

FXVQ-NTL

Floor Standing Duct Type

60 Hz

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1. Lineup

Capacity range	14.0 kW	22.4 kW	28.0 kW	45.0 kW	56.0 kW
	5 HP	8 HP	10 HP	16 HP	20 HP
Capacity index	125	200	250	400	500
FXVQ	125NTL	200NTL	250NTL	400NTL	500NTL

TL : 3 phase, 220/230 V, 60 Hz



2. Specifications

Model			FXVQ125NTL	FXVQ200NTL
Power supply			3 phase, 220/230 V, 60 Hz	3 phase, 220/230 V, 60 Hz
★1 ★3 Cooling capacity		kcal/h	12,000	19,300
		Btu/h	47,800	76,400
		kW	14.0	22.4
★2 ★3 Heating capacity		kcal/h	13,800	21,500
		Btu/h	54,600	85,300
		kW	16.0	25.0
Power input	Cooling	kW	0.480	0.690
	Heating	kW	0.480	0.690
Casing / Colour			Ivory white (5Y7.5/1)	Ivory white (5Y7.5/1)
Dimensions: (H×W×D)		mm	1,670×750×510	1,670×950×510
Coil (Cross fin coil)	Rows × Stages × Fin pitch	mm	3×32×2.0	3×32×2.0
	Face area	m ²	0.419	0.560
Fan	Model		D13/4G2BT3	2D15/8A1CJ5
	Type		Sirocco fan	Sirocco fan
	Motor output × Number of units	W	750×1	750×1
	Airflow rate	m ³ /min	42	63
		cfm	1,483	2,224
	★4 External static pressure	Pa	144	157
	Drive		Belt drive	Belt drive
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Air filter			Long life (Resin net with mould resistance)	Long life (Resin net with mould resistance)
★5 Piping connections	Liquid pipes	mm	φ9.5 (Brazing connection)	φ9.5 (Brazing connection)
	Gas pipes	mm	φ15.9 (Brazing connection)	φ19.1 (Brazing connection)
	Drain pipe		Rp1 (PS1B internal thread)	Rp1 (PS1B internal thread)
Mass		kg	118	143
★6 Sound pressure level		dB(A)	51	53
Safety devices			Fuse, Overcurrent relay	Fuse, Overcurrent relay
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Standard accessories			Connection pipe, Drain plug cap, Insulation for drain plug, Clamp, Bolt, Nut, Operation manual, Installation manual	Connection pipe, Drain plug cap, Insulation for drain plug, Clamp, Bolt, Nut, Operation manual, Installation manual
Drawing No.	Specification		C: 3D103353	C: 3D103353
	Sound level		C: 4D103467	C: 4D103468

Notes:

- ★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Standard external static pressure / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★2. Indoor temp.: 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Standard external static pressure / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. The value is the external static pressure with standard pulley.
- ★5. Both liquid pipe and gas pipe need insulation work.
- ★6. Sound level: measured when the air discharge outlet duct (2 m) is attached (anechoic chamber conversion value).
It increases by approximately 5 dB(A) when the plenum chamber is installed to deliver direct airflow.

Conversion formulae
kcal/h=kW×860
Btu/h=kW×3412
cfm=m ³ /min×35.3

Model			FXVQ250NTL	FXVQ400NTL
Power supply			3 phase, 220/230 V, 60 Hz	3 phase, 220/230 V, 60 Hz
★1 ★3 Cooling capacity		kcal/h	24,100	38,700
		Btu/h	95,500	154,000
		kW	28.0	45.0
★2 ★3 Heating capacity		kcal/h	27,100	43,000
		Btu/h	107,000	171,000
		kW	31.5	50.0
Power input	Cooling	kW	0.900	2.560
	Heating	kW	0.900	2.560
Casing / Colour			Ivory white (5Y7.5/1)	Ivory white (5Y7.5/1)
Dimensions: (H×W×D)		mm	1,670×1,170×510	1,900×1,170×720
Coil (Cross fin coil)	Rows × Stages × Fin pitch	mm	3×32×2.0	3×44×2.0
	Face area	m ²	0.715	0.945
Fan	Model		2D13/4G2BAC3	D2E1AS4
	Type		Sirocco fan	Sirocco fan
	Motor output × Number of units	W	1,500×1	2,200×1
	Airflow rate	m ³ /min	80	120
		cfm	2,824	4,236
	★4 External static pressure	Pa	104	176
	Drive		Belt drive	Belt drive
Temperature control			Microprocessor thermostat for cooling and heating	Microprocessor thermostat for cooling and heating
Air filter			Long life (Resin net with mould resistance)	Long life (Resin net with mould resistance)
★5 Piping connections	Liquid pipes	mm	φ9.5 (Brazing connection)	φ12.7 (Brazing connection)
	Gas pipes	mm	φ22.2 (Brazing connection)	φ28.6 (Brazing connection)
	Drain pipe		Rp1 (PS1B internal thread)	Rp1 (PS1B internal thread)
Mass		kg	169	221
★6 Sound pressure level		dB(A)	55	60
Safety devices			Fuse, Overcurrent relay	Fuse, Overcurrent relay
Refrigerant control			Electronic expansion valve	Electronic expansion valve
Standard accessories			Connection pipe, Drain plug cap, Insulation for drain plug, Clamp, Bolt, Nut, Operation manual, Installation manual	Connection pipe, Drain plug cap, Insulation for drain plug, Clamp, Bolt, Nut, Operation manual, Installation manual
Drawing No.	Specification		C: 3D103353	C: 3D103353
	Sound level		C: 4D103469	C: 4D103470

Notes:

- ★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Standard external static pressure / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★2. Indoor temp.: 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Standard external static pressure / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. The value is the external static pressure with standard pulley.
- ★5. Both liquid pipe and gas pipe need insulation work.
- ★6. Sound level: measured when the air discharge outlet duct (2 m) is attached (anechoic chamber conversion value).
It increases by approximately 5 dB(A) when the plenum chamber is installed to deliver direct airflow.

Conversion formulae

kcal/h=kW×860
 Btu/h=kW×3412
 cfm=m³/min×35.3

Model			FXVQ500NTL
Power supply			3 phase, 220/230 V, 60 Hz
★1 ★3 Cooling capacity		kcal/h	48,200
		Btu/h	191,000
		kW	56.0
★2 ★3 Heating capacity		kcal/h	54,200
		Btu/h	215,000
		kW	63.0
Power input	Cooling	kW	2.800
	Heating	kW	2.800
Casing / Colour			Ivory white (5Y7.5/1)
Dimensions: (H×W×D)		mm	1,900×1,470×720
Coil (Cross fin coil)	Rows × Stages × Fin pitch	mm	3×44×2.0
	Face area	m ²	1.237
Fan	Model		2D2E1BS4
	Type		Sirocco fan
	Motor output × Number of units	W	3,700×1
	Airflow rate	m ³ /min	165
		cfm	5,825
	★4 External static pressure	Pa	150
	Drive		Belt drive
Temperature control			Microprocessor thermostat for cooling and heating
Air filter			Long life (Resin net with mould resistance)
★5 Piping connections	Liquid pipes	mm	φ15.9 (Brazing connection)
	Gas pipes	mm	φ28.6 (Brazing connection)
	Drain pipe		Rp1 (PS1B internal thread)
Mass		kg	281
★6 Sound pressure level		dB(A)	63
Safety devices			Fuse, Overcurrent relay
Refrigerant control			Electronic expansion valve
Standard accessories			Connection pipe, Drain plug cap, Insulation for drain plug, Clamp, Bolt, Nut, Operation manual, Installation manual
Drawing No.	Specification		C: 3D103353
	Sound level		C: 4D103471

Notes:

- ★1. Indoor temp.: 27°CDB, 19°CWB / outdoor temp.: 35°CDB / Standard external static pressure / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★2. Indoor temp.: 20°CDB / outdoor temp.: 7°CDB, 6°CWB / Standard external static pressure / Equivalent piping length: 7.5 m, level difference: 0 m.
- ★3. Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.
- ★4. The value is the external static pressure with standard pulley.
- ★5. Both liquid pipe and gas pipe need insulation work.
- ★6. Sound level: measured when the air discharge outlet duct (2 m) is attached (anechoic chamber conversion value).
It increases by approximately 5 dB(A) when the plenum chamber is installed to deliver direct airflow.

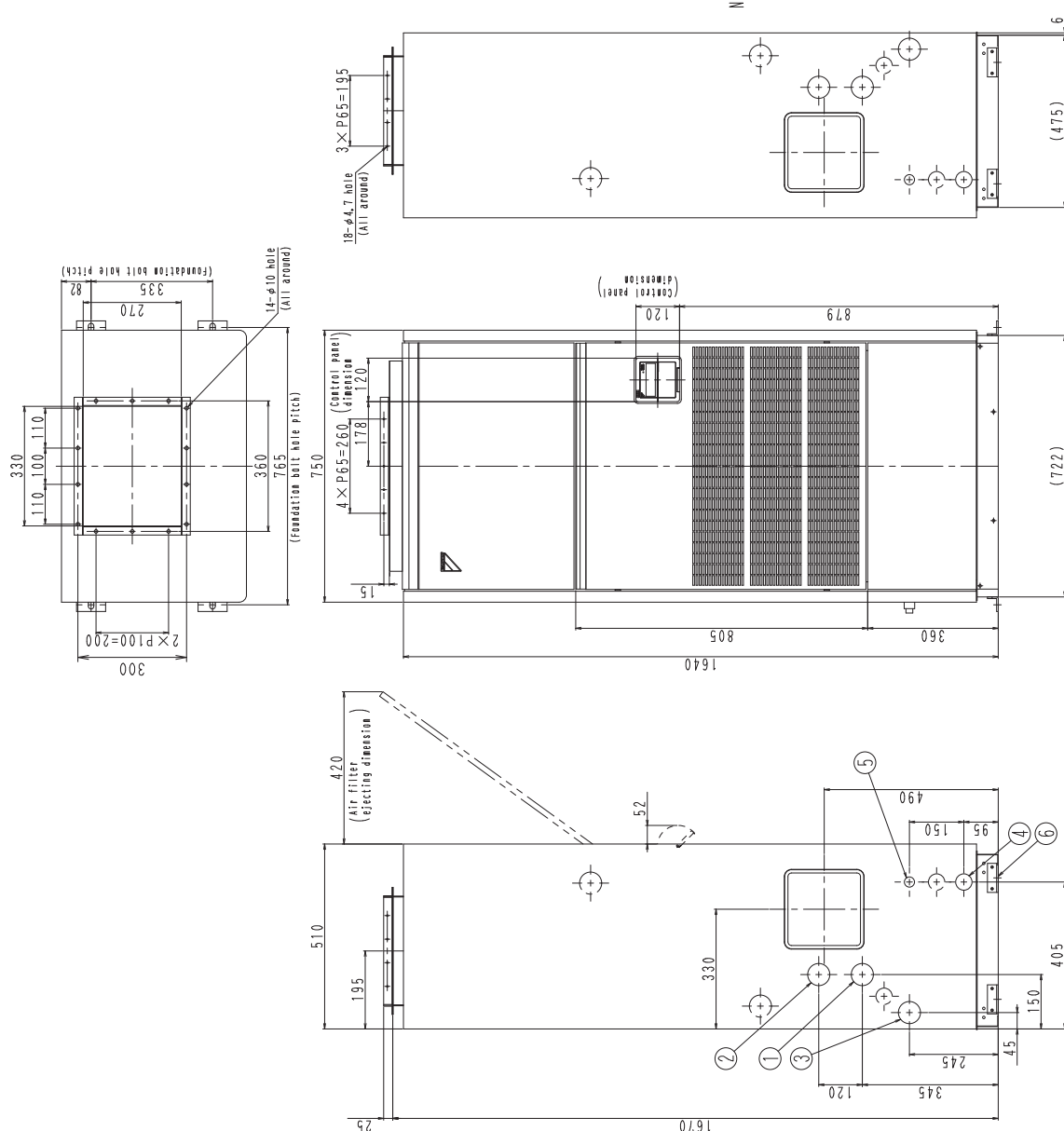
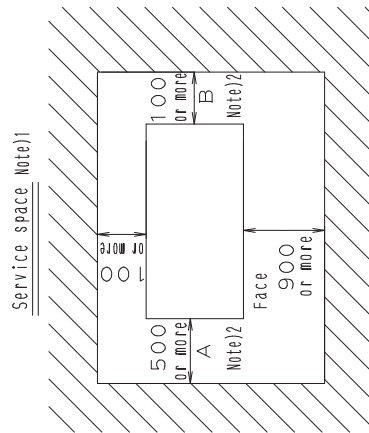
Conversion formulae

kcal/h=kW×860
Btu/h=kW×3412
cfm=m³/min×35.3

3. Dimensions

FXVQ125NTL

Unit: mm



Note)1. It shows in case of left side piping.
(Factory default is left side piping.
Change to right side piping needs field work.)

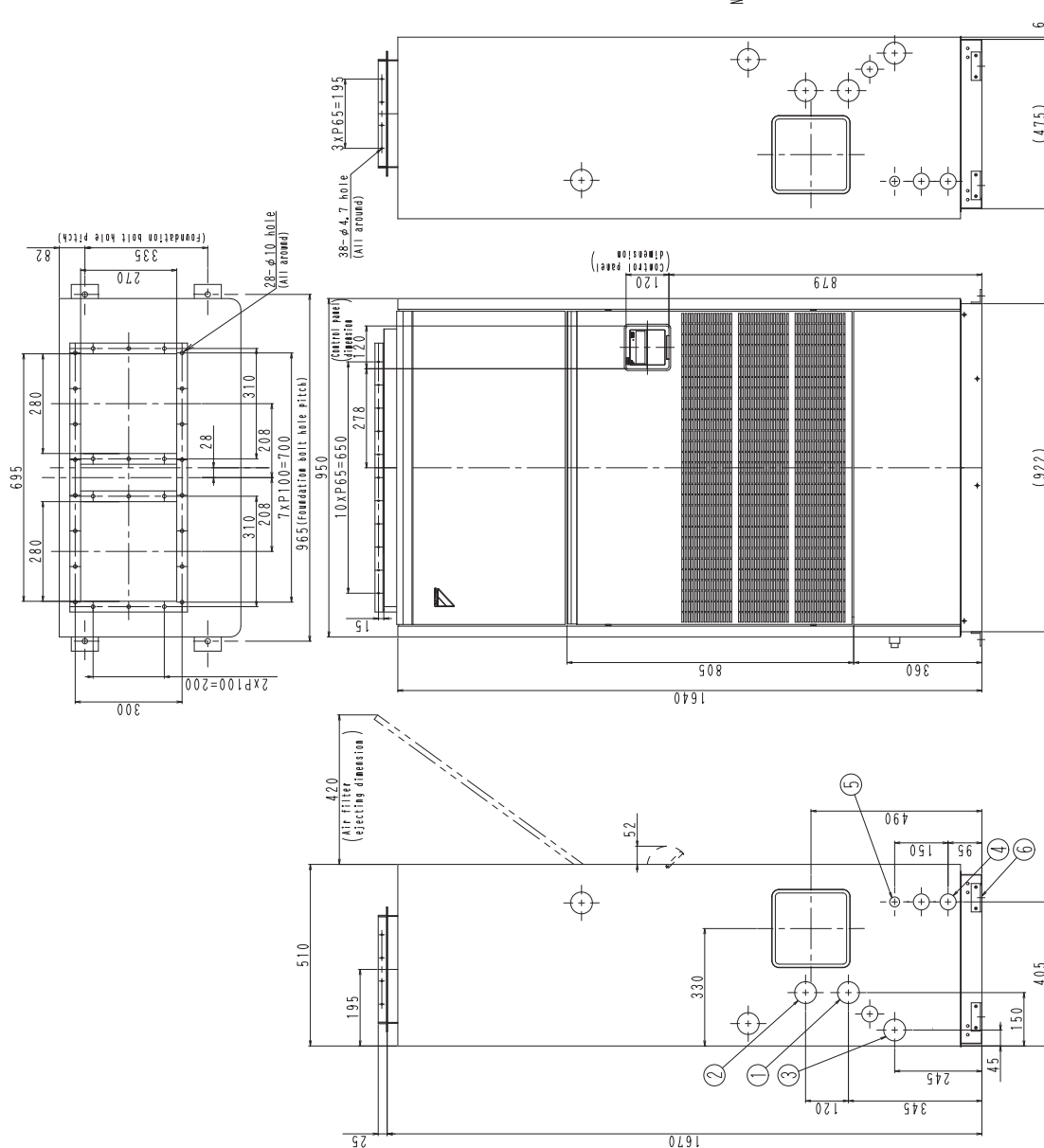
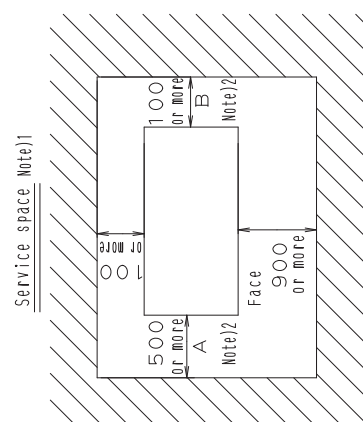
- 2.Reverse dimension A to B in case of right side piping.
- 3.Earth terminal (M5) is in control box.
Location of MANUFACTURER'S LABEL : Bottom right of face

6	Foundation bolt fixing plate (removable)	4-15x23 winging hole (for M10)
5	Interunit wiring connection	ø 28 hole
4	Power supply connection	ø 45 hole
3	Drain	Rp 1
2	Gas pipe connection	ø 13,9 brazing connection
1	Liquid pipe connection	ø 9,5 brazing connection
ITEM	PART NAME	REMARK

3D081764D

FXVQ200NTL

Unit: mm



Note1). It shows in case of left side piping,
(Factory default is left side piping,
Change to right side piping needs field work.)

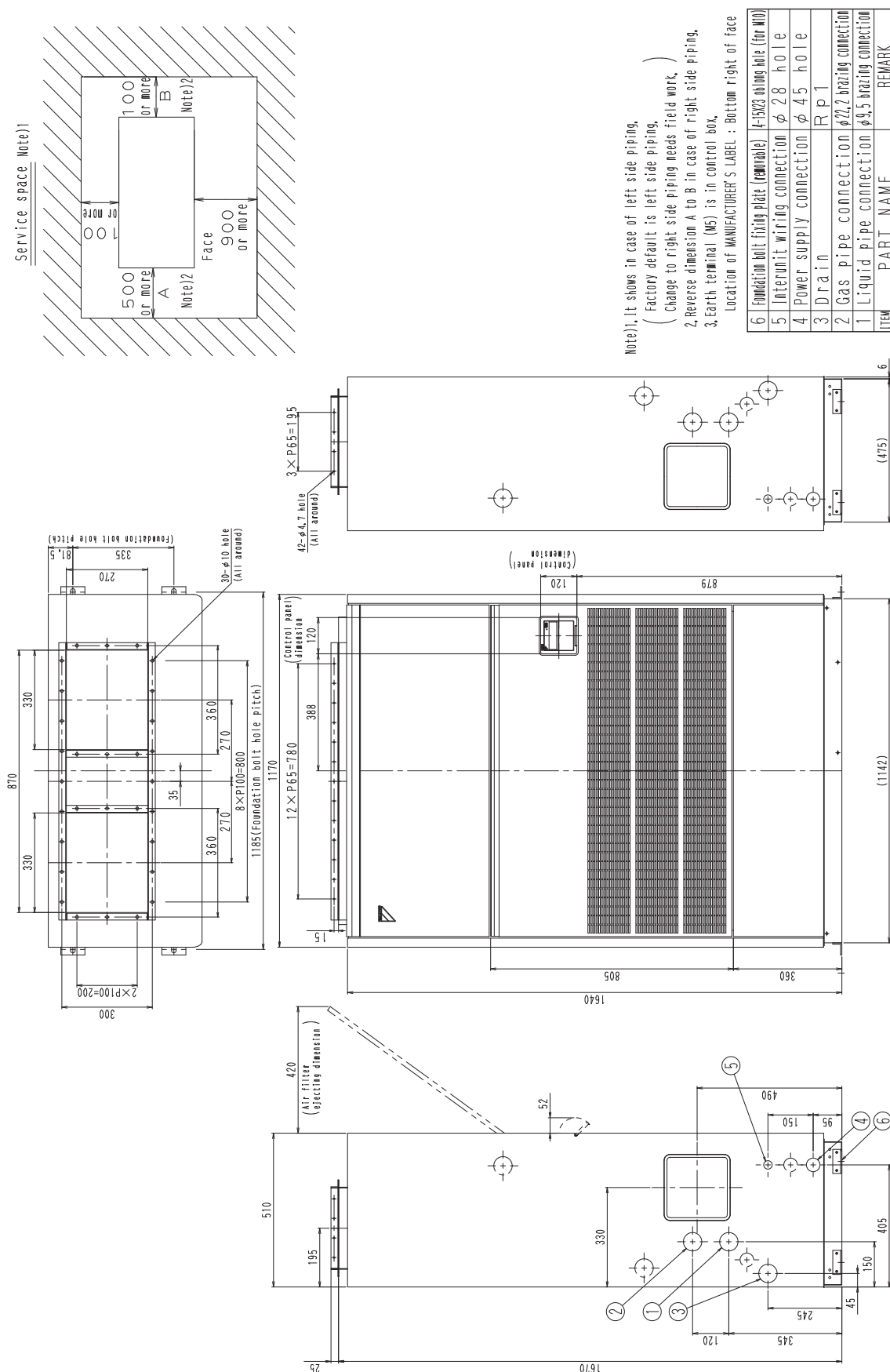
- 2.Reverse dimension A to B in case of right side piping.
- 3.Earth terminal (M5) is in control box.
Location of MANUFACTURER'S LABEL : Bottom right of face

6	Foundation bolt fixing plate (removable)	4x15233 (shoring hole (for win))
5	Interunit wiring connection	ø 28 hole
4	Power supply connection	ø 45 hole
3	Drain	Rp1
2	Gas pipe connection	ø 1/2 brazing connection
1	Liquid pipe connection	ø 1/2 brazing connection
	PART NAME	REMARK

3D103348A

FXVQ250NTL

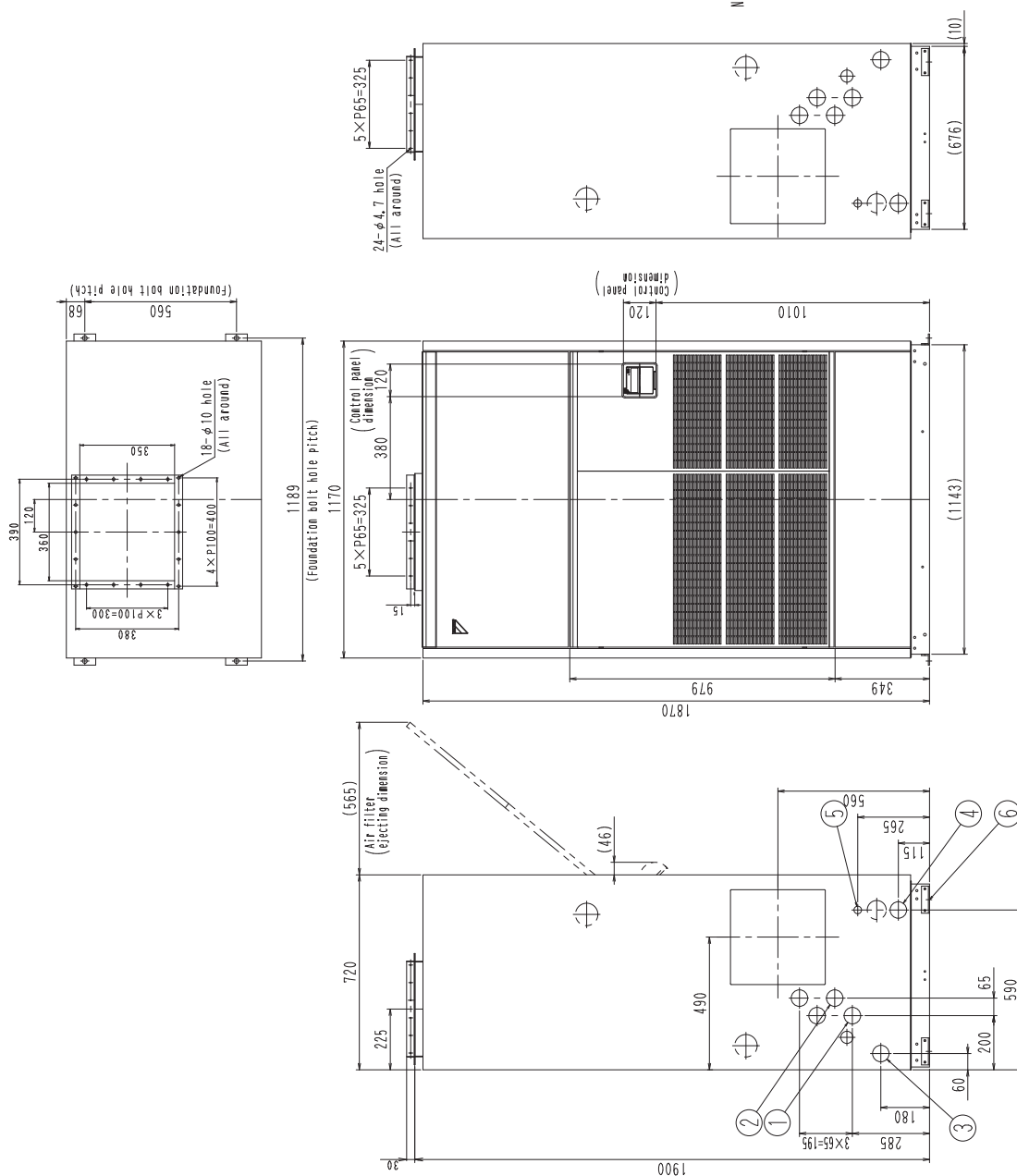
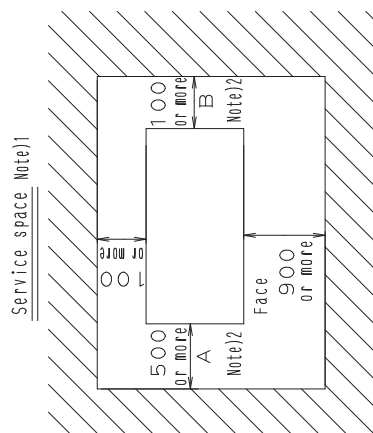
Unit: mm



3D081766D

FXVQ400NTL

Unit: mm



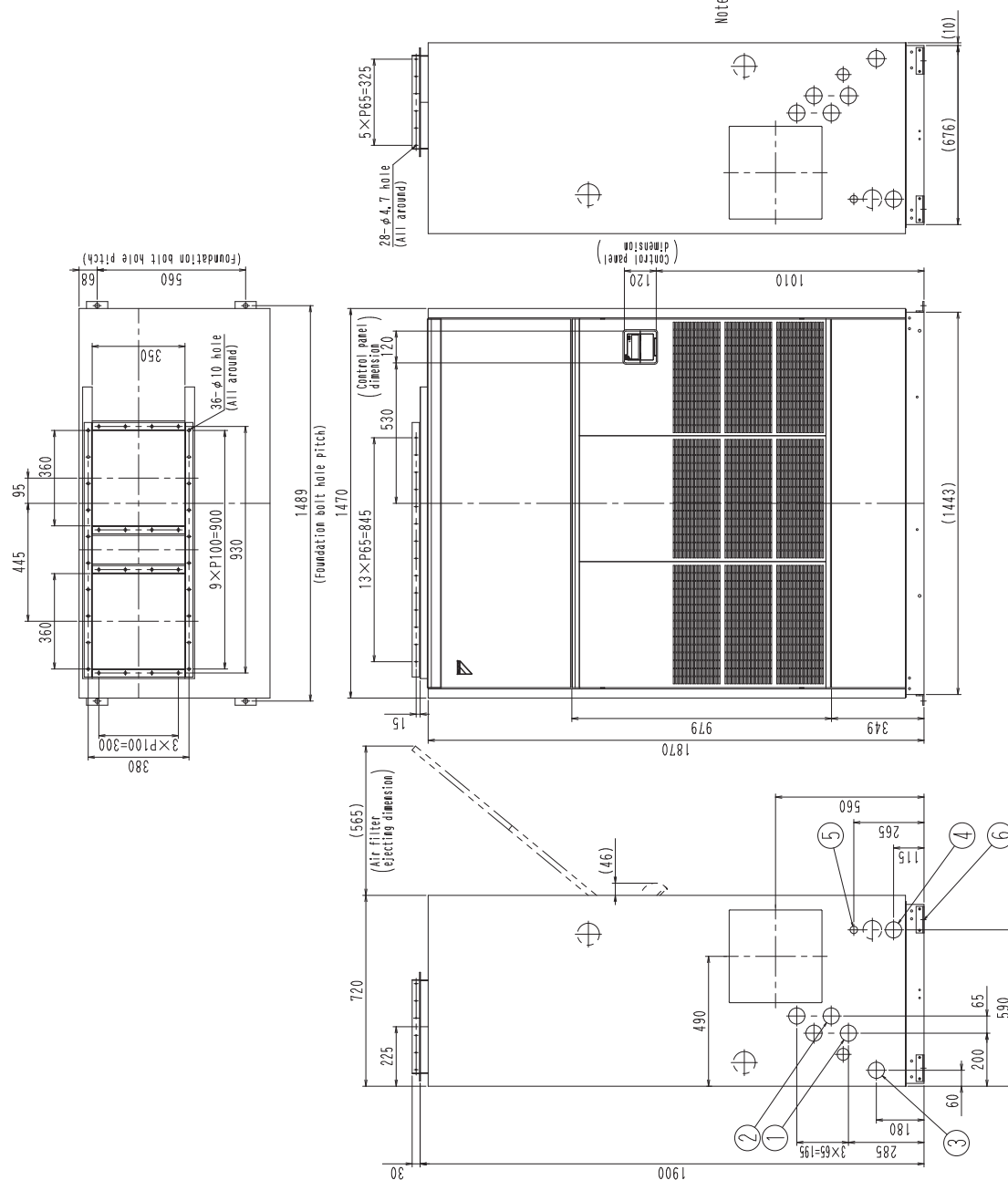
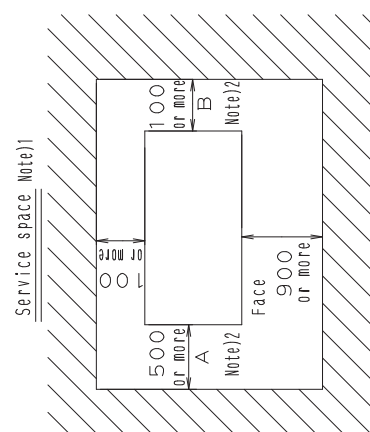
Note)1. It shows in case of left side piping,
(Factory default is left side piping,
Change to right side piping needs field work,)
2. Reverse dimension A to B in case of right side piping,
3. Earth terminal (M5) is in control box,

6	Foundation bolt firing plate (removable)	4-171918 osling hole (for W12)
5	Interunit wiring connection	ø 28 hole
4	Power supply connection	ø 61 hole
3	Drain	Rp1
2	Gas pipe connection	ø28, 6 brazing connection
1	Liquid pipe connection	ø12, brazing connection
7	PART NAME	REMARK

3D081767D

FXVQ500NTL

Unit: mm



Note1, It shows in case of left side piping,
(Factory default is left side piping,
Change to right side piping needs field work.)

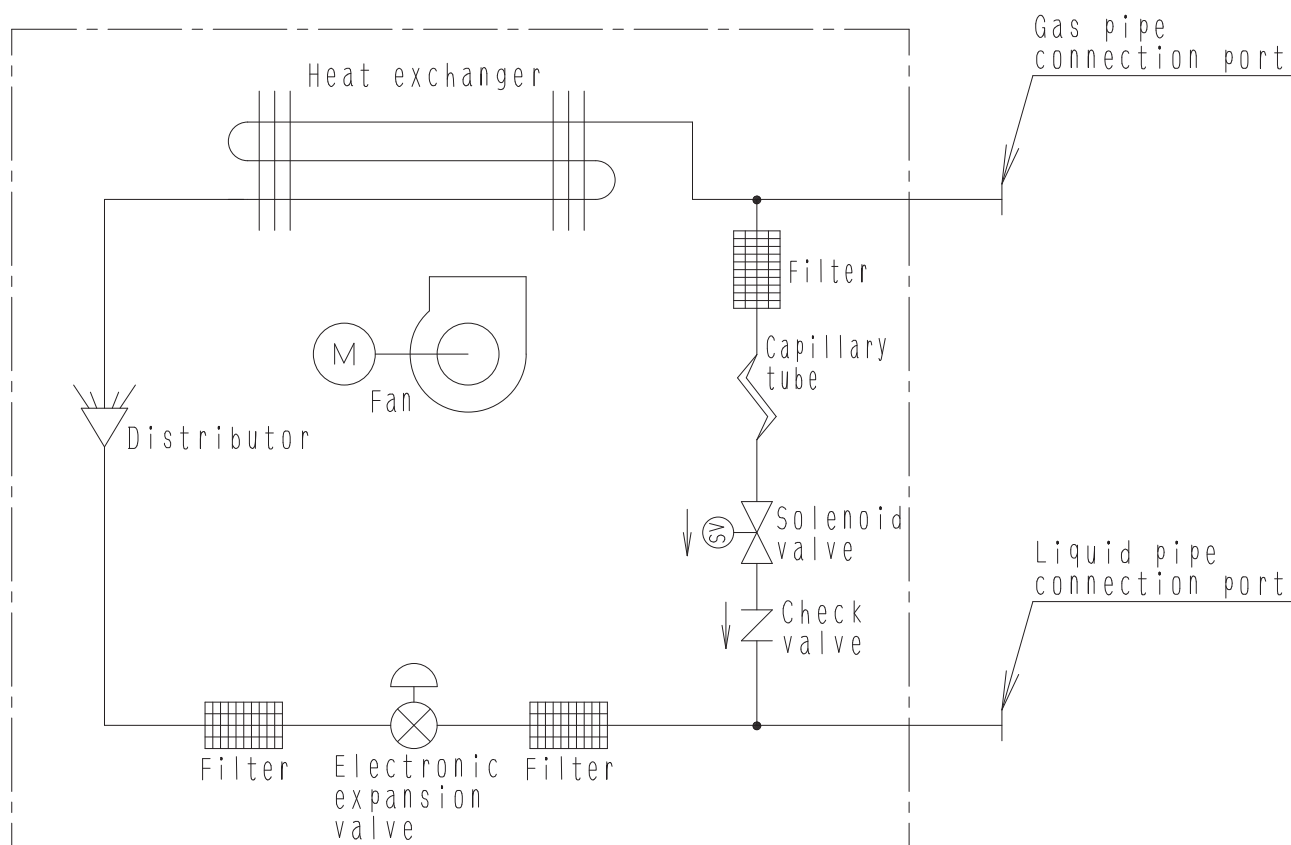
- 2.Reverse dimension A to B in case of right side piping,
- 3.Earth terminal (M5) is in control box,
Location of MANUFACTURER'S LABEL : Bottom right of face

6	Foundation bolt fixing plate (removable)	4-1719x mounting hole (for M12)
5	Interunit wiring connection	ø 28 hole
4	Power supply connection	ø 61 hole
3	Drain	Rp1
2	Gas pipe connection	ø28, 5 brazing connection
1	Liquid pipe connection	ø15, 5 brazing connection
	PART NAME	REMARK

3D085649C

4. Piping Diagrams

FXVQ125NTL / FXVQ200NTL / FXVQ250NTL

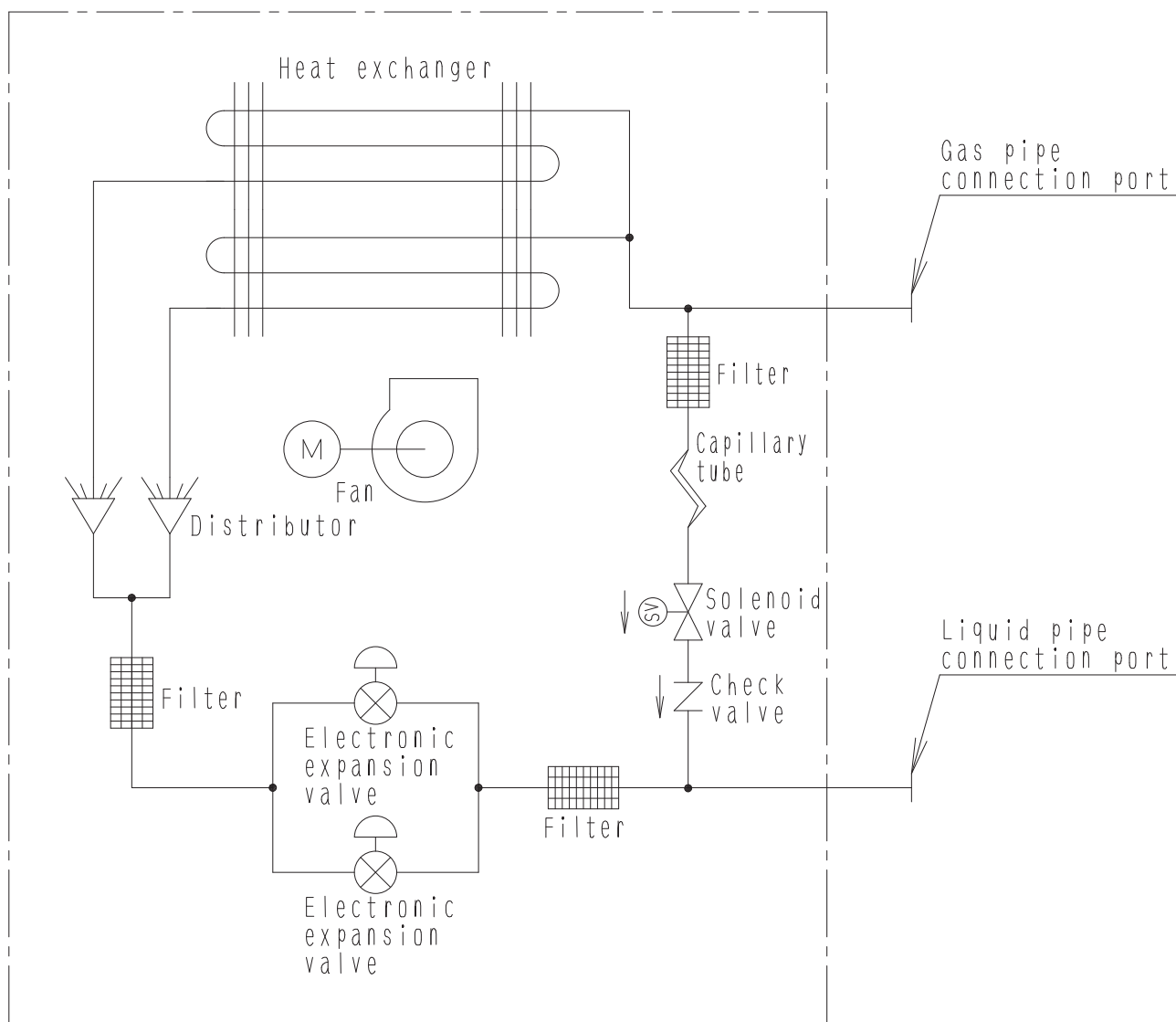


4D081333C

■ Refrigerant pipe connection port diameters

Model	Gas	Unit: mm
		Liquid
FXVQ125NTL	φ15.9	φ9.5
FXVQ200NTL	φ19.1	
FXVQ250NTL	φ22.2	

FXVQ400NTL / FXVQ500NTL



4D081334C

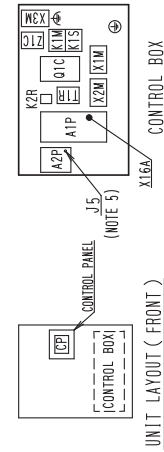
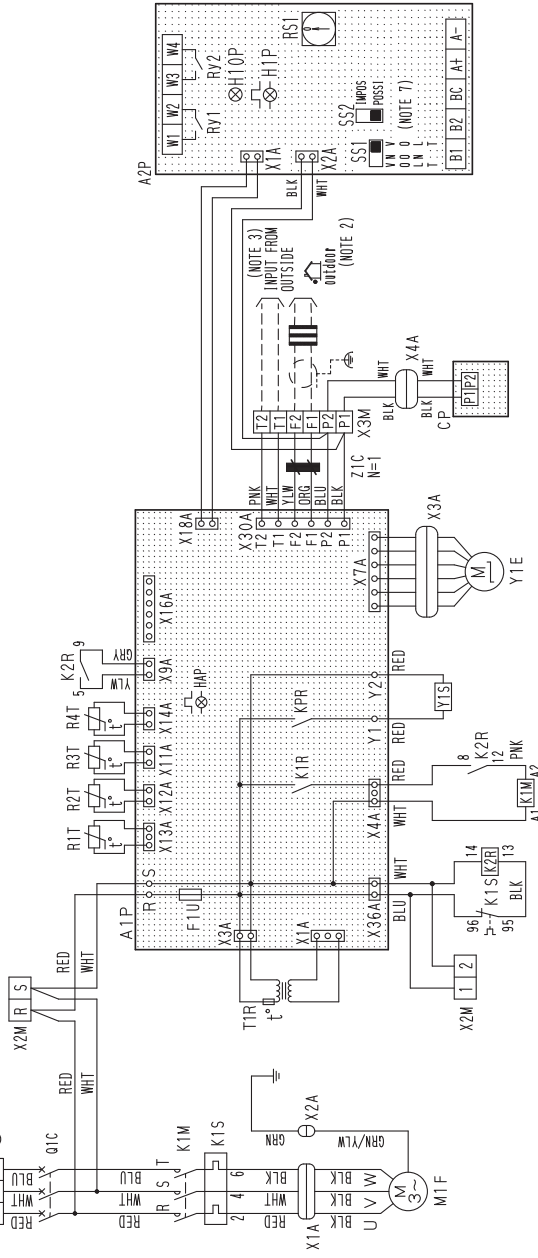
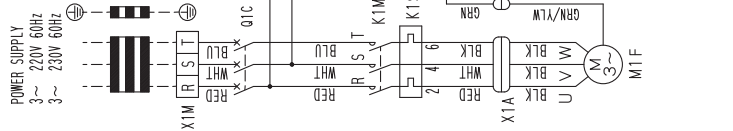
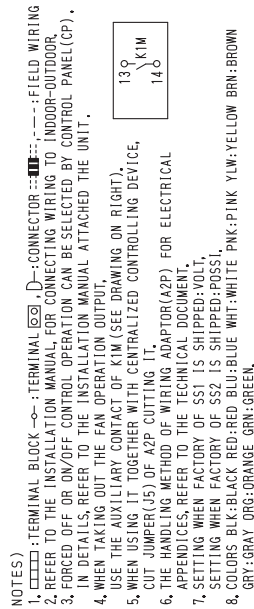
■ Refrigerant pipe connection port diameters

Model	Unit: mm	
	Gas	Liquid
FXVQ400NTL	φ28.6	φ12.7
FXVQ500NTL	φ28.6	φ15.9

5. Wiring Diagrams

FXVQ125NTL / FXVQ200NTL / FXVQ250NTL

WIRING DIAGRAM



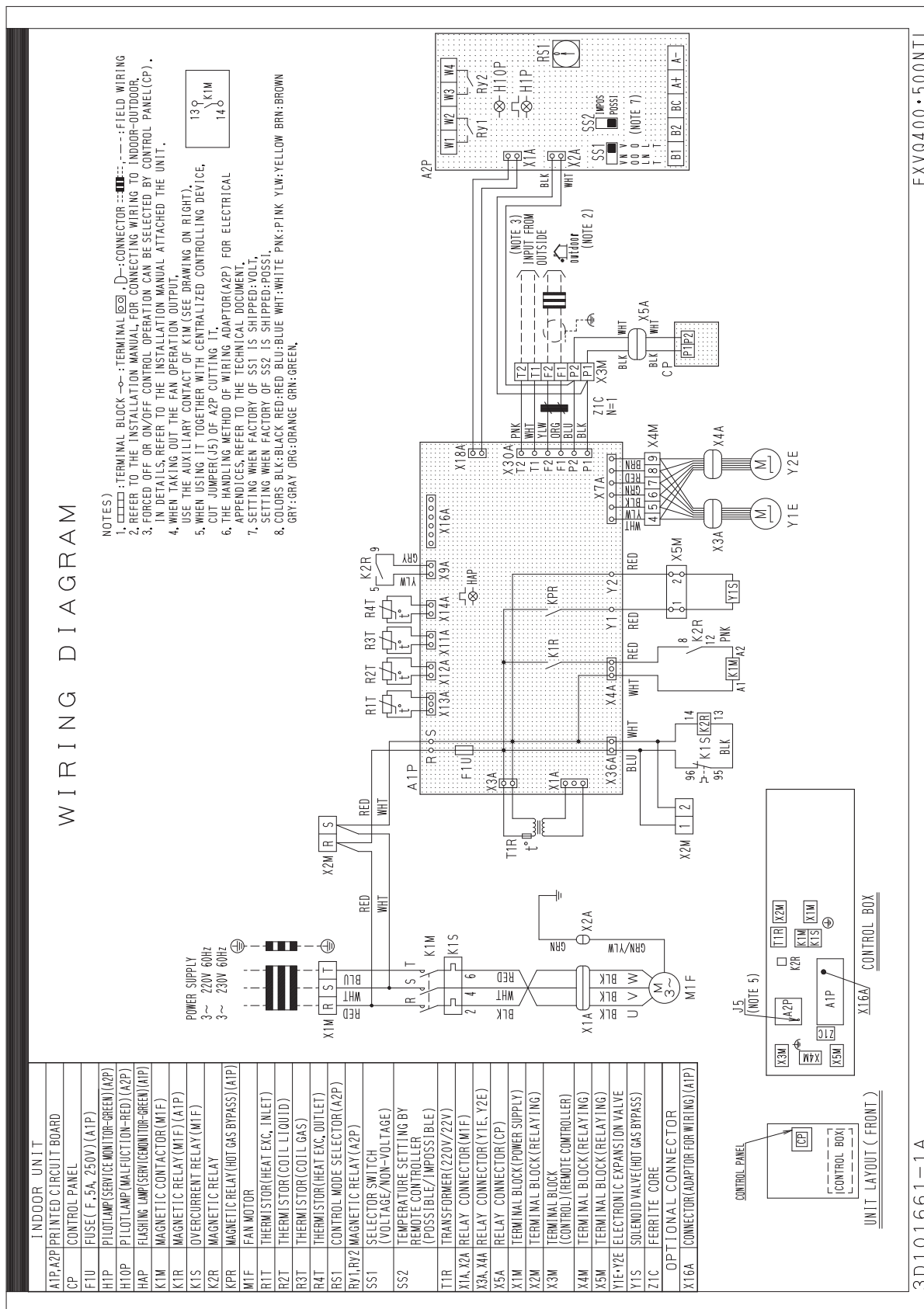
UNIT LAYOUT (FRONT)

FXVQ125•200•250NTL

3D101660-1A

3D101660A

FXVQ400NTL / FXVQ500NTL



3D101661B

6. Electric Characteristics

FXVQ125NTL / FXVQ200NTL / FXVQ250NTL / FXVQ400NTL / FXVQ500NTL

Units				Power supply		IFM		Input(W)	
Model	Hz	Volts	Voltage range	MCA	MFA	KW	FLA	Cooling	Heating
FXVQ125NTL	60	220 230	MAX. 242 Min. 198	4.3	16	0.75	3.4	480	480
FXVQ200NTL				4.3	16	0.75	3.4	690	690
FXVQ250NTL				7.5	20	1.5	6.0	900	900
FXVQ400NTL				11.5	32	2.2	9.2	2560	2560
FXVQ500NTL				17.3	50	3.7	13.8	2800	2800

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

Note :

1. Voltage range

Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits,

2. Maximum allowable voltage unbalance between phases is 2%.

3. MCA/MFA

$$MCA = 1.25 \times FLA$$

$$MFA \leq 4 \times FLA$$

(Next lower standard fuse rating. Min.16A)

4. Select wire size based on the MCA.

5. Instead of fuse, use Circuit Breaker.

7. Safety Devices Setting

Model	FXVQ125NTL	FXVQ200NTL	FXVQ250NTL
Printed circuit board fuse	250 V, 5 A	250 V, 5 A	250 V, 5 A
Over current relay (Fan motor)	3.6 A	3.6 A	6.7 A

Model	FXVQ400NTL	FXVQ500NTL
Printed circuit board fuse	250 V, 5 A	250 V, 5 A
Over current relay (Fan motor)	12 A	16 A

C: 4D103351

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
FXVQ125NTL	125	12.3	10.5	13.2	11.3	13.8	11.8	14.0	10.9	14.2	10.6	14.5	9.9	14.8	9.0
FXVQ200NTL	200	19.8	16.3	21.0	17.6	22.0	18.2	22.4	16.9	22.7	16.4	23.2	15.3	23.7	13.9
FXVQ250NTL	250	24.7	20.5	26.3	22.2	27.5	22.7	28.0	21.2	28.3	20.5	29.0	19.1	29.6	17.6
FXVQ400NTL	400	39.7	32.1	42.3	34.5	44.2	36.5	45.0	34.1	45.5	32.6	46.5	30.5	47.5	28.1
FXVQ500NTL	500	49.4	41.7	52.6	45.0	55.1	47.7	56.0	44.2	56.7	42.7	57.9	39.8	59.1	37.1

TC: Total capacity: kW

SHC: Sensible heat capacity: kW

Notes:

- 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
FXVQ125NTL	125	9.4	8.8	11.3	9.8	13.1	10.7	14.0	10.9	14.2	10.6	14.5	9.9	14.9	9.1
FXVQ200NTL	200	15.1	13.7	18.0	15.1	20.9	16.5	22.4	16.8	22.7	16.4	23.2	15.3	23.8	14.0
FXVQ250NTL	250	18.9	16.9	22.5	18.8	26.2	20.6	28.0	21.0	28.3	20.5	29.0	19.1	29.7	17.7
FXVQ400NTL	400	30.4	27.2	36.2	30.2	42.1	33.2	45.0	33.8	45.5	32.6	46.6	30.5	47.7	28.2
FXVQ500NTL	500	37.8	35.2	45.1	39.5	52.4	43.4	56.0	44.2	56.7	42.7	58.0	39.9	59.4	37.3

TC: Total capacity: kW

SHC: Sensible heat capacity: kW

Notes:

- 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 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
FXVQ125NTL	125	16.8	16.8	16.0	15.5	15.0	13.9
FXVQ200NTL	200	26.2	26.2	25.0	24.2	23.4	21.8
FXVQ250NTL	250	33.1	33.0	31.5	30.5	29.5	27.5
FXVQ400NTL	400	52.5	52.4	50.0	48.4	46.8	43.6
FXVQ500NTL	500	66.1	66.0	63.0	61.0	59.0	54.9

Notes:

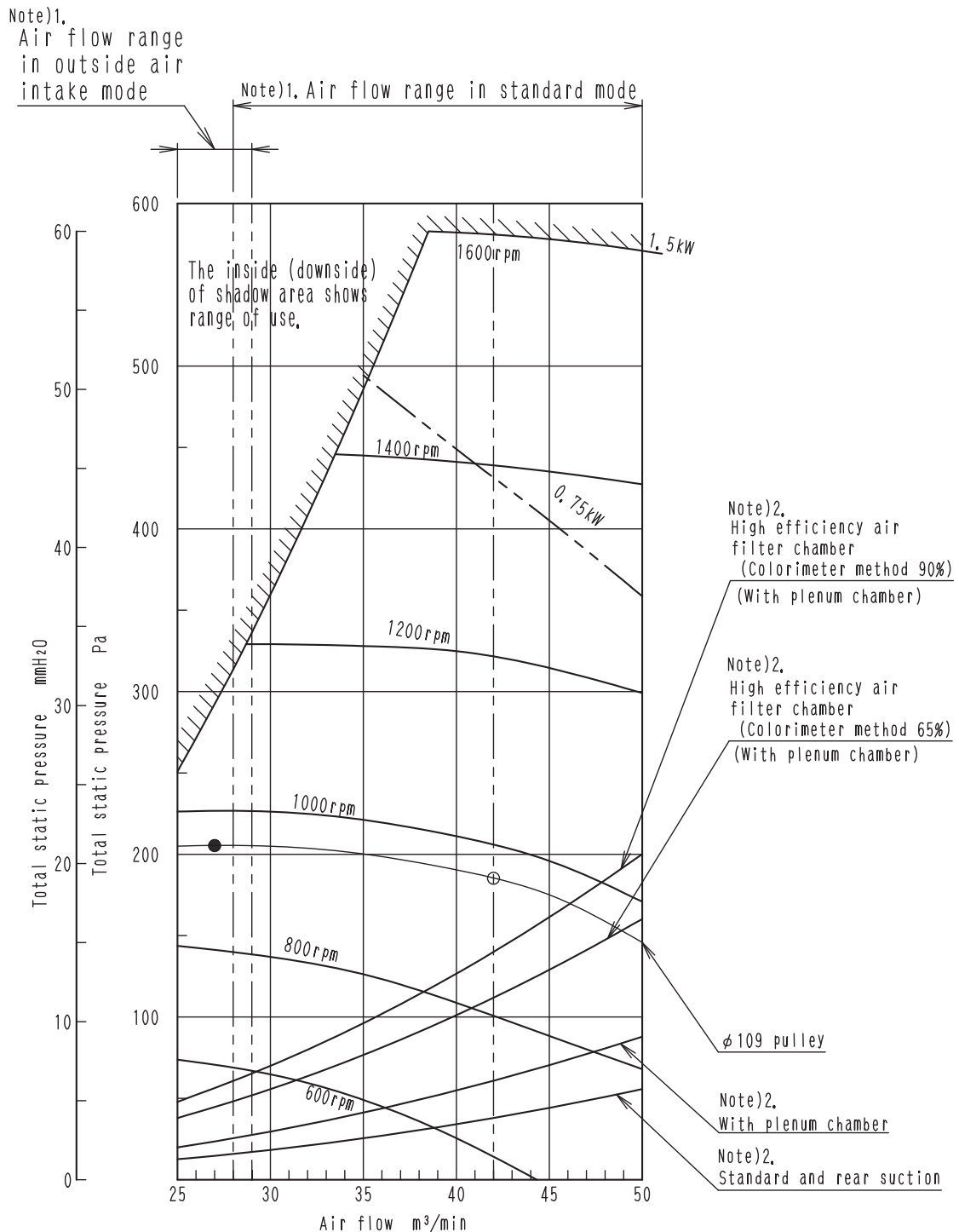
- These capacity tables are for use when selecting a **VRV** indoor unit. The actual capacity of the **VRV** system depends on factors such as the selected model of outdoor units, outdoor air temperature and piping length. Please confirm that the corrected capacity of the **VRV** system satisfies the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

9. Fan Characteristics

FXVQ125NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 0.75kW
 Standard fan pulley A195
 Standard motor pulley A109
 Standard belt size A44

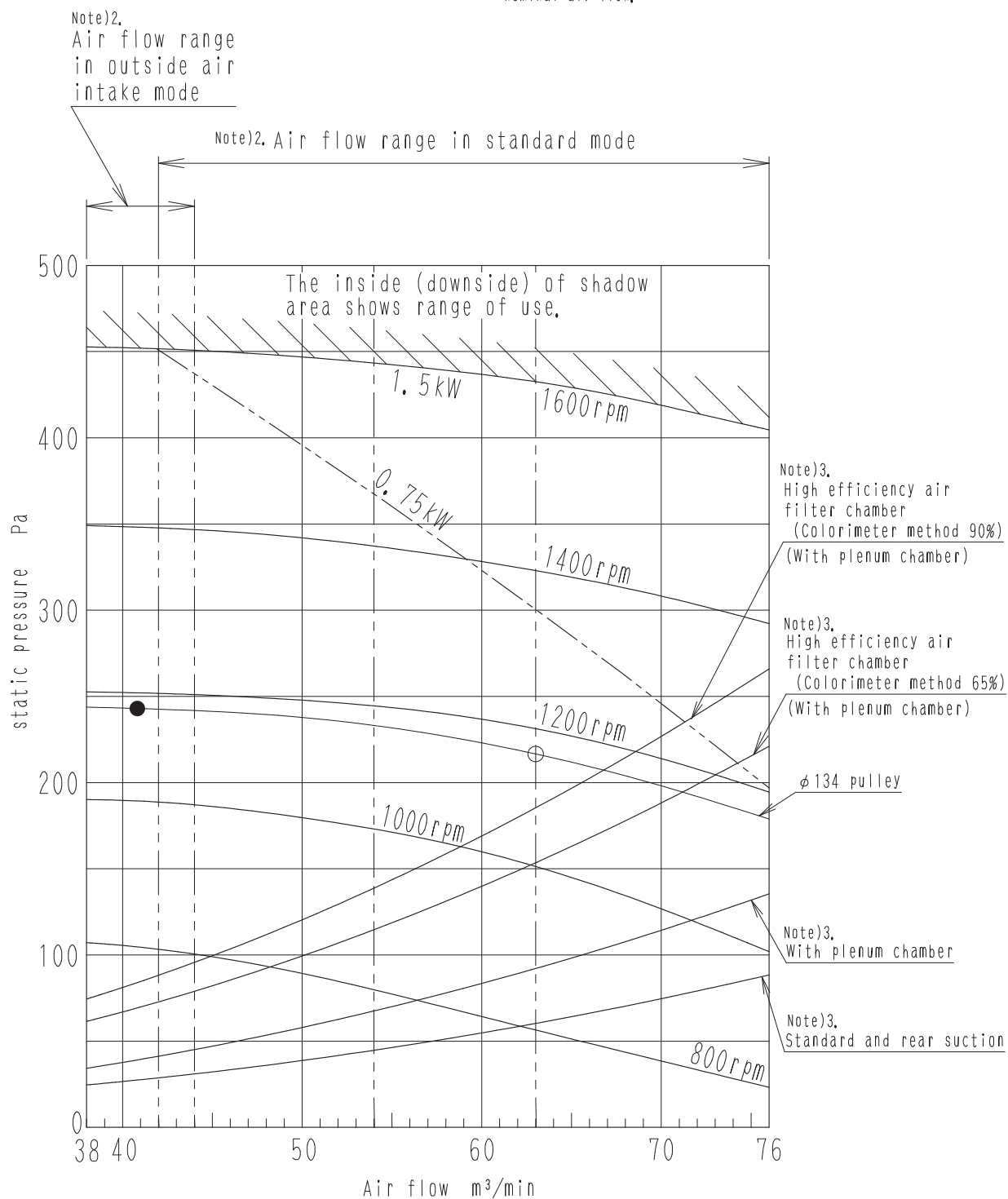
Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. The distance between motor shaft and fan shaft is 332mm at nominal air flow.



FXVQ200NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 0.75kW
 Standard fan pulley A195
 Standard motor pulley A134
 Standard belt size A43

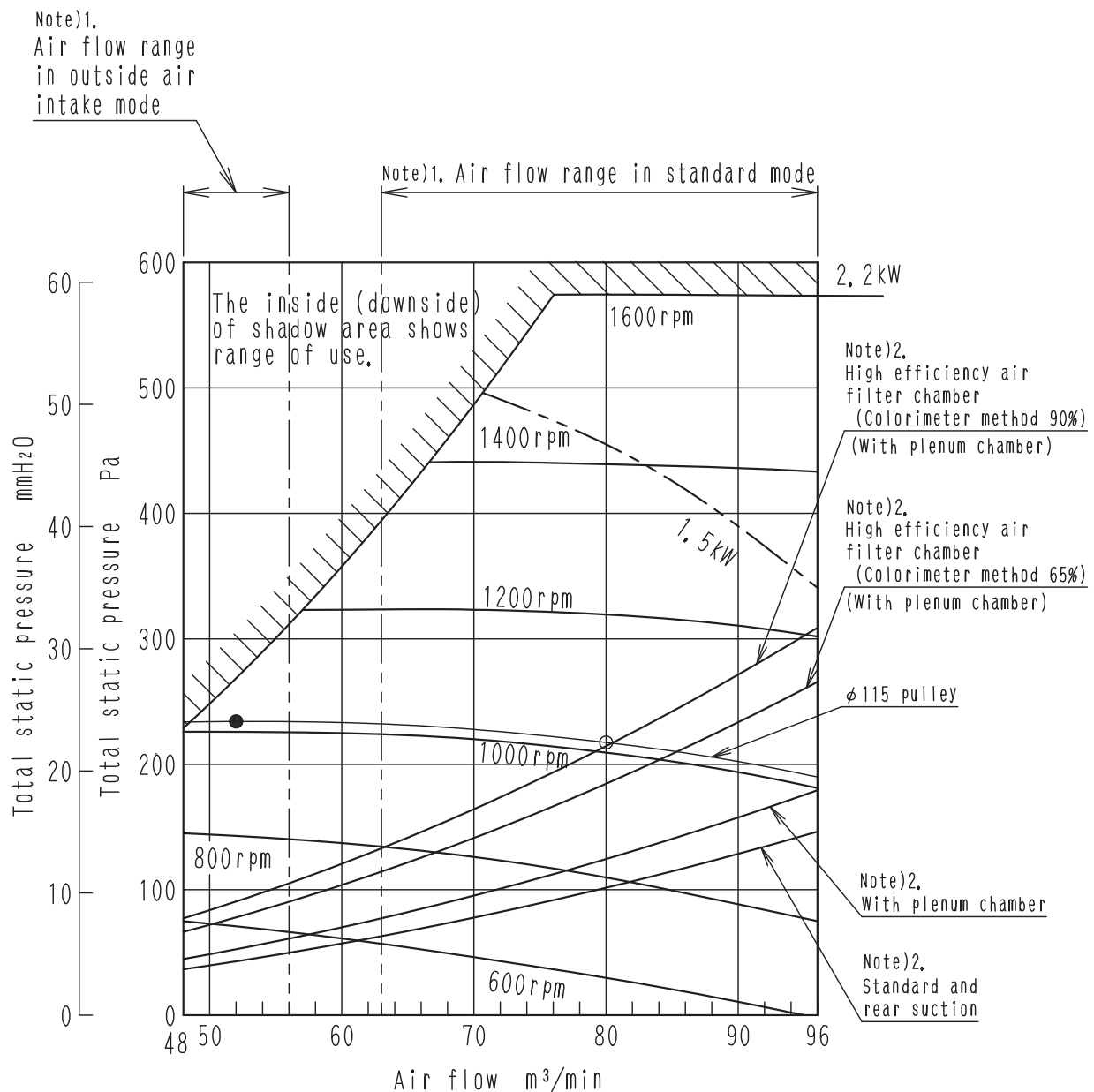
Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. The distance between motor shaft and fan shaft is 300mm at nominal air flow.



FXVQ250NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 1.5kW
 Standard fan pulley A195
 Standard motor pulley A115
 Standard belt size A45

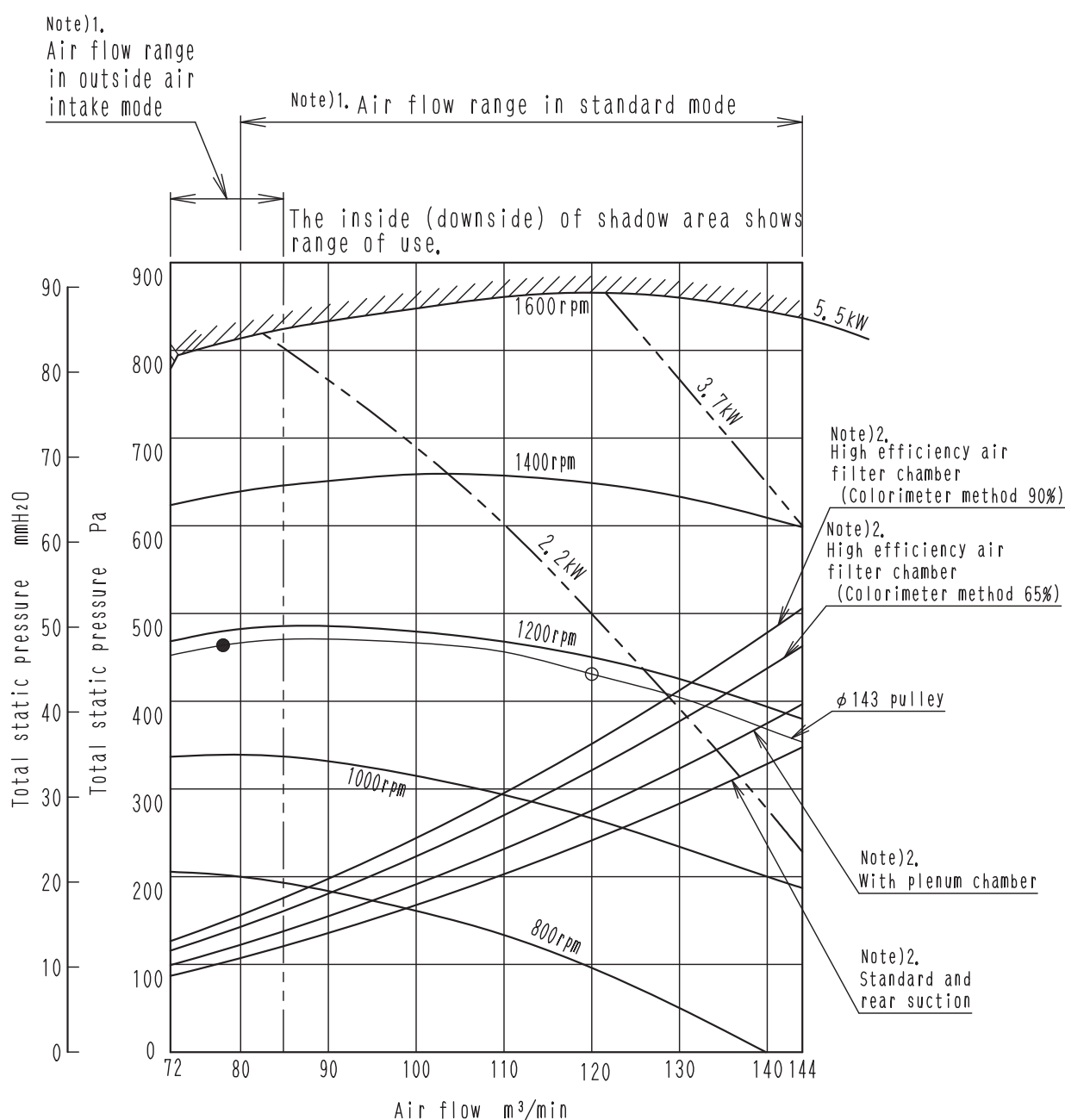
Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. The distance between motor shaft and fan shaft is 340mm at nominal air flow.



FXVQ400NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 2.2kW
 Standard fan pulley 2B211
 Standard motor pulley B143
 Standard belt size B39

Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. The distance between motor shaft and fan shaft is 232mm at nominal air flow.

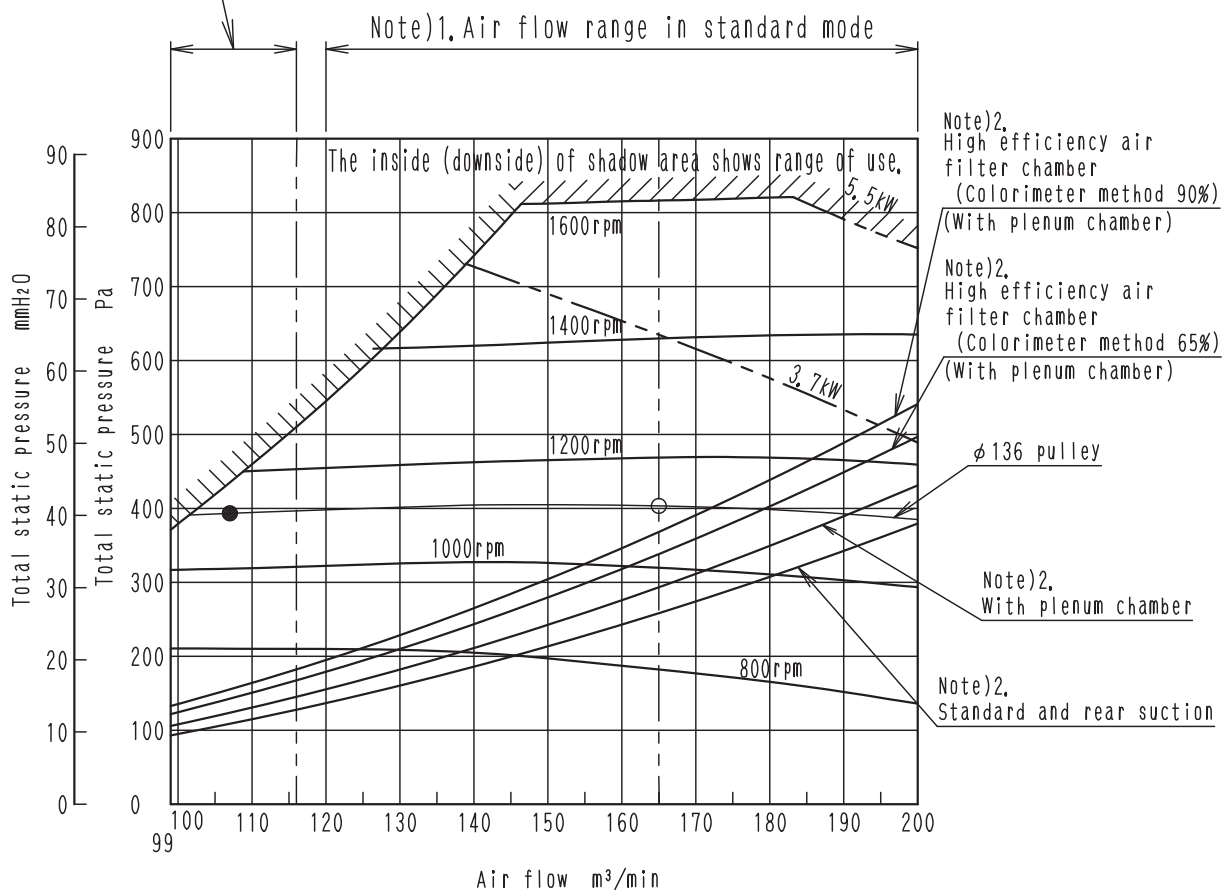


FXVQ500NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 3.7kW
 Standard fan pulley 2B211
 Standard motor pulley B136
 Standard belt size B38

- Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. The distance between motor shaft and fan shaft is 224mm at nominal air flow.

Note)1.
 Air flow range
 in outside air
 intake mode



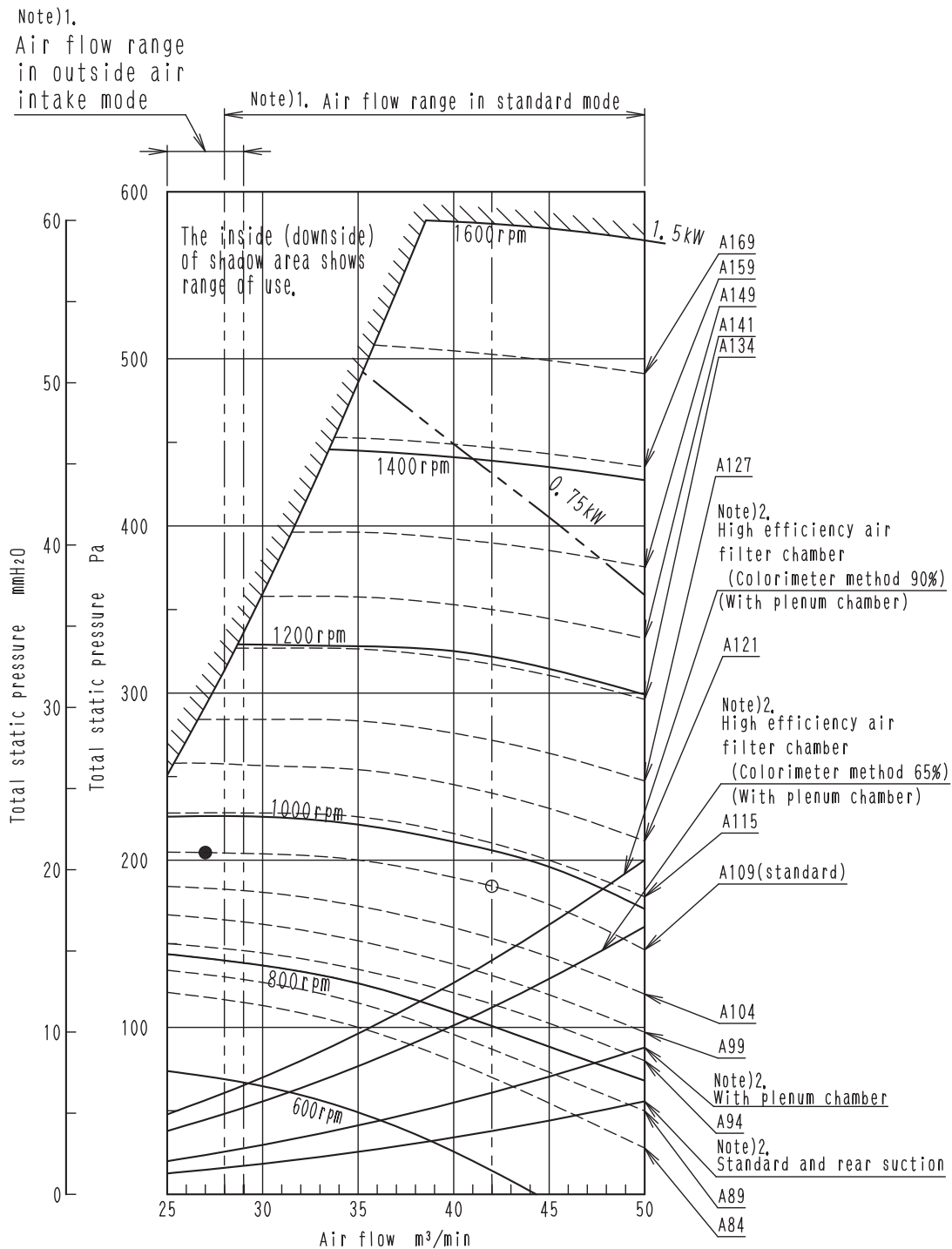
10. Fan Characteristics (For Pulley Selection)

10.1 Pulley Selection

FXVQ125NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 0.75kW
 Standard fan pulley A195
 Standard motor pulley A109
 Standard belt size A44

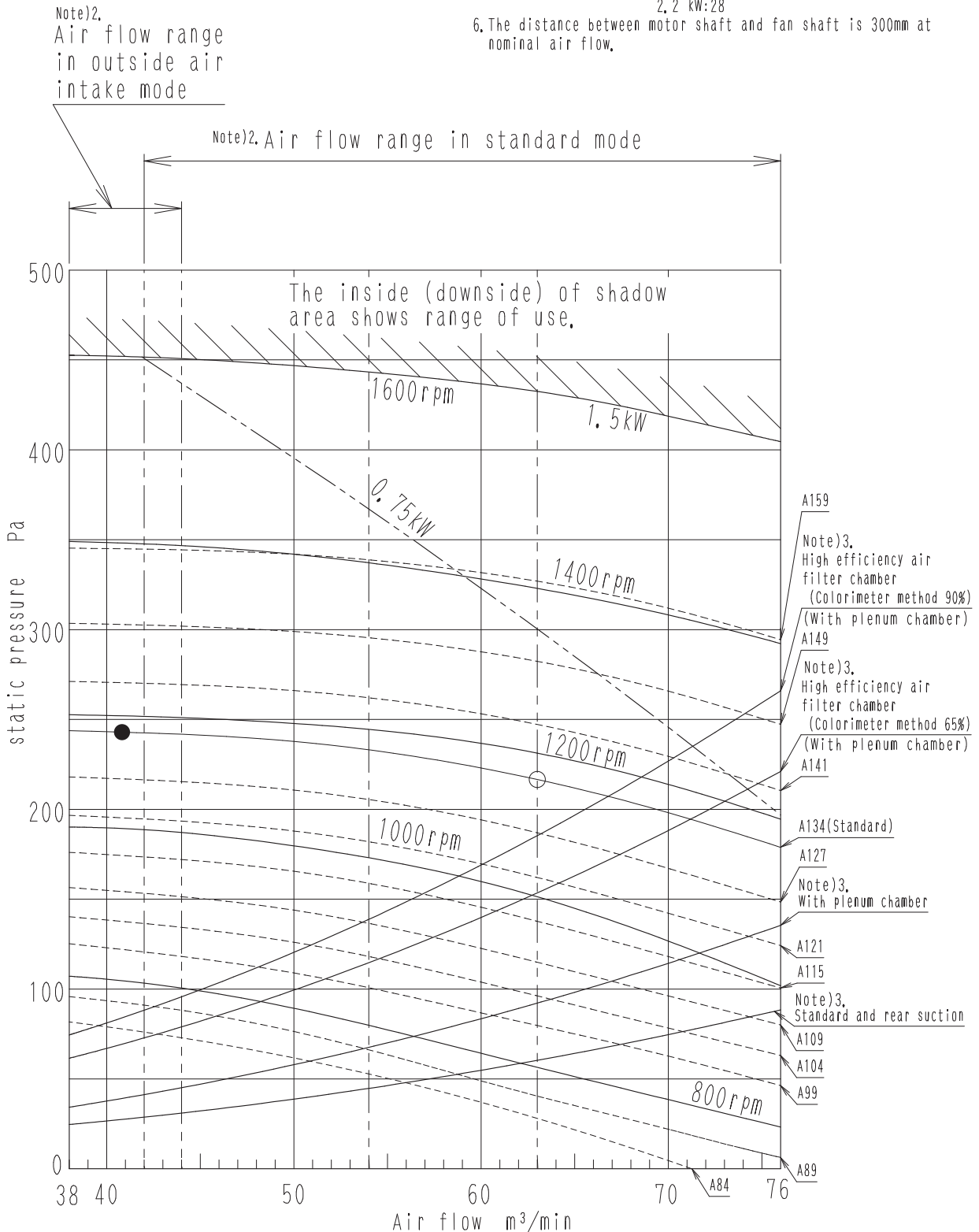
Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. Motor shaft diameter...0.75kW:19
 1.5 kW:24
 6. The distance between motor shaft and fan shaft is 332mm at nominal air flow.



FXVQ200NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 0.75kW
 Standard fan pulley A195
 Standard motor pulley A134
 Standard belt size A43

- Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. Motor shaft diameter...1.5kW:24
 2.2 kW:28
 6. The distance between motor shaft and fan shaft is 300mm at nominal air flow.

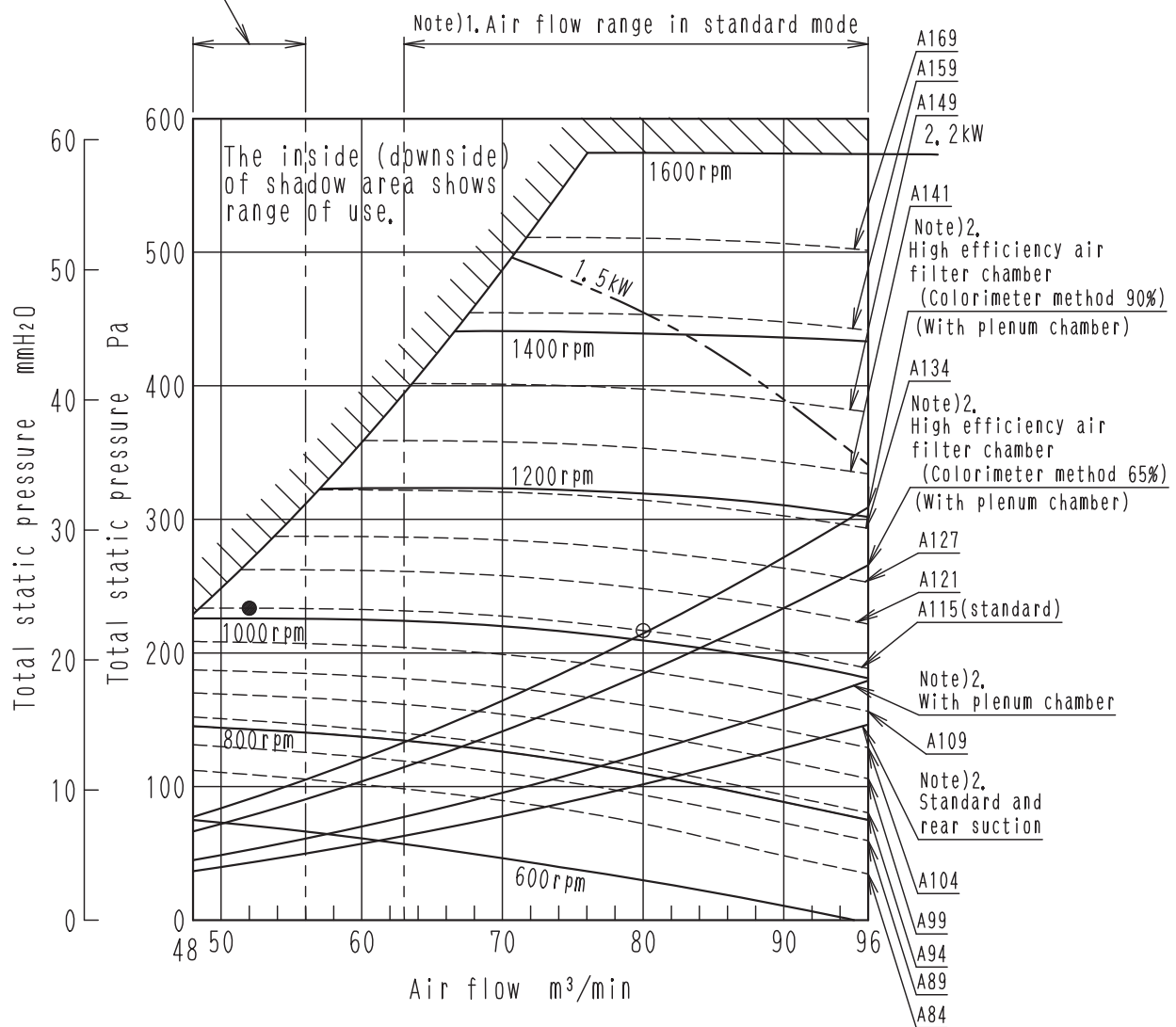


FXVQ250NTL

Fan maximum revolution speed	1600rpm
Standard motor output	1.5kW
Standard fan pulley	A195
Standard motor pulley	A115
Standard belt size	A45

- Note)1. Air flow range is different for each operation mode.
In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
3. "○" shows rated air flow in standard mode.
4. "●" shows rated air flow in outside air intake mode.
5. Motor shaft diameter...1.5kW:24
2.2 kW:28
6. The distance between motor shaft and fan shaft is 340mm at nominal air flow.

Note)1.
Air flow range
in outside air
intake mode



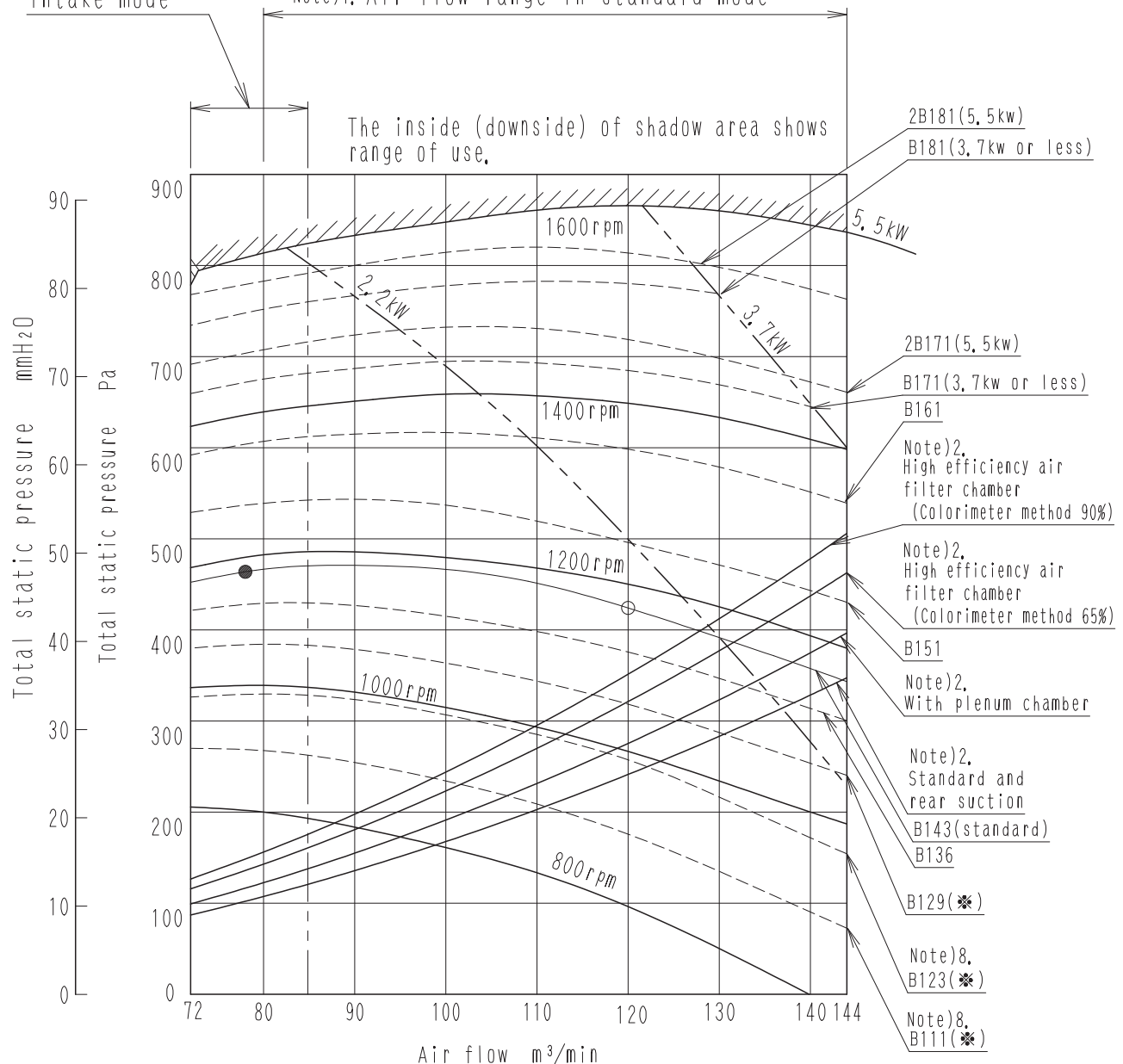
FXVQ400NTL

Fan maximum revolution speed 1600rpm
 Standard motor output 2.2kW
 Standard fan pulley 2B211
 Standard motor pulley B143
 Standard belt size B39

- Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. "○" shows rated air flow in standard mode.
 4. "●" shows rated air flow in outside air intake mode.
 5. Motor shaft diameter...2.2kW:28
 3.7 kW:28
 5.5 kW:38
 6. The distance between motor shaft and fan shaft is 232mm at nominal air flow.
 7. "*" shows special size.
 8. Use low edge cogged belt in selection lower size motor pulley than B129.

Note)1.
 Air flow range
 in outside air
 intake mode

Note)1. Air flow range in standard mode

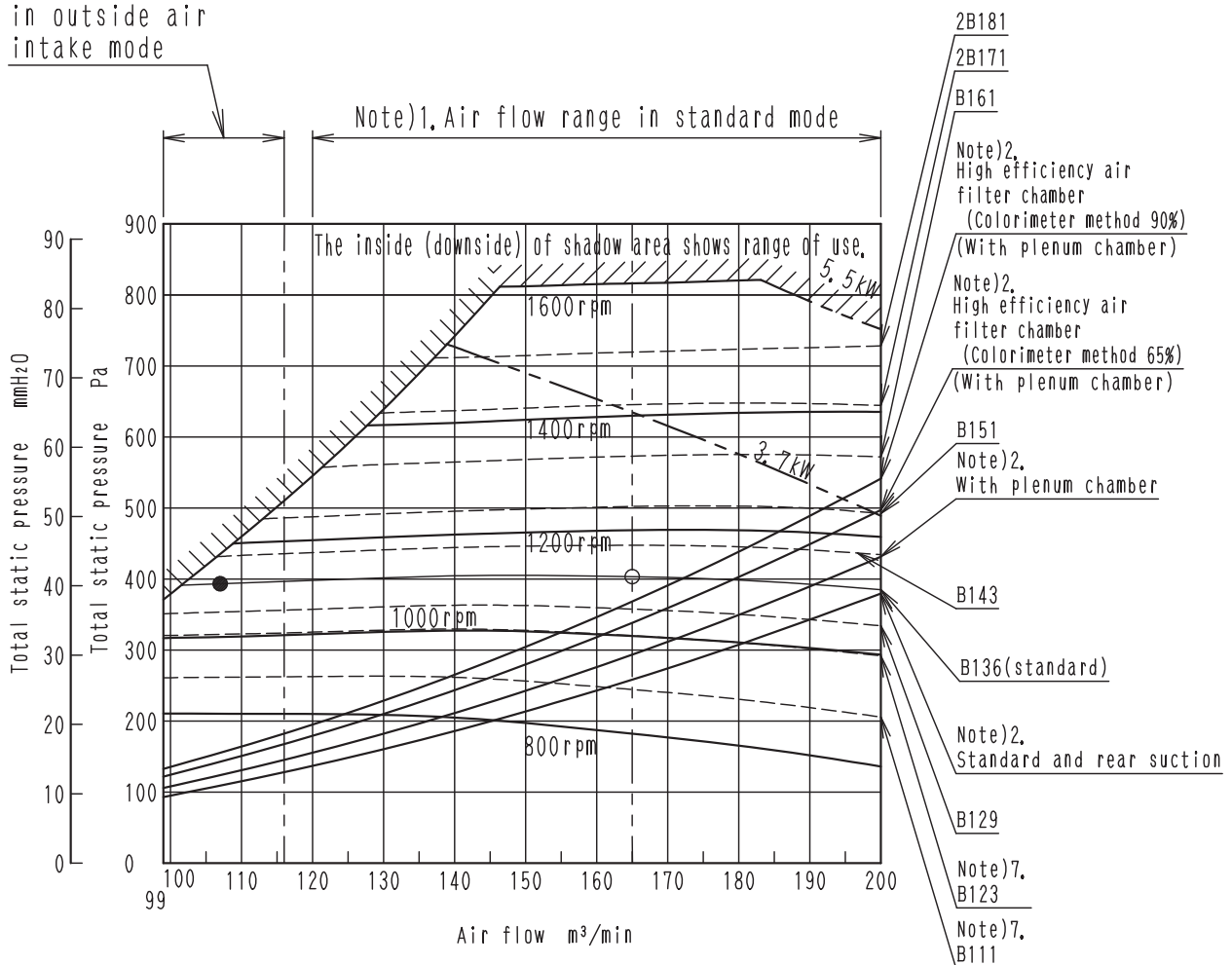


FXVQ500NTL

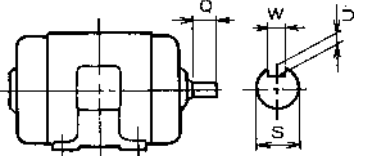
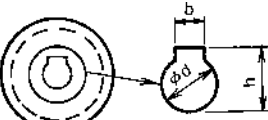
Fan maximum revolution speed 1600rpm
 Standard motor output 3.7kW
 Standard fan pulley 2B211
 Standard motor pulley B136
 Standard belt size B38

- Note)1. Air flow range is different for each operation mode.
 In outside air intake mode, air flow must be adjusted by change of pulley and set of damper etc.
 2. Plenum chamber, rear suction and high efficiency air filter chamber are optional accessories.
 3. ○ shows rated air flow in standard mode.
 4. ● shows rated air flow in outside air intake mode.
 5. Motor shaft diameter...3.7kW:28
 5.5kW:38
 6. The distance between motor shaft and fan shaft is 224mm at nominal air flow.
 7. Use low edge cogged belt in selection lower size motor pulley than B129.

Note)1.
 Air flow range
 in outside air
 intake mode



10.2 Fan Motor Specifications

Items			Rated motor output	0.75	1.5	2.2	3.7	5.5	
Motor			1. Shaft outer diameter	ϕS	19	24	28	28	38
			2. Shaft length	Q	40	50	60	60	80
			3. Keyway width	W	6	8	8	8	10
			4. Keyway depth	U	3.5	4	4	4	5
			5. Insulation class		E	E	E	E	B
V Pulley	Type A and type B		1. Shaft hole diameter	ϕd	19	24	28	28	38
			2. Keyway	b	6	8	8	8	10
			3. Keyway height	h	21.5	27	31	31	41

10.3 How to Select Motor Pulley

1. Select the fan revolution speed by air flow rate and external static pressure.
2. Select motor pulley by fan revolution speed.

$$D_1 = \frac{D_2 \times N_2}{N_1}$$

D_1 : Pitch diameter of motor pulley (mm)
 D_2 : Pitch diameter of fan pulley (mm)
 N_1 : Revolution speed of fan motor (rpm)
 N_2 : Fan revolution speed

Relation between outer diameter and pitch diameter of each pulley are as follows:

A type (Pitch diameter) = Outer diameter of pulley - 9 mm

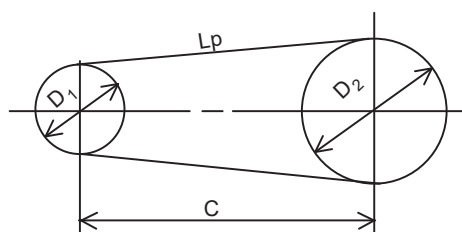
B type (Pitch diameter) = Outer diameter of pulley - 11 mm

Please use the value given for the fan motor revolution speed (4 pole).

60 Hz.....1750 rpm

3. When changing the motor pulley, the standard V belt may not be used.
In that case, select V belt in accordance with the following formula:

V belt Size (Length)



$$L_p = 2C + 1.57 (D_1 + D_2) + \frac{(D_2 - D_1)^2}{4C}$$

L_p : Effective center periphery length (mm)

D_1 : Pitch diameter of motor pulley (mm)

D_2 : Pitch diameter of fan pulley (mm)

C : Distance between the shafts of the pulleys (mm)

Note:

The unit of V belt length (Nominal number) is usually shown in "inch".

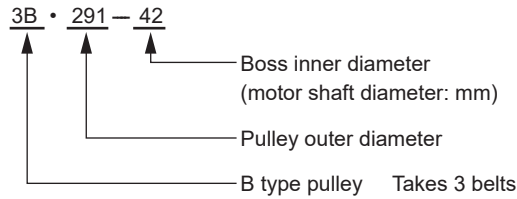
Distance between the shafts of the pulleys (C)

Unit: mm

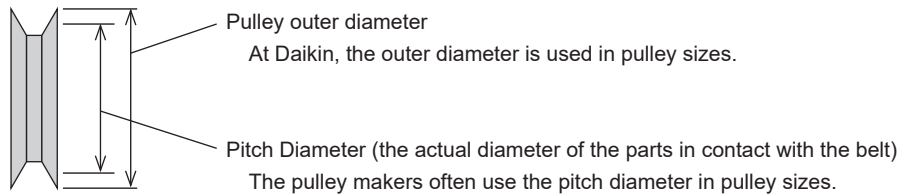
60 Hz	
FXVQ125NTL	332
FXVQ200NTL	326
FXVQ250NTL	340
FXVQ400NTL	232
FXVQ500NTL	224

Refer to each **Fan Characteristics** drawing for the latest value.

■ Pulley specification



The pulley makers give the pulley size using the pitch diameter, while Daikin uses the pulley outer diameter.



When using air conditioners in duct connection, external static pressure and airflow rate will increase, exceeding the range of use for standard motors and pulleys. Therefore, it is necessary to change the motor or pulley to deal with this.

10.4 Pulley and V Belt Adjustment



Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

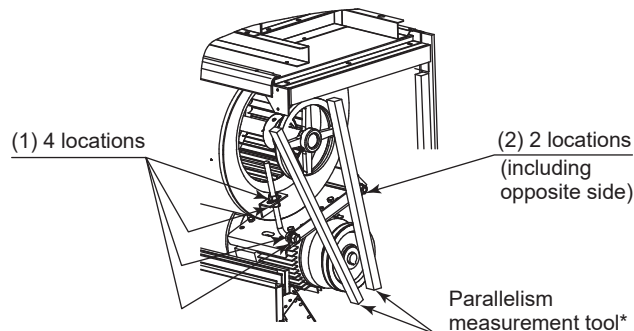
Procedures

1. Following the Installation manual, remove the front panel and others.

1) PARALLELISM OF PULLEY

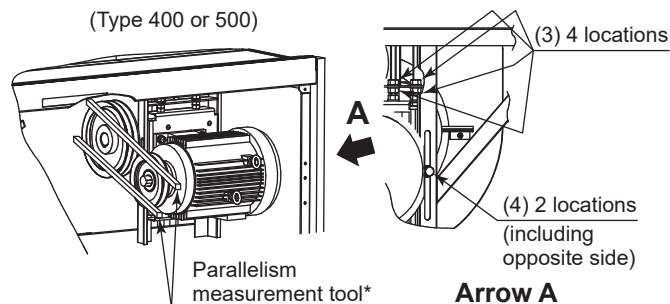
- Adjust the parallelism between fan pulley and motor pulley by measuring the upper and lower points of the V belt as the following figures so as to satisfy the value in the following table.

(Type 125-250)



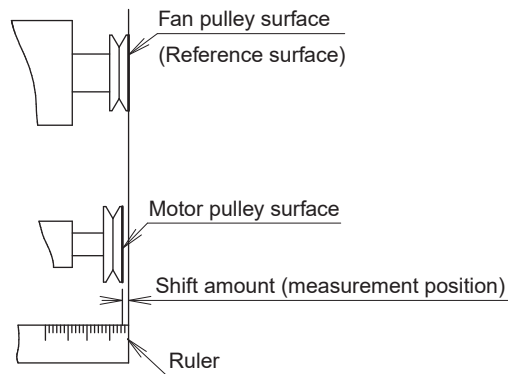
Loosen nuts (1) and (2) and then adjust the V belt.

(Type 400 or 500)



Loosen nuts (3) and (4) and then adjust the V belt.

- Adopt the surface of the fan pulley side as a reference surface.
- Consider the difference of the thickness of a pulley at the shift amount measurement when using a pulley having different thicknesses like variable pulley.



Inter-shaft distance (mm)	Shift amount (mm)
200 - 350	1.0 or less
350 - 450	1.5 or less

Note:

Use a metal ruler, L shape ruler or the like which is measureable the straight line as a parallelism measurement tool.

CAUTION:

If the tension of the V belt or the parallelism of the pulley are not appropriate, vibrations or abnormal sound may be generated and the useful life of the V belt may be reduced. Make sure to readjust the tension of the V belt once it has become adapted to the pulley. When a new belt is first installed, a large amount of powder may be generated from abrasion. Check whether powder continues to be generated after about half a day of operation, and then remove any dispersed powder.

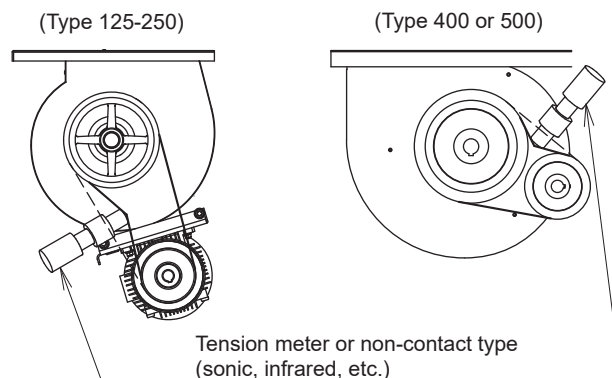
2) TENSION OF V BELT**Note:**

Be sure to conduct a trial operation after replacing the belt and pulley to check the sound and vibration.

- Be sure to adjust the tension of the V belt when replacing the belt and pulley.
- Be sure to re-adjust the tension of the V belt when roughly 50 hours after the first trial operation or after replacing the belt and pulley (after the belt gets to fit).

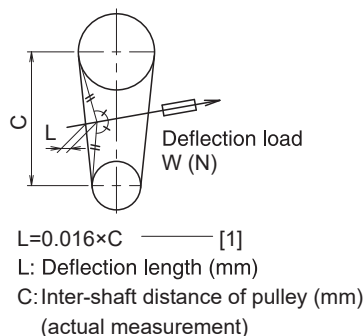
■ How to adjust the tension

- 1) Calculate a proper deflection length (L) by formula [1].
- 2) Measure necessary deflection load (W) when the length (L) of the above 1) is given to the V belt. (See the following figures.)
- 3) Adjust the inter-shaft distance of the pulley so that the deflection load (W) of the above 2) becomes within the following table range.
- 4) Repeat the above step 2) and 3) until the deflection load (W) becomes within the table range.



Measure the deflection load (W) while pressing down the tension meter vertically to the midpoint of the belt until it indicates with the proper deflection length (L).

Immediately after operation the V belt will be hot, which may hinder accurate measurement. Therefore, perform measurement after the belt has returned to a normal temperature.

**Note:**

When replacing the V belt, do not use force as this may result in damage to the belt. Instead, reduce the inter-shaft distance and then attach it.

Increase 1.15 times of the following deflection load (W) at the initial tensioning when the belt is renewed.

Moreover, measurement should be performed after turning the pulley by hand 2 to 3 times to eliminate any uneven elongation of the belt.

Belt type	Qty	Motor output (kW)	Motor pulley diameter (mm)	Deflection load W (N) per belt
A	1	0.75	- 99	9.45 ± 0.45
	1	0.75	104-	12.6 ± 0.6
	1	1.5	- 115	15.55 ± 0.75
	1	1.5, 2.2	121-	12.6 ± 0.6
B	1	2.2	Any	19.95 ± 0.95
	1	3.7	- 136	31.5 ± 1.5
	1	3.7	143- 161	26.65 ± 1.25
	1	3.7	171 -	22.15 ± 1.05
	2	3.7, 5.5	Any	19.95 ± 0.95

■ Precautions when re-using set screws

- When re-securing set screws, apply thread-locking adhesive (procure locally product equivalent to LOCTITE 243) to the threads of the screw to prevent loosening.
- After installation or local replacement of the pulley check that the set screw is screwed in perpendicular to the surface and tightened to the relevant torque specified in Table 1.
Failure to observe may result in a lack of airflow due to slippage or displacement of the pulley. (Refer to Fig. 1)
- Before re-using set screws, make sure that the threads are not worn down or cracked.
Do not use the set screws if the threads are worn down; otherwise, it may not be possible to obtain the required holding force. (Refer to Fig. 2)

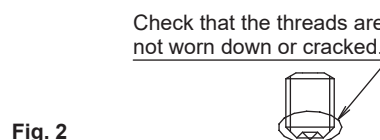
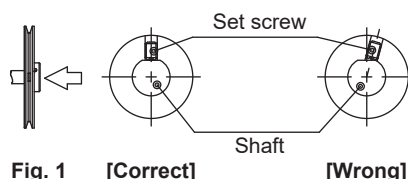


Table 1

Size	M4	M5	M6	M8	M10	M12
Tightening torque	17.7 ± 1.7	31.4 ± 3.1	44.1 ± 4.4	98.1 ± 9.8	196 ± 19.6	294 ± 29.4

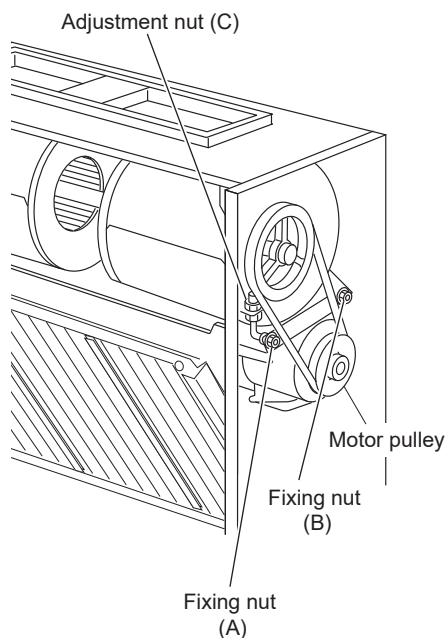
2. Take measurements

- 1) Measure the parallelism of the fan pulley and motor pulley.
- 2) Measure the tension of the V belt.

3. Make adjustments

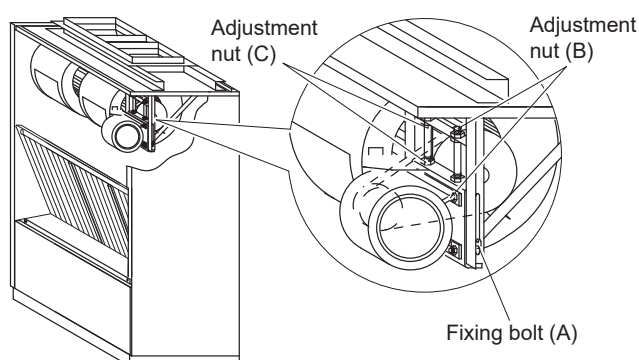
In case of FXVQ125 / 200 / 250N

- 1) Secure the pulley parallelism by adjustment of the motor pulley position and adjustment of fixing nuts (A) (B).
- 2) Adjust the V belt tension with adjustment nut (C).



In case of FXVQ400 / 500N

- 1) Secure the pulley parallelism by adjustment of the motor pulley position and adjustment of fixing bolt (A).
- 2) Adjust the V belt tension by loosening fixing bolt (A) and using adjustment nut (B), (C).



4. Perform checks

- 1) Check that the pulley parallelism and the V belt tension are within the criteria.

10.5 V Belt Size Table

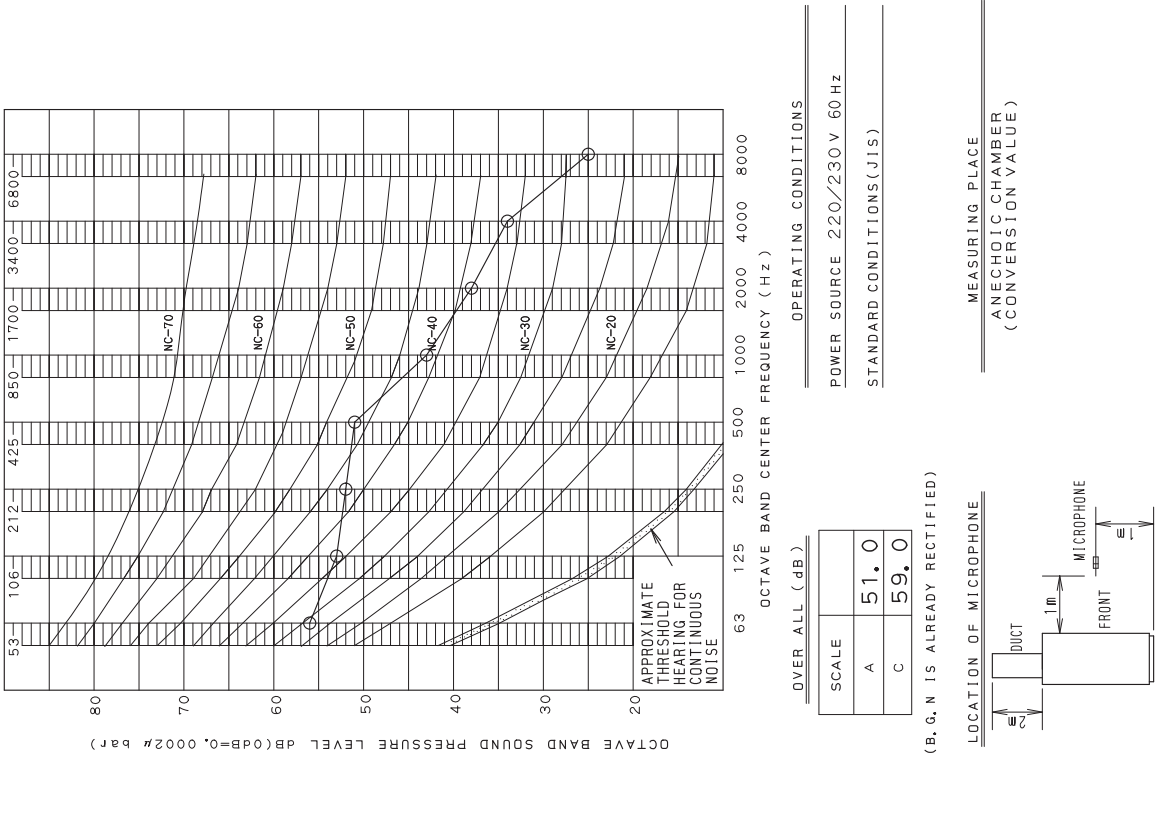
Refer to the JIS K 6323 (V belt) for details. (JIS: Japanese Industrial Standards)

Unit: mm

Nominal number	Type A	Type B	Nominal number	Type A	Type B	Nominal number	Type A	Type B	Nominal number	Type A	Type B
20	508	—	49	1245	1245	78	1981	1981	118	2997	2997
21	533	—	50	1270	1270	79	2007	2007	120	3048	3048
22	559	—	51	1295	1295	80	2032	2032	122	3099	3099
23	584	—	52	1321	1321	81	2057	2057	125	3175	3175
24	610	—	53	1346	1346	82	2083	2083	128	3251	3251
25	635	635	54	1372	1372	83	2108	2108	130	3302	3302
26	660	660	55	1397	1397	84	2134	2134	132	—	3353
27	686	686	56	1422	1422	85	2159	2159	135	3429	3429
28	711	711	57	1448	1448	86	2184	2184	138	—	3505
29	737	737	58	1473	1473	87	2210	2210	140	3556	3556
30	762	762	59	1499	1499	88	2235	2235	142	—	—
31	787	787	60	1524	1524	89	2261	2261	145	3683	3683
32	813	813	61	1549	1549	90	2286	2286	148	—	—
33	838	838	62	1575	1575	91	2311	2311	150	3810	3810
34	864	864	63	1600	1600	92	2337	2337	155	3937	3937
35	889	889	64	1626	1626	93	2362	2362	160	4064	4064
36	914	914	65	1651	1651	94	2388	2388	165	4191	4191
37	940	940	66	1676	1676	95	2413	2413	170	4318	4318
38	965	965	67	1702	1702	96	2438	2438	175	—	4445
39	991	991	68	1727	1727	97	2464	2464	180	4572	4572
40	1016	1016	69	1753	1753	98	2489	2489	185	—	4699
41	1041	1041	70	1778	1778	99	2515	2515	190	—	4826
42	1067	1067	71	1803	1803	100	2540	2540	195	—	4953
43	1092	1092	72	1829	1829	102	2591	2591	200	—	5080
44	1118	1118	73	1854	1854	105	2667	2667	210	—	5334
45	1143	1143	74	1880	1880	108	2743	2743			
46	1168	1168	75	1905	1905	110	2794	2794			
47	1194	1194	76	1930	1930	112	2845	2845			
48	1219	1219	77	1956	1956	115	2921	2921			

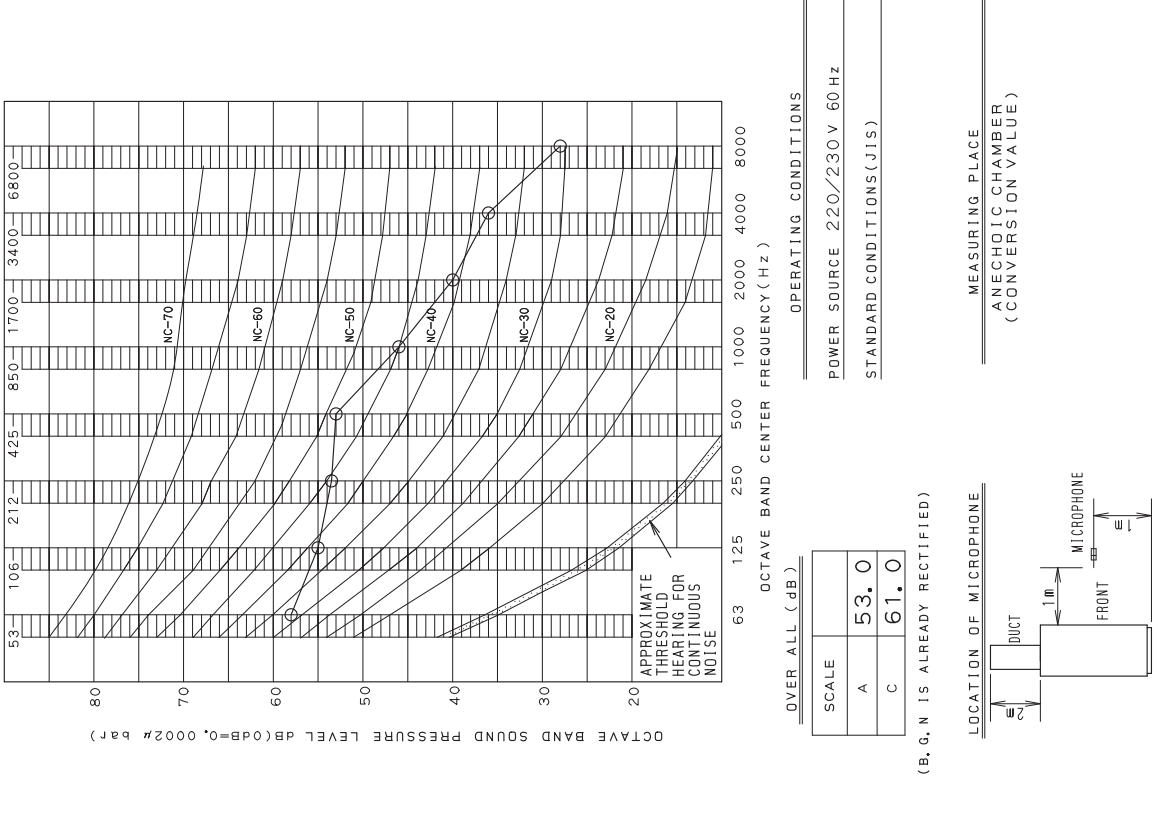
11.Sound Levels

FXVQ125NTL



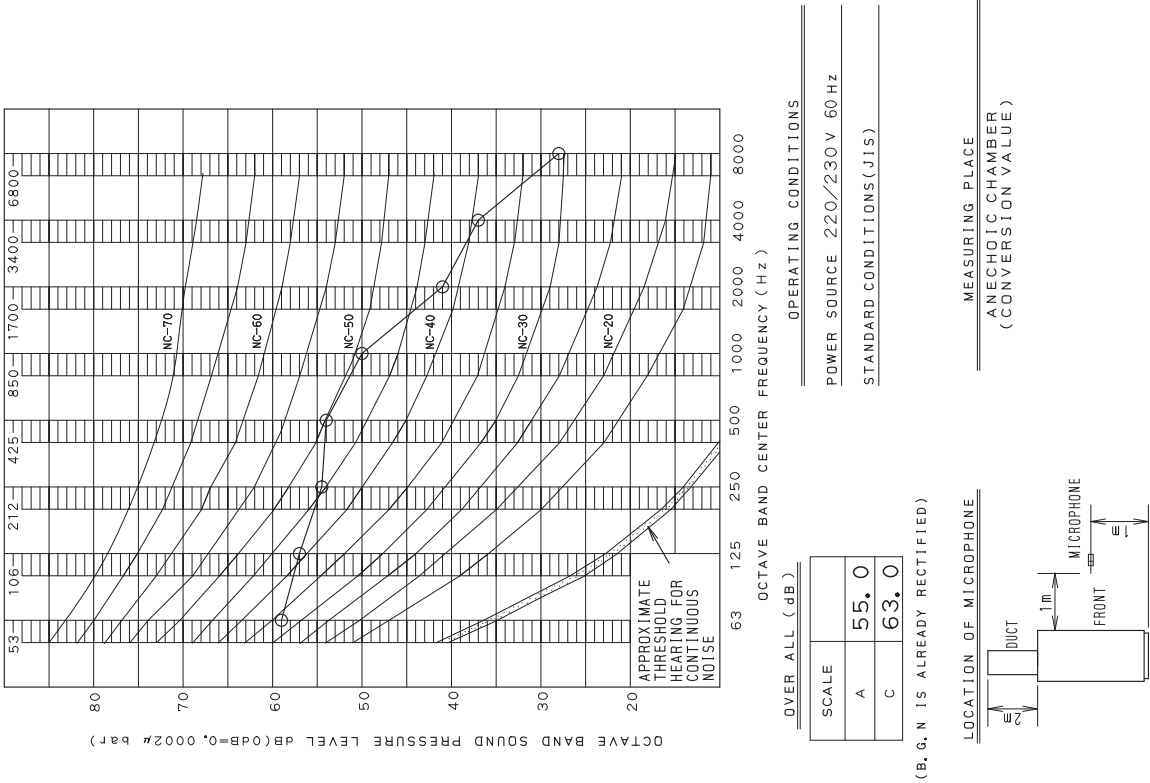
4D103467

FXVQ200NTL



4D103468

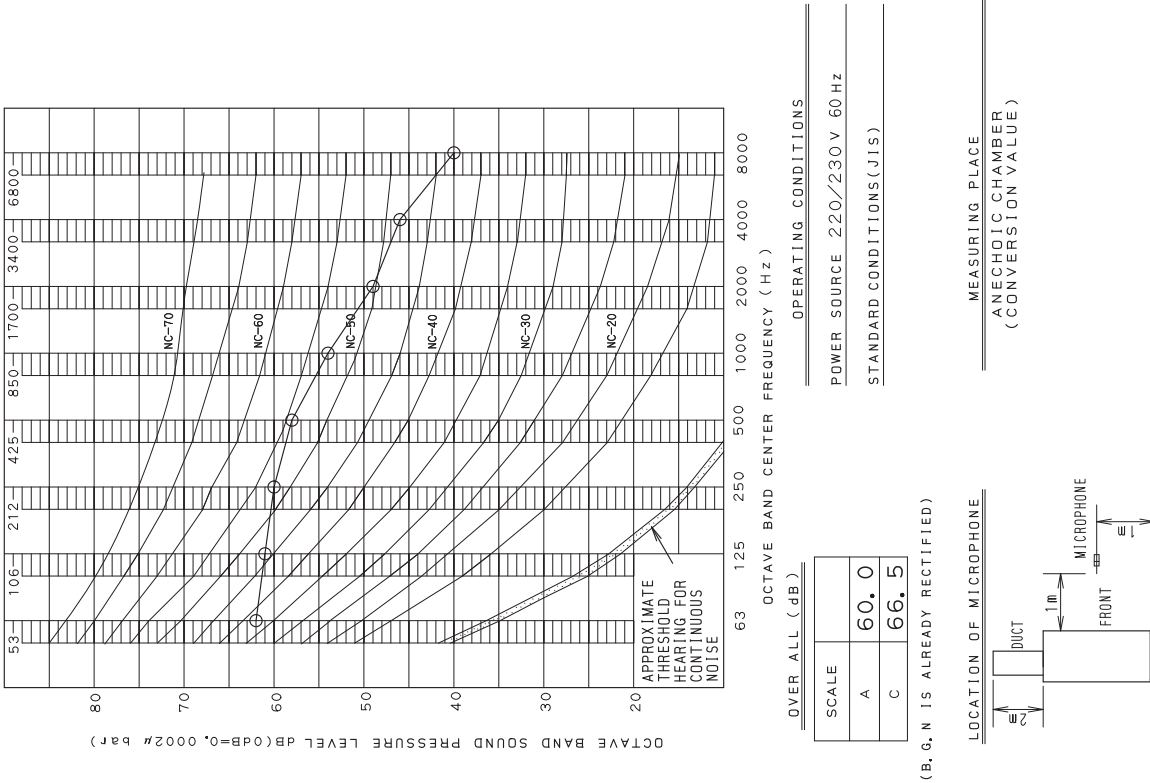
FXVQ250NTL



NOTE: Operation noise differs with operation and ambient conditions.

4D103469

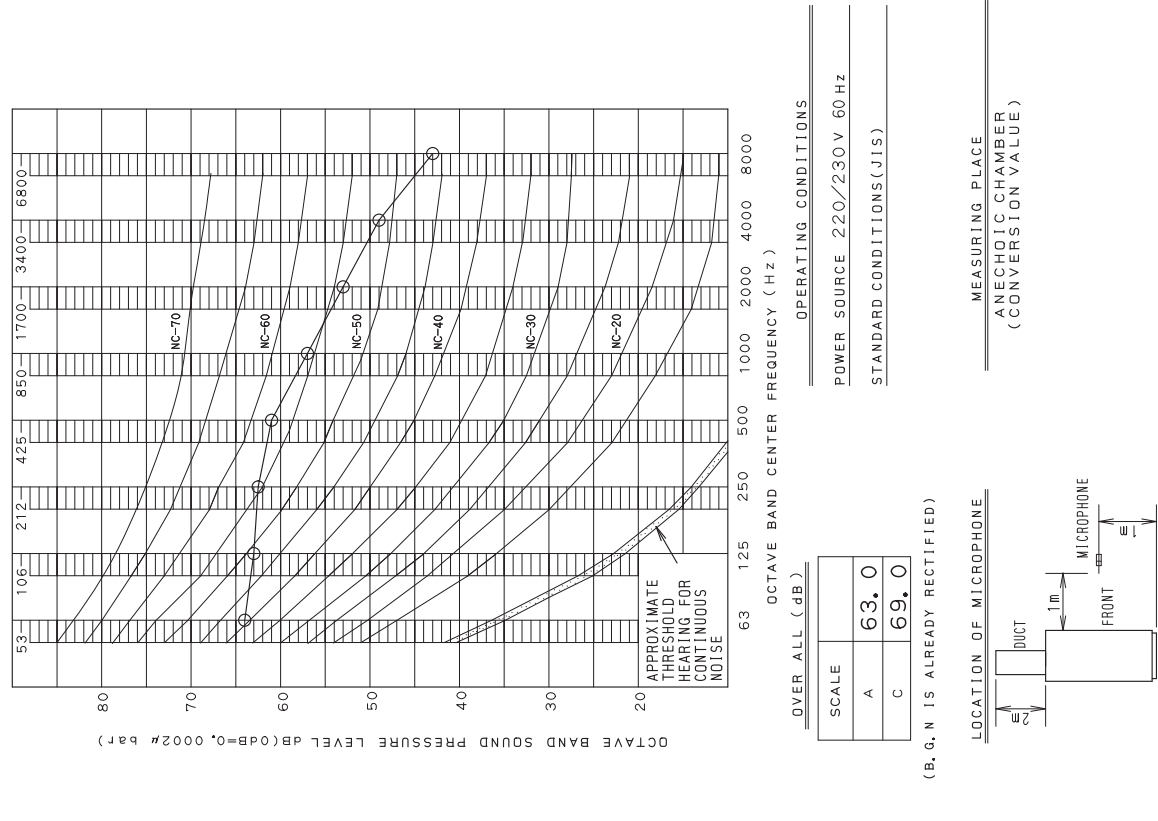
FXVQ400NTL



NOTE: Operation noise differs with operation and ambient conditions.

4D103470

FXVQ500NTL

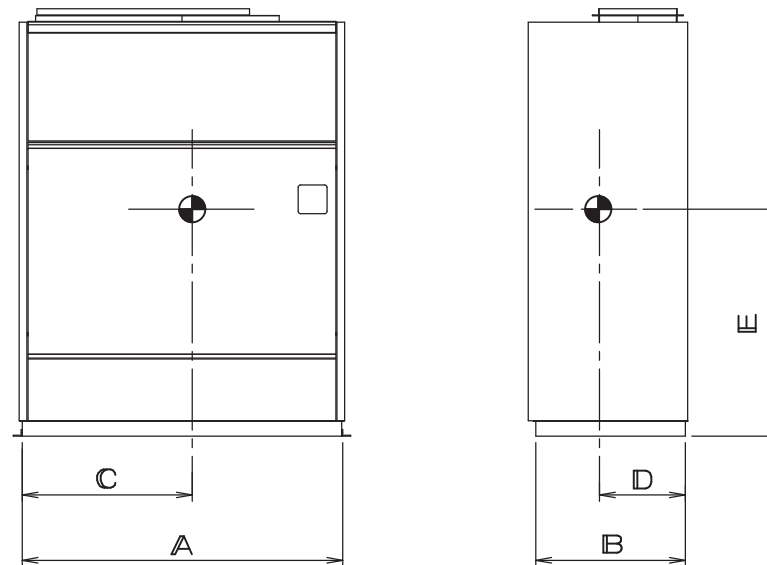


4D103471

12.Centre of Gravity

FXVQ125NTL / FXVQ200NTL / FXVQ250NTL / FXVQ400NTL / FXVQ500NTL

Unit: mm



MODEL NAME	A	B	C	D	E
FXVQ125NTL	722	475	375	260	800
FXVQ200NTL	922	475	480	260	800
FXVQ250NTL	1142	475	590	260	800
FXVQ400NTL	1143	676	590	360	980
FXVQ500NTL	1443	676	740	360	980

13.Data and Notice in Using the Outdoor-Air Processing Mode

■ The FXVQ-series can be modified to the following operation mode.

-Outdoor air processing mode

It supports cooling and heating operations by introducing outdoor air.

(In this outdoor-air processing mode, you cannot control the room temperature.
If you need to do so, please use this mode with another air conditioning unit for room temperature control.)



- The combination with an outdoor unit is limited to one indoor unit and one set of outdoor unit (including multiple connection of outdoor units). The connection of multiple floor standing duct units is prohibited. Connection of floor standing duct units and other type of indoor units mixed together is prohibited.
- When the outdoor-air processing mode is selected, the airflow range is limited. If the airflow exceeds the specified range, the product may stop abnormally. On the other hand, if the airflow falls below the specified range, the equipment reliability may decrease. For details, please see the "■ Airflow range" section.
- When the outdoor-air processing mode is selected, the machine controls the operation so that the temperature of the discharge air becomes closer to the preset temperature of the control panel. However, if the air-conditioning load is too large or too small, the discharge air temperature may not become closer to the preset temperature.

■ Airflow range

Please set the airflow according to each operation mode. When selecting a pulley, please see "Fan characteristics (For Pulley Selection)".

Operation mode	Airflow range (m ³ /min); The value in () is the rated airflow.				
	FXVQ125NTL	FXVQ200NTL	FXVQ250NTL	FXVQ400NTL	FXVQ500NTL
Standard operation mode	28 - 50 (42)	42 - 76 (63)	63 - 96 (80)	80 - 144 (120)	120 - 200 (165)
Outdoor-air processing mode	25 - 29 (27)	38 - 44 (41)	48 - 56 (52)	72 - 85 (78)	99 - 116 (107)

■ Option models of the rear side air inlet

When outdoor air is taken in from the rear side of the indoor unit in the outdoor-air processing mode, please prepare the following option (Rear Suction Kit). For the shape and external dimension for the main unit attachment of this kit, please see "Detail of Optional Accessories". Please remove the air inlet protection gauze of the main unit when attaching a front shield plate.

	FXVQ125NTL	FXVQ200NTL	FXVQ250NTL	FXVQ400NTL	FXVQ500NTL
Option model name	KDFJ905B140	KDFJ905B200	KDFJ905B280	KDFJ905B400	KDFJ905B560

■ Temperature setting range

The temperature you can set varies in each operation mode.

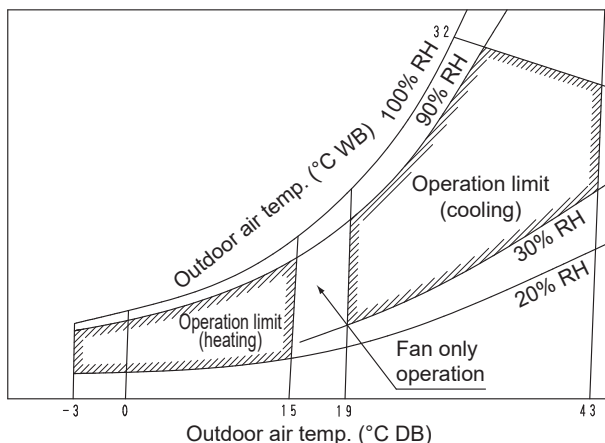
Operation mode	Cooling	Heating
Standard operation mode	15 - 32°C	15 - 32°C
Outdoor-air processing mode	15 - 27°C (controlled by the discharge air temperature)	18 - 35°C (controlled by the discharge air temperature)

Note:

The setting is not available in the fan operation mode.

JC: CA13A209

■ Operation limits



Notes:

1. This diagram shows operation limits under the following conditions:
Indoor/Outdoor units - Equivalent piping length: 7.5 m
Level difference : 0 m
2. Field settings and airflow rate should be changed from the control panel.
(The airflow rate range is limited.)
3. Use the unit at indoor and outdoor air temperatures within the operation limits.
(Using the unit at temperatures outside the operation limit may cause it to malfunction or abnormal stop.)
4. Discharge air temperature can be set from the control panel, but may not reach the set temperature depending on outdoor air conditions or equipment protection control. (Particularly in heating operation, discharge air temperature may come close to room temperature and make you feel cold.)
5. Room temperature cannot be controlled while in outdoor-air processing mode. If room temperature needs to be controlled, use other room temperature control air conditioner in combination.

■ Field settings

[In case of VRV IV, VRV A, VRV X, VRV H, VRV R]

Be sure to set from both (a) Field settings from the indoor unit and (b) Field settings from the outdoor unit.

(a) Field settings from the indoor unit

You need to configure the settings by the control panel of the indoor unit to change the operation mode.

Please configure the settings as shown below after completing test run.

Please also see the installation manual of the indoor unit for the setting method.

Operation mode	Mode No.	First code No.	Second code No.
Standard operation mode	14	8	01
Outdoor-air processing mode			03

(b) Field settings from the outdoor unit

Perform field settings with BS button (BS1-3) on the Printed Circuit Board in the Electric Component Box.

After finishing check operation, set up according to following procedure.

As to setting method, refer to the paragraph of Field Setting in the installation manual of the outdoor unit as well.

Procedure of outdoor-air processing mode setting	Details of setting	7 Segment display		
		SEG1	SEG2	SEG3
1. Push the Mode button (BS1) for 5 seconds in normal mode. Confirm that 7 segment display is same as the figure shown in the right.	Switched to Setting mode.	2	0	0
2. Push the operation button (BS2) and adjust the 7 segment display to the figure shown in the right.	"Outdoor-air processing mode"	2	9	3
3. Push the confirmation button (BS3).		The present settings of [4.] will be indicated.		
4. Push the operation button (BS2) and adjust the 7 segment display to the figure shown in the right.	"Invalid" (factory set)	light off	light off	0
	"Valid"	light off	light off	1
5. Push the confirmation button (BS3).	The setting in [4.] is defined.	It will turn to light ON.		
6. Push the confirmation button (BS3) again.	The system starts the operation according to the setting.	2	0	0
7. Push the Mode button (BS1).	Returned to Normal mode.	light off	light off	light off

[In case of VRV III]

Set from (a) Field settings from the indoor unit only.

(a) Field settings from the indoor unit

You need to configure the settings by the control panel of the indoor unit to change the operation mode.

Please configure the settings as shown below after completing test run.

Please also see the installation manual of the indoor unit for the setting method.

Operation mode	Mode No.	First code No.	Second code No.
Standard operation mode	14	8	01
Outdoor-air processing mode			03

■ Specification table (outdoor-air processing mode)

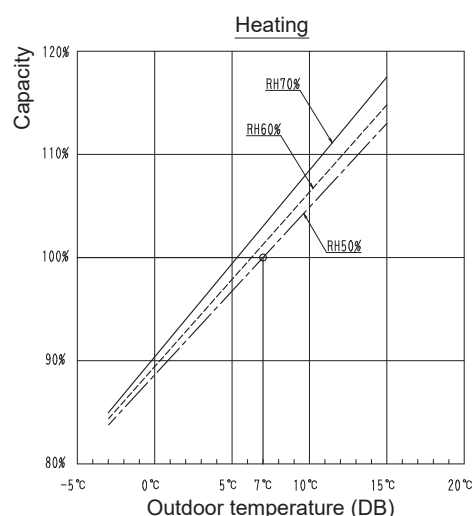
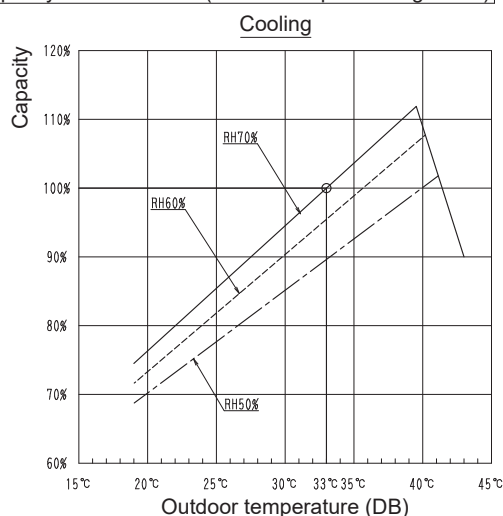
Model name			FXVQ125NTL	FXVQ200NTL	FXVQ250NTL	FXVQ400NTL	FXVQ500NTL
Cooling capacity ★1		kW	16.8	26.8	33.5	53.6	67.0
Heating capacity ★2		kW	14.0	22.4	28.0	45.0	56.0
Fan	Airflow rate ★3	m ³ /min	27	41	52	78	107
	External static pressure ★4	Pa	190	215	190	370	285

Notes:

- ★1. Indoor temperature: 33°CDB, 28°CWB / outdoor temperature: 33°CDB / Equivalent piping length: 7.5 m, level difference: 0 m.
 ★2. Indoor temperature: 7°CDB / outdoor temperature: 7°CDB, 3°CWB / Equivalent piping length: 7.5 m, level difference: 0 m.
 ★3. This product is shipped with the airflow set to the standard mode. When introducing outdoor air (outdoor-air processing mode), please make sure to adjust the airflow by conducting field settings from the control panel, changing the pulley, or installing dampers. If not adjusting the airflow, the airflow would still be set to the standard mode and therefore you might feel cold when heating or feel hot when cooling.
 ★4. The value is the external static pressure with standard pulley.

■ Capacity characteristics

Capacity characteristics (outdoor-air processing mode)



Notes:

1. The characteristics in this chart indicates values under the following conditions.

Equivalent piping length : 7.5 m
 Level difference : 0.0 m
 Airflow rate : Rated
 Static pressure : Rated
 Gas pipe : Below table

Gas pipe diameter	Model name
φ15.9	125 Type
φ19.1	200 Type
φ22.2	250 Type
φ28.6	400 · 500 Type

2. O mark represents a rated point. Please read the value multiplied by the capacity in the specification.
 3. The capacity characteristics at heating does not include capacity changes at frost accumulation (including defrosting operation).
 4. The blowing air temperature may not become the preset temperature of the control panel due to capacity shortage, compressor control range or protection control for excessive capacity.
 (Especially in the heating operation, you might feel cold as the discharge air temperature becomes closer to the room temperature.)
 5. Since you cannot control the room temperature in the outdoor-air processing mode, please use another air-conditioning unit for room temperature control together if you need to adjust the room temperature.

JC: 3D057397D