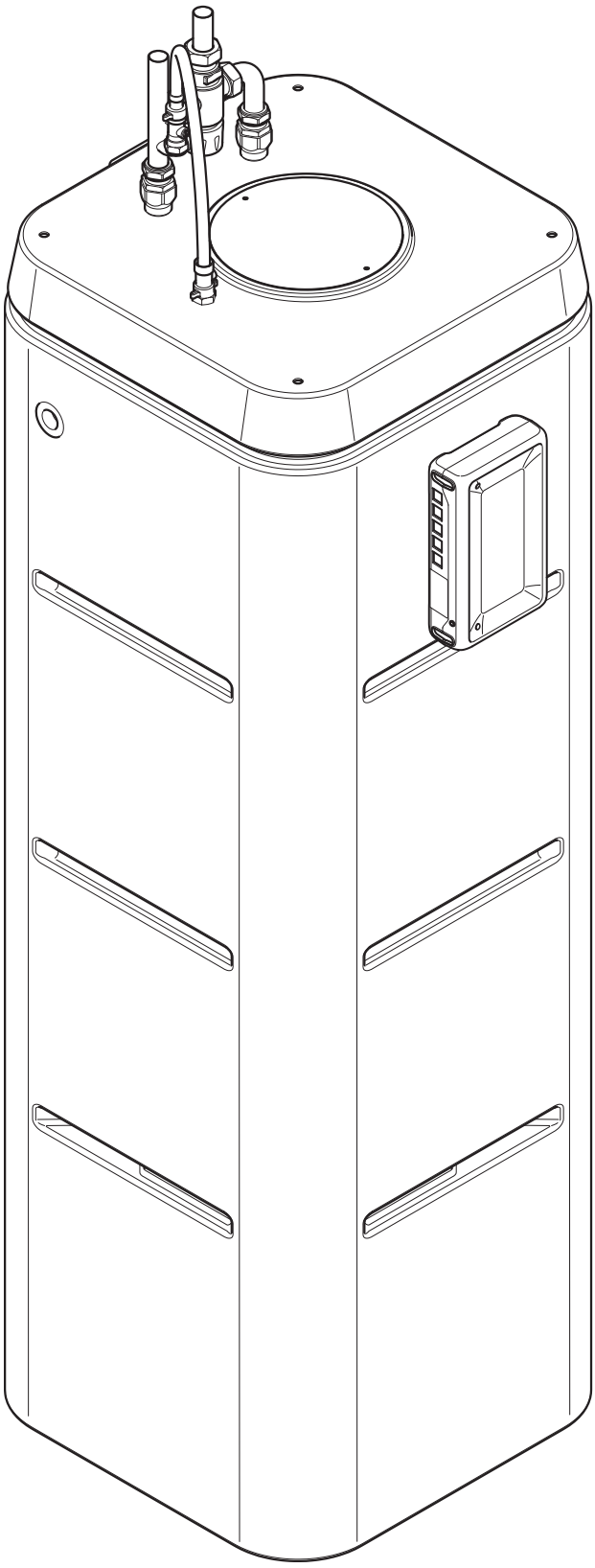
Cube X

Installation & Servicing instructions

For stainless steel hot water vessels



CIPHE
ciphe.org.uk
INDUSTRIAL ASSOCIATE

WRAS
APPROVED PRODUCT

hot water association

PLEASE LEAVE WITH HOUSEHOLDER

Failure to install and maintain this system in accordance with these instructions will invalidate the manufacturer's warranty.

mixergy®

Contents

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1.0 Vessel details - MX number

Your vessel MX number can be found on the label placed on the front of the vessel.

For detailed guidance on how a Mixergy vessel operates and how to optimise system performance, visit **support.mixergy.co.uk**

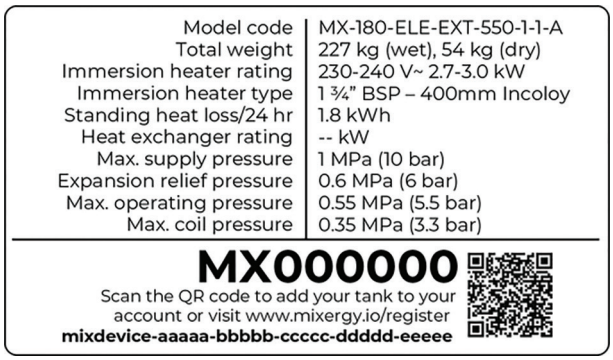


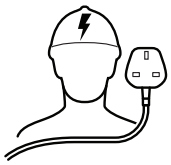
Fig. 1

2.0 Technical data

	150	210
Primary Connections	22mm comp	22mm comp
Overfill pipe connections	G ¾"	G ¾"
Electrical requirements	16A, 230-240V, 1.5mm2 CSA	16A, 230-240V, 1.5mm2 CSA
DHW coil max operating pressure (bar)	3	3
Maximum permissible storage water temperature (°C)	60	60
Standing Heat loss (kWh/24h)	1.12	1.24
ERP Rating	B	B
Heat UP time (15-60°C) (mins)	160	260
Reheat Time (0%-30% SOC @60°C) (mins)	28	31
Reheat Time (0%-50% SOC @60°C) (mins)	58	65
Reheat Time (0%-70% SOC @60°C) (mins)	90	95
Reheat Time (0%-100% SOC @60°C) (mins)	124	160
Volume (l) of hot water without reheating at 10 l/min draw off rate (Inlet temperature 12°C, store temperature 60°C, 100% SOC)	142	188
Volume (l) of hot water without reheating at 10 l/min draw off rate (Inlet temperature 12°C, store temperature 60°C, 70% SOC)	103	122
Volume (l) of hot water without reheating at 10 l/min draw off rate (Inlet temperature 12°C, store temperature 60°C, 50% SOC)	62	86
Volume (l) of hot water without reheating at 10 l/min draw off rate (Inlet temperature 12°C, store temperature 60°C, 30% SOC)	35	50

3.0 Safety

This equipment must be connected to a protective earthing (PE) conductor.



This equipment is designed for connection to single phase supplies with the neutral conductor at earth potential – category TN or TT. This equipment is not designed for use with live and neutral connections reversed or where the neutral conductor is not at earth potential (IT supplies).

This device must be connected via a 16A MCB protected supply.

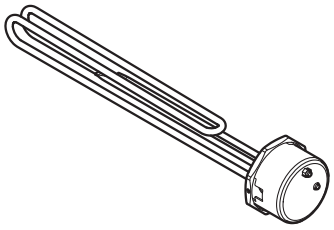
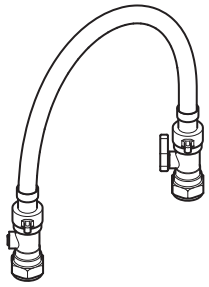
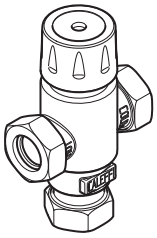
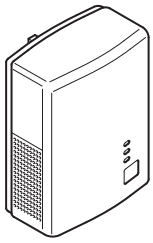
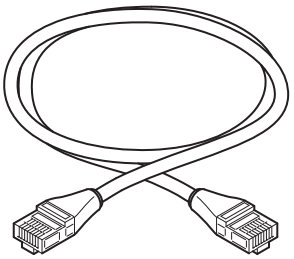
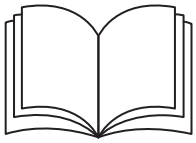
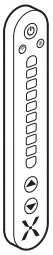
Always disconnect the device from the supply before removing or replacing the cover. This device has been manufactured in accordance with current safety standards. However, incorrect operation or misuse may result in:

- Injury or death to the operator or third parties.
- Damage to the device and other property of the operator.
- Incorrect operation of the device.

All persons involved in commissioning, maintaining, and servicing the device must:

- Be suitably qualified and competent.
- Have knowledge of and experience in dealing with electrical installations.
- Read and follow these operating instructions carefully.

4.0 Additional components

- Tundish 
- 3 kW immersion heater(s) (factory fitted) 
- Filling loop 
- Thermostatic mixing valve 
- Powerline to ethernet adaptor TL-PA4010 
- Ethernet cable 
- User guide 
- Gauge 

5.0 Mechanical Controls

5.1 Thermostatic Mixing Valve

The thermostatic mixing valve safely sets the hot water temperature produced by your CubeX-DHW. The setting temperature defines how hot the water inside the product gets. This can be configured using the Mixergy App, for more details visit **support.mixergy.co.uk**. Having a higher setting temperature means that the product will store more energy. Having a lower setting temperature means less energy but also lower heat losses.
The thermostatic mixing valve (Fig. 2) has an adjustment range of between 30°C (MIN) and 65°C (MAX) is supplied as standard with the Mixergy CubeX-DHW models. The function of the thermostatic mixing valve is to deliver water consistently at a safe temperature. To prevent scalding, we highly recommend that the mixing valve is set to position 4 (nominally 44°C).

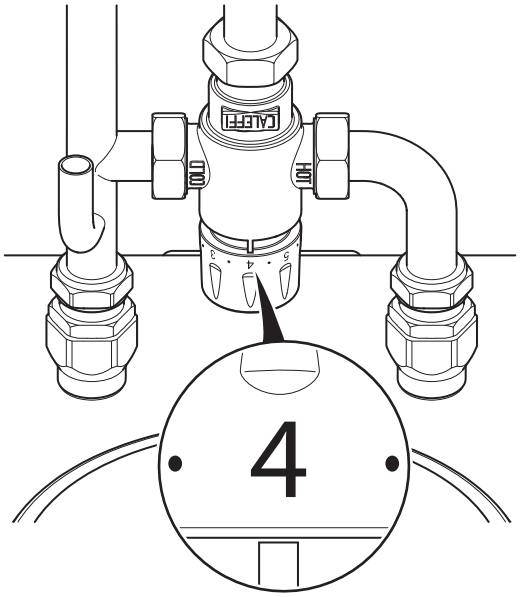


Fig. 2

5.2 Tank Overfill Pipe Connection

The Mixergy CubeX-DHW has an overfill pipe connection (Fig. 3). The function of the overfill pipe is to act as a vent and prevent any pressure build up if the tank was overfilled or developed an internal fault. If water is continuously flowing through the overfill pipe this may suggest the tank has developed a fault or that the inlet valve is leaking. If the fault persists, contact your original installer.

Note: If a fault is discovered switch off all heat sources, isolate the power supply, contact your installer and do NOT turn off the water supply. Wait until the storage water has sufficiently cooled before carrying out any repairs.

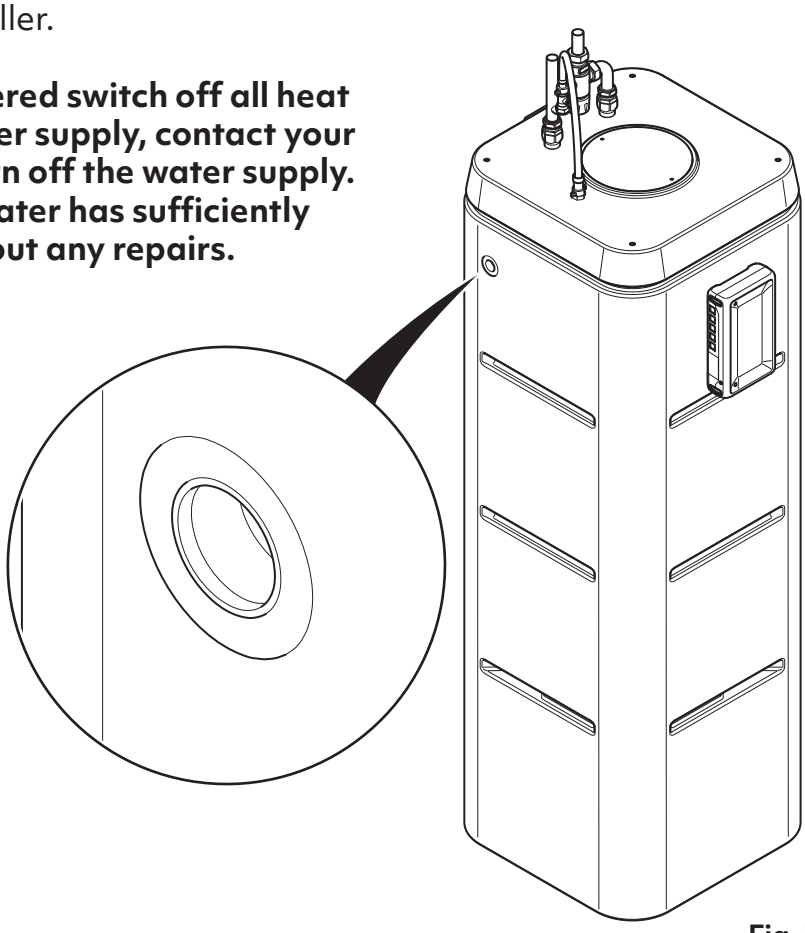


Fig. 3

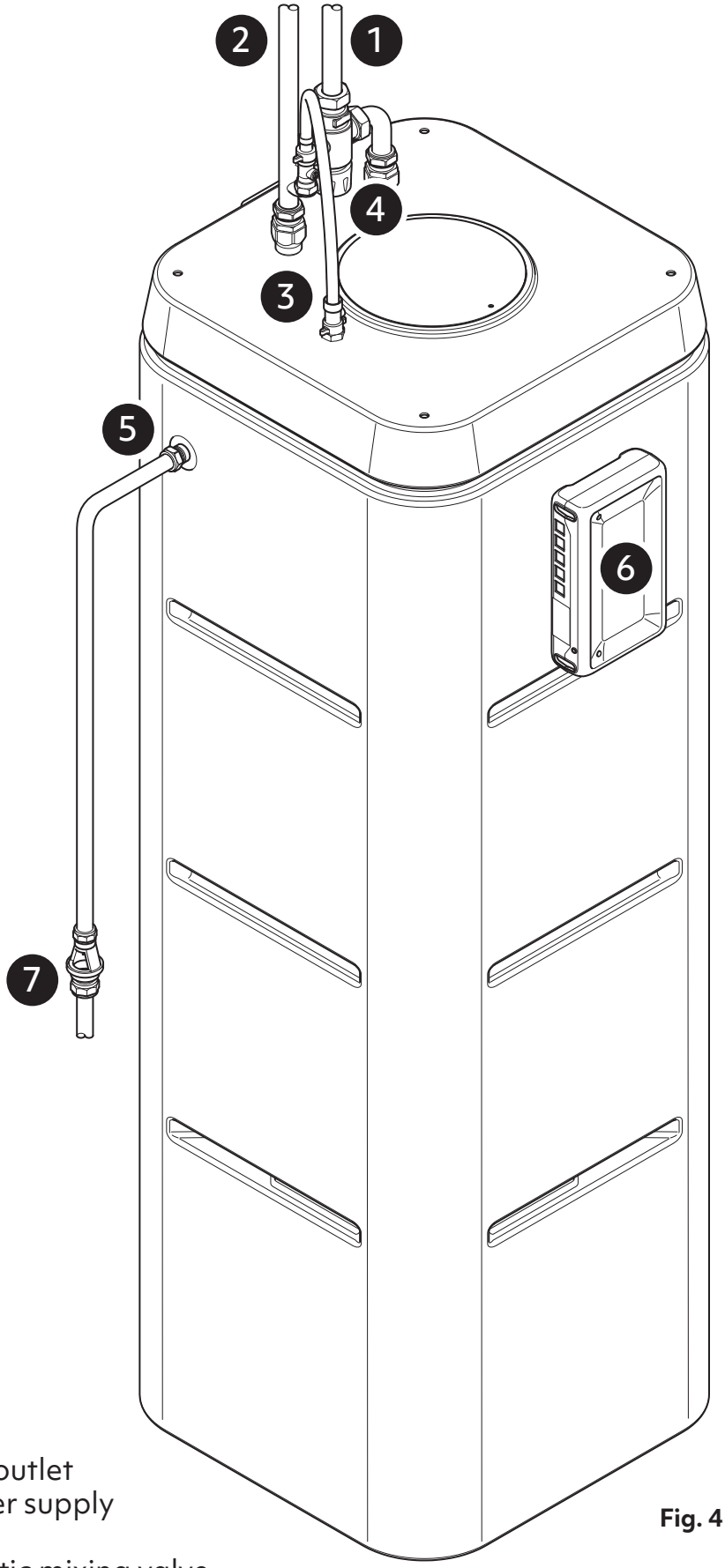
6.0 Design notes

CubeX-DHW, is an intelligent thermal store (Heat Battery) which only heats what you need by stratifying thermal energy around an internal heat exchanger. This provides rapid re-heat performance whilst reducing heat losses. The integral State of Charge (SOC) measurement and software control allows CubeX-DHW to work with smart tariffs so that the store pays the customers whenever there is surplus renewable energy.

CubeX-DHW provides mains pressurised domestic hot water without needing an expansion vessel, group inlet control set or Temperature and Pressure Relief discharge pipework, this greatly simplifies installation.

The unit should be handled with care in order to avoid damage.
It should be stored upright in a dry place.

7.0 Schematic



1. Hot water outlet
2. Mains water supply
3. Filling loop
4. Thermostatic mixing valve
5. Overfill pipe connection
6. Controller
7. Tundish

Fig. 4

8.0 Hydraulic schematics

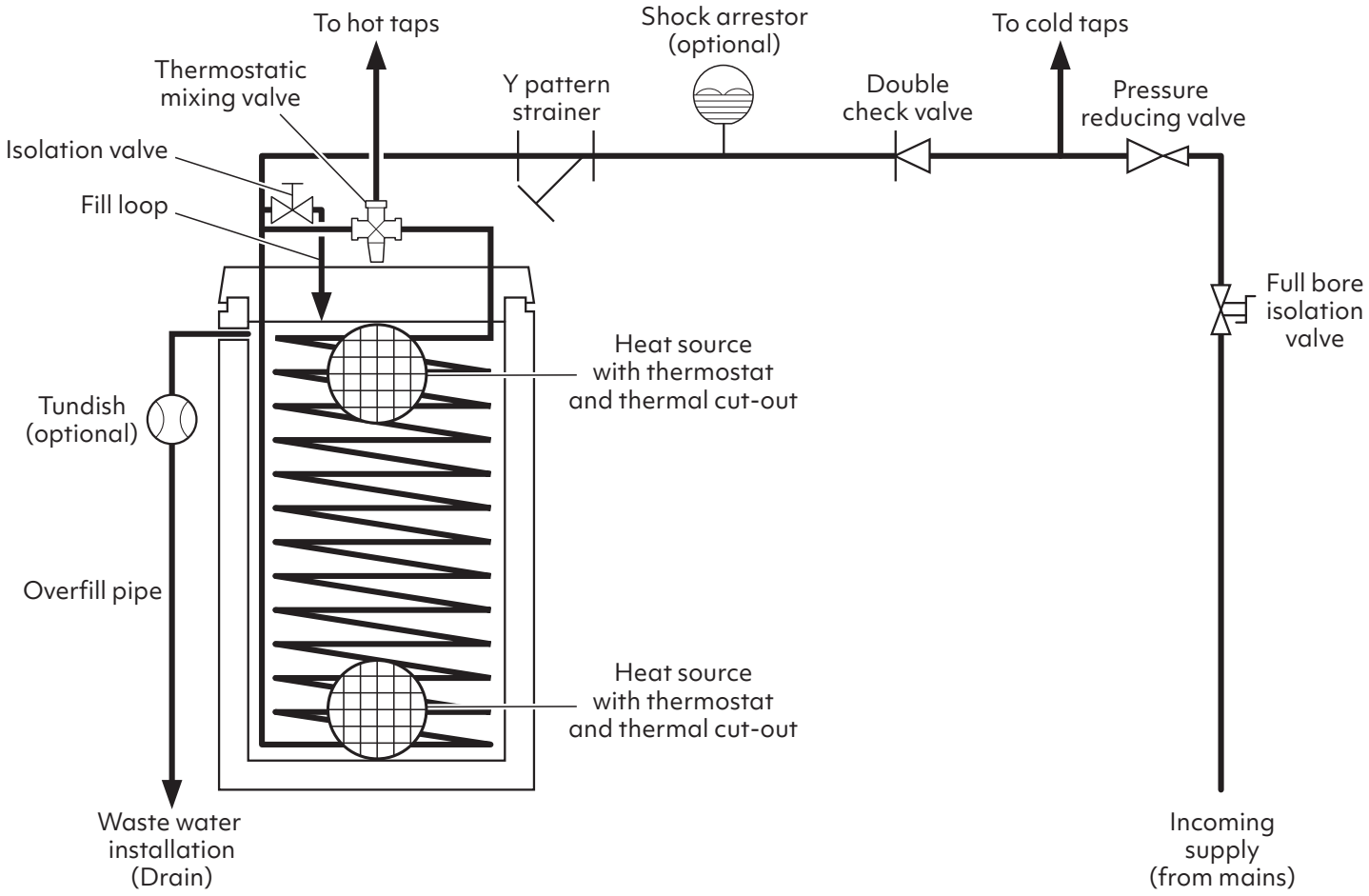


Fig. 5

9.0 Installation

The following instructions must be read prior to the installation of the Mixergy CubeX-DHW, and work should only be carried out by a competent person. The installer should be aware of their responsibility and duty of care to ensure all aspects of the installation comply with all current regulations and legislation.

9.0 Installation

9.1 Positioning of the vessel

The CubeX-DHW unit should be supported on a solid level base, free from any debris and should cover the entire base of the unit. The base must be capable of supporting the Cube X DHW filled weight. The installation site should be indoors in a frost-free room and protected from continuous direct sunlight. To protect the integrity of the CubeX-DHW it should be situated in an area with suitable and effective rodent control measures in place. When selecting a suitable location, consideration should be given with regards to the relative position of the main hot water outlets to keep pipe runs as short as possible, thus maximising efficiency. Routing of the overfill pipe should also be considered to allow it to be safely conveyed and discharged.

The CubeX-DHW should be placed a minimum of 1M away from any heat source or open fire to ensure the unit is not at risk of damage or melting from heat exposure.

For future servicing and maintenance requirements the hot water storage tank should be positioned in such a way that allows for components to be inspected, removed, and replaced, if necessary (Fig 6).

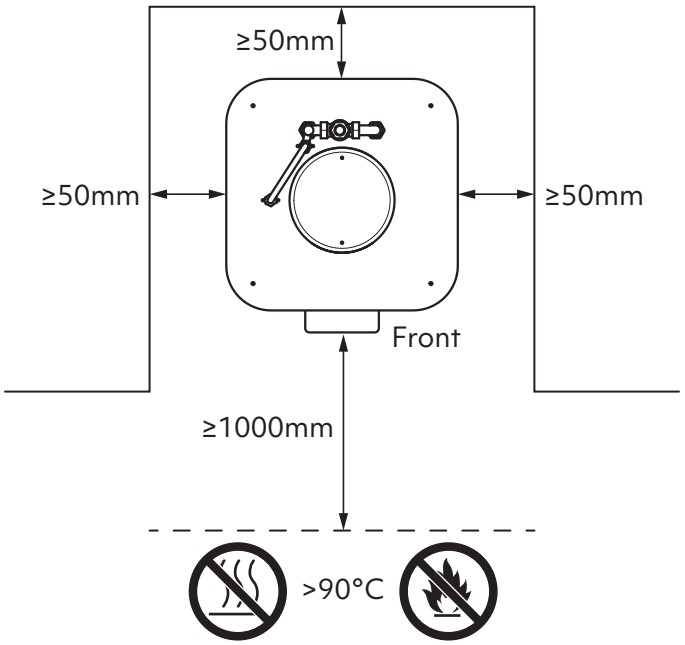
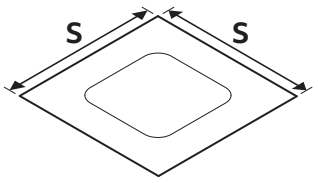


Fig. 6

Ensure at-least 475mm of vertical clearance above the vessel.



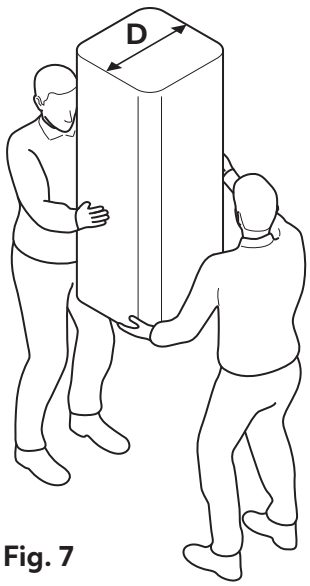


Fig. 7

Ensure that any apertures (such as loft hatches) that the vessel must pass through, meet the minimum space requirement S.

Model	150L	210L
Width	520mm	520mm
Depth	585mm	585mm
Height (including fittings)	1315mm	1650mm
Clearances	W- 100mm D - 50mm H - 475mm	W- 100mm D - 50mm H - 475mm
Weight empty	36kg	44kg
Weight full*	188kg	246kg

9.0 Installation

9.2 Connections

450mm (18 inches) is the minimum distance to make a solder connection from any of the inlet and outlet connections on top of the Mixergy CubeX-DHW. This is to reduce the possibility of any residual flux / solder contacting the stainless-steel corrugated tube inside the tank. Fluxes used for soldering or brazing are, by their nature and purpose, aggressive towards metals.

If excessive flux enters the bore of the tube and remains there, local attack can result. Corrosion likelihood is best minimised by using water soluble flux with restricted aggressivity and flushing the unit to remove any flux residues as soon as possible after completion of the soldering or brazing operation. It is recommended the y pattern strainer is fitted as close as possible to the cold-water inlet to the tank before the first solder connection.

9.3 Mains Water Supply Pipework

For optimum performance, it is recommended that the incoming mains water supply should be capable of always delivering a minimum flow rate of 10l/min at a dynamic pressure of 1 bar or above. This should be sufficient for the operation of most sanitary appliances. It is recommended that a 22mm mains supply pipework is used; however, this is not mandatory.

- If the mains supply pressure is likely to exceed 3 bar at any time a pressure reducing valve must be installed.

- We recommend that a full-bore isolation valve is fitted to the incoming mains water supply to allow the tank, and cold-water outlet taps to be isolated for maintenance purposes.

- The incoming mains water pipework should be split to serve both the hot water storage and coldwater outlets after the full-bore isolation valve.

- To protect the public water network from backflow contamination a double check valve must be installed. Care must be taken to ensure the direction arrow on the side of the double check valve follows the direction of flow.

- The supplied Y pattern strainer must be fitted on the mains water supply to the hot water storage tank as close as practicable to the location of the mixing valve. This will trap any debris from the pipework upstream which may affect the performance of the Cube X DHW unit. This should be fitted on a straight run of pipe away from any bends and in an accessible location to allow the filter to be removed for inspection and cleaning if necessary.

It may be necessary to fit a shock arrestor on the mains supply pipework to prevent noise from water hammer. Refer to Fig. 5 on page 12 for typical pipework configuration.

9.0 Installation

9.4 Hot and cold-water connections

The mixing valve pipe set fittings should be fitted to the hot and cold domestic hot water heat exchanger coil connections. These are positioned on the top of the hot water storage tank and are identified with a tap symbol (Fig. 8). Once in place the thermostatic mixing valve can be connected. It is recommended that the thermostatic mixing valve be set to position 4 (nominally 44°C), see Fig. 8, to achieve the best hot water performance. However, this can be adjusted dependent on user requirements - this can be set during commissioning of the hot water storage tank.

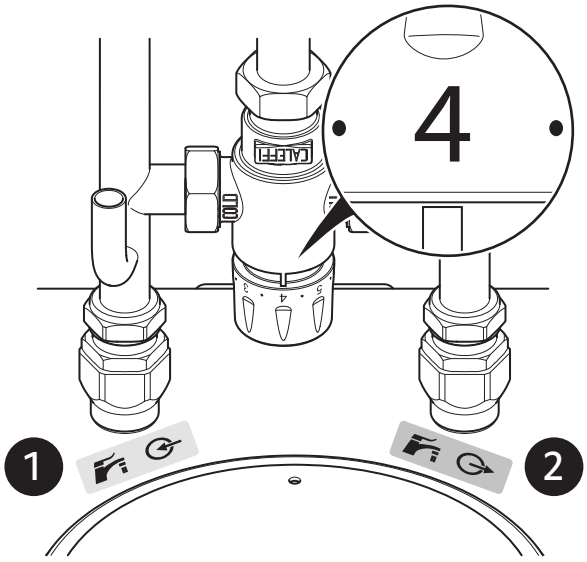


Fig. 8

1. Mains water supply
2. Hot water outlet

Care should be taken to ensure the hot and cold-water supplies are connected to the valve in accordance with the indications on the body of the valve. The straight pipe set fitting should be fitted to the mixed water outlet on the mixing valve. See Fig. 8 for the hot and cold-water connection set up. The mixing valve can either be positioned in the vertical or horizontal position depending on the individual installation requirements, however it must be accessible to allow for maintenance, commissioning and testing of the valve.

Fibre washers (supplied) should be fitted at the point of each connection. Connections to the cold and mixed hot water pipe set fittings should be made using compression fittings. Use 2 spanners to ensure the connection doesn't twist when tightening.

Note: It is not recommended to use any form of sealant / paste in combination with the flat washers. These should be fitted dry. When making the compression connections hold the compression fitting body tightly with a spanner and tighten the compression nut on top with a spanner. Do not overtighten as this can cause the fitting to leak. On models where a thermostatic mixing valve has not been provided, to prevent scalding, it is recommended that all hot water outlets should be blended at point of use.

9.0 Installation

9.5 Fill loop connection

Remove the isolation valve (fig 9).

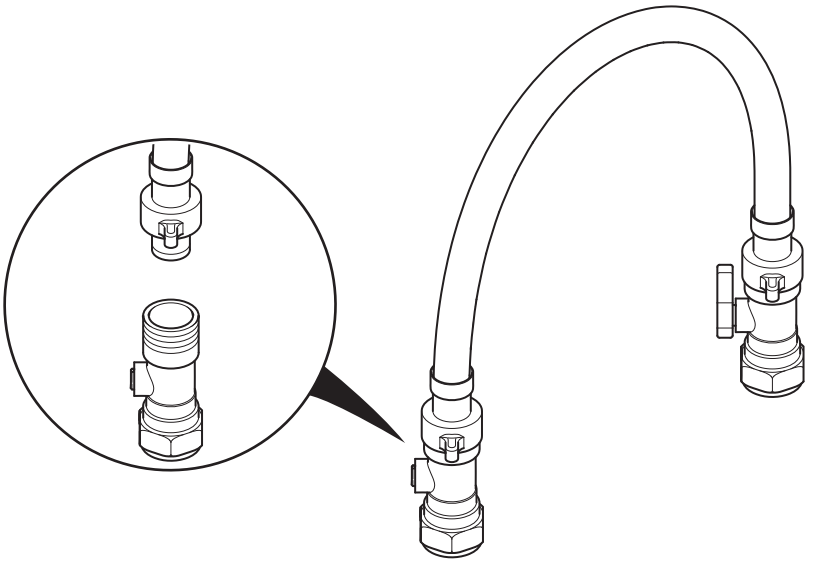


Fig. 9

Assemble the double check valve to the copper pipe. Ensure the orientation matches that in fig. 10. There is an arrow on the valve which signifies the direction of flow.

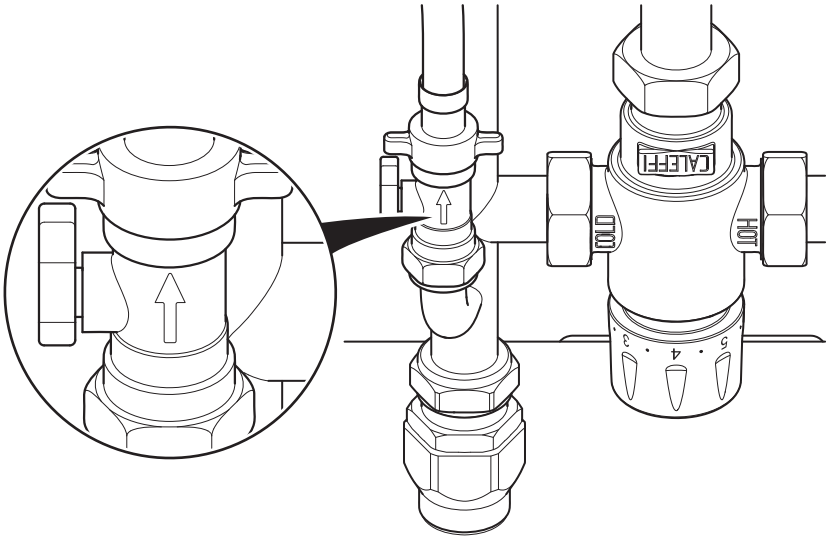


Fig. 10

Assemble the filling loop flexi between both valves as shown in Fig. 11.

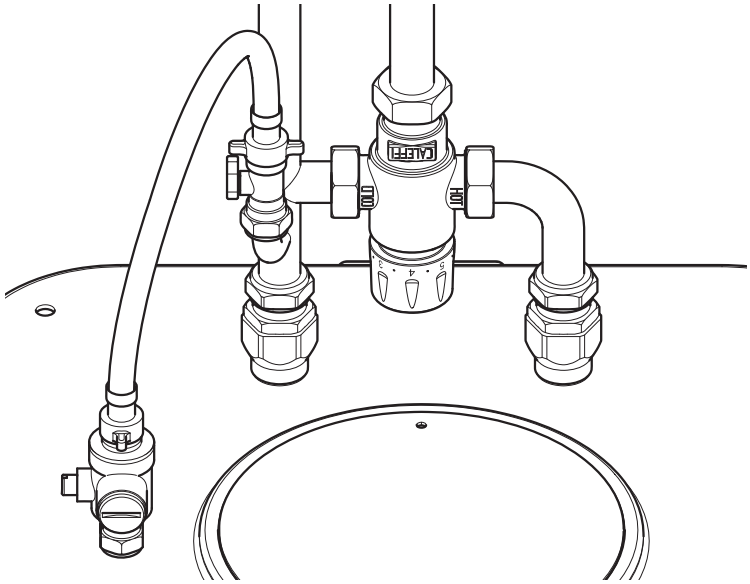


Fig. 11

9.0 Installation

9.6 Secondary Return

Ideally the Cube X DHW should be installed as close as possible to all hot water outlets however, where this is not possible, and the pipe runs to outlets are excessive, a secondary return may need to be fitted. Fig 11 details a typical schematic of how to fit a secondary return to the hot water storage tank. In addition to a WRAS approved bronze secondary hot water pump suitable for sanitary hot water it is recommended that a pipe thermostat or time clock is fitted to prevent the pump running constantly. To prevent excessive heat loss the secondary return pipework should be insulated over its entire length. It is essential that the check valves shown in the diagram are fitted to prevent the cold mains feed backflowing up the secondary return pipework.

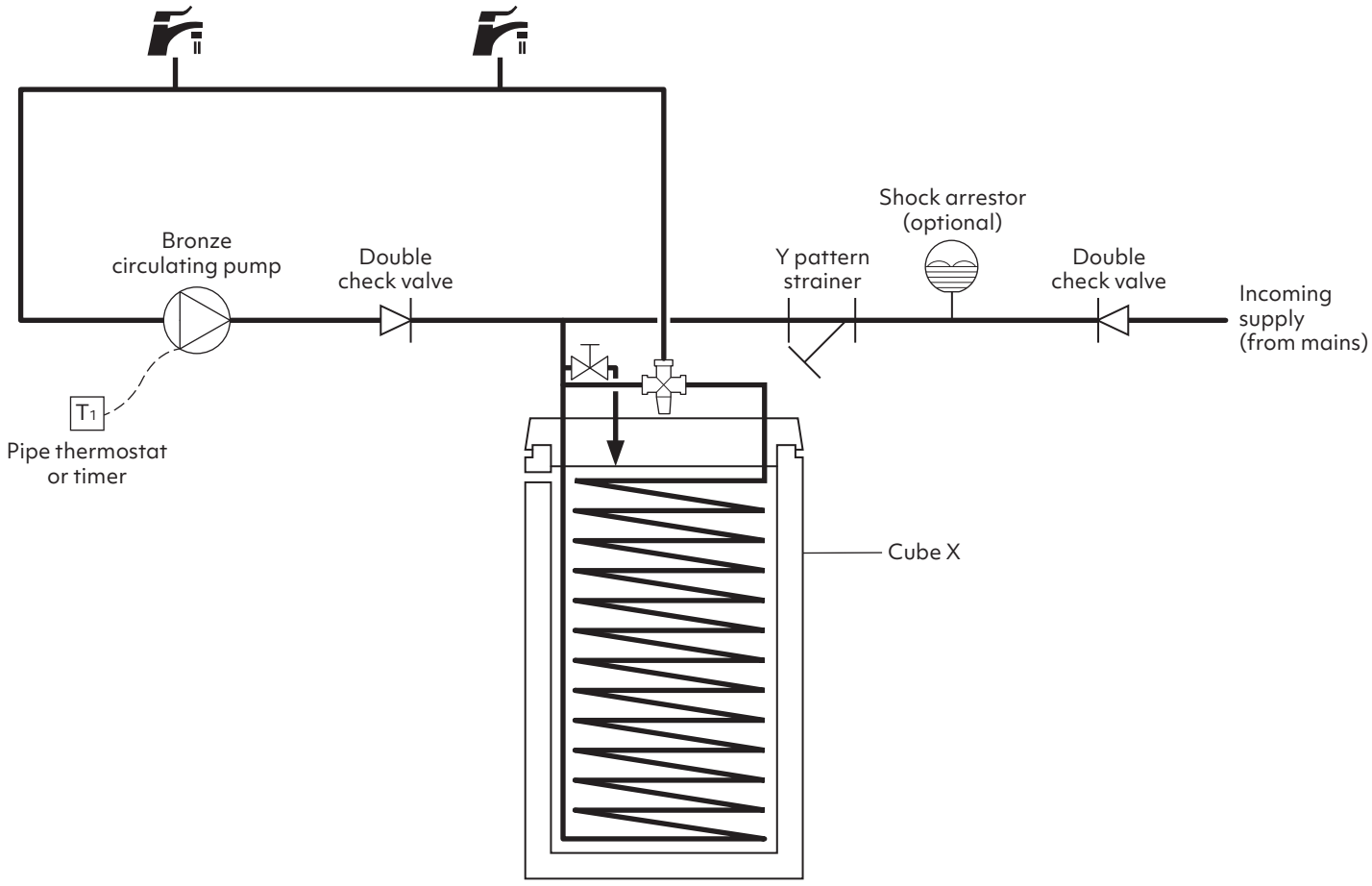


Fig. 12

9.0 Installation

9.7 Overfill pipework

The overfill pipework should be configured in such a way to allow any overfill flow from the Cube X DHW unit to be conveyed to a safe visible position. The overfill pipework should fall away from the tank via gravity, taking the shortest possible route to the termination point. The overfill pipe should be terminated to either waste (sink or toilet), soil or atmosphere.

When terminating to waste / soil pipe, the overfill pipework should include a visible air-break so any overfillflow from the tank becomes apparent. Where it is not possible to terminate the overfill pipe upstream of an existing waste / soil pipe trap, it is recommended that a waterless drain waste valve is fitted to prevent the escape of foul air into the living space from the drain.

A dry trap tundish can also be used as a means of creating a visible air break and trap. Any overfill pipework should have a minimum of 19mm ID (typically 22mm OD) and can be either plastic or copper pipe. If it is impractical to terminate the overfill pipe to waste / soil, the overfill pipe can be terminated at a point open to the atmosphere.

When terminating to a point open to atmosphere the overfill pipe should terminate in a safe place where there are no risks to persons in the vicinity of any overfill flow from the hot water storage tank. Where it is impractical to terminate the overfill pipe to waste / soil or atmosphere, the internal overfill kit can be used.

Note: For the operation of the Mixergy CubeX-DHW unit, it is essential that the overfill pipe remains free of any blockages. A blockage in this pipe can lead to the failure of the unit.

10.0 Fitting the gauge

The gauge has a magnetic backing strip to attach directly to the vessel, or by using the self adhesive pad can be installed outside of the vessel cupboard for easy user access.

If required, the cable can be extended by using a RJ11 extension cable (available from Mixergy).

Insert the connector into the control box (Fig. 13).

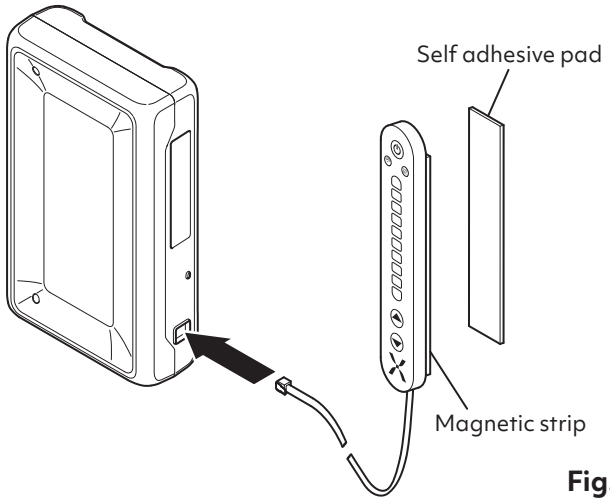


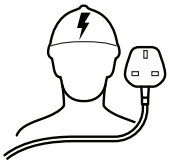
Fig. 13

11.0 Installation: electrical

11.1 Indirect units and electrical wiring

The electrical supply to the controller must be installed by a qualified electrician.

ENSURE ALL ELECTRICAL SUPPLIES ARE SWITCHED OFF BEFORE MAKING ANY CONNECTION TO THE UNIT.



ELECTRICAL INSTALLATION MUST BE CARRIED OUT BY COMPETENT ELECTRICIAN AND BE IN ACCORDANCE WITH THE LATEST I.E.T. REGULATIONS

11.2 External wiring

Mixergy vessels come supplied with cable. Any extensions to the supplied cabling should match or exceed the current and voltage ratings of the cables to be extended.

11.3 Primary supply (13A, 230-240V~, 1.5mm2 CSA)

The white 3-core (L,N,E) cable labelled '**PRIMARY SUPPLY**' must be connected to the household's main supply via a dedicated 16A MCB protected circuit with a 20A DP switch. This is the primary power supply for the control electronics and is used to power the immersion when the vessel is set to heat in direct mode.

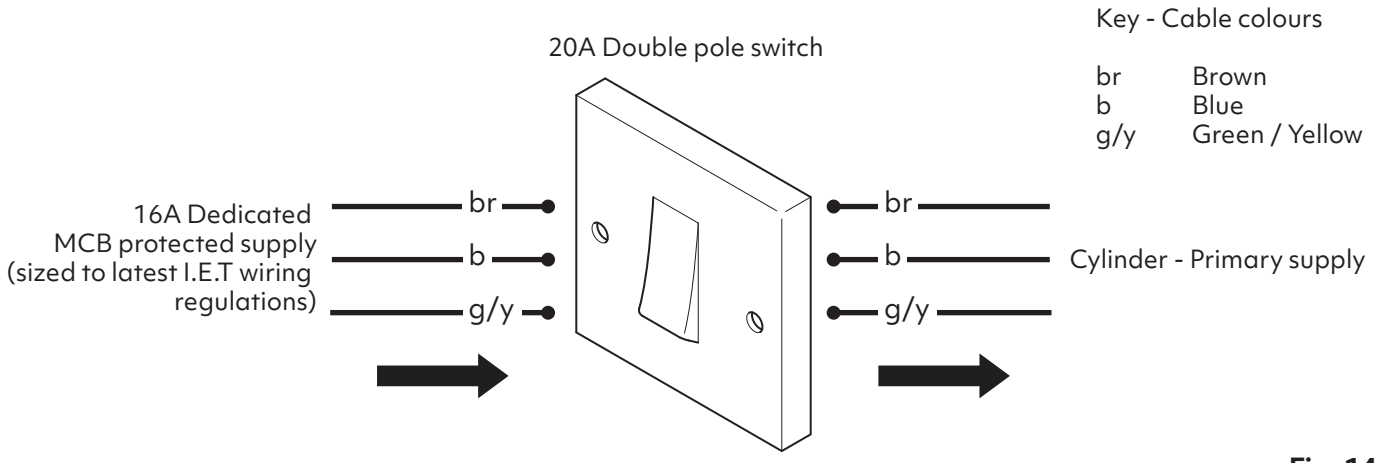


Fig. 14

11.0 Installation: electrical

11.4 Timer control (VOLT-FREE, 10mA 80-240V~, 0.5mm2 CSA)

The black 3-core (L,N,E) cable labelled '**TIMER CONTROL**' can be used to integrate the Mixergy vessel with any existing timers or controllers i.e. economy 7 timer or a hive dual channel controller. This cable detects a 80-240VAC signal and instructs the vessel to heat unless otherwise disabled in software.

11.5 Wiring diagram

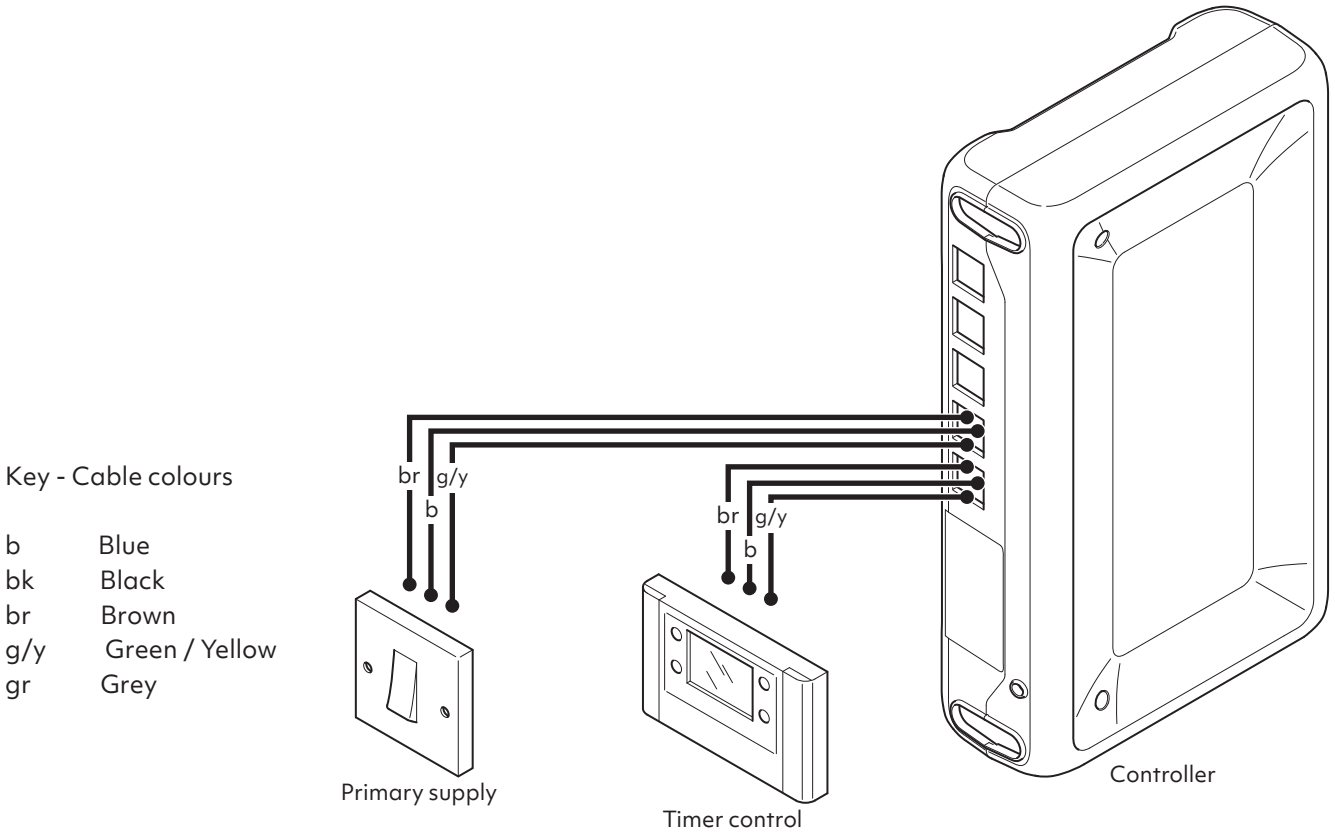


Fig. 15

12.0 Installation: connectivity

12.1 Installing the powerline adaptor

The Mixergy vessel requires internet connectivity to allow for full control of the system. Connection to the vessel can be made using the provided ethernet to powerline adaptor or by hard-wired ethernet.

If an existing HomePlug AV powerline network is installed at the property, it is recommended to pair the vessel with the existing network as per page 25. Powerline connectivity between the vessel and internet router is only possible in houses where both the vessel and adaptor are powered from the same electrical phase.

DO NOT USE AN EXTENSION LEAD AS THIS WILL NOT ALLOW THE POWERLINE TO WORK CORRECTLY

1. Plug the powerline adaptor into a wall socket within 2m of the internet router.

2. Plug the powerline adaptor into the internet router using the included 2m ethernet cable.

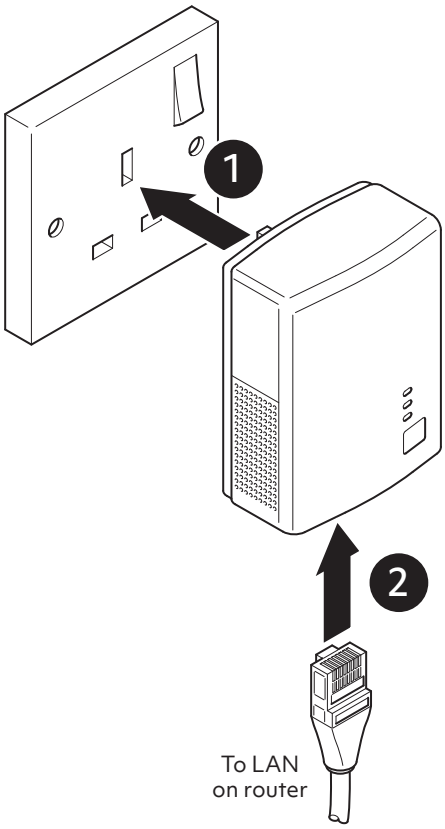


Fig. 16

12.0 Installation: connectivity

12.2 Wiring an ethernet connection

If a hard-wired CAT5/CAT5e/CAT6 network connection is desired, this can be achieved as follows:

ENSURE ALL ELECTRICAL SUPPLIES ARE SWITCHED OFF BEFORE OPENING THE Vessel CONTROLLER COVER AND SAFE ISOLATION PROCEDURE IS FOLLOWED (see page 32).

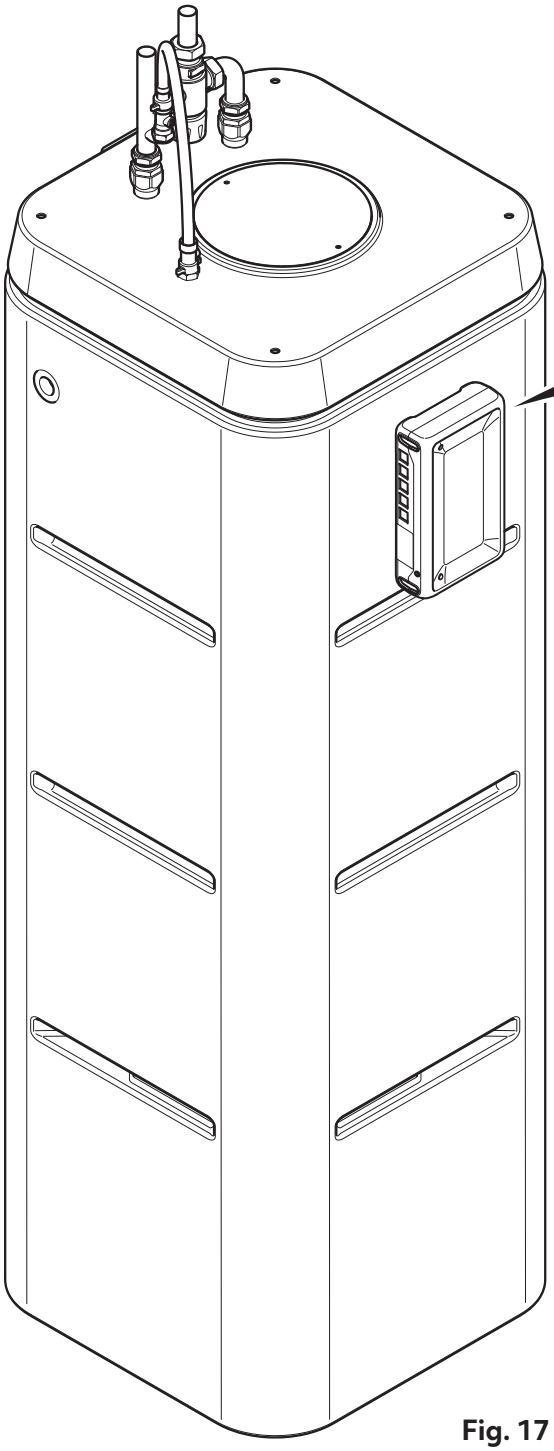


Fig. 17

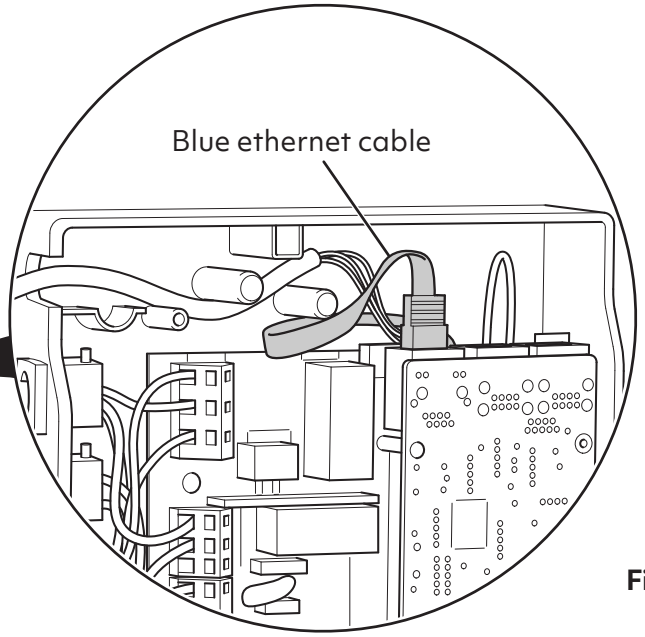


Fig. 18

1. Unscrew and remove the vessel controller's cover and then disconnect the blue ethernet cable (Fig. 18).

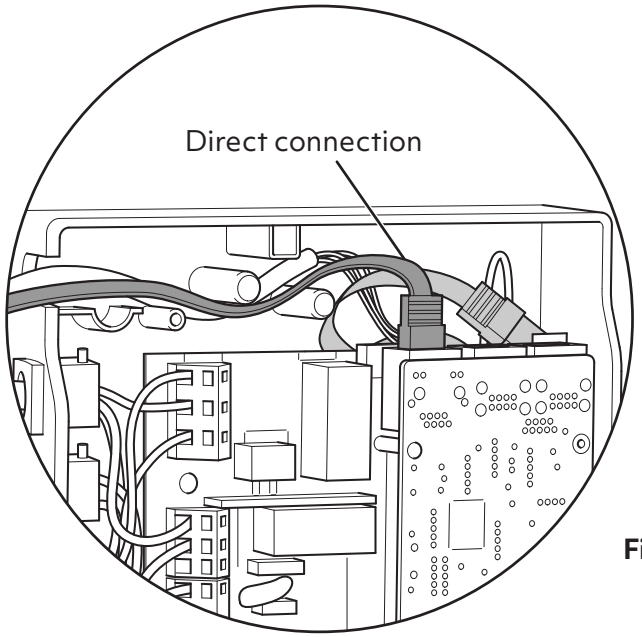


Fig. 19

2. Replace the removed ethernet cable with a suitable direct connection to the network (broadband router/switch) (Fig. 19).

13.0 Commissioning

DO NOT SWITCH THE SYSTEM ON UNLESS THE Vessel IS COMPLETELY FILLED WITH WATER.

All factory fitted valves etc. are fitted using a thread sealant. If this seal is broken it should be re-sealed using a suitable sealant. It is the installer's responsibility to ensure all the connections are water tight prior to leaving the property.

The following instructions must be read and understood prior to the commissioning of the CubeX-DHW. If under any circumstances there are aspects to the installation and or unit which do not comply with the specification laid down, the unit MUST NOT be put into operation until the unit and or installation meets all the requirements. Unless otherwise instructed isolate all electrical supplies to the Cube X DHW before carrying out commissioning of the unit.

Note: Before filling ensure the overfill pipe is connected correctly, free from blockages and can discharge in a safe visible location.

On power up the tank controller runs a series of tests and displays the results on the gauge.

Note that this will only run when the main controller has booted up which takes approximately 50 seconds.

Check that no LEDs light red and that the bottom seven LEDs light green.

Fig. 20 shows the meaning of each LED.Note that if a voltage is applied to the Remote Control input the Remote Control LED will light green rather than blue.

Check that all buttons (boost UP, boost DOWN and power) work correctly.

For further information on gauge operation please reference the Mixergy iHP User Guide.

Connect the vessel to the internet by pairing to the included powerline adaptor. For more information on pairing the vessel to the adaptor, please reference page 25, or visit support. mixergy.co.uk.

Ensure the vessel's gauge illuminates and all buttons (boost UP, boost DOWN and power) work correctly.

For more detailed guidance on gauge operation, please visit support.mixergy.co.uk

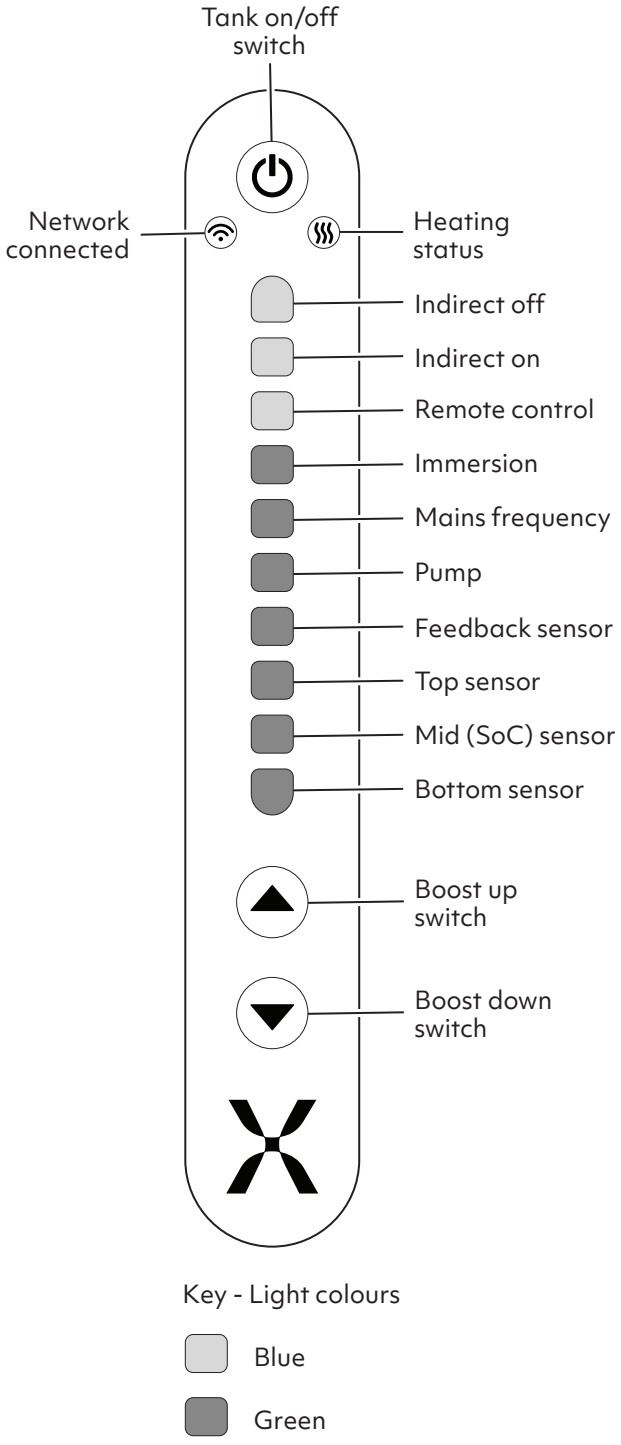


Fig. 20

13.0 Commissioning

The following instructions must be read and understood prior to the commissioning of the CubeX-DHW. If under any circumstances there are aspects to the installation and or unit which do not comply with the specification laid down, the unit **MUST NOT** be put into operation until the unit and or installation meets all the requirements. Unless otherwise instructed isolate all electrical supplies to the Cube X DHW before carrying out commissioning of the unit.

Note: Before filling ensure the overfill pipe is connected correctly, free from blockages and can discharge in a safe visible location.

13.1 Pre commissioning cleaning

A suitable and effective cleaning and flushing procedure should be undertaken on all pipework prior to commissioning of the Cube X DHW. Unit contaminants such as flux residues, solder pieces, jointing compound, building debris will inevitably be found in pipework units. If allowed to remain in the unit, in sufficient quantity, these contaminants will make the unit prone to blockages at strainers and valves. They may also initiate corrosion and encourage the growth of micro-organisms.

13.2 Filling the unit

With the filling loop hose connected (Fig. 11), open the stopcock on the mains cold water supply to the Cube X DHW then open the isolation valve. The Cube X-DHW is fitted with an automatic fill valve when the correct store volume has been reached, the valve will automatically stop filling. Open the nearest hot tap followed by the rest in sequence to allow any trapped air to escape and flush out any debris. Leave the tap open until the unit has been cleared. If water begins to exit the Cube X DHW via the overflow tank during filling isolate the Cube X DHW and contact Mixergy Support.

13.3 Standby mode

With the Cube X DHW completely full, fit the flow restriction cartridge into the isolation valve on the filling loop.

Close the double check valve that was shown in Fig. 11. Unscrew the cap in the flow restricting valve and insert the cartridge as indicated in the fig. 21. Ensure orientation of the cartridge matches that shown (Fig. 21).

Once the cartridge is inserted, screw the cap back on to the valve ensuring it is secure as shown (Fig. 22). Finally, re-open the double check valve that was opened at the start of fitting the filling loop.

NOTE: Leave the isolation valve open after the install, failure to do so could potentially result in damage to internal components.

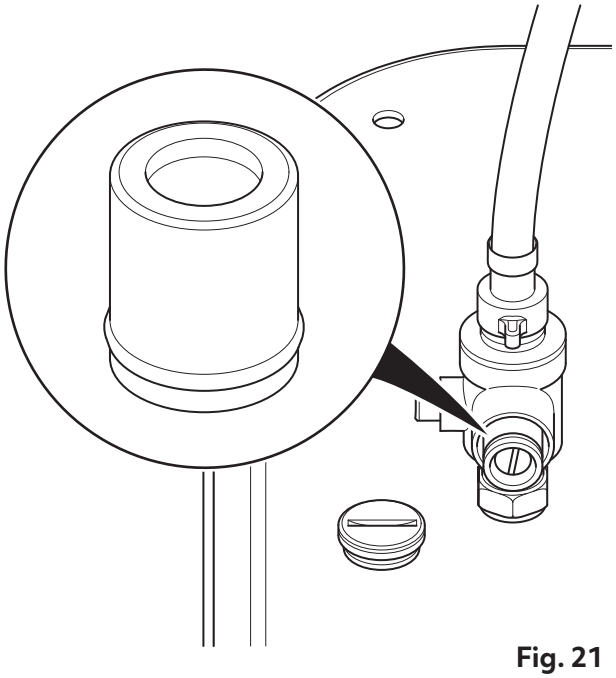


Fig. 21

13.0 Commissioning

Failing to install this cartridge properly may result in flooding in the event the of the inlet valve failing.

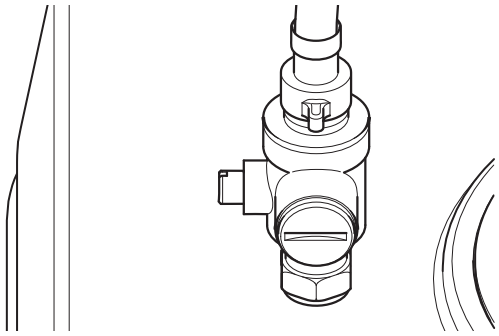


Fig. 22

13.4 Status LED error codes

If the system is not behaving as expected, please check the status LED on the side of the controller enclosure and contact Mixergy:

- **Flashing green**: System OK.
- **Solid green/red**: System updating (DO NOT REMOVE POWER).
- **Very slow flashing red (once every two seconds)**: Temp. sensor problem.
- **Slow flashing red (once a second)**: No gauge detected.
- **Fast flashing red (twice a second)**: Energy measurement issue.
- **Very fast flashing red (five times a second)**: Main processor issue.

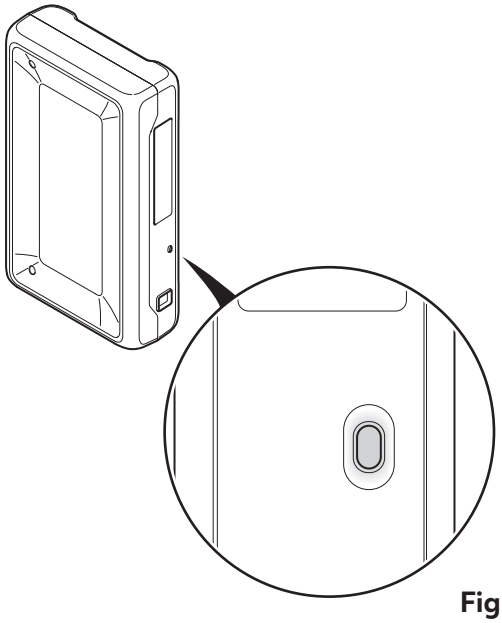


Fig. 23

13.5 Pairing the vessel and connecting to the internet

In the case that the vessel does not automatically pair to the powerline adaptor or connection to an existing homeplug AV network is desired, please follow the steps below to pair the vessel to the network.

1. Use a thin tool to depress and hold the pair button for 1 - 2 seconds.
2. Depress the pair button on the powerline adaptor for 1-2 seconds within 2 minutes of step 1.
3. Observe all 3 LEDs as solid green on the powerline adaptor.

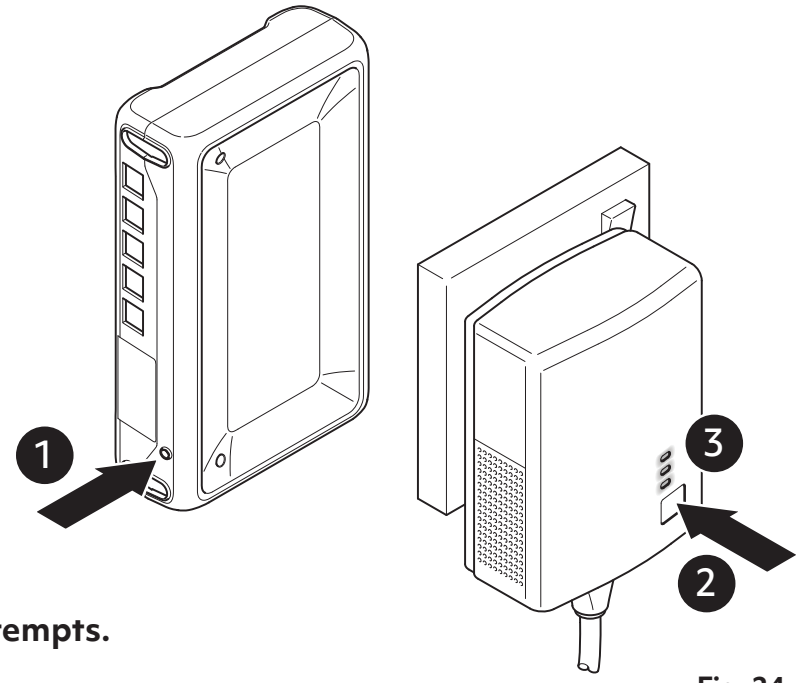


Fig. 24

NOTE: Steps 1-3 could take multiple attempts.

The vessel must be registered and connected online in order to validate the manufacturer's 25 yr warranty.

13.0 Commissioning

13.6 Commissioning checklist

This Commissioning Checklist is to be completed in full (either in this booklet or on the side of the vessel) by the competent person who commissioned the vessel as a means of demonstrating compliance with the appropriate Building Regulations.

Failure to install and commission this equipment to the manufacturer's instructions may invalidate the warranty but does not affect statutory rights.

Please ensure all information is filled in correctly below.

Customer name:		Telephone No:	
Address:			
Vessel model:			
Vessel serial no:			
Commissioned by: (Print name)		G3 Certificate No:	
Company name:		Telephone No:	
Company address:			

ALL SYSTEMS PRIMARY SETTINGS (Indirect heating only)				
Is the primary circuit a sealed or open vented system?	Sealed		Open	
What is the maximum primary flow temperature?				

ALL SYSTEMS				
What is the incoming static cold-water pressure at the inlet to the system?				bar
Has the strainer been cleaned of installation debris?	Yes		No	
Is the installation in a hard water area (above 200ppm)?	Yes		No	
If yes, has a scale reducer been fitted?	Yes		No	
What type of scale reducer has been fitted?				
What is the hot water temperature set to?				°C
What is the maximum hot water flow rate (measured at high flow outlet)?				min
Time & temperature controls have been fitted in compliance with Part L of the Building Regulations?	Yes			
Type of control system (if applicable)	Y Plan		S Plan	Other
Is the vessel renewable compatible?	Yes		No	
What is the hot water temperature at the nearest outlet?				°C
All appropriate pipes have been lagged up to 1m or at the point they become concealed?	Yes			

13.0 Commissioning

UNVENTED SYSTEMS ONLY				
Where is the pressure reducing valve located?				
What is the pressure reducing valve setting?				Bar
Has a combined temperature & pressure relief valve and expansion valve been fitted, and discharge tested?	Yes		No	
The tundish & discharge pipework have been connected and terminated to Part G Building Regulations?	Yes		No	
Are all energy sources fitted with a cut-out device?	Yes		No	
Has the expansion vessel been checked?	Yes		No	

THERMAL STORES ONLY	
What store temperature is achievable?	°C
What is the maximum hot water temperature?	°C

ALL INSTALLATIONS		
The hot water system complies with the appropriate Building Regulations	Yes	
The system has been installed in accordance with the manufacturer's instructions	Yes	
The system has been commissioned in accordance with the manufacturer's instructions	Yes	
The system controls have been demonstrated to and understood by the customer	Yes	
The vessel has been connected to the internet and the customer has been registered online	Yes	
The manufacturer's literature has been explained and left with the customer	Yes	
Building Regulations Notification Number (if applicable)		
To be completed by the customer on receipt of a Building Compliance Certificate*		
Commissioning Engineer's Signature		
Customer's signature (to confirm satisfactory demonstration & receipt of manufacturer's literature)		

* All installations in England and Wales must be notified to Local Authority Building Control (LABC) either directly or through a Competent Persons Scheme. A Building Regulation Compliance Certificate will then be issued to the customer.

14.0 Maintenance

The design of the Mixergy CubeX-DHW means that it requires minimal maintenance, it is important that the unit is serviced annually to ensure its safe and efficient operation.

Servicing should be carried out by a qualified heating engineer and the details of any work carried out should be logged in the Service Record section of this manual. Failing to service the unit may invalidate the warranty.

Note: Unless otherwise instructed isolate all electrical supplies to the Cube X DHW before carrying out any maintenance work.

14.1 Inspection access

If for any reason, inspection access is required to check the internal components of the Cube X DHW access can be provided by means of removing the dual element immersion heater and using an appropriate inspection tool such as an inspection camera inserted through the opening in the lid. Removing the lid assembly of the unit (to which the coils are attached) at any time will invalidate the warranty.

14.2 Maintenance checks

Carry out a visual inspection of the general condition of the unit.

14.3 Maintenance checklist

Check the overfill pipe connection and associated pipework for any leaks and or blockages which may affect free drainage. If necessary, replace defective parts.

- When the Cube X DHW water has reached the set temperature, open the nearest hot water outlet and check the mixing valve is delivering water at a safe and consistent temperature.
- Check that the immersion heater and heat supply thermostats are appropriately set.
- Check all thermostats are functioning correctly (i.e., once the Cube X DHW water regulation temperature has been reached any connected heat source should be disabled). If necessary, replace defective parts.
- Check the Y pattern strainer / any filters are free from particulate debris / blockages.
- Check all connections are tight and free from leaks. If necessary, carry out repairs / replace defective parts.

15.0 De-commissioning

15.1 Disassembly, recycling and disposal

Disassembly and removal from service should be carried out by a competent person.

Note: Disconnect and isolate all electrical supplies and allow the store water and pipework to cool before carrying out disassembly and or removal of the unit.

1. Close the stopcock on the mains cold water supply to the tank.

2. Drain the water in the hot water supply pipework by opening at least two hot water outlets nearby.

3. Drain the water remaining in the domestic hot water coil to an open drain using a syphon fitted through the cold-water inlet connection.

4. Unscrew and raise the dual element immersion heater and using a syphon inserted into the gap in the centre of the element, drain the contents of the unit.

The designation of the product means that it should not be disposed of together with unsorted domestic waste. It is the responsibility of the owner to properly dispose of the unit in accordance with national regulations. Further guidance should be sought from the appropriate local authorities. The packaging of the unit can however be recycled, and this should be done so through a local recycling centre.

16.0 Problem solving

Discharge from either of the relief valves indicates a malfunction in the system and must be investigated immediately.

16.1 Electrical fault

If an electrical fault of the controller is suspected or the electrical system does not operate as expected, please visit support.mixergy.co.uk for further guidance.

16.2 Connectivity issues

If a connectivity issue is suspected, please visit support.mixergy.co.uk for further guidance.

17.0 Replacement parts

Do not attempt to repair or replace any parts of the Mixergy vessel unless you are a trained operative. If you suspect a fault or a replacement part is needed, please visit: support.mixergy.co.uk

To determine the correct parts for your system, please ensure you have your vessel MX number which can be found on the nameplate located at the front of the vessel.

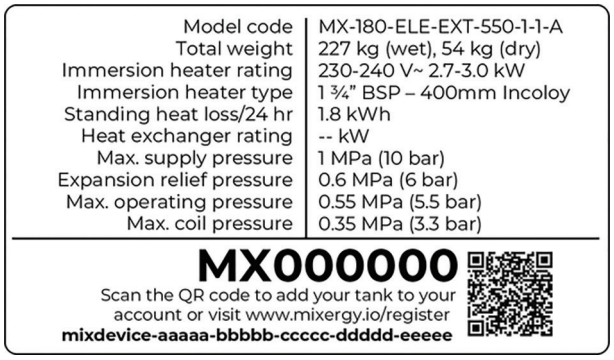
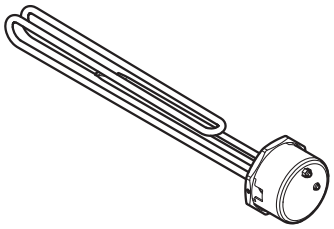
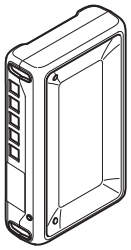
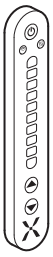


Fig. 25

Part description	Part number
Immersion stat 	MEL0140
Controller 	MAS0005
Gauge 	MAS0043

18.0 Guide to safe isolation

A Mixergy vessel may have more than one incoming main electrical supply.

Indirect control black wire on connection 2.

Primary supply brown wire on connection 6.

Timer control brown wire on connection 8.

All of which must be “Proven Dead” before commencing work.

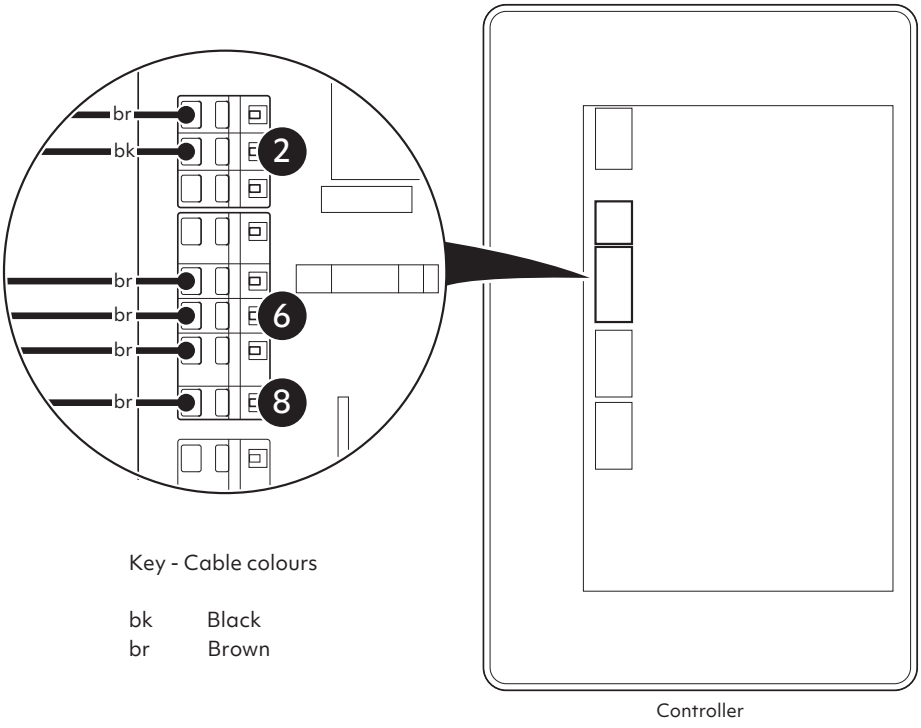


Fig. 26

A Mixergy vessel may have more than one point of isolation:

Primary supply: 16A MCB protected circuit with a 20A DP switch

Indirect control: 3A fuse spur

Timer control: 3A or 13A fuse spur

All of which must be isolated and locked-off before testing.

For more information on safe isolation see www.electricalsafetyfirst.org.uk and search best practice.

19.0 Servicing and maintenance

ANNUAL MAINTENANCE should be performed by a competent operative.

A maintenance record should be kept on the service record on page 34 of this booklet.

19.2 Disassociating an account

If a new tenant is moving into the property and the user of the account tied to the vessel needs to be changed, the new tenant will have to disassociate the vessel from the existing account before registering. This can be performed by pressing and holding the boost down and power buttons for approximately 15 seconds.

20.0 Service Record

It is recommended that your hot water system is serviced regularly and that the appropriate service record is completed.

Before completing the service record below, please ensure you have completed the service in accordance with the manufacturer's instructions.

Service No.1	Date		**Service No.2**	Date	
Engineer name			Engineer name		
Company name			Company name		
Telephone No.			Telephone No.		
Email address			Email address		
Comments			Comments		
Signature			Signature		
Service No.3	Date		**Service No.4**	Date	
Engineer name			Engineer name		
Company name			Company name		
Telephone No.			Telephone No.		
Email address			Email address		
Comments			Comments		
Signature			Signature		

20.0 Service Record

Service No.5	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.6	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.7	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.8	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.9	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.10	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

20.0 Service Record

Service No.11	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.12	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.13	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.14	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.15	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.16	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

20.0 Service Record

Service No.17	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.18	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.19	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.20	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.21	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.22	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

20.0 Service Record

Service No.23	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.24	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.25	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.26	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.27	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

Service No.28	Date	
Engineer name		
Company name		
Telephone No.		
Email address		
Comments		
Signature		

For further guidance and troubleshooting
visit **support.mixergy.co.uk**

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