Coral

FOCUSED ON APPLICATION HVAC

Unit information

Chiller Model	CA2-445-4210	
Width:	2,250.00 mm	88.58 in
Length:	11,970.00 mm	471.26 in
Height:	2,520.00 mm	99.21 in
Shipping Weight:	11,630.00 kg	25,639.76 lb
Operating Weight:	11,820.00 kg	26,058.64 lb
Capacity Control	Slide Valve	
Refrigerant:	R134a	
Refrigerant Charge (Ckt1 / Ckt2):	275.00 kg	275.00 Kg
Starting Control:	Y-Δ	

Performance Information (Cooling Conditions)

** Cooling Capacity:	1,566.00 kW	445.68 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	269.40 m^3/h	1,186.13 GPM
Input Power (Electrical):	469.60 kW	
IPLV/NPLV:	4.60 (W/W)	15.69 (Btu/W.h)
COP:	3.33 (W/W)	11.37 EER (Btu/W.h)

Compressor Information

Brand:	Bitzer	
Model:	CSH9593-300Y-40D	
Compressor Type:	Semi-Hermetic Screw	
Maximum Compressor Current:	402.00 A	
Quantity:	2 Piece/s	
Oil Type (per compressor):	BSE170	1,055.90 oz
Capacity Regulating Range:	12.5% - 100%	

Water-Side Heat Exchanger Information

Fluid Type:	Water	
Nozzle Type:	Victaulic Coupling	
Water Volume:	286.00 L	75.56 gal
Heat Exchanger Type:	Flooded Shell-and-Tube	
Fouling Factor:	0.018 m^2.K/kW	0.1021 ft^2.F/Btu
Nozzle Size(DN):	200.00 mm	8.00 in
Water Pressure Drop:	72.00 kPa	24.09 ft CA
Design Pressure of Water Side (Max):	1.00 MPa	145.04 psi

Air-Side Heat Exchanger Information

Type:	Fin-and-Tube	
Fan Quantity:	20 Units	
Air Flow	450,000.00 m^3/h	264,859.65 CFM
Fan Power Input	2.20 kW/unit	44.00 kW Total

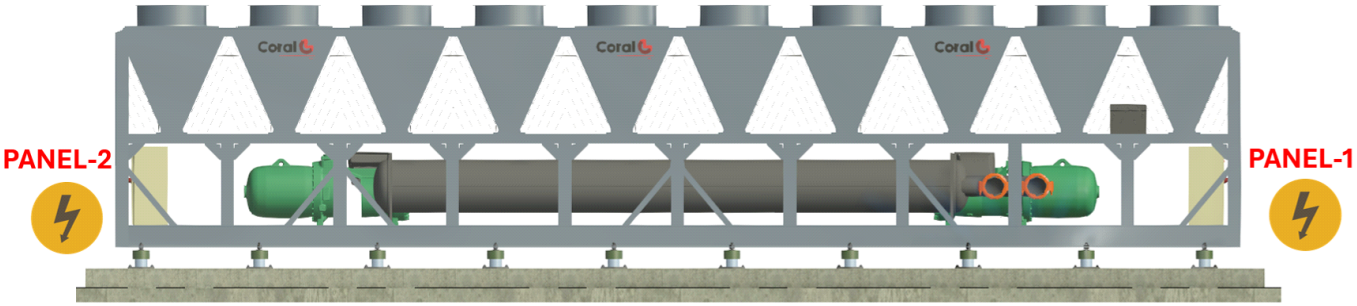
Electrical Connections

Amperage	Electrical Circuit 1	Electrical Circuit 2
Maximum Operating Current (MCA):	455.00 A	455.00 A
Maximum Overcurrent Protection (MOCP):	630.00 A	630.00 A

Electrical Information

Power Supply:	460V / 3 Ph / 60 Hz	
Voltage Range:	440 V	480 V
Rating Current (A):	660.00 A	
Max. Starting Current (A):	1,260.00 A	
Maximum Operating Current (A)	910.00 A	

Electrical Panel	Electrical Circuit 1	Electrical Circuit 2
Electrical Connection Point:	Panel E-1	Panel E-2



* Garantía de 2 años en partes y compresores
* Resortes antivibratorios
* Refrigerante HFC, libre de cloro, ODP = 0
* Conexiones de tubería ranurada tipo Victaulic

Coral

IPLV/NPLV Points (SI)

Load %	Cooling Capacity	Input Power	Cooling	Cooling COP	Evap. WPD	DBT	EEWT	ELWT
100	1,566.00 kW	469.60 kW	1.0544 kW/TR	3.33 W/W	72.00 kPa	35.00 °C	12.00 °C	7.00 °C
75	1,175.00 kW	285.90 kW	0.8555 kW/TR	4.11 W/W	72.00 kPa	27.00 °C	10.75 °C	7.00 °C
50	783.00 kW	162.40 kW	0.7292 kW/TR	4.82 W/W	72.00 kPa	19.00 °C	9.50 °C	7.00 °C
25	392.00 kW	70.60 kW	0.6332 kW/TR	5.55 W/W	72.00 kPa	13.00 °C	8.25 °C	7.00 °C

IPLV /NPLV =0.01*A+0.42*B+0.45*C+0.12*D= 4.60 (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	445.68 TR	469.60 kW	1.0544 kW/TR	11.39 (Btu/W.h)	24.09 ft CA	95.00 °F	53.60 °F	44.60 °F
75	334.40 TR	285.90 kW	0.8555 kW/TR	14.04 (Btu/W.h)	24.09 ft CA	80.60 °F	51.35 °F	44.60 °F
50	222.84 TR	162.40 kW	0.7292 kW/TR	16.47 (Btu/W.h)	24.09 ft CA	66.20 °F	49.10 °F	44.60 °F
25	111.56 TR	70.60 kW	0.6332 kW/TR	18.96 (Btu/W.h)	24.09 ft CA	55.40 °F	46.85 °F	44.60 °F

IPLV /NPLV =0.01*A+0.42*B+0.45*C+0.12*D= 15.69 EER (Btu/w)

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

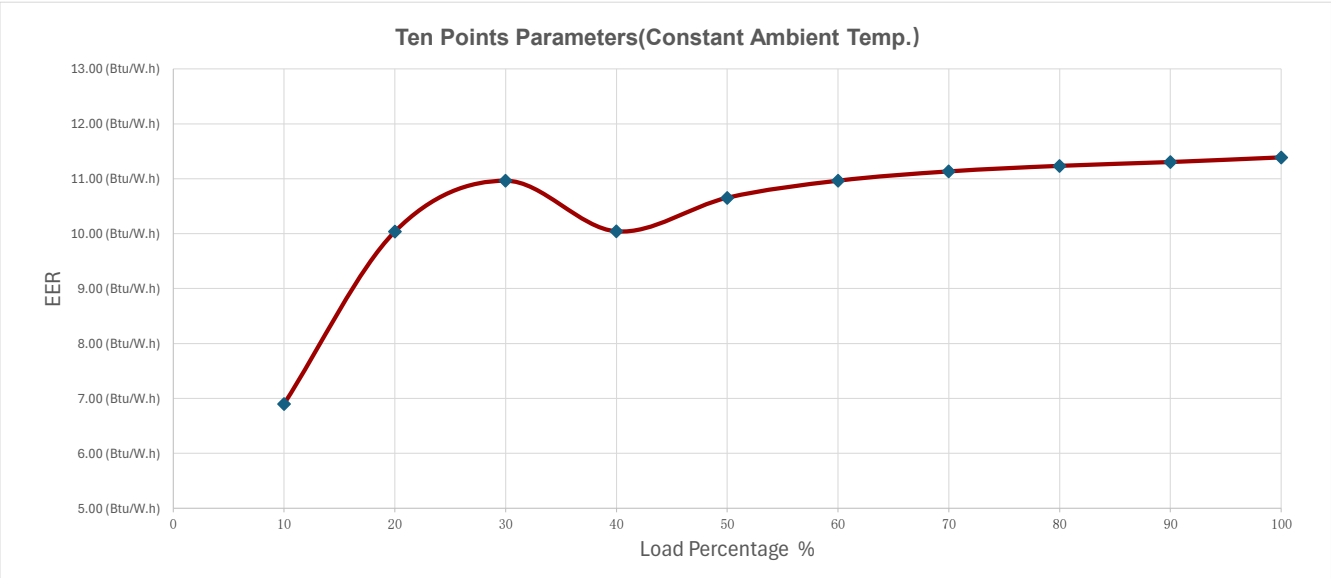
Performance calculations are in accordance with AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI).

Ten Points Parameters(Constant Ambient Temp.）

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Evap. WPD	DBT	FLOW RATE	ELWT
100	445.68 TR	469.60 kW	1.0544 kW/TR	11.39 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
90	401.00 TR	425.70 kW	1.0623 kW/TR	11.30 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
80	356.60 TR	380.90 kW	1.0688 kW/TR	11.23 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
70	311.92 TR	336.20 kW	1.0785 kW/TR	11.13 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
60	267.52 TR	292.80 kW	1.0952 kW/TR	10.96 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
50	222.84 TR	251.00 kW	1.1271 kW/TR	10.65 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
40	178.16 TR	212.90 kW	1.1958 kW/TR	10.04 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
30	133.76 TR	146.40 kW	1.0952 kW/TR	10.96 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
20	89.08 TR	106.50 kW	1.0738 kW/TR	10.04 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
10	44.68 TR	77.70 kW	1.5619 kW/TR	6.90 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 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

Chiller Model: CA2-445-4210

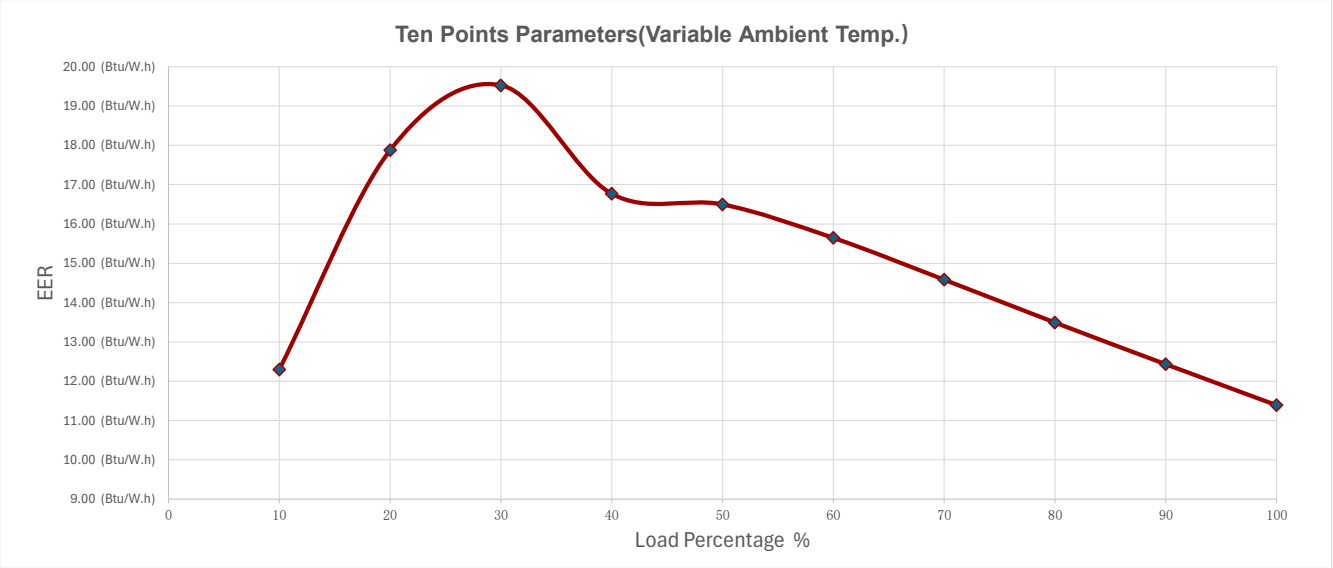


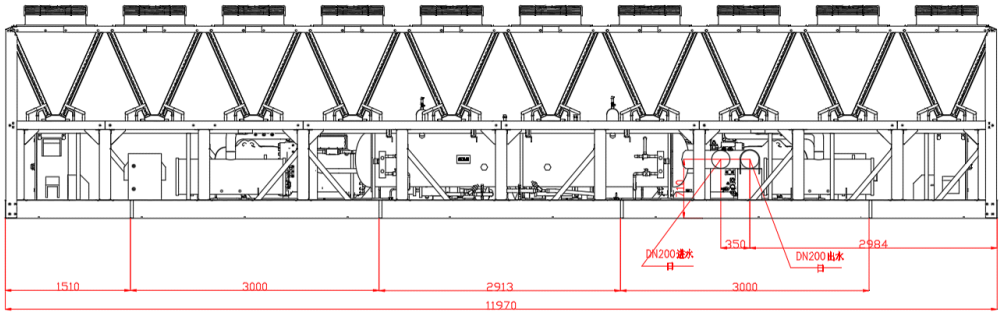
Ten Points Parameters(Variable Ambient Temp.)

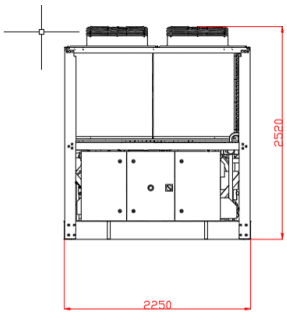
Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Evap. WPD	DBT	FLOW RATE	ELWT
100	445.68 TR	469.60 kW	1.0544 kW/TR	11.39 (Btu/W.h)	24.09 ft CA	35.00 °C	1,186.13 GPM	7.00 °C
90	401.00 TR	387.10 kW	0.9660 kW/TR	12.43 (Btu/W.h)	24.09 ft CA	31.80 °C	1,186.13 GPM	7.00 °C
80	356.60 TR	317.20 kW	0.8901 kW/TR	13.49 (Btu/W.h)	24.09 ft CA	28.60 °C	1,186.13 GPM	7.00 °C
70	311.92 TR	256.70 kW	0.8235 kW/TR	14.58 (Btu/W.h)	24.09 ft CA	25.40 °C	1,186.13 GPM	7.00 °C
60	267.52 TR	205.20 kW	0.7675 kW/TR	15.64 (Btu/W.h)	24.09 ft CA	22.20 °C	1,186.13 GPM	7.00 °C
50	222.84 TR	162.10 kW	0.7279 kW/TR	16.50 (Btu/W.h)	24.09 ft CA	19.00 °C	1,186.13 GPM	7.00 °C
40	178.16 TR	127.50 kW	0.7161 kW/TR	16.77 (Btu/W.h)	24.09 ft CA	15.80 °C	1,186.13 GPM	7.00 °C
30	133.76 TR	82.20 kW	0.6149 kW/TR	19.53 (Btu/W.h)	24.09 ft CA	13.00 °C	1,186.13 GPM	7.00 °C
20	89.08 TR	59.80 kW	0.6717 kW/TR	17.88 (Btu/W.h)	24.09 ft CA	13.00 °C	1,186.13 GPM	7.00 °C
10	44.68 TR	43.6	0.9764 kW/TR	12.30 (Btu/W.h)	24.09 ft CA	13.00 °C	1,186.13 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

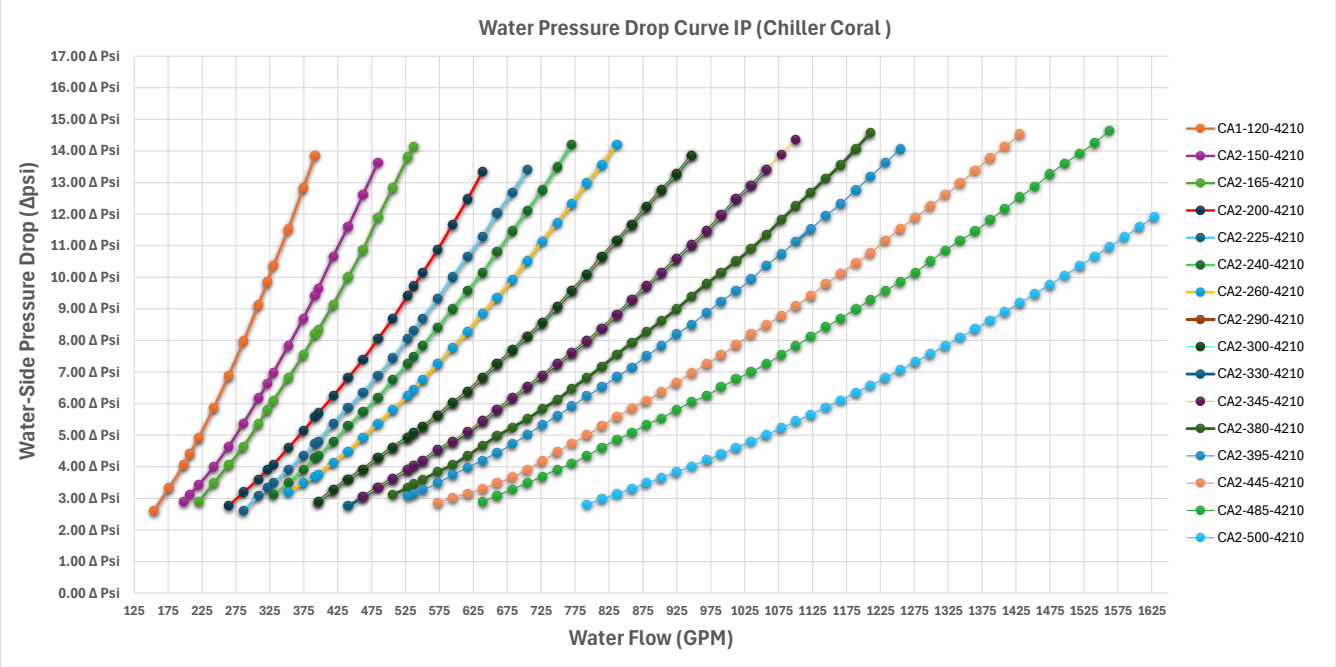
Chiller Model: CA2-445-4210

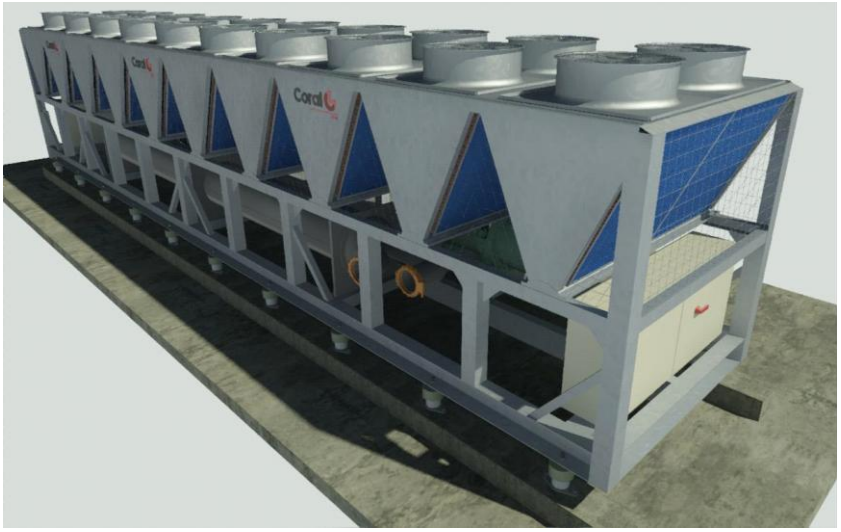






Dimension Model: CA2-445-4210	Length	Width	Height
	11,970.00 mm	2,250.00 mm	2,520.00 mm





CA2-445-4210

Cooling Capacity:	1,566.00 kW	445.68 TR
Chilled Water Flow:	269.40 m^3/h	1,186.13 GPM
Width:	2,250.00 mm	88.58 in
Length:	11,970.00 mm	471.26 in
Height:	2,520.00 mm	99.21 in
Fan Quantity:	20 Units	
Nozzle Size(DN):	200.00 mm	8.00 in
Operating Weight:	11,820.00 kg	26,058.64 lb