



# 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-3	1	QTC3085TSE46XFBSXXX	81.8	460-3-60	R410A

PIN:								
QTC3085TSE	46XFBSXXXH	XXBLXCXX44	XXXXXXXXHXXX	YAXXXXXXXXXX	AXXXXXXXXXXX			
....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)	8.8	EER (EER)	9.8
LWT (°F)	44	Min. Flow Rate (USGPM)	100	IPLV (EER)	15.7
Design Flow Rate (USGPM)	196.3	Max. Flow Rate (USGPM)	385		
Evap. Press. Drop (ft H2O)	6.8	Condenser Data		Physical Data	
Strainer Press. Drop (ft H2O)	3.7	Ambient Temp. Design (°F)	95	Rigging Wt. (lb)	4017
Ext. Kit Press. Drop (ft H2O)	0	Altitude (ft)	0	Operating Wt. (lb)	4090
Total Press. Drop (ft H2O)	10.5	User Min. Operating Air Temp. (°F)	41	Refrigerant Charge (lb)	114
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	27 / 27 / 27	27 / 27 / 27		
Fan QTY/FLA (each)	2 / 4	2 / 4		
High LRA Current	180 / 180 / 180	180 / 180 / 180		

Single Point				
Min. Circuit Ampacity	184			
Recommended Fuse/CB Rating	200			
Max. Inverse Time CB Rating	200			
Max. Dual Element Fuse Size (A)	200			
Unit Short Circuit Withstand (STD)	5 [kA]			
Wire Lugs Per Phase	1		Operating Condition Electrical Data	
Wire Range (Lug Size)	#6 - 500 kcmil		Compressor kW	93
Starter Type	Across The Line		Total Fan kW	6.7
			Total kW	99.7

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





# Design Conditions Datasheet

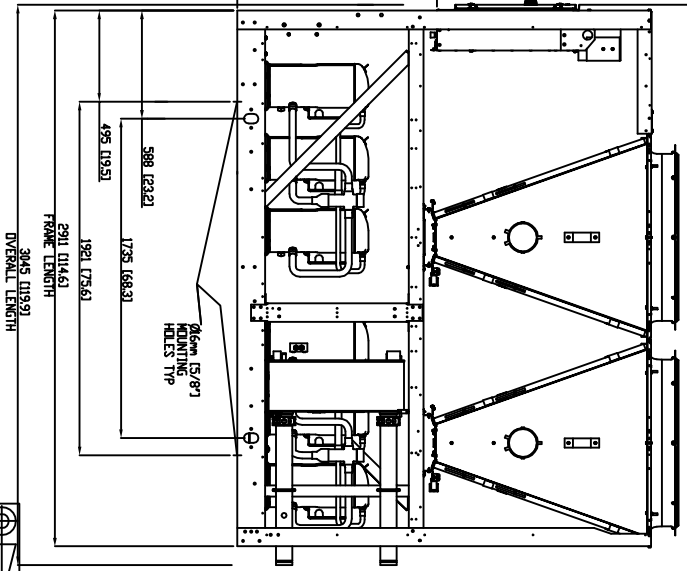
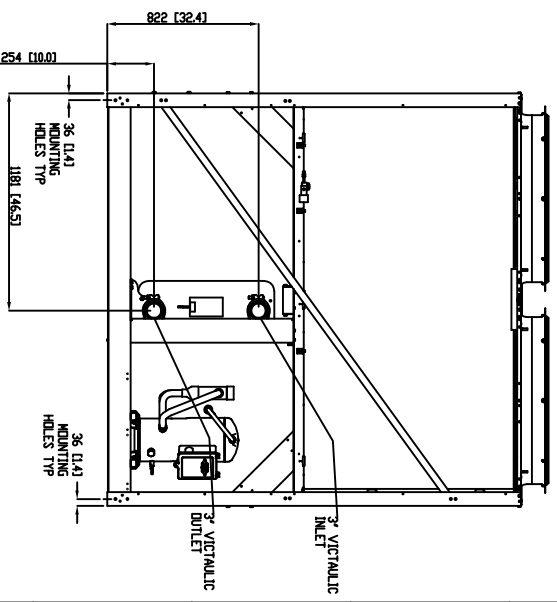
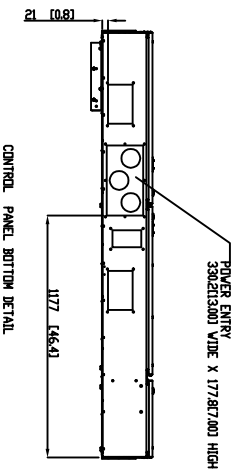
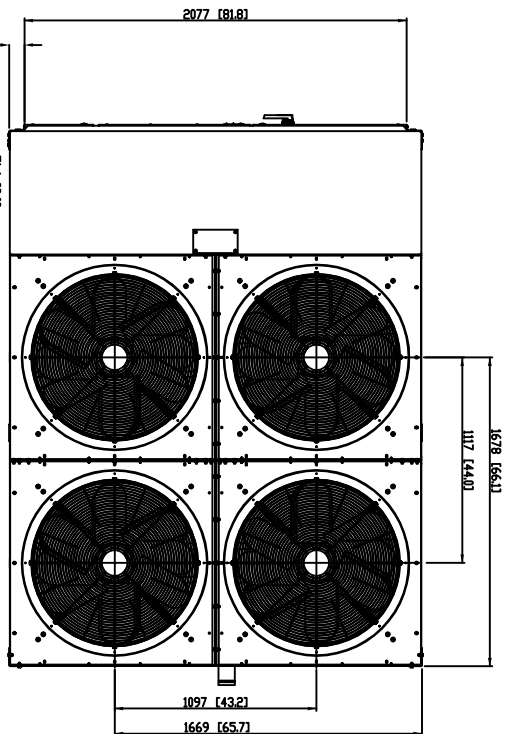
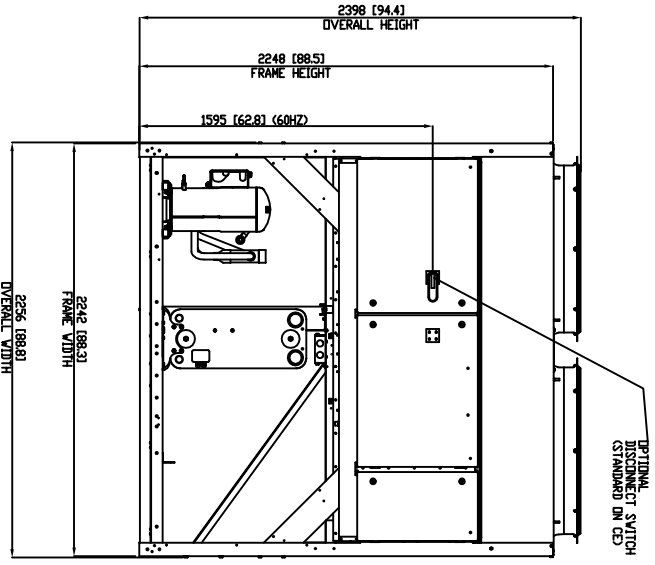
Part Load Rating Data				
Stage	Ambient (°F)	Capacity (TR)	Total kW	Unit Efficiency
1	95	81.8	99.7	9.8
2	88.2	72.6	76.5	11.4
3	80.7	62.2	55.4	13.5
4	71	49.1	38.5	15.3
5	59.4	33.3	21.8	18.3
6	55	16.4	10.3	19.1

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	88.2	96	95	91	91	87	83	80	77	93
3	80.7	96	95	91	91	87	83	80	77	93
4	71	96	95	91	91	87	83	80	77	93
5	59.4	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)	9.8
LWT (°F)	44	Altitude (ft)	0	IPLV (EER)	15.7
Flow Rate (USGPM)	196.3			Net Cooling Capacity (TR)	81.8
Pressure Drop (ft H2O)	6.8				
Fluid	Water				
Fouling Factor (h.ft <sup>2</sup> .F/Btu)	0.0001				
Fluid Volume (USGAL)	8.8				

- 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 PAINTWORK, SILEX RESTRICTIONS AND COMPRESSOR MINIMUM CLEARANCES MUST BE MAINTAINED AT ALL TIMES. THE UNIT SHOULD BE OPERATED AT ALL TIMES TO DIMINISHED PERFORMANCE. UNIT CONTROLS WILL OPTIMIZE OPERATION AND POSSIBLE WITHOUT MISTAKE HIGH PRESSURE SAFETY CUTOFF. HOWEVER, THE SYSTEM DESIGNER MUST CONSIDER POTENTIAL PERFORMANCE DEGRADATION.
  2. RECOMMENDED MINIMUM CLEARANCES:
  111. REAR TO WALL - 1828mm(67")
  112. REAR TO WALL - 1828mm(67")
  113. CONTROL PANEL TO WALL - 1828mm(67")
  114. TOP - NO OBSTRUCTIONS ALLOWED.
  115. DISTANCE BETWEEN ADJACENT UNITS - 944mm(37")
  116. CLEARANCE FROM WALL TO REFRIGERANT PIPING - REFER TO A/C 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)



**GUANANTECH**

HARD HOLE  
NO DOT SCALE

REVISION	DATE	EC NUMBER	DRAWN BY	CHECKED BY	ENGINEERED BY	SCALE

DESIGNED BY	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA
CHECKED BY	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA	DR. J. M. GARCIA
SCALE	1:100	1:100	1:100	1:100	1:100	1:100
SCALE	1:100	1:100	1:100	1:100	1:100	1:100

REV. NO.	A1	DATE	03-15-12
REV. BY	JMG	REV. DESCRIPTION	REVISED
REV. NO.		DATE	
REV. BY		REV. DESCRIPTION	

THIS DRAWING PERTAINS TO THE FOLLOWING MODELS:

QTC3070T
QTC3075T
QTC3085T

