

Coral

FOCUSED ON APPLICATION HVAC



Unit information Water Cooled Screw Chiller		
Chiller Model:	CW2-500-4200	
Width:	1,800.10 mm	70.87 in
Length:	4,649.98 mm	183.07 in
Height:	2,210.05 mm	87.01 in
Shipping Weight:	7,400.00 kg	16,314.21 lb
Operating Weight:	8,200.00 kg	18,077.90 lb
Capacity Control:	Slide Valve	
Refrigerant:	R-134a	
Refrigerant Charge (Ckt1 / Ckt2):	195.00 kg	195.00 kg
Starting Control:	Y-Δ	

Performance Information (Cooling Conditions)		
Cooling Capacity:	1,758.43 kW	500.45 TR
Entering Water Temp (Evaporator):	12.22 °C	54.00 °F
Leaving Water Temp (Evaporator):	6.66 °C	43.99 °F
Entering Water Temp (Condenser):	29.44 °C	84.99 °F
Leaving Water Temp (Condenser):	35.00 °C	95.00 °F
Ambient Temperature (DB):	---	---
Evaporator Water Flow:	273.00 m³/h	1,201.98 GPM
Input Power (Electrical):	307.10 kW	
IPLV/NPLV:	7.42 (W/W)	25.34 (Btu/W.h)
COP:	5.73 (W/W)	19.56 EER (Btu/W.h)

Water-Side Heat Exchanger Information (Evaporator)		
Fluid Type:	Water	
Nozzle Type:	Victaulic Coupling	
Heat Exchanger Type:	Flooded Shell-and-Tube	
Fouling Factor:	0.018 m².K/kW	0.1021 ft².F/Btu
Nozzle Size (DN):	200.00 mm	8 in
Water Pressure Drop:	79.50 kPa	26.60 ft CA
Design Pressure of Water-Side:	1.00 MPa	145.03 psi
Passes:	2	
Pipe Wall Thickness:	1.15	
Flow Rate:	273.00 m³/h	1,201.98 GPM

Electrical Connections		
Amperage:	Electrical Circuit 1	Electrical Circuit 2
Maximum operating current (MCA):	-	----
Operating Current:	432.00 A	----
Maximum Overcurrent Protection (MOCP):	----	----

Options	
Bottom Channels	YES
Circuit Breaker	NO
Safety Valve	Single Safety Valves
Thermal Insulation:	20 mm
Shock Absorber	Rubber Vibration Isolator
Rubber Ball Cleaning Device	NO
Testing	Factory Self-Testing
RS485	YES
Control Cabinet IP rating	IP20
Harmonic Wave (Only Frequency)	---

Compressor Information	
Brand:	Bitzer
Model:	----
Compressor Type:	Semi-Hermetic Screw
Noise (dB):	94.50 dB
Maximum Compressor Current:	550.00 A
Quantity:	2 Units
Oil Type/Charge (per compressor):	BSE-170 31/29L
Capacity Regulating Range:	12.5%-100%

Water-Side Heat Exchanger Information (Condenser)		
Fluid Type:	Water	
Nozzle Type:	Victaulic Coupling	
Heat Exchanger Type:	Shell-and-Tube	
Fouling Factor:	0.044 m².K/kW	0.2497 ft².F/Btu
Nozzle Size (DN):	200.00 mm	8 in
Water Pressure Drop:	73.70 kPa	24.66 ft CA
Design Pressure of Water-Side:	1.00 MPa	145.03 psi
Passes:	2	
Pipe Wall Thickness:	1.15	
Flow Rate:	320.69 m³/h	1,411.96 GPM

Electrical Information	
Power Supply:	460 V / 3 Ph / 60 Hz
Voltage Range:	440 V 480 V
Rating Current (A):	432.00 A
Max. Starting Current (A):	910.00 A
Wiring Current (A):	550.00 A

Noise (Full Load)							
Frequency (Hz)	1/3rd octave	1st octave	63.00 Hz	125.00 Hz	250.00 Hz	500.00 Hz	1,000.00 Hz
Noise (dBA)	94.50 dBA	-	-	-	-	-	-

* Garantía de 2 años en partes y compresores

* Refrigerante HFC, libre de cloro, ODP = 0

* Aisladores antivibratorios de neopreno

* Conexiones de tubería ranurada tipo Victaulic

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Unit information Water Cooled Screw Chiller (page 1)

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IPLV/NPLV Points (SI)

Load %	Cooling Capacity	Input Power	Cooling	Cooling COP	Evap. WPD		EWT	LWT
100%	1,765.46 kW	304.60 kW	0.61 kW/TR	5.80 W/W	80.11 kPa	---	12.22 °C	6.67 °C
75%	1,322.34 kW	197.10 kW	0.52 kW/TR	6.72 W/W	80.40 kPa	---	10.83 °C	6.67 °C
50%	882.73 kW	108.40 kW	0.43 kW/TR	8.14 W/W	81.00 kPa	---	9.44 °C	6.67 °C
25%	439.61 kW	60.50 kW	0.48 kW/TR	7.30 W/W	81.30 kPa	---	8.06 °C	6.67 °C

Load %	Cooling Capacity	Input Power	Cooling	Cooling COP	Cond. WPD		EWT	LWT
100%	1,765.46 kW	304.60 kW	0.61 kW/TR	5.80 W/W	84.29 kPa	---	29.44 °C	34.61 °C
75%	1,322.34 kW	197.10 kW	0.52 kW/TR	6.72 W/W	86.38 kPa	---	23.89 °C	27.68 °C
50%	882.73 kW	108.40 kW	0.43 kW/TR	8.14 W/W	88.47 kPa	---	18.33 °C	20.81 °C
25%	439.61 kW	60.50 kW	0.48 kW/TR	7.30 W/W	88.77 kPa	---	18.33 °C	19.58 °C

Performance calculated in accordance with AHRI Standards 550/590 (I-P) and AHRI 551/591 (SI).

IPLV/NPLV Points (IP)

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Evap. WPD		EWT	LWT
100%	502.00 TR	304.60 kW	0.61 kW	19.79 Btu/W.h	26.80 ft CA	---	54.00°F	44.00°F
75%	376.00 TR	197.10 kW	0.52 kW	22.94 Btu/W.h	26.90 ft CA	---	51.50°F	44.00°F
50%	251.00 TR	108.40 kW	0.43 kW	27.80 Btu/W.h	27.10 ft CA	---	49.00°F	44.00°F
25%	125.00 TR	60.50 kW	0.48 kW	24.92 Btu/W.h	27.20 ft CA	---	46.50°F	44.00°F

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Cond WPD		EWT	LWT
100%	502.00 TR	304.60 kW	0.61 kW	19.79 Btu/W.h	28.20 ft CA	---	85.00°F	94.30°F
75%	376.00 TR	197.10 kW	0.52 kW	22.94 Btu/W.h	28.90 ft CA	---	75.00°F	81.83°F
50%	251.00 TR	108.40 kW	0.43 kW	27.80 Btu/W.h	29.60 ft CA	---	65.00°F	69.45°F
25%	125.00 TR	60.50 kW	0.48 kW	24.92 Btu/W.h	29.70 ft CA	---	65.00°F	67.25°F

NPLV (SI) (AHRI 550/590)

Load %	Cooling Capacity	Input Power	Cooling	Cooling COP	Evap. WPD		EWT	LWT
100%	1,758.50 kW	307.10 kW	0.61 kW/TR	5.73 W/W	79.51 kPa	---	12.22 °C	6.67 °C
75%	1,318.88 kW	198.20 kW	0.53 kW/TR	6.66 W/W	80.11 kPa	---	10.83 °C	6.67 °C
50%	879.25 kW	108.80 kW	0.43 kW/TR	8.08 W/W	80.40 kPa	---	9.44 °C	6.67 °C
25%	439.63 kW	60.50 kW	0.48 kW/TR	7.27 W/W	80.70 kPa	---	8.06 °C	6.67 °C

Load %	Cooling Capacity	Input Power	Cooling	Cooling COP	Cond. WPD		EWT	LWT
100%	1,758.50 kW	307.10 kW	0.61 kW/TR	5.73 W/W	73.83 kPa	---	29.44 °C	35.00 °C
75%	1,318.88 kW	198.20 kW	0.53 kW/TR	6.66 W/W	75.32 kPa	---	23.89 °C	27.97 °C
50%	879.25 kW	108.80 kW	0.43 kW/TR	8.08 W/W	77.42 kPa	---	18.33 °C	20.99 °C
25%	439.63 kW	60.50 kW	0.48 kW/TR	7.27 W/W	77.71 kPa	---	18.33 °C	19.68 °C

Performance calculated in accordance with AHRI Standards 550/590 (I-P) and AHRI 551/591 (SI).

NPLV (IP) (AHRI 550/590)

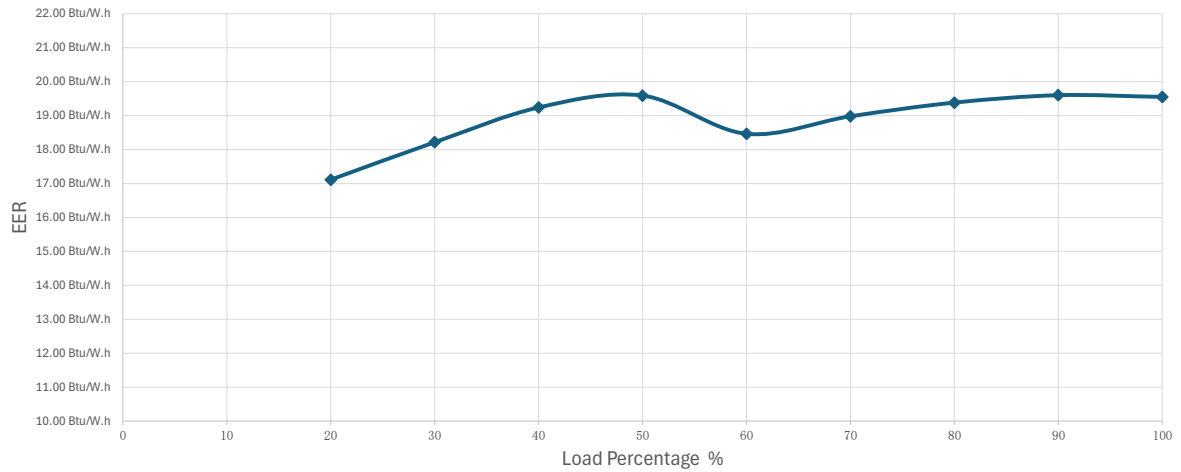
Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Evap. WPD		EWT	LWT
100%	500.00 TR	307.10 kW	0.61 kW/TR	19.56 Btu/W.h	26.60 ft CA	---	54.00°F	44.00°F
75%	375.00 TR	198.20 kW	0.53 kW/TR	22.73 Btu/W.h	26.80 ft CA	---	51.50°F	44.00°F
50%	250.00 TR	108.80 kW	0.44 kW/TR	27.61 Btu/W.h	26.90 ft CA	---	49.00°F	44.00°F
25%	125.00 TR	60.50 kW	0.48 kW/TR	24.82 Btu/W.h	27.00 ft CA	---	46.50°F	44.00°F

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	Cond WPD		EWT	LWT
100%	500.00 TR	307.10 kW	0.61 kW/TR	19.56 Btu/W.h	24.70 ft CA	---	85.00°F	95.00°F
75%	375.00 TR	198.20 kW	0.53 kW/TR	22.73 Btu/W.h	25.20 ft CA	---	75.00°F	82.34°F
50%	250.00 TR	108.80 kW	0.44 kW/TR	27.61 Btu/W.h	25.90 ft CA	---	65.00°F	69.78°F
25%	125.00 TR	60.50 kW	0.48 kW/TR	24.82 Btu/W.h	26.00 ft CA	---	65.00°F	67.42°F

Ten Points Parameters(Constant Condenser Entering Water Temperature)

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	EVAPORATOR (WPD --- Kpa)		Condenser (WPD --- Kpa)	
					EWT	ELWT	EEWT	ELWT
100	500.00 TR	307.10 kW	0.61 kW/TR	19.55 Btu/W.h	54.00°F	44.00°F	85.00°F	95.00°F
90	450.00 TR	275.70 kW	0.61 kW/TR	19.60 Btu/W.h	53.00°F	44.00°F	85.00°F	94.00°F
80	400.00 TR	247.80 kW	0.62 kW/TR	19.38 Btu/W.h	52.00°F	44.00°F	85.00°F	93.01°F
70	350.00 TR	221.50 kW	0.63 kW/TR	18.98 Btu/W.h	51.00°F	44.00°F	85.00°F	92.03°F
60	300.00 TR	195.10 kW	0.65 kW/TR	18.47 Btu/W.h	50.00°F	44.00°F	85.00°F	91.05°F
50	250.00 TR	153.20 kW	0.61 kW/TR	19.59 Btu/W.h	49.00°F	44.00°F	85.00°F	90.00°F
40	200.00 TR	124.80 kW	0.62 kW/TR	19.24 Btu/W.h	48.00°F	44.00°F	85.00°F	89.01°F
30	150.00 TR	98.90 kW	0.66 kW/TR	18.22 Btu/W.h	47.00°F	44.00°F	85.00°F	88.03°F
20	100.00 TR	70.20 kW	0.70 kW/TR	17.11 Btu/W.h	46.00 °F	44.00 °F	85.00 °F	87.04 °F
10	-	-	-	-	-	-	-	-

Ten Points Parameters(Constant Condenser Entering Water Temperature)



Ten Points Parameters(Variable Condenser Water Temperature)

Load %	Cooling Capacity	Input Power	Cooling	Cooling EER	EVAPORATOR (WPD --- Kpa)		Condenser (WPD --- Kpa)	
					EWT	ELWT	EEWT	ELWT
100	500.00 TR	307.00 kW	0.61 kW/TR	19.57 Btu/W.h	54.00°F	44.00°F	85.00°F	95.00°F
90	450.00 TR	258.00 kW	0.57 kW/TR	21.00 Btu/W.h	53.00°F	44.00°F	81.00°F	89.91°F
80	400.00 TR	216.00 kW	0.54 kW/TR	22.20 Btu/W.h	52.00°F	44.00°F	77.00°F	84.86°F
70	350.00 TR	181.00 kW	0.52 kW/TR	23.22 Btu/W.h	51.00°F	44.00°F	73.00°F	79.84°F
60	300.00 TR	149.00 kW	0.50 kW/TR	24.18 Btu/W.h	50.00°F	44.00°F	69.00°F	74.83°F
50	250.00 TR	109.00 kW	0.44 kW/TR	27.59 Btu/W.h	49.00°F	44.00°F	65.00°F	69.78°F
40	200.00 TR	90.00 kW	0.45 kW/TR	26.81 Btu/W.h	48.00°F	44.00°F	65.00°F	68.84°F
30	150.00 TR	71.00 kW	0.47 kW/TR	25.48 Btu/W.h	47.00°F	44.00°F	65.00°F	67.90°F
20	100.00 TR	50.00 kW	0.50 kW/TR	24.25 Btu/W.h	46.00 °F	44.00 °F	65.00 °F	66.94 °F
10	-	-	-	-	-	-	-	-

Ten Points Parameters(Variable Condenser Water Temperature)

