Unvented Hot Water Storage Cylinders

Installation and Maintenance Instruction Manual

Including User Instructions

C&M
CHAFFOTEAUX & MAURY

spares & parts online IBASIS.CO.UK

Customer Care and Guarantee

Chaffoteaux & Maury, as a leading manufacturer of domestic and commercial water heating appliances, as well as domestic unvented direct and indirect storage cylinders, is committed to providing high quality products and a first class after sales service. If it is necessary to contact an engineer, then telephone your local Chaffoteaux Service Centre.

LOCAL CHAFFOTEAUX SERVICE CENTRE
Tel: 0801 243 0224

Advice on installation or servicing can also be obtained by contacting the Chaffoteaux Customer Services Department.

CUSTOMER SERVICES DEPARTMENT
Tel : 01952 222288 Fax. 01952 22402

The manufacturer's guarantee against faulty construction or materials for the cylinder is 5 years and for the electrical components, thermal controls and safety valves is for 12 months, from the date of purchase.

The guarantee will be invalidated if the factory fitted temperature and pressure relief valve is tampered with or removed. The Manufacturer or Distributors cannot be held responsible for any damage howsoever caused and which is a consequence of the removal or tampering.

The guarantee may also be invalidated if the appliance is not installed by a competent person in accordance with the recommendations made herein, current standards, regulations or in a manner not approved by the manufacturer, modified in any way, subjected to frost, misuse or neglect and that factory fitted parts have had unauthorised repairs or replacements carried out. Evidence of purchase and the date of supply must be made available at the time of any claim.

To assist us in providing you with an efficient after sales service, please return the guarantee registration card enclosed with the cylinder without delay.

Safety Notice

- Installation must be carried out by a suitably qualified installer and in accordance with current regulations and codes of practice.
- Only the safety valves supplied with the cylinder should be used.
- The cylinder must not be used without the safety valves and expansion vessels.
- The cylinder must not be used with a boiler without thermostatic control.
- The cylinder and ancillary controls must be adequately maintained
- The installation must have a sufficient and constant supply of mains fed cold water.
- No valve should be fitted between the expansion relief valve and the storage cylinder.
- Only Chaffoteaux & Maury approved replacement parts should be used.
- The discharge pipe must be terminated where it is visible and will not cause danger to people in the vicinity of the discharge.

Note: The discharge could consist of scalding water and steam.

Contents

General Information 4
Delivery 4
Installation 5
Water regulations 5
Building regulations 5
How the appliance works 5
Overall dimensions 6
Cold water supply 6
Siting and fixing 6
Connection of mains water supply 7
Cold water combination valve 8
Connection to service 9
Secondary return. 9
Discharge pipework 9
Electrical connection 11
Indirect systems 12
Commissioning 15
Maintenance 16
Magnesium anti-corrosion anodes 16
Thermal cut-out(s) 16
Immersion heater(s) 16
Unvented controls 16
Thermostats 16
Fault finding 17
Technical information. 18

Table of figures

Fig. 1 Overall dimensions. 6
Fig. 2 HYDRAFLO STD 125-150-210-300 Direct . 7
Fig. 3 HYDRAFLO STI 125-150-210-300 Indirect 7
Fig. 4 Combination valve. 8
Fig. 5 Disharge pipework. 10
Fig. 6 Direct systems 11
Fig. 7 Electrical diagram - single element 12
Fig. 8 Electrical element. 12
Fig. 9 Wiring scheme for Britony System 2 X 2 Port Motorised Valves 13
Fig. 10 Wiring scheme for Britony System Plus Option 1 14
Fig. 11 Wiring scheme for Britony System Plus Option 2 14

This manual is an integral and essential part of the product. It should be kept with the appliance so that it can be consulted by the user and our authorised personnel. Please read carefully the instructions and notices about the appliance contained in this manual, as they provide important information regarding the safe installation, use and maintenance of the cylinder. Failure to do so may invalidate the guarantee.

Delivery

The **HYDRAFLO** range is supplied as following;

One large box containing;
1) The cylinder with factory fitted temperature & pressure relief valve.
2) Immersion heater(s) and thermostat(s) with thermal cut-out(s) (not fitted).
3) Cylinder thermostat with thermal cut-out (indirect only).
4) Feet x 3.

One small box containing;
1) Unvented control pack (expansion vessel, 2 piece cold water combination valve, tundish) and separate motorised valve (indirect only).

Water regulations

These regulations (byelaws in Scotland) ensure a good supply of wholesome water, and that only approved materials, pipes and fittings are used to convey water.

Building regulations

These are a statutory document and take priority over all other regulations and recommendations. The installation of an unvented hot water storage cylinder is classified as a "Controlled Service" and Regulation G3 applies. To meet the requirements of the Regulation, installation of an unvented system should be undertaken by a "competent installer".

All installations of unvented hot water storage systems having a capacity of more than 15 litres should be notified to the relevant Local Authority by means of building notice or by the submission of full plans. It is important to note that it is a criminal offense to install an unvented hot water storage system without notifying the Local Authority.

How the appliance works

The immersion heater(s) are controlled through a thermostat which senses the water temperature. The operating temperature can be pre-set by adjusting the spindle in the head of the thermostat. In addition to the thermostat there is a thermal cut-out incorporated if the thermostat fails and the water temperature rises too high. Once the cut-out operates it can only be re-set manually after the fault has been rectified.

Indirect models have dual thermal controls. In addition to the above there is a separate cylinder thermostat and thermal cut-out for controlling the indirect circuit. Again the thermal cut-out operates if the cylinder thermostat fails, by disconnecting the live feed (call for hot water) from the programmer.

All models have magnesium anodes provided to prevent corrosion of the water cylinder tank.

The factory fitted temperature & pressure relief valve at the top of the cylinder is a safety device to back-up the thermostat(s) and thermal cut-out(s). It works by sensing an excess in water temperature or pressure and releasing the hot water into a discharge tundish and drain.

The cylinder will only work in the vertical position. The inlet pipe needs to deliver cold water to the bottom of the tank. When water is heated it expands. To accommodate this increase in volume an expansion vessel is provided. A cold water combination valve is also provided in two pieces, loose jointed for ease of installation. These comprise a combined line strainer/pressure reducing valve and core non-return valve/expansion relief valve.

The strainer prevents any debris entering the other controls. The pressure reducer ensures the correct operation of the expansion vessel, and prevents any damage to the control valves through too great a pressure.

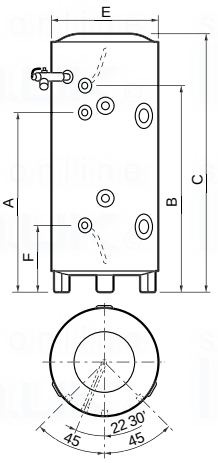
The non-return valve ensures the water expansion is forced into the expansion vessel and prevents contamination of the mains cold water supply. The expansion relief valve will discharge expanded water to the discharge tundish if the expansion vessel fails.

Overall dimensions

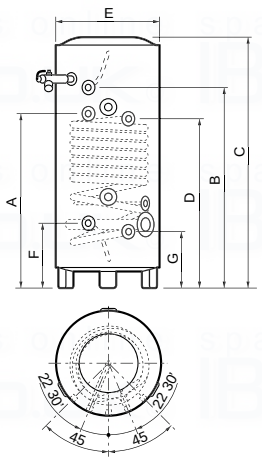
Fig. 1

MODEL	STORAGE CAPACITY	UNITS PIPES SIZE		COIL SURFACE m²	DIMENSIONS IN MM							WEIGHT WHEN FULL KG
		INLET	OUTLET		A	B	C	D	E	F	G	
DIRECT RANGE												
HYDRAFLO STD 125	125 L	3/4"		-	650	755	995	-	505	265	225	158
HYDRAFLO STD 150	150 L	3/4"		-	790	915	1155	-	505	265	225	190
HYDRAFLO STD 210	200 L	3/4"		-	940	1230	1475	-	505	265	225	245
HYDRAFLO STD 300	300 L	3/4"		-	1215	1555	1790	-	560	275	255	385
INDIRECT RANGE												
HYDRAFLO STI 125	125 L	3/4"		0.75	650	755	995	625	505	265	225	166
HYDRAFLO STI 150	150 L	3/4"		0.9	790	915	1155	765	505	265	225	201
HYDRAFLO STI 210	200 L	3/4"		0.9	940	1230	1475	765	505	265	225	256
HYDRAFLO STI 300	300 L	3/4"		0.9	1215	1555	1790	815	560	275	255	395

HYDRAFLO
STD 125-150-210-300



HYDRAFLO
STI 125-150-210-300



Cold water supply

It is important to ensure that the cold water main is capable of supplying the increased demand which will be imposed on it. Hot and cold water are both drawn off the same source of supply. Remember, there will not be a storage tank to help compensate for variations in the demand on the system.

A minimum pressure of approximately 1.5 bar and 20 litres per minute is required for satisfactory operation. 85% of UK dwellings have a mains pressure above 2.0 bar.

Note: THE MAINS WATER SUPPLY MUST NOT EXCEED 16 BAR.

Siting & Fixing

The cylinder should be left packed until it is time to install. When unpacking the appliance follow the guidelines within the packaging and take care not to damage the temperature and pressure relief valve.

The cylinder may be installed at any convenient position, as it is connected to the mains cold water supply, it is equally effective on any floor.

However, do not install the unit in premises which may be subject to freezing. Ensure that the floor load bearing strength is adequate to take the weight of the cylinder when full of water (see **Fig. 1**).

All models are free standing. These are supplied with feet which are attached to the heater via self-tapping screws which are also supplied. All units must be installed in the VERTICAL POSITION.

For maintenance purposes leave at least 500 mm free space in front of the unit, for access to electrical components, immersion heater(s) and magnesium anodes.

Connection of mains water supply

On the front of the unit there is a label to identify the connection ports. Please check this before making any connection to the unit.

For all units it is recommended that all mains cold water supply pipe work is a minimum of 22mm. An isolating valve should be installed between the cold water supply and the cylinder for servicing. ALL PIPEWORK MUST BE FLUSHED TO AVOID DAMAGE TO THE CONTROL VALVES.

Please refer to **Fig. 2** and **Fig. 3** for suggested installation layouts.

HYDRAFLO STD 125-150-210-300 Direct

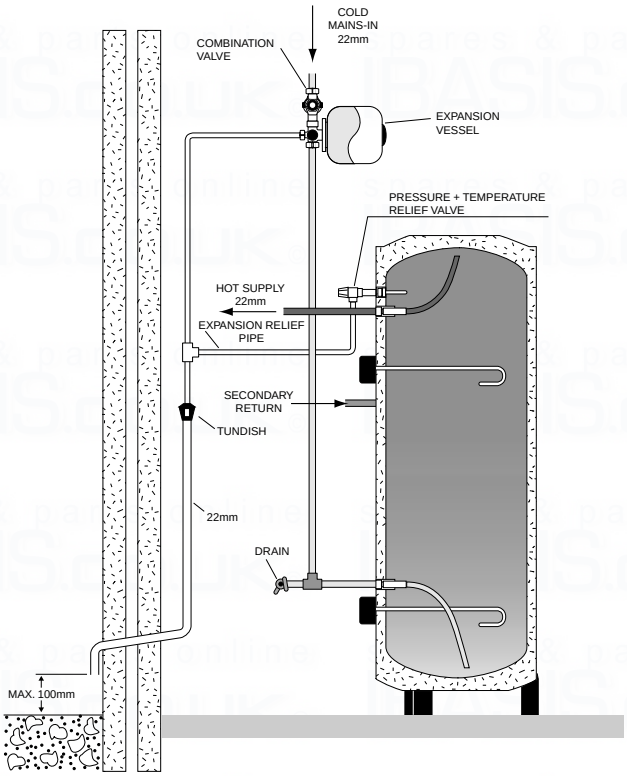


Fig. 2

HYDRAFLO STI 125-150-210-300 Indirect

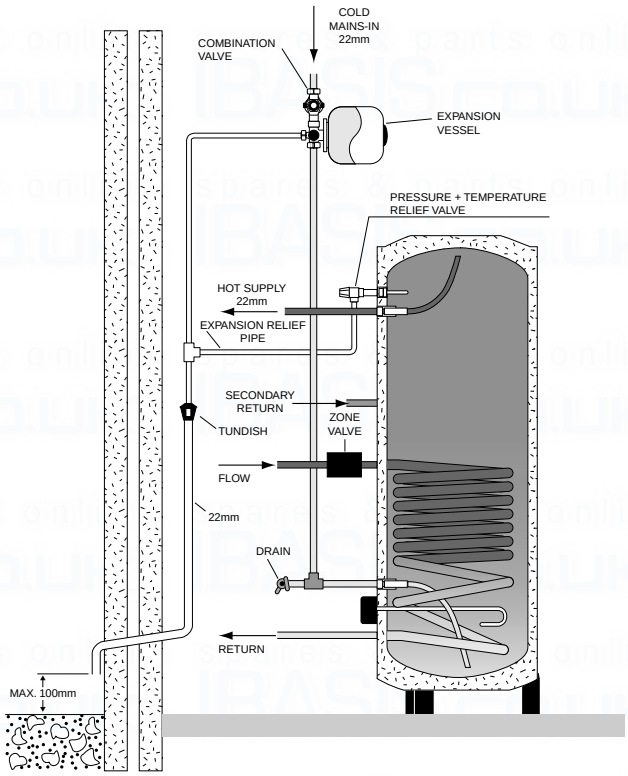


Fig. 3

Cold water combination valve

The cold water combination valve can be connected either close by the unit or alternatively it may be installed in a remote position from the unit as there is no requirement to site it in close proximity to the cylinder. This allows a flexible and convenient installation. However, it is important to note allowances for the discharge pipe work from the expansion relief valve must be accounted for.

A balancing port is supplied on the pressure reducing valve, allowing a balanced cold water supply to the rest of the building giving constant results for mixer and shower valves. If the facility is not needed a plug is supplied. Refer to **Fig. 4**.

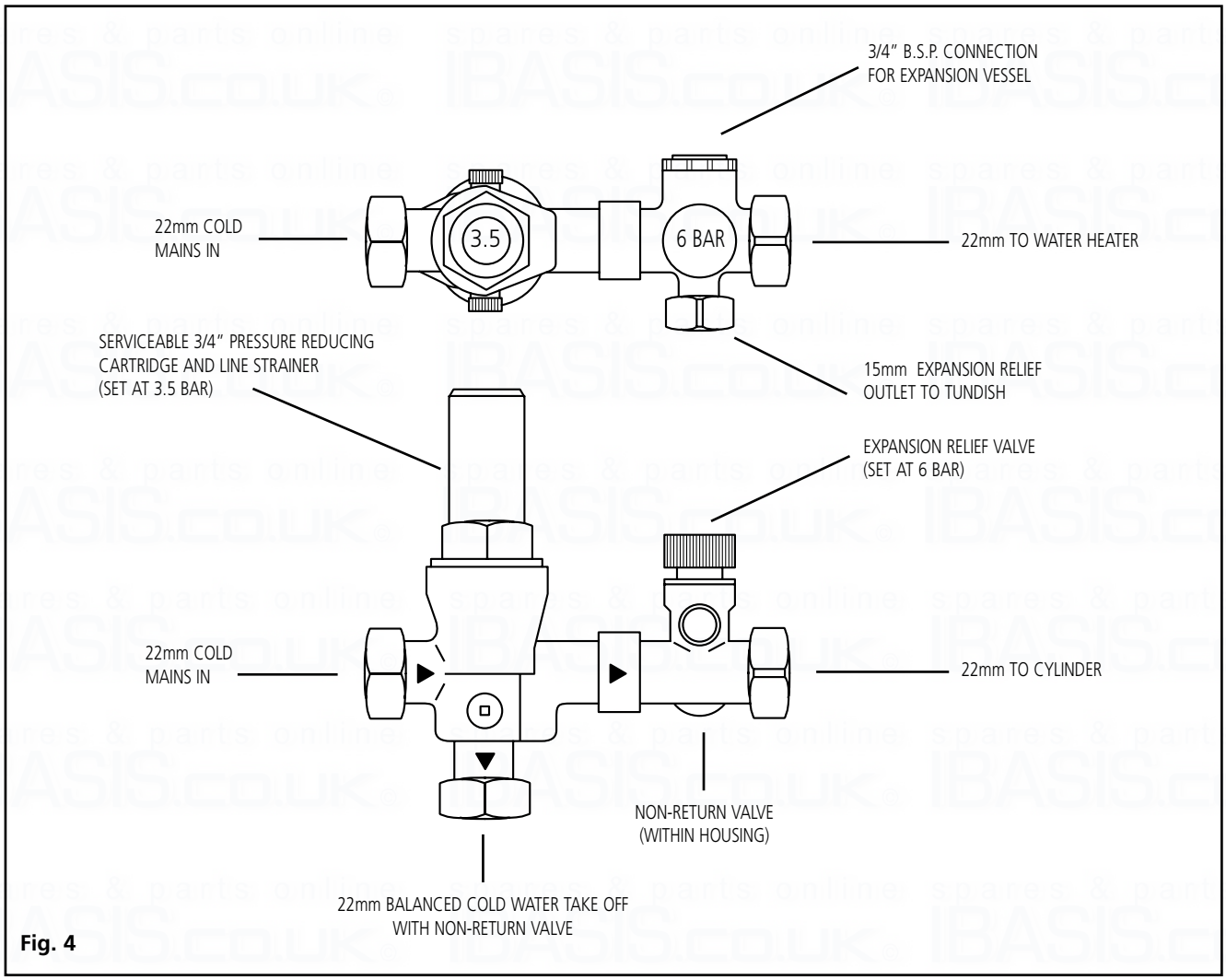


Fig. 4

Connection to services

It is recommended that a 22mm pipe run should supply the outlets throughout the building, especially to baths and showers. Short runs of 15mm pipe may be used to connect basins and sinks.

Secondary return

A secondary return may be fitted (consult the label on the face of the unit for the correct location). A non-return valve (not supplied) must be fitted to prevent back-flow and a bronze pump will be needed in conjunction with a pipe thermostat to circulate the hot water (both not supplied).

Note: an extra expansion vessel may be required where the additional volume of the secondary return exceeds the capacity of the expansion vessel supplied.

Discharge pipework

1) The tundish must be vertical and fitted within 500mm of the temperature & pressure relief valve and must be located with the cylinder. The tundish must also be in a position visible to the occupants, and positioned away from any electrical devices. The discharge pipe from the tundish should terminate in a safe place where there is no risk to persons in the vicinity of the discharge and to be of metal.

2) Discharge pipes from the temperature & pressure relief and expansion relief valve may be joined together.

3) The pipe diameter must be at least one pipe size larger than the nominal outlet size of the safety device unless it's total equivalent hydraulic resistance exceeds that of a straight pipe 9m long.
   i.e. Discharge pipes between 9m and 18m equivalent resistance length should be at least 2 sizes larger than the nominal outlet size of the safety device. Between 18m and 27m at least 3 larger, and so on.

   Bends must be taken into account in calculating the flow resistance. See **Fig. 5** and **Table 1**.

4) The discharge pipe must have a vertical section of pipe at least 300mm in length, below the tundish before any elbows or bends in the pipework.

5) The discharge pipe must be installed with a continuous fall.
6) The discharge must be visible at both the tundish and the final point of discharge, but where this is not possible or practically difficult; there should be clear visibility at one or other of these locations. Examples of acceptance are:
   i) Ideally below a fixed grating and above the water seal in a trapped gully.
   ii) Downward discharges at a low level; i.e. up to 100mm above external surfaces such as car parks, hard standings, grassed areas etc. These are acceptable providing that where children may play or otherwise come into contact with discharges, a wire cage or similar guard is positioned to prevent contact, whilst maintaining visibility.
   iii) Discharges at high level; I.e. into a metal hopper and metal down pipe with the end of the discharge pipe clearly visible (tundish visible or not). Or onto a roof capable of withstanding high temperature discharges of water 3m from any plastic guttering systems that collect would such a discharge (tundish visible).
   iv) Where a single pipe serves a number of discharges, such as in blocks of flats, the number served should be limited to not more than 6 systems so that any installation can be traced reasonably easily. The single common discharge pipe should be at least one pipe size large than the largest individual discharge pipe to be connected. If unvented hot water storage systems re-installed where discharges from safety devices may not be apparent I.e. in dwellings occupied by the blind, infirm or disabled people, consideration should be given to the installation of an electronically operated device to warn when discharge takes place.

   Note: The discharge will consist of scalding water and steam. Asphalt, roofing felt and non-metallic rainwater goods may be damaged by such discharges.

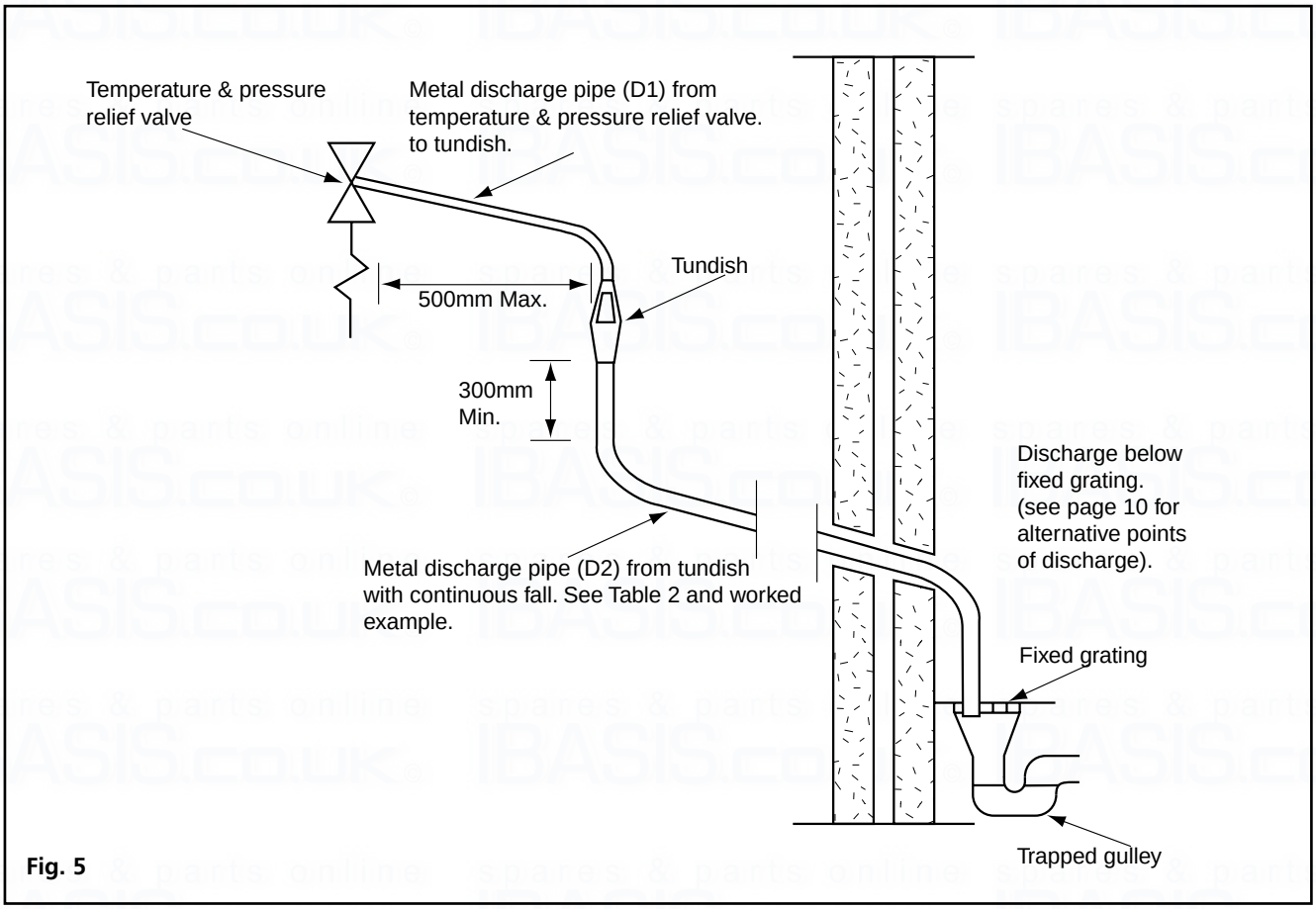


Fig. 5

Table 1. Sizing of copper discharge pipe "D2" for common temperature valve outlet sizes.

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 pipe (i.e. no elbow or bends)	Resistance created by each elbow or bend
G 1/2	15mm	22mm	Up to 9m	0.8m
		28mm	Up to 18m	1.0m
		35mm	Up to 27m	1.4m
G 3/4	22mm	28mm	Up to 9m	1.0m
		35mm	Up to 18m	1.4m
		42mm	Up to 27m	1.7m
G 1	28mm	35mm	Up to 9m	1.4m
		42mm	Up to 18m	1.7m
		54mm	Up to 27m	2.3m

WORKED EXAMPLE

The example below is for a G ½" temperature & pressure 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 1;**

Maximum resistance allowed for a straight length of 22mm copper discharge pipe (D2) from G ½" temperature & pressure valve is 9m. Subtract the resistance for 4 no. 22mm elbows at 0.8m each = 3.2m. Therefore the maximum permitted length equates to: 5.8m. As 5.8m is less than the actual length of 7m therefore calculate the next largest size.

Maximum resistance allowed for a straight length of 28mm pipe (D2) from G ½" temperature & pressure valve equates to: 18m. Subtract the resistance for 4 no. 28mm elbow at 1.0m each = 4m. Therefore the maximum permitted length equates to: 14m As the actual length is 7m, a 28mm (D2) copper pipe will be satisfactory.

WARNINGS

The outlet from the temperature & pressure relief valve must not be used for any other purpose. This also applies to the expansion relief valve. No other valve is to be fitted between the cold water combination valve and the cylinder.

The temperature & pressure relief valve must not be removed in any circumstances. Any of the above will totally invalidate the guarantee.

Electrical Connection

The electrical installation must be in accordance with the current I.E.E. wiring regulations.

FITTING IMMERSION HEATER(S)
These are supplied but not fitted with the Chaffoteaux & Maury HYDRAFLO range. A sealing gasket is supplied with each element, however the use of a suitable sealing compound may be used to ensure a correct seal. Care must be taken not to cross thread the immersion heater(s) when fitting. Each immersion heater is supplied with a regulation thermostat and manual reset thermal cut-out. This will activate if the regulation thermostat fails. Under no circumstances should this be by-passed.

Although the immersion heaters are a standard 2¼" thread, they must not be substituted with anything but an original Chaffoteaux & Maury spare part.

DIRECT SYSTEMS
A mains supply of 240V, 3kW (13 amps) is required. Heat resistant cable, round 3 or 4 core 2.5mm2 (to BS6141 table 8) must be used to connect the electrical supply through the Economy 7 time control switch using either system 'A' or 'B' as illustrated in **Fig. 6**.

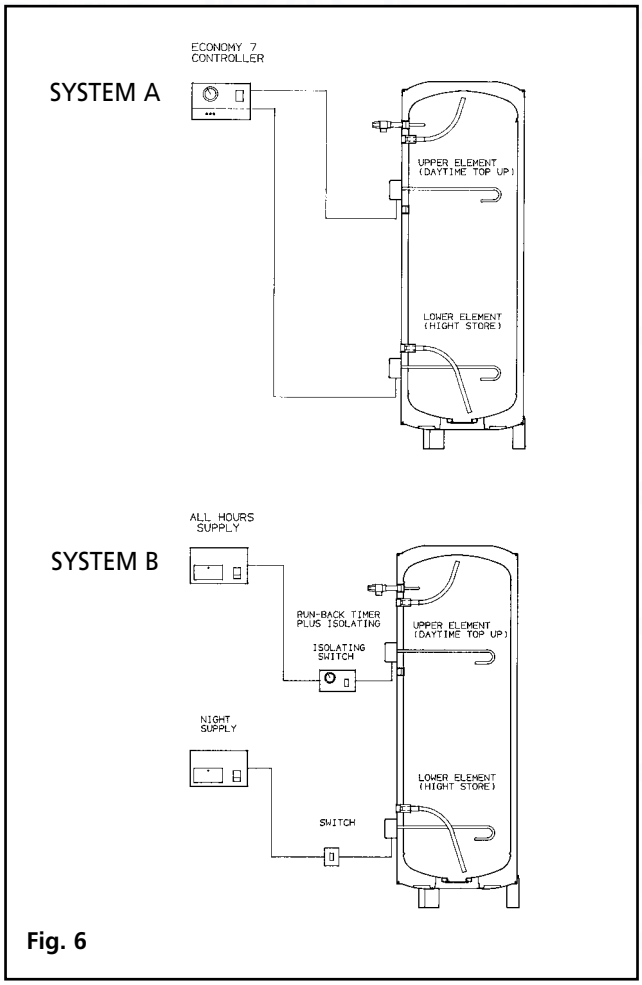


Fig. 6

Electrical Diagram

Should the Economy 7 system not to be used, a separate 13 amp supply to each element will be required. Through a double pole fused isolating switch having a contact gap of at least 3mm on each pole.The immersion heater shall be installed with 85°C rubber insulated hofr-sheathed flexible cords complying with Table 8 of BS 6141: 1991. Make the connection(s) to the immersion heater(s) as per **Fig. 7** and **Fig. 8**.

The thermostat(s) on the immersion heater(s) should be adjusted to trip at 60°C. This is the ideal temperature to prolong element life in hard water areas. Scale on the sheath builds up more rapidly at temperatures above this causing the element to overheat and premature failure can occur. Higher temperatures without additional controls would result in scalding.

In addition to the thermostat the thermal cut-out will switch power off to the element should the thermostat malfunction, causing an excessive rise in water temperature. The thermal cut-out can be reset manually after the fault has been corrected.

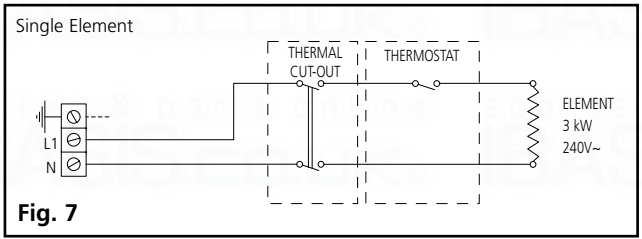


Fig. 7

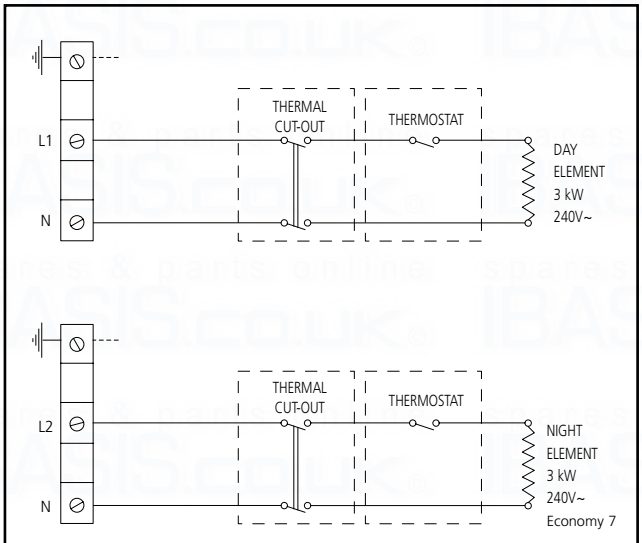


Fig. 8

Indirect Systems

For all models a mains supply of 240V, 3kW (13 amps) will be required for the direct immersion heater. heat resistant cable, round 3 core 2.5mm^2 (to BS 6141) must be used.

For indirect controls a 240V, 3 amp supply is required.

The indirect thermostat must be installed on the unit using an approved P.T.F.E tape (Please consult the label on the face of the unit for the correct location in both cases).

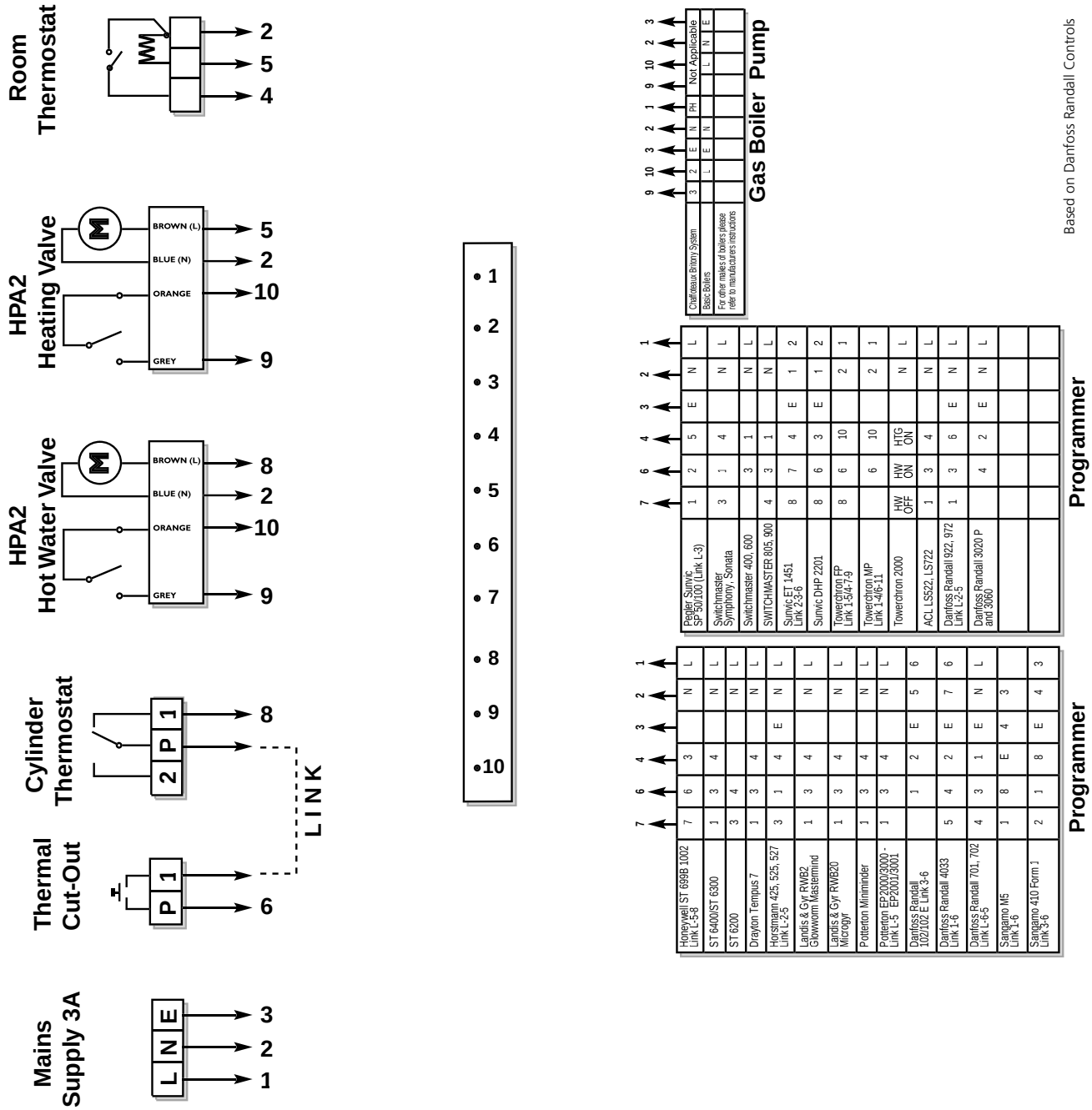
The cables must be clamped in position (as previously stated) and the control thermostat should be set at 60°C for the reasons above. In addition to the thermostat there is a thermal cut-out should the thermostat fail. Refer to **Fig. 9**, **Fig. 10** & **Fig. 11** for full wiring instructions.

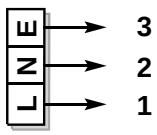
WARNING - THE APPLIANCE MUST BE EARTHED

The earth continuity conductor of the electrical installation must be effectively connected to all exposed parts of other appliances and services in the room in which the water heater is to be installed, conformity with the I.E.E. wiring regulations.

Note: Do not switch on the immersion heater or fire the boiler until the cylinder is full of water

Wiring Scheme for Britony System/Basic Boiler - 2 x 2 Port Motorised Valves





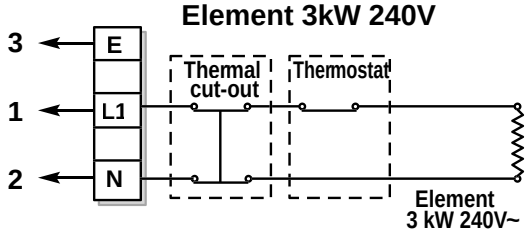


Fig. 9

Wiring Scheme for Britony System Plus Boilers

OPTION 1

Using a hot water priority system with the hot water on constantly and the heating timed. A simple time clock can be used such as the Danfoss Randall 103.

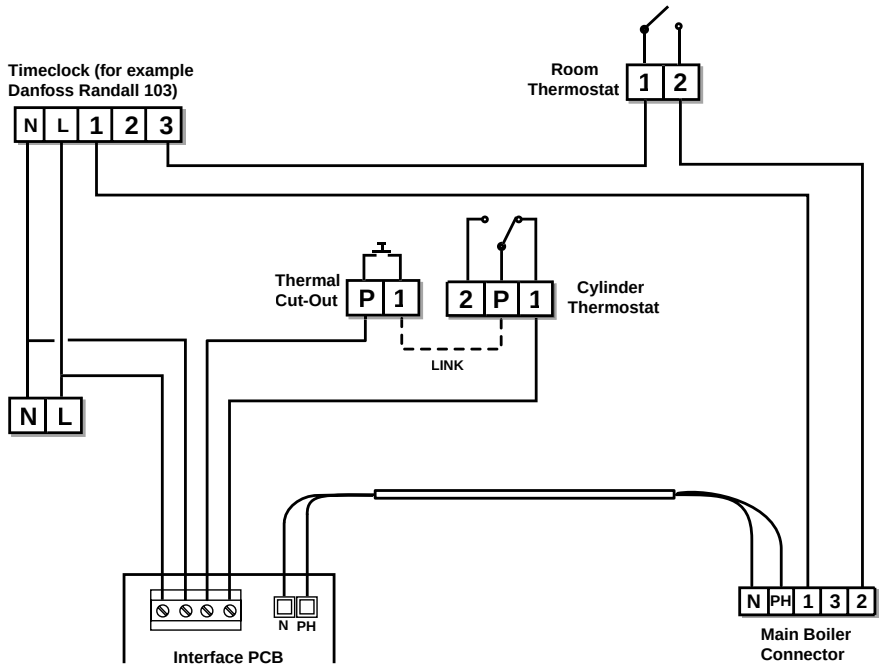


Fig. 10

OPTION 2

Using hot water priority with a timed facility for both hot water and central heating. A twin channel clock such as the Horstman Channelplus Model H27 must be used.

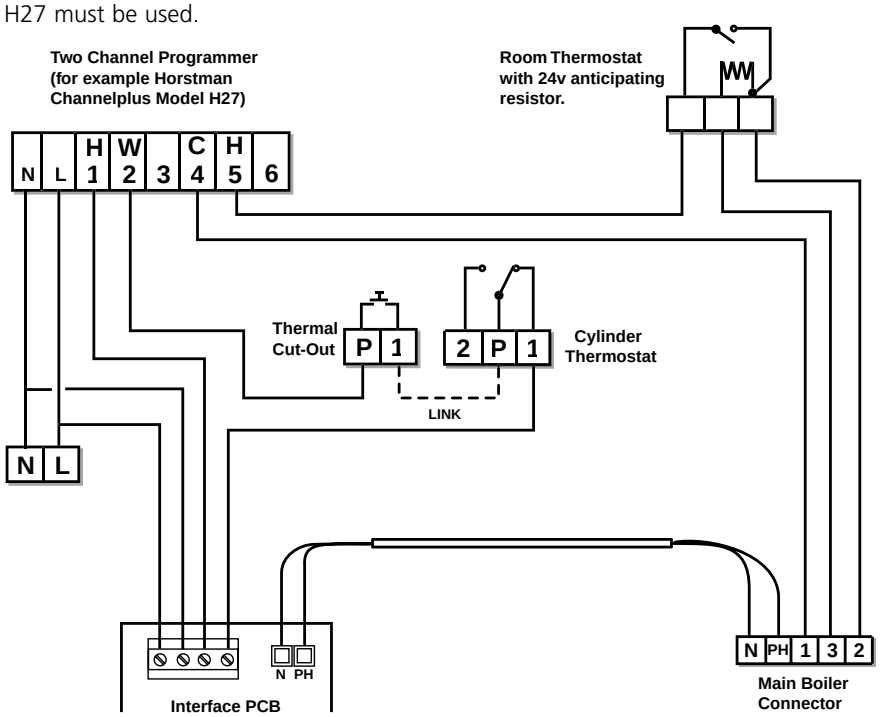


Fig. 11

Commissioning

Check for obvious signs of damage to the cylinder and controls and also that the controls fitted correspond with the references quoted in these instructions.

Ensure that the Drain Cock at the base of the appliance is closed before commencing.

1) Open all outlet taps;

2) Turn on mains water supply and allow the water heater to fill;

3) Close taps in turn after having purged the system of air;

4) Check for leaks around the controls and immersion heaters and again after the unit has heated up;

5) Check that no water is passing to waste through the relief valves;

6) Test the operation of the temperature & pressure relief and expansion valves by lifting/turning the manually operated test lever/cap and observing that water flows through freely and safely to waste;

7) Check that the discharge pipe is plumbed so that it falls continuously and that no taps, valves or other shut off devices are installed in the pipe;

8) Check that all thermostats are set at 60°C;

9) DIRECT UNITS. Switch on immersion heater(s) and allow unit to heat up. Check operation of Thermostat(s);

10) INDIRECT UNITS. Fill the indirect (primary) circuit following the boiler instructions. Switch on the boiler, ensure that the programmer is in the domestic hot water position. Allow unit to heat up and check operation of indirect thermostat on motorised valve(s);

11) Demonstrate operation to user, including operation of temperature & pressure relief valve and what to do if it operates;

12) Give this manual to the user to retain for future reference and make the customer aware that periodic checks of the equipment are essential for safety.

To ensure efficient safe operation, it is recommended that the appliance is serviced annually by a competent person.

After servicing, preliminary electrical system checks must be carried out to ensure electrical safety (i.e. polarity, earth continuity, resistance to earth and short circuit).

Magnesium Anti-Corrosion Anodes

No longer than every 12 months, the installer should check the magnesium anti-corrosion anodes (consult the label on the face of the unit for the correct location). Assessment of the condition of the bottom anode (where fitted) can be made by judging the condition of the top anode.

Removal of anodes;

1) Close the mains supply service valve;
2) Open hot water taps;
3) Attach a hose and open the drain cock and allow the cylinder to empty;
4) The anodes are removed by unscrewing (for Wall-hung models the anodes are mounted on the immersion heater plate);

EXAMINE THE ANODES AND REPLACE IF THE DIAMETER IS LESS THAN 10mm.

The use of an approved P.T.F.E. sealing tape is recommended to ensure watertight connection for anodes.

Thermal Cut-out(s)

If the thermal cut-out has operated the cause must be found before resetting.

Immersion Heater(s)

Descale the immersion heater(s) and remove any lime deposit from the cylinder. Replace in reverse order.

Unvented Controls(s)

Check controls as per the following:

1) Line strainer - with the water supply turned off remove screen from strainer and clean of any detritus;

2) Expansion vessel - with the water supply turned off and taps open, check expansion vessel pressure and top up as necessary;

3) Temperature & pressure relief valve - with the water supply turned on, check manually by lifting the test lever/turning the test knob (ensure valve closes after testing);

4) Expansion relief valve - check manually by turning the test knob (ensure valve closes after testing);

5) Discharge pipes (D1) - from both temperature & pressure relief and expansion relief valve for obstructions;

6) Tundish & discharge pipe (D2)- open either valve gradually to produce a full bore discharge into tundish and D2 without any back pressure;

7) Pressure reducing valve - check that the correct outlet pressure is being maintained by recording the pressure at an in-line terminal fitting i.e. tap.

Thermostats

Ensure that all thermostats adjusted for the correct temperature setting, this should be between 60 and 65°C.

Fault Finding

FAULT	POSSIBLE CAUSES	REMEDY
NO HOT WATER FLOW	1) Mains cold water supply shut off Check water, Local Water Authority	Check and open Isolating and/or stop valve.
	2) Line strainer blocked strainer and clean	Turn off mains water supply, remove line
	3) Cold water combination valve fitted incorrectly	Check direction of flow arrows on valve, refit in correct position if necessary
REDUCED FLOW RATE	1) Low mains water pressure	Check pressure, consult Local Water Authority if necessary
	2) Line strainer partially blocked	Turn off mains water supply, remove line strainer and clean
	3) Size of service pipe too small	Increase to size stated on page 8
WATER FROM HOT TAPS IS COLD	1) Direct immersion heater is not switched on	Check immersion heater, switch on if necessary
	2) Direct thermal cut-out has operated	Test thermostat operation and wiring, if faulty, correct/replace. Reset cut-out
	3) Boiler programmer set to central heating only (Indirect models)	Check switch on domestic hot water if necessary
	4) Boiler is not functioning (Indirect models)	Check boiler operation, if fault suspected consult manufacturer's instructions
	5) Indirect thermal cut-out has operated	Test thermostat operation and wiring, if faulty, correct/replace. Reset cut-out
	6) Motorised valve jammed or not wired correctly (Indirect models)	Check wiring and operation of motorised valve correct/replace as necessary
DISCHARGE FROM PRESSURE/ TEMPERATURE RELIEF VALVE	1) Pressure above 7 bar, failure of pressure reducing valve. Temperature above 90°C failure of thermal control	Shut down boiler or immersion heater. Check pressure reducing valve and thermal controls. Replace if necessary
DISCHARGE FROM EXPANSION VALVE	1) Continually. Pressure reducing valve faulty	Check pressure from valve. Replace if over 3.5 bar
	2) When heater is heating. Faulty expansion vessel or lost charge	Check charge of vessel. Re-charge vessel to 3.5 bar or replace if necessary.

		HYDRAFLO STD 125	HYDRAFLO STD 150	HYDRAFLO STD 210	HYDRAFLO STD 300	HYDRAFLO STI 125	HYDRAFLO STI 150	HYDRAFLO STI 210	HYDRAFLO STI 300
Maximum Water Supply Pressure*	bar	12	12	12	12	12	12	12	12
Operating Pressure	bar	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Expansion Vessel Charge Pressure	bar	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Expansion Relief Valve Setting	bar	6	6	6	6	6	6	6	6
Pressure & Temperature Relief Valve Setting	bar/°C	7/90	7/90	7/90	7/90	7/90	7/90	7/90	7/90
Pressure Reducing Valve Set Pressure	bar	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Electrical Supply	V	240	240	240	240	240	240	240	240
Immersion Heater Rating	kW	3+3	3+3	3+3	3+3	3	3	3	3
Immersion Heater Length	mm	350	350	350	350	350	350	350	350
Immersion Heater Type		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Immersion Heater Reference Number		(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Direct Reheat Time (Single Immersion Heater) (ΔT 50°C)	mins	150	175	240	350	150	175	240	350
Maximum Primary Pressure	bar	-	-	-	-	3.5	3.5	3.5	3.5
Indirect Coil Rating	kW	-	-	-	-	20.5	26.7	26.7	26.7
Coil Surface Area	m^2	-	-	-	-	0.75	0.90	0.90	0.90
Indirect Reheat Time (ΔT 50°C)**	mins	-	-	-	-	18	22	26	40
Heat Loss (kWh in 24h) @ 60°C		1.70	1.90	2.10	2.85	2.00	2.20	2.40	2.85
Nett Weight	Kg	33	40	45	85	41	51	56	95

* To pressure reducing valve **Primary circuit 80°C, 1m³/h circulation. (1) Single Phase (2) BS 3456 Section 2.21

Model	Time taken to raise temperature from 15°C to 65°C	Time taken to raise 70% of the stored volume to 65°C
HYDRAFLO STI 125***	15 mins	13 mins
HYDRAFLO STI 210***	24 mins	21 mins
HYDRAFLO STD 210	1 hr 58 mins	1 hr 39 mins

*** Indirectly heated. Figures obtained by WRc in accordance with Test Criteria 1-50-220 & 1-50-222.

NOTES

spares & parts online IBASIS.CO.UK

Chaffoteaux & Maury are continuously improving their products and therefore reserve the right to change specifications without prior notice and accepts no liability for any errors or omission in the information contained in this document.

Manufacturer: **MTS Benelux sa/nv - Belgium**

Commercial subsidiary: **MTS (GB) Limited**
MTS Building
Hughenden Avenue
High Wycombe
Bucks HP13 5FT
Telephone: (01494) 755600
Fax: (01494) 459775
internet: www.chaffoteaux.co.uk
E-mail: info@mtsgb.ltd.uk
Technical Support Help Line: (01952) 222288

1309033a - 02/2002