



Consultant: Fernando Hidalgo

Date: 6/7/23 10:01 AM

PRICE SUMMARY

Tag	Model	Location	Qty	Net
P-16-Tamaulipas-HGZ13	DCLCH46H45DDV		1	
Project Total				

Centrifugal - DCLC300MDDH465E - DCLCH46H45DDV [DCLC300MDDH465E]

Description	List	Net
Tag - P-16-TAMAULIPAS-HGZ 13 ▪ Manufacturer DBUSA ▪ Base Price of DCLCH46H45DDV [DCLC300MDDH465E]. ▪ BAC : BACnet MSTP ▪ Capacity (Tons): 250.00, Input power (kW): 125.18, Refrigerant: R-134a ▪ Evaporator: Fluid flow (USgpm): 600.6, EFT (°F): 55.0, LFT (°F): 45.0, Pressure drop (psi): 4.7, Fouling factor (h·ft²·°F/Btu): 0.00010, Fluid: Water ▪ Condenser: Fluid flow (USgpm): 678.7, EFT (°F): 85.0, LFT (°F): 95.0, Pressure drop (psi): 5.3, Fouling factor (h·ft²·°F/Btu): 0.00025, Fluid: Water		
Unit List / Net Adds		

Shipped loose items

Description	List	Net
EDPTUL : Water flow switch Differential pressure transducer with UL approval- EVAP		
Shipped Loose List / Net Adds		
Total List/Net Adds		
Net Total (1 count at 1.0 mult)		
Grand Total		



PERFORMANCE SUMMARY	Consultant: Fernando Hidalgo
	Date: 6/7/23 10:01 AM
	Tag: CHILLER DCLC M MY-1 Location:



Magnetic Centrifugal Compressor Water Cooled Package Chiller

Model #	DCLC300MDDH465E	Rating version	DCLC1.30
Quantity	1	Refrigerant	R-134a
Manufacturer	DBUSA	Design Type	AT3

Physical Specifications

Compressor(s)	TT400	Height (in)	82.28
Length (in)	153.27	Shipping weight (lb)	9453
Width (in)	48.82	Operating weight (lb)	10631
		Approx. refrigerant charge (lb)	944

Conditions of service

Percent of full load	100%	Unit power (kW)	125.2
Capacity (Tons)	250.0	Cooling Efficiency (kW/Ton)	0.5008
		NPLV.IP (kW/Ton)	0.3300

Evaporator

Model (Qty)	H46(1)
Number of passes	2
Fluid	Water
Fluid flow rate (USgpm)	600.6
Entering fluid temp. (°F)	55.00
Leaving fluid temp. (°F)	45.00
Fouling factor (h·ft ² ·°F/Btu)	0.000100
Pressure drop (psi/ft.H ₂ O)	4.69/10.8
Fluid freezing point (°F)	32.00

Condenser

Model (Qty)	H45(1)
Number of passes	2
Fluid	Water
Fluid flow rate (USgpm)	678.7
Entering fluid temp. (°F)	85.00
Leaving fluid temp. (°F)	95.00
Fouling factor (h·ft ² ·°F/Btu)	0.000250
Pressure drop (psi/ft.H ₂ O)	5.27/12.2
Fluid freezing point (°F)	32.00

Electrical characteristics

Unit power supply	460V/3/60	Unit Running Current (Amp)	214
Motor starter mode	VFD	Unit Min. Circuit Ampacity (Amp)	241
		Unit Max. Fuse Size (Amp)	350

Notes

- Meets ASHRAE 90.1-2016 Path A and Path B chiller minimum efficiency guidelines
- Certified in accordance with the AHRI Water Cooled Water-Chilling and Heat Pump Water-Heating Packages Using the Vapor Compression Cycle Certification Program, which is based on AHRI Standard-550/590(I-P) and AHRI Standard 551/591(SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org.

NPLV.IP Points

% Full load	Tons	Unit kW	kW/Ton	Evap.EFT (°F)	Evap.LFT (°F)	Evap Flow(USGp)	Evap PD(psi)	Cond.EFT (°F)	Cond.LFT (°F)	Cond Flow(USGp)	Cond PD(psi)	Type
100%	250.0	125.2	0.5008	55.00	45.00	600.6	4.69	85.00	95.00	679	5.272	Actual
75%	187.5	83.46	0.4453	52.50	45.00	600.6	4.78	74.97	82.51	679	5.294	Actual
50%	125.0	33.90	0.2712	50.00	45.00	600.6	4.86	65.00	69.85	679	5.476	Actual
25%	62.50	18.36	0.2944	47.50	45.00	600.6	4.97	65.00	67.40	679	5.476	Actual



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Part load points												
% Full load	Tons	Unit kW	kW/Ton	Evap.EFT (°F)	Evap.LFT (°F)	Evap Flow(USGp)	Evap PD(psi)	Cond.EFT (°F)	Cond.LFT (°F)	Cond Flow(USGp)	Cond PD(psi)	Type
100%	250.0	125.2	0.5008	55.00	45.00	600.6	4.69	85.00	95.00	679	5.272	Actual
90%	225.0	99.68	0.4431	54.00	45.00	600.6	4.71	80.99	90.20	679	5.194	Actual
80%	200.0	80.22	0.4010	53.00	45.00	600.6	4.75	76.98	85.02	679	5.259	Actual
70%	175.0	62.48	0.3572	52.00	45.00	600.6	4.79	72.96	79.94	679	5.329	Actual
60%	150.0	47.36	0.3160	51.00	45.00	600.6	4.83	68.95	74.82	679	5.401	Actual
50%	125.0	33.90	0.2712	50.00	45.00	600.6	4.86	65.00	69.85	679	5.476	Actual
40%	100.0	26.82	0.2680	49.00	45.00	600.6	4.89	65.00	68.84	679	5.476	Actual
30%	75.00	19.64	0.2613	48.00	45.00	600.6	4.92	65.00	67.88	679	5.476	Actual
20%	50.00	11.98	0.2401	47.00	45.00	600.6	4.95	65.00	66.91	679	5.476	Actual

Standard Equipment

Code compliance	Refrigerant Specialties
▪ Certified in accordance with the AHRI Water-Chilling Packages Using the Vapor Compression Cycle Certification Program ▪ ASME pressure vessel code	▪ Evaporator sight glass ▪ Replaceable filter core

Evaporator/Condenser

- | | |
|--|---|
| <ul style="list-style-type: none">▪ Cleanable integral fin copper tubes▪ Removable water headers▪ Victaulic groove water connections | <ul style="list-style-type: none">▪ Relief valves▪ Water flow switch (1nos) shipped loose for Evap.▪ Evaporator 25mm insulation |
|--|---|

Standard Electrical Components	Units
▪ Single power point connection ▪ Main power supply monitoring module. Protection on under or over voltage, phase reversal, phases losses and imbalance ▪ Transformer for control voltage	▪ One(1) year warranty limited to parts only ▪ R134a refrigerant charged ▪ Liquid isolation valves

Unit Protection

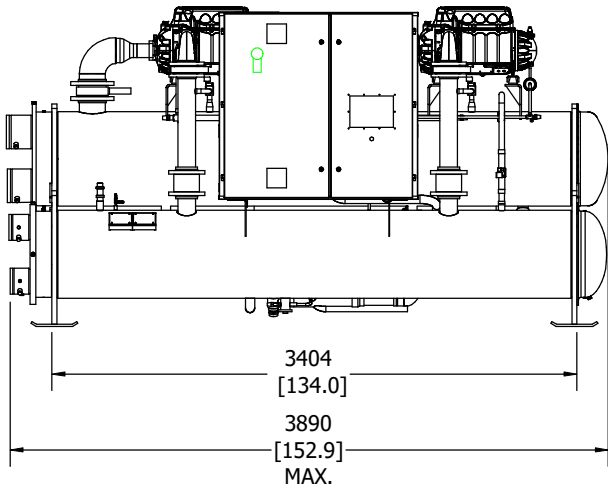
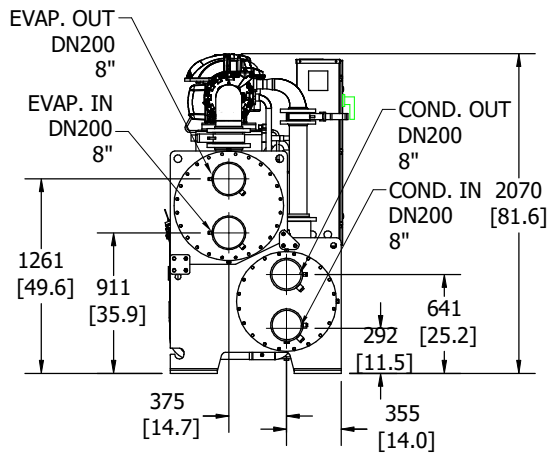
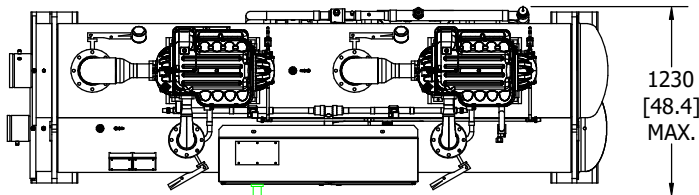
- | | |
|--|--|
| <ul style="list-style-type: none">▪ High condensing pressure and low evaporating pressure▪ Freeze protection▪ Motor over current▪ Chilled water flow loss | <ul style="list-style-type: none">▪ Sensor fault▪ Compressor high motor temperature▪ Compressor surge protection |
|--|--|

Controls	Compressor
▪ DB Director(DDC controller) with color touch screen graphical user interface. ▪ Built-in communication protocol(Modbus RS485) ▪ Programmable unit Operating Schedule ▪ Alarm histories ▪ Compressors rotation	▪ Semi-Hermetic centrifugal compressor ▪ Magnetic bearing oil free ▪ 2 Stage impeller ▪ Direct driven with permanent magnet DC motor ▪ VFD operation with inlet guide vane

Readouts Status

- | | |
|--|---|
| <ul style="list-style-type: none">▪ Leaving and entering chilled water temperature▪ Leaving and entering condenser water temperature▪ Evaporator and condenser refrigerant pressure▪ Percentage of motor current▪ Cavity Temperature | <ul style="list-style-type: none">▪ Compressor status▪ Water flow status▪ Unit Start/stop command▪ Compressors run hours |
|--|---|

CERTIFIED DRAWING



NOTES:

1. FLEXIBLE CONNECTOR IS NECESSARY BETWEEN THE WATER PIPE AND COOLER/CONDENSER, NEVER ADD ANY LOAD ON THE CHILLER.
2. THE FOUNDATION MUST BE HORIZONTAL AND FLAT. LEVELING TOLERANCE SHOULD BE WITHIN 3MM.
3. THE CHILLED WATER AND CONDENSER WATER SHOULD BE CLEANED AND NO CONTAMINANTS.
4. THE WATER FLOW SWITCH (IF APPLICABLE) SHOULD BE INSTALLED AT WATER OUTLET PIPING.
5. PLEASE REFER THE INSTALLATION MANUAL FOR INSTALLATION.
6. THE MINIMUM MAINTENANCE LENGTH FOR PULLING OUT THE TUBES FROM HEAT EXCHANGER IS 3500mm (137.8").
7. TOLERANCE FOR ALL DIMENSIONS $\pm 3/4"$ (19.1mm).
8. UNIT LAYOUT SHOWN IS FOR REFERENCE ONLY. SOME ORIENTATIONS MAY VARY.
9. ALL DIMENSIONS ARE IN mm (INCHES).MAJOR UNIT DIMENSIONS IN mm ARE ROUNDED TO CLOSEST ZERO.
10. THE RIGGING HOLES AT COMPRESSOR MOTOR AND VESSELS ARE USE FOR RIGGING THOSE COMPONENTS ONLY. PLEASE REFER TO INSTALLATION MANUAL FOR CHILLER RIGGING INSTRUCTIONS.
11. SPRING ISOLATOR IS AN OPTIONAL ITEM. SPRING ISOLATOR HEIGHT IS ABOUT 165mm.
12. VESSEL HEADER CONSTRUCTION CAN BE DOME HEAD OR FLAT HEAD.
13. MAIN INCOMING ISOLATOR HANDLE IS REMOVABLE DURING SHIPPING.
14. COMPRESSOR ISOLATION VALVE IS AN OPTIONAL ITEM.
15. ESTIMATED SHIPPING WEIGHT AND OPERATING WEIGHT REFER TO SPEC. REFER PACKING LIST FOR ACTUAL WEIGHT.

ALL DIMENSIONS ARE IN MILLIMETER-INCHES

DRAWN BY	DARIAN PACE	DATE	2/27/2024
DESIGNED BY	DARIAN PACE	DATE	2/27/2024
CHECKED BY		DATE	
APPROVED BY		DATE	

1.1 Update dimensional changes 6/24 DP

REV	DESCRIPTION	DATE	DRN BY
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LOCATION.

QTY. 4

MODEL DCLC300MFDH465E

PROJECT

TITLE

UNIT DIMENSIONAL

DRAWING NO 93909G-700 REV: 1.1

SCALE : N. T. S. SHEET 1 OF 1