

# **Indirect - SWC**

## INDIRECT UNVENTED STORAGE CYLINDER WITH *EXTERNAL* EXPANSION VESSEL

Indirect Single Coil

**INSTALLATION MANUAL ISSUE 1-2020** 

FOR MORE INFORMATION GO TO: **WWW.JOULEUK.CO.UK** 





#### **IMPORTANT**

By installing this product you agree to be bound by the terms and conditions supplied within this manual, or available for download via our website.

#### INTRODUCTION

This corrosion resistant Unvented cylinder is made from Duplex Stainless Steel. It is highly insulated with environmentally friendly foam enclosed in a rust resistant white steel case.

It is available in Direct, and Indirect versions in a family of 7 sizes from 90 - 300 litres in Solar Twin Coil and Solar Direct. There is also a range of slimsline units from 60 - 210 litres again in Direct and Indirect versions. To help ensure compliance with the relevant Water and Building Regulations all cylinder units are supplied complete with the necessary safety and control devices needed to connect to the cold water mains. In order to ensure high flowrate performance with minimum pressure drop even in lower pressure areas, pre-set high quality controls have been selected. This cylinder is approved to demonstrate compliance with Water Regulations and Building Regulations G3 & Part L.

#### STORAGE PRIOR TO INSTALLATION

This cylinder should be stored upright in a dry area and kept in its original packaging until immediately prior to installation.

#### INSTALLATION PREREQUISITES

This cylinder should only be installed by a competent installer holding their G3 unvented qualification, or be a member of a competent persons scheme. The installation of this product is also notifiable to Building Control under the Building Regulations.

#### ONCE COMPLETED THIS INSTRUCTION MANUAL IN ITS ENTIRETY SHOULD BE LEFT WITH THE HOME OWNER.

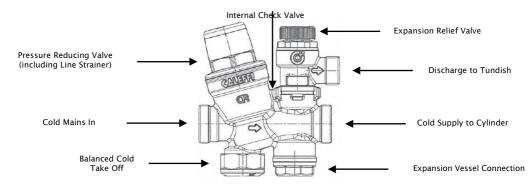
#### WHAT IS BENCHMARK

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

#### **COLD INLET SET - THE CONNECTIONS**



#### WHAT'S INCLUDED

Cold Water Inlet Set	LOOSE
15 x 22mm Tundish	LOOSE
Temperature & Pressure Relief Valve	FITTED
Expansion Vessel	LOOSE
Expansion Vessel Bracket	LOOSE
Compression Nut Connection For Expansion Vessel	LOOSE
Immersion Heater(s) - Dependant on size & configuration	FITTED
Installation Manual	LOOSE
Benchmark Log Book - Found at the rear of this manual	LOOSE

#### WATER SUPPLY

This cylinder is capable of delivering over 50 litres per minute when connected to a suitable mains supply. The high quality inlet control set with its 3 bar operating pressure has been designed to make the most of the pressure and flow available however the performance of any unvented system is only as good as the water supply.

In unvented systems both hot and cold services are supplied simultaneously from the mains so the maximum possible on-site water demand must be assessed and the water supply should be tested to ensure it can meet these requirements.

If necessary consult the local water supplier regarding the likely pressure and flow rate availability. It is important that site pressure readings are taken under dynamic flow conditions, high pressures under zero flow conditions are not necessarily indicative of satisfactory performance. A minimum of 1.5 bar at 20 l/m flow should be available. Where mains inlet pressures are likely to exceed 10 bar then an additional upstream pressure reducing device should be fitted.

A minimum of 22mm supply pipe-work should ideally be provided and existing 1/2" (15mm) cold mains pipe-work may need to be upgraded. Hard water treatment should be considered in areas where the CaCo<sub>3</sub> content is greater than 200ppm.

#### CHANGE OF WATER SUPPLY

The changing or alternating from one water supply to another can have a detrimental effect on the operation and/or life expectation of the water heater storage cylinder, pressure temperature relief valve and heating unit. Where there is a changeover from one water supply to another, e.g.. a rainwater tank supply, bore water supply, desalinated water supply, public reticulated water supply or water brought in from another supply, then water chemistry information should be sought from the supplier or it should be tested to ensure the water supply meets the requirements given in these guidelines for the manufacturer's warranty to apply.

#### WATER CHEMISTRY

This water heater must be installed in accordance with this advice to be covered by the warranty. This water heater is manufactured to suit the water conditions of most public reticulated water supplies. However, there are some known water chemistries which can have detrimental effects on the water heater and its operation and/or life expectancy. If you are unsure of your water chemistry, you may be able to obtain information from your local water supply authority.

#### WATER CHEMISTRY LEVELS AFFECTING WARRANTY

The warranty of this water heater will not cover resultant faults on components including the storage cylinder where water stored in the storage cylinder exceeds at any time any of the following levels: -

WATER COMPONENTS	MAXIMUM PERMITTED LEVELS
TOTAL DISSOLVED SOLIDS	600mg/Litre
TOTAL HARDNESS	200mg/Litre
CHLORIDE	300mg/Litre
MAGNESIUM	10mg/Litre
CALCIUM	20mg/Litre
SODIUM	150mg/Litre
IRON	1 mg/Litre
MAXIMUM pH	9.5
MINIMUM pH	6.5

## **TOTAL DISSOLVED SOLIDS (TDS)**

Some water analysis reports may state the conductivity of the water rather than the level of total dissolved solids. Conductivity, measured in micro siemens per centimetre ( $\mu$ S/cm), is directly proportional to the TDS content of the water. TDS, in mg/L, is approximately 70% of the conductivity in  $\mu$ S/cm. The warranty will not cover resultant faults to the storage cylinder if this water heater is connected at any time to a water supply where the TDS content of the water exceeds 600 mg/L. 16 In locations where TDS approaches 600 mg/L, e.g. due to sediment, we strongly recommend fitting an appropriate filter to ensure water entering or in the water heater does not exceed this level at any time i.e. due to sediment build up.

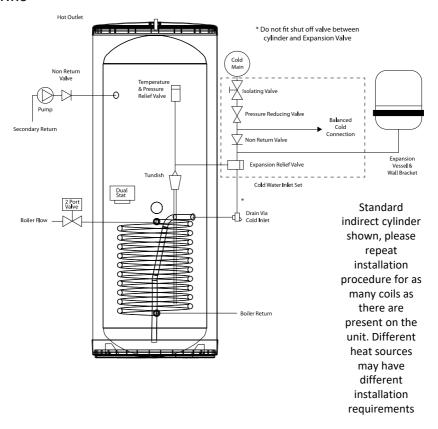
#### SITING THE UNIT

This cylinder can be positioned more or less anywhere in the dwelling but it should be remembered that for every 1 metre that an outlet is above the cylinder, the pressure will be reduced by 0.1 bar. If siting outside the heated envelope of the dwelling such as in a garage or outbuilding then frost protection should be provided and exposed pipework should be insulated.

This cylinder must be supported on a flat base capable of supporting the weight of the cylinder when full. The minimum recommended cupboard size is 650mm square.

It's important that consideration is given to access for maintenance of the valves. The immersion heaters are 400mm long and access space should be provided for possible future replacement, also adequate access to remove and re-install the cylinder in the event of a problem.

#### **SCHEMATIC**



#### **COLD MAINS PIPEWORK & EXPANSION VESSEL**

This Run the cold main through the building to the place where the cylinder is to be installed. Take care not to run the cold pipe near hot water or heating pipe work so that the heat pick up is minimised. Identify the cold water supply pipe and fit an isolating valve (not supplied).

A 22mm BS1010 stopcock can typically be used but a 22mm quarter turn full bore valve would be better as it does not restrict the flow as much. Do not use "screwdriver slot" or similar valves.

Make the connection to the cold feed of the cylinder and incorporate a drain valve. Position the inlet control just ABOVE the Temperature & Pressure Relief Valve (TPRV) mounted on the side of the cylinder. This ensures that the cylinder does not have to be drained down in order to service the inlet control set. Ensure that the arrow points in the direction of the water flow. Select a suitable position for the expansion vessel. Mount it to the wall using the bracket provided. Use the compression connection supplied to connect the vessel into the cold water pipe adjacent to the cold feed point on the cylinder. There must be no obstruction or flow restriction between the cylinder and the expansion vessel.

#### **BALANCED COLD SUPPLY CONNECTION**

It is essential to protect the cylinder from filling pressures greater than 3.0bar. Precautions must be taken where mixing or blending water fittings are installed, (typically shower mixers, bidet outlets, monobloe/mixing taps, thermostatic mixing valves etc), where there maybe the potential for directly fed cold service pressures to leach into the controlled hot circuit. Back pressure of this nature is detrimental to the system and may cause unwarranted operation of discharge valves. It is essential the cold service must be balanced throughout the property by taking the cold services from the balanced cold connection on the inlet control set. Should this not be possible an independent 3.0bar inlet pressure reducing valve must be installed into the cold supply of any such water fitting, positioning not to compromise the water flow to the cylinder. An outside hose tap may still be connected direct to the incoming cold supply if desired.

#### HOT WATER PIPEWORK

Run the first part of the hot water distribution pipework in 22mm. This can be reduced to 15mm and 10mm as appropriate for the type of tap etc. Your aim should be to reduce the volume of the hot draw off pipework to a practical minimum so that the time taken for the hot water is as quick as possible. Do not use monobloc mixer tap or showers if the balanced cold connection is not provided, the unit will back pressurise and result in discharge. Ensure that the top of the vessel is accessible for servicing.

#### PRIMARY COIL CONNECTIONS (INDIRECT ONLY)

Compression connections are provided for the primary circuit which must be positively pumped. Primary flow and return connections are interchangeable to suit site conditions without affecting reheat times. These connections are metric and should be changed by the installer if using Irish size copper tube.

Sealed or vented primary circuits can be used, to comply with normal installation practice the primary pressure should not exceed 3 bar although the cylinder coil is suitable for up to 7 bar if required. The boiler may be Gas, Electric, Oil etc but must be under effective thermostatic control. Uncontrolled heat sources such as some AGA's, back boilers, solid fuel stoves, etc may not be suitable please contact us for guidance. The two port zone valve should be installed into the primary flow pipework leading to the coil flow inlet. The direction of flow arrow should be towards the primary flow connection. On twin coil cylinders an extra thermostat boss is provided.

Maximum operating temperature of primary coils under normal circumstances is 85° C.

Ensure corrosion inhibitor compatible with stainless steel coils is used in the primary circuit.

#### SECONDARY CIRCULATION

Where secondary circulation is required a circulator suitable for potable water should be used in conjunction with a non return valve to prevent backflow, it may be necessary to incorporate an extra expansion vessel into the circuit to accommodate the increased system water volume in larger secondary circulation systems. Where off peak electrical tariffs are being used then secondary circulation should be avoided. A secondary return boss is fitted as standard on 210, 250 & 300L. On smaller sizes tee into the cold feed pipe above the drain.

#### **IMMERSION HEATERS**

As a requirement of Building Regulations the cylinder immersion heaters are fitted with thermal cut-out in addition to the normal control thermostat. To help ensure correct replacement the immersion heaters have a special  $1^{-3}/4^{\circ}$  BSP thread. They are of a low noise Incoloy construction and rated at 3 kW at 240 V. Replacement immersion heaters should be purchased via ourselves otherwise your guarantee may be affected.

The 'O'ring on the head of the immersion heater should be correctly positioned and lubricated before fitting. Screw in hand-tight until almost sealed then gently tighten as the 'O' rings will seal easily. The electrical supply to each immersion heater(s) must be fused at 13A via a double pole isolating switch to BS 3456. The cable must be 2.5mm2 heat resistant (85°C HOFR) sheathed flex complying to BS 6141:1981 Table 8. Do not operate the immersion heater(s) until the unit is full of water. If any sterilisation liquid is in the cylinder do not operate the immersion heater(s) as this will cause premature failure. Electric to be supplied by a fused supply compliant with local regulations, and fitted by a qualified Part P Electrician.

#### WIRING

As per instruction above, our 3kW immersion heaters MUST be wired in 2.5mm heat resistant cable, failure to do so can cause nuisance tripping and we will be unable to support your installation until this has been corrected.

#### **COMMERCIAL / HEAVY DUTY / CONSTANT USE**

For commercial / heavy duty installations where constant usage / reheat is required or where an external programmer designed for immersion heaters is not present then Titanium immersion heaters must be fitted in order to comply with the warranty.

#### ENERGY CUT OUT AND CYLINDER THERMOSTAT

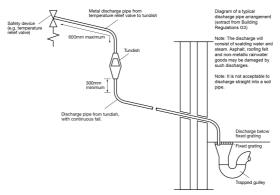
As a requirement of Building Regulations the cylinder units are fitted with a thermal cut-out in addition to the normal control thermostat. This unit should be fitted to the dedicated boss on the cylinder and wired to the two port valve controlling the primary flow.(see wiring diagram).

#### DISCHARGE ARRANGEMENT

Full detail of Building Regulation G3 is available as a free download from: www.planningportal.gov.uk. The discharge from both the temperature relief and expansion relief valves can be joined together via a 15mm end feed tee.

It is important that any discharge water does not collect in this pipe-work and can run freely to the tundish. The tundish should be mounted in a vertical and visible position located in the same space as the unvented hot water storage system and be fitted as close as possible and within 600mm of the safety device e.g. the temperature relief valve. The discharge pipe-work from the tundish must be routed in accordance with Part G3 of the Building Regulations.

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, be of metal and:



- 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. discharge pipes between 9m and 18m 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. An alternative approach for sizing discharge pipes would be to follow BS6700 Specification for design installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages.
- Have a vertical section of pipe at least 300mm long, below the tundish before any elbows or bends in the pipework and be installed
  with a continuous fall of at least 1 in 200 thereafter.
- Be installed with a continuous fall.
- Any discharge should be visible at the tundish. See regulations for instruction relating to dwellings occupied by persons
  with impaired vision or mobility.

From the tundish, pipework should terminate in a safe place where there is no danger to persons in the vicinity of the discharge. Examples of acceptable discharge arrangements include:

- 1. To a trapped gully with outlet below a fixed grating and above water seal.
- Downward discharges to low level, within 100mm, above external surfaces such as car park, hard standing, grassed area with protective wire cage to prevent contact but retaining visibility of discharge.
- 3. Discharge at high level into metal hopper and metal downipe with the termination point clearly visible or onto roof capable of withstanding high temperature discharge and at least 3m away from plastic guttering system.

Building Regulation G3 allows for the usage of non-metallic pipework within the tundish discharge (D2): The discharge pipe (D2) should be made of a) metal or b) other material that has demonstrated to be capable of safely withstanding high temperatures of water discharged and is clearly and permanently marked to identify the product and the performance standard. The discharge should not be connected to a soil discharge stack unless it can be demonstrated of safely withstanding the high temperature of water discharge, in which case it should;

- 1. Contain a mechanical seal, not a water trap, which allows water into the branch pipe but not foul air from the drain to be ventilated through the tundish.
- 2. Be a separate branch pipe with no sanitary appliances connected to it.
- 3. Plastic pipes used as branch pipes with the discharge should be Polybutalene (PB) or cross linked polythene (PE-X) complying with national standards such as Class S of B7291-2:2006 or Class S of BS7291-3:2006 respectively.
- 4. Be continuously marked with a warning that no sanitary appliances should be connected to the pipe.
- Plastic pipes should be joined and assembled with fittings appropriate to the circumstances in which they are used as set out in BS EN 1043-1:2002.

THE FOREGOING IS AN APPRAISAL OF BUILDING REGULATION DETAIL AND IT IS ESSENTIAL THE INSTALLER GAINS KNOWLEDGE OF THE FULL REQUIREMENTS PRIOR TO PRODUCT INSTALLATION.

#### **IMPORTANT**

QUERIES WITH REGARD TO DISCHARGE ARRANGEMENT, CONTACT YOUR LOCAL BUILDING CONTROL OFFICE.

#### TWIN COIL FORMAT

Indirect twin coil units can be installed in two separate formats:

- In a solar powered system with a backup boiler.
- In a system with two non-solar heat sources (normally two boilers).

With either format it is essential that the installation meets all current regulations including, in particular, the high limit cut out requirements of Building Regulation G3.

### **UPPER COIL**

This is connected to the boiler as per the instructions for a single coil cylinder with the high limit thermostat inserted into the middle thermostat pocket and wired to control the supplied two port valve in either the primary flow or return as indicated in the wiring instructions.

#### LOWER COIL - SOLAR VARIENT

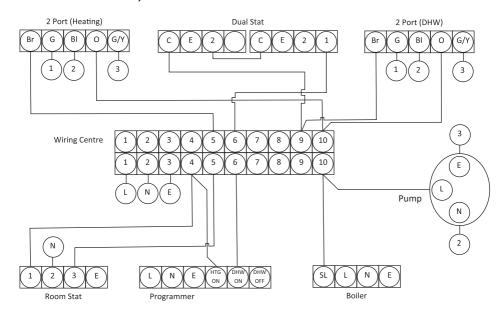
In a solar system the lower coil is connected to the solar heat source. Either primary coil connection may be used for flow or return. The solar cylinder sensor supplied is inserted into the lower thermostat pocket and the energy cut out into the upper pocket. The 'mechanical' control thermostat is not normally utilised in a solar system. In systems where the panels are above the cylinder then the energy cut out shall be wired so as to interrupt the power supply to the solar pump or controller in the event of over temperature.

In systems where the cylinder is above the panels then the energy cut out should be wired to a suitable two port valve (not supplied) on the return pipe-work to the solar panel.

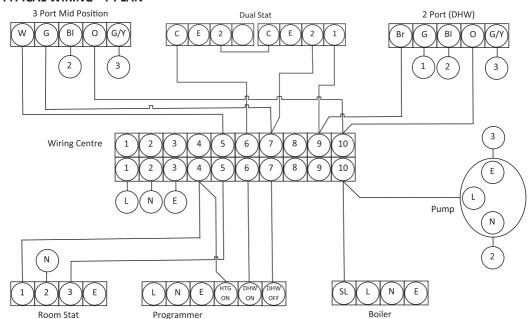
#### **LOWER COIL - NON SOLAR VARIENT**

This is connected to the additional boiler as per the instructions for a single coil cylinder with the high limit thermostat inserted into the lower thermostat pocket and wired to control the supplied two port valve in either the primary flow or return.

#### **TYPICAL WIRING - S PLAN, 1 ZONE**



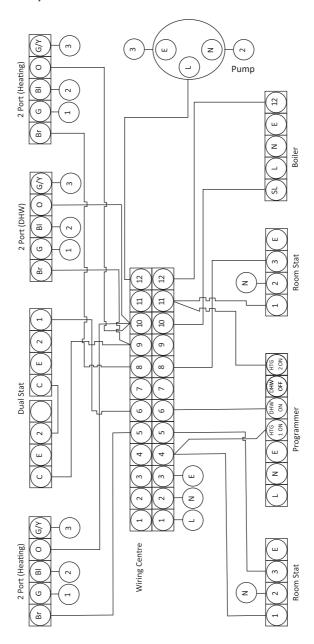
#### **TYPICAL WIRING - Y PLAN**



#### CC

W=WHITE G=GREY BL=BLUE G/Y=GREEN/YELLOW BR=BROWN L=LIVE N=NEUTRAL C=COMMON SL=SWITCHED LIVE E=EARTH

## **TYPICAL WIRING - S PLAN, 2 ZONE**



## **COLOUR CODES**

W=WHITE G=GREY BL=BLUE G/Y=GREEN/YELLOW BR=BROWN L=LIVE N=NEUTRAL C=COMMON SL=SWITCHED LIVE E=EARTH

#### COMMISSIONING - FILLING THE SYSTEM

Check all connections for water tightness including any factory made connections such as the temperature and pressure relief valve as these may have loosened during transit. The pressure in the expansion vessel should be checked to ensure it is 3 bar (45PSI). The valve is of the car tyre (Schrader) type. The hot tap furthest away from the cylinder should be opened before filling the system to let air out. The system should be flushed before use. The remaining taps should be opened in turn to expel air. The Benchmark Commissioning Checklist shall be completed upon commissioning by the installer.

#### IMMERSION HEATERS

The system must be fully filled and flushed before switching on the power to the immersion heaters and allowing the unit to heat up. The immersion heater is supplied preset at 60°C. Turning fully to + sets to approx 65°C.

#### **INDIRECT UNITS**

Ensure the lever on the two port valve is set to the filling position and use the boiler manufacturers commissioning instructions to fill the primary circuit. When full release the lever. Switch the programmer to Domestic Hot water (DHW) and allow the unit to start to heat. Adjust the dial of the dual thermostat to between 55°C and 60°C as required.

#### RECOMMENDED STORAGE TEMPERATURE

For domestic usage a temperature set of 55°C-60°C is the norm. This is above recognised bacterial growth levels and low enough to prevent nuisance tripping of limit thermostats or unnecessary scaling.

#### SAFETY VALVE CHECKS

Any water coming from either the expansion relief valve or the temperature / pressure relief valve during heat up is indicative of a problem which needs to be identified and rectified. The temperature relief and expansion relief valves should be fully opened, one at a time then both together allowing as much water as possible to flow through the tundish. Check that your discharge pipework is free from debris and is carrying the water away without spillage over the tundish and release the valves and check that they re-seat properly.

#### DRAINING

Isolate from the electrical supply to prevent the immersion heaters burning out. Isolate the unit from the cold mains. Attach a hose to the draining tap ensuring it reaches to a level below the unit (This will ensure an efficient syphon is set up and the maximum amount of water is drained from the unit). Open the hot tap closest to the unit and open the draining tap.

#### WARNING!

#### WATER DRAINED OFF MAY BE VERY HOT!

#### ANNUAL SERVICING

A competent installer should carry out the following checks on an annual basis, ideally at the same time as the annual boiler service.

- 1. The expansion relief valve on the inlet control set should be eased open allowing water to flow for 5 seconds. The valve should then be closed making sure it resets correctly. Repeat this procedure with the pressure / temperature relief valve. Always insure that the discharge pipework is allowing the water to drain away adequately. If not check for blockages etc. and clear.
- Ensure that any immersion heaters that are fitted are working correctly and that they are controlling the water at a temperature of between 55°C and 60°C.
- 3. Make sure the pressure in the expansion vessel is charged to 3 bar. Turn off the water supply to the unit and open a hot tap first. The valve on the expansion vessel is a Schrader (standard car tyre) type. Air or CO2 can be used to repressurise the expansion vessel.
- 4. Remove the head on the inlet control set by unscrewing, and clean the mesh filter within.
- 5. The benchmark service record supplied within this manual shall be updated at each service by the installer.

#### SERVICING

SERVICING MUST BE CARRIED OUT ANNUALLY & SHOULD ONLY BE CARRIED OUT BY COMPETENT INSTALLERS AND ANY SPARE PARTS USED MUST BE PURCHASED FROM US. NEVER BYPASS ANY SAFETY DEVICES OR OPERATE THE UNIT WITHOUT THEM FULLY OPERATIONAL.

YOUR GUARANTEE MAY BE VOID WITHOUT PROOF OF ANNUAL SERVICING. THE COMMISSIONING CERTIFICATE SUPPLIED AT THE REAR OF THIS MANUAL SHOULD ALSO BE COMPLETED BY THE INSTALLER.

#### **GUARANTEE**

This cylinders stainless steel vessel carries a 25 year guarantee against faulty materials or manufacture provided that:

It has been correctly installed as per this document and all the relevant standards, regulations and codes of practice in force at the time, and the Benchmark Commissioning Checklist has been completed.

- It has not been modified in any way, other than by the manufacturer.
- It has not been misused, tampered with or subjected to neglect.
- It has only been used for the storage of potable water.
- It has not been subjected to frost damage.
- Ti has not been subjected to most damag
- The unit has been serviced annually.
- The benchmark service record has been filled in after each annual service by the installer.
- The guarantee period starts from the date of purchase and no registration is required.
- The extended guarantee is not transferable, and rests with the original householder.
- The system is fed from a public mains water supply.
- Store temperatures do not exceed 65oC.
- Installations are made only in the UK & Republic Of Ireland.
- The water supply does not have a Chloride content greater than 300ppm.
- Units are not installed with uncontrollable heat sources (E.g. Wood Burning Stoves).
- For commercial / heavy duty installations where constant usage / reheat is required Titanium immersion heaters must be fitted in order to comply with the warranty.

Please note that invoices for servicing may be requested to prove that the unit has been serviced annually.

All the components fitted to / or supplied with the cylinder carry a 2 year guarantee. The guarantee starts when the cylinder is first filled.

#### **EXCLUSIONS**

THE EFFECTS OF SCALE BUILD UP. ANY LABOUR CHARGES ASSOCIATED WITH REPLACING THE UNIT OR ITS PARTS. ANY CONSEQUENTIAL LOSSES CAUSED BY THE FAILURE OR MALFUNCTION OF THE UNIT.

#### **CLAIMS**

ON THE RARE OCCASION WHEN A FAULT OCCURS WE WILL ONLY CONSIDER SENSIBLE BROKEN DOWN CLAIMS SUBMITTED IN FULL AT THE THE TIME THE FAULTY PART / CYLINDER IS RETURNED.

WE WILL NOT COVER CLAIMS FOR EXCESSIVE TRAVELLING TIME WHERE AN INSTALLER HAS CHOSEN TO ACCEPT A JOB MORE THAN 30 MILE FROM THEIR BASE.

COSTS CAN NOT BE RECOVERED FOR THE REMOVAL OF A FAULTY UNIT FROM A DIFFICULT TO REACH AREA, OR AREA WHERE THE CYLINDER ACCESS HAS BEEN RESTRICTED, THIS IS IN CONTRADICTION WITH OUR INSTALLATION GUIDELINES WHERE A UNIT SHOULD ALWAYS BE ALLOWED SUITABLE PROVISION FOR REPLACEMENT.

CLAIMS WILL NOT BE ACCEPTED FOR UNITS THAT HAVE NOT BEEN INSTALLED IN ACCORDANCE WITH THIS MANUAL.

#### **GUIDANCE IN THE EVENT OF A PROBLEM**

If you have a problem in the first year contact the plumber who fitted the unit. Thereafter contact the plumber who carries out the annual servicing for you. If your cylinder develops a leak we will supply you with a new one. We ask for an up-front payment to prevent fraud.

We will require the original unit to be returned to us for inspection along with a copy of your service record and commissioning checklist. If it is confirmed that it has failed within the terms of the warranty your upfront payment will be refunded. If a component part fails within the two year guarantee period we will send you a new one again with an upfront charge. Credit card details may be taken to prevent fraud. We ask you to post the faulty part back to us within one month by recorded delivery. Once the part has been tested and proven faulty a refund will be issued.

#### **USER INSTRUCTION**

Your stainless system is automatic in normal use and requires only annual servicing. You should employ an competent installer to perform the annual servicing. Normally this is timed to coincide with the annual boiler service.

#### **DISCHARGE AT THE TUNDISH**

IF WATER IS FLOWING FROM THE SAFETY VALVES THROUGH THE TUNDISH THIS INDICATES A FAULT CONDITION AND ACTION IS NEEDED.

If this water is hot turn the boiler and / or the immersion heater off. Do not turn off the water until the discharge runs cool. The discharge may also stop.

#### CALL A COMPETENT PLUMBER OUT TO SERVICE THE UNIT.

Tell them you have a fault on an unvented cylinder. We stock all the spare parts they may need.

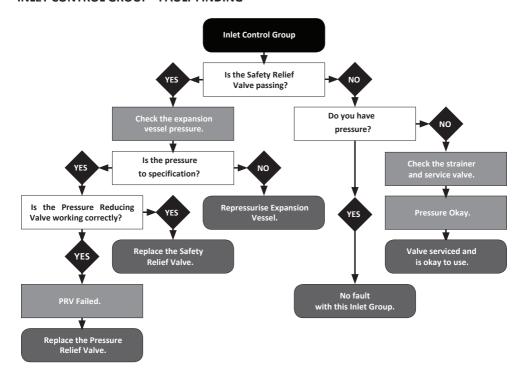
## **UNVENTED CYLINDER - FAULT FINDING**

Symptoms.	Possible Causes	Follow up action.	
Cylinder appears to leak from within the case.	Loose cylinder connection.	Check all connection points including immersion heaters to ensure integrity of joint and remake any suspect joints.	
Possible fault at Pressure Reducing Valve.  Expanion Valve operates and water is visable at the Tundish.  Back pressure from the system.	Possible fault at Pressure Reducing Valve.	Follow fault finding information for Inlet Control Group.	
	Back pressure from the system.	Check all mixer type outlets are served by a balanced cold service. Where not repipe or install bespoke pressure reducing valve to offending outlet.	
Expansion Valve operates when cylinder is heated.	Possible fault at Expansion Vessel.	Follow fault finding information for Expansion Vessel.	
Noise when operating tap outlet.	Insecure Pipework.	Increase the number of pipe clips.	
	External works to public mains.	Wait for works to be completed.	
Reduced water flow.	Debris from water mains.	Strip & clean or replace Inlet Control Group.	
	Pressure Reducing Valve sticking.	Strip & clean or replace Inlet Control Group.	
No hot water available.	Immersion heater failure.	Follow fault finding information for Immersion Heater	
	Boiler failure.	Check operation of the boiler and its controls.	

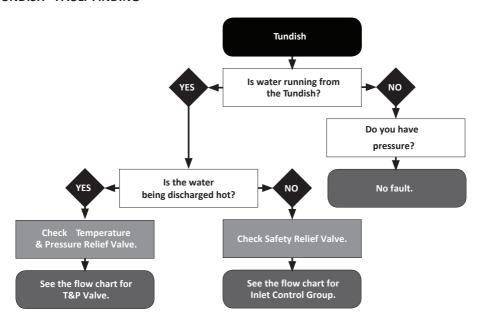
## **EXPANSION VESSEL - FAULT FINDING**

Symptoms.	Possible Causes	Follow up action.
Discharge of water from the Relief Valve.	Expansion Vessel is too small.	Vessel needs resizing and installation by appropriately qualified engineers.
	Pre-charge set incorrectly on vessel installation.	Pre-charge requires setting while system is de-pressurised according to cylinder manufacturers recommendations.
	Membrane is ruptured and may require replacement.	Replace membrane or entire vessel. Inspect Shrader valve for leaks or damage.
	Membrane may be partially de-pressurised due to natural losses and require re-pressurisation.	Re-pressurise or consider replacement depending on age of vessel and amount of pressure lost. Inspect Shrader valve for leaks or damage.
Leak from Flange or Water Connection.	Failure of Flange Plate.	Replace Flange Plate or entire Vessel.
	Loss of torque in Flange retaining bolts.	Re-tighten bolts as needed.
	Ruptured membrane has caused corrosion of vessel body resulting in pinhole leak.	Entire Vessel must be replaced. Inspect Shrader valve for leaks or damage.
Vessel appears to be fully of liquid when system is cold.	Membrane is de-pressurised.	Replace membrane or entire vessel. Inspect Shrader valve for leaks or damage.
Water is discharged from vessel when Shrader pin is de-pressed for inspection of air pressure.	Membrane is ruptured.	Membrane or vessel requires replacement.

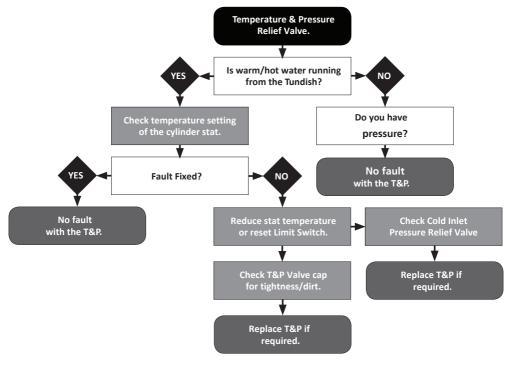
#### **INLET CONTROL GROUP - FAULT FINDING**



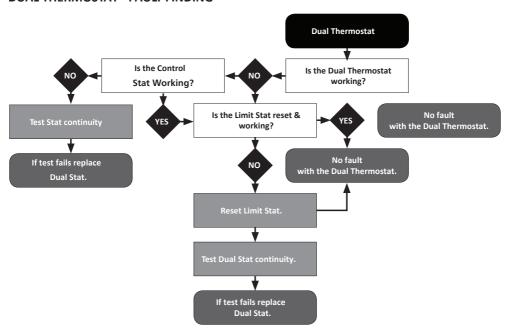
#### **TUNDISH - FAULT FINDING**



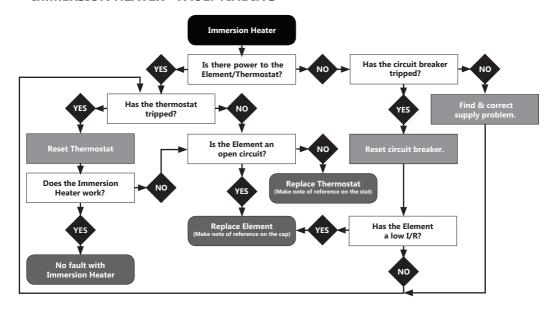
#### **T&P VALVE - FAULT FINDING**



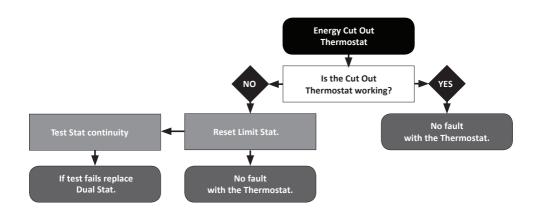
#### **DUAL THERMOSTAT - FAULT FINDING**



#### **IMMERSION HEATER - FAULT FINDING**



#### **ENERGY CUT OUT - FAULT FINDING**



#### 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 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 r	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 Regulation 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)?	No	1
Is the installation in a hard water area (above 200ppm)?	No	
If yes, has a water scale reducer been fitted?	No	
What type of scale reducer has been fitted?		
What is the hot water thermostat set temperature?	Т	
What is the maximum hot water flow rate at set thermostat temperature (measured at high flow outlet)?		I/min
Time and temperature controls have been fitted in compliance with Part L of the building Regulations?	Yes	7
Type of control system (if applicable)  Y Plan  S Plan	Other	_
Is the cylinder solar(or other renewable compatible)?	No	_
What is the hot water temperature at the nearest outlet?		∘c
All appropriate pipes have been insulated up to 1 meter or the point where they become concealed	Yes	=
An appropriate pipes have been installated up to 1 ineter of the point where they become concealed	163	
UNVENTED SYSTEMS ONLY	-	
Where is the pressure reducing valve situated (if fitted)?		
What is the pressure reducing valve stetting?		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?	No	
To the expansion vessel of internal all space been elected.	NO_	
THERMAL STORES ONLY		
What store temperature is achievable?		°C
What is the maximum hot water temperature?		-c
What is the maximum not water temperature.		
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	Ī
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		
Customer's Jugianuse		

<sup>\*</sup>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.



## **SERVICE RECORD**

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

#### **Service Provider**

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

SERVICE 1 Date	SERVICE 2 Date	
Engineer Name	Engineer Name	
Company Name	Company Name	
Telephone Number	Telephone Number	
Comments	Comments	
-		
Signature	Signature	
Signature	Signature	
SERVICE 3 Date	SERVICE 4 Date	
Engineer Name	Engineer Name	
Company Name	Company Name	
Telephone Number	Telephone Number	
Comments	Comments	
Comments	Comments	
Signature	Signature	
Signature	Signature	
SERVICE 5 Date	SERVICE 6 Date	
Engineer Name	Engineer Name	_
Company Name	Company Name	
Telephone Number	Telephone Number	
Comments	Comments	
Signature	Signature	
SERVICE 7 Date	SERVICE 8 Date	
Engineer Name	Engineer Name	
Company Name	Company Name	
Telephone Number	Telephone Number	
Comments	Comments	
Simple state of the state of th	Simple was	
Signature	Signature	
SERVICE 9 Date	SERVICE 10 Date	
Engineer Name	Engineer Name	
Company Name	Company Name	
Telephone Number	Telephone Number	
Comments	Comments	
Signature	Signature	

#### THE HWA CHARTER

The Charter offers consumers quality assurance, product satisfaction, and confidence in the manufacturer, that they will deliver a service beyond just supplying the product.

The HWA Charter Code of Practice requires that, all members adhere to the following:

- To supply fit for purpose products clearly and honestly described.
- To supply products that meet, or exceed appropriate standards and building and water regulations.
- To provide pre and post sales technical support.
- To provide clear and concise warranty details to customers.





#### 1. DEFINITIONS

- "Buyer" means the person who accepts a quotation of the Compa Goods or whose order for the Goods is accepted by the Company
- 'Company" means ThermaQ. "Conditions" means the terms and conditions of sale set out in this doc
- "Conditions" means the terms and conditions of sale set out in this document and any special terms and conditions agreed in writing by the Company and the Buyer "Contrast" mean the contrast for the practises and sale of the Goods to be by in according with these conditions in a supply sale of the Cooks to be by in according with these conditions. The present present and insurance (if any) 1.2 Any reference in these Conditions to any provision of a statuse shall be construct as a reference to that provision as amended re-enacted or extended at the relevant time 1.3 The headings in these Conditions to not convenience only and shall not affect their 3.1 The headings in these Conditions are of convenience only and shall not affect their shall be considered to the conditions are for convenience only and shall not affect their shall be considered to the conditions are for convenience only and shall not affect their shall be considered to the conditions are for convenience only and shall not affect their shall be shall be shall be shall be shall be shall be the condition are for convenience only and shall not affect their shall be shall be

#### 2. BASIS OF SALE

- ny shall sell and the Buyer shall purchase the Goods in accordance 2.1.1 the Company's quotation (if provided by the Comp ny and accepted by the
- Buyer), or 2.12 (if the Company does not submit a quotation and following a request or purported order from the Buyer for Goods) in accordance with the Company's offer to the Buyer (if accepted by the Buyer) subject in either case to these Conditions which shall govern the Contract to the exclusion of any other terms, subject to which
- any such quotation or offer is accepted, or purported to be accepted.

  2.2 Any variation to these Conditions (including any special terms and condition agreed between the parties) shall be inapplicable unless agreed in writing by the Company.
- Company
  2.3 Any advice or recommendation given by the Company or its emplo 2.3 Amy advisec or recommendation given by the Company or 1st employees or agents to the Buyer or its employees or agents as to the storage application or use of the Goods which is not confirmed in writing by the Company is followed or acted upon entirely at the Buyer's own risk and accordingly the Company shall not be liable for any such advice or recommendation which is not so confirmed 2.4 Amy typographical cliental or other error or omission in any sales literature
- on price list acceptance of offer invoice or other document or information issu Company shall be subject to correction without any liability on the part of the by the C
- 2.5 All specifications, drawings, particulars of weight and dimension and performance data contained in any of the Company's literature are approximate of 2.6 The Company reserves the right to improve and/or modify any specifications,
- designs and dimensions without notice.

  2.7 For the avoidance of doubt nothing in these Conditions or any Contract shall confer on any third party any benefit nor the right to enforce any term of these Condit any Contract whether pursuant to the Contracts (Rights of Third Parties) Act 1999 or

#### THE PRICE AND PAYMENT

- The Price shall be either:t the Company's quoted price which shall only be valid for 30 days from its date
  which time the Price may be altered by the Company and shall be subject to mpany requoting; or
- the Company requoting; or 3.12 where no price has been quoted the Price listed in the then current price list of the Company sent by the Company to the Buyer from time to time. 3.2 Except as otherwise stated in the Company's quotation or in any price list of the Company or otherwise stagered in writing between the Buyer and the Company all prices are given by the Company to include the Company's charges for transport an all prices are given by the Company to include the Company is charges for transport an all prices are given by the Company to include the Company is charges for transport and
- insurance.

  3.3 The Price and any other sums payable by the Buyer to the Company is any applicable Value Added Tax, which the Buyer shall be additionally
- 3.4 [Subject to any special terms agreed in writing between the Buyer and the 3.4 [Subject to any special terms agreed in writing between the Boyer and the Company, the Company may service the Buyer for the Price of the Goods on earl any time after delivery of the Goods, for any installment of the Goods) must be a superior of the Goods and the control of the Control of the Control of the Control of the Control
- 3.6 if the Buyer finit to make any payment on the due caute tense witnout prepunse or us of hori right or remody available to the Company the Company shall be entitled to 3.6.1 cancel the contract or suspend any further deliveries to the Buyer 3.6.2 appropriate any payment made by the Buyer to such of the Goods (or the Goods under any other contract between the Buyer and the Company) as the Company any third fit (notowithstanding any purported appropriation by the Buyer Company may third for the order to the Company and the Company and
- and
  3.6.3 charge the Buyer interest (both before and after any judgement) on the amoun
  unpaid at the rate of 8% per cent per annum above Barclays Bank PLC base rate from
  time to time until payment in full is made (a part of a month being treated as a full
- se of calculating in 4. THE GOODS

## 4. THE GOODS 4.1.1 The quantity and description of the Goods shall be as set out in the Company's option or in the Company's offer (as the case may be); and 4.1.2 the quality and specification for the Goods shall be as set out in the Company's quotation or (where there is no quotation) in the Company's literature brochure for the Goods in question.

- brochuse for the Goods in question.

  4.2 The Buyer shall be responsible to the Company for ensuring the accuracy of the terms of any order and any information supplied for the Company as to its requirements (including but without limitation the use to which the Goods will be put and any applicable specification) submitted by the Buyer and for giving the Compan and particular particular particular particular to stating to the Goods within a sufficient time to enable the Company to perform the Contract in accordance with its terms 4.3 if the Goods are to be manufactured or any process is to be applied to the Goods by the Company and covered and the process of the Company and the Company against all lossed startings costs, chaim, defined, faithfilties and expenses.
- awarded against or incurred by the Company in connection with or paid or agreed to be paid by the Company in settlement of any claim for infringement of any patent copyright design trade mark or other industrial or intellectual property rights of any other person which results from the Company's use of the Buyer's specification or from compliance by the Company with the Buyer's instructions whether express or 4.4 No order which has been accepted by the Company may be cancelled by the Bi
- 4.4 No order which has been accepted by the Company may be cancelled by the Baye except with the agreement in writing of the Company and on terms that any deposit paid shall not be repayable and that the Buyer shall indemnify the Company in full materials used diamage charges and expenses incurred by the Company in carrying out any work in respect of the Condo or otherwise as a result of cancellation 4.5 All designs, skeles, or similar articles uspiled by or swithout feet or write the Company shall remain the property of the Company and may not be disclosed the Company shall remain the property of the Company and may not be disclosed by the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and may not be disclosed to the Company shall remain the property of the Company and the Company shall remain the property of the Company and the Company shall remain the property of the Company and the Company shall remain the property of the Company and the Company shall remain the property of the Company and the Company that th

- 5. DELIVERY OF GOODS
  5. Unless otherwise agreed in writing the Company shall deliver the Goods to such delivery address as is specified by the Buyer to the Company at such time as the Goods or part thereof (as the cane may be) are ready for delivery.
  5.2 The Buyer shall be responsible for offloading the Goods at the delivery address and shall advise the Company of any local or internal laws, byelens or rules relating to parking or loading of vehicles at the delivery address.
  5.3 The Buyer shall be responsible for exeming that access to the delivery address is wholly by a road with a surface capable of withstanding the weight and store of a vehicle carrying the Goods.
- carrying the Goods.

  5.4 Any dates quoted for delivery of the Goods are approximate only and the
  Company shall not be liable for any delay in delivery of the Goods howsoever
  caused Time for delivery shall not be of the essence unless previously agreed by

- the Company in writing The Goods may be delivered by the Company in advance of the Delivery Date upon giving reasonable notice to the Buyer 5.5 Where the Goods are to be delivered in installments each
- ments each delivery shall o separate contract and failure by the Company to deliver any one or more of the installments in accordance with these Conditions or any claim by the Buyer in resj of any one or more installments shall not entitle the Buyer to treat the Contract as
- measuments in accordance with mised contained with great per to treat the Contract as a offus one or more installments shall not entitle the Buyer to treat the Contract as a \$5.61 ft the Buyer fails for any reason whatsoever to take delivery of the Goods or fails to give the Company adequate delivery instructions at the time stated for delivery (otherwise than by reason any cause beyond the Buyer's reasonable control or by reason of the Company's fault) then without prejudice to any other right or remedy available to the Company may: \$6.1 store the Goods until actual delivery and charge the Buyer for the reasonable costs (melading insurance) of returning the Goods to the Company's permises, storage and for transport, packaging and insurance for re-delivery of the Goods, or \$5.6.2 self the Goods at the best price readily obtainable and (after deducting all Perice or charge the Buyer for any abstract Buyer for the second over the \$5.6.2 self the Goods and the best price readily obtainable and (after deducting all \$5.6.2 self the Goods and the best price readily obtainable and (after deducting all \$6.5.2 self or \$6.5.2 self the Goods and the best price readily obtainable and (after deducting all \$6.5.2 self the Goods and the best price readily obtainable and (after deducting all \$6.5.2 self or \$6.5.2 self the Goods and the self-contract of the Company and \$6.5.2 self-contract and self-contract and \$6.5.2 self-contract and

#### RISK AND RETENTION OF TITLE

- 6. RISK AND RETENTION OF TITLE.
  6. Igods supplied by the Company shall be at the Buyer's risk immediately upon delivery to the Buyer or into custody on the Buyer's hehalf or to the Buyer's Order. The Buyer shall effect adequate insurance of the goods against all risks to the full invoice value of the goods, such insurance to be effective from the time of delivery until property
- value of the goods, such insurance to be effective from the time of delivery unil proper in the goods that pleas to the Buyer as breamther provided. 6.2 property in the goods supplied bereunder will pass to the Buyer when full 6.2 the goods of the subject of this contract plans, for ex-6.2.1 the goods of the subject of this contract between the Buyer and the Company which, at the time of payment of the full price of the goods sold under contract, have been delivered to the Buyer but not paid for in full. 6.3 until property in the goods applied between the goods to the Buyer and the contract have been delivered to the Buyer so to the Buyer and the contract have been delivered to the Buyer but not paid for in full. 6.3 until property in the goods supplied between the goods to the Buyer in accordance with
- agraph (3) above 6.3.1 the Buyer shall hold the goods in a fiduciary capacity for us and shall store the
- 6.3.1 the Buyer shall hold the goods in a fiduciary capacity for us and shall store same separately from any other goods in the Buyer's possession and in a may which enables them to be identified as our goods.
  Companies authorized the properties of the company should the Companies authorized representative to request. All the necessary incidents associated with a fiduciary relationship shall apply.
  6.4 the Buyer's right to possess the goods shall cease forthwith upon the happening of any of the following events, namely:
  6.1 if the Buyer rials to make payment in full for the goods within the time
- ed in clause 3 hereot
- 6.4.2 if the Buyer, not being a company, commits any act of bankruptcy, makes a proposal to his or her creditors for a compromise or does anything which would
- proposal to ns or her credators for a compromise or does anything which would entitle a petition for a Bankruptey Code to be presented. 6.4.3 if the Buyer, being a company, does anything or fails to do anything which would entitle an administrator or an administrative receiver or a receiver to take possession of any assets or which would entitle any person to present a petition for winding up or to apply for an administration order.
- 6.5 the Buyer hereby grants to the Company an irrevocable licence to enter at any vehicle or prem es owned or occupied by the Buyer or in the possession of the any vehicle or premises owned or occupied by the Buyer or in the possession of the Buyer for the purposes of represserga mice recovering any such goods the property in which has remained in the Company under puragraph (2) above. The Company shall respect to the company of the property of the property

- this respect the Biyer shall art in the capacity of the Companies commission agent and the proceeds of such sale: 6.6.1 shall be held in trust for us in a manner which enables such proceeds to be destinified as such, and will wish other monies nor paid into an overdrawn bank of 6.6.2 shall not be mixed with other monies nor paid into an overdrawn bank of 6.6.2 shall not be mixed with other monies nor paid into an overdrawn bank account. The Company, as principal, shall remunerate the Buyer as commission agent a commission depending upon the surplus which the Buyer can obtain over and above the same, singulated in this contact of supply which will satisfy the
- 6.7 in the event that the Buyer shall sell any of the goods pursuant to clause (5) hereof, the Buyer shall forthwith inform the Company in writing of such sale and of the identity and address of the third party to whom the goods have been sold. 6.8 if, before riting of such sale and of the identity and address of the third party to whom the goods have been sold. 6 slf, before property in the goods passes to the Broyer under paragraph (a) above the goods are or become affixed to any land or building owned by the Broyer it is hereby agreed and declared that such a fiffication shall not have the effect of passing property in the goods to the Broyer Turthermore if, before property in the goods shall pass to the Broyer under paragraph (3) hereof, the goods are or become affixed to any land or building (whether or not owned by the Bryer), the Broyer shall—SAS 1 ensure that the goods are earlied to any land or building (whether or not owned by the Bryer), the Broyer shall—SAS 1 ensure that the goods are earlied to enline greenoved without material injury to
- uch land or building.
- ake all necessary steps to prevent title to the goods from passing to the rd of such land or building.
- landered of such land or building.

  6.33 forthwith inform the Company in writing of such affixation and of the address of the land or building concerned. The Buyer warrants to repair and make good any damage caused by the affixation of the goods to or their removal from any land or building and to indemnify the Company against all loss damage or liability the Company may incor or sustains as a result of affixation or removal. 6.9 in the event that, before property in the goods has passed to the Buyer under paragraph (3) hereof, the
- enable properly in the goods has passed as the rhigh of indext participant (s) breast, un-fold the property of the property of the property of the property of the contract of the fact and circumstances of such loss, then, durange or destruction. (6) 26 the Buyer shill assign to the Company to breaff of any insurance claim in respect of the goods so lost, stolen, damaged or destroyed. 7. WARRANTIES AND LIABILITY POR PROUCTS INSTALLED IN THE UK
- WARRANTIES AND LIABILITY FOR PROUCTS INSTALLED IN THE ONLY 7.1 Subject to the following provisions, the Company warrants that the Goods will be free from defects in material and workmanship for a period of 24 months from their delivery to the Buyer, unless a period of different duration is specified in the product installation instructions in respect of that product and/or its specific warranty terms, or specified components thereof.
- warranty terms, or specified components thereof.

  7.2 The warranty in clause 7.1 is given by the Company subject to the following
- condutions: 7.2.1 the Company shall be under no liability in respect of any defect in the Goods arising from any information drawing design or specification supplied by th 7.2.2 the Company shall be under no liability in respect of any defect arising from fair
- 1.2.2 the Company statu or enter to many my wear and tear wilful damage negligence abnormal working conditions failure to follothe Company's instructions (whether oral or in writing) misuse or alteration or the Company's instructions (whether oral or in writing) misuse or alteration repair of the Goods without the Company's approval 7.2.3 the Company shall not be liable for any consequential damage(s) occurred to the Buyer, or the Buyer's customer's properly, caused by failure of the Company's Goods. Any such costs incurred shall be claimed by the Buyer or the
- Company's Cutous. Any such costs incurred small ne craimed by the Buyer's customer's insurance party.

  7.2.4 the above warranty does not extend to parts materials equipment not manufactured by the Company in respect of which the Buyer shall only be entitled to the benefit of any such warranty or guarantee as is given by the manufacturer to the
- Company.

  3.7 The Buyer shall not make any statement or representation or give any warranty to an third party in respect of any Goods other than in the terms made or given by the Company to the Buyer in these Conditions nor shall the Buyer have any authority to commit the Company to provide any service in relation to the Goods. The Buyer shall informatly the Company against all losses, damages, costs, claim, demands, lashitisms and expenses incurred or suffered by the Company in respect of or atrising out of any such statement, representation or warranty made of green by the Duyer in contravenille of this clause

- 7.4 The Company's liability to the Buyer for -
- 7.4.1 death or injury resulting from its own or that of its employees' agents' or subcontractors' negligence; and 7.4.2 damage suffered by the Buyer as a result of any breach of the obligations implied by Section 12 of The Sale of Goods Act 1979 shall not be limited
- impired by Section 12 of 1 me sale of Goods Act 1979 shall not be limited 5.5 Subject as expressly provided in these Conditions all other warranties conditions or terms whether implied by statute or common law or otherwise are sereby excluded.

  7.6 If the Company fails to deliver the Goods for any reason other than any cause
- beyond the Company's reasonable control or the Buyer's fault then the Company sha only be liable to the Buyer for and the Company's liability shall be limited to the excess (if any) of the cost to the Buyer (in the cheapest available market) of similar
- excess (if any) of the cost to the Buyer (in the chaopet available market) of similar goods to replace hose not delivered over the Price of the Goods.

  7.7 The Buyer shall examine all Goods delivered forthwist following delivery. Any calculate by the Buyer which is based or any delect in the quality or condition of the containing the condition of the containing th failure and the Higuer shall be bound to pay the Pirce as if the Goods had been delivered in accordance with the Contract In no event shall the Buyer be entitled to reject the unexample of the property of the Contract In the Contract shall be buyer to reject them 7.8 The Company shall be entitled to examine any Goods which are the subject of any calin by the Buyer and to remove used Goods or any part thereof for testing. No tests carried out by the Buyer will be recognised by a Company unless carried out strictly in an accordance with a method previously agreed Company unless carried out strictly in ancordance with a method previously agreed.
- Company unless carried out strictly in accordance with a method previously agreed by the Company as hone guidable for the purpose. Good which is based on any 73 Where any valid claim in respect of any of the Goods stormed specifications is motivated to the control of the Goods for the previously and the control of the Company shall be entitled to the Company is an exordance with these Conditions to Company and the Company is an exordance with these Conditions for one previously the control of the Proposity of the Company and the Company
- the Buyer T.11 Without prejudice to the provisions of clauses 7.5, 7.6, 7.7, 7.9 and 7.10 the et liability of the Buyer under or in connection with the Contract shall not excee
- liability of the Buyer under or in connection with the Contract shall not exceed the Price of the Goods.

  7.12 The Company shall not be liable to the Buyer or be deemed to be in breach of the
- 1/22 title Company state and the manter ourse super to de queened to the in redection of any delay in performing or any failure to perform any of the Company's obligations in relation to the Goods if the delay or failure was due to the Concase beyond the Company's reasonable control Without limiting the foregoing, the following shall be regarded as causes beyond the Company's reasonable control Without limiting the foregoing, the following shall be regarded as causes beyond the Company's reasonable control! 7/1221 act of good, explosion, flood, tempest, or inclinent weather, they
- accident, 7.12.2 war or threat of war, sabotage, insurrection, civil disturbance or requisition, 7.12. aces, restrictions, regulations, by-laws, prohibitions or measures of any kind on the part of any Governmental, Parliamentary or Local Authority, 7.12.4 imports or exports, regulations or embargos; 7.12.5 strikes, lockouts or other industrial action or trade disputes (whether
- employees of the Company or of a third party): 7.12.6 difficulties in obtaining raw materials, labour, fuel, parts or machinery; 7.12.7 er failure, fail re of teleications lines, failure or breakdown of pla
- machinery or vehicles 7.12.8 theft or malicio o, ous damage 12.9 defaults for any reason whatse ever of suppliers or sub-contractors of the
- Company; 7.12.10 incompleteness or inaccuracy of any technical information which it is the responsibility of the Buyer to provide

#### 8. INSOLVENCY OF THE BUYER

8.1 This clause applies if 8.1.1 the Buyer makes any composition or voluntary arrangement with icreditors (being an individual or firm) becomes bankrupt or (being a compan becomes subject to an administration order or seeks an out of court route into administration or goes into liquidation (otherwise than for the purposes of the purpose of the pu amalgamation or reconstruction) or a moratorium comes into force in respect of the

Buyer (within the meaning of the Insolvency Act 1986); or

Buyer (within the meaning of the Innobenes/ Act 1986); or 8.12 an encumbrance talks possession or acceiver or manager or administrative or receiver or administrative is apposing of any of the property or assets of the buyers created or administrative is apposing of any of the property or assets of the buyers and the state of the property of the pr the Buyer and if the Goods have been delivered but not paid for the Price shall become immediately due and payable notwithstanding any previous agreement or

### 9. HEALTH AND SAFETY INFORMATION The Buyer series and undertakes with the Compar

The Buyer agrees and undertakes with the Company to ensure that the provisions of all instruction manuals including health and safety instructions and any other information or document relating to the use of the Goods provided by the Company with to document retaining on the use of me todoos provided by the Company we the Goods are fully implemented so as to ensure so far as is reasonably practicable that the Goods will be safe and without risk to health at all times, when being installed, used, cleaned or maintained by a person at work and that all such manuals instructions or documents remain with the Goods.

## 10. GENERAL

0. GENERAL.
10.1 The Contract is personal to the Buyer which may not assign or dispose of any of rights or obligations or otherwise delegate any of its obligations under the Contract without the written consent of the Company.
10.2 The Company shall be entitled to assign its rights and obligations under the

Contract and to sub-contract or otherwise delegate any of its obligations under the 10.3 Any notice required or permitted to be given by either party to the other under

10.3 Am ondice required or permitted to be given by either party to the other trans-lation of the property of idered as a waiver of any subsequent breach of the same or any other provision If any provision of these Conditions is held by a Court or other competent consulered as a manufacture of these Conditions is held by a Court or other con authority to be invalid or unenforceable in whole or in part the validity of the provisions of these Conditions and the remainder of the provision in question

## 11. INFORMATION

Company will provide the Buyer on request with information as to the p use of the Goods and the Buyer shall at all times obey and comply wit apany's instructions or other information relating to the use of the Good

Terms & Conditions may change without prior notice being given, for up to date Terms please visit www.thermaq.co.uk/terms

## **NOTES**

## **NOTES**