

mitsubishi

Room Air-Conditioners

MODEL MFHR-45EA-A3
REAR REGISTER
(MACAT-805RR)

SERVICE MANUAL

[B] SERVICE DATA & PARTS LIST

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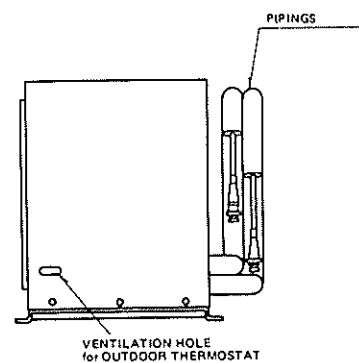
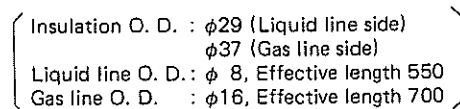
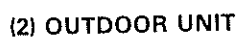
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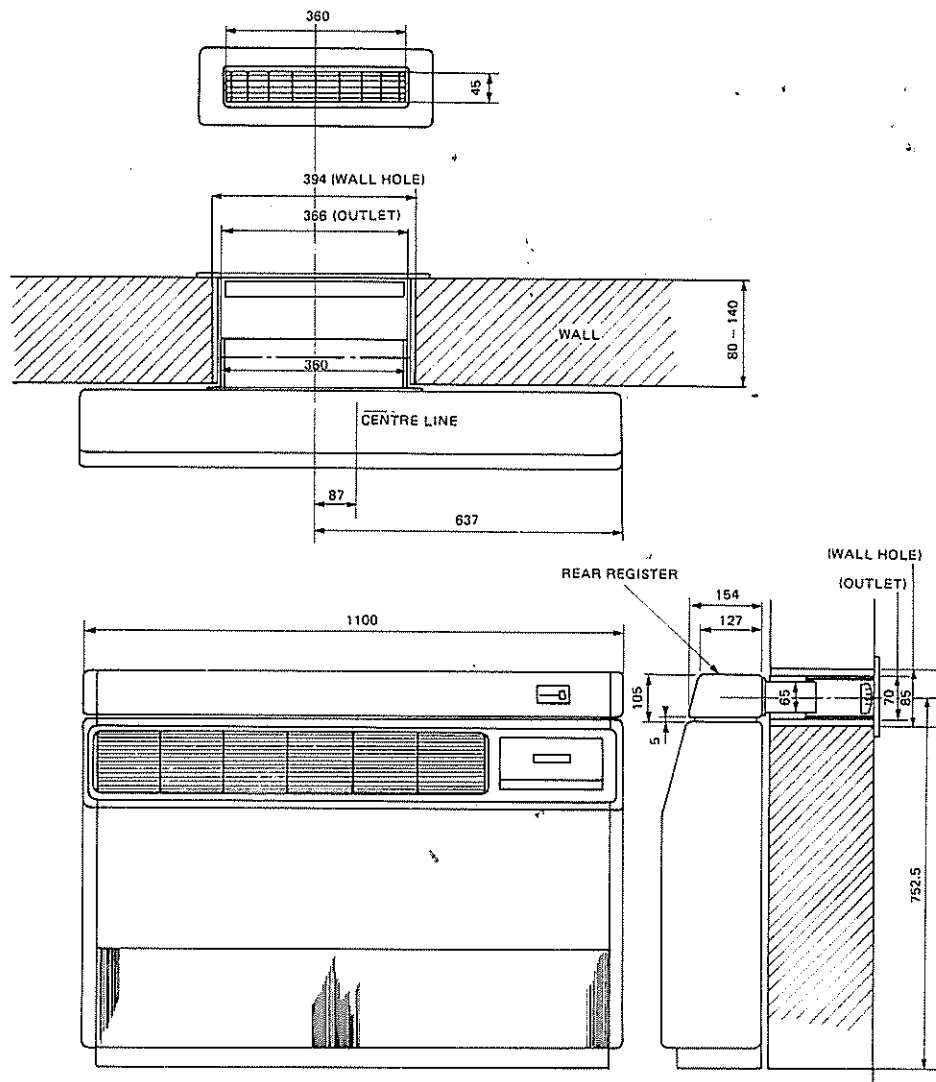
1. Specifications

Model				MFHR-45EA-A3	
Function				Cooling	Heating
Power supply				Single phase, 240V, 50H	
Capacities	Capacity	BTU/h		18,000	1,7000
	Dehumidification	ℓ/h		2.8	—
	Air flow	m ³ /h		750	
Electrical data	Running current	A		9.3	8.5
	Total input	W		2,170	1,950
	Power factor	%		97	96
	Starting current	A		45	
	Compressor motor current	A		8.3	7.5
	Fan motor current	A		1.0	1.0
Compressor	Model			GH-460VE	
	Output	W		1,500	
Energy efficiency ratio		BTU/h.W		8.3	—
Dimensions	Indoor unit	Width	mm (in)	1,100 (43-5/16)	
		Height	mm (in)	700 (27-9/16)	
		Depth	mm (in)	202 (7-15/16)	
	Outdoor unit	Width	mm (in)	785 (30-7/8)	
		Height	mm (in)	516 (20-5/16)	
		Depth	mm (in)	470 (18-1/2)	
Weight	Indoor unit	kg/lb		35 / 77	
	Outdoor unit	kg/lb		66/146	
Special remarks	Air deflection			4	
	Fan speed (Hi)	Indoor unit	rpm	1,240	
		Outdoor unit	rpm	740	
	Fan speed regulator	Indoor unit		3	
		Outdoor unit		2	
	Capillary tube (inner dia. x length)		mm	φ2.0 x (450 + 310)	φ2.0 x 450
	Refrigerant filling capacity (R-22)		kg/lb	1.64 / 3.616	
	Thermostat		°C	21 ~ 33	
	Thermostat (26F2) (air flow control)		°C	ON; 30, OFF; 28	
	Thermostat (26F3) (air flow control)		°C	ON; 10, OFF; 14	
	Thermostat (26F1) (protection of cold air flow)		°C	ON; 24, OFF; 16	
	Thermostat (defrost)		°C	ON; 4, OFF; 8	
	Thermostat (defrost)		°C	ON; -3, OFF; +1	
	Thermostat (low temp)		°C	ON; +8, OFF; -8	
Rear register (MACAT-805RR)	Fan motor input		W	27	
	Fan motor running current		A	0.12	
	Fan speed		rpm	2,240	

(1) INDOOR UNIT



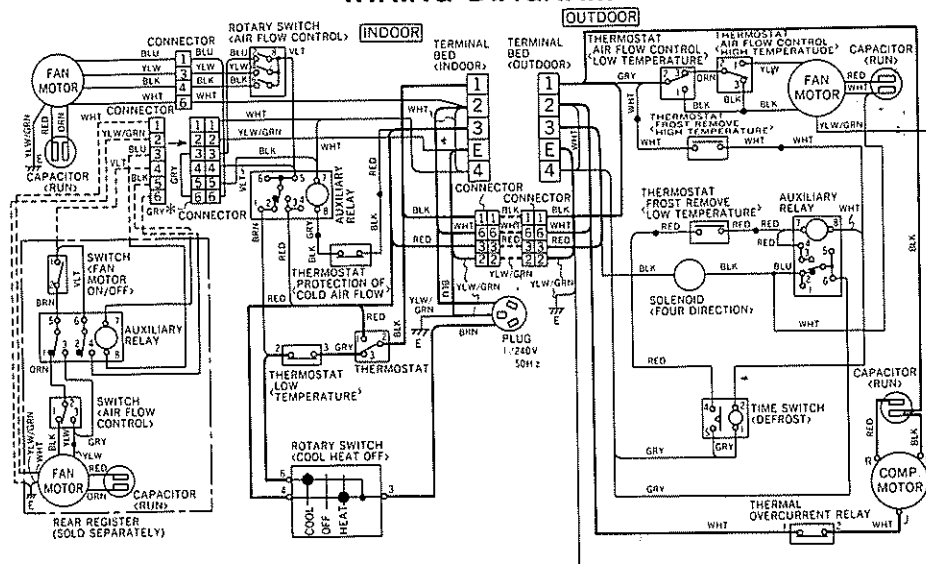
〈 REAR REGISTER 〉
(MACAT-805RR)



3. Circuit Diagram

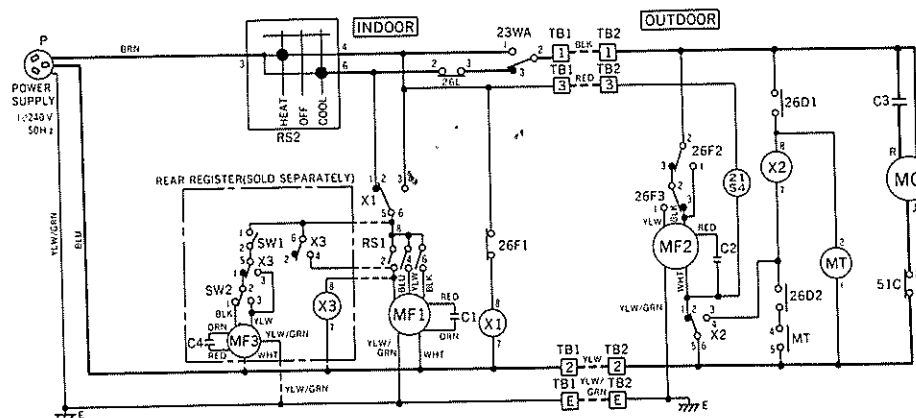
(MFHR-45EA-A3)

WIRING DIAGRAM



NOTE.1 PULL OUT THE CONNECTOR (*) WHEN YOU INSTALL REAR REGISTER.

SKELETON WIRING DIAGRAM



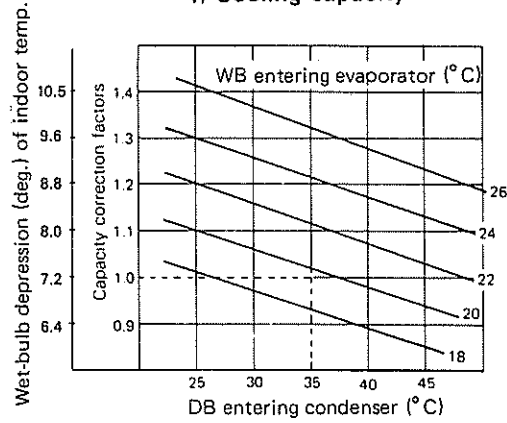
SYM	NAME	SYM	NAME	SYM	NAME	SYM	NAME
MC	COMP MOTOR	51C	THERMAL OVERCURRENT RELAY	26F2	THERMOSTAT (AIR FLOW CONTROL LOW TEMPERATURE)	RS2	SWITCH (COOL HEAT OFF)
MF1	FAN MOTOR (INDOOR)	X1	AUXILIARY RELAY	26F3	THERMOSTAT (AIR FLOW CONTROL HIGH TEMPERATURE)	MT	TIME SWITCH (DEFROST)
MF2	FAN MOTOR (OUTDOOR)	X2	AUXILIARY RELAY	21S4	SOLENOID COIL (4 WAY)	X3	AUXILIARY RELAY (REAR REGISTER)
C1	CAPACITOR (RUN)	RS1	SWITCH (AIR FLOW CONTROL)	26L	THERMOSTAT (LOW TEMPERATURE)	MF3	FAN MOTOR (REAR REGISTER)
C2	CAPACITOR (RUN)	23WA	THERMOSTAT	26D1	THERMOSTAT (FROST REMOVE HIGH TEMPERATURE)	C4	CAPACITOR (RUN) (REAR REGISTER)
C3	CAPACITOR (RUN)	26F1	THERMOSTAT (PROTECTION OF COLD AIR FLOW)	26D2	THERMOSTAT (FROST REMOVE LOW TEMPERATURE)	SW1	SWITCH (FAN MOTOR ON/OFF) (REAR REGISTER)
P	PLUG	TB1	TERMINAL BED (INDOOR)	TB2	TERMINAL BED (OUTDOOR)	SW2	SWITCH (AIR FLOW CONTROL) (REAR REGISTER)

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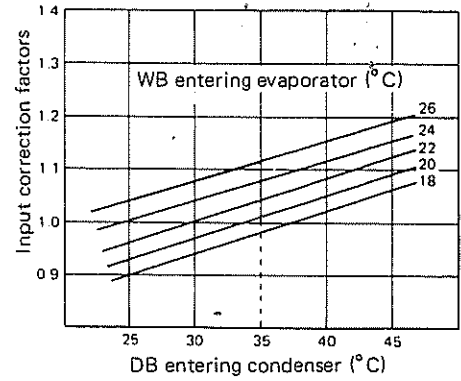
4. Performance Curve

〈MFHR-45EA-A3〉

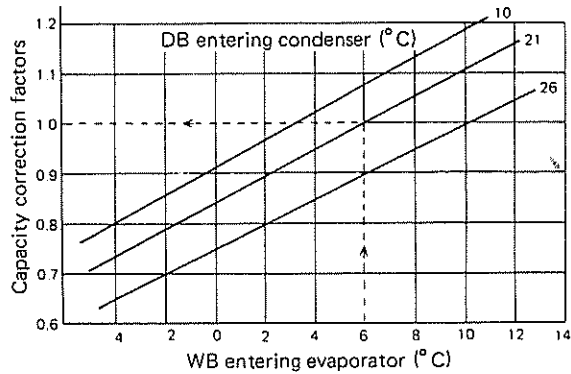
1) Cooling capacity



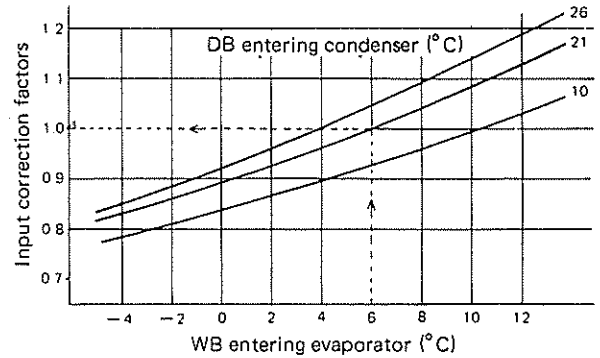
2) Total input (cooling)



3) Heating capacity

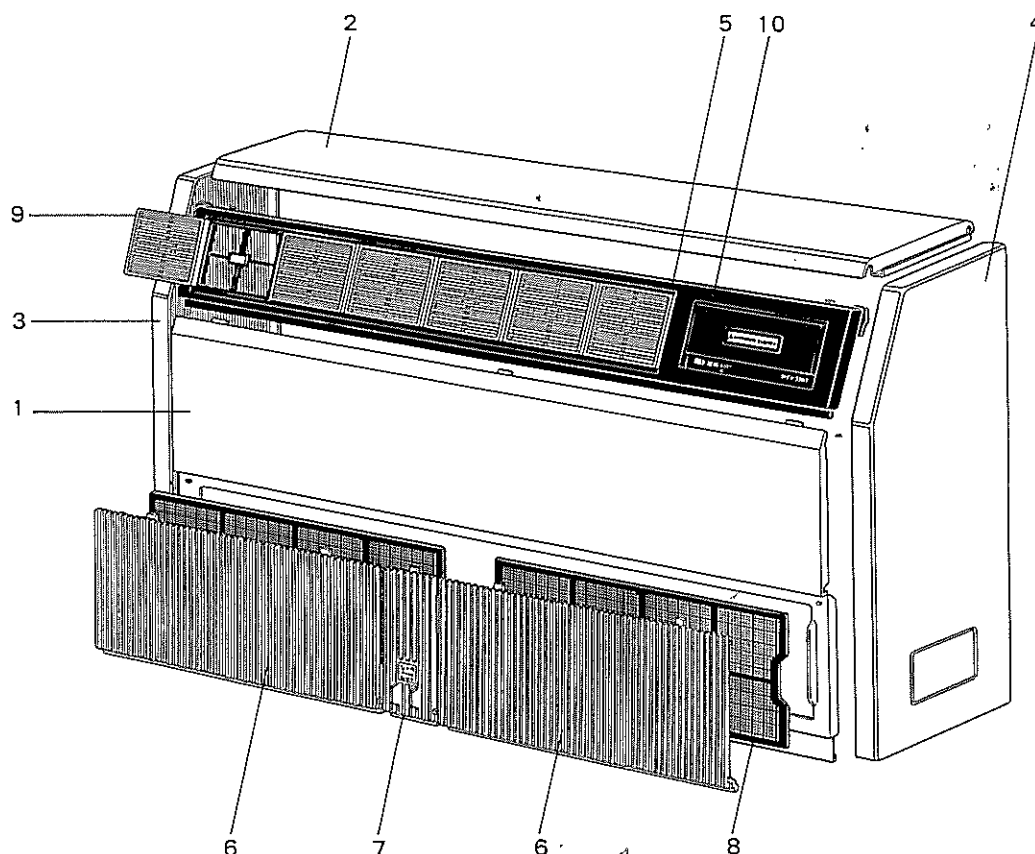


4) Total input (heating)



5. Parts List

〈 MFHR-45EA-A3 〉

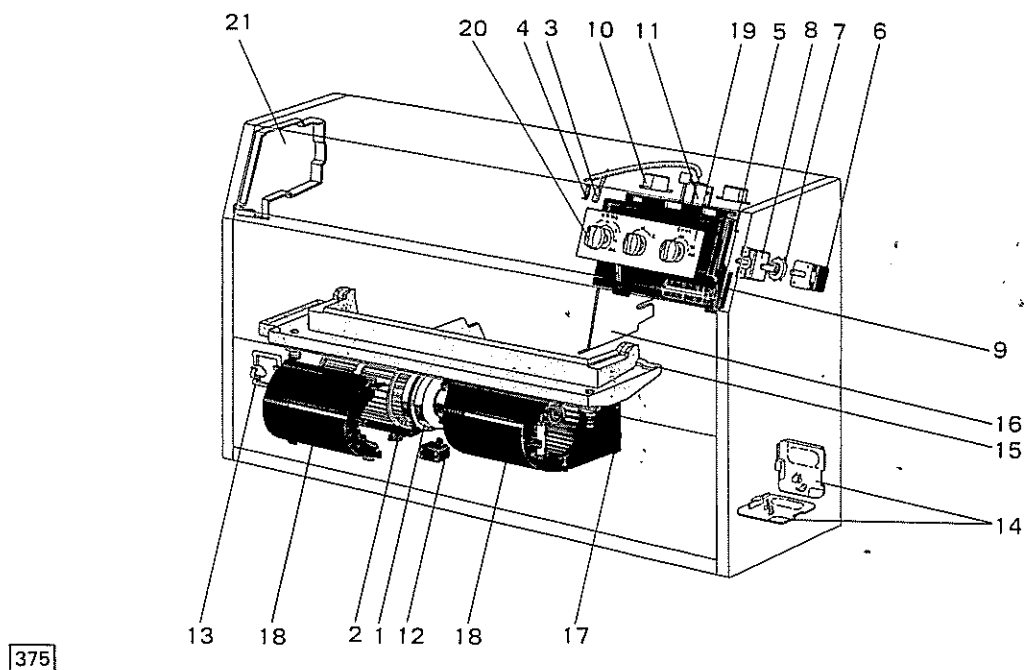


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Parts indicated by "○" in the table are included but not shown in the illustration.

No.	Parts No.	Parts Name	Q'ty/unit	Remarks
			MFHR-45EA-A3	
1	M21 830 000	FRONT PANEL ASSY	1	
2	M21 830 002	UPPER PANEL ASSY	1	
3	M21 830 086	SIDE (L) PANEL ASSY	1	
4	M21 830 085	SIDE (R) PANEL ASSY	1	
5	T2W 244 020	GRILLE OUT	1	
6	M21 830 021	GRILLE IN ASSY	2	
7	M21 830 023	GRILLE IN CENTER	1	
8	M21 830 100	FILTER	2	
9	T2W 244 030	LOUVER ASSY	6	
10	M21 830 004	COVER (SWITCH)	1	
⑪	M21 830 752	METAL LATCH	1	

〈 MFHR-45EA-A3 〉

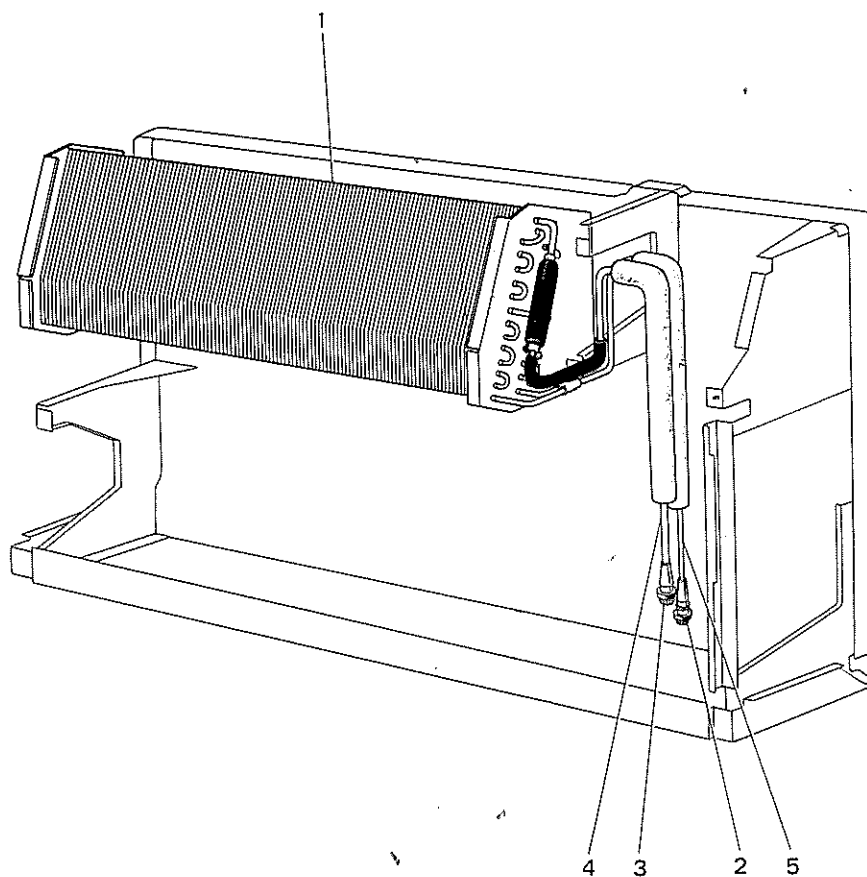


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No.	Parts No.	Parts Name	Q'ty/unit	Remarks
			MFHR-45EA-A3	
1	T2W 244 300	MOTOR	1	DFD40F-BA (MF1)
2	M21 830 500	SIROCCO FAN	2	
3	M21 516 304	THERMOSTAT (PROTECTOR OF COLD AIR FLOW)	1	TRS-22MSR (26F1)
4	M21 516 472	L. TH. SPRING	1	
5	T2W 244 082	RELAY PANEL	1	
6	M21 047 311	ROTARY SWITCH	1	(RS2)
7	M21 369 327	ROTARY SWITCH (AIR FLOW CONTROL)	1	(RS1)
8	M21 830 304	THERMOSTAT	1	A22-1020 (23WA)
9	T2W 244 375	TERMINAL BED	1	
10	T2W 237 342	AUXILIARY RELAY	1	LY-2F (X1)
11	M21 830 309	THERMOSTAT (LOW TEMP.)	1	(26L)
12	T2W 186 353	CME CAPACITOR	1	2 μ F 440V (C1)
13	M21 830 921	BUSH	1	
14	M21 830 973	HOLE COVER	2	
15	M21 830 700	DRAIN PAN	1	
16	M21 830 713	WATER CUT	1	
17	M21 830 237	CASING	1	
18	M21 830 755	CASING COVER	2	
19	T2W 142 050	CONTROL PANEL	1	
20	M21 830 320	KNOB	3	
21	M21 830 182	BEAM L. U.	1	
②②	T2W 244 395	POWER SUPPLY CORD	1	
②③	T2W 244 130	CABLE	1	

〈 MFHR-45EA-A3 〉

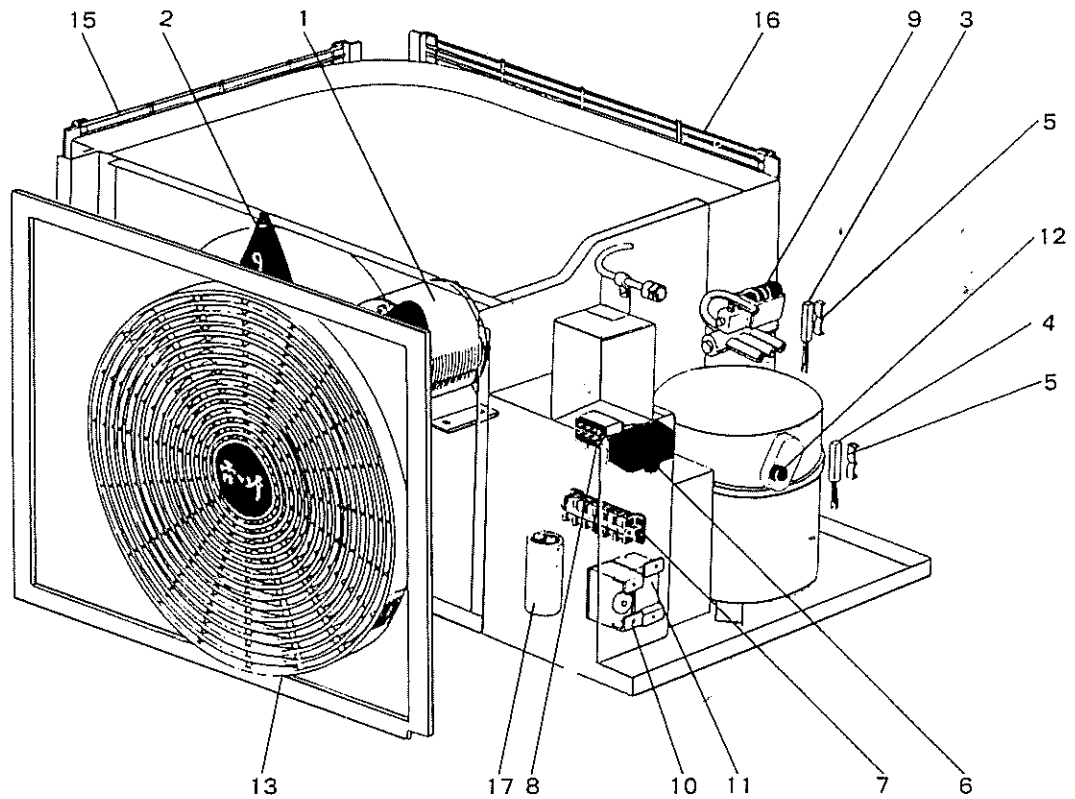


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No.	Parts No.	Parts Name	Q'ty/unit	Remarks
			MFHR-45EA-A3	
1	T2W 185 620	HEAT EXCHANGER (IN)	1	
2	M21 991 945	COUPLING WELDING (PLUG)	1	φ8
3	M21 992 946	COUPLING WELDING (SOCKET)	1	φ9.52
4	M21 992 938	COPPER TUBE	1	φ9.52 x t 0.8, L 10m
5	M21 991 938	COPPER TUBE	1	φ8 x t 0.7, L 10m

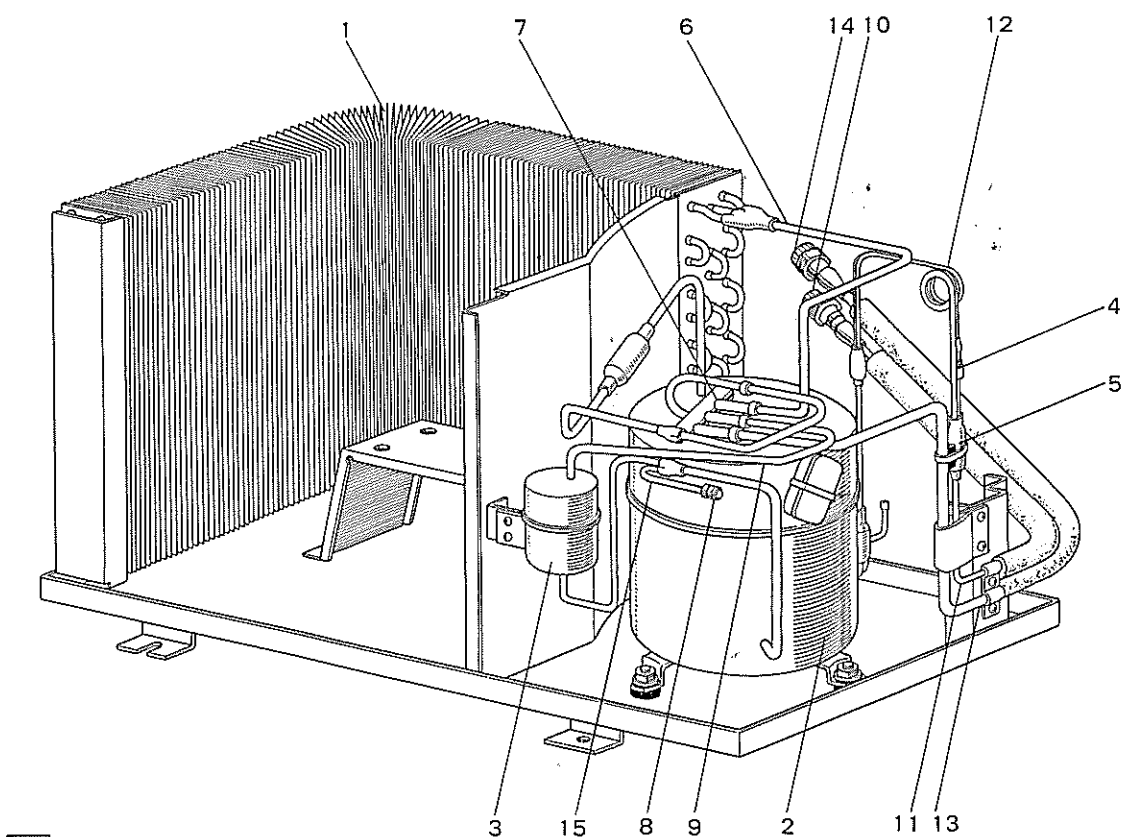
〈 MFHR-45EA-A3 〉



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No.	Parts No.	Parts Name	Q'ty/unit	Remarks
			MFHR-45EA-A3	
1	T2W 244 301	FAN MOTOR	1	SGD40F-AA (MF2)
2	M21 226 501	PROPELLER FAN	1	PP-40F-AA
3	T2W 244 306	THERMOSTAT (FROST REMOVE LOW TEMP.)	1	TRS-M8BSR (26D2)
4	M21 280 307	THERMOSTAT (FROST REMOVE HIGH TEMP.)	1	TRS5-1BSR (26D1)
5	M21 516 472	L. TH. SPRING	2	
6	T2W 244 350	CAPACITOR	1	2.5 μ F 440V (C2)
7	T2W 244 375	TERMINAL BED	1	
8	T2W 237 342	AUXILIARY RELAY	1	LY-1F (X2)
9	T2W 141 389	SOLENOID COIL	1	(21S4)
10	M21 721 306	THERMOSTAT	1	A22-1019 (26F3)
11	M21 441 309	THERMOSTAT	1	A11-1023 (26F2)
12	T2W 146 330	THERMAL OVER CURRENT RELAY	1	TR-20S-227 (51C)
13	M21 936 522	FAN COVER	1	
⑭	T2W 244 094	SERVICE PANEL	1	
15	M21 157 523	CONDENSER NET	1	
16	M21 441 521	CONDENSER NET	1	
17	T2W 244 353	RUN CAPACITOR	1	55 μ F 400V (C3)
⑮	T2W 237 325	TIMER (DEFROST)	1	(MT)

〈 MFHR-45EA-A3 〉

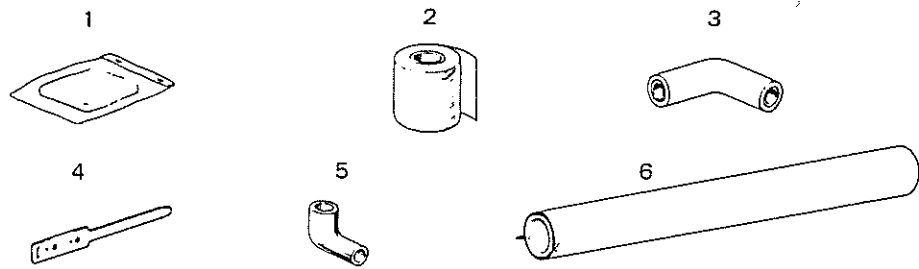


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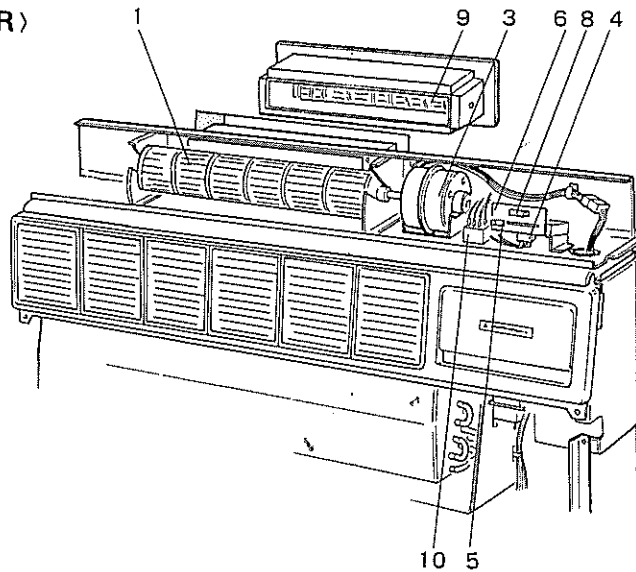
No.	Parts No.	Parts Name	Q'ty/unit	Remarks
			MFHR-45EA-A3	
1	M21 938 630	HEAT EXCHANGER (OUT)	1	
2	—	COMPRESSOR	1	GH-460VE
3	M21 530 959	GAS SEPARATOR ASSY	1	
4	M21 121 642	RESTRICTOR VALVE	1	
5	M21 830 934	STRAINER	1	
6	M21 992 938	COPPER TUBE	1	φ9.52 x t 0.8, L 10m
7	M21 722 961	REVERSING VALVE	1	
8	M21 319 641	CHARGE PLUG	1	
9	M21 993 938	COPPER TUBE	1	φ12 x t 1.0, L 4m
10	M21 991 946	COUPLING WELDING (SOCKET)	1	φ8
11	M21 991 938	COPPER TUBE	1	φ8 x t 0.7, L 10m
12	M21 744 936	CAPILLARY TUBE	2	φ3.0 x t 2.0, L 3.8m
13	M21 994 938	COPPER TUBE	1	φ16 x t 1.0, L 4m
14	M21 994 945	COUPLING WELDING (PLUG)	1	φ16
15	M21 990 938	COPPER TUBE	1	φ6 x t 0.6, L 10m

〈 MFHR-45EA-A3 〉



No.	Parts No.	Parts Name	Q'ty/unit	Remarks
			MFHR-45EA-A3	
1	M21 210 919	PUTTY	1	
2	M21 313 917	PVC TAPE	1	
3	M21 213 703	DRAIN HOSE	1	
4	M21 632 708	PIPE BAND	3	
5	M21 018 710	ELBOW	2	
6	M21 830 910	COUPLING INSU.	1	

〈 REAR REGISTER 〉
(MACAT-805RR)



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No.	Parts No.	Parts Name	Q'ty/unit	Remarks
1	T2W 245 302	LINE FLOW FAN	1	
②	M21 516 504	SLEEVE BEARING	1	
3	T2W 245 300	MOTOR	1	〈 MF3 〉
4	M21 152 350	CAPACITOR	1	1 μ F 440V 〈 C4 〉
5	T2W 100 320	KNOB	1	
6	T2W 245 050	CONTROL PANEL	1	
⑦	T2W 245 120	DAMPER LEVER	1	
8	M21 442 311	SWITCH (FAN MOTOR ON/OFF)	1	〈 SW1 〉
9	M21 059 803	LOUVER	1	
10	T7W 667 215	RELAY	1	LY-2F 〈 X3 〉
⑪	M22 810 315	SWITCH	1	〈 SW2 〉

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