

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.

Revision A:

- MUZ-FE18NA has been added.

Revision B:

- MUZ-FE09NA - and MUZ-FE12NA1 have been added.

Revision C:

- Specification has been corrected.

[Capacity Rated → Capacity Rated (Maximum), Power consumption Rated → Power consumption Rated (Maximum)]

1

TECHNICAL CHANGES

MUZ-FE09NA

MUZ-FE12NA

MUZ-FE18NA

1. New model

MUZ-FE09NA → MUZ-FE09NA -

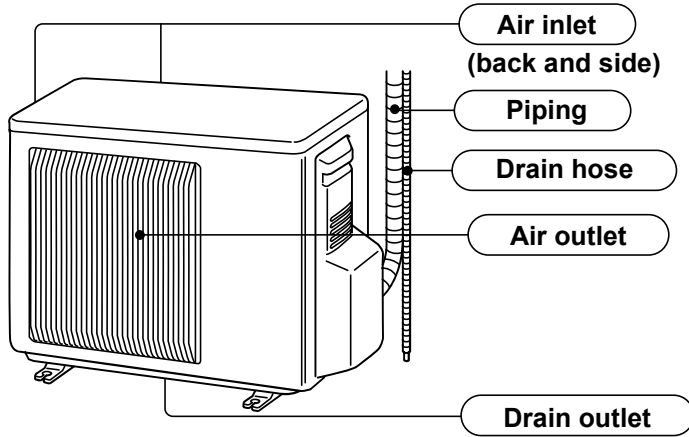
MUZ-FE12NA → MUZ-FE12NA1

1. Compressor has been changed.
2. Inverter P.C. board has been changed.

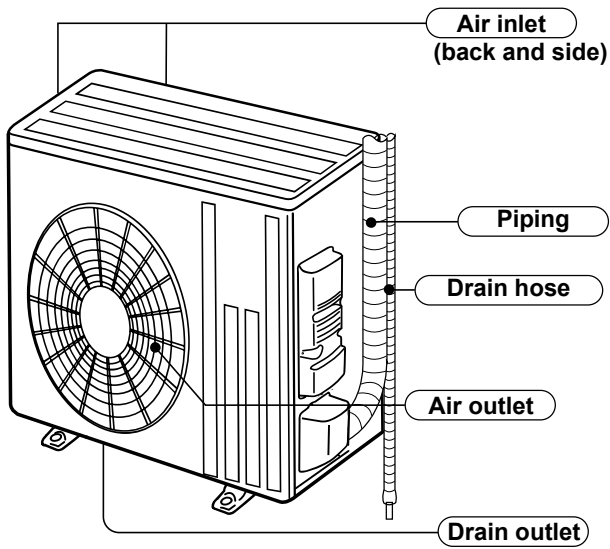
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PART NAMES AND FUNCTIONS

MUZ-FE09NA MUZ-FE12NA MUZ-FE12NA1



MUZ-FE18NA



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SPECIFICATION

Outdoor unit model			MUZ-FE09NA	MUZ-FE12NA MUZ-FE12NA1	MUZ-FE18NA
Capacity Rated (Minimum~Maximum)	Cooling *1	Btu/h	9,000 (2,800~9,000)	12,000 (2,800~12,000)	18,000 (8,200~25,200)
	Heating 47 *1	Btu/h	10,900 (3,000~18,000)	13,600 (3,000~21,000)	21,600 (7,500~29,700)
Capacity Rated (Maximum)	Heating 17 *2	Btu/h	6,700 (12,500)	12NA	8,300(13,600)
				12NA1	7,900(13,600)
Power consumption Rated (Minimum~Maximum)	Cooling *1	W	580 (160~650)	930 (160~960)	1,270 (570~2,280)
	Heating 47 *1	W	710 (150~2,250)	950 (150~2,250)	1,540 (520~2,420)
Power consumption Rated (Maximum)	Heating 17 *2	W	650 (1,730)	12NA	800(1,780)
				12NA1	750(1,780)
EER *1 [SEER] *3	Cooling		15.5 [26.0]	12.9 [23.0]	14.2 [20.2]
HSPF IV *4	Heating		10.0	12NA	10.6
				12NA1	10.5
COP	Heating *1		4.50	4.20	4.11
Power supply	V , phase , Hz		208/230, 1 , 60		
Max. fuse size (time delay)		A	15		20
Min. circuit ampacity		A	12		17.1
Fan motor		F.L.A	0.56		0.93
Compressor	Model	09NA	SNB130FQAH		SNB172FQKMT
		12NA			
		09NA - □1	SNB130FQBHT		
		12NA1			
		R.L.A	8.6		12.9
	L.R.A	10.8		16.1	
	Refrigeration oil L (Model)	0.45 (NEO22)		0.40 (FV50S)	
Refrigerant control	Linear expansion valve				
Sound level *1	Cooling	dB(A)	48	48	55
	Heating	dB(A)	49	49	55
Defrost method	Reverse cycle				
Dimensions	W	in.	31-1/2		33-1/16
	D	in.	11-1/4		13
	H	in.	21-5/8		34-5/8
Weight		lb.	80		119
External finish	Munsell 3Y 7.8/1.1				
Remote controller	Wireless type				
Control voltage (by built-in transformer)	VDC		12 - 24		
Refrigerant piping	Not supplied				
Refrigerant pipe size (Min. wall thickness)	Liquid	in.	1/4 (0.0315)		3/8 (0.0315)
	Gas	in.	3/8 (0.0315)		5/8 (0.0315)
Connection method	Indoor		Flared		Flared
	Outdoor		Flared		Flared
Between the indoor & outdoor units	Height difference	ft.	40		50
	Piping length	ft.	65		100
Refrigerant charge (R410A)			2 lb. 9 oz.		4 lb. 3 oz.

NOTE: Test conditions are based on AHRI 210/240.

*1: Rating conditions (Cooling) — Indoor: 80°FDB, 67°FWB, Outdoor: 95°FDB, (75°FWB)
(Heating) — Indoor: 70°FDB, 60°FWB, Outdoor: 47°FDB, 43°FWB

*2: (Heating) — Indoor: 70°FDB, 60°FWB, Outdoor: 17°FDB, 15°FWB

Test condition

※3,※4

ARI	Mode	Test	Indoor air condition (°F)		Outdoor air condition (°F)	
			Dry bulb	Wet bulb	Dry bulb	Wet bulb
	SEER (Cooling)	"A-2" Cooling Steady State at rated compressor Speed	80	67	95	(75)
		"B-2" Cooling Steady State at rated compressor Speed	80	67	82	(65)
		"B-1" Cooling Steady State at minimum compressor Speed	80	67	82	(65)
		"F-1" Cooling Steady State at minimum compressor Speed	80	67	67	(53.5)
		"E-V" Cooling Steady State at Intermediate compressor Speed ※5	80	67	87	(69)
	HSPF (Heating)	"H1-2" Heating Steady State at rated compressor Speed	70	60	47	43
		"H3-2" Heating at rated compressor Speed	70	60	17	15
		"H0-1" Heating Steady State at minimum compressor Speed	70	60	62	56.5
		"H1-1" Heating Steady State at minimum compressor Speed	70	60	47	43
		"H2-V" Heating at Intermediate compressor Speed ※5	70	60	35	33

※5: At Intermediate compressor Speed
= ("Cooling rated compressor speed" - "minimum compressor speed") / 3 + "minimum compressor speed".

OPERATING RANGE

(1) POWER SUPPLY

	Rated voltage	Guaranteed voltage (V)
Outdoor unit	208/230 V 1 phase 60 Hz	<p>Min. 187 208 230 Max. 253</p>

(2) OPERATION

Mode	Condition	Intake air temperature (°F)			
		Indoor		Outdoor	
		DB	WB	DB	WB
Cooling	Standard temperature	80	67	95	—
	Maximum temperature	90	73	115	—
	Minimum temperature	67	57	14	—
	Maximum humidity	78 %		—	
Heating	Standard temperature	70	60	47	43
	Maximum temperature	80	67	75	65
	Minimum temperature	70	60	-13	-15

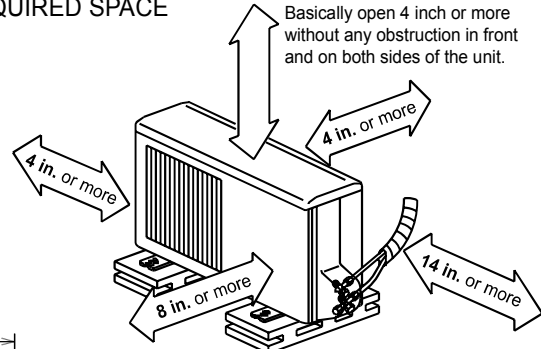
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OUTLINES AND DIMENSIONS

MUZ-FE09NA MUZ-FE12NA MUZ-FE12NA1

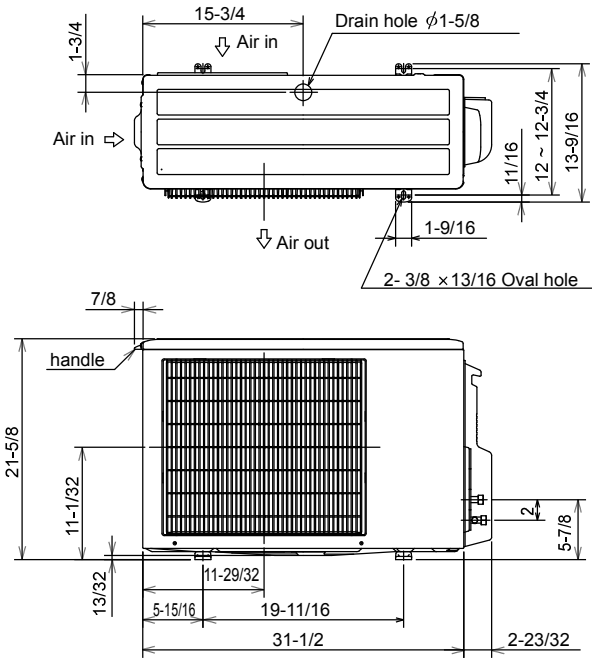
Unit: inch

REQUIRED SPACE

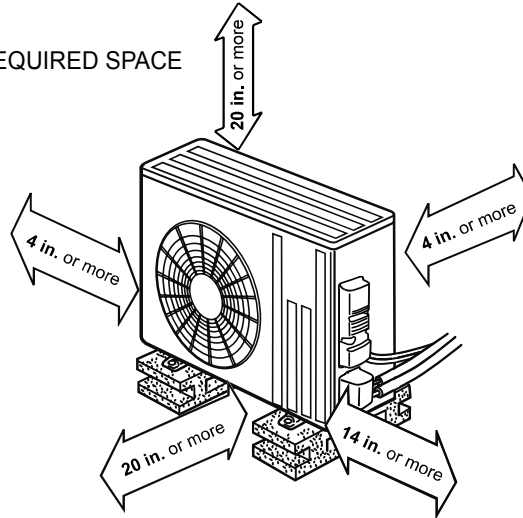


Open two sides of left, right, or rear side.

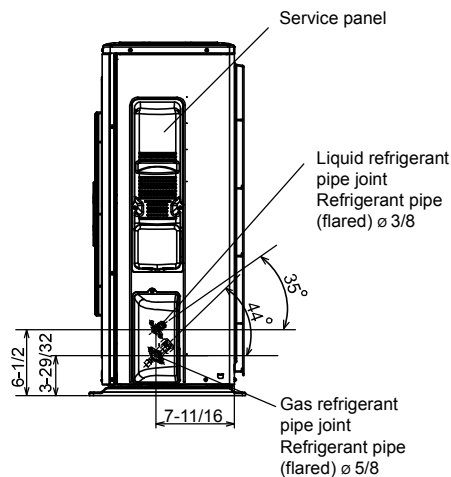
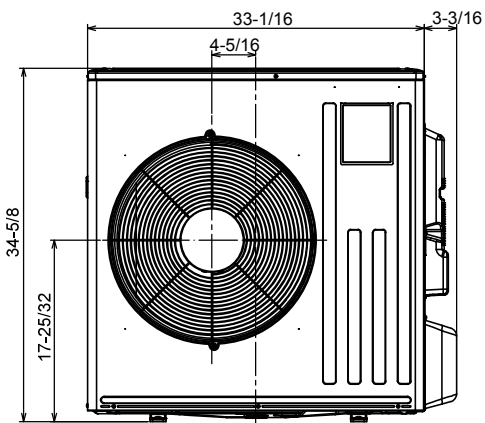
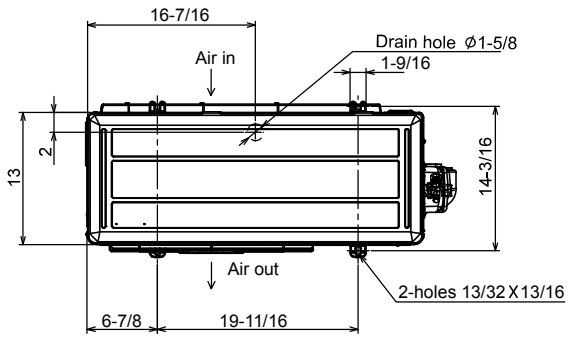
Liquid pipe : 1/4 (flared)
Gas pipe : 3/8 (flared)



REQUIRED SPACE



MUZ-FE18NA



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DATA

MUZ-FE09NA MUZ-FE12NA MUZ-FE12NA1 MUZ-FE18NA

7-1. PERFORMANCE DATA

1) COOLING CAPACITY

Model	Indoor air IWB (°F)	Outdoor intake air DB temperature (°F)														
		75			85			95			105			115		
		TC	SHC	TPC	TC	SHC	TPC	TC	SHC	TPC	TC	SHC	TPC	TC	SHC	TPC
MUZ-FE09NA	71	11.0	6.9	0.58	10.3	6.5	0.63	9.7	6.1	0.68	9.0	5.6	0.72	8.3	5.2	0.75
	67	10.4	7.9	0.55	9.7	7.4	0.60	9.0	6.8	0.65	8.4	6.4	0.69	7.7	5.8	0.72
	63	9.8	8.8	0.52	9.1	8.1	0.58	8.5	7.6	0.62	7.7	6.9	0.66	7.0	6.3	0.69
MUZ-FE12NA MUZ-FE12NA1	71	14.7	8.8	0.85	13.7	8.2	0.94	12.9	7.7	1.01	12.0	7.2	1.06	11.0	6.6	1.10
	67	13.9	10.2	0.81	13.0	9.5	0.89	12.0	8.8	0.96	11.2	8.1	1.02	10.3	7.5	1.07
	63	13.1	11.3	0.77	12.1	10.5	0.85	11.3	9.7	0.92	10.3	8.9	0.98	9.4	8.1	1.02
MUZ-FE18NA	71	22.1	15.6	1.13	20.6	14.6	1.24	19.4	13.7	1.33	18.0	12.7	1.40	16.6	11.7	1.46
	67	20.9	17.5	1.07	19.4	16.3	1.17	18.0	15.1	1.27	16.7	14.1	1.35	15.4	12.9	1.41
	63	19.6	19.1	1.02	18.2	17.7	1.12	16.9	16.5	1.21	15.4	15.0	1.30	14.0	13.7	1.35

NOTE: 1. IWB : Intake air wet-bulb temperature

TC : Total Capacity (x10³ Btu/h)

SHC : Sensible Heat Capacity (x10³ Btu/h)

TPC : Total Power Consumption (kW)

2. SHC is based on 80°F of indoor Intake air DB temperature.

2) COOLING CAPACITY CORRECTIONS

	Refrigerant piping length (one way: ft.)			
	25 (std.)	40	65	100
MUZ-FE09NA MUZ-FE12NA MUZ-FE12NA1	1.0	0.954	0.878	-
MUZ-FE18NA	1.0	0.954	0.878	0.771

3) HEATING CAPACITY

Model	Indoor air IDB (°F)	Outdoor intake air WB temperature (°F)													
		5		15		25		35		43		45		55	
		TC	TPC	TC	TPC	TC	TPC	TC	TPC	TC	TPC	TC	TPC	TC	TPC
MUZ-FE09NA	75	4.8	0.44	6.3	0.56	7.9	0.66	9.4	0.73	10.6	0.77	11.0	0.78	12.4	0.81
	70	5.2	0.42	6.7	0.54	8.2	0.64	9.6	0.71	10.9	0.75	11.2	0.77	12.7	0.80
	65	5.5	0.41	6.9	0.52	8.6	0.62	10.0	0.69	11.2	0.73	11.6	0.74	13.0	0.78
MUZ-FE12NA MUZ-FE12NA1	75	6.0	0.58	7.9	0.73	9.9	0.86	11.8	0.96	13.3	1.00	13.7	1.02	15.5	1.06
	70	6.5	0.55	8.4	0.71	10.2	0.84	12.0	0.93	13.6	0.98	14.0	1.00	15.8	1.04
	65	6.8	0.53	8.6	0.68	10.7	0.81	12.4	0.91	14.0	0.96	14.4	0.97	16.2	1.02
MUZ-FE18NA	75	9.5	0.91	12.5	1.15	15.7	1.35	18.7	1.50	21.1	1.58	21.7	1.60	24.6	1.66
	70	10.3	0.87	13.3	1.11	16.2	1.32	19.1	1.46	21.6	1.54	22.2	1.57	25.2	1.63
	65	10.8	0.83	13.6	1.06	17.0	1.27	19.8	1.42	22.2	1.50	22.9	1.52	25.7	1.60

NOTE: 1. IDB : Intake air dry-bulb temperature

TC : Total Capacity (x10³ Btu/h)

TPC : Total Power Consumption (kW)

2. Above data is for heating operation without any frost.

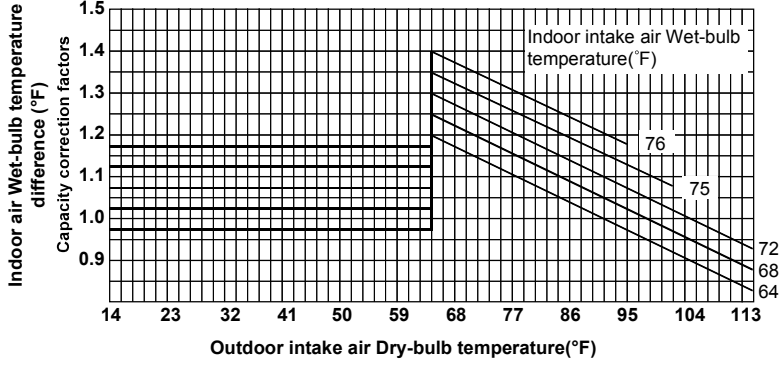
How to operate with fixed operational frequency of the compressor.

1. Press the EMERGENCY OPERATION switch on the front of the indoor unit, and select either EMERGENCY COOL mode or EMERGENCY HEAT mode before starting to operate the air conditioner.
2. The compressor starts with operational frequency.
3. The fan speed of the indoor unit is High.
4. This operation continues for 30 minutes.
5. In order to release this operation, press the EMERGENCY OPERATION switch twice or once, or press any button on the remote controller.

7-2. PERFORMANCE CURVE

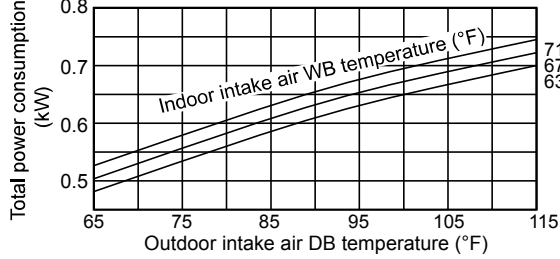
Cooling

Cooling capacity (at Rated frequency)



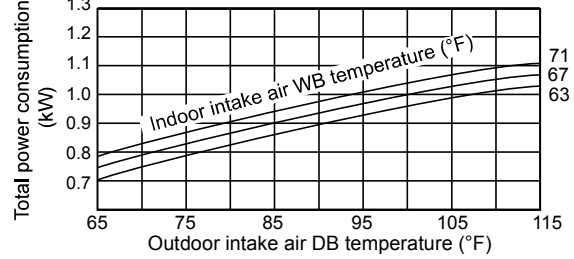
MUZ-FE09NA

SHF at rating condition = 0.76
Airflow = 307 CFM



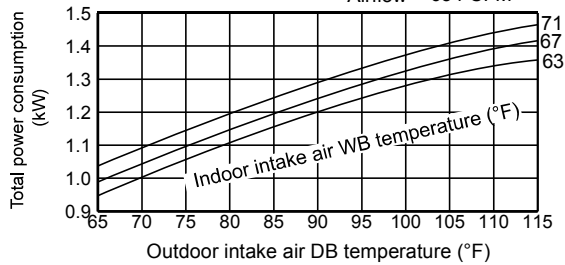
MUZ-FE12NA MUZ-FE12NA1

SHF at rating condition = 0.73
Airflow = 350 CFM



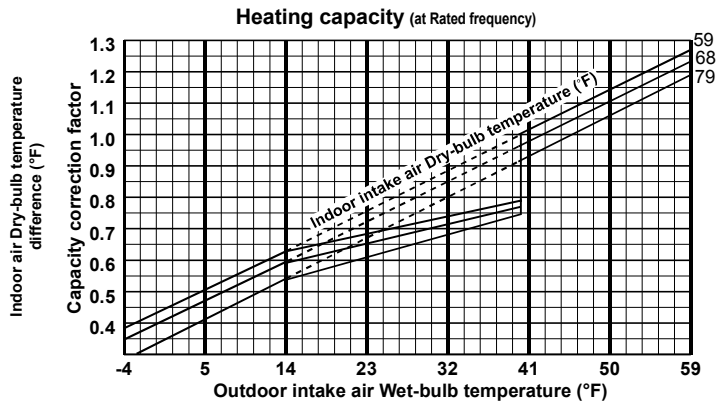
MUZ-FE18NA

SHF at rating condition = 0.84
Airflow = 634 CFM

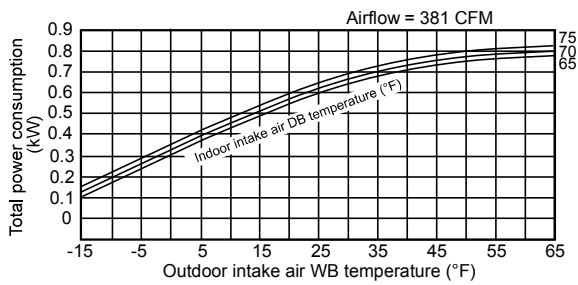


This value of frequency is not the same as the actual frequency in operating. Refer to 7-5 and 7-6 for the relationships between frequency and capacity.

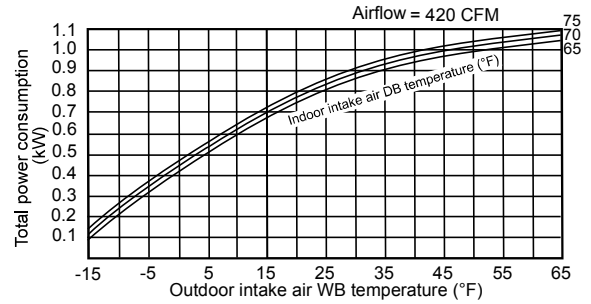
Heating



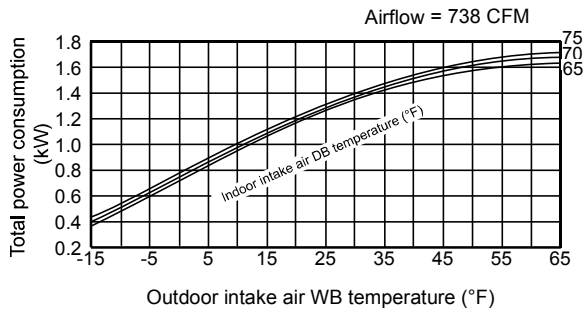
MUZ-FE09NA



MUZ-FE12NA MUZ-FE12NA1



MUZ-FE18NA



This value of frequency is not the same as the actual frequency in operating. Refer to 7-5 and 7-6 for the relationships between frequency and capacity.

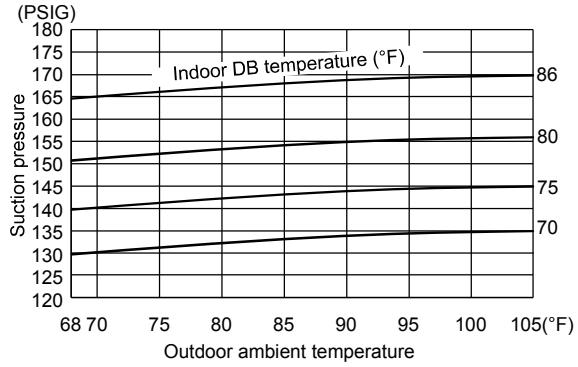
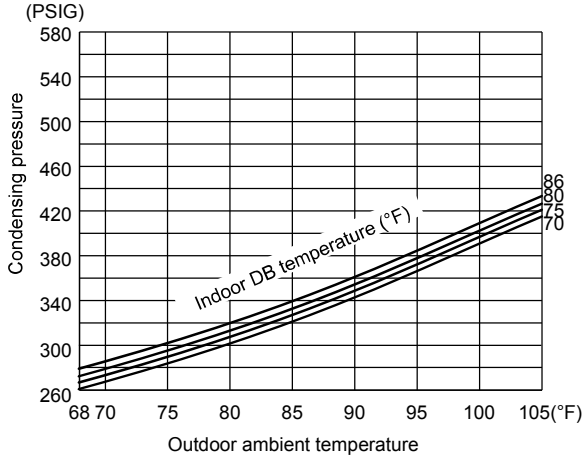
7-3. CONDENSING PRESSURE

Cooling

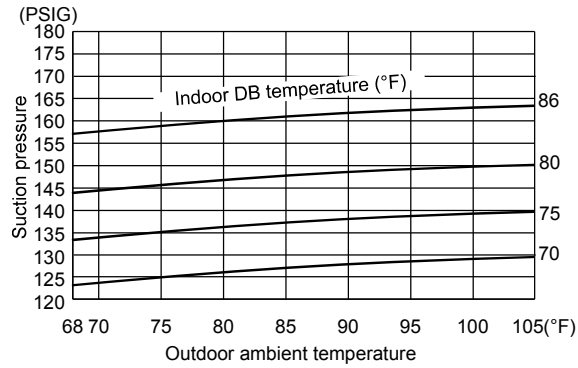
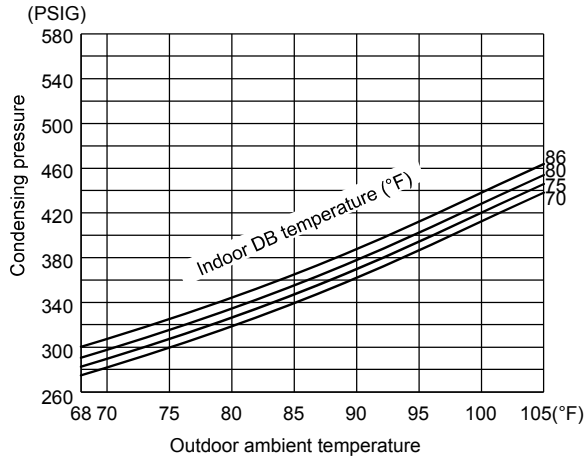
Data is based on the condition of indoor humidity 50 %.

Air flow should be set to High speed.

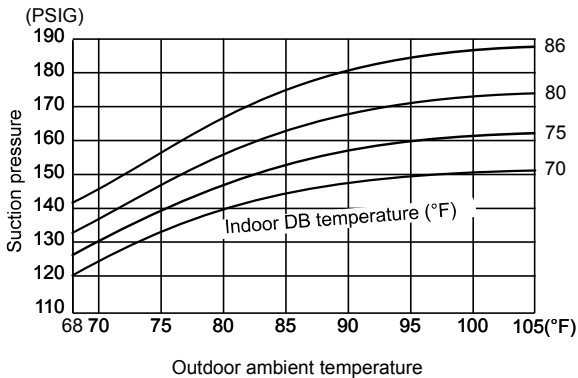
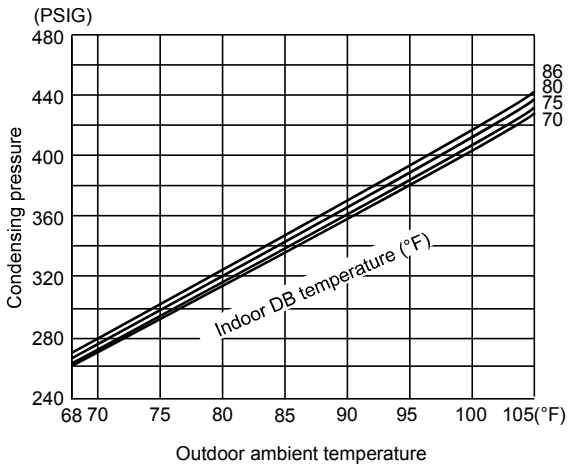
MUZ-FE09NA



MUZ-FE12NA MUZ-FE12NA1



MUZ-FE18NA



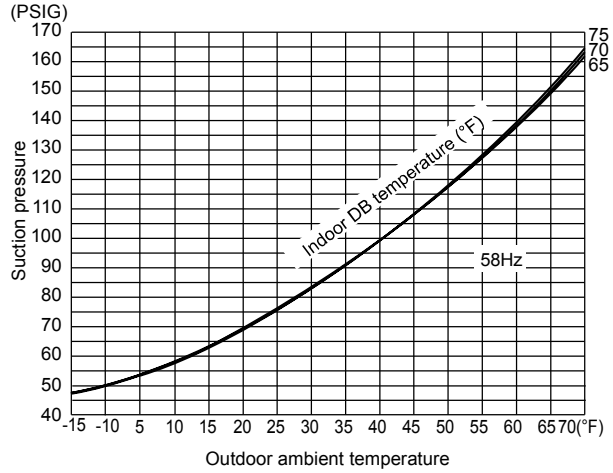
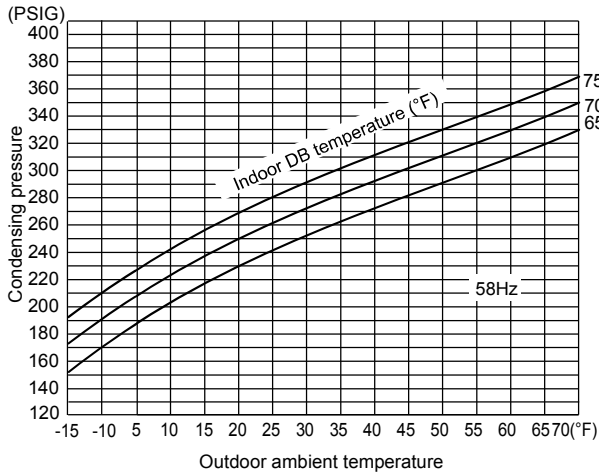
Heating

Data is based on the condition of outdoor humidity 75%.

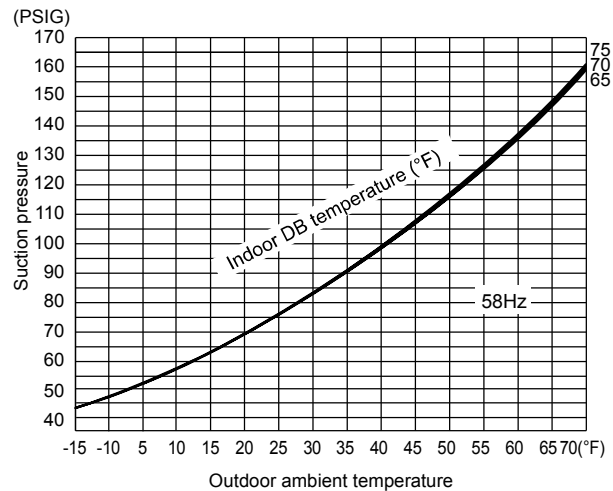
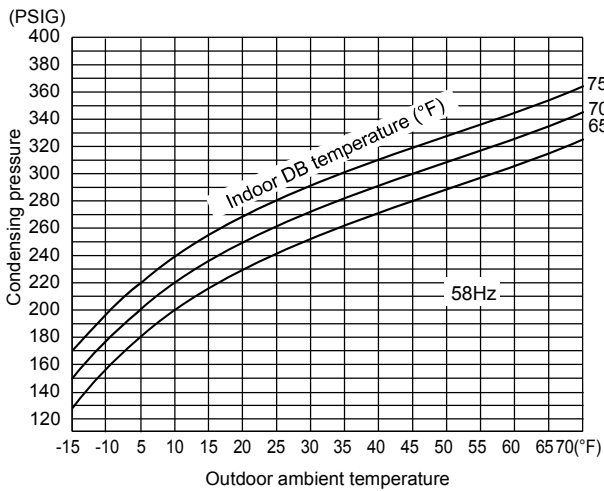
Air flow should be set to High speed.

Data is for heating operation without any frost.

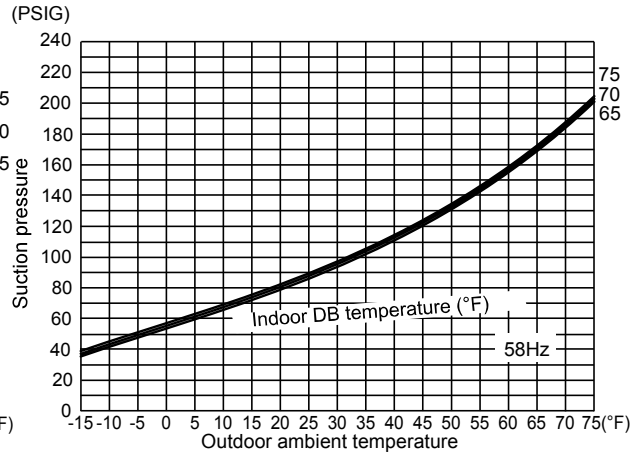
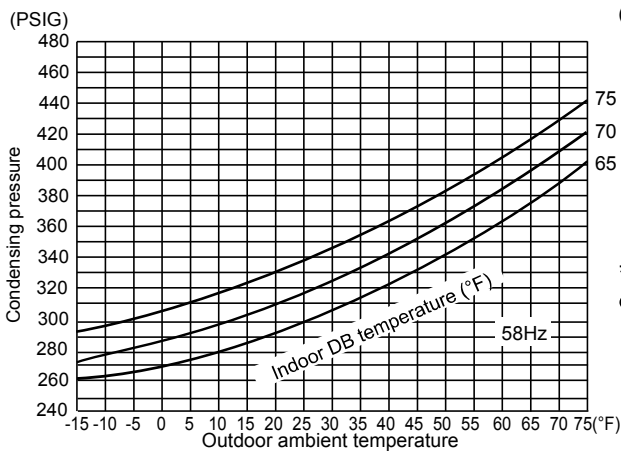
MUZ-FE09NA



MUZ-FE12NA MUZ-FE12NA1



MUZ-FE18NA

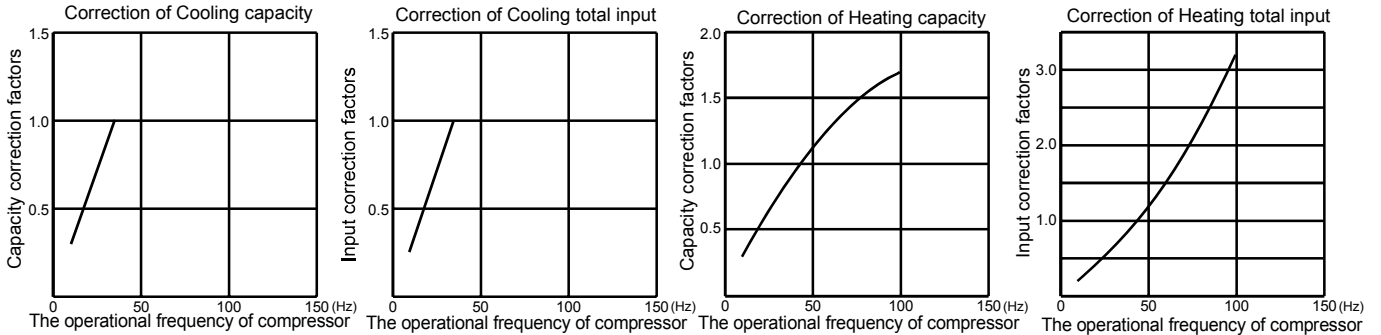


7-4. STANDARD OPERATION DATA

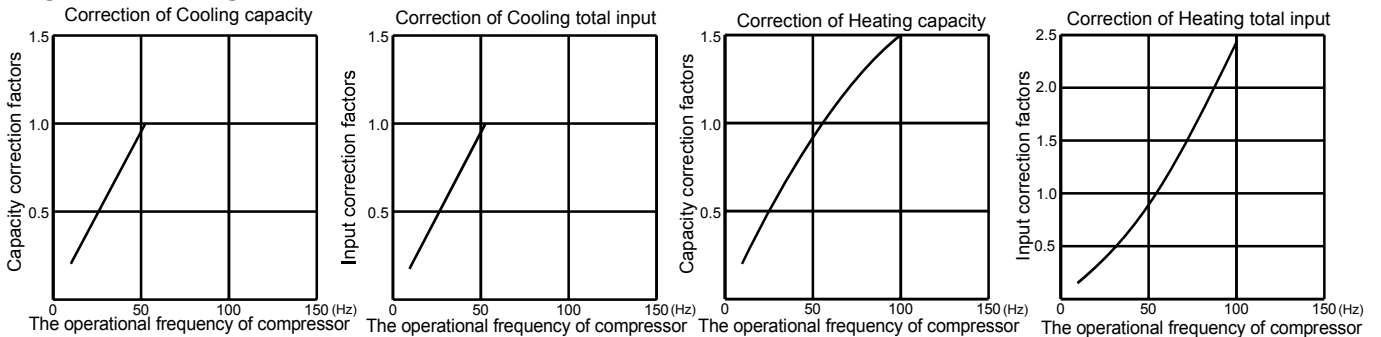
Model			MSZ-FE09NA		MSZ-FE12NA		MSZ-FE18NA		
Item		Unit	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Total	Capacity	Btu/h	9,000	10,900	12,000	13,600	18,000	21,600	
	SHF	—	0.76	—	0.73	—	0.84	—	
	Input	kW	0.580	0.710	0.930	0.950	1.800	2.200	
	Rated frequency	Hz	34	42	51	52.5	50.5	62.5	
Electrical circuit	Indoor unit		MSZ-FE09NA		MSZ-FE12NA		MSZ-FE18NA		
	Power supply	V, phase, Hz	208/230, 1, 60						
	Input	kW	0.018	0.024	0.024	0.030	0.058		
	Fan motor current	A	0.19/0.17	0.25/0.23	0.25/0.23	0.32/0.29	0.56/0.51		
	Outdoor unit		MUZ-FE09NA		MUZ-FE12NA MUZ-FE12NA1		MUZ-FE18NA		
	Power supply	V, phase, Hz	208/230, 1, 60						
	Input	kW	0.562	0.686	0.906	0.920	1.212	1.482	
	Comp. current	A	2.38/2.15	2.98/2.70	4.05/3.66	4.12/3.72	4.47/4.04	5.72/5.17	
	Fan motor current	A	0.35/0.32				1.16/1.05	1.13/1.02	
Refrigerant circuit	Condensing pressure	PSIG	376	355	402	392	373	357	
	Suction pressure	PSIG	154	108	148	104	151	107	
	Discharge temperature	°F	142	145	160	158	150	159	
	Condensing temperature	°F	112	108	117	115	111	105	
	Suction temperature	°F	53	36	53	34	58	41	
	Comp. shell bottom temperature	°F	144	128	146	129	132	136	
	Ref. pipe length	ft.	25						
	Refrigerant charge (R410A)		2 lb. 9 oz.				4 lb 3 oz.		
Indoor unit	Intake air temperature	DB	°F	80	70	80	70	80	70
		WB	°F	67	60	67	60	67	60
	Discharge air temperature	DB	°F	59	99	58	101	59	102
		WB	°F	56	—	55	—	56	—
	Fan speed (High)	rpm	1,020	1,120	1,120	1,220	1,300		
Airflow (High)	CFM	307 (Wet)	381	350 (Wet)	420	634 (Wet)	738		
Outdoor unit	Intake air temperature	DB	°F	95	47	95	47	95	47
		WB	°F	—	43	—	43	—	43
	Fan speed	rpm	810	870	810	870	840	810	
	Airflow	CFM	1,102	1,187	1,102	1,187	1,769	1,701	

7-5. CAPACITY AND INPUT CORRECTION BY INVERTER OUTPUT FREQUENCY

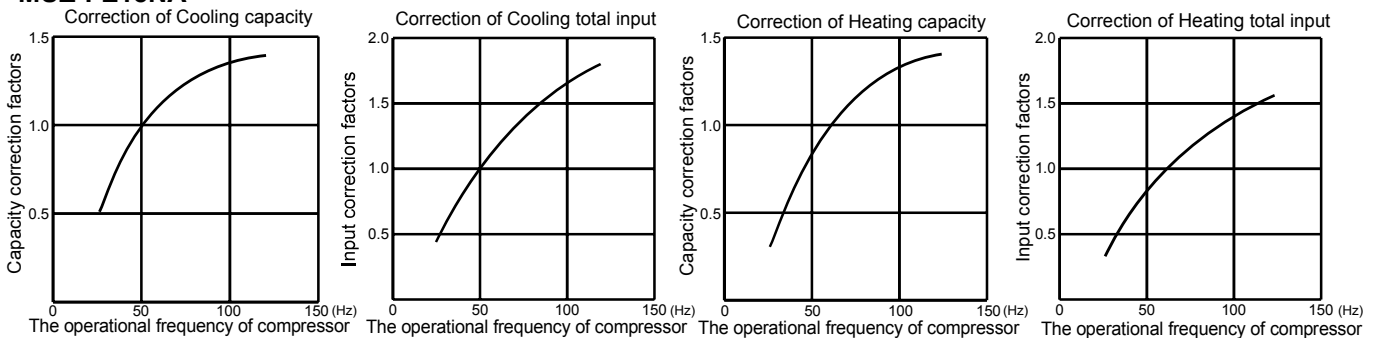
MUZ-FE09NA



MUZ-FE12NA MUZ-FE12NA1



MUZ-FE18NA



7-6. HOW TO OPERATE FIXED-FREQUENCY OPERATION (Test run operation)

1. Press EMERGENCY OPERATION switch to start COOL or HEAT mode (COOL: Press once, HEAT: Press twice).
2. Test run operation starts and continues to operate for 30 minutes.
3. Compressor operates at rated frequency in COOL mode or 58 Hz in HEAT mode.
4. Indoor fan operates at High speed.
5. After 30 minutes, test run operation finishes and EMERGENCY OPERATION starts (operation frequency of compressor varies).
6. To cancel test run operation (EMERGENCY OPERATION), press EMERGENCY OPERATION switch or any button on remote controller.