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	RPI-6.0FSN1SQ
Indoor Unit Power Supply		AC 1φ, 220-240V/50Hz			
Combined Outdoor Unit Model		RAS-3HVRN	RAS-4HVRN	RAS-5HVRN	RAS-6HVRN
Nominal Cooling	kW	7.1	10.0	12.5	14.7
Capacity	kcal/h	6,100	8,600	10,750	12,600
	Btu/h	24,200	34,100	42,700	50,200
Nominal Heating	kW	8.0	11.2	14.0	16.0
Capacity	kcal/h	6,880	9,600	12,000	13,800
	Btu/h	27,300	38,100	47,600	54,600
Sound Pressure Level (Overall A Scale) (Hi/Me/Lo)					
120Pa Setting	dB	46/44/40	48/45/41	49/46/43	53/49/45
70Pa Setting	dB	45/43/39	47/44/40	48/45/42	52/48/44
Outer Dimensions					
Height	mm	350	350	350	350
	(in.)	(13-3/4)	(13-3/4)	(13-3/4)	(13-3/4)
Width	mm	1,076	1,076	1,300	1,300
	(in.)	(42-3/8)	(42-3/8)	(51-3/16)	(51-3/16)
Depth	mm	800	800	800	800
	(in.)	(31-1/2)	(31-1/2)	(31-1/2)	(31-1/2)
Net Weight	kg	52	57	61	63
	(lbs.)	(115)	(126)	(134)	(139)
Refrigerant		R410A (Nitrogen-Charged for Corrosion-Resistance)			
Indoor Fan					
Air Flow Rate (Hi/Me/Lo)					
120Pa Setting	m^3/min.	29/26/20	36/33/25	47/43/34	56/50/40
	(ℓ/s)	(484/433/333)	(600/550/417)	(783/717/567)	(933/833/667)
70Pa Setting	m^3/min.	29/26/20	36/29/25	47/39/36	56/48/42
	(ℓ/s)	(484/433/333)	(600/483/417)	(783/650/600)	(933/800/700)
External Pressure (*2)	Pa	120 (70)	120 (70)	120 (70)	120 (70)
Motor	W	250	300	500	550
Connections		Flare-Nut Connection (with Flare Nuts)			
Refrigerant Piping					
Liquid Line	mm	φ9.53	φ9.53	φ9.53	φ9.53
	(in.)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	φ15.88	φ15.88	φ15.88	φ15.88 or φ19.05 (*1)
	(in.)	(5/8)	(5/8)	(5/8)	(5/8) or (3/4)
Condensate Drain		VP25	VP25	VP25	VP25
Approximate Packing Measurement	m^3	0.49	0.49	0.573	0.573

(*1): When the pipe size of φ19.05 is used, apply the reducer (field-supplied) to fit the φ15.88 pipe for indoor unit, branch pipe kit connection.

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 (*2) 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-3HVRN	RAS-4HVRN	RAS-5HVRN	RAS-6HVRN
Power Supply		AC 1ϕ, 220-240V/50Hz, 220V/60Hz			AC 1ϕ, 240V/50Hz
Nominal Cooling	kW	7.1	10.0	12.5	14.7
Capacity	kcal/h	6,100	8,600	10,750	12,600
	Btu/h	24,200	34,100	42,700	50,200
Nominal Heating	kW	8.0	11.2	14.0	16.0
Capacity	kcal/h	6,880	9,600	12,000	13,800
	Btu/h	27,300	38,100	47,600	54,600
Cabinet		Synthetic Resin Paint Baked on Galvanized Steel Plate			
Sound Pressure Level					
Cool (Night Shift)/Heat	dB (A)	43(39)/45	45(41)/47	47(43)/49	48(44)/50
Outer Dimensions					
Height	mm	800	1,240	1,240	1,240
	(in.)	(31-1/2)	(48-13/16)	(48-13/16)	(48-13/16)
Width	mm	850	950	950	950
	(in.)	(33-7/16)	(37-3/8)	(37-3/8)	(37-3/8)
Depth	mm	315	315	315	315
	(in.)	(12-7/16)	(12-7/16)	(12-7/16)	(12-7/16)
Net Weight	kg	60	95	97	97
	(lbs.)	(132)	(210)	(214)	(214)
Refrigerant		R410A			
Flow Control		Micro-Computer Control Expansion Valve			
Compressor		Hermetic (Scroll)			
Model		2YC45BXD	E305AHD	E405AHD	E405AHD
Quantity		1	1	1	1
Motor Output (Pole)	kW	1.38 (4)	2.2 (4)	3.0 (4)	3.0 (4)
Heat Exchanger		Multi-Pass Cross-Finned Tube			
Condenser Fan		Propeller Fan			
Quantity		1	2	2	2
Air Flow Rate	m^3/min.	45	80	90	90
	(cfm)	(1,589)	(2,824)	(3,177)	(3,177)
Motor Output (Pole)	kW	0.05(8)	0.03(8) + 0.05(8)	0.05(8) + 0.07(8)	0.05(8) + 0.07(8)
Refrigerant Piping		Flare-Nut Connection (with Flare Nuts)			
Liquid Line	mm	ϕ9.53	ϕ9.53	ϕ9.53	ϕ9.53
	(in.)	(3/8)	(3/8)	(3/8)	(3/8)
Gas Line	mm	ϕ15.88	ϕ15.88	ϕ15.88	ϕ15.88 or ϕ19.05 (*1)
	(in.)	(5/8)	(5/8)	(5/8)	(5/8) or (3/4)
Refrigerant Charge	kg	2.4	3.6	3.6	3.6
Approximate Packing Measurement	m^3	0.34	0.55	0.55	0.55

(*1): When the pipe size of ϕ19.05 is used, apply the reducer (field-supplied) to fit the ϕ15.88 pipe for indoor unit, branch pipe kit connection.

NOTES:

1. 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)

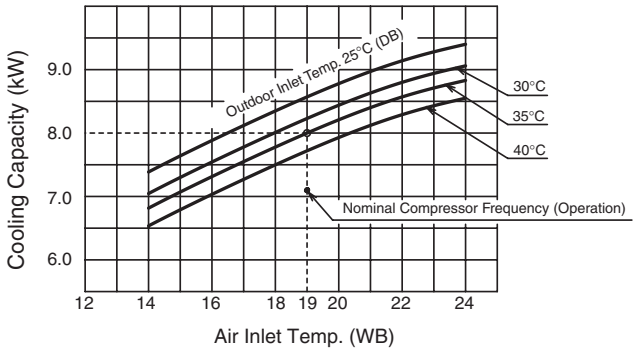
   Heating Operation Conditions
   - Indoor Air Inlet Temperature: 20°C DB (68°F DB)
   - Outdoor Air Inlet Temperature: 7°C DB (45°F DB) / 6°C WB (43°F WB)

   Piping Length: 7.5 Meters Piping Lift: 0 Meter
2. 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.
3. The above data is based on the 4-Way Cassette Type indoor units. <RCI-**FSN>
   (In case of 6HP, the data is based on the In-the-Ceiling Type indoor unit single connection. <RPI-6.0FSN1SQ>)

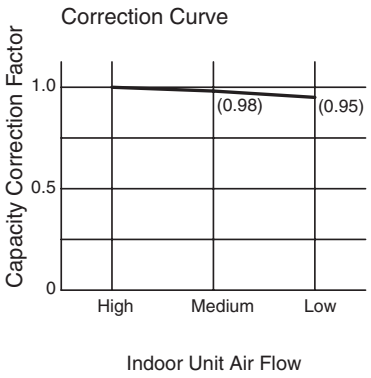
4.3 Cooling Capacity

- Cooling

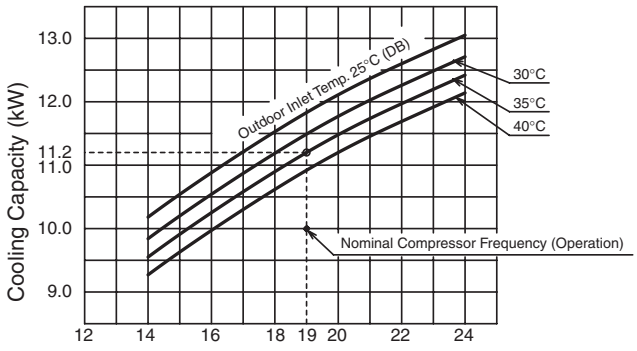
RAS-3HVRN
Cooling Capacity Curve



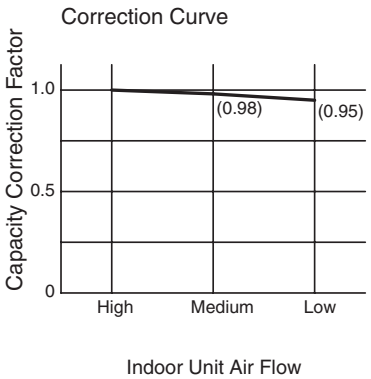
Correction Curve



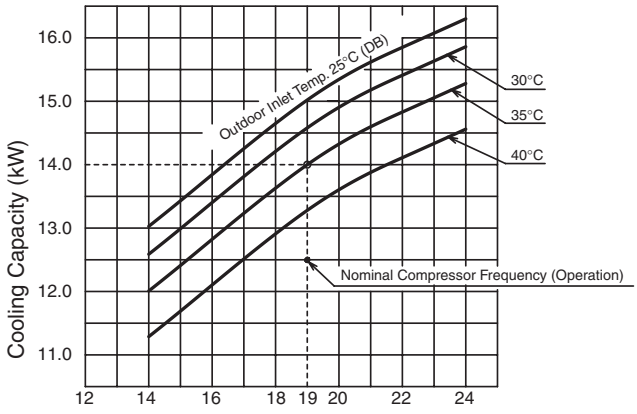
RAS-4HVRN
Cooling Capacity Curve



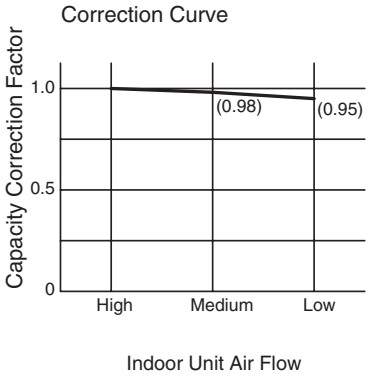
Correction Curve



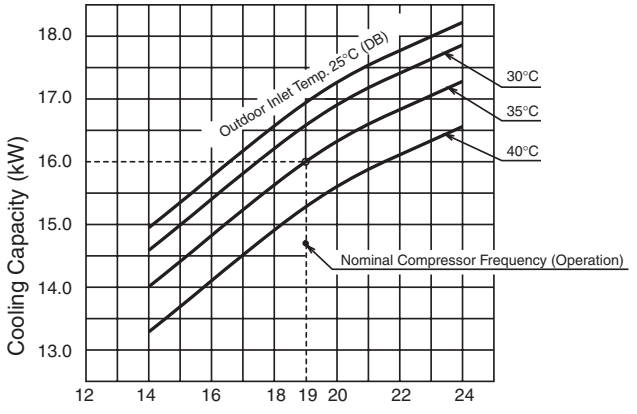
RAS-5HVRN
Cooling Capacity Curve



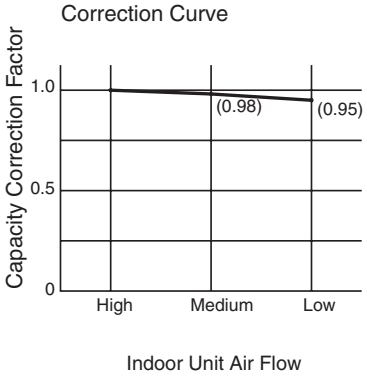
Correction Curve



RAS-6HVRN
Cooling Capacity Curve



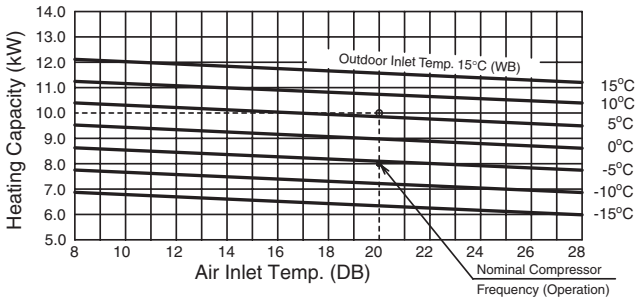
Correction Curve



4.4 Heating Capacity

● Heating

RAS-3HVRN
Heating Capacity Curve



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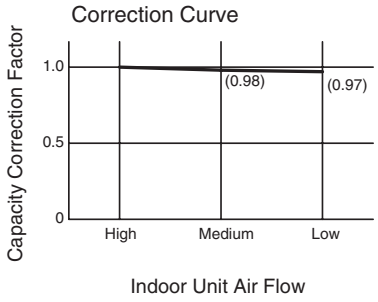
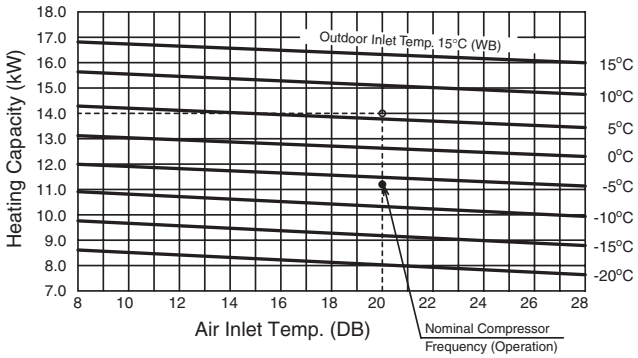
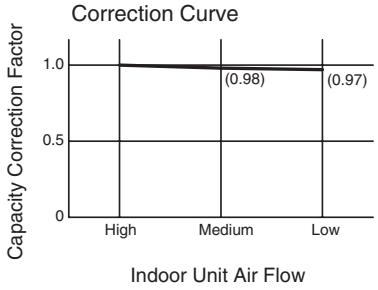


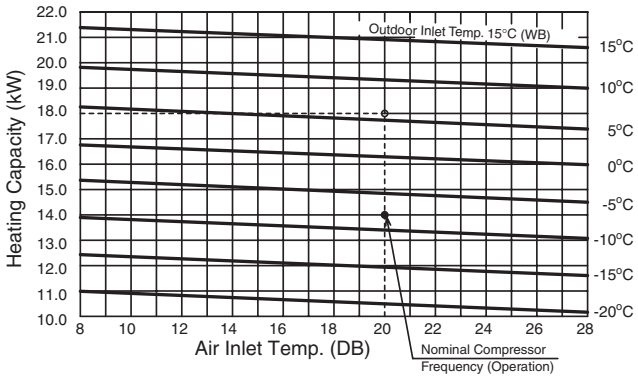
RAS-4HVRN
Heating Capacity Curve



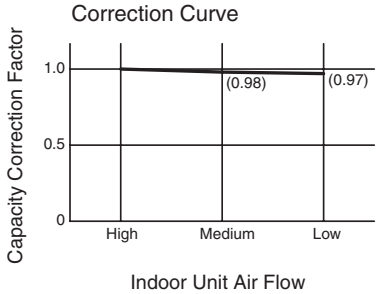
Correction Curve



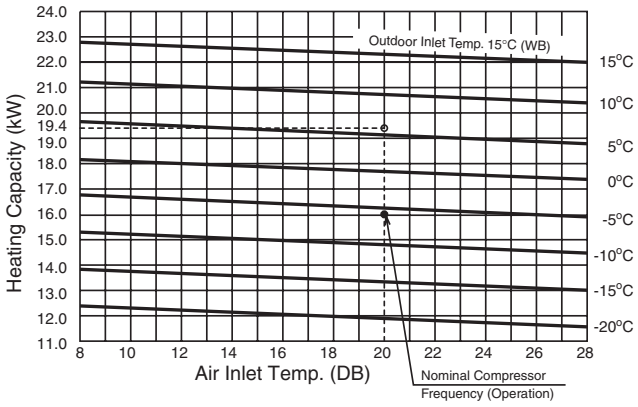
RAS-5HVRN
Heating Capacity Curve



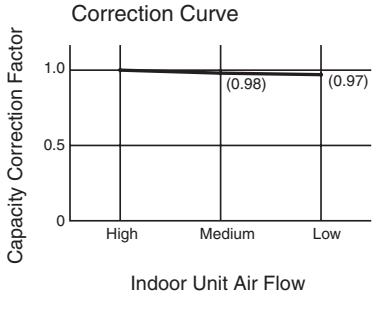
Correction Curve



RAS-6HVRN
Heating Capacity Curve



Correction Curve



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=CCxF

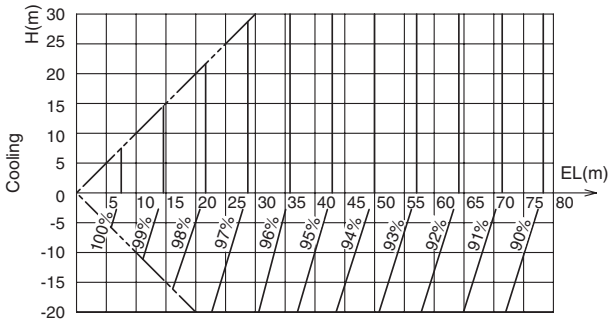
CCA: Actual Corrected Cooling Capacity (kW)

CC: Cooling Capacity in the Performance Table (kW)

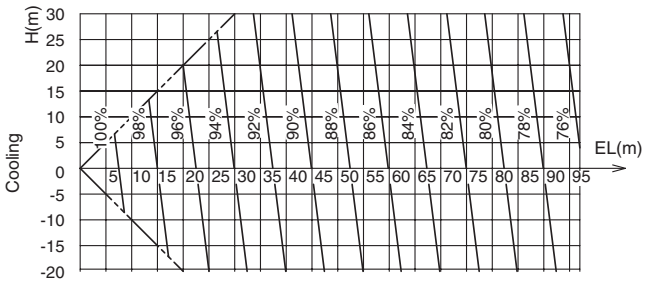
F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the following figure.

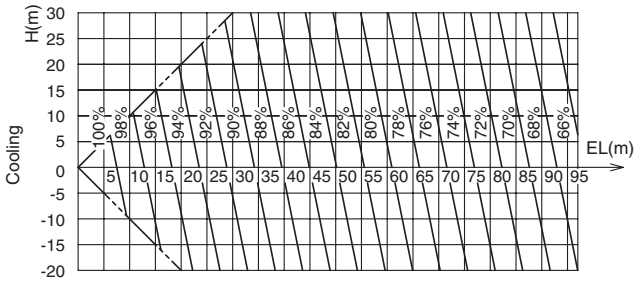
● RAS-3HVRN



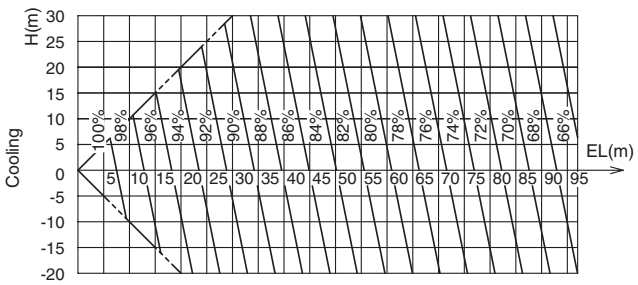
● RAS-4HVRN



● RAS-5HVRN



● RAS-6HVRN



Correction Factor for Heating Capacity According to Piping Length

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

HCA=HCxF

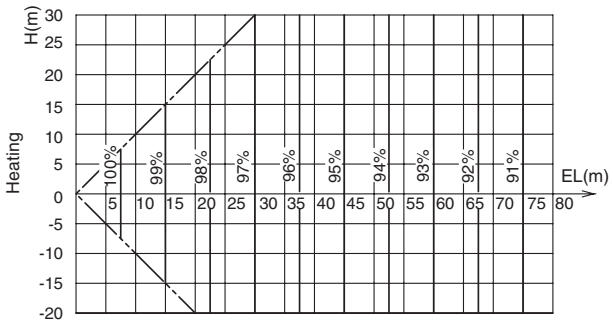
HCA: Actual Corrected Heating Capacity (kW)

HC: Heating Capacity in the Performance Table (kW)

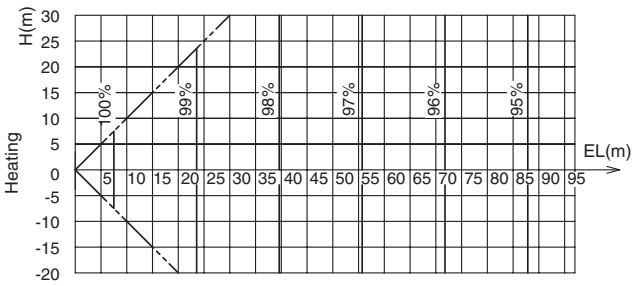
F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the following figure.

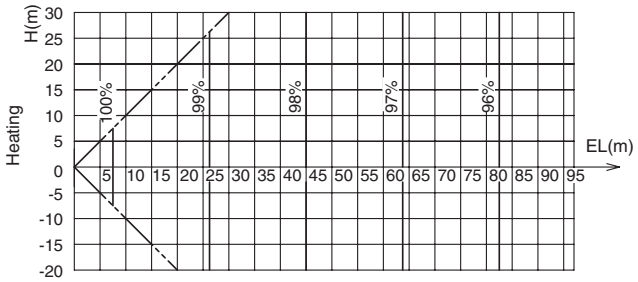
● RAS-3HVRN



● RAS-4HVRN



● RAS-5HVRN



● RAS-6HVRN