

**2. General Data**

**2.1 General Data for Indoor Units**

**In-the-Ceiling Type**

Indoor Unit Type		In-the-Ceiling Type			
Model		RPI-3.0FSN1SQ	RPI-4.0FSN1SQ	RPI-5.0FSN1SQ	
Indoor Unit Power Supply		AC 1 $\phi$ , 220-240V/50Hz			
Combined Outdoor Unit Model		RAS-3HVRNS	RAS-4HVRNS	RAS-5HVRNS	
Nominal Cooling Capacity	kW	7.1	10.0	12.5	
	kcal/h	6,100	8,600	10,750	
	Btu/h	24,200	34,100	42,700	
Nominal Heating Capacity	kW	8.0	11.2	14.0	
	kcal/h	6,880	9,600	12,000	
	Btu/h	27,300	38,100	47,600	
Sound Pressure Level (Overall A Scale) (Hi/Me/Lo)					
	120Pa Setting	dB	46/44/40	48/45/41	49/46/43
	70Pa Setting	dB	45/43/39	47/44/40	48/45/42
Outer Dimensions	Height	mm	350	350	350
		(in.)	(13-3/4)	(13-3/4)	(13-3/4)
	Width	mm	1,076	1,076	1,300
		(in.)	(42-3/8)	(42-3/8)	(51-3/16)
	Depth	mm	800	800	800
		(in.)	(31-1/2)	(31-1/2)	(31-1/2)
Net Weight	kg	52	57	61	
	(lbs.)	(115)	(126)	(134)	
Refrigerant		R410A (Nitrogen-Charged for Corrosion-Resistance)			
Indoor Fan					
Air Flow Rate (Hi/Me/Lo)	120Pa Setting	m <sup>3</sup> /min.	29/26/20	36/33/25	47/43/34
		(l/s)	(484/433/333)	(600/550/417)	(783/717/567)
	70Pa Setting	m <sup>3</sup> /min.	29/26/20	36/29/25	47/39/36
		(l/s)	(484/433/333)	(600/483/417)	(783/650/600)
External Pressure (*1)	Pa	120 (70)	120 (70)	120 (70)	
Motor	W	250	300	500	
Connections		Flare-Nut Connection (with Flare Nuts)			
Refrigerant Piping	Liquid Line	mm	$\phi$ 9.53	$\phi$ 9.53	$\phi$ 9.53
		(in.)	(3/8)	(3/8)	(3/8)
Gas Line	mm	$\phi$ 15.88	$\phi$ 15.88	$\phi$ 15.88	
	(in.)	(5/8)	(5/8)	(5/8)	
Condensate Drain		VP25	VP25	VP25	
Approximate Packing Measurement	m <sup>3</sup>	0.49	0.49	0.573	

**NOTES:**

1. The nominal cooling capacity is the combined capacity of the HITACHI standard split system, and is based on the JIS standard B8616.

Cooling Operation Conditions

Indoor Air Inlet Temperature: 27°C DB (80°F DB)  
19.0°C WB (66.2°F WB)  
Outdoor Air Inlet Temperature: 35°C DB (95°F DB)

Heating Operation Conditions

Indoor Air Inlet Temperature: 20°C DB (68°F DB)  
Outdoor Air Inlet Temperature: 7°C DB (45°F DB)  
6°C WB (43°F WB)

Piping Length: 7.5 Meters      Piping Lift: 0 Meter

2. The sound pressure level is based on following conditions.

1.5 Meters Beneath the Unit.

With Discharge Duct (2.0m) and Return Duct (1.0m).

Voltage of the power source for the indoor fan motor is 220V.

In case of the power source of 240V, the sound pressure level increases by about 1 or 2 dB.

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.

3. The data for external pressure (\*1) indicates "High Pressure Setting (Standard Pressure Setting)" values when a filter is not used.

The sound pressure level is based on the High Pressure Setting.

2.2 General Data for Outdoor Units

Model		RAS-3HVRNS	RAS-4HVRNS	RAS-5HVRNS
Power Supply		AC 1φ, 220-240V/50Hz, 220V/60Hz		
Nominal Cooling Capacity	kW	7.1	10.0	12.5
	kcal/h	6,100	8,600	10,750
	Btu/h	24,200	34,100	42,700
Nominal Heating Capacity	kW	8.0	11.2	14.0
	kcal/h	6,880	9,600	12,000
	Btu/h	27,300	38,100	47,600
Cabinet		Synthetic Resin Paint Baked on Galvanized Steel Plate		
Sound Pressure Level				
Cool (Night Shift)/Heat	dB (A)	48(46)/50	50(48)/52	52(50)/54
Outer Dimensions				
Height	mm	600	800	800
	(in.)	(23.62)	(31.5)	(31.5)
Width	mm	792 (+95)	950	950
	(in.)	(31.18 (+3.74))	(37.40)	(37.40)
Depth	mm	300	370	370
	(in.)	(11.81)	(14.57)	(14.57)
Net Weight	kg	44	85	89
	(lbs.)	(97)	(187)	(196)
Refrigerant		R410A		
Flow Control		Micro-Computer Control Expansion Valve		
Compressor		Hermetic (Scroll)		
Model		EU1318D1	E306AHD	E406AHD
Quantity		1	1	1
Motor Output (Pole)	kW	1.3 (4)	2.2 (4)	3.0 (4)
Heat Exchanger		Multi-Pass Cross-Finned Tube		
Condenser Fan		Propeller Fan		
Quantity		1	1	1
Air Flow Rate	m <sup>3</sup> /min.	45	62	68
	(cfm)	(1,589)	(2,189)	(2,400)
Motor Output (Pole)	kW	0.04 (8) x 1	0.07 (8) x 1	0.17 (8) x 1
Refrigerant Piping		Flare-Nut Connection (with Flare Nuts)		
Liquid Line	mm	φ9.53	φ9.53	φ9.53
	(in.)	(3/8)	(3/8)	(3/8)
Gas Line	mm	φ15.88	φ15.88	φ15.88
	(in.)	(5/8)	(5/8)	(5/8)
Refrigerant Charge	kg	1.9	2.8	3.3
Approximate Packing Measurement	m <sup>3</sup>	0.261	0.440	0.440

**NOTES:**

- The above cooling and heating capacities show the maximum capacities when the outdoor and indoor temperature are below condition.

Cooling Operation Conditions

Indoor Air Inlet Temperature: 27°C DB (80°F DB)  
19.0°C WB (66.2°F WB)  
Outdoor Air Inlet Temperature: 35°C DB (95°F DB)

Heating Operation Conditions

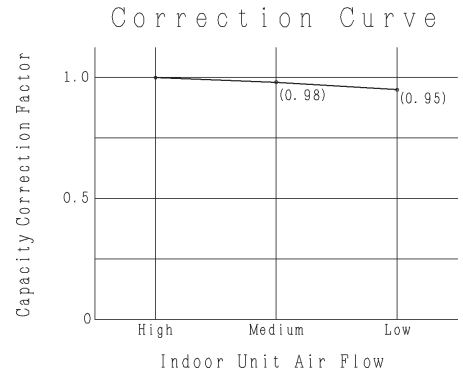
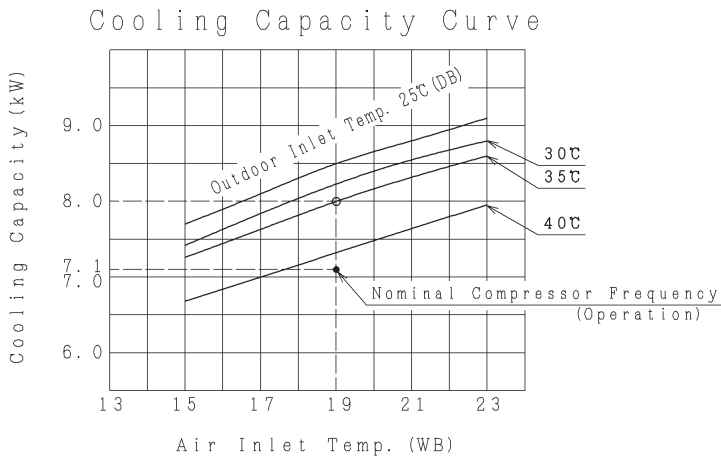
Indoor Air Inlet Temperature: 20°C DB (68°F DB)  
Outdoor Air Inlet Temperature: 7°C DB (45°F DB)  
6°C WB (43°F WB)

Piping Length: 7.5 Meters Piping Lift: 0 Meter

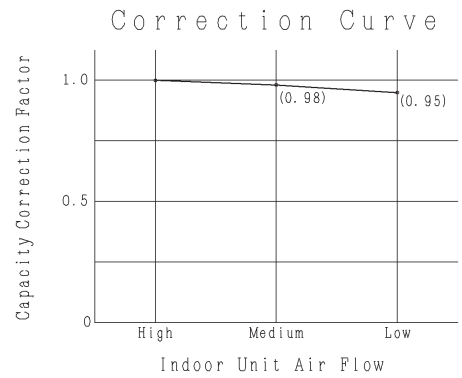
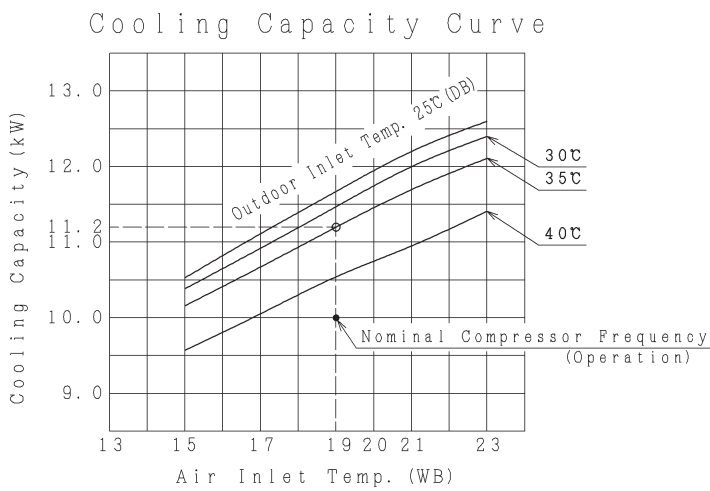
- The sound pressure is based on the following conditions.  
1 Meter from the unit service cover surface, and 1.5 Meters from floor level.  
The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration in the field.
- The above data is based on the 4-Way Cassette Type indoor units. <RCI-\*\*FSN2>

### 4.3 Cooling Capacity

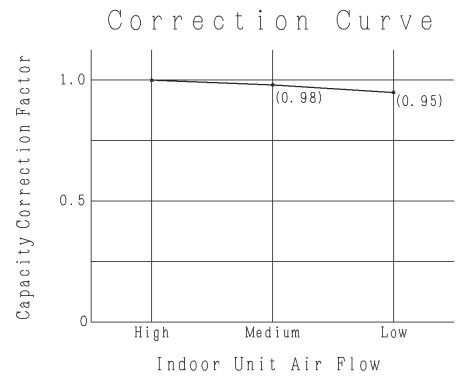
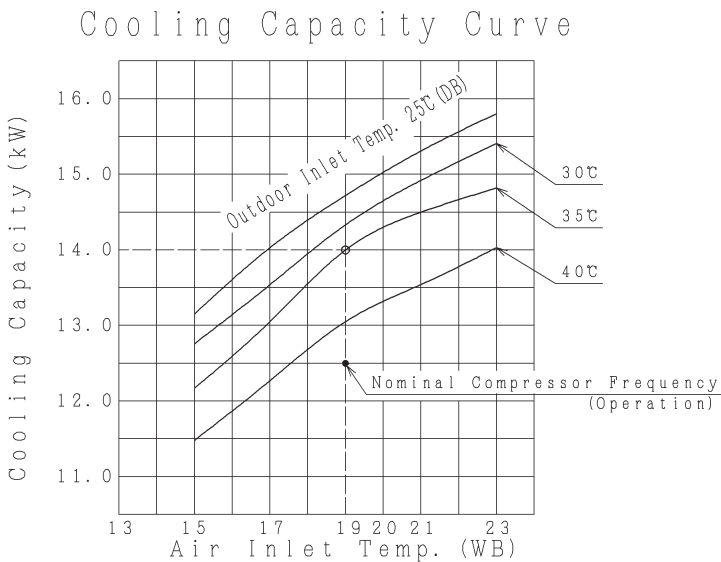
● RAS-3HVRNS



● RAS-4HVRNS

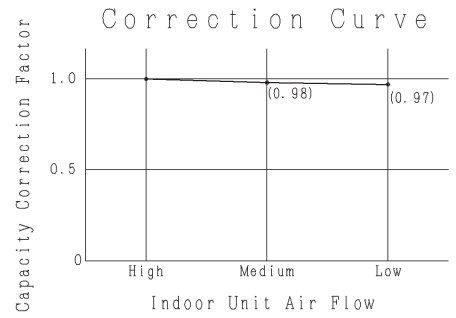
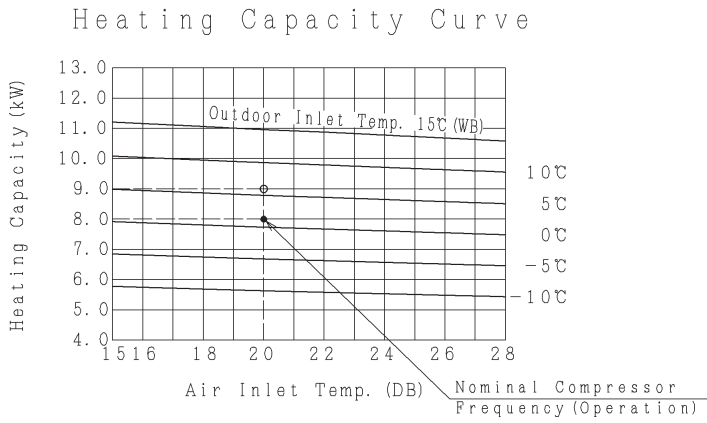


● RAS-5HVRNS

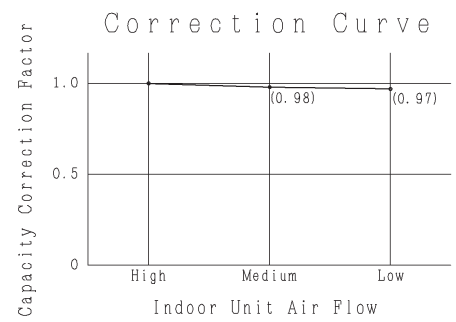
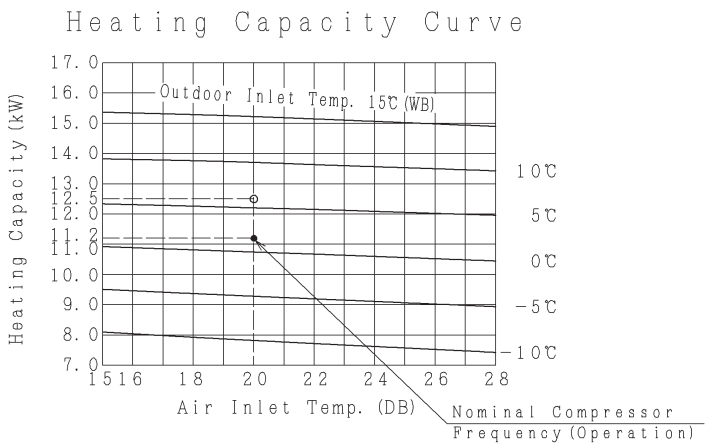


**4.4 Heating Capacity**

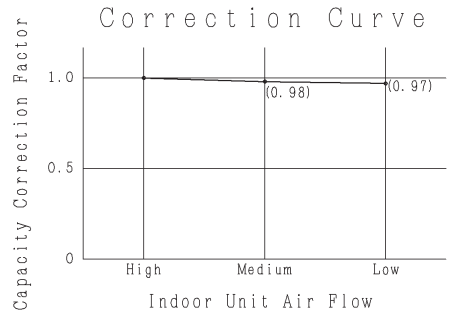
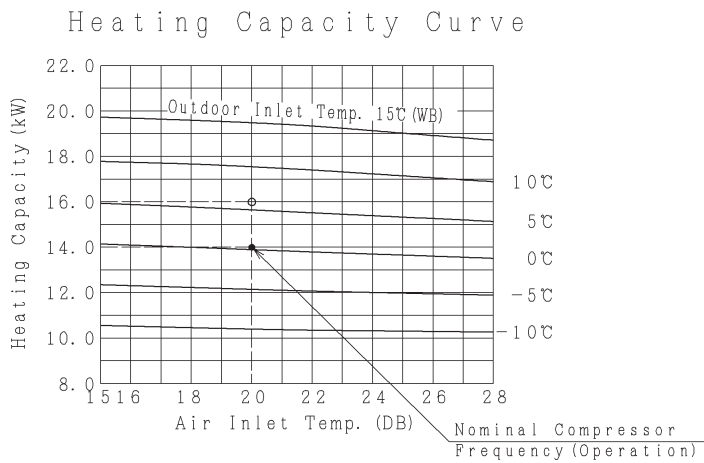
● **RAS-3HVRNS**



● **RAS-4HVRNS**



● **RAS-5HVRNS**



4.5 Correction Factor According to Piping Length

**Correction Factor for Cooling Capacity According to Piping Length**

The cooling capacity should be corrected according to the following formula:

$$CCA = CC \times F$$

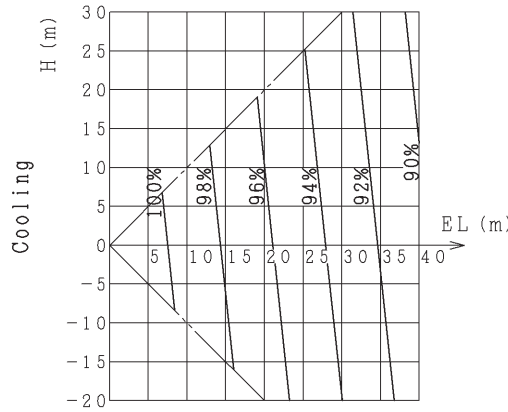
CCA: Actual Corrected Cooling Capacity (kW)

CC: Cooling Capacity in the Performance Table (kW)

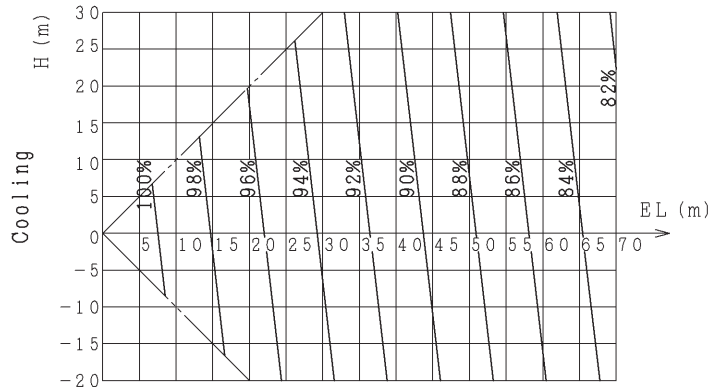
F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the following figure.

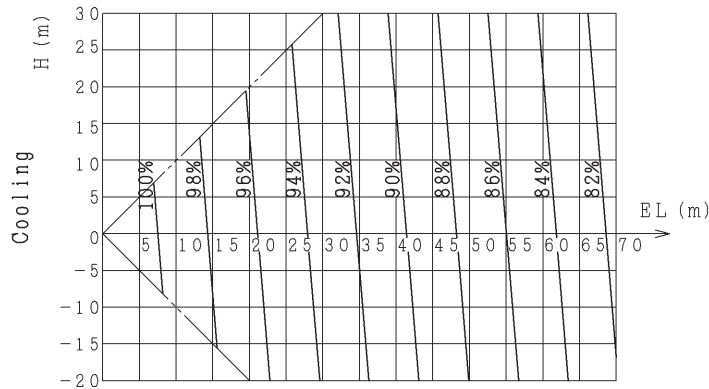
● RAS-3HVRNS



● RAS-4HVRNS



● RAS-5HVRNS



**Correction Factor for Heating Capacity According to Piping Length**

The heating capacity should be corrected according to the following formula:

$$HCA = HC \times F$$

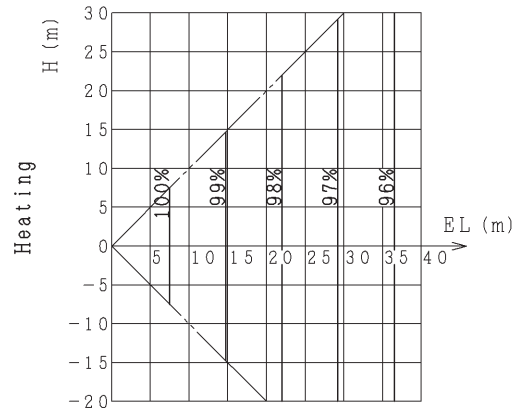
HCA: Actual Corrected Heating Capacity (kW)

HC: Heating Capacity in the Performance Table (kW)

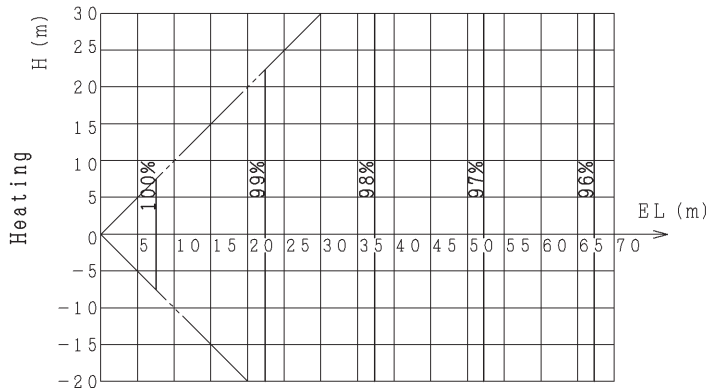
F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the following figure.

● RAS-3HVRNS



● RAS-4HVRNS



● RAS-5HVRNS

