

SERVICE MANUAL

R410A

[Model name]	[Service Ref.]
EHST20C-VM2C	EHST20C-VM2C.UK
EHST20C-VM6C	EHST20C-VM6C.UK
EHST20C-YM9C	EHST20C-YM9C.UK
EHST20C-TM9C	EHST20C-TM9C.UK
EHST20C-VM2EC	EHST20C-VM2EC.UK
EHST20C-VM6EC	EHST20C-VM6EC.UK
EHST20C-YM9EC	EHST20C-YM9EC.UK
EHST20C-MHCW	EHST20C-MHCW.UK
EHST20C-MEC	EHST20C-MEC.UK
EHST20D-VM2C	EHST20D-VM2C.UK
EHST20D-VM2EC	EHST20D-VM2EC.UK
EHST20D-YM9C	EHST20D-YM9C.UK
EHST20D-MHCW	EHST20D-MHCW.UK
EHST20D-MEC	EHST20D-MEC.UK
EHST20D-MHC	EHST20D-MHC.UK
EHPT20X-VM2C	EHPT20X-VM2C.UK
EHPT20X-VM6C	EHPT20X-VM6C.UK
EHPT20X-YM9C	EHPT20X-YM9C.UK
EHPT20X-TM9C	EHPT20X-TM9C.UK
EHPT20X-MHCW	EHPT20X-MHCW.UK
ERST20C-VM2C	ERST20C-VM2C.UK
ERST20C-MEC	ERST20C-MEC.UK
ERST20D-VM2C	ERST20D-VM2C.UK
ERST20D-MEC	ERST20D-MEC.UK

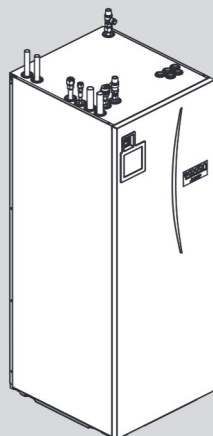
Revision:

- Added EHST20D-VM2EC.UK, EHST20D-YM9C.UK, ERST20C-VM2C.UK, ERST20C-MEC.UK, ERST20D-VM2C.UK and ERST20D-MEC.UK in REVISED EDITION-A.
- Some descriptions have been modified.

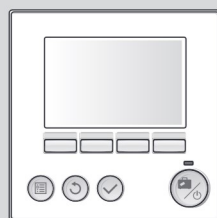
- Please void OCH570.

Note:

- This manual describes only service data of cylinder unit.
- RoHS compliant products have <G> mark on the spec name plate.



CYLINDER UNIT


 MAIN REMOTE
CONTROLLER

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PARTS CATALOG (OCB570)

OUTDOOR UNIT'S SERVICE MANUAL

Service Ref.	Service Manual No.
PUHZ-W50/85VHA(-BS) PUHZ-W50/85VHAR1(-BS) PUHZ-W50VHAR2(-BS) PUHZ-W50VHAR3(-BS)	OCH439
PUHZ-W85VHA2-BS.UK PUHZ-W85VHA2(R1)-BS.UK	OCH465
PUHZ-W112VHA(-BS)	OCH562
PUHZ-HW112/140YHA(-BS) PUHZ-HW112/140YHA2(-BS) PUHZ-HW112/140YHA2R1(-BS) PUHZ-HW112/140YHA2R3(-BS) PUHZ-HW112/140YHA2R4(-BS) PUHZ-HW140VHA(-BS) PUHZ-HW140VHA2(-BS) PUHZ-HW140VHA2R1(-BS) PUHZ-HW140VHA2R2-BS PUHZ-HW140VHA2R3(-BS) PUHZ-HW140VHA2R4(-BS)	OCH439
PUHZ-SW40/50VHA(-BS) PUHZ-SW40/50VHAR1(-BS)	OCH525
PUHZ-SW75/100/120VHA(-BS) PUHZ-SW100/120YHA(-BS) PUHZ-SW100/120YHAR1(-BS)	OCH533
PUHZ-SHW80/112VHA PUHZ-SHW80/112VHAR2(-BS).UK PUHZ-SWH112/140YHA(R1) PUHZ-SWH112/140YHAR2(-BS).UK	OCH526
PUHZ-FRP71VHA	OCH544
SUHZ-SW45VA(H).TH SUHZ-SW45VA(H)R1.TH	OCH557

Please read the following safety precautions carefully.

⚠ WARNING:
Precautions that must be observed to prevent injuries or death.

⚠ CAUTION:
Precautions that must be observed to prevent damage to unit.

This installation manual along with the user manual should be left with the product after installation for future reference.
Mitsubishi Electric is not responsible for the failure of locally-supplied parts.

- Be sure to perform periodical maintenance.
- Be sure to follow your local regulations.
- Be sure to follow the instructions provided in this manual.

⚠ WARNING	
Mechanical	
The cylinder unit and outdoor unit must not be installed, disassembled, relocated, altered or repaired by the user. Ask an authorised installer or technician. If the unit is installed improperly or modified after installation by the user water leakage, electric shock or fire may result.	
The outdoor unit should be securely fixed to a hard level surface capable of bearing its weight.	
The cylinder unit should be positioned on a hard level surface capable of supporting its filled weight to prevent excessive sound or vibration.	
Do not position furniture or electrical appliances below the outdoor unit or cylinder unit.	
The discharge pipework from the emergency devices of the cylinder unit should be installed according to local law.	
Only use accessories and replacement parts authorised by Mitsubishi Electric ask a qualified technician to fit the parts.	
Electrical	
All electrical work should be performed by a qualified technician according to local regulations and the instructions given in this manual.	
The units must be powered by a dedicated power supply and the correct voltage and circuit breakers must be used.	
Wiring should be in accordance with national wiring regulations. Connections must be made securely and without tension on the terminals.	
Earth unit correctly.	
General	
Keep children and pets away from both the cylinder unit and outdoor unit.	
Do not use the hot water produced by the heat pump directly for drinking or cooking. This could cause illness to the user.	
Do not stand on the units.	
Do not touch switches with wet hands.	
Annual maintenance checks on both the cylinder unit and the outdoor unit should be conducted by a qualified person.	
Do not place containers with liquids on top of the cylinder unit. If they leak or spill onto the cylinder unit damage to the unit and/or fire could occur.	
Do not place any heavy items on top of the cylinder unit.	
When installing, relocating, or servicing the cylinder unit, use only the specified refrigerant (R410A) to charge the refrigerant lines. Do not mix it with any other refrigerant and do not allow air to remain in the lines. If air is mixed with the refrigerant, then it can be the cause of abnormal high pressure in the refrigerant line, and may result in an explosion and other hazards.	
The use of any refrigerant other than that specified for the system will cause mechanical failure or system malfunction or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.	
In heating mode, to avoid the heat emitters being damaged by excessively hot water, set the target flow temperature to a minimum of 2°C below the maximum allowable temperature of all the heat emitters. For Zone2, set the target flow temperature to a minimum of 5°C below the maximum allowable flow temperature of all the heat emitters in Zone2 circuit.	

⚠ CAUTION	
Use clean water that meets local quality standards on the primary circuit.	
The outdoor unit should be installed in an area with sufficient airflow according to the diagrams in the outdoor unit installation manual.	
The cylinder unit should be located inside to minimise heat loss.	
Water pipe-runs on the primary circuit between outdoor and indoor unit should be kept to a minimum to reduce heat loss.	
Ensure condensate from outdoor unit is piped away from the base to avoid puddles of water.	
Remove as much air as possible from the primary and DHW circuits.	
Refrigerant leakage may cause suffocation. Provide ventilation in accordance with EN378-1.	
Be sure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.	
Never put batteries in your mouth for any reason to avoid accidental ingestion.	
Battery ingestion may cause choking and/or poisoning.	
Install the unit on a rigid structure to prevent excessive sound or vibration during operation.	
Do not transport the cylinder unit with water inside the DHW tank. This could cause damage to the unit.	
If power to the cylinder unit is to be turned off (or system switched off) for a long time, the water should be drained.	
If unused for a long period, before operation is resumed, DHW tank should be flushed through with potable water.	
Preventative measures should be taken against water hammer, such as installing a Water Hammer Arrestor on the primary water circuit, as directed by the manufacturer.	

As for the handling of refrigerant, refer to the outdoor unit installation manual.



⚠ WARNING (SPLIT MODELS ONLY)

- Do not discharge refrigerant into the atmosphere if refrigerant leaks during installation, ventilate the room.
- Use appropriate tools for high pressure refrigerant.
- When pumping down refrigerant , stop the compressor before disconnecting the refrigerant pipes.
- During installation securely fasten the refrigerant pipes before starting the compressor.
- Check that refrigerant gas does not leak after the completion of installation.
- Use R410A refrigerant only. Do not allow air to enter the lines. Failure to observe these instructions will cause mechanical failure, system failure or, in the worst case, serious breach of product safety.

⚠ CAUTION (SPLIT MODELS ONLY)

- <Using R410A refrigerant heat pumps>
- Use C1220 copper phosphorus, for copper and copper alloy seamless pipes, to connect the refrigerant pipes. Make sure the insides of the pipes are clean and do not contain any harmful contaminants such as sulfuric compounds, oxidants, debris, or dust. Use pipes with the specified thickness. (Refer to section 4.4 in the installation manual.) Note the following if reusing existing pipes that carried R22 refrigerant.
 - Replace the existing flare nuts and flare the flared sections again.
 - Do not use thin pipes. (Refer to section 4.4 in the installation manual.)
- Store the pipes to be used during installation indoors and keep both ends of the pipes sealed until just before brazing. (Leave elbow joints, etc. in their packaging.) If dust, debris, or moisture enters the refrigerant lines, oil deterioration or compressor breakdown may result.
- Use ester oil, ether oil, alkylbenzene oil (small amount) as the refrigeration oil applied to the flared sections. If mineral oil is mixed in the refrigeration oil, oil deterioration may result.
- Do not use refrigerant other than R410A refrigerant. If another refrigerant is used, the chlorine will cause the oil to deteriorate.
- Use the following tools specifically designed for use with R410A refrigerant. The following tools are necessary to use R410A refrigerant. Contact your nearest dealer for any questions.

Tools (for R410A)	
Gauge manifold	Flare tool
Charge hose	Size adjustment gauge
Gas leak detector	Vacuum pump adapter
Torque wrench	Electronic refrigerant charging scale

- Be sure to use the correct tools. If dust, debris, or moisture enters the refrigerant lines, refrigeration oil deterioration may result.
- Do not use a charging cylinder, a cylindrical measuring container, when charging R410A refrigerant gas. If the refrigerant gas is transferred to a charging cylinder, the composition of the refrigerant will change and system efficiency will be reduced.

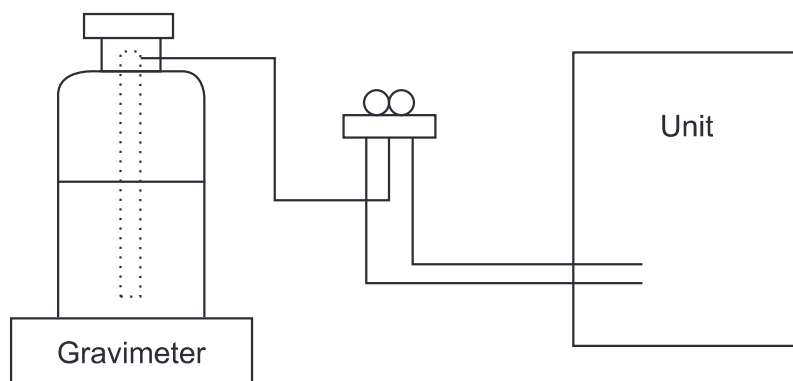
[1] Cautions for service

- (1) Perform service after recovering the refrigerant left in unit completely.
- (2) Do not release refrigerant in the air.
- (3) After completing service, charge the cycle with specified amount of refrigerant.
- (4) When performing service, install a filter drier simultaneously.
Be sure to use a filter drier for new refrigerant.

[2] Additional refrigerant charge

When charging directly from refrigerant cylinder

- Check that cylinder for R410A on the market is syphon type.
- Charging should be performed with the refrigerant cylinder of syphon stood vertically. (Refrigerant is charged from liquid phase.)



[3] Service tools

Use the service tools below as exclusive tools for R410A refrigerant.

No.	Tool name	Specifications
1	Gauge manifold	· Only for R410A
		· Use the existing fitting specifications. (UNF1/2)
		· Use high-tension side pressure of 5.3 MPa·G or over.
2	Charge hose	· Only for R410A
		· Use pressure performance of 5.09 MPa·G or over.
3	Electronic scale	—
4	Gas leak detector	· Use the detector for R134a, R407C or R410A
5	Adaptor for reverse flow check	· Attach on vacuum pump.
6	Refrigerant charge base	—
7	Refrigerant cylinder	· Only for R410A · Top of cylinder (Pink)
		· Cylinder with syphon
8	Refrigerant recovery equipment	—

Model name	EHST20C-VM2C.UK	EHST20C-VM6C.UK	EHST20C-VM8C.UK	EHST20C-VM9C.UK	EHST20C-VM10C.UK	EHST20C-VM12C.UK	EHST20C-VM15C.UK	EHST20C-VM18C.UK	EHST20C-VM20C.UK	EHST20C-VM22C.UK	EHST20C-VM25C.UK	EHST20C-VM30C.UK	EHST20C-VM35C.UK	EHST20C-VM40C.UK	EHST20C-VM45C.UK	EHST20C-VM50C.UK
Nominal domestic hot water volume	200L															
Overall unit dimensions	1600 x 585 x 680 mm (Height x Width x Depth)															
Weight (empty)	110 kg	111 kg	112 kg	112 kg	104 kg	105 kg	106 kg	103 kg	103 kg	96 kg	103 kg	103 kg	97 kg	105 kg	105 kg	105 kg
Weight (full)	320 kg	321 kg	322 kg	322 kg	314 kg	315 kg	316 kg	313 kg	312 kg	305 kg	312 kg	312 kg	306 kg	314 kg	314 kg	314 kg
Water volume of heating circuit in the unit *1	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg	6.6 kg
Plate heat exchanger (MWA2)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Plate heat exchanger (MWA1)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unvented expansion vessel (Primary heating)	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L	12 L
Charge pressure	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar	1 bar
Control circuit (Primary)	1 - 80°C															
Pressure relief valve	0.3 MPa (3bar)															
Flow sensor	Min flow 5.0 L/min															
Manual reset thermostat	90°C															
Thermal Cut-out (for dry run prevention)	121°C															
Control thermostat	40 - 70°C															
Temperature and pressure relief valve/Pressure relief valve	1.0 MPa (10 bar)															
Primary circuit circulating Pump	Grundfos UPM2 15 70 - 130															
Sanitary circuit circulating Pump	Grundfos UPSO 15-60 130 CIL2															
Water	28mm compression primary circuit/ 22mm compression DHW circuit															
Refrigerant (R410A)	Liquid 9.52 mm															
Gas	15.88 mm															
Flow temperature	25 - 60°C															
Heating	—															
Cooling	10 - 30°C															
Room temperature	—															
Heating	—															
Cooling	—															
Ambient *2	0 - 35°C (≤ 80 %RH)															
Heating temperature	See outdoor unit spec table.															
Cooling	—															
Maximum allowable hot water temperature	70°C															
Time to raise DHW tank temp 15 - 65°C *5	22.75 mins															
Time to reheat 70% of DHW tank to 65°C *5	17.17 mins															
Control board	Power supply (Phase, voltage, frequency) ~N, 230 V, 50 Hz															
Booster heater	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW
Capacity	9 A	13 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A
Current	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A
Breaker	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A	16 A
Power supply (Phase, voltage, frequency)	~N, 230 V, 50 Hz															
Capacity	—															
Current	—															
Breaker	—															
Sound level	28dBA															

Optional extras

- Wireless Remote Controller PAX-WT50R-E
 - Wireless Receiver PAX-WR51R-E
 - Immersion heater (1Ph 3kW) PAX-IH03V2-E
 - EHPT Accessories for UK PAX-WK01UK-E
 - Remote Sensor PAC-SE41TS-E
 - Thermistors PAC-TH011-E, PAC-TH011HT-E
 - High temperature thermostat PAC-TH011HT-E
 - eocdan WiFi Interface PAC-WF010-E
- *1 Volume of sanitary water circuit, primary DHW circuit (from 3-way valve to confluent point with heating circuit), piping to expansion vessel, and expansion vessel are not included in this value.
 *2 The environment must be frost-free.
 *3 Cooling mode is not available in low outdoor temperature.
 *4 For the model without both booster heater and immersion heater, the maximum allowable hot water temperature is [Maximum outlet water of outdoor unit - 3°C]
 For the maximum outlet water of outdoor unit, refer to outdoor unit data book.
 *5 Tested under BS7206 conditions.
 *6 Do not fit immersion heaters without thermal cut-out.

Model name	ERST20C-MEC.UK	ERST20C-VM2C.UK	ERST20D-MEC.UK	ERST20D-VM2C.UK	EHP20X-VM2C.UK	EHP20X-VM6C.UK	EHP20X-VM9C.UK	EHP20X-TM9C.UK	EHP20X-MHCW.UK	EHP20C-MHCW.UK	EHP20D-MHCW.UK	
Nominal domestic hot water volume	200L											
Overall unit dimensions	1600 x 595 x 680 mm. (Height x Width x Depth)											
Weight (empty)	103 kg	110 kg	96 kg	103 kg	98 kg	99 kg	100 kg	100 kg	98 kg	110 kg	103 kg	
Weight (full)	313 kg	320 kg	305 kg	312 kg	307 kg	308 kg	309 kg	309 kg	307 kg	320 kg	312 kg	
Water volume of heating circuit in the unit *1	6.6 kg	6.6 kg	5.7 kg	5.7 kg	5.9 kg	5.9 kg	5.9 kg	5.9 kg	5.9 kg	6.6 kg	5.7 kg	
Plate heat exchanger (MWA2)	✓	✓	—	✓	—	—	—	—	—	✓	—	
Plate heat exchanger (MWA1)	—	—	✓	—	—	—	—	—	—	—	✓	
Unvented expansion vessel (Primary heating)	—	12 L	—	—	—	—	—	12 L	—	—	—	
Charge pressure	—	1 bar	—	—	—	—	—	1 bar	—	—	—	
Control thermistor	1 - 80°C											
Pressure relief valve	0.3 MPa (3bar)											
Flow sensor	Min flow 5.0 L/min											
Manual reset thermostat	90°C											
Thermal Cut-out (for dry run prevention)	121°C											
Control thermistor	40 - 70°C											
DHW tank	1.0 MPa (10 bar)											
Temperature and pressure relief valve/ Pressure relief valve	90°C/ 0.7 MPa (7 bar)											
Primary circuit circulating Pump	Grundfos UPM2 15 70 - 130											
Sanitary circuit circulating Pump	Grundfos UPSO 15-60 130 CIL2											
Water	28mm compression primary circuit/ 22mm compression DHW circuit											
Refrigerant (R410A)	Liquid	9.52 mm	—	6.35 mm	—	—	—	—	—	9.52 mm	6.35 mm	
Gas	—	15.88 mm	—	12.7 mm	—	—	—	—	—	15.88 mm	12.7 mm	
Heating	25 - 60°C											
Cooling	—											
Room temperature	5 - 25°C											
Ambient *2	NOT available											
Outdoor temperature	0 - 35°C (≤ 80 %RH)											
Maximum allowable hot water temperature	See outdoor unit spec table.											
Time to raise DHW tank temp 15 - 65°C *5	*4	70°C	*4	—	—	—	—	70°C	—	—	—	
Time to reheat 70% of DHW tank to 65°C *5	22.75 mins											
Control board	Power supply (Phase, voltage, frequency) Breaker (*when powered from independent source)											
Booster heater	—	~N, 230 V, 50 Hz 2kW	—	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	~N, 230 V, 50 Hz 2kW	2kW+4kW	3kW+6kW	3-- 400 V, 50 Hz 3kW+6kW	—	—	
Current	—	9 A	—	9 A	9 A	9 A	26 A	13A	23A	—	—	
Breaker	—	16 A	—	16 A	16 A	16 A	32 A	16A	32A	—	—	
Immersion heater *6	Power supply (Phase, voltage, frequency) Capacity Current Breaker											
Capacity	—											
Current	—											
Breaker	~N, 230 V, 50 Hz 3kW 13A 16A											
Sound level	28dB(A)											

Optional extras

- Wireless Remote Controller PAR-WT50R-E
- Remote Sensor PAC-SE41TS-E
- Wireless Receiver PAR-WR51R-E
- Thermostat PAC-TH011-E
- Immersion heater (1Ph 3kW) PAC-IH03V2-E
- High temperature thermostat PAC-TH011HT-E
- EHP2 Accessories for UK PAC-WK01UK-E
- ecodan Wi-Fi Interface PAC-WF010-E

*1 Volume of sanitary water circuit, primary DHW circuit (from 3-way valve to confluent point with heating circuit), piping to expansion vessel, and expansion vessel are not included in this value.

*2 The environment must be frost-free.

*3 Cooling mode is not available in low outdoor temperature.

*4 For the model without both booster heater and immersion heater, the maximum allowable hot water temperature is [Maximum outlet water of outdoor unit - 3°C]
For the maximum outlet water of outdoor unit, refer to outdoor unit data book.

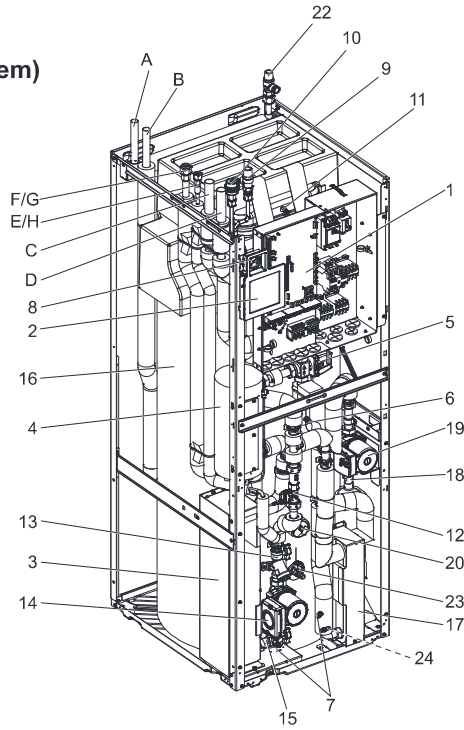
*5 Tested under BS7206 conditions.

*6 Do not fit immersion heaters without thermal cut-out.

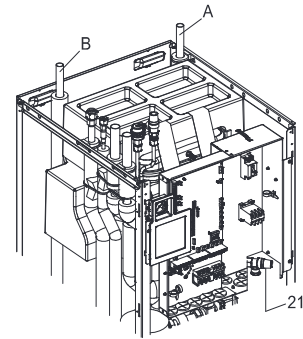
4

PART NAMES AND FUNCTIONS

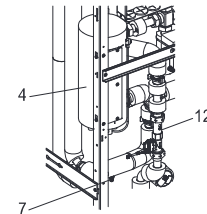
<E*ST20*-*MC>**
(Split model system)



<EH*T20*-*MHCW>
(UK split/package model system)



<EHPT20X-*MC*>**
(Packaged model system)



<Figure 4-1>

No.	Part name	E*ST20*-*M2/6/9C	E*ST20*-*M2/6/9EC	E*ST20*-*MEC	EHST20D-MHC	EHPT20X-*M2/6/9C	EHPT20X-MHCW	EHST20*-*MHCW
A	DHW outlet pipe	✓	✓	✓	✓	✓	✓	✓
B	Cold water inlet pipe	✓	✓	✓	✓	✓	✓	✓
C	Water pipe (Space heating/cooling return connection)	✓	✓	✓	✓	✓	✓	✓
D	Water pipe (Space heating/cooling flow connection)	✓	✓	✓	✓	✓	✓	✓
E	Water pipe (Flow from heat pump connection)	—	—	—	—	✓	✓	—
F	Water pipe (Return to heat pump connection)	—	—	—	—	✓	✓	—
G	Refrigerant pipe (Gas)	✓	✓	✓	✓	—	—	✓
H	Refrigerant pipe (Liquid)	✓	✓	✓	✓	—	—	✓
1	Control and electrical box	✓	✓	✓	✓	✓	✓	✓
2	Main remote controller	✓	✓	✓	✓	✓	✓	✓
3	Plate heat exchanger (Refrigerant - Water)	✓	✓	✓	✓	—	—	✓
4	Booster heater 1,2	✓	✓	—	—	✓	—	—
5	3-way valve	✓	✓	✓	✓	✓	✓	✓
6	Manual air vent	✓	✓	✓	✓	✓	✓	✓
7	Drain cock (Primary circuit)	✓	✓	✓	✓	✓	✓	✓
8	Manometer	✓	✓	✓	✓	✓	✓	✓
9	Pressure relief valve (3bar)	✓	✓	✓	✓	✓	✓	✓
10	Automatic air vent	✓	✓	✓	✓	✓	✓	✓
11	Expansion vessel	✓	—	—	✓	✓	✓	✓
12	Flow sensor	✓	✓	✓	✓	✓	✓	✓
13	Strainer valve	✓	✓	✓	✓	✓	✓	✓
14	Water circulation pump 1 (Primary circuit)	✓	✓	✓	✓	✓	✓	✓
15	Pump valve	✓	✓	✓	✓	✓	✓	✓
16	DHW tank	✓	✓	✓	✓	✓	✓	✓
17	Plate heat exchanger (Water - Water)	✓	✓	✓	✓	✓	✓	✓
18	Scale trap	✓	✓	✓	✓	✓	✓	✓
19	Water circulation pump (Sanitary circuit)	✓	✓	✓	✓	✓	✓	✓
20	Immersion heater	—	—	—	✓	—	✓	✓
21	Temperature and pressure relief valve	—	—	—	—	—	✓	✓
22	Pressure relief valve (10bar) (DHW Tank)	✓	✓	✓	✓	✓	—	—
23	Drain cock (DHW tank)	✓	✓	✓	✓	✓	✓	✓
24	Drain cock (Sanitary circuit)	✓	✓	✓	✓	✓	✓	✓
25	Flow water temp. thermistor (THW1)	✓	✓	✓	✓	✓	✓	✓
26	Return water temp. thermistor (THW2)	✓	✓	✓	✓	✓	✓	✓
27	DHW tank water temp. thermistor (THW5)	✓	✓	✓	✓	✓	✓	✓
28	Refrigerant liquid temp. thermistor (TH2)	✓	✓	✓	✓	—	—	✓
29	Outdoor unit	—	—	—	—	—	—	—
30	Drain pipe (Local supply)	—	—	—	—	—	—	—
31	Back flow prevention device (Local supply)	—	—	—	—	—	—	—
32	Isolating valve (Local supply)	—	—	—	—	—	—	—
33	Magnetic filter (Local supply) (Recommended)	—	—	—	—	—	—	—
34	Strainer (Local supply)	—	—	—	—	—	—	—
35	Inlet control group *1	—	—	—	—	—	—	—
36	Filling loop (Ball valves, check valves and flexible hose) *1	—	—	—	—	—	—	—
37	Potable expansion vessel *1	—	—	—	—	—	—	—

*1 Supplied with UK model ONLY. Please refer to PAC-WK01UK-E Installation Manual for more information on accessories.

<Note> For installation of E*ST20*-*M*EC model, make sure to install a primary-side expansion vessel in the field. (See figure 4.3.4 in Installation Manual.)

<Table 4-1>