

Engineering Data

FXFSQ-ARV16

50 Hz

FXFSQ-ARV1

50/60 Hz

R-410A



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1. Lineup

Capacity range	2.8 kW	3.6 kW	4.5 kW	5.6 kW	7.1 kW	9.0 kW	11.2 kW	14.0 kW	16.0 kW
	1 HP	1.25 HP	1.6 HP	2 HP	2.5 HP	3.2 HP	4 HP	5 HP	6 HP
Capacity index	25	31.25	40	50	62.5	80	100	125	140
FXFSQ (for India)	25ARV16	32ARV16	40ARV16	50ARV16	63ARV16	80ARV16	100ARV16	125ARV16	140ARV16
FXFSQ (for Middle East and Africa)	25ARV1	32ARV1	40ARV1	50ARV1	63ARV1	80ARV1	100ARV1	125ARV1	140ARV1

V16: 1 phase, 220-240 V, 50 Hz

V1: 1 phase, 220-240 V, 50/60 Hz



With Sensing Sensor



Without Sensing Sensor

2. Specifications

Model			FXFSQ25ARV16	FXFSQ25ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	2,400	2,400
		Btu/h	9,600	9,600
		kW	2.8	2.8
★2 ★3 Heating capacity		kcal/h	2,800	2,800
		Btu/h	10,900	10,900
		kW	3.2	3.2
Power input	Cooling	kW	0.028	0.028
	Heating	kW	0.026	0.026
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	256 × 840 × 840	256 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	53 × 1	53 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	13/12.5/11.5/11/10	13/12.5/11.5/11/10
		l/s	217/208/192/183/167	217/208/192/183/167
		cfm	459/441/406/388/353	459/441/406/388/353
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ6.4	φ6.4
	Gas pipes	mm	φ12.7	φ12.7
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	19	19
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	30/29.5/28.5/28/27	30/29.5/28.5/28/27
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121736A	4D121736A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ32ARV16	FXFSQ32ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	3,100	3,100
		Btu/h	12,300	12,300
		kW	3.6	3.6
★2 ★3 Heating capacity		kcal/h	3,400	3,400
		Btu/h	13,600	13,600
		kW	4.0	4.0
Power input	Cooling	kW	0.028	0.028
	Heating	kW	0.026	0.026
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	256 × 840 × 840	256 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	53 × 1	53 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	13/12.5/11.5/11/10	13/12.5/11.5/11/10
		l/s	217/208/192/183/167	217/208/192/183/167
		cfm	459/441/406/388/353	459/441/406/388/353
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ6.4	φ6.4
	Gas pipes	mm	φ12.7	φ12.7
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	19	19
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	30/29.5/28.5/28/27	30/29.5/28.5/28/27
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121736A	4D121736A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ40ARV16	FXFSQ40ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	3,900	3,900
		Btu/h	15,400	15,400
		kW	4.5	4.5
★2 ★3 Heating capacity		kcal/h	4,300	4,300
		Btu/h	17,100	17,100
		kW	5.0	5.0
Power input	Cooling	kW	0.035	0.035
	Heating	kW	0.034	0.034
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	256 × 840 × 840	256 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	53 × 1	53 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	17/13.5/12.5/12/11	17/13.5/12.5/12/11
		l/s	283/225/208/200/183	283/225/208/200/183
		cfm	600/477/441/424/388	600/477/441/424/388
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ6.4	φ6.4
	Gas pipes	mm	φ12.7	φ12.7
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	19	19
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	35/29.5/29/28/27	35/29.5/29/28/27
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121737A	4D121737A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ50ARV16	FXFSQ50ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	4,800	4,800
		Btu/h	19,100	19,100
		kW	5.6	5.6
★2 ★3 Heating capacity		kcal/h	5,400	5,400
		Btu/h	21,500	21,500
		kW	6.3	6.3
Power input	Cooling	kW	0.056	0.056
	Heating	kW	0.056	0.056
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	256 × 840 × 840	256 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	53 × 1	53 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	23/20.5/19/14.5/11	23/20.5/19/14.5/11
		l/s	383/342/317/242/183	383/342/317/242/183
		cfm	812/724/671/512/388	812/724/671/512/388
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ6.4	φ6.4
	Gas pipes	mm	φ12.7	φ12.7
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	24	24
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	38/35/34.5/29.5/27	38/35/34.5/29.5/27
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121738A	4D121738A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ63ARV16	FXFSQ63ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	6,100	6,100
		Btu/h	24,200	24,200
		kW	7.1	7.1
★2 ★3 Heating capacity		kcal/h	6,900	6,900
		Btu/h	27,300	27,300
		kW	8.0	8.0
Power input	Cooling	kW	0.061	0.061
	Heating	kW	0.060	0.060
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	256 × 840 × 840	256 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	53 × 1	53 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	23.5/21/20/16/13.5	23.5/21/20/16/13.5
		l/s	392/350/333/267/225	392/350/333/267/225
		cfm	830/741/706/565/477	830/741/706/565/477
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ9.5	φ9.5
	Gas pipes	mm	φ15.9	φ15.9
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	22	22
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	38/36/35.5/31.5/28	38/36/35.5/31.5/28
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121739A	4D121739A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ80ARV16	FXFSQ80ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	7,700	7,700
		Btu/h	30,700	30,700
		kW	9.0	9.0
★2 ★3 Heating capacity		kcal/h	8,600	8,600
		Btu/h	34,100	34,100
		kW	10.0	10.0
Power input	Cooling	kW	0.092	0.092
	Heating	kW	0.092	0.092
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	256 × 840 × 840	256 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	53 × 1	53 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	24.5/22/20.5/20/15	24.5/22/20.5/20/15
		l/s	408/367/342/333/250	408/367/342/333/250
cfm		865/777/724/706/530	865/777/724/706/530	
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ9.5	φ9.5
	Gas pipes	mm	φ15.9	φ15.9
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	22	22
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	39/37/36/35.5/31	39/37/36/35.5/31
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
Mass		kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121740A	4D121740A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ100ARV16	FXFSQ100ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	9,600	9,600
		Btu/h	38,200	38,200
		kW	11.2	11.2
★2 ★3 Heating capacity		kcal/h	10,800	10,800
		Btu/h	42,700	42,700
		kW	12.5	12.5
Power input	Cooling	kW	0.164	0.164
	Heating	kW	0.144	0.144
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	298 × 840 × 840	298 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	106 × 1	106 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	33.5/30.5/27/23.5/21	33.5/30.5/27/23.5/21
		l/s	558/508/450/392/350	558/508/450/392/350
cfm		1,183/1,077/953/830/741	1,183/1,077/953/830/741	
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ9.5	φ9.5
	Gas pipes	mm	φ15.9	φ15.9
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	25	25
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	44/41/38/35/33	44/41/38/35/33
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121742A	4D121742A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ125ARV16	FXFSQ125ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	12,000	12,000
		Btu/h	47,800	47,800
		kW	14.0	14.0
★2 ★3 Heating capacity		kcal/h	13,800	13,800
		Btu/h	54,600	54,600
		kW	16.0	16.0
Power input	Cooling	kW	0.170	0.170
	Heating	kW	0.159	0.159
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	298 × 840 × 840	298 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	106 × 1	106 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	34.5/31.5/28.5/25.5/23	34.5/31.5/28.5/25.5/23
		l/s	575/525/475/425/383	575/525/475/425/383
		cfm	1,218/1,112/1,006/900/812	1,218/1,112/1,006/900/812
	Drive		Direct drive	Direct drive
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ9.5	φ9.5
	Gas pipes	mm	φ15.9	φ15.9
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	25	25
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	45/42.5/39.5/37/35	45/42.5/39.5/37/35
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121743A	4D121743A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

Model			FXFSQ140ARV16	FXFSQ140ARV1
Power supply			1 phase, 220-240 V, 50 Hz	1 phase, 220-240 V, 50/60 Hz
★1 ★3 Cooling capacity		kcal/h	13,800	13,800
		Btu/h	54,600	54,600
		kW	16.0	16.0
★2 ★3 Heating capacity		kcal/h	13,800	13,800
		Btu/h	54,600	54,600
		kW	16.0	16.0
Power input	Cooling	kW	0.194	0.194
	Heating	kW	0.183	0.183
Casing / Colour			Galvanised steel plate	Galvanised steel plate
Dimensions: (H × W × D)		mm	298 × 840 × 840	298 × 840 × 840
Fan	Model		QTS48G15M	QTS48G15M
	Type		Turbo fan	Turbo fan
	Motor output × Number of units	W	106 × 1	106 × 1
	Airflow rate (H/HM/M/ML/L)	m³/min	35.5/32.5/29.5/26.5/23	35.5/32.5/29.5/26.5/23
		l/s	592/542/492/442/383	592/542/492/442/383
		cfm	1,253/1,147/1,041/935/812	1,253/1,147/1,041/935/812
Drive		Direct drive	Direct drive	
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Sound absorbing thermal insulation material			Polyurethane form	Polyurethane form
Piping connections	Liquid pipes	mm	φ9.5	φ9.5
	Gas pipes	mm	φ15.9	φ15.9
	Drain pipe	mm	φ26 (hole)	φ26 (hole)
Mass		kg	26	26
★4 Sound pressure level (H/HM/M/ML/L)		dB(A)	46/43.5/40.5/38/35	46/43.5/40.5/38/35
Safety devices			Fuse	Fuse
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Decoration panel (option)	Model		BYCQ125EAF6	BYCQ125EAF9
	Colour		Fresh white	Fresh white
	Dimensions: (H × W × D)	mm	50 × 950 × 950	50 × 950 × 950
	Air filter		Resin net (with mould resistance)	Resin net (with mould resistance)
	Mass	kg	5.5	5.5
Standard accessories			Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide	Operation manual, Installation manual, Pattern for installation, Drain hose, Clamp metal, Washer fixing plate, Sealing pads, Clamps, Screws, Washer for hanging bracket, Insulation for fitting, Installation guide
Drawing No.	Specification		C: 3D121176C	C: 3D121176C
	Sound level		4D121744A	4D121744A

Note:

- ★1. Data based on the condition shown in below;
Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB, 24°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★2. Data based on the condition shown in below;
Indoor temp.: 20°CDB, 15°CWB / outdoor temp.: 7°CDB, 6°CWB / equivalent piping length: 7.5 m, height difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. Anechoic chamber conversion value, measured at a point 1.5 m downward from the unit centre. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

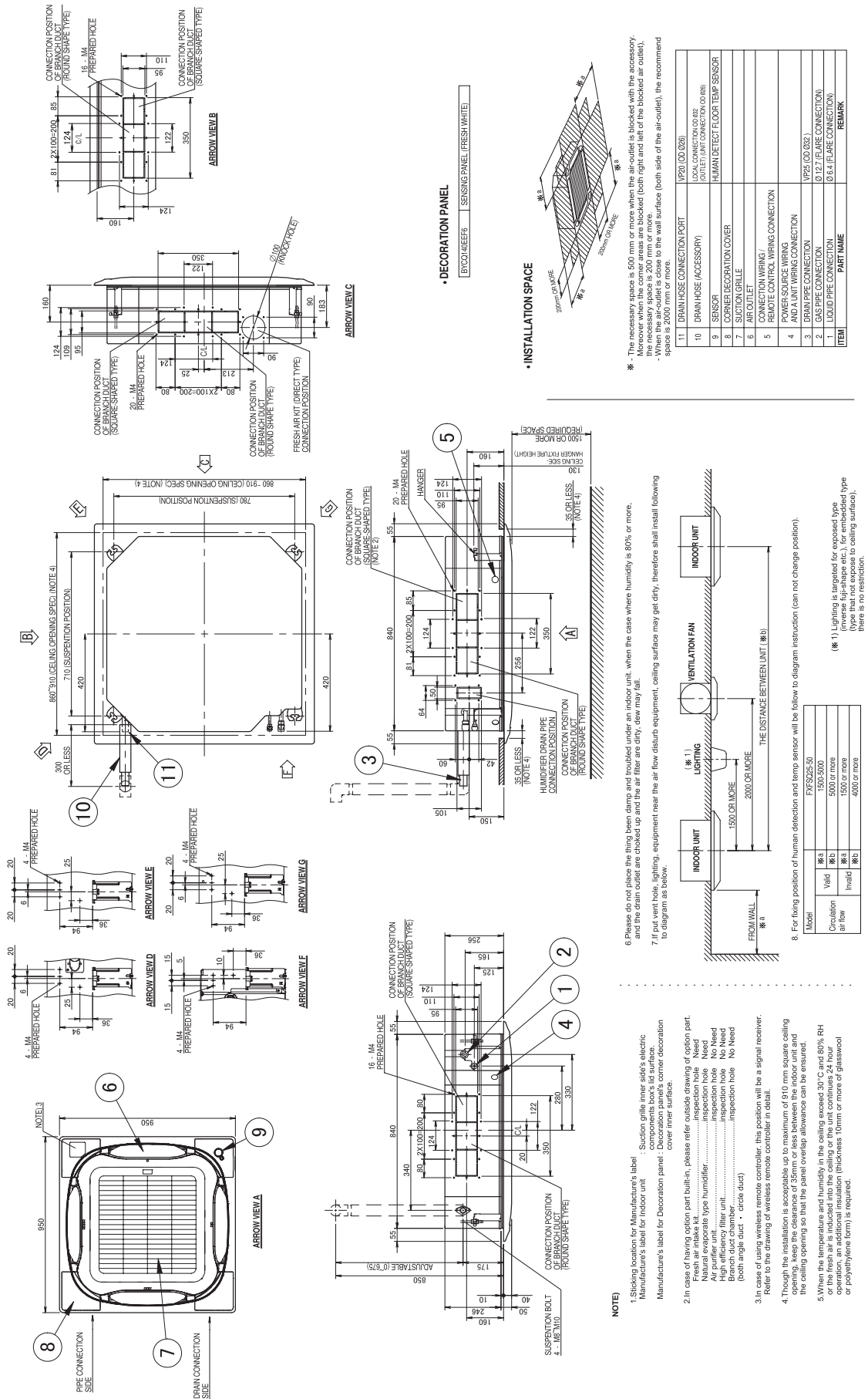
Conversion formulae	
kcal/h=kW×860	
Btu/h=kW×3,412	
cfm=m³/min×35.3	
l/s=m³/min×1,000/60	

3. Dimensions

3.1 Standard Panel with Sensing Sensor

FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16

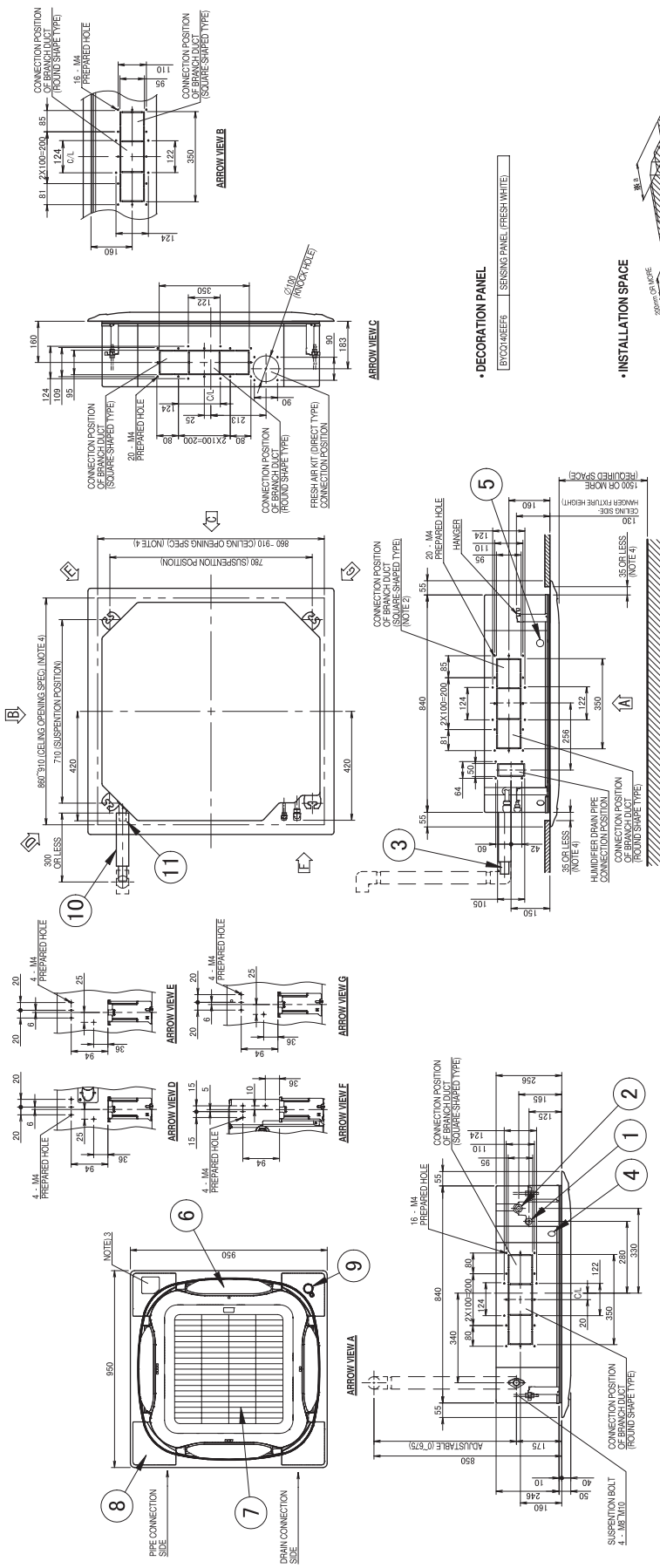
Unit: mm



3D121751A

FXFSQ63ARV16 / FXFSQ80ARV16

Unit: mm



NOTE

1. Sticking location for Manufacturer's label
Manufacturer's label for Indoor unit : Section grille inner side's electric components box's lid surface
Manufacturer's label for Decoration panel : Decoration panel's inner decoration cover inner surface.

2. In case of having section part built-in, please refer outside drawing of ceiling part.
Fresh air intake kit : Need
Natural evaporative type humidifier : Need
Air purifier unit : No Need
Branch duct chamber : No Need
(both angle duct + circle duct)
Refer to the drawing of wireless remote controller, this position will be a signal receiver.

3. In case of using wireless remote controller, this position will be a signal receiver.
Refer to the drawing of wireless remote controller in detail.

4. Though the installation is acceptable up to maximum of 610 mm square ceiling opening, keep the clearance of 35mm or less between the indoor unit and the ceiling opening so that the panel overlap allowance can be ensured.

5. When the temperature and humidity in the ceiling exceeds 30°C and 80% RH or the fresh air is introduced into the ceiling or the unit continues 24 hour operation, an additional insulation (thickness 10mm or more of glasswool or polyethylene foam) is required.

6. Please do not place the things being damp and troubled under an indoor unit, when the case where humidity is 60% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall.

7. If put vent hole, lighting, equipment near the air flow disturb equipment, ceiling surface may get dirty, therefore shall install following to Diagram as below.

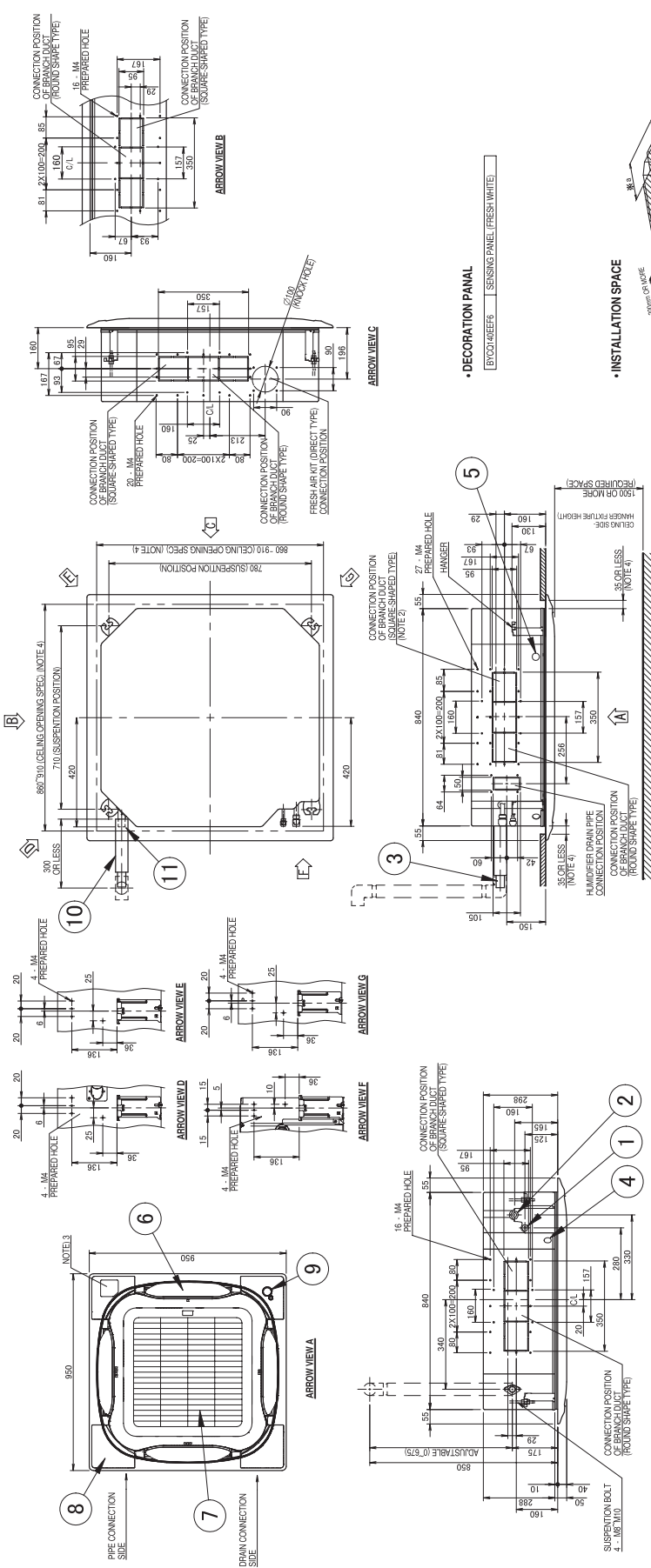
8. For fixing position of human detection and temp sensor will be follow to diagram instruction (can not change position).

Model	FXFSQ 63-80
Circulation	Valid
air flow	Invalid

(※ 1) Lighting is targeted for exposed type (type that not expose to ceiling surface), there is no restriction.

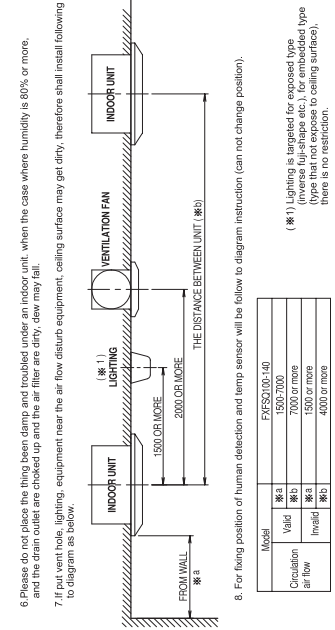
FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16

Unit: mm



NOTE

- 1. Sticking location for Manufacturer's label
Manufacturer's label for indoor unit : Suction grille inner side's electric
Manufacturer's label for Decoration panel : Decoration panel's corner decoration
cover inner surface.
- 2. In case of having option part built-in, please refer outside drawing of option part.
Fresh air intake kit..... inspection hole Need
Natural evaporative type humidifier..... inspection hole Need
Air purifier unit..... inspection hole No Need
Branch duct filter unit..... inspection hole No Need
Branch duct chamber..... inspection hole No Need
(both angle duct・circle duct)
- 3. In case of using wireless remote controller, this position will be a signal receiver.
Refer to the drawing of wireless remote controller in detail.
- 4. Though the installation is acceptable up to maximum of 910 mm square ceiling
opening, keep the clearance of 35mm or less between the indoor unit and
the ceiling opening so that the panel overlap allowance can be ensured.
- 5. When the temperature and humidity in the ceiling exceeds 30°C and 80% RH
or the fresh air is induced into the ceiling or the unit continues 24 hour
operation, an additional insulation (thickness 10mm or more of glasswool
or polystyrene foam) is required.



- 6. Please do not place the thing been damp and troubled under an indoor unit, when the case where humidity is 80% or more,
and the drain outlet are checked up and the air filter are dirty, dew may fall.
- 7. If a vent hole, lighting, equipment near the air flow disturbs equipment, ceiling surface may get dirty, therefore shall install following
to diagram as below.
- 8. For fixing position of human detection and temp sensor will be follow to diagram instruction (can not change position).

Model	FXFSQ100-140
Valid	※a
Circulation	※b
air flow	※c
	※d
	※e
	※f
	※g
	※h
	※i
	※j
	※k
	※l
	※m
	※n
	※o
	※p
	※q
	※r
	※s
	※t
	※u
	※v
	※w
	※x
	※y
	※z

(※1) Lighting is targeted for exposed type
(inverse tul-shape etc.), for embedded type
(type that not expose to ceiling surface),
there is no restriction.

※ - The necessary space is 500 mm or more when the air-outlet is blocked with the accessory.
the necessary space is 200 mm or more when the air-outlet is blocked (both right and left of the blocked air outlet).
- When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend
space is 2000 mm or more.

11	DRAIN HOSE CONNECTION PORT	VP20 (OD 20)
10	DRAIN HOSE (ACCESSORY)	LOCAL CONNECTION (OD 20) (OUTLET UNIT CONNECTION (OD 20))
9	SENSOR	HUMAN DETECT FLOOR TEMP SENSOR
8	CORNER DECORATION COVER	
7	STATIONARY PIPE	
6	STATIONARY PIPE	
5	CONNECTION WIRING	REMOTE CONTROL WIRING CONNECTION
4	AND A UNIT WIRING CONNECTION	POWER-SOURCE WIRING
3	DRAIN PIPE CONNECTION	VP25 (OD 25)
2	GAS PIPE CONNECTION	(Ø 15.9 (FLARE CONNECTION))
1	LIQUID PIPE CONNECTION	(Ø 9.5 (FLARE CONNECTION))
	PART NAME	REMARK

• INSTALLATION SPACE

• DECORATION PANEL

BYCOLOR4EE66 | SENSING PANEL (FRESH WHITE)

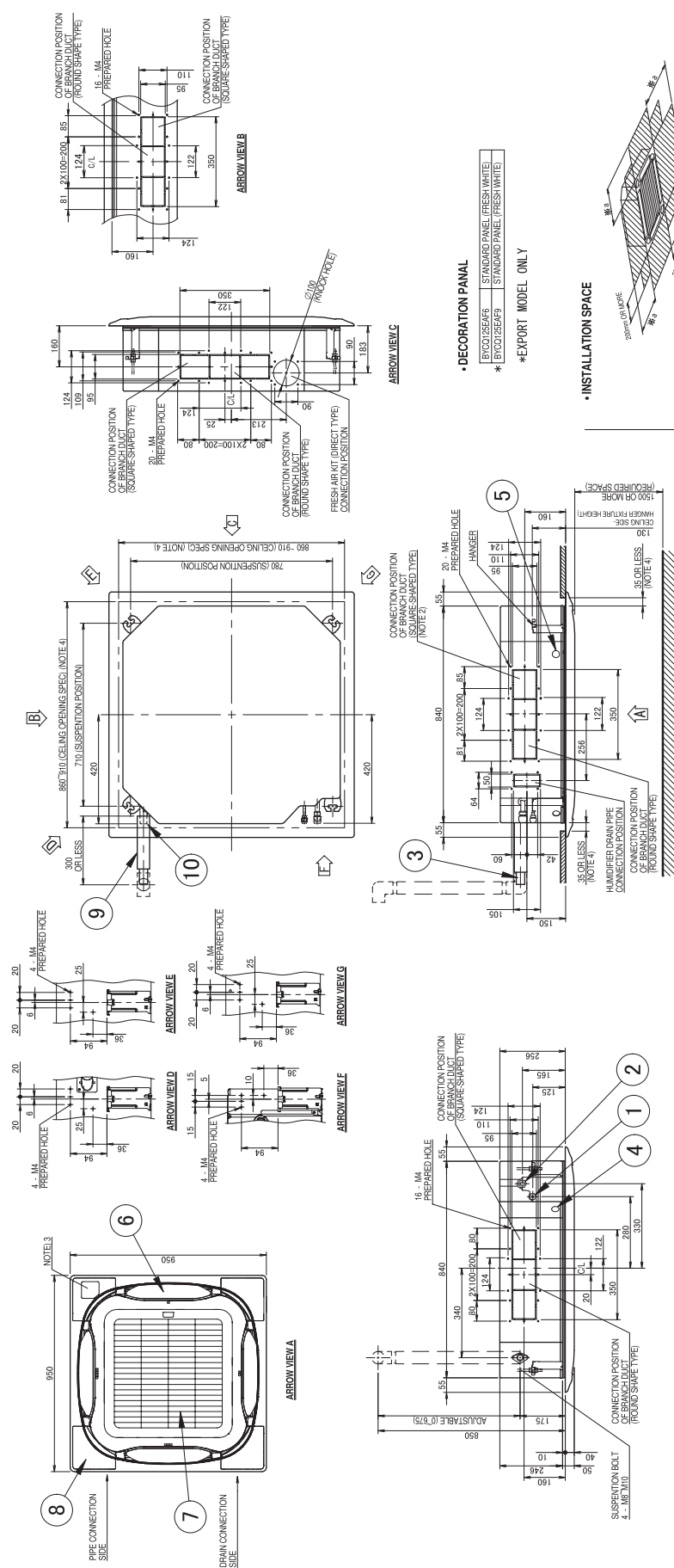
3D121753A

3.2 Standard Panel

FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16

FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1

Unit: mm



(NOTE)

- (Sticking location for Manufacturer's label
Manufacturer's label for indoor unit)
Suction grille inner side's electric components box's surface.
Decorate panel cover inner decoration cover inner surface.
- In case of having option part built-in, please refer drawing of option part
- | | |
|--|-----------------|
| Natural air intake kit..... | No Need |
| Fresh air evaporative type humidifier..... | Inspection hole |
| Air purifier unit..... | No Need |
| Branch duct filter..... | Inspection hole |
| Branch duct chamber..... | No Need |
| (both angle duct - circle duct) | |
- In case of using wireless remote controller, this position will be a signal receiver.
Refer to the drawing of wireless remote controller in detail.
- The opening the installation is acceptable up to maximum of 910 mm square ceiling opening, keep the clearance of 35mm or less between the indoor unit and the ceiling opening so that the cavity cooling allowance can be ensured.
5. When the temperature and humidity condition in the ceiling exceed 30 °C and 80% RH of the fresh air is introduced into the ceiling of the unit continue 24 hour or more (in inches) (Inches) (Tonnal) of moisture of polyethylene film is required).

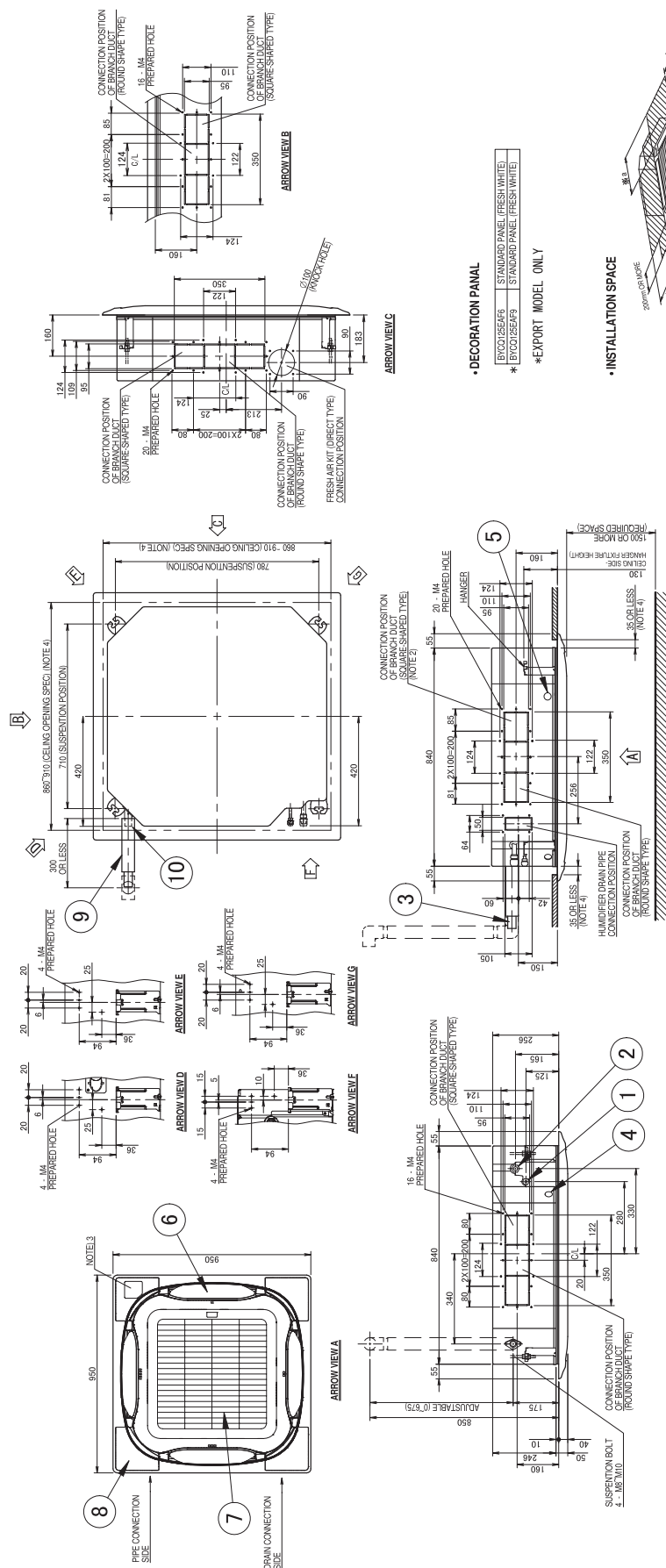
10	DRAIN HOSE CONNECTION PORT	IP20 (Ø 206)
9	DRAIN HOSE (ACCESSORY)	LOCAL CONNECTION Ø182 (OUTLET UNIT CONNECTION Ø 808)
8	CORNER DECORATION COVER	
7	SUNCTION GRILLE	
6	AIR OUTLET	
5	CONNECTION WIRING / REMOTE CONTROL WIRING CONNECTION	
4	POWER SOURCE WIRING AND FLUENT WIRING CONNECTION	
3	DRAIN PIPE CONNECTION	IP25 (Ø 202)
2	GAS PIPE CONNECTION	Ø 12.7 (1/2" ARE CONNECTION)
1	LIQUID PIPE CONNECTION	Ø 6.4 (1/4" ARE CONNECTION)

※ 1) Lighting is targeted for exposed type (inverse fuji-shape etc.), for embedded type (type that not expose to ceiling surface), there is no restriction.

3D121754

FXFSQ63ARV16 / FXFSQ80ARV16
FXFSQ63ARV1 / FXFSQ80ARV1

Unit: mm

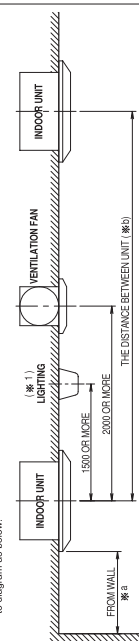


NOTE)

- | | |
|--|---|
| Sticking location for Manufacturer's label | Section grille inner side's electric components box lid surface |
| Manufacturer's label for indoor unit | Components box lid surface cover inner surface. |
| Manufacturer's label for Decoration panel | Decoration panel corner decoration cover inner surface. |
- In case of having option part built-in, please enter outside drawing of option part.
- | | | |
|-------------------------------------|--------------------|---------|
| Fresh air intake kit | No inspection hole | Need |
| Natural evaporative type humidifier | inspection hole | Need |
| Air purifier unit | inspection hole | No Need |
| Filter unit | inspection hole | No Need |
| Branch duct chamber | inspection hole | No Need |
| (both angle duct • circle duct) | | |
- In case of using wireless remote controller, this position will be a signal receiver.
Refer to the drawing of wireless remote controller in detail.
- Though the installation is acceptable up to maximum of 910 mm square ceiling opening, keep the gap between the ceiling and the indoor unit and the ceiling opening so that the panel overlap allowance can be maintained.
5. When the temperature and humidity in the ceiling exceeds 30 °C and 80% RH or the fresh air is introduced into the ceiling at the unit continues 24 hour continuously, the ceiling must be made of fireproof material (glass fiber reinforced polyethylene form or polycarbonate) is required.

5. Please do not place the thing been damp and troubled under an indoor unit. when the case where humidity is 80% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall.

7. If put vent hole, lighting, equipment near the air flow disturb equipment, ceiling surface may get dirty, therefore shall install following to diagram as below.



Model	Circulation air flow	
	Valid	Invalid
FXFQ63-80	※a	※a
FXFQ63-80	※b	※a
1500-5000		※a
5000 or more		※a
1500 or more		※a
4000 or more		※a

.) Lighting is targeted for exposed type (inverse fuji-shape etc.), for embedded type (type that not expose to ceiling surface), there is no restriction.

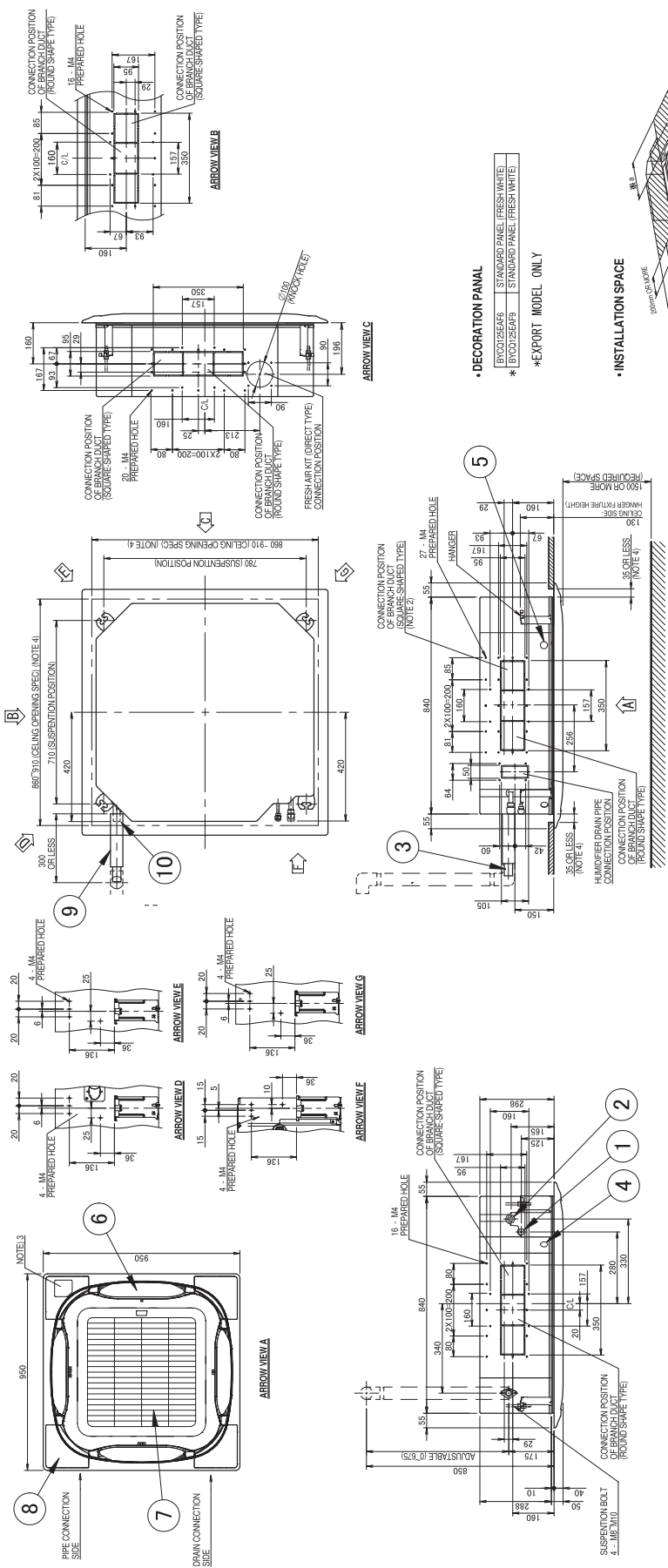
10	DRAIN HOSE CONNECTION PORT		VP25 (QD 026) LOCAL CONNECTION OR DISC OUTLET (UNIT CONNECTION QD 046)
9	DRAIN HOSE (ACCESSORY)		
8	CORNER DECORATION COVER		
7	SUNCTION GRILLE		
6	AIR OUTLET		VP5 (QD 032) 0.15 FLARE CONNECTION 0.15 FLARE CONNECTION
5	CONNECTION WIRING REMOTE CONTROL WIRING CONNECTION		
4	POWER SOURCE WIRING AND A UNIT WIRING CONNECTION		
3	DRAIN PIPE CONNECTION		
2	GAS PIPE CONNECTION		VP5 (QD 032) 0.15 FLARE CONNECTION 0.15 FLARE CONNECTION
1	LIQUID PIPE CONNECTION		

- * - The necessary space is 500 mm or more when the air-outlet is blocked with the accessory. Moreover when the corner areas are blocked (both right and left of the blocked air outlet), the necessary space is 200 mm or more.
- When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend space is 2000 mm or more.

3D121762

FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16
FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1

Unit: mm



NOTE

1. Sticking location for Manufacturer's label : Suction grille inner side's electric components box's lid surface.
Manufacturer's label for Indoor unit : Decoration panel's corner decoration cover inner surface.

2. In case of having option part built-in, please refer outside drawing of option part.
Suction grille inner side's electric components box's lid surface : No Need
Natural evaporation type humidifier : No Need
Air purifier unit : No Need
High efficiency filter unit : No Need
Inspection hole (point angle duct + circle duct) : No Need

3. In case of using wireless remote controller, this position will be a signal receiver.
Refer to the drawing of wireless remote controller in detail.

4. Though the installation is acceptable up to maximum of 910 mm square ceiling and the ceiling opening so that the panel overlap allowance can be ensured.

5. When the temperature and humidity in the ceiling exceed 30°C and 80% RH operation, an additional insulation (thickness 10mm or more of glasswool or polyethylene foam) is required.

6. Please do not place the thing been damp and fouled under an indoor unit, when the case where humidity is 80% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall.

7. If put vent hole, lighting, equipment near the air flow disturb equipment, ceiling surface may get dirty, therefore shall install following to diagram as below.

INDOOR UNIT **VENTILATION FAN** **LIGHTING** **INDOOR UNIT**

THE DISTANCE BETWEEN UNIT (※6)

FROM WALL ※a

1500 OR MORE

2000 OR MORE

※1

※2

※3

※4

※5

※6

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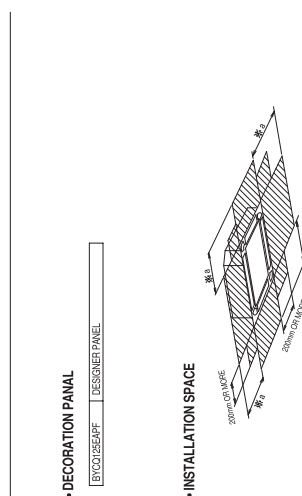
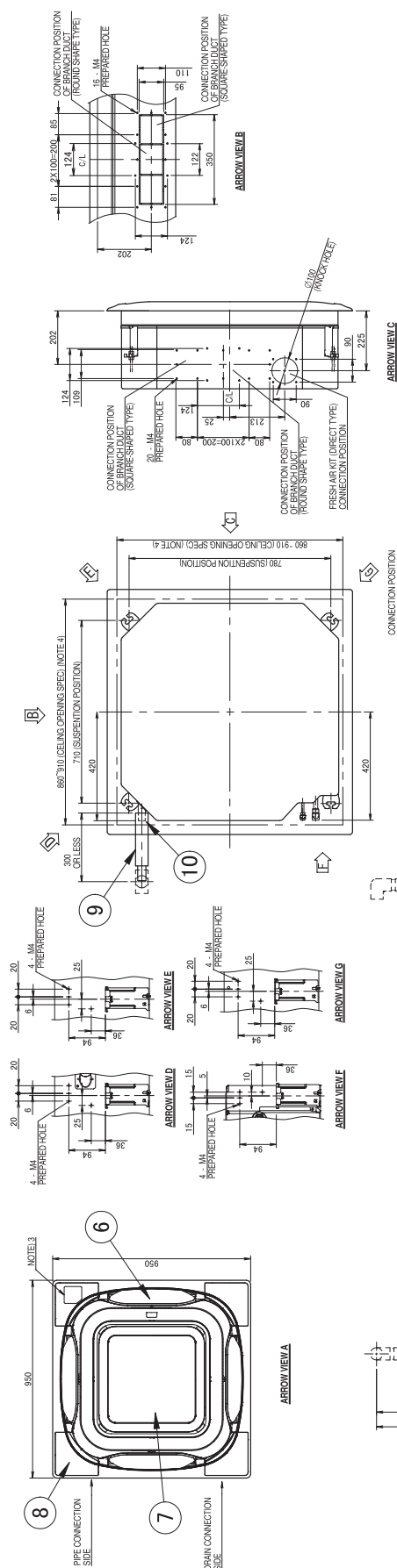
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3.3 Designer Panel

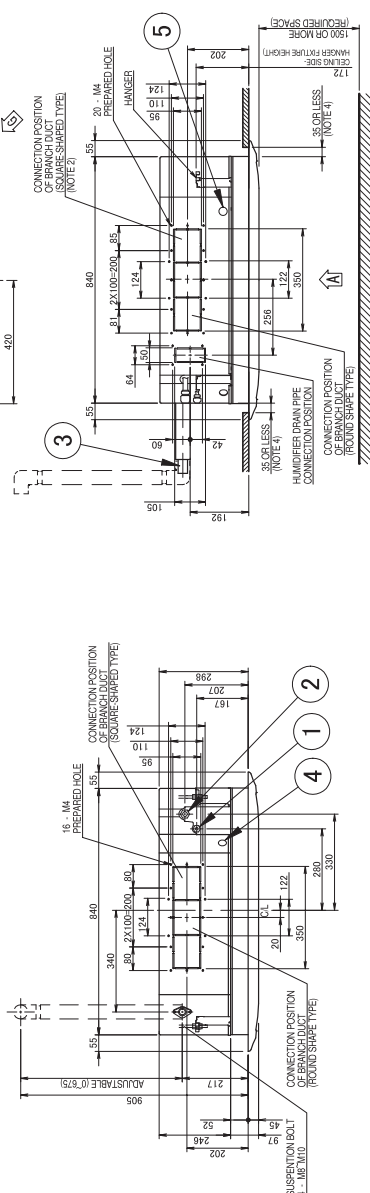
FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16

Unit: mm



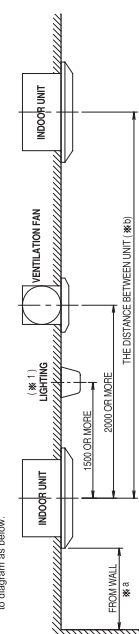
* - When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend space is 2000 mm or more.

10	DRAIN HOSE CONNECTION PORT	VP95 00 026
9	DRAIN HOSE (ACCESSORY)	CONNECTION (00 093 004 FOR THA ONLY) (OUTLET) (UNIT CONNECTION 00 026)
8	CORNER CONNECTION COVER	
7	SUCKTION GRILLE	
6	AIR OUTLET	
5	CONNECTION WIRING	
4	POWER COMPRESSOR CONNECTION FOR REFRIGERANT	
3	POWER SUPPLY WIRING AND UNIT WIRING CONNECTION	
2	DRAIN PIPE CONNECTION	VP95 00 002 034 FOR THA ONLY
1	GAS PIPE CONNECTION	(0 12.7 FLARE CONNECTION)
	LIQUE PIPE CONNECTION	(0 6.4 FLARE CONNECTION)



Please do not place the thing been damp and troubled under an indoor unit. when the case where humidity is 80% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall.

If put vent hole, lighting, equipment near the air flow disturb equipment, ceiling surface may get dirty, therefore shall install following to diagram as below.



Model		FXFSQ25-50	FXFQ25-50
Circulation air flow	Valid	※a	1500-5000
		※b	5000 or more
	Invalid	※a	1500 or more

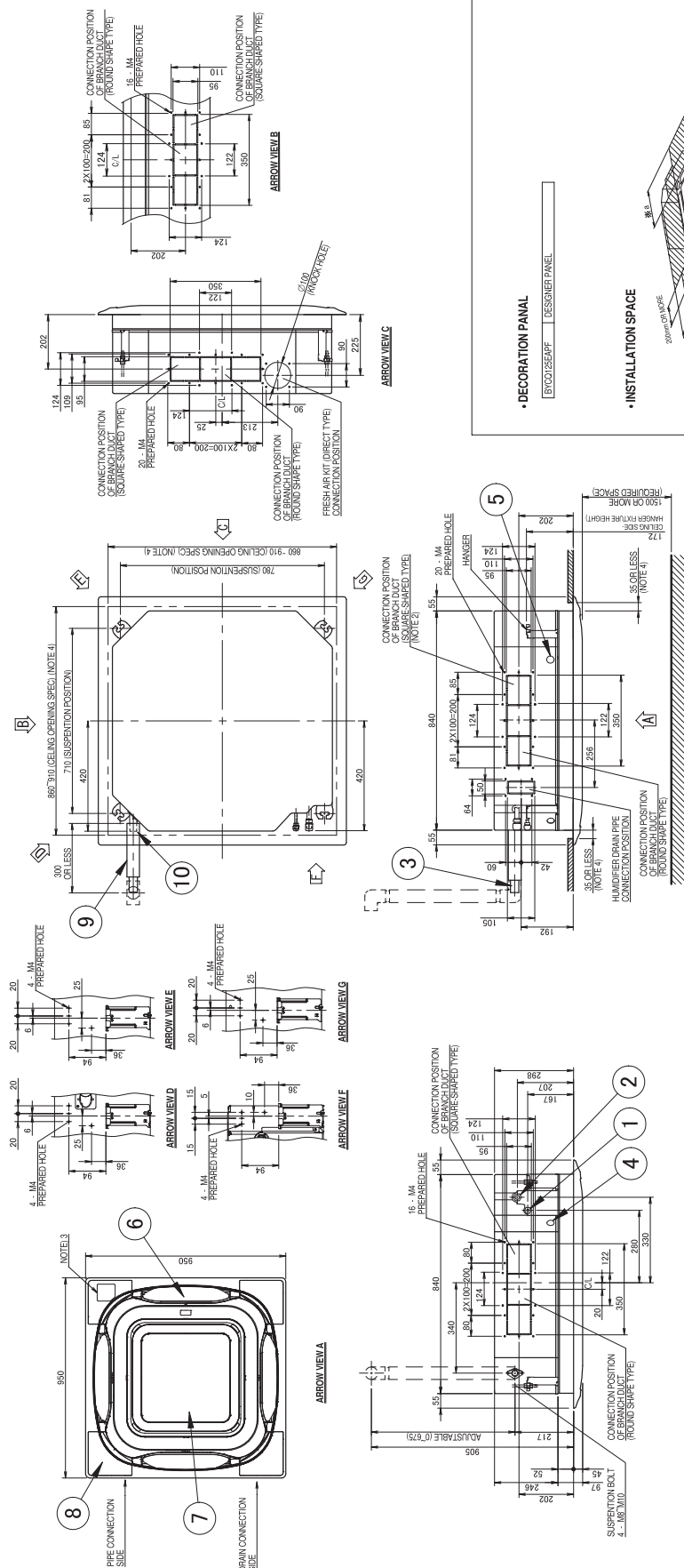
※ 1) Lighting is targeted for exposed type (inverse fuji-shape etc.), for embedded type (type that not expose to ceiling surface), there is no restriction.

(NOTE)

- Sticking location for Manufacturer's label
Manufacturer's label for indoor unit
Sticking location for indoor split electric
control panel box on surface
Sticking location for outdoor split electric
control panel box on surface
Manufacturer's label for Decoration panel
cover inner surface.
- In case of having option part built-in, please enter outside drawing of option part.
Fresh air intake kit _____ inspection hole _____ Need _____
Natural exhauster type humidifier _____ inspection hole _____ No Need _____
(both angle duct + orifice duct) _____ inspection hole _____
- In case of using wireless remote controller, this position will be a signal receiver.
Refer to the drawing of wireless remote controller in detail.
- Opening: Keep the installation is acceptable up to maximum of 910 mm square ceiling opening. Keep the clearance of 30mm or less between the indoor unit and the ceiling opening so that the panel overlap allowance can be ensured.
- When the temperature and the humidity overlying allowance can be ensured.
If the fresh air is introduced into the ceiling of the unit continues 24 hour continuously, it may cause mold growth. In such cases, please use mold inhibitor (polyethylene film) is required.

FXFSQ63ARV16 / FXFSQ80ARV16

Unit: mm



(NOTE)

- | | |
|---|--|
| <p>Sticking location for Manufacturer's label</p> <p>Manufacturer's label for indoor unit</p> <p>Manufacturer's label for Decoration panel</p> | <p>Sticking place for indoor unit's electric components box is surface.</p> <p>Decoration panel's corner decoration cover inner surface.</p> |
| <p>In case of having option part built-in, please refer outside drawing of option part.</p> <p>Fresh air intake kit, please refer outside drawing of option part.</p> <p>Humidifier exhauster type humidifier. Need inspection hole</p> <p>Round duct type humidifier. Need inspection hole</p> <p>Base unit (both angle duct + circle duct)</p> | <p>Need inspection hole</p> <p>Need inspection hole</p> <p>No Need inspection hole</p> |
| <p>In case of using wireless remote controller, this position will be a signal receiver.</p> <p>Refer to the drawing of Wireless remote controller for detail.</p> | |
| <p>Though the installation is acceptable up to maximum of 910 mm square ceiling opening, keep this distance between ceiling and indoor unit and ceiling opening as small as possible to prevent the ceiling opening from being exposed to the outside.</p> <p>When the temperature and humidity in the ceiling exceed 30°C and 80% RH (relative humidity), the ceiling will be damaged. In this case, the ceiling must be covered with an additional insulation (thickness of 10 mm or more of elastofol or polyethylene film) is required.</p> | |

Lighting is targeted for exposed type (inverse fuji-shape etc.), for embedded type that not expose to ceiling surface), there is no restriction.

	Model	FYFSQ63-80	FYFSQ63-80	FYFSQ63AVT
Circulation air flow	Valid	*a	1500-5000	
		*b	5000 or more	
	Invalid	*c	1500 or more	

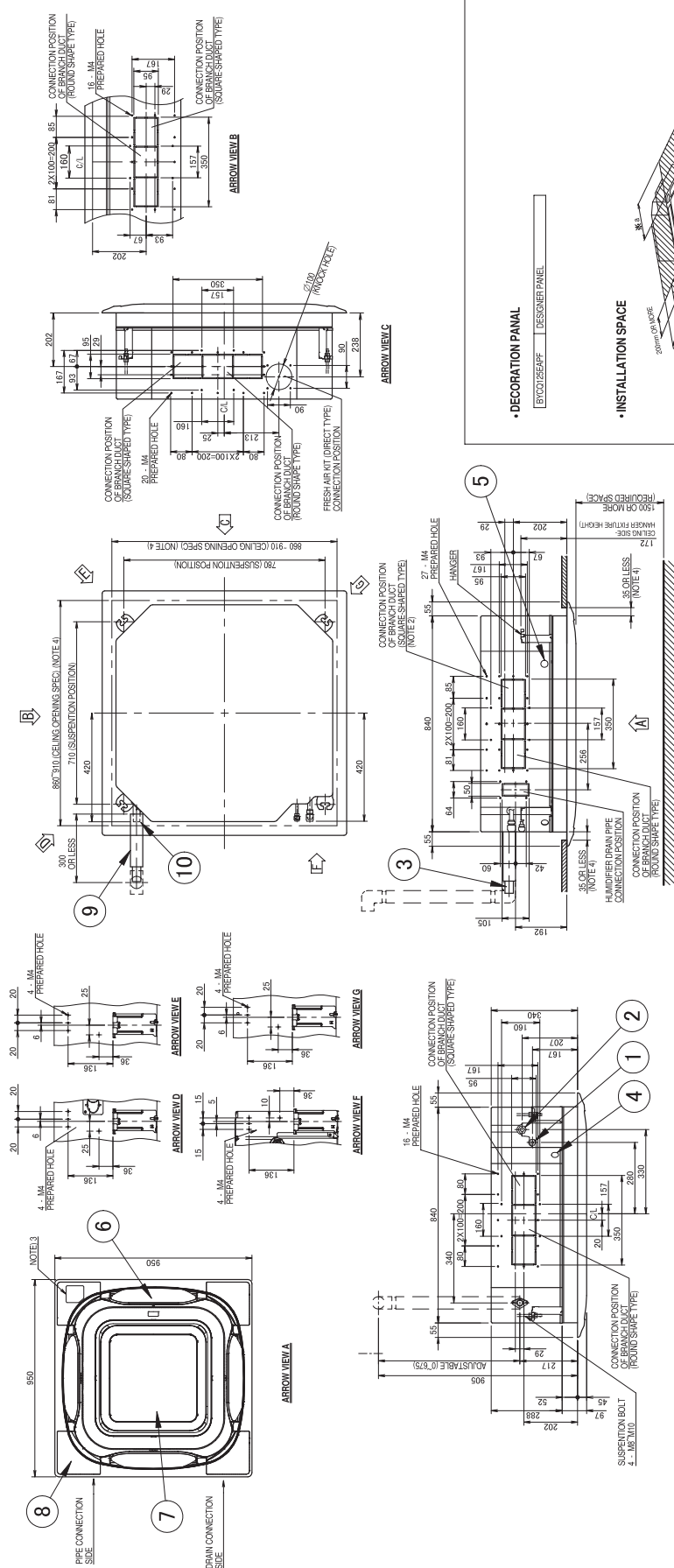
* - When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend space is 2000 mm or more.

10	DRAIN HOSE CONNECTION PORT	VP25 (Ø 0.25)
9	DRAIN HOSE ACCESSORY	LOCAL CONNECTION (Ø 0.32 - Ø 0.4 FOR THAI ONLY) (OUTLET) (UNIT CONNECTION Ø 0.25)
8	CORNER DECORATION COVER	
7	SUCTION GRILLE	
6	AIR OUTLET	
5	REMOTE CONTROL WIRING / REMOTE CONTROL WIRING CONNECTION	VP25 (Ø 0.25)
4	POWER-SOURCE WIRING AND A UNIT WIRING CONNECTION	VP25 (Ø 0.032 - Ø 0.4 FOR THAI ONLY)
3	DRAIN PIPE CONNECTION	Ø 15.9 (FLARE CONNECTION)
2	GAS PIPE CONNECTION	Ø 15.9 (FLARE CONNECTION)
1	LIQUID PIPE CONNECTION	Ø 15.9 (FLARE CONNECTION)

3D112985C

FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16

Unit: mm



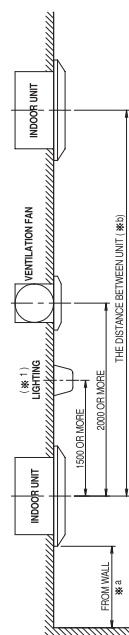
(NOTE)

- | | |
|--|---|
| <p>Sticking location for Manufacturer's label</p> <p>Manufacturer's label for indoor unit</p> <p>Manufacturer's label for Decoration panel</p> | <p>Section grille inner side's electric components box is surface.</p> <p>Decoration panel's corner decoration cover inner surface.</p> |
| <p>In case of having option part built-in, please refer inner surface.</p> <p>Fresh air intake kit</p> <p>Decorative air intake type Humidifier</p> <p>Need inspection hole</p> <p>Need inspection hole</p> <p>No Need inspection hole</p> <p>(both angle duct + circle duct)</p> | <p>option part.</p> <p>Need</p> <p>Need</p> <p>Need</p> <p>No Need</p> |
| <p>In case of using wireless remote controller, this position will be a signal receiver.</p> <p>Refer to the drawing of wireless remote controller in detail.</p> | <p>will be a signal receiver.</p> |
| <p>Though the installation is acceptable up to maximum of 910 mm square ceiling area, in this case, the ceiling height must be 2.4m or more.</p> <p>the ceiling opening so that the panel overlap distance can be ensured.</p> <p>When the temperature and humidity in the ceiling exceed 30°C and 80% RH (relative humidity), the ceiling must be cooled and dehumidified.</p> <p>operation, an additional insulation (thickness 10mm or more of glasswool or polyethylene foam) is required.</p> | <p>will be a signal receiver.</p> |

6. Please do not place the thing been damp and troubled under an indoor unit, when the case where humidity is 80% or more,

and the drain outlet are choked up and the air filter are dirty, dew may fall.

7. If put vent hole, lighting, equipment near the air flow disturb equipment, ceiling surface may get dirty, therefore shall install following to diagram as below.

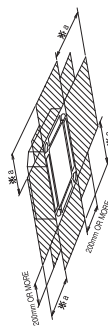


Circulation air flow	Model		FXFSQ100-140	FXFQ100-140	FXFSQ80-140AVT
	Valid	Invalid			
	※a			1500-7000	
	※b			7000 or more	
	※a			1500 or more	

Lighting is targeted for exposed type (inverse full-shape etc.), for embedded type that not expose to ceiling surface), there is no restriction.

10	DRAIN HOSE CONNECTION PORT	VP25 (OD Ø28)
9	DRAIN HOSE (ACCESSORY)	USE CONNECTION OD Ø28 (FOR THA ONLY) (OUTLET) (UNIT CONNECTION OD Ø28)
8	CORNER DECORATION COVER	
7	SUCTION GRILLE	
6	AIR OUTLET	
5	POWERED WIRING / REMOTE CONTROL WIRING CONNECTION	
4	POWER SQUARE WIRING AND A UNIT WIRING CONNECTION	VP25 (OD Ø32 - Ø34 FOR THA ONLY)
3	DRAIN PIPE CONNECTION	Ø15.9 (FLARE CONNECTION)
2	GAS PIPE CONNECTION	Ø13.5 (FLARE CONNECTION)
1	LIQUID PIPE CONNECTION	Ø9.5 (FLARE CONNECTION)

* - When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend space is 2000 mm or more.



• DECORATION PANAL

BYCQ125EAPF	DESIGNER PANEL
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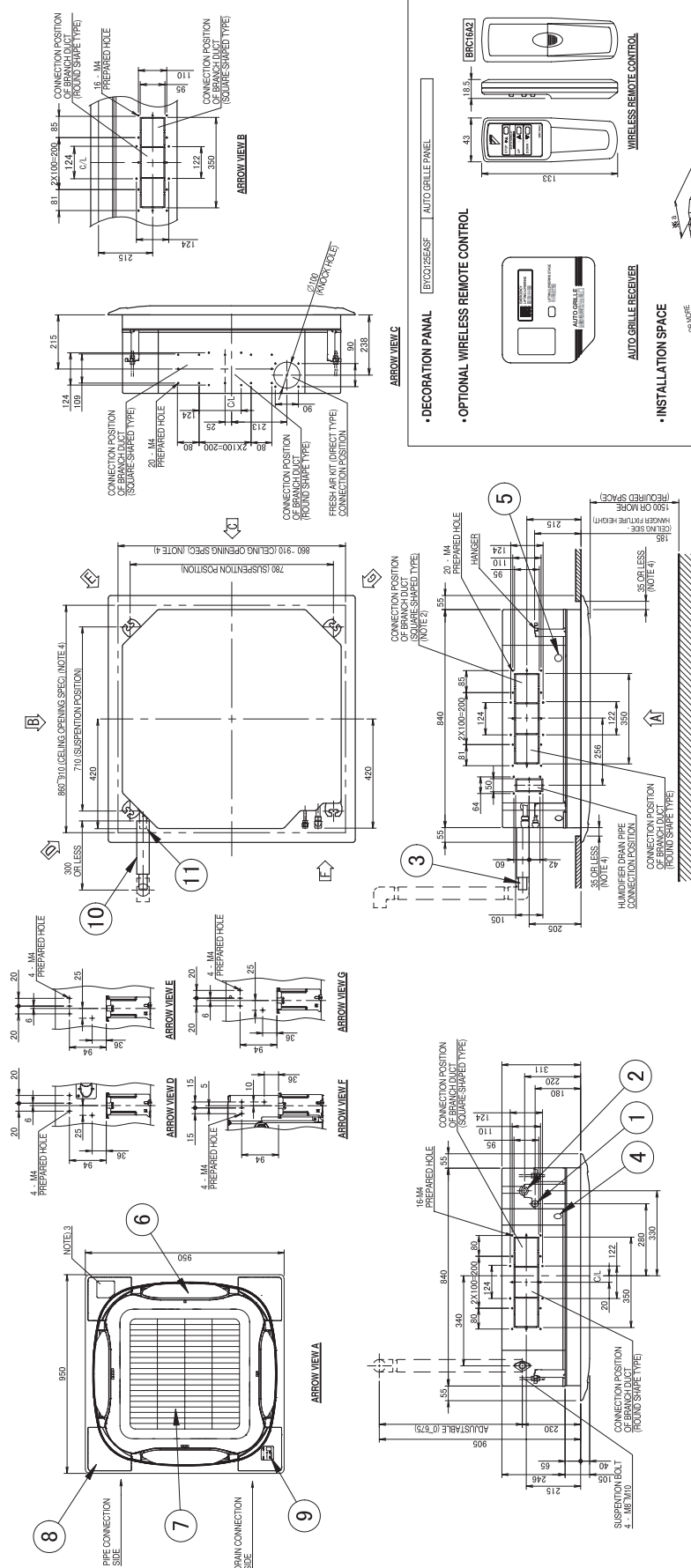
• INSTALLATION SPACE

3D112980C

3.4 Auto Grille Panel

FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16

Unit: mm

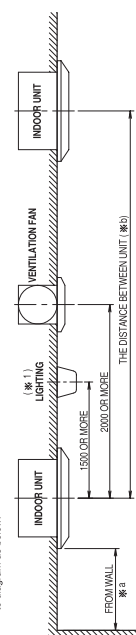


(NOTE)

- Sticking position for Max channel's label
Manufacturer's label for indoor panel
- Stuck on the inner side of electric components box's surface.
Decorations panel's corner decoration cover inner surface.
- Manufacturer's label for indoor panel
- In case of having option part built-in, please refer outside drawing of option part.
- Fresh air intake kit
Natural expropriate type humidifier
Need inspection hole
Need inspection hole
No Need inspection hole
(both angle duct + duct duct)
- Case of using wireless remote controller. This position will be a signal receiver.
Please to the drawing of wireless remote controller in detail.
- Though the installation is acceptable up to maximum of 910 mm square ceiling opening, keep the clearance of 30mm or less between the indoor unit and the ceiling opening so that the panel overlying allowance can be ensured.
5. When the temperature and humidity in the ceiling should be 30°C and 80% RH or the fresh air is included into the ceiling of the unit, continue 24 hour (100% fresh air).
(Note: 100% fresh air means 100% of room air continues 24 hours of glassed or polyethylene form) is required.

Please do not place the thing been damp and troubled under an indoor unit, when the case where humidity is 80% or more, and the drain outlet are choked up and the air filter are dirty, dew may fall.

and the drain outlet are clogged up and the air filter are dirty, new may fail.

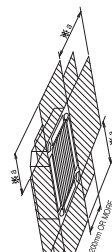


Model	FXFSQ25-50		FXFSQ25-50	
	※a	1500-5000		
	Valid	※b	5000 or more	
Circulation air flow	※a	1500 or more		
	Invalid	※c	4000 or more	

※ 1) Lighting is targeted for exposed type (inverse full-shape etc.), for embedded type (type that not expose to ceiling surface), there is no restriction.

VP20 (02 026)	11	DRAIN HOSE CONNECTION PORT	LOCAL CONNECTION (02 032 FOR THAI ONLY) (OUTLET) (UNIT CONNECTION 02 026)
	10	DRAIN HOSE (ACCESSORY)	
	9	AUTO GRILLE REGULATOR	
	8	COPPER REPAIRATION COVER	
	7	SUCTION GRILLE	
	6	AIR OUTLET	
	5	CONNECTION WIRING / REMOTE CONTROL WIRING CONNECTION	
	4	POWER SOURCE WIRING AND A UNIT WIRING CONNECTION	
	3	DRAIN PIPE CONNECTION	VP25 (02 032 : 034 FOR THAI ONLY)
	2	GAS PIPE CONNECTION	G 12 / F 14 (FLARE CONNECTION)
	1	LIQUEUR PIPE CONNECTION	G 6 / F 14 (FLARE CONNECTION)

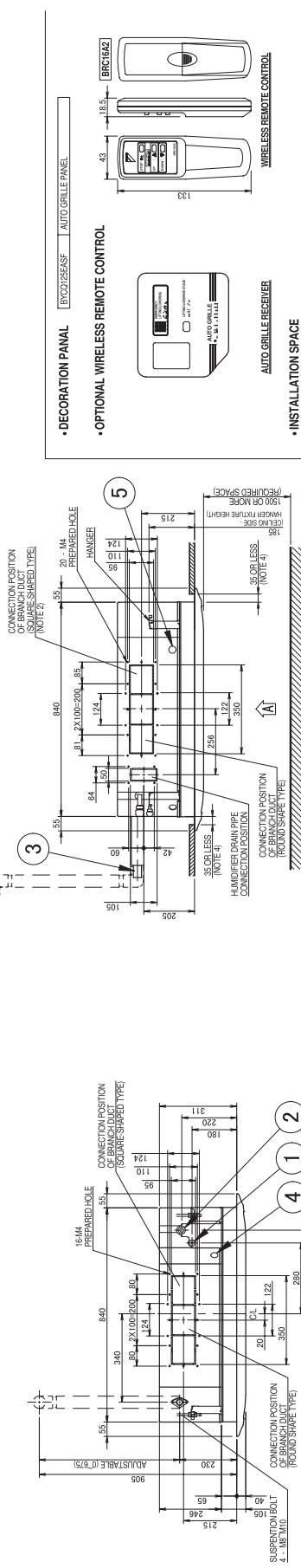
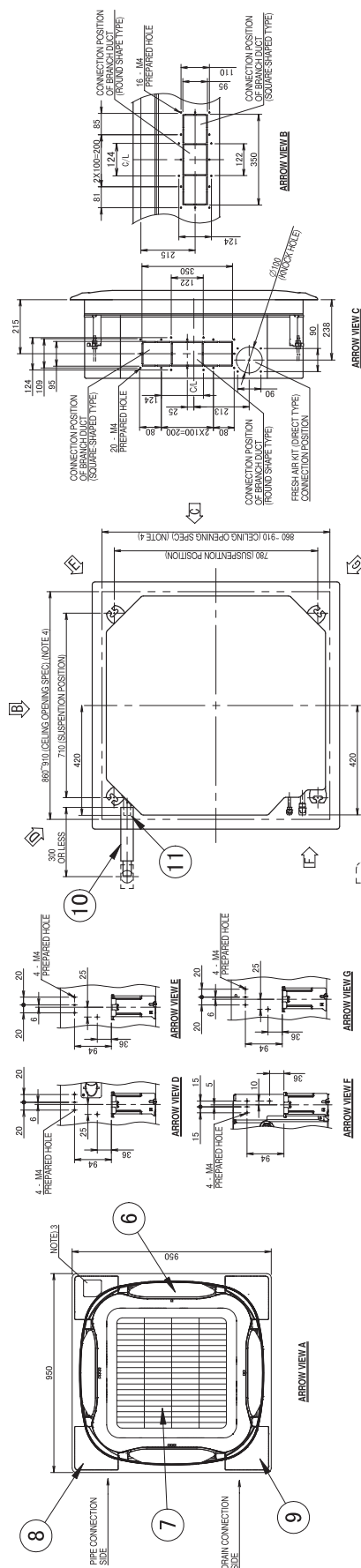
* - The necessary space is 500 mm or more when the air-outlet is blocked with the accessory. Moreover when the corner areas are blocked (both right and left of the blocked air outlet), the necessary space is 200 mm or more.
- When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend space is 2000 mm or more.



3D112991D

FXFSQ63ARV16 / FXFSQ80ARV16

Unit: mm

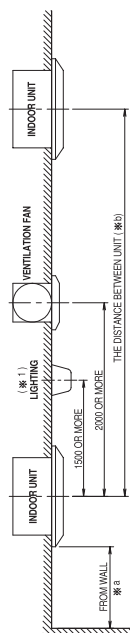


(NOTE)

3. Sticking location for Manufacturer's label
Manufacturer's label for indoor unit
Manufacturer's label for outdoor unit
Manufacturer's label for Decoration panel
cover inner surface
4. In case of having option part built-in, please refer outside drawing of option part.
Fresh air intake kit.....inspection hole Need
Natural exhauster type humidifier.....inspection hole Need
(both angle duct + circle duct).....inspection hole No Need
5. In case of using wireless remote controller, this position will be a signal receiver.
Refer to the Drawing of Wireless remote controller in detail.
6. Though the installation is acceptable up to maximum of 910 mm square ceiling opening, keep the clearance of 35mm or less between the indoor unit and the ceiling opening so that the panel opening allowance can be enough.
5. When the temperature and humidity in the ceiling exceed 30°C and 80% RH or the fresh air is induced into the ceiling of the unit continues 24 hours, the ceiling must be replaced with a ceiling of 10mm or more of glass wool (polyurethane foam or polyethylene foam) is required.

Please do not place the thing been damp and troubled under an indoor unit. when the case where humidity is 80% or more,

If put vent hole, lighting, equipment near the air flow disturb equipment, ceiling surface may get dirty, therefore shall install following to diagram as below.



Model		FXFSQ63-80	FXFSQ63-80	FXFSQ63AVT
Circulation air flow		※a	1500-5000	
	Valid	※b	5000 or more	
	Invalid	※a	1500 or more	

Lighting is targeted for exposed type (inverse fuji-shape etc.), for embedded type (type that not expose to ceiling surface), there is no restriction.

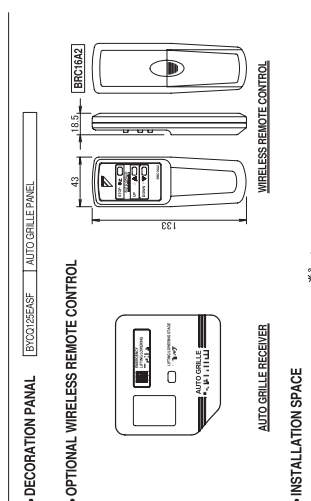
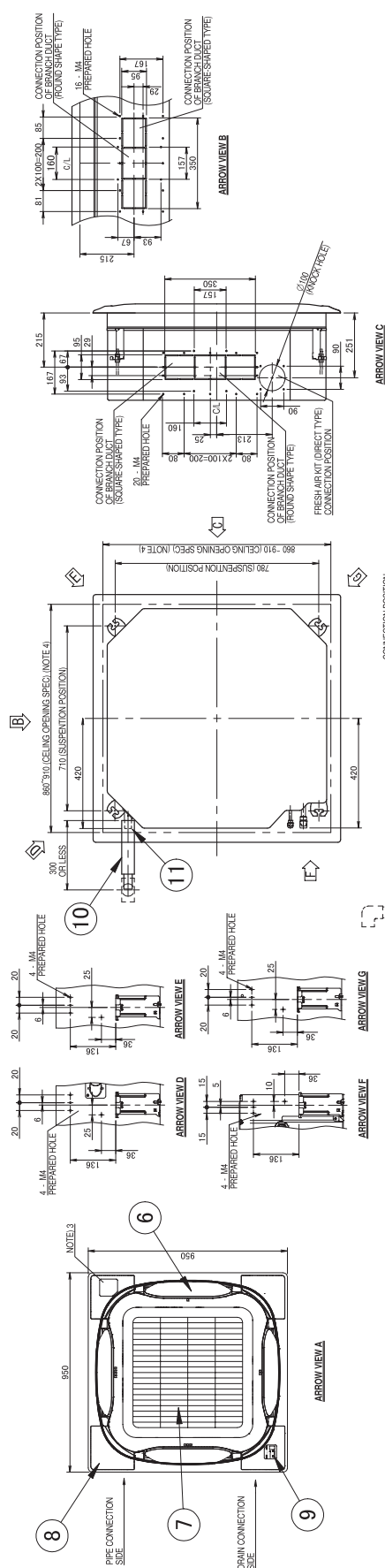
11	DRAIN HOSE CONNECTION PORT	VP20 (00 028)
10	DRAIN HOSE (ACCESSORY)	LOCAL CONNECTION OF 105, 204 FOR THE ONLY (OUTLET) (UNIT CONNECTION 00 028)
9	AUTO GRILLE REVEALER	
8	CORNER DECORATION COVER	
7	SUCTION GRILLE	
6	AIR OUTLET	
5	CONNECTION WIRING / REMOTE CONTROL WIRING CONNECTION	
4	POWER SOURCE WIRING AND UNIT WIRING CONNECTION	
3	DRAIN PIPE CONNECTION	
2	GAS PIPE CONNECTION	VP25 (00 028, 204 FOR THE ONLY)
1	LIQUID PIPE CONNECTION (Ø 1/3 FLARE CONNECTION) (Ø 3/8 FLARE CONNECTION)	

* - The necessary space is 500 mm or more when the air-outlet is blocked with the accessory.
Moreover when the corner areas are blocked (both right and left of the blocked air outlet), the necessary space is 200 mm or more.
- When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend space is 2000 mm or more.

3D112986C

FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16

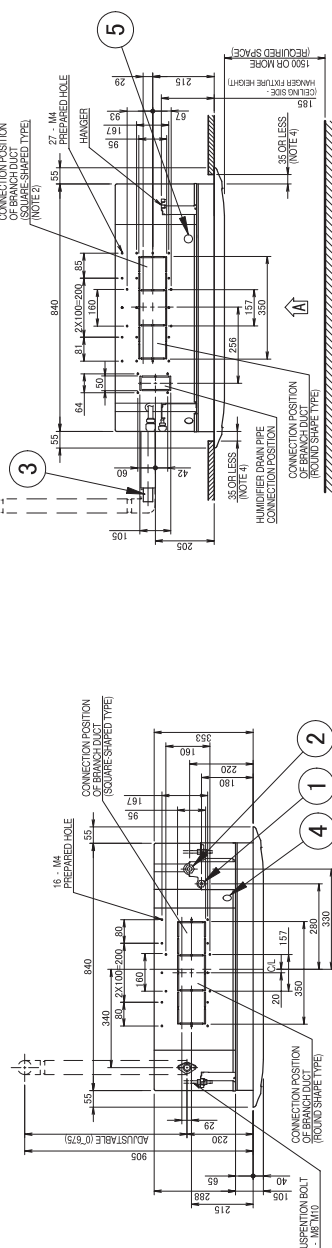
Unit: mm



- * - The necessary space is 500 mm or more when the air-outlet is blocked with the accessory. Moreover when the corner areas are blocked (both right and left of the blocked air outlet), the necessary space is 200 mm or more.
- When the air-outlet is close to the wall surface (both side of the air-outlet), the recommend space is 2000 mm or more.

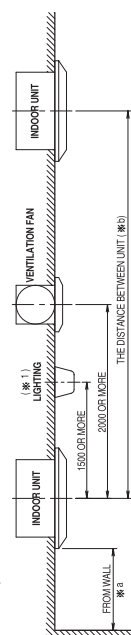
11	DRAIN HOSE CONNECTION PORT	VP20 (OD 226)
10	DRAIN HOSE (ACCESSORY)	LOCAL CONNECTION (OD 232, 234 FOR THA ONLY)
9	AUTO GRIFFLE RECEIVER	(OUTLET) (LUMI CONNECTION (OD 226))
8	CORNER DECORATION COVER	
7	SUCTION GRILLE	
6	AIR OUTLET	
5	CONNECTION WIRING / REMOTE CONTROL WIRING CONNECTION	
4	POWER SOURCE WIRING AND A UNIT WIRING CONNECTION	
3	DRAIN PIPE CONNECTION	VP25 (OD 232, 234 FOR THA ONLY)
2	GAS PIPE CONNECTION	Ø15.9 FLARE CONNECTION
1	LIQUID PIPE CONNECTION	Ø19.5 FLARE CONNECTION
	PIPE CONNECTION FOR REMOTE CONTROL	

3D112981C



6. Please do not place the thing been damp and troubled under an indoor unit, when the case where humidity is 80% or more,

If put vent hole, lighting, equipment near the air flow disturb equipment, ceiling surface may get dirty, therefore shall install following to diagram as below.



Model		FXFSQ100-140	FXFQ100-140	FXFSQ80-140AVT
Circulation air flow	※a		1500-7000	
	Valid ※b		7000 or more	
	Invalid ※a		1500 or more	

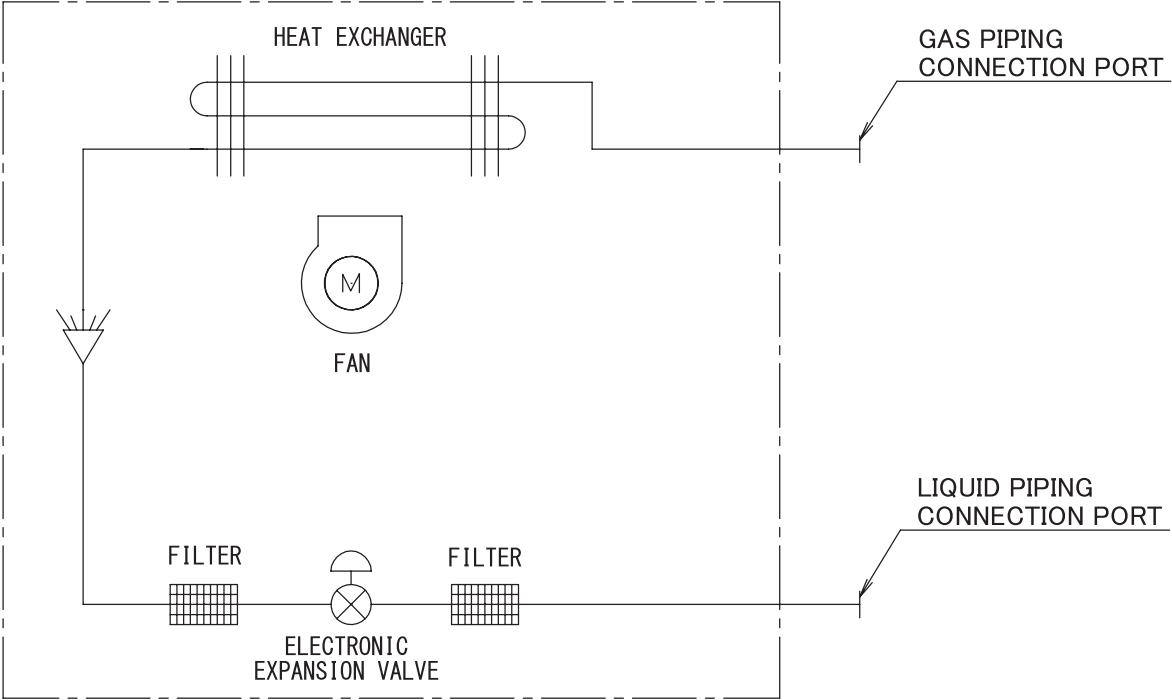
※ 1) Lighting is targeted for exposed type (inverse fuji-shape etc.), for embedded type (type that not expose to ceiling surface), there is no restriction.

(NOTE)

- [illegible]

4. Piping Diagrams

FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16 / FXFSQ63ARV16 /
FXFSQ80ARV16 / FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16
FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1 / FXFSQ63ARV1 /
FXFSQ80ARV1 / FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1



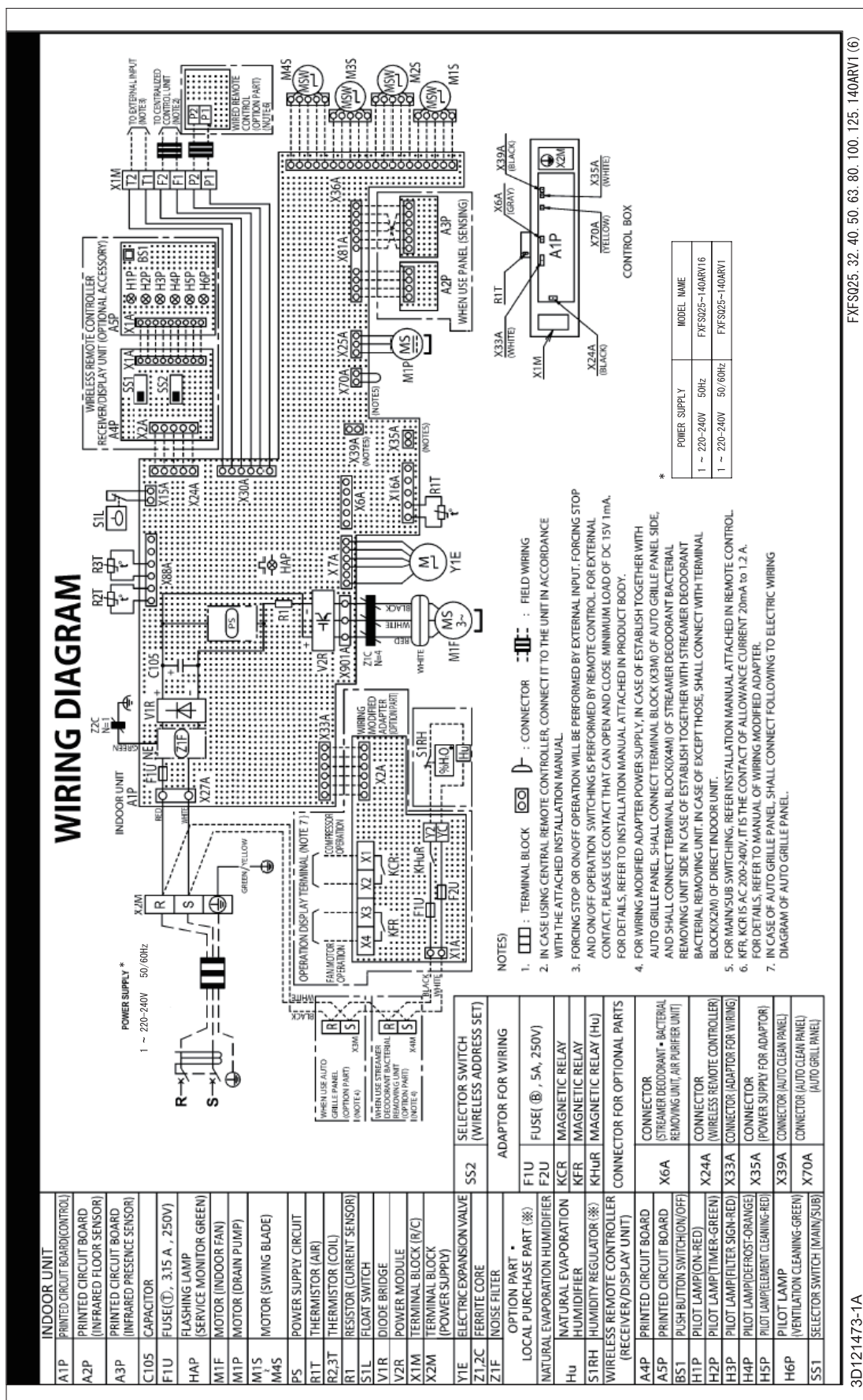
4D121746

■ Refrigerant pipe connection port diameters

Model	Unit: mm	
	Gas	Liquid
FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16 FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1	φ12.7	φ6.4
FXFSQ63ARV16 / FXFSQ80ARV16 / FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16 FXFSQ63ARV1 / FXFSQ80ARV1 / FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1	φ15.9	φ9.5

5. Wiring Diagrams

FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16 / FXFSQ63ARV16 /
FXFSQ80ARV16 / FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16
FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1 / FXFSQ63ARV1 /
FXFSQ80ARV1 / FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1



3D121473A

6. Electric Characteristics

FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16 / FXFSQ63ARV16 /
FXFSQ80ARV16 / FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16
FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1 / FXFSQ63ARV1 /
FXFSQ80ARV1 / FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1

Model	Power supply					IFM		Input (W)	
	Hz	Volts	Voltage	MCA	MFA	kW	FLA	Cooling	Heating
FXFSQ25ARV16	50	220~240V	Max. 264V Min. 198V	0.3	16	0.053	0.2	28	26
FXFSQ32ARV16				0.3	16	0.053	0.2	28	26
FXFSQ40ARV16				0.4	16	0.053	0.3	35	34
FXFSQ50ARV16				0.6	16	0.053	0.5	56	56
FXFSQ63ARV16				0.6	16	0.053	0.5	61	60
FXFSQ80ARV16				1.0	16	0.053	0.8	92	92
FXFSQ100ARV16				1.4	16	0.106	1.1	164	144
FXFSQ125ARV16				1.6	16	0.106	1.3	170	159
FXFSQ140ARV16				1.8	16	0.106	1.4	194	183
FXFSQ25ARV1	50/60	220~240V	Max. 264V Min. 198V	0.3	16	0.053	0.2	28	26
FXFSQ32ARV1				0.3	16	0.053	0.2	28	26
FXFSQ40ARV1				0.4	16	0.053	0.3	35	34
FXFSQ50ARV1				0.6	16	0.053	0.5	56	56
FXFSQ63ARV1				0.6	16	0.053	0.5	61	60
FXFSQ80ARV1				1.0	16	0.053	0.8	92	92
FXFSQ100ARV1				1.4	16	0.106	1.1	164	144
FXFSQ125ARV1				1.6	16	0.106	1.3	170	159
FXFSQ140ARV1				1.8	16	0.106	1.4	194	183

Note:

- Voltage range
Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.
- Maximum allowable voltage unbalance between phases is 2%.
- MCA/MFA
 $MCA = 1.25 \times FLA$
 $MFA = 4 \times FLA$
(Next lower standard fuse rating Min. 16 A)
- Select wire size base on the MCA.
- Instead of fuse, use circuit breaker.

Symbols:

MCA : Min. Circuit Amps (A)
MFA : Max. Fuse Amps (See note 5)
kW : Fan Motor Rated Output (kW)
FLA : Full Load Amps (A)
IFM : Indoor Fan Motor

7. Safety Devices Setting

Model		FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16 / FXFSQ63ARV16 / FXFSQ80ARV16 / FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16 FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1 / FXFSQ63ARV1 / FXFSQ80ARV1 / FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1
Printed circuit board fuse		250 V, 3.15 A
Fan motor thermal protector	°C	—
Drain pump thermal protector	°C	—

C: 3D121745

8. Capacity Tables

8.1 Cooling Capacity for Te: Auto

Model	Capacity indication	Indoor air temp.													
		14°CWB		16°CWB		18°CWB		19°CWB		20°CWB		22°CWB		24°CWB	
		20°CDB		23°CDB		26°CDB		27°CDB		28°CDB		30°CDB		32°CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
FXFSQ25ARV16	25	2.5	2.5	2.6	2.7	2.8	2.9	2.8	2.7	2.8	2.6	2.9	2.5	3.0	2.4
FXFSQ32ARV16	32	3.2	3.2	3.4	3.4	3.5	3.4	3.6	3.2	3.6	3.1	3.7	2.9	3.8	2.8
FXFSQ40ARV16	40	4.0	4.0	4.2	4.4	4.4	4.4	4.5	4.0	4.6	4.0	4.7	3.8	4.8	3.7
FXFSQ50ARV16	50	4.9	5.0	5.3	5.4	5.5	5.4	5.6	5.0	5.7	4.9	5.8	4.5	5.9	4.1
FXFSQ63ARV16	63	6.3	6.1	6.7	6.4	7.0	6.5	7.1	6.0	7.2	5.8	7.3	5.6	7.5	5.2
FXFSQ80ARV16	80	7.9	7.1	8.5	7.5	8.8	7.6	9.0	7.0	9.1	6.9	9.3	6.6	9.5	6.2
FXFSQ100ARV16	100	9.9	9.2	10.5	9.6	11.0	9.8	11.2	9.0	11.3	8.8	11.6	8.5	11.8	8.2
FXFSQ125ARV16	125	12.3	10.4	13.2	10.8	13.8	11.1	14.0	10.3	14.2	10.2	14.5	9.8	14.8	9.5
FXFSQ140ARV16	140	14.1	11.8	15.0	12.3	15.7	12.5	16.0	11.6	16.2	11.5	16.5	11.1	16.9	10.5

TC: Total capacity: kW

SHC: Sensible heat capacity: kW

Note:

- These capacity tables are for use when selecting a **VRV** indoor unit. The actual capacity of the **VRV** system depends on factors such as the selected model of outdoor units, outdoor air temperature and piping length. Please confirm that the corrected capacity of the **VRV** system satisfies the required heat load.
- ☐ shows rated condition.

8.2 Cooling Capacity for Te: 6°C

Model	Capacity indication	Indoor air temp.													
		14°CWB		16°CWB		18°CWB		19°CWB		20°CWB		22°CWB		24°CWB	
		20°CDB		23°CDB		26°CDB		27°CDB		28°CDB		30°CDB		32°CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
FXFSQ25ARV16 FXFSQ25ARV1	25	1.9	1.9	2.3	2.3	2.6	2.6	2.8	2.7	2.8	2.6	2.9	2.5	3.0	2.4
FXFSQ32ARV16 FXFSQ32ARV1	32	2.4	2.4	2.9	2.8	3.4	3.1	3.6	3.2	3.6	3.1	3.7	2.9	3.8	2.8
FXFSQ40ARV16 FXFSQ40ARV1	40	3.0	3.0	3.6	3.6	4.2	4.0	4.5	4.0	4.6	4.0	4.7	3.8	4.8	3.7
FXFSQ50ARV16 FXFSQ50ARV1	50	3.8	3.8	4.5	4.5	5.2	4.9	5.6	5.0	5.7	4.9	5.8	4.5	5.9	4.1
FXFSQ63ARV16 FXFSQ63ARV1	63	4.8	4.6	5.7	5.3	6.6	5.9	7.1	6.0	7.2	5.8	7.4	5.6	7.5	5.2
FXFSQ80ARV16 FXFSQ80ARV1	80	6.1	5.4	7.2	6.2	8.4	6.9	9.0	7.0	9.1	6.9	9.3	6.6	9.5	6.2
FXFSQ100ARV16 FXFSQ100ARV1	100	7.6	7.0	9.0	8.0	10.5	8.9	11.2	9.0	11.3	8.8	11.6	8.5	11.9	8.2
FXFSQ125ARV16 FXFSQ125ARV1	125	9.4	7.8	11.3	9.0	13.1	10.1	14.0	10.3	14.2	10.2	14.5	9.8	14.9	9.6
FXFSQ140ARV16 FXFSQ140ARV1	140	10.8	8.9	12.9	10.2	15.0	11.4	16.0	11.6	16.2	11.5	16.6	11.1	17.0	10.6

TC: Total capacity: kW

SHC: Sensible heat capacity: kW

Note:

- These capacity tables are for use when selecting a **VRV** indoor unit. The actual capacity of the **VRV** system depends on factors such as the selected model of outdoor units, outdoor air temperature and piping length. Please confirm that the corrected capacity of the **VRV** system satisfies the required heat load.
- ☐ shows rated condition.

8.3 Cooling Capacity for Te: 9°C

For **VRV** indoor units only at Te: 9°C / mixed combination of **VRV** and residential indoor units

Model	Capacity indication	Indoor air temp.													
		14°CWB		16°CWB		18°CWB		19°CWB		20°CWB		22°CWB		24°CWB	
		20°CDB		23°CDB		26°CDB		27°CDB		28°CDB		30°CDB		32°CDB	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
FXFSQ25ARV16	25	1.4	1.4	1.8	1.8	2.1	2.1	2.3	2.3	2.4	2.4	2.5	2.3	2.7	2.2
FXFSQ32ARV16	32	1.8	1.8	2.2	2.2	2.8	2.8	3.0	2.9	3.1	2.8	3.2	2.7	3.4	2.6
FXFSQ40ARV16	40	2.3	2.3	2.8	2.8	3.5	3.5	3.8	3.7	3.9	3.7	4.1	3.6	4.3	3.4
FXFSQ50ARV16	50	2.5	2.5	3.3	3.3	4.1	4.1	4.5	4.4	4.7	4.3	5.0	4.0	5.2	3.7
FXFSQ63ARV16	63	3.3	3.3	4.2	4.2	5.2	5.1	5.8	5.3	5.9	5.2	6.3	5.0	6.6	4.7
FXFSQ80ARV16	80	4.3	4.3	5.3	5.2	6.7	6.0	7.3	6.2	7.5	6.1	8.0	5.9	8.4	5.7
FXFSQ100ARV16	100	5.2	5.2	6.4	6.4	8.2	7.6	8.9	7.8	9.2	7.6	9.7	7.5	10.3	7.4
FXFSQ125ARV16	125	6.4	6.2	8.3	7.6	10.4	8.8	11.3	9.0	11.7	9.0	12.3	8.7	13.0	8.7
FXFSQ140ARV16	140	7.4	7.1	9.6	8.6	11.9	10.0	13.0	10.2	13.5	10.2	14.3	10.0	15.0	9.7

TC: Total capacity: kW

SHC: Sensible heat capacity: kW

Note:

- These capacity tables are for use when selecting a **VRV** indoor unit. The actual capacity of the **VRV** system depends on factors such as the selected model of outdoor units, outdoor air temperature and piping length. Please confirm that the corrected capacity of the **VRV** system satisfies the required heat load.
- ☐ shows rated condition.

8.4 Heating Capacity

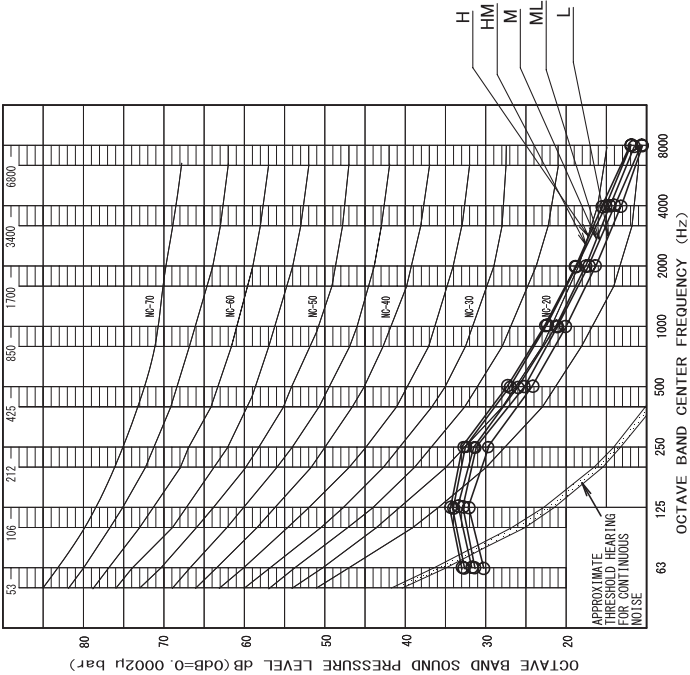
Model	Capacity indication	Indoor air temp.					
		16°CDB	18°CDB	20°CDB	21°CDB	22°CDB	24°CDB
		kW	kW	kW	kW	kW	kW
FXFSQ25ARV16 FXFSQ25ARV1	25	3.4	3.2	3.2	3.1	3.0	2.8
FXFSQ32ARV16 FXFSQ32ARV1	32	4.2	4.2	4.0	3.9	3.7	3.5
FXFSQ40ARV16 FXFSQ40ARV1	40	5.2	5.2	5.0	4.8	4.7	4.4
FXFSQ50ARV16 FXFSQ50ARV1	50	6.6	6.6	6.3	6.1	5.9	5.5
FXFSQ63ARV16 FXFSQ63ARV1	63	8.4	8.4	8.0	7.7	7.5	7.0
FXFSQ80ARV16 FXFSQ80ARV1	80	10.5	10.5	10.0	9.7	9.4	8.7
FXFSQ100ARV16 FXFSQ100ARV1	100	13.1	13.1	12.5	12.1	11.7	10.9
FXFSQ125ARV16 FXFSQ125ARV1	125	16.8	16.8	16.0	15.5	15.0	13.9
FXFSQ140ARV16 FXFSQ140ARV1	140	16.8	16.8	16.0	15.5	15.0	13.9

Note:

- These capacity tables are for use when selecting a **VRV** indoor unit. The actual capacity of the **VRV** system depends on factors such as the selected model of outdoor units, outdoor air temperature and piping length. Please confirm that the corrected capacity of the **VRV** system satisfies the required heat load.
- ☐ shows rated condition.

9. Sound Levels

FXFSQ25ARV16 / FXFSQ32ARV16
FXFSQ25ARV1 / FXFSQ32ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	30.0	29.5	28.5	28.0	27.0
C	38.3	38.0	37.3	36.8	35.9

(B. G. N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50/60Hz

COOLING : INDOOR 270B°C/19WB°C
OUTDOOR 350B°C/24WB°C

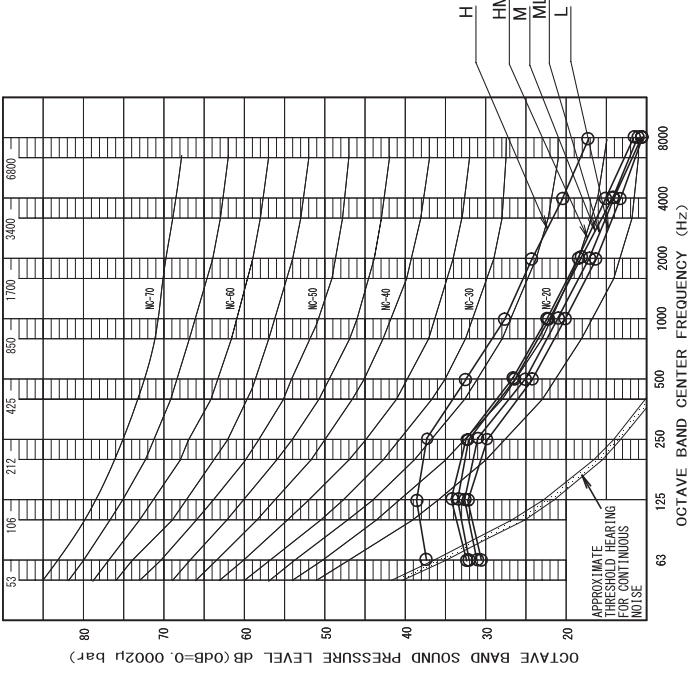
HEATING : INDOOR 200B°C/15WB°C
OUTDOOR 70B°C/6WB°C

LOCATION OF MICROPHONE

NOTE : Operation noise differs with operation and ambient conditions

4D121736A

FXFSQ40ARV16
FXFSQ40ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	35	29.5	28.0	27.0	27.0
C	42.9	38.0	37.6	36.8	35.9

(B. G. N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50Hz/60Hz

COOLING : INDOOR 270B°C/19WB°C
OUTDOOR 350B°C/24WB°C

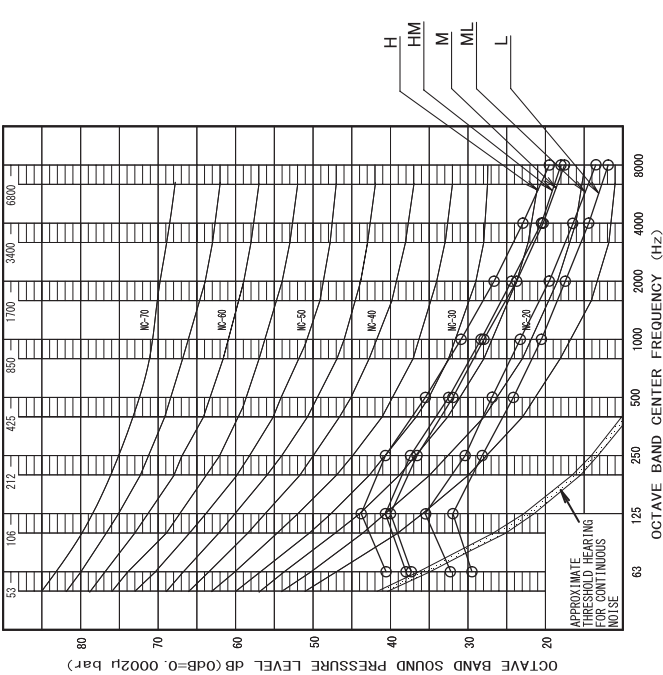
HEATING : INDOOR 200B°C/15WB°C
OUTDOOR 70B°C/6WB°C

LOCATION OF MICROPHONE

NOTE : Operation noise differs with operation and ambient conditions

4D121737A

FXFSQ50ARV16
FXFSQ50ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	38.0	35.0	34.5	29.5	27.0
C	46.9	43.9	43.3	38.3	35.2

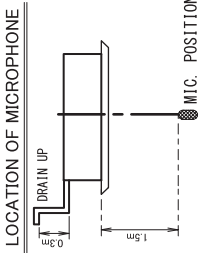
(B. G. N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50/60Hz

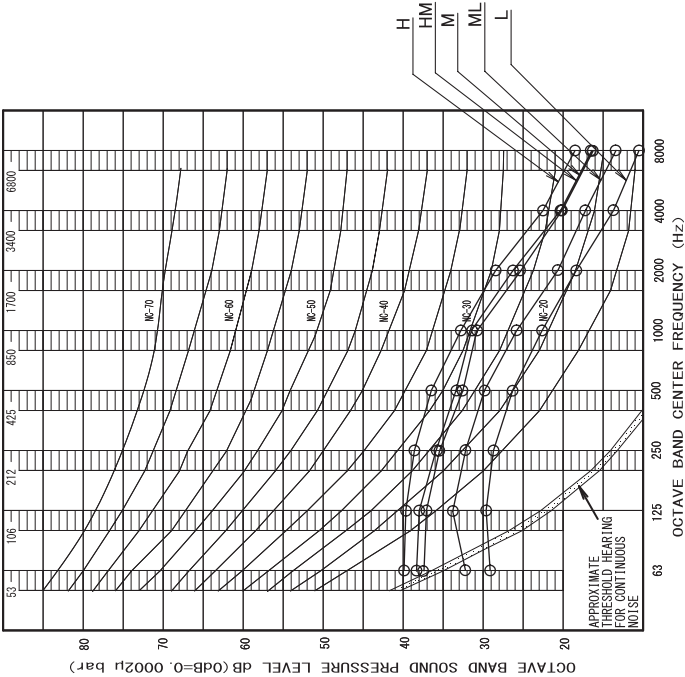
COOLING	: INDOOR 27DB°C/19WB°C OUTDOOR 35DB°C/24WB°C
HEATING	: INDOOR 20DB°C/15WB°C OUTDOOR 7DB°C/6WB°C

NOTE : Operation noise differs with operation and ambient conditions



4D121738A

FXFSQ63ARV16
FXFSQ63ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	38.0	36.0	35.5	31.5	28.0
C	44.9	42.9	42.2	38.3	34.7

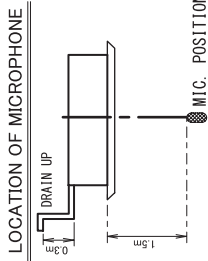
(B. G. N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50Hz/60Hz

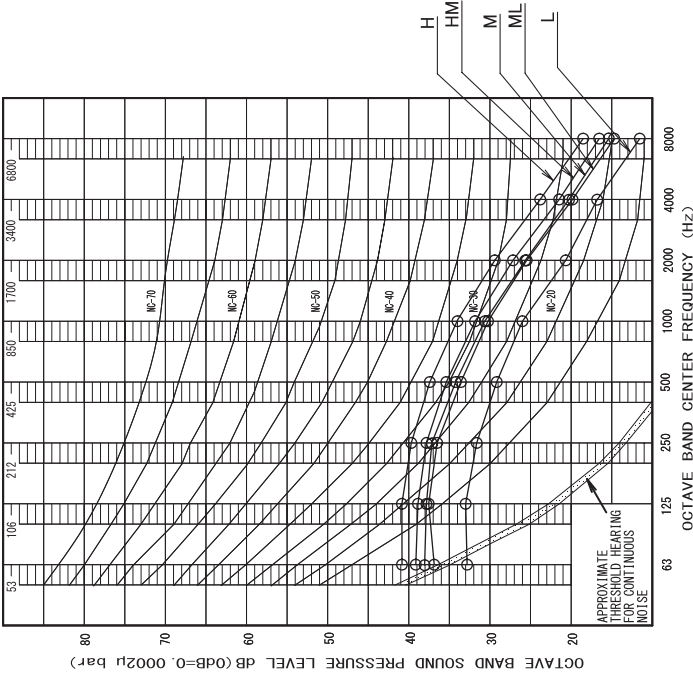
COOLING	: INDOOR 27DB°C/19WB°C OUTDOOR 35DB°C/24WB°C
HEATING	: INDOOR 20DB°C/15WB°C OUTDOOR 7DB°C/6WB°C

NOTE : Operation noise differs with operation and ambient conditions



4D121739A

FXFSQ80ARV16
FXFSQ80ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	39.0	37.0	36.0	35.5	31.0
C	45.9	44.1	43.0	42.8	37.9

(B. G. N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50Hz/60Hz

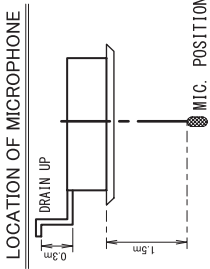
COOLING : INDOOR 27DB°C/19WB°C

OUTDOOR 35DB°C/24WB°C

HEATING : INDOOR 20DB°C/15WB°C

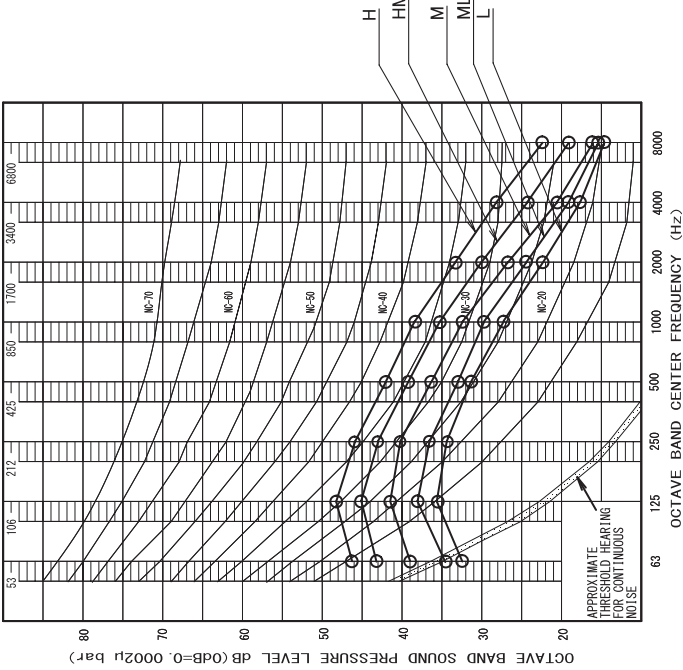
OUTDOOR 7DB°C/6WB°C

NOTE : Operation noise differs with operation and ambient conditions



4D121740A

FXFSQ100ARV16
FXFSQ100ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	44.0	41.0	38.0	35.0	33.0
C	52.2	49.1	45.8	42.2	39.9

(B. G. N IS ALREADY RECTIFIED)

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50/60Hz

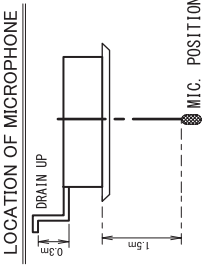
COOLING : INDOOR 27DB°C/19WB°C

OUTDOOR 35DB°C/24WB°C

HEATING : INDOOR 20DB°C/15WB°C

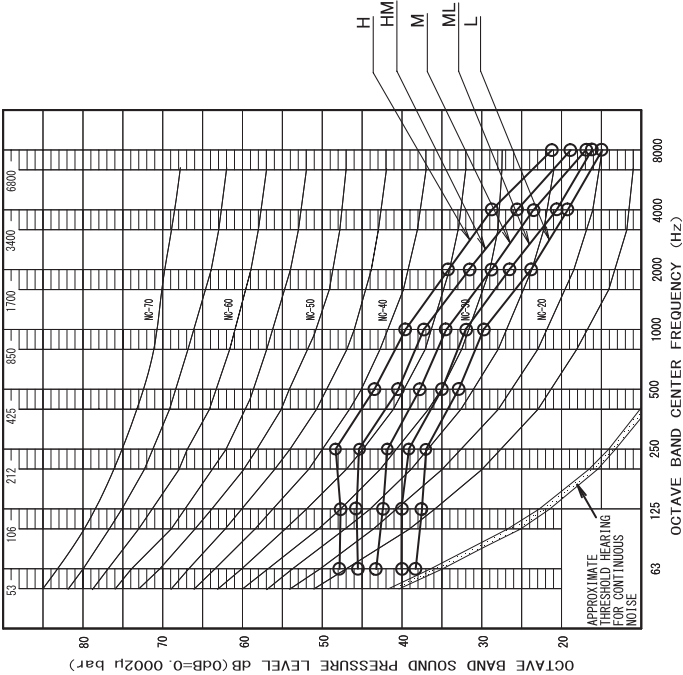
OUTDOOR 7DB°C/6WB°C

NOTE : Operation noise differs with operation and ambient conditions



4D121742A

FXFSQ125ARV16
FXFSQ125ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	45.0	42.5	39.5	37.0	35.0
C	53.3	50.7	47.7	44.9	42.9

APPLY MODEL

MODEL NAME
FXFSQ125AW(AV4) (AVS)

LOCATION OF MICROPHONE

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50Hz/60Hz

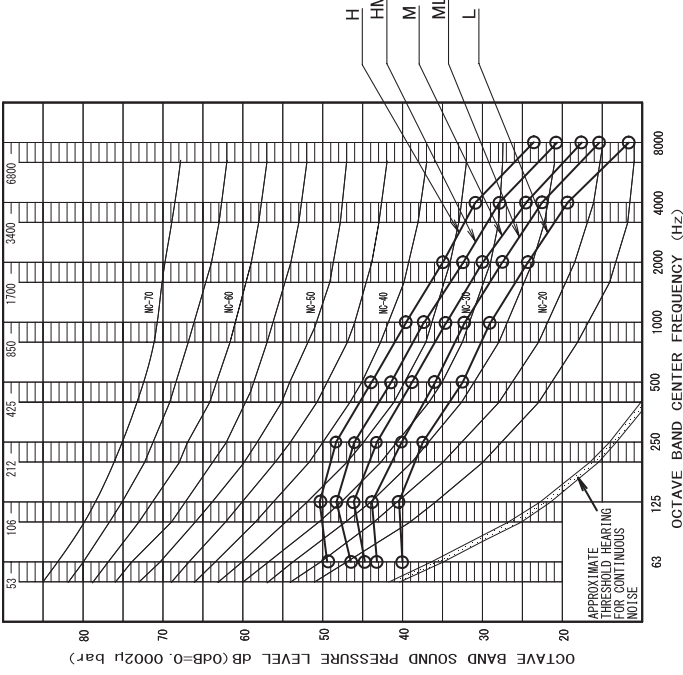
COOLING : INDOOR 27DB°C/19WB°C
OUTDOOR 35DB°C/24WB°C

HEATING : INDOOR 20DB°C/15WB°C
OUTDOOR 7DB°C/6WB°C

NOTE : Operation noise differs with operation and ambient conditions

4D121743A

FXFSQ140ARV16
FXFSQ140ARV1



OVER ALL (dB)

SCALE	H	HM	M	ML	L
A	46	43.5	40.5	38	35
C	53.3	53.7	52.5	48.8	41.8

APPLY MODEL

MODEL NAME
FXF (S) Q140AVM (AV4) (AVS)

LOCATION OF MICROPHONE

OPERATING CONDITIONS

POWER SOURCE : ARV16 220-240V 50Hz
ARV1 220-240V 50Hz/60Hz

COOLING : INDOOR 27DB°C/19WB°C
OUTDOOR 35DB°C/24WB°C

HEATING : INDOOR 20DB°C/15WB°C
OUTDOOR 7DB°C/6WB°C

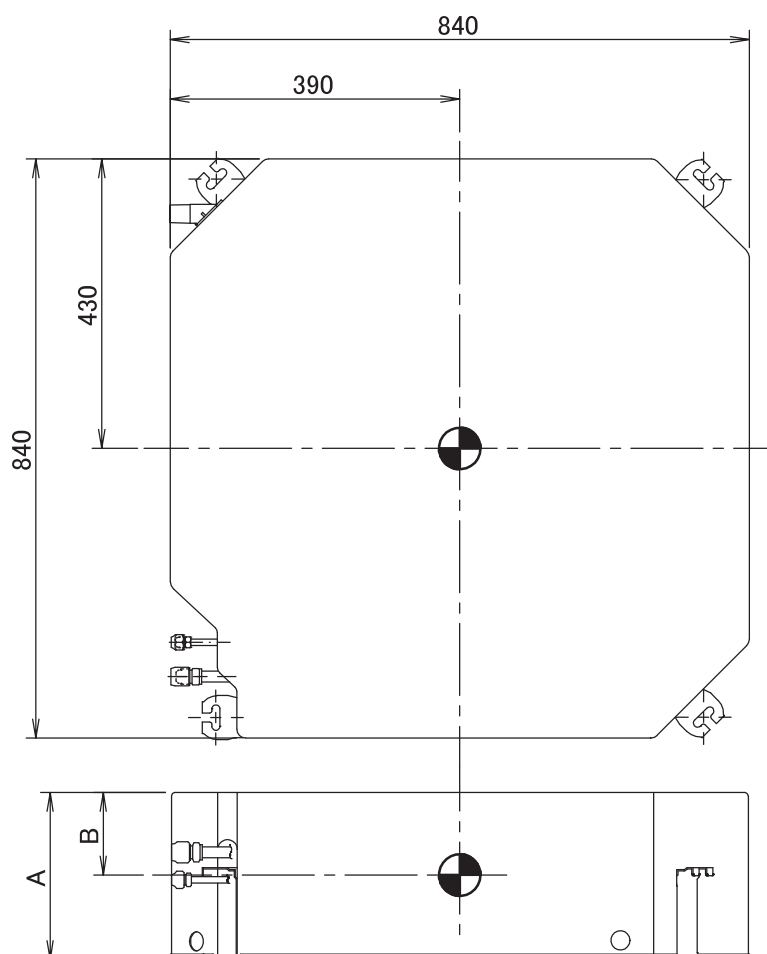
NOTE : Operation noise differs with operation and ambient conditions

4D121744A

10. Centre of Gravity

FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16 / FXFSQ63ARV16 /
 FXFSQ80ARV16 / FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16
 FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1 / FXFSQ63ARV1 /
 FXFSQ80ARV1 / FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1

Unit: mm



MODEL NAME	A	B
FXFSQ25~80ARV1 (6)	246	90
FXFSQ100~140ARV1 (6)	288	120

11. Accessories

11.1 Optional Accessories (for Unit)

Item			Model			
			FXFSQ25ARV16 FXFSQ32ARV16 FXFSQ40ARV16 FXFSQ50ARV16 FXFSQ63ARV16 FXFSQ80ARV16	FXFSQ100ARV16 FXFSQ125ARV16 FXFSQ140ARV16	FXFSQ25ARV1 FXFSQ32ARV1 FXFSQ40ARV1 FXFSQ50ARV1 FXFSQ63ARV1 FXFSQ80ARV1	FXFSQ100ARV1 FXFSQ125ARV1 FXFSQ140ARV1
Standard panel with sensing sensor	Fresh white		BYCQ140EEF6		—	
	Black		BYCQ125EEK		—	
Standard panel ★	Fresh white		BYCQ125EAF6		BYCQ125EAF9	
	Black		BYCQ125EAK		—	
Designer panel (Note 1) ★	Fresh white		BYCQ125EAPF		—	
Auto grille panel (Note 2, 3) ★	Fresh white		BYCQ125EBSF		—	
Sealing material of air discharge outlet (Note 4)	For usage of 3-, 4-way flow		KDBH551C160		—	
	For usage of 2-way flow		KDBH552C160		—	
Panel spacer			KDB55J160F		—	
Fresh air intake kit	Chamber type (Note 5, 6, 8)	Without T-duct joint	KDDP55C160 [Components: KDDP55C160-1, KDDP55C160-2]		—	
		With T-duct joint	KDDP55C160K [Components: KDDP55C160-1, KDDP55C160K2]		—	
	Direct installation type (Note 7)		KDDP55X160A		—	
High efficiency filter unit (including filter chamber) (Note 9)	(Colorimetric method 65%)		KAF556D80	KAF556D160	—	
	(Colorimetric method 90%)		KAF557D80	KAF557D160	—	
Replacement high efficiency filter (Note 9, 10)	(Colorimetric method 65%)		KAF552D80	KAF552D160	—	
	(Colorimetric method 90%)		KAF553D80	KAF553D160	—	
Filter chamber			KDDFP55C160		—	
Replacement long-life filter			KAF5511D160		—	
Replacement long-life filter (auto grille panel)			KAF5512D160		—	
Ultra long-life filter unit (including filter chamber) (Note 9)			KAF555D160		—	
Replacement ultra long-life filter (Note 9, 10)			KAF550D160		—	
Branch duct chamber (Note 4)			KDJP55C80	KDJP55C160	—	
Insulation kit for high humidity (Note 9, 11)			KDTP55K80A	KDTP55K160A	—	
PM2.5 filter chamber			BDDFP55C160-6		BDDFP55C160-6	
PM2.5 filter			KAFP554C80	KAFP554C160	KAFP554C80	KAFP554C160

C: 3D121772F

Note:

- When installing designer panel, body height (ceiling required dimension) is 42 mm higher than standard panel. Designer panel cannot operate 2 and 3 way flow.
 - A dedicated wireless remote controller for the auto grille panel is included for lowering and raising the suction grille.
 - When installing auto grille panel, body height (ceiling required dimension) is 55 mm higher than standard panel.
 - Circulation airflow is not available with this option.
 - When installing a fresh air intake kit (chamber type), two air outlet corners are closed.
 - It is recommended that the volume of outdoor air introduced through the kit is limited to 10% of the maximum airflow rate of the indoor unit. Introducing higher quantities will increase the operating sound and may also influence temperature sensing.
 - The volume of fresh air for direct installation type is approximately 1% of the indoor unit airflow. The chamber type is recommended when more fresh air is necessary.
 - Please order using the name of both components instead of set name.
 - This option cannot be installed to designer panel and auto grille panel.
 - Filter chamber is required.
 - Please use in case temperature / humidity inside ceiling may get over 30°C, 80%RH.
- ★ These panels do not contain the sensing function.

11.2 Optional Accessories (for Controls)

Item			Model			
			FXFSQ25ARV16 FXFSQ32ARV16 FXFSQ40ARV16 FXFSQ50ARV16 FXFSQ63ARV16 FXFSQ80ARV16	FXFSQ100ARV16 FXFSQ125ARV16 FXFSQ140ARV16	FXFSQ25ARV1 FXFSQ32ARV1 FXFSQ40ARV1 FXFSQ50ARV1 FXFSQ63ARV1 FXFSQ80ARV1	FXFSQ100ARV1 FXFSQ125ARV1 FXFSQ140ARV1
Remote controller	Wireless	Remote controller (for VRV Standard)	BRC4M150W16			
		Remote controller (for VRV Smart)	BRC4M150P16		—	
		Receiver kit	BRC7M632F-6 (fresh white)			
	Wired	Navigation	BRC1E63			
		Madoka	BRC1H61W / BRC1H61K		—	
			BRC1H62W / BRC1H62K		—	
			—		BRC1H52W / BRC1H52S / BRC1H52K	
			—		BRC1H81W7 / BRC1H81S7	
			—		BRC1H82W / BRC1H82S / BRC1H82K (UAE only)	
	Adaptor for wiring (operation status output) (Note 1)		BRP11B62		—	
Wiring adaptor for electrical appendices (Note 1)			KRP4AA53			
Installation box for adaptor PCB			KRP1H98A (Note 2, 3)			
Remote sensor (for indoor temperature)			BRCS01A-5		—	
External control adaptor for outdoor unit (Note 1)			DTA104A62			
Multi tenant unit for indoor (24 V free type) (Note 1)			BRP114A61			

C: 3D121772F

Note:

1. Installation box for adaptor PCB (KRP1H98A) is necessary.
2. Up to 2 adaptors can be fixed for each installation box.
3. Only one installation box can be installed for each indoor unit.
4. Some functions can be set only via wired remote controller BRC1E63. They cannot be set via other remote controllers. Please see **Function List** below.

Function List

Remote controller	Wired	Wireless
	BRC1E63	BRC7M632F-6 (Fresh white)
Dual sensors ★1	○	—
Direct airflow ★1	○	—
Sensing sensor low mode ★1	○	—
Sensing sensor stop mode ★1	○	—
Circulation airflow	○	—
Individual airflow direction control	○	—
Switchable 5 step fan speed	○	○
Auto airflow rate	○	○
Auto swing	○	○
Swing pattern selection	○	○
High ceiling application	○	—

★1. Applicable when sensing panel is installed.

12. Installation Manual

12.1 FXFSQ25ARV16 / FXFSQ32ARV16 / FXFSQ40ARV16 / FXFSQ50ARV16 / FXFSQ63ARV16 / FXFSQ80ARV16 / FXFSQ100ARV16 / FXFSQ125ARV16 / FXFSQ140ARV16

DAIKIN

VRV SYSTEM Air Conditioners

Installation manual

CONTENTS

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1. SAFETY PRECAUTIONS

Please read the these "SAFETY PRECAUTIONS" carefully before installing air conditioning unit and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained.

Also, inform customers that they should store this installation manual along with the operation manual for future reference. This product comes under the term "appliances not accessible to the general public".

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

- This manual classifies the precautions into WARNINGS and CAUTIONS.

Be sure to follow all the precautions below: They are all important for ensuring safety.



WARNINGIndicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTIONIndicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

- After the installation is completed, test the air conditioner and check if the air conditioner operates properly. Give the user adequate instructions concerning the use and cleaning of the indoor unit according to the Operation Manual. Ask the user to keep this manual and the Operation Manual together in a handy place for future reference.



WARNING

- Ask your local dealer or qualified personnel to carry out installation work.
Improper installation may result in water leakage, electric shocks or a fire.
- Perform installation work in accordance with this installation manual.
Improper installation may result in water leakage, electric shocks or a fire.

- Consult your local dealer regarding what to do in case of refrigerant leakage.
When the air conditioner is installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage.
Otherwise, this may lead to an accident due to oxygen deficiency.
- Be sure to use only the specified parts and accessories for installation work.
Failure to use the specified parts may result in the air conditioner falling down, water leakage, electric shocks, a fire, etc.
- Install the air conditioner on a foundation that can withstand its mass.
Insufficient strength may result in the air conditioner falling down and causing injury.
In addition, it may lead to vibration of indoor units and cause unpleasant chattering noise.
- Carry out the specified installation work in consideration of strong winds, typhoons, or earthquakes.
Improper installation may result in an accident such as air conditioner falling.
- Make certain that all electrical work is carried out by qualified personnel according to the applicable legislation (note 1) and this installation manual, using a separate circuit.
In addition, even if the wiring is short, make sure to use a wiring that has sufficient length and never connect additional wiring to make the length sufficient.
Insufficient capacity of the power supply circuit or improper electrical construction may lead to electric shocks or a fire.
(note 1) applicable legislation means "All international, national and local directives, laws, regulations and/or codes which are relevant and applicable for a certain product or domain".
- Earth the air conditioner.
Do not connect the earth wiring to gas or water piping, lightning conductor or telephone earth wiring.
Incomplete earthing may cause electric shocks or a fire.
- Be sure to install an earth leakage breaker.
Failure to do so may cause electric shocks and a fire.
- Disconnect the power supply before touching the electric components.
If you touch the live part, you may get an electric shocks.
- Make sure that all wiring is secure, using the specified wirings and ensuring that external forces do not act on the terminal connections or wirings.
Incomplete connection or fixing may cause an overheat or a fire.
- When wiring between the indoor and outdoor units, and wiring the power supply, form the wirings orderly so that the control box lid can be securely fastened.
If the control box lid is not in place, overheat of the terminals, electric shocks or a fire may be caused.
- If refrigerant gas leaks during installation work, ventilate the area immediately.
Toxic gas may be produced if refrigerant gas comes into contact with a fire.
- After completing the installation work, check to make sure that there is no leakage of refrigerant gas.
Toxic gas may be produced if refrigerant gas leaks into the room and comes into contact with a source of a fire, such as a fan heater, stove or cooker.
- Never directly touch any accidental leaking refrigerant.
This could result in severe wounds caused by frostbite.

— CAUTION —

- Do not allow children to climb on the outdoor unit and avoid placing objects on the unit.
Injury may result if the unit becomes loose and falls.
- Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals.
Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.
- Install in a machine room that is free of moisture. The unit is designed for indoor use.
- Disposal requirements
Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.
- Install drain piping according to this installation manual to ensure good drainage, and insulate the piping to prevent condensation.
Improper drain piping may cause water leakage, make the furniture get wet.
- Install the air conditioner, power supply wiring, remote controller wiring and transmission wiring at least 1 meter away from televisions or radios to prevent image interference or noise.
(Depending on the radio waves, a distance of 1 meter may not be sufficient to eliminate the noise.)
- Install the indoor unit as far as possible from fluorescent lamps.
If a wireless remote controller kit is installed, the transmission distance may be shorter in a room where an electronic lighting type (inverter or rapid start type) fluorescent lamp is installed.
- Do not install the air conditioner in places such as the following:
 1. Where there is mist of oil, oil spray or vapour for example a kitchen.
Resin parts may deteriorate, and cause them to fall out or water to leak.
 2. Where corrosive gas, such as sulfurous acid gas, is produced.
Corrosion of copper pipings or brazed parts may cause the refrigerant to leak.
 3. Where there is machinery which emits electromagnetic waves.
Electromagnetic waves may disturb the control system, and cause malfunction of the equipment.
 4. Where flammable gases may leak, where carbon fibre or ignitable dust is suspended in the air or where volatile flammables, such as thinner or gasoline, are handled.
If the gas should leak and remained around the air conditioner, it may cause ignition.
- Pay attention to product transportation.
Carry by hold the handle position that display on packing material.
In case of hold PP band, PP band will get loose, it will be dangerous.

SPECIAL NOTICE PRODUCT

- The refrigerant R410A requires that strict precautions be observed for keeping the system clean, dry and tightly sealed.

Clean and dry

Strict measures must be taken to keep impurities (including SUNISO oil and other mineral oils as well as moisture) out of the system.

Tightly sealed

R410A contains no chlorine, does not destroy the ozone layer and so does not reduce the earth's protection against harmful ultraviolet radiation. R410A will contribute only slightly to the greenhouse effect if released into the atmosphere.

- Since design pressure is 4.0 MPa or 40 bar (for R407C units: 3.3 MPa or 33 bar), the thickness of pipes must be greater than previously. Since R410A is a mixed refrigerant, the required additional refrigerant must be charged in its liquid state.
(If the system is charged with refrigerant in its gaseous state, due to composition change, the system will not function normally). The indoor unit is designed for R410A use. See the catalogue for indoor unit models that can be connected. (Normal operation is not possible when connecting units that are originally designed for other refrigerants.)

2. BEFORE INSTALLATION

When unpacking the indoor unit or moving the unit after unpacked, hold the hangers (4 places) and do not apply force to other parts (particularly refrigerant piping, drain piping and resin parts).

- Make sure to check in advance that the refrigerant to be used for installation work is R410A.
(The air conditioner will not properly operate if a wrong refrigerant is used.)
- For installation of the outdoor unit, refer to the installation manual attached to the outdoor unit.
- Do not throw away the accessories until the installation work is completed.
- After the indoor unit is carried into the room, to avoid the indoor unit from getting damaged, take measures to protect the indoor unit with packing materials.
 - (1) Determine the route to carry the unit into the room.
 - (2) Do not unpack the unit until it is carried to the installation location.
Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the indoor unit.
- Have the customer actually operate the air conditioner while looking at the operation manual.
Instruct the customer how to operate the air conditioner (particularly cleaning of the air filters, operation procedures, and temperature adjustment).
- For selection of installation location, use the installation pattern paper as reference.
- Do not use the air conditioner where in the salty atmosphere such as coastal areas, vehicles, vessels or the voltage fluctuation is frequent such as factories.
- Take off static electricity from the body when carrying out wiring and the control box lid is removed.
The electric parts may be damaged.

2-1 ACCESSORIES

Check if the following accessories are attached to the indoor unit.

Name	(1) Drain hose	(2) Metal clamp	(3) Washer for hanger	(4) Clamp
Quantity	1 pc.	1 pc.	8 pcs.	6 pcs.
Shape				

Name	(5) Installation pattern paper	(6) Screw (M4)	(7) Washer clamp	Joint insulating material
Quantity	1 sheet	4 pcs.	4 pcs.	1 each
Shape	Upper part of packing 			(8) For gas piping (9) For liquid piping 

Name	Sealing material		
Quantity	1 each	1 sheet	1 pc.
Shape	(10) Large  (11) Medium-1  (12) Medium-2  (13) Small  (14) 		

Name	(15) Installation guide	(Miscellaneous) • Operation manual • Installation manual
Quantity	1 sheet	
Shape		

2-2 OPTIONAL ACCESSORIES

- This indoor unit separately requires a decoration panel and a remote controller.
- Confirm if a decoration panel shown in the Table 1 is prepared and meets your model.
(Refer to the installation manual attached to the decoration panel for how to install.)

Table 1

Unit model	Optional decoration panel
FXFSQ25 · 32 · 40 · 50 · 63 · 80 · 100 · 125 · 140ARV16	BYCQ140EEF6 BYCQ125EAF6 BYCQ125EEK BYCQ125EAK BYCQ125EAPF BYCQ125EASF Color : Fresh white/Black

- There are 2 kinds of remote controller; wired type and wireless type.
Select a remote controller from Table 2 according to customer request and install in an appropriate place.
(Refer to the installation manual attached to the remote controller for how to install.)

Table 2

Remote controller		
Wired type		BRC1E63
Wireless type	Heat pump	BRC7M632F-6
	Cooling only	

NOTE

- If you wish to use a remote controller that is not listed in "Table 2" on page 3, select a suitable remote controller after consulting catalogs and technical materials.

CARRY OUT THE WORK GIVING CAUTION TO THE FOLLOWING ITEMS AND AFTER THE WORK IS COMPLETED CHECK THESE AGAIN.

1. Items to be checked after the installation work is completed

Items to be checked	In case of defective	Check column
Are the indoor and outdoor units rigidly fixed?	Drop · vibration · noise	
Are the installation works of the outdoor and indoor units completed?	The unit may malfunction or the components burn out	
Have you carried out a leakage test with the test pressure specified in the outdoor unit installation manual?	It may result in insufficient cooling / insufficient heating	
Is the insulation of refrigerant piping and drain piping completely carried out?	Water leakage	
Does the drain flow out smoothly?	Water leakage	
Is the power supply voltage identical to that stated in the manufacturer's label on the air conditioner?	The unit may malfunction or the components burn out	
Are you sure that there is no wrong wiring or piping or no loose wiring?	The unit may malfunction or the components burn out	
Is unit safety grounded?	It may result in electric shock	
Are the sizes of electric wiring according to the specification?	The unit may malfunction or the components burn out	
Is any of air outlets or inlets of the indoor and outdoor units blocked with obstacles? (It may lead to capacity drop due to fan speed drop or malfunction of equipment.)	It may result in insufficient cooling / insufficient heating	
Have you recorded the refrigerant piping length and the refrigerant charge added?	Refrigerant charge amount is not clear	

Make sure to recheck the items of "SAFETY PRECAUTIONS".

2. Items to be checked at delivery

Items to be checked	Check column
Have you carried out field setting? (if necessary)	
Are the control box lid, the air filter and the suction grille attached?	
Does the cool air discharge during the cooling operation and the warm air discharge during the heating operation? Does the indoor unit makes unpleasant sound of air discharge?	
Have you explained how to operate the air conditioner showing the operation manual to the customer?	
Have you explained the description of cooling, heating, program dry and automatic (cooling/heating) given in the operation manual to the customer?	
If you set the fan speed at thermostat OFF, did you explain the set fan speed to the customer.	
Have you handed the operation manual and the installation manual to the customer?	

Points of the operation explanation

In addition to the general usage, since the items in the operation manual with the **⚠ WARNING** and **⚠ CAUTION** marks are likely to result in human bodily injuries and property damages, it is necessary not only to explain these items to the customer but also to have the customer read them.

2-3 NOTE TO THE INSTALLER

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

3. SELECTION OF INSTALLATION LOCATION

Hold the hangers at 4 locations to move the indoor unit when unpacking (or after unpacked), and do not apply force to the piping (refrigerant and drain) and resin parts.

If the temperature and humidity in the ceiling is likely to exceed 30°C, RH80%, use the optional kit for coping with high temperature and humidity, or additionally stick the insulation to the indoor unit.

Use the insulation such as glass wool or polyethylene that has thickness of 10 mm or more. However, keep the insulated outside dimension smaller than the ceiling opening so that the unit may go through the opening at installation.

The direction of air discharge for this product can be selected. Sealing material of air discharge outlet is available option for 4-way with sealed corners, 3-way and 2-way.

(1) Select the installation location that meets the following conditions and get approval of the customer.

- Where the cool and warm air spreads evenly in the room.
- Where there is no obstacles in the air passage.
- Where drainage can be ensured.
- Where the ceiling lower surface is not remarkably inclined.

- Where there is sufficient strength to withstand the mass of the indoor unit. (If the strength is insufficient, the indoor unit may vibrate and get in contact with the ceiling and generate unpleasant chattering noise.)
- Where a space sufficient for installation and service can be ensured. (Refer to Fig. 1)
- Where the piping length between the indoor and the outdoor units is ensured within the allowable length. (Refer to the installation manual attached to the outdoor unit.)
- Where there is no risk of flammable gas leak.

Required installation space (mm)

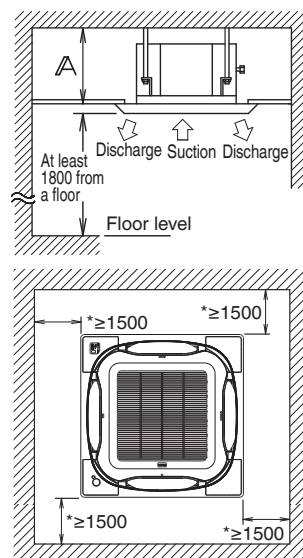


Fig. 1

MODEL NAME	Δ [mm]		
	BYCQ140EEF6/12SEK BYCQ125EAF6/EAK	BYCQ125EAPF	BYCQ125EASF
FXFSQ25-32-40-50-63-80ARV16	261	303	316
FXFSQ100-125-140ARV16	303	345	358

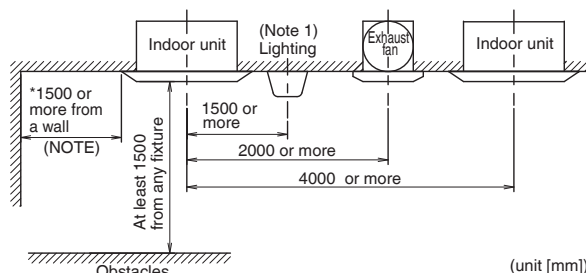


Fig. 2

NOTE

- The clearance from the wall (indicated with *) must be 500 mm or more if the air outlet is closed or the horizontal blade is set to Airflow block and, if the corners (left and right corners of the target air outlet) are also closed, 200 mm or more.

⚠ CAUTION

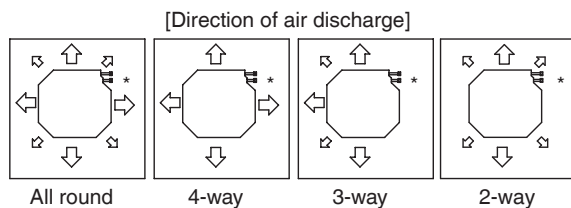
- Any vents, light fixtures, or other appliances which may disturb the airflow might cause ceiling to become dirty if located too nearby, so follow **Fig. 2** when installing.
(Note)
- 1. This restriction applies to the exposed type lighting, but does not apply to the recessed type (which does not protrude below the ceiling line).
- 2. For how to set the airflow direction (including Airflow block) with the horizontal blade, refer to "Individual Airflow Direction" in the operation manual attached to the remote controller.
- Install the indoor and outdoor units, power supply wiring, remote controller wiring and transmission wiring at least 1 meter away from televisions or radios to prevent image interference or noise.
(Depending on the radio waves, a distance of 1 meter may not be sufficient to eliminate the noise.)
- Install the indoor unit as far as possible from fluorescent lamps.
If a wireless remote controller kit is installed, the transmission distance may be shorter in a room where an electronic lighting type (inverter or rapid start type) fluorescent lamp is installed.
- Localized temperature difference from the room temperature, if too large, can affect how the infrared floor sensor judges.
(This may occur, for example, in an area where floor heating/high-temperature heat generating equipment is installed.)
- Each sensor has been set so that the center of the sensing area is located in the center of the product 800 mm above the floor (in case of the infrared presence sensor) or 0 mm above the floor (in case of the infrared floor sensor) when the ceiling height is approximately 2.7 m.

(2) Ceiling height

- This indoor unit can be installed in a space of which ceiling height is up to 3.5 m (Type 100 · 125 · 140 : 4.2 m)
- However, if the ceiling height exceeds 2.7 m (Type 100 · 125 · 140 : 3.2 m), it is necessary to set from the remote controller on site. Refer to the section "10. FIELD SETTING AND TEST OPERATION".

(3) Direction of the air discharge

- Select the number of directions of the optimum air discharge for the shape or the position of the room.
- The number of directions of the air discharge can be changed by installing a sealing material.
- When installing a sealing material, the field setting from the remote controller is required. For details, refer the operation manual attached to the sealing materials.
(It is set to the setting position number "01" (Standard · All round outlet) when shipped from the factory.)
- To use the optional sealing material kit to change the setting of air discharge direction (4-way blow type (with corners sealed)/3-way blow type/2-way blow type), refer to the installation manual attached to it.



*: Refrigerant piping

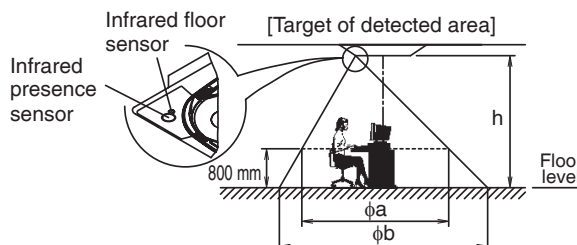
Fig. 3

(4) Use hanging bolts for installation.

Investigate if the installation place can withstand the mass of the indoor unit and, if necessary, hang the indoor unit with bolts after it is reinforced by beams etc.
(Refer to the installation pattern paper (5) for the mounting pitch.)

(5) Infrared presence/floor sensor's sensing area

The sensing area is as shown in the figure below.



Indoor unit installation height h [m]	2.7	3.5	4.0
Infrared presence sensor φa [m]	Approx. 8.5	Approx. 11.5	Approx. 13.5
Infrared floor sensor φb [m]	Approx. 11	Approx. 14	Approx. 16

4. PREPARATION BEFORE INSTALLATION

(1) Check the relation of location between the ceiling opening and the indoor unit hanging bolts.

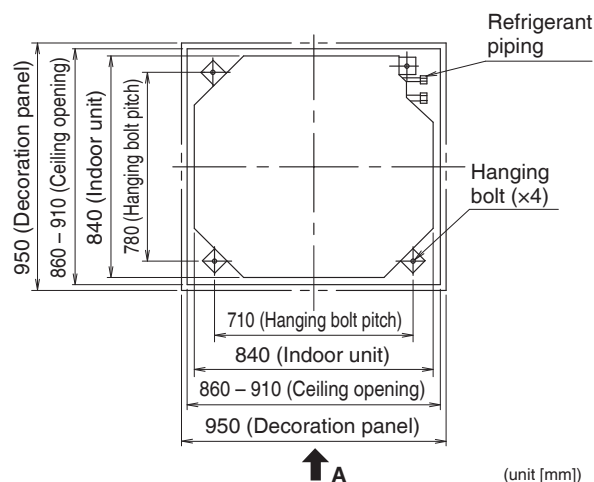


Fig. 4

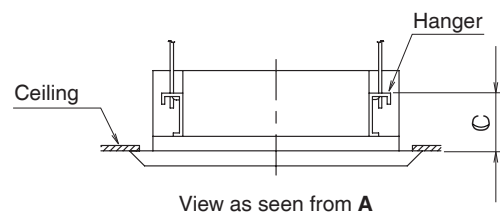


Fig. 5

Decoration Panel	BYCQ140EEF6/125EEK BYCQ125EAF6/EAK	BYCQ125EAPF	BYCQ125EASF
⌀ [mm]	125~130	167~172	180~185

CAUTION

- Reduce the distance between the unit and ceiling to 35 mm or below in order to maintain an overlapping panel margin of 20 mm for the opening on the ceiling.
- If the distance exceeds 35 mm, attach a ceiling material to the part marked  or replace the ceiling. (Refer to Fig. 6)

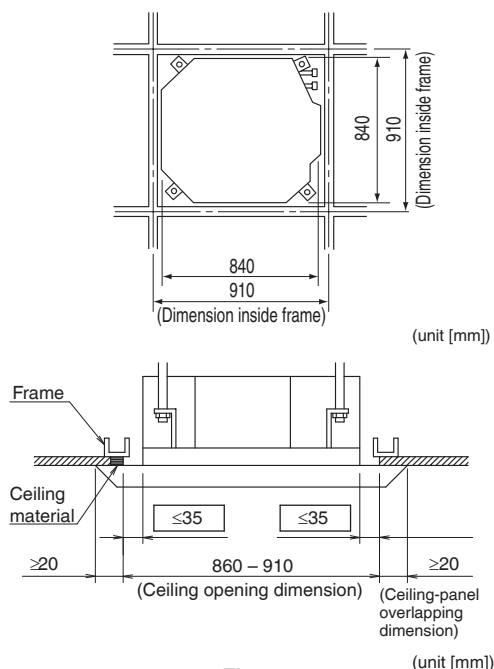


Fig. 6

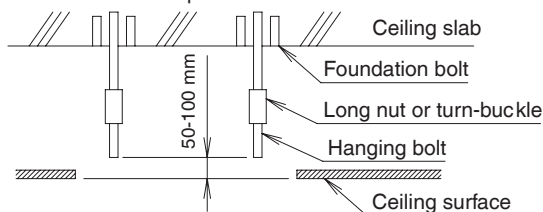
(2) Make the ceiling opening required for installation. (in case of existing ceiling)

- Use the installation pattern paper (5) matched to the ceiling opening dimension.
- Make the ceiling opening required for installation at the installation location and carry out refrigerant/drain piping, power supply wiring, remote controller wiring (not needed in case of wireless remote controller) and wiring between the indoor and outdoor units. (Refer to each section "6. REFRIGERANT PIPING WORK, 7. DRAIN PIPING WORK and 8. ELECTRIC WIRING WORK")
- After making the opening, sometimes it is necessary to reinforce the ceiling framework to keep the level of the ceiling and prevent vibration of the ceiling. For details, consult with the builder and interior designer.

(3) Install the hanging bolts.

- Use M8 or M10 bolts for hanging the indoor unit. Use hole-in-anchors for the existing bolts and embedded inserts or foundation bolts for new bolts, and fix the indoor unit firmly to the building so that it may withstand the mass of the unit. In addition, adjust clearance (50 - 100 mm) from the ceiling in advance.

<Installation examples>



Note) The above shown parts are all field supply.

5. INSTALLATION OF INDOOR UNIT

<<It is easy to attach the optional parts (except for decoration panel) before installing the indoor unit. Refer to also the installation manual attached to the optional parts.>>

For installation, use the attached installation parts and specified parts.

[Install the indoor unit in the order of steps (1), (2), (3), (4), and (5) in case of a newly built ceiling, or in the order of steps (1), (3), (4) and (5) in case of an existing ceiling.]

(1) Install the indoor unit temporarily.

- Fix the hanger to the hanging bolt.

Make sure to securely fix the hanger with the nut and the washer for hanger (3) from the upper and lower side. (Refer to Fig. 7)

If the washer clamp (7) is used, the upper side washer for hanger (3) may be protected from falling off. (Refer to Fig. 8)

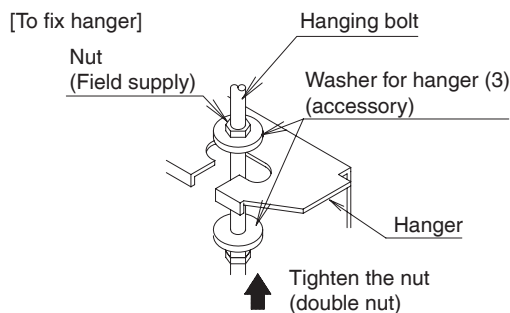


Fig. 7

[Washer clamp (7) fixing method]

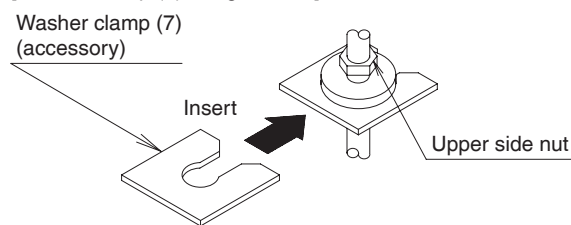
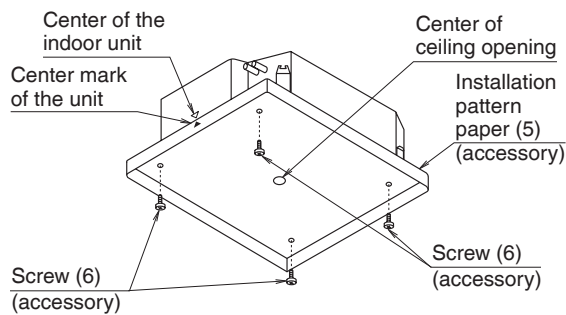


Fig. 8

(2)

- The installation pattern paper (5) is matched to the ceiling opening dimension. For the height of ceiling lower surface from the floor level, confirm with the builder of ceiling.
- The center of the ceiling opening is shown in the installation pattern paper (5). The center of the indoor unit is indicated as triangle marks on the sides and bottom of the unit and those on the installation pattern paper (5).
- Put the installation pattern paper (5) to the indoor unit with four screws (6). At this time, put the installation pattern paper (5) to the indoor unit with the triangle marks on the indoor unit and those on the installation pattern paper (5) aligned.



[Installation of the installation pattern paper]

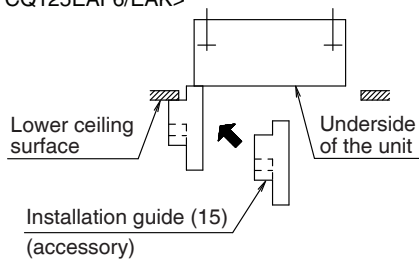
< Installation work after the ceiling work is finished >

- (3) Adjust so that the unit will be properly positioned.
(Refer to "4. PREPARATION BEFORE INSTALLATION – (1)")

- Using the Installation guide (15) allows you to check the positions from the underside of the unit to the lower ceiling surface.

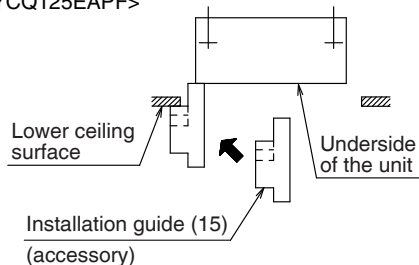
- Apply the short side of the cut-out section in case of standard grille.

<BYCQ140EEF6/EEK>
<BYCQ125EAF6/EAK>



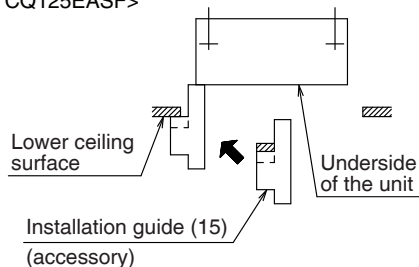
- Apply the long side of the cut-out section in case of designer grille.

<BYCQ125EAPF>



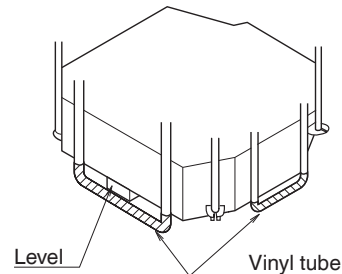
- Apply the long side by cut one of the cut-out section in case of auto grille.

<BYCQ125EASF>



- (4) Check the level of the unit. (Refer to Fig. 9)

- (5) Remove the washer clamp (7) used for preventing the washer for hanger (3) from dropping and tighten the upper side nut.



[Maintaining horizontality]

Fig. 9**CAUTION**

- Install the indoor unit leveled.**

If the indoor unit is inclined and the drain piping side gets high, it may cause malfunction of a float switch and results in water leakage.

- Attach nuts on the upper and lower side of hanger.**

If there is no upper nut and the lower nut is over-tightened, the hanger and the top plate will deform and cause abnormal sound.

- Do not insert materials other than that specified into the clearance between the hanger and the washer for hanger (3).**

Unless the washers are properly attached, the hanging bolts may come off from the hanger.

WARNING

The indoor unit must be securely installed on a place that can withstand the mass.

If the strength is insufficient, the indoor unit may fall down and cause injuries.

6. REFRIGERANT PIPING WORK

- For the outdoor unit refrigerant piping, refer to the installation manual attached to the outdoor unit.
- Carry out insulation of both gas and liquid refrigerant piping securely. If not insulated, it may cause water leakage. For gas piping, use insulation material of which heat resistant temperature is not less than 120°C.
For use under high humidity, strengthen the insulation material for refrigerant piping. If not strengthened, the surface of insulation material may sweat.
- Before installation work, make sure that the refrigerant is R410A. (Unless the refrigerant is R410A, the normal operation cannot be expected.)

CAUTION

This air conditioner is a dedicated model for new refrigerant R410A. Make sure to meet the requirements shown below and carry out installation work.

- Use dedicated piping cutters and flaring tools for R410A.
- When making a flare connection, coat the flared inner surface only with ether oil or ester oil.
- Use only the flare nuts attached to the air conditioner. If other flare nuts are used, it may cause refrigerant leakage.
- To prevent contamination or moisture from getting into the piping, take measures such as pinching or taping the pipings.

Do not mix substance other than the specified refrigerant such as air into the refrigeration circuit. If the refrigerant leaks during the work, ventilate the room.

- The refrigerant is pre-charged in the outdoor unit.
- When connecting the pipings to the air conditioner, make sure to use a spanner and a torque wrench as shown in Fig. 10.
- For the dimension of flared part and the tightening torque, refer to the Table 3.
- For flare nut, use the mounting one to the body.
- When making a flare connection, coat the flared inner surface only with ether oil or ester oil.

(Refer to Fig. 11)

Then, turn the flare nut 3 to 4 times with your hand and screw in the nut.

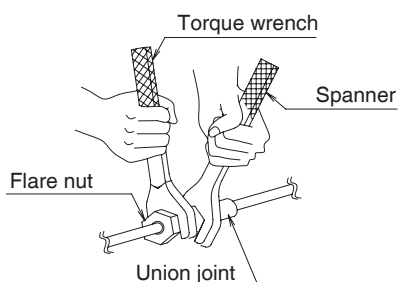


Fig. 10

Coat the flared inner surface only with ether oil or ester oil

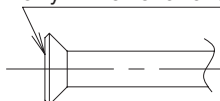


Fig. 11

Table 3

Piping size (mm)	Tightening torque (N·m)	Dimension for processing flare A (mm)	Flare shape
φ 6.4	15.7 ± 1.5	8.9 ± 0.2	
φ 9.5	36.3 ± 3.6	13.0 ± 0.2	
φ 12.7	54.9 ± 5.4	16.4 ± 0.2	
φ 15.9	68.6 ± 6.8	19.5 ± 0.2	

CAUTION

Do not have oil adhere to the screw fixing part of resin parts.

If oil adheres, it may weaken the strength of screwed part.

Do not tighten flare nuts too tight.

If a flare nut cracks, the refrigerant may leak.

- If there is no torque wrench, use Table 4 as a rule of thumb.
When tightening a flare nut with a spanner harder and harder, there is a point where the tightening torque suddenly increases.
From that position, tighten the nut additionally the angle shown in Table 4.
After the work is finished, check securely that there is no gas leak.
If the nut is not tightened as instructed, it may cause slow refrigerant leak and result in malfunction (such as does not cool or heat).

Table 4

Piping size (mm)	Tightening angle	Recommended arm length of tool used
φ 6.4	60° - 90°	approx. 150 mm
φ 9.5	60° - 90°	approx. 200 mm
φ 12.7	30° - 60°	approx. 250 mm
φ 15.9	30° - 60°	approx. 300 mm

CAUTION

Insulation of field piping must be carried out up to the connection inside the casing.

If the piping is exposed to the atmosphere, it may cause sweating, burn due to touching the piping, electric shocks or a fire due to the wiring touching the piping.

- After leak test, referring to Fig. 12, insulate both the gas and liquid piping connection with the attached joint insulating material (8) and (9) to prevent the pipings from getting exposed.
Then, tighten the both ends of insulating material with the clamp (4).
- Wrap the sealing material (Medium-1, 2) (11) (12) around the joint insulating material (8) and (9) (flare nut section), both the gas and liquid piping.
- Make sure to bring the seam of joint insulating material (8) and (9) to the top.

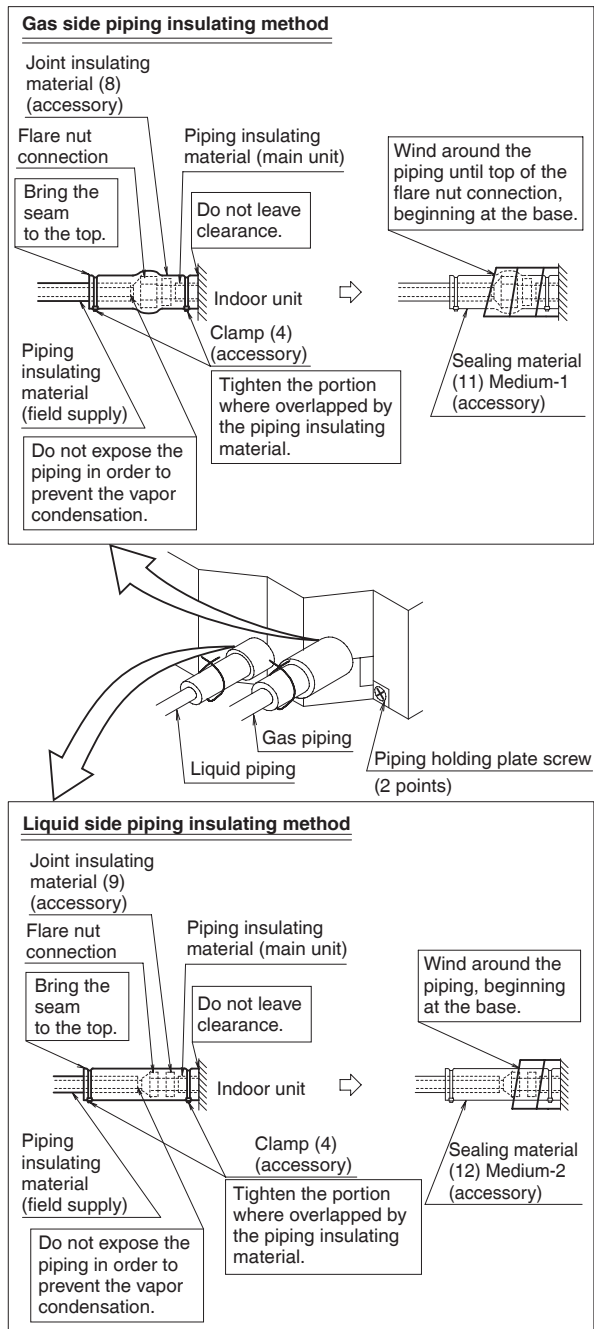


Fig. 12

- Before brazing refrigerant piping, have nitrogen flow through the refrigerant piping and substitute air with nitrogen (NOTE 2) (Refer to Fig. 13). Then, carry out brazing (NOTE 3).

After all the brazing works are finished, carry out flare connection with the indoor unit. (Refer to Fig. 12)

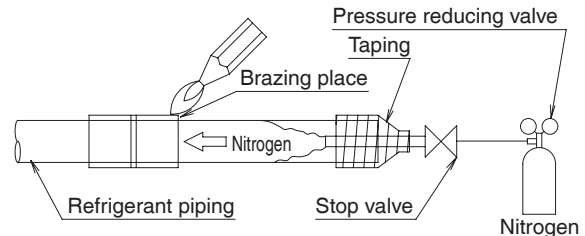


Fig. 13

NOTE

- After indoor unit installation completed, in case will perform the air tight test of field pipe and indoor unit, for air tight test pressure, refer the installation manual attached in outdoor unit.
- The proper pressure for having nitrogen flow through the piping is approximately 0.02 MPa, a pressure that makes one feel like breeze and can be obtained through a pressure reducing valve.
- Do not use flux when brazing refrigerant piping. Use phosphor copper brazing filler metal (BCuP-2: JIS Z 3264/B-Cu93P-710/795: ISO 3677) that does not require flux. (If chlorinated flux is used, the piping will be corroded and, in addition if fluorine is contained, the refrigerant oil will be deteriorated and the refrigerant circuit will be affected badly.)
- When carrying out leakage test of refrigerant piping and the indoor unit after the installation of indoor unit is finished, confirm the connecting outdoor unit installation manual for test pressure. Refer to also the outdoor unit installation manual or technical document for refrigerant piping.
- In case of refrigerant shortage due to forgetting additional refrigerant charge etc., it will result in malfunction such as does not cool or does not heat. Refer to the outdoor unit installation manual or technical document for refrigerant piping.

CAUTION

Do not use antioxidant when brazing piping.

It may result in malfunction of components and clogging of piping due to residue.

7. DRAIN PIPING WORK

(1) Carry out drain piping.

Carry out drain piping so that drainage can be ensured.

- Select the piping diameter equal to or larger than (except for riser) that of the connection piping (polyvinyl chloride piping, nominal diameter 25 mm, outside diameter 32 mm).
- Install the drain piping as short as possible with downward inclination of 1/100 or more and without where air may stagnate. (Refer to Fig. 14) (It may cause abnormal sound such as bubbling noise.)

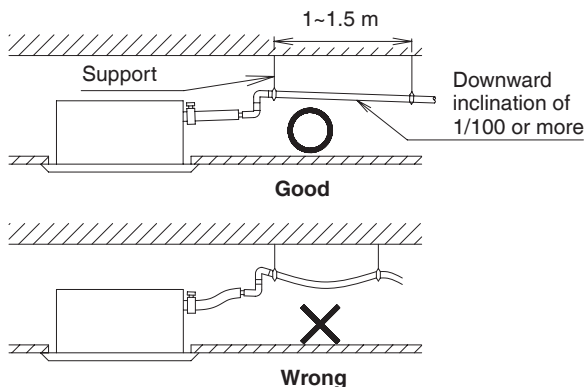


Fig. 14

CAUTION

If drain stagnates in the drain piping, the piping may be clogged.

- If sufficient downward inclination cannot be ensured, carry out upward drain piping.
- Install supports at a distance of 1 to 1.5 m so that the piping may not deflect. (Refer to Fig. 14)
- Make sure to use the attached drain hose (1) and the metal clamp (2).

CAUTION

Using old drain hose, clamp fixture may cause water leakage.

- Insert the drain hose (1) into the drain socket up to the point where the socket diameter becomes larger. Put the metal clamp (2) to the taped hose end and tighten the metal clamp (2) with torque $1.35 \pm 0.15 \text{ N}\cdot\text{m}$ ($135 \pm 15 \text{ N}\cdot\text{cm}$).

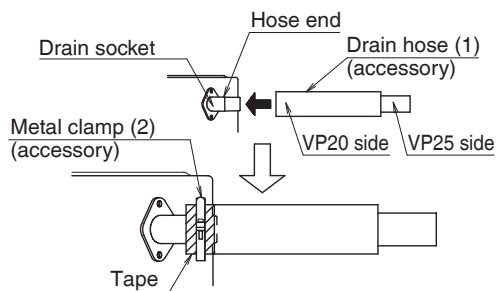


Fig. 15

CAUTION

- Do not tighten the metal clamp (2) with the torque more than the specified value.
The drain hose (1), the socket or the metal clamp (2) may be damaged.

< Caution to be taken when carrying out upward drain piping (Refer to Fig. 16) >

- The maximum height of the drain riser is 675 mm.
Since the drain pump mounted on this indoor unit is a high head type, from the characteristic point of view, the higher the drain riser the lower the draining noise. Therefore, the drain riser of 300 mm or higher is recommended.
- For upward drain piping, keep the horizontal piping distance of 300 mm or less between the drain socket root to the drain riser.

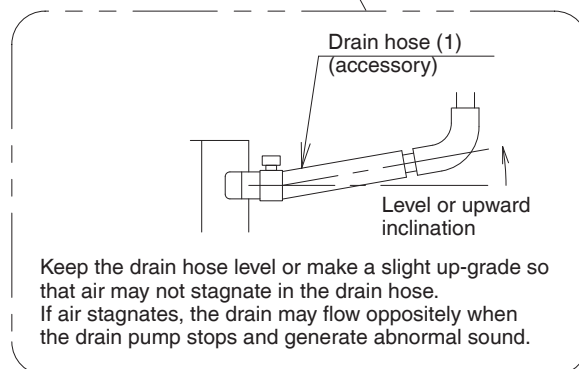
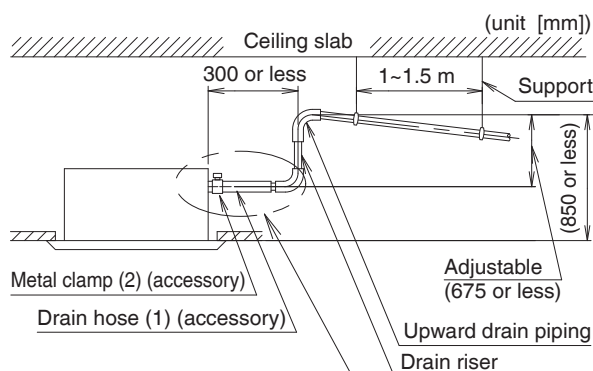


Fig. 16

⚠ CAUTION

- To avoid the attached drain hose (1) getting excessive force, do not bend nor twist it. It may cause water leakage.
- In case of centralized drain piping, carry out piping work according to the procedure shown in the following **Fig. 17**.

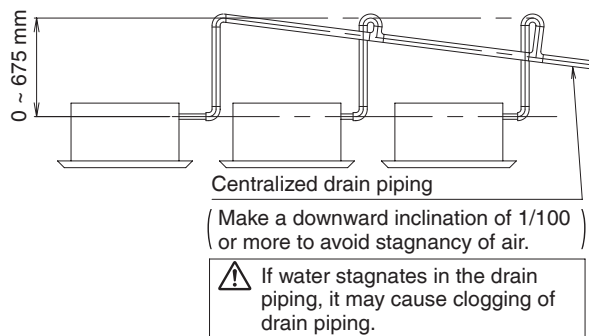


Fig. 17

- As for the size of centralized drain piping, select the size that meet the capacity of indoor units to be connected. (Refer to the technical document)
- At replacement with new indoor unit, use the attached new drain hose (1) and the metal clamp (2). If an old drain hose or a metal clamp is used, it may cause water leakage.

(2) After piping is finished, check if the drain flows smoothly.

[When the electric wiring work is finished]

- Gradually pour 1 liter of water from the air outlet on the left side of the drain socket into the drain pan giving caution to avoid splashing water on the electric components such as drain pump and confirm drainage by operating the indoor unit under cooling mode according to “10. FIELD SETTING AND TEST OPERATION”. (Refer to Fig. 18)

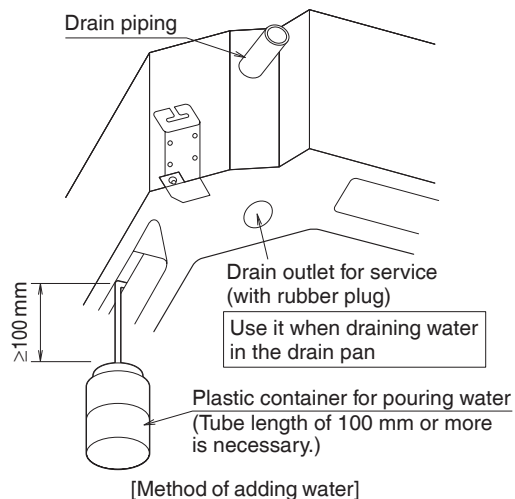


Fig. 18

- After checking the drainage of water, refer to **Fig. 19** and attach the sealing material (14) to perform the thermal insulation of the drain socket.

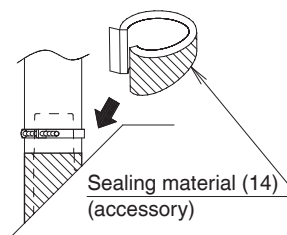


Fig. 19

⚠ CAUTION

Do not add the external force to float switch. It may cause failure.

[When the electric wiring work is not finished]

- For electric wiring operation shall refer the details in “8. ELECTRIC WIRING WORK”
- The electric wiring works (including earthing) must be carried out by a qualified electrician.
- If a qualified person is not present, after the electric wiring work is finished, check the drainage according to the method specified in [When the electric wiring work is finished].

1. Open the control box lid and connect the single phase 220 - 240 V power supply to the terminal (L, N) on the terminal block (X2M). Connect the earth wiring to the earth terminal. (Refer to Fig. 20)

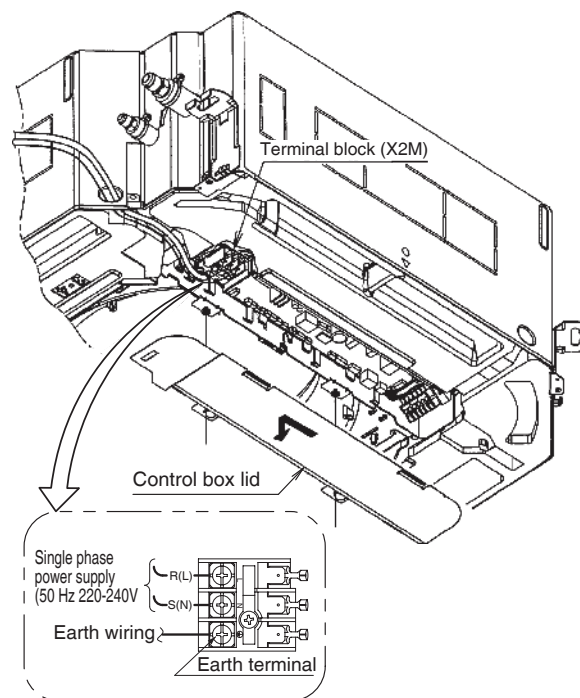


Fig. 20

2. Make sure the control box lid is closed before turning on the power supply.
 - Throughout the whole process, carry out the work giving caution to the wiring around the control box so that the connectors may not come off.
3. Gradually pour 1 liter of water from the air outlet on the left side of the drain socket into the drain pan giving caution to avoid splashing water on the electric components such as drain pump. **(Refer to Fig. 18)**
4. When the power supply is turned on, the drain pump will operate. Drainage can be checked at the transparent part of the drain socket.
(The drain pump will automatically stop after 10 minutes.)
After checking the drainage of water, refer to **Fig. 19** and attach the sealing material (14) to perform the thermal insulation of the drain socket.
 - Do not connect the drain piping directly to the sewage that gives off ammonia odor.
The ammonia in the sewage may go through the drain piping and corrode the heat exchanger of the indoor unit.
 - Do not apply external force to the float switch. (It may result in malfunction)
5. Turn off the power supply after checking drainage, and remove the power supply wiring.
6. Attach the control box lid as before.
 - Do not touch the electronic parts other than the terminal block (X2M).

(3) Sweating may occur and result in water leakage. Therefore, make sure to insulate the following 2 locations (drain piping and drain sockets that laid indoors).

After drainage is checked, put the attached sealing material (14) referring to **Fig. 19**, and insulate the drain hose (1) and the metal clamp (2) with the attached sealing material (Large) (10) referring to **Fig. 21**.

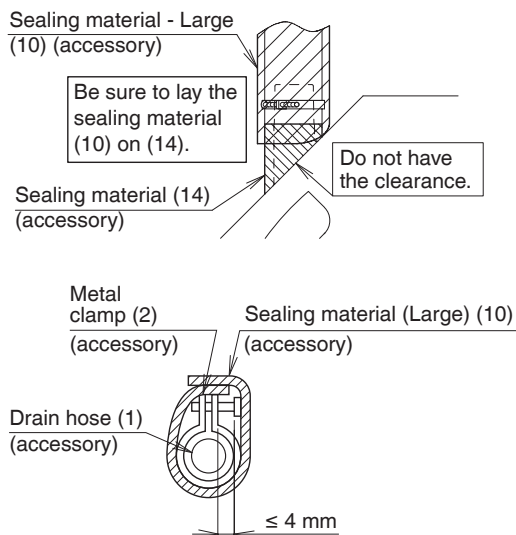


Fig. 21

8. ELECTRIC WIRING WORK

8-1 GENERAL INSTRUCTIONS

- Make certain that all electric wiring work is carried out by qualified personnel according to the applicable legislation and this installation manual, using a separate dedicated circuit.
Insufficient capacity of the power supply circuit or improper electrical construction may lead to electric shocks or a fire.
- Make sure to install an earth leakage breaker.
Failure to do so may cause electrical shocks and a fire.
- Do not turn on the power supply (branch switch, branch overcurrent circuit breaker) until all the works are finished.
- Multiple number of indoor units are connected to one outdoor unit. Name each indoor unit as A-unit, B-unit and the like. When these indoor units are wired to the outdoor unit and the BS unit, always wiring the indoor unit to the terminal indicated with the same symbol on the terminal block. If the wiring and the piping are connected to the different indoor units and operated, it will result in malfunction.
- Make sure to earth the air conditioner.
Earthing resistance should be according to applicable legislation.
- Do not connect the earth wiring to gas or water pipings, lightning conductor or telephone earth wiring.
 - Gas piping Ignition or explosion may occur if the gas leaks.
 - Water piping Hard vinyl tubes are not effective earths.
 - Lightning conductor or telephone earth wiring Electric potential may rise abnormally if struck by a lightning bolt.
- For electric wiring work, refer to also the "WIRING DIAGRAM" attached to the control box lid.
- Carry out wiring between the outdoor units, indoor units and the remote controllers according to the wiring diagram.
- Carry out installation and wiring of the remote controller according to the "installation manual" attached to the remote controller.
- Do not touch the Printed Circuit Board assembly. It may cause malfunction.

8-2 ELECTRICAL CHARACTERISTICS

Units	Power supply					Fan motor	
Model	Hz	Volts	Voltage range	MCA	MFA	kW	FLA
FXFSQ25ARV16	50	220-240	Max. 264 Min. 198	0.3	16	0.053	0.2
FXFSQ32ARV16				0.3	16	0.053	0.2
FXFSQ40ARV16				0.4	16	0.053	0.3
FXFSQ50ARV16				0.6	16	0.053	0.5
FXFSQ63ARV16				0.6	16	0.053	0.5
FXFSQ80ARV16				1.0	16	0.053	0.8
FXFSQ100ARV16				1.4	16	0.106	1.1
FXFSQ125ARV16				1.6	16	0.106	1.3
FXFSQ140ARV16				1.8	16	0.106	1.4

MCA: Min. Circuit Amps (A) MFA: Max. Fuse Amps (A)
kW: Fan Motor Rated Output (kW) FLA: Full Load Amps (A)

8-3 SPECIFICATION FOR FIELD SUPPLY FUSES AND WIRING

Model	Power supply wiring			Remote controller wiring Transmission wiring	
	Field fuses 	Wiring	Size	Wiring	Size
FXFSQ25ARV16	16A	H05VV-U3G NOTE 1, 2)	2.5 mm ² NOTE 4)	Vinyl cord with sheath or cable (2 core) NOTE 3)	0.75- 1.25 mm ²
FXFSQ32ARV16					
FXFSQ40ARV16					
FXFSQ50ARV16					
FXFSQ63ARV16					
FXFSQ80ARV16					
FXFSQ100ARV16					
FXFSQ125ARV16					
FXFSQ140ARV16					

The lengths of remote controller wiring and transmission wirings are as follows:

- (1) Remote controller wiring
(indoor unit - remote controller).....Max. 500 m
- (2) Transmission wiringsTotal wiring length 2000 m
 - Outdoor unit - Indoor unit.....Max. 1000 m
 - Outdoor unit - BS unitMax. 1000 m
 - BS unit - Indoor unitMax. 1000 m
 - Indoor unit - Indoor unitMax. 1000 m

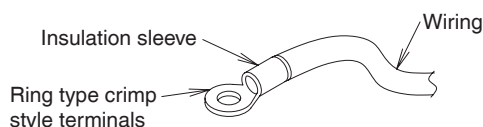
NOTE

1. Shows only in case of protected piping. Use H07RN-F in case of no protection.
2. Supply cords shall not be lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC 57)
3. Vinyl cord with sheath or cable (Insulated thickness : 1 mm or more)
4. Wiring size and length must comply with local codes or IEC 60335-1 (Table 11)

8-4 WIRING CONNECTION METHOD

CAUTION FOR WIRING

- For connection to the terminal block, use a ring type crimp style terminals with insulation sleeve or insulate the wirings properly.



- Connect the terminal as shown in Fig. 23.
- Do not carry out soldering finish when stranded wires are used. (Otherwise, the loosening of wires may result in abnormal heat radiation.)

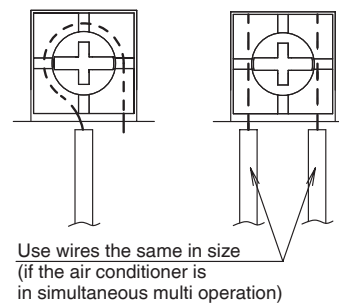


Fig. 22

(Abnormal heating may occur if the wirings are not tightened securely.)

- Use the required wirings, connect them securely and fix these wirings securely so that external force may not apply to the terminals.
- Use a proper screw driver for tightening the terminal screws. If an improper screw driver is used, it may damage the screw head and a proper tightening cannot be carried out.
- If a terminal is over tightened, it may be damaged. Refer to the table shown below for tightening torque of terminals.

	Tightening torque (N·m)
Terminal block for remote controller and transmission wirings	0.88 ± 0.08
Terminal for power supply	1.20 ± 0.12
Earth terminal	1.20 ± 0.12

- Do not carry out soldering finish when stranded wirings are used.

WARNING

- When wiring, form the wirings orderly so that the control box lid can be securely fastened. If the control box lid is not in place, the wirings may float up or be sandwiched by the box and the lid and cause electric shocks or a fire.

< Power supply wiring · earth wiring · remote controller wiring · transmission wiring connecting method >

- Power supply wiring, earth wiring
Pull the wiring through the wiring penetrating hole (high voltage). After connecting the power supply wiring to [L · N] on the power supply terminal block (X2M) and the earth wiring to the earth terminal, clamp them near the terminal block using the attached clamp (4). (Refer to page 14)
- Remote controller wiring, transmission wiring
Pull the wiring through the wiring penetrating hole (low voltage). After connecting the remote controller wiring to [P1 · P2] and the transmission wiring to [F1 · F2] on the terminal block (X1M), clamp them near the terminal block using the attached clamp (4). (Refer to page 14)
- After connecting the wiring, make sure to stick the sealing material (Small) (13) to the wiring penetrating hole. (Refer to Fig. 24)
(It is to prevent water from entering into the indoor unit.)

CAUTION

- Never connect the power supply wiring to the terminal block for remote controller/transmission wiring (X1M). It may damage the total system.
- Do not connect the remote controller/transmission wiring to the wrong terminal block.

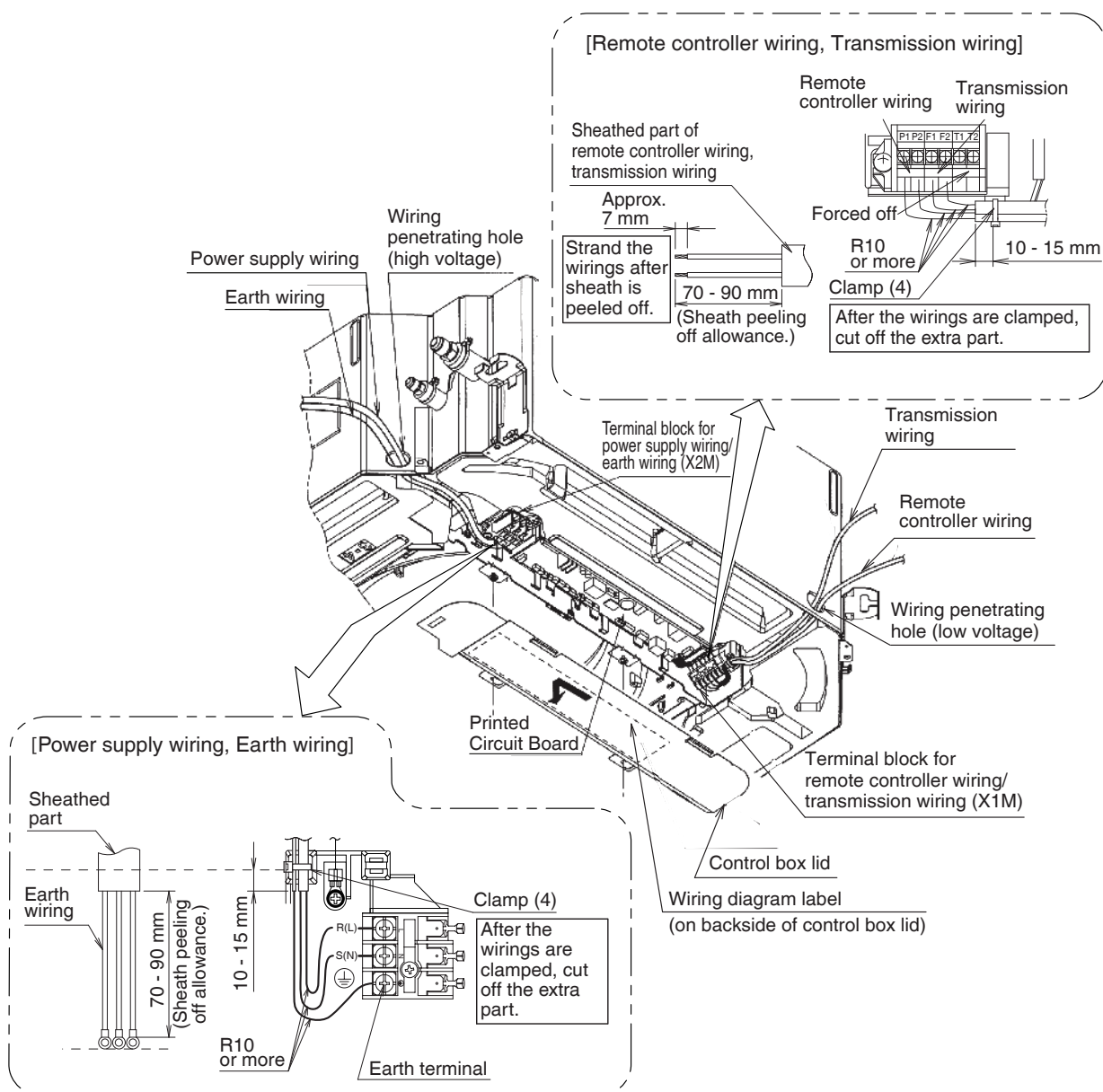


Fig. 23

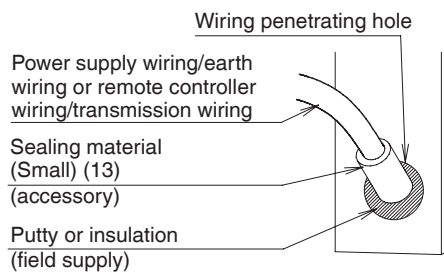


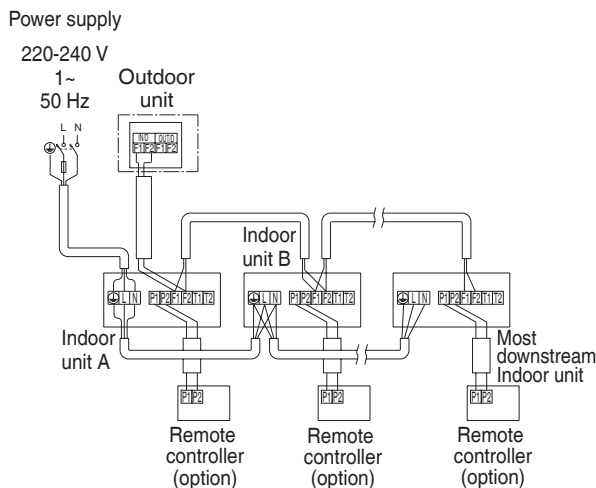
Fig. 24

<<Mending method of wiring penetrating hole>>

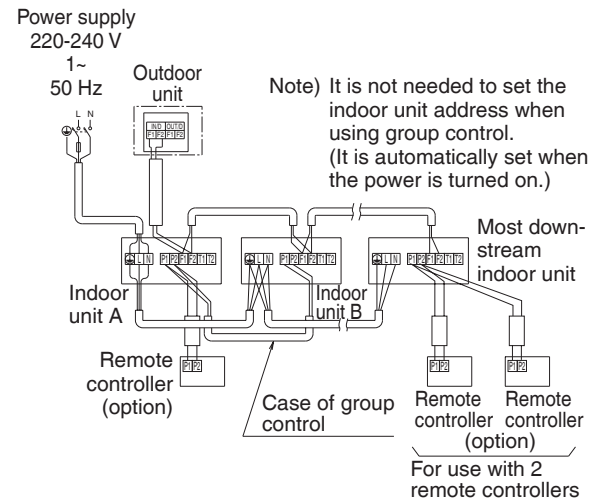
- After wiring connection is finished, to prevent the penetration of water, small animals and insects into the indoor unit from the outside, mend the respective covers for wiring penetrating hole for the power supply wiring/earth wiring and the remote controller wiring/transmission wiring.
- Cut the sealing material (Small) (13) into two pieces and wrap each wiring with each piece.
- Seal the clearance around the wirings with putty and insulating material (field supply). (If insects and small animals get into the indoor unit, short circuiting may occur inside the control box.)
- Keep the distance of 50 mm or more between the low voltage wiring (remote controller wiring, transmission wiring) and the high voltage wiring (power supply wiring, earth wiring) at anywhere outside the indoor unit. If both the wirings are laid down together, they may be affected by electric noise (outside noise) and cause malfunction or failure.

8-5 EXAMPLE OF WIRING

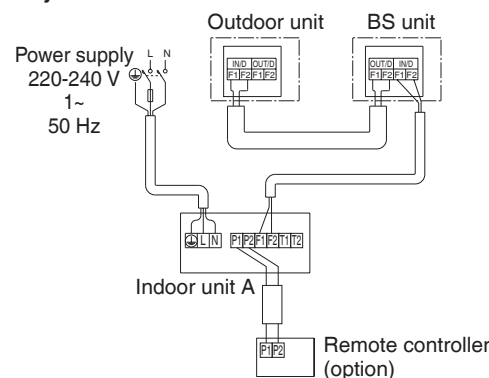
< No. 1 system: When 1 remote controller is used for 1 indoor unit. >



< No. 2 system: When carrying out group control or 2 remote controller control. >



< No. 3 system: When BS unit is used >



NOTE

1. Remote controller wiring and transmission wiring have no polarity.

WARNING

Be sure to install an earth leakage breaker.
Failure to do so may cause electric shocks and a fire.

8-6 FOR CONTROL WITH 2 REMOTE CONTROLLERS (TO CONTROL 1 INDOOR UNIT WITH 2 REMOTE CONTROLLERS)

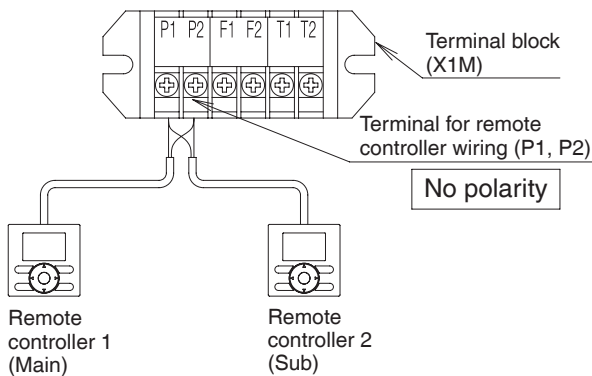
- For control with 2 remote controllers, set one remote controller as Main and the other remote controller as Sub.

< Changeover method from Main to Sub and vice versa >

Refer to the installation manual attached to the remote controller.

< Wiring method >

- (1) Remove the control box lid.
- (2) Carry out additional wiring from the remote controller 2 (Sub) to the terminals (P1, P2) for remote controller wiring on the terminal block (X1M) in the control box.



< Caution >

- When using the group control and the 2 remote controllers control at the same time, connect the remote controller 2 (Sub) to the indoor unit at the end of the crossover wiring (the largest No.). (Refer to Fig. 25)

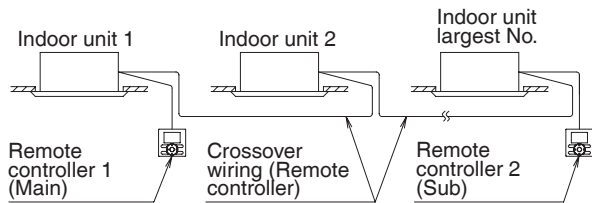


Fig. 25

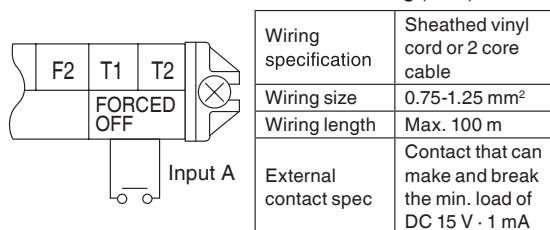
8-7 FOR CENTRALIZED CONTROL

- When centralized equipment (such as centralized controller) is used for control, it is required to set the group No. on the remote controller.
For details, refer to the manuals attached to the centralized equipment.
- Connect the centralized equipment to the indoor unit connected to the remote controller.

8-8 FOR REMOTE CONTROL (FORCE OFF OR ON / OFF OPERATION)

(1) Wiring method and specification

- Remote control is available by connecting the external input to the terminal T1 and T2 on the terminal block for remote controller and transmission wiring (X1M).



(2) Actuation

- Input A of FORCED OFF and ON/OFF OPERATION will be as the table shown below.

	Input A = ON	Input A = OFF
In case of FORCED OFF	Remote controller prohibited	Remote controller permitted
In case of ON/OFF OPERATION	Operation	Stop

(3) How to choose FORCED OFF or ON/OFF OPERATION

- For choosing FORCED OFF or ON/OFF OPERATION, setting by remote controller is required.
(Refer to "10. FIELD SETTING AND TEST OPERATION")

9. MOUNTING DECORATION PANEL

<<If test operation is required before mounting the decoration panel, "10. FIELD SETTING AND TEST OPERATION" can be carried out before "9. MOUNTING DECORATION PANEL".>>

CAUTION

In case of a wireless remote controller, unless the decoration panel is mounted, field setting and test operation cannot be carried out.

Refer to the installation manual attached to the decoration panel.

- After the decoration panel is mounted, check if no clearance exists between the panel and the unit.
- If test operation is carried out before mounting the decoration panel, check the swing blade action after the panel is mounted.

10. FIELD SETTING AND TEST OPERATION

<<Refer to also the installation manual attached to the outdoor unit.>>

CAUTION

Before carrying out field setting, check the items mentioned in the clause 2 "1. Items to be checked after the installation work is completed" on page 3.

- Check if all the installation and piping works for the air conditioner are completed.
- Check if the control box lids of the air conditioner are closed.

< FIELD SETTING >

<<After turn on the power supply, carry out field setting from the remote controller according to the installation state.>>

- Carry out setting at 3 places, "Mode No.", "FIRST CODE No." and "SECOND CODE No.".
The settings shown by " " in the table indicate those when shipped from the factory.
- The method of setting procedure and operation is shown in the installation manual attached to the remote controller.
(Note) Though setting of "Mode No." is carried out as a group, if you intend to carry out individual setting by each indoor unit or confirmation after setting, carry out setting with the Mode No. shown in the parenthesis ().
- In case of remote control, for changeover of input to FORCED OFF or to ON/OFF OPERATION.
[1] Enter into the field setting mode with the remote controller.
[2] Select Mode No. "12".
[3] Set the FIRST CODE No. to "1".
[4-1] For FORCE OFF, set the SECOND CODE No. to "01".
[4-2] For ON/OFF OPERATION, set the SECOND CODE No. to "02".
(It is set to FORCE OFF when shipped from the factory.)
- Ask your customer to keep the manual attached to the remote controller together with the operation manual.
- Do not carry out settings other than those shown in the table.

10-1 SETTING CEILING HEIGHT

- Set the SECOND CODE No. according to the ceiling height as shown in the Table 5.

Table 5

Setting	Ceiling height (m)		Mode No.	FIRST CODE No.	SECOND CODE No.
	25-80 type	100-140 type			
Standard	2.7 or less	3.2 or less	13 (23)	0	01
High ceiling 1	2.7 - 3.0	3.2 - 3.6			02
High ceiling 2	3.0 - 3.5	3.6 - 4.2			03

10-2 SETTING AIR DISCHARGE DIRECTION

- Refer to the installation manual attached to the sealing material of air discharge outlet sold separately and engineering data book, for ceiling height settings for four-direction (part of corner closed off), three-direction and two-direction. (The SECOND CODE No. is factory set to "01" (all round outlet) before shipping.)

10-3 SETTING WHEN AN OPTIONAL ACCESSORY IS ATTACHED

- For setting when attaching an optional accessory, refer to the installation manual attached to the optional accessory.

10-4 WHEN USING WIRELESS REMOTE CONTROLLER

- When using a wireless remote controller, it is necessary to set the wireless remote controller address. Refer to the installation manual attached to the wireless remote controller.

10-5 SETTING FAN SPEED DURING THERMOSTAT OFF

- Set the fan speed according to the using environment after consultation with your customer.
- When the fan speed is changed, explain the set fan speed to your customer.

Table 6

Setting		Mode No.	FIRST CODE No.	SECOND CODE No.
Fan speed during cooling thermostat OFF	LL (Extra low)	12 (22)	6	01
	Setting			02
Fan speed during heating thermostat OFF	LL (Extra low)	12 (22)	3	01
	Setting			02

10-6 SETTING FILTER SIGN

- A message to inform the air filter cleaning time will be indicated on the remote controller.
- Set the SECOND CODE No. shown in the Table 7 according to the amount of dust or pollution in the room.
- Though the indoor unit is equipped with the long life filter, it is necessary to periodically clean the filter to avoid clogging of the filter. Please also explain the set time to the customer.

Table 7

Contamination	Hours until indication	Mode No.	FIRST CODE No.	SECOND CODE No.
Normal	Approx. 2500 hrs	10 (20)	0	01
More contaminated	Approx. 1250 hrs			02
With indication			3	01
No indication*				02

* Use "No indication" setting when cleaning indication is not necessary such as the case of periodical cleaning being carried out.

<TEST OPERATION >

- After cleaning the indoor unit inside, carry out test operation according to installation manual attached to the outdoor unit.
- When the remote controller operation lamp flashes, it shows that something is abnormal. Check the malfunction codes on the remote controller. The relation between the malfunction codes and malfunction details is described in the operation manual attached to the outdoor unit. Particularly, if the indication is one of those shown in the Table 8, it may be an error in the electrical wiring or the power supply is disconnected. Therefore, recheck wiring.

Table 8

Remote controller indication	Details
Though the centralized control is not carried out, the lamp "A" turns on.	The terminals (T1 · T2) for FORCED OFF on the indoor unit transmission terminal block is short circuited.
"U4" turns on "UH" turns on	- The power supply to the outdoor unit is not made. - The power supply work to the outdoor unit is not carried out. - The transmission wiring and the remote controller wiring and FORCED OFF wiring are connected wrongly. - The transmission wiring is disconnected.
No indication	- The power supply to the indoor unit is not made. - The power supply work to the indoor unit is not carried out. - The remote controller wiring and the transmission wiring and FORCED OFF wiring are connected wrongly. - The remote controller wiring is disconnected.

Note) In case of use wireless remote control, shall refer operation manual attached to wireless remote control.

- At test operation, if the decoration panel is mounted, check the actuation of the swing blade.

— **CAUTION** —

After test operation is completed, check the items mentioned in the clause 2 "**2. Items to be checked at delivery**" on page 4.

If the interior finish work is not completed when the test operation is finished, for protection of the air conditioner, ask the customer not operate the air conditioner until the interior finish work is completed.

If the air conditioner is operated, the inside of the indoor units may be polluted by substances generated from the coating and adhesives used for the interior finish work and cause water splash and leakage.

— **To the operator carrying out test operation** —

After test operation is completed, before delivering the air conditioner to the customer, confirm that the control box lid, the air filter and suction grille are attached.

In addition, explain the power supply status (power supply ON/OFF) to the customer.

12.2 FXFSQ25ARV1 / FXFSQ32ARV1 / FXFSQ40ARV1 / FXFSQ50ARV1 / FXFSQ63ARV1 / FXFSQ80ARV1 / FXFSQ100ARV1 / FXFSQ125ARV1 / FXFSQ140ARV1

DAIKIN

VRV SYSTEM Air Conditioners

Installation manual

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1. SAFETY PRECAUTIONS

Please read these "SAFETY PRECAUTIONS" carefully before installing air conditioning unit and be sure to install it correctly. After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained.

Also, inform customers that they should store this installation manual along with the operation manual for future reference. This product comes under the term "appliances not accessible to the general public".

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

- This manual classifies the precautions into WARNINGS and CAUTIONS.

Be sure to follow all the precautions below: They are all important for ensuring safety.

 **WARNING**Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION**Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

- After the installation is completed, test the air conditioner and check if the air conditioner operates properly. Give the user adequate instructions concerning the use and cleaning of the indoor unit according to the Operation Manual. Ask the user to keep this manual and the Operation Manual together in a handy place for future reference.

WARNING

- Ask your local dealer or qualified personnel to carry out installation work.
Improper installation may result in water leakage, electric shocks or a fire.
- Perform installation work in accordance with this installation manual.
Improper installation may result in water leakage, electric shocks or a fire.

- Consult your local dealer regarding what to do in case of refrigerant leakage.
When the air conditioner is installed in a small room, it is necessary to take proper measures so that the amount of any leaked refrigerant does not exceed the concentration limit in the event of a leakage.
Otherwise, this may lead to an accident due to oxygen deficiency.
- Be sure to use only the specified parts and accessories for installation work.
Failure to use the specified parts may result in the air conditioner falling down, water leakage, electric shocks, a fire, etc.
- Install the air conditioner on a foundation that can withstand its mass.
Insufficient strength may result in the air conditioner falling down and causing injury.
In addition, it may lead to vibration of indoor units and cause unpleasant chattering noise.
- Carry out the specified installation work in consideration of strong winds, typhoons, or earthquakes.
Improper installation may result in an accident such as air conditioner falling.
- Make certain that all electrical work is carried out by qualified personnel according to the applicable legislation (note 1) and this installation manual, using a separate circuit.
In addition, even if the wiring is short, make sure to use a wiring that has sufficient length and never connect additional wiring to make the length sufficient.
Insufficient capacity of the power supply circuit or improper electrical construction may lead to electric shocks or a fire.
(note 1) applicable legislation means "All international, national and local directives, laws, regulations and/or codes which are relevant and applicable for a certain product or domain".
- Earth the air conditioner.
Do not connect the earth wiring to gas or water piping, lightning conductor or telephone earth wiring.
Incomplete earthing may cause electric shocks or a fire.
- Be sure to install an earth leakage breaker.
Failure to do so may cause electric shocks and a fire.
- Disconnect the power supply before touching the electric components.
If you touch the live part, you may get an electric shocks.
- Make sure that all wiring is secure, using the specified wirings and ensuring that external forces do not act on the terminal connections or wirings.
Incomplete connection or fixing may cause an overheat or a fire.
- When wiring between the indoor and outdoor units, and wiring the power supply, form the wirings orderly so that the control box lid can be securely fastened.
If the control box lid is not in place, overheat of the terminals, electric shocks or a fire may be caused.
- If refrigerant gas leaks during installation work, ventilate the area immediately.
Toxic gas may be produced if refrigerant gas comes into contact with a fire.
- After completing the installation work, check to make sure that there is no leakage of refrigerant gas.
Toxic gas may be produced if refrigerant gas leaks into the room and comes into contact with a source of a fire, such as a fan heater, stove or cooker.
- Never directly touch any accidental leaking refrigerant.
This could result in severe wounds caused by frostbite.

— CAUTION —

- Do not allow children to climb on the outdoor unit and avoid placing objects on the unit.
Injury may result if the unit becomes loose and falls.
- Make sure to provide for adequate measures in order to prevent that the outdoor unit be used as a shelter by small animals.
Small animals making contact with electrical parts can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.
- Install in a machine room that is free of moisture. The unit is designed for indoor use.
- Disposal requirements
Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.
- Install drain piping according to this installation manual to ensure good drainage, and insulate the piping to prevent condensation.
Improper drain piping may cause water leakage, make the furniture get wet.
- Install the air conditioner, power supply wiring, remote controller wiring and transmission wiring at least 1 meter away from televisions or radios to prevent image interference or noise.
(Depending on the radio waves, a distance of 1 meter may not be sufficient to eliminate the noise.)
- Install the indoor unit as far as possible from fluorescent lamps.
If a wireless remote controller kit is installed, the transmission distance may be shorter in a room where an electronic lighting type (inverter or rapid start type) fluorescent lamp is installed.
- Do not install the air conditioner in places such as the following:
 1. Where there is mist of oil, oil spray or vapour for example a kitchen.
Resin parts may deteriorate, and cause them to fall out or water to leak.
 2. Where corrosive gas, such as sulfurous acid gas, is produced.
Corrosion of copper pipings or brazed parts may cause the refrigerant to leak.
 3. Where there is machinery which emits electromagnetic waves.
Electromagnetic waves may disturb the control system, and cause malfunction of the equipment.
 4. Where flammable gases may leak, where carbon fibre or ignitable dust is suspended in the air or where volatile flammables, such as thinner or gasoline, are handled.
If the gas should leak and remained around the air conditioner, it may cause ignition.
- Pay attention to product transportation.
Carry by hold the handle position that display on packing material.
In case of hold PP band, PP band will get loose, it will be dangerous.

SPECIAL NOTICE PRODUCT

- The refrigerant R-410A requires that strict precautions be observed for keeping the system clean, dry and tightly sealed.
 - Clean and dry
Strict measures must be taken to keep impurities (including SUNISO oil and other mineral oils as well as moisture) out of the system.
 - Tightly sealed
R-410A contains no chlorine, does not destroy the ozone layer and so does not reduce the earth's protection against harmful ultraviolet radiation. R-410A will contribute only slightly to the greenhouse effect if released into the atmosphere.
- Since design pressure is 4.0 MPa or 40 bar (for R407C units: 3.3 MPa or 33 bar), the thickness of pipes must be greater than previously. Since R-410A is a mixed refrigerant, the required additional refrigerant must be charged in its liquid state.
(If the system is charged with refrigerant in its gaseous state, due to composition change, the system will not function normally). The indoor unit is designed for R-410A use. See the catalogue for indoor unit models that can be connected. (Normal operation is not possible when connecting units that are originally designed for other refrigerants.)

2. BEFORE INSTALLATION

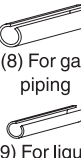
When unpacking the indoor unit or moving the unit after unpacked, hold the hangers (4 places) and do not apply force to other parts (particularly refrigerant piping, drain piping and resin parts).

- Make sure to check in advance that the refrigerant to be used for installation work is R-410A.
(The air conditioner will not properly operate if a wrong refrigerant is used.)
- For installation of the outdoor unit, refer to the installation manual attached to the outdoor unit.
- Do not throw away the accessories until the installation work is completed.
- After the indoor unit is carried into the room, to avoid the indoor unit from getting damaged, take measures to protect the indoor unit with packing materials.
 - (1) Determine the route to carry the unit into the room.
 - (2) Do not unpack the unit until it is carried to the installation location.
Where unpacking is unavoidable, use a sling of soft material or protective plates together with a rope when lifting, to avoid damage or scratches to the indoor unit.
- Have the customer actually operate the air conditioner while looking at the operation manual.
Instruct the customer how to operate the air conditioner (particularly cleaning of the air filters, operation procedures, and temperature adjustment).
- For selection of installation location, use the installation pattern paper as reference.
- Do not use the air conditioner where in the salty atmosphere such as coastal areas, vehicles, vessels or the voltage fluctuation is frequent such as factories.
- Take off static electricity from the body when carrying out wiring and the control box lid is removed.
The electric parts may be damaged.

2-1 ACCESSORIES

Check if the following accessories are attached to the indoor unit.

Name	(1) Drain hose	(2) Metal clamp	(3) Washer for hanger	(4) Clamp
Quantity	1 pc.	1 pc.	8 pcs.	6 pcs.
Shape				

Name	(5) Installation pattern paper	(6) Screw (M4)	(7) Washer clamp	Joint insulating material
Quantity	1 sheet	4 pcs.	4 pcs.	1 each
Shape	Upper part of packing 			(8) For gas piping (9) For liquid piping 

Name	Sealing material		
Quantity	1 each	1 sheet	1 pc.
Shape	(10) Large  (11) Medium-1  (12) Medium-2  (13) Small  (14) 		

Name	(15) Installation guide	(Miscellaneous) • Operation manual • Installation manual
Quantity	1 sheet	
Shape		

2-2 OPTIONAL ACCESSORIES

- This indoor unit separately requires a decoration panel and a remote controller.
- Confirm if a decoration panel shown in the Table 1 is prepared and meets your model.
(Refer to the installation manual attached to the decoration panel for how to install.)

Table 1

Unit model	Decoration panel
FXFSQ25 · 32 · 40 · 50 · 63 · 80 · 100 · 125 · 140ARV1	BYCQ125EAF9, BYCQ125EEF9 Color : Fresh white

- There are 2 kinds of remote controller; wired type and wireless type.
Select a remote controller from Table 2 according to customer request and install in an appropriate place.
(Refer to the installation manual attached to the remote controller for how to install.)

Table 2

Remote controller		
Wired type		BRC1E63, BRC1H81W
Wireless type	Heat pump	BRC7M634F/K
	Cooling only	BRC7M635F/K

NOTE

- If you wish to use a remote controller that is not listed in "Table 2" on page 3, select a suitable remote controller after consulting catalogs and technical materials.

CARRY OUT THE WORK GIVING CAUTION TO THE FOLLOWING ITEMS AND AFTER THE WORK IS COMPLETED CHECK THESE AGAIN.

1. Items to be checked after the installation work is completed

Items to be checked	In case of defective	Check column
Are the indoor and outdoor units rigidly fixed?	Drop · vibration · noise	
Are the installation works of the outdoor and indoor units completed?	The unit may malfunction or the components burn out	
Have you carried out a leakage test with the test pressure specified in the outdoor unit installation manual?	It may result in insufficient cooling / insufficient heating	
Is the insulation of refrigerant piping and drain piping completely carried out?	Water leakage	
Does the drain flow out smoothly?	Water leakage	
Is the power supply voltage identical to that stated in the manufacturer's label on the air conditioner?	The unit may malfunction or the components burn out	
Are you sure that there is no wrong wiring or piping or no loose wiring?	The unit may malfunction or the components burn out	
Is unit safety grounded?	It may result in electric shock	
Are the sizes of electric wiring according to the specification?	The unit may malfunction or the components burn out	
Is any of air outlets or inlets of the indoor and outdoor units blocked with obstacles? (It may lead to capacity drop due to fan speed drop or malfunction of equipment.)	It may result in insufficient cooling / insufficient heating	
Have you recorded the refrigerant piping length and the refrigerant charge added?	Refrigerant charge amount is not clear	

Make sure to recheck the items of "SAFETY PRECAUTIONS".

2. Items to be checked at delivery

Items to be checked	Check column
Have you carried out field setting? (if necessary)	
Are the control box lid, the air filter and the suction grille attached?	
Does the cool air discharge during the cooling operation and the warm air discharge during the heating operation? Does the indoor unit makes unpleasant sound of air discharge?	
Have you explained how to operate the air conditioner showing the operation manual to the customer?	
Have you explained the description of cooling, heating, program dry and automatic (cooling/heating) given in the operation manual to the customer?	
If you set the fan speed at thermostat OFF, did you explain the set fan speed to the customer.	
Have you handed the operation manual and the installation manual to the customer?	

Points of the operation explanation

In addition to the general usage, since the items in the operation manual with the **⚠ WARNING** and **⚠ CAUTION** marks are likely to result in human bodily injuries and property damages, it is necessary not only to explain these items to the customer but also to have the customer read them.

2-3 NOTE TO THE INSTALLER

Be sure to instruct customers how to properly operate the unit (especially cleaning filters, operating different functions, and adjusting the temperature) by having them carry out operations themselves while looking at the manual.

3. SELECTION OF INSTALLATION LOCATION

Hold the hangers at 4 locations to move the indoor unit when unpacking or after unpacked, and do not apply force to the piping (refrigerant and drain) and resin parts. If the temperature and humidity in the ceiling is likely to exceed 30°C, RH80%, use the optional kit for coping with high temperature and humidity, or additionally stick the insulation to the indoor unit.

Use the insulation such as glass wool or polyethylene that has thickness of 10 mm or more. However, keep the insulated outside dimension smaller than the ceiling opening so that the unit may go through the opening at installation.

The direction of air discharge for this product can be selected. Sealing material of air discharge outlet is available option for 4-way with sealed corners, 3-way and 2-way.

(1) Select the installation location that meets the following conditions and get approval of the customer.

- Where the cool and warm air spreads evenly in the room.
- Where there is no obstacles in the air passage.
- Where drainage can be ensured.
- Where the ceiling lower surface is not remarkably inclined.

- Where there is sufficient strength to withstand the mass of the indoor unit. (If the strength is insufficient, the indoor unit may vibrate and get in contact with the ceiling and generate unpleasant chattering noise.)
- Where a space sufficient for installation and service can be ensured. (Refer to Fig. 1)
- Where the piping length between the indoor and the outdoor units is ensured within the allowable length. (Refer to the installation manual attached to the outdoor unit.)
- Where there is no risk of flammable gas leak.

Required installation space (mm)

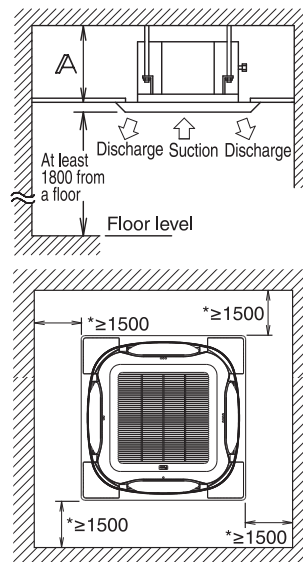


Fig. 1

MODEL NAME	Δ [mm]
	BYCQ125EAF9, BYCQ125EEF9
FXFSQ25.32.40.50.63.80ARV1	261
FXFSQ100-125-140ARV1	303

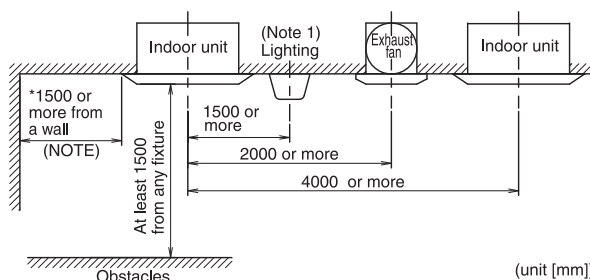


Fig. 2

NOTE

- The clearance from the wall (indicated with *) must be 500 mm or more if the air outlet is closed or the horizontal blade is set to Airflow block and, if the corners (left and right corners of the target air outlet) are also closed, 200 mm or more.

⚠ CAUTION

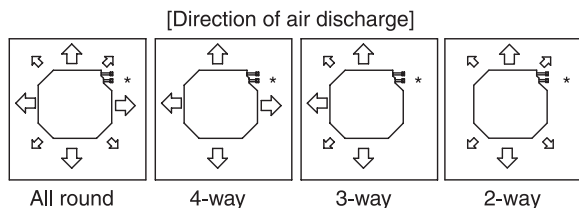
- Any vents, light fixtures, or other appliances which may disturb the airflow might cause ceiling to become dirty if located too nearby, so follow **Fig. 2** when installing.
(Note)
- This restriction applies to the exposed type lighting, but does not apply to the recessed type (which does not protrude below the ceiling line).
- For how to set the airflow direction (including Airflow block) with the horizontal blade, refer to "Individual Airflow Direction" in the operation manual attached to the remote controller.
- Install the indoor and outdoor units, power supply wiring, remote controller wiring and transmission wiring at least 1 meter away from televisions or radios to prevent image interference or noise.
(Depending on the radio waves, a distance of 1 meter may not be sufficient to eliminate the noise.)
- Install the indoor unit as far as possible from fluorescent lamps.
If a wireless remote controller kit is installed, the transmission distance may be shorter in a room where an electronic lighting type (inverter or rapid start type) fluorescent lamp is installed.

(2) Ceiling height

- This indoor unit can be installed in a space of which ceiling height is up to 3.5 m (Type 100 · 125 · 140 : 4.2 m)
- However, if the ceiling height exceeds 2.7 m (Type 100 · 125 · 140 : 3.2 m), it is necessary to set from the remote controller on site. Refer to the section "**10. FIELD SETTING AND TEST OPERATION**".

(3) Direction of the air discharge

- Select the number of directions of the optimum air discharge for the shape or the position of the room.
- The number of directions of the air discharge can be changed by installing a sealing material.
- When installing a sealing material, the field setting from the remote controller is required. For details, refer the operation manual attached to the sealing materials. (It is set to the setting position number "01" (Standard · All round outlet) when shipped from the factory.)
- To use the optional sealing material kit to change the setting of air discharge direction (4-way blow type (with corners sealed)/3-way blow type/2-way blow type), refer to the installation manual attached to it.



*: Refrigerant piping

Fig. 3

(4) Use hanging bolts for installation.

Investigate if the installation place can withstand the mass of the indoor unit and, if necessary, hang the indoor unit with bolts after it is reinforced by beams etc.
(Refer to the installation pattern paper (5) for the mounting pitch.)

4. PREPARATION BEFORE INSTALLATION

(1) Check the relation of location between the ceiling opening and the indoor unit hanging bolts.

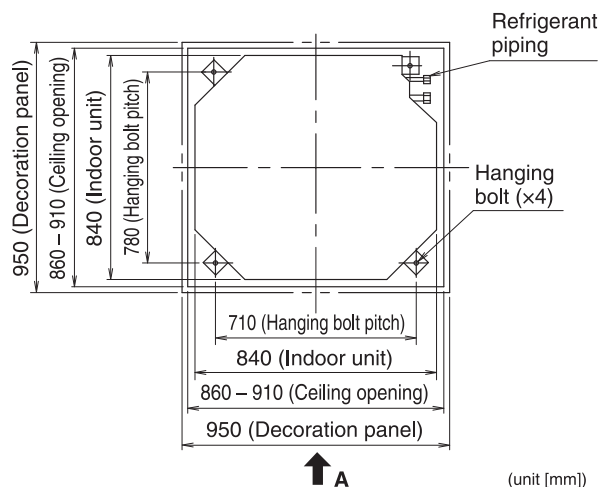


Fig. 4

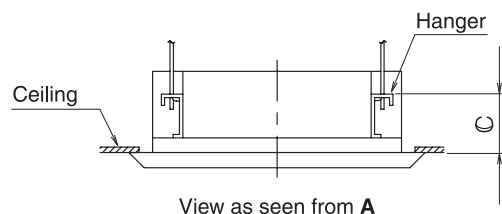


Fig. 5

Decoration Panel	BYCQ125EAF9, BYCQ125EEF9
⌀ [mm]	125~130

CAUTION

- Reduce the distance between the unit and ceiling to 35 mm or below in order to maintain an overlapping panel margin of 20 mm for the opening on the ceiling.
- If the distance exceeds 35 mm, attach a ceiling material to the part marked  or replace the ceiling. (Refer to Fig. 6)

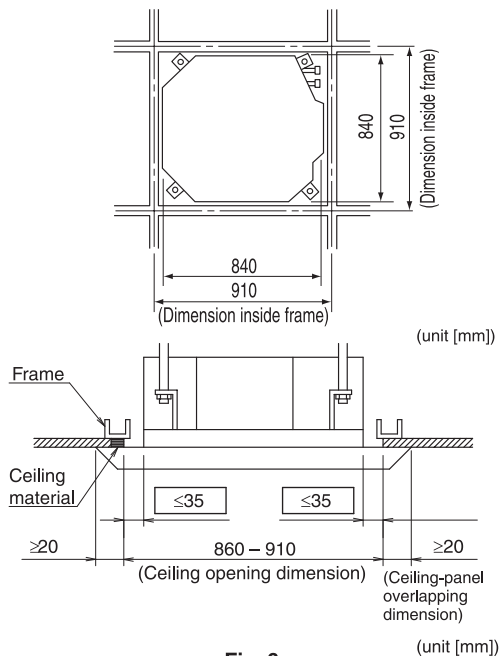


Fig. 6

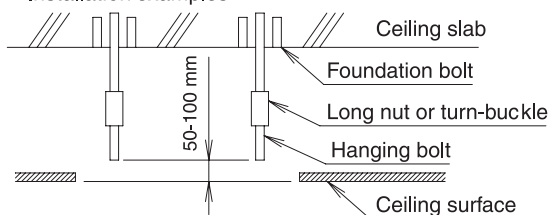
(2) Make the ceiling opening required for installation. (in case of existing ceiling)

- Use the installation pattern paper (5) matched to the ceiling opening dimension.
- Make the ceiling opening required for installation at the installation location and carry out refrigerant/drain piping, power supply wiring, remote controller wiring (not needed in case of wireless remote controller) and wiring between the indoor and outdoor units. (Refer to each section "6. REFRIGERANT PIPING WORK, 7. DRAIN PIPING WORK and 8. ELECTRIC WIRING WORK")
- After making the opening, sometimes it is necessary to reinforce the ceiling framework to keep the level of the ceiling and prevent vibration of the ceiling. For details, consult with the builder and interior designer.

(3) Install the hanging bolts.

- Use M8 or M10 bolts for hanging the indoor unit. Use hole-in-anchors for the existing bolts and embedded inserts or foundation bolts for new bolts, and fix the indoor unit firmly to the building so that it may withstand the mass of the unit. In addition, adjust clearance (50 - 100 mm) from the ceiling in advance.

<Installation examples>



Note) The above shown parts are all field supply.

5. INSTALLATION OF INDOOR UNIT

<<It is easy to attach the optional parts (except for decoration panel) before installing the indoor unit. Refer to also the installation manual attached to the optional parts.>>

For installation, use the attached installation parts and specified parts.

[Install the indoor unit in the order of steps (1), (2), (3), (4), and (5) in case of a newly built ceiling, or in the order of steps (1), (3), (4) and (5) in case of an existing ceiling.]

(1) Install the indoor unit temporarily.

- Fix the hanger to the hanging bolt.

Make sure to securely fix the hanger with the nut and the washer for hanger (3) from the upper and lower side. (Refer to Fig. 7)

If the washer clamp (7) is used, the upper side washer for hanger (3) may be protected from falling off. (Refer to Fig. 8)

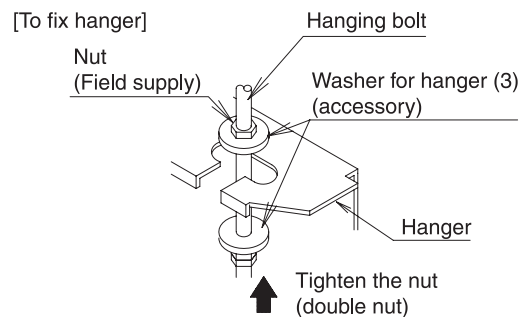


Fig. 7

[Washer clamp (7) fixing method]

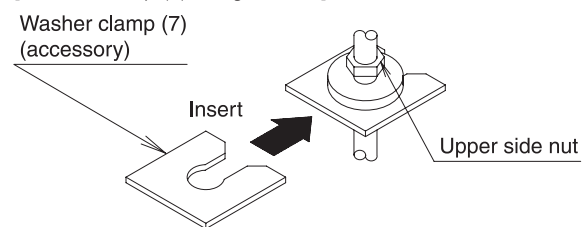
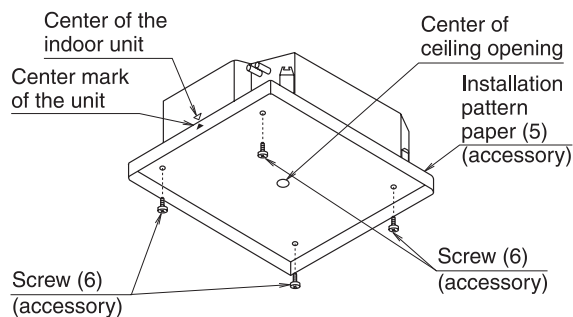


Fig. 8

(2)

- The installation pattern paper (5) is matched to the ceiling opening dimension. For the height of ceiling lower surface from the floor level, confirm with the builder of ceiling.
- The center of the ceiling opening is shown in the installation pattern paper (5). The center of the indoor unit is indicated as triangle marks on the sides and bottom of the unit and those on the installation pattern paper (5).
- Put the installation pattern paper (5) to the indoor unit with four screws (6). At this time, put the installation pattern paper (5) to the indoor unit with the triangle marks on the indoor unit and those on the installation pattern paper (5) aligned.

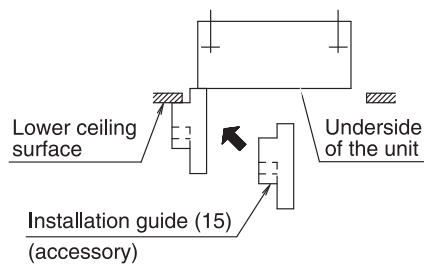


[Installation of the installation pattern paper]

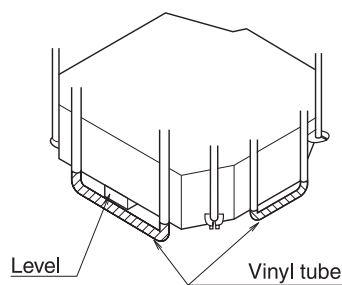
< Installation work after the ceiling work is finished >

- (3) Adjust so that the unit will be properly positioned.
(Refer to "4. PREPARATION BEFORE INSTALLATION - (1)")
- Using the Installation guide (15) allows you to check the positions from the underside of the unit to the lower ceiling surface.
 - Apply the short side of the cut-out section in case of standard grille.

<BYCQ125EAF9/BYCQ125EEF9>



- (4) Check the level of the unit. (Refer to Fig. 9)
- (5) Remove the washer clamp (7) used for preventing the washer for hanger (3) from dropping and tighten the upper side nut.



[Maintaining horizontality]

Fig. 9

— **CAUTION** —• **Install the indoor unit leveled.**

If the indoor unit is inclined and the drain piping side gets high, it may cause malfunction of a float switch and results in water leakage.

• **Attach nuts on the upper and lower side of hanger.**

If there is no upper nut and the lower nut is over-tightened, the hanger and the top plate will deform and cause abnormal sound.

• **Do not insert materials other than that specified into the clearance between the hanger and the washer for hanger (3).**

Unless the washers are properly attached, the hanging bolts may come off from the hanger.

— **WARNING** —• **The indoor unit must be securely installed on a place that can withstand the mass.**

If the strength is insufficient, the indoor unit may fall down and cause injuries.

6. REFRIGERANT PIPING WORK

- For the outdoor unit refrigerant piping, refer to the installation manual attached to the outdoor unit.
- Carry out insulation of both gas and liquid refrigerant piping securely. If not insulated, it may cause water leakage. For gas piping, use insulation material of which heat resistant temperature is not less than 120°C. For use under high humidity, strengthen the insulation material for refrigerant piping. If not strengthened, the surface of insulation material may sweat.
- Before installation work, make sure that the refrigerant is R-410A. (Unless the refrigerant is R-410A, the normal operation cannot be expected.)



CAUTION

This air conditioner is a dedicated model for new refrigerant R-410A. Make sure to meet the requirements shown below and carry out installation work.

- Use dedicated piping cutters and flaring tools for R-410A.
- When making a flare connection, coat the flared inner surface only with ether oil or ester oil.
- Use only the flare nuts attached to the air conditioner. If other flare nuts are used, it may cause refrigerant leakage.
- To prevent contamination or moisture from getting into the piping, take measures such as pinching or taping the pipings.

Do not mix substance other than the specified refrigerant such as air into the refrigeration circuit. If the refrigerant leaks during the work, ventilate the room.

- The refrigerant is pre-charged in the outdoor unit.
- When connecting the pipings to the air conditioner, make sure to use a spanner and a torque wrench as shown in Fig. 10.
- For the dimension of flared part and the tightening torque, refer to the Table 3.
- For flare nut, use the mounting one to the body.
- When making a flare connection, coat the flared inner surface only with ether oil or ester oil. (Refer to Fig. 11)

Then, turn the flare nut 3 to 4 times with your hand and screw in the nut.

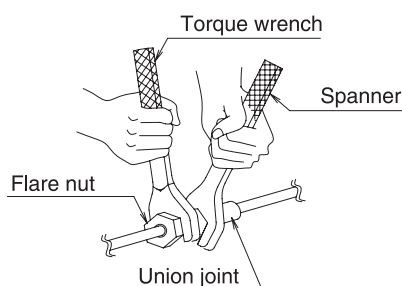


Fig. 10

Coat the flared inner surface only with ether oil or ester oil

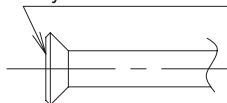


Fig. 11

Table 3

Piping size (mm)	Tightening torque (N·m)	Dimension for processing flare A (mm)	Flare shape
φ 6.4	15.7 ± 1.5	8.9 ± 0.2	
φ 9.5	36.3 ± 3.6	13.0 ± 0.2	
φ 12.7	54.9 ± 5.4	16.4 ± 0.2	
φ 15.9	68.6 ± 6.8	19.5 ± 0.2	



CAUTION

Do not have oil adhere to the screw fixing part of resin parts.

If oil adheres, it may weaken the strength of screwed part.

Do not tighten flare nuts too tight.

If a flare nut cracks, the refrigerant may leak.

- If there is no torque wrench, use Table 4 as a rule of thumb. When tightening a flare nut with a spanner harder and harder, there is a point where the tightening torque suddenly increases. From that position, tighten the nut additionally the angle shown in Table 4. After the work is finished, check securely that there is no gas leak. If the nut is not tightened as instructed, it may cause slow refrigerant leak and result in malfunction (such as does not cool or heat).

Table 4

Piping size (mm)	Tightening angle	Recommended arm length of tool used
φ 6.4	60° - 90°	approx. 150 mm
φ 9.5	60° - 90°	approx. 200 mm
φ 12.7	30° - 60°	approx. 250 mm
φ 15.9	30° - 60°	approx. 300 mm



CAUTION

Insulation of field piping must be carried out up to the connection inside the casing.

If the piping is exposed to the atmosphere, it may cause sweating, burn due to touching the piping, electric shocks or a fire due to the wiring touching the piping.

- After leak test, referring to Fig. 12, insulate both the gas and liquid piping connection with the attached joint insulating material (8) and (9) to prevent the pipings from getting exposed. Then, tighten the both ends of insulating material with the clamp (4).
- Wrap the sealing material (Medium-1, 2) (11) (12) around the joint insulating material (8) and (9) (flare nut section), both the gas and liquid piping.
- Make sure to bring the seam of joint insulating material (8) and (9) to the top.

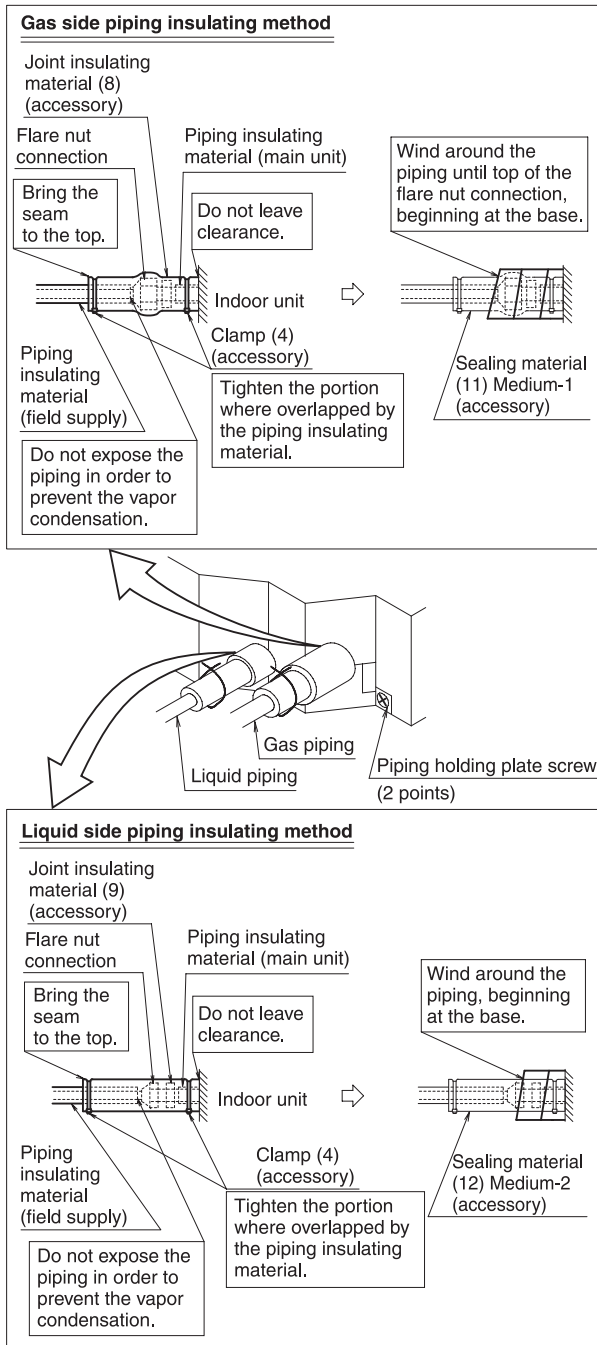


Fig. 12

- Before brazing refrigerant piping, have nitrogen flow through the refrigerant piping and substitute air with nitrogen (NOTE 2) (**Refer to Fig. 13**). Then, carry out brazing (NOTE 3).

After all the brazing works are finished, carry out flare connection with the indoor unit. (**Refer to Fig. 12**)

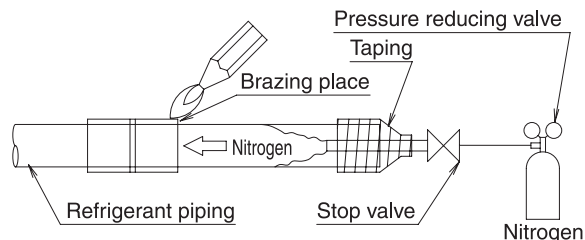


Fig. 13

NOTE

- After indoor unit installation completed, in case will perform the air tight test of field pipe and indoor unit, for air tight test pressure, refer the installation manual attached in outdoor unit.
- The proper pressure for having nitrogen flow through the piping is approximately 0.02 MPa, a pressure that makes one feel like breeze and can be obtained through a pressure reducing valve.
- Do not use flux when brazing refrigerant piping. Use phosphor copper brazing filler metal (BCuP-2: JIS Z 3264/B-Cu93P-710/795: ISO 3677) that does not require flux. (If chlorinated flux is used, the piping will be corroded and, in addition if fluorine is contained, the refrigerant oil will be deteriorated and the refrigerant circuit will be affected badly.)
- When carrying out leakage test of refrigerant piping and the indoor unit after the installation of indoor unit is finished, confirm the connecting outdoor unit installation manual for test pressure. Refer to also the outdoor unit installation manual or technical document for refrigerant piping.
- In case of refrigerant shortage due to forgetting additional refrigerant charge etc., it will result in malfunction such as does not cool or does not heat. Refer to the outdoor unit installation manual or technical document for refrigerant piping.

CAUTION

Do not use antioxidant when brazing piping.

It may result in malfunction of components and clogging of piping due to residue.

7. DRAIN PIPING WORK

(1) Carry out drain piping.

Carry out drain piping so that drainage can be ensured.

- Select the piping diameter equal to or larger than (except for riser) that of the connection piping (polyvinyl chloride piping, nominal diameter 25 mm, outside diameter 32 mm).
- Install the drain piping as short as possible with downward inclination of 1/100 or more and without where air may stagnate. (Refer to Fig. 14) (It may cause abnormal sound such as bubbling noise.)

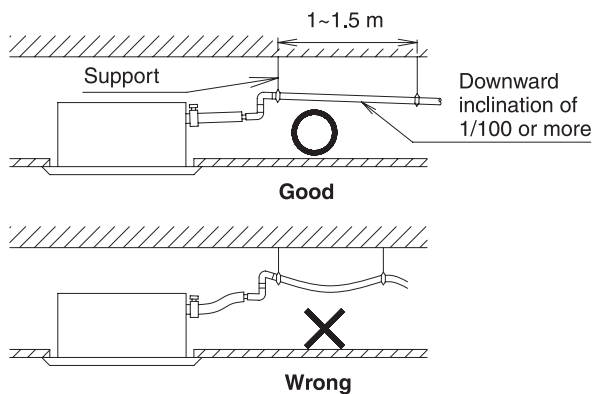


Fig. 14

CAUTION

If drain stagnates in the drain piping, the piping may be clogged.

- If sufficient downward inclination cannot be ensured, carry out upward drain piping.
- Install supports at a distance of 1 to 1.5 m so that the piping may not deflect. (Refer to Fig. 14)
- Make sure to use the attached drain hose (1) and the metal clamp (2).

CAUTION

Using old drain hose, clamp fixture may cause water leakage.

- Insert the drain hose (1) into the drain socket up to the point where the socket diameter becomes larger. Put the metal clamp (2) to the taped hose end and tighten the metal clamp (2) with torque $1.35 \pm 0.15 \text{ N} \cdot \text{m}$ ($135 \pm 15 \text{ N} \cdot \text{cm}$).

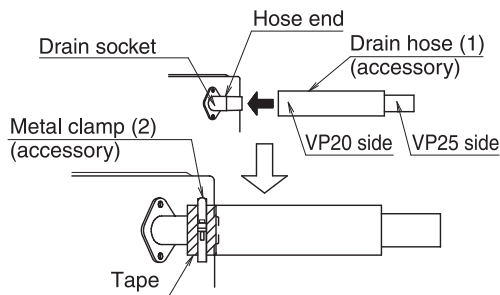


Fig. 15

CAUTION

- Do not tighten the metal clamp (2) with the torque more than the specified value. The drain hose (1), the socket or the metal clamp (2) may be damaged.

< Caution to be taken when carrying out upward drain piping (Refer to Fig. 16) >

- The maximum height of the drain riser is 675 mm. Since the drain pump mounted on this indoor unit is a high head type, from the characteristic point of view, the higher the drain riser the lower the draining noise. Therefore, the drain riser of 300 mm or higher is recommended.
- For upward drain piping, keep the horizontal piping distance of 300 mm or less between the drain socket root to the drain riser.

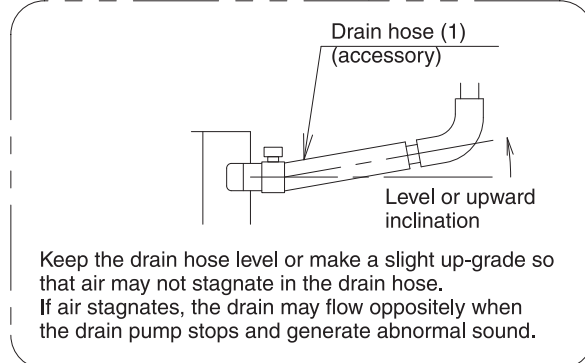
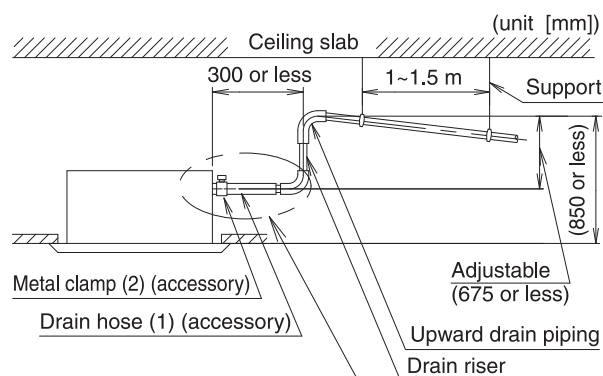


Fig. 16

CAUTION

- To avoid the attached drain hose (1) getting excessive force, do not bend nor twist it. It may cause water leakage.
- In case of centralized drain piping, carry out piping work according to the procedure shown in the following Fig. 17.

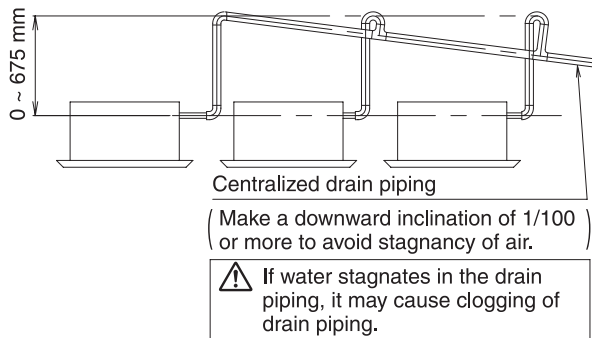


Fig. 17

- As for the size of centralized drain piping, select the size that meet the capacity of indoor units to be connected. (Refer to the technical document)
- At replacement with new indoor unit, use the attached new drain hose (1) and the metal clamp (2). If an old drain hose or a metal clamp is used, it may cause water leakage.

(2) After piping is finished, check if the drain flows smoothly.

[When the electric wiring work is finished]

- Gradually pour 1 liter of water from the air outlet on the left side of the drain socket into the drain pan giving caution to avoid splashing water on the electric components such as drain pump and confirm drainage by operating the indoor unit under cooling mode according to "10. FIELD SETTING AND TEST OPERATION". (Refer to Fig. 18)

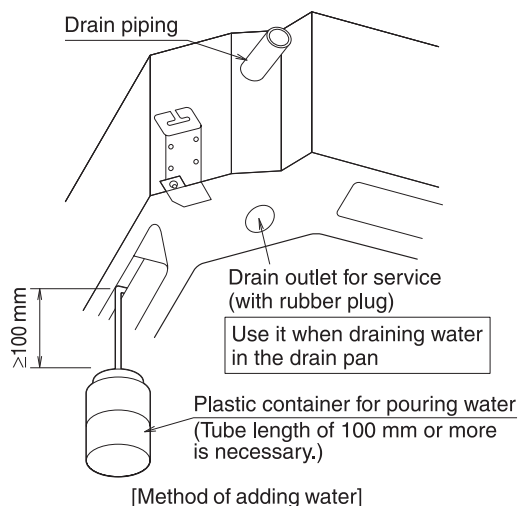


Fig. 18

- After checking the drainage of water, refer to Fig. 19 and attach the sealing material (14) to perform the thermal insulation of the drain socket.

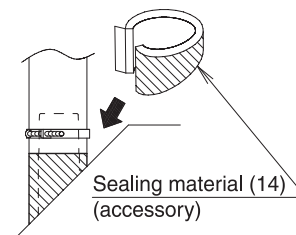


Fig. 19

CAUTION

Do not add the external force to float switch. It may cause failure.

[When the electric wiring work is not finished]

- For electric wiring operation shall refer the details in "8. ELECTRIC WIRING WORK"
- The electric wiring works (including earthing) must be carried out by a qualified electrician.
- If a qualified person is not present, after the electric wiring work is finished, check the drainage according to the method specified in [When the electric wiring work is finished].

- Open the control box lid and connect the single phase 220 - 240 V power supply to the terminal (L, N) on the terminal block (X2M). Connect the earth wiring to the earth terminal. (Refer to Fig. 20)

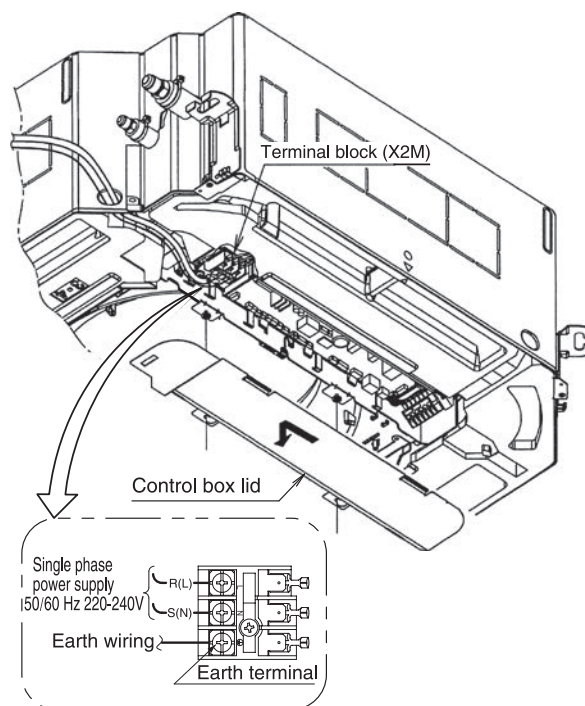


Fig. 20

2. Make sure the control box lid is closed before turning on the power supply.
 - Throughout the whole process, carry out the work giving caution to the wiring around the control box so that the connectors may not come off.
3. Gradually pour 1 liter of water from the air outlet on the left side of the drain socket into the drain pan giving caution to avoid splashing water on the electric components such as drain pump. **(Refer to Fig. 18)**
4. When the power supply is turned on, the drain pump will operate. Drainage can be checked at the transparent part of the drain socket.
(The drain pump will automatically stop after 10 minutes.)
After checking the drainage of water, refer to **Fig. 19** and attach the sealing material (14) to perform the thermal insulation of the drain socket.
 - Do not connect the drain piping directly to the sewage that gives off ammonia odor.
The ammonia in the sewage may go through the drain piping and corrode the heat exchanger of the indoor unit.
 - Do not apply external force to the float switch. (It may result in malfunction)
5. Turn off the power supply after checking drainage, and remove the power supply wiring.
6. Attach the control box lid as before.
 - Do not touch the electronic parts other than the terminal block (X2M).

(3) Sweating may occur and result in water leakage. Therefore, make sure to insulate the following 2 locations (drain piping and drain sockets that laid indoors).

After drainage is checked, put the attached sealing material (14) referring to **Fig. 19**, and insulate the drain hose (1) and the metal clamp (2) with the attached sealing material (Large) (10) referring to **Fig. 21**.

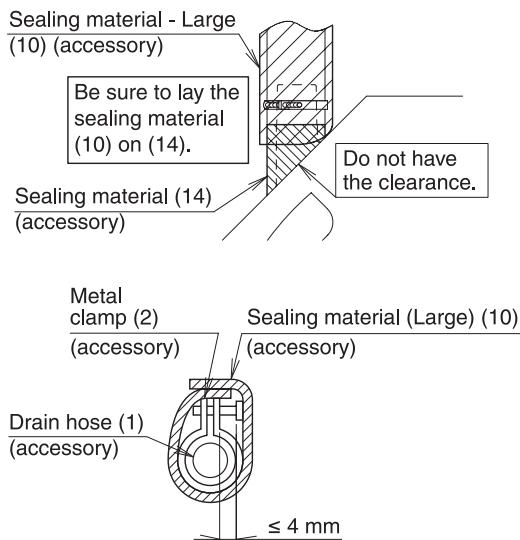


Fig. 21

8. ELECTRIC WIRING WORK

8-1 GENERAL INSTRUCTIONS

- Make certain that all electric wiring work is carried out by qualified personnel according to the applicable legislation and this installation manual, using a separate dedicated circuit.
Insufficient capacity of the power supply circuit or improper electrical construction may lead to electric shocks or a fire.
- Make sure to install an earth leakage breaker.
Failure to do so may cause electrical shocks and a fire.
- Do not turn on the power supply (branch switch, branch overcurrent circuit breaker) until all the works are finished.
- Multiple number of indoor units are connected to one outdoor unit. Name each indoor unit as A-unit, B-unit and the like. When these indoor units are wired to the outdoor unit and the BS unit, always wiring the indoor unit to the terminal indicated with the same symbol on the terminal block. If the wiring and the piping are connected to the different indoor units and operated, it will result in malfunction.
- Make sure to earth the air conditioner.
Earthing resistance should be according to applicable legislation.
- Do not connect the earth wiring to gas or water pipings, lightning conductor or telephone earth wiring.
 - Gas piping Ignition or explosion may occur if the gas leaks.
 - Water piping Hard vinyl tubes are not effective earths.
 - Lightning conductor or telephone earth wiring Electric potential may rise abnormally if struck by a lightning bolt.
- For electric wiring work, refer to also the "WIRING DIAGRAM" attached to the control box lid.
- Carry out wiring between the outdoor units, indoor units and the remote controllers according to the wiring diagram.
- Carry out installation and wiring of the remote controller according to the "installation manual" attached to the remote controller.
- Do not touch the Printed Circuit Board assembly. It may cause malfunction.

8-2 ELECTRICAL CHARACTERISTICS

Units	Power supply				Fan motor	
Model	Hz	Volts	Voltage range	MCA	MFA	FLA
FXFSQ25ARV1	50/60	220-240	Max. 264 Min. 198	0.3	16	0.053
FXFSQ32ARV1				0.3	16	0.053
FXFSQ40ARV1				0.4	16	0.053
FXFSQ50ARV1				0.6	16	0.053
FXFSQ63ARV1				0.6	16	0.053
FXFSQ80ARV1				1.0	16	0.053
FXFSQ100ARV1				1.4	16	0.106
FXFSQ125ARV1				1.6	16	0.106
FXFSQ140ARV1				1.8	16	0.106

MCA: Min. Circuit Amps (A) MFA: Max. Fuse Amps (A)
kW: Fan Motor Rated Output (kW) FLA: Full Load Amps (A)

8-3 SPECIFICATION FOR FIELD SUPPLY FUSES AND WIRING

Model	Power supply wiring			Remote controller wiring Transmission wiring	
	Field fuses 	Wiring	Size	Wiring	Size
FXFSQ25ARV1	16A	H05VV-U3G NOTE 1, 2)	2.5 mm ² NOTE 4)	Vinyl cord with sheath or cable (2 core) NOTE 3)	0.75- 1.25 mm ²
FXFSQ32ARV1					
FXFSQ40ARV1					
FXFSQ50ARV1					
FXFSQ63ARV1					
FXFSQ80ARV1					
FXFSQ100ARV1					
FXFSQ125ARV1					
FXFSQ140ARV1					

The lengths of remote controller wiring and transmission wirings are as follows:

- (1) Remote controller wiring
(indoor unit - remote controller).....Max. 500 m
- (2) Transmission wiringsTotal wiring length 2000 m
 - Outdoor unit - Indoor unit.....Max. 1000 m
 - Outdoor unit - BS unit.....Max. 1000 m
 - BS unit - Indoor unit.....Max. 1000 m
 - Indoor unit - Indoor unitMax. 1000 m

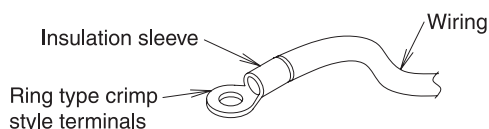
NOTE

1. Shows only in case of protected piping. Use H07RN-F in case of no protection.
2. Supply cords shall not be lighter than polychloroprene sheathed flexible cord (code designation 60245 IEC 57)
3. Vinyl cord with sheath or cable (Insulated thickness : 1 mm or more)
4. Wiring size and length must comply with local codes or IEC 60335-1 (Table 11)

8-4 WIRING CONNECTION METHOD

CAUTION FOR WIRING

- For connection to the terminal block, use a ring type crimp style terminals with insulation sleeve or insulate the wirings properly.



- Connect the terminal as shown in **Fig. 23**.
- Do not carry out soldering finish when stranded wires are used. (Otherwise, the loosening of wires may result in abnormal heat radiation.)

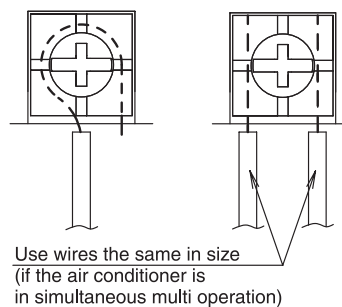


Fig. 22

(Abnormal heating may occur if the wirings are not tightened securely.)

- Use the required wirings, connect them securely and fix these wirings securely so that external force may not apply to the terminals.
- Use a proper screw driver for tightening the terminal screws. If an improper screw driver is used, it may damage the screw head and a proper tightening cannot be carried out.
- If a terminal is over tightened, it may be damaged. Refer to the table shown below for tightening torque of terminals.

	Tightening torque (N·m)
Terminal block for remote controller and transmission wirings	0.88 ± 0.08
Terminal for power supply	1.20 ± 0.12
Earth terminal	1.20 ± 0.12

- Do not carry out soldering finish when stranded wirings are used.

WARNING

- When wiring, form the wirings orderly so that the control box lid can be securely fastened. If the control box lid is not in place, the wirings may float up or be sandwiched by the box and the lid and cause electric shocks or a fire.

< Power supply wiring · earth wiring · remote controller wiring · transmission wiring connecting method >

- Power supply wiring, earth wiring
Pull the wiring through the wiring penetrating hole (high voltage). After connecting the power supply wiring to [L · N] on the power supply terminal block (X2M) and the earth wiring to the earth terminal, clamp them near the terminal block using the attached clamp (4). (**Refer to page 14**)
- Remote controller wiring, transmission wiring
Pull the wiring through the wiring penetrating hole (low voltage). After connecting the remote controller wiring to [P1 · P2] and the transmission wiring to [F1 · F2] on the terminal block (X1M), clamp them near the terminal block using the attached clamp (4). (**Refer to page 14**)
- After connecting the wiring, make sure to stick the sealing material (Small) (13) to the wiring penetrating hole. (**Refer to Fig. 24**)
(It is to prevent water from entering into the indoor unit.)

CAUTION

- Never connect the power supply wiring to the terminal block for remote controller/transmission wiring (X1M). It may damage the total system.
- Do not connect the remote controller/transmission wiring to the wrong terminal block.

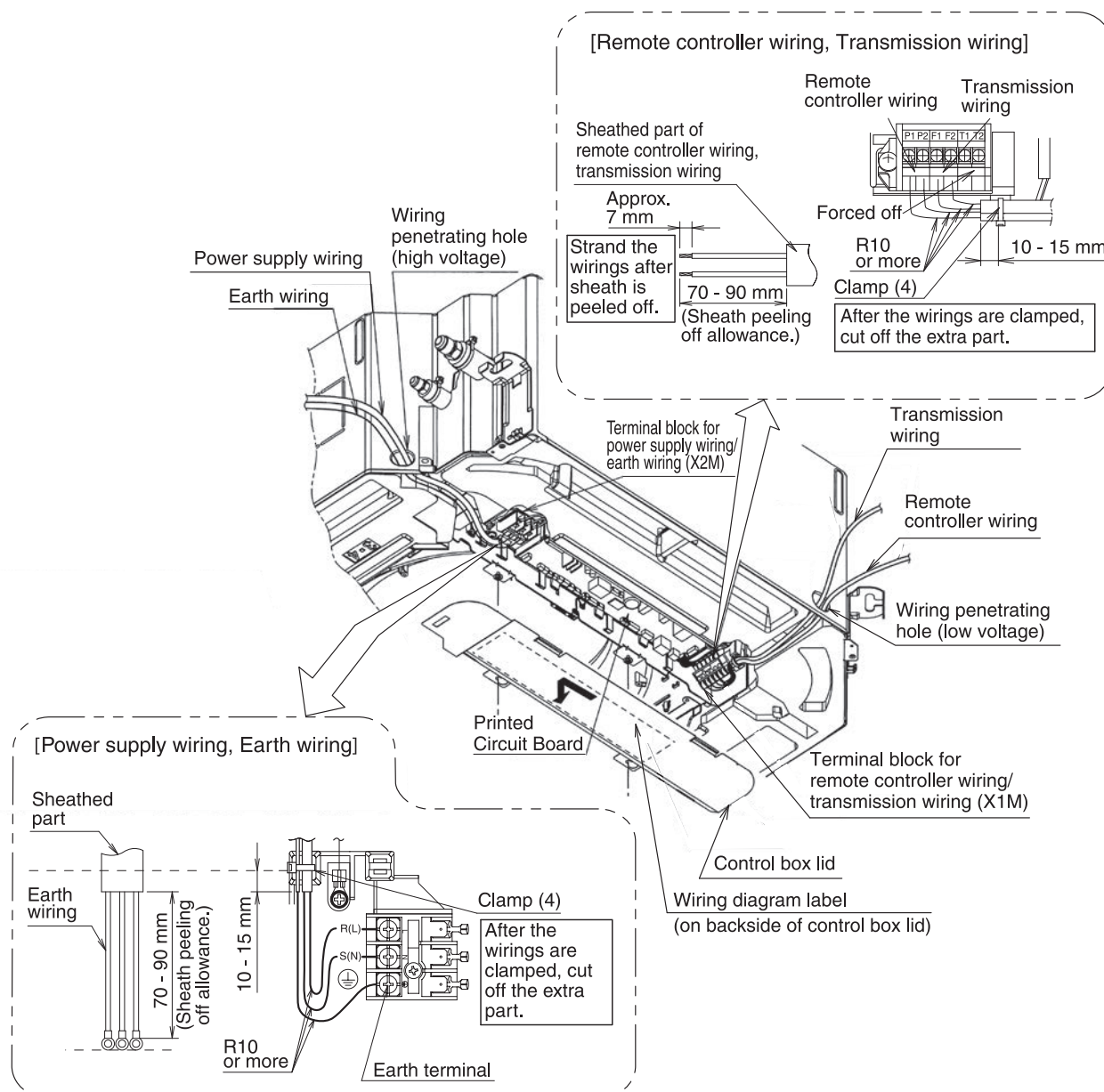


Fig.23

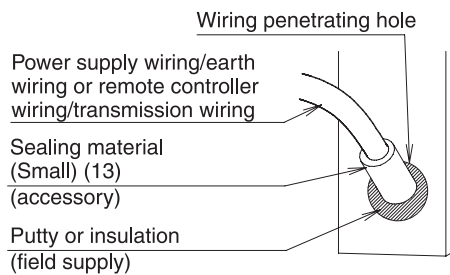


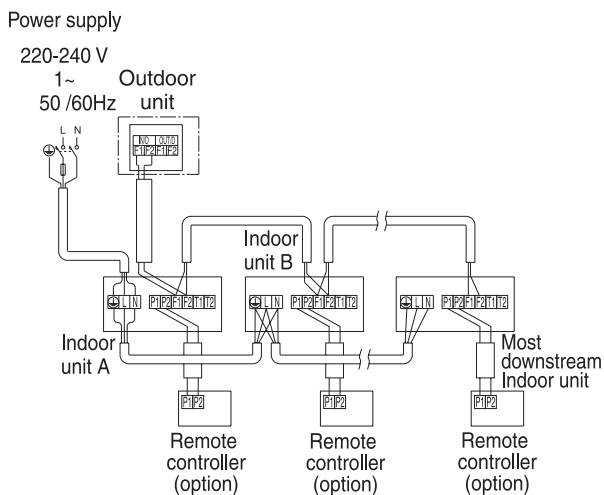
Fig. 24

<<Mending method of wiring penetrating hole>>

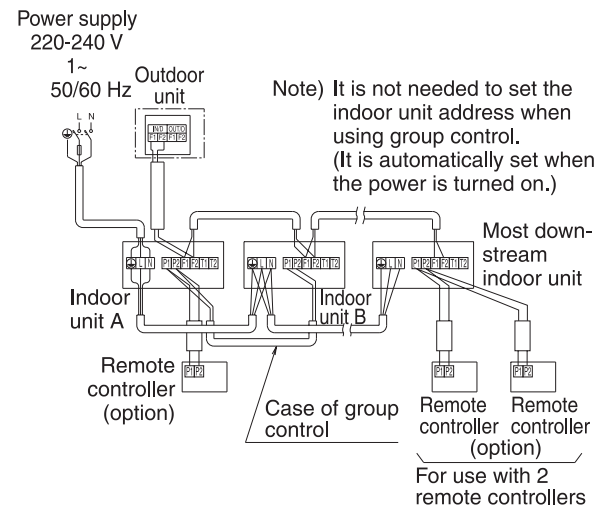
- After wiring connection is finished, to prevent the penetration of water, small animals and insects into the indoor unit from the outside, mend the respective covers for wiring penetrating hole for the power supply wiring/earth wiring and the remote controller wiring/transmission wiring.
- Cut the sealing material (Small) (13) into two pieces and wrap each wiring with each piece.
- Seal the clearance around the wirings with putty and insulating material (field supply).
(If insects and small animals get into the indoor unit, short circuiting may occur inside the control box.)
- Keep the distance of 50 mm or more between the low voltage wiring (remote controller wiring, transmission wiring) and the high voltage wiring (power supply wiring, earth wiring) at anywhere outside the indoor unit. If both the wirings are laid down together, they may be affected by electric noise (outside noise) and cause malfunction or failure.

8-5 EXAMPLE OF WIRING

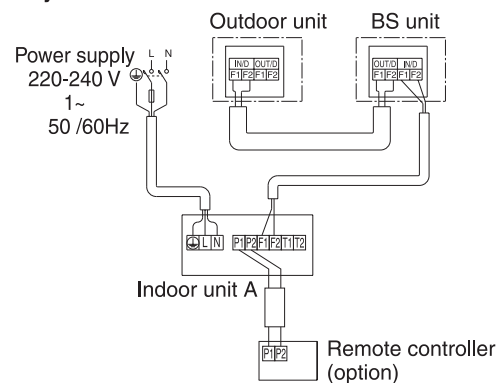
< No. 1 system: When 1 remote controller is used for 1 indoor unit. >



< No. 2 system: When carrying out group control or 2 remote controller control. >



< No. 3 system: When BS unit is used >



NOTE

1. Remote controller wiring and transmission wiring have no polarity.

⚠ WARNING

Be sure to install an earth leakage breaker.
Failure to do so may cause electric shocks and a fire.

8-6 FOR CONTROL WITH 2 REMOTE CONTROLLERS (TO CONTROL 1 INDOOR UNIT WITH 2 REMOTE CONTROLLERS)

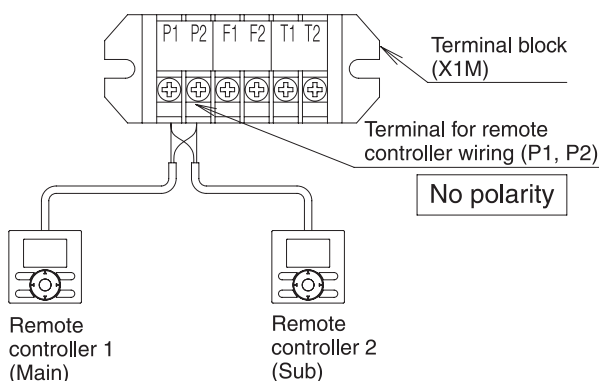
- For control with 2 remote controllers, set one remote controller as Main and the other remote controller as Sub.

< Changeover method from Main to Sub and vice versa >

Refer to the installation manual attached to the remote controller.

< Wiring method >

- (1) Remove the control box lid.
- (2) Carry out additional wiring from the remote controller 2 (Sub) to the terminals (P1, P2) for remote controller wiring on the terminal block (X1M) in the control box.



< Caution >

- When using the group control and the 2 remote controllers control at the same time, connect the remote controller 2 (Sub) to the indoor unit at the end of the crossover wiring (the largest No.). (Refer to Fig. 25)

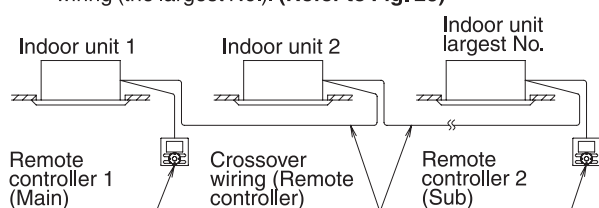


Fig. 25

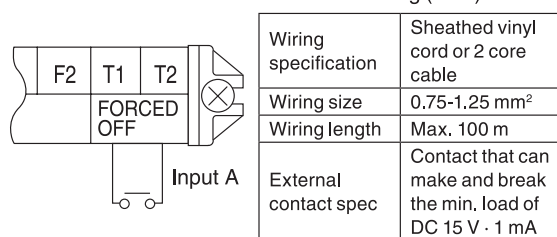
8-7 FOR CENTRALIZED CONTROL

- When centralized equipment (such as centralized controller) is used for control, it is required to set the group No. on the remote controller.
For details, refer to the manuals attached to the centralized equipment.
- Connect the centralized equipment to the indoor unit connected to the remote controller.

8-8 FOR REMOTE CONTROL (FORCE OFF OR ON / OFF OPERATION)

(1) Wiring method and specification

- Remote control is available by connecting the external input to the terminal T1 and T2 on the terminal block for remote controller and transmission wiring (X1M).



(2) Actuation

- Input A of FORCED OFF and ON/OFF OPERATION will be as the table shown below.

	Input A = ON	Input A = OFF
In case of FORCED OFF	Remote controller prohibited	Remote controller permitted
In case of ON/OFF OPERATION	Operation	Stop

(3) How to choose FORCED OFF or ON/OFF OPERATION

- For choosing FORCED OFF or ON/OFF OPERATION, setting by remote controller is required.
(Refer to "10. FIELD SETTING AND TEST OPERATION")

9. MOUNTING DECORATION PANEL

<<If test operation is required before mounting the decoration panel, "10. FIELD SETTING AND TEST OPERATION" can be carried out before "9. MOUNTING DECORATION PANEL".>>

CAUTION

In case of a wireless remote controller, unless the decoration panel is mounted, field setting and test operation cannot be carried out.

Refer to the installation manual attached to the decoration panel.

- After the decoration panel is mounted, check if no clearance exists between the panel and the unit.
- If test operation is carried out before mounting the decoration panel, check the swing blade action after the panel is mounted.

10. FIELD SETTING AND TEST OPERATION

<<Refer to also the installation manual attached to the outdoor unit.>>

CAUTION

Before carrying out field setting, check the items mentioned in the clause 2 "1. Items to be checked after the installation work is completed" on page 3.

- Check if all the installation and piping works for the air conditioner are completed.
- Check if the control box lids of the air conditioner are closed.

< FIELD SETTING >

<<After turn on the power supply, carry out field setting from the remote controller according to the installation state.>>

- Carry out setting at 3 places, "Mode No.", "FIRST CODE No." and "SECOND CODE No.".
The settings shown by " " in the table indicate those when shipped from the factory.
- The method of setting procedure and operation is shown in the installation manual attached to the remote controller.
(Note) Though setting of "Mode No." is carried out as a group, if you intend to carry out individual setting by each indoor unit or confirmation after setting, carry out setting with the Mode No. shown in the parenthesis ().
- In case of remote control, for changeover of input to FORCED OFF or to ON/OFF OPERATION.
[1] Enter into the field setting mode with the remote controller.
[2] Select Mode No. "12".
[3] Set the FIRST CODE No. to "1".
[4-1] For FORCE OFF, set the SECOND CODE No. to "01".
[4-2] For ON/OFF OPERATION, set the SECOND CODE No. to "02".
(It is set to FORCE OFF when shipped from the factory.)
- Ask your customer to keep the manual attached to the remote controller together with the operation manual.
- Do not carry out settings other than those shown in the table.

10-1 SETTING CEILING HEIGHT

- Set the SECOND CODE No. according to the ceiling height as shown in the Table 5.

Table 5

Setting	Ceiling height (m)		Mode No.	FIRST CODE No.	SECOND CODE No.
	25-80 type	100-140 type			
Standard	2.7 or less	3.2 or less	13 (23)	0	01
High ceiling 1	2.7 - 3.0	3.2 - 3.6			02
High ceiling 2	3.0 - 3.5	3.6 - 4.2			03

10-2 SETTING AIR DISCHARGE DIRECTION

- Refer to the installation manual attached to the sealing material of air discharge outlet sold separately and engineering data book, for ceiling height settings for four-direction (part of corner closed off), three-direction and two-direction. (The SECOND CODE No. is factory set to "01" (all round outlet) before shipping.)

10-3 SETTING WHEN AN OPTIONAL ACCESSORY IS ATTACHED

- For setting when attaching an optional accessory, refer to the installation manual attached to the optional accessory.

10-4 WHEN USING WIRELESS REMOTE CONTROLLER

- When using a wireless remote controller, it is necessary to set the wireless remote controller address. Refer to the installation manual attached to the wireless remote controller.

10-5 SETTING FAN SPEED DURING THERMOSTAT OFF

- Set the fan speed according to the using environment after consultation with your customer.
- When the fan speed is changed, explain the set fan speed to your customer.

Table 6

Setting		Mode No.	FIRST CODE No.	SECOND CODE No.
Fan speed during cooling thermostat OFF	LL (Extra low) Setting	12 (22)	6	01
				02
Fan speed during heating thermostat OFF	LL (Extra low) Setting	12 (22)	3	01
				02

10-6 SETTING FILTER SIGN

- A message to inform the air filter cleaning time will be indicated on the remote controller.
- Set the SECOND CODE No. shown in the Table 7 according to the amount of dust or pollution in the room.
- Though the indoor unit is equipped with the long life filter, it is necessary to periodically clean the filter to avoid clogging of the filter. Please also explain the set time to the customer.

Table 7

Contamination	Hours until indication	Mode No.	FIRST CODE No.	SECOND CODE No.
Normal	Approx. 2500 hrs	10 (20)	0	01
More contaminated	Approx. 1250 hrs			02
With indication			3	01
No indication*				02

* Use "No indication" setting when cleaning indication is not necessary such as the case of periodical cleaning being carried out.

<TEST OPERATION >

- After cleaning the indoor unit inside, carry out test operation according to installation manual attached to the outdoor unit.
- When the remote controller operation lamp flashes, it shows that something is abnormal. Check the malfunction codes on the remote controller. The relation between the malfunction codes and malfunction details is described in the operation manual attached to the outdoor unit. Particularly, if the indication is one of those shown in the Table 8, it may be an error in the electrical wiring or the power supply is disconnected. Therefore, recheck wiring.

Table 8

Remote controller indication	Details
Though the centralized control is not carried out, the lamp "A" turns on.	The terminals (T1 · T2) for FORCED OFF on the indoor unit transmission terminal block is short circuited.
"U4" turns on "UH" turns on	- The power supply to the outdoor unit is not made. - The power supply work to the outdoor unit is not carried out. - The transmission wiring and the remote controller wiring and FORCED OFF wiring are connected wrongly. - The transmission wiring is disconnected.
No indication	- The power supply to the indoor unit is not made. - The power supply work to the indoor unit is not carried out. - The remote controller wiring and the transmission wiring and FORCED OFF wiring are connected wrongly. - The remote controller wiring is disconnected.

Note) In case of use wireless remote control, shall refer operation manual attached to wireless remote control.

- At test operation, if the decoration panel is mounted, check the actuation of the swing blade.

— **CAUTION** —

After test operation is completed, check the items mentioned in the clause 2 “**2. Items to be checked at delivery**” on page 4.

If the interior finish work is not completed when the test operation is finished, for protection of the air conditioner, ask the customer not operate the air conditioner until the interior finish work is completed.

If the air conditioner is operated, the inside of the indoor units may be polluted by substances generated from the coating and adhesives used for the interior finish work and cause water splash and leakage.

— **To the operator carrying out test operation** —

After test operation is completed, before delivering the air conditioner to the customer, confirm that the control box lid, the air filter and suction grille are attached.

In addition, explain the power supply status (power supply ON/OFF) to the customer.

-
- In the event that there is any conflict in the interpretation of this manual and any translation of the same in any language, the English version of this manual shall prevail.
 - The manufacturer reserves the right to revise any of the specification and design contain herein at any time without prior notification.
-

Warning

- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the user's manual carefully before using this product. The user's manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

VRV is a trade mark of Daikin Industries, Ltd.

VRV Air Conditioning System is the world's first individual air conditioning system with variable refrigerant flow control and was commercialised by Daikin in 1982.

VRV is the trade mark of Daikin Industries, Ltd., which is derived from the technology we call "variable refrigerant volume."