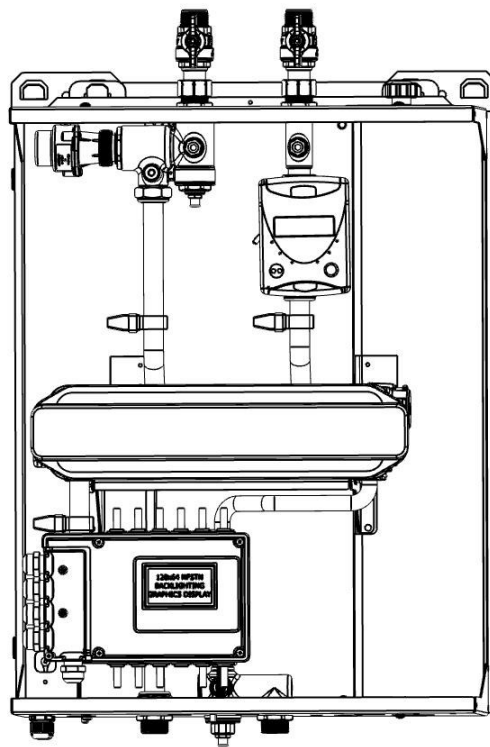




Installation and Operating Manual



V4 Hiper II Single Plate Heat Interface Unit Instantaneous hot water only

In this document Inta have endeavoured to make all the information and procedures accurate. Inta cannot accept responsibility should it be found that in any respect the information is inaccurate or incomplete as a result of future developments.

inta



Required Hiper HIU documents.

1. Installation and Operating Manual (this document)
2. Operation and Maintenance record. (included with the HIU)
3. Commissioning report (included with the HIU)
4. Programming Guide (available on request, contact Inta before commissioning)



Annual servicing is required to ensure that the conditions of the warranty are met.

SECTION 1 - Important information and introduction

These instructions describe the installation and operation and fault finding diagnostics of the Hiper II V4 Heat Interface Unit (HIU). For operation of the entire plant, the technical documentation of all the components used such as, boiler, tank, pumps, pipework and valves must be complied with. Inta does not accept any responsibility for the design and performance of the heat network or components outside of the HIU, demarcation being the HIU isolation valves at the connection to the HIU.

Installation should only be carried out by a qualified and competent plumbing installer and a qualified and competent electrical installer in accordance with the current Building, Water and Electrical Regulations, Legislation and Standards. Do not start installation until you have thoroughly read and understood all the Installation and Operating Instructions as listed above, and have complied with all safety provisions required.

Symbols used in these documents



DANGER – immediate risk of physical injury or even death.
DANGER – immediate risk of serious damage.



IMPORTANT – information critical to the installation or installer.
IMPORTANT – information critical to the user.



NOTE – useful information regarding the operation or installation of the HIU.



Do not tamper or make any alteration to the earthing connections provided as indicated on the casing with the provision of an earthing label.
One earthing point is on the outside of the lower casing, underneath the HIU. The other is inside the HIU on the casing backplate. Each earthing connections is provided with a metric M4 screw and locking washer.

Earthing label

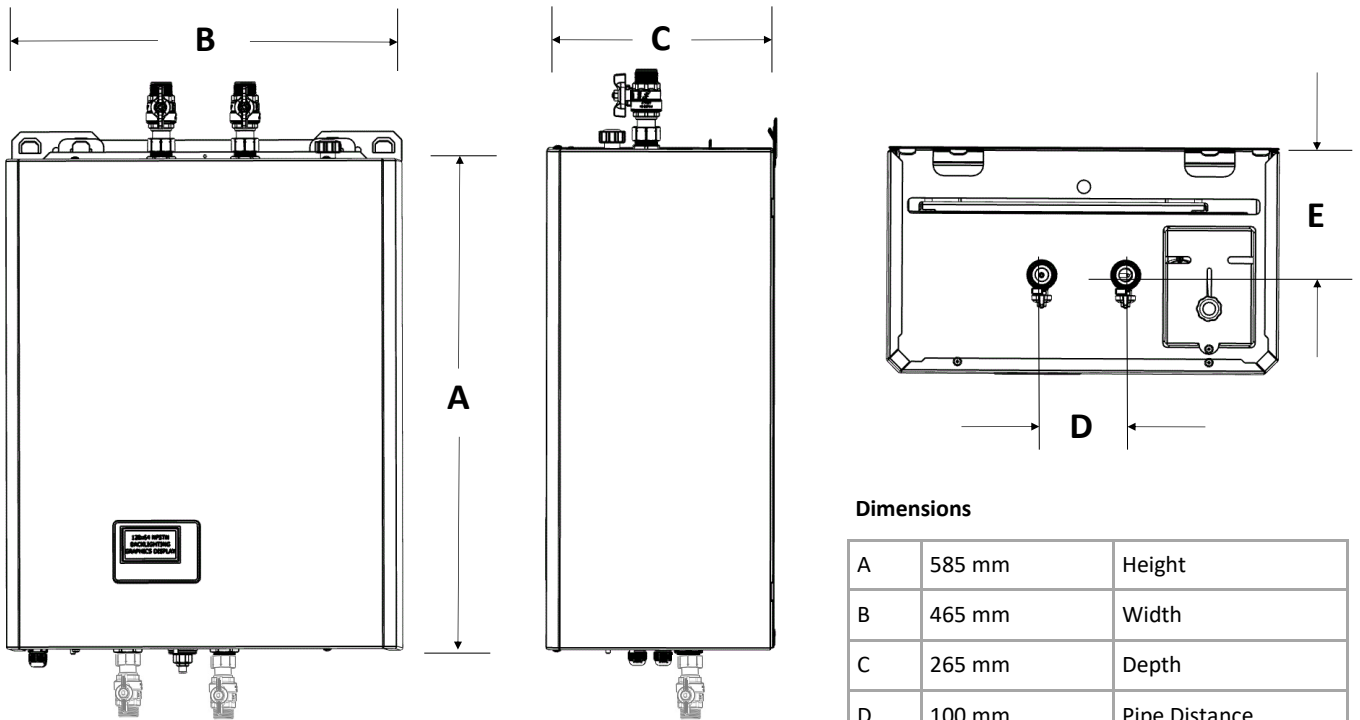


SECTION 2 - Dimensions and components

Description

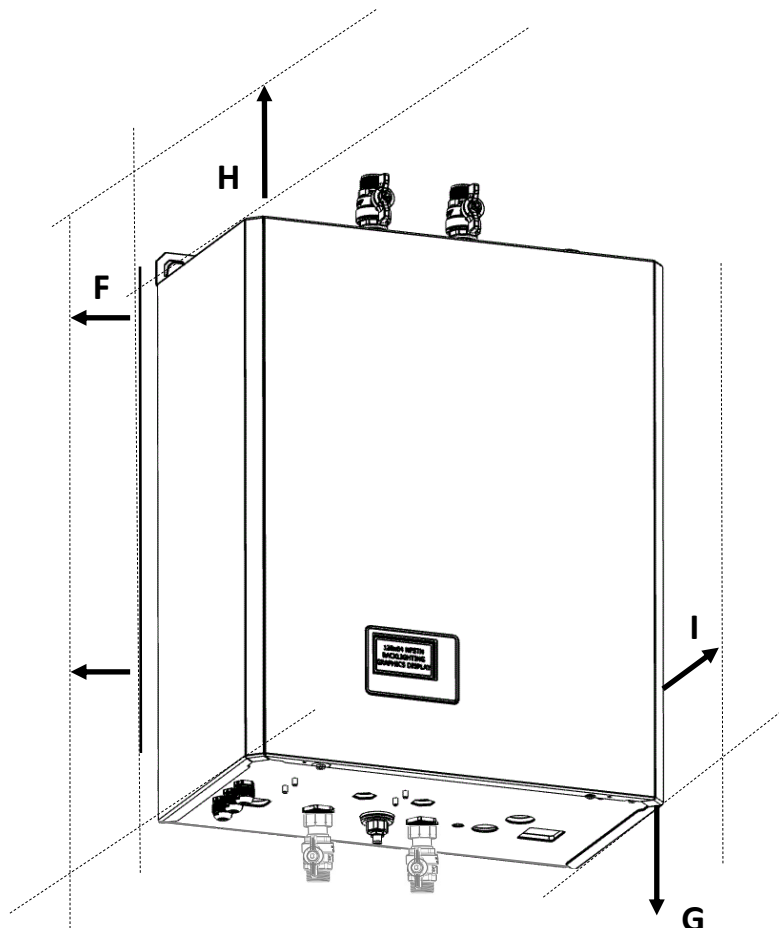
V4 Hiper II Hot Water ONLY Heat Interface Unit

V4 Hiper II Hot Water ONLY Heat Interface Unit with fitted Heat Meter



Dimensions

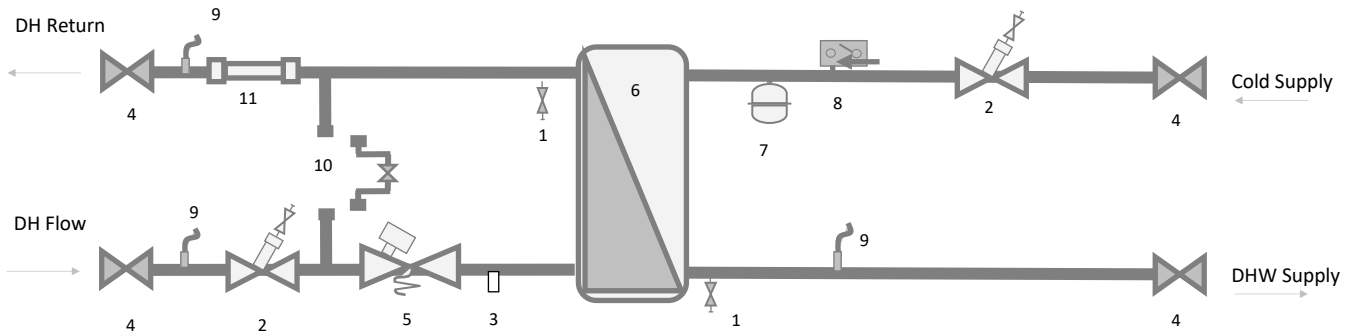
A	585 mm	Height
B	465 mm	Width
C	265 mm	Depth
D	100 mm	Pipe Distance
E	140 mm	Pipe Distance







Clearances





F	Sides	30mm
G	Below	300mm
H	Above	200mm
I	In front	50mm




Schematic V4 Hiper II HIU

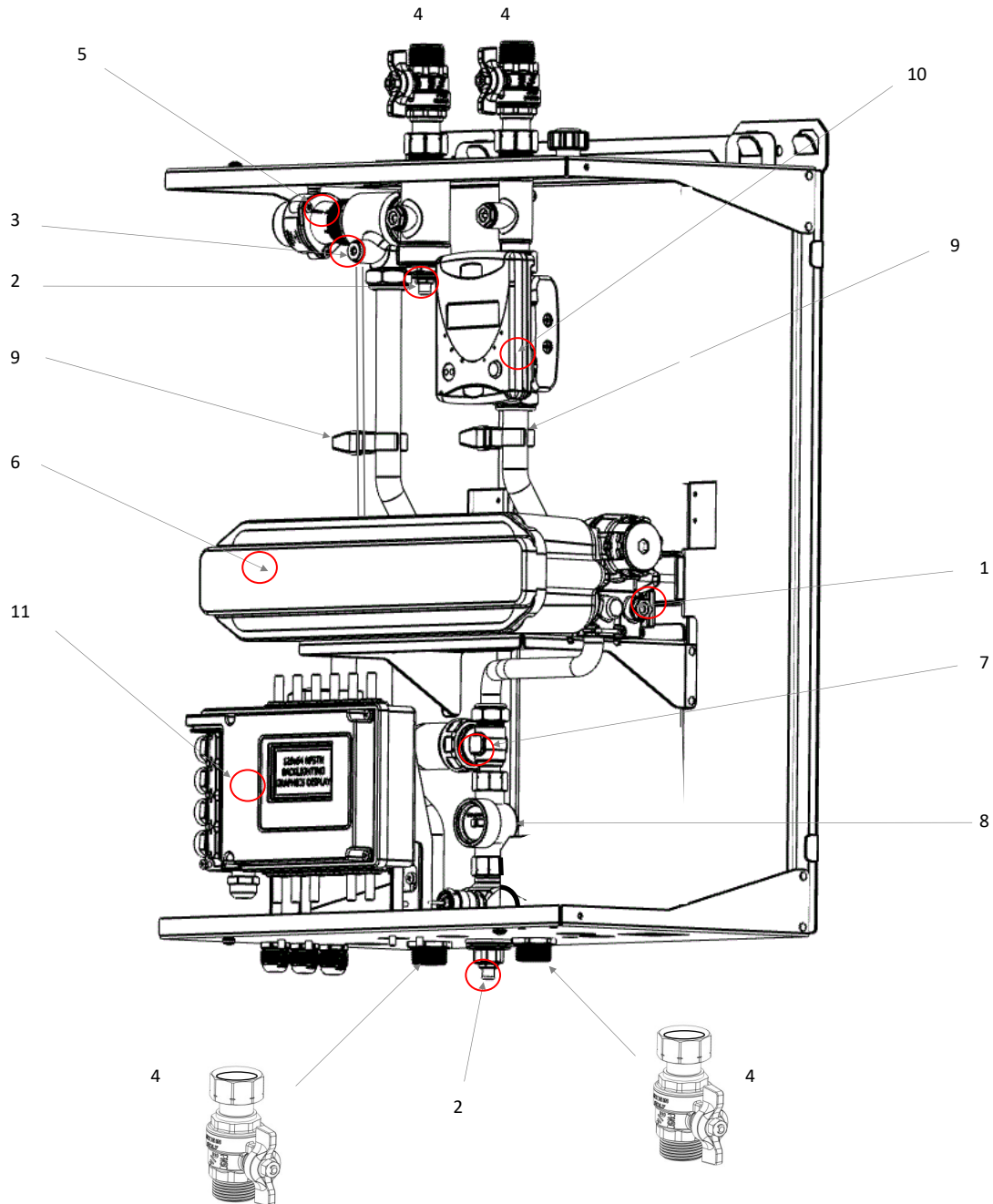


Key to symbols

1		Drain valve / air venting
2		Strainer with drain valve
3		Pocket for heat meter sensor
4		Isolation Valves Red - Flow Blue - Return

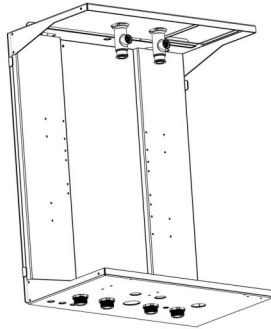
5		Pressure independent control valve (PICV)
6		Plate heat exchanger (PHE)
7		Shock arrester
8		Flow meter switch

9		Temperature sensors
10		Flushing bypass accessory
11		Heat Meter position or spacer pipe



1. Drain / air venting
2. Strainer with drain valves
3. Pocket for heat meter strainer
4. Isolation Valves
5. Pressure independent control valve & actuator
6. DHW Plate heat exchanger
7. Shock arrester
8. Flow meter switch
9. Temperature sensor
10. Heat meter (or 110mm spacer pipe)
11. Electronic PID Controller

First fix JIG. - HI2ACJIG



Accessories - 'First Fix Jig'

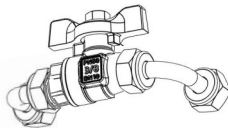
The installation plan may require pipe work to be made up to the position where the HIU is to be installed, but at this stage not involve installing the HIU itself. At this 'first fix' stage not having the HIU in position eliminates risk of damage or even vandalism while the property is not secure.

Using the Jig allows pipe work to be installed without the HIU and saves the cost of the purchase of a 'first fix rail' for every HIU.

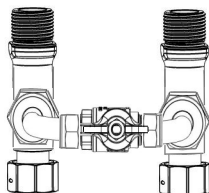
Flushing Kit options



HI2AKITA



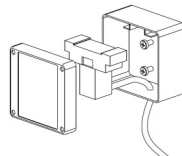
HI2AKITB



HI2AKITC



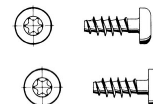
Insulation jacket for HIU isolation valve.ARM022129



Prepayment relay for 230v. HIAC04230KIT



ZE102C5 Zenner Ultrasonic Heat Meter



Anti tamper fixing screws HIAC05SSPACK

ACCESSORIES for HIPER 2 TWIN PLATE HIU	Part Code
Flushing By Pass Kit A (temporary pipe).	HI2AKITA
Flushing By Pass Kit B (Fixed connection to HIU with shut off valve).	HI2AKITB
Flushing By Pass Kit C (External valve and tee fittings).	HI2AKITC
First fix JIG.(use as a template for first fix piping, use with HIACPFKIT)	HI2ACJIG
Prepayment relay (for billing systems using a 230v signal).	HIAC04230KIT
Security - anti tamper fixing screws + driver.	HIAC05SSPACK
Insulation jacket for HIU isolation valve.	ARM022129
ZE102C5 Zenner Ultrasonic Heat Meter with Mbus.	ZE102C5

5.1 Before installation read and comply with the following



Comply with all safety provisions. Do not tamper with the earthing connections as indicated on the casing. To secure the casing when closing the cover, use the provided M4 screw and washer provided to ensure earth continuity on the casing.



The Installer's Responsibility -in accordance with Part L of the Building Regulations, all hot and cold water pipes should be labelled and insulated to the current standards.



Installation should only be carried out by a qualified and competent plumbing installer and a qualified and competent electrical installer in accordance with the current document Building Regulations, Legislation and Standards.



It is the installer's responsibility to ensure that the place of installation and wall is suitable. An unsuitable location or provision of adequate supplies (Primary Heating and Cold Water mains) will not justify any warranty or fault claim;

- The wall must be capable of bearing the weight of the HIU filled with water permanently
- Locations where access is restricted for maintenance, see page 3.
- The HIU is only for WALL MOUNTING in the orientation shown in this manual.
- Locations where criminal damage or illegal tampering cannot be reasonably preventable.
- Locations where discharge pipe is not able to be safely or legally installed and connected
- Supplies which are not suitably clean, and free from contaminants.
- Supplies which contain chemical contaminants.
- Supplies with inadequate flow or pressure (less than 1.5 bar)
- All cold and hot water pipes must be labelled and insulated in line with Part L of the Building Regulations.
- On site precautions must be made by the installer to protect the unit from builders dust and debris.

Cold water mains supply should be protected from excessive high pressures.
A Pressure Reducing Valve is recommended and pre-set to 3 bar.



- Wall fixing bolts are to be provided by the installer and be suitable to bear the weight of the HIU permanently when full of water.
- The position of the HIU should be where the pipe run lengths to DHW outlets are kept to a minimum.



Before removing the cover turn off the power supply at the mains (fused spur 230v 50Hz).

5.2 Consider which installation method is to be used.



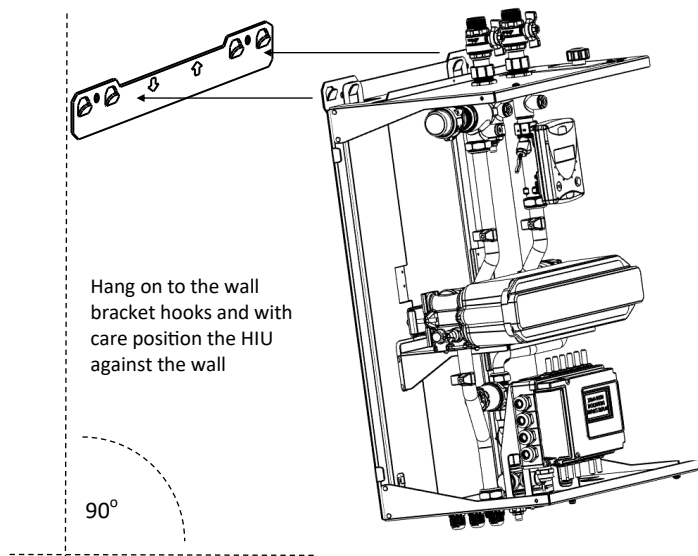
1. HIU as delivered to site.
2. HIU and stand off brackets as delivered to site
3. HIU JIG at First Fix Pipe work stage, with the HIU to follow later.
4. HIU JIG and stand off brackets, with the HIU to follow later.

5.3 General installation notes

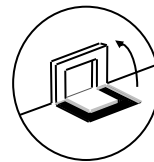


- Ensure all hot and cold water pipes are labelled and insulated in accordance with Part L of the building regulations.
- The HIU can only be installed in one orientation, with the heat network connections at the top, and in a vertical position.

- 5.4** Ensure the chosen installation site is inside the building, weather proofed and provides good access for maintenance, minimum requirements as on page 3. Note where and which pipe connections will be required, and pay attention to where the safety valve discharge pipe will terminate, and ensure this meets all current building regulations and has a continuous fall. All pipe runs for domestic hot water services (DHWS) should be at a minimum to prevent water wastage and maximise DHWS delivery times.
- 5.5** Making sure the wall the HIU is to be mounted on complies with 5.1, mark up the position for the wall bracket. The position of the HIU is to be on a true vertical plane as in 5.3. Drill and plug the wall, and secure the HIU with suitable wall fixings (not provided with the HIU).

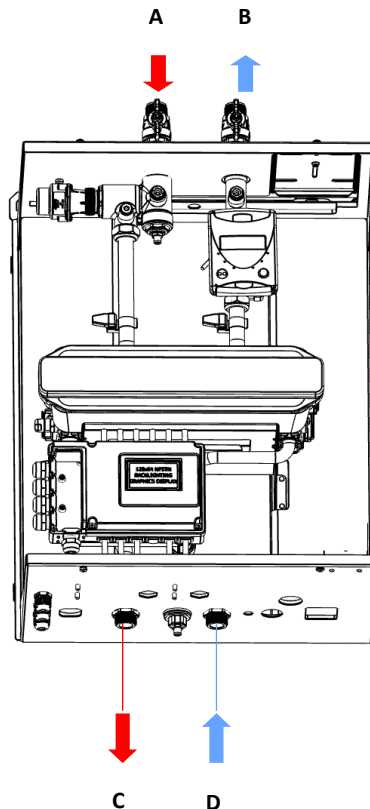


- 5.6** Hang the HIU as shown in this illustration on to the inner hooks on the wall bracket.



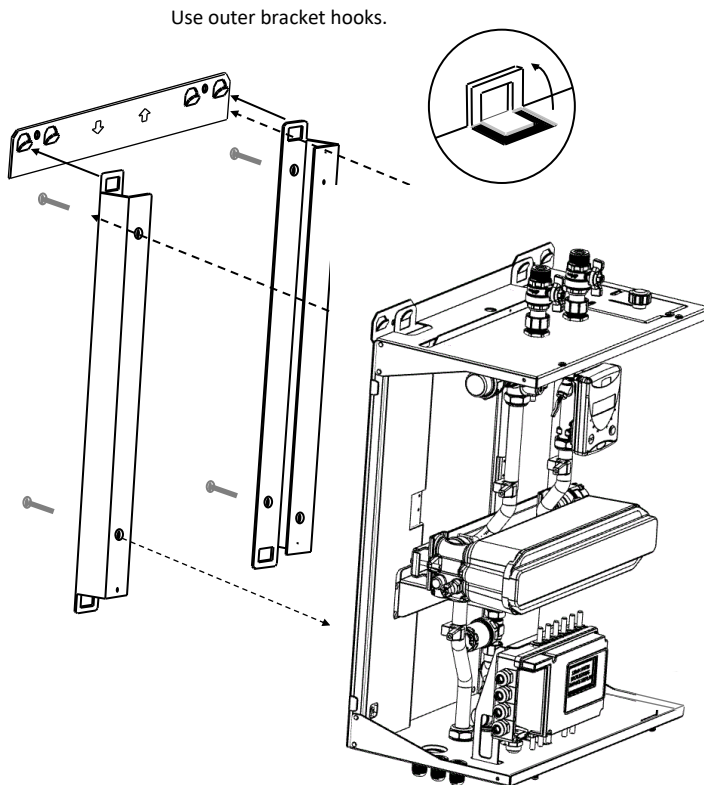
5.7 Plumbing Connections UPPER

- A Heat Network Flow
B Heat Network Return



5.8 Plumbing Connections LOWER

- C 3/4" DHW HOT OUTLET
D 3/4" DHW COLD INLET



Accessory option - stand off brackets (SOB)

5.9 Stand off brackets create a space behind the HIU that can be used to run pipes in. The stand off brackets are 40mm off the wall allowing for 13mm pipe insulation thickness.

First attach the brackets using 4 x fixing screws to the back of the HIU in the matching fixing holes provided.

Fit the wall bracket as in 5.6 and per 5.1

Then hang the HIU as in diagram 5.6, but this time using the outer wall bracket hooks.

5.10 Accessory option - pre-formed pipes

Also available are time saving pipes which are formed to run behind the HIU and make all the connection from above

First attach the brackets using 2 x fixing screws to the back of the HIU in the matching fixing holes provided.

Fit the wall bracket as in 5.6 and per 5.1

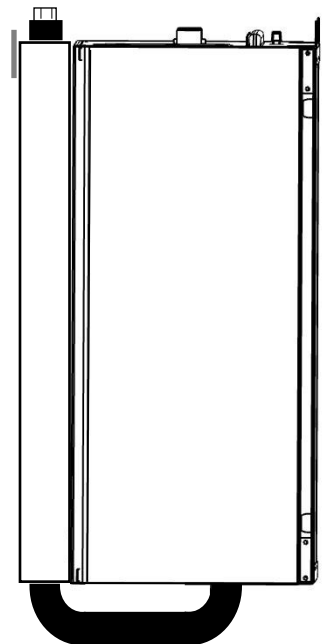
Fit the stand off brackets as per 5.10

The isolation can be connected either;

- Below the HIU
- Above the HIU

Hang the HIU as in diagram 5.6, using the outer wall bracket hooks.

All connections from above



Set of 2. preformed insulated pipes
See section 4 page 6 - Accessories

5.11 Accessory option - first fix JIG HI2ACJIG

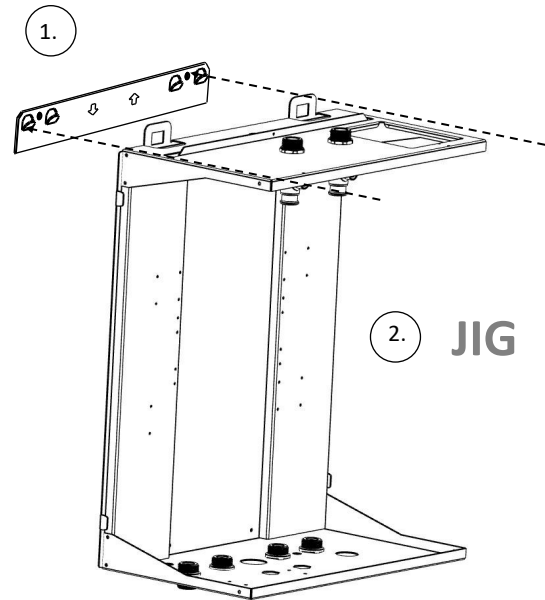


Flushing Bypass Kit C fitted at this point in first fix installation!

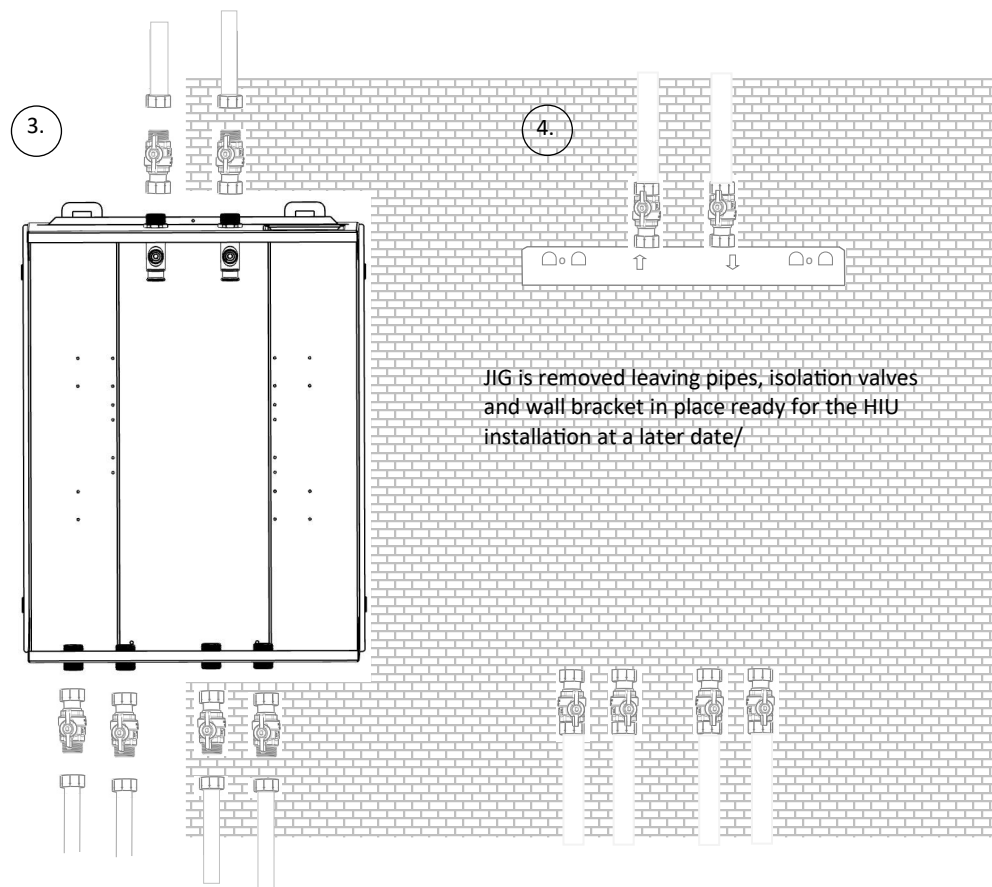
1. Fix the wall bracket
2. Hang the JIG.
3. Make the isolation and pipework connections.
4. Remove the JIG, and move on to the next installation site.

Wall bracket and valves and pipes are in position ready to receive the HIU at a later date.

Repeat as required, the JIG is an installation tool.



Flushing Bypass Kit C fitted at this point in first fix installation!
Minimum 22mm pipe.
Clip and insulate pipes



5.12 Flushing Bypass Kits - instructions for KIT A

- See section 6, HIU wiring complete. HIU turned off to close the PICV.
- All HIU's on this circuit must be flushed using this method at the same time.
- Close the isolation valves as shown, and empty of water through the drain valve into a bowl.
- remove test port plugs.
- Install the kit adaptors making water tight seal on the O rings of the adaptors.
- Fix the flushing pipe in position as shown, tighten the union nuts making a water tight seal with the fibre washers provided.
- Open the isolation valves for system flushing.
- When the flushing operation is finished, close the isolation valves as shown below, and empty water through the drain valve again.
- Now remove and clean the filter mesh by undoing and removing the filter cap.
- Replace the now clean filter mesh, replace the filter cap. This is part of commissioning section 8, part 4. Sign complete.
- Remove and store the flushing pipe, replace the test plugs and make water tight. Do not over tighten on the O rings.
- Fill the HIU, ready for commissioning.

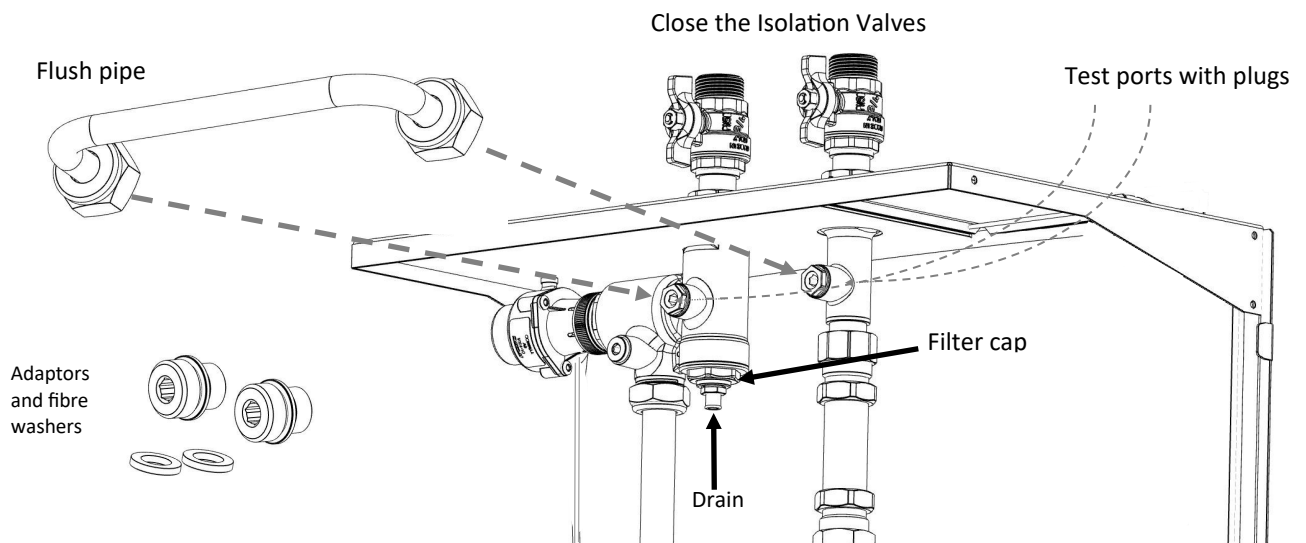
5.14 Flushing Bypass Kits - instructions for KIT B, as above, but the flush pipe and valve can be left in position.

5.15 Flushing Bypass Kits - instructions for KIT C.

- Kit is to be installed at first fix stage, and the Tee's fit to the HIU, the isolation valves to the Tee's. the flushing procedure is as above, but without the use of the test ports inside the HIU



On completion of flushing and during operation the bypass valve on Kit B and C must be shut and kept shut!



5.16 Checklist before filling

Check Connections!

- Flow and Return in correct positions?
- All union nuts have been tightened, and a visual inspection expects them to be water tight.
- All union nuts inside are tightened, and a visual inspection expects them to be water tight.

All isolation valves in the closed position

- Safety valve discharge pipe to the safety valve.
- Safety valve discharge pipe installation conforms to Building Regulations. (pipework to comply with current Building regulations and refer to BS6798)

All drain valves and air vent valves are closed.

The HIU installation on the wall is secure and conforms to these instructions .

If a flush bypass kit has been installed, it is in the closed position

6.1 Before electrical connection read and comply with the following.



Comply with all safety provisions.



Installation should only be carried out by a competent electrical installer and the installation conform to all IEE regulations



Note that the Room thermostat switching must be VOLT FREE !!



Note that the billing connection for pre-payment function must be VOLT FREE !!



Isolate all electrical supplies before removing the access panel !

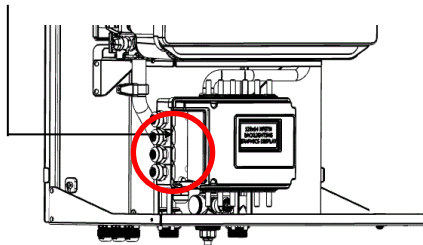
6.2 The installer is to provide a 230vAC 3 amp fused supply as per BS EN 7671:2008. Entry for cables is provided by 3 x cable glands located beneath the HIU (at the rear, LHS).

Live, neutral and earth connections as per the diagram below.

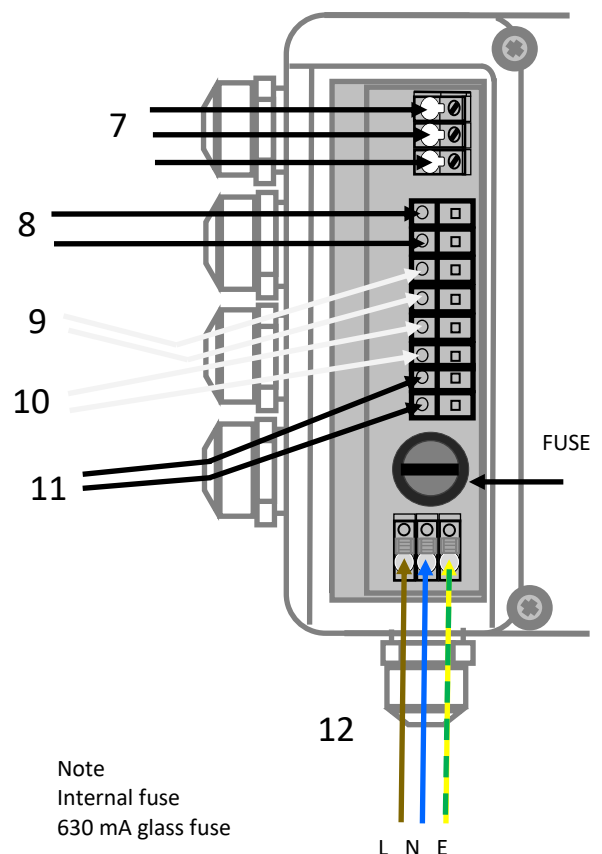
6.3 Room thermostat connection as per the diagram below. This is a 2 core cable connection and VOLT FREE.

The room thermostat switching position is NORMALLY OPEN (though this can be changed to normally closed in the installer level programming of the controller which is covered in the separate programming manual).

Electrical connections access panel, remove securing screws to enter



7	CN1 MODBUS 9600K connection
8	ROOM THERMOSTAT—VOLT FREE!
9	OPTIONAL SWITCHING (VOLT FREE—relay required) FOR 2nd pump to LOAD THE OPTIONAL ADDITION OF HOT WATER TANK
10	Connection for OPTIONAL tank temperature sensor (Type NTC)
11	Pre-payment connection to VOLT FREE supply
12	Power connection 230V



Description	Factory Set	Description	Factory Set
Set max. primary return temperature limit.	60°C	Select which Plate Heat Exchanger (PHE) will be used in combination with the keep warm function. 00 = PHE for DHW 01 = PHE for Heating Or convert the controller to Single Plate HIU operation 02 Single Plate HIU - HTG Only 03 Single plate HIU - DHW ONLY	00
Set temp DHW (set the hot water temperature)	55°C	Select Legionella cycle (00 = NO / 01 = YES Only operates when there is no call for DHW function.	NO
OPTION for system with a hot water storage cylinder Set DHW temperature produced by cylinder.	60°C	Time of the legionella cycle. In minutes.	30
OPTION for a system with a hot water storage cylinder Set ΔT for loading the cylinder.	5°C	Time for the Legionella to start after the last demand for DHW function value in days.	7
OPTION for a system with a hot water storage cylinder Select cylinder connected. (NO = no cylinder/ YES= cylinder).	NO	Set temperature to pasteurise in the legionella cycle.	65°C
OPTION for a system with a hot water storage cylinder Off =00 Switching loading pump or electrical heating element = 01 Switching remote fault or error indicator = 02	01	Prepayment - select Prepayment NO or YES. 'Pay as you go' (PAYG). Connected to a Billing Provider by a VOLT FREE connection.	NO
Select keep warm function (OFF / ON). YES = ON	YES	PICV ACTUATOR - manual operation stepper motor PICV 00 = AUTO. (Setting 01 = FULLY CLOSE Setting 02 = FULLY OPEN).	00
Set delay time for activating the keep warm function after closing the PICV (last operation heating or DHW). Set time in 10 minute values (1 == 10 minutes).	1	Reset to Factory Settings. Note if operating as a single plate HIU - reset parameter 60!	NO
Set max primary return temperature during keep warm function.	40°C	Diagnostics (display shows operation, temperature, valve opening steps).	NO
Set min primary return temperature during keep warm function.	37°C		



Programming the HIU Controller.

Any changes to the factory settings should be carried out during commissioning. Details of programming parameters are to be found in the **Controller Programming Guide**.

Contact Inta to request the Controller Programming Guide.



This document is not to be left with the HIU or the occupier of the home!

This document is available on request from your Inta Specification manager involved with this installation project.

Alternately contact by;

Inta website <https://intatec.co.uk/contact-us/>

Phone 01889 272181 ask for HIU Technical Support or HIU Service Desk

The **Controller Programming Guide** is only for the use of the installer or commissioning engineer, and under no circumstances be left with the user or home owner. Incorrect parameter programming may result in inefficient performance or error code diagnostics which prevent the HIU operating as required.



Factory Reset.

Should in the installer level of programming a factory reset of the controller be required, then for this HIU to operate as a Hot water only HIU, then before resuming operation go to parameter 60.

Select which PHE will be used in combination with the keep warm function, or dedicate the HIU operation to just one mode.

00 = PHE for DHW

02 = Heating ONLY

01 = PHE for Heating

03 = DHW ONLY

FOR HOT WATER ONLY OPERATION THIS PARAMETER MUST BE SET TO 03.



For the user to view only the settings the HIU must be in standby mode, and not in heating or hot water modes.

HOLD THE OK BUTTON DOWN FOR OVER 3 SECONDS.

First on the screen will be the DHW set Temperature.

1.



Hot Water
Factory set = 55 °C



The set temperature is flashing, change with the up and down arrow buttons, press OK

2.



Screen shows Date, (flashing) press OK to confirm. Up or down to reset year/month/day.

3.

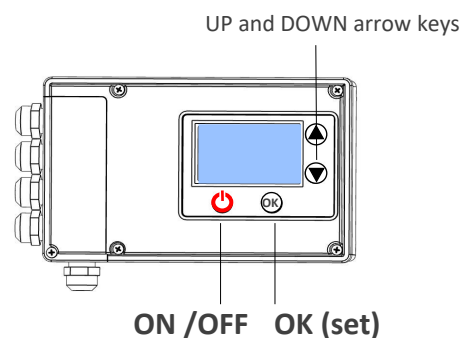


Screen shows time, (flashing) press OK to confirm. Or change by up or down to reset minutes / hours.

4.



After confirming the time, the unit will then return to standby mode.



Operation

UP and DOWN buttons - use to increase or decrease a value or number.

OK button - to confirm and set a value or number.

ON / OFF button will turn off the HIU.

The unit will not be in standby mode.

Heating, hot water, keep warm and frost protection functions are OFF.

HIU controller screen display shows the HIU is ready for Operation and in standby mode.



The screen also shows the symbol for Keep Warm function ON.



HIU controller screen display shows the HIU is ready for Operation and in standby mode.

With Keep Warm function OFF.



Re-programming shall only be allowed by the network operator.

Diagnostics - Fault code definitions.

When a fault occurs the relevant code will be displayed on the controller screen.

Fault codes inform that the controller has diagnosed a fault in one of the HIU's components.

code	Cause	Effect	Remedy
F0	DHW temperature sensor is short circuit or broken circuit, or disconnected	The HIU will not operate in DHW demand. It will still operate in heating demand mode.	Check that the sensor cable plug connection is good, and if OK then check the connection inside the controller. If this doesn't clear the F0 code, then replace the sensor. The F0 will clear and return to normal operation.
F1	Primary flow temperature sensor is short circuit or broken circuit, or disconnected.	The HIU will not operate in DHW or heating demand. Without information of the primary temperature in, the controller can not function.	Check that the sensor cable plug connection is good, and if OK then check the connection inside the controller. If this doesn't clear the F1 code, then replace the sensor. The F1 will clear and return to normal operation.
F2	DHW storage tank temperature sensor is short circuit or broken circuit, or disconnected.	The controller disconnects the control of a optional hot water cylinder and all it's parameters.	Check that the sensor cable plug connection is good, and if OK then check the connection inside the controller. If this doesn't clear the F2 code, then replace the sensor. The F2 will clear and return to normal operation.
F4	Primary return temperature sensor is short circuit or broken circuit, or disconnected.	The HIU 'keep warm' function is disabled as this sensor controls the DHW PHE temperature during periods of non-use. Also efficiency is reduced as there is no control of the primary return temperature DHW and Heating are both still operational.	Check that the sensor cable plug connection is good, and if OK then check the connection inside the controller. If this doesn't clear the F4 code, then replace the sensor. The F4 will clear and return to normal operation.
F6	It is a notification that unexpected fluctuations in the return temperature have been monitored during hot water production. Probable cause is the network supply to the HIU.	The F6 error code is a notification that this is unusual. F6 will reset back to normal operation after 60 seconds.	Check the network supply temperature and flow and remedy. If F6 persists, then do a factory reset (parameter 00). This will recalibrate the PICV actuator. Check DHW sensor is in the correct position. Check with a manual operation of the PICV. Set this on parameter 91. If not working, replace the PICV actuator as a last resort.

Diagnostics - Error code definitions.

When an error code is seen, the controller is warning of unsuitable operating conditions that may be causing the HIU to operate inefficiently or possibly not at all. Also could be an potential operating conditions that could if left in that state become a safety issue

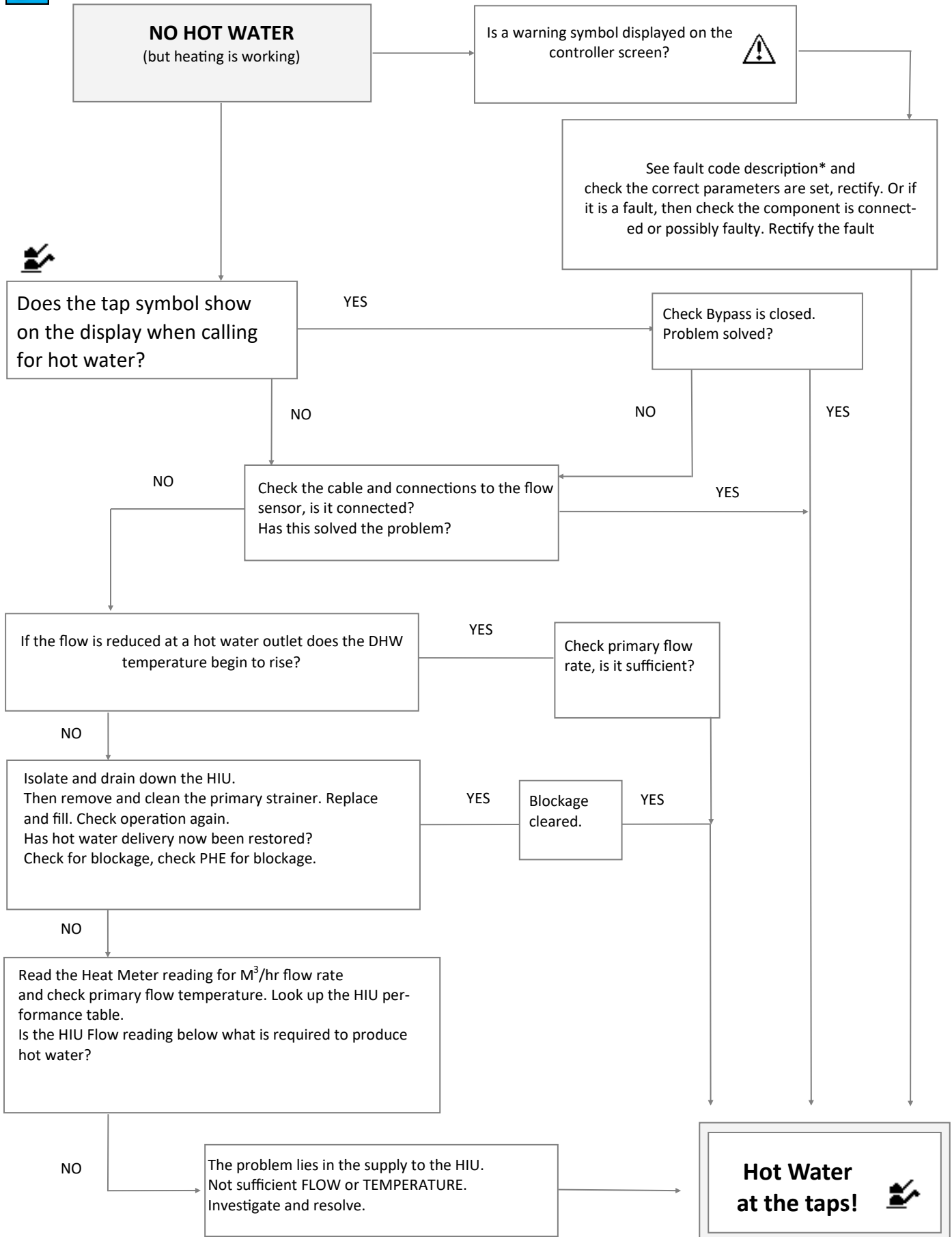
code	Cause	Effect	Remedy
E1	The measured primary temperature is lower than the set point temperature is for heating or hot water, so the HIU will not be able to achieve the set temperature, this is after 60 seconds of flow.	The function is re-enabled when the primary exceeds the setpoint temperature.	Remedy? Check the set point in the controller, adjust is the set point is set higher than the design supply temperature. Check that the primary temperature probe is correctly connected to the primary pipe. When the primary temperature and set point are aligned, the error code E1 automatically disappears.
E3	The controller is recognising that the HIU performance is not as the algorithm predicts. The energy transfer is poor.	Heat transfer is inefficient, hot water production reduced and temperature control unstable.	If signs of blockage it could be the strainer is blocked or the PHE is partially blocked with lime scale. Check PICV fully open – check flow on the heat meter, low flow now would prove a blockage of some sort is the issue.
E4	No hot water	The controller has detected that the hot water temperature control behaviour is consistent with the sensor being in the wrong position, and shut down hot water production as a safety precaution. The HIU will automatically rest after 10 minutes, but repeat the shutdown again if the issue is not resolved.	Check DHW temperature sensor position is correct. Reposition. Then system reset, turn off the power at the supply, and then turn on again to allow the PICV actuator to re-calibrate its position.

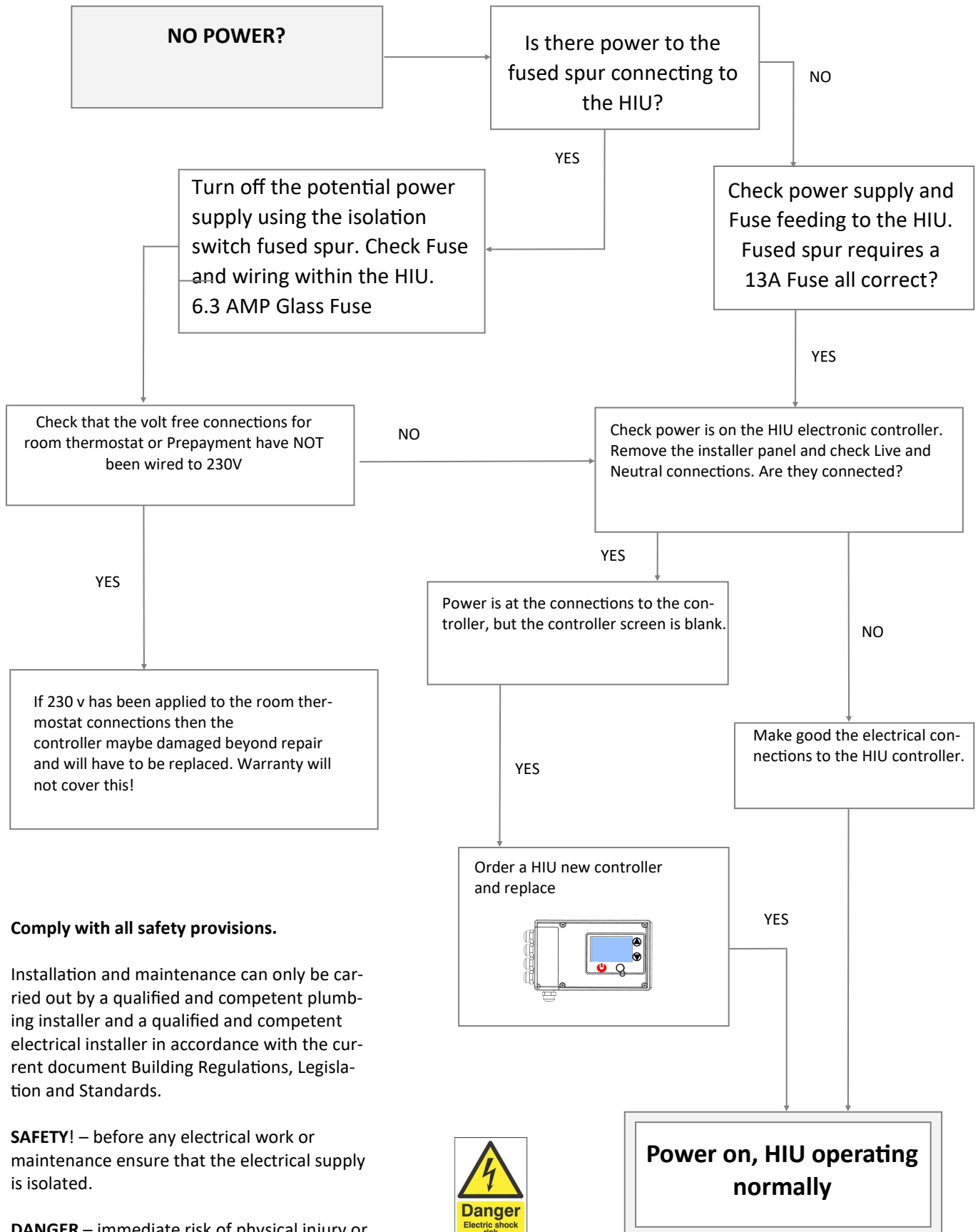
Performance issues where no fault code is displayed

Ref	REPORTED ISSUES	Trouble Shooting Checklist
1	The water from the hot taps is COLD.	<ul style="list-style-type: none"> Is there power to the HIU? Is the unit going into hot water mode? Possible blockages – if there is heat coming into the HIU from the communal heating system, follow the path through the Strainer, PICV, Diverter ? Plate Heat Exchanger blockage, possibly scale. If suspected take the necessary steps to remove and clean (Fig 8B in the Section Maintenance) No flow or insufficient flow through the flow sensor or flow sensor not working.? <p>Once blockages are cleared, then reconnect the unit, and follow the commissioning instructions.</p>
2	There is NO WATER at the Hot Taps.	<ul style="list-style-type: none"> Is there water at the cold taps? If not, check the mains stop tap. If it is found to be closed, open it and check the fault is resolved. Check piping. Are the HIU isolation valves open or closed? <p>If not check for blockages on the cold water supply pipe. Check all filters and clean if blocked.</p>
3	<p>Insufficient Hot Water at the taps, but no error codes at the Controller</p> <p>First check Is it a flow or temperature problem?</p> <p>Is the primary flow sufficient? Low primary flow caused poor or no DHW performance!</p>	<p>If all checks prove the HIU is working correctly,</p> <ul style="list-style-type: none"> Is there a bypass fitted on the primary before the HIU, and it has been left open? CLOSE the valve, the HIU will now work as designed. Is the TMV set at the correct temperature? Has it been tampered with or reset in error? Set to 57C. Is there enough FLOW at the HIU? If the supply pumps have not been designed to the required flow of the HIU, then DHWS will not be sufficient. Similar for pipework, if not sized correctly, the HIU will not be able to deliver to its designed output.



* Have the 'Controller Programming Guide at hand!





Comply with all safety provisions.

Installation and maintenance can only be carried out by a qualified and competent plumbing installer and a qualified and competent electrical installer in accordance with the current document Building Regulations, Legislation and Standards.

SAFETY! – before any electrical work or maintenance ensure that the electrical supply is isolated.

DANGER – immediate risk of physical injury or even death.



For the user to view only the settings the HIU must be in standby mode, and not hot water modes (producing hot water).

HOLD THE OK BUTTON DOWN FOR OVER 3 SECONDS.

First on the screen will be the DHW set Temperature.

1.



Hot Water
Factory set = 55 °C



The set temperature is flashing, change with the up and down arrow buttons, press OK

2.



Screen shows Date, (flashing) press OK to confirm. Up or down to reset year/month/day.

3.

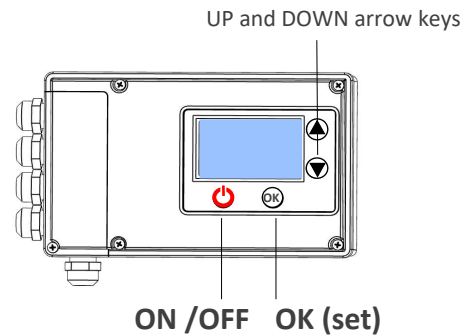


Screen shows time, (flashing) press OK to confirm. Or change by up or down to reset minutes / hours.

4.



After confirming the time, the unit will then return to standby mode.



Operation

UP and DOWN buttons - use to increase or decrease a value or number.

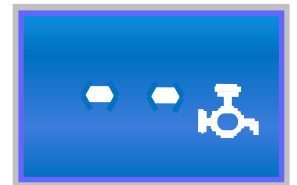
OK button - to confirm and set a value or number.

ON / OFF button will turn off the HIU.

The unit will not be in standby mode.

Heating, hot water, keep warm and frost protection functions are OFF.

HIU controller screen display shows the HIU is ready for Operation and in standby mode.

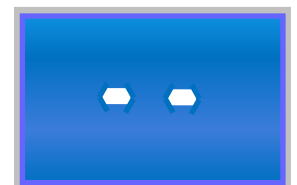


The screen also shows the symbol for Keep Warm function ON.

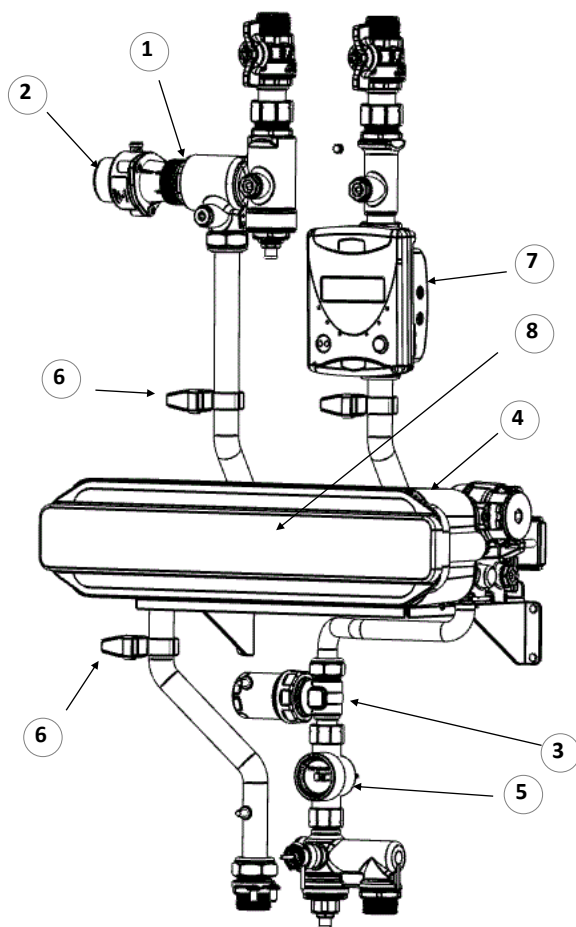


HIU controller screen display shows the HIU is ready for Operation and in standby mode.

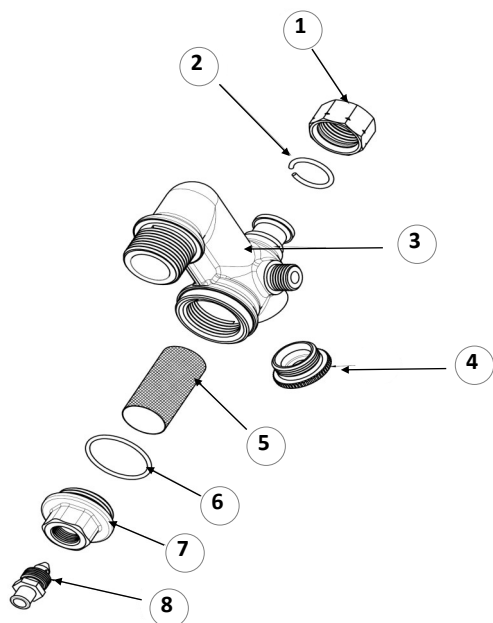
With Keep Warm function OFF.



Re-programming shall only be allowed by the network operator.



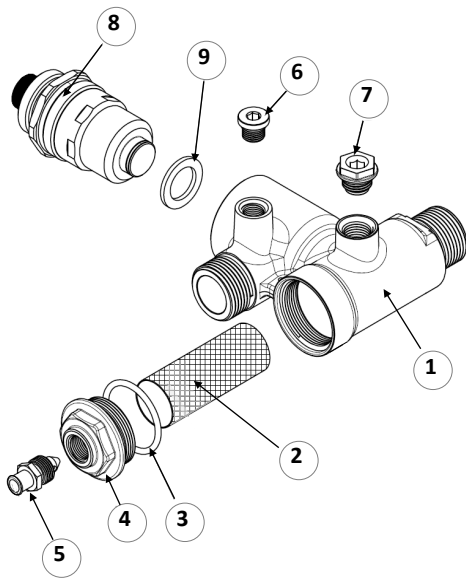
Ref	Front line spares description	Part Code
1	Frese compact OEM cartridge	HI29329005
2	Frese PICV Stepper ACTUATOR	HI29330005
3	Shock arrester	HI29325003
4	DHWS Plate Heat Exchanger x 42	HI29342005
5	Flow meter switch	HI29338005
6	NTC Temperature sensor	HI29531-005
7	ZE102C5 Zenner Ultrasonic Heat Meter	ZE1025
-	Pipe spacer for Heat Meter position (not shown)	HI24933015
8	PHE fixing bar	HI29343-005
Controller and Cables Spares (not pictured)		Part Code
-	HIUC PID Controller	HI29295-005
-	HIU Controller No Display - RBM	PFAP-1462-00
-	HIU Controller User Interface Board and Plastic Cover	PFFG0652-00
-	Cable gland	HI29287-005
-	Power supply cable	HI29532-125
-	Flow meter cable	HI29532-045
-	Primary flow temperature sensor cable	HI29532-065
-	Primary return temperature sensor cable	HI29532-075
-	DHW temperature sensor cable	HI29532-105
-	Casing earth wire	HI29532-115
-	Ø18 Primary flow pipe	HI29346-005
-	Ø18 Primary return pipe	HI29347-005
-		
-		



View	Ref	Cold Inlet Group	Part Code	Qty
D		Cold Inlet Group - assembled	HI29297003	1
D	1	1/2" NUT	HI24307014	*
D	2	ELASTIC RING Ø16,6X2	HI24308005	*
D	3	SANITARY MANIFOLD BODY	HI29297004	*
D	4	SIDE CAP GROUP	HI2835013	*
D	5	L=41 STRAINER 800 MICRON***	HI29299005	***
D	6	O-RING Ø26,70X1,78	HI25022045	***
D	7	3/4" STRAINER CAP	HI29298004	***
D	8	M12X1 DRAIN VALVE	HI29300004	***

*Part of fully assembled group of components **HI29297003**

***Purchase as **Service KIT2**

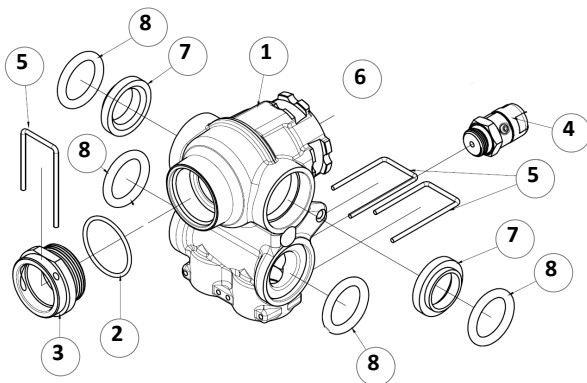


View	Ref	PICV and Primary Strainer Group	Part Code	Qty
E		PICV and Primary Strainer Group - assembled	HI29320003	1
E	1	PICV and strainer manifold BODY only	HI29320004	*
E	2	L=60 Strainer mesh 800 MICRON***	HI29321005	10
E	4	1" Strainer cap	HI29322004	***
E	3	O-RING Ø29,82X2,62	HI25024045	***
E	5	M12X1 Drain valve	HI29300004	***
E	8	Frese compact OEM cartridge	HI29329005	1
E	7	1/4" test / flush port plug	HI2602013	*
E	6	M10 Heat meter temperature probe plug	HI225560002	*
E	9	PICV Cartridge flat sealing gasket	HI27113005	*

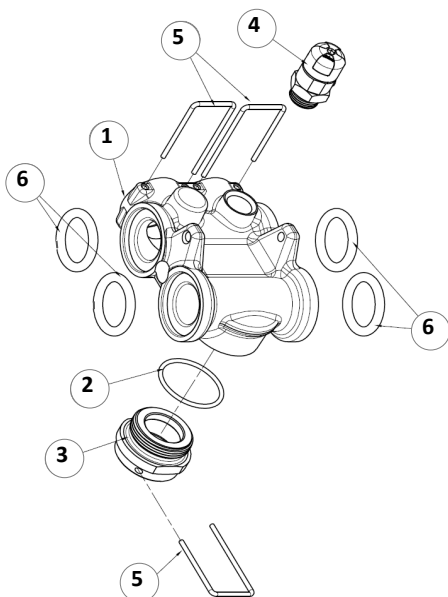
*Part of fully assembled group of components **HI29320003**

Included with **Service Kit HI238940000

***Purchase as **Service KIT3**

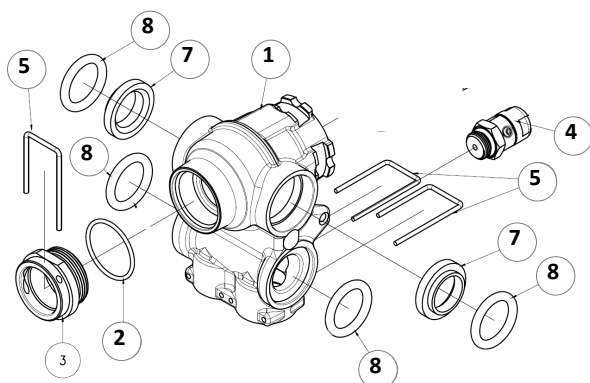


Ref	Components	Part Code	Qty
1	PHE Primary return manifold	HI29310004	1
2	O-RING Ø26,70X1,78	HI25022045	1
3	Pipe fast connector	HI29327004	1
4	1/4" manual air vent	HI2180200	1
6	Cover plate	N/A	1
5	Ø2X21 U CLIP	HI29363005	3
7	Spacer ring	HI29311004	2
8	O-RING Ø20X4	HI25198045	4



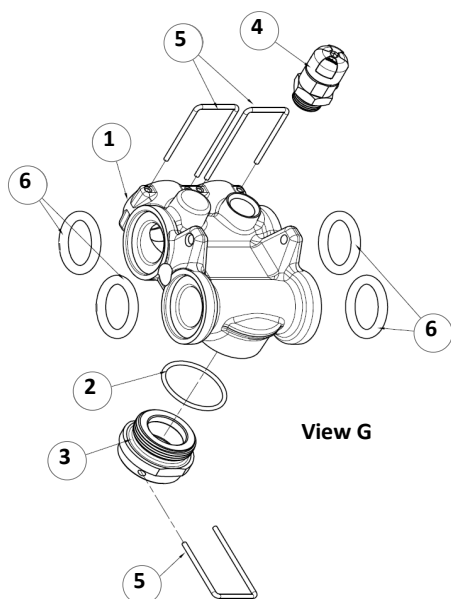
*		PHE Primary flow group - assembled	9318-003	1
View	Ref	Components	Part Code	Qty
G	1	PHE Primary flow manifold	HI29318-004	1
G	2	O-Ring Ø 25.12 x 1.78	HI25088045	1
G	3	Pipe fast connector	HI29327-004	1
G	4	1/4" manual air vent	HI20018-02-00	1
G	5	Ø2 x 21 U CLIP	HI29363-005	3
G	6	O-Ring Ø 20 x 4	HI25198045	4

View F



View	Ref	PHE Block Return Group	Part Code	Qty
F		PHE Block Primary Return Group - assembled	HI29310003	1
F	1	PHE Primary return body	HI29310004	*
F	2	O-RING Ø26,70X1,78	HI25022045	1
F	3	Pipe fast connector	HI29327004	1
F	4	1/4" manual air vent	HI2180200	**
F	5	Ø2X21 U CLIP	HI29363005	**
F	7	Spacer ring	HI29311004	**
F	8	O-RING Ø20X4	HI25198045	**

*Part of fully assembled group of components HI29310003

Included with **Service Kit HI238940000

View G

View	Ref	PHE Block Flow Group	Part Code	Qty
G		PHE Primary flow group - assembled	HI29318004	1
G	1	PHE Primary flow manifold	HI29318-004	1
G	2	O-Ring Ø 25.12 x 1.78	HI25088045	1
G	3	Pipe fast connector	HI29327004	1
G	4	1/4" manual air vent	HI200180200	**
G	5	Ø2 x 21 U CLIP	HI29363005	**
G	6	O-Ring Ø 20 x 4	HI25198045	**

*Part of fully assembled group of components HI29318004

Included with **Service Kit HI238940000

Various Components Spares**	Part Code
Flow meter cable	HI29532-045
Pressure switch cable	HI29532-055
Primary flow temperature sensor cable	HI29532-065
Primary return temperature sensor cable	HI29532-075
Heating flow temperature sensor cable	HI29532-085
Heating return temperature sensor cable	HI29532-095
DHW temperature sensor cable	HI29532-105
Casing earth wire	HI29532-115
Cable gland	HI29287-005
NTC Temperature sensor	HI29531-005
Fibre washer Ø30 x Ø21 x 2	HI27176-005
FASIT GASKET Ø24 x Ø16 x 2	HI27175-005
FASIT GASKET Ø18,5 x Ø11 x 2	HI29366-005
FASIT GASKET Ø14,6 x Ø9 x 2	HI29367-005
FASIT GASKET Ø11 x Ø6.2 x 2	HI29368-005
PHE fixing bar	HI29343-005
SCREW DIN 912 M5X40	HI29357-005
SCREW DIN 912 M5X110	HI29358-005
SCREW DIN 912 M5X16	HI29359-005
O-RING Ø17,86X2,62	HI25017-045

** Not illustrated

Various Components Spares**	Part Code
Ø18 DHW feed pipe	HI29323-005
Ø18 Primary flow pipe	HI29346-005
Ø18 Primary return pipe	HI29347-005
Ø18 DHW outlet pipe	HI29348-005
Ø18 Heating outlet flow pipe	HI29349-005
Ø18 Cold water inlet pipe	HI29351-005
HIU Casing upper plate	HI29273-005
HIU Casing lower plate	HI29274-005
HIU Casing back plate	HI29282-005
PHE metal bracket	HI29283-005
Pressure switch bracket	HI29284-005
SELF TAPPING SCREW DIN 968 4,2X13	HI29360-005

Service Kits	
Service Kit multi- pack containing PHE seals, clips, o rings and air vents.	HI238940000
Strainer Service Kit 2 (secondary strainers)	POA
Strainer Service Kit 2 (Primary strainer)	POA
Fixings Kit (assorted screws)	POA

Extended Product Warranty

Intatec Limited (company number 04359938) (**we, us, our**) offers any business customer which has purchased directly from us (**Buyer/you**) any of those products which are part of our Hiper HIU range of products described in paragraph 2 of Section A of this extended warranty document (**Hiper HIU**), the benefit of an extended warranty in respect of manufacturing defects, subject to the following conditions and exclusions.

Section A: Our Warranty

1. Intatec warrants to the Buyer that the Hiper HIU shall be free from manufacturing defects under normal and proper use (**Warranty**) for a period of 3 years following the Warranty Commencement Date (as defined in paragraph 5 of this Section A) (**Warranty Period**).

2. The Warranty only applies to the following products which are part of our Hiper HIU range:

- Twin Plate HIU;
- Single Plate HIU;
- Cooling Interface Unit;
- HIU with HW Cylinder arrangement but not including the cylinder.

3. Subject always to the warranty exclusions set out in Section B of this extended warranty document, during the Warranty Period we will repair or replace at our discretion, the Hiper HIU or any defective part thereof, which is proven to be a component failure caused by manufacturing defects.

4. The Hiper HIU must be correctly installed and commissioned by a competent and qualified installer and in accordance with the installation manual to which this extended warranty document is enclosed (which includes the requirement for you to issue to us (or procure the issue of), those commissioning documents requested by us from time to time such as the 'Benchmark' commissioning checklist), otherwise the Warranty may not apply. Proof of installation and commissioning in accordance with this paragraph 4 may be required to validate the Warranty.

5. The Warranty must be registered by you (or on your behalf) via the internet at https://www.intatec.co.uk/register_hiu_product or by post to Intatec Limited, Airfield Industrial Estate, Hixon ST18 0PF, no later than 30 days following the Hiper HIU being installed at the relevant property, with the date of installation being the '**Warranty Commencement Date**' for the purposes of the Warranty. In the event that you fail to register the Warranty in accordance with this paragraph 5, then the Warranty Commencement Date shall be deemed to be the date that we dispatch the Hiper HIU to you.

6. The Warranty only relates to the Hiper HIU and integrated controls and does not extend to any connected system or accessories including without limitation any external pumps, external wiring, filters and valves.

7. The Warranty only extends to the Buyer and the Buyer shall not assign or transfer its rights or obligations under the Warranty without our prior written consent. However, nothing in this paragraph shall prevent the Buyer's customers and/or the end-users of the Hiper HIU from contacting us in accordance with paragraph 1 of Section C.

8. The Warranty is not insurance backed.

Section B: Warranty Exclusions and Our Liability

1. The Warranty shall not apply and we shall not be liable where:

- a) any alterations or adjustments have been made to the Hiper HIU (including without limitation alterations or amendments to its design and/or construction);
- b) further use is made of the Hiper HIU after we have been notified of an alleged defect;
- c) repairs have been attempted by anyone other than us or our authorised representatives; the Hiper HIU has been moved from its original place of installation;
- d) defects are caused by:
 - i. wilful damage, neglect, negligence or abnormal storage or working conditions;
 - ii. accidental or malicious damage (e.g. vandalism) or events outside of our control (e.g. fire, flood or explosion);
 - iii. theft or attempted theft;
 - iv. fair wear and tear;
 - v. a failure to adhere to installation, usage, maintenance and/or servicing instructions provided (orally or in writing) by us from time to time, including, without limitation, the installation manual issued to you and available via our website at www.intatec.co.uk;
 - vi. incorrect or improper installation, fitting or use of the Hiper HIU (including without limitation where damage is caused to the controller of the Hiper HIU by connecting voltage to connections that are in the installation manual advised as being "Volt Free");
 - vii. use of non-genuine spare parts (which have not been approved by us in advance in writing) in the installation, maintenance, service or repair of the Hiper HIU;
 - viii. any problems or defects caused by the supply of services (such as electricity, gas or water) to the property where the Hiper HIU is installed;
 - ix. any fault or failure in the systems to which the Hiper HIU is connected (e.g. pumps and boilers);
 - x. any damage caused by the condition of water which supplies the systems (including without limitation hard water scale deposits or sludge resulting from corrosion).

2. The Warranty only applies to any Hiper HIU bought in and installed and used in the United Kingdom and Republic of Ireland.

3. Except as provided in this extended warranty document and our Standard Terms and Conditions of Sale (which can be found online at www.intatec.co.uk), which form the basis of the contract between you and us, we shall have no liability to you in respect of any defect in the Hiper HIU supplied.

4. The terms implied by sections 13 to 15 of the Sale of Goods Act 1979 are, to the fullest extent permitted by law, hereby excluded.

5. We shall in no circumstances be liable to you in contract, tort (including negligence), breach of statutory duty, or otherwise for any of the following losses arising under or in connection with the Warranty:

- a) any indirect, consequential or special losses;
- b) any loss of profit (whether direct, indirect or consequential); and
- c) any loss of sales or business (whether direct, indirect or consequential).

6. Nothing in the Warranty excludes or limits any liability which cannot legally be limited including liability for death or personal injury caused by negligence or fraud or fraudulent misrepresentation.

7. The Warranty shall apply to any repaired or replaced Hiper HIU supplied to you by us. For the avoidance of doubt, any repair or replacement carried out under the terms of the Warranty does not extend the Warranty beyond the Warranty Period.

Section C: How to Claim

1. In the unlikely event that you encounter a problem with the Hiper HIU, you or your customer and/or end-user should contact us promptly in writing (whether by post or email) or by telephone, using the contact details set out below in this Section and in any event within 10 days of the defect becoming evident. Any claim made under the terms of the Warranty must be made within the Warranty Period.

2. Once you or your customer and/or end-user have contacted us in accordance with paragraph 1 above to report a problem, we will contact you or your customer or end-user (as the case may be) by telephone in the first instance so that we can ask a series of initial questions to get a better understanding of the nature of the problem and provide some initial guidance. If we are unable to resolve the problem by telephone remotely, we will arrange, at a mutually agreed time, for an engineer to visit the site where the Hiper HIU is installed to examine the Hiper HIU.

3. Please note, health and safety is of paramount importance to us and if our engineers cannot gain safe access to the Hiper HIU or our engineer cannot gain access to the property where the Hiper HIU is located, then an abortive charge equal to our 'initial call out charge' (as referred to in paragraph 5 of this Section C) shall apply and shall be payable by you on demand.

4. After examination by our engineer, we will arrange to repair or replace any part(s) of the Hiper HIU, which are in our opinion a component failure caused by manufacturing defects, free of charge.

Important note: We will require you to provide details of the serial number of the Hiper HIU in order for us to be able to consider any claim, so please have such details readily available upon request.

Our contact details:

Email: sales@intatec.co.uk
 Telephone: 01889 272180
 By Post:
 F.A.O Technical Department
 Airfield Industrial Estate
 Hixon
 Stafford
 Staffordshire
 ST18 0PF

5. If, after examination by us, we are of the opinion that the defect(s) is/are not covered by the terms of the Warranty, additional call out charges (including without limitation an initial call out charge) shall apply. Details of such charges (and our payment terms) are displayed on our website at www.intatec.co.uk.

Section D: General

1. In the event that we receive any personal information from you, we will only use such personal information to administer the Warranty. We may share such personal information with our engineers in order to conduct any repairs or replacements covered by the Warranty. We will process such personal information in accordance with our privacy policy (a copy of which is available on request or can otherwise be found at <https://www.intatec.co.uk/privacy-policy>).

2. This extended warranty document does not give rise to any rights under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of the Warranty.

3. If the terms and conditions set out in this extended warranty document have not been complied with in full, then we reserve the right to declare the Warranty as null and void.

4. Any words following the terms including, include, in particular, for example or any similar expression shall be construed as illustrative and shall not limit the sense of the words, description, definition, phrase or term preceding those terms.

5. If any exclusion or limitation expressly set out in this extended warranty document is or becomes invalid, illegal or unenforceable, it shall be deemed deleted, but that shall not affect the validity and enforceability of the rest of this extended warranty document.

6. The terms of this extended warranty document are subject to the law of England and Wales and the courts of England and Wales shall have exclusive jurisdiction to settle any dispute or claim arising out of or in connection with this extended warranty document.



General Specification

Indirect interface for instantaneous DHW	V4 Hiper II Hot Water ONLY
Control method	Electronic PID controller with fast acting stepper / PICV.
Plate Heat Exchangers	Stainless steel—insulated Wras approved
Casing	Fully insulated steel backplate and cover
Dimensions	585mm H x 465mm W x 265mm D
Heat meter options	Zenner C5 MID compliant 1.5 qp M ³ /hr 110mm
Filters 1) Primary 2) CW inlet	800 micron
Wras approved shock arrester	Inta - mechanical spring loaded
Internal pipework	copper

Technical Specification

DH maximum pressure	16 bar
DH maximum temperature (Recommended operating 80C)	85° C
DH maximum pressure differential.	4 bar
DHW temperature adjustment	30°C to 65°C
DHW maximum output at 1300 ltrs/hr with 80C DH and ΔT 40°C	Max 80kW
DHW minimum output at 400 ltrs/hr with 55C DH and ΔT 40°C	Min 15 kW
DHW maximum flow at 1300 ltrs/hr with 80C DH and ΔT 40°	28.5 Ltrs/min
DHW maximum flow at 1300 ltrs/hr with 55C DH and ΔT 40°	5.8 Ltrs/min
DHW maximum output at 1300 ltrs /hr with 70C DH ΔT 45°C	63kW
Minimum suggested inlet pressure for cold water supply	1.5 bar
Electrical supply	1 ph 50Hz 230v

For specific operating conditions under all conditions please contact our office.

Intatec Ltd

Airfield Industrial Estate
Hixon
Staffordshire
ST18 OPF

Tel: **01889 272 180**

Fax: **01889 272 181**

email: **sales@intatec.co.uk**

web: **www.intatec.co.uk**