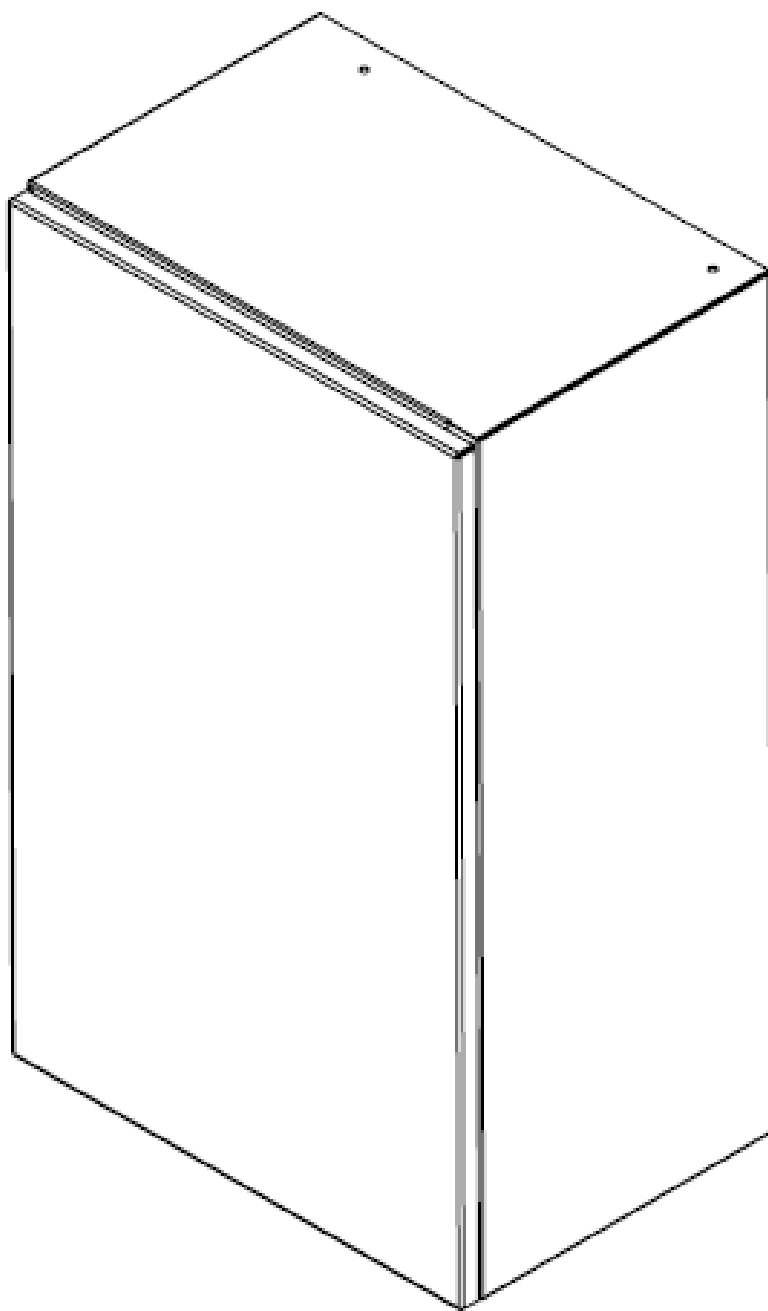


Instruction Manual for Installation and Operation



INDIRECT SMARTEXA DHW

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1 Explanation of Symbols and Abbreviations

Symbols



CAUTION General Safety Remark



CAUTION Hot Surface, Risk of Burn



CAUTION Risk of electrical shock



Requirement of 230V Alternating Current



Requirement of Handtool



Important Note



Phillips Screwdriver



Insulated flathead Screwdriver



Recycle component if possible



Dispose component



Motorized tool



Manual operation no need

Abbreviations

DH	District Heating	PE	Protective Earth
SH	Space Heating	°C	Temperature in degrees Celsius
DHW	Domestic Hot Water	kPa	Pressure Kilopascal
DCW	Domestic Cold Water	kg	Weight in kilograms
VAC	Volts Alternating Current	mm	Distance in millimetres
VDC	Volts Direct Current	PN	Pressure class in Bar
A	Current in Amps	"	Thread size in inch (ISO 228/1)
N	230VAC Neutral	HIU	Heat Interface Unit
L	230VAC Live (phase)		

2 Operation

2.1 Domestic Hot Water (DHW)

The HIU is equipped with single wall plate heat exchangers. The heat exchanger transfers the heat from the heat distribution system to the domestic hot water. The electronic controller in the unit, together with electronic control valves, temperature sensors and flow sensor regulates the temperature of the hot water to its set point (default 55°C).

The unit has DHW keep warm mode. This mode the heat exchanger is kept up to temperature for hour after the last hot water draw off. After 1 hour of inactivity the temperature is allowed to drop to minimize energy consumption. In this mode the heat exchangers continuously kept warm for quicker hot water delivery. To prevent legionella from growing the heat exchanger is heated to 60°C every 24 hours for at least 30 minutes.

CAUTION! Hot Water



The hot water temperature is regulated to 55°C (default value). If there is a power outage during tapping conditions the unit will stop regulating the domestic hot water temperature. This may lead to a domestic hot water temperature that is higher or lower than its set point. Hot water can cause burns.

2.2 Priority Switching

The HIU is fitted with priority switching. When hot water is drawn off, the HIU diverts all the DH flow to heat up the domestic water. If there is a power outage during tapping conditions or during a situation where there is no request for heat from the (connected) thermostat, the space heating valve will stay in closed position. This may lead to a decrease in temperature of the space heating installation/circuit.

3 General Plumbing Requirements

New System Installations

When carrying out a completely new heating system installation in a new build property or a first time installation in an existing property, then the heating system must conform to current building regulations Part L1a. All new domestic heating systems must have a minimum of two heating zones. Each of these zones should be controlled by a thermostat and zone valve. Alternatively individual electronically controlled Thermostatic Radiator Valves may be fitted. If domestic hot water is provided by a storage system then the storage system or cylinder will require separate time and temperature control.

All radiators must have TRV's fitted in all rooms except bathrooms and any rooms where a thermostat is located. The exception to this are single storey, open plan dwellings where the living area is more than 70% of the total usable floor area. Then this type of dwelling can be controlled as one zone.

Existing Installations

When carrying out boiler replacements on an existing system, the regulations do not require separate zoning of the upstairs and downstairs and compliance with the regulations can be achieved by a single room thermostat or programmable room thermostat. It is however recommended that [TRV's](#) are fitted to all rooms except the bathrooms and the room where a thermostat is located.

3.1 British and Irish Standard

Where no specific instruction is given, reference should be made to the relevant British and/or Irish Standard codes of Practice.

BS7074:1	Code of practice for domestic and hot water supply
EN12928	Space heating for domestic premises
BS7593	Treatment of water in domestic hot water space heating systems
ECTI	National rules for electrical installations

Keep following conditions in mind during installation:

- The HIU can only be used with closed heating systems up to a temperature of 90°C.
- The HIU must be stored and installed in a frost free area.
- The HIU must not be exposed to direct sunlight.
- Ambient temperature must be between +5°C and +40°C.
- Humidity must be between 20% and 80%. •Temperatures of components in the HIU and connected to the HIU can reach high temperatures. Contact may lead to burns.

Potable water: All seals, joints and compounds (including flux and solder) and components used as part of the secondary domestic water system must be approved by WRAS.

CH Water: Artificially softened water must not be used to fill the central heating system.

3 General Plumbing Requirements

3.2 Fitting and Modifications

Fitting the appliance and any controls to the appliance may only be carried out by a competent engineer. Any misuse or unauthorised modifications to the appliance or associated components and systems could invalidate the guarantee and may lead to serious injury or even death. The manufacturer accepts no liability arising from any such actions, excluding statutory rights.

3.3 District Heating



CAUTION!

Components, pipes and radiators in, and connected to, the unit may be hot. The heat interface unit is designed for use with centralized heating systems up to 90°C. The pipes and components in the HIU as well as the pipes and radiators in the space heating installation can reach these temperatures. Contact may lead to burns.

Keep following conditions in mind during installation:

- Maximum pressure supplied by the district heating network is 16 bar.
- Maximum differential pressure supplied by the district heating network is 600 kPa.
- Maximum supplied temperature by the district heating network is 90°C.
Minimal supply temperature is set-point DHW + 5°C.

3.4 Servicing

The end user should be advised to have the system serviced annually by a competent engineer. Contact your supplier for a list of approved engineers. Approved spares must be used to help maintain the economy, safety and reliability of the appliance. The service engineer must complete the Service Record after each service.

4 General Wiring Requirements

These instructions apply in the UK and Ireland only and must be followed except for any statutory obligations. Component specific electrical information may also be supplied in support of these instructions.

FAILURE TO INSTALL APPLIANCES CORRECTLY COULD LEAD TO PROSECUTION.



CAUTION!

Isolate the mains supply before starting any work and observe all relevant safety precautions. The HIU uses electrical components (230VAC and 24VDC). These components must stay dry at all times. Touching these components can result in an electrical shock, burn, or electrocution.

When the HIU is permanently connected to the 230VAC installation, a switch or circuit-breaker must be included in the installation as the means for disconnection. The switch or circuit-breaker must be suitably located next to the appliance and easily reached. The switch or circuit-breaker must be marked as the disconnecting device for the equipment.

4.1 Danger of Short-Circuit

When connecting the cables ensure that no cable pieces fall inside the control panel. Unless otherwise stated, all HIU's should be connected to a mains 230V 50Hz Supply fused at 3 Amps. All electrical connections with the HIU control panel are clearly marked as follows:

L = Live 230V

N = Neutral

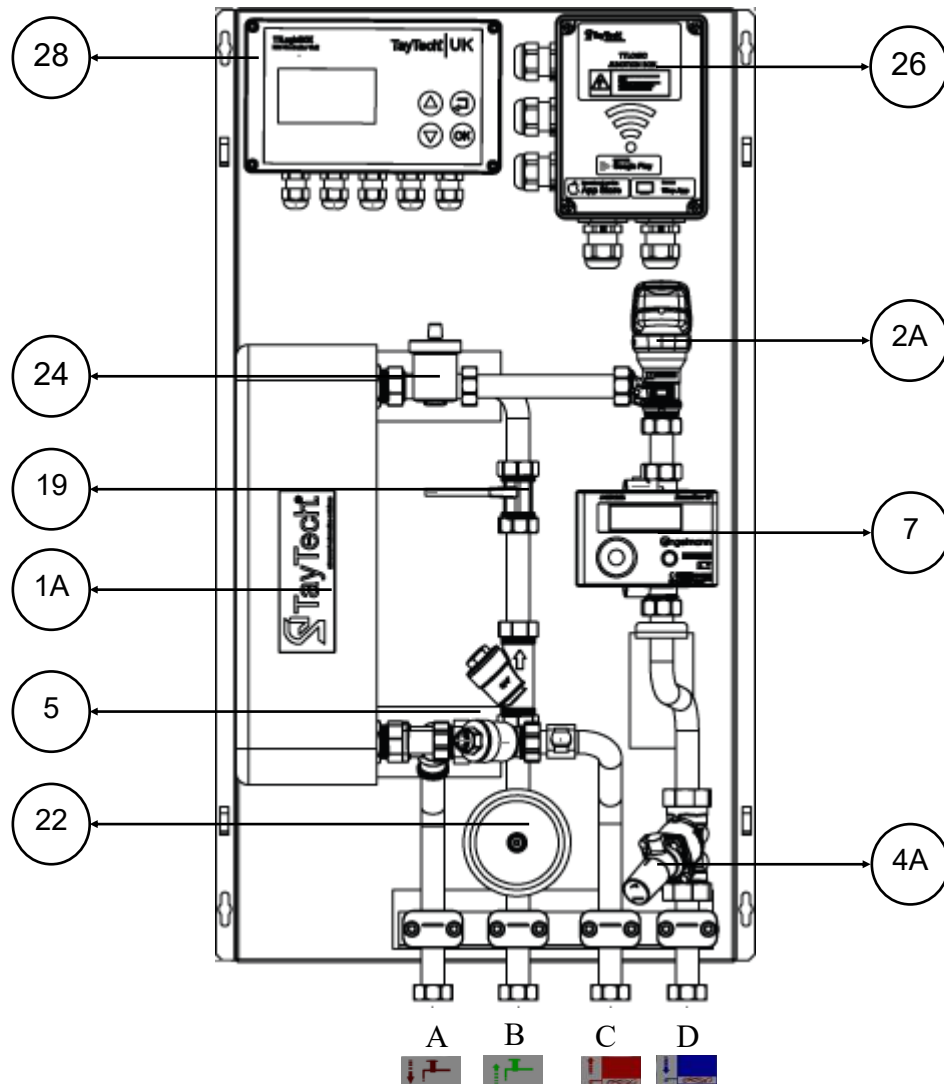
E = Earth

PE = Protective Earth

Any additional mains cable should comply fully with the current I.E.E. wiring regulations. It must have a minimum section of 1.5mm² and be capable of withstanding a minimum of 90°C.

5 Specifications

5.1 Component List

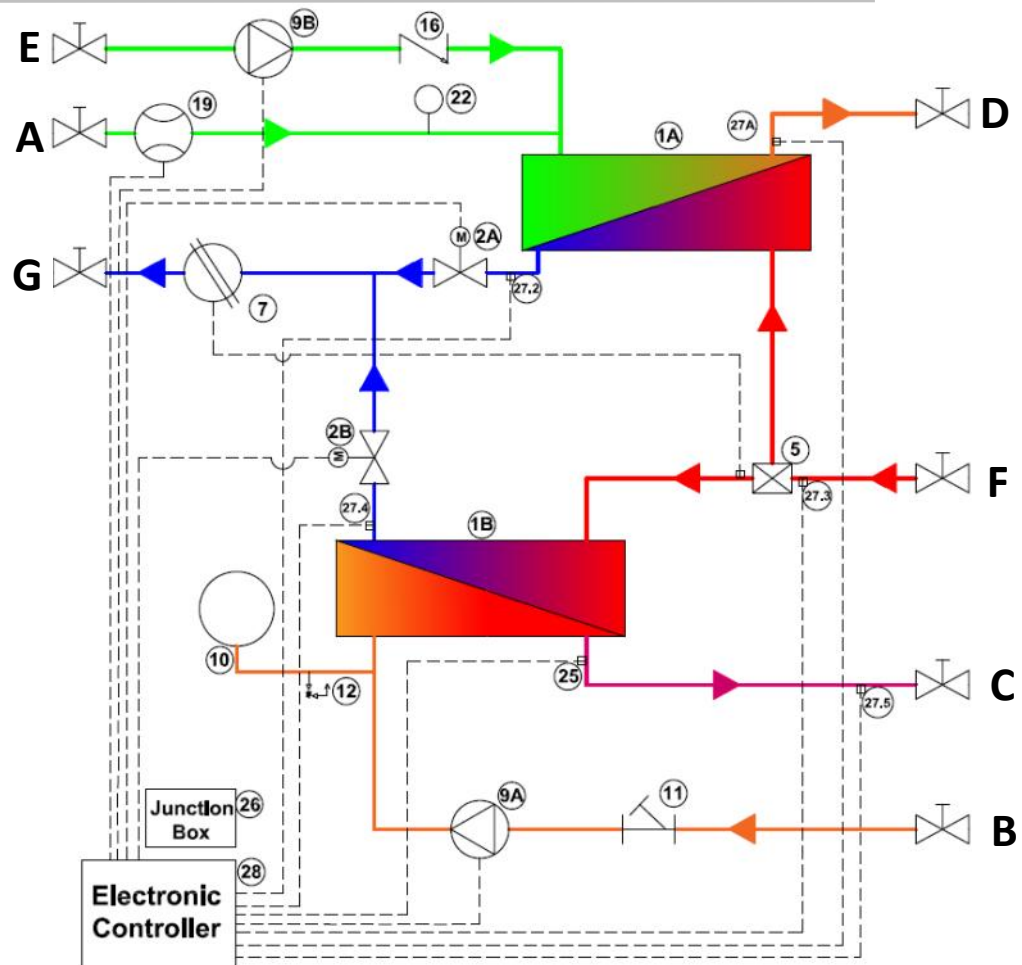


1A DHW Heat Exchanger
 2A DHW Temperature Control Valve
 5 District Heating Strainer
 7 Heat Meter
 19 Flow Sensor
 22 Water Hammer Arrester
 24 Bleed Point (Automatic)
 26 Junction Box
 28 TT LogicBOX Controller

A - Domestic Hot Water
 B - Cold Water Inlet
 C - District Heating Supply
 D - District Heating Return

5 Specifications

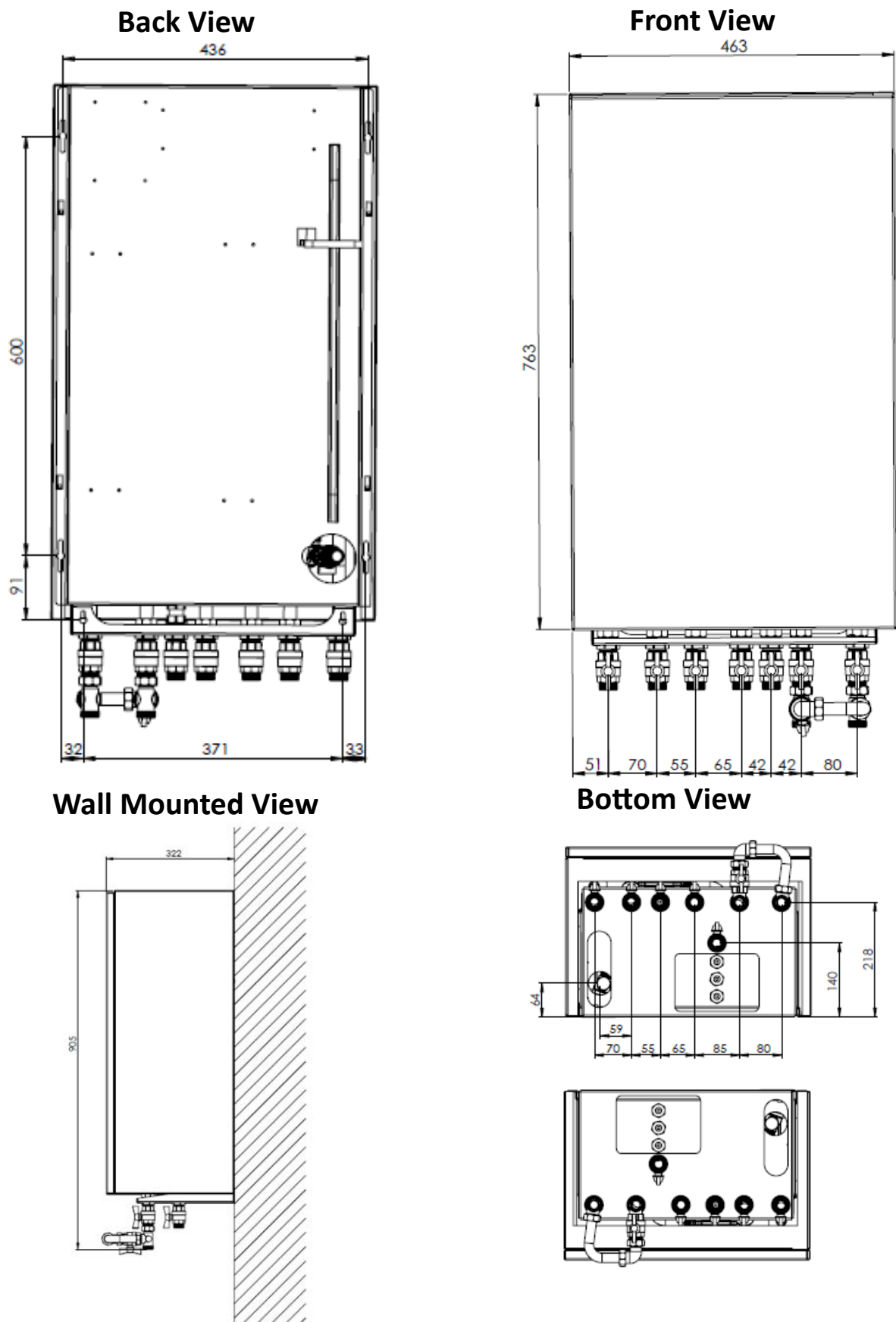
5.2 Flow Diagram



A —	DCWI	—	Domestic Cold Water Inlet
B —	SHR	—	Space Heating Return
C —	SHS	—	Space Heating Supply
D —	DHW	—	Domestic Hot Water
E —	Re-Circ	—	Re-Circulation
F —	DHS	—	District Heating Supply
G —	DHR	—	District Heating Return

5 Specifications

5.3 Dimensions



5 Specifications

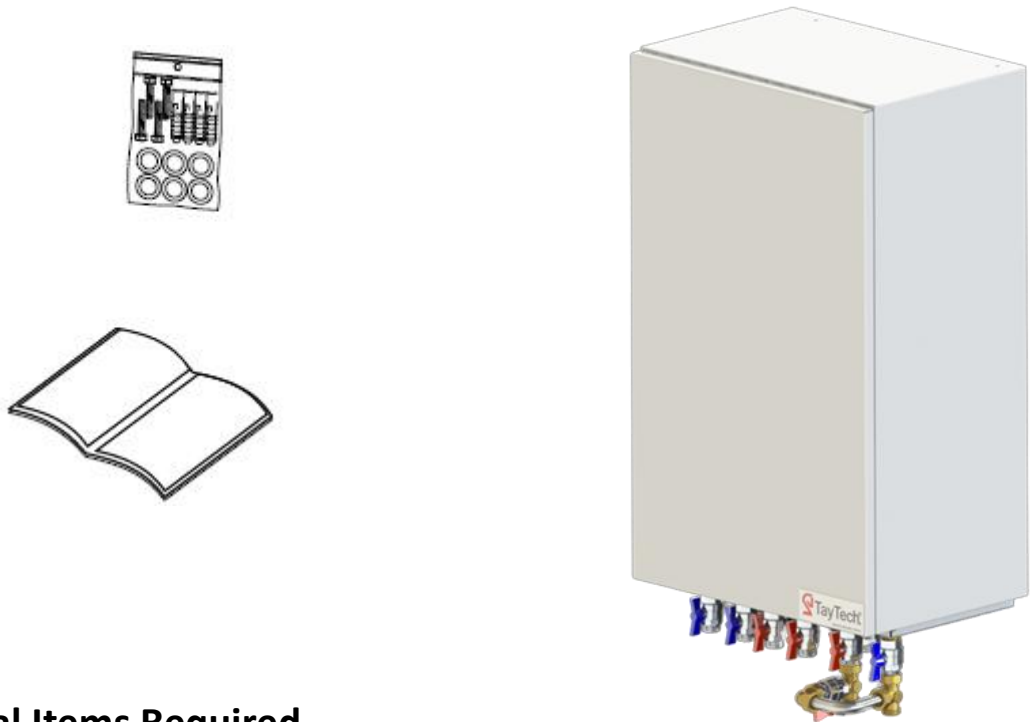
5.4 Technical Data

Description	Data
Nominal primary supply temperature	80°C
Maximum primary supply temperature	85°C
Minimum primary supply temperature	55°C *
Nominal DHW supply temperature	55°C
DHW Set Range	45°C to 60°C
Primary connections	Female / 18mm
Mains & DHW connections	Female / 18mm
Central heating connections	Female / 18mm
Maximal primary differential pressure (without dP regulator)	450kPa
Pressure class DH circuit	PN16
Pressure class DHW circuit	PN10
Casing width	463mm
Casing height	763mm
Casing depth	322mm
Casing Material	Metal case with Insulation
Weight	20kg **
Electrical supply info	230V 50Hz
Fuse ratings	3 Amp
Sensor DHW	NTC 10k ohm @ 25°C
Functions	Keep Warm Legionella Pump Exercise Valve Exercise Pre-pay Shut Off Hot Water Priority

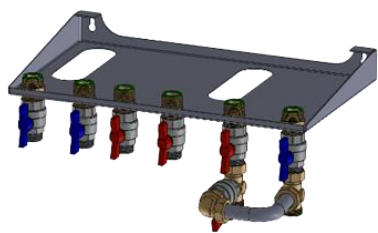
* Minimum required DH supply temperature is DHW setpoint + 5°C with a minimum of 55°C.

** Unit weight may vary depending on the optional components built into the unit.

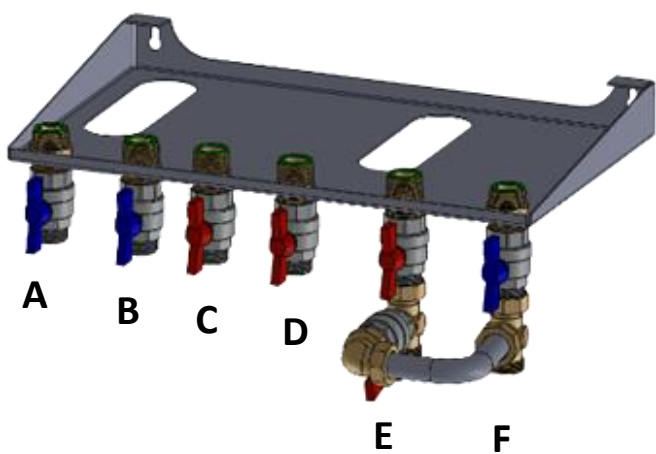
6 Installations



Additional Items Required



Connections

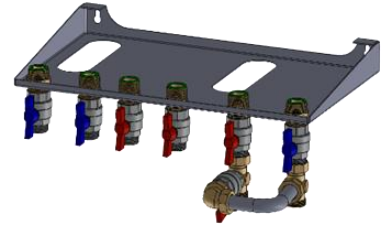


- A Domestic Cold Water Inlet
- B Space Heating Return
- C Space Heating Supply
- D Domestic How Water
- E District Heating Supply
- F District Heating Return

6 Installations

6.1 Mounting to the Wall

The wall needs to be strong enough to support the HIU. If the wall is of drywall construction make sure that there is a board installed (e.g. plywood, min. 18mm) to support the structure, which is strong enough to hold the HIU. Use a 4mm drill bit (at least 40mm depth for the wall plugs).



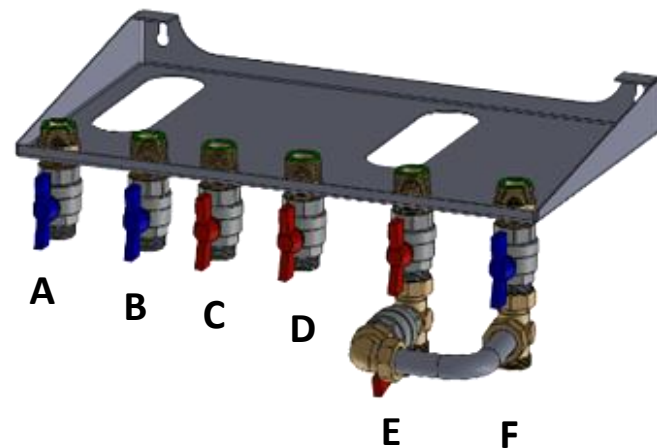
If the wall is of concrete or brick construction use a 10mm drill bit (at least 60mm depth for the wall plugs).



The PPB (Pre-Plumbing Brackets) requires 2 fixing screws, the HIU requires 4 fixing screws.

6.2 Flushing the System

Before mounting the HIU and connecting it to the PPB all pipework that is to be connected must be thoroughly cleaned and flushed out. Any debris or flux that could collect in the narrow channels of the heat exchangers will be difficult to remove once they are installed. Any remaining debris and flux may cause serious corrosion problems, as well as restricting flow and reducing the efficiency of the HIU. Use the flushing by-pass (optional accessory) and connect it to the PPB (E-F).



7 Service

7.1 Filling the Space Heating System

The method of filling the SH system must comply with the current water supply (water fittings) regulations and use approved equipment. For GB Please refer to Guidance G24.2 and recommendation R24.2 of the water regulations guide. For IE Please refer to the current edition of I.S. 813 "Domestic Gas Installations".

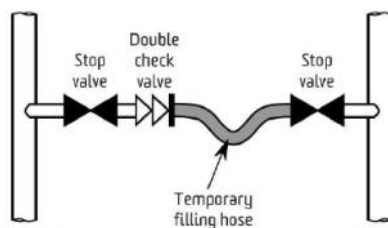
A WRAS approved filling loop should be used for connecting the mains water supply to the SH system so that the system can be filled on installation or whenever water pressure has been removed for system modifications, etc. An approved double check valve must be permanently fitted to the mains water circuit to provide backflow prevention and the temporary filling hose must be removed and connections capped after use.

CAUTION!



Failure to isolate and disconnect the temporary filling hose after use, may result in the central heating system being over-pressurised and could cause damage to central heating components.

The nominal operating pressure of the central heating system should be between 1 and 2 Bar.



Domestic Cold Water Inlet

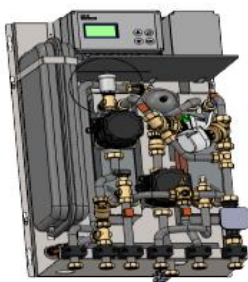
Space Heating Supply

7.2 Air Venting the HIU

All air has to be removed from the system to ensure full functionality of the SH. Bleeding the air can be either manually or automatically. Also all SH circuits have to be bled to make sure all air is removed.

CAUTION!

Please use caution when handling the HIU. Parts and components may be hot or energized. Contact may lead to shock, burn or electrocution.



Quick filling option:

When filling the system turn the red handle of the automatic air vent anti-clockwise. Turn on: the circulation pump and let it run until all air is removed. Isolate the filling loop, re-adjust the pump setting and close the automatic air vent by turning it clockwise

7 Service

7.3 Power Supply

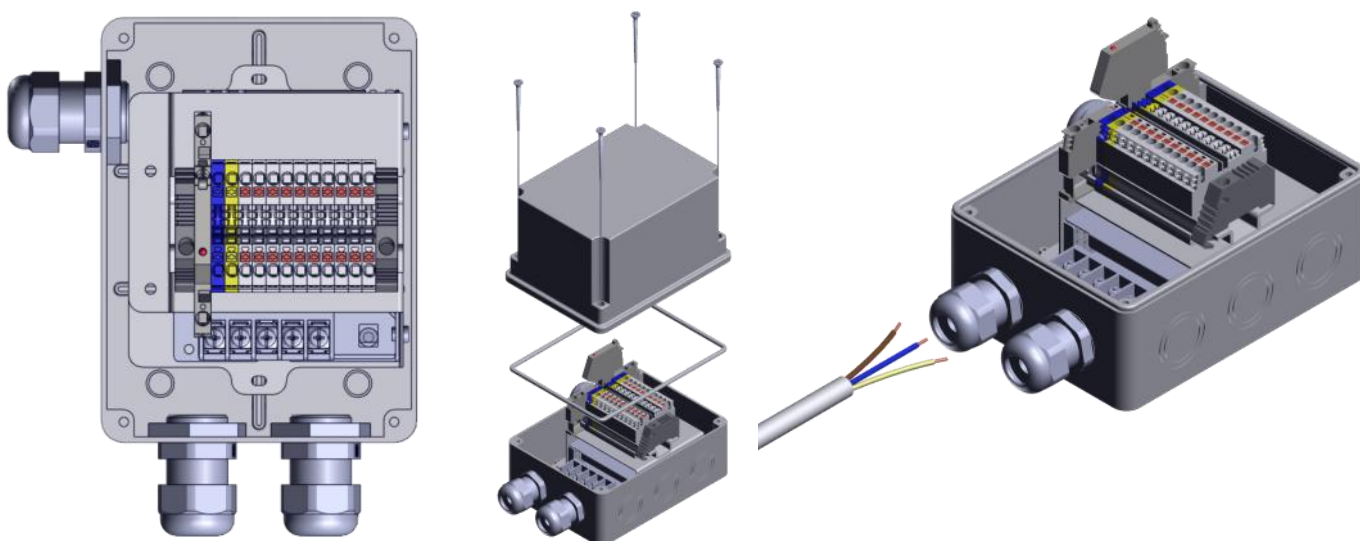
7.3.1 Junction Box



The HIU is equipped with an electric connection box that converts the 230VAC power supply to 24 VDC and powers the equipped SH pump and optional DHW pump. It also houses the fuse of the unit.

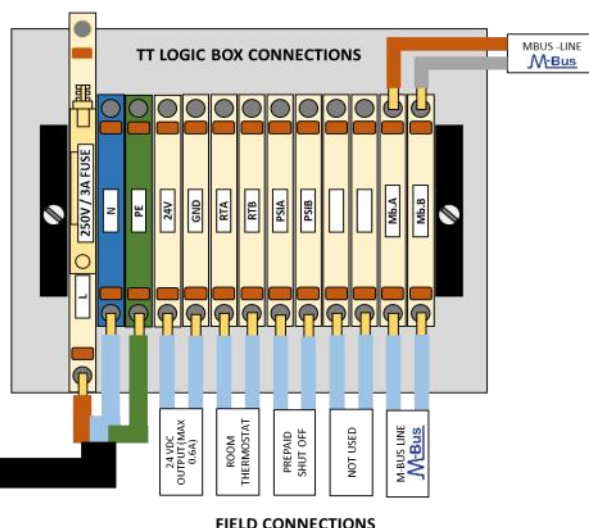
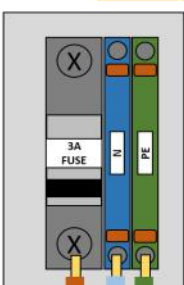
CAUTION!

The HIU uses electrical component (230VAC and 24VDC). Touching these components can result in an electrical shock, burn, or electrocution. The casing shall only be opened by authorised personnel when the power supply is cut off



*Recommended Fuse Type

5X20MM FUSE GLASS 3A 250VAC



Recommended Field Connect Cables

PVC insulated flexible power multi-core cable

Power Supply Cable: minimum 3x0,75 mm²

Other Cables: 2x0,50 mm²



7 Service

7.3 Power Supply

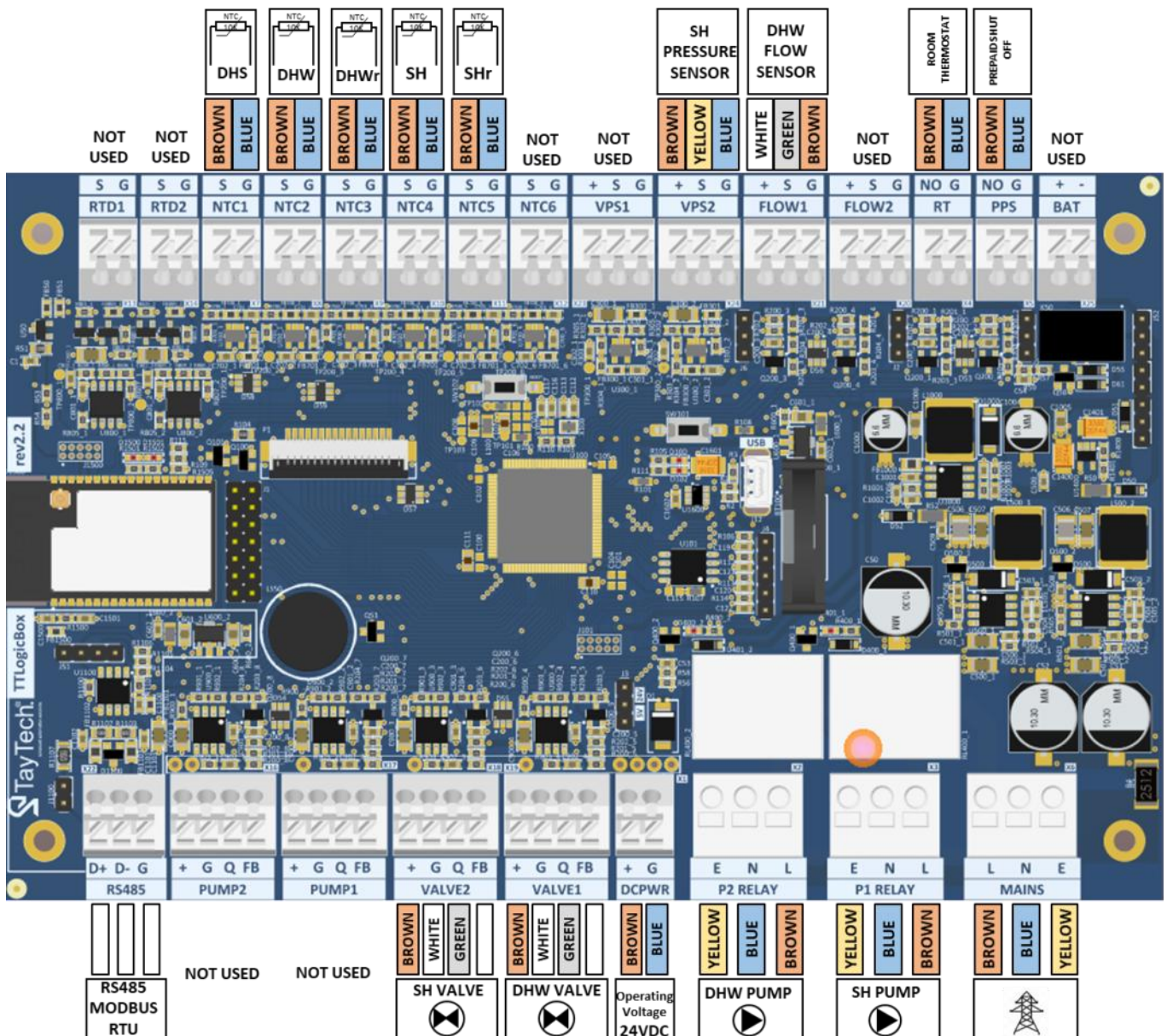
7.3.2 TT Logic Box



The HIU is equipped with an electric connection box that converts the 230VAC power supply to 24 VDC and powers the equipped SH pump and optional DHW pump. It also houses the fuse of the unit.

CAUTION!

The HIU uses electrical component (230VAC and 24VDC). Touching these components can result in an electrical shock, burn, or electrocution. The casing shall only be opened by authorised personnel when the power supply is cut off



7 Service

7.3 Power Supply

7.3.2 TT Logic Box

Description	Cable Label	Board Symbol	Cable Color	Panel Fitting Number
NOT USED		RTD1	S G	
NOT USED		RTD2	S G	
District Heating Supply Temperature	DHS	NTC1	S BROWN G BLUE	1
Domestic Hot Water Temperature	DHW	NTC2	S BROWN G BLUE	2
Domestic Hot Water return Temperature	DHWr	NTC3	S BROWN G BLUE	2
Space Heating Temperature	SH	NTC4	S BROWN G BLUE	2
Space Heating Return Temperature	SHr	NTC5	S BROWN G BLUE	3
NOT USED		NTC6	S G	
NOT USED		VPS1	+ S G	
Space Heating Pressure	PS	VPS2	+ BROWN S YELLOW G BLUE	3
Domestic Hot Water flow	FS	FLOW1	+ WHITE S GREEN G BROWN	3
NOT USED		FLOW2	+ S G	
Room Thermostat Contact	RT	RT	NO BROWN G BLUE	4
Prepaid Shut Off Contact	PP	PPS	NO BROWN G BLUE	4
NOT USED		BAT	+ -	

Description	Cable Label	Board Symbol	Cable Color	Panel Fitting Number
Modbus RTU		RS485	D+ D- G	
NOT USED		PUMP2	+ G Q FB	
NOT USED		PUMP1	+ G Q FB	
SPACE HEATING VALVE PWM	SPv	VALVE2	+ BROWN G WHITE Q GREEN FB -	1
DOMESTIC HOT WATER VALVE PWM	DHWv	VALVE1	+ BROWN G WHITE Q GREEN FB -	1
OPERATING SUPPLY VOLTAGE	24V DC	DCPWR	+ BROWN G BLUE	4
DHW Recirculation Pump Relay	DHW Pump	P2 RELAY	E YELLOW N BLUE L BROWN	5
SH Recirculation Pump Relay	SH Pump	P1 RELAY	E YELLOW N BLUE L BROWN	5
MAINS Voltage	230VAC	MAINS	L BROWN N BLUE E YELLOW	5

7 Service

7.4 Circulation Pump

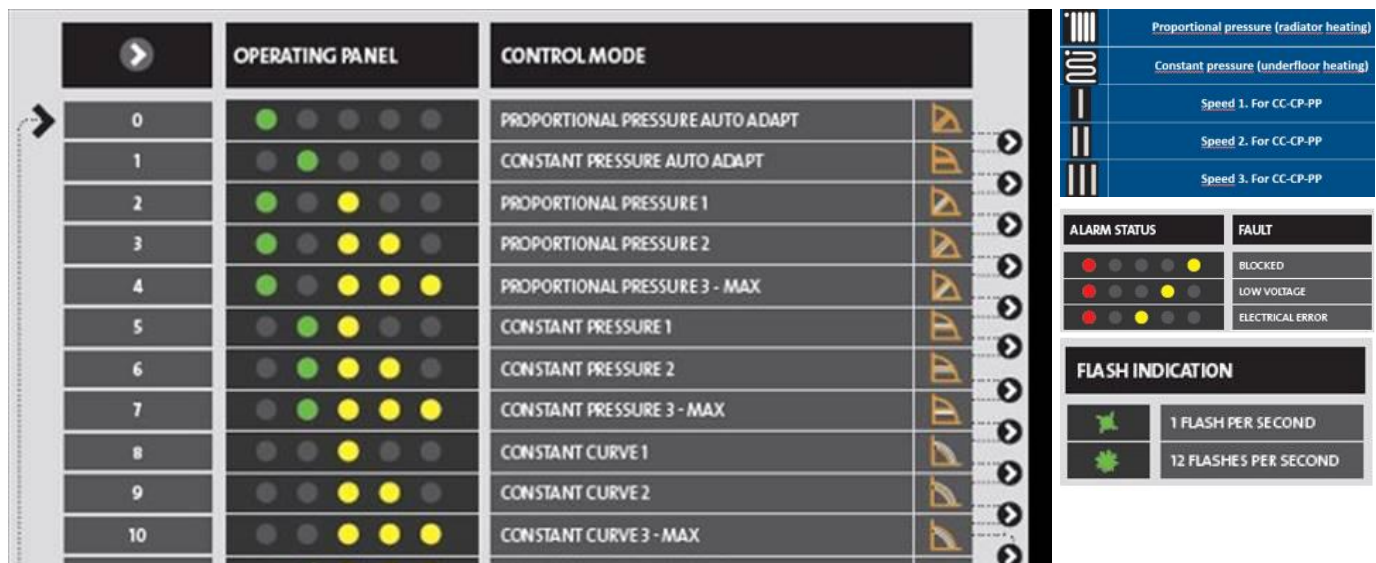
The Grundfos pump has 3 control modes (proportional pressure, constant pressure and constant curve). Each control mode has 4 settings to choose from. The user interface has one push button, one red/green LED and four yellow LEDs

Settings

You can choose between the performance view and settings view. If you press the push button for 2 to 10 seconds, the user interface switches to “select selection” if the user interface is unlocked. You can change the settings as they appear. The settings appear in a particular order in a closed loop. When you release the button, the user interface switches back to the performance view and the last setting is stored.



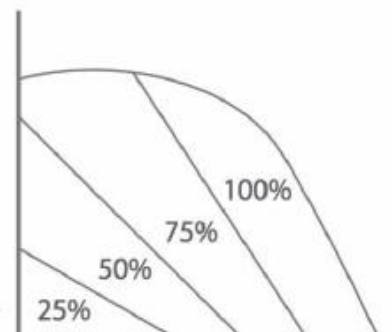
To set the desired operation mode for Hybrid – AUTO – FLEX pump variant. Press the button as many times needed to select the required setting.



7.5 Performance View

While the pump is running, the first LED will show a green light. The following four LEDs will indicate the power consumption as shown in the table below.

Stand-by (only externally controlled)	0%	● ○ ○ ○ ○
Low performance	0 - 25%	● ● ○ ○ ○
Medium performance	25 - 50%	● ● ● ○ ○
Medium High performance	50 - 70%	● ● ● ● ○
High performance	70 - 100%	● ● ● ● ●



7 Service

7.6 Circulation Pump

COMPLAINT	CAUSE	SOLUTION
Leakage - Close all valves on the fix rail and close the main supply valve		
Coupling nut leaking	1-Coupling nut is loose 2-Gasket is missing	1-Replace Temperature sensor 2-Replace Temperature sensor
Other components/pipes are leaking	Component / pipe is damaged.	Replace component / pipe.
CENTRAL HEATING DOES NOT WARM UP		
Radiators do not warm up	No power at power source	Check power source
	Unit is not connected to power source	Connect the unit to the power source
	Power cables not properly connected to main control board	Connect power cables to main control board.
	Fuse is broken	Check for any short-circuit problems and replace fuse (3A)
	Failure in the electronics	Contact your supplier
Hot tap water does not warm up	Tap flow rate too low, minimum 1/7min has not been reached.	Increase tap to at least 2 L/min. by opening the tap further
	Sensors not connected/bad contact	Check cable connections and connect the sensors properly then restart electronics
	Sensor(s) defect	Replace broken sensor and restart electronics
	Possible defect electronic cables or electronics	Contact your supplier
	Supply and return valves are closed	Open supply and return valves
	Pressure or temperature of the DH system are not in accordance with specifications	Check temperature and pressure of the DH system
	Filter is clogged	Check and clean filter
	DHW heat exchanger is clogged	Replace DHW heat exchanger
	Possible defect in control valve	Replace control valve
	Fuse is broken	Check for any short-circuit problems and replace fuse (3A)
	Power supply cable of the optional DHW circulation pump unit is not connected	Connect the power supply cable of the optional DHW circulation pump unit
	Optional DHW circulation pump broken or jammed	Replace DHW circulation pump unit
	Failure in electronics	Contact your supplier
CASING DOES NOT CLOSE PROPERLY		
Casing does not close properly	Cables trapped between unit and casing	Keep cables free of any obstructions
	Heat meter is obstructing the casings path	Connect the heat meter properly
	Electronics not properly placed	Position electronics correctly

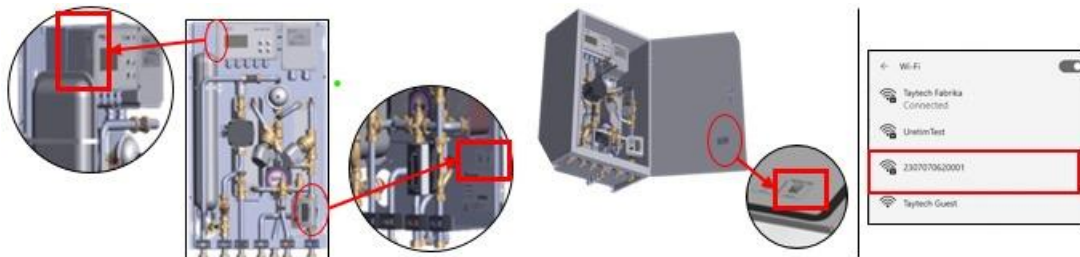
8 WI-FI Configuration

8.1 WI-FI Setup

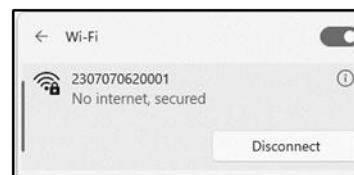
Using the application instructions, the end user can connect the TTLogicBox to WiFi.

When TTLogicBox cannot connect to an access point, it broadcasts as an access point with its own serial number. In order to configure the access point settings to connect to, you must connect to this TTLogicBox access point on your personal computer or mobile device.

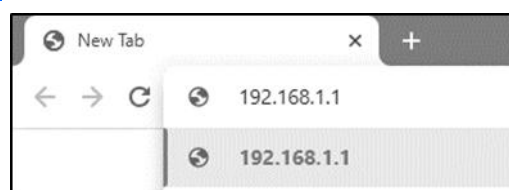
*** You can find the serial number of the TTLogicBox from the label inside the cabinet door of the HIU or near the TTLogic Box.**



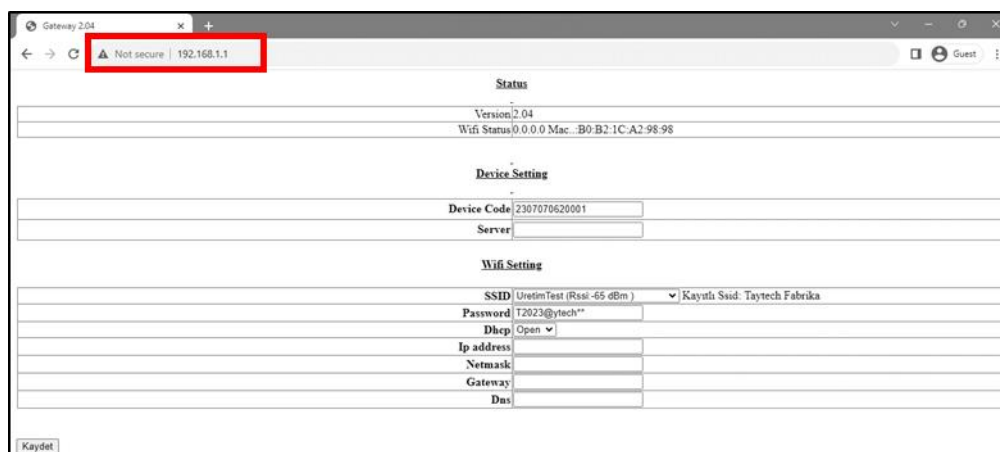
The WiFi password of the TTLogicBox is entered as **"12345678"**



Enter the <http://192.168.1.1/> address to the web browser.



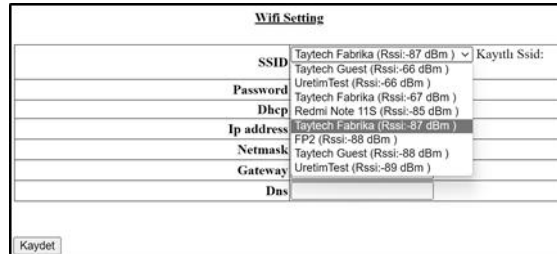
The **TTLogicBox Web Configuration Interface** will open.



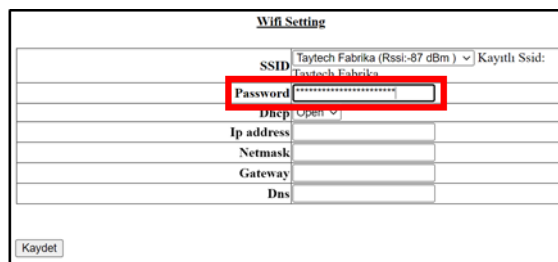
8 WI-FI Configuration

8.1 WI-FI Setup

Select your WIFI network by clicking on "SSID" in the "Wifi Settings" section.

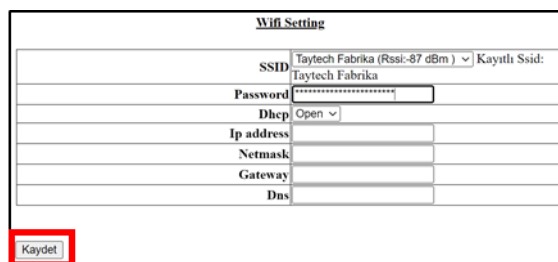


Enter the password of your WiFi network.



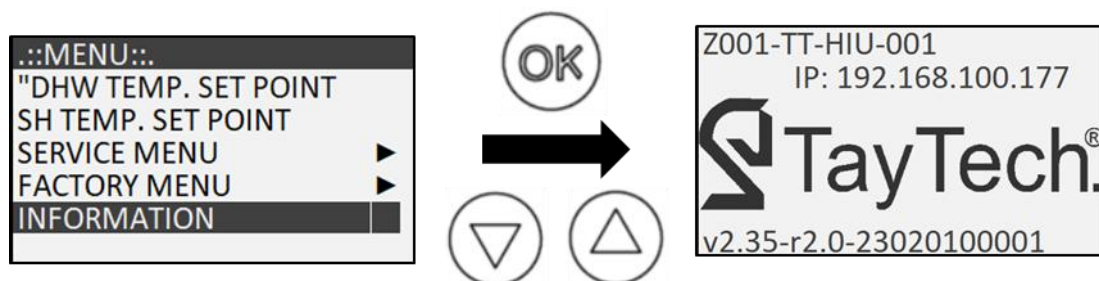
Then press the " Save " button and close the tab.

*** It is recommended to wait half a minute before closing the tab.**



Press "OK" button to enter "MENU" screen. Using down arrow button "Information" appears on screen.

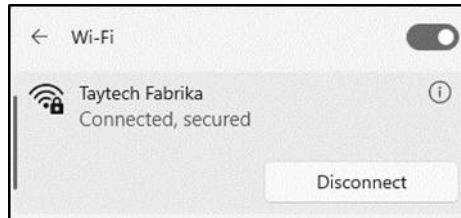
If you see an IP address on the screen, the TTLogic Box has successfully connected to your personal WIFI.



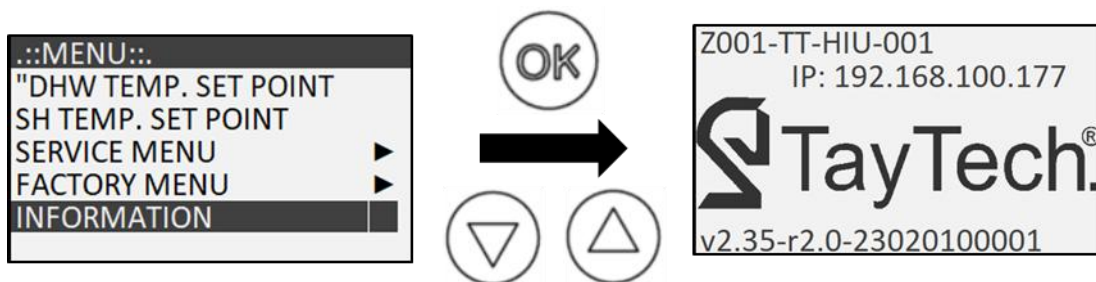
8 WI-FI Configuration

8.2 WI-FI Connection Control

To verify that the TTLogicBox is successfully connected to your wireless network, your computer or mobile device must be connected to the same wireless network as the TTLogicBox.



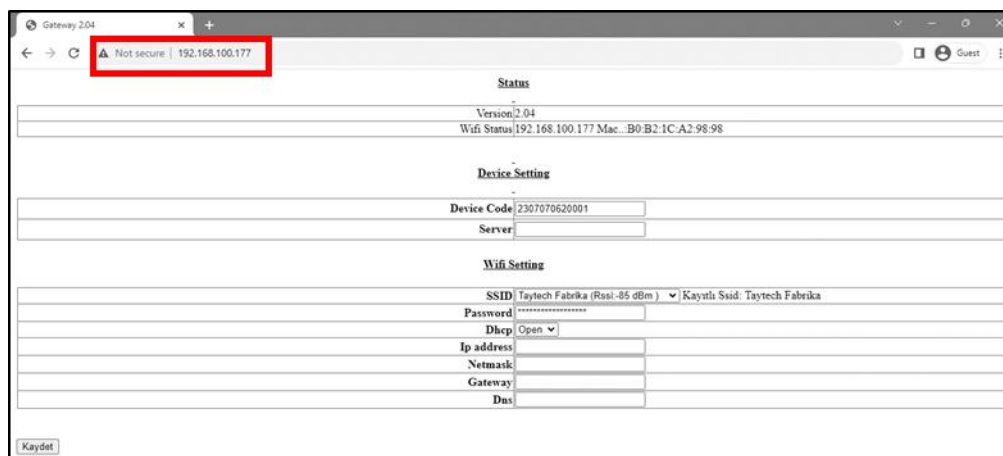
Press "OK" button to enter "MENU" screen. Using down arrow button "Information" appears on screen.



Connect to the **TTLogicBox Web Configuration Interface** from your browser using the IP address on the "Information" screen.



If you were able to connect to the **TTLogicBox Web Configuration Interface** again, your connection to the network was successful.



9 Taytech Gateway

9.1 Safety Precautions

Safety is a top priority when using the **Taytech Gateway**. Please read and understand the following safety precautions to prevent accidents, injury, or damage to the product.

General Safety Instructions

1. Read the Manual

Before using the product, thoroughly read this manual to understand its features, operation, and safety instructions

2. Follow Instructions

Always adhere to the instructions and warnings in this manual to ensure safe and correct operation.

3. Keep Away from Children

This product is not intended for use by children. Ensure that children do not have access to the product and its accessories.

4. Avoid Water Exposure

Do not expose the product to water, rain, or moisture unless it is specifically designed for wet conditions. Water exposure may cause electrical shock or damage the product.

5. Use Correct Power Supply

Ensure that the power supply voltage matches the specifications indicated on the product's label. Using an incorrect power supply can cause fire, electric shock, or product damage.

6. Unplug When Not in Use

If the product is not in use for an extended period, unplug it from the power source to prevent damage from power surges or electrical storms.

7. Avoid Overloading Outlets

Do not overload electrical outlets or extension cords, as this can result in fire or electric shock.

8. Handle with Care

Avoid dropping or striking the product, as physical impact may damage internal components or affect performance.

9. Avoid Heat and Flames

Keep the product away from direct sunlight, heat sources, or open flames, as high temperatures can damage the product or create a fire hazard.

10. Used Approved Accessories

Only use accessories recommended or provided by the manufacturer. Unauthorized accessories may not be compatible and could damage the product.

11. Do Not Disassemble

Do not attempt to disassemble or modify the product. Doing so may cause injury or damage and voids the warranty. Repairs should be performed by authorized service personnel only.

9 Taytech Gateway

9.1 Safety Precautions

12. Monitor Operation

Regularly check the product for proper operation. If you notice any unusual noises, smells, or performance issues, immediately disconnect the product and contact technical support. ,

13. Keep Vents Clear

Ensure that the ventilation openings are not blocked. Blocked vents can cause overheating and reduce the product's lifespan.

14. Read the Manual

Before using the product, thoroughly read this manual to understand its features, operation, and safety instructions

15. Environmental Considerations

Dispose of the product according to local regulations to minimize environmental impact. Recycling options may be available for electronic products.

9.2 Installation and Setup

When the machine work normally, use the mobile phone to search and connect to Repeater-xxxxxx.

(xxxx is the last 6 numbers of the repeater MAC address).

Note: If the mobile phone does not automatically jump to setting page after connecting, please click “forget” the wifi name that has been connected on the mobile in wifi manage, turn off the wifi and then reopen the wifi to search it, or input “192.168.11.1”.

9 Taytech Gateway

9.2 Installation and Setup



Wi-Fi Repeater Mode Setup

Step 1: Click repeater mode to enter the network search page.



9 Taytech Gateway

9.2 Installation and Setup

Step 2: Select the wireless signal you want to expand, if it is a hidden network, you need to add it manually.



Step 3: Enter your router connection password and click “NEXT”. If you don’t want the same name as your router, please choose and input the new name.



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9.2 Installation and Setup

Step 4: Click the “Finish” button to complete the relay mode configuration (The extended WiFi’s password is the same as the routers’ by default).



Step 5: Complete Repeater Mode setting.



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9.2 Installation and Setup

AP mode Setting

Step 1: Click to Select “AP” mode to enter the setting page.



Step 2: Set the wireless name and password with more than 8 digits (the wireless name and password can be set according to personal preference).



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9.2 Installation and Setup

Step 3: Click the “Finish” button to complete the AP mode configuration.



Step 4: Complete AP mode setting.



10 CE Declaration



EC DECLARATION OF CONFORMITY

Taytech Otomasyon ve Bilisim Teknolojileri

İnönü Mahallesi, Atatürk Blv. No:7/2 41400 Gebze Plastikçiler
O.S.B Gebze / Kocaeli

We, Taytech Otomasyon ve Bilisim Teknolojileri, declare under our sole responsibility that the product;

Product Name: Indirect SmarHexa

to which this declaration relates is in conformity with the following EU Directives:

Machinery Directive 2006/42/EG

Low Voltage Directive 2014/35/EU

Electromagnetic Compatibility Directive 2014/30/EU

using the provisions set in the following standards, insofar as they are relevant:

EN 60335-1 : 2012-10

EN 60335-2-51

EN 55014-1&2

EN 60730-1

EN 61000-3

Date and Place of Issue

February 21, 2021 Kocaeli

Name, position and signature of authorized person

Cenk ŞEN
Electromechanical Group Leader

Seyrani AKTAŞ
Deputy of General Manager

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

NOTES

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