



# AIR-COOLED SCROLL CHILLER

Form QTC3-NM1 (515)

035-24487-000

## QTC3055T - QTC3160T WITH BRAZED PLATE HEAT EXCHANGER STYLE B (60 HZ) 4-10 FAN 55 - 160 TON



LD18971a

### R-410A



Issue Date:  
May 20, 2015



# Design Conditions Datasheet

Unit Tag	Qty	Model No	Net Cooling Capacity (TR)	Nominal Voltage	Refrigerant Type
CH-10	1	QTC3070TSE46XFBSXXX	71.0	460-3-60	R410A

PIN:								
QTC3070TSE	46XFBSXXXH	XXBLXCXX44	XXXXXXXXHXXX	YXXXXXXXXXX	XXXXXXXXXXX			
....5...10	....5...20	....5...30	....5...40	....5...50	....5...60	....5...70	....5...80	....5...90


Evaporator Data		Evaporator Data (Cont.)		Performance Data	
EWT (°F)	54	Fluid Volume (USGAL)	5.4	EER (EER)	10.4
LWT (°F)	44	Min. Flow Rate (USGPM)	60	IPLV (EER)	16.1
Design Flow Rate (USGPM)	170.5	Max. Flow Rate (USGPM)	285		
Evap. Press. Drop (ft H2O)	11.1	Condenser Data		Physical Data	
Strainer Press. Drop (ft H2O)	2.8	Ambient Temp. Design (°F)	95	Rigging Wt. (lb)	3898
Ext. Kit Press. Drop (ft H2O)	0	Altitude (ft)	0	Operating Wt. (lb)	3943
Total Press. Drop (ft H2O)	14	User Min. Operating Air Temp. (°F)	41	Refrigerant Charge (lb)	101
Fluid	Water	User Max. Operating Air Temp. (°F)	100		
Fouling Factor (h.ft <sup>2</sup> .F/Btu)	0.0001	Compressor Type	Scroll - Hermetic		

Electrical Data				
Circuit	1	2	3	4
Compressor RLA	24 / 24 / 24	24 / 24 / 24		
Fan QTY/FLA (each)	2 / 4	2 / 4		
High LRA Current	145 / 145 / 145	145 / 145 / 145		

Single Point				
Min. Circuit Ampacity	169			
Recommended Fuse/CB Rating	175			
Max. Inverse Time CB Rating	175			
Max. Dual Element Fuse Size (A)	175			
Unit Short Circuit Withstand (STD)	5 [kA]			
Wire Lugs Per Phase	1			
Wire Range (Lug Size)	#6 - 500 kcmil			
Starter Type	Across The Line			
			Operating Condition Electrical Data	
			Compressor kW	75.5
			Total Fan kW	6.7
			Total kW	82.2

Notes:

Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Using 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](http://www.ahridirectory.org). Auxiliary components included in total KW - Oil heaters, Chiller controls. Auxiliary power is already included in the compressor and fan power





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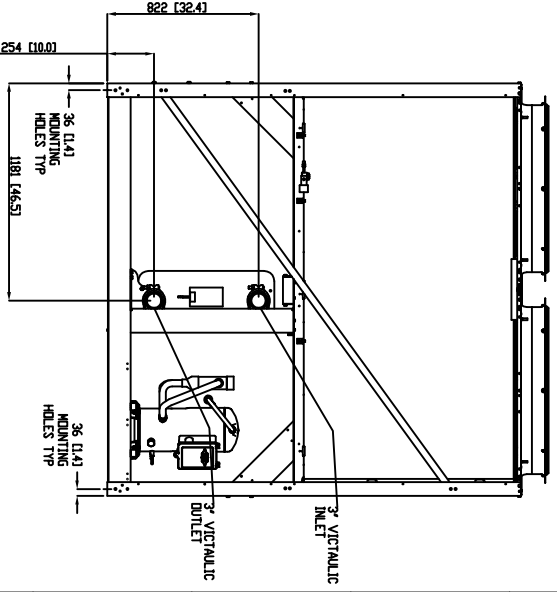
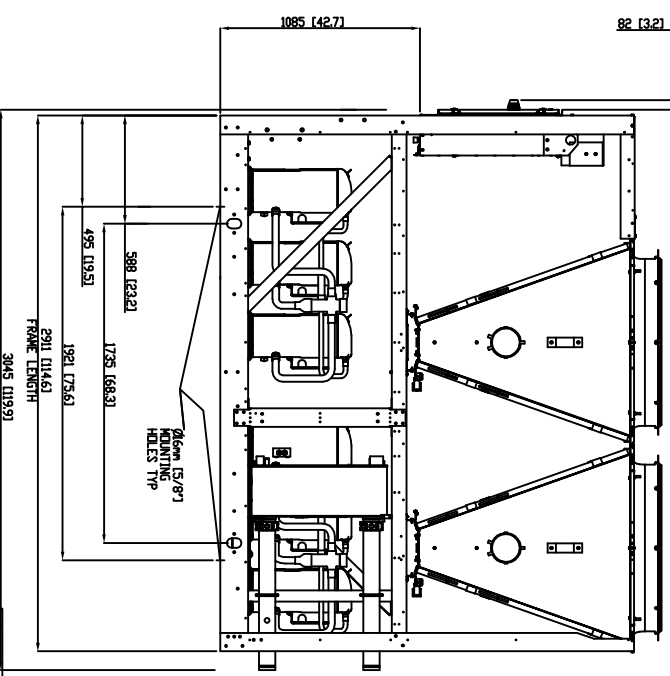
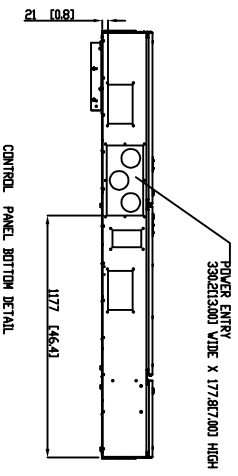
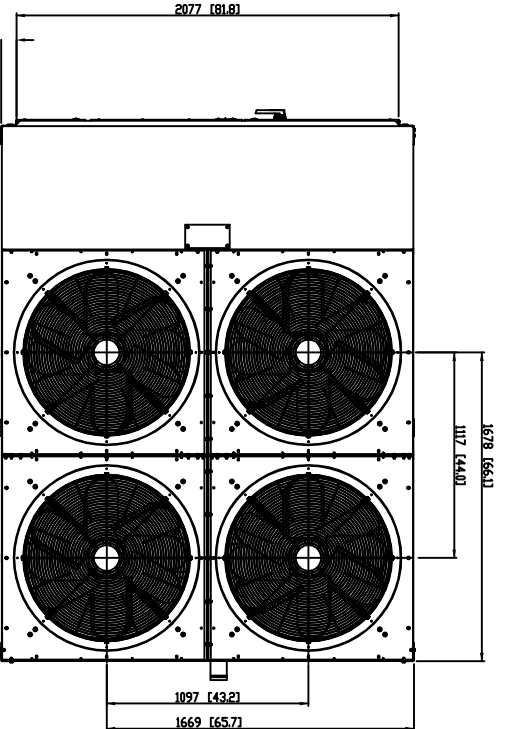
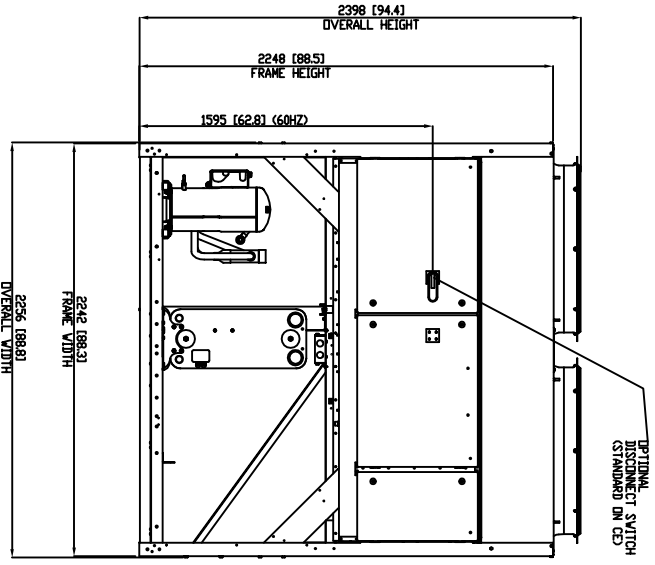
Part Load Rating Data				
Stage	Ambient (°F)	Capacity (TR)	Total kW	Unit Efficiency
1	95	71	82.2	10.4
2	88.1	62.8	63	12
3	80.4	53.7	46.1	14
4	70.5	42.1	31.5	16
5	59.6	29.2	18.9	18.5
6	55	14.4	9.1	19.1

Sound Power Levels										
Stage	Ambient (°F)	63	125	250	500	1K	2K	4K	8K	LWA
1	95	96	95	91	91	87	83	80	77	93
2	88.1	96	95	91	91	87	83	80	77	93
3	80.4	96	95	91	91	87	83	80	77	93
4	70.5	95	94	90	90	86	82	79	76	91
5	59.6	93	92	88	88	84	80	77	74	90
6	55	57	47	N/A	66	65	62	59	50	69

Note: Unit is equipped with Low Sound Fans.

Performance at AHRI Conditions					
Evaporator Data		Condenser Data		Performance Data	
EWT (°F)	54	Ambient Temp. (°F)	95	EER (EER)	10.4
LWT (°F)	44	Altitude (ft)	0	IPLV (EER)	16.1
Flow Rate (USGPM)	170.5			Net Cooling Capacity (TR)	71
Pressure Drop (ft H2O)	11.1				
Fluid	Water				
Fouling Factor (h.ft <sup>2</sup> .F/Btu)	0.0001				
Fluid Volume (USGAL)	5.4				

- NOTES:
1. PLACEMENT ON A LEVEL SURFACE FREE OF OBSTRUCTIONS (INCLUDING SNOW FOR WINTER OPERATION) OR AIR RE-CIRCULATION ENSURES RATED PERFORMANCE. RELIABLE OPERATION AND LEAKS OF REFRIGERANTS, SILENT RESTRICTIONS AND CLEARANCES. MINIMUM CLEARANCES MUST BE MAINTAINED AT ALL TIMES. REFRIGERANT LEAKS AND POSSIBLE DIMINISHED PERFORMANCE. UNIT CONTROLS WILL OPTIMIZE OPERATION WITHOUT MISUSE. HIGH PRESSURE SAFETY SHUTOUT. HOWEVER, THE SYSTEM DESIGNER MUST CONSIDER POTENTIAL PERFORMANCE DEGRADATION.
  2. RECOMMENDED MINIMUM CLEARANCES:
  111. REAR TO WALL - 1828mm(67")
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  113. CONTROL PANEL TO WALL - 1828mm(67")
  114. TOP - NO OBSTRUCTIONS ALLOWED.
  115. DISTANCE BETWEEN ADJACENT UNITS - 344mm(13 1/2")
  116. CLEARANCE FROM CENTER OF GRAVITY - REFER TO AVM REPORT.
  3. INSTALLING CONTRACTOR MUST INCLUDE VENT AND POUND ACCOMMODATIONS IN CHILLED WATER PIPING NEAR THE EVAPORATOR.
  4. NUMBER OF COMPRESSORS MAY VARY FROM DRAWING.
  5. OVERALL HEIGHT OF UNITS IS 2394.6mm(94.27") ON MONTEBERRY, MEXICO BUILDS.
  6. ALL UNITS IN MM (INCHES)



**QUANTECH**

REVISION	DATE	EC NUMBER	DRAWN BY	CHECKED BY	ENGINEERED BY	SCALE	NO. OF SHEETS	TOTAL SHEETS

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THIS DRAWING PERTAINS TO THE FOLLOWING MODELS:

QTC3070T
QTC3075T
QTC3085T

13 12 11 10 9 8 7 6 5 4 3 2 1

13 12 11 10 9 8 7 6 5 4 3 2 1