

SUBMITTAL

Project

Chillers 2023

Date

lunes, 13 de marzo de 2023

General Contractor

yectos

Mechanical Contractor

Mechanical Engineer

Table Of Conte	nts
Project: Chillers 2023	03/16/2023
Prepared By:	10:44a. m.
Unit Report	3
Certified Drawing.	
Field Wiring Diagram	
Acoustic Summary	
Detailed Performance Report	11



Unit Report For Chiller 110 TR 460

 Project: Chillers 2023
 03/16/2023

 Prepared By:
 10:44a. m.

Unit Information

V-Ph-Hz
%
lb
lb
in
in
in

Accessories and Installed Options

Freeze Protection
Micro Channel
Single Point
Coil Trim Panels (Header side only)

Chiller Warranty Information (Note: for US & Canada only)

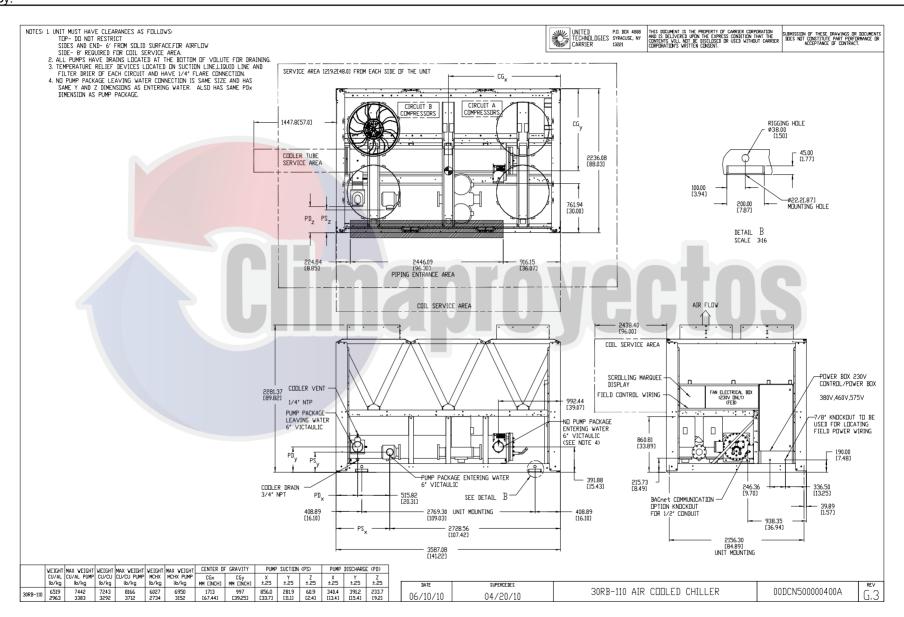
First Year - Parts Only (Standard)

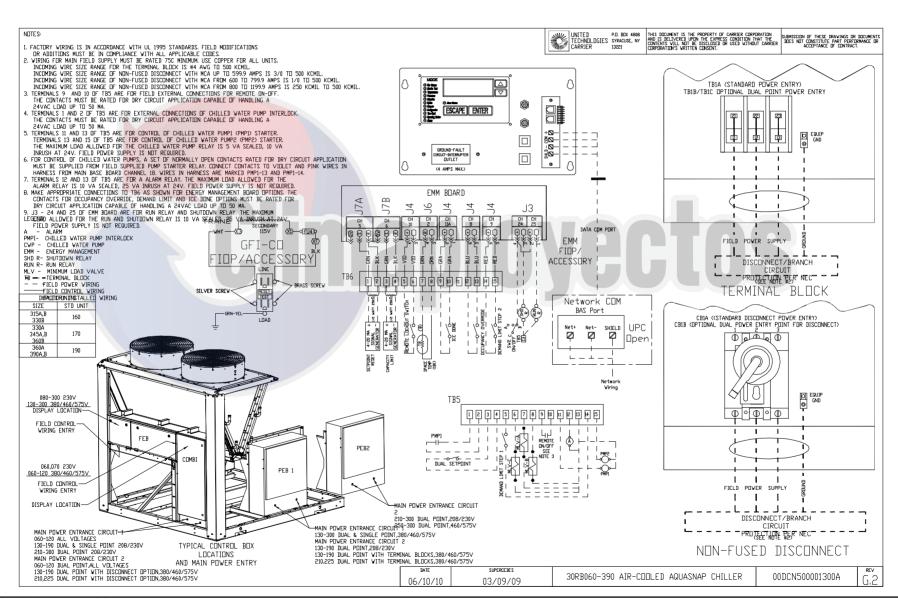
Ordering Information

Part Number	Description	Quantity
30RBX11064-L3	Packaged Chiller	1
	Base Unit	
	Freeze Protection	
	Micro Channel	
	Single Point	
	Coil Trim Panels (Header side only)	



Project: Chillers 2023 Prepared By:





Summary Performance Report For Chiller 110 TR 460

Project: Chillers 2023 03/16/2023
Prepared By: 03/16/2023
10:44a. m.





AquaSnap™ Air-Cooled Scroll Chiller



Unit Information

Tag Name: Chiller 110	TR 460	
Model Number: 30	RB110	
Quantity:	1	
Manufacturing Source: Charlotte, N	C USA	
ASHRAE 90.1: 2013/2016, 2010), 2007	
Refrigerant:F	R-410A	
Independent Refrigerant Circuits:	2	
Shipping Weight:	5652	lb
Operating Weight:	6027	lb
Refrigerant Weight (Circuit A):	40	lb
Refrigerant Weight (Circuit B):	51	lb
Unit Length:	142	in
Unit Width:	89	in
Unit Height:	90	in

Evaporator Information

Fluid Type:	Fresh Water	
Fouling Factor:	0.000100	(hr-sqft-F)/BTU
Leaving Temperature:	44.00	°F
Entering Temperature:	54.00	°F
Fluid Flow:	253.4	gpm
Pressure Drop:	8.88	ft H2O

Condenser Information

Altitude: 0.000	ft
Number of Fans: 6	1
Total Condenser Fan Air Flow:74,400	CFM
Entering Air Temperature: 95.0	°F

Integrated Pump Information

No Pump Selected

Performance Information

Cooling Capacity:	106.0	Tons
Total Compressor Power:	110.2	kW
Total Fan Motor Power:	15.48	kW
Total Unit Power (without pump):	125.7	kW
Efficiency (without pump) (EER):	10.12	BTU/Wh
IPLV:.IP:	13.91	BTU/Wh

Accessories and Installed Options

Freeze Protection
Micro Channel
Single Point
Coil Trim Panels (Header side only)

Electrical Information

Unit Voltage:	460-3-60	V-Ph-Hz
Connection Type:	Single Point	
Minimum Voltage:	414	Volts
Maximum Voltage:	506	Volts

	Electrical	Electrical
Amps	Circuit 1	Circuit 2
MCA	224.1	
MOCP	250.0	
ICF	432.1	
Rec Fuse Size	250.0	
		-

Sound power measured in accordance with ANSI/AHRI Standard 370-2015.



Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages 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.

Summary Performance Report For Chiller 110 TR 460

Project: Chillers 2023 03/16/2023
Prepared By: 10:44a. m.

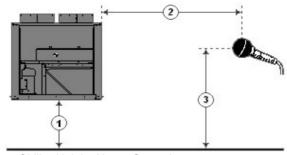


Summary Performance Report For Chiller 110 TR 460

Project: Chillers 2023 03/16/2023
Prepared By: 03/16/2023

Unit Parameters

Tag Name:	Chiller 110 TR 460	
Model Number:		
Condenser Type:	Air Cooled	
Compressor Type:	Scroll	
Chiller Nameplate Voltage:		V-P
Hz		
Quantity:	1	
Manufacturing Source:	Charlotte, NC USA	
Refrigerant:	R-410A	
Shipping Weight:		lb
Operating Weight:		lb
Refrigerant Weight (Circuit A):	40	lb
Refrigerant Weight (Circuit B):	51	lb
Unit Length:	142	in
Unit Width:		in
Unit Height:	90	in



- 1 Chiller Height Above Ground
- 2 Horizontal Distance From Chiller to Receiver
- 3 Receiver Height Above Ground (See Note 3)

Accessories and Installed Options

Freeze Protection
Micro Channel

Single Point
Coil Trim Panels (Header side only)

Acoustic Information

Table 1. A-Weighted Sound Power Levels (dB re 1 picowatt). See note #1.

Octave Band Center Frequency, Hz	31	63	125	250	50 0	1k	2k	4k	8k	Overall
100% Load		67	82	89	94	96	92	89	80	100
75% Load		68	80	87	93	97	93	89	80	100
50% Load		67	80	86	92	96	91	87	78	99
25% Load		66	80	85	90	94	90	86	76	98

Table 2. <u>A-Weighted Sound Pressure Levels</u> (dB re 20 micropascals) calculated based upon user defined input for dimensions 1, 2 and 3 as shown in above diagram. See note #2 and #3.

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Overall
100% Load		39	53	61	66	68	64	61	52	72
75% Load		40	52	59	65	69	65	61	52	72
50% Load		39	52	58	64	68	63	59	50	71
25% Load		38	52	57	62	66	62	58	48	69

Notes: (1) Measurements performed in accordance with AHRI Standard 370-2015 for air cooled Chillers.

- (2) Chiller is assumed to be a point source on a reflecting plane.
- (3) Without user defined input, the default dimensions used to construct Table 2 are as follows:
 - 1 Chiller Height Above Ground = 0.0 ft
 - 2 Horizontal Distance From Chiller to Receiver = 30.0 ft
 - 3 Receiver Height Above Ground = 3.0 ft

03/16/2023 10:44a. m.

Please refer to Performance Output Summary or Detailed Performance Report for Acoustic information







AquaSnap™ Air-Cooled Scroll Chiller



h-Hz

Unit Information

Tag Name:	Chiller 110 TR 460	
Model Number:		
Condenser Type:	Air Cooled	
Compressor Type:		
Nameplate Voltage:	460-3-60	V-F
Quantity:	1	
Manufacturing Source:	Charlotte, NC USA	
ASHRAE 90.1:201		
Refrigerant:	R-410A	
Capacity Control Steps:	5	
Minimum Capacity:	18.00	%
Shipping Weight:	5652	lb
Operating Weight:		lb
Refrigerant Weight (Circ	cuit A): 40	lb
Refrigerant Weight (Circ	cuit B): 51	lb
Unit Length:	142	in
Line: 4 VA/: alkla .	89	in
Unit Height:	90	in
Minimum Outdoor Opera	ating Temp:32.0	°F

Performance Information

Cooling Capacity:	106.0	Tons
Total Compressor Power:	110.2	kW
Total Fan Motor Power:	15.48	kW
Total Unit Power (without pump):	125.7	kW
Efficiency (without pump) (EER):	10.12	BTU/Wh

Evaporator Information

Fluid Type:	Fresh Water	
Fouling Factor:	0.000100	(hr-sqft-F)/BTU
Leaving Temperature:	44.00	°F
Entering Temperature:		°F
Fluid Flow:	253.4	gpm
Fluid Flow Min:	132.0	gpm
Fluid Flow Max:	528.0	gpm
Pressure Drop:	8.88	ft H2O
•		

Condenser Information

Altitude: 0.000) ft
Number of Fans:	ò
Total Condenser Fan Air Flow: 74,400) CFM
Entering Air Temperature: 95.0) °F

Integrated Pump Information

No Pump Selected

Accessories and Installed Options

Freeze Protection
Micro Channel
Single Point
Coil Trim Panels (Header side only)

Electrical Information

Unit Voltage:	460-3-60	V-Ph-Hz
Connection Type:	Single Point	
Minimum Voltage:	414	Volts
Maximum Voltage:	506	Volts

	Electrical	Electrical
Amps	Circuit 1	Circuit 2
MCA	224.1	
MOCP	250.0	
ICF	432.1	
Rec Fuse Size	250.0	

Detailed Performance Summary For Chiller 110 TR 460

 Project: Chillers 2023
 03/16/2023

 Prepared By:
 10:44a. m.

Integrated Part Load Value (AHRI)

CERTIFIED[®]

IPLV.IP: ______13.91 BTU/Wh

Unit Performance				
Percent of Full Load Capacity, %	100.00	75.00	50.00	25.00
Percent of Full Load Power, %	100.00	58.03	34.74	17.21
Unloading Sequence	В	В	В	В
Cooling Capacity, Tons	106.0	79.50	53.00	26.50
Total Unit Power, kW	125.7	72.94	43.66	21.64
Efficiency (EER), BTU/Wh	10.12	13.08	14.57	14.70
Evaporator Data				
Fluid Entering Temperature, °F	54.00	51.49	48.99	46.50
Fluid Leaving Temperature, °F	44.00	44.00	44.00	44.00
Fluid Flow Rate, gpm	253.4	253.4	253.4	253.4
Fouling Factor, (hr-sqft-F)/BTU	0.000100	0.000100	0.000100	0.000100
Pressure Drop, psi	3.85	3.87	3.89	3.91
Condenser Data				
Entering Air Temperature, °F	95.0	80.0	65.0	55.0

Sound power measured in accordance with ANSI/AHRI Standard 370-2015.

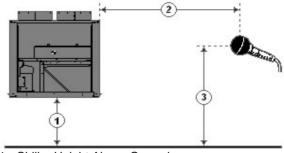
Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Detailed Performance Summary For Chiller 110 TR 460

Project: Chillers 2023 03/16/2023
Prepared By: 10:44a. m.

Unit Parameters

Tag Name:	Chiller 110 TR 460	
Model Number:		
Condenser Type:	Air Cooled	
Compressor Type:		
Chiller Nameplate Voltage:		V-Ph-
Hz		
Quantity:	1	
Manufacturing Source:	Charlotte, NC USA	
Refrigerant:		
Shipping Weight:		lb
Operating Weight:	6027	lb
Refrigerant Weight (Circuit A):		
Refrigerant Weight (Circuit B):	51	lb
Unit Length:		
Unit Width:	89	in
Unit Height:	90	in



- 1 Chiller Height Above Ground
- 2 Horizontal Distance From Chiller to Receiver
- 3 Receiver Height Above Ground (See Note 3)

Accessories and Installed Options

Freeze Protection Micro Channel Single Point Coil Trim Panels (Header side only)

Acoustic Information

Table 1. A-Weighted Sound Power Levels (dB re 1 picowatt). See note #1.

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Overall
100% Load		67	82	89	94	96	92	89	80	100
75% Load		68	80	87	93	97	93	89	80	100
50% Load		67	80	86	92	96	91	87	78	99
25% Load		66	80	85	90	94	90	86	76	98

Table 2. A-Weighted Sound Pressure Levels (dB re 20 micropascals) calculated based upon user defined input for dimensions 1, 2 and 3 as shown in above diagram. See note #2 and #3.

Octave Band Center Frequency, Hz	31	63	125	250	500	1k	2k	4k	8k	Overall
100% Load		39	53	61	66	68	64	61	52	72
75% Load		40	52	59	65	69	65	61	52	72
50% Load		39	52	58	64	68	63	59	50	71
25% Load		38	52	57	62	66	62	58	48	69

Notes: (1) Measurements performed in accordance with AHRI Standard 370-2015 for air cooled Chillers.

- (2) Chiller is assumed to be a point source on a reflecting plane.
- (3) Without user defined input, the default dimensions used to construct Table 2 are as follows:
 - 1 Chiller Height Above Ground = 0.0 ft
 - 2 Horizontal Distance From Chiller to Receiver = 30.0 ft
 - 3 Receiver Height Above Ground = 3.0 ft