



# **iSteel**

**INSTALLATION MANUAL**

**ISSUE 2015 – V1**

**FOR MORE INFORMATION GO TO:**

**[www.atagheating.co.uk](http://www.atagheating.co.uk)**

**INTRODUCTION**

The corrosion resistant iSteel 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. Twin Coil Indirect units are available in 5 sizes from 150 - 300 litres. There is also a range of slim-style units from 60 - 210 litres again in Direct and Indirect versions, please contact ATAG Heating Technology about slim-style units.

To help ensure compliance with the relevant Water and Building Regulations all iSteel units are supplied complete with the necessary safety and control devices needed to connect to the cold water mains. In order to ensure high flow-rate performance with minimum pressure drop even in lower pressure areas, pre-set high quality controls have been selected.

iSteel is approved to demonstrate compliance with Water Regulations and Building Regulations G3 & Part L.

**STORAGE PRIOR TO INSTALLATION**

iSteel 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. The installation of this product is also notifiable under the national Building Regulations.

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

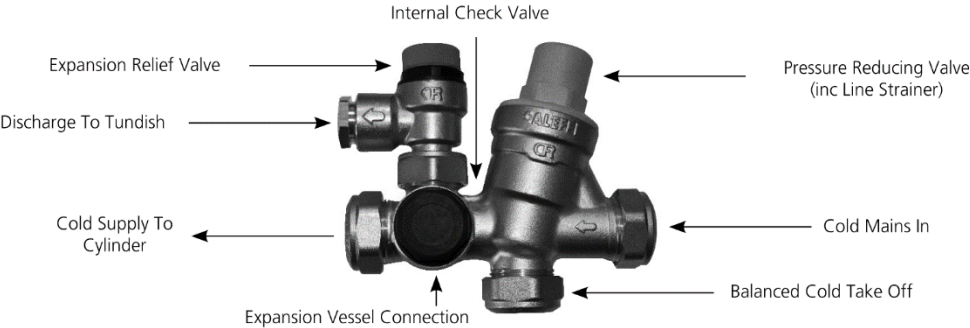
**WHAT IS BENCHMARK?**

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](http://www.centralheating.co.uk)

**COLD INLET SET – WHAT ARE THE CONNECTIONS?**



**EQUIPMENT SUPPLIED WITH THE CYLINDER**

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 and configuration	LOOSE
Instruction Manual	LOOSE
Benchmark Log Book – at the rear of this manual	LOOSE

**WATER SUPPLY**

iSteel 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 what is 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 16 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 content is greater than 200ppm, if required adjust cylinder temperature to below 60 degrees.

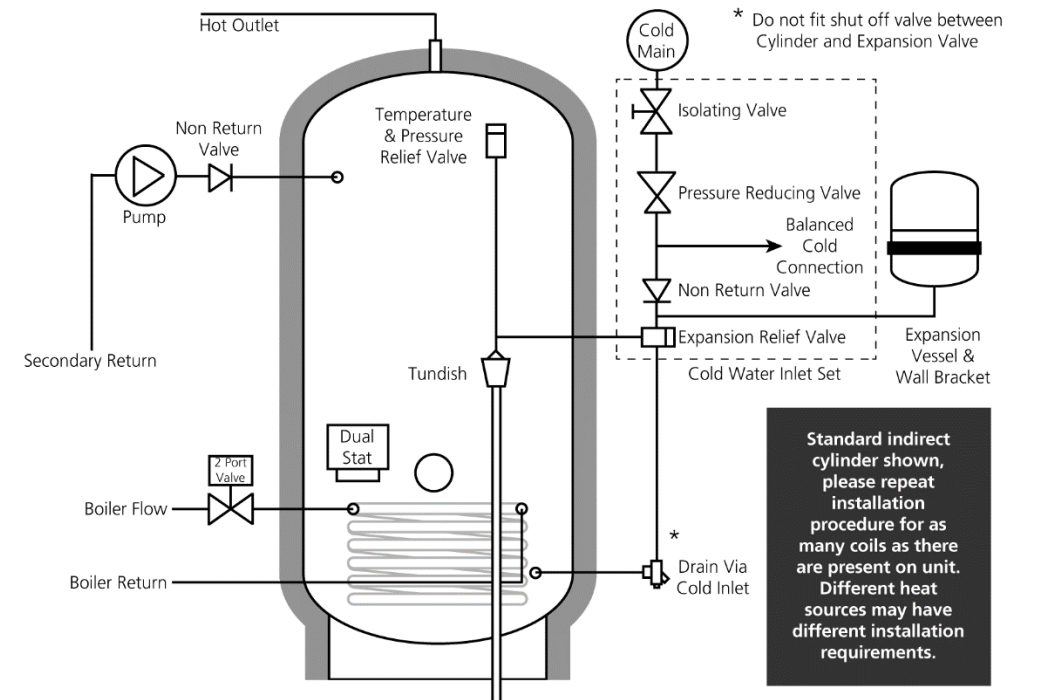
SITING THE UNIT

iSteel 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 iSteel, 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.

iSteel 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 375 mm 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



## GENERAL INSTALLATION

### COLD MAINS PIPEWORK

Run the cold main through the building to the place where the iSteel 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 CONNECTION

If there are to be showers, bidets or mono-bloc taps in the installation then a balanced cold supply is necessary. There is a 22mm balanced connection on the inlet control set. All outlets in the house will be at 3 bar and thus automatically balanced.

### 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 mono-bloc 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 coil in the iSteel is suitable for up to 7 bar if required. The boiler may be Gas, Electric, and 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.

### 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

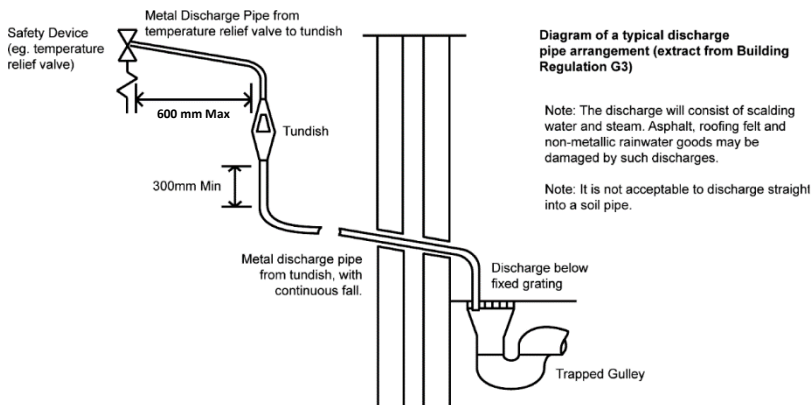
As a requirement of Building Regulations the iSteel immersion heaters are fitted with thermal cut-out in addition to the normal control thermostat. To help ensure correct replacement the immersion heaters have a special 1¼" thread. They are of a low noise Incoloy construction and rated at 3 kW at 240 V. Replacement immersion heaters should be purchased via ourselves otherwise your guarantee may be affected. For commercial / heavy duty installations where constant usage / reheat is required Titanium immersion heaters must be fitted in order to comply with the warranty.

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 2.5mm<sup>2</sup> 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.

## ENERGY CUT OUT AND CYLINDER THERMOSTAT (INDIRECT ONLY)

As a requirement of Building Regulations the iSteel 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



This guidance is available as a download of the G3 Approved Document from [www.planningportal.gov.uk](http://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.
- Be installed with a continuous fall.
- It is preferable for the discharge to 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 acceptable discharge arrangements are:

1. Ideally below the fixed grating and above the water seal in a trapped gully.
2. Downward discharges at a low level; i.e. up to 100mm above external surfaces such as car parks, hard standings, grassed areas etc. are acceptable providing that where children play or otherwise come into contact with discharges, a wire cage or similar guard is positioned to prevent contact whilst maintaining visibility.
3. Discharges at a high level; e.g. in to 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 and 3m from any plastic guttering systems that would collect such discharges (tundish available).
4. 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 larger than the largest individual discharge pipe to be connected. If unvented hot water storage systems are installed where discharges from safety devices may not be apparent i.e. in dwellings occupied by blind, infirm or disabled people, consideration should be given to the installation of an electronically operated device to warn when discharge takes place.

**Any queries with regard to discharge arrangement contact your local council planning 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 iSteel 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 VARIANT

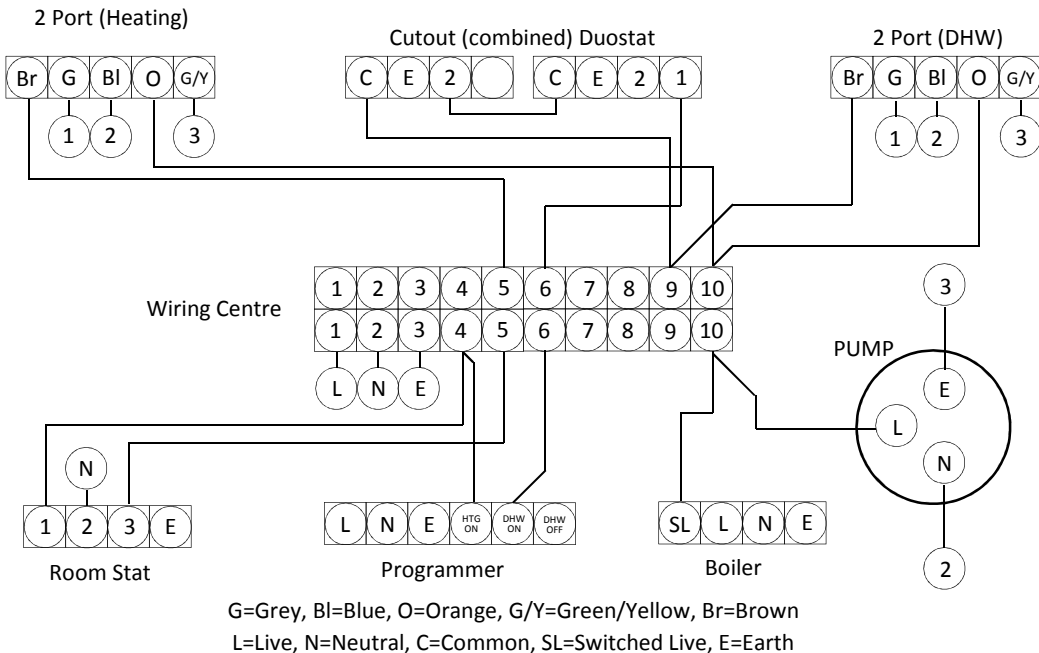
In a solar system the lower coil is connected to the solar heat source. Either primary coil connection may be used for flow or return. The solar cylinder sensor supplied is inserted into the lower thermostat pocket and the energy cut out into the upper pocket. The 'mechanical' control thermostat is not 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.

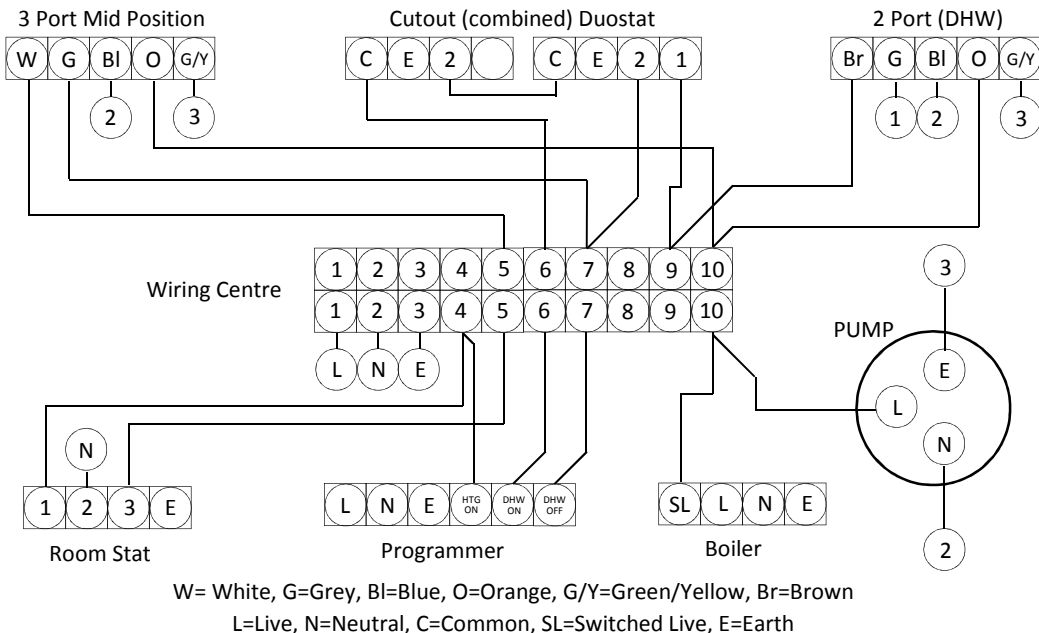
### LOWER COIL – NON SOLAR VARIANT

This is connected to the additional boiler as per the instructions for a iSteel 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.

## WIRING DIAGRAM 2 X 2 PORT ZONE VALVES (TYPICALLY HONEYWELL "S" PLAN)



## WIRING DIAGRAM 3 PORT + 2 PORT ZONE VALVES (TYPICALLY HONEYWELL "Y" PLAN)



## COMMISSIONING SERVICING

### FILLING

Check all connections for water tightness including any factory made connections such as the temperature and pressure relief valve. 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 iSteel 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.

### DIRECT UNITS

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 pre-set at 55°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 65°C as required.

### STORAGE TEMPERATURE

A storage temperature of 60-65°C is normal for both direct and indirect iSteel. In hard water areas consideration should be given to reducing this to 55-60°C. In many healthcare applications the guidance on Legionella control and safe water delivery temperatures will require storing the water at 60-65°C, distributing at 50-55°C and using thermostatic mixing valves to control the final temperature. For details consult the NHS estates guidance on safe hot water temperatures.

### 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.

### GENERAL

Servicing should only be carried out by competent installers and any spare parts used must be purchased from ATAG Heating Technology UK Ltd. NEVER bypass any safety devices or operate the unit without them fully operational.

### 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.

**WARNING: THE WATER DISCHARGED MAY BE VERY HOT!**

2. 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 65°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 re-pressurise 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 should be updated at each service.

**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

The iSteel 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.
- It has not been modified in any way, other than by ATAG Heating Technology UK Ltd.
- 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.
- The unit has been serviced annually.
- The benchmark service record has been filled in after each annual service.
- 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 65 °C.
- Installations are made only in the UK & Republic of Ireland.
- The water supply does not have a Chloride content greater than 250ppm.
- 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 iSteel carry a 2 year guarantee. The guarantee starts when the cylinder is first filled.

## EXCLUSIONS – THINGS THE GUARANTEE DOES NOT COVER

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.

## 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 iSteel 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 check sheet. 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 INSTRUCTIONS

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

### **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.

## PLEASE NOTE

Before making any claim/return on a iSteel Cylinder or Component, please make sure you have run through the following fault finding options and check the offending item is less than one year old or the unit has been serviced every 12 months in line with the Benchmark Scheme.

Proof of this will be required when returning any part, also note all components are date stamped. Failure to do this will result in any credit/claim being rejected.

## FAULT FINDING INFORMATION

### UNVENTED CYLINDER

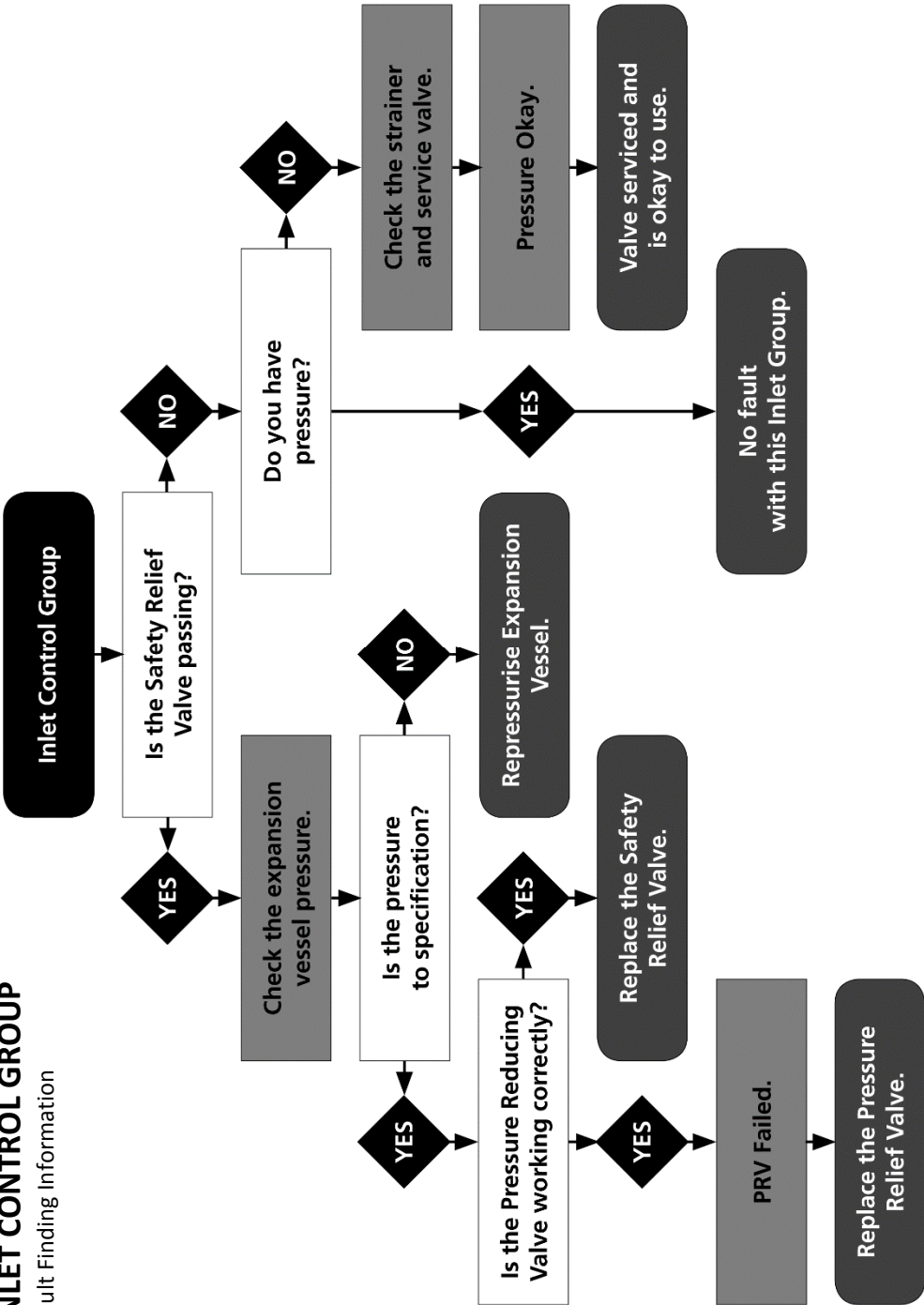
Symptoms	Possible causes	Follow up action
Cylinder appears to leak from within the case.	Loose cylinder Connection.	Check all connection points including immersion heaters to ensure integrity of joint and remake any suspect joints.
Expansion valve operates and water is visible at the Tundish.	Possible 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 re-pipe 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.
Reduced Water flow.	External work to public mains.	Wait for works to be completed.
	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

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 manufacturer's 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 full 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.

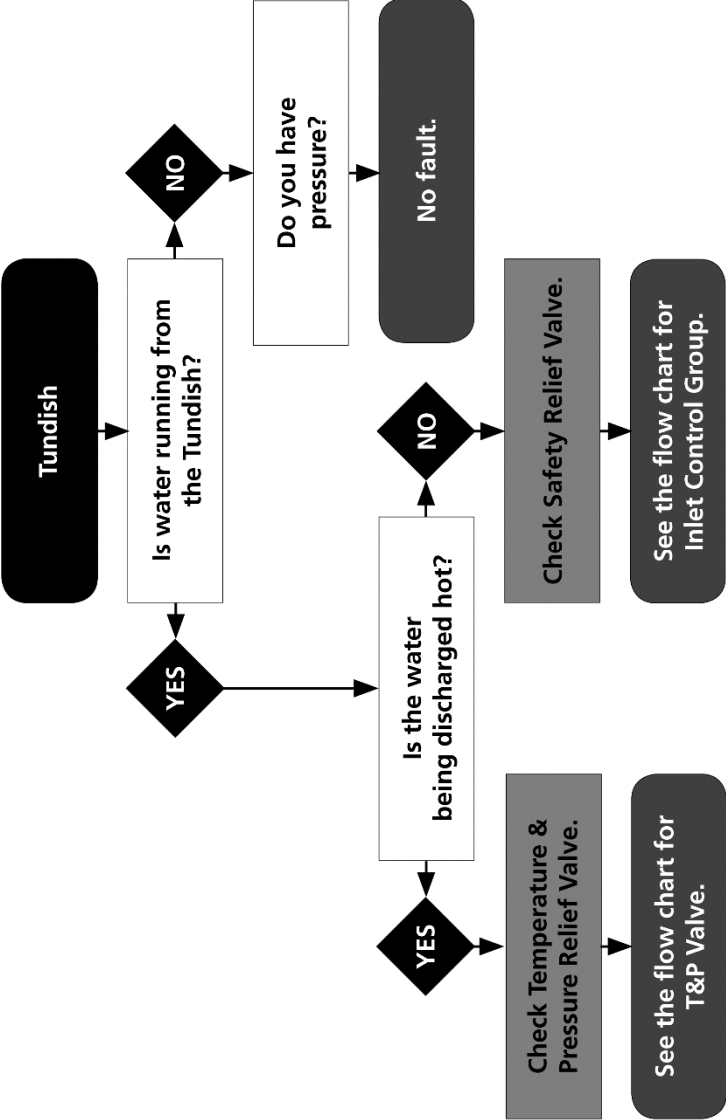
# INLET CONTROL GROUP

Fault Finding Information



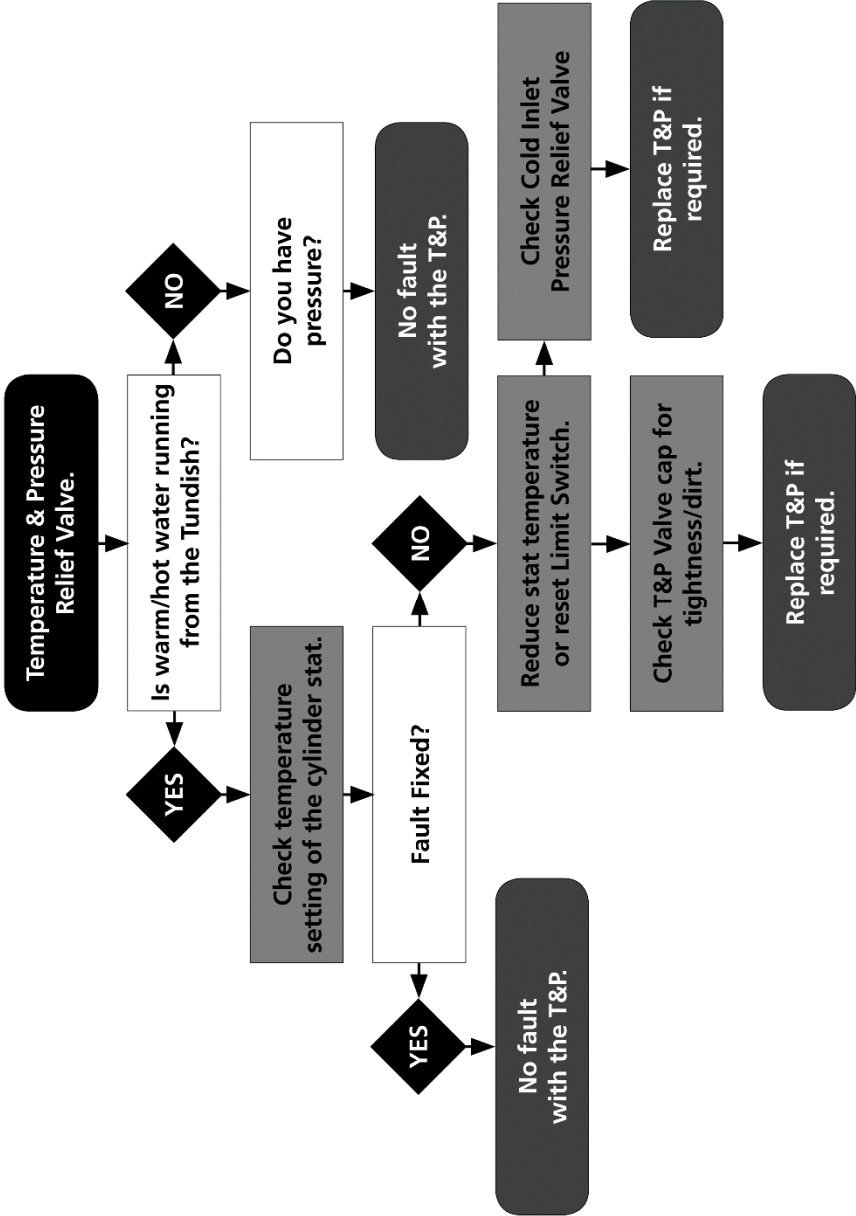
# TUNDISH

Fault Finding Information



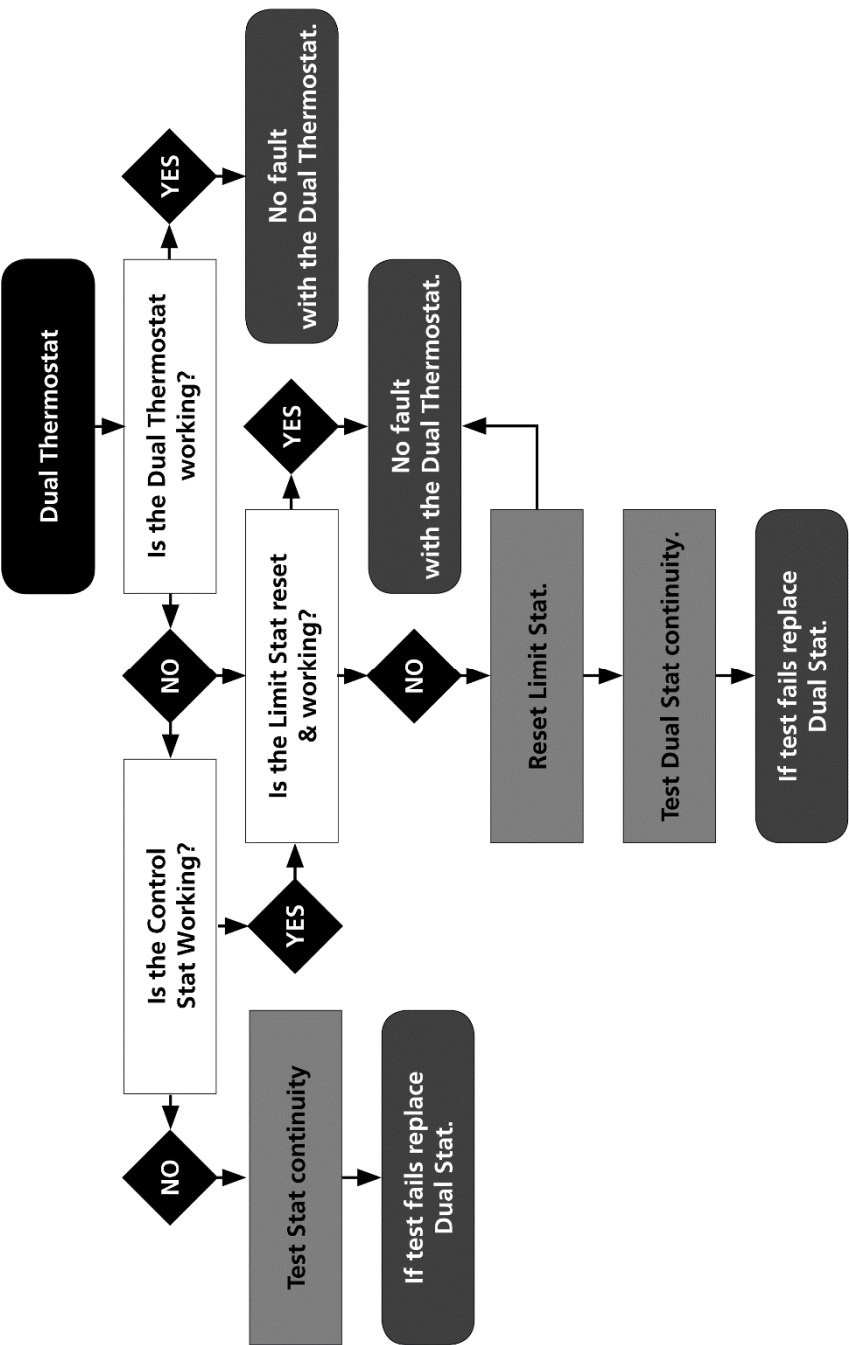
# T&P RELIEF VALVE

Fault Finding Information



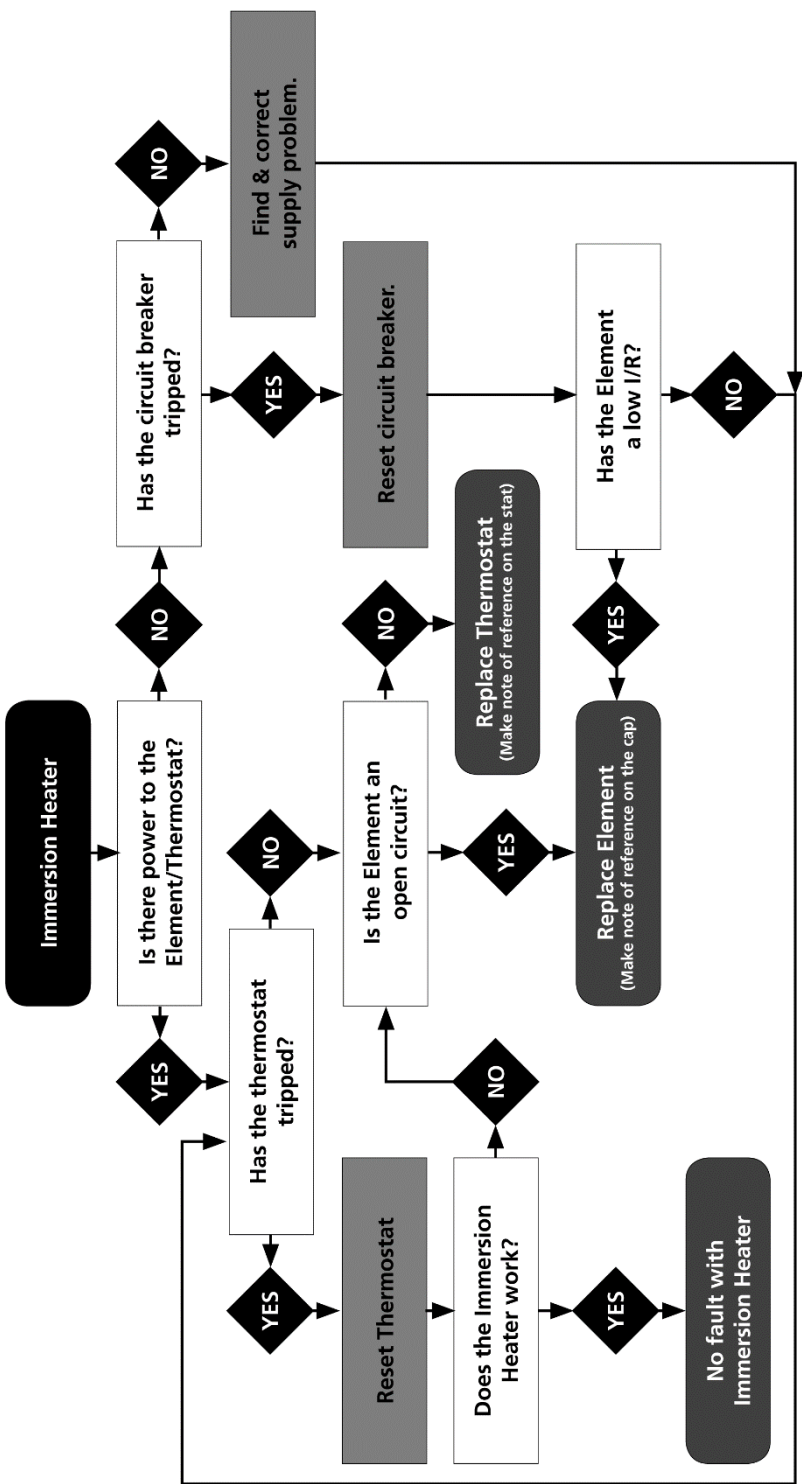
# DUAL THERMOSTAT

Fault Finding Information



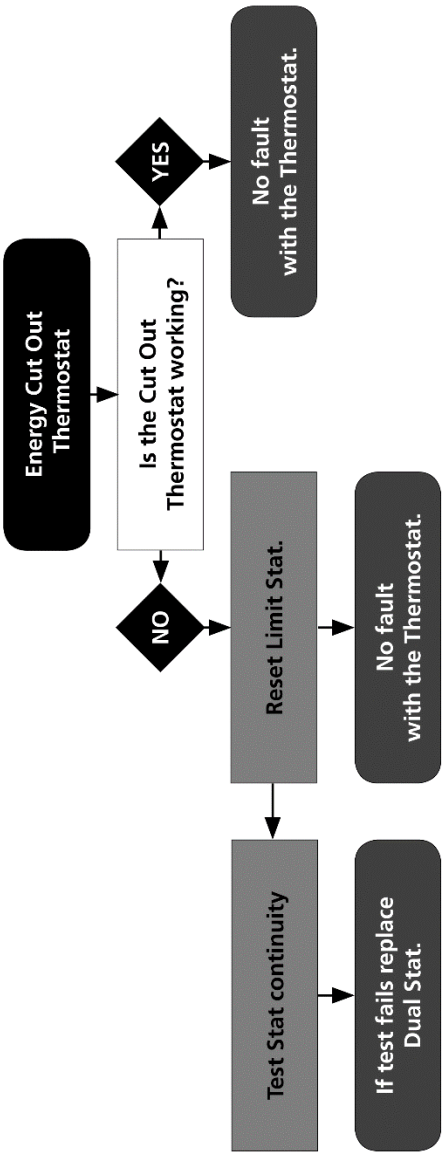
# IMMERSION HEATER

Fault Finding Information



# ENERGY CUT OUT

Fault Finding Information







# 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

Engineer Name

Company Name

Telephone Number

Comments

Signature

SERVICE 2

Date

Engineer Name

Company Name

Telephone Number

Comments

Signature

SERVICE 3

Date

Engineer Name

Company Name

Telephone Number

Comments

Signature

SERVICE 4

Date

Engineer Name

Company Name

Telephone Number

Comments

Signature

SERVICE 5

Date

Engineer Name

Company Name

Telephone Number

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SERVICE 6

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Engineer Name

Company Name

Telephone Number

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Signature

SERVICE 7

Date

Engineer Name

Company Name

Telephone Number

Comments

Signature

SERVICE 8

Date

Engineer Name

Company Name

Telephone Number

Comments

Signature

SERVICE 9

Date

Engineer Name

Company Name

Telephone Number

Comments

Signature

SERVICE 10

Date

Engineer Name

Company Name

Telephone Number

Comments

Signature

## CONDITIONS OF SALE

1. Definitions  
"Buyer" means the person who makes a quotation of the Company for the sale of the Goods or whose order for the Goods is accepted by the Company  
"Company" means ATAG Heating Technology UK Ltd.  
"Conditions" means the terms and conditions of sale set out in this document and all special terms and conditions agreed in writing by the Company and the Buyer  
"Contract" means the contract for the purchase and sale of the Goods  
"Price" means the goods and the Company is to supply and which the Buyer agrees to buy in accordance with these conditions  
"Price" means the price for the Goods including transport and insurance (if any) at that time  
1.2 Any reference in these Conditions to any provision of a statute shall be construed as a reference to that provision as amended re-enacted or extended at any time  
1.3 The headings in these Conditions are for convenience only and shall not affect their interpretation  
2. Basis of sale  
2.1 The Company shall sell and the Buyer shall purchase the Goods in accordance with:-  
2.2 The Company's quotation (if provided by the Company) accepted in writing by the Buyer; or  
2.1.2 If the Buyer does not submit a quotation and following a request or order from the Buyer for the 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.  
2.3 Any variation to these Conditions (including any special terms and conditions to which the parties) shall be inoperative unless agreed in writing by the Company  
2.3.1 Any advice or recommendation given by the Company or its employees or agents to the Buyer or the Company in writing shall not be relied upon in 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 Any typographical clerical or other error or omission in any sales literature (such as price lists) or in any correspondence or other documents or information issued by the Company shall be subject to correction without any liability on the part of the Company  
2.5 Any specifications for the Goods for particulars of weight and dimension and performance data contained in any of the Company's literature are approximate only  
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 or any other agreement or correspondence or other documents or information issued by the Company or any Contract whereby pursuant to the Contracts (Rights of Third Parties) Act 1999 or otherwise  
2.8 The Price and payment  
2.8.1 The Price shall be:-  
3.1 The Company's quoted price which shall only be valid for 30 days from the date after which the time the Price may be altered by the Company and shall be subject to the Company's quotation (if provided by the Company) accepted in writing by the Buyer  
3.1.2 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.  
3.1.3 Where no other price has been quoted the Price shall be the then current list of the Company or otherwise agreed in writing between the Buyer and the Company, all prices are given by the Company to include the Company's standard freight and transport charges  
3.1.3 The Price and any other sums payable by the Buyer to the Company is exclusive of any applicable Value Added Tax, which the Buyer shall be additionally liable to pay to the Company  
3.4 [Subject to any special terms agreed in writing between the Buyer and the Company,] the Company may invoice the Buyer for the Price of the Goods on or at any time after delivery of the Goods, (or any instalment of the Goods) unless the Goods are to be collected by the Buyer or the Buyer wrongfully fails to take delivery of the Goods, in which event the Company shall be entitled to invoice the Buyer for the full price of the Goods and the Buyer shall pay to the Buyer that the Goods are ready for collection or (as the case may be) the Buyer has tendered delivery of the Goods.  
3.4.2 The Buyer shall be deemed to have accepted the Price and VAT shall be taken within the agreed period from the date of the invoice without deduction or set off. Time for payment shall be of the essence  
3.5 Where the Buyer fails to make any payment on the due date then without prejudice to any other right or remedy available to the Company the Company shall be entitled to:-  
3.5.1 to cancel the contract or suspend any further deliveries to the Buyer  
3.5.2 appropriate any payment made by the Buyer to such of the Goods (or the Goods supplied under any other contract between the Buyer and the Company) as the Company may think fit (notwithstanding any purported appropriation by the Buyer) and  
3.5.3 charge the Buyer interest (both before and after any judgement) on the amount of any payment due at the time of payment and thereafter at the base rate from time to time until payment in full is made (a part of time being treated as a full time for the purpose of calculating interest)  
3.6 The Goods  
4.1.1 The quantity and description of the Goods shall be as set out in the Company's quotation or in the Company's offer (as the case may be); and the Company's liability and the Buyer's obligation shall be as set out in the Company's quotation or (where there is no quotation) in the Company's literature and brochure 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 specifications) submitted by the Buyer and for giving the Company any necessary information relating to the Goods within a sufficient time to enable the Company to perform the Contract in accordance with the requirements of the Goods.  
4.3 If the Goods are to be manufactured or any process is to be applied to the Goods by the Company in accordance with a specification submitted by the Buyer, 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 specifications) submitted by the Buyer and for giving the Company any necessary information relating to the Goods within a sufficient time to enable the Company to perform the Contract in accordance with the requirements of the Goods.  
4.4 No order which has been accepted by the Company may be cancelled by the Buyer except with the agreement in writing of the Company and on terms and conditions that the Buyer shall be liable to the Company for the cost of the Company in full against all loss (including loss of profit) costs (including the cost of all labour and materials used) damages charges and expenses incurred in connection with the cancellation of the order and the Goods are cancelled as a result of cancellation  
4.5 All designs, sketches, or similar articles supplied by or submitted in writing by the Company shall remain the property of the Company and may not be disclosed by nor used by nor copied or otherwise reproduced by the Buyer without the prior written consent of the Company.  
4.6 Delivery of Goods  
5.1 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 and on such date or part date as the Buyer may specify in writing 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, bylaws or restrictions as to parking or delivery vehicles at the delivery address  
5.3 The Buyer shall be responsible for ensuring that access to the delivery address is wholly by a road with a surface capable of withstanding the weight and dimensions of the vehicle used for delivery  
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. The Buyer shall be responsible for the essence unless previously agreed in writing 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 delivered in accordance with these Conditions the Buyer shall constitute a separate contract and failure by the Company to deliver any one

or more of the instalments in accordance with these Conditions or any claim by the Buyer in respect of any one or more instalments shall not entitle the Buyer to treat the Contract as a whole as repudiated  
5.6 Where the Buyer is responsible for any reason for failure 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) the Buyer shall be liable to the Company for the cost of the prejudice to any other right or remedy available to the Company the Company may wish:-  
5.6.1 to store the Goods until actual delivery and charge the Buyer for the reasonable costs (including insurance) of returning the Goods to the Company's premises, storage and for transport, packaging and insurance for the Goods  
5.6.2 sell the Goods at the best price readily obtainable (and after deducting all reasonable storage and selling expenses) account to the Buyer for the price of the Goods and the Buyer shall be liable to the Company for the cost of the Goods  
5.8 The Goods may not be returned to the Company except by prior written permission of an authorised officer of the Company and such return shall be subject to payment by the Buyer of all the costs of re-stocking, charges, transport and all other costs incurred by the Company  
6. RISK AND RETENTION OF TITLE  
6.1 The risk of the Goods shall be at the Buyer's risk immediately upon delivery to the Buyer or into custody on the Buyer's behalf or to the Buyer's Order. The Buyer shall effect adequate insurance of the Goods against all risks to the full value of the Goods and the Buyer shall be liable for the loss from the time of delivery until property in the goods shall pass to the Buyer as hereinafter provided.  
6.2 property in the goods supplied hereunder will pass to the Buyer when full payment has been made by the Buyer to the Company for :-  
6.2.1 the goods of the subject of this contract.  
6.2.2 the goods of the subject of any other contract between the Buyer and the Company which, at the time of payment of the full price of the goods sold under this contract, have been delivered to the Buyer but not paid for in full.  
6.3 until property in the goods supplied hereunder passes to the Buyer in accordance with paragraph (3) above.  
6.4 The Buyer shall be liable for any loss of the full capacity for use and shall store the same separately from any other goods in the Buyer's possession and in a manner which enables them to be identified as our goods.  
6.5 The Buyer shall be liable to return the Goods to the Company should the Company's authorised representative so request. All the necessary incisions associated with a fiduciary relationship shall apply.  
6.6 The Buyer shall be liable to return the Goods to the Company forthwith upon the happening of any of the following events, namely:-  
6.4.1 if the Buyer fails to make payment in full for the goods within the time specified in the contract or in writing by the Company  
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 renders possession and control of his or her property in jeopardy  
6.4.3 if the Buyer, being a company, does anything or fails to do anything which would enable an administrator or an administrative receiver or a receiver to take possession and control of his or her property  
6.5 The Buyer hereby grants to the Company an irrevocable licence to enter at any time any hereditaments or premises occupied by the Buyer or in the possession or control of the Buyer or of any person or company or firm or such goods the property in which has remained in the Company under paragraph (2) above. The Company shall not be responsible for and the Buyer shall be responsible for any loss or damage caused by the removal of such any vehicle or premises in such repossession and removal being damaged which it was not reasonably practicable to avoid.  
6.6 The Buyer shall be liable to return the Goods to the Company (3) hereof, the Buyer shall be permitted to sell the goods to third parties in the normal course of business. In this respect the Buyer shall act in the capacity of the Company's 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 identified as such;  
6.6.2 shall be paid to us by other monies not paid into an overdraft bank account. The Company, as principal, shall remunerate the Buyer as commission agent a commission depending upon the surplus which the Buyer may realise in the sale of the goods, stipulated in the contract or in writing, which will satisfy the Company.  
6.7 in the event that the Buyer shall sell any of the goods pursuant to clause 6.6 the Buyer shall forthwith inform the Company of the sale and of the sale and of the identity and address of the third party to whom the goods have been sold.  
6.8 the property in the goods passes to the Buyer under paragraph (3) above the goods are or become affixed to any land or building owned by the Buyer it is hereby agreed and declared that such affixation shall not have the effect of transferring the property in the goods to the land or building, the property in the goods shall pass to the Buyer under paragraph (3) hereof, the goods are or become affixed to any land or building (whether or not owned by the Buyer) the property in the goods may incur or sustain as a result of affixation or removal.  
6.8 in the event that, before property in the goods has passed to the Buyer under paragraph (3) hereof, the goods are or become lost, stolen, damaged or destroyed :-  
6.9.1 the Buyer shall forthwith inform the Company in writing of the fact and circumstances of such loss, theft, damage or destruction.  
6.9.2 the Buyer shall assign to the Company the benefit of any insurance claim in respect of the goods so lost, stolen, damaged or destroyed.  
7. Warranty  
7.1 The Company warrants FOR THE GOODS THAT THE GOODS IN THE UK ONLY  
7.1.1 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 the date of delivery of the Goods to the Buyer. If the Goods are specified in the product installation instructions in respect of that product and/or its specific warranty terms, or specified components thereof.  
7.2 The warranty in clause 7.1 is given by the Company subject to the following conditions:-  
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 the Buyer  
7.2.2 the Company shall be under no liability in respect of any defect arising from fair wear and tear, willful damage, negligence, abnormal working or use of the Goods, or from any other cause other than that in the terms of the warranty in clause 7.1 is given by the Company in writing (whether oral or in writing) misuse or alteration or 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 property, caused by failure of the Company's Goods. Any such costs incurred shall be claimed by the Buyer from the Buyer's customer or guarantor  
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 Company's standard warranty or guarantee as is given by the manufacturer to the Company  
7.3 the Buyer shall not make any statement or representation or give any warranty or make any claim or demand or other thing 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 connection with the Goods or to indemnify the Company for any loss or damages, damages, costs, claims, demands, liabilities and expenses incurred or suffered by the Company in respect of or arising out of any such statement, representation or warranty made or given by the Buyer in contravention of this clause.  
7.4 The Company's liability to the Buyer for:-  
7.4.1 death or personal injury or to 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

7.5 Subject as expressly provided in these Conditions all other warranties conditions or terms whether implied by statute or common law or otherwise are hereby 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 any cause beyond the Company's reasonable control or the Buyer's liability shall be limited to the excess (if any) of the cost to the Buyer (in the cheapest available market) of similar goods to replace those not delivered over the Price of the Goods  
7.7 The Buyer shall examine all Goods delivered forthwith following delivery. Any claim by the Buyer which is based on any defect in the quality or condition of the Goods or their failure to correspond with specification shall (whether or not the defect is reflected by the Buyer) be notified to the Company within 7 days from the date of delivery or (where the defect or failure was not apparent on reasonable inspection) within a reasonable time after discovery of the defect being notified to the Buyer in writing by the Buyer. If the defect or failure is accordingly the Buyer shall not be entitled to reject the Goods and the Company shall have no liability for such defect or failure and the Buyer shall be limited to the excess (if any) of the cost to the Buyer (in the cheapest available market) of similar goods to replace those not delivered over the Price of the Goods  
7.8 The Company shall be entitled to examine any Goods which are the subject of any claim by the Buyer and to remove such Goods or any part thereof for testing. No tests carried out by the Buyer shall be recognised as such by the Company unless carried out strictly in accordance with a method previously agreed by the Company as being suitable for the purpose.  
7.9 Where any valid claim in respect of any of the Goods which is based on any defect in the quality or condition of the Goods or their failure to meet specification is notified to the Company in accordance with these Conditions and the Buyer shall be entitled to a refund of the full price of the Goods (or portion) free of charge or at the Company's sole discretion refund to the Buyer the Price (or a proportionate part of the Price) but the Company shall be liable to pay the Price as if the Goods had been delivered in accordance with the Contract. In no event shall the Buyer be entitled to reject the Goods on the basis of any defect or failure which is so slight that it would be reasonable for the Buyer to use the Goods.  
7.10 Where failed Goods are returned to the Company and subsequently found to have no fault found or failed due to reasons) (other than these terms and conditions, the Buyer reserves the right to claim any subsequent costs entailed, from the Buyer.  
7.11 Without prejudice to the provisions of clauses 7.5, 7.6, 7.7, 7.9 and 7.10 the Buyer shall be liable to the Company 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 contract or to be liable to the Buyer for any reason other than the performance of any of the Company's obligations in relation to the Goods if the delay or failure was due to any cause beyond the Company's reasonable control or the Buyer's liability or the Buyer's failure to deliver the Goods as caused beyond the Company's reasonable control.  
7.12.1 act of God, explosion, flood, tempest, or inclement weather, fire or other cause beyond the Company's reasonable control  
7.2.2 war or threat of war, sabotage, insurrection, civil disturbance or requisition;  
7.2.3 acts, 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 or not the employees of the Company are involved);  
7.12.6 difficulties in obtaining raw materials, labour, fuel, parts or machinery;  
7.12.7 power failure, failure of tele-communications links, failure of tele-communications or other machinery or plant;  
7.12.8 theft or malicious damage;  
7.12.9 defaults for any reason whatsoever 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  
7.12.11 insolvency, the liquidation or the bankruptcy of any of the parties to the Contract.  
8.1 This clause applies if:-  
8.1.1 the Company makes any composition or voluntary arrangement with its creditors or is being liquidated or becomes bankrupt or Being a company 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 an arrangement with creditors) or is subject to an order of the court in respect of the Buyer (within the meaning of the Insolvency Act 1986); or  
8.1.2 an encumbrancer takes possession or a receiver or manager or other person takes possession or control of any of the property or assets of the buyer; or  
8.1.3 the Buyer becomes or threatens to cease to carry on business or to become bankrupt or to be liquidated or to become bankrupt or the property above is about to occur in relation to the Buyer and notifies the Buyer accordingly  
8.2 If any of the above applies then without prejudice to any other right or remedy available to the Company the Company shall be entitled to stop any Goods in transit, cancel the Contract or suspend any further deliveries under the Contract without any liability to 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 arrangement to the contrary  
8.3 Health and Safety  
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 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 it is 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  
10.1 The Contract is personal to the Buyer which may not assign or dispose of any of its rights or obligations or otherwise delegate any of its obligations under the Contract to any other person or 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 Contract to any other person or company.  
10.3 Any notice required or permitted to be given by either party to the other under these Conditions shall be in writing including a facsimile addressed to the relevant party or to the relevant party's solicitor or to the relevant party or other address as may at the relevant time have been notified pursuant to this provision to the party giving the notice and shall be deemed to have been received by the party to whom it is addressed at the time of its transmission if during normal business day and otherwise by the next business day and if sent by post, 72 hours after posting.  
10.4 Notwithstanding the provisions of clause 10.3, any notice given by the Buyer to the Company shall be deemed to have been received by the Company at the same time as any other provision 10.5 if any provision of these Conditions is held by a Court or other competent authority to be invalid or unenforceable in whole or in part then the provisions of these Conditions shall remain valid and the remainder of the provision in question shall not be affected thereby  
10.6 The Contract and these Conditions shall be governed by the laws of England  
10.7 The parties hereby submit to the non-exclusive jurisdiction of the English courts.  
11. Indemnity  
The Buyer shall indemnify the Company for all costs and damages, including attorneys' fees, suffered by the Company as a result of the Buyer's actual or threatened breach of these terms and conditions.  
12. Information  
The Company will provide the Buyer on request with information as to the proper and safe use of the Goods and the Buyer shall at all times obey and comply with the Company's instructions or other information relating to the use of the Goods  
Specific product warranty terms are available on request.  
Terms & Conditions may change without prior notice being given, for up to date terms please access [www.atagheating.co.uk](http://www.atagheating.co.uk)

Essential Cylinder Information
Maximum Water Supply Pressure – <b>16 Bar</b>
Immersed Electric Element Rating – <b>3kW</b>
Operating Pressure – <b>3 Bar</b>
Expansion Vessel Charge Pressure – <b>3 Bar</b>
Expansion Valve Setting – <b>6 Bar</b>
Set Opening Pressure Of Combined T&P Valve – <b>7 Bar</b>
Storage Capacity – <b>See Cylinder Info Table</b>
Mass Of Unit – <b>See Cylinder Data Table</b>
Immersion Heater Length – <b>14"</b>
Maximum Primary Pressure (Indirect Only) – <b>3 Bar</b>

Cylinder Data Table		Capacity	Weight (Kg) Empty
iSteel 90	Direct	90	21
	Indirect	88	27
iSteel 120	Direct	120	25
	Indirect	118	31
iSteel 150	Direct	150	30
	Indirect	148	35
	Twin Coil	147	40
iSteel 180	Direct	180	32
	Indirect	178	39
	Twin Coil	177	42
iSteel 210	Direct	210	37
	Indirect	208	44
	Twin Coil	207	47
iSteel 250	Direct	250	44
	Indirect	248	50
	Twin Coil	247	53
iSteel 300	Direct	300	50
	Indirect	298	57
	Twin Coil	297	62