction and in frost free environment; (see page 20 for details)
- details on how to set the temperature controls for immersion heaters can be found on pages 10.

Note: This Megaflo Commercial Flexistor cylinder needs a minimum 100L/min water supply at open outlet.

Important Notice:

When installed with the KIWA approved unvented kit Megaflo Eco Plus Flexistore cylinders are approved as meeting current water regulations.

To satisfy these regulations when the kit is not supplied it will be required that the installer ensures that all of the system components meet the required standards.

Checklist (if purchased through Heatrae Sadia)

Before commencing installation check that all the components for your Megaflo Commercial Flexistor unit are contained in the package. The following components are supplied as standard with your Megaflo Commercial Flexistor unit:

| Commercial Cylinder Volume (ltr) | Pressure Reducing Valve | Pressure Relief Valve | S i n g l e Check Valve |
|----------------------------------|------------------------------------|----------------------------------|-------------------------|
| 400 - 500 | 1" Integrated inlet control valve | | |
| 800 | 1.25" (1.5 - 6 bar) or (5 -10 bar) | 1" x 1.25" (8 bar) or (13 bar) | 1.25" |
| 1000 | 1.25" (1.5 - 6 bar) or (5 -10 bar) | 1" x 1.25" (8 bar) or (13 bar) | 1.25" |
| 1250 - 1450 | 1.5" (1.5 - 6 bar) or (5 -10 bar) | 1" x 1.25" (8 bar) or (13 bar) | 1.5" |
| 2000 - 2500 | 2" (1.5 - 6 bar) or (5 -10 bar) | 1.25" x 1.5" (8 bar) or (13 bar) | 2" |

Table 1: Cold Water Inlet Control Kit (depending on model)

| Commercial Cylinder Volume (ltr) | Expansion Vessel Size (ltr) | Mounting Kit | Weights |
|----------------------------------|-----------------------------|---------------|---------|
| 400 - 500 | 60 | Floor Mounted | 12kg |
| 800 | 100 | Floor Mounted | 17kg |
| 1000 - 1250 | 150 | Floor Mounted | 24kg |
| 1450 | 200 | Floor Mounted | 38.5kg |
| 2000 - 2500 | 300 | Floor Mounted | 41kg |

Table 2: Expansion Vessel Sizing

- Factory fitted Temperature & Pressure Relief Valve, set at 90°C / 1 MPa (10bar) or factory fitted Temperature & Pressure Relief valve set at 90°C / 1.5MPa (15bar) Depending on model. Connection size 1 1/4" BSP male to cylinder and 1 1/4" BSP female outlet.
- Tundish 1 1/4" inlet, 1 1/2" outlet
- Isolating Valve (2")
- 1" Drain Valve.
- All connections BSP female.

Notes:

1" Integrated inlet control valve is not assembled.

Storage and Handling

Please take care when handling a packaged Megaflo Commercial Flexistor. The unit is heavy and must only be moved manually within safe working practices. If the unit is to be stored before installation, it must be placed on a secure, level surface and in a dry, frost free environment.

Precautions to be carried out prior to commencement of work:

1. Tidy area ensuring there is safe access and egress to installation place, free from trip hazards.
2. Be aware of other people who may be in the area
3. Operate any machinery in accordance with training and operating instructions
4. Visually inspect the equipment prior to use, do not use damaged equipment.
5. Safe working practices are adopted for manual handling of appliances/parts
6. Correct PPE to be worn.

The Megaflo Commercial Flexistor unit must be vertically floor mounted. It can be placed anywhere convenient provided the discharge pipe(s) from its safety valves can be correctly installed. Areas that are subject to freezing must be avoided. Ensure that the floor is level and of sufficient strength to support the "full" weight of the unit when filled with water (refer to Table 5 for unit weights). Pipe runs should be kept as short as possible for maximum economy. Access to associated controls, immersion heaters and indirect controls should be possible for servicing and maintenance of the system.

To aid installation, the Megaflo Commercial Flexistor is provided with lifting points located at the top of the unit. To access the lifting eyes please remove the red outlet grommet and the top cover. The weights of the units are noted on Table 5.

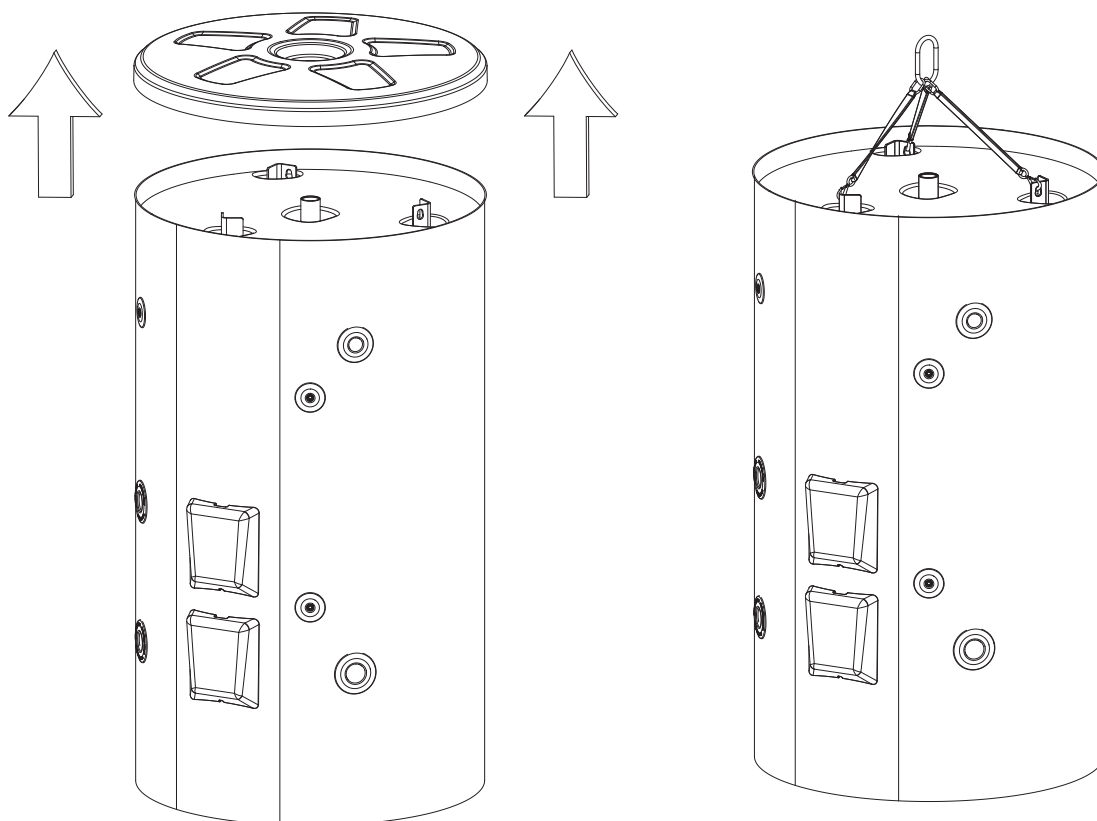


FIGURE 1: Lifting

Technical data (Indirect models in conformance with BS EN 12897:2006)

| | |
|---|----------------------------|
| Maximum mains water supply pressure | 2.5MPa (25 bar) |
| Operating pressure/PRV (low pressure system) | 0.60MPa (6. bar) |
| Operating pressure/PRV (high pressure system) | 1.00MPa (10 bar) |
| Expansion vessel pressure (low pressure system) | 1.0MPa (10 bar max) |
| Expansion vessel pressure (high pressure system) | 1.6MPa (16 bar max) |
| Expansion relief valve setting (low pressure system) | 0.8MPa (8 bar) |
| Expansion relief valve setting (high pressure system) | 1.3MPa (13 bar) |
| Maximum design pressure (low pressure system) | 0.80MPa (8 bar) |
| Maximum design pressure (high pressure system) | 1.3MPa (13 bar) |
| T&P relief valve setting | 1.0MPa/90 °C (10 bar) |
| T&P relief valve setting | 1.5MPa/90 °C (15 bar) |
| Immersion heater rating (a.c. supply only) single phase | 6kW & 9kW 50/60Hz ~ |
| Immersion heater rating (a.c. supply only) 3 phase | 12kW - 54kW 50/60Hz ~ |
| (See Accessories on page 32 for full range) | |
| Storage weights (empty and full) | See Table 4 See Table 6 |

ErP data

| ErP Data | | | | | | | |
|----------------------------|------|------|-------|-------|-------|-------|-------|
| Model(s) | 400 | 500 | 800 | 1000 | 1250 | 1450 | 2000 |
| Energy efficiency class | B | C | C | C | C | C | C |
| Standing loss W | 72.0 | 89.0 | 114.0 | 139.0 | 150.0 | 163.0 | 179.0 |
| Storage volume V in Litres | 400 | 500 | 800 | 1000 | 1250 | 1450 | 2000 |

Table 3: ErP Data Information

Technical parameters in accordance with European Commission regulations 814/2013 and 812/2013

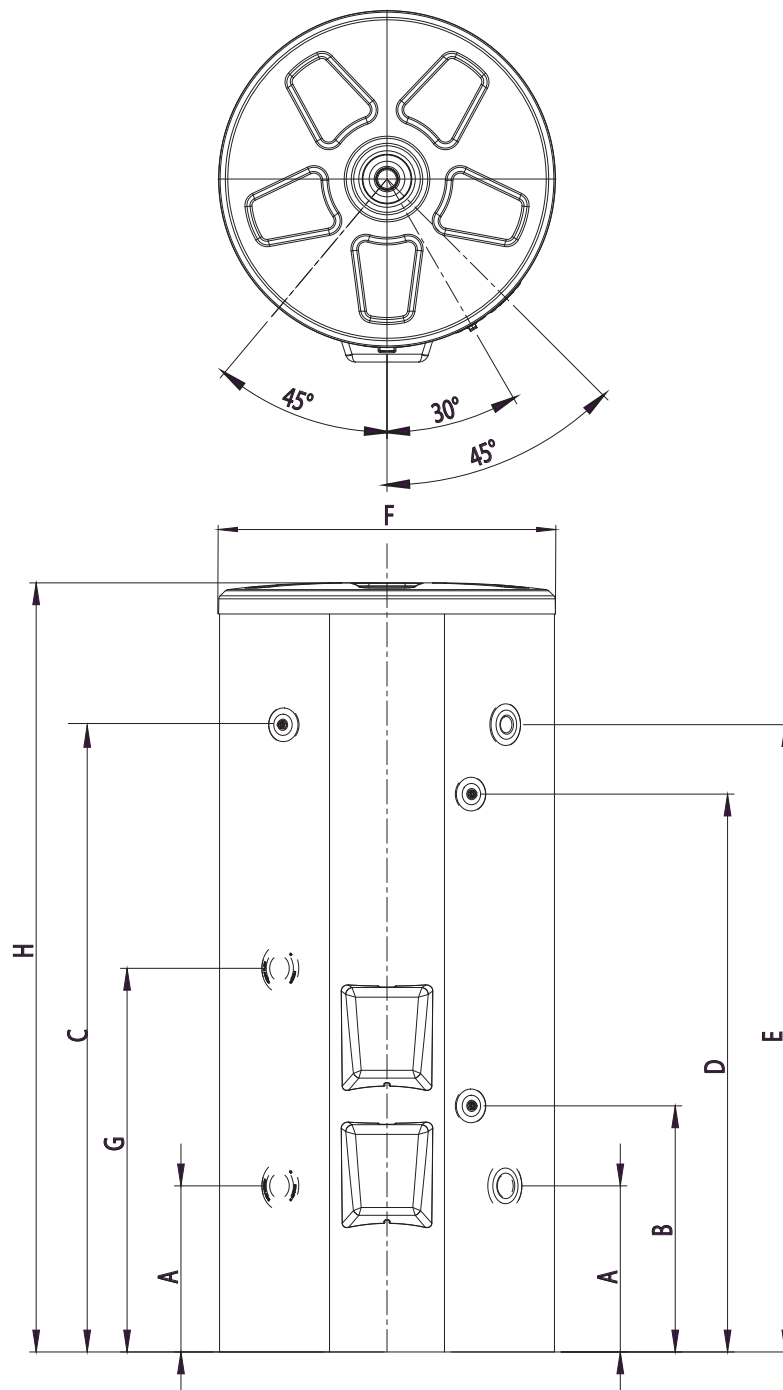


FIGURE 2: Flexistor Dimensions

| | Connection 400 - 500L | | | | Connection 800 - 1000L | | | | Connection 1250 - 1450L | | | | Connection 2000 - 2500L | | | |
|---|-----------------------|------|------|--|------------------------|------|------|--|-------------------------|------|------|--|-------------------------|------|------|--|
| A | 2" BSP | 471 | 471 | | 2" BSP | 502 | 502 | | 2" BSP | 541 | 541 | | ½" BSP | 591 | 591 | |
| B | ½" BSP | 616 | 616 | | ½" BSP | 744 | 744 | | ½" BSP | 783 | 783 | | ½" BSP | 833 | 833 | |
| C | ½" BSP | 1138 | 1416 | | ½" BSP | 1502 | 1897 | | ½" BSP | 1466 | 1721 | | ½" BSP | 1493 | 1886 | |
| D | ½" BSP | 1001 | 1191 | | ½" BSP | 1263 | 1687 | | ½" BSP | 1326 | 1536 | | ½" BSP | 1376 | 1626 | |
| E | 1 ¼" BSP | 1138 | 1416 | | 1 ¼" BSP | 1502 | 1897 | | 1 ¼" BSP | 1466 | 1721 | | 1 ¼" BSP | 1493 | 1886 | |
| F | N/A | 872 | 872 | | N/A | 1024 | 1024 | | N/A | 1224 | 1224 | | N/A | 1470 | 1470 | |
| G | 2" BSP | 754 | 754 | | 2" BSP | 880 | 880 | | 2" BSP | 1042 | 1042 | | 2" BSP | 1077 | 1077 | |
| H | N/A | 1535 | 1804 | | N/A | 1906 | 2301 | | N/A | 1936 | 2253 | | N/A | 2014 | 2419 | |

Table 4: Flexistor Dimensions

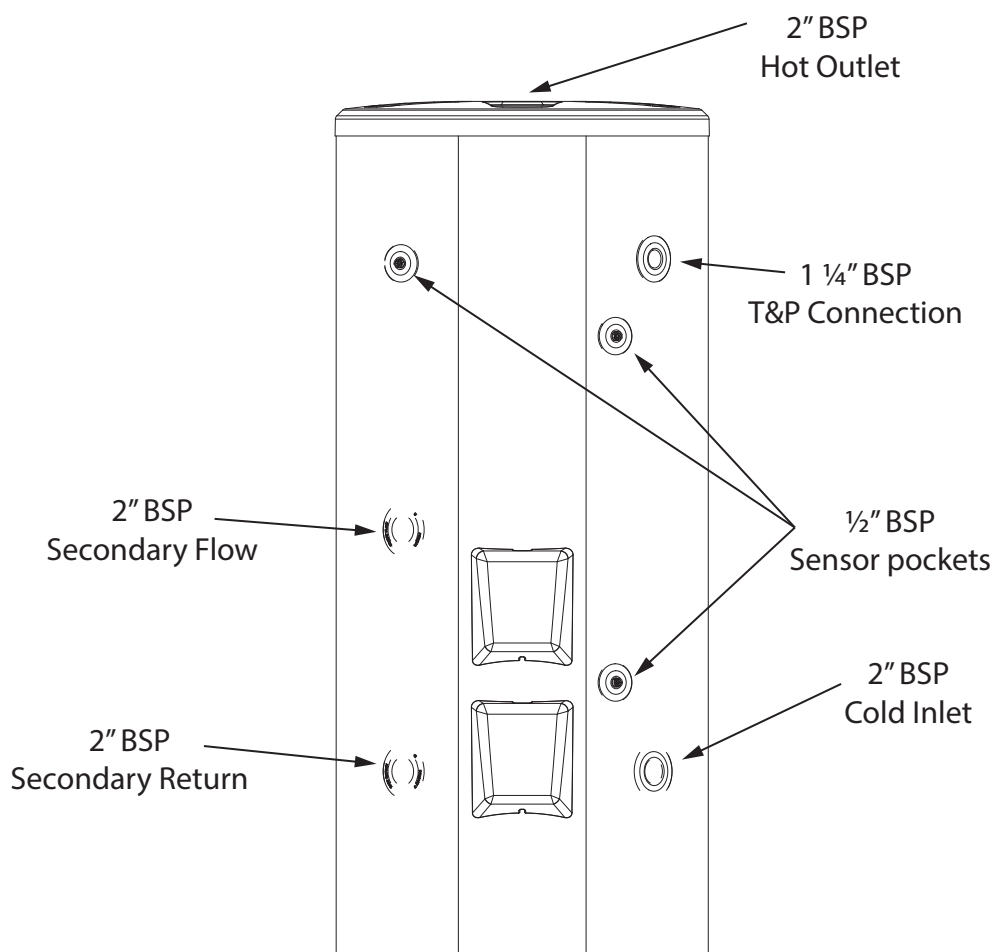


FIGURE 3: Flexistor Connections

NOTE: All connections BSP female threads

| N o m i n a l Capacity (Litres) | Unit Weight (kg) | |
|---------------------------------------|------------------|------|
| | Empty | Full |
| 400 | 99 | 499 |
| 500 | 100 | 600 |
| 800 | 160 | 960 |
| 1000 | 180 | 1180 |
| 1250 | 297 | 1547 |
| 1450 | 304 | 1754 |
| 2000 | 415 | 2415 |
| 2500 | 421 | 2921 |

Table 5: Cylinder Weights

| N o m i n a l Capacity (Litres) | Per Day (kWh/24h) | Per Year (kWh/24h) |
|---------------------------------------|----------------------|-----------------------|
| 400 | 1.72 | 627 |
| 500 | 2.14 | 781 |
| 800 | 2.74 | 1000 |
| 1000 | 3.33 | 1215 |
| 1250 | 3.60 | 1314 |
| 1450 | 3.90 | 1423 |
| 2000 | 4.30 | 1569 |
| 2500 | 4.50 | 1642 |

Table 6: Standing heat-loss

Testing is carried out to BS EN12897:2006

| N o m i n a l Capacity (Litres) | Maximum kW ratings | | |
|---------------------------------------|--------------------|------------|----------|
| | Lower boss | Upper boss | Total kW |
| 400 | 30 | 9 | 39 |
| 500 | 45 | 12 | 57 |
| 800 | 45 | 18 | 63 |
| 1000 | 45 | 36 | 81 |
| 1250 | 54 | 30 | 84 |
| 1450 | 54 | 36 | 90 |
| 2000 | 54 | 36 | 90 |
| 2500 | 54 | 36 | 90 |

Table 7: Maximum kW ratings for auxiliary heating supply

| N o m i n a l Capacity (Litres) | Heat-Up Times | | N o m i n a l Capacity (Litres) | Heat-Up Times | |
|---------------------------------------|---------------|------------------------|---------------------------------------|---------------|------------------------|
| | Maximum kW | Heat-up Time (mins) | | Maximum kW | Heat-up Time (mins) |
| 400 | 39 | 32 | 1250 | 84 | 47 |
| 500 | 57 | 28 | 1450 | 90 | 51 |
| 800 | 63 | 40 | 2000 | 90 | 70 |
| 1000 | 81 | 39 | 2500 | 90 | 87 |

Table 8: Auxiliary heat up times based on maximum immersion input per cylinder

Notes:

Times based on nominal volume

Times base on 45°C temperature rise

| | 6kW | | 9kW | | 12kW | | 18kW | | 24kW | | 30kW | | 36kW | | 45kW | | 54kW | |
|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| | 95970155 | | 95970156 | | 95970144 | | 95970145 | | 95970146 | | 95970147 | | 95970148 | | 95970149 | | 95970150 | |
| | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower | Upper | Lower |
| 400L | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | | | | | |
| 500L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | | | |
| 800L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | |
| 1000L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | |
| 1250L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | ✓ |
| 1450L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| 2000L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| 2500L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |

Table 9: Immersion allocation

Note:

The Immersion(s) are not factory fitted.

Thermostat/Cut-out

All immersion heaters are fitted with a thermostat which is fitted in the centre of the heater plate and a cut-out which is fitted to the side of the thermostat. These **MUST** be wired in series with the operating coil circuit of the contactor (not supplied). See figures 4 below and figures 5 & 6, Page 11.

Maximum working temperature is 80°C/176°F. In very hard water areas limit to 60/65°C (140/150°F)

For optimal working conditions the thermal cut-out should be set to 80°C (factory set, if the seal is broken it may invalidate your warranty) and the thermostat should be set to 70°C max. If the thermostat is set above 70°C there could be instances nuisance tripping of the thermal cut-out.

Notes:

The 2 external contactors must be approved components certified for 10,000 cycles of operation for the contactor controlled by the thermostat and at least 30 for the contactor controlled by the none self-resetting thermal cut-out.

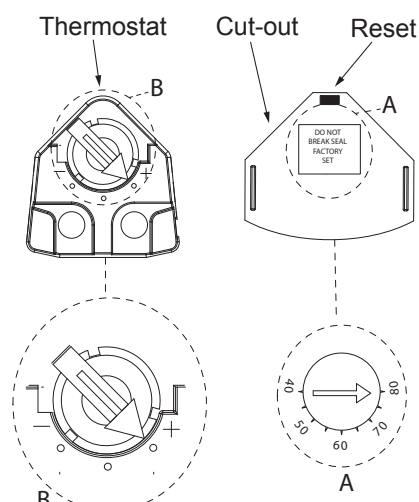


FIGURE 4: Thermostat and thermal cut-out settings

Wiring Schematic

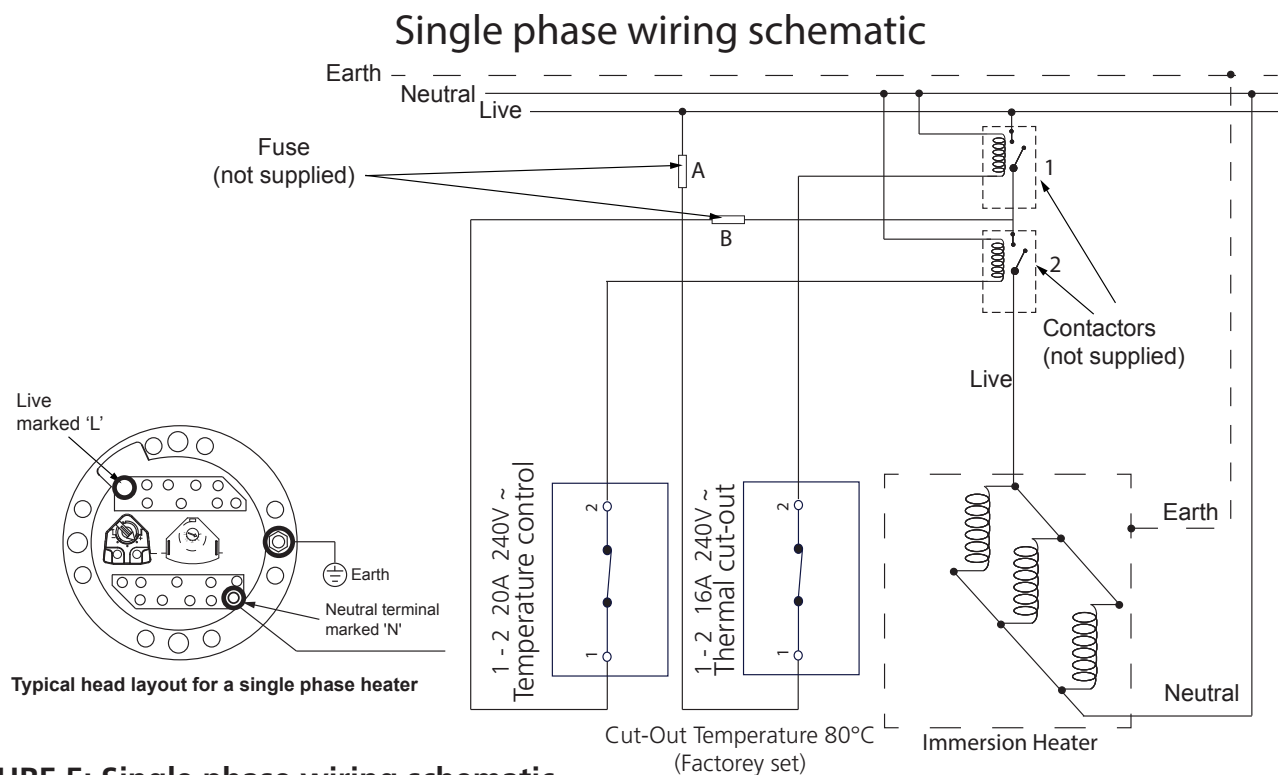


FIGURE 5: Single phase wiring schematic

Note:

The 2 external contactors must be approved components certified for 10,000 cycles of operation for the contactor controlled by the thermostat and at least 30 for the contactor controlled by the non-self-resetting thermal cut-out.

3 phase wiring schematic

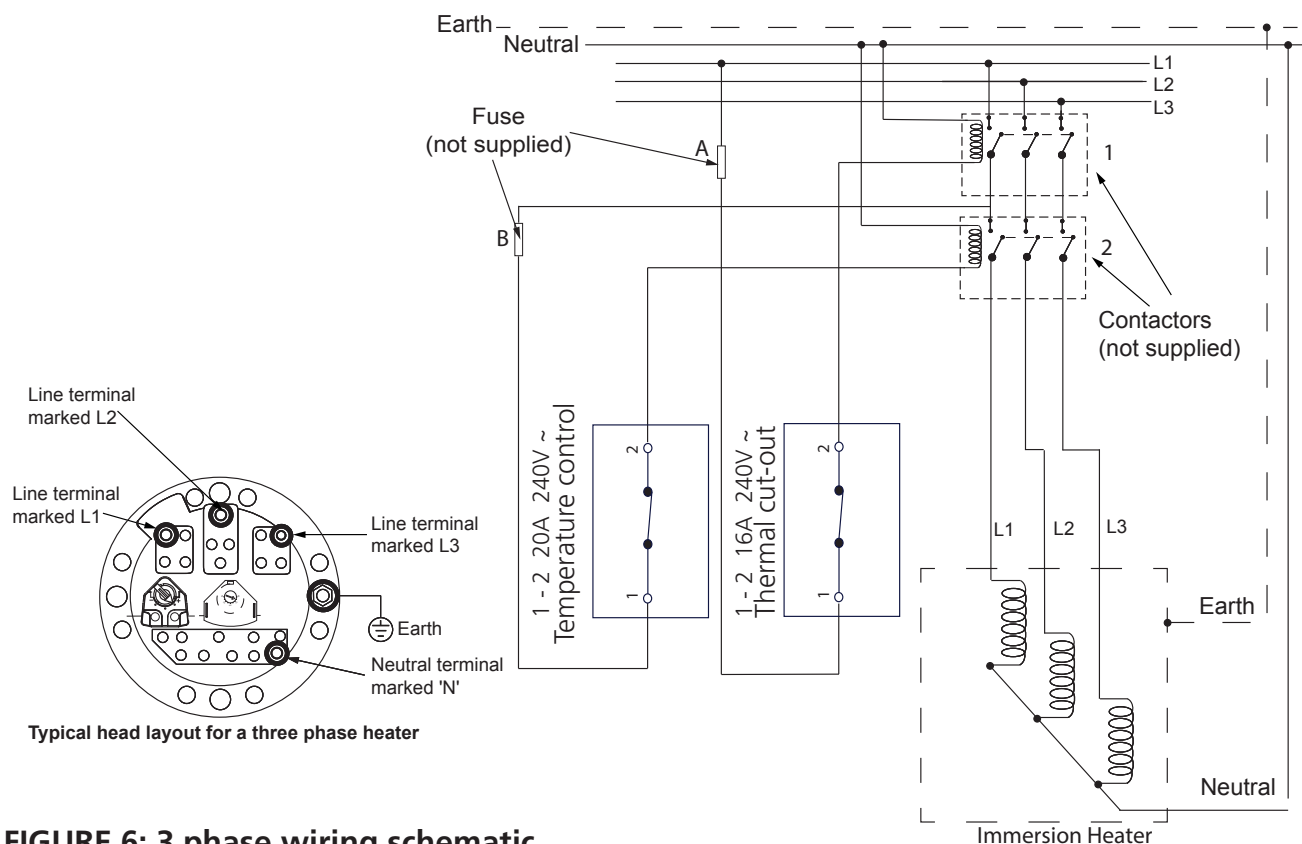


FIGURE 6: 3 phase wiring schematic

Limitations

- The Megaflo Commercial Flexistor unvented water heater should not be used in any of the following instances:
- Solid fuel boilers or any other boiler in which the energy input is not under effective thermostatic control unless additional and appropriate safety measures are installed.
- Gravity circulation primaries.
- Steam heating plant unless additional and appropriate safety devices are installed.
- Ascending spray type bidets or any other Class 5 back syphonage risk requiring that a Type AA, AB, AD or AG air gap be employed.
- Water supplies that have either inadequate pressure or where the supply may be intermittent.
- Situations where it is not possible to safely pipe away any discharge from the safety valves.
- Areas where the water consistently contains a high proportion of solids, eg. suspended matter that could block the strainer, unless adequate filtration can be ensured.
- The installation must be carried out in accordance with the relevant requirements of the appropriate Building Regulations: either The Building Regulations (England), The Building Regulations (Scotland) or Building Regulations (Northern Ireland), The Water Fittings Regulations (England and Wales) or Water Byelaws (Scotland).

Water supply

Bear in mind that the mains water supply to the property will be supplying both the hot and cold water requirements simultaneously. It is recommended that the maximum water demand be assessed and the water supply checked to ensure this demand can be met. A minimum flow rate of 100l/min is required for the Megaflo Commercial Flexistor range of cylinders

NOTE: A high mains water pressure will not always guarantee high flow rates.

Wherever possible the main supply pipe should be in 2". The minimum mains water supply requirements should be 0.15 MPa (1.5 bar) working pressure and minimum 100 litres per minute flow rate. At these values outlet flow rates may be poor if several outlets are used simultaneously, the higher the available pressure and flow rate the better the system performance will be.

The water supply must be of wholesome water quality (Fluid Category 1 as defined by the Water Supply Regulations 1999). The Megaflo Commercial Flexistor is to be used for the storage of wholesome water (max. 250mg/l chloride).

Note: In hard water areas it is recommended that service intervals are reduced to monitor scale build up on the immersion heaters.

Water container:

Duplex stainless steel. 100% pressure tested to 2.25 MPa (22.5 bar).

Installation & Commissioning

General installation

Pipe fittings

All pipe connections to the Megaflo Commercial Flexistor are made via BSP female parallel threaded pipe connection directly to the unit.

Cold water supply

A 2" cold water supply is recommended, however, if a smaller supply exists which provides sufficient flow this may be used. More flow noise may be experienced from small bore pipes due to the increased water velocity through them. A minimum flow rate of 100l/min is required for the Megaflo Commercial Flexistor range of cylinders

High flow cold water control pack (Low and high pressure)

The control pack consists of a pressure reducing valve with integral strainer, check valve, core unit and expansion relief valve. The pressure settings are adjustable for the low or high pressure valve sets. For the "low" pressure valve set the pressure reducing valve can be set between 1.5 and 6 bar. For the "high" pressure valve set the pressure can be set between 5 and 10 bar. For optimum performance the following installation instructions should be complied with.

Note: The expansion vessel pressure must be set in accordance with the inlet pressure set on the pressure reducing valve by the installer. Set the Expansion Vessel pressure before pressurising the cylinder.

Installation:

Flush supply pipe work before connection to remove all flux and debris prior to fitting the inlet controls. Failure to do this may result in irreparable damage to the controls and will invalidate the warranty.

The pressure reducing valve can be fitted in any orientation to suit the installation as long as it is fitted in the correct flow direction. Check the flow arrows on the side of the body.

The expansion relief valve should be installed with the discharge pipe work in either the horizontal position or facing downwards, if the discharge pipe is facing upwards debris may be deposited on the seat of the valve when in operation.

The blank plastic plugs in the body of the pressure relief valve are pressure gauge connections to enable pressure monitoring to be carried out, should the system develop a fault. It is recommended that these be accessible (the pressure reducing valve has two – only one need be accessible).

Expansion relief discharge pipe work must be connected to a safe visible discharge point via a tundish and the pipe work must have a continuous fall. If site conditions allow, the expansion relief discharge pipe work can be connected to the T&P valve discharge pipe work before the tundish.

Pressure reducing valve:

The pressure reducing valve can be connected anywhere on the cold water mains supply prior to the Megaflo Commercial Flexistor unit. There is no requirement to site it close to the unit, it can be located at a point where the mains supply enters the premises if this is more convenient but you must install a non-return valve just after the reducing valve for ease of maintenance. The pressure reducing valve incorporates a adjustable pressure reducer / strainer. The valve can be fitted in any orientation to suit the installation, however, ensure that the valve is installed with the direction of flow arrows (stamped on the side of the brass body) pointing towards the Megaflo Commercial Flexistor heater.

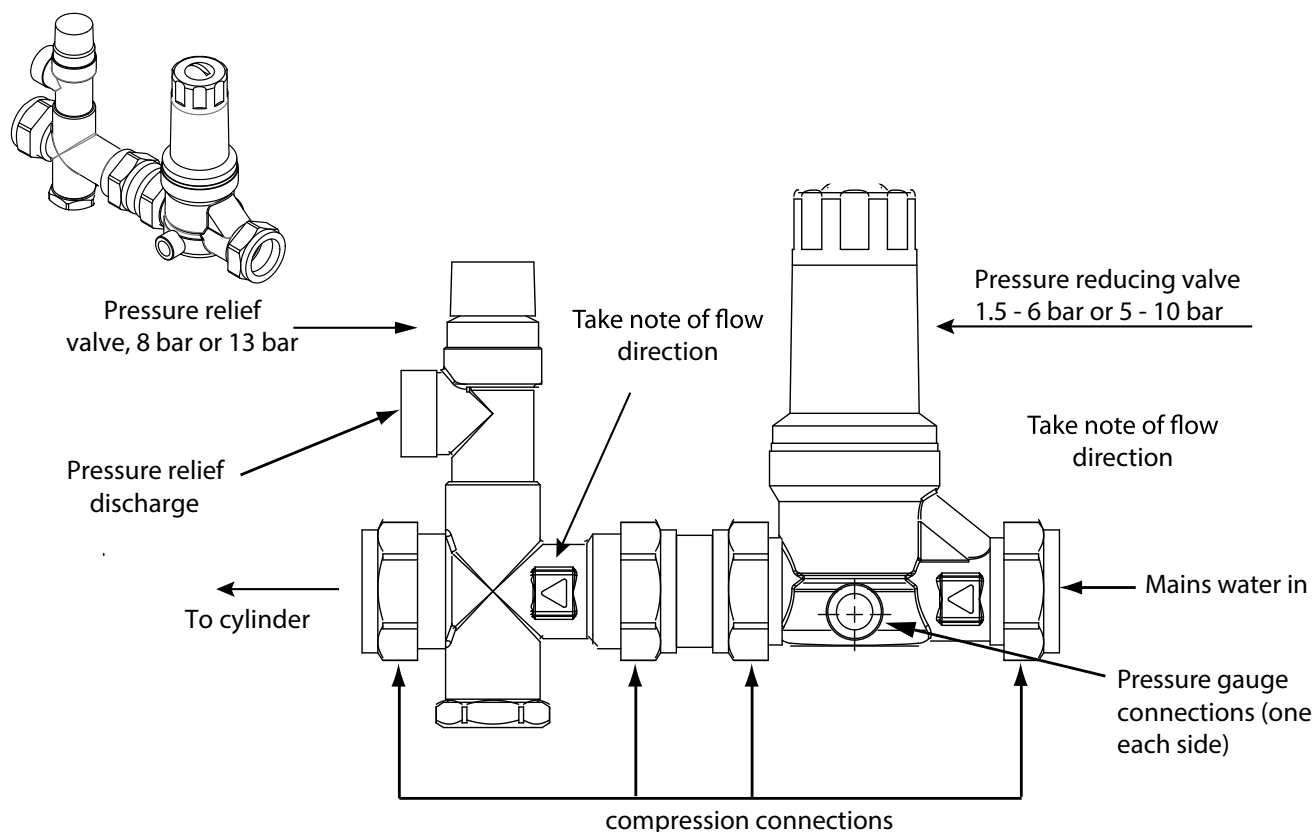


Figure 07: Cold water combination valve (for 400 & 500ltr)

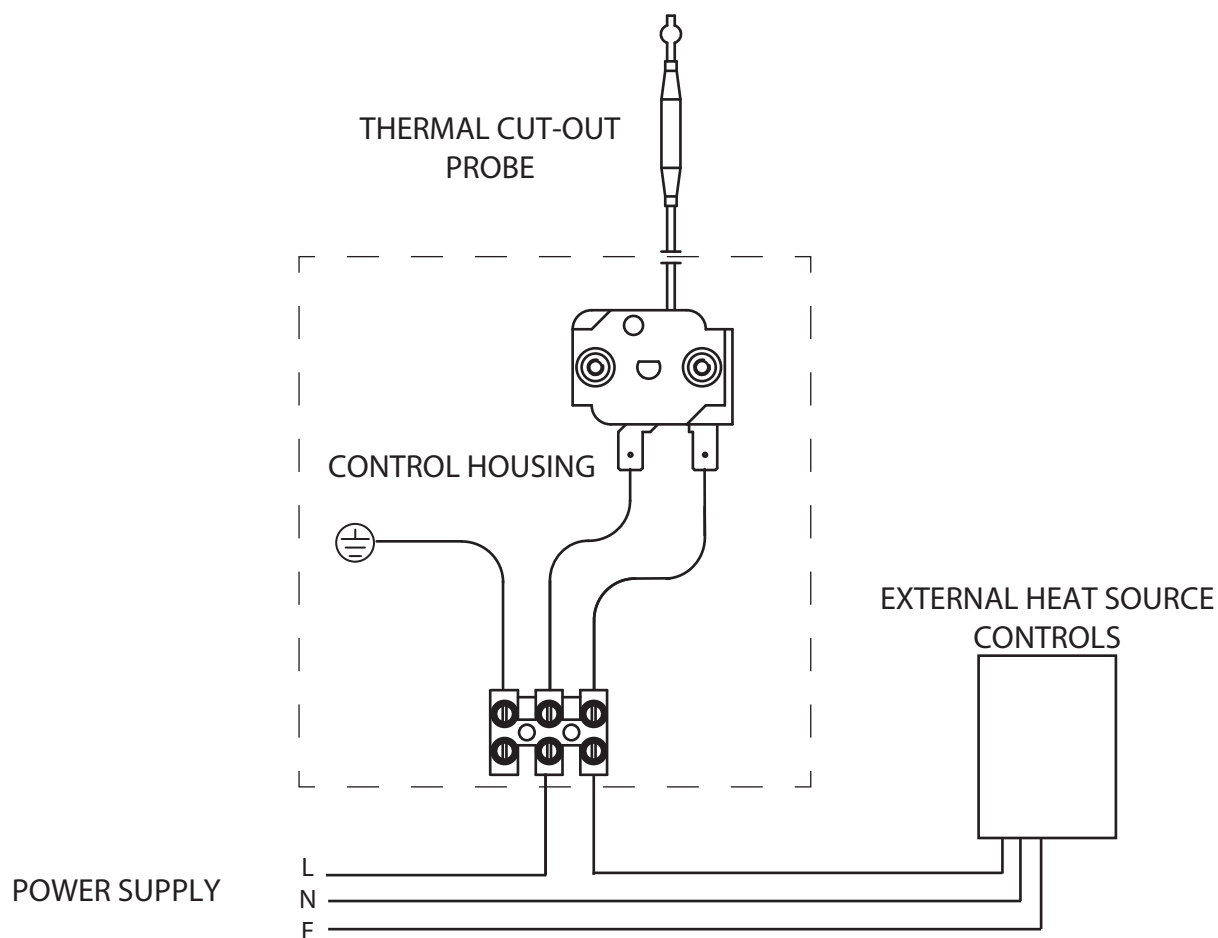
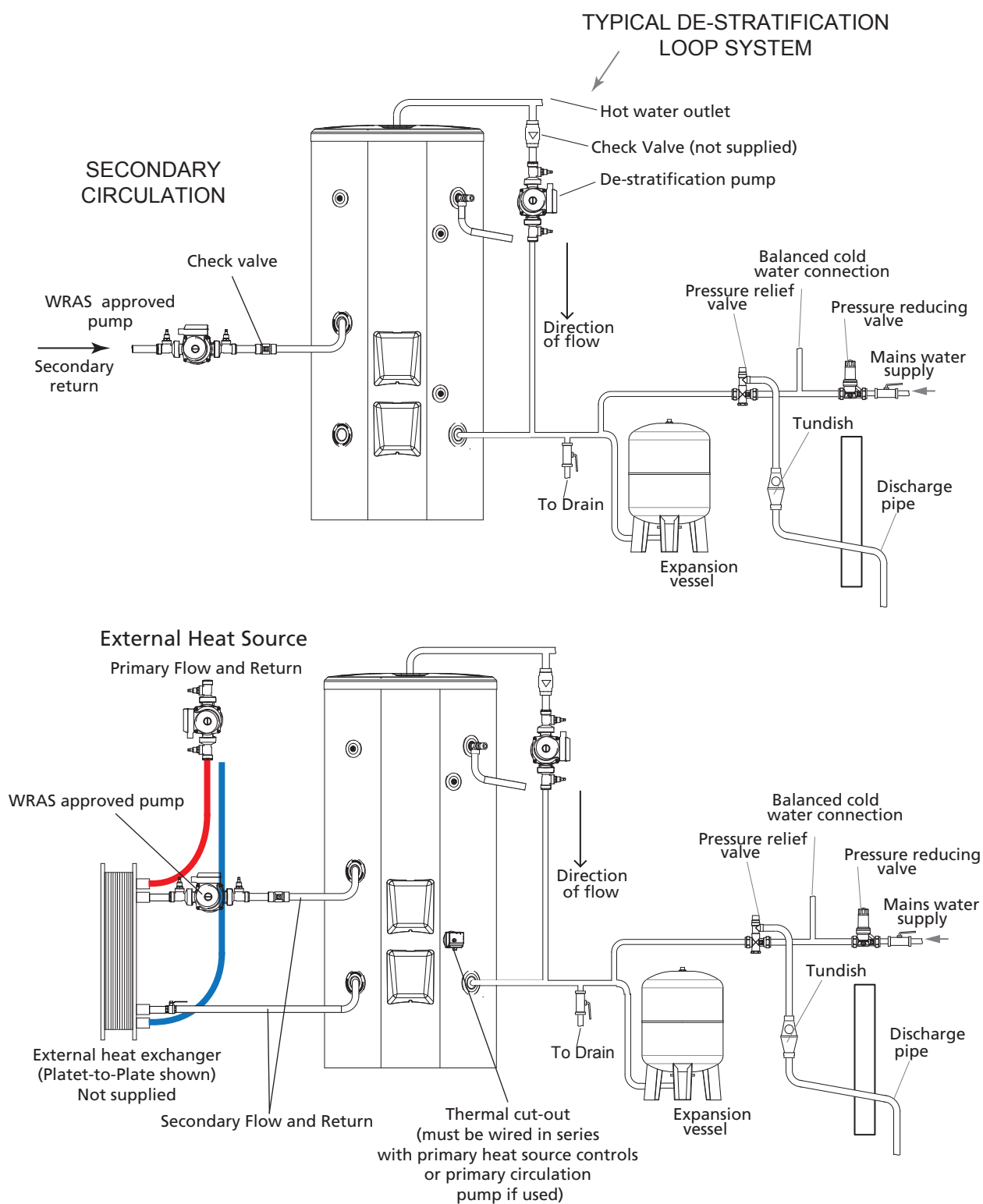


Figure 08: External heat source Thermal Cut-out



Notes:

1. Primary heat source must be able to cope with working pressure of cylinder.
2. Secondary flow and return is wholesome water only.
3. There is no internal heat exchanger fitted to this cylinder range.

Please note, that these are typical installations and
other options are permissable

Figure 09: Schematic installations

Pressure Relief Valve

This should be installed between the Pressure Reducing Valve and the Megaflo Commercial Flexistor cylinder. Should a balanced pressure cold water draw off supply be required for the cold water outlets, this should be taken off between the Pressure Reducing Valve and Pressure Relief Valve. Branches to drinking water outlets should be taken before the Pressure Relief Valve to avoid the possibility of warm expanded water being drawn from the tap.

Drain valve

It is recommended that the drain valve (supplied) be incorporated into the cold water inlet system, Figure 09, page 15. It is recommended that the outlet point of the drain pipe work be at least 1 metre below the level of the heater (this can be achieved by attaching a hose pipe to the drain valve outlet spigot).

Outlet Pipe work

Ideally the pipe work from the Megaflo Commercial Flexistor to the outlet fittings should be in 2" pipe, smaller bore pipe can be used but it could impact on the performance of the unit. Small bore pipe can also be used to suit some taps, but runs should be of minimum length. Pipe sizes may vary due to system design.

Secondary Circulation

If a secondary circulation system is required it is recommended that it be connected to the Megaflo Commercial Flexistor similar to Figure 9, page 15. The secondary return pipe should be in 28mm pipe and incorporate a check valve to prevent back flow, smaller pipe diameters can be used but may have a reduced flow. A suitable WRAS approved circulation pump will be required. On large systems, due to the increase in system water content, it may be necessary to fit additional expansion volume to the secondary system by fitting an external expansion vessel to the circuit. This should be done if the capacity of the secondary circuit exceeds 10 litres.

De-stratification kits

The correct size of de-stratification kit must be used with your cylinder to ensure the volume can be circulated in 1 hour. The pump instructions will need to be reviewed for information on the correct setting. Please follow the installation schematic (Figure 9, page 15) for guidance. When the system circulates it needs to be specified by the installer to ensure water is not drawn off during the de-stratification process. If a hot water demand is required during this period cold water may be discharged from the hot outlet. It is recommended that a check valve be installed before the pump to stop any risk of cold water draw off through the pump when it is not in use. For guidance on installation please refer to Figure 9, page 15.

External heat source

If an external heat source is connected the cylinder the control to the heat source must be wired via the over temperature cut-out supplied with the cylinder, alternatively it can be wired to the Primary circulation pump. This is to stop the external heat source from creating extreme temperatures within the cylinder. The secondary circulation must be wholesome water as there is no internal heat exchanger fitted to this cylinder range.

The external heat source, if connected, must be able to withstand the cylinder working pressures

Tundish

The tundish should not be located adjacent to any electrical components.

Pipe capacities (copper)

22mm o/d = 0.38 litres per metre run (10 litres = 26m)

28mm o/d = 0.55 litres per metre run (10 litres = 18m)

35mm o/d = 0.83 litres per metre run (10 litres = 12m)

42mm o/d = 1.23 litres per meter run (10 litres = 8m)

The following extract is taken from latest G3 Regulations

Discharge pipes from safety devices

Discharge pipe D1

3.50 Safety devices such as **temperature relief valves or combined temperature and pressure relief valves** (see paragraphs 3.13 or 3.18) should discharge either directly or by way of a manifold via a short length of metal pipe (D1) to a **tundish**.

3.51 The diameter of discharge pipe (D1) should be not less than the nominal outlet size of the safety device, e.g. **temperature relief valve**.

3.52 Where a manifold is used it should be sized to accept and discharge the total discharge from the discharge pipes connected to it.

3.53 Where valves other than a **temperature and pressure relief valve** from a single unvented hot water system discharge by way of the same manifold that is used by the safety devices, the manifold should be factory fitted as part of the **hot water storage system unit** or package.

Tundish

3.54 The **tundish** should be vertical, located in the same space as the unvented **hot water storage system** and be fitted as close as possible to, and lower than, the safety device, with no more than 600mm of pipe between the valve outlet and the **tundish** (see Diagram 1).

Note: To comply with the Water Supply (Water Fittings) Regulations, the tundish should incorporate a suitable air gap.

3.55 Any discharge should be visible at the tundish. In addition, where discharges from safety devices may not be apparent, e.g. in dwellings occupied by people with impaired vision or mobility, consideration should be given to the installation of a suitable safety device to warn when discharge takes place, e.g. electronically operated.

Discharge pipe D2

3.56 The discharge pipe (D2) from the **tundish** should:

- a. have a vertical section of pipe at least 300mm long below the tundish before any elbows or bends in the pipework (see Diagram 1); and
- b. be installed with a continuous fall of at least 1 in 200 thereafter.

3.57 The discharge pipe (D2) should be made of:

- a. metal; or
- b. other material that has been demonstrated to be capable of safely withstanding temperatures of the water discharged and is clearly and permanently marked to identify the product and performance standard (e.g. as specified in the relevant part of BS 7291- 1:2006 Thermostatic pipes and fittings for hot and cold water for domestic purposes and heating installations in buildings. General requirements).

3.58 The discharge pipe D2 should be at least one pipe size larger than the nominal outlet size of the safety device unless its total equivalent hydraulic resistance exceeds that of a straight pipe 9m long, i.e. for discharge pipes between 9m and 18m the equivalent resistance length should be at least two sizes larger than the nominal outlet size of the safety device; between 18 and 27m at least 3 sizes larger, and so on; bends must be taken into account in calculating the flow resistance. See Diagram 1, Table 3.1 and the worked example.

Note: An alternative approach for sizing discharge pipes would be to follow Annex D, section D.2 of BS 6700:2006 + A1:2009 Specification for design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages.

3.59 Where a single common discharge pipe serves more than one system, it should be at least one pipe size larger than the largest individual discharge pipe (D2) to be connected.

3.60 The discharge pipe should not be connected to a soil discharge stack unless it can be demonstrated that the soil discharge stack is capable of safely withstanding temperatures of the water discharged, in which case, it should:

- a. contain a mechanical seal, not incorporating a water trap, which allows water into the branch pipe without allowing foul air from the drain to be ventilated through the **tundish**;
- b. be a separate branch pipe with no **sanitary appliances** connected to it;
- c. if plastic pipes are used as branch pipes carrying discharge from a safety device, they should be either polybutylene (PB) or crosslinked polyethylene (PE-X) complying with national standards such as Class S of BS 7291-2:2006 or Class S of BS 7291-3:2006 respectively; and
- d. be continuously marked with a warning that no **sanitary appliances** should be connected to the pipe.

Notes:

1. Plastic pipes should be joined and assembled with fittings appropriate to the circumstances in which they are used as set out in BS EN ISO 1043-1:2002 Plastics. Symbols and abbreviated terms. Basic polymers and their special characteristics.
2. Where pipes cannot be connected to the stack it may be possible to route a dedicated pipe alongside or in close proximity to the discharge stack.

Termination of discharge pipe

3.61 The discharge pipe (D2) from the **tundish** should terminate in a safe place where there is no risk to persons in the vicinity of the discharge.

3.62 Examples of acceptable discharge arrangements are:

- a. to a trapped gully with the end of the pipe below a fixed grating and above the water seal;
- b. downward discharges at low level; i.e. up to 100mm above external surfaces such as car parks, hard standings, grassed areas etc. are acceptable providing that a wire cage or similar guard is positioned to prevent contact, whilst maintaining visibility; and,
- c. discharges at high level: e.g. into a metal hopper and metal downpipe with the end of the discharge pipe clearly visible or onto a roof capable of withstanding high temperature discharges of water and 3 m from any plastic guttering system that would collect such discharges.

3.63 The discharge would consist of high temperature water and steam. Asphalt, roofing felt and nonmetallic rainwater goods may be damaged by such discharges.

Discharge Pipe work

It is a requirement of Building Regulations that any discharge from an unvented system is conveyed to where it is visible, but will not cause danger to persons in or about the building. The tundish and discharge pipes should be fitted in accordance with the requirements and guidance notes of Building Regulations. Building Regulation G3 Requirements and Guidance section 2 (page 17) are reproduced in the previous sections.

For discharge pipe arrangements not covered by G3 Guidance advice should be sought from your local Building Control Officer. Any discharge pipe connected to the pressure relief devices (Expansion Valve and Temperature / Pressure Relief Valve) must be installed in a continuously downward direction and in a frost free environment.

The water may drip from the discharge pipe of the pressure relief device and that this pipe must be left open to the atmosphere. The pressure relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked.

G3 Requirement

"...there shall be precautions...to ensure that the hot water discharged from safety devices is safely conveyed to where it is visible but will not cause danger to persons in or about the building".

Worked example of discharge pipe sizing (Taken from Building Regulations 2000, G3, 2010 edition)

The example below is for a G1" temperature relief valve with a discharge pipe (D2) having 4 No. elbows and length of 7m from the tundish to the point of discharge.

From Table 5:

Maximum resistance allowed for a straight length of 35mm copper discharge pipe (D2) from a G1" temperature relief valve is 9m.

Subtract the resistance for 4 No. 35mm elbows at 1.4m each = 5.6m

Therefore the permitted length equates to: 3.4m

3.4m is less than the actual length of 7m therefore calculate the next largest size.

Maximum resistance allowed for a straight length of 42mm pipe (D2) from a G1" temperature relief valve equates to 18m.

Subtract the resistance of 4 No. 42mm elbows at 1.7m each = 6.8m

Therefore the maximum permitted length equates to: 11.2m

As the actual length is 7m, a 42mm (D2) copper pipe will be satisfactory.

Warnings

1. Under no circumstances should the factory fitted Temperature /Pressure Relief Valve be removed other than by authorised Heatrae Sadia personnel. To do so will invalidate any guarantee or claim.
2. The Cold Water Combination Valve must be fitted to the mains water supply to the Megaflö Commercial Flexistor unit.
3. No control or safety valves should be tampered with or used for any other purposes.
4. Water may drip from the discharge pipe of the pressure relief device (Expansion Valve) and this pipe must be left open to atmosphere. The discharge pipe should not be blocked or used for any other purpose.
5. The tundish must be installed so that it is visible to the end user.
6. The tundish and drain valve must be installed away from any electrical components.
7. No valve should be fitted between the 8 bar or 13 bar pressure relief valve and the Megaflö Commercial Flexistor unit.

Notes:

- 1) Discharge pipe-work D2 can now be a plastic pipe but only pipes that have been tested to a minimum 110°C must be used.
- 2) Discharge pipe D2 can now be plumbed in the soil stack but only soil stacks that can handle temperatures of 99°C or greater should be used.

| VALVE OUTLET SIZE | MINIMUM SIZE OF DISCHARGE PIPE D1 | MINIMUM SIZE OF DISCHARGE PIPE D2 FROM TUNDISH | MAXIMUM RESISTANCE ALLOWED, EXPRESSED AS A LENGTH OF STRAIGHT PIPE (I.E. NO ELBOWS OR BENDS) | RESISTANCE CREATED BY EACH ELBOW OR BEND |
|-------------------|-----------------------------------|--|--|--|
| G 1/2 | 15mm | 22mm 28mm 35mm | UP TO 9m UP TO 18m UP TO 27m | 0.8m 1.0m 1.4m |
| G 3/4 | 22mm | 28mm 35mm 42mm | UP TO 9m UP TO 18m UP TO 27m | 1.0m 1.4m 1.7m |
| G 1 | 28mm | 35mm 42mm 54mm | UP TO 9m UP TO 18m UP TO 27m | 1.4m 1.7m 2.3m |

Table 10 Sizing of copper discharge pipe "D2" for common T&P Relief Valve sizes.

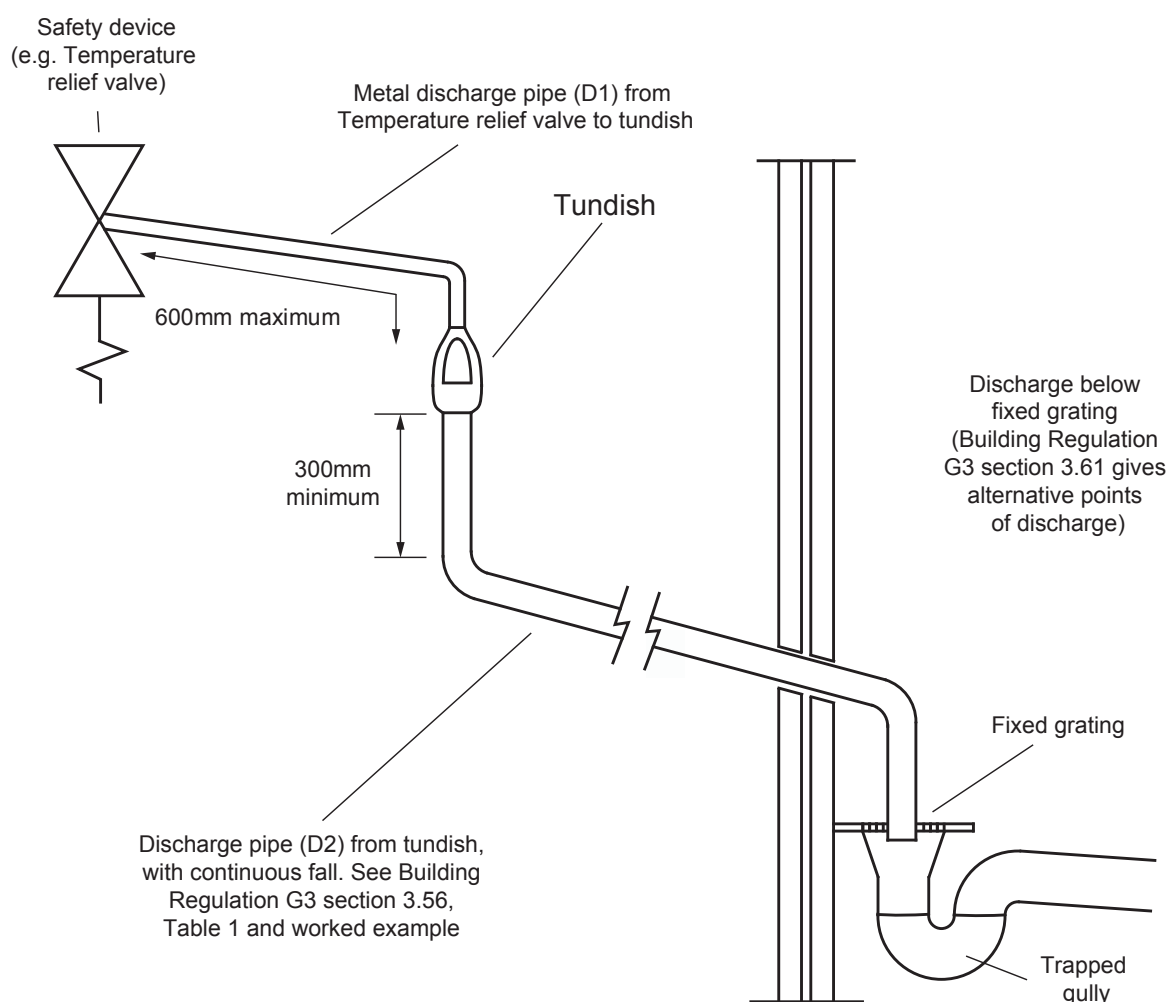


Figure 10: Typical discharge pipe arrangement (Extract from Building Regulations G3 Guidance section 3.5 to 3.63)

Immersion Heater(s)

The Megaflo Commercial Flexistor can be fitted with a selection of single phase and three phase immersion heaters (see Table 7, page 9 and element allocation Table 9, page 10 for details). The immersion heaters must be installed in accordance with the installation instructions supplied with the immersion heater (supplied separately)

Warning: Before starting any work on the Megaflo commercial immersion heaters switch off all electrical supplies to such immersion heaters including thermostatic controls, these may be on a separate circuit.

To remove the immersion heater:

Drain down the cylinder before any work is carried out on the Immersion heaters. Remove the immersion heater cover and disconnect all wiring from the immersion and thermostatic controls. Remove the 8 nuts (or bolts) and withdraw the immersion heater from the cylinder. Take care when lifting the immersion out of the cylinder and work within safe working practices.

Replacement:

Make sure the Immersion heater gasket face is clean and if necessary replace the gasket (spare part number 95607396). Replace the Immersion heater and make sure the 8 nuts (or bolts) are correctly torqued (20Nm or 14.75 ft/lb) as per the Commercial Immersion heater fitting instructions (36006161). Wire up the immersion heater as per Fig 5 or Fig 6, page 11 or Megaflo Commercial Flexistor immersion heater fitting instructions. Refill the cylinder and check for leaks. Turn on the supply and set the thermostat temperature to the desired water temperature (60°C - 65°C is recommended).

NOTE: If using fibre gaskets they should be pre-soaked in ambient temperature water for 30 mins before installation and the 8 securing nuts are diametrically tightened to 20 Nm or 0.42psi. White silicone gaskets can be fitted directly.

Wiring (See Figures 4, 5 & 6)

All electrical wiring should be carried out by a competent electrician and be in accordance with the latest I.E.E. Wiring Regulations BS 7671.

DO NOT OPERATE THE IMMERSION HEATER(S) UNTIL THE MEGAFLO COMMERCIAL Flexistor HAS BEEN FILLED WITH WATER.

Operation

See Fig 4, page 10 for details on how to adjust the temperature setting of the heater.

DO NOT BYPASS THE THERMAL CUT-OUT IN ANY CIRCUMSTANCES.

Commissioning

Filling and flushing the Megaflo Commercial Flexistor

Ensure that all fittings and immersion heaters are correctly fitted and tightened.

- i) Open a hot tap furthest from the Megaflo Commercial Flexistor.
- ii) Open the mains stop cock to fill the unit. When water issues from the tap, allow to run for a few minutes to thoroughly flush through any residue, dirt or swarf, then close tap.
- iii) Open successive hot taps to purge any air from the system.
- iv) Check all connections for leaks and rectify as necessary.
- v) The Strainer housed within the Pressure Reducing Valve should be cleaned to remove any debris that may have been flushed through the main supply pipe.

Check the operation of the Safety Valves

- i) Slowly, manually open for a few seconds, the Temperature and Pressure Relief Valve (T&P Valve) situated on the Megaflo Commercial Flexistor unit. Check water discharged runs freely away through the tundish and discharge pipe work. Close valve, ensure water flow stops and valve reseats correctly.
- ii) Repeat for the Pressure Relief Valve.

NOTE: The water discharged may be very hot.

Primary Heat source (if fitted)

Connect up primary heat source as per manufacturers instructions. Fill up primary and secondary circuits, bleeding any air that may be trapped and check for leaks. Make sure secondary circuit has wholesome water only, the Flexistor range of cylinders do not have an internal heat exchanger. Take care that the Primary Heat source can handle the working pressure of the cylinder.

Auxiliary power supply (Immersion Heaters)

Switch on the electrical supply to the immersion heater(s) and allow the unit to heat up. Check that the thermostat operates correctly. A storage temperature of approx. 60°C is recommended, install and set up immersions as per immersion heater fitting instructions (36006161) . Check that no water is discharged from either the Expansion Valve or Temperature and Pressure Relief Valve during the heating cycle. The thermal cut-out is factory set to 80°C max for direct heating

Benchmark™ Log Book

On completion of the installation and commissioning procedures detailed in this Product Guide the Benchmark™ "Installation, Commissioning and Service Record Log" should be completed and signed off by the competent installer or commissioning engineer in the relevant sections. The various system features, location of system controls, user instructions and what to do in the event of a system failure should be explained to the customer. The customer should then countersign the Benchmark™ commissioning checklist to accept completion. The Service Record should be filled in when any subsequent service or maintenance operation is carried out on the Megaflo Commercial Flexistor unit.

See pages 31 and 32 for Benchmark™ logbook and service record

Maintenance & Servicing

Maintenance requirements

To ensure the continued optimum performance of the Megaflo Commercial Flexistor it should be regularly maintained. This is of particular importance in hard water areas or where the water supply contains particulate matter. Maintenance should be carried out by a competent person and any replacement parts used should be authorised Megaflo Commercial Flexistor spare parts. It is recommended that maintenance is carried out every 12 months and includes the checks detailed below.

In hard water areas consideration should be given to periodically descaling the immersion heater elements. To do this the Megaflo Commercial Flexistor unit will need to be drained.

Check operation of Safety Valves

Slowly open the Temperature and Pressure Relief Valve by twisting its cap for a few seconds. Check water is discharged and that it flows freely through the tundish and discharge pipe work. Check valve reseats correctly when released.

NOTE: The water discharged may be very hot.

Repeat the procedure for the Pressure Relief Valve.

Inspection

The immersion heater boss can be used as an access for inspecting the cylinder internally.

Clean the strainer

The strainer is incorporated within the Pressure Reducing Valve housing of the Valve. To inspect and clean the strainer:

1. Turn off the isolating valve prior to the Pressure Reducing Valve or the main stop cock to the system.
2. Open the lowest hot tap in the system to relieve the system pressure.
3. Using a spanner unscrew the pressure reducing cartridge and remove the moulded housing. The strainer will be removed with the cartridge.
4. Wash any particulate matter from the strainer under clean running water.
5. Replace the strainer and screw the Pressure Reducing Valve cartridge into the moulded housing.
6. Close hot tap, turn on isolating valve or main stop cock to the system. Check for leaks.

Draining the Cylinder

Switch off the electrical supply to the immersion heater(s) and primary heat source, if used. Turn off the mains water supply to the Megaflo Commercial Flexistor unit. Attach a hosepipe to the drain valve having sufficient length to take water to a suitable discharge point below the level of the unit, at least one metre below the unit is recommended. Open hot water tap nearest to the Megaflo Commercial Flexistor to relieve the system pressure. Open drain valve. If water fails to drain from the Megaflo Commercial Flexistor vent the unit by manually opening the Temperature / Pressure Relief Valve.

Refilling system

DO NOT switch on the immersion heater(s) or primary heat source until the system has been completely refilled.

Close the drain valve. With the hot tap open, turn on mains water supply. When water flows from the hot tap allow to flow for a short while to purge air and to flush through any disturbed particles. Close hot tap and then open successive hot taps in system to purge any air. The electrical supply can now be switched on.

Benchmark™

On completion of any maintenance or service of the Megaflo **Commercial**, the Benchmark™ “Installation, Commissioning and Service Record”, Pages 31 & 32, should be filled in to record the actions taken and the date the work was undertaken.

Maintenance

Under normal circumstances the control valves should not require any maintenance. However, annual inspection and/or cleaning of the integral strainer, pressure reducing valve cartridge, expansion relief valve cartridge and seating may be necessary depending on local water conditions.

Pressure reducing valve

Isolate cold water supply and drain system if necessary

Unscrew the retaining nut of the valve. The complete operating mechanism, including the strainer can be removed. Clean the filter mesh and cartridge ensuring that the strainer is correctly located and reassemble the unit.

Expansion Valve

Isolate cold water supply

Unscrew expansion relief cartridge from body and clean the filter mesh and cartridge.

Clean valve seat face and seating – do not scratch or damage either seal face or seating,

Refit in reverse order. Do not over tighten.

Warnings

IF WATER DISCHARGES FROM THE TEMPERATURE / PRESSURE RELIEF VALVE ON THE MEGAFLO COMMERCIAL FLEXISTOR UNIT REFER TO FAULT FINDING TABLE FIRST FOR GUIDANCE. IF THIS DOES NOT RECTIFY THE FAULT SWITCH OFF ELECTRICAL SUPPLY TO THE IMMERSION HEATER(S) [AUXILIARY HEATING] OR SHUT DOWN THE EXTERNAL HEAT SOURCE [IF CONNECTED]. DO NOT TURN OFF THE WATER SUPPLY. CONTACT A COMPETENT INSTALLER FOR UNVENTED WATER HEATERS TO CHECK THE SYSTEM.

DO NOT TAMPER WITH ANY OF THE SAFETY VALVES FITTED TO THE MEGAFLO COMMERCIAL FLEXISTOR SYSTEM, IF A FAULT IS SUSPECTED CONTACT A COMPETENT INSTALLER.

Fault finding

The Fault Finding chart will enable operational faults to be identified and their possible causes rectified. Any work carried out on the Megaflo Commercial Flexistor unvented water heater and its associated controls MUST be carried out by a competent installer for unvented water heating systems. In case of doubt contact the Megaflo Commercial Flexistor Service Department.

| Fault | Possible Cause | Remedy |
|---|---|--|
| No hot water flow | Mains water supply off | Check and open stop cock/isolating valve |
| | Strainer blocked | Turn off water supply, remove strainer and clean |
| | Cold water combination valve incorrectly fitted | Check and refit as required |
| Water from hot tap is cold | Auxiliary immersion heater not switched on | Check and switch on |
| | Auxiliary immersion heater thermal cut-out has operated | Check, reset by pushing button on thermal cut-out |
| | External heat source not switched on | Check, turn on external heat source |
| | External heat source not working | Check heat source operation. If fault is suspected consult heat source manufacturer's instructions |
| | External heat source thermal cut-out has operated | Check, reset by pushing button on thermal cut-out Check operation of heat source thermostat |
| Water discharges from overflow visual indicator (tundish) | INTERMITTENTLY | Incorrect pre-charge pressure for expansion vessel |
| | CONTINUALLY | Check pressure from pressure reducing valve |
| | | Remove expansion relief cartridge from pressure relief valve and check seating. If necessary fit new cartridge |
| Water discharges from the T&P relief valve intermittently | Expansion relief valve faulty | Check valve and replace if necessary |
| Water discharges from the T&P relief valve continually | Thermal control failure NOTE: Water will be very hot | Switch off power to immersion heater(s) and shut down external heat source. DO NOT turn off water supply. When discharge stops check all thermal controls, replace if faulty |
| Performance has deteriorated | GRADUALLY | Check for scale build up in the DHW heat exchanger |

Table 11 - Fault finding guide.

Servicing

Important

- i) Servicing should only be carried by an authorised Engineer, Agents or by installers competent in the installation and maintenance of unvented water heating systems.
- ii)Any spare parts used MUST be authorised Megaflo Commercial Flexistor parts.
- iii)Disconnect the electrical supply before removing any electrical equipment covers.
- iv)NEVER bypass any thermal controls or operate system without the necessary safety valves.
- v)Water contained in the Megaflo Commercial Flexistor unit may be very hot, especially following a thermal control failure. Caution must be taken when drawing water from the unit.

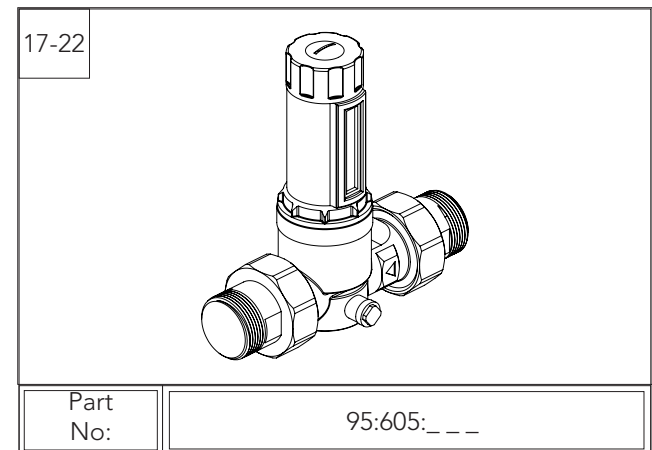
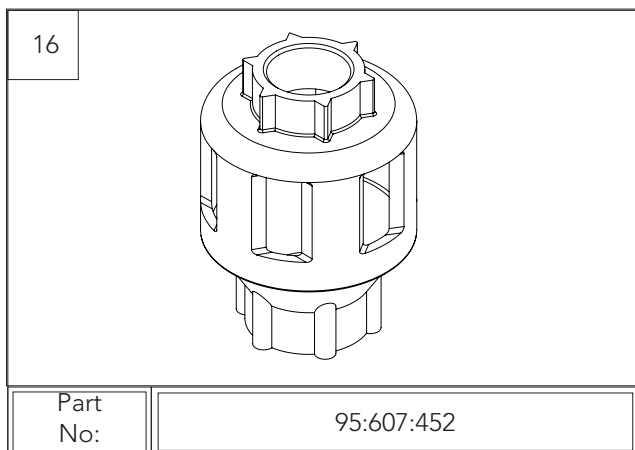
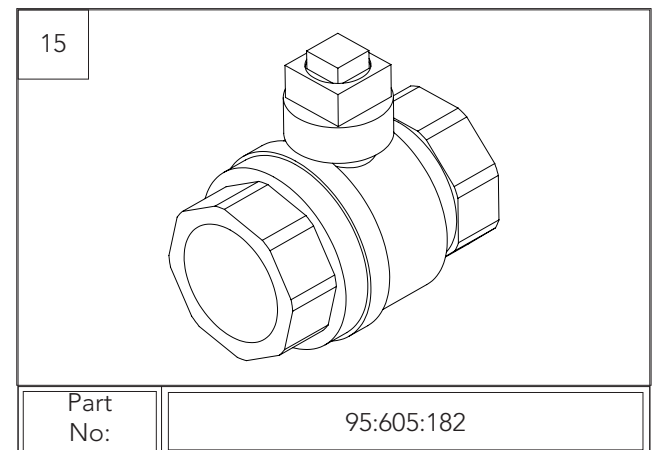
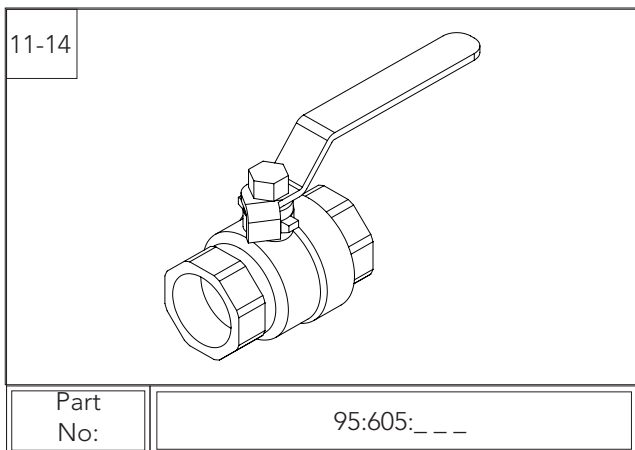
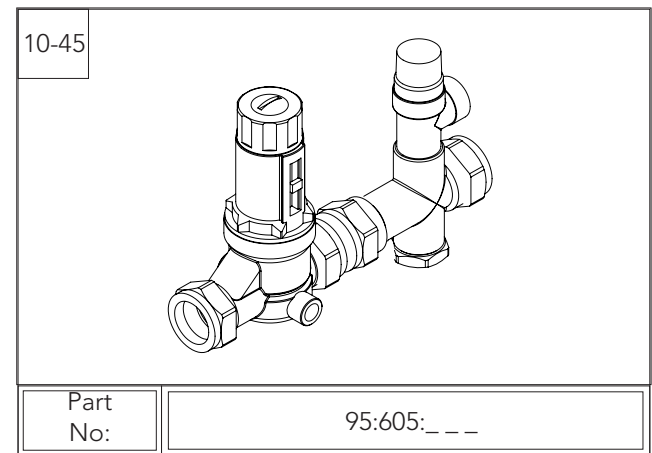
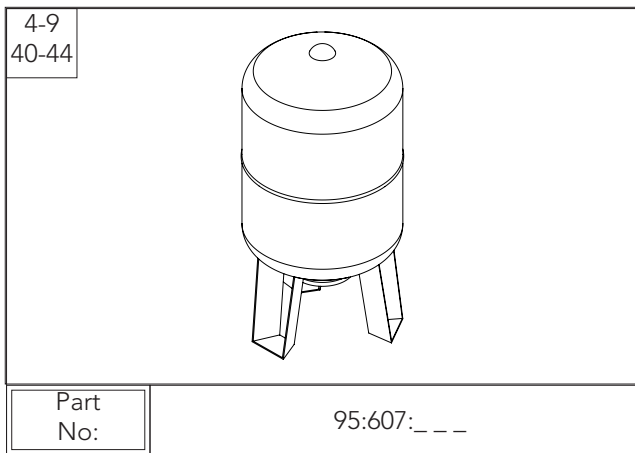
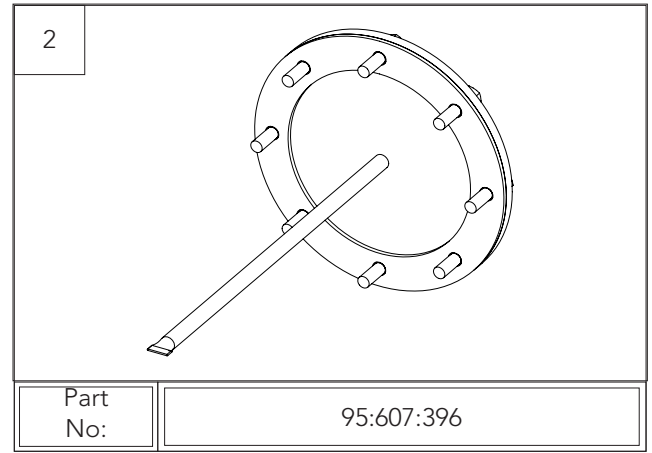
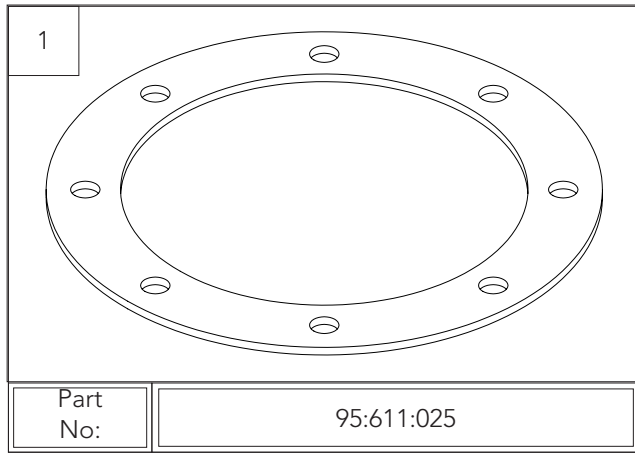
Spare parts

A full range of spare parts are available for the Megaflo Commercial Flexistor range. Refer to the Technical Data label on the unit to identify the model installed and ensure the correct part is ordered.

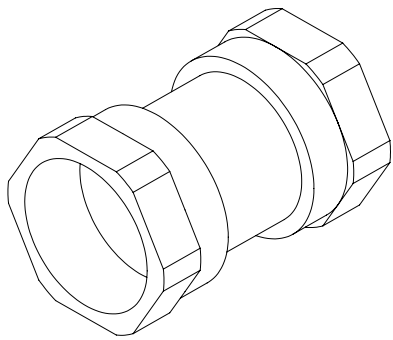
| Key | Description | Spares Number |
|-----|---|---------------|
| 1 | Immersion Heater Gasket | 95611025 |
| 2 | Blanking Plate Kit | 95607396 |
| 4 | Expansion Vessel 60L 6 Bar | 95607445 |
| 6 | Expansion Vessel 100L 6 Bar | 95607458 |
| 7 | Expansion Vessel 150L 6 Bar | 95607461 |
| 8 | Expansion Vessel 200L 6 Bar | 95612723 |
| 9 | Expansion Vessel 300L 6 Bar | 95612724 |
| 10 | 1" Integrated Inlet Control Valve 5-10Bar | 95605176 |
| 11 | Isolating Ball Valve 1" | 95605178 |
| 12 | Isolating Ball Valve 1 1/4" | 95605179 |
| 13 | Isolating Ball Valve 1 1/2" | 95605180 |
| 14 | Isolating Ball Valve 2" | 95605181 |
| 15 | Isolating Drain Valve 1" | 95605182 |
| 16 | Tundish 1 1/2" X 2" | 95607452 |
| 17 | Prv 1 1/4" Set Pressure 1.5 To 6 Bar Max Ip 16 Bar | 95605183 |
| 18 | Prv 1 1/4" Set Pressure 5 To 10 Bar Max Ip 16 Bar | 95605184 |
| 19 | Prv 1 1/2" Set Pressure 1.5 To 6 Bar Max Ip 16 Bar | 95605185 |
| 20 | Prv 1 1/2" Set Pressure 5 To 10 Bar Max Ip 16 Bar | 95605186 |
| 21 | Prv 2" Set Pressure 1.5 To 6 Bar Max Ip 16 Bar | 95605187 |
| 22 | Prv 2" Set Pressure 5 To 10 Bar Max Ip 16 Bar | 95605188 |
| 23 | Single Check Valve 1 1/4" | 95605189 |
| 24 | Single Check Valve 1 1/2" | 95605190 |
| 25 | Single Check Valve 2" | 95605191 |
| 26 | Expansion Relief Valve 1" X 1 1/4" Set Pressure 8 Bar | 95605192 |
| 27 | Expansion Relief Valve 1" X 1 1/4" Set Pressure 13 Bar | 95605193 |
| 28 | Expansion Relief Valve 1 1/4" X 1 1/2" Set Pressure 8 Bar | 95605194 |
| 29 | Expansion Relief Valve 1 1/4" X 1 1/2" Set Pressure 13 Bar | 95605195 |
| 30 | Temperature And Pressure Relief Valve - Set Pressure 10 Bar | 7033371 |
| 31 | Temperature And Pressure Relief Valve - Set Pressure 15 Bar | 95605197 |
| 32 | Dual Control Thermostat | 95612650 |
| 33 | Cut-out thermostat | 7031593 |
| 34 | Rod thermostat | 95980025 |
| 35 | Pump 3 speed circulation up 20-30n | 95607366 |
| 36 | Pump 3 speed circulation ups 15-50n 130 | 95607404 |
| 37 | 28mm pump isolating valve | 95605177 |
| 38 | 1/2" blanking stat pocket | 95607690 |
| 40 | Expansion vessel 60l 10 bar | 95607446 |
| 41 | Expansion vessel 100l 10 bar | 95607459 |
| 42 | Expansion vessel 150l 10 bar | 95607462 |
| 43 | Expansion vessel 200l 10 bar | 95612725 |
| 44 | Expansion vessel 300l 10 bar | 95612726 |
| 45 | 1" integrated inlet control valve 1-6bar | 95605109 |
| 46 | Over temperature rod thermostat | 95980009 |
| 48 | 2" BSP Blanking Plug | 7038680 |

Accessories

| Immersion | Part number |
|--|-------------|
| 6kW Commercial Immersion - Single phase | 95970155 |
| 9kW Commercial Immersion - Single phase | 95970156 |
| 12kW Commercial Immersion - Three phase | 95970144 |
| 18kW Commercial Immersion - Three phase | 95970145 |
| 24kW Commercial Immersion - Three phase | 95970146 |
| 30kW Commercial Immersion - Three phase | 95970147 |
| 36kW Commercial Immersion - Three phase | 95970148 |
| 45kW Commercial Immersion - Three phase | 95970149 |
| 54kW Commercial Immersion - Three phase | 95970150 |
| Busbar Conversion Kit | 94970110 |
| De-Stratification loop kit - 400-500 litre | 95970140 |
| De-Stratification loop kit - 800-1450 litre | 95970157 |
| De-Stratification loop kit - 2000-2500 litre | 95970158 |
| Temperature gauge | 95970141 |
| Pressure gauge | 95970142 |
| Temperature gauge (calibrated) | 95970017 |
| Pressure gauge (calibrated) | 95970016 |
| Flexistor 400/500L 6 bar cold water control kit | 7038498 |
| Flexistor 800L 6 bar cold water control kit | 7038499 |
| Flexistor 1000L 6 bar cold water control kit | 7038500 |
| Flexistor 1250L 6 bar cold water control kit | 7038501 |
| Flexistor 1450L 6 bar cold water control kit | 7038502 |
| Flexistor 2000/2500L cold water control kit | 7038503 |
| Flexistor 400/500L 10 bar cold water control kit | 7038504 |
| Flexistor 800L 10 bar cold water control kit | 7038505 |
| Flexistor 1000L 10 bar cold water control kit | 7038506 |
| Flexistor 1250L 10 bar cold water control kit | 7038507 |
| Flexistor 1450L 10 bar cold water control kit | 7038508 |
| Flexistor 2000/2500L 10 bar cold water control kit | 7038509 |



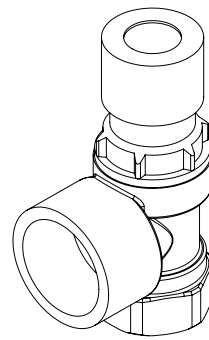
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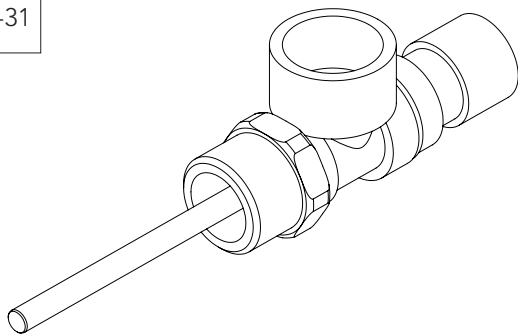
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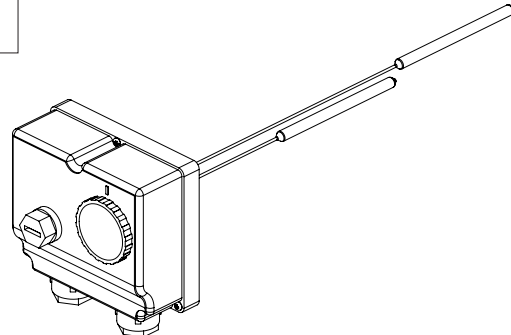
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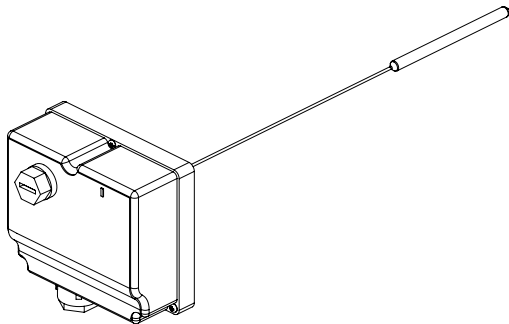
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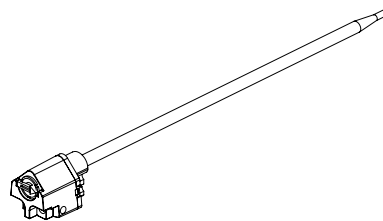
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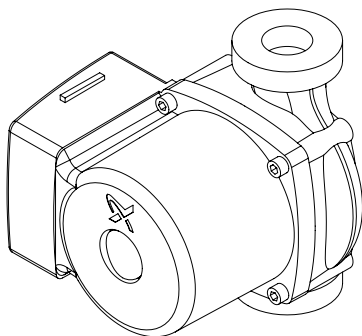
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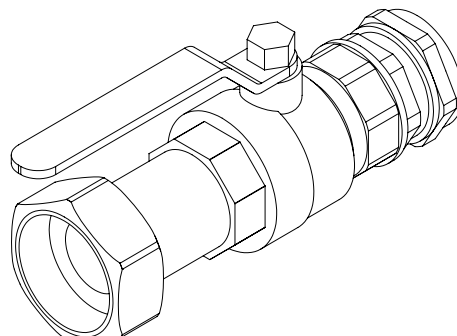
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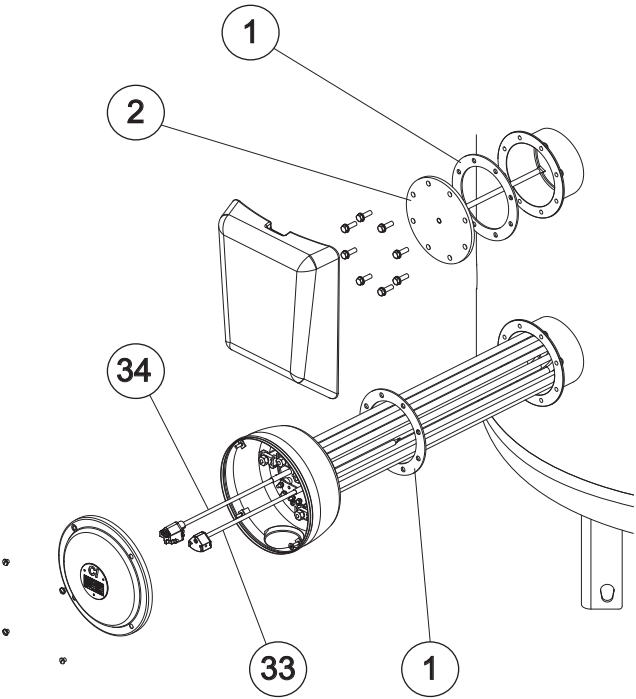
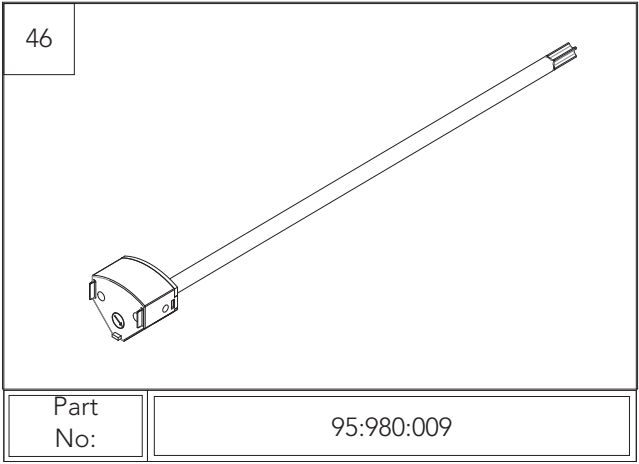
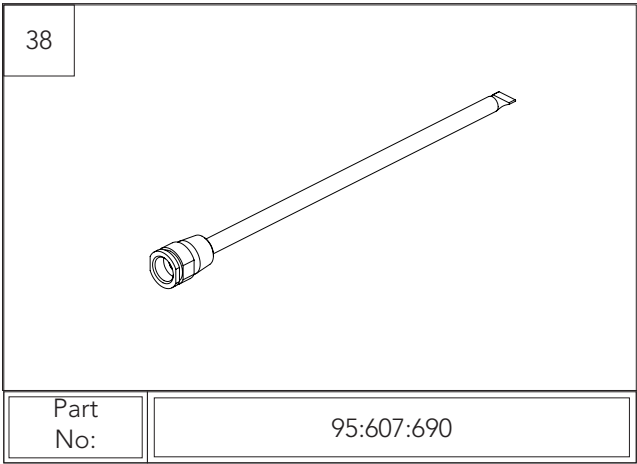


Figure 11: Exploded view - Immersion & Blanking Plate Spares

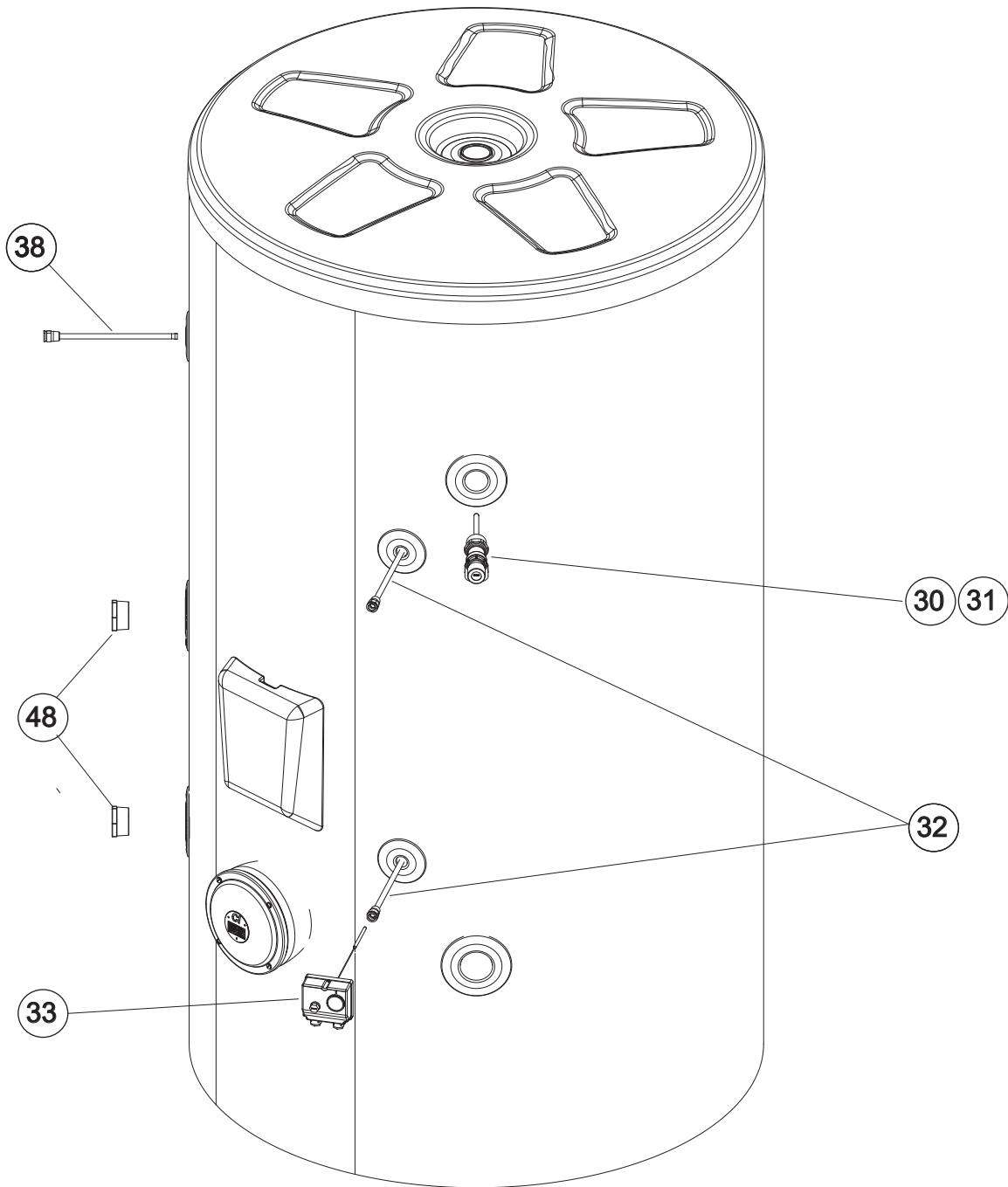


Figure 12: Exploded view - Spares

MAINS PRESSURE HOT WATER STORAGE SYSTEM COMMISSIONING CHECKLIST

This Commissioning Checklist is to be completed in full by the competent person who commissioned the storage system as a means of demonstrating compliance with the appropriate Building Regulations and then handed to the customer to keep for future reference.

Failure to install and commission this equipment to the manufacturer's instructions may invalidate the warranty but does not affect statutory rights.

Customer Name _____ Telephone Number _____
 Address _____
 Cylinder Make and Model _____
 Cylinder Serial Number _____
 Commissioned by (print name) _____ Registered Operative ID Number _____
 Company Name _____ Telephone Number _____
 Company Address _____
 _____ Commissioning Date _____

To be completed by the customer on receipt of a Building Regulations Compliance Certificate*:

Building Regulations Notification Number (if applicable) _____

ALL SYSTEMS PRIMARY SETTINGS (indirect heating only)

Is the primary circuit a sealed or open vented system? Sealed ☐ Open ☐
 What is the maximum primary flow temperature? _____ °C

ALL SYSTEMS

What is the incoming static cold water pressure at the inlet to the system? _____ bar
 Has a strainer been cleaned of installation debris (if fitted)? Yes ☐ No ☐
 Is the installation in a hard water area (above 200ppm)? Yes ☐ No ☐
 If yes, has a water scale reducer been fitted? Yes ☐ No ☐
 What type of scale reducer has been fitted? _____
 What is the hot water thermostat set temperature? _____ °C
 What is the maximum hot water flow rate at set thermostat temperature (measured at high flow outlet)? _____ l/min
 Time and temperature controls have been fitted in compliance with Part L of the Building Regulations? Yes ☐
 Type of control system (if applicable) Y Plan ☐ S Plan ☐ Other ☐
 Is the cylinder solar (or other renewable) compatible? Yes ☐ No ☐
 What is the hot water temperature at the nearest outlet? _____ °C
 All appropriate pipes have been insulated up to 1 metre or the point where they become concealed Yes ☐

UNVENTED SYSTEMS ONLY

Where is the pressure reducing valve situated (if fitted)? _____
 What is the pressure reducing valve setting? _____ bar
 Has a combined temperature and pressure relief valve and expansion valve been fitted and discharge tested? Yes ☐ No ☐
 The tundish and discharge pipework have been connected and terminated to Part G of the Building Regulations Yes ☐
 Are all energy sources fitted with a cut out device? Yes ☐ No ☐
 Has the expansion vessel or internal air space been checked? Yes ☐ No ☐

THERMAL STORES ONLY

What store temperature is achievable? _____ °C
 What is the maximum hot water temperature? _____ °C

ALL INSTALLATIONS

The hot water system complies with the appropriate Building Regulations Yes ☐
 The system has been installed and commissioned in accordance with the manufacturer's instructions Yes ☐
 The system controls have been demonstrated to and understood by the customer Yes ☐
 The manufacturer's literature, including Benchmark Checklist and Service Record, has been explained and left with the customer Yes ☐

Commissioning Engineer's Signature _____

Customer's Signature _____

(To confirm satisfactory demonstration and receipt of manufacturer's literature)

*All installations in England and Wales must be notified to Local Authority Building Control (LABC) either directly or through a Competent Persons Scheme. A Building Regulations Compliance Certificate will then be issued to the customer.

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It is recommended that your hot water system is serviced regularly and that the appropriate Service Record is completed.

Before completing the appropriate Service Record below, please ensure you have carried out the service as described in the manufacturer's instructions.

| | |
|-------------------|------|
| SERVICE 10 | Date |
| Engineer Name | |
| Company Name | |
| Telephone Number | |
| Comments | |
| | |
| | |
| | |
| Signature | |

LIFETIME WARRANTY*

The Megaflo Lifetime Warranty provides unrivalled levels of customer support and peace of mind in the unlikely event that a problem arises from a manufacturing defect. It is supported by a large nationwide team of company-employed field-based engineers and our own call centre, which is open 363 days a year.

This Lifetime Warranty applies in relation to the following Megaflo products:

- Megaflo cylinders
- Megaflo calorifiers

The Megaflo Domestic Lifetime* Warranty

The Megaflo Domestic Lifetime* Warranty covers Megaflo cylinders installed in domestic properties against corrosion for the lifetime* of the owner.

The cold water combination valve (and expansion vessel, where supplied) is covered by a five year warranty from the date of purchase of the Megaflo product that includes both parts and labour. All other components, including any other valves, fittings and controls are covered by a two year warranty from the date of purchase of the Megaflo product that includes both parts and labour. In the case of the Megaflo Systemready, Megaflo Systemfit and Megaflo SolaReady units the supplied pumps and motorized valves (where fitted) are also covered by this two year warranty. Incalloy immersion heaters (where fitted) are covered by a two year warranty. Titanium Immersion heaters (where fitted) are covered by a five year warranty.

The Megaflo Commercial Lifetime* Warranty

The Megaflo Commercial Lifetime Warranty covers Megaflo cylinders and calorifiers installed in non-domestic properties^ against corrosion for a period of 30 years from the date of purchase.

All other components, including valves, expansion vessels, immersion heaters, fittings and controls are covered by a two year warranty from the date of purchase of the Megaflo product that includes both parts and labour.

Accessories

Shower heat recovery units are covered against manufacturing defects for a period of two years. Flat plate solar collectors are covered against manufacturing defects for a period of 10 years from the date of purchase of the Megaflo product. Evacuated tube solar collectors are covered against manufacturing defects for a period of five years from the date of purchase of the Megaflo product. All other solar accessories are covered against manufacturing defects for a period of two years from the date of purchase of the Megaflo product.

Outside of the UK

These warranties are valid for installations within the United Kingdom.

For installation in the Republic of Ireland please contact Potterton Myson (Ireland) Limited on 00353 (0) 1 4590870

For installations outside of the United Kingdom and the Republic of Ireland, please telephone Megaflo Export on +44 1603 420271 for further details of the warranty terms and conditions applicable.

These warranties are valid provided that:

- The Megaflo product has been installed by a competent installer in accordance with the instructions contained in the installation instructions and in compliance with all relevant laws, guidance, codes of practice and regulations in force at the time of installation.
- The Megaflo product has not been modified or tampered with in any way, other than by a Heatrae Sadia or Baxi Customer Support approved engineer.
- The Megaflo product has not been subject to damage by scale.
- The Megaflo product and any part or parts of the Megaflo product (whether factory fitted or otherwise) have not been repaired or replaced other than by a Baxi Customer Support approved engineer and any replacement parts used on the Megaflo product are authorised Megaflo spare parts.
- The factory fitted temperature and pressure relief valve have not been tampered with or removed.
- The Megaflo product has not been subject to misuse or neglect.
- The Megaflo product has only been used for the storage of wholesome water. Should another substance be put through the product, the warranty will be invalid unless it is part of a disinfectant procedure carried out in accordance with BS EN 806.
- The Megaflo product has not been subjected to frost or freezing temperatures (except for solar collectors which are designed for external installation).
- The Benchmark™ commissioning checklist service record, included in the Megaflo installation instructions has been completed.
- Regular maintenance has been carried out by a competent person/, an approved engineer from Heatrae Sadia or any other part of the Baxi Group Baxi Customer Support approved engineer in accordance with the requirements set out in the maintenance section of the installation instructions.
- Access is available, at reasonable times and upon reasonable notice, to the Megaflo product to allow for any inspection repair or replacement.
- The product is registered within 60 days of purchase. This can be done by telephone, online or by using the registration form provided with the product.
- Evidence of purchase (for example a receipt or delivery note) and date of supply is submitted when making a claim.
- The Megaflo product has not been affected by any cause beyond our reasonable control including, without limitation: an act of God, explosion, flood, fire or accident; war or civil disturbance; strike, industrial action or stoppages of work; any form of government intervention; a third party act or omission including theft or malicious damage; failure by you to give us a correct delivery address or notify us of any change of address.

If any of the following situations occur, the Megaflo Lifetime Warranty* will not apply:

- Any wilful or accidental damage caused by your negligence
- Damage caused as a result of scale.
- Installation not in line with the installer and user manuals provided,
- Failure to comply with installation instructions (whether oral or in writing),
- Misuse of the Megaflo product or alteration of the Megaflo product not in accordance with the requirements set out above.
- Defects which are not reported to us outside of the warranty period on 0345 0701058 or customer.support@baxi.co.uk
- Any third party repair or replacement costs unless those costs have been agreed and authorised by Baxi Customer Support or Heatrae Sadia in writing prior to incurring the costs.
- In relation to the Megaflo Commercial Lifetime Warranty only, we will not be liable for any indirect and consequential losses and any loss of earnings, loss of business, or losses in relation to stress and inconvenience, howsoever caused.

Claims

Defects should be reported to us as soon as you are aware of them. Please report defect to us by contacting 0345 0701058 or customer.support@baxi.co.uk.

Notes

We are only able to carry out warranty repair/replacement to Megaflo solar collectors which have safe access and that meet current Health & Safety working at heights requirements. The customer will cover the cost of any safety equipment including but limited to scaffolding and lifting equipment that is required to meet this standard and will appoint a contractor to carry this work out.

Heatrae Sadia accepts no liability for any third party damage.

These warranties do not affect your statutory rights and remedies in relation to the Megaflo products.

Annual service

Annual services are available from Baxi Customer Support, the service division of Heatrae Sadia. Please contact Baxi Customer Support on 0345 0701058 for details.

*In domestic properties, lifetime is the period during which the first owner of the Megaflo or new build home continues to own the property. Should the property be sold, the new owner and any subsequent owners will receive a 30 year warranty from the date the original owner purchased the Megaflo or new home with a Megaflo installed. In non-domestic properties lifetime is a period of 30 years from the date of purchase by the original owner and is transferable to any new owner of the property.

†Domestic is any premises not being, or ever having been, wholly or partly utilised for business purposes.

^Non-domestic premises are any premises other than those defined as Domestic.†

All Megaflo warranties are conditional on the installation being carried out in accordance with the installation instructions supplied with the product. These warranties do not affect your statutory rights. Full terms and conditions of these warranty packages are available on request or via www.heatraesadia.com/Megaflo

Heatrae Sadia*, Hurricane Way, Norwich, Norfolk, NR6 6EA

Megaflo may introduce modifications to their products from time to time. Consequentially the details given in this brochure are subject to alteration without notice.

Contacts

Specification Advice Hotline

T: 01603 420220

F: 01603 420229

E: specifier@heatraesadia.com

www.heatraesadia.com

* Heatrae Sadia is a trading name of Baxi Heating UK Limited, Brooks House, Coventry Road, Warwick, CV34 4LL.