

Model #: RTAC2004UR0NUAFNN1TX1TDNNN0NN10CN0EXN  
Serial #: U09M05843



# Product Catalog

## Air-Cooled Series R™ Chillers Model RTAC

140–500 Nominal Tons (60 Hz)  
140–400 Nominal Tons (50 Hz)

L: 19' 6"  
W: 7' 8"  
H: 8'

Shipping Weight: 12,885  
Operating Weight: 13,186



# Model Number Description

## Digits 1, 2 - Unit model

RT = Rotary chiller

## Digit 3 - Unit type

A = Air-cooled

## Digit 4 - Development sequence

C = Development sequence

## Digit 5, 6 & 7 - Nominal capacity

140 = 140 Nominal tons  
 155 = 155 Nominal tons  
 170 = 170 Nominal tons  
 185 = 185 Nominal tons  
 200 = 200 Nominal tons  
 225 = 225 Nominal tons  
 250 = 250 Nominal tons  
 275 = 275 Nominal tons  
 300 = 300 Nominal tons  
 350 = 350 Nominal tons  
 375 = 375 Nominal tons  
 400 = 400 Nominal tons  
 450 = 450 Nominal tons  
 500 = 500 Nominal tons

## Digit 8 - Unit voltage

A = 200/60/3  
 C = 230/60/3  
 J = 380/60/3  
 D = 400/50/3  
 4 = 460/60/3  
 5 = 575/60/3

## Digit 9 - Manufacturing location

U = Water Chiller Business Unit, Pueblo, CO USA

## Digit 10, 11 - Design sequence

XX = Factory Input

## Digit 12 - Unit basic configuration

N = Standard efficiency/performance configuration  
 H = High efficiency/performance configuration

## Digit 13 - Agency listing

N = No agency listing  
 U = UL/CUL listing

## Digit 14 - Pressure vessel code

A = ASME pressure vessel code  
 C = Canadian code  
 D = Australian code  
 L = Chinese code

## Digit 15 - Evaporator application

F = Standard (40-60 F) leaving temp  
 G = Low (Less than 40 F) leaving temp  
 R = Remote (40-60 F) leaving temp

## Digit 16 - Evaporator configuration

N = Standard 2 pass arrangement, insulated  
 P = 3 pass arrangement, insulated

## Digit 17 - Condenser application

N = Standard ambient range (25-115 F)  
 H = High ambient capability (25-125 F)  
 L = Low ambient capability (0-115 F)  
 W = Wide ambient capability (0-125 F)

## Digit 18 - Condenser fin material

1 = Standard aluminum slit fins  
 2 = Copper fins  
 4 = CompleteCoat epoxy coated fins

## Digit 19 - Condenser fan/motor configuration

T = STD fans with TEAO motors  
 W = Low noise fans

## Digit 20 - Compressor motor starter type

X = Across-the-line starter  
 Y = Wye-delta closed transition starter

## Digit 21 - Incoming power line connection

1 = Single point power connection  
 2 = Dual point power connection

## Digit 22 - Power line connection type

T = Terminal block connection for incoming line(s)  
 D = Non-fused disconnect switch(es) for incoming line(s)  
 C = Circuit breaker(s) for incoming line(s)

## Digit 23 - Unit operator interface

D = DynaView operator interface

## Digit 24 - Remote operator interface

N = No remote interface  
 C = Tracer Comm 3 interface  
 B = BACnet interface  
 L = LonTalk compatible (LCI-C) interface

## Digit 25 - Control input accessories/options

N = No remote inputs  
 R = Ext. evaporator leaving water setpoint  
 C = Ext. current limit setpoint  
 B = Ext. leaving water and current limit setpoint

## Digit 26 - Control output accessories/options

N = No output options  
 A = Alarm relay outputs  
 C = Ice making I/O  
 D = Alarm relay outputs and ice making I/O

## Digit 27 - Electrical protection options

0 = No short circuit rating  
 5 = 10,000 Amp short circuit rating  
 4 = 35,000 Amp short circuit rating  
 6 = 65,000 Amp short circuit rating

## Digit 28 - Flow Switch

T = Factory installed flow switch - water  
 U = Factory installed flow switch - glycol

## Digit 29 - Control panel accessories

N = No convenience outlet  
 A = 15A 115V convenience outlet (60Hz)

## Digit 30 - Service valves

1 = With suction service valves

## Digit 31 - Compressor sound attenuation option

0 = No compressor sound attenuation  
 1 = Factory installed compressor sound attenuation

## Digit 32 - Appearance options

N = No appearance options  
 A = Architectural louvered panels  
 C = Half louvers

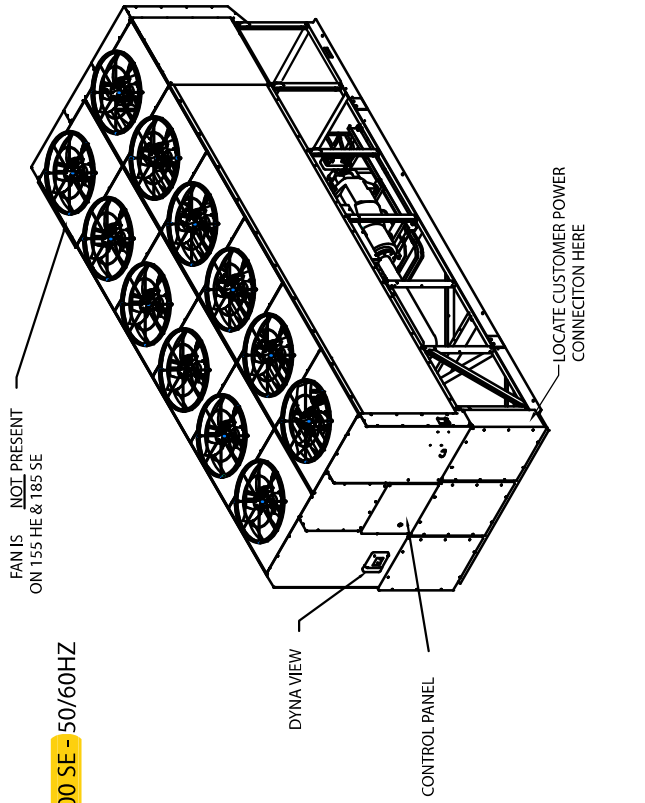
## Digit 33 - Installation accessories

N = No installation accessories  
 R = Neoprene in shear unit isolators  
 F = Flange kit for water connections  
 G = Neoprene isolators and flange kit

## Digit 34 - Factory testing options

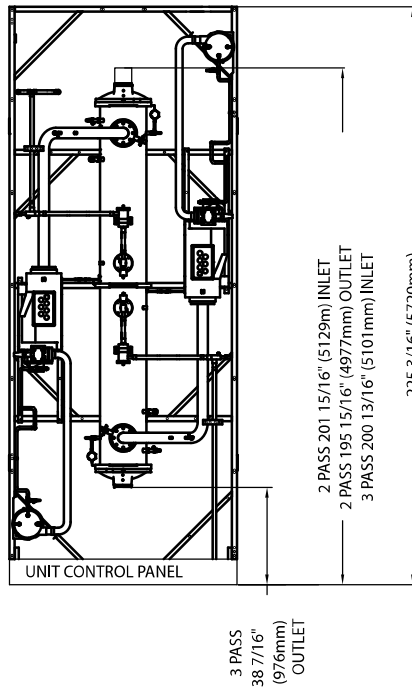
0 = Standard functional test  
 C = Customer-witnessed performance test with report  
 E = Non-witnessed performance test with report

# Dimensions

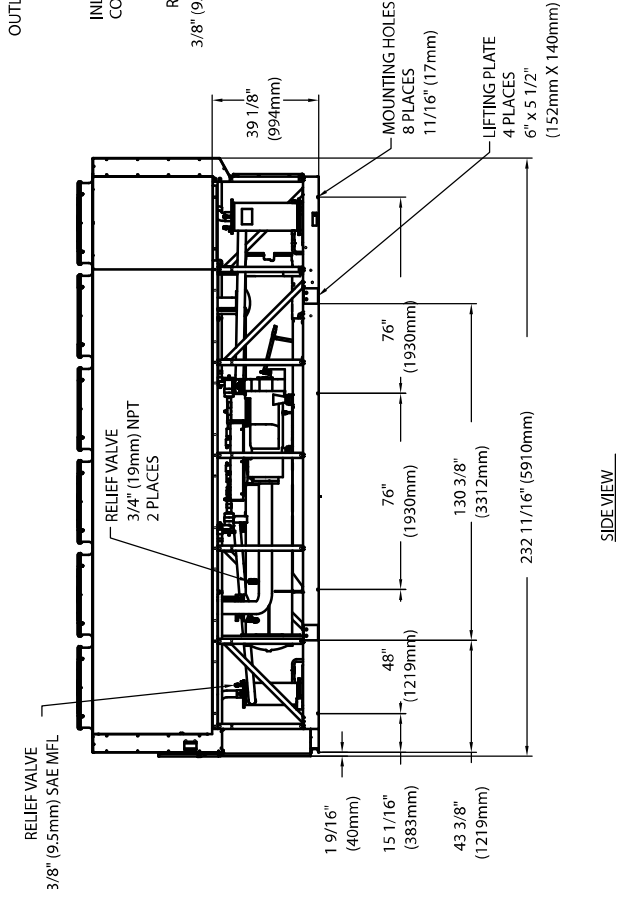
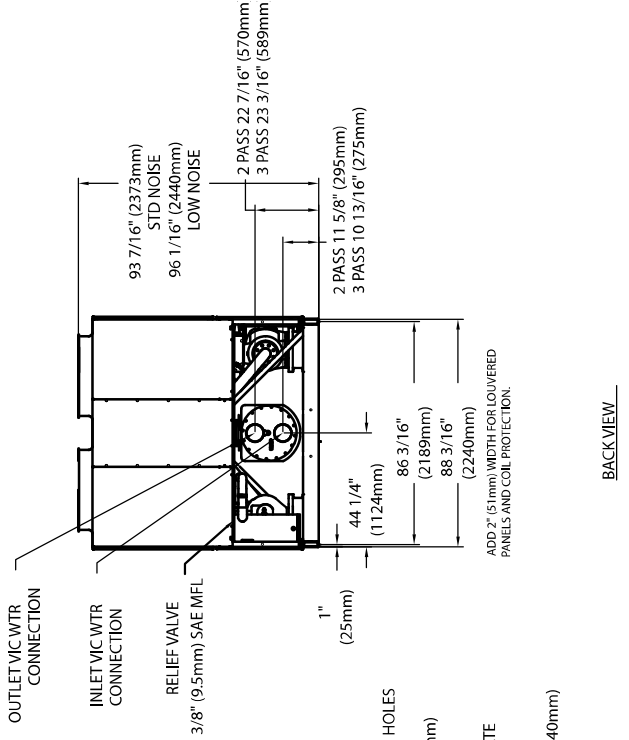


155, 170 HE/185, 200 SE - 50/60HZ

WATER CONNECTION DIAMETER:  
 2 PASS 6" (150mm)  
 3 PASS 4" (100mm)



TOP PLAN VIEW  
 (With Coil Box Removed)





## Dimensions

## Weights

Table 13. 60 Hz - aluminum or CompleteCoat coils

Nominal Tonnage	Standard Efficiency				High Efficiency			
	Shipping Weight (lb)	Shipping Weight (kg)	Operating Weight (lb)	Operating Weight (kg)	Shipping Weight (lb)	Shipping Weight (kg)	Operating Weight (lb)	Operating Weight (kg)
140	10831	4913	11077	5024	10858	4925	11140	5053
155	10910	4949	11116	5042	12114	5495	12417	5632
170	10868	4930	11211	5085	12172	5521	12563	5698
185	12478	5660	12884	5844	13983	6343	14298	6485
200	12885	5845	13186	5981	14434	6547	14676	6657
225	14905	6761	14671	6655	15906	7215	16392	7435
250	15039	6822	14937	6775	16006	7260	16392	7435
275	19000	8618	19613	8896	20390	9249	21023	9536
300	20685	9383	21181	9608	21659	9824	22139	10042
350	21539	9770	21984	9972	24780	11240	24679	11194
400	25399	11521	25833	11718	27114	12299	27729	12578
450	26819	12165	26453	11999			n/a	
500	27132	12307	27877	12645			n/a	

1. Operating weight includes refrigerant and water.
2. Shipping weight includes refrigerant.
3. All weights +/- 3%.

Table 14. 60 Hz - copper coils

Nominal Tonnage	Standard Efficiency				High Efficiency			
	Shipping Weight (lb)	Shipping Weight (kg)	Operating Weight (lb)	Operating Weight (kg)	Shipping Weight (lb)	Shipping Weight (kg)	Operating Weight (lb)	Operating Weight (kg)
140	13406	6081	13656	6194	13432	6093	13716	6221
155	13419	6087	13699	6214	15647	7097	15834	7182
170	13443	6098	13730	6228	15591	7072	15991	7253
185	15869	7198	16248	7370	18249	8278	18593	8434
200	16305	7396	16623	7540	18684	8475	18941	8591
225	18712	8488	19037	8635	20783	9427	21266	9646
250	18897	8572	19201	8709	20881	9471	21266	9646
275	23879	10831	24560	11140	26014	11800	26537	12037
300	26190	11880	26649	12088	27659	12546	28161	12774
350	27403	12430	27899	12655	30850	13993	31410	14247
400	32217	14613	32702	14833	34991	15872	35667	16178
450	32685	14826	33180	15050			n/a	
500	35010	15880	35766	16223			n/a	

1. Operating weight includes refrigerant and water.
2. Shipping weight includes refrigerant.
3. All weights +/- 3%.



# General Data

Figure 1. General Data - 60 hz units - standard efficiency - IP

Size		140	155	170	185	200	225	250	275	300	350	400	450	500
<b>Compressor</b>		Screw												
Quantity	#	2	2	2	2	2	2	2	3	3	3	4	4	4
Nominal size @60Hz	(tons)	70/70	85/70	85/85	100/85	100/100	120/100	120/120	85-85/100	100-100/100	120-120/100	100-100/100-100	120-120/100-100	120-120/120-120
<b>Evaporator</b>		Flooded												
Water storage	(gal)	29	32	34	36	40	39	43	62	67	72	83	86	91
2 pass arrangement														
Min flow	(gpm)	193	214	202	217	241	217	241	309	339	375	404	422	461
Max flow	(gpm)	709	785	741	796	883	796	883	1134	1243	1374	1483	1548	1690
3 pass arrangement														
Min flow	(gpm)	129	143	135	145	161	145	161	206	226	250	270	282	307
Max flow	(gpm)	473	523	494	531	589	531	589	756	829	916	989	1032	1127
Water connect	(in)	4	4	6	6	6	6	6	8	8	8	8	8	8
<b>Condenser</b>		Fin and tube												
Qty of coils	#	4	4	4	4	4	4	4	8	8	8	8	8	8
Coil length	(in)	156/156	180/156	180/180	216/180	216/216	252/216	252/252	180/108	216/108	252/108	216/216	252/216	252/252
Coil height	(in)	42	42	42	42	42	42	42	42	42	42	42	42	42
	(mm)	1067	1067	1067	1067	1067	1067	1067	1067	1067	1067	1067	1067	1067
# of rows	#	3	3	3	3	3	3	3	3	3	3	3	3	3
Fins per foot	(fpf)	192	192	192	192	192	192	192	192	192	192	192	192	192
<b>Fan</b>		Direct drive propeller												
Quantity	#	4/4	5/4	5/5	6/5	6/6	7/6	7/7	10/6	12/6	14/6	12/12	14/12	14/14
Diameter	(in)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Air flow per fan	(cfm)	9625	9394	9209	9209	9209	9210	9210	9209	9209	9208	9209	9210	9214
Power/motor	(kW)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Fan speed	(rpm)	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
Tip speed	(Ft/min)	8954	8954	8954	8954	8954	8954	8954	8954	8954	8954	8954	8954	8954
<b>General Unit</b>		HFC-134a												
# Refrig ckts	#	2	2	2	2	2	2	2	2	2	2	2	2	2
% min load	%	15	15	15	15	15	15	15	15	15	15	15	15	15
Refrigerant charge	(lb)	165/165	175/165	175/175	215/210	215/215	225/215	225/225	365/200	415/200	460/200	415/415	460/415	460/460
Oil charge	(gal)	1.3/1.3	1.3/1.3	1.3/1.3	1.9/1.3	1.9/1.9	1.9/1.9	1.9/1.9	4.2/1.9	4.6/2.9	4.6/1.9	4.6/4.6	4.6/4.6	4.6/4.6
Min ambient-std	(°F)	25	25	25	25	25	25	25	25	25	25	25	25	25
Min ambient-low	(°F)	0	0	0	0	0	0	0	0	0	0	0	0	0

1. Data containing information on two circuits is shown as follows: ckt 1/ ckt 2.  
 2. Minimum start-up/operating ambient is based on a 5 mph wind across the condenser.