

SERVICE MANUAL

R32
[Model Name]

PUZ-SWM60VAA

PUZ-SWM80VAA

PUZ-SWM100VAA

PUZ-SWM120VAA

PUZ-SWM140VAA

PUZ-SWM80YAA

PUZ-SWM100YAA

PUZ-SWM120YAA

PUZ-SWM140YAA

PUZ-SHWM60VAA

PUZ-SHWM80VAA

PUZ-SHWM100VAA

PUZ-SHWM120VAA

PUZ-SHWM140VAA

PUZ-SHWM80YAA

PUZ-SHWM100YAA

PUZ-SHWM120YAA

PUZ-SHWM140YAA

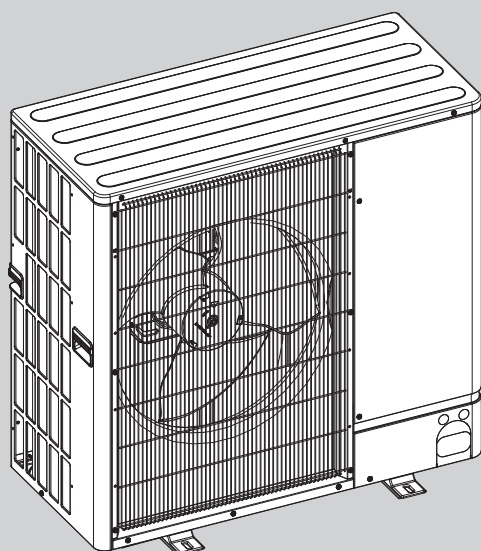
[Service Ref.]
PUZ-SWM60VAA.TR
PUZ-SWM80VAA.TR
PUZ-SWM100VAA.TR
PUZ-SWM120VAA.TR
PUZ-SWM140VAA.TR
PUZ-SWM80YAA.TR
PUZ-SWM100YAA.TR
PUZ-SWM120YAA.TR
PUZ-SWM140YAA.TR
PUZ-SHWM60VAA.TR
PUZ-SHWM80VAA.TR
PUZ-SHWM100VAA.TR
PUZ-SHWM120VAA.TR
PUZ-SHWM140VAA.TR
PUZ-SHWM80YAA.TR
PUZ-SHWM100YAA.TR
PUZ-SHWM120YAA.TR
PUZ-SHWM140YAA.TR
Note:

- This manual describes service data of the outdoor units only.

Revision:

- Added connectable indoor units in REVISED EDITION-A.

OCH809 is void.


OUTDOOR UNIT
CONTENTS

1. REFERENCE MANUAL.....	2
2. SAFETY PRECAUTION	3
3. SPECIFICATIONS	11
4. DATA	13
5. OUTLINES AND DIMENSIONS.....	16
6. WIRING DIAGRAM.....	17
7. WIRING SPECIFICATIONS	21
8. REFRIGERANT SYSTEM DIAGRAM	22
9. TROUBLESHOOTING.....	24
10. MONITORING THE OPERATION DATA BY THE REMOTE CONTROLLER.....	68
11. DISASSEMBLY PROCEDURE	73

PARTS CATALOG (OCB809)

INDOOR UNIT SERVICE MANUAL

1-1. FOR AIR TO WATER SYSTEM

Model name	Service ref.	Service manual No.
EHST17D-VM2D EHST17D-YM9D ERST17D-VM2D ERST17D-VM6D ERST17D-VM2BD ERST17D-VM6BD ERST17D-YM9BD EHST20D-VM2D EHST20D-VM6D EHST20D-YM9D EHST20D-MED ERST20D-VM2D ERST20D-VM6D ERST20D-YM9D EHST20D-YM9ED EHST20D-TM9D EHST30D-VM6ED EHST30D-YM9ED EHST30D-TM9ED EHST30D-MED ERST30D-VM2ED ERST30D-YM9ED	EHST17D-VM2D.UK EHST17D-YM9D.UK ERST17D-VM2D.UK ERST17D-VM6D.UK ERST17D-VM2BD.UK ERST17D-VM6BD.UK ERST17D-YM9BD.UK EHST20D-VM2D.UK EHST20D-VM6D.UK EHST20D-YM9D.UK EHST20D-MED.UK ERST20D-VM2D.UK ERST20D-VM6D.UK ERST20D-YM9D.UK EHST20D-YM9ED.UK EHST20D-TM9D.UK EHST30D-VM6ED.UK EHST30D-YM9ED.UK EHST30D-TM9ED.UK EHST30D-MED.UK ERST30D-VM2ED.UK ERST30D-YM9ED.UK	OCH714 OCB714
EHSD-VM2D EHSD-VM6D EHSD-YM9D EHSD-YM9ED EHSD-TM9D EHSD-MED ERSD-VM2D ERSD-VM6D ERSD-YM9D ERSD-MED	EHSD-VM2D.UK EHSD-VM6D.UK EHSD-YM9D.UK EHSD-YM9ED.UK EHSD-TM9D.UK EHSD-MED.UK ERSD-VM2D.UK ERSD-VM6D.UK ERSD-YM9D.UK ERSD-MED.UK	OCH712 OCB712
ERST20D-VM2D ERST20D-VM6D ERST20D-YM9D	ERST20D-VM2DR2.TR ERST20D-VM6DR2.TR ERST20D-YM9DR2.TR	OCH808 OCB808
ERST17D-VM2BE ERST17D-VM6BE ERST17D-YM9BE ERST20F-VM2E ERST20F-VM6E ERST20F-YM9E ERST20F-TM9E ERST30F-VM2EE ERST30F-VM6EE ERST30F-YM9EE ERST30F-TM9EE	ERST17D-VM2BE.UK ERST17D-VM6BE.UK ERST17D-YM9BE.UK ERST20F-VM2E.UK ERST20F-VM6E.UK ERST20F-YM9E.UK ERST20F-TM9E.UK ERST30F-VM2EE.UK ERST30F-VM6EE.UK ERST30F-YM9EE.UK ERST30F-TM9EE.UK	OCH814 OCB814
ERSF-MEE ERSF-VM2E ERSF-VM6E ERSF-YM9E ERSF-TM9E	ERSF-MEE.UK ERSF-VM2E.UK ERSF-VM6E.UK ERSF-YM9E.UK ERSF-TM9E.UK	OCH815 OCB815

Symbol	Parts name	Detail
COMP	Compressor	DC inverter scroll compressor (Mitsubishi Electric Corporation)
H/P SW	High pressure switch	For protection (OFF: 4.80 MPa)
REV/V	Reversing (4-way) valve (21S4)	Change the refrigerant circuit (Heating/Cooling) and for Defrosting
CHECK/V	Charge plug	(H) High pressure/(L) Low pressure/For production test use
P-SENSOR	Pressure sensor (63HS)	For calculation of the condensing temperature from high pressure
LEV-A/B	Linear expansion valve -A/B	Heating: Primary LEV
LEV-C	Linear expansion valve -C	For HIC
TH32	Suction temperature thermistor	For LEV control
TH3	Liquid temperature thermistor	Heating: Evaporating temperature
TH4	Discharge temperature thermistor	For LEV control and for compressor protection
TH6	2-phase pipe temperature thermistor	Outdoor 2-phase pipe temperature
TH7	Ambient temperature thermistor	For fan control and for compressor frequency control
TH8	Heatsink temperature thermistor	
TH33	Comp. surface temperature thermistor	For protection
HIC	Heat Interchanger	For high heating capacity
Air HEX	Air Heat Exchanger	
T/P	Thermal Protector	
Strainer 1~2	Strainer for LEV	
Strainer 3	Strainer	
Strainer 4	Strainer for comp	
Distributor	Distributor	
P/B	Power circuit board	

REFRIGERANT COLLECTING (PUMP DOWN)

When relocating or disposing of the indoor/outdoor unit, pump down the system following the procedure below so that no refrigerant is released into the atmosphere.

- ① Turn off the power supply (circuit breaker).
- ② Connect the low pressure valve on the gauge manifold to the service port of the gas stop valve on the outdoor unit.
- ③ Close the liquid stop valve completely.
- ④ Supply power (circuit breaker).
 - Startup of the indoor-outdoor communication takes about 3 minutes after the power (circuit breaker) is turned on. Start the pump-down operation 3 to 4 minutes after the power (circuit breaker) is turned on.
- ⑤ Perform the refrigerant collecting operation (cooling test run).
 - Push the pump-down SWP switch (push-button type) on the control board of the outdoor unit. The compressor and ventilators (outdoor unit) start operating (refrigerant collecting operation begins). (LED1 and LED2 on the control board of the outdoor unit are lit.)
 - Only push the pump-down SWP switch if the unit is stopped. However, even if the unit is stopped and the pump-down SWP switch is pushed less than 3 minutes after the compressor stops, the refrigerant collecting operation cannot be performed. Wait until the compressor has been stopped for 3 minutes and then push the pump-down SWP switch again.
- ⑥ Fully close the gas stop valve on the gas pipe side of the outdoor unit when the pressure gauge on the gauge manifold shows 0.05 to 0 MPa [Gauge] (approx. 0.5 to 0 kgf/cm²) and quickly stop the outdoor unit.
 - Because the unit automatically stops in about 3 minutes when the refrigerant collecting operation is completed (LED1 off, LED2 lit), be sure to quickly close the gas stop valve. However, if LED1 is lit, LED2 is off, and the unit is stopped, open the liquid stop valve completely, close the valve completely after 3 minutes or more have passed, and then repeat step ⑤. (Open the gas stop valve completely.)
 - If the refrigerant collecting operation has been completed normally (LED1 off, LED2 lit), the unit will remain stopped until the power supply is turned off.
 - Note that when the extension piping is very long with a large refrigerant amount, it may not be possible to perform a pump-down operation. In this case, use refrigerant recovery equipment to collect all of the refrigerant in the system.
- ⑦ Turn off the power supply (circuit breaker), remove the gauge manifold, and then disconnect the refrigerant pipes.

⚠ WARNING:

When the refrigeration circuit has a leak, DO NOT execute pump down with the compressor.

When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes.

- If the refrigerant pipes are disconnected while the compressor is operating and the stop valve (ball valve) is open, the pressure in the refrigeration cycle become extremely high if air is drawn in, causing the pipes to burst, personal injury, etc.