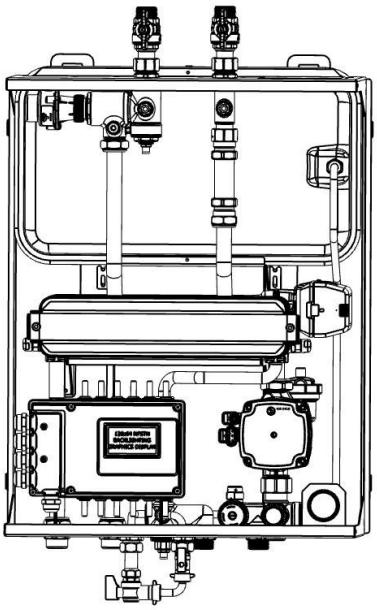
HIPER II
HEAT INTERFACE UNIT

Commissioning Report

Required Hiper HIU documents.

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

Location /address / Apartment number



Name of Commissioning Services Company

Name of Installation Company

Date commissioned

Confirm the HIU has been registered and the warranty activated

YES ☐ NO ☐

Registration link https://intatec.co.uk/hiu-product-

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Unless the HIU is commissioned by an approved independent Commissioning Services Company, this checklist is to be completed in full by the competent person appointed to carry out this work. On completion the document should be handed to the customer, and the HIU registered with Inta to validate the warranty agreement.
This does not affect the customer's statutory rights. Steps 1 to 4 are mandatory.
It is the installer's responsibility to have the installation complete with power off before the commissioning engineer's arrival, if not then the commissioning may be aborted at cost to the installer.

Step 1 - pre-commissioning checklist **before power up**.

No.	HIU Commissioning Checklist	Comment and confirm checked
1	Record installation date, serial number and apartment number	*HIU Model*
		Serial No.:
	If the HIU installation date was more than 12 months ago, and the unit has been filled and left with standing water, then flush thoroughly!	*Actual installation date.*
2	Verify and record if the room thermostat is 'voltage free' ***If the room thermostat is not voltage free do not turn on power to the HIU!***	*Record make and model of room thermostat:*
		Volt free switching YES / NO ***If NO, abort commissioning!***
3	Pre-payment wiring connection? If wired in check is volt free or the a relay has been fitted to supply a volt free signal to the controller	*Volt free switching YES / NO* ***If NO, abort commissioning!***
4	Confirm Heat Network supply 1)is fully operational 2) and has been flushed	Installer signature and date. Verify supporting documentation.
5	Is the **cold water supply** in a hard water area greater than 200 mg/l? The water conditioner may be fitted in the plant room (supplying all properties with conditioned water). See back cover map.	Note type of water conditioner fitted...
6	Note position of cold mains stopcock.	Note here
7	Pressure reducing valve with gauge? Note water pressure.	Bar g
8	**Leaks** or signs of **water damage**?	Notes here...

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Step 2 - Installation external checklist.

No.	HIU Commissioning Checklist	Comment and confirm checked
9	**Manual bypass valve is closed** or flushing pipe on the PRIMARY is removed and capped	Notes here or tick YES**.** **YES** ☐
10	Safety valve **Discharge** Pipe is free from leaks; has a continuous fall: and record that it conforms to regulations.	Notes here or tick YES. **YES** ☐
11	**Insulation is** accordance with current building regulations.	Notes here or tick YES. **YES** ☐
12	**Pipes** connecting to the HIU are secure with adequate wall fastening.	Notes here or tick YES. **YES** ☐
13	**Installation Position** Confirm access to the front of the HIU and casing fixings are accessible.	**NO** ☐ **YES** ☐ **If NO is ticked then the commissioning may be aborted.**
14	**Electrical wiring to the HIU** Verify fused spur and electrical supply are as per installation instructions and meet current regulations.	Notes here or tick YES. **NO** ☐ **YES** ☐ **If NO is ticked then the commissioning may be aborted**

Step 3 - Installation internal checklist before power up.

No.	HIU Commissioning Checklist	Comment and confirm checked
15	Remove the HIU Casing. **Leaks** or signs of **water damage**?	Notes here or on page 7 NONE ☐
16	Remove Controller wiring access cover. Confirm wiring is as per installation instructions. Replace Controller wiring access cover	**YES** ☐
17	**Strainer** Verify and record if the 1 heat network side strainer inside the HIU 2) tertiary heating side strainer 3) cold water inlet strainer are CLEAN / FREE of DEBRIS.	1) NO ☐ YES ☐ 2) NO ☐ YES ☐ 3) NO ☐ YES ☐

Step 4 - Power ON checklist.

No.	HIU Commissioning Checklist	Comment and confirm checked
18	Switch ON power supply to the unit. If this is the first Power Up, follow the instructions on the screen and as in the installation manual.  Underfloor Heating selected. **The correct selection of temperature id critical for both slab draying and operating temperature. If the temperature is set too high then the floor could become irreparably damaged!**	*Address error codes accordingly and record actions.* *Record heating set temperature* ☐ *Record slab drying temperature set* ☐
19	Does the installation require any settings changes to the Controller? See pages for list of parameters that can be changed for aligning the HIU controller to the special requirement of the system. SEE **Programming Guide** for gaining entry to the installer level programming! This Guide is available on request by contacting the supplier.	See the installation manual for record of any changes made to any of the operating parameters by the installer. Parameter ☐ New parameter setting. ☐ Parameter ☐ New parameter setting ☐ Parameter ☐ New parameter setting ☐ Parameter ☐ New parameter setting ☐ No changes to parameter settings tick here; ☐
20	Before running the HIU in heating mode check and record the system pressure reading from the gauge on the HIU. If necessary, using the filling group as per installation instructions, recharge the system to the recommended pressure.	**System pressure requirement, and actual pressure. Bar g.** For installations up to 2 x floors or 10 bar static 1.2 Bar g* ☐ **Heating system pressure correct and Link pipe removed and valve caps fitted.** tick here ☐
21	When filling is complete and the system is at the correct pressure, close the valves and remove the filling pipe from the filling group. Seal the valve connections with the caps provided, and leave the pipe safely for future use.	Filling pipe removed YES / NO

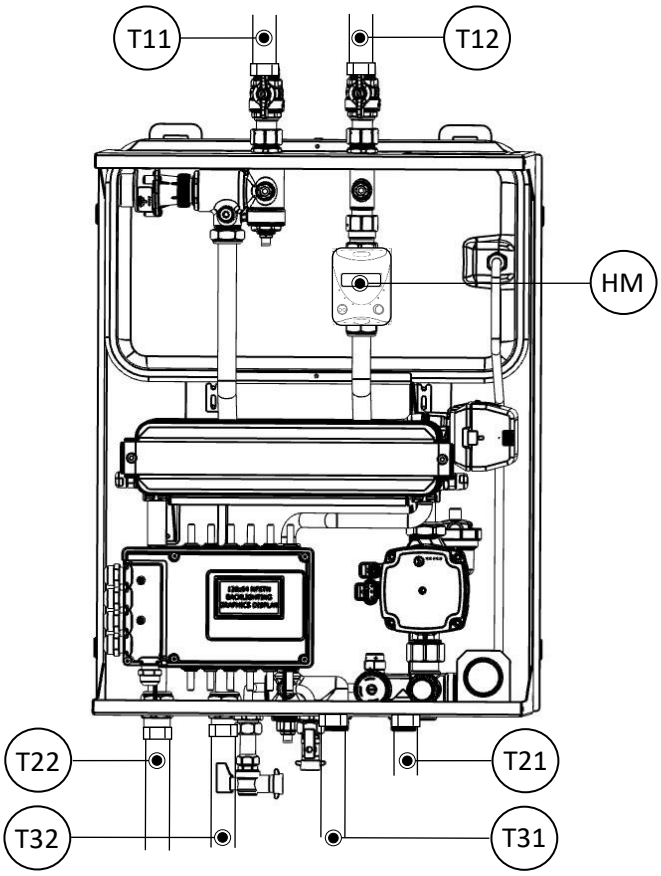
23

Step 4 - Operational checklist.

After initial power on, HIU self diagnostics check complete, programming checks complete, now run the HIU in both heating and hot water modes and record the operating conditions.

Should any anomalies be noticed during this time consult the fault finding section of the HIU installation manual.
Test positions for surface test probes.
Use the heat meter to record the primary return flow rate.

T11	Primary FLOW (SUPPLY) TEMPERATURE °C
T12	Primary RETURN TEMPERATURE °C
HM	Primary RETURN flow rate
T22	Heating FLOW TEMPERATURE °C
T21	Heating RETURN TEMPERATURE °C
T31	Cold water mains supply TEMPERATURE °C
T32	Hot water SUPPLY TEMPERATURE °C



In accordance with BS 8558 the water temperature at an outlet or thermostatic mixing valve should be at least 50°C within 1 minute of running the water

Test Position	Temperature
T31	

Test Position	Design set point	Actual after 60 seconds	additional
T11			
T12		Also see addendum 2	Record pressure drop here (optional) *
HM			
T22			**MUST always be lower than primary flow! T11**
T21			
T32 **		Also see addendum 3	Temperature at Kitchen Sink °C and at bathroom basin °C **MUST always be lower than primary flow! T11**

* See Addendum 1 on page 7

** See Addendum 3 on page 7

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Step 5 - Balancing the Heating System.

Though not part of the manufacturers instruction for the HIU, the radiators or UFH circuits require professional balancing before being handed over to a home owner. A system that is not balanced will not only give poor comfort levels but more importantly be inefficient with higher than designed for return temperatures.
UFH systems balancing is the responsibility of the UFH installer, so will not be part of the commissioning engineer's duty unless agreed. For commissioning the HIU then radiator circuits should be reviewed and reported on as part ensuring the proper operation of HIU.

No.	Method 1 - MINIMUM practice	Complete this table if using Method 1
23	**All air is purged from the Radiators!!!** AAV is installed at the high points in the pipe work where there is a risk of air entrapment.	Notes here or tick YES. **YES** ☐ **YES** ☐
24	Check all radiators are heating to design FLOW temperature. **Design Temperature** ☐ **°C**	Notes here or tick YES. **YES** ☐
25	Check all radiators are heated to design RETURN temperature. **Design Temperature** ☐ **°C**	Notes here or tick YES. **YES** ☐
26	All radiators balanced to have equal pressure drop and temperature by manually adjusting the lock shield radiator valves.	Notes here or tick YES. **YES** ☐

Method 2 - Best practice for balanced radiator systems.

PTRV (presentable thermostatic radiator valves) Specified and fitted to each radiator. ☐ **YES**

The valves have been accurately set as per the manufactures instructions. ☐ Enter YES or NO here.

The commissioning instructions as written in the CIBSE CP1 2020 Code of Practice for the UK have been adhered to without exception. ☐ Enter YES or NO here.

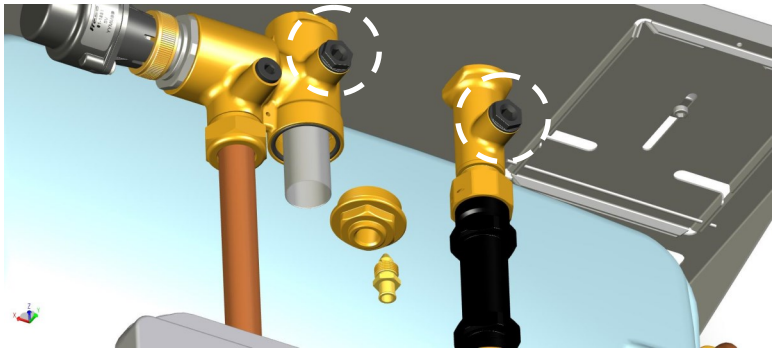
Addendum

Addendum 1.

The maximum pressure differential across the PICV is 400 kPa giving a good scope for consultants to size pipes accounting for even for the closest connections to the pump. If the differential pressure across the PICV actually exceeds that then control can be lost. It is good practice therefore to monitor the pressure drop during commissioning. The HIU has two 1/4" test ports on the inlet block which can be used for this purpose. Two gauges can be fitted at the same time as cleaning the strainer at Step 3 to these ports, circled in below. These are to be removed when commissioning is finished, so then additional time is lost waiting for the block to cool, Isolate , drain and remove, replace the plugs, re-fill.

This may only be required on selected apartments, 1 per floor or closest to the pump station.

Professional commissioning will carry specialist equipment for measuring pressure differential.



Gauges specification.

Intatec
1/4" back entry 0 - 10 bar GP1576010
1/4" back entry 1-14 bar (Glyc) GFG1463BK

Pressure drop can be recorded in the table on page 5 as indicated.

Addendum 2

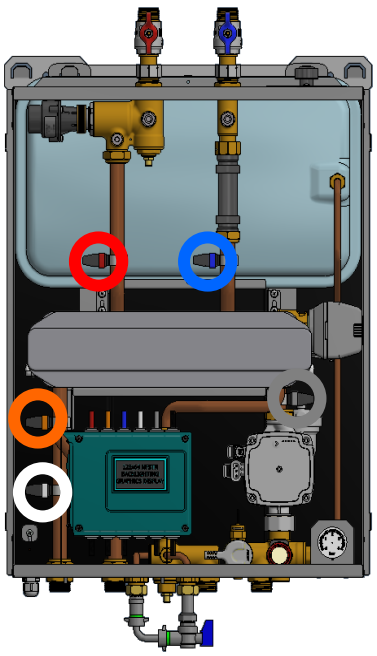
Temperatures to be recorded as per BS 8558. Temperatures not reaching 50C in 1 minute would indicate that the pipe runs to the tap are too long, and this may also point to long dead legs of pipework that may be considered legionella risk. All the commissioning engineer is required to do is note this for the installer's consideration.

Note if temperatures exceed 60C at the taps, this is a SCALDING risk and the controller SET TEMPERATURE must be reduced!

Addendum 3

Always check the temperature sensors are clipped securely to the pipes for accurate control, All the sensors are colour coded for connection identification.

RED = Primary FLOW
BLUE = Primary RETURN
ORANGE = Hot Water OUT
WHITE = Heating FLOW
GREY = Heating RETURN



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ActivFlo Water Conditioners

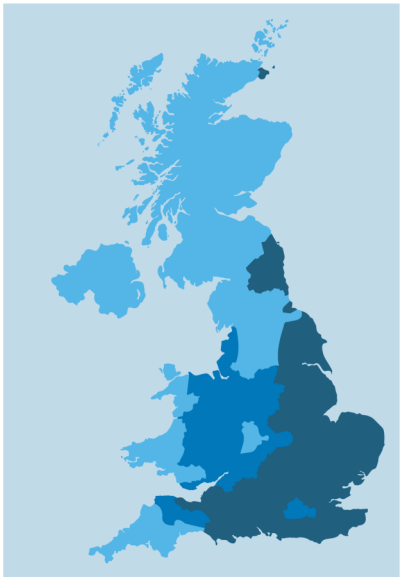
UK water hardness map.

Soft water - 0 - 100 mg/l calcium carbonate.

Hard water - 100 - 200 mg/l calcium carbonate.

Very hard water - 200 + mg/l calcium carbonate.

Water Quality Map



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Twin Plate Heat Interface Unit

Instantaneous priority hot water and heating

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