



# INSTALLATION MANUAL

## **Domestic hot water tank with option kit for air to water heat pump system**

EKHWSU150B3V3  
EKHWSU200B3V3  
EKHWSU300B3V3

EKUHWB

EKUHW2WB

## CONTENTS

	Page
Introduction .....	1
General information .....	1
Scope of this manual .....	1
Model identification .....	1
Accessories .....	2
Accessories supplied with the EKHWSU domestic hot water tank .....	2
Accessories supplied with the EKUHWB option kit for the domestic hot water tank .....	2
Accessories supplied with the EKUHW2WB option kit for the domestic hot water tank when the EKSOLHWAV1 option kit is installed .....	2
Optional equipment .....	2
Installation of the EKHWSU domestic hot water tank .....	2
Main components .....	2
Outlook diagram .....	3
Installation guidelines .....	4
Installing the domestic hot water tank .....	4
Connecting the water circuits .....	4
Field wiring .....	5
Installation of the option kit on the domestic hot water tank .....	7
Piping requirements .....	7
Installation procedure of the option kit .....	8
Commissioning .....	9
Filling up .....	9
Draining .....	9
Maintenance .....	9
Troubleshooting .....	10
General guidelines .....	10
General symptoms .....	10
Technical specifications .....	11
General .....	11
Domestic hot water tank specifications .....	11
Field wiring diagram .....	11



READ THESE INSTRUCTIONS CAREFULLY BEFORE  
 INSTALLATION. KEEP THIS MANUAL IN A HANDY  
 PLACE FOR FUTURE REFERENCE.

PLEASE LEAVE THIS MANUAL WITH THE EKHWSU  
 DOMESTIC HOT WATER TANK AFTER INSTALLATION.

IMPROPER INSTALLATION OR ATTACHMENT OF  
 EQUIPMENT OR ACCESSORIES COULD RESULT IN  
 ELECTRIC SHOCK, SHORT-CIRCUIT, LEAKS, FIRE OR  
 OTHER DAMAGE TO THE EQUIPMENT. BE SURE ONLY  
 TO USE ACCESSORIES MADE BY DAIKIN WHICH ARE  
 SPECIFICALLY DESIGNED FOR USE WITH THE  
 EQUIPMENT AND HAVE THEM INSTALLED BY A  
 PROFESSIONAL.

IF UNSURE OF INSTALLATION PROCEDURES OR USE,  
 ALWAYS CONTACT YOUR DAIKIN DEALER FOR  
 ADVICE AND INFORMATION.

THE UNIT DESCRIBED IN THIS MANUAL IS DESIGNED  
 FOR INDOOR INSTALLATION ONLY AND FOR AMBIENT  
 TEMPERATURES RANGING 0°C~35°C.

## INTRODUCTION

### General information

Thank you for purchasing this **altherma® by DAIKIN** EKHWSU  
 domestic hot water tank.

The **altherma® by DAIKIN** domestic hot water tank must be installed  
 by a competent person and be installed in compliance with  
 instructions as of subject in this manual, all current legislation, codes  
 of practice and regulations governing the installation of unvented hot  
 water cylinders in force at the date of installation.

**This installation is subject to building regulation approval, notify  
 Local Authority of intention to install.**

The domestic hot water tank is to be connected to the  
**altherma® by DAIKIN** EKHBH/X indoor unit, the indoor part of the  
 reversible air to water Daikin ERHQ heat pumps.

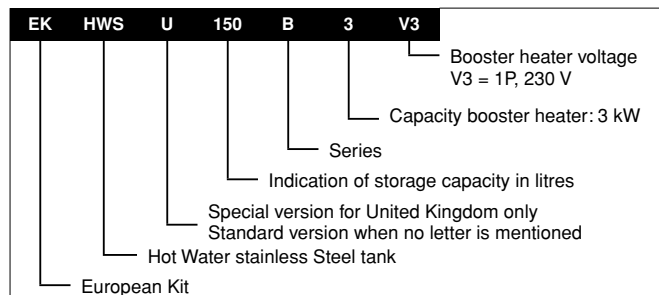
The EKHWSU domestic hot water tank with integrated 3 kW  
 electrical booster heater is available in three types: 150, 200 and  
 300. All models can be floor mounted, while the 150 type model can  
 be wall mounted as well via option kit EKWBSWW150.

### Scope of this manual

This installation manual describes the procedures for installing and  
 connecting the EKHWSU domestic hot water tanks with the  
 EKUHWB option kit and with the EKUHW2WB option kit in case the  
 EKSOLHWAV1 option kit is to be installed as well.

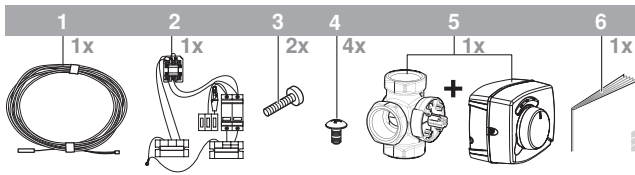
### Model identification

#### Domestic hot water tank



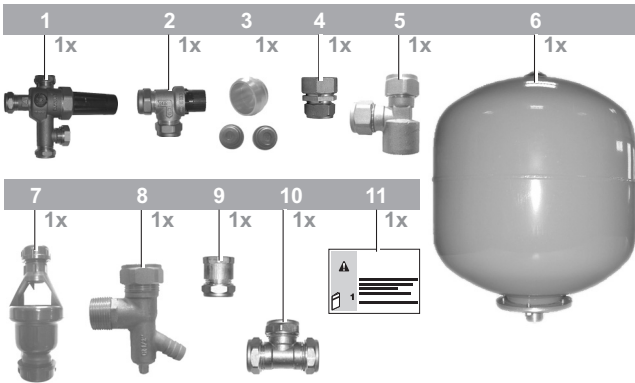
## ACCESSORIES

### Accessories supplied with the EKHWSU domestic hot water tank



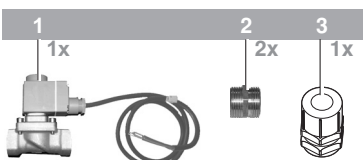
- 1 Thermistor + connection wire (12 m)
- 2 Contactor - fuse assembly
- 3 Contactor fixing screw
- 4 Tapping screw
- 5 3-way valve + motor
- 6 Installation manual

### Accessories supplied with the EKHWSB option kit for the domestic hot water tank



- 1 Pressure reducing valve
- 2 Expansion relief valve
- 3 Blind stop + 2 plastic screw-on closing caps for pressure reducing valve
- 4 Reducing coupler 22 mm - 15 mm
- 5 T-piece 1/2" Female BSP x 15 mm x 15 mm
- 6 Expansion vessel of 18 litres
- 7 Tundish
- 8 Elbow/Drain valve 22 mm x 3/4" Male BSP
- 9 Adaptor 22 mm x 3/4" Female BSP
- 10 T-piece 22 mm x 22 mm x 22 mm
- 11 Instruction sheet

### Accessories supplied with the EKHWS2WB option kit for the domestic hot water tank when the EKSOLHWAV1 option kit is installed



- 1 Solenoid 2-way valve 3/4" Female BSP x 3/4" Female BSP
- 2 Connection nipple 3/4" Male BSP
- 3 PG nipple and nut

### Optional equipment

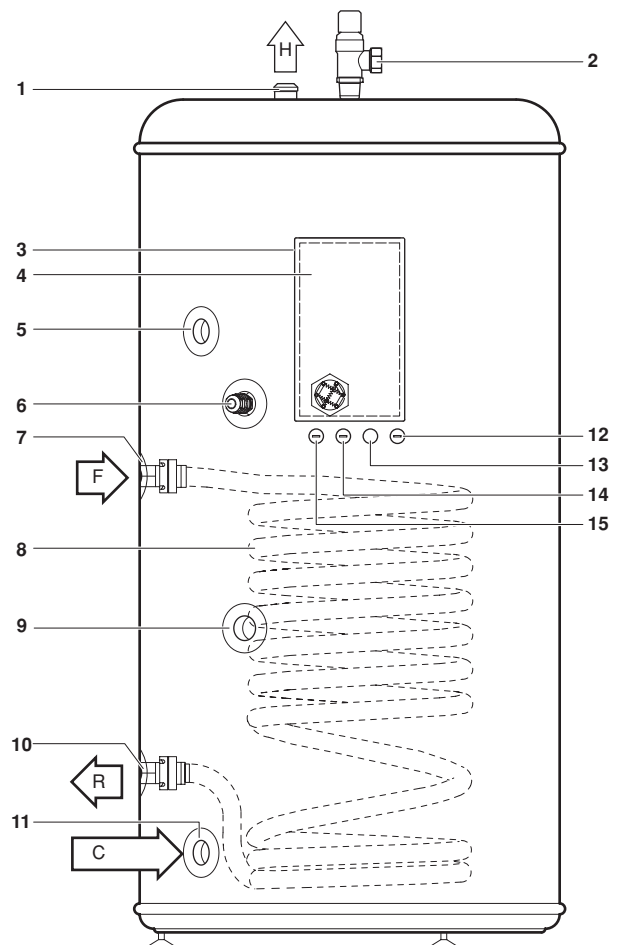
EKWBSWW150: kit, including a wall bracket for a domestic hot water tank of 150 litres.

## INSTALLATION OF THE EKHWSU DOMESTIC HOT WATER TANK



- The total **altherma<sup>®</sup> by DAIKIN** system (indoor unit and outdoor unit) is designed for combination with an **altherma<sup>®</sup> by DAIKIN** domestic hot water tank. In case another tank or a spare part other than native Daikin is being used in combination with the **altherma<sup>®</sup> by DAIKIN** indoor unit, Daikin cannot guarantee neither good operation nor reliability of the system. For those reasons Daikin cannot give warranty of the system in such case.
- The equipment is not intended for use in a potentially explosive atmosphere.
- For safety reasons, it is not allowed to add ethylene glycol to the water circuit. Adding ethylene glycol might lead to contamination of the domestic water if a leakage would occur in the heat exchanger coil.
- Only this tank can be used in combination with the solar kit option.
- Domestic water quality must be according to EN directive 98/83 EC.
- It is important that the storage capacity of the domestic water tank meets normal daily fluctuations in consumption of hot water without any fall of the water outlet temperature during use.
- Immediately after installation, the domestic hot water tank must be flushed with fresh water. This procedure must be repeated at least once a day the first 5 consecutive days after installation.

### Main components



- 1 Hot water connection
- 2 Temperature and pressure relief valve
- 3 Electrical box
- 4 Electrical box lid
- 5 Recirculation hole
- 6 Thermistor socket
- 7 Flow inlet connection
- 8 Heat exchanger coil
- 9 Threaded thermistor hole for use with solar kit option. Refer to the Installation manual EKSOLHWAV1
- 10 Return outlet connection
- 11 Cold water connection
- 12 Only in case of installing the EKSOLHWAV1 option kit  
Cable hole to fit PG nipple and nut for use with solar kit option. Refer to the Installation manual of the EKSOLHWAV1 option kit.
- 13 Cable hole to fit PG nipple and nut into for cable connections of booster heater, power supply and thermal protection cable
- 14 Only in case of installing the EKSOLHWAV1 option kit  
Cable hole to fit PG nipple and nut into for cable connections of solenoid valve. Refer to the Installation manual of the EKSOLHWAV1 option kit.
- 15 Only in case of installing the EKSOLHWAV1 option kit  
Cable hole to fit PG nipple and nut into for cable connections of solenoid valve power supply and solar pump power supply. Refer to the Installation manual of the EKSOLHWAV1 option kit.

## Safety devices



- The domestic hot tank relief valve connections should not be used for other purposes.
- Do not install heaters without thermal cut-outs.

- Thermal protector — The booster heater in the domestic hot water tank is equipped with a thermal protector (setting 85°C).
- For EKHWSU200B3V3 only: Secondary thermal protector (solenoid 2-way valve) — The thermal protector will close the solenoid 2-way valve (setting 85°C).

Both thermal protectors are activated when the temperature becomes too high. When activated, the protectors have to be reset on the domestic hot water tank by pressing the red button (for access, remove the electrical box lid).



The electrical box lid must only be opened by a licensed electrician.

Switch off the power supply before opening the electrical box lid.

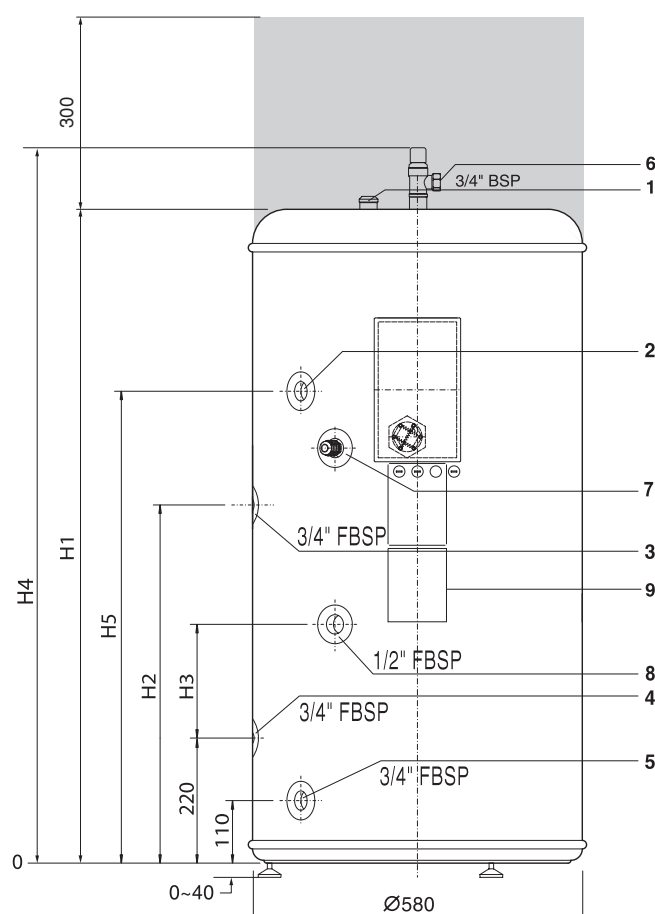
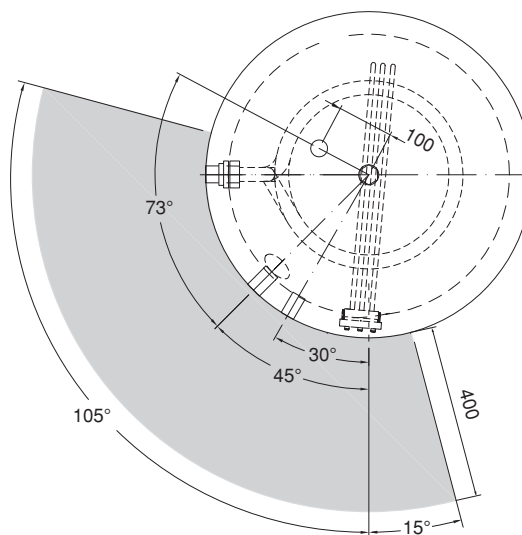
- For EKHWSU200B3V3 only: Thermostat (solenoid 2-way valve)  
The thermostat will close the solenoid 2-way valve when the temperature becomes too high (setting 79°C).
- Temperature and pressure relief valve  
The temperature and pressure relief valve prevents excessive water temperature (>95°C) and excessive water pressure (≥10 bar) in the domestic hot water tank.
- Expansion relief valve (option kit)  
The pressure relief valve prevents excessive water pressure (≥8 bar) in the water circuit.

### NOTE



Refer to "Installation of the option kit on the domestic hot water tank" on page 7 for connection of other safety devices in accordance with relevant local and national regulations.

## Outlook diagram



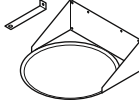
- 1 Hot water connection
- 2 Recirculation hole
- 3 Flow inlet connection (see also "Installation guidelines" on page 4 regarding pipe size to use)
- 4 Return outlet connection (see also "Installation guidelines" on page 4 regarding pipe size to use)
- 5 Cold water connection
- 6 Temperature and pressure relief valve connection
- 7 Thermistor socket
- 8 Threaded thermistor hole for use with solar kit option. Refer to the Installation manual EKSOLHWAV1
- 9 Warning label

Domestic hot water tank model	H1	H2	H3	H4	H5
EKHWSU150B3V3	900	475	185	1015	605
EKHWSU200B3V3	1150	630	200	1265	830
EKHWSU300B3V3	1600	630	200	1715	830

## Installation guidelines

Keep in mind the following guidelines when installing the domestic hot water tank:

- The installation location is frost-free.
- Make sure to make the piping in size 1" or more (and reduce to 3/4" at the inlet of the tank) as to have sufficient water volume in the piping between indoor unit and domestic hot water tank.
- Locate the domestic hot water tank in a suitable position to facilitate easy maintenance; remember access is required to the electrical box. Refer to the grey zones in the outlook diagram.
- The domestic hot water tank model EKHWSU150B3V3 can be floor or wall mounted. In case of wall mounting, wall mounting kit EKWBWW150 is required (separate ordering).
- If installing an EKHWSU\* domestic hot water tank, installing the option kit EKHUHWB is obligatory. Refer to the UK Building Regulation G3.
- If installing the kit EKSOLHWAV1, installing the option kit EKHUHW2WB is obligatory.
- Take care that in the event of a leak, water cannot cause any damage to the installation space and surroundings



## Installing the domestic hot water tank

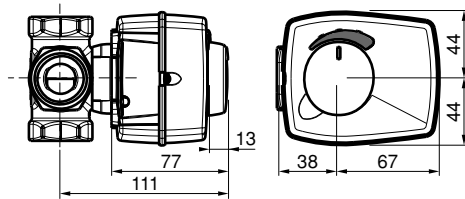
- 1 Check if all domestic hot water tank accessories (see "Accessories" on page 2) are enclosed.
- 2 When floor mounting, place the domestic hot water tank on a level surface. When wall mounting (only for EKHWSU150B3V3 model), make sure the wall is sturdy. In both cases, make sure the tank is mounted level.
- 3 Apply thermal paste to the thermistor and insert the thermistor as deep as possible in the thermistor socket. Fix using the nut provided.

## Connecting the water circuits

Refer to the chapter "Typical application examples" described in the installation manual delivered with the indoor unit for details on connecting the water circuits and the motorised 3-way valve.

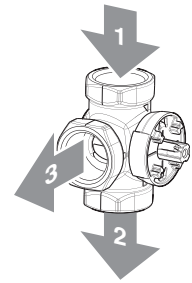
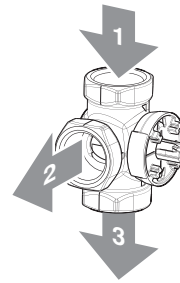
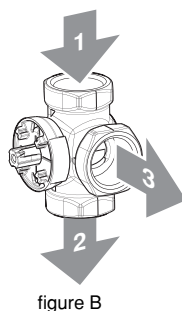
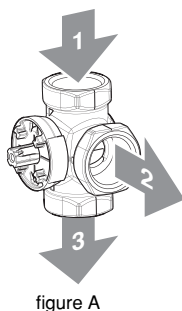
## Connecting the 3-way valve

- 1 Refer to the figure below before making the connection.



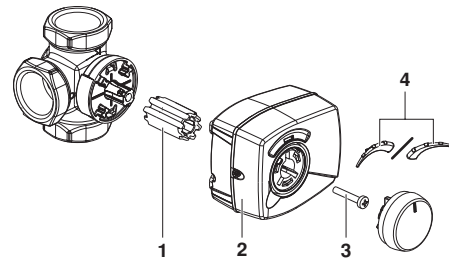
- 2 Installation position.

It is advised to connect the 3-way valve as close as possible to the indoor unit. It can be installed in accordance with one of the following four configurations.



- 1 From **altherma**® by **DAIKIN** indoor unit
- 2 To domestic hot water tank
- 3 To room heating

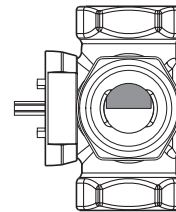
- 3 Unpack the 3-way valve body and 3-way valve motor. Verify that following accessories are provided with the motor.



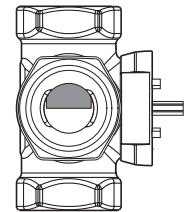
- 1 Sleeve
- 2 Valve motor cover
- 3 Screw
- 4 Scale

- 4 Install the 3-way valve body in the pipework.

- Make sure the shaft will be positioned in such a way that the motor can be mounted and replaced.
- Put the sleeve on the valve and turn the valve to the middle position of the scale plate. Check that the valve is positioned as in the figure below. It should be blocking the outlet connection to the domestic hot water for 50% and the outlet connection to the room heating also for 50%.



Installation in accordance with  
figure A and figure B



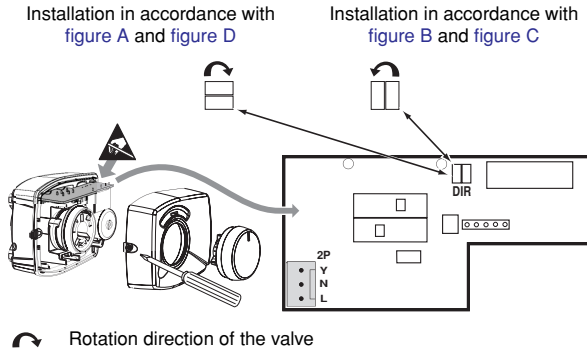
Installation in accordance with  
figure C and figure D



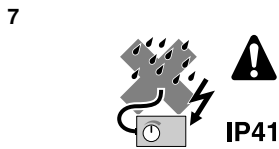
If the valve is not positioned in this way before mounting the motor, the valve will give way to both domestic water and room heating during operation.

- 5 When installing in accordance with [figure A](#) or [figure D](#), open the valve motor cover by loosening the screw and change the jumper so as to change the rotation direction of the valve.

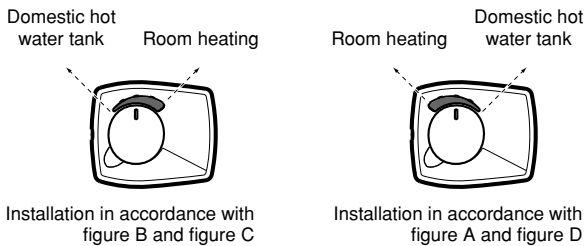
By default the jumper is factory set to apply for installation in accordance with [figure B](#) and [figure C](#).



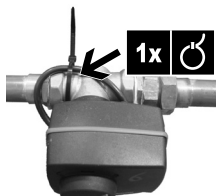
- 6 Push the motor on the motor sleeve.  
Make sure not to rotate the sleeve during this action, so as to maintain the valve position as set during step 4.



- 8 Put the scale on the valve as shown below.



- 9 Make sure to firmly fix the power supply cord onto the 3-way valve body with a field supplied cable tie like in illustration below.



- 10 Perform the wiring in the indoor unit in accordance with the following figure:

8	9	10
3-way valve		
BRN	BLU	BLK
L	N	Y

Refer also to the drawing on [page 6](#).

Refer to "[Installation of the option kit on the domestic hot water tank](#)" on [page 7](#) for details on installation in accordance with relevant local and national regulations.

## Field wiring

Also refer to "[Field wiring diagram](#)" on [page 11](#).



- A main switch or other means for disconnection, having a contact separation in all poles, must be incorporated in the fixed wiring in accordance with relevant local and national legislation.
- All field wiring and components must be installed by a licensed electrician and must comply with relevant European and national regulations.
- The field wiring must be carried out in accordance with the wiring diagram sticker supplied with the unit and the instructions given below.
- The domestic hot water tank must be earthed via the indoor unit.

## Power circuit and cable requirements



- Be sure to use a dedicated power circuit. Never use a power circuit shared by another appliance.
- Use one and same dedicated power supply for the outdoor unit, indoor unit, backup heater and domestic hot water tank.

For cable requirements and specifications, refer to "[Field wiring](#)" in the indoor unit installation manual supplied with the EKHBH/X unit.

### NOTE



Select the power cable in accordance with relevant local and national regulations.

## Thermistor cable

The distance between the thermistor cable and power supply cable must always be at least 5 cm to prevent electromagnetic interference on the thermistor cable.

## Procedure



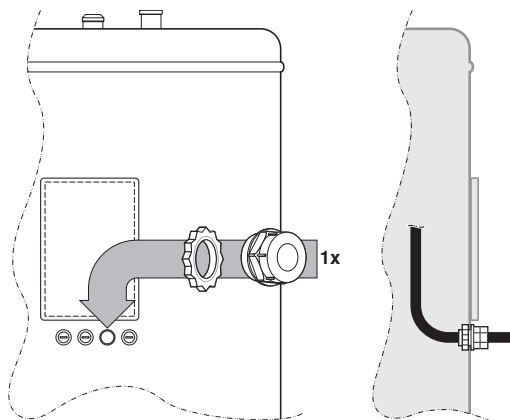
Switch off the power supply before making any connections.

## Connections to be made in the domestic hot water tank electrical box



Make sure all field wiring is insulated from the surface of the inspection hole or can resist temperatures to 90°C.

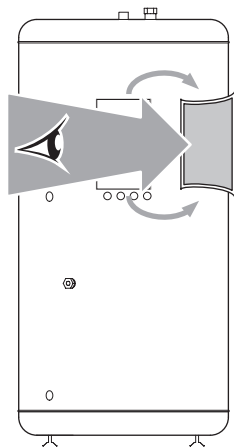
- Prior to upwiring  
Make sure to ensure strain relief of the power cable by correctly mounting the PG nipple and PG nut (delivered with the tank).



- 2 **Booster heater power supply**  
Connect the booster heater power supply and thermal protection cable as shown in wiring diagram sticker on the inside of the switch box lid.

- 3 **Solenoid valve power supply**  
Connect the solenoid valve power supply cable as shown in the following diagram sticker on the inside of the switch box lid.

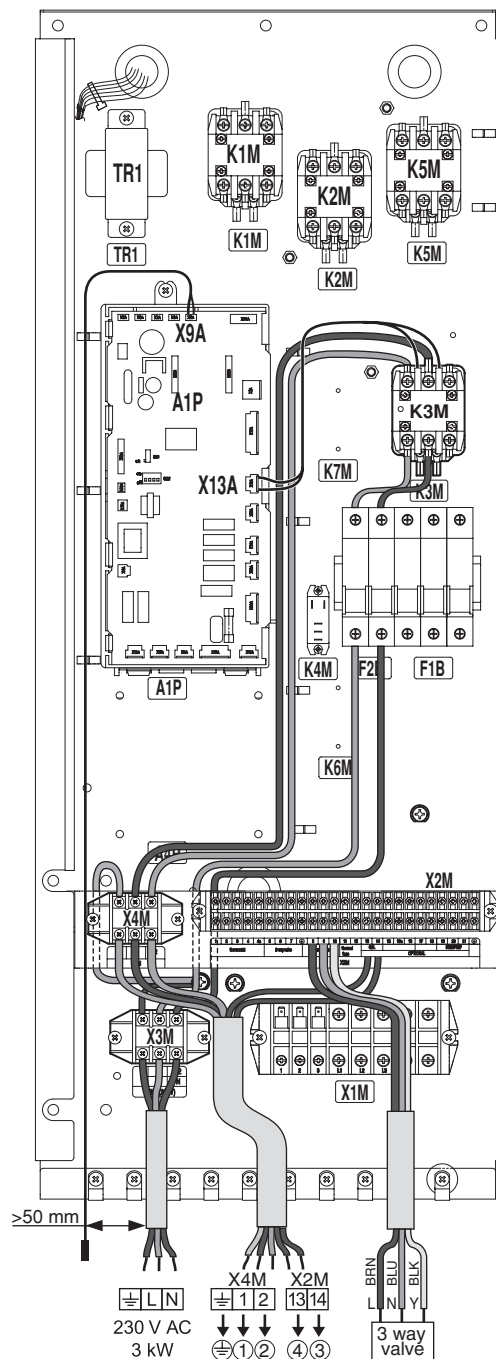
- 4 **Solenoid valve**  
Connect the solenoid valve as shown in the following diagram sticker on the inside of the switch box lid.



*Note: only relevant field wiring is shown.*


#### Connections to be made in the indoor unit switch box

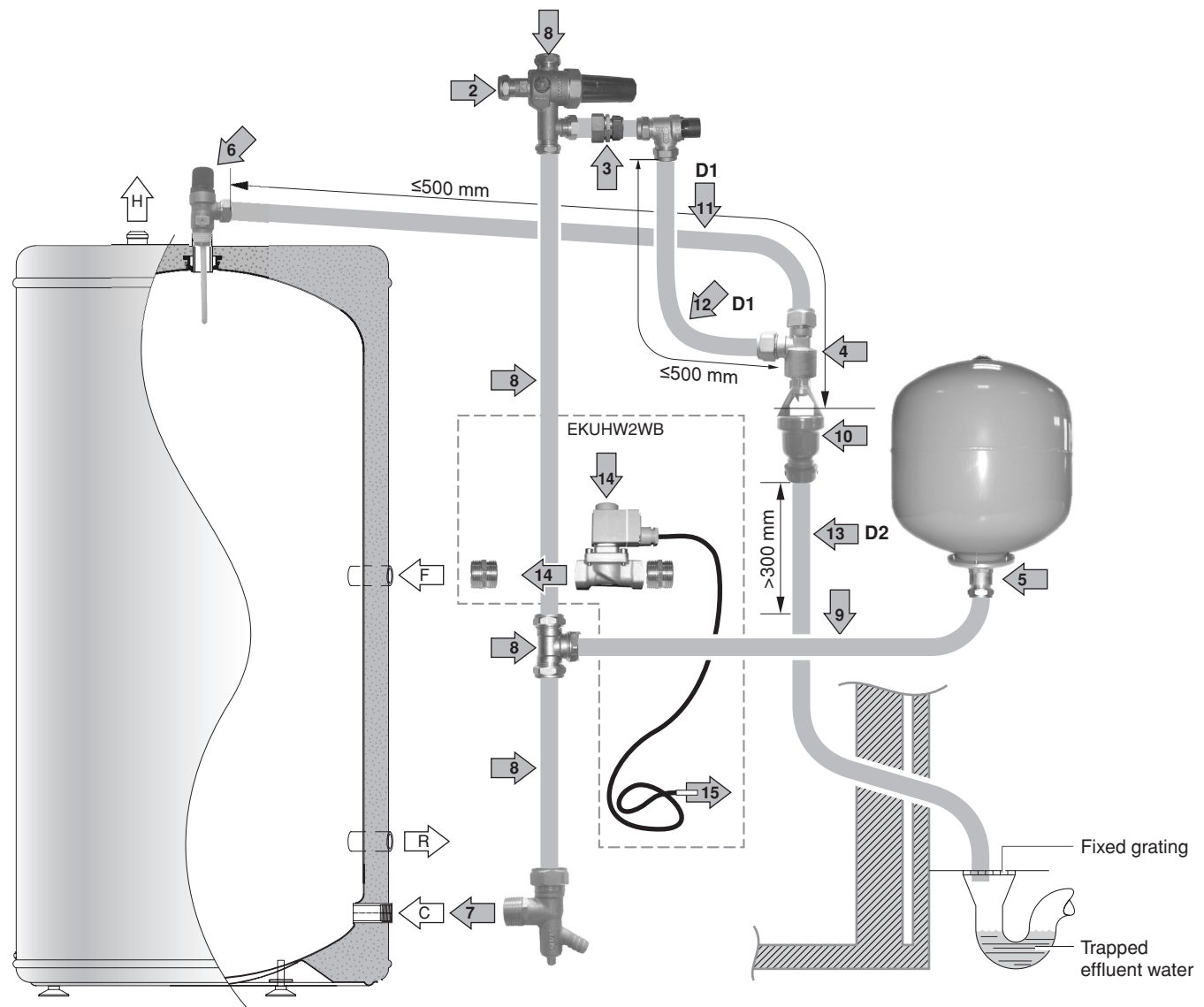
- 5 Mount the prewired contactor (K3M), circuit breaker (F2B) and terminal blocks (X3M, X4M). The contactor and terminal blocks should be fixed with the 3x 2 screws supplied.
- 6 Plug the connector connected to the contactor K3M in the socket X13A on the PCB.
- 7 Plug the thermistor cable connector in the socket X9A on the PCB.
- 8 Connect the prewired earth wires of the terminal block X3M and X4M to the earthing screw.
- 9 Connect the booster heater power supply and thermal protection cable (field supply) to terminal X4M earth, 1, 2, and X2M 13, 14.
- 10 Connect the booster heater power supply cable to the terminal block X3M.
- 11 Connect the solenoid valve power supply cable to terminal block X7M as shown on [wiring diagram B](#) in paragraph "Connections to be made in the domestic hot water tank electrical box" on [page 5](#).
- 12 Fix the cables to the cable tie mountings with cable ties to ensure strain relief.
- 13 Set DIP switch SS2-2 on the PCB to ON.
- 14 When routing out cables, make sure that these do not obstruct mounting of the indoor unit cover.





INSTALLATION OF THE OPTION KIT ON THE DOMESTIC HOT WATER TANK

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- All pipework and fittings must be flushed free of all flux and debris prior to the fitting of controls of this option kit. Failure to do this may cause irreparable damage to the controls.
  - All cautions as under chapter "Installation of the EKHSU domestic hot water tank" on page 2 remain of extreme importance and are equally valid in this chapter.



Piping requirements


- **Tundish**  
Install the tundish in a vertical position within a maximum of 500 mm away from the temperature and pressure relief valve on the domestic hot water tank and the expansion relief valve included in the option kit.
- **Tundish pipework**  
Tundish pipework must be 22 mm metal pipe with a minimum vertical length of 300 mm below the tundish. Maximum permitted (equivalent) length of 22 mm pipework is 9 m. Each bend or elbow is equivalent to 0.8 m of pipework. All pipework must have a continuous fall.

Sizing of copper discharge pipe D2 for common temperature relief valve outlet sizes

Valve outlet size	Discharge pipe size D1	Discharge pipe size D2 from tundish	Maximum resistance allowed, expressed as a length of straight pipe (i.e. no elbows or bends)	Resistance created by each elbow or bend
15 mm	15 mm	22 mm	up to 9 m	0.8 m

- **Requirements to discharges**
  - Discharge piping, tundish, drain valves, etc. must be positioned away from any electrical components.
  - The discharge pipe away from the tundish must terminate in a safe, visible position without forming any risk to persons in the vicinity.

If in any doubt, refer to Building Regulation G3.

- 
- Do not install any valves between the domestic hot water tank and relief valves/expansion vessel.



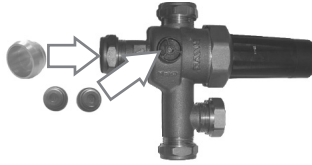
## Installation procedure of the option kit

- 1 Locate the domestic hot water tank in a suitable position to facilitate the installation of water supply, discharge fittings and pipework. It is therefore recommended to first read through this whole procedure.

**Refer to the figure on the facing page at the start of this chapter for full understanding of next procedure steps.**

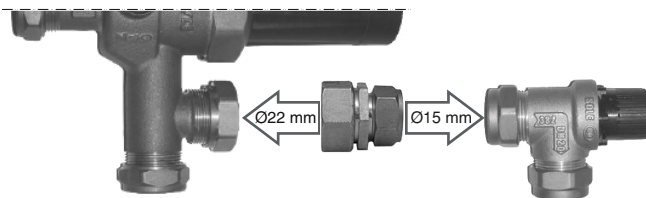
### Pre-assembly

- 2 Pre-assemble the pressure reducing valve (part 1 of this kit, refer to [page 2](#)) by mounting the blind stop and the 2 black plastic screw-on closing caps (part 3 of this kit), so that the pressure reducing valve is ready for installation.



The black plastic plugs in the pressure reducing valve body are pressure gauge connections to enable pressure monitoring to be carried out, should the system develop a fault. It is recommended that these be accessible (the pressure reducing valve has two - only one need be accessible).

- 3 Mount the reducing coupler (part 4 of this kit) in between the pressure reducing valve and the expansion relief valve (part 2 of this kit) using a length of copper tube Ø22 mm (to the pressure reducing valve) and a length of copper tube Ø15 mm (to the expansion relief valve).



Do not install valves between the temperature and pressure relief valve and the expansion relief valve.

- 4 Pre-assemble the T-piece and tundish (parts 5 and 7 of this kit) so that tundish is ready for installation.
- 5 Pre-assemble the adaptor and expansion vessel (parts 9 and 6 of this kit) so that the expansion vessel is ready for installation.
- 6 Manually operate the temperature and pressure relief valve to ensure free water flow through discharge pipe. Turn knob left.

### Water main in

- 7 Fit the elbow/drain valve (part 8 of this kit) in the cold water connection <C> of the domestic hot water tank.
- 8 Position both, the pressure reducing valve with integrated non return valve and line strainer and the expansion relief valve (parts 1 and 2 of this kit - see also procedure step 2) as high as possible and connect it to the water mains inlet.

- The pressure reducing valve and expansion relief valve must be installed higher than the temperature and pressure relief.
- The expansion relief valve must be installed with a horizontal discharge. If fitted inverted, debris may be deposited on the seat and cause fouling of the seat when the valve operates. Check direction of flow arrows.

Fit a length of copper tube Ø22 mm (field supply) in between the elbow/drain valve (procedure step 7) and the pressure reducing valve.

Make sure to provide for a connection on this pipe to the expansion vessel (part 6 of this kit).

- 9 Fit a length of copper tube Ø22 mm (field supply) in between the T-piece (part 10 of this kit) and the pre-assembled expansion vessel (procedure steps 5 and 8).

## Discharge

- 10 Install the tundish in a vertical position within a maximum of 500 mm away from the temperature and pressure relief valve and expansion relief valve. (Procedure step 4). Make sure that you install it so that you can still connect the 15 mm outlet of the expansion relief valve and the horizontal inlet of the T-piece on top of the tundish. (Procedure step 13)
- 11 Connect a metal discharge pipe Ø15 mm (field supply) from the temperature and pressure relief valve to the vertical inlet of the T-piece on top of the tundish (≤500 mm).
- 12 Connect a metal discharge pipe Ø15 mm (field supply) from the expansion relief valve to the horizontal inlet of the T-piece on top of the tundish (≤500 mm).
- 13 Connect a discharge pipe from the tundish. Refer to paragraph "Tundish pipework" on [page 7](#). All pipework must have a continuous fall and be fitted conform to the requirements of the Building Regulation G3.

### Only when installing the EKHUW2WB option kit Flow inlet connection

- 14 Fit the solenoid 2-way valve (part 1 of this kit) using the connection nipples (part 2 of this kit) for screwing into the 3/4" FBSP flow inlet connection <F> of the domestic hot water tank. Also refer to "Installation guidelines" on [page 4](#).
  - The valve must be mounted so that the valve head is above horizontal level of pipework to prevent that in the highly unlikely event of a leak, a safety hazard results.
  - Check direction of the flow arrow cast on the solenoid valve body.
  - Do not grip the valve head while making and tightening up connections. Either hold brass body in your hand or attach adjustable spanner across hexagonal or flat faces in valve body at each port's screw thread.
- 15 Make sure that the solenoid 2-way valve is wired up properly as described in "Connections to be made in the domestic hot water tank electrical box" on [page 5](#).

### After completing the installation

- 16 After completing the installation, the installer has to fill in the warning label on the tank with indelible ink. Refer to "Outlook diagram" on [page 3](#) for location of the warning label.

**WARNING**

- Do not remove. Contact the installer.
- Should the system develop a fault, switch contact the installer.

**WARNING TO INSTALLER**

- This installation is subject to building regulation approval, notify Local Authority of intention to install.
- Use only manufacturer's recommended spare parts. Contact your local Daikin dealer.
- Installed by

name \_\_\_\_\_

address \_\_\_\_\_

tel. No. \_\_\_\_\_

completion date \_\_\_\_\_

**TECHNICAL SPECIFICATIONS**

### Filling up

Follow the next steps to fill up the tank:

- 1 Switch off the power supply.
- 2 Open each hot water tap in turn to expel air from the system pipe work.
- 3 Open the cold water supply valve.
- 4 Check for leaks.
- 5 Close all water taps if all air is expelled.
- 6 Manually operate the temperature and pressure relief valve to ensure free water flow through the discharge pipe (turn knob left). Refer to ["Main components" on page 2](#) for location of the temperature and pressure relief valve.

### Draining

Follow the next steps to drain the tank:

- 1 Switch off the power supply.
- 2 Turn off the cold water supply valve.
- 3 Open the hot water taps.
- 4 Open the drain valve.

In order to ensure optimal availability of the unit, a number of checks and inspections on the unit and the field wiring have to be carried out at regular intervals.



- Before carrying out any maintenance or repair activity, always switch off the circuit breaker on the supply panel, remove the fuses or open the protection devices of the unit.
- Make sure that before starting any maintenance or repair activity, also the power supply to the outdoor unit is switched off.

The described checks must be executed at least **once a year**.

#### 1 Domestic hot water tank booster heater

It is advisable to remove lime buildup on the booster heater to extend its life span, especially in regions with hard water. To do so, drain the domestic hot water tank, remove the booster heater from the domestic hot water tank and immerse in a bucket (or similar) with lime-removing product for 24 hours.

#### 2 Temperature and pressure relief valve

Check for correct operation of the temperature and pressure relief valve. Manually operate the temperature and pressure relief valve to ensure free water flow through discharge pipe. Turn knob left.

#### 3 Pressure reducing valve with integrated non return valve and line strainer

Depending on local water conditions, annual inspection of the integral line strainer, pressure reducing valve cartridge and seating may be necessary.

- Unscrew the retaining nut of the valve. The complete operating mechanism, including the strainer can be removed.
- Clean the filter mesh and cartridge under running water.
- Replace cartridge, ensuring that strainer is correctly located and reassemble the unit.

#### 4 Expansion relief valve

Check for correct operation of the expansion relief valve. Manually operate the expansion relief valve to ensure free water flow through discharge pipe. Turn knob left.

Depending on local water conditions, annual inspection of the expansion relief valve cartridge and seating may be necessary.

- Unscrew the expansion relief headwork from valve body.
- Clean valve seat face and seating - do not scratch or damage either seat face or seating.
- Refit in reverse order. Do not over tighten.

#### 5 Indoor unit switch box

- Carry out a thorough visual inspection of the switch box and look for obvious defects such as loose connections or defective wiring.

- Check for correct operation of contactor K3M by use of an ohmmeter. All contacts of this contactor must be in open position.

## TROUBLESHOOTING

This section provides useful information for diagnosing and correcting certain troubles which may occur in the unit.

### General guidelines

Before starting the trouble shooting procedure, carry out a thorough visual inspection of the unit and look for obvious defects such as loose connections or defective wiring.

Before contacting your local dealer, read this chapter carefully, it will save you time and money.



When carrying out an inspection on the supply panel or on the switch box of the unit, always make sure that the circuit breaker of the unit is switched off.

When a safety device was activated, stop the unit and find out why the safety device was activated before resetting it. Under no circumstances safety devices may be bridged or changed to a value other than the factory setting. If the cause of the problem cannot be found, call your local Daikin dealer

### General symptoms

#### Symptom 1: No water flow from hot taps

POSSIBLE CAUSES	CORRECTIVE ACTION
The main water supply is off.	Check that all shut off valves of the water circuit are completely open.
The strainer is blocked.	Turn off the water supply, remove and clean the strainer (see "Pressure reducing valve with integrated non return valve and line strainer" on page 9 on how to do this).
The cold water inlet pressure reducing valve is not fitted properly.	Check and refit as required (see "Pressure reducing valve with integrated non return valve and line strainer" on page 9 on how to do this).

#### Symptom 2: Water from hot taps is cold

POSSIBLE CAUSES	CORRECTIVE ACTION
The thermal cut-out(s) has/have operated	Check and reset button(s).
The indoor unit (EKHBH/X) is not operating.	Check the indoor unit (EKHBH/X) operation. Refer to the manual delivered with the indoor unit. If any faults are suspected, contact your local Daikin dealer.
The solenoid 2-way valve is not operating correctly (only when option kit EKHUW2WB is installed).	Check the wiring, F2U and the plumbing connections to the solenoid 2-way valve. Check the setting of the thermostat (79°C).

#### Symptom 3: Intermittent water discharge

POSSIBLE CAUSES	CORRECTIVE ACTION
Thermal control failure (water will be hot).	Switch off power to the indoor unit. When discharge has stopped, check the thermal controls and replace if faulty. Contact your local Daikin dealer.
The expansion vessel is broken.	Replace the expansion vessel.

#### Symptom 4: Continuous water discharge

POSSIBLE CAUSES	CORRECTIVE ACTION
Cold water inlet pressure.	Check the pressure reducing valve. Replace the pressure reducing valve if the measured pressure is >2.1 bar.
Temperature and pressure relief valve.	Check and reset button.
The expansion relief valve is not functioning properly.	Check for correct operation of the pressure relief valve by turning the red knob on the valve counter clockwise: <ul style="list-style-type: none"><li>• If you do not hear a clacking sound, contact your local Daikin dealer.</li><li>• In case the water keeps running out of the unit, close both the water inlet and outlet shut-off valves first and then contact your local Daikin dealer.</li></ul>

# TECHNICAL SPECIFICATIONS

## General

	Heating/cooling models (EKHBX)	Heating only models (EKHBH)
<b>Operation range - air side</b>		
• domestic hot water by heat pump	-20~+35°C <sup>(a)</sup>	-20~+35°C <sup>(a)</sup>

(a) For EKHB(H/X)008\*: down to -20°C and up to +43°C by booster heater

## Domestic hot water tank specifications

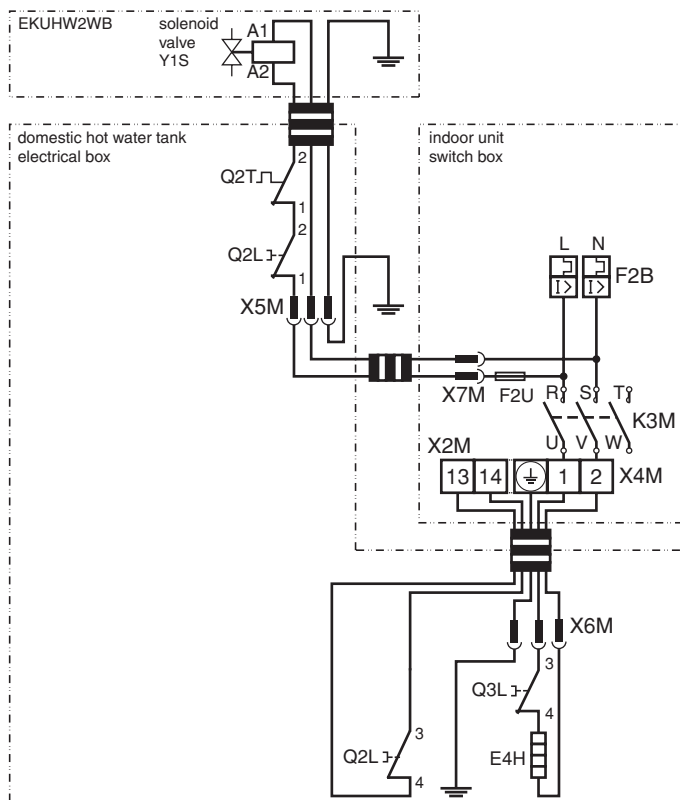
	EKHWSU150B3V3	EKHWSU200B3V3	EKHWSU300B3V3
• Storage capacity	150 l	200 l	285 l
• Overall dimensions (Ø x H)	580 x 1015 mm	580 x 1265 mm	580 x 1715 mm
• Booster heater			
- power supply	230 V 50 Hz 1P	230 V 50 Hz 1P	230 V 50 Hz 1P
- running current	13 A	13 A	13 A
- capacity	3 kW	3 kW	3 kW
• Operating pressure	2.1 bar	2.1 bar	2.1 bar
• Maximum primary working pressure (heating side)	2.5 bar	2.5 bar	2.5 bar
• Expansion vessel pre-charge pressure	2.5 bar	2.5 bar	2.5 bar
• Preset opening pressure of expansion relief valve	8 bar	8 bar	8 bar
• Preset opening temperature of temperature and pressure relief valve	90~95°C	90~95°C	90~95°C
• Set opening pressure of temperature and pressure relief valve	10 bar	10 bar	10 bar
• Connections	3/4" FBSP <sup>(a)</sup>	3/4" FBSP <sup>(a)</sup>	3/4" FBSP <sup>(a)</sup>
• Weight			
- empty	38 kg	46 kg	60 kg
- when full	188 kg	246 kg	345 kg
• Mounting	Wall or floor	Floor	Floor
• Supply temperature time <sup>(b)</sup>	1 hr 15 min	1 hr 41 min	2 hr 26 min
• Maximum water supply pressure	8 bar	8 bar	8 bar
• Re-heat time <sup>(c)</sup>	1 hr 5 min	1 hr 29 min	2 hr 8 min

(a) FBSP = Female British Standard Pipe

(b) The time it takes to increase the temperature from 15°C to 60°C

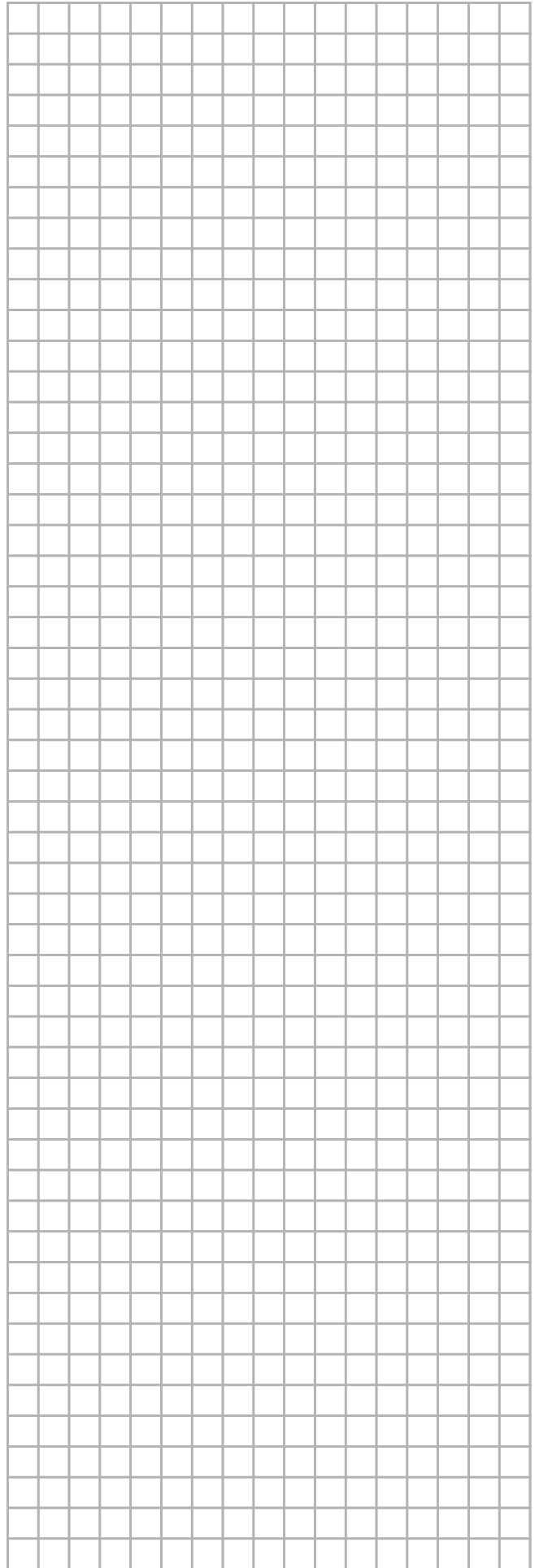
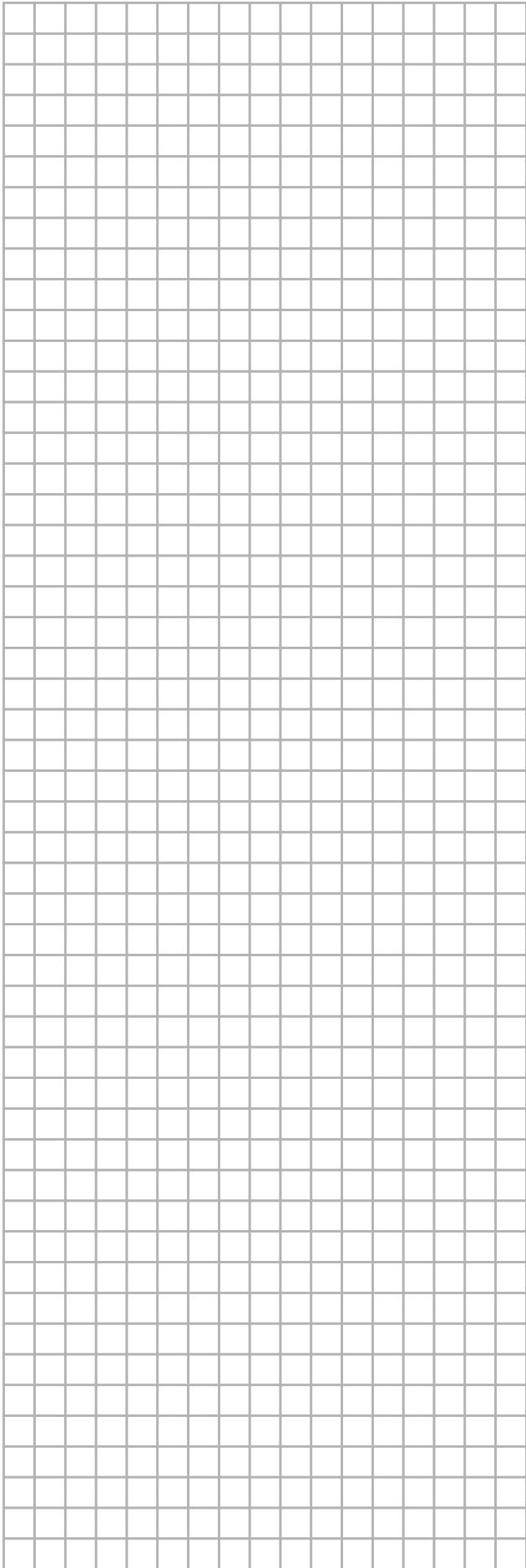
(c) The time it takes to increase 70% of the contents of the vessel back up to 60°C

## Field wiring diagram



- E4H .....Booster heater
- F2B.....Fuse booster heater
- F2U.....Fuse 5 A/250 V
- K3M.....Contactor booster heater
- L .....Life
- N.....Neutral
- Q2T .....Thermostat domestic hot water tank
- Q2L.....Thermal protector domestic hot water tank
- Q3L.....Thermal protector booster heater
- Y1S.....Solenoid valve
- X1M.....Terminal block
- X5M~X7M .....Terminal block
- ⏏ .....Protective earth
- .....Field wiring

## NOTES





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