

Coral

FOCUSED ON APPLICATION HVAC



Unit information		
Chiller Model	CA1-120-4210	
Width:	2,250.00 mm	88.58 in
Length:	3,600.00 mm	141.73 in
Height:	2,460.00 mm	96.85 in
Shipping Weight:	4,120.00 kg	9,083.04 lb
Operating Weight:	4,170.00 kg	9,193.28 lb
Capacity Control	Slide Valve	
Refrigerant:	R134a	
Refrigerant Charge (Ckt1 / Ckt2):	140.00 kg	---
Starting Control:	Y-Δ	

Performance Information (Cooling Conditions)		
** Cooling Capacity:	430.00 kW	122.38 TR
** Entering Water Temp:	12.00 °C	53.60 °F
** Leaving Water Temp:	7.00 °C	44.60 °F
Ambient Temperature (DB):	35.00 °C	95.00 °F
Design Water Flow	74.00 m³/h	325.81 GPM
Input Power (Electrical):	133.90 kW	
IPLV/NPLV:	4.27 (W/W)	14.59 (Btu/W.h)
COP:	3.21 (W/W)	10.96 EER (Btu/W.h)

Water-Side Heat Exchanger Information		
Fluid Type:	Water	
Nozzle Type:	Victaulic Coupling	
Water Volume:	70.78 L	18.70 gal
Heat Exchanger Type:	Flooded Shell-and-Tube	
Fouling Factor:	0.018 m²·K/kW	0.1021 ft²·F/Btu
Nozzle Size(DN):	150.00 mm	6.00 in
Water Pressure Drop:	70.00 kPa	23.42 ft CA
Design Pressure of Water Side (Max):	1.00 MPa	145.04 psi

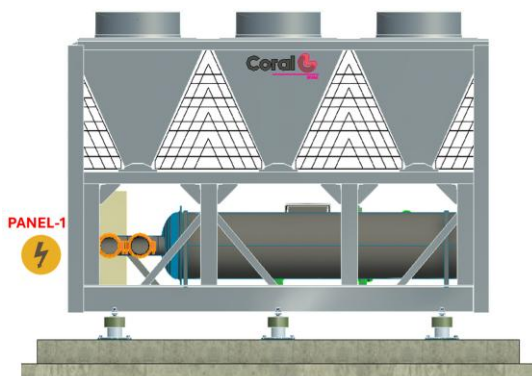
Electrical Connections		
Amperage	Electrical Circuit 1	Electrical Circuit 2
Maximum Operating Current (MCA):	268.00 A	---
Maximum Overcurrent Protection (MOCP):	400.00 A	---

Compressor Information		
Brand:	Bitzer	
Model:	CSH8583-160Y-40D	
Compressor Type:	Semi-Hermetic Screw	
Maximum Compressor Current:	236.00 A	
Quantity:	1 Piece/s	
Oil Type (per compressor):	BSE170	668.70 oz
Capacity Regulating Range:	25% - 100.0 %	

Air-Side Heat Exchanger Information		
Type:	Fin-and-Tube	
Fan Quantity:	6 Units	
Air Flow	147,000.00 m³/h	86,520.82 CFM
Fan Power Input	2.20 kW/unit	13.20 kW Total

Electrical Information		
Power Supply:	460V / 3 Ph / 60 Hz	
Voltage Range:	440 V	480 V
Rating Current (A):	188.00 A	
Max. Starting Current (A):	371.00 A	
Maximum Operating Current (A)	268.00 A	

Electrical Panel	Electrical Circuit 1	Electrical Circuit 2
Electrical Connection Point:	Panel E-1	N/A



- * Garantía de 2 años en partes y compresores
- * Resortes antivibratorios

- * Refrigerante HFC, libre de cloro, ODP = 0
- * Conexiones de tubería ranurada tipo Victaulic

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IPLV/NPLV Points (SI)

Load %	Cooling Capacity	Input Power	Cooling	Cooling COP	Evap. WPD	DBT	EEWT	ELWT
100	430.00 kW	133.90 kW	1.0949 kW/TR	3.21 W/W	70.00 kPa	35.00 °C	12.00 °C	7.00 °C
75	323.00 kW	81.60 kW	0.8883 kW/TR	3.96 W/W	70.00 kPa	27.00 °C	10.75 °C	7.00 °C
50	215.00 kW	46.20 kW	0.7555 kW/TR	4.65 W/W	70.00 kPa	19.00 °C	9.50 °C	7.00 °C
25	108.00 kW	26.70 kW	0.8692 kW/TR	4.04 W/W	70.00 kPa	13.00 °C	8.25 °C	7.00 °C

$IPLV/NPLV = 0.01 \cdot A + 0.42 \cdot B + 0.45 \cdot C + 0.12 \cdot D = 4.27 \text{ (W/W)}$

A=EER At 100%; B=EER At 75%; C=EER At 50%; D=EER At 25%;

Performance calculations are in accordance with AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI).

IPLV/NPLV Points (IP)

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Evap. WPD	DBT	EEWT	ELWT
100	122.38 TR	133.90 kW	1.0949 kW/TR	10.97 (Btu/W.h)	23.42 ft CA	95.00 °F	53.60 °F	44.60 °F
75	91.93 TR	81.60 kW	0.8883 kW/TR	13.52 (Btu/W.h)	23.42 ft CA	80.60 °F	51.35 °F	44.60 °F
50	61.19 TR	46.20 kW	0.7555 kW/TR	15.89 (Btu/W.h)	23.42 ft CA	66.20 °F	49.10 °F	44.60 °F
25	30.74 TR	26.70 kW	0.8692 kW/TR	13.81 (Btu/W.h)	23.42 ft CA	55.40 °F	46.85 °F	44.60 °F

$IPLV/NPLV = 0.01 \cdot A + 0.42 \cdot B + 0.45 \cdot C + 0.12 \cdot D = 14.59 \text{ EER (Btu/w)}$

A=EER At 100%; B=EER At 75%; C=EER At 50%; D=EER At 25%;

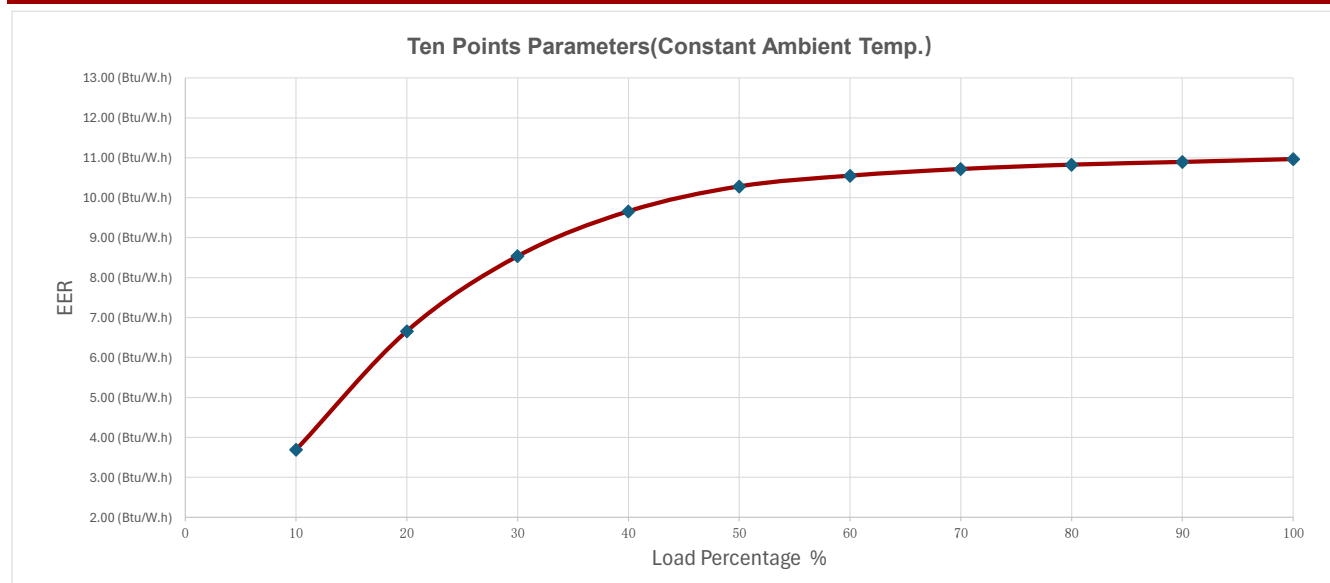
Performance calculations are in accordance with AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI).

Ten Points Parameters(Constant Ambient Temp.)

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Evap. WPD	DBT	FLOW RATE	ELWT
100	122.38 TR	133.90 kW	1.0949 kW/TR	10.97 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
90	110.14 TR	121.30 kW	1.1020 kW/TR	10.90 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
80	97.90 TR	108.50 kW	1.1090 kW/TR	10.83 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
70	85.66 TR	95.90 kW	1.1202 kW/TR	10.72 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
60	73.43 TR	83.50 kW	1.1379 kW/TR	10.55 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
50	61.19 TR	71.40 kW	1.1676 kW/TR	10.28 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
40	48.95 TR	60.80 kW	1.2429 kW/TR	9.66 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
30	36.71 TR	51.60 kW	1.4064 kW/TR	8.54 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
20	24.48 TR	44.10 kW	1.6184 kW/TR	6.66 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
10	12.24 TR	39.80 kW	2.9211 kW/TR	3.69 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C

For single COMP chiller, the 10% and 20% load are out of running range, so the data is only for reference; For double COMP chiller, the 10% load are out of running range, so the data is only for reference

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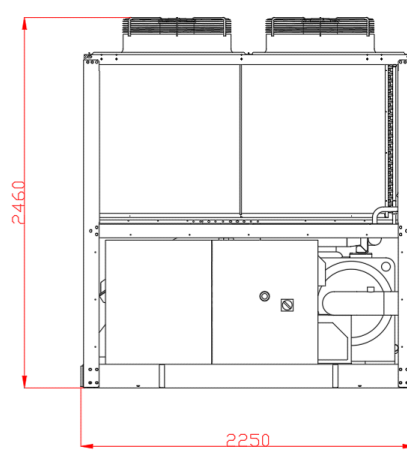
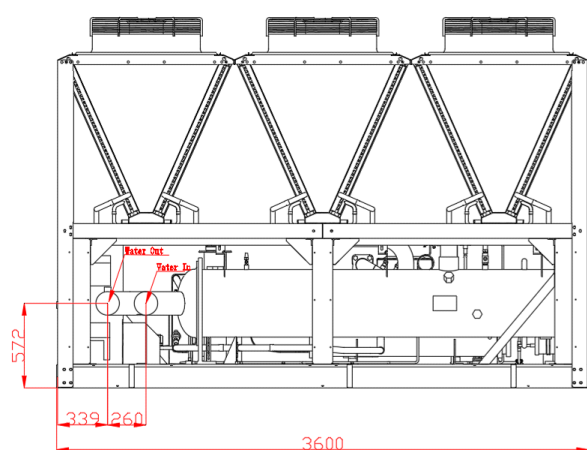
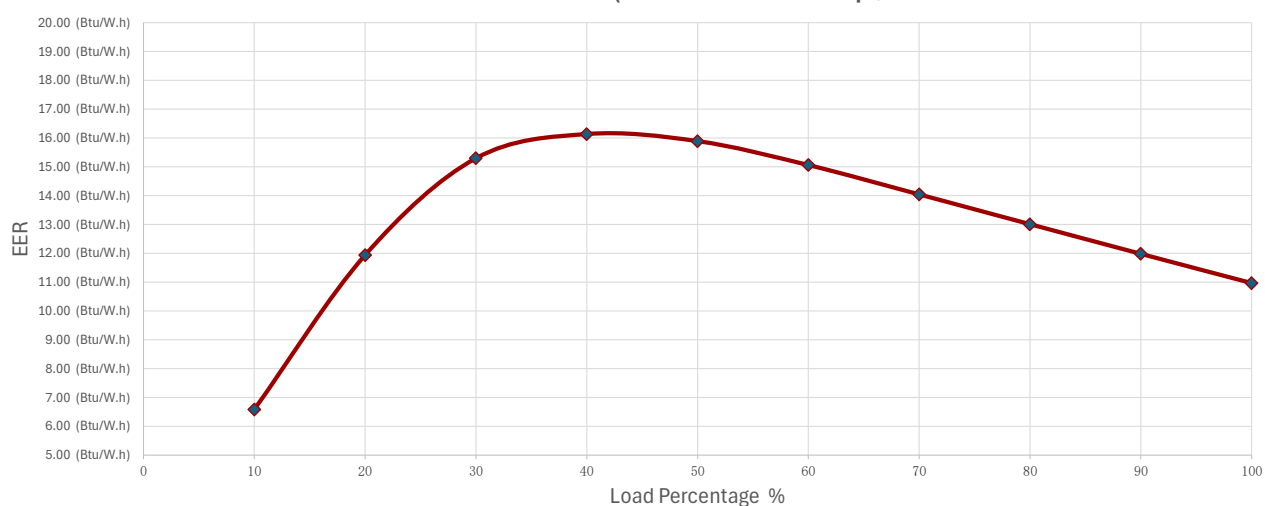
Ten Points Parameters(Variable Ambient Temp.)

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Evap. WPD	DBT	FLOW RATE	ELWT
100	122.38 TR	133.90 kW	1.0949 kW/TR	10.97 (Btu/W.h)	23.42 ft CA	35.00 °C	325.81 GPM	7.00 °C
90	110.14 TR	110.30 kW	1.0021 kW/TR	11.98 (Btu/W.h)	23.42 ft CA	31.80 °C	325.81 GPM	7.00 °C
80	97.90 TR	90.30 kW	0.9230 kW/TR	13.01 (Btu/W.h)	23.42 ft CA	28.60 °C	325.81 GPM	7.00 °C
70	85.66 TR	73.20 kW	0.8551 kW/TR	14.04 (Btu/W.h)	23.42 ft CA	25.40 °C	325.81 GPM	7.00 °C
60	73.43 TR	58.50 kW	0.7972 kW/TR	15.06 (Btu/W.h)	23.42 ft CA	22.20 °C	325.81 GPM	7.00 °C
50	61.19 TR	46.20 kW	0.7555 kW/TR	15.89 (Btu/W.h)	23.42 ft CA	19.00 °C	325.81 GPM	7.00 °C
40	48.95 TR	36.40 kW	0.7441 kW/TR	16.14 (Btu/W.h)	23.42 ft CA	15.80 °C	325.81 GPM	7.00 °C
30	36.71 TR	28.80 kW	0.7850 kW/TR	15.30 (Btu/W.h)	23.42 ft CA	13.00 °C	325.81 GPM	7.00 °C
20	24.48 TR	24.60 kW	1.0057 kW/TR	11.94 (Btu/W.h)	23.42 ft CA	13.00 °C	325.81 GPM	7.00 °C
10	12.24 TR	22.3	1.8234 kW/TR	6.59 (Btu/W.h)	23.42 ft CA	13.00 °C	325.81 GPM	7.00 °C

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Ten Points Parameters(Variable Ambient Temp.)



Dimension Model: CA1-120-4210

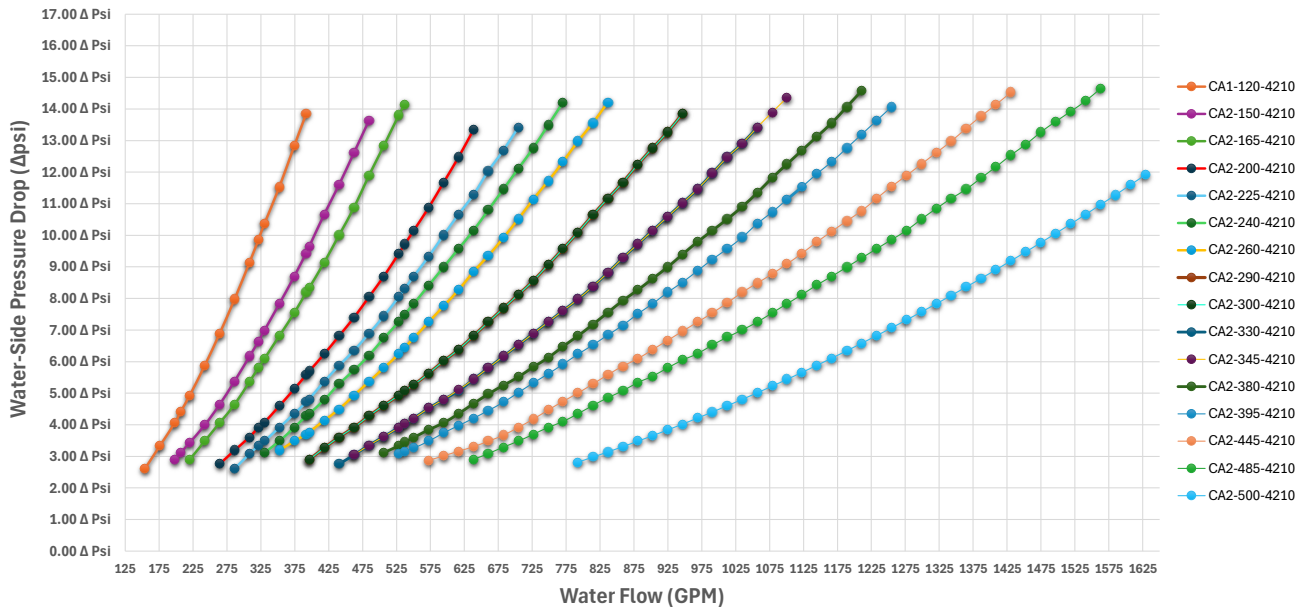
Length
3,600.00 mm

Width
2,250.00 mm

Height
2,460.00 mm

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Water Pressure Drop Curve IP (Chiller Coral)



CA1-120-4210

Cooling Capacity:	430.00 kW	122.38 TR
Chilled Water Flow:	74.00 m ³ /h	325.81 GPM
Width:	2,250.00 mm	88.58 in
Length:	3,600.00 mm	141.73 in
Height:	2,460.00 mm	96.85 in
Fan Quantity:	6 Units	
Nozzle Size(DN):	150.00 mm	6.00 in
Operating Weight:	4,170.00 kg	9,193.28 lb