

June 2008

No. OC376

REVISED EDITION-C



TECHNICAL & SERVICE MANUAL

[Model name]
<Outdoor unit>
PUMY-P100VHM

PUMY-P125VHM

PUMY-P140VHM

PUMY-P100VHMA

PUMY-P125VHMA

PUMY-P140VHMA

PUMY-P100VHMA-BS

PUMY-P125VHMA-BS

PUMY-P140VHMA-BS

[Service Ref.]

PUMY-P100VHM

PUMY-P125VHM

PUMY-P140VHM

PUMY-P100VHMA

PUMY-P125VHMA

PUMY-P140VHMA

PUMY-P100VHMA-BS

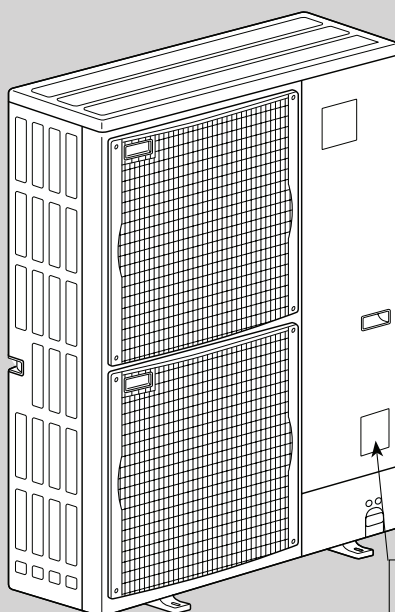
PUMY-P125VHMA-BS

PUMY-P140VHMA-BS

Revision:

- PUMY-P100/125/140 VHMA-BS are added in REVISED EDITION-C.
- Some descriptions have been modified.

- Please void OC376 REVISED EDITION-B



OUTDOOR UNIT

Model name
indication

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NOTE :

- This service manual describes technical data of outdoor unit.
As for indoor units, refer to its service manual.
- RoHS compliant products have <G> mark on the spec name plate.
- For servicing of RoHS compliant products, refer to the RoHS PARTS LIST.

1

TECHNICAL CHANGES

PUMY-P100VHM → PUMY-P100VHMA
 PUMY-P125VHM → PUMY-P125VHMA
 PUMY-P140VHM → PUMY-P140VHMA

• Compressor(MC) and oil have been changed.

ANB33FDCMT → ANB33FDHMT

Ester oil → Ether oil

• Electrical parts below have been changed.

①Controller board (MULTI.B.)

②Noise filter circuit board (N.F.)

③Active filter module(ACTM)

④Relay(52C), Resister(RS)(Including N.F.)

• PEFY-P15 can be connected.

2

SAFETY PRECAUTION

2-1. CAUTIONS RELATED TO NEW REFRIGERANT

Caution for units utilizing refrigerant R410A

Use new refrigerant pipes.

Avoid using thin pipes.

Make sure that the inside and outside of refrigerant piping are clean and it has no contamination such as sulfur hazardous for use, oxides, dirt, shredded particles, etc. In addition, use pipes with specified thickness.

Contamination inside refrigerant piping can cause deterioration of refrigerant oil etc.

Store the piping to be used during installation indoors and keep both ends of the piping sealed until just before brazing. (Leave elbow joints, etc. in their packaging.)

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Use ester oil, ether oil or alkylbenzene oil (small amount) as the refrigerant oil applied to flares and flange connections.

If large amount of mineral oil enters, that can cause deterioration of refrigerant oil etc.

Charge refrigerant from liquid phase of gas cylinder.

If the refrigerant is charged from gas phase, composition change may occur in refrigerant and the efficiency will be lowered.

Do not use refrigerant other than R410A.

If other refrigerant (R22 etc.) is used, chlorine in refrigerant can cause deterioration of refrigerant oil etc.

Use a vacuum pump with a reverse flow check valve.

Vacuum pump oil may flow back into refrigerant cycle and that can cause deterioration of refrigerant oil etc.

Use the following tools specifically designed for use with R410A refrigerant.

The following tools are necessary to use R410A refrigerant.

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

Keep the tools with care.

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Do not use a charging cylinder.

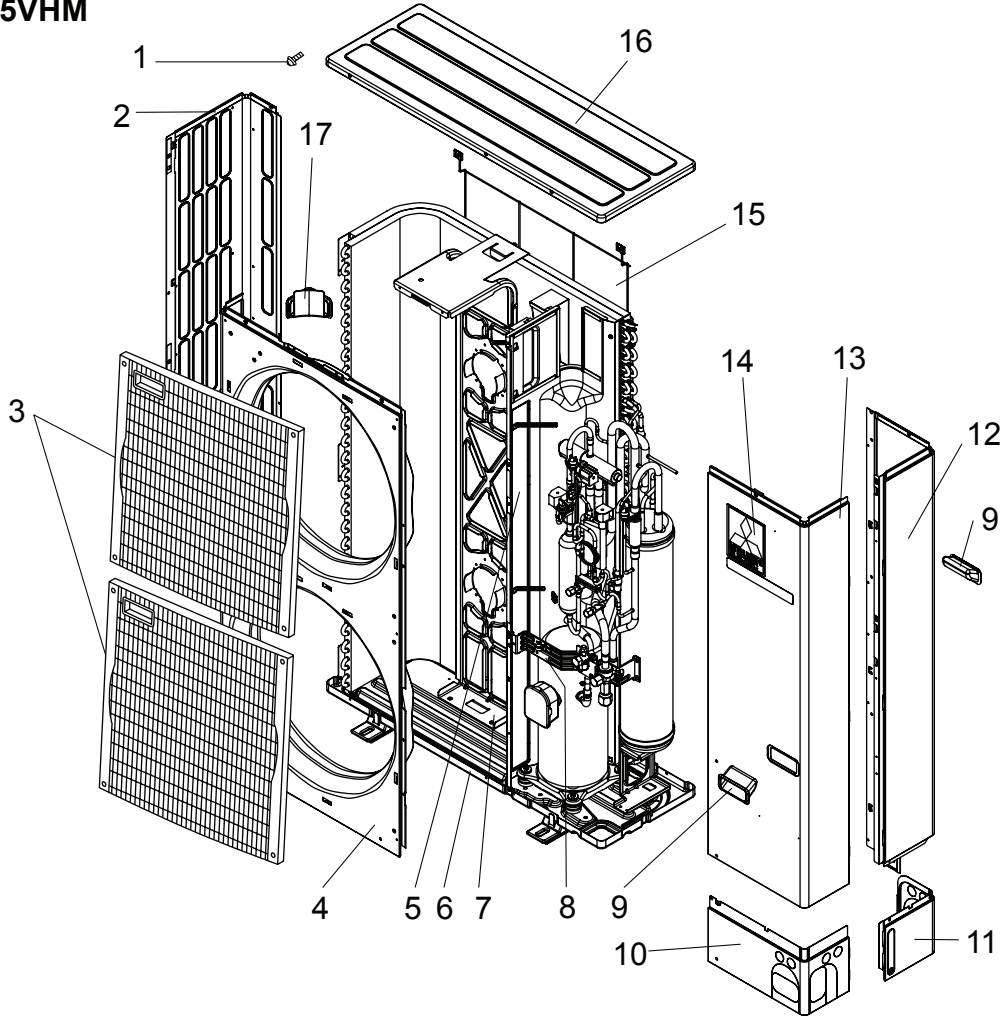
If a charging cylinder is used, the composition of refrigerant will change and the efficiency will be lowered.

Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.

13

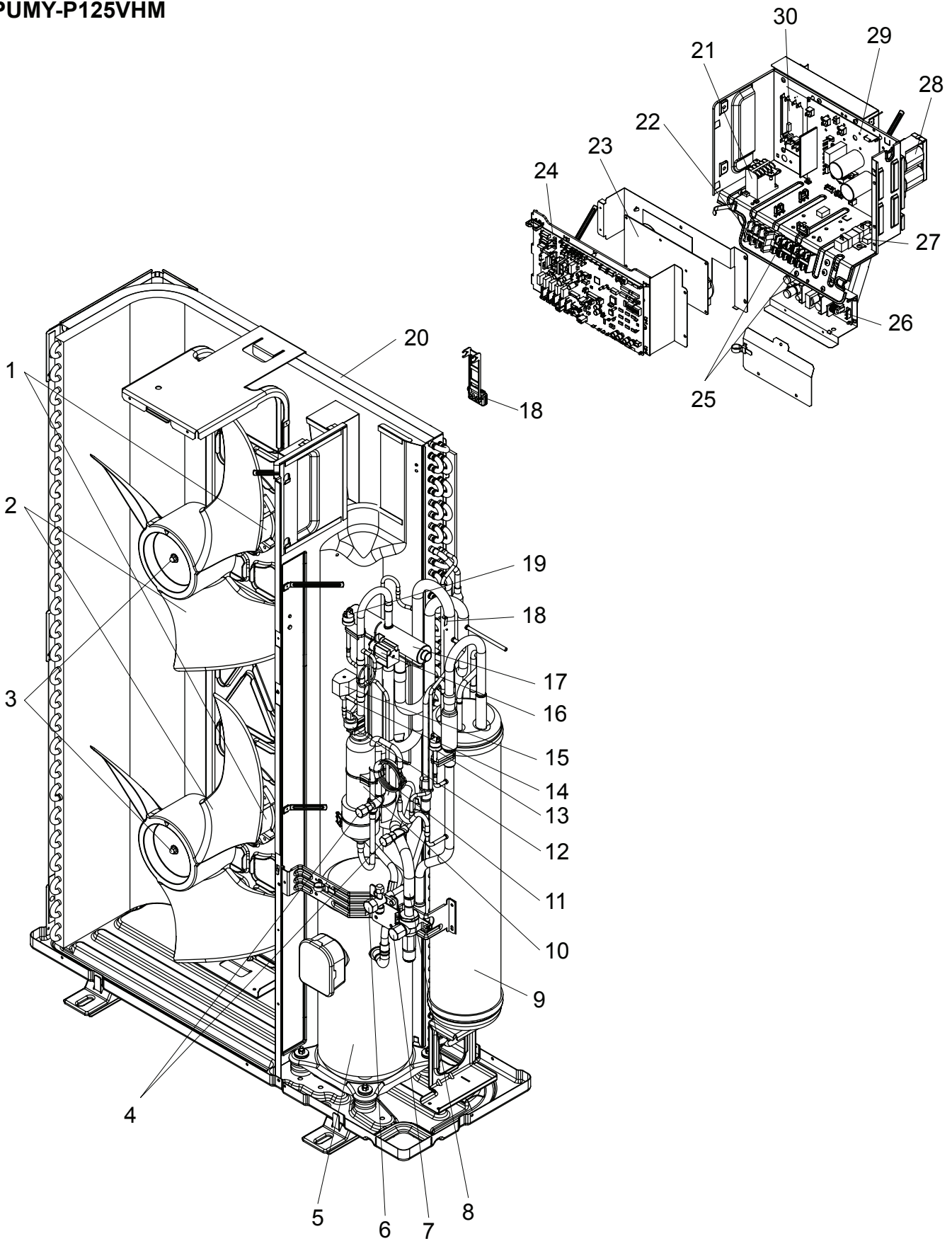
PARTS LIST (non-RoHS compliant)

13-1. STRUCTURAL PARTS PUMY-P125VHM



No.	Part No.	Part Name	Specification	Q'ty/set	Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty
				PUMY-P125VHM			
1	-	F.ST SCREW	(5×10)	38	(DG12F536H10)		
2	T7W E02 662	SIDE PANEL (L)		1			
3	T7W E02 691	FAN GRILLE		2			
4	T7W E02 667	FRONT PANEL		1			
5	-	SEPARATOR		1	(BK00C143G80)		
6	R01 E14 686	BASE ASSY		1			
7	R01 E25 130	MOTOR SUPPORT		1			
8	-	VALVE BED ASSY		1	(BK00C142G15)		
9	R01 30L 655	HANDLE		2			
10	R01 E13 658	COVER PANEL (FRONT)		1			
11	R01 E11 658	COVER PANEL (REAR)		1			
12	R01 E24 661	SIDE PANEL (R)		1			
13	T7W E03 668	SERVICE PANEL		1			
14	-	LABEL (MITSUBISHI)		1	(DG79R130H01)		
15	R01 E01 698	REAR GUARD		1			
16	R01 E04 641	TOP PANEL		1			
17	R01 E00 655	HANDLE		1			

13-2. FUNCTIONAL PARTS PUMY-P125VHM

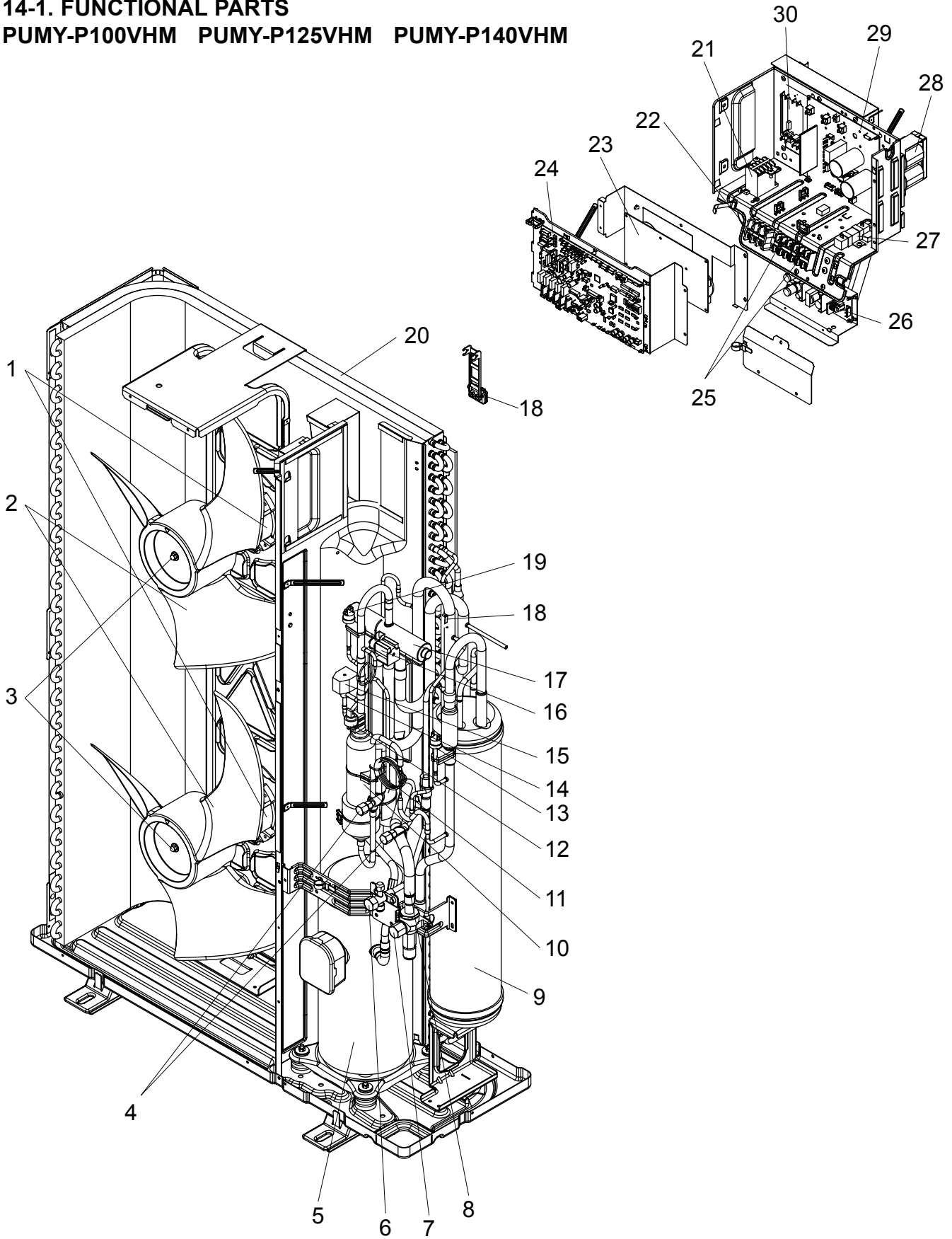


Part numbers that are circled are not shown in the figure.

No.	Part No.	Part Name	Specification	Q'ty/set	Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty
				PUMY-P125VHM			
1	R01 E44 221	FAN MOTOR		2		MF1,2	
2	R01 E01 115	PROPELLER FAN		2			
3	R01 E02 097	NUT		2			
4	R01 E06 413	CHARGE PLUG		2			
5	T97 410 742	COMPRESSOR	ANB33FDCMT Including RUBBER MOUNT	1		MC	
6	R01 E09 410	STOP VALVE	3/8	1			
7	R01 E09 411	BALL VALVE	5/8	1			
8	R01 E03 450	STRAINER		1			
9	R01 E35 440	ACCUMULATOR		1			
10	R01 E09 490	OIL SEPARATOR		1			
11	R01 E22 425	CAPILLARY TUBE	$\phi 2.5 \times \phi 0.8 \times 1000\text{mm}$	1			
12	T7W E04 208	H.P SENSOR		1		63HS	
13	R01 25T 209	LOW PRESSURE SWITCH		1		63L	
14	R01 E09 428	BYPASS VALVE		1			
15	T7W E08 242	SOLENOID VALVE COIL <BYPASS VALVE>		1		SV1	
16	T7W E25 242	SOLENOID COIL <FOUR-WAY VALVE>		1		21S4	
17	R01 E26 403	4-WAY VALVE		1			
18	R01 E75 202	THERMISTOR		1		TH6,7	
19	R01 E04 208	HIGH PRESSURE SWITCH		1		63H	
20	T7W E26 408	HEAT EXCHANGER		1			
21	T7W E02 259	CONTACTOR		1		52C	
22	T7W A13 716	TERMINAL BLOCK	3P (L,N, \oplus)	1		TB1	
23	T7W E14 346	NOISE FILTER CIRCUIT BOARD		1		N.F.	
24	R01 H76 310	MULTI CONTROLLER CIRCUIT BOARD		1		MULTI.B.	
25	T7W E17 716	TERMINAL BLOCK	3P (M1, M2, S)	2		TB3, TB7	
26	R01 E01 311	TRANSMISSION POWER BOARD		1		M-P.B.	
27	T7W E01 234	RESISTOR		1		RS	
28	T7W E09 259	REACTOR		1		DCL	
29	T7W E26 313	POWER CIRCUIT BOARD		1		P.B.	
30	T7W E01 233	ACT MODULE		1		ACTM	
③①	T7W E09 254	MAIN SMOOTHING CAPACITOR		1		CB	
③②	R01 E66 202	THERMISTOR (OUTDOOR PIPE)		1		TH3	
③③	R01 E00 201	THERMISTOR (DISCHARGE)		1		TH4	
③④	R01 E65 202	THERMISTOR (HEATSINK)		1		TH8	
③⑤	R01 E02 239	FUSE	250V 6.3A	2		F1, 2	

14-1. FUNCTIONAL PARTS

PUMY-P100VHM PUMY-P125VHM PUMY-P140VHM



Part numbers that are circled are not shown in the figure.

No.	RoHS	Part No.	Part Name	Specification	Q'ty/set	Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty
					PUMY- P100, 125, 140VHM			
1	G	R01 E44 221	FAN MOTOR		2		MF1,2	
2	G	R01 E08 115	PROPELLER FAN		2			
3	G	R01 E09 097	NUT		2			
4	G	R01 E14 413	CHARGE PLUG		2			
5	G	T97 415 742	COMPRESSOR	ANB33FDCMT Including RUBBER MOUNT	1		MC	
6	G	R01 E13 410	STOP VALVE	3/8	1			
7	G	R01 E11 411	BALL VALVE	5/8	1			
8	G	R01 E06 450	STRAINER		1			
9	G	R01 E44 440	ACCUMULATOR		1			
10	G	R01 E12 490	OIL SEPARATOR		1			
11	G	R01 E26 425	CAPILLARY TUBE	$\phi 2.5 \times \phi 0.8 \times 1000\text{mm}$	1			
12	G	R01 E07 208	H.P SENSOR		1		63HS	
13	G	R01 E00 209	LOW PRESSURE SWITCH		1		63L	
14	G	R01 E14 428	BYPASS VALVE		1			
15	G	T7W E32 242	SOLENOID VALVE COIL <BYPASS VALVE>		1		SV1	
16	G	T7W E25 242	SOLENOID COIL <FOUR-WAY VALVE>		1		21S4	
17	G	R01 E26 403	FOUR-WAY VALVE		1			
18	G	R01 H01 202	THERMISTOR		1		TH6,7	
19	G	R01 E06 208	HIGH PRESSURE SWITCH		1		63H	
20	G	T7W E39 408	HEAT EXCHANGER		1			
21	G	T7W E10 259	CONTACTOR		1		52C	
22	G	T7W A15 716	TERMINAL BLOCK	3P (L,N, ⊕)	1		TB1	
23	G	T7W E16 346	NOISE FILTER CIRCUIT BOARD		1		N.F.	
24	G	R01 N21 310	MULTI CONTROLLER CIRCUIT BOARD		1		MULTI.B.	
25	G	T7W E31 716	TERMINAL BLOCK	3P (M1, M2, S)	2		TB3, TB7	
26	G	R01 E02 311	TRANSMISSION POWER BOARD		1		M-P.B.	
27	G	R01 E00 234	RESISTOR		1		RS	
28	G	R01 E20 259	REACTOR		1		DCL	
29	G	T7W E31 313	POWER CIRCUIT BOARD		1		P.B.	
30	G	T7W E01 233	ACT MODULE		1		ACTM	
31	G	R01 E20 254	MAIN SMOOTHING CAPACITOR		1		CB	
32	G	R01 H00 202	THERMISTOR (OUTDOOR PIPE)		1		TH3	
33	G	R01 E12 201	THERMISTOR (DISCHARGE)		1		TH4	
34	G	R01 E99 202	THERMISTOR (HEATSINK)		1		TH8	
35	G	R01 E06 239	FUSE	250V 6.3A	2		F1, 2	

FUNCTIONAL PARTS

PUMY-P100VHMA

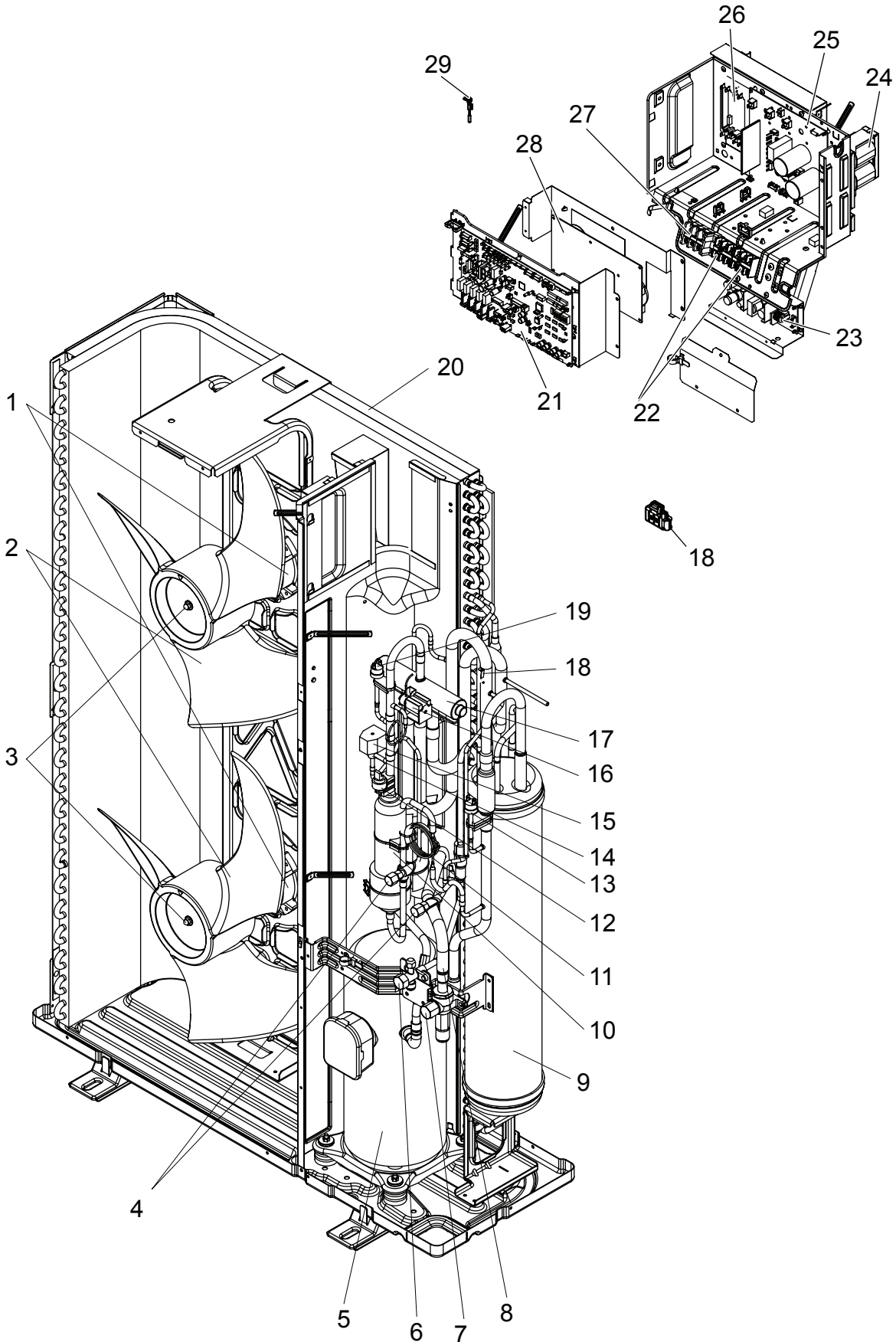
PUMY-P125VHMA

PUMY-P140VHMA

PUMY-P100VHMA-BS

PUMY-P125VHMA-BS

PUMY-P140VHMA-BS



Part numbers that are circled are not shown in the figure.

No.	ROHS	Part No.	Part Name	Specifications	Q'ty/set		Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty
					PUMY-P100, 125, 140				
					VHMA	VHMA-BS			
1	G	T7W E27 763	FAN MOTOR		2	2		MF1, 2	
2	G	R01 E08 115	PROPELLER FAN		2	2			
3	G	R01 E09 097	NUT		2	2			
4	G	R01 E14 413	CHARGE PLUG		2	2			
5	G	T97 415 755	COMPRESSOR	ANB33FDHMT Including RUBBER MOUNT	1	1		MC	
6	G	R01 E13 410	STOP VALVE	3/8	1	1			
7	G	R01 E11 411	BALL VALVE	5/8	1	1			
8	G	R01 E06 450	STRAINER		1	1			
9	G	R01 E44 440	ACCUMULATOR		1	1			
10	G	R01 E12 490	OIL SEPARATOR		1	1			
11	G	R01 E26 425	CAPILLARY TUBE	ø2.5×ø0.8×1000mm	1	1			
12	G	R01 E07 208	H.P SENSOR		1	1		63HS	
13	G	R01 E00 209	LOW PRESSURE SWITCH		1	1		63L	
14	G	R01 E14 428	BYPASS VALVE		1	1			
15	G	R01 E57 242	SOLENOID COIL <BYPASS VALVE>		1			SV1	
	G	T7W E51 242	SOLENOID COIL <BYPASS VALVE>			1		SV1	
16	G	T7W E25 242	SOLENOID COIL <4-WAY VALVE>		1	1		21S4	
17	G	R01 E32 403	4-WAY VALVE		1	1			
18	G	R01 H01 202	THERMISTOR		1	1		TH6, 7	
19	G	R01 E06 208	HIGH PRESSURE SWITCH		1	1		63H	
20	G	T7W E39 408	HEAT EXCHANGER		1	1			
21	G	R01 N56 310	CONTROLLER CIRCUIT BOARD		1	1		C.B.	
22	G	R01 E27 246	TERMINAL BLOCK	3P (M1, M2, S)	2	2		TB3, TB7	
23	G	R01 E02 311	M-POWER BOARD		1	1		M-NET.P.B.	
24	G	R01 E20 259	REACTOR		1			DCL	
	G	T7W E17 259	REACTOR			1		DCL	
25	G	R01 E65 313	POWER CIRCUIT BOARD		1	1		P.B.	
26	G	R01 E07 233	ACT MODULE		1	1		ACTM	
27	G	T7W A15 716	TERMINAL BLOCK	3P (L, N, ⊕)	1	1		TB1	
28	G	T7W E22 346	NOISE FILTER CIRCUIT BOARD		1	1		N.F.	
29	G	R01 E99 202	THERMISTOR (HEATSINK)		1	1		TH8	
30	G	R01 E22 255	MAIN SMOOTHING CAPACITOR		1	1		CE	
31	G	R01 H00 202	THERMISTOR (OUTDOOR PIPE)		1	1		TH3	
32	G	R01 E12 201	THERMISTOR (DISCHARGE)		1	1		TH4	
33	G	R01 E06 239	FUSE	250V, 6.3A	2	2		F1, 2	

14-2. STRUCTURAL PARTS

PUMY-P100VHM

PUMY-P125VHM

PUMY-P140VHM

PUMY-P100VHMA

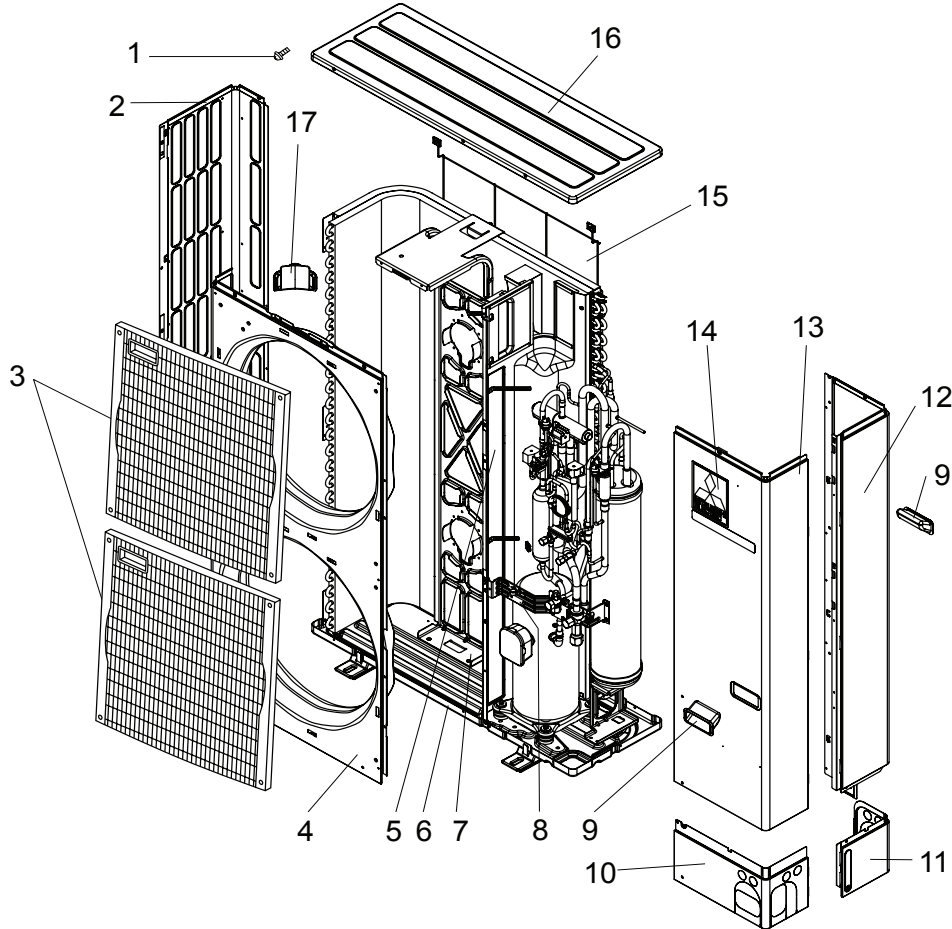
PUMY-P125VHMA

PUMY-P140VHMA

PUMY-P100VHMA-BS

PUMY-P125VHMA-BS

PUMY-P140VHMA-BS



No.	RoHS	Part No.	Part Name	Specification	Q'ty/set		Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty
					PUMY-P100,125,140VHM PUMY-P100,125,140VHMA	PUMY-P100,125,140VHMA-BS			
1	G	—	F.ST SCREW	(5×10)	38	38	(DG12F536H10)		
2	G	T7W E03 662	SIDE PANEL (L)		1				
	G	T7W E06 662	SIDE PANEL (L)			1			
3	G	T7W E03 691	FAN GRILLE		2	2			
4	G	T7W E06 667	FRONT PANEL		1	1			
5	G	—	SEPARATOR		1		(BK00C143G99)		
	G	—	SEPARATOR			1	(BK00C143GB2)		
6	G	R01 E31 686	BASE ASSY		1				
	G	R01 E26 686	BASE ASSY			1			
7	G	R01 E27 130	MOTOR SUPPORT		1				
	G	R01 E19 130	MOTOR SUPPORT			1			
8	G	—	VALVE BED ASSY		1		(BK00C142G15)		
	G	—	VALVE BED ASSY			1	(BK00C142G29)		
9	G	R01 E01 655	HANDLE		2	2			
10	G	R01 E13 658	COVER PANEL (FRONT)		1				
	G	R01 E14 658	COVER PANEL (FRONT)			1			
11	G	R01 E11 658	COVER PANEL (REAR)		1				
	G	R01 E24 658	COVER PANEL (REAR)			1			
12	G	R01 E32 661	SIDE PANEL (R)		1				
	G	T7W E19 661	SIDE PANEL (R)			1			
13	G	T7W E08 668	SERVICE PANEL		1				
	G	T7W E06 668	SERVICE PANEL			1			
14	G	—	LABEL (MITSUBISHI)		1	1	(DG79R130H01)		
15	G	R01 E07 698	REAR GUARD		1	1			
16	G	R01 E14 641	TOP PANEL		1				
	G	R01 E29 641	TOP PANEL			1			
17	G	R01 E02 655	HANDLE		1	1			

DRAIN SOCKET

Part No.	PAC-SG61DS-E
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AIR OUTLET GUIDE

Part No.	PAC-SG59SG-E
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* Need 2 pieces.

AIR GUIDE

Part No.	PAC-SH63AG-E
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* Need 2 pieces.

DRAIN PAN

Part No.	PAC-SG64DP-E
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FILTER DRYER (For liquid line : ϕ 9.52)

Part No.	PAC-SG82DR-E
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* Only for R410A model (Don't use for R22 model.)

BRANCH PIPE (Joint)

Part No.	NUMBER OF BRANCHING POINTS
CMY-Y62-G-E	2
CMY-Y64-G-E	4
CMY-Y68-G-E	8

CITY MULTI™



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Distributed in Jun. 2008 No. OC376 REVISED EDITION-C PDF 7
Distributed in Jan. 2008 No. OC376 REVISED EDITION-B PDF 9
Distributed in Aug. 2006 No. OC376 REVISED EDITION-A PDF 8
Distributed in Mar. 2006 No. OC376 PDF 9
Made in Japan

New publication, effective Jun. 2008
Specifications subject to change without notice