

Revision A:

• MU-GF50VA- E1, MU-GF60VA- E1 and MU-GF80VA- E1 have been added.

Please void OBH622.

OUTDOOR UNIT SERVICE MANUAL

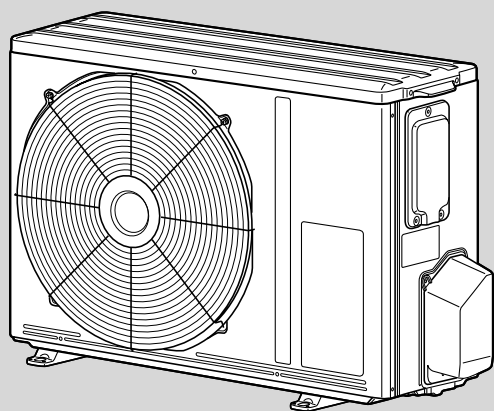


**No. OBH622
REVISED EDITION-A**

Models

MU-GF20VA - E1
MU-GF25VA - E1
MU-GF35VA - E1
MU-GF50VA - E1
MU-GF60VA - E1
MU-GF80VA - E1

Indoor unit service manual
MS-GF•VA Series (OBH621)



MU-GF20/25/35VA

NOTE:

RoHS compliant products have <G> mark on the spec name plate.

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PARTS CATALOG (OBB622)



Use the specified refrigerant only

Never use any refrigerant other than that specified.

Doing so may cause a burst, an explosion, or fire when the unit is being used, serviced, or disposed of.

Correct refrigerant is specified in the manuals and on the spec labels provided with our products.

We will not be held responsible for mechanical failure, system malfunction, unit breakdown or accidents caused by failure to follow the instructions.

<Preparation before the repair service>

- Prepare the proper tools.
- Prepare the proper protectors.
- Provide adequate ventilation.
- After stopping the operation of the air conditioner, turn off the power-supply breaker and remove the power plug.
- Discharge the capacitor before the work involving the electric parts.

<Precautions during the repair service>

- Do not perform the work involving the electric parts with wet hands.
- Do not pour water into the electric parts.
- Do not touch the refrigerant.
- Do not touch the hot or cold areas in the refrigeration cycle.
- When the repair or the inspection of the circuit needs to be done without turning off the power, exercise great caution not to touch the live parts.

Revision A:

- MU-GF50VA- [E1], MU-GF60VA- [E1] and MU-GF80VA- [E1] have been added.

1

TECHNICAL CHANGES

MU-GF20VA -[E1]

MU-GF25VA -[E1]

MU-GF35VA -[E1]

1. New model

MU-GF50VA -[E1]

MU-GF60VA -[E1]

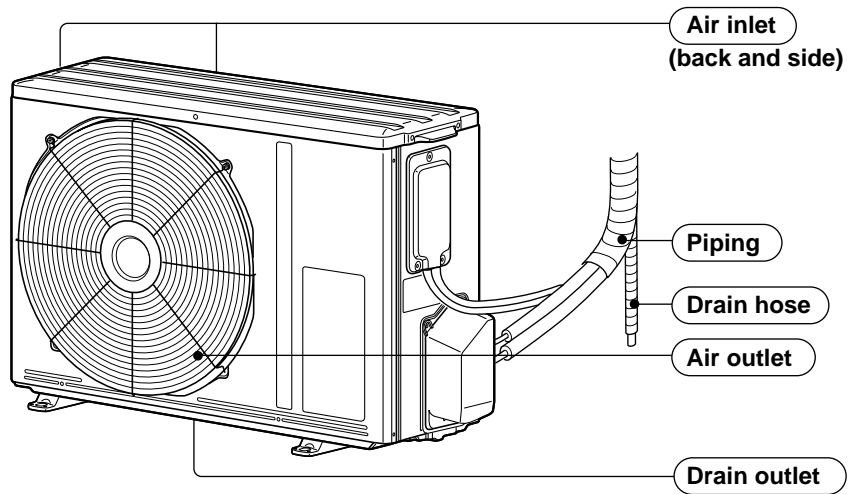
MU-GF80VA -[E1]

1. New model

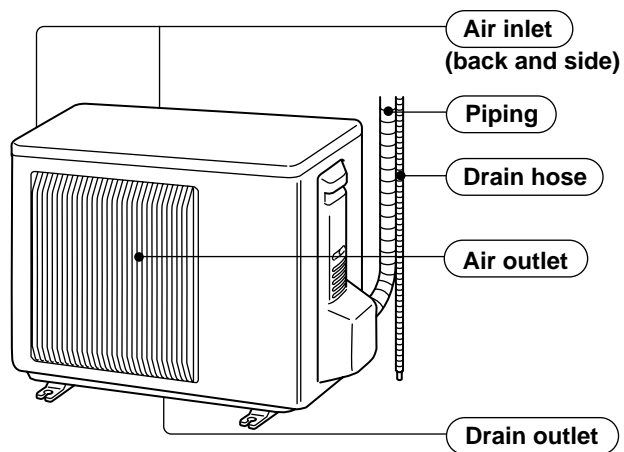
2

PART NAMES AND FUNCTIONS

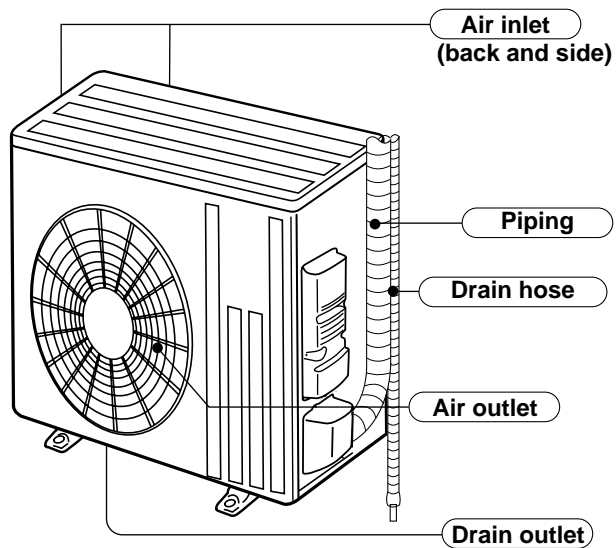
MU-GF20VA MU-GF25VA MU-GF35VA



MU-GF50VA



MU-GF60VA MU-GF80VA



3

SPECIFICATION

Outdoor model		MU-GF20VA	MU-GF25VA	MU-GF35VA	MU-GF50VA	MU-GF60VA	MU-GF80VA	
Function		Cooling						
Power supply		Single phase 230 V, 50 Hz						
Capacity	kW	2.3	2.5	3.45	4.85	6.4	7.8	
Breaker capacity	A	10			15	20	25	
Electrical data	Running current (Total)	A	3.2	3.6	5.0	6.7	9.7	12.5
	Power input (Total)	W	710	775	1,120	1,480	2,170	2,780
	Power factor (Total)	%	96	94	97	96	97	97
	Starting current (Total)	A	14.5	19.0	27.0	33.5	57.0	79.5
Energy Efficiency Ratio (EER) (Total)			3.24	3.23	3.08	3.28	2.95	2.81
Compressor	Model		KN083VDPMC	KN092VDPMC	RN135VHSMT	RN174VHSMT	PN25VABMT	NN33VAAMT
	Output	W	500	650	900	1,300	1,800	2,200
	Compressor motor current	A	2.77	3.17	4.49	6.10	8.90	11.48
	Winding resistance (at 20°C)	Ω	C-R 4.52 C-S 7.07	C-R 3.62 C-S 5.40	C-R 2.69 C-S 3.51	C-R 2.12 C-S 3.40	C-R 0.95 C-S 1.48	C-R 0.68 C-S 1.80
Fan motor	Model		RA6V21-BC		RA6V33-QA		RA6V75-FA	RA6V75-EA
	Fan motor current	A	0.23		0.29	0.30	0.50	0.60
	Winding resistance (at 20°C)	Ω	WHT-BLK 276 BLK-RED 233		WHT-BLK 171 BLK-RED 226		WHT-BLK 71.5 BLK-RED 89.5	WHT-BLK 64.3 BLK-RED 84.0
Dimensions W × H × D	mm	718 x 525 x 255			800x 550x 285		840x 880x 330	
Weight	kg	25		34	38	57	72	
Special remarks	Dehumidification	ℓ/h	0.5	0.7	1.3	1.3	2.6	3.7
	Air flow (High)	m³/h	1,716		1,722	1,860	3,174	3,018
	Sound level	dB	47		49	52	54	55
	Fan speed (High)	rpm	830		860		830	
	Fan speed regulator		1					
	Refrigerant filling capacity (R410A)	kg	0.65		1.10	1.20	1.30	1.85
	Refrigeration oil (Model)	L	0.30 (FV50S)		0.52 (FV50S)		0.90 (FV50S)	1.30 (FV50S)

NOTE: Test conditions are based on ISO5151.

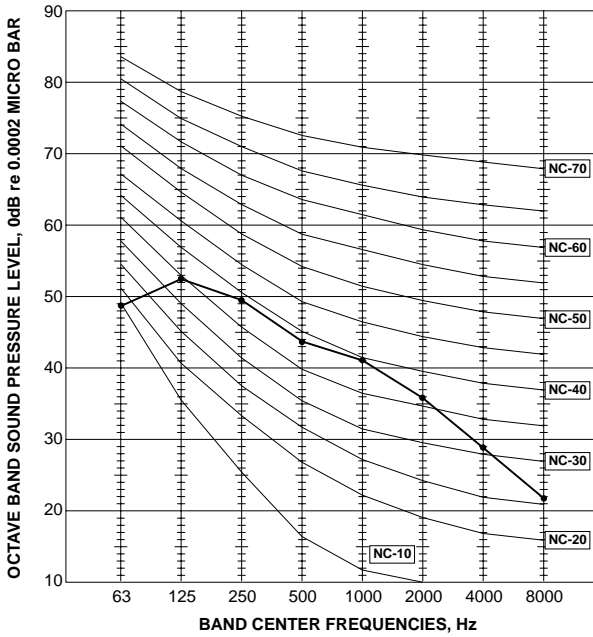
Cooling: Indoor Dry-bulb temperature 27 °C Wet-bulb temperature 19 °C

Outdoor Dry-bulb temperature 35 °C Wet-bulb temperature 24 °C

Indoor-Outdoor piping length: 5.0 m

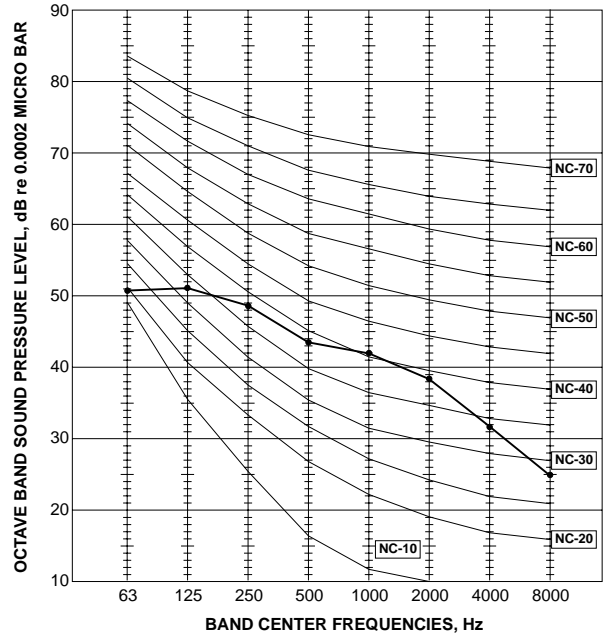
MU-GF20VA

FUNCTION	SPL(dB(A))	LINE
COOLING	47	●—●



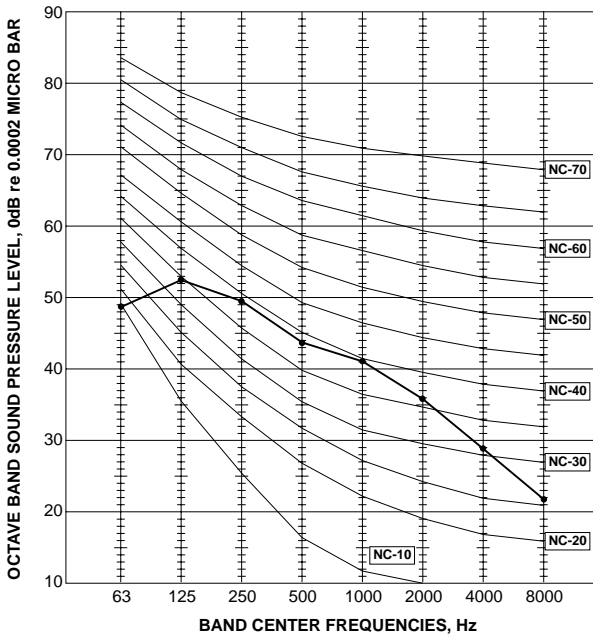
MU-GF25VA

FUNCTION	SPL(dB(A))	LINE
COOLING	47	●—●



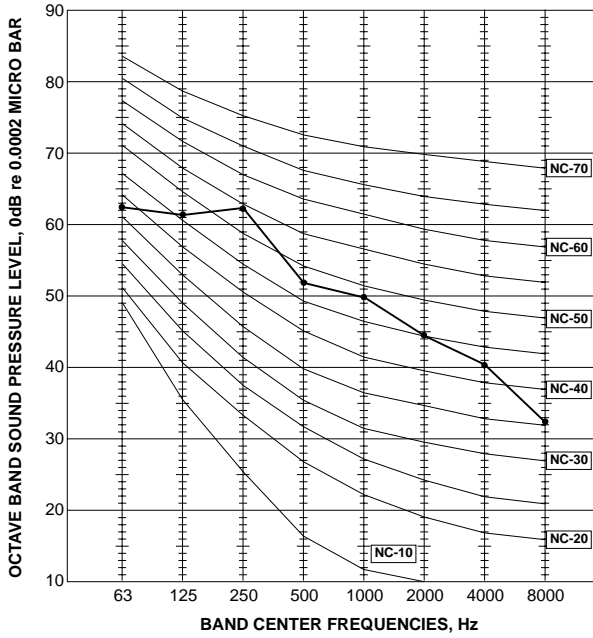
MU-GF35VA

FUNCTION	SPL(dB(A))	LINE
COOLING	49	●—●



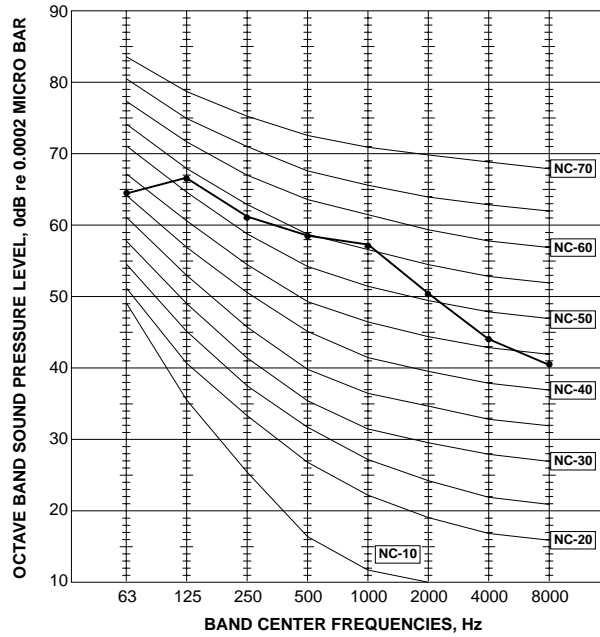
MU-GF50VA

FUNCTION	SPL(dB(A))	LINE
COOLING	52	●—●



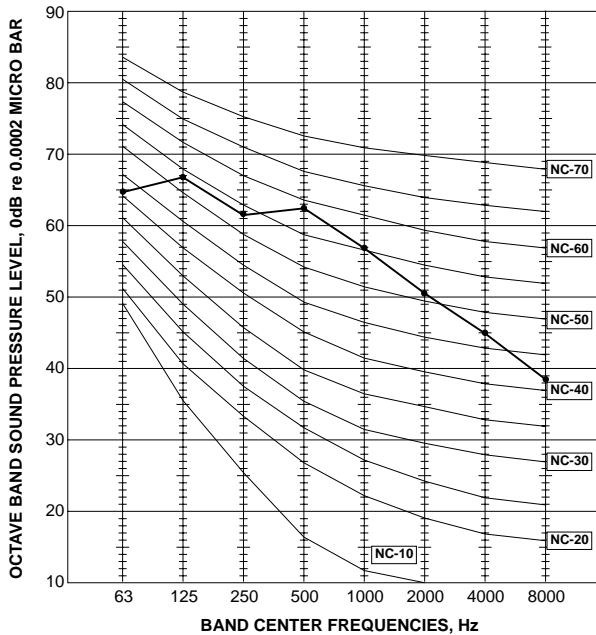
MU-GF60VA

FUNCTION	SPL(dB(A))	LINE
COOLING	54	●—●



MU-GF80VA

FUNCTION	SPL(dB(A))	LINE
COOLING	55	●—●

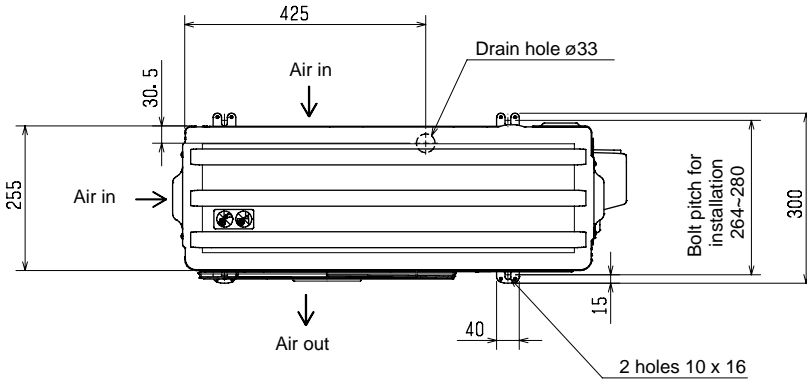


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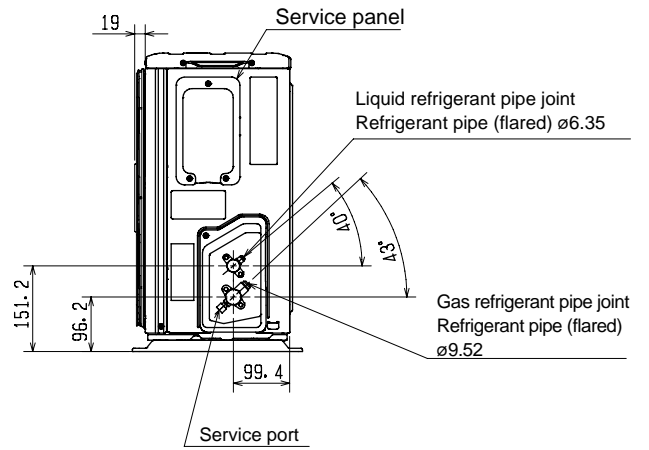
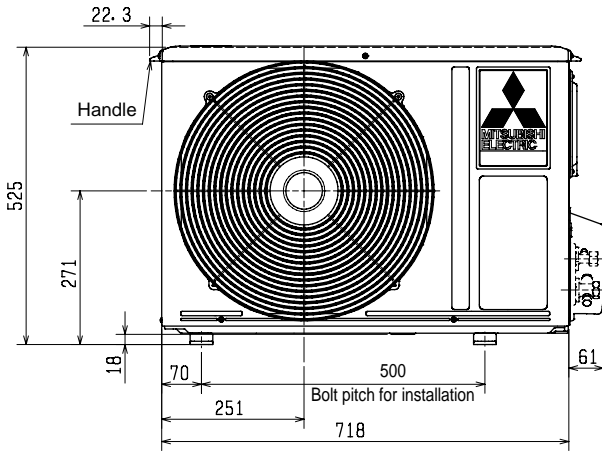
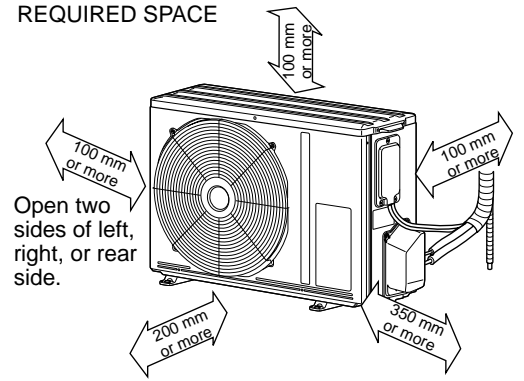
OUTLINES AND DIMENSIONS

MU-GF20VA MU-GF25VA MU-GF35VA

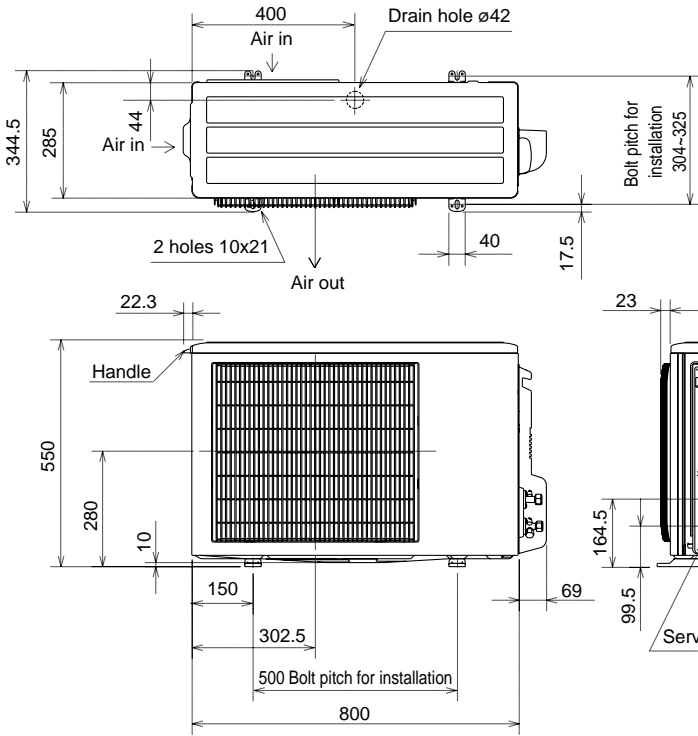
Unit: mm



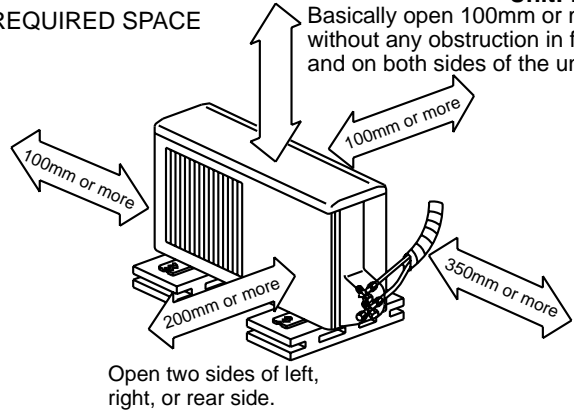
REQUIRED SPACE



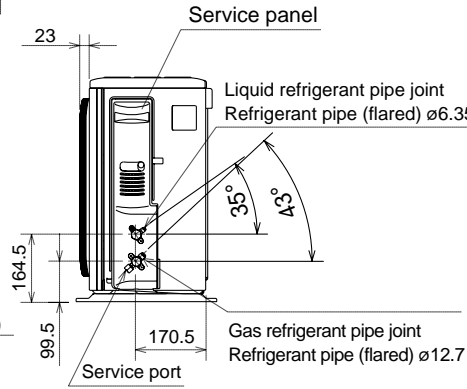
MU-GF50VA



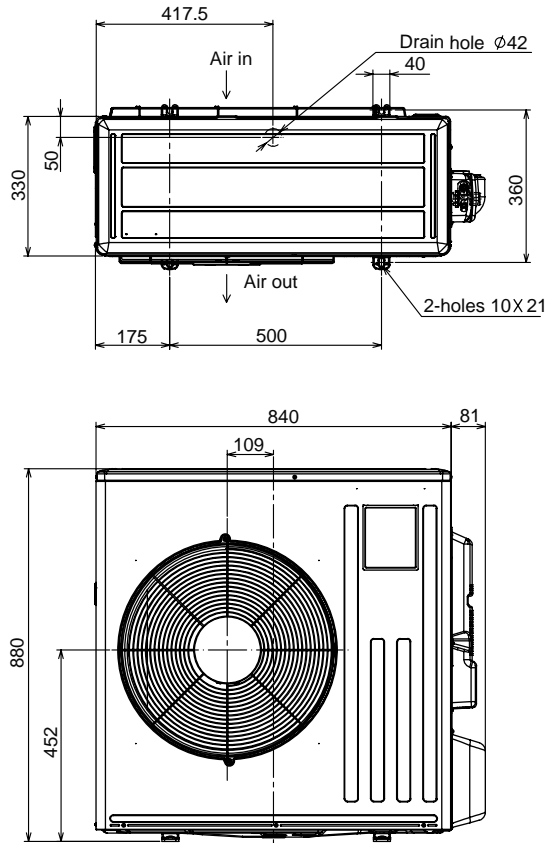
REQUIRED SPACE
 Basically open 100mm or more without any obstruction in front and on both sides of the unit.



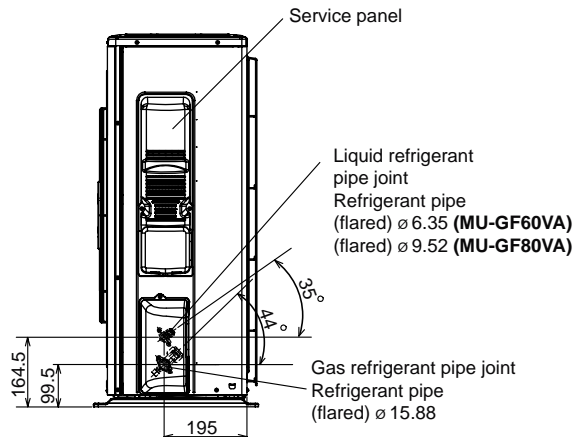
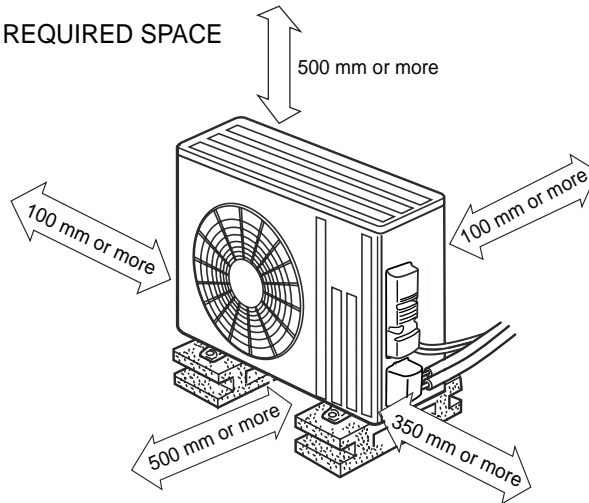
Open two sides of left, right, or rear side.



MU-GF60VA MU-GF80VA



REQUIRED SPACE

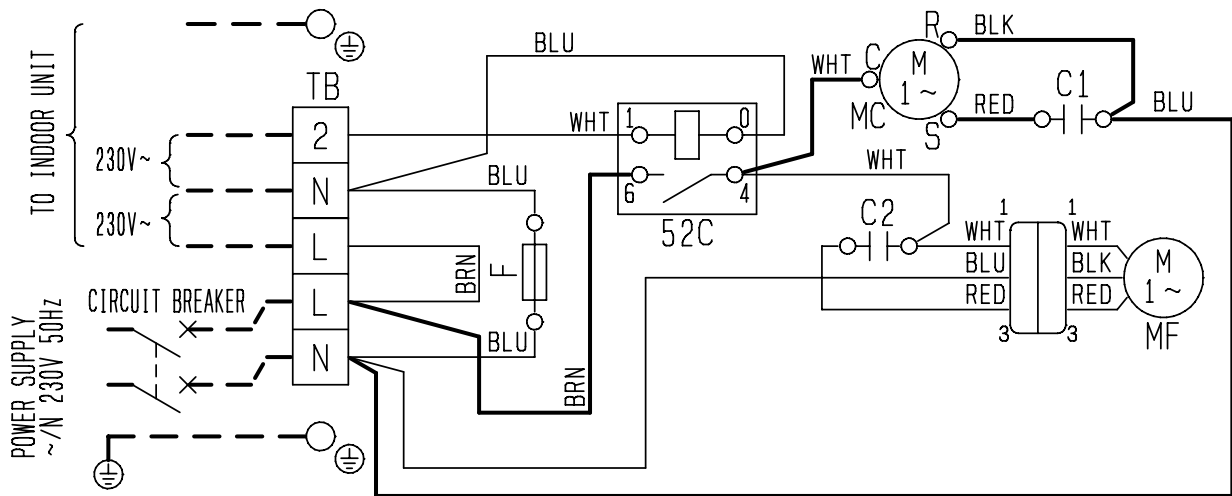


OBH622A

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WIRING DIAGRAM

MU-GF20VA MU-GF25VA MU-GF35VA



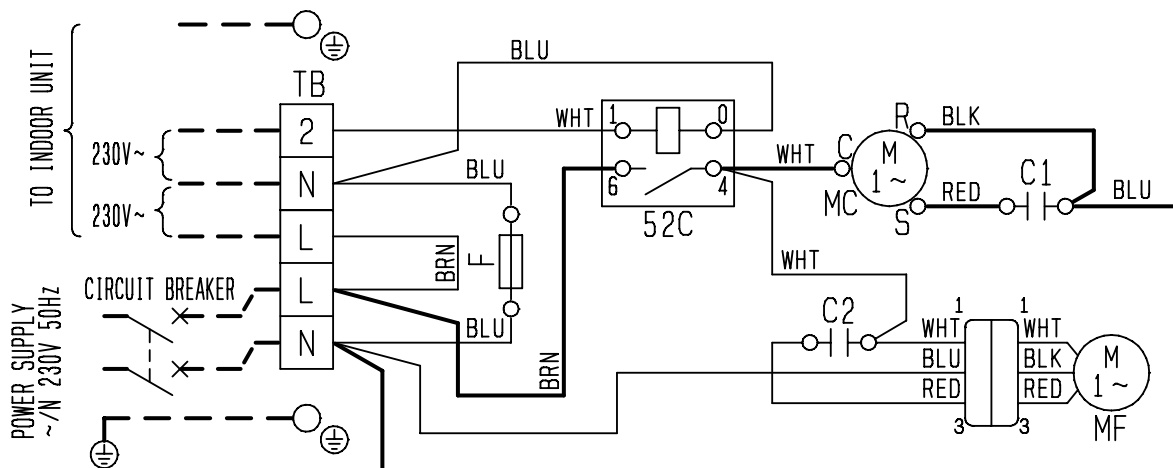
NOTES:

1. Use copper conductors only (For field wiring).
2. Since the indoor and outdoor unit connecting wires have polarity, connect them according to the numbers (2, N, L).
3. Symbols below indicate.



SYMBOL	NAME
C1	COMPRESSOR CAPACITOR
C2	FAN MOTOR CAPACITOR
F	FUSE (T3. 15A/250V)
MC	COMPRESSOR (INNER PROTECTOR)
MF	FAN MOTOR (INNER FUSE)
TB	TERMINAL BLOCK
52C	COMPRESSOR CONTACTOR

MU-GF50VA



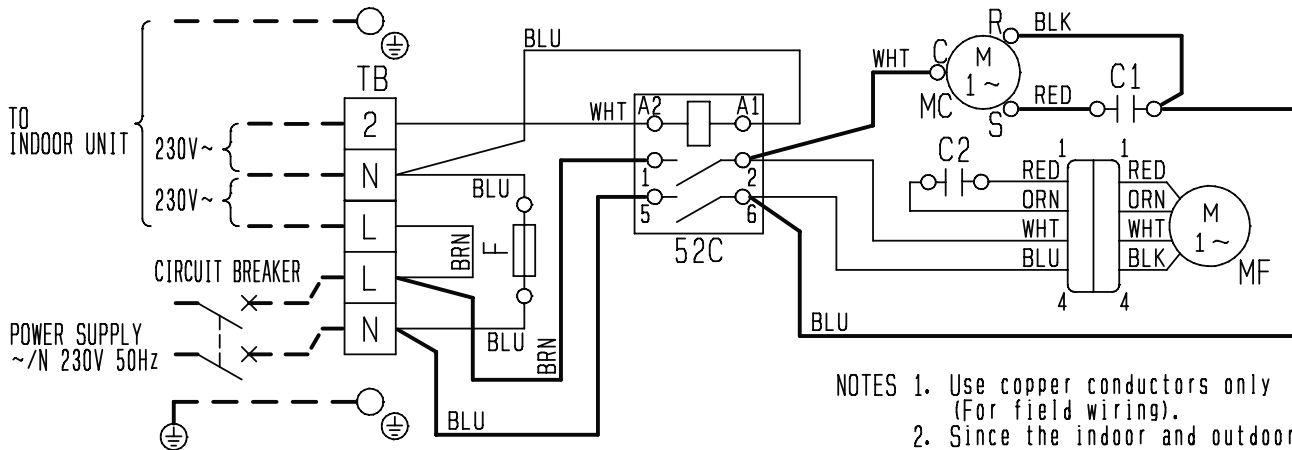
SYMBOL	NAME
C1	COMPRESSOR CAPACITOR
C2	FAN MOTOR CAPACITOR
F	FUSE (T3. 15A/250V)
MC	COMPRESSOR (INNER PROTECTOR)
MF	FAN MOTOR (INNER FUSE)
TB	TERMINAL BLOCK
52C	COMPRESSOR CONTACTOR

NOTES:

1. Use copper conductors only (For field wiring).
2. Since the indoor and outdoor unit connecting wires have polarity, connect them according to the numbers (2, N, L).
3. Symbols below indicate.



MU-GF60VA MU-GF80VA



- NOTES
1. Use copper conductors only (For field wiring).
 2. Since the indoor and outdoor unit connecting wires have polarity, connect them according to the numbers (2, N, L).
 3. Symbols below indicate.

 :Terminal block
 :Connector

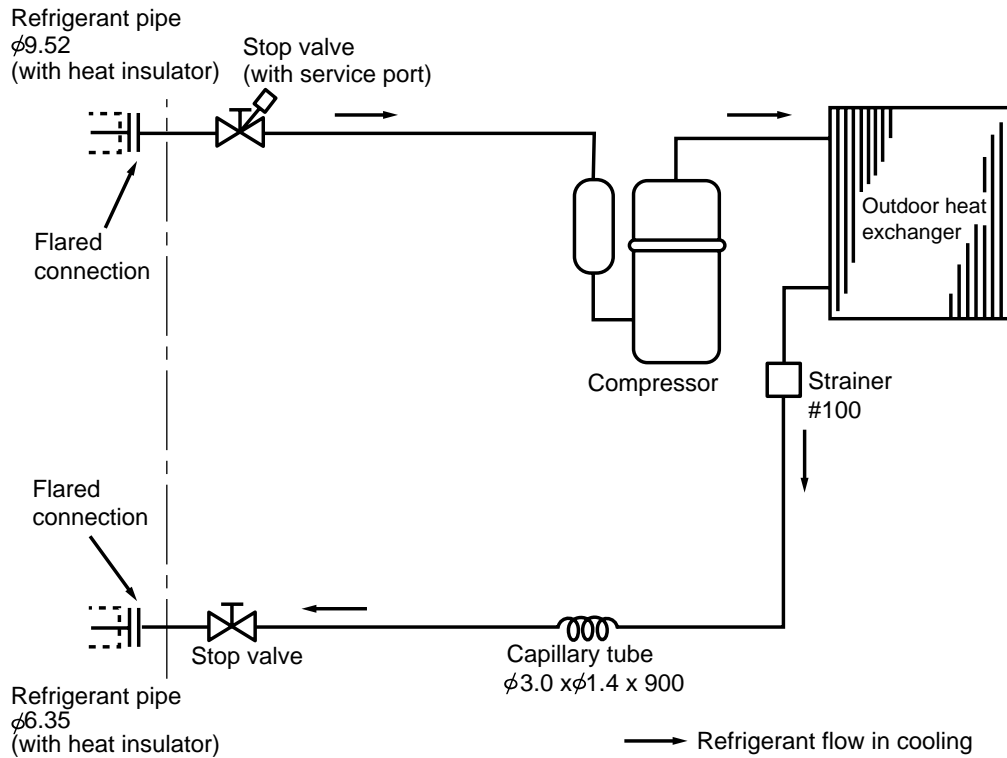
SYMBOL	NAME	SYMBOL	NAME
C1	COMPRESSOR CAPACITOR	MF	FAN MOTOR (INNER PROTECTOR)
C2	FAN MOTOR CAPACITOR	TB	TERMINAL BLOCK
F	FUSE (T3. 15A/250V)	52C	COMPRESSOR CONTACTOR
MC	COMPRESSOR (INNER PROTECTOR)		

7

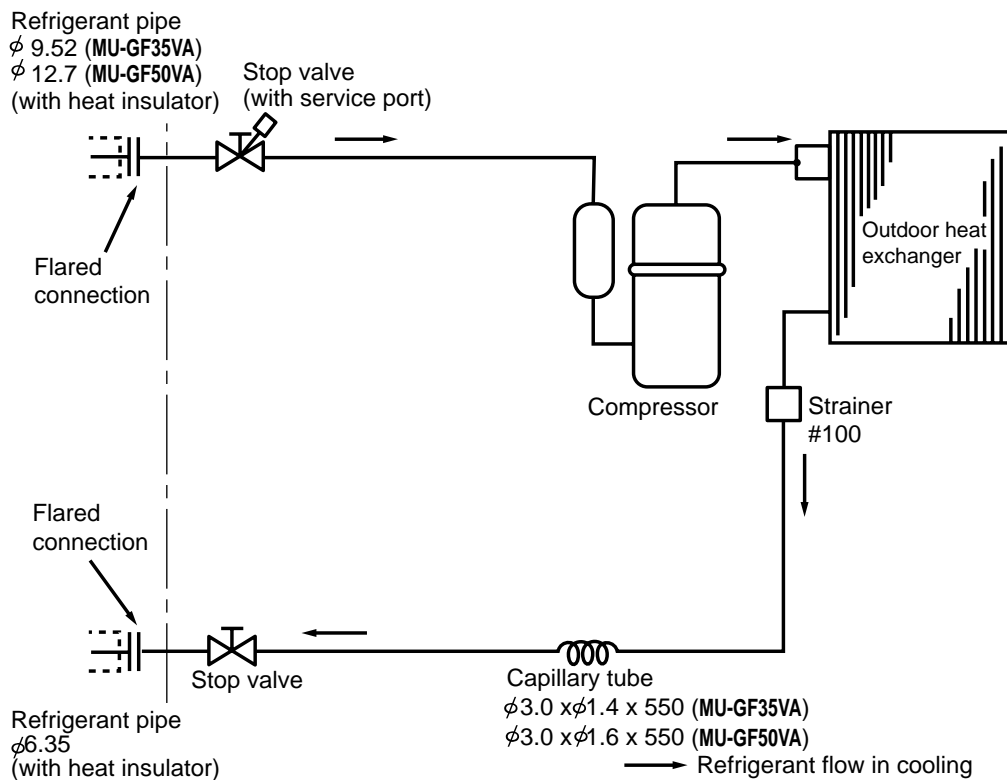
REFRIGERANT SYSTEM DIAGRAM

MU-GF20VA MU-GF25VA

Unit: mm

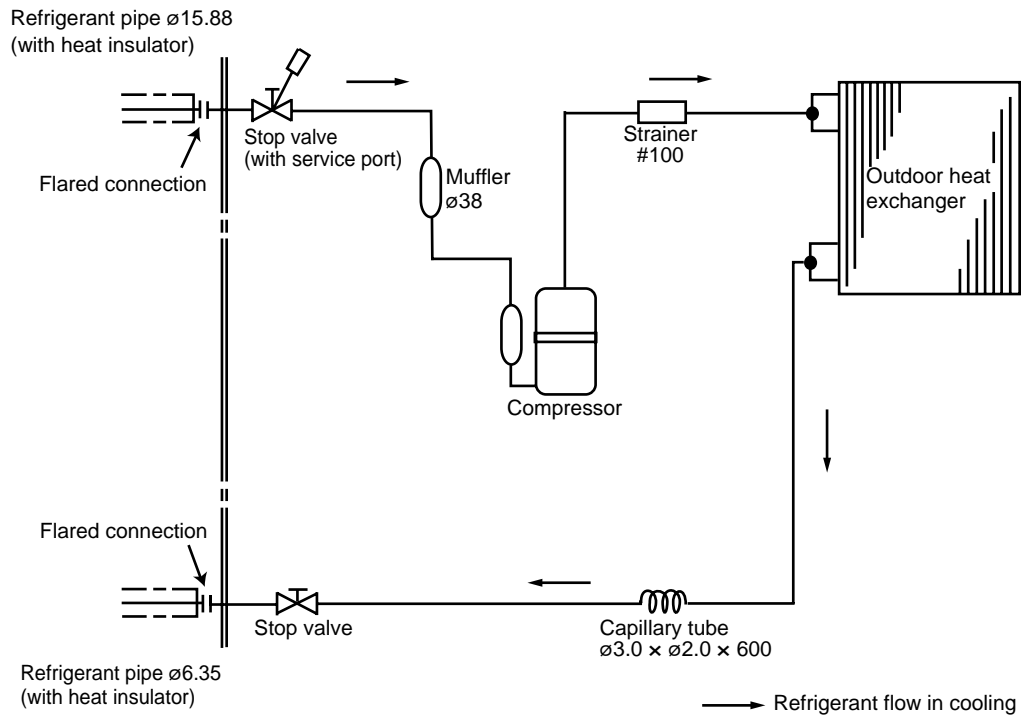


MU-GF35VA MU-GF50VA

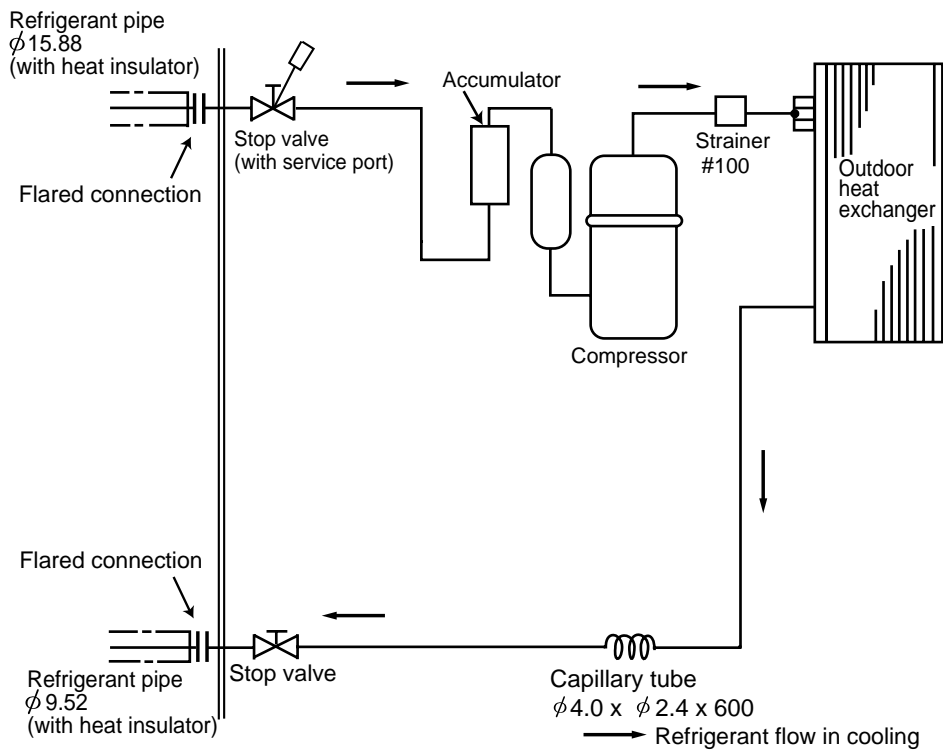


MU-GF60VA

Unit: mm



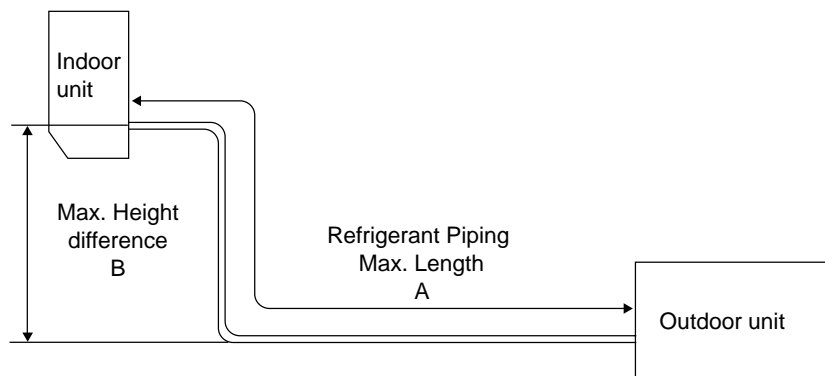
MU-GF80VA



MAX. REFRIGERANT PIPING LENGTH and MAX. HEIGHT DIFFERENCE

	Refrigerant piping: m		Piping size O.D: mm	
	Max. Length A	Max. Height difference B	Gas	Liquid
MU-GF20VA	20	10	9.52	6.35
MU-GF25VA	20	10	9.52	6.35
MU-GF35VA	25	10	9.52	6.35
MU-GF50VA	30	10	12.7	6.35
MU-GF60VA	30	10	15.88	6.35
MU-GF80VA	30	15	15.88	9.52

MAX. HEIGHT DIFFERENCE



ADDITIONAL REFRIGERANT CHARGE (R410A: g)

MU-GF20VA MU-GF25VA MU-GF35VA

Model	Outdoor unit precharged	Refrigerant piping length (one way)			
		7.5m	10m	15m	20m
MU-GF20VA	650	0	50	150	250
MU-GF25VA	650	0	50	150	250
MU-GF35VA	1,100	0	50	150	250

Calculation: $Xg = 20 \text{ g/m} \times (\text{Refrigerant piping length (m)} - 7.5)$

NOTE: Refrigerant piping exceeding 7.5 m requires additional refrigerant charge according to the calculation.

MU-GF50VA MU-GF60VA MU-GF80VA

Model	Outdoor unit precharged	Refrigerant piping length (one way)					
		7 m	10 m	15 m	20 m	25m	30m
MU-GF50VA	1,200	0	50	150	250	350	450
MU-GF60VA	1,300						
MU-GF80VA	1,850						

Calculation: $Xg = 20 \text{ g/m} \times (\text{Refrigerant piping length (m)} - 7.5)$

NOTE: Refrigerant piping exceeding 7.5 m requires additional refrigerant charge according to the calculation.

MU-GF20VA MU-GF25VA MU-GF35VA MU-GF50VA MU-GF60VA MU-GF80VA

The standard specifications apply only to the operation of the air conditioner under normal conditions. Since operating conditions vary according to the areas where these units are installed, the following information has been provided to clarify the operating characteristics of the air conditioner under the conditions indicated by the performance curve.

(1) GUARANTEED VOLTAGE

198 ~ 264 V, 50 Hz

(2) AIR FLOW

Air flow should be set at MAX.

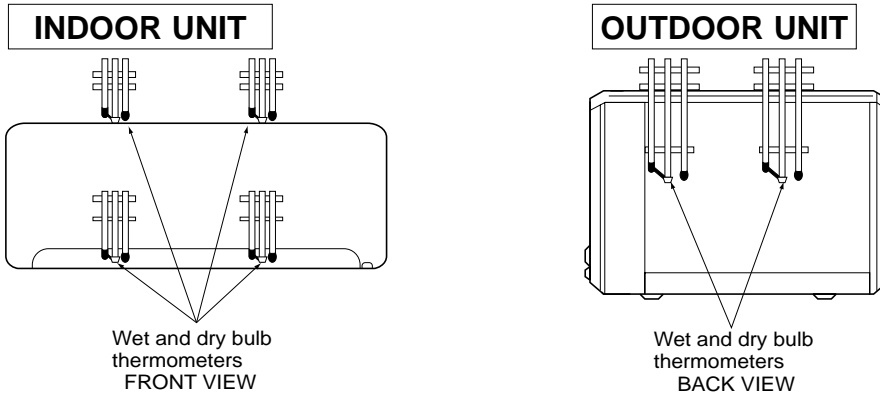
(3) MAIN READINGS

- (1) Indoor intake air wet-bulb temperature: °C WB
- (2) Indoor outlet air wet-bulb temperature: °C WB
- (3) Outdoor intake air dry-bulb temperature: °C DB
- (4) Total input: W

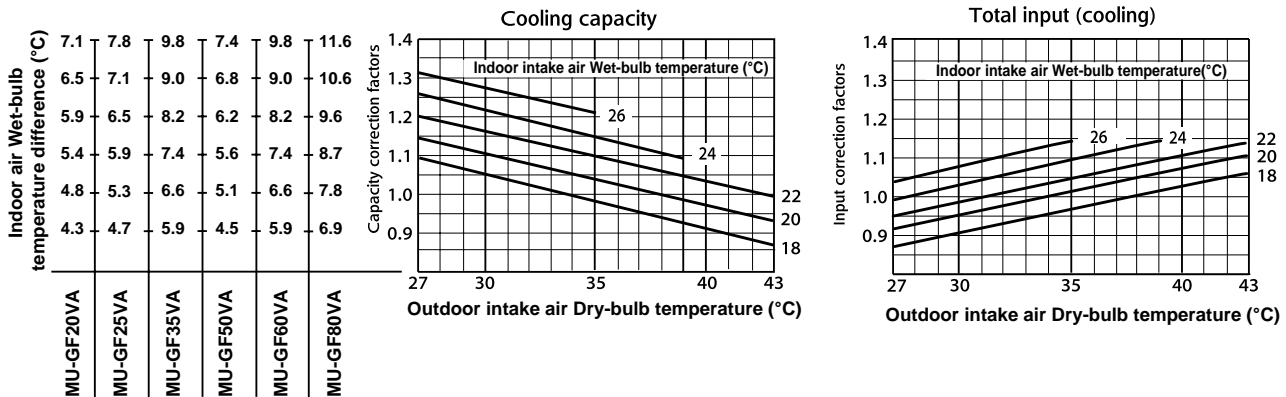
Indoor air wet and dry bulb temperature difference on the left side of the following chart shows the difference between the indoor intake air wet and dry bulb temperature and the indoor outlet air wet and dry bulb temperature for your reference at service.

How to measure the indoor air wet and dry bulb temperature difference

1. Attach at least 2 sets of wet and dry bulb thermometers to the indoor air intake as shown in the figure, and at least 2 sets of wet and dry bulb thermometers to the indoor air outlet. The thermometers must be attached to the position where air speed is high.
2. Attach at least 2 sets of wet and dry bulb thermometers to the outdoor air intake. Cover the thermometers to prevent direct rays of the sun.
3. Check that the air filter is cleaned.
4. Open windows and doors of room.
5. Press the EMERGENCY OPERATION switch once to start the EMERGENCY COOL MODE.
6. When system stabilizes after more than 15 minutes, measure temperature and take an average temperature.
7. 10 minutes later, measure temperature again and check that the temperature does not change.



8-1. CAPACITY AND INPUT CURVES



8-2. OUTDOOR LOW PRESSURE AND OUTDOOR UNIT CURRENT

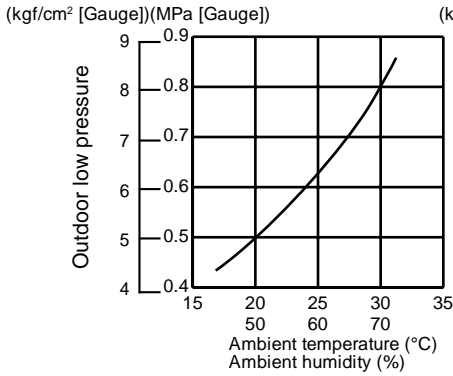
COOL operation

- ① Both indoor and outdoor unit are under the same temperature/humidity condition.
- ② Air flow should be set at MAX.

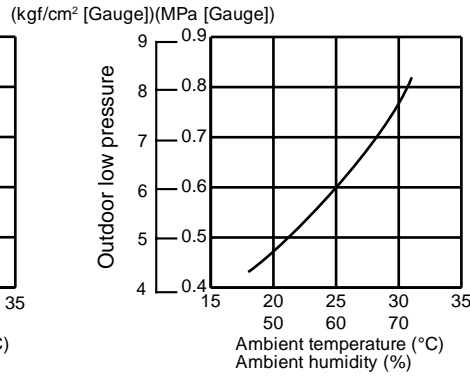
Dry-bulb temperature (°C)	Relative humidity (%)
20	50
25	60
30	70

Outdoor low pressure

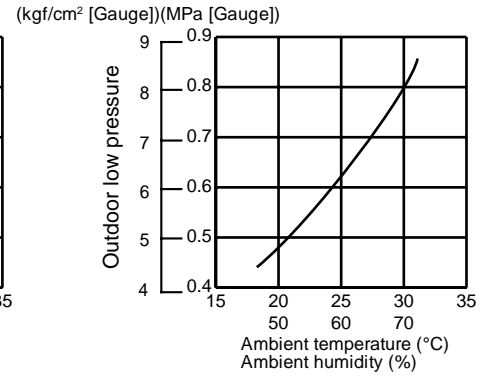
MU-GF20VA



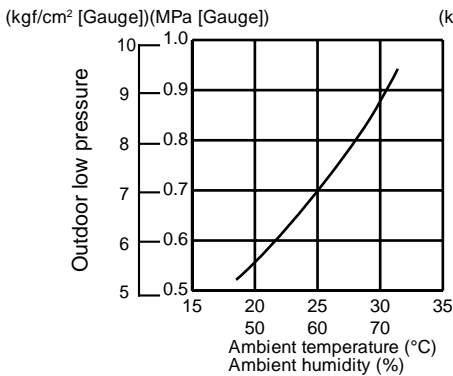
MU-GF25VA



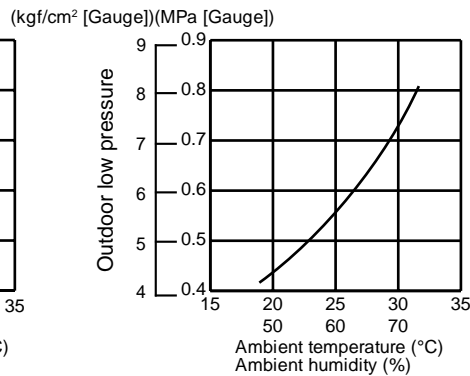
MU-GF35VA



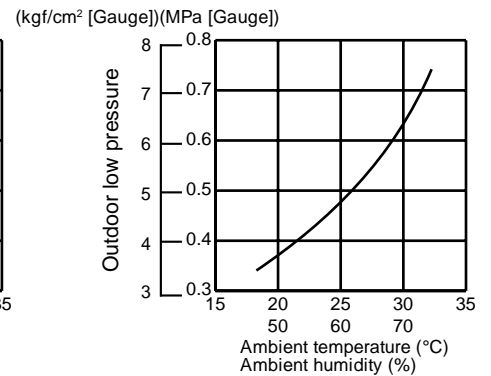
MU-GF50VA



MU-GF60VA



MU-GF80VA

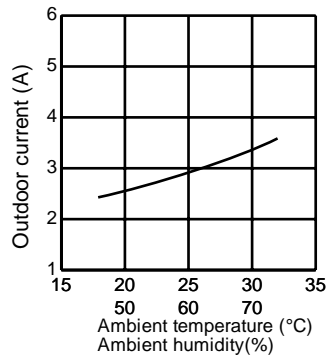


NOTE:

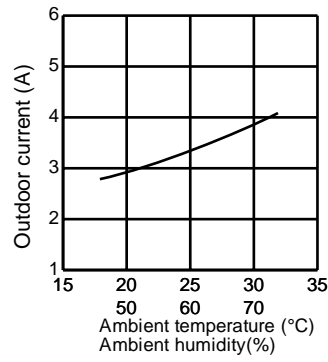
The unit of pressure has been changed to MPa on the international system of units (SI unit system)
The conversion factor is: **1 (MPa [Gauge]) = 10.2 (kgf/cm² [Gauge])**

Outdoor unit current

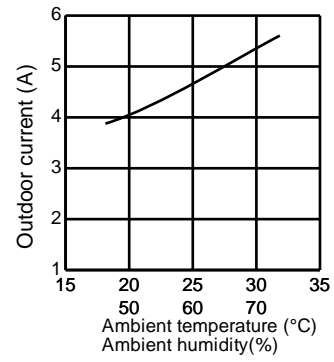
MU-GF20VA



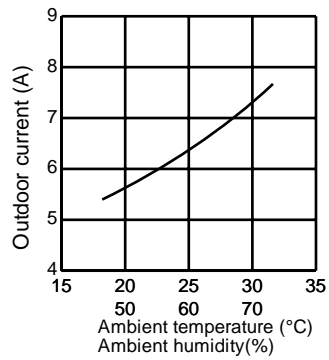
MU-GF25VA



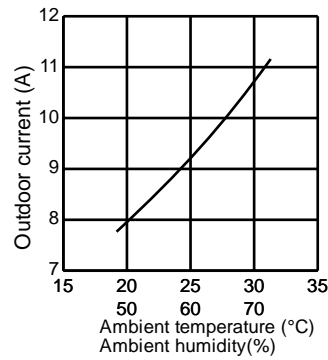
MU-GF35VA



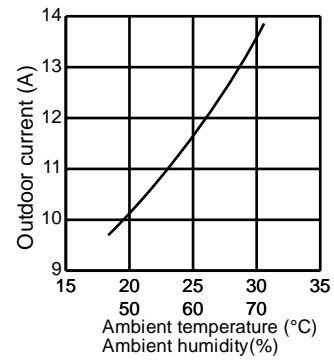
MU-GF50VA



MU-GF60VA



MU-GF80VA



PERFORMANCE DATA COOL operation at Rated frequency

MU-GF20VA

CAPACITY: 2.3 kW

SHF: 0.84

INPUT: 710 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.70	1.78	0.66	568	2.59	1.71	0.66	596	2.48	1.64	0.66	625	2.39	1.58	0.66	653
21	20	2.82	1.52	0.54	596	2.70	1.46	0.54	632	2.62	1.42	0.54	646	2.53	1.37	0.54	675
22	18	2.70	1.89	0.70	568	2.59	1.81	0.70	596	2.48	1.74	0.70	625	2.39	1.67	0.70	653
22	20	2.82	1.63	0.58	596	2.70	1.57	0.58	632	2.62	1.52	0.58	646	2.53	1.47	0.58	675
22	22	2.93	1.35	0.46	618	2.83	1.30	0.46	657	2.76	1.27	0.46	675	2.65	1.22	0.46	703
23	18	2.70	2.00	0.74	568	2.59	1.91	0.74	596	2.48	1.84	0.74	625	2.39	1.77	0.74	653
23	20	2.82	1.75	0.62	596	2.70	1.68	0.62	632	2.62	1.63	0.62	646	2.53	1.57	0.62	675
23	22	2.93	1.47	0.50	618	2.83	1.41	0.50	657	2.76	1.38	0.50	675	2.65	1.32	0.50	703
24	18	2.70	2.11	0.78	568	2.59	2.02	0.78	596	2.48	1.94	0.78	625	2.39	1.87	0.78	653
24	20	2.82	1.86	0.66	596	2.70	1.78	0.66	632	2.62	1.73	0.66	646	2.53	1.67	0.66	675
24	22	2.93	1.58	0.54	618	2.83	1.53	0.54	657	2.76	1.49	0.54	675	2.65	1.43	0.54	703
24	24	3.08	1.29	0.42	646	2.97	1.25	0.42	682	2.90	1.22	0.42	703	2.81	1.18	0.42	738
25	18	2.70	2.22	0.82	568	2.59	2.12	0.82	596	2.48	2.04	0.82	625	2.39	1.96	0.82	653
25	20	2.82	1.97	0.70	596	2.70	1.89	0.70	632	2.62	1.84	0.70	646	2.53	1.77	0.70	675
25	22	2.93	1.70	0.58	618	2.83	1.64	0.58	657	2.76	1.60	0.58	675	2.65	1.53	0.58	703
25	24	3.08	1.42	0.46	646	2.97	1.36	0.46	682	2.90	1.33	0.46	703	2.81	1.29	0.46	738
26	18	2.70	2.32	0.86	568	2.59	2.23	0.86	596	2.48	2.14	0.86	625	2.39	2.06	0.86	653
26	20	2.82	2.08	0.74	596	2.70	2.00	0.74	632	2.62	1.94	0.74	646	2.53	1.87	0.74	675
26	22	2.93	1.82	0.62	618	2.83	1.75	0.62	657	2.76	1.71	0.62	675	2.65	1.64	0.62	703
26	24	3.08	1.54	0.50	646	2.97	1.48	0.50	682	2.90	1.45	0.50	703	2.81	1.40	0.50	738
26	26	3.17	1.21	0.38	682	3.08	1.17	0.38	717	3.04	1.15	0.38	738	2.94	1.12	0.38	760
27	18	2.70	2.43	0.90	568	2.59	2.33	0.90	596	2.48	2.24	0.90	625	2.39	2.15	0.90	653
27	20	2.82	2.20	0.78	596	2.70	2.11	0.78	632	2.62	2.05	0.78	646	2.53	1.97	0.78	675
27	22	2.93	1.94	0.66	618	2.83	1.87	0.66	657	2.76	1.82	0.66	675	2.65	1.75	0.66	703
27	24	3.08	1.66	0.54	646	2.97	1.60	0.54	682	2.90	1.56	0.54	703	2.81	1.52	0.54	738
27	26	3.17	1.33	0.42	682	3.08	1.29	0.42	717	3.04	1.28	0.42	738	2.94	1.24	0.42	760
28	18	2.70	2.54	0.94	568	2.59	2.43	0.94	596	2.48	2.33	0.94	625	2.39	2.25	0.94	653
28	20	2.82	2.31	0.82	596	2.70	2.22	0.82	632	2.62	2.15	0.82	646	2.53	2.07	0.82	675
28	22	2.93	2.05	0.70	618	2.83	1.98	0.70	657	2.76	1.93	0.70	675	2.65	1.85	0.70	703
28	24	3.08	1.79	0.58	646	2.97	1.72	0.58	682	2.90	1.68	0.58	703	2.81	1.63	0.58	738
28	26	3.17	1.46	0.46	682	3.08	1.42	0.46	717	3.04	1.40	0.46	738	2.94	1.35	0.46	760
29	18	2.70	2.65	0.98	568	2.59	2.54	0.98	596	2.48	2.43	0.98	625	2.39	2.34	0.98	653
29	20	2.82	2.42	0.86	596	2.70	2.32	0.86	632	2.62	2.25	0.86	646	2.53	2.18	0.86	675
29	22	2.93	2.17	0.74	618	2.83	2.09	0.74	657	2.76	2.04	0.74	675	2.65	1.96	0.74	703
29	24	3.08	1.91	0.62	646	2.97	1.84	0.62	682	2.90	1.80	0.62	703	2.81	1.74	0.62	738
29	26	3.17	1.59	0.50	682	3.08	1.54	0.50	717	3.04	1.52	0.50	738	2.94	1.47	0.50	760
30	18	2.70	2.70	1.00	568	2.59	2.59	1.00	596	2.48	2.48	1.00	625	2.39	2.39	1.00	653
30	20	2.82	2.54	0.90	596	2.70	2.43	0.90	632	2.62	2.36	0.90	646	2.53	2.28	0.90	675
30	22	2.93	2.29	0.78	618	2.83	2.21	0.78	657	2.76	2.15	0.78	675	2.65	2.06	0.78	703
30	24	3.08	2.03	0.66	646	2.97	1.96	0.66	682	2.90	1.91	0.66	703	2.81	1.85	0.66	738
30	26	3.17	1.71	0.54	682	3.08	1.66	0.54	717	3.04	1.64	0.54	738	2.94	1.59	0.54	760
31	18	2.70	2.70	1.00	568	2.59	2.59	1.00	596	2.48	2.48	1.00	625	2.39	2.39	1.00	653
31	20	2.82	2.65	0.94	596	2.70	2.54	0.94	632	2.62	2.46	0.94	646	2.53	2.38	0.94	675
31	22	2.93	2.40	0.82	618	2.83	2.32	0.82	657	2.76	2.26	0.82	675	2.65	2.17	0.82	703
31	24	3.08	2.16	0.70	646	2.97	2.08	0.70	682	2.90	2.03	0.70	703	2.81	1.96	0.70	738
31	26	3.17	1.84	0.58	682	3.08	1.79	0.58	717	3.04	1.76	0.58	738	2.94	1.71	0.58	760
32	18	2.70	2.70	1.00	568	2.59	2.59	1.00	596	2.48	2.48	1.00	625	2.39	2.39	1.00	653
32	20	2.82	2.76	0.98	596	2.70	2.65	0.98	632	2.62	2.57	0.98	646	2.53	2.48	0.98	675
32	22	2.93	2.52	0.86	618	2.83	2.43	0.86	657	2.76	2.37	0.86	675	2.65	2.27	0.86	703
32	24	3.08	2.28	0.74	646	2.97	2.20	0.74	682	2.90	2.14	0.74	703	2.81	2.08	0.74	738
32	26	3.17	1.97	0.62	682	3.08	1.91	0.62	717	3.04	1.88	0.62	738	2.94	1.83	0.62	760

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF20VA

CAPACITY: 2.3 kW

SHF: 0.84

INPUT: 710 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.25	1.49	0.66	696	2.07	1.37	0.66	738	1.91	1.26	0.66	767
21	20	2.37	1.28	0.54	724	2.21	1.19	0.54	760	2.05	1.11	0.54	802
22	18	2.25	1.58	0.70	696	2.07	1.45	0.70	738	1.91	1.34	0.70	767
22	20	2.37	1.37	0.58	724	2.21	1.28	0.58	760	2.05	1.19	0.58	802
22	22	2.51	1.15	0.46	753	2.35	1.08	0.46	795	2.19	1.01	0.46	824
23	18	2.25	1.67	0.74	696	2.07	1.53	0.74	738	1.91	1.41	0.74	767
23	20	2.37	1.47	0.62	724	2.21	1.37	0.62	760	2.05	1.27	0.62	802
23	22	2.51	1.25	0.50	753	2.35	1.17	0.50	795	2.19	1.09	0.50	824
24	18	2.25	1.76	0.78	696	2.07	1.61	0.78	738	1.91	1.49	0.78	767
24	20	2.37	1.56	0.66	724	2.21	1.46	0.66	760	2.05	1.35	0.66	802
24	22	2.51	1.35	0.54	753	2.35	1.27	0.54	795	2.19	1.18	0.54	824
24	24	2.65	1.11	0.42	781	2.48	1.04	0.42	816	2.35	0.99	0.42	852
25	18	2.25	1.85	0.82	696	2.07	1.70	0.82	738	1.91	1.57	0.82	767
25	20	2.37	1.66	0.70	724	2.21	1.55	0.70	760	2.05	1.43	0.70	802
25	22	2.51	1.45	0.58	753	2.35	1.36	0.58	795	2.19	1.27	0.58	824
25	24	2.65	1.22	0.46	781	2.48	1.14	0.46	816	2.35	1.08	0.46	852
26	18	2.25	1.94	0.86	696	2.07	1.78	0.86	738	1.91	1.64	0.86	767
26	20	2.37	1.75	0.74	724	2.21	1.63	0.74	760	2.05	1.51	0.74	802
26	22	2.51	1.55	0.62	753	2.35	1.45	0.62	795	2.19	1.35	0.62	824
26	24	2.65	1.32	0.50	781	2.48	1.24	0.50	816	2.35	1.17	0.50	852
26	26	2.78	1.06	0.38	809	2.62	1.00	0.38	845	2.46	0.94	0.38	880
27	18	2.25	2.03	0.90	696	2.07	1.86	0.90	738	1.91	1.72	0.90	767
27	20	2.37	1.85	0.78	724	2.21	1.72	0.78	760	2.05	1.60	0.78	802
27	22	2.51	1.65	0.66	753	2.35	1.55	0.66	795	2.19	1.44	0.66	824
27	24	2.65	1.43	0.54	781	2.48	1.34	0.54	816	2.35	1.27	0.54	852
27	26	2.78	1.17	0.42	809	2.62	1.10	0.42	845	2.46	1.03	0.42	880
28	18	2.25	2.12	0.94	696	2.07	1.95	0.94	738	1.91	1.79	0.94	767
28	20	2.37	1.94	0.82	724	2.21	1.81	0.82	760	2.05	1.68	0.82	802
28	22	2.51	1.75	0.70	753	2.35	1.64	0.70	795	2.19	1.53	0.70	824
28	24	2.65	1.53	0.58	781	2.48	1.44	0.58	816	2.35	1.36	0.58	852
28	26	2.78	1.28	0.46	809	2.62	1.21	0.46	845	2.46	1.13	0.46	880
29	18	2.25	2.21	0.98	696	2.07	2.03	0.98	738	1.91	1.87	0.98	767
29	20	2.37	2.04	0.86	724	2.21	1.90	0.86	760	2.05	1.76	0.86	802
29	22	2.51	1.86	0.74	753	2.35	1.74	0.74	795	2.19	1.62	0.74	824
29	24	2.65	1.64	0.62	781	2.48	1.54	0.62	816	2.35	1.45	0.62	852
29	26	2.78	1.39	0.50	809	2.62	1.31	0.50	845	2.46	1.23	0.50	880
30	18	2.25	2.25	1.00	696	2.07	2.07	1.00	738	1.91	1.91	1.00	767
30	20	2.37	2.13	0.90	724	2.21	1.99	0.90	760	2.05	1.84	0.90	802
30	22	2.51	1.96	0.78	753	2.35	1.83	0.78	795	2.19	1.70	0.78	824
30	24	2.65	1.75	0.66	781	2.48	1.64	0.66	816	2.35	1.55	0.66	852
30	26	2.78	1.50	0.54	809	2.62	1.42	0.54	845	2.46	1.33	0.54	880
31	18	2.25	2.25	1.00	696	2.07	2.07	1.00	738	1.91	1.91	1.00	767
31	20	2.37	2.23	0.94	724	2.21	2.08	0.94	760	2.05	1.92	0.94	802
31	22	2.51	2.06	0.82	753	2.35	1.92	0.82	795	2.19	1.79	0.82	824
31	24	2.65	1.85	0.70	781	2.48	1.74	0.70	816	2.35	1.64	0.70	852
31	26	2.78	1.61	0.58	809	2.62	1.52	0.58	845	2.46	1.43	0.58	880
32	18	2.25	2.25	1.00	696	2.07	2.07	1.00	738	1.91	1.91	1.00	767
32	20	2.37	2.32	0.98	724	2.21	2.16	0.98	760	2.05	2.01	0.98	802
32	22	2.51	2.16	0.86	753	2.35	2.02	0.86	795	2.19	1.88	0.86	824
32	24	2.65	1.96	0.74	781	2.48	1.84	0.74	816	2.35	1.74	0.74	852
32	26	2.78	1.73	0.62	809	2.62	1.63	0.62	845	2.46	1.53	0.62	880

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF25VA

CAPACITY: 2.5 kW

SHF: 0.81

INPUT: 775 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.94	1.85	0.63	620	2.81	1.77	0.63	651	2.70	1.70	0.63	682	2.60	1.64	0.63	713
21	20	3.06	1.56	0.51	651	2.94	1.50	0.51	690	2.85	1.45	0.51	705	2.75	1.40	0.51	736
22	18	2.94	1.97	0.67	620	2.81	1.88	0.67	651	2.70	1.81	0.67	682	2.60	1.74	0.67	713
22	20	3.06	1.68	0.55	651	2.94	1.62	0.55	690	2.85	1.57	0.55	705	2.75	1.51	0.55	736
22	22	3.19	1.37	0.43	674	3.08	1.32	0.43	717	3.00	1.29	0.43	736	2.88	1.24	0.43	767
23	18	2.94	2.09	0.71	620	2.81	2.00	0.71	651	2.70	1.92	0.71	682	2.60	1.85	0.71	713
23	20	3.06	1.81	0.59	651	2.94	1.73	0.59	690	2.85	1.68	0.59	705	2.75	1.62	0.59	736
23	22	3.19	1.50	0.47	674	3.08	1.45	0.47	717	3.00	1.41	0.47	736	2.88	1.35	0.47	767
24	18	2.94	2.20	0.75	620	2.81	2.11	0.75	651	2.70	2.03	0.75	682	2.60	1.95	0.75	713
24	20	3.06	1.93	0.63	651	2.94	1.85	0.63	690	2.85	1.80	0.63	705	2.75	1.73	0.63	736
24	22	3.19	1.63	0.51	674	3.08	1.57	0.51	717	3.00	1.53	0.51	736	2.88	1.47	0.51	767
24	24	3.35	1.31	0.39	705	3.23	1.26	0.39	744	3.15	1.23	0.39	767	3.05	1.19	0.39	806
25	18	2.94	2.32	0.79	620	2.81	2.22	0.79	651	2.70	2.13	0.79	682	2.60	2.05	0.79	713
25	20	3.06	2.05	0.67	651	2.94	1.97	0.67	690	2.85	1.91	0.67	705	2.75	1.84	0.67	736
25	22	3.19	1.75	0.55	674	3.08	1.69	0.55	717	3.00	1.65	0.55	736	2.88	1.58	0.55	767
25	24	3.35	1.44	0.43	705	3.23	1.39	0.43	744	3.15	1.35	0.43	767	3.05	1.31	0.43	806
26	18	2.94	2.44	0.83	620	2.81	2.33	0.83	651	2.70	2.24	0.83	682	2.60	2.16	0.83	713
26	20	3.06	2.17	0.71	651	2.94	2.09	0.71	690	2.85	2.02	0.71	705	2.75	1.95	0.71	736
26	22	3.19	1.88	0.59	674	3.08	1.81	0.59	717	3.00	1.77	0.59	736	2.88	1.70	0.59	767
26	24	3.35	1.57	0.47	705	3.23	1.52	0.47	744	3.15	1.48	0.47	767	3.05	1.43	0.47	806
26	26	3.45	1.21	0.35	744	3.35	1.17	0.35	783	3.30	1.16	0.35	806	3.20	1.12	0.35	829
27	18	2.94	2.56	0.87	620	2.81	2.45	0.87	651	2.70	2.35	0.87	682	2.60	2.26	0.87	713
27	20	3.06	2.30	0.75	651	2.94	2.20	0.75	690	2.85	2.14	0.75	705	2.75	2.06	0.75	736
27	22	3.19	2.01	0.63	674	3.08	1.94	0.63	717	3.00	1.89	0.63	736	2.88	1.81	0.63	767
27	24	3.35	1.71	0.51	705	3.23	1.64	0.51	744	3.15	1.61	0.51	767	3.05	1.56	0.51	806
27	26	3.45	1.35	0.39	744	3.35	1.31	0.39	783	3.30	1.29	0.39	806	3.20	1.25	0.39	829
28	18	2.94	2.67	0.91	620	2.81	2.56	0.91	651	2.70	2.46	0.91	682	2.60	2.37	0.91	713
28	20	3.06	2.42	0.79	651	2.94	2.32	0.79	690	2.85	2.25	0.79	705	2.75	2.17	0.79	736
28	22	3.19	2.14	0.67	674	3.08	2.06	0.67	717	3.00	2.01	0.67	736	2.88	1.93	0.67	767
28	24	3.35	1.84	0.55	705	3.23	1.77	0.55	744	3.15	1.73	0.55	767	3.05	1.68	0.55	806
28	26	3.45	1.48	0.43	744	3.35	1.44	0.43	783	3.30	1.42	0.43	806	3.20	1.38	0.43	829
29	18	2.94	2.79	0.95	620	2.81	2.67	0.95	651	2.70	2.57	0.95	682	2.60	2.47	0.95	713
29	20	3.06	2.54	0.83	651	2.94	2.44	0.83	690	2.85	2.37	0.83	705	2.75	2.28	0.83	736
29	22	3.19	2.26	0.71	674	3.08	2.18	0.71	717	3.00	2.13	0.71	736	2.88	2.04	0.71	767
29	24	3.35	1.98	0.59	705	3.23	1.90	0.59	744	3.15	1.86	0.59	767	3.05	1.80	0.59	806
29	26	3.45	1.62	0.47	744	3.35	1.57	0.47	783	3.30	1.55	0.47	806	3.20	1.50	0.47	829
30	18	2.94	2.91	0.99	620	2.81	2.78	0.99	651	2.70	2.67	0.99	682	2.60	2.57	0.99	713
30	20	3.06	2.66	0.87	651	2.94	2.56	0.87	690	2.85	2.48	0.87	705	2.75	2.39	0.87	736
30	22	3.19	2.39	0.75	674	3.08	2.31	0.75	717	3.00	2.25	0.75	736	2.88	2.16	0.75	767
30	24	3.35	2.11	0.63	705	3.23	2.03	0.63	744	3.15	1.98	0.63	767	3.05	1.92	0.63	806
30	26	3.45	1.76	0.51	744	3.35	1.71	0.51	783	3.30	1.68	0.51	806	3.20	1.63	0.51	829
31	18	2.94	2.94	1.00	620	2.81	2.81	1.00	651	2.70	2.70	1.00	682	2.60	2.60	1.00	713
31	20	3.06	2.79	0.91	651	2.94	2.67	0.91	690	2.85	2.59	0.91	705	2.75	2.50	0.91	736
31	22	3.19	2.52	0.79	674	3.08	2.43	0.79	717	3.00	2.37	0.79	736	2.88	2.27	0.79	767
31	24	3.35	2.24	0.67	705	3.23	2.16	0.67	744	3.15	2.11	0.67	767	3.05	2.04	0.67	806
31	26	3.45	1.90	0.55	744	3.35	1.84	0.55	783	3.30	1.82	0.55	806	3.20	1.76	0.55	829
32	18	2.94	2.94	1.00	620	2.81	2.81	1.00	651	2.70	2.70	1.00	682	2.60	2.60	1.00	713
32	20	3.06	2.91	0.95	651	2.94	2.79	0.95	690	2.85	2.71	0.95	705	2.75	2.61	0.95	736
32	22	3.19	2.65	0.83	674	3.08	2.55	0.83	717	3.00	2.49	0.83	736	2.88	2.39	0.83	767
32	24	3.35	2.38	0.71	705	3.23	2.29	0.71	744	3.15	2.24	0.71	767	3.05	2.17	0.71	806
32	26	3.45	2.04	0.59	744	3.35	1.98	0.59	783	3.30	1.95	0.59	806	3.20	1.89	0.59	829

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF25VA

CAPACITY: 2.5 kW

SHF: 0.81

INPUT: 775 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.45	1.54	0.63	760	2.25	1.42	0.63	806	2.08	1.31	0.63	837
21	20	2.58	1.31	0.51	791	2.40	1.22	0.51	829	2.23	1.13	0.51	876
22	18	2.45	1.64	0.67	760	2.25	1.51	0.67	806	2.08	1.39	0.67	837
22	20	2.58	1.42	0.55	791	2.40	1.32	0.55	829	2.23	1.22	0.55	876
22	22	2.73	1.17	0.43	822	2.55	1.10	0.43	868	2.38	1.02	0.43	899
23	18	2.45	1.74	0.71	760	2.25	1.60	0.71	806	2.08	1.47	0.71	837
23	20	2.58	1.52	0.59	791	2.40	1.42	0.59	829	2.23	1.31	0.59	876
23	22	2.73	1.28	0.47	822	2.55	1.20	0.47	868	2.38	1.12	0.47	899
24	18	2.45	1.84	0.75	760	2.25	1.69	0.75	806	2.08	1.56	0.75	837
24	20	2.58	1.62	0.63	791	2.40	1.51	0.63	829	2.23	1.40	0.63	876
24	22	2.73	1.39	0.51	822	2.55	1.30	0.51	868	2.38	1.21	0.51	899
24	24	2.88	1.12	0.39	853	2.70	1.05	0.39	891	2.55	0.99	0.39	930
25	18	2.45	1.94	0.79	760	2.25	1.78	0.79	806	2.08	1.64	0.79	837
25	20	2.58	1.73	0.67	791	2.40	1.61	0.67	829	2.23	1.49	0.67	876
25	22	2.73	1.50	0.55	822	2.55	1.40	0.55	868	2.38	1.31	0.55	899
25	24	2.88	1.24	0.43	853	2.70	1.16	0.43	891	2.55	1.10	0.43	930
26	18	2.45	2.03	0.83	760	2.25	1.87	0.83	806	2.08	1.72	0.83	837
26	20	2.58	1.83	0.71	791	2.40	1.70	0.71	829	2.23	1.58	0.71	876
26	22	2.73	1.61	0.59	822	2.55	1.50	0.59	868	2.38	1.40	0.59	899
26	24	2.88	1.35	0.47	853	2.70	1.27	0.47	891	2.55	1.20	0.47	930
26	26	3.03	1.06	0.35	883	2.85	1.00	0.35	922	2.68	0.94	0.35	961
27	18	2.45	2.13	0.87	760	2.25	1.96	0.87	806	2.08	1.81	0.87	837
27	20	2.58	1.93	0.75	791	2.40	1.80	0.75	829	2.23	1.67	0.75	876
27	22	2.73	1.72	0.63	822	2.55	1.61	0.63	868	2.38	1.50	0.63	899
27	24	2.88	1.47	0.51	853	2.70	1.38	0.51	891	2.55	1.30	0.51	930
27	26	3.03	1.18	0.39	883	2.85	1.11	0.39	922	2.68	1.04	0.39	961
28	18	2.45	2.23	0.91	760	2.25	2.05	0.91	806	2.08	1.89	0.91	837
28	20	2.58	2.03	0.79	791	2.40	1.90	0.79	829	2.23	1.76	0.79	876
28	22	2.73	1.83	0.67	822	2.55	1.71	0.67	868	2.38	1.59	0.67	899
28	24	2.88	1.58	0.55	853	2.70	1.49	0.55	891	2.55	1.40	0.55	930
28	26	3.03	1.30	0.43	883	2.85	1.23	0.43	922	2.68	1.15	0.43	961
29	18	2.45	2.33	0.95	760	2.25	2.14	0.95	806	2.08	1.97	0.95	837
29	20	2.58	2.14	0.83	791	2.40	1.99	0.83	829	2.23	1.85	0.83	876
29	22	2.73	1.93	0.71	822	2.55	1.81	0.71	868	2.38	1.69	0.71	899
29	24	2.88	1.70	0.59	853	2.70	1.59	0.59	891	2.55	1.50	0.59	930
29	26	3.03	1.42	0.47	883	2.85	1.34	0.47	922	2.68	1.26	0.47	961
30	18	2.45	2.43	0.99	760	2.25	2.23	0.99	806	2.08	2.05	0.99	837
30	20	2.58	2.24	0.87	791	2.40	2.09	0.87	829	2.23	1.94	0.87	876
30	22	2.73	2.04	0.75	822	2.55	1.91	0.75	868	2.38	1.78	0.75	899
30	24	2.88	1.81	0.63	853	2.70	1.70	0.63	891	2.55	1.61	0.63	930
30	26	3.03	1.54	0.51	883	2.85	1.45	0.51	922	2.68	1.36	0.51	961
31	18	2.45	2.45	1.00	760	2.25	2.25	1.00	806	2.08	2.08	1.00	837
31	20	2.58	2.34	0.91	791	2.40	2.18	0.91	829	2.23	2.02	0.91	876
31	22	2.73	2.15	0.79	822	2.55	2.01	0.79	868	2.38	1.88	0.79	899
31	24	2.88	1.93	0.67	853	2.70	1.81	0.67	891	2.55	1.71	0.67	930
31	26	3.03	1.66	0.55	883	2.85	1.57	0.55	922	2.68	1.47	0.55	961
32	18	2.45	2.45	1.00	760	2.25	2.25	1.00	806	2.08	2.08	1.00	837
32	20	2.58	2.45	0.95	791	2.40	2.28	0.95	829	2.23	2.11	0.95	876
32	22	2.73	2.26	0.83	822	2.55	2.12	0.83	868	2.38	1.97	0.83	899
32	24	2.88	2.04	0.71	853	2.70	1.92	0.71	891	2.55	1.81	0.71	930
32	26	3.03	1.78	0.59	883	2.85	1.68	0.59	922	2.68	1.58	0.59	961

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF35VA

CAPACITY: 3.45 kW

SHF: 0.74

INPUT: 1120 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.05	2.27	0.56	896	3.88	2.17	0.56	941	3.73	2.09	0.56	986	3.59	2.01	0.56	1030
21	20	4.23	1.86	0.44	941	4.05	1.78	0.44	997	3.93	1.73	0.44	1019	3.80	1.67	0.44	1064
22	18	4.05	2.43	0.60	896	3.88	2.33	0.60	941	3.73	2.24	0.60	986	3.59	2.15	0.60	1030
22	20	4.23	2.03	0.48	941	4.05	1.95	0.48	997	3.93	1.89	0.48	1019	3.80	1.82	0.48	1064
22	22	4.40	1.58	0.36	974	4.24	1.53	0.36	1036	4.14	1.49	0.36	1064	3.97	1.43	0.36	1109
23	18	4.05	2.59	0.64	896	3.88	2.48	0.64	941	3.73	2.38	0.64	986	3.59	2.30	0.64	1030
23	20	4.23	2.20	0.52	941	4.05	2.11	0.52	997	3.93	2.05	0.52	1019	3.80	1.97	0.52	1064
23	22	4.40	1.76	0.40	974	4.24	1.70	0.40	1036	4.14	1.66	0.40	1064	3.97	1.59	0.40	1109
24	18	4.05	2.76	0.68	896	3.88	2.64	0.68	941	3.73	2.53	0.68	986	3.59	2.44	0.68	1030
24	20	4.23	2.37	0.56	941	4.05	2.27	0.56	997	3.93	2.20	0.56	1019	3.80	2.13	0.56	1064
24	22	4.40	1.94	0.44	974	4.24	1.87	0.44	1036	4.14	1.82	0.44	1064	3.97	1.75	0.44	1109
24	24	4.62	1.48	0.32	1019	4.45	1.42	0.32	1075	4.35	1.39	0.32	1109	4.21	1.35	0.32	1165
25	18	4.05	2.92	0.72	896	3.88	2.79	0.72	941	3.73	2.68	0.72	986	3.59	2.58	0.72	1030
25	20	4.23	2.54	0.60	941	4.05	2.43	0.60	997	3.93	2.36	0.60	1019	3.80	2.28	0.60	1064
25	22	4.40	2.11	0.48	974	4.24	2.04	0.48	1036	4.14	1.99	0.48	1064	3.97	1.90	0.48	1109
25	24	4.62	1.66	0.36	1019	4.45	1.60	0.36	1075	4.35	1.56	0.36	1109	4.21	1.52	0.36	1165
26	18	4.05	3.08	0.76	896	3.88	2.95	0.76	941	3.73	2.83	0.76	986	3.59	2.73	0.76	1030
26	20	4.23	2.70	0.64	941	4.05	2.59	0.64	997	3.93	2.52	0.64	1019	3.80	2.43	0.64	1064
26	22	4.40	2.29	0.52	974	4.24	2.21	0.52	1036	4.14	2.15	0.52	1064	3.97	2.06	0.52	1109
26	24	4.62	1.85	0.40	1019	4.45	1.78	0.40	1075	4.35	1.74	0.40	1109	4.21	1.68	0.40	1165
26	26	4.76	1.33	0.28	1075	4.62	1.29	0.28	1131	4.55	1.28	0.28	1165	4.42	1.24	0.28	1198
27	18	4.05	3.24	0.80	896	3.88	3.11	0.80	941	3.73	2.98	0.80	986	3.59	2.87	0.80	1030
27	20	4.23	2.87	0.68	941	4.05	2.76	0.68	997	3.93	2.67	0.68	1019	3.80	2.58	0.68	1064
27	22	4.40	2.46	0.56	974	4.24	2.38	0.56	1036	4.14	2.32	0.56	1064	3.97	2.22	0.56	1109
27	24	4.62	2.03	0.44	1019	4.45	1.96	0.44	1075	4.35	1.91	0.44	1109	4.21	1.85	0.44	1165
27	26	4.76	1.52	0.32	1075	4.62	1.48	0.32	1131	4.55	1.46	0.32	1165	4.42	1.41	0.32	1198
28	18	4.05	3.41	0.84	896	3.88	3.26	0.84	941	3.73	3.13	0.84	986	3.59	3.01	0.84	1030
28	20	4.23	3.04	0.72	941	4.05	2.92	0.72	997	3.93	2.83	0.72	1019	3.80	2.73	0.72	1064
28	22	4.40	2.64	0.60	974	4.24	2.55	0.60	1036	4.14	2.48	0.60	1064	3.97	2.38	0.60	1109
28	24	4.62	2.22	0.48	1019	4.45	2.14	0.48	1075	4.35	2.09	0.48	1109	4.21	2.02	0.48	1165
28	26	4.76	1.71	0.36	1075	4.62	1.66	0.36	1131	4.55	1.64	0.36	1165	4.42	1.59	0.36	1198
29	18	4.05	3.57	0.88	896	3.88	3.42	0.88	941	3.73	3.28	0.88	986	3.59	3.16	0.88	1030
29	20	4.23	3.21	0.76	941	4.05	3.08	0.76	997	3.93	2.99	0.76	1019	3.80	2.88	0.76	1064
29	22	4.40	2.82	0.64	974	4.24	2.72	0.64	1036	4.14	2.65	0.64	1064	3.97	2.54	0.64	1109
29	24	4.62	2.40	0.52	1019	4.45	2.31	0.52	1075	4.35	2.26	0.52	1109	4.21	2.19	0.52	1165
29	26	4.76	1.90	0.40	1075	4.62	1.85	0.40	1131	4.55	1.82	0.40	1165	4.42	1.77	0.40	1198
30	18	4.05	3.73	0.92	896	3.88	3.57	0.92	941	3.73	3.43	0.92	986	3.59	3.30	0.92	1030
30	20	4.23	3.38	0.80	941	4.05	3.24	0.80	997	3.93	3.15	0.80	1019	3.80	3.04	0.80	1064
30	22	4.40	2.99	0.68	974	4.24	2.89	0.68	1036	4.14	2.82	0.68	1064	3.97	2.70	0.68	1109
30	24	4.62	2.59	0.56	1019	4.45	2.49	0.56	1075	4.35	2.43	0.56	1109	4.21	2.36	0.56	1165
30	26	4.76	2.09	0.44	1075	4.62	2.03	0.44	1131	4.55	2.00	0.44	1165	4.42	1.94	0.44	1198
31	18	4.05	3.89	0.96	896	3.88	3.73	0.96	941	3.73	3.58	0.96	986	3.59	3.44	0.96	1030
31	20	4.23	3.55	0.84	941	4.05	3.41	0.84	997	3.93	3.30	0.84	1019	3.80	3.19	0.84	1064
31	22	4.40	3.17	0.72	974	4.24	3.06	0.72	1036	4.14	2.98	0.72	1064	3.97	2.86	0.72	1109
31	24	4.62	2.77	0.60	1019	4.45	2.67	0.60	1075	4.35	2.61	0.60	1109	4.21	2.53	0.60	1165
31	26	4.76	2.29	0.48	1075	4.62	2.22	0.48	1131	4.55	2.19	0.48	1165	4.42	2.12	0.48	1198
32	18	4.05	4.05	1.00	896	3.88	3.88	1.00	941	3.73	3.73	1.00	986	3.59	3.59	1.00	1030
32	20	4.23	3.72	0.88	941	4.05	3.57	0.88	997	3.93	3.46	0.88	1019	3.80	3.34	0.88	1064
32	22	4.40	3.34	0.76	974	4.24	3.23	0.76	1036	4.14	3.15	0.76	1064	3.97	3.02	0.76	1109
32	24	4.62	2.96	0.64	1019	4.45	2.85	0.64	1075	4.35	2.78	0.64	1109	4.21	2.69	0.64	1165
32	26	4.76	2.48	0.52	1075	4.62	2.40	0.52	1131	4.55	2.37	0.52	1165	4.42	2.30	0.52	1198

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF35VA

CAPACITY: 3.45 kW

SHF: 0.74

INPUT: 1120 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.38	1.89	0.56	1098	3.11	1.74	0.56	1165	2.86	1.60	0.56	1210
21	20	3.55	1.56	0.44	1142	3.31	1.46	0.44	1198	3.07	1.35	0.44	1266
22	18	3.38	2.03	0.60	1098	3.11	1.86	0.60	1165	2.86	1.72	0.60	1210
22	20	3.55	1.71	0.48	1142	3.31	1.59	0.48	1198	3.07	1.47	0.48	1266
22	22	3.76	1.35	0.36	1187	3.52	1.27	0.36	1254	3.28	1.18	0.36	1299
23	18	3.38	2.16	0.64	1098	3.11	1.99	0.64	1165	2.86	1.83	0.64	1210
23	20	3.55	1.85	0.52	1142	3.31	1.72	0.52	1198	3.07	1.60	0.52	1266
23	22	3.76	1.50	0.40	1187	3.52	1.41	0.40	1254	3.28	1.31	0.40	1299
24	18	3.38	2.30	0.68	1098	3.11	2.11	0.68	1165	2.86	1.95	0.68	1210
24	20	3.55	1.99	0.56	1142	3.31	1.85	0.56	1198	3.07	1.72	0.56	1266
24	22	3.76	1.65	0.44	1187	3.52	1.55	0.44	1254	3.28	1.44	0.44	1299
24	24	3.97	1.27	0.32	1232	3.73	1.19	0.32	1288	3.52	1.13	0.32	1344
25	18	3.38	2.43	0.72	1098	3.11	2.24	0.72	1165	2.86	2.06	0.72	1210
25	20	3.55	2.13	0.60	1142	3.31	1.99	0.60	1198	3.07	1.84	0.60	1266
25	22	3.76	1.81	0.48	1187	3.52	1.69	0.48	1254	3.28	1.57	0.48	1299
25	24	3.97	1.43	0.36	1232	3.73	1.34	0.36	1288	3.52	1.27	0.36	1344
26	18	3.38	2.57	0.76	1098	3.11	2.36	0.76	1165	2.86	2.18	0.76	1210
26	20	3.55	2.27	0.64	1142	3.31	2.12	0.64	1198	3.07	1.97	0.64	1266
26	22	3.76	1.96	0.52	1187	3.52	1.83	0.52	1254	3.28	1.70	0.52	1299
26	24	3.97	1.59	0.40	1232	3.73	1.49	0.40	1288	3.52	1.41	0.40	1344
26	26	4.17	1.17	0.28	1277	3.93	1.10	0.28	1333	3.69	1.03	0.28	1389
27	18	3.38	2.70	0.80	1098	3.11	2.48	0.80	1165	2.86	2.29	0.80	1210
27	20	3.55	2.42	0.68	1142	3.31	2.25	0.68	1198	3.07	2.09	0.68	1266
27	22	3.76	2.11	0.56	1187	3.52	1.97	0.56	1254	3.28	1.84	0.56	1299
27	24	3.97	1.75	0.44	1232	3.73	1.64	0.44	1288	3.52	1.55	0.44	1344
27	26	4.17	1.34	0.32	1277	3.93	1.26	0.32	1333	3.69	1.18	0.32	1389
28	18	3.38	2.84	0.84	1098	3.11	2.61	0.84	1165	2.86	2.41	0.84	1210
28	20	3.55	2.56	0.72	1142	3.31	2.38	0.72	1198	3.07	2.21	0.72	1266
28	22	3.76	2.26	0.60	1187	3.52	2.11	0.60	1254	3.28	1.97	0.60	1299
28	24	3.97	1.90	0.48	1232	3.73	1.79	0.48	1288	3.52	1.69	0.48	1344
28	26	4.17	1.50	0.36	1277	3.93	1.42	0.36	1333	3.69	1.33	0.36	1389
29	18	3.38	2.98	0.88	1098	3.11	2.73	0.88	1165	2.86	2.52	0.88	1210
29	20	3.55	2.70	0.76	1142	3.31	2.52	0.76	1198	3.07	2.33	0.76	1266
29	22	3.76	2.41	0.64	1187	3.52	2.25	0.64	1254	3.28	2.10	0.64	1299
29	24	3.97	2.06	0.52	1232	3.73	1.94	0.52	1288	3.52	1.83	0.52	1344
29	26	4.17	1.67	0.40	1277	3.93	1.57	0.40	1333	3.69	1.48	0.40	1389
30	18	3.38	3.11	0.92	1098	3.11	2.86	0.92	1165	2.86	2.63	0.92	1210
30	20	3.55	2.84	0.80	1142	3.31	2.65	0.80	1198	3.07	2.46	0.80	1266
30	22	3.76	2.56	0.68	1187	3.52	2.39	0.68	1254	3.28	2.23	0.68	1299
30	24	3.97	2.22	0.56	1232	3.73	2.09	0.56	1288	3.52	1.97	0.56	1344
30	26	4.17	1.84	0.44	1277	3.93	1.73	0.44	1333	3.69	1.62	0.44	1389
31	18	3.38	3.25	0.96	1098	3.11	2.98	0.96	1165	2.86	2.75	0.96	1210
31	20	3.55	2.98	0.84	1142	3.31	2.78	0.84	1198	3.07	2.58	0.84	1266
31	22	3.76	2.71	0.72	1187	3.52	2.53	0.72	1254	3.28	2.36	0.72	1299
31	24	3.97	2.38	0.60	1232	3.73	2.24	0.60	1288	3.52	2.11	0.60	1344
31	26	4.17	2.00	0.48	1277	3.93	1.89	0.48	1333	3.69	1.77	0.48	1389
32	18	3.38	3.38	1.00	1098	3.11	3.11	1.00	1165	2.86	2.86	1.00	1210
32	20	3.55	3.13	0.88	1142	3.31	2.91	0.88	1198	3.07	2.70	0.88	1266
32	22	3.76	2.86	0.76	1187	3.52	2.67	0.76	1254	3.28	2.49	0.76	1299
32	24	3.97	2.54	0.64	1232	3.73	2.38	0.64	1288	3.52	2.25	0.64	1344
32	26	4.17	2.17	0.52	1277	3.93	2.05	0.52	1333	3.69	1.92	0.52	1389

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF50VA

CAPACITY: 4.85 kW

SHF: 0.81

INPUT: 1480 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	5.70	3.59	0.63	1184	5.46	3.44	0.63	1243	5.24	3.30	0.63	1302	5.04	3.18	0.63	1362
21	20	5.94	3.03	0.51	1243	5.70	2.91	0.51	1317	5.53	2.82	0.51	1347	5.34	2.72	0.51	1406
22	18	5.70	3.82	0.67	1184	5.46	3.66	0.67	1243	5.24	3.51	0.67	1302	5.04	3.38	0.67	1362
22	20	5.94	3.27	0.55	1243	5.70	3.13	0.55	1317	5.53	3.04	0.55	1347	5.34	2.93	0.55	1406
22	22	6.18	2.66	0.43	1288	5.97	2.57	0.43	1369	5.82	2.50	0.43	1406	5.58	2.40	0.43	1465
23	18	5.70	4.05	0.71	1184	5.46	3.87	0.71	1243	5.24	3.72	0.71	1302	5.04	3.58	0.71	1362
23	20	5.94	3.51	0.59	1243	5.70	3.36	0.59	1317	5.53	3.26	0.59	1347	5.34	3.15	0.59	1406
23	22	6.18	2.91	0.47	1288	5.97	2.80	0.47	1369	5.82	2.74	0.47	1406	5.58	2.62	0.47	1465
24	18	5.70	4.27	0.75	1184	5.46	4.09	0.75	1243	5.24	3.93	0.75	1302	5.04	3.78	0.75	1362
24	20	5.94	3.74	0.63	1243	5.70	3.59	0.63	1317	5.53	3.48	0.63	1347	5.34	3.36	0.63	1406
24	22	6.18	3.15	0.51	1288	5.97	3.04	0.51	1369	5.82	2.97	0.51	1406	5.58	2.84	0.51	1465
24	24	6.50	2.53	0.39	1347	6.26	2.44	0.39	1421	6.11	2.38	0.39	1465	5.92	2.31	0.39	1539
25	18	5.70	4.50	0.79	1184	5.46	4.31	0.79	1243	5.24	4.14	0.79	1302	5.04	3.98	0.79	1362
25	20	5.94	3.98	0.67	1243	5.70	3.82	0.67	1317	5.53	3.70	0.67	1347	5.34	3.57	0.67	1406
25	22	6.18	3.40	0.55	1288	5.97	3.28	0.55	1369	5.82	3.20	0.55	1406	5.58	3.07	0.55	1465
25	24	6.50	2.79	0.43	1347	6.26	2.69	0.43	1421	6.11	2.63	0.43	1465	5.92	2.54	0.43	1539
26	18	5.70	4.73	0.83	1184	5.46	4.53	0.83	1243	5.24	4.35	0.83	1302	5.04	4.19	0.83	1362
26	20	5.94	4.22	0.71	1243	5.70	4.05	0.71	1317	5.53	3.93	0.71	1347	5.34	3.79	0.71	1406
26	22	6.18	3.65	0.59	1288	5.97	3.52	0.59	1369	5.82	3.43	0.59	1406	5.58	3.29	0.59	1465
26	24	6.50	3.05	0.47	1347	6.26	2.94	0.47	1421	6.11	2.87	0.47	1465	5.92	2.78	0.47	1539
26	26	6.69	2.34	0.35	1421	6.50	2.27	0.35	1495	6.40	2.24	0.35	1539	6.21	2.17	0.35	1584
27	18	5.70	4.96	0.87	1184	5.46	4.75	0.87	1243	5.24	4.56	0.87	1302	5.04	4.39	0.87	1362
27	20	5.94	4.46	0.75	1243	5.70	4.27	0.75	1317	5.53	4.15	0.75	1347	5.34	4.00	0.75	1406
27	22	6.18	3.90	0.63	1288	5.97	3.76	0.63	1369	5.82	3.67	0.63	1406	5.58	3.51	0.63	1465
27	24	6.50	3.31	0.51	1347	6.26	3.19	0.51	1421	6.11	3.12	0.51	1465	5.92	3.02	0.51	1539
27	26	6.69	2.61	0.39	1421	6.50	2.53	0.39	1495	6.40	2.50	0.39	1539	6.21	2.42	0.39	1584
28	18	5.70	5.19	0.91	1184	5.46	4.97	0.91	1243	5.24	4.77	0.91	1302	5.04	4.59	0.91	1362
28	20	5.94	4.69	0.79	1243	5.70	4.50	0.79	1317	5.53	4.37	0.79	1347	5.34	4.21	0.79	1406
28	22	6.18	4.14	0.67	1288	5.97	4.00	0.67	1369	5.82	3.90	0.67	1406	5.58	3.74	0.67	1465
28	24	6.50	3.57	0.55	1347	6.26	3.44	0.55	1421	6.11	3.36	0.55	1465	5.92	3.25	0.55	1539
28	26	6.69	2.88	0.43	1421	6.50	2.79	0.43	1495	6.40	2.75	0.43	1539	6.21	2.67	0.43	1584
29	18	5.70	5.41	0.95	1184	5.46	5.18	0.95	1243	5.24	4.98	0.95	1302	5.04	4.79	0.95	1362
29	20	5.94	4.93	0.83	1243	5.70	4.73	0.83	1317	5.53	4.59	0.83	1347	5.34	4.43	0.83	1406
29	22	6.18	4.39	0.71	1288	5.97	4.24	0.71	1369	5.82	4.13	0.71	1406	5.58	3.96	0.71	1465
29	24	6.50	3.83	0.59	1347	6.26	3.69	0.59	1421	6.11	3.61	0.59	1465	5.92	3.49	0.59	1539
29	26	6.69	3.15	0.47	1421	6.50	3.05	0.47	1495	6.40	3.01	0.47	1539	6.21	2.92	0.47	1584
30	18	5.70	5.64	0.99	1184	5.46	5.40	0.99	1243	5.24	5.19	0.99	1302	5.04	4.99	0.99	1362
30	20	5.94	5.17	0.87	1243	5.70	4.96	0.87	1317	5.53	4.81	0.87	1347	5.34	4.64	0.87	1406
30	22	6.18	4.64	0.75	1288	5.97	4.47	0.75	1369	5.82	4.37	0.75	1406	5.58	4.18	0.75	1465
30	24	6.50	4.09	0.63	1347	6.26	3.94	0.63	1421	6.11	3.85	0.63	1465	5.92	3.73	0.63	1539
30	26	6.69	3.41	0.51	1421	6.50	3.31	0.51	1495	6.40	3.27	0.51	1539	6.21	3.17	0.51	1584
31	18	5.70	5.70	1.00	1184	5.46	5.46	1.00	1243	5.24	5.24	1.00	1302	5.04	5.04	1.00	1362
31	20	5.94	5.41	0.91	1243	5.70	5.19	0.91	1317	5.53	5.03	0.91	1347	5.34	4.85	0.91	1406
31	22	6.18	4.89	0.79	1288	5.97	4.71	0.79	1369	5.82	4.60	0.79	1406	5.58	4.41	0.79	1465
31	24	6.50	4.35	0.67	1347	6.26	4.19	0.67	1421	6.11	4.09	0.67	1465	5.92	3.96	0.67	1539
31	26	6.69	3.68	0.55	1421	6.50	3.57	0.55	1495	6.40	3.52	0.55	1539	6.21	3.41	0.55	1584
32	18	5.70	5.70	1.00	1184	5.46	5.46	1.00	1243	5.24	5.24	1.00	1302	5.04	5.04	1.00	1362
32	20	5.94	5.64	0.95	1243	5.70	5.41	0.95	1317	5.53	5.25	0.95	1347	5.34	5.07	0.95	1406
32	22	6.18	5.13	0.83	1288	5.97	4.95	0.83	1369	5.82	4.83	0.83	1406	5.58	4.63	0.83	1465
32	24	6.50	4.61	0.71	1347	6.26	4.44	0.71	1421	6.11	4.34	0.71	1465	5.92	4.20	0.71	1539
32	26	6.69	3.95	0.59	1421	6.50	3.83	0.59	1495	6.40	3.78	0.59	1539	6.21	3.66	0.59	1584

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF50VA

CAPACITY: 4.85 kW

SHF: 0.81

INPUT: 1480 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.75	2.99	0.63	1450	4.37	2.75	0.63	1539	4.03	2.54	0.63	1598
21	20	5.00	2.55	0.51	1510	4.66	2.37	0.51	1584	4.32	2.20	0.51	1672
22	18	4.75	3.18	0.67	1450	4.37	2.92	0.67	1539	4.03	2.70	0.67	1598
22	20	5.00	2.75	0.55	1510	4.66	2.56	0.55	1584	4.32	2.37	0.55	1672
22	22	5.29	2.27	0.43	1569	4.95	2.13	0.43	1658	4.61	1.98	0.43	1717
23	18	4.75	3.37	0.71	1450	4.37	3.10	0.71	1539	4.03	2.86	0.71	1598
23	20	5.00	2.95	0.59	1510	4.66	2.75	0.59	1584	4.32	2.55	0.59	1672
23	22	5.29	2.48	0.47	1569	4.95	2.33	0.47	1658	4.61	2.17	0.47	1717
24	18	4.75	3.56	0.75	1450	4.37	3.27	0.75	1539	4.03	3.02	0.75	1598
24	20	5.00	3.15	0.63	1510	4.66	2.93	0.63	1584	4.32	2.72	0.63	1672
24	22	5.29	2.70	0.51	1569	4.95	2.52	0.51	1658	4.61	2.35	0.51	1717
24	24	5.58	2.18	0.39	1628	5.24	2.04	0.39	1702	4.95	1.93	0.39	1776
25	18	4.75	3.75	0.79	1450	4.37	3.45	0.79	1539	4.03	3.18	0.79	1598
25	20	5.00	3.35	0.67	1510	4.66	3.12	0.67	1584	4.32	2.89	0.67	1672
25	22	5.29	2.91	0.55	1569	4.95	2.72	0.55	1658	4.61	2.53	0.55	1717
25	24	5.58	2.40	0.43	1628	5.24	2.25	0.43	1702	4.95	2.13	0.43	1776
26	18	4.75	3.94	0.83	1450	4.37	3.62	0.83	1539	4.03	3.34	0.83	1598
26	20	5.00	3.55	0.71	1510	4.66	3.31	0.71	1584	4.32	3.06	0.71	1672
26	22	5.29	3.12	0.59	1569	4.95	2.92	0.59	1658	4.61	2.72	0.59	1717
26	24	5.58	2.62	0.47	1628	5.24	2.46	0.47	1702	4.95	2.33	0.47	1776
26	26	5.87	2.05	0.35	1687	5.53	1.94	0.35	1761	5.19	1.82	0.35	1835
27	18	4.75	4.14	0.87	1450	4.37	3.80	0.87	1539	4.03	3.50	0.87	1598
27	20	5.00	3.75	0.75	1510	4.66	3.49	0.75	1584	4.32	3.24	0.75	1672
27	22	5.29	3.33	0.63	1569	4.95	3.12	0.63	1658	4.61	2.90	0.63	1717
27	24	5.58	2.84	0.51	1628	5.24	2.67	0.51	1702	4.95	2.52	0.51	1776
27	26	5.87	2.29	0.39	1687	5.53	2.16	0.39	1761	5.19	2.02	0.39	1835
28	18	4.75	4.33	0.91	1450	4.37	3.97	0.91	1539	4.03	3.66	0.91	1598
28	20	5.00	3.95	0.79	1510	4.66	3.68	0.79	1584	4.32	3.41	0.79	1672
28	22	5.29	3.54	0.67	1569	4.95	3.31	0.67	1658	4.61	3.09	0.67	1717
28	24	5.58	3.07	0.55	1628	5.24	2.88	0.55	1702	4.95	2.72	0.55	1776
28	26	5.87	2.52	0.43	1687	5.53	2.38	0.43	1761	5.19	2.23	0.43	1835
29	18	4.75	4.52	0.95	1450	4.37	4.15	0.95	1539	4.03	3.82	0.95	1598
29	20	5.00	4.15	0.83	1510	4.66	3.86	0.83	1584	4.32	3.58	0.83	1672
29	22	5.29	3.75	0.71	1569	4.95	3.51	0.71	1658	4.61	3.27	0.71	1717
29	24	5.58	3.29	0.59	1628	5.24	3.09	0.59	1702	4.95	2.92	0.59	1776
29	26	5.87	2.76	0.47	1687	5.53	2.60	0.47	1761	5.19	2.44	0.47	1835
30	18	4.75	4.71	0.99	1450	4.37	4.32	0.99	1539	4.03	3.99	0.99	1598
30	20	5.00	4.35	0.87	1510	4.66	4.05	0.87	1584	4.32	3.76	0.87	1672
30	22	5.29	3.96	0.75	1569	4.95	3.71	0.75	1658	4.61	3.46	0.75	1717
30	24	5.58	3.51	0.63	1628	5.24	3.30	0.63	1702	4.95	3.12	0.63	1776
30	26	5.87	2.99	0.51	1687	5.53	2.82	0.51	1761	5.19	2.65	0.51	1835
31	18	4.75	4.75	1.00	1450	4.37	4.37	1.00	1539	4.03	4.03	1.00	1598
31	20	5.00	4.55	0.91	1510	4.66	4.24	0.91	1584	4.32	3.93	0.91	1672
31	22	5.29	4.18	0.79	1569	4.95	3.91	0.79	1658	4.61	3.64	0.79	1717
31	24	5.58	3.74	0.67	1628	5.24	3.51	0.67	1702	4.95	3.31	0.67	1776
31	26	5.87	3.23	0.55	1687	5.53	3.04	0.55	1761	5.19	2.85	0.55	1835
32	18	4.75	4.75	1.00	1450	4.37	4.37	1.00	1539	4.03	4.03	1.00	1598
32	20	5.00	4.75	0.95	1510	4.66	4.42	0.95	1584	4.32	4.10	0.95	1672
32	22	5.29	4.39	0.83	1569	4.95	4.11	0.83	1658	4.61	3.82	0.83	1717
32	24	5.58	3.96	0.71	1628	5.24	3.72	0.71	1702	4.95	3.51	0.71	1776
32	26	5.87	3.46	0.59	1687	5.53	3.26	0.59	1761	5.19	3.06	0.59	1835

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF60VA

CAPACITY: 6.4 kW

SHF: 0.72

INPUT: 2170 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	7.52	4.06	0.54	1736	7.20	3.89	0.54	1823	6.91	3.73	0.54	1910	6.66	3.59	0.54	1996
21	20	7.84	3.29	0.42	1823	7.52	3.16	0.42	1931	7.30	3.06	0.42	1975	7.04	2.96	0.42	2062
22	18	7.52	4.36	0.58	1736	7.20	4.18	0.58	1823	6.91	4.01	0.58	1910	6.66	3.86	0.58	1996
22	20	7.84	3.61	0.46	1823	7.52	3.46	0.46	1931	7.30	3.36	0.46	1975	7.04	3.24	0.46	2062
22	22	8.16	2.77	0.34	1888	7.87	2.68	0.34	2007	7.68	2.61	0.34	2062	7.36	2.50	0.34	2148
23	18	7.52	4.66	0.62	1736	7.20	4.46	0.62	1823	6.91	4.29	0.62	1910	6.66	4.13	0.62	1996
23	20	7.84	3.92	0.50	1823	7.52	3.76	0.50	1931	7.30	3.65	0.50	1975	7.04	3.52	0.50	2062
23	22	8.16	3.10	0.38	1888	7.87	2.99	0.38	2007	7.68	2.92	0.38	2062	7.36	2.80	0.38	2148
24	18	7.52	4.96	0.66	1736	7.20	4.75	0.66	1823	6.91	4.56	0.66	1910	6.66	4.39	0.66	1996
24	20	7.84	4.23	0.54	1823	7.52	4.06	0.54	1931	7.30	3.94	0.54	1975	7.04	3.80	0.54	2062
24	22	8.16	3.43	0.42	1888	7.87	3.31	0.42	2007	7.68	3.23	0.42	2062	7.36	3.09	0.42	2148
24	24	8.58	2.57	0.30	1975	8.26	2.48	0.30	2083	8.06	2.42	0.30	2148	7.81	2.34	0.30	2257
25	18	7.52	5.26	0.70	1736	7.20	5.04	0.70	1823	6.91	4.84	0.70	1910	6.66	4.66	0.70	1996
25	20	7.84	4.55	0.58	1823	7.52	4.36	0.58	1931	7.30	4.23	0.58	1975	7.04	4.08	0.58	2062
25	22	8.16	3.75	0.46	1888	7.87	3.62	0.46	2007	7.68	3.53	0.46	2062	7.36	3.39	0.46	2148
25	24	8.58	2.92	0.34	1975	8.26	2.81	0.34	2083	8.06	2.74	0.34	2148	7.81	2.65	0.34	2257
26	18	7.52	5.56	0.74	1736	7.20	5.33	0.74	1823	6.91	5.11	0.74	1910	6.66	4.93	0.74	1996
26	20	7.84	4.86	0.62	1823	7.52	4.66	0.62	1931	7.30	4.52	0.62	1975	7.04	4.36	0.62	2062
26	22	8.16	4.08	0.50	1888	7.87	3.94	0.50	2007	7.68	3.84	0.50	2062	7.36	3.68	0.50	2148
26	24	8.58	3.26	0.38	1975	8.26	3.14	0.38	2083	8.06	3.06	0.38	2148	7.81	2.97	0.38	2257
26	26	8.83	2.30	0.26	2083	8.58	2.23	0.26	2192	8.45	2.20	0.26	2257	8.19	2.13	0.26	2322
27	18	7.52	5.87	0.78	1736	7.20	5.62	0.78	1823	6.91	5.39	0.78	1910	6.66	5.19	0.78	1996
27	20	7.84	5.17	0.66	1823	7.52	4.96	0.66	1931	7.30	4.82	0.66	1975	7.04	4.65	0.66	2062
27	22	8.16	4.41	0.54	1888	7.87	4.25	0.54	2007	7.68	4.15	0.54	2062	7.36	3.97	0.54	2148
27	24	8.58	3.60	0.42	1975	8.26	3.47	0.42	2083	8.06	3.39	0.42	2148	7.81	3.28	0.42	2257
27	26	8.83	2.65	0.30	2083	8.58	2.57	0.30	2192	8.45	2.53	0.30	2257	8.19	2.46	0.30	2322
28	18	7.52	6.17	0.82	1736	7.20	5.90	0.82	1823	6.91	5.67	0.82	1910	6.66	5.46	0.82	1996
28	20	7.84	5.49	0.70	1823	7.52	5.26	0.70	1931	7.30	5.11	0.70	1975	7.04	4.93	0.70	2062
28	22	8.16	4.73	0.58	1888	7.87	4.57	0.58	2007	7.68	4.45	0.58	2062	7.36	4.27	0.58	2148
28	24	8.58	3.94	0.46	1975	8.26	3.80	0.46	2083	8.06	3.71	0.46	2148	7.81	3.59	0.46	2257
28	26	8.83	3.00	0.34	2083	8.58	2.92	0.34	2192	8.45	2.87	0.34	2257	8.19	2.79	0.34	2322
29	18	7.52	6.47	0.86	1736	7.20	6.19	0.86	1823	6.91	5.94	0.86	1910	6.66	5.72	0.86	1996
29	20	7.84	5.80	0.74	1823	7.52	5.56	0.74	1931	7.30	5.40	0.74	1975	7.04	5.21	0.74	2062
29	22	8.16	5.06	0.62	1888	7.87	4.88	0.62	2007	7.68	4.76	0.62	2062	7.36	4.56	0.62	2148
29	24	8.58	4.29	0.50	1975	8.26	4.13	0.50	2083	8.06	4.03	0.50	2148	7.81	3.90	0.50	2257
29	26	8.83	3.36	0.38	2083	8.58	3.26	0.38	2192	8.45	3.21	0.38	2257	8.19	3.11	0.38	2322
30	18	7.52	6.77	0.90	1736	7.20	6.48	0.90	1823	6.91	6.22	0.90	1910	6.66	5.99	0.90	1996
30	20	7.84	6.12	0.78	1823	7.52	5.87	0.78	1931	7.30	5.69	0.78	1975	7.04	5.49	0.78	2062
30	22	8.16	5.39	0.66	1888	7.87	5.20	0.66	2007	7.68	5.07	0.66	2062	7.36	4.86	0.66	2148
30	24	8.58	4.63	0.54	1975	8.26	4.46	0.54	2083	8.06	4.35	0.54	2148	7.81	4.22	0.54	2257
30	26	8.83	3.71	0.42	2083	8.58	3.60	0.42	2192	8.45	3.55	0.42	2257	8.19	3.44	0.42	2322
31	18	7.52	7.07	0.94	1736	7.20	6.77	0.94	1823	6.91	6.50	0.94	1910	6.66	6.26	0.94	1996
31	20	7.84	6.43	0.82	1823	7.52	6.17	0.82	1931	7.30	5.98	0.82	1975	7.04	5.77	0.82	2062
31	22	8.16	5.71	0.70	1888	7.87	5.51	0.70	2007	7.68	5.38	0.70	2062	7.36	5.15	0.70	2148
31	24	8.58	4.97	0.58	1975	8.26	4.79	0.58	2083	8.06	4.68	0.58	2148	7.81	4.53	0.58	2257
31	26	8.83	4.06	0.46	2083	8.58	3.94	0.46	2192	8.45	3.89	0.46	2257	8.19	3.77	0.46	2322
32	18	7.52	7.37	0.98	1736	7.20	7.06	0.98	1823	6.91	6.77	0.98	1910	6.66	6.52	0.98	1996
32	20	7.84	6.74	0.86	1823	7.52	6.47	0.86	1931	7.30	6.27	0.86	1975	7.04	6.05	0.86	2062
32	22	8.16	6.04	0.74	1888	7.87	5.83	0.74	2007	7.68	5.68	0.74	2062	7.36	5.45	0.74	2148
32	24	8.58	5.32	0.62	1975	8.26	5.12	0.62	2083	8.06	5.00	0.62	2148	7.81	4.84	0.62	2257
32	26	8.83	4.42	0.50	2083	8.58	4.29	0.50	2192	8.45	4.22	0.50	2257	8.19	4.10	0.50	2322

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF60VA

CAPACITY: 6.4 kW

SHF: 0.72

INPUT: 2170 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	6.27	3.39	0.54	2127	5.76	3.11	0.54	2257	5.31	2.87	0.54	2344
21	20	6.59	2.77	0.42	2213	6.14	2.58	0.42	2322	5.70	2.39	0.42	2452
22	18	6.27	3.64	0.58	2127	5.76	3.34	0.58	2257	5.31	3.08	0.58	2344
22	20	6.59	3.03	0.46	2213	6.14	2.83	0.46	2322	5.70	2.62	0.46	2452
22	22	6.98	2.37	0.34	2300	6.53	2.22	0.34	2430	6.08	2.07	0.34	2517
23	18	6.27	3.89	0.62	2127	5.76	3.57	0.62	2257	5.31	3.29	0.62	2344
23	20	6.59	3.30	0.50	2213	6.14	3.07	0.50	2322	5.70	2.85	0.50	2452
23	22	6.98	2.65	0.38	2300	6.53	2.48	0.38	2430	6.08	2.31	0.38	2517
24	18	6.27	4.14	0.66	2127	5.76	3.80	0.66	2257	5.31	3.51	0.66	2344
24	20	6.59	3.56	0.54	2213	6.14	3.32	0.54	2322	5.70	3.08	0.54	2452
24	22	6.98	2.93	0.42	2300	6.53	2.74	0.42	2430	6.08	2.55	0.42	2517
24	24	7.36	2.21	0.30	2387	6.91	2.07	0.30	2496	6.53	1.96	0.30	2604
25	18	6.27	4.39	0.70	2127	5.76	4.03	0.70	2257	5.31	3.72	0.7	2344
25	20	6.59	3.82	0.58	2213	6.14	3.56	0.58	2322	5.70	3.30	0.58	2452
25	22	6.98	3.21	0.46	2300	6.53	3.00	0.46	2430	6.08	2.80	0.46	2517
25	24	7.36	2.50	0.34	2387	6.91	2.35	0.34	2496	6.53	2.22	0.34	2604
26	18	6.27	4.64	0.74	2127	5.76	4.26	0.74	2257	5.31	3.93	0.74	2344
26	20	6.59	4.09	0.62	2213	6.14	3.81	0.62	2322	5.70	3.53	0.62	2452
26	22	6.98	3.49	0.50	2300	6.53	3.26	0.50	2430	6.08	3.04	0.50	2517
26	24	7.36	2.80	0.38	2387	6.91	2.63	0.38	2496	6.53	2.48	0.38	2604
26	26	7.74	2.01	0.26	2474	7.30	1.90	0.26	2582	6.85	1.78	0.26	2691
27	18	6.27	4.89	0.78	2127	5.76	4.49	0.78	2257	5.31	4.14	0.78	2344
27	20	6.59	4.35	0.66	2213	6.14	4.06	0.66	2322	5.70	3.76	0.66	2452
27	22	6.98	3.77	0.54	2300	6.53	3.53	0.54	2430	6.08	3.28	0.54	2517
27	24	7.36	3.09	0.42	2387	6.91	2.90	0.42	2496	6.53	2.74	0.42	2604
27	26	7.74	2.32	0.30	2474	7.30	2.19	0.30	2582	6.85	2.05	0.30	2691
28	18	6.27	5.14	0.82	2127	5.76	4.72	0.82	2257	5.31	4.36	0.82	2344
28	20	6.59	4.61	0.70	2213	6.14	4.30	0.70	2322	5.70	3.99	0.70	2452
28	22	6.98	4.05	0.58	2300	6.53	3.79	0.58	2430	6.08	3.53	0.58	2517
28	24	7.36	3.39	0.46	2387	6.91	3.18	0.46	2496	6.53	3.00	0.46	2604
28	26	7.74	2.63	0.34	2474	7.30	2.48	0.34	2582	6.85	2.33	0.34	2691
29	18	6.27	5.39	0.86	2127	5.76	4.95	0.86	2257	5.31	4.57	0.86	2344
29	20	6.59	4.88	0.74	2213	6.14	4.55	0.74	2322	5.70	4.22	0.74	2452
29	22	6.98	4.33	0.62	2300	6.53	4.05	0.62	2430	6.08	3.77	0.62	2517
29	24	7.36	3.68	0.50	2387	6.91	3.46	0.50	2496	6.53	3.26	0.50	2604
29	26	7.74	2.94	0.38	2474	7.30	2.77	0.38	2582	6.85	2.60	0.38	2691
30	18	6.27	5.64	0.90	2127	5.76	5.18	0.90	2257	5.31	4.78	0.90	2344
30	20	6.59	5.14	0.78	2213	6.14	4.79	0.78	2322	5.70	4.44	0.78	2452
30	22	6.98	4.60	0.66	2300	6.53	4.31	0.66	2430	6.08	4.01	0.66	2517
30	24	7.36	3.97	0.54	2387	6.91	3.73	0.54	2496	6.53	3.53	0.54	2604
30	26	7.74	3.25	0.42	2474	7.30	3.06	0.42	2582	6.85	2.88	0.42	2691
31	18	6.27	5.90	0.94	2127	5.76	5.41	0.94	2257	5.31	4.99	0.94	2344
31	20	6.59	5.41	0.82	2213	6.14	5.04	0.82	2322	5.70	4.67	0.82	2452
31	22	6.98	4.88	0.70	2300	6.53	4.57	0.70	2430	6.08	4.26	0.70	2517
31	24	7.36	4.27	0.58	2387	6.91	4.01	0.58	2496	6.53	3.79	0.58	2604
31	26	7.74	3.56	0.46	2474	7.30	3.36	0.46	2582	6.85	3.15	0.46	2691
32	18	6.27	6.15	0.98	2127	5.76	5.64	0.98	2257	5.31	5.21	0.98	2344
32	20	6.59	5.67	0.86	2213	6.14	5.28	0.86	2322	5.70	4.90	0.86	2452
32	22	6.98	5.16	0.74	2300	6.53	4.83	0.74	2430	6.08	4.50	0.74	2517
32	24	7.36	4.56	0.62	2387	6.91	4.29	0.62	2496	6.53	4.05	0.62	2604
32	26	7.74	3.87	0.50	2474	7.30	3.65	0.50	2582	6.85	3.42	0.50	2691

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF80VA

CAPACITY: 7.8 kW

SHF: 0.67

INPUT: 2780 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	9.17	4.49	0.49	2224	8.78	4.30	0.49	2335	8.42	4.13	0.49	2446	8.11	3.97	0.49	2558
21	20	9.56	3.54	0.37	2335	9.17	3.39	0.37	2474	8.89	3.29	0.37	2530	8.58	3.17	0.37	2641
22	18	9.17	4.86	0.53	2224	8.78	4.65	0.53	2335	8.42	4.46	0.53	2446	8.11	4.30	0.53	2558
22	20	9.56	3.92	0.41	2335	9.17	3.76	0.41	2474	8.89	3.65	0.41	2530	8.58	3.52	0.41	2641
22	22	9.95	2.88	0.29	2419	9.59	2.78	0.29	2572	9.36	2.71	0.29	2641	8.97	2.60	0.29	2752
23	18	9.17	5.22	0.57	2224	8.78	5.00	0.57	2335	8.42	4.80	0.57	2446	8.11	4.62	0.57	2558
23	20	9.56	4.30	0.45	2335	9.17	4.12	0.45	2474	8.89	4.00	0.45	2530	8.58	3.86	0.45	2641
23	22	9.95	3.28	0.33	2419	9.59	3.17	0.33	2572	9.36	3.09	0.33	2641	8.97	2.96	0.33	2752
24	18	9.17	5.59	0.61	2224	8.78	5.35	0.61	2335	8.42	5.14	0.61	2446	8.11	4.95	0.61	2558
24	20	9.56	4.68	0.49	2335	9.17	4.49	0.49	2474	8.89	4.36	0.49	2530	8.58	4.20	0.49	2641
24	22	9.95	3.68	0.37	2419	9.59	3.55	0.37	2572	9.36	3.46	0.37	2641	8.97	3.32	0.37	2752
24	24	10.45	2.61	0.25	2530	10.06	2.52	0.25	2669	9.83	2.46	0.25	2752	9.52	2.38	0.25	2891
25	18	9.17	5.96	0.65	2224	8.78	5.70	0.65	2335	8.42	5.48	0.65	2446	8.11	5.27	0.65	2558
25	20	9.56	5.06	0.53	2335	9.17	4.86	0.53	2474	8.89	4.71	0.53	2530	8.58	4.55	0.53	2641
25	22	9.95	4.08	0.41	2419	9.59	3.93	0.41	2572	9.36	3.84	0.41	2641	8.97	3.68	0.41	2752
25	24	10.45	3.03	0.29	2530	10.06	2.92	0.29	2669	9.83	2.85	0.29	2752	9.52	2.76	0.29	2891
26	18	9.17	6.32	0.69	2224	8.78	6.05	0.69	2335	8.42	5.81	0.69	2446	8.11	5.60	0.69	2558
26	20	9.56	5.45	0.57	2335	9.17	5.22	0.57	2474	8.89	5.07	0.57	2530	8.58	4.89	0.57	2641
26	22	9.95	4.48	0.45	2419	9.59	4.32	0.45	2572	9.36	4.21	0.45	2641	8.97	4.04	0.45	2752
26	24	10.45	3.45	0.33	2530	10.06	3.32	0.33	2669	9.83	3.24	0.33	2752	9.52	3.14	0.33	2891
26	26	10.76	2.26	0.21	2669	10.45	2.19	0.21	2808	10.30	2.16	0.21	2891	9.98	2.10	0.21	2975
27	18	9.17	6.69	0.73	2224	8.78	6.41	0.73	2335	8.42	6.15	0.73	2446	8.11	5.92	0.73	2558
27	20	9.56	5.83	0.61	2335	9.17	5.59	0.61	2474	8.89	5.42	0.61	2530	8.58	5.23	0.61	2641
27	22	9.95	4.87	0.49	2419	9.59	4.70	0.49	2572	9.36	4.59	0.49	2641	8.97	4.40	0.49	2752
27	24	10.45	3.87	0.37	2530	10.06	3.72	0.37	2669	9.83	3.64	0.37	2752	9.52	3.52	0.37	2891
27	26	10.76	2.69	0.25	2669	10.45	2.61	0.25	2808	10.30	2.57	0.25	2891	9.98	2.50	0.25	2975
28	18	9.17	7.06	0.77	2224	8.78	6.76	0.77	2335	8.42	6.49	0.77	2446	8.11	6.25	0.77	2558
28	20	9.56	6.21	0.65	2335	9.17	5.96	0.65	2474	8.89	5.78	0.65	2530	8.58	5.58	0.65	2641
28	22	9.95	5.27	0.53	2419	9.59	5.08	0.53	2572	9.36	4.96	0.53	2641	8.97	4.75	0.53	2752
28	24	10.45	4.29	0.41	2530	10.06	4.13	0.41	2669	9.83	4.03	0.41	2752	9.52	3.90	0.41	2891
28	26	10.76	3.12	0.29	2669	10.45	3.03	0.29	2808	10.30	2.99	0.29	2891	9.98	2.90	0.29	2975
29	18	9.17	7.42	0.81	2224	8.78	7.11	0.81	2335	8.42	6.82	0.81	2446	8.11	6.57	0.81	2558
29	20	9.56	6.59	0.69	2335	9.17	6.32	0.69	2474	8.89	6.14	0.69	2530	8.58	5.92	0.69	2641
29	22	9.95	5.67	0.57	2419	9.59	5.47	0.57	2572	9.36	5.34	0.57	2641	8.97	5.11	0.57	2752
29	24	10.45	4.70	0.45	2530	10.06	4.53	0.45	2669	9.83	4.42	0.45	2752	9.52	4.28	0.45	2891
29	26	10.76	3.55	0.33	2669	10.45	3.45	0.33	2808	10.30	3.40	0.33	2891	9.98	3.29	0.33	2975
30	18	9.17	7.79	0.85	2224	8.78	7.46	0.85	2335	8.42	7.16	0.85	2446	8.11	6.90	0.85	2558
30	20	9.56	6.98	0.73	2335	9.17	6.69	0.73	2474	8.89	6.49	0.73	2530	8.58	6.26	0.73	2641
30	22	9.95	6.07	0.61	2419	9.59	5.85	0.61	2572	9.36	5.71	0.61	2641	8.97	5.47	0.61	2752
30	24	10.45	5.12	0.49	2530	10.06	4.93	0.49	2669	9.83	4.82	0.49	2752	9.52	4.66	0.49	2891
30	26	10.76	3.98	0.37	2669	10.45	3.87	0.37	2808	10.30	3.81	0.37	2891	9.98	3.69	0.37	2975
31	18	9.17	8.16	0.89	2224	8.78	7.81	0.89	2335	8.42	7.50	0.89	2446	8.11	7.22	0.89	2558
31	20	9.56	7.36	0.77	2335	9.17	7.06	0.77	2474	8.89	6.85	0.77	2530	8.58	6.61	0.77	2641
31	22	9.95	6.46	0.65	2419	9.59	6.24	0.65	2572	9.36	6.08	0.65	2641	8.97	5.83	0.65	2752
31	24	10.45	5.54	0.53	2530	10.06	5.33	0.53	2669	9.83	5.21	0.53	2752	9.52	5.04	0.53	2891
31	26	10.76	4.41	0.41	2669	10.45	4.29	0.41	2808	10.30	4.22	0.41	2891	9.98	4.09	0.41	2975
32	18	9.17	8.52	0.93	2224	8.78	8.16	0.93	2335	8.42	7.83	0.93	2446	8.11	7.54	0.93	2558
32	20	9.56	7.74	0.81	2335	9.17	7.42	0.81	2474	8.89	7.20	0.81	2530	8.58	6.95	0.81	2641
32	22	9.95	6.86	0.69	2419	9.59	6.62	0.69	2572	9.36	6.46	0.69	2641	8.97	6.19	0.69	2752
32	24	10.45	5.96	0.57	2530	10.06	5.74	0.57	2669	9.83	5.60	0.57	2752	9.52	5.42	0.57	2891
32	26	10.76	4.84	0.45	2669	10.45	4.70	0.45	2808	10.30	4.63	0.45	2891	9.98	4.49	0.45	2975

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

PERFORMANCE DATA COOL operation at Rated frequency

MU-GF80VA

CAPACITY: 7.8 kW

SHF: 0.67

INPUT: 2780 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	7.64	3.75	0.49	2724	7.02	3.44	0.49	2891	6.47	3.17	0.49	3002
21	20	8.03	2.97	0.37	2836	7.49	2.77	0.37	2975	6.94	2.57	0.37	3141
22	18	7.64	4.05	0.53	2724	7.02	3.72	0.53	2891	6.47	3.43	0.53	3002
22	20	8.03	3.29	0.41	2836	7.49	3.07	0.41	2975	6.94	2.85	0.41	3141
22	22	8.50	2.47	0.29	2947	7.96	2.31	0.29	3114	7.41	2.15	0.29	3225
23	18	7.64	4.36	0.57	2724	7.02	4.00	0.57	2891	6.47	3.69	0.57	3002
23	20	8.03	3.62	0.45	2836	7.49	3.37	0.45	2975	6.94	3.12	0.45	3141
23	22	8.50	2.81	0.33	2947	7.96	2.63	0.33	3114	7.41	2.45	0.33	3225
24	18	7.64	4.66	0.61	2724	7.02	4.28	0.61	2891	6.47	3.95	0.61	3002
24	20	8.03	3.94	0.49	2836	7.49	3.67	0.49	2975	6.94	3.40	0.49	3141
24	22	8.50	3.15	0.37	2947	7.96	2.94	0.37	3114	7.41	2.74	0.37	3225
24	24	8.97	2.24	0.25	3058	8.42	2.11	0.25	3197	7.96	1.99	0.25	3336
25	18	7.64	4.97	0.65	2724	7.02	4.56	0.65	2891	6.47	4.21	0.65	3002
25	20	8.03	4.26	0.53	2836	7.49	3.97	0.53	2975	6.94	3.68	0.53	3141
25	22	8.50	3.49	0.41	2947	7.96	3.26	0.41	3114	7.41	3.04	0.41	3225
25	24	8.97	2.60	0.29	3058	8.42	2.44	0.29	3197	7.96	2.31	0.29	3336
26	18	7.64	5.27	0.69	2724	7.02	4.84	0.69	2891	6.47	4.47	0.69	3002
26	20	8.03	4.58	0.57	2836	7.49	4.27	0.57	2975	6.94	3.96	0.57	3141
26	22	8.50	3.83	0.45	2947	7.96	3.58	0.45	3114	7.41	3.33	0.45	3225
26	24	8.97	2.96	0.33	3058	8.42	2.78	0.33	3197	7.96	2.63	0.33	3336
26	26	9.44	1.98	0.21	3169	8.89	1.87	0.21	3308	8.35	1.75	0.21	3447
27	18	7.64	5.58	0.73	2724	7.02	5.12	0.73	2891	6.47	4.73	0.73	3002
27	20	8.03	4.90	0.61	2836	7.49	4.57	0.61	2975	6.94	4.23	0.61	3141
27	22	8.50	4.17	0.49	2947	7.96	3.90	0.49	3114	7.41	3.63	0.49	3225
27	24	8.97	3.32	0.37	3058	8.42	3.12	0.37	3197	7.96	2.94	0.37	3336
27	26	9.44	2.36	0.25	3169	8.89	2.22	0.25	3308	8.35	2.09	0.25	3447
28	18	7.64	5.89	0.77	2724	7.02	5.41	0.77	2891	6.47	4.98	0.77	3002
28	20	8.03	5.22	0.65	2836	7.49	4.87	0.65	2975	6.94	4.51	0.65	3141
28	22	8.50	4.51	0.53	2947	7.96	4.22	0.53	3114	7.41	3.93	0.53	3225
28	24	8.97	3.68	0.41	3058	8.42	3.45	0.41	3197	7.96	3.26	0.41	3336
28	26	9.44	2.74	0.29	3169	8.89	2.58	0.29	3308	8.35	2.42	0.29	3447
29	18	7.64	6.19	0.81	2724	7.02	5.69	0.81	2891	6.47	5.24	0.81	3002
29	20	8.03	5.54	0.69	2836	7.49	5.17	0.69	2975	6.94	4.79	0.69	3141
29	22	8.50	4.85	0.57	2947	7.96	4.53	0.57	3114	7.41	4.22	0.57	3225
29	24	8.97	4.04	0.45	3058	8.42	3.79	0.45	3197	7.96	3.58	0.45	3336
29	26	9.44	3.11	0.33	3169	8.89	2.93	0.33	3308	8.35	2.75	0.33	3447
30	18	7.64	6.50	0.85	2724	7.02	5.97	0.85	2891	6.47	5.50	0.85	3002
30	20	8.03	5.86	0.73	2836	7.49	5.47	0.73	2975	6.94	5.07	0.73	3141
30	22	8.50	5.19	0.61	2947	7.96	4.85	0.61	3114	7.41	4.52	0.61	3225
30	24	8.97	4.40	0.49	3058	8.42	4.13	0.49	3197	7.96	3.90	0.49	3336
30	26	9.44	3.49	0.37	3169	8.89	3.29	0.37	3308	8.35	3.09	0.37	3447
31	18	7.64	6.80	0.89	2724	7.02	6.25	0.89	2891	6.47	5.76	0.89	3002
31	20	8.03	6.19	0.77	2836	7.49	5.77	0.77	2975	6.94	5.35	0.77	3141
31	22	8.50	5.53	0.65	2947	7.96	5.17	0.65	3114	7.41	4.82	0.65	3225
31	24	8.97	4.75	0.53	3058	8.42	4.46	0.53	3197	7.96	4.22	0.53	3336
31	26	9.44	3.87	0.41	3169	8.89	3.65	0.41	3308	8.35	3.42	0.41	3447
32	18	7.64	7.11	0.93	2724	7.02	6.53	0.93	2891	6.47	6.02	0.93	3002
32	20	8.03	6.51	0.81	2836	7.49	6.07	0.81	2975	6.94	5.62	0.81	3141
32	22	8.50	5.87	0.69	2947	7.96	5.49	0.69	3114	7.41	5.11	0.69	3225
32	24	8.97	5.11	0.57	3058	8.42	4.80	0.57	3197	7.96	4.53	0.57	3336
32	26	9.44	4.25	0.45	3169	8.89	4.00	0.45	3308	8.35	3.76	0.45	3447

NOTE Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

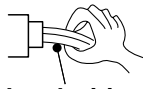
MU-GF20VA MU-GF25VA MU-GF35VA MU-GF50VA MU-GF60VA MU-GF80VA**9-1. CAUTIONS ON TROUBLESHOOTING****1. Before troubleshooting, check the following**

- 1) Check the power supply voltage.
- 2) Check the indoor/outdoor connecting wire for miswiring.

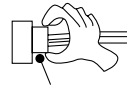
2. Take care of the following during servicing

- 1) Before servicing the air conditioner, be sure to turn OFF the main unit first with the remote controller, and then after confirming the horizontal vane is closed, turn OFF the breaker and/or disconnect the power plug.
- 2) Be sure to turn OFF the power supply before removing the front panel, the cabinet, the top panel, and the electronic control P.C. board.
- 3) When removing the electrical parts, be careful of the residual voltage of smoothing capacitor.
- 4) When removing the electronic control P.C. board, hold the edge of the board with care NOT to apply stress on the components.
- 5) When connecting or disconnecting the connectors, hold the housing of the connector. DO NOT pull the lead wires.

<Incorrect>

**Lead wiring**

<Correct>

**Housing point****3. Troubleshooting procedure**

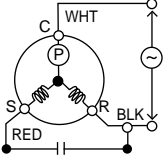
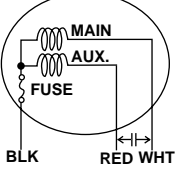
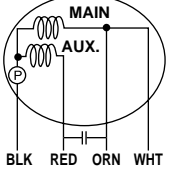
- 1) Check if the OPERATION INDICATOR lamp on the indoor unit is flashing on and off to indicate an abnormality.
To make sure, check how many times the OPERATION INDICATOR lamp is flashing on and off before starting service work.
- 2) Before servicing, check that the connector and terminal are connected properly.
- 3) When the electronic control P.C. board seems to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
- 4) Refer to 9-2. and 9-3.

9-2. INSTRUCTION OF TROUBLESHOOTING

If the indoor and outdoor units do not operate, check outdoor unit fuse (F).

9-3. TROUBLE CRITERION OF MAIN PARTS

MU-GF20VA MU-GF25VA MU-GF35VA MU-GF50VA MU-GF60VA MU-GF80VA

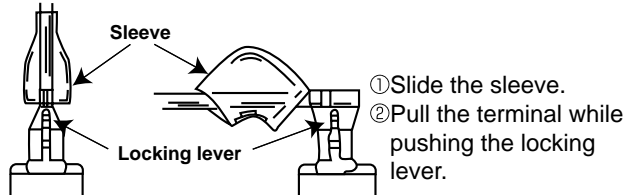
Part name	Check method and criterion	Figure																														
<p>Compressor</p> <p>INNER PROTECTOR</p> <p>MU-GF20/60VA 150 ± 5°C OPEN 90 ± 10°C CLOSE</p> <p>MU-GF25/50/80VA 160 ± 5°C OPEN 90 ± 10°C CLOSE</p> <p>MU-GF35/50VA 155 ± 5°C OPEN 90 ± 10°C CLOSE</p>	<p>Measure the resistance between terminals using a tester. (Temperature: -10 ~ 40°C)</p> <table border="1" data-bbox="363 421 1082 600"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">Normal (Ω)</th> </tr> <tr> <th>MU-GF20VA</th> <th>MU-GF25VA</th> <th>MU-GF35VA</th> </tr> </thead> <tbody> <tr> <td>C-R</td> <td>3.98 ~ 4.88</td> <td>3.19 ~ 3.91</td> <td>2.37 ~ 2.91</td> </tr> <tr> <td>C-S</td> <td>6.23 ~ 7.63</td> <td>4.76 ~ 5.83</td> <td>3.09 ~ 3.79</td> </tr> </tbody> </table> <table border="1" data-bbox="363 640 1082 808"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">Normal (Ω)</th> </tr> <tr> <th>MU-GF50VA</th> <th>MU-GF60VA</th> <th>MU-GF80VA</th> </tr> </thead> <tbody> <tr> <td>C-R</td> <td>1.87 ~ 2.29</td> <td>0.83 ~ 1.03</td> <td>0.59 ~ 0.74</td> </tr> <tr> <td>C-S</td> <td>2.99 ~ 3.67</td> <td>1.30 ~ 1.60</td> <td>1.58 ~ 1.95</td> </tr> </tbody> </table>		Normal (Ω)			MU-GF20VA	MU-GF25VA	MU-GF35VA	C-R	3.98 ~ 4.88	3.19 ~ 3.91	2.37 ~ 2.91	C-S	6.23 ~ 7.63	4.76 ~ 5.83	3.09 ~ 3.79		Normal (Ω)			MU-GF50VA	MU-GF60VA	MU-GF80VA	C-R	1.87 ~ 2.29	0.83 ~ 1.03	0.59 ~ 0.74	C-S	2.99 ~ 3.67	1.30 ~ 1.60	1.58 ~ 1.95	
	Normal (Ω)																															
	MU-GF20VA	MU-GF25VA	MU-GF35VA																													
C-R	3.98 ~ 4.88	3.19 ~ 3.91	2.37 ~ 2.91																													
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C-S	2.99 ~ 3.67	1.30 ~ 1.60	1.58 ~ 1.95																													
<p>Outdoor fan motor</p> <p>INNER FUSE</p> <p>MU-GF20/25VA 130°C CUT OFF</p> <p>MU-GF35/50VA 145°C CUT OFF</p> <p>INNER PROTECTOR</p> <p>MU-GF60VA 130 ± 5°C OPEN 83 ± 15°C CLOSE</p> <p>MU-GF80VA 145 ± 5°C OPEN 94 ± 15°C CLOSE</p>	<p>Measure the resistance between lead wires using a tester. (Temperature: -10 ~ 40°C)</p> <table border="1" data-bbox="363 1048 1114 1238"> <thead> <tr> <th rowspan="2">Color of lead wire</th> <th colspan="5">Normal (Ω)</th> </tr> <tr> <th>MU-GF20VA</th> <th>MU-GF25VA</th> <th>MU-GF35/50VA</th> <th>MU-GF60VA</th> <th>MU-GF80VA</th> </tr> </thead> <tbody> <tr> <td>WHT – BLK</td> <td>243 ~ 298</td> <td></td> <td>150 ~ 185</td> <td>63 ~ 78</td> <td>56 ~ 70</td> </tr> <tr> <td>BLK – RED</td> <td>205 ~ 252</td> <td></td> <td>199 ~ 244</td> <td>78 ~ 97</td> <td>74 ~ 91</td> </tr> </tbody> </table>	Color of lead wire	Normal (Ω)					MU-GF20VA	MU-GF25VA	MU-GF35/50VA	MU-GF60VA	MU-GF80VA	WHT – BLK	243 ~ 298		150 ~ 185	63 ~ 78	56 ~ 70	BLK – RED	205 ~ 252		199 ~ 244	78 ~ 97	74 ~ 91	<p>MU-GF20/25/35/50VA</p>  <p>MU-GF60/80VA</p> 							
Color of lead wire	Normal (Ω)																															
	MU-GF20VA	MU-GF25VA	MU-GF35/50VA	MU-GF60VA	MU-GF80VA																											
WHT – BLK	243 ~ 298		150 ~ 185	63 ~ 78	56 ~ 70																											
BLK – RED	205 ~ 252		199 ~ 244	78 ~ 97	74 ~ 91																											

Ⓒ: INNER PROTECTOR

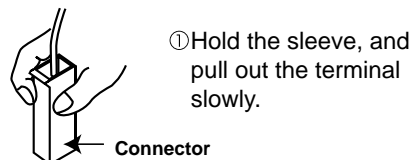
<"Terminal with locking mechanism" Detaching points>

The terminal which has the locking mechanism can be detached as shown below.
There are two types (refer to (1) and (2)) of the terminal with locking mechanism.
The terminal without locking mechanism can be detached by pulling it out.
Check the shape of the terminal before detaching.

(1) Slide the sleeve and check if there is a locking lever or not.



(2) The terminal with this connector has the locking mechanism.



10-1. MU-GF20VA MU-GF25VA MU-GF35VA

NOTE: Turn OFF power supply before disassembly.

OPERATING PROCEDURE	PHOTOS
<p>1. Removing the cabinet</p> <ol style="list-style-type: none"> (1) Remove the screw fixing the service panel and service panel. (2) Disconnect the indoor/outdoor connecting wire. (3) Remove the screw of the valve cover and the valve cover. (4) Remove the screws fixing the top panel. (5) Remove the top panel. (6) Remove the screws fixing the cabinet. (7) Remove the cabinet. (8) Remove the screws fixing the back panel. (9) Remove the back panel. <p>Photo 3</p> <p>Screws of the top panel Screws of the service panel Screw of the valve cover Screw of the cabinet Screws of the back panel Screws of the back panel</p>	<p>Photo 1</p> <p>Screws fixing the motor support and the fan motor Screw of the top panel Screws of the cabinet</p> <p>Photo 2</p> <p>Screws of the top panel Screws of the cabinet</p>

OPERATING PROCEDURE

2. Removing the electrical parts

- (1) Remove the top panel, the service panel and the cabinet.
(Refer to 1.)
- (2) Remove the following parts.
 - Compressor capacitor (C1)
 - Outdoor fan capacitor (C2)
 - Terminal block (TB)
 - Compressor contactor (52C)
 - Fuse (F)

3. Removing propeller and the outdoor fan motor

- (1) Remove the top panel and the cabinet. (Refer to 1.)
- (2) Remove the propeller nut and remove the propeller.
NOTE: Loosen the propeller in the rotating direction for removal.
When attaching the propeller, align the mark on the propeller and the motor shaft cut section.
- (3) Disconnect the connector and remove the lead clamp and outdoor fan motor lead wires.
- (4) Remove the screws fixing the outdoor fan motor.
- (5) Remove the outdoor fan motor.

4. Removing the compressor

- (1) Remove the top panel, the service panel, the valve cover and the cabinet. (Refer to 1.)
- (2) Remove the relay panel.
- (3) Remove the soundproof felt.
- (4) Remove the terminal cover.
- (5) Pull out the lead wires from the glass terminal of the compressor.
- (6) Recover gas from the refrigerant circuit.
NOTE: Recover gas from the pipes until the pressure gauge shows 0 kg/cm² (0 MPa).
- (7) Disconnect the brazed part of the suction pipe and discharge pipe.
- (8) Remove the nuts fixing the compressor and the compressor.

PHOTOS

Photo 4

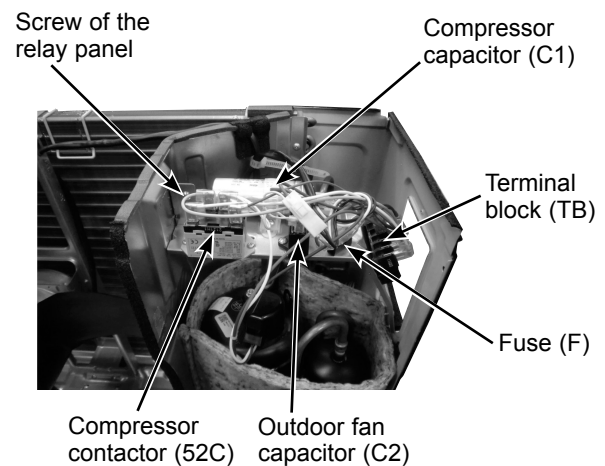


Photo 5

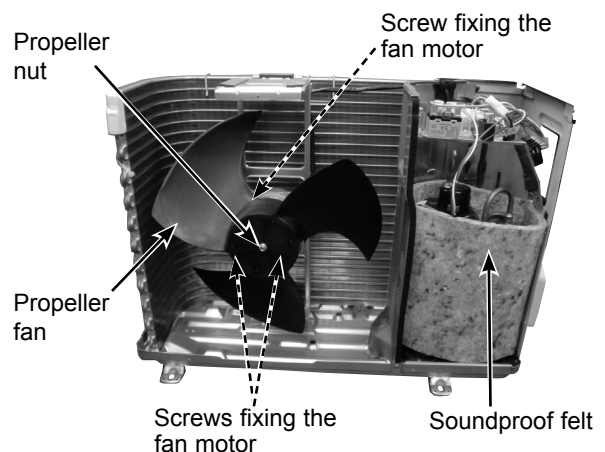
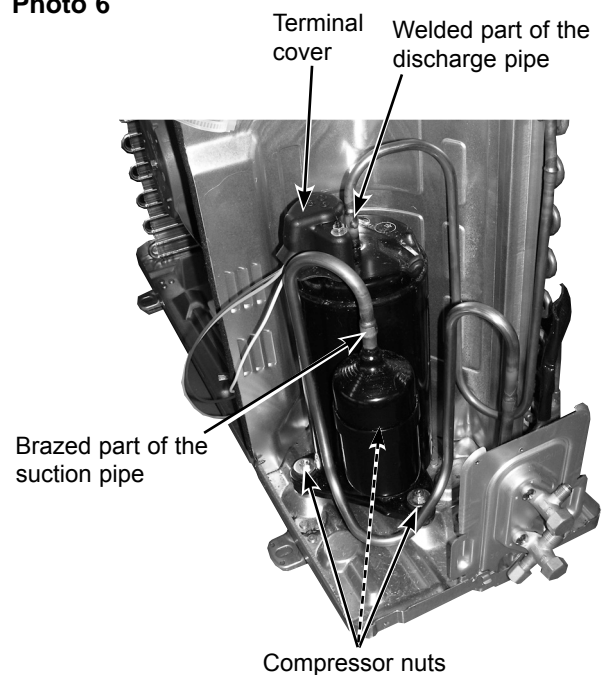


Photo 6



10-2. MU-GF50VA

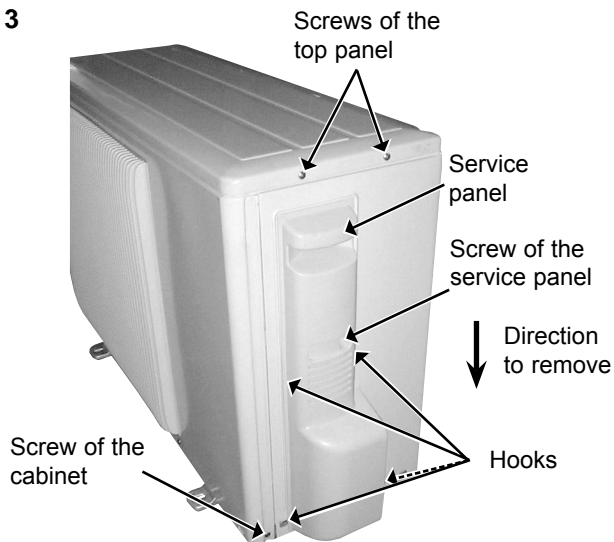
NOTE: Turn OFF the power supply before disassembly.

OPERATING PROCEDURE

1. Removing the cabinet

- (1) Remove the screw fixing the service panel
- (2) Pull down the service panel and remove it.
- (3) Disconnect the indoor/outdoor connecting wire.
- (4) Remove the screws fixing the top panel.
- (5) Remove the top panel.
- (6) Remove the screws fixing the cabinet.
- (7) Remove the cabinet.
- (8) Remove the screws fixing the back panel.
- (9) Remove the back panel.

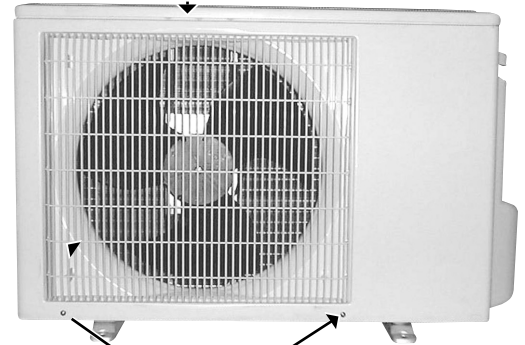
Photo 3



PHOTOS

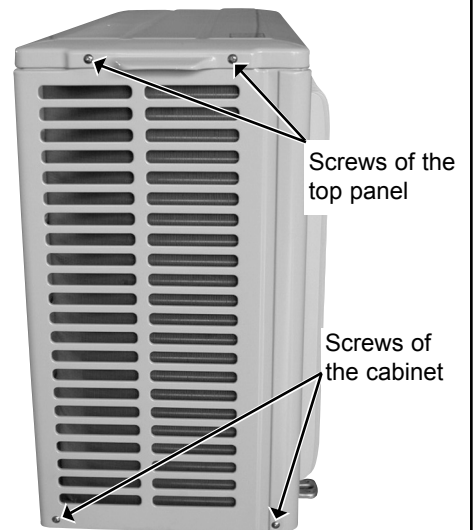
Photo 1

Screws of the front panel and motor support



Screws of the cabinet

Photo 2



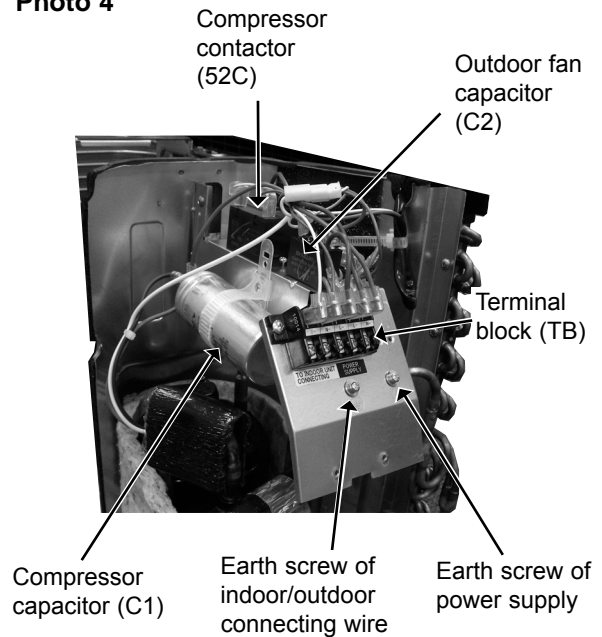
OPERATING PROCEDURE

2. Removing the electrical parts

- (1) Remove the service panel and the cabinet. (Refer to 1.)
- (2) Remove the following parts.
 - Compressor capacitor (C1)
 - Outdoor fan capacitor (C2)
 - Terminal block (TB)
 - Compressor contactor (52C)

PHOTOS

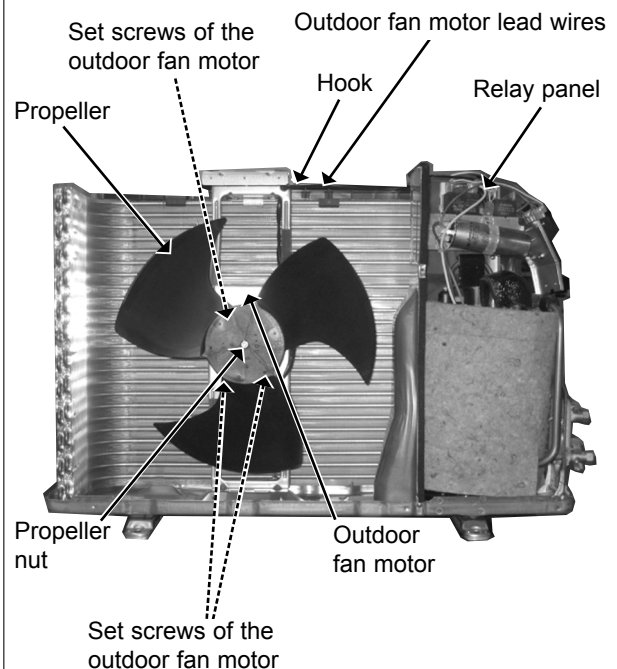
Photo 4



3. Removing propeller and the outdoor fan motor

- (1) Remove the cabinet. (Refer to 1.)
- (2) Remove the propeller nut and remove the propeller.
NOTE: Loosen the propeller in the rotating direction for removal.
When attaching the propeller, align the mark on the propeller and the motor shaft cut section.
Set the propeller in position by using the cut on the shaft and the mark on the propeller.
- (3) Disconnect the connector and remove the lead clamps and outdoor fan motor lead wires.
- (4) Remove the screws fixing the outdoor fan motor.
- (5) Remove the outdoor fan motor.

Photo 5



OPERATING PROCEDURE

4. Removing the compressor

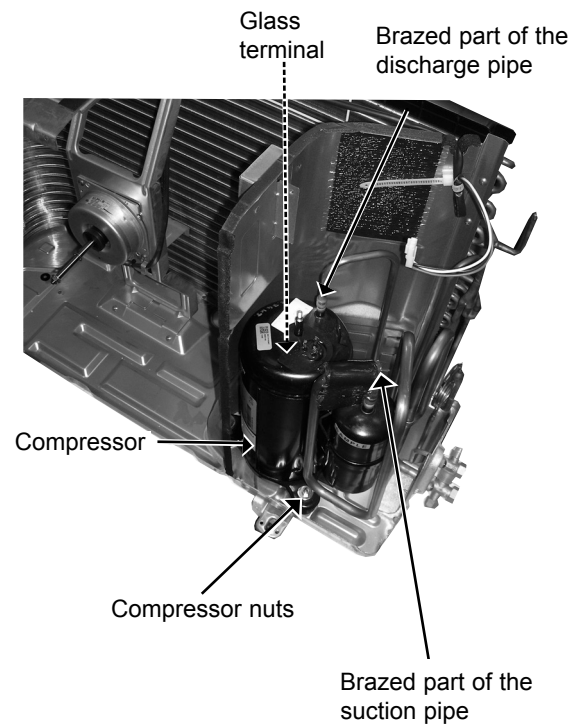
- (1) Remove the cabinet. (Refer to 1.)
- (2) Remove the relay panel.
- (3) Remove the soundproof felt.
- (4) Remove the terminal cover.
- (5) Pull out the lead wires from the glass terminal of the compressor.
- (6) Recover gas from the refrigerant circuit.

NOTE: Recover gas from the pipes until the pressure gauge shows 0 kg/cm² (0 MPa).

- (7) Disconnect the brazed parts of the suction pipe and discharge pipe.
- (8) Remove the nuts fixing the compressor and the compressor.

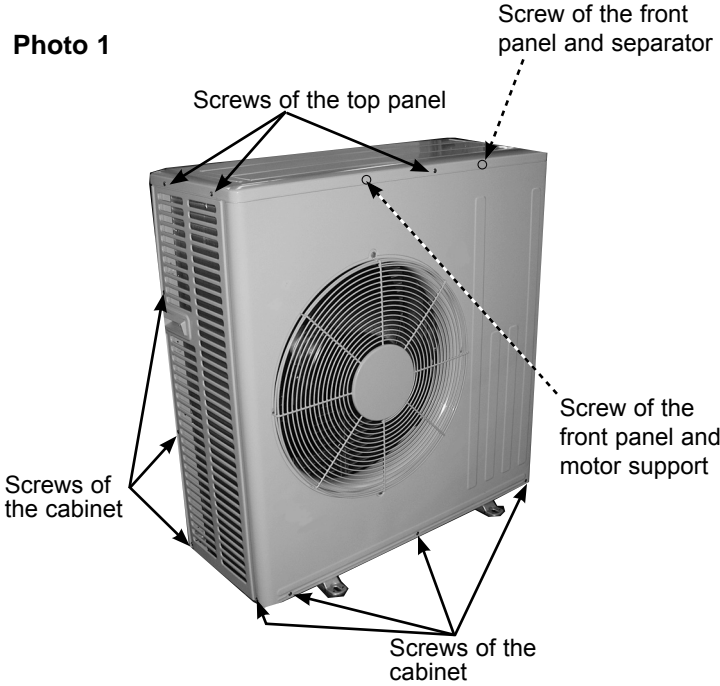
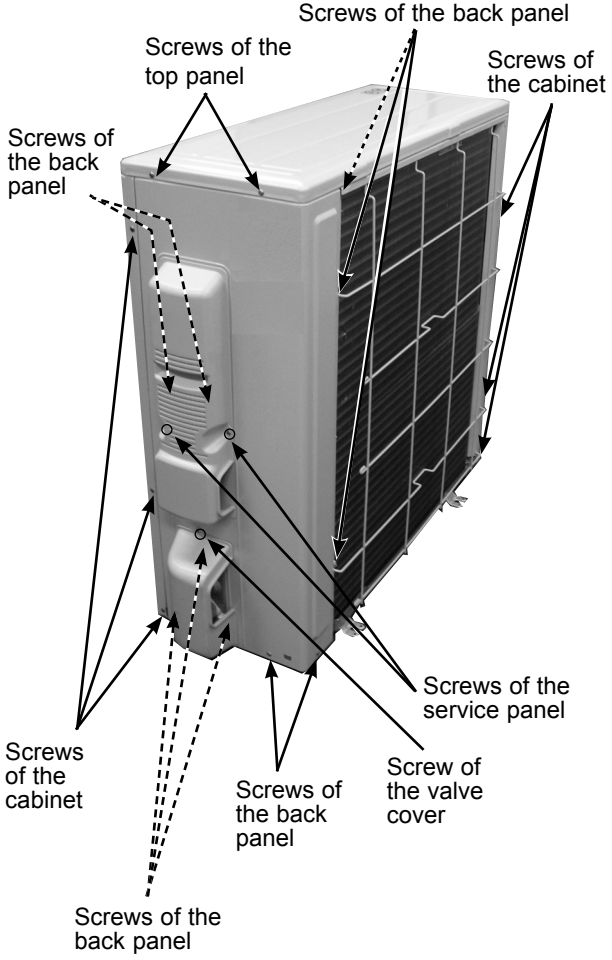
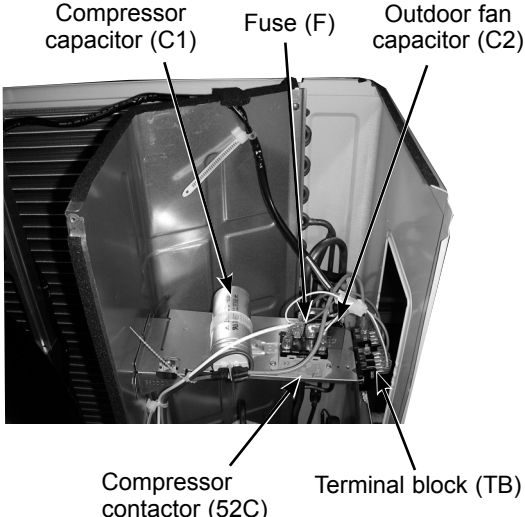
PHOTOS

Photo 6



10-3. MU-GF60VA

NOTE: Turn OFF power supply before disassembly.

OPERATING PROCEDURE	PHOTOS
<p>1. Removing the cabinet</p> <ol style="list-style-type: none">(1) Remove the screws of the service panel.(2) Remove the screws of the top panel.(3) Remove the screw of the valve cover.(4) Remove the service panel.(5) Remove the top panel.(6) Remove the valve cover.(7) Remove the screws of the front panel.(8) Remove the front panel.(9) Remove the screws of the back panel.(10) Remove the back panel. <p>Photo 1</p> 	<p>Photo 2</p> 
<p>2. Removing the electrical parts</p> <ol style="list-style-type: none">(1) Remove the service panel and the cabinet (Refer to 1.).(2) Remove the following parts.<ul style="list-style-type: none">• Compressor capacitor (C1)• Outdoor fan capacitor (C2)• Terminal block (TB)• Compressor contactor (52C)	<p>Photo 3</p> 



OPERATING PROCEDURE

3. Removing propeller and the outdoor fan motor

(1) Remove the cabinet (Refer to 1.).

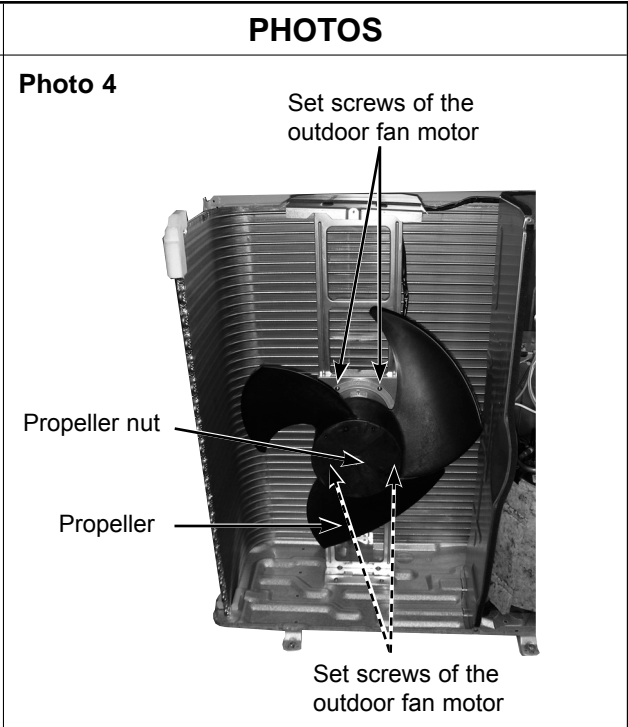
(2) Remove the propeller nut and remove the propeller.

NOTE: Loosen the propeller in the rotating direction for removal.
When attaching the propeller, align the mark on the propeller and the motor shaft cut section.

(3) Disconnect the connector and remove the lead clamp and outdoor fan motor lead wires.

(4) Remove the screws fixing the outdoor fan motor.

(5) Remove the outdoor fan motor.



4. Removing the compressor

(1) Remove the cabinet (Refer to 1.).

(2) Remove the relay panel.

(3) Remove the soundproof felt.

(4) Remove the terminal cover on the compressor.

(5) Disconnect lead wires from the compressor.

(6) Recover gas from the refrigerant circuit.

(7) Disconnect the welded part of the discharge pipe.

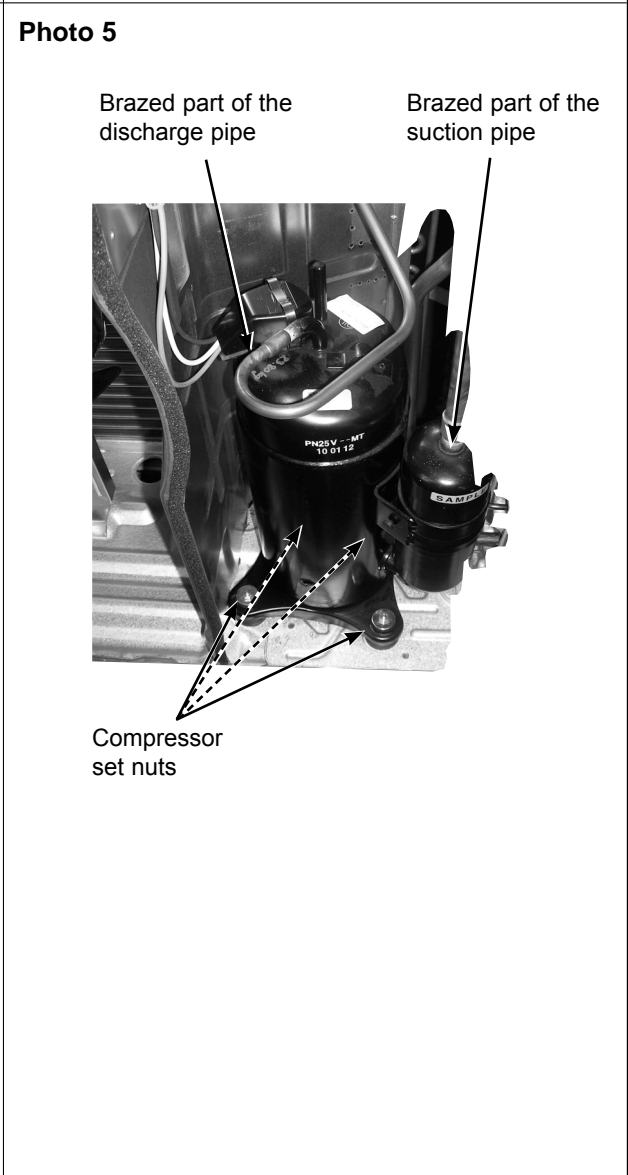
(8) Disconnect the welded part of suction pipe.

(9) Remove nuts fixing the compressor.

(10) Remove the compressor.

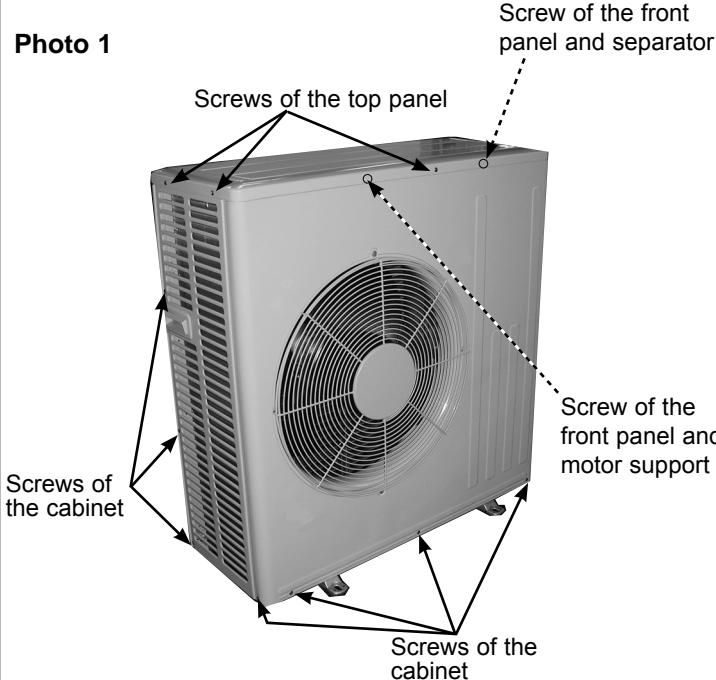
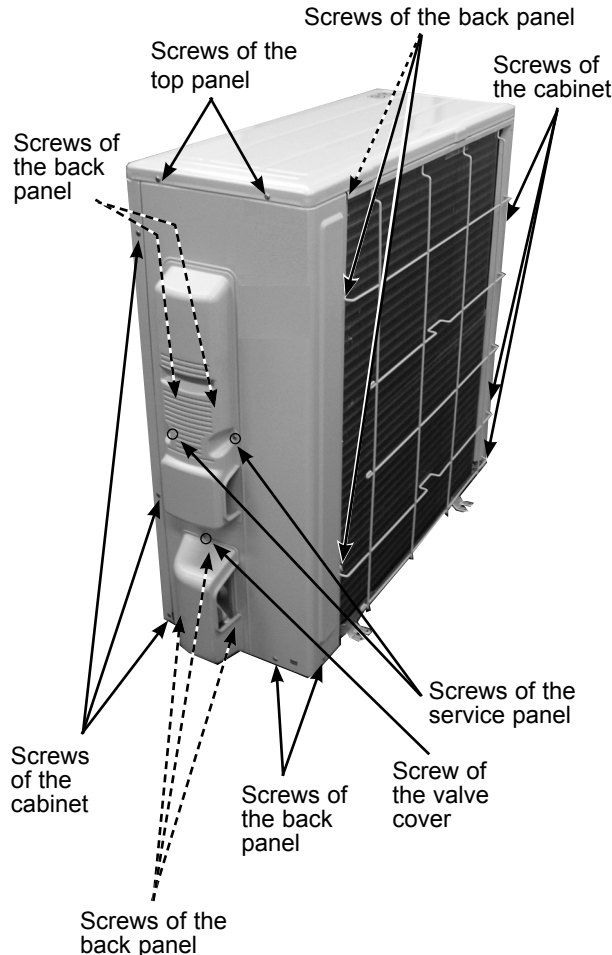
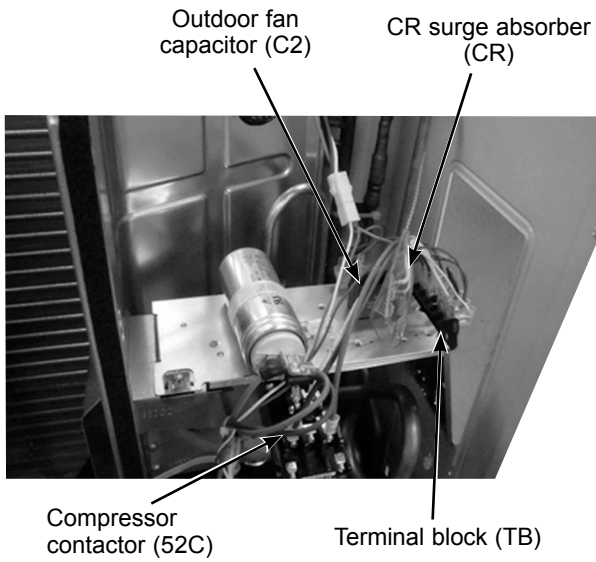
NOTE

- Before using a burner, recover gas from the pipes until the pressure gauge shows 0 kg/cm² (0 MPa).
- Use the burner under the condition that gas can be recovered even when the inner pressure rises by heat.



10-4. MU-GF80VA

NOTE: Turn OFF power supply before disassembly.

OPERATING PROCEDURE	PHOTOS
<p>1. Removing the cabinet</p> <ol style="list-style-type: none"> (1) Remove the screws of the service panel. (2) Remove the screws of the top panel. (3) Remove the screw of the valve cover. (4) Remove the service panel. (5) Remove the top panel. (6) Remove the valve cover. (7) Remove the screws of the front panel. (8) Remove the front panel. (9) Remove the screws of the back panel. (10) Remove the back panel. <p>Photo 1</p>  <p>Screw of the front panel and separator</p> <p>Screws of the top panel</p> <p>Screw of the front panel and motor support</p> <p>Screws of the cabinet</p> <p>Screws of the cabinet</p>	<p>Photo 2</p>  <p>Screws of the back panel</p> <p>Screws of the top panel</p> <p>Screws of the cabinet</p> <p>Screws of the back panel</p> <p>Screws of the cabinet</p> <p>Screws of the service panel</p> <p>Screw of the valve cover</p> <p>Screws of the back panel</p> <p>Screws of the back panel</p>
<p>2. Removing the electrical parts</p> <ol style="list-style-type: none"> (1) Remove the service panel and the cabinet (Refer to 1.). (2) Remove the following parts. <ul style="list-style-type: none"> • Compressor capacitor (C1) • Outdoor fan capacitor (C2) • Terminal block (TB) • Compressor contactor (52C) • CR surge absorber (CR) 	<p>Photo 3</p>  <p>Outdoor fan capacitor (C2)</p> <p>CR surge absorber (CR)</p> <p>Compressor contactor (52C)</p> <p>Terminal block (TB)</p>



OPERATING PROCEDURE

3. Removing propeller and the outdoor fan motor

(1) Remove the cabinet (Refer to 1.).

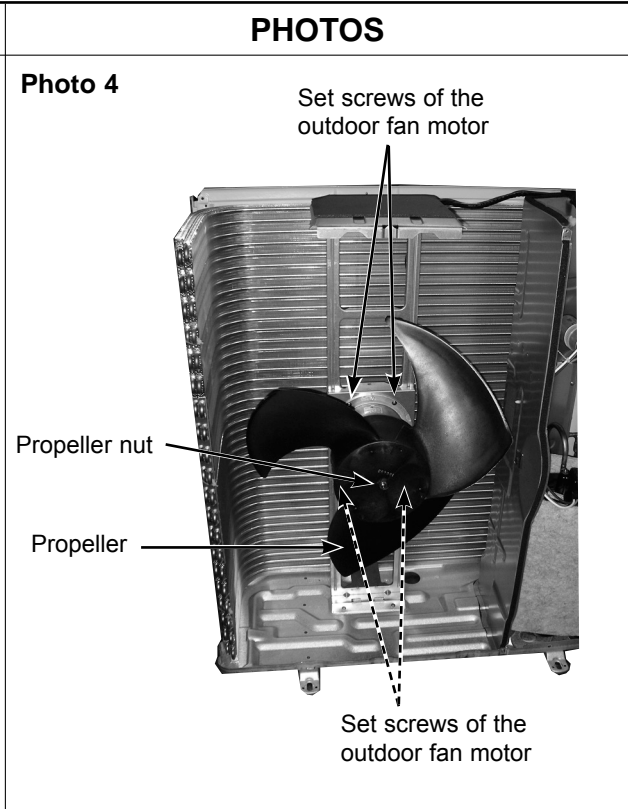
(2) Remove the propeller nut and remove the propeller.

NOTE: Loosen the propeller in the rotating direction for removal.
When attaching the propeller, align the mark on the propeller and the motor shaft cut section.

(3) Disconnect the connector and remove the lead clamp and outdoor fan motor lead wires.

(4) Remove the screws fixing the outdoor fan motor.

(5) Remove the outdoor fan motor.



4. Removing the compressor

(1) Remove the cabinet (Refer to 1.).

(2) Remove the relay panel.

(3) Remove the soundproof felt.

(4) Remove the terminal cover on the compressor.

(5) Disconnect lead wires from the compressor.

(6) Recover gas from the refrigerant circuit.

(7) Disconnect the brazed part of the discharge pipe.

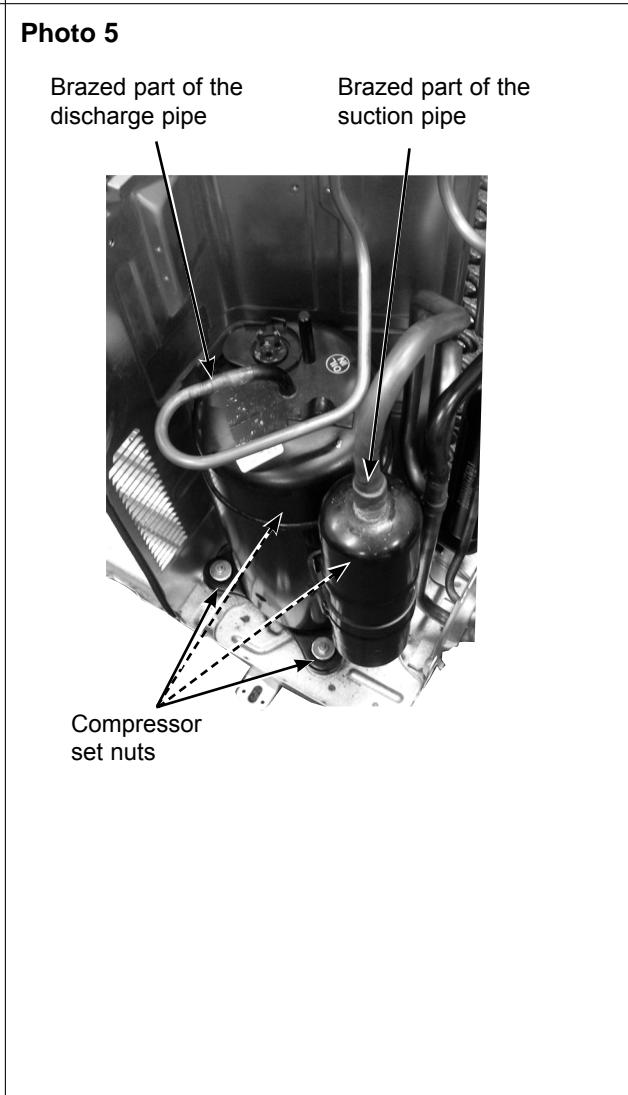
(8) Disconnect the brazed part of suction pipe.

(9) Remove nuts fixing the compressor.

(10) Remove the compressor.

NOTE

- Before using a burner, recover gas from the pipes until the pressure gauge shows 0 kg/cm² (0 MPa).
- Use the burner under the condition that gas can be recovered even when the inner pressure rises by heat.



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