

# SERVICE MANUAL

**[Model Name]**

EHST17D-VM2D	ERST30D-VM6ED	EHPT17X-VM2D
EHST17D-YM9D	ERST30D-YM9ED	EHPT17X-VM6D
ERST17D-VM2D	EHST20C-MED	EHPT17X-YM9D
ERST17D-VM6D	EHST20C-VM2D	ERPT17X-VM2D
EHST20D-MED	EHST20C-VM6D	EHPT20X-MED
EHST20D-VM2D	EHST20C-YM9D	EHPT20X-VM6D
EHST20D-VM6D	EHST20C-YM9ED	EHPT20X-YM9D
EHST20D-YM9D	EHST20C-TM9D	EHPT20X-YM9ED
EHST20D-YM9ED	ERST20C-VM2D	EHPT20X-TM9D
EHST20D-TM9D	ERST20C-VM6D	EHPT20X-MHEDW
ERST20D-VM2D	ERST20C-YM9D	ERPT20X-MD
ERST20D-VM6D	EHST30C-MED	ERPT20X-VM2D
ERST20D-YM9D	EHST30C-VM6ED	ERPT20X-VM6D
EHST30D-MED	EHST30C-YM9ED	EHPT30X-MED
EHST30D-VM6ED	EHST30C-TM9ED	EHPT30X-YM9ED
EHST30D-YM9ED	ERST30C-VM2ED	ERPT30X-VM2ED
EHST30D-TM9ED	ERST30C-VM6ED	ERPT30X-VM6ED
ERST30D-VM2ED	ERST30C-YM9ED	

**[Service Ref.]**

Refer to page 2.

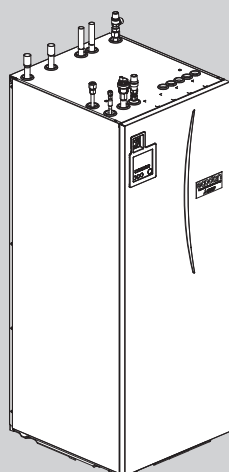
**Revision:**

- EHST17D-VM2DR1.UK, EHST17D-YM9DR1.UK, ERST17D-VM2/6DR1.UK, EHST20D-MEDR1.UK, EHST20D-VM2/6DR1.UK, EHST20D-YM9DR1.UK, EHST20D-YM9EDR1.UK, EHST20D-TM9DR1.UK, ERST20D-VM2/6DR1.UK, ERST20D-YM9DR1.UK, EHST30D-MEDR1.UK, EHST30D-VM6EDR1.UK, EHST30D-YM9EDR1.UK, EHST30D-TM9EDR1.UK, ERST30D-VM2/6EDR1.UK, ERST30D-YM9EDR1.UK, EHST20C-MEDR1.UK, EHST20C-VM2/6DR1.UK, EHST20C-YM9DR1.UK, EHST20C-YM9EDR1.UK, EHST20C-TM9DR1.UK, ERST20C-VM2/6DR1.UK, ERST20C-YM9DR1.UK, EHST30C-MEDR1.UK, EHST30C-VM6EDR1.UK, EHST30C-YM9EDR1.UK, EHST30C-TM9EDR1.UK, ERST30C-VM2/6EDR1.UK, ERST30C-YM9EDR1.UK, EHPT17X-VM2/6DR1.UK, EHPT17X-YM9DR1.UK, ERPT17X-VM2DR1.UK, EHPT20X-MEDR1.UK, EHPT20X-VM6DR1.UK, EHPT20X-YM9DR1.UK, EHPT20X-TM9DR1.UK, EHPT20X-MHEDWR1.UK, ERPT20X-MDR1.UK, ERPT20X-VM2/6DR1.UK, EHPT30X-MEDR1.UK, EHPT30X-YM9EDR1.UK and ERPT30X-VM2/6EDR1.UK have been added
- Some descriptions have been modified in REVISED EDITION-B.

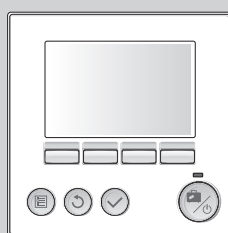
OCH714A is void.

**Note:**

- This manual describes service data of cylinder unit only.



CYLINDER UNIT



MAIN REMOTE CONTROLLER

## CONTENTS

TECHNICAL CHANGES.....	3
1. REFERENCE MANUAL .....	4
2. SAFETY PRECAUTION.....	5
3. SPECIFICATIONS.....	7
4. PART NAMES AND FUNCTIONS .....	11
5. OUTLINES AND DIMENSIONS.....	13
6. WIRING DIAGRAM.....	15
7. FIELD WIRING.....	21
8. WATER SYSTEM DIAGRAM.....	25
9. CONTROLS .....	29
10. TROUBLESHOOTING.....	50
11. DISASSEMBLY PROCEDURE .....	67
12. SUPPLEMENTARY INFORMATION .....	88
13. SERVICE AND MAINTENANCE .....	89

**PARTS CATALOG (OCB714)**

Model name		EHST30D-MED	EHST30D-VM6ED	EHST30D-YM9ED	EHST30D-TM9ED	ERST30D-VM2ED	ERST30D-VM6ED	ERST30D-YM9ED	EHST20C-MED	EHST20C-VM2D	EHST20C-VM6D	EHST20C-YM9D	EHST20C-YM9ED	EHST20C-TM9D	ERST20C-VM2D	ERST20C-VM6D	ERST20C-YM9D					
Nominal domestic hot water volume		300 L							200 L													
Overall unit dimensions (Height × Width × Depth)		2050 × 595 × 680 mm							1600 × 595 × 680 mm													
Weight (empty)		113 kg	115 kg	117 kg		115 kg	116 kg	117 kg	103 kg	110 kg	110 kg	112 kg	107 kg	112 kg	110 kg	111 kg	112 kg					
Weight (full)		420 kg	422 kg	426 kg		422 kg	423 kg	426 kg	310 kg	317 kg	318 kg	322 kg	316 kg	322 kg	317 kg	318 kg	322 kg					
Water volume of heating circuit in the unit *1		3.9 L	3.9 L	6.2 L		3.9 L		6.2 L	4.6 L			6.9 L		6.9 L	4.6 L	4.6 L	6.9 L					
Unvented expansion vessel(Primary heating)		Nominal volume		—							12 L		—									
		Charge pressure		—							0.1 MPa		—									
Safety device		Primary circuit		Control thermistor		80°C																
				Pressure relief valve		0.3 MPa (3 bar)																
				Flow sensor		Min. flow 5.0 L/min																
		BH manual reset thermostat		—		90°C							90°C									
		BH thermal Cut Off		—		121°C							121°C									
		DHW tank		Control thermistor		75°C																
IH manual reset thermostat				—																		
Temperature / Pressure relief valve				1.0 MPa (10 bar)																		
Connections		Water		Primary circuit		ø28 mm																
		DHW circuit		ø22 mm																		
		Refrigerant (R32/ R410A)		Liquid		6.35 mm							9.52 mm									
		Gas		12.7 mm							15.88 mm											
Operating range		Heating		Room temperature		10 - 30°C																
				Flow temperature		20 - 60°C																
		Cooling		Room temperature		—																
				Flow temperature		—		5 - 25 °C							—			5 - 25°C				
Guaranteed operating range *2		Ambient		0 - 35°C (≤ 80 %RH)																		
		Outdoor temperature		Heating		See outdoor unit spec table.																
DHW tank performance		Cooling		—		*3							—			*3						
		Maximum allowable hot water temperature		*4		70°C							*4			70°C						
		Declared load profile		XL							L											
		Average climate		Water heater energy efficiency class		A or A+							A+									
Electrical data		Control board (Including 4 pumps)		Power supply (Phase, voltage, frequency)		~N, 230 V, 50 Hz																
				Input		0.30 kW																
				Current		1.95 A																
				Breaker		10 A																
		Booster heater		Power supply (Phase, voltage, frequency)		—	~N, 230 V, 50 Hz	3~, 400 V, 50 Hz	3~, 230 V, 50 Hz	~N, 230 V, 50 Hz	3~, 400 V, 50 Hz	—	~N, 230 V, 50 Hz	3~, 400 V, 50 Hz	3~, 230 V, 50 Hz	~N, 230 V, 50 Hz	3~, 400 V, 50 Hz					
				Capacity		—	2 kW +4 kW	3 kW +6 kW		2 kW	2 kW +4 kW	3 kW +6 kW	—	2 kW	2 kW +4 kW	3 kW +6 kW		3 kW+6 kW	2 kW	2 kW +4 kW	3 kW +6 kW	
				Heater step		—	3			1	3			—	1	3			3	1	3	
				Current		—	26 A	13 A	23 A	9 A	26 A	13 A	—	9 A	26 A	13 A		23 A	9 A	26 A	13 A	
				Breaker		—	32 A	16 A	32A	16 A	32 A	16 A	—	16 A	32 A	16 A		32 A	16 A	32 A	16 A	
		Immersion heater *5		Power supply (Phase, voltage, frequency)		—																
				Capacity		—																
				Current		—																
Breaker				—																		
Sound power level (PWL)		41 dB(A)							40 dB(A)													

&lt;Table 3.2&gt;

\*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 See outdoor unit spec table (min, 10 °C). Cooling mode is not available in low outdoor temperature. If you use our system in cooling mode at the low ambient temperature (10°C or below), there are some risks of plate heat exchanger damages by frozen water.

\*4 For the model without 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 Do not fit immersion heaters without thermal cut-out. Use only Mitsubishi Electric service parts as a direct replacement.