



TRANE®

*Cooling and Heating
Systems and Services*

Air-Cooled Series R™ Helical-Rotary Liquid Chiller

**Model RTAC 120 to 400
(400 to 1500 kW – 50 Hz)
Built for the Industrial and
Commercial Markets**



Model RTAC size 155

RLC-PRC005-E4

Introduction

The Trane Model RTAC Air-Cooled Helical-Rotary Chiller is the result of a search for higher reliability, higher energy efficiency, and lower sound levels for today's environment.

In an effort to reduce energy consumed by HVAC equipment and to continually produce chilled water, Trane has developed the Model RTAC chiller with higher efficiencies and a more reliable design than any other air-cooled chiller available on the market today.

The Model RTAC chiller uses the proven design of the Trane helical-rotary compressor, which embraces all of the design features that have made the Trane helical-rotary compressor liquid chillers such a success since 1987.

The RTAC offers high reliability coupled with greatly improved energy efficiency, vastly reduced physical footprint, and improved acoustical performance, due to its advanced design, low-speed, direct-drive compressor, and proven Series R™ performance.

The major advantages of the Series R, Model RTAC are:

- 99.5% reliability rate
- Smaller physical footprint
- Lower sound levels
- Higher energy efficiency
- Designed specifically for operating with environmentally-safe HFC-134a.

The Series R Model RTAC helical-rotary chiller is an industrial-grade design, built for both the industrial and commercial markets. It is ideal for schools, hospitals, retailers, office buildings, and industrial applications.

Figure 1 - Model RTAC size 350



General Data

SI Units

Table G-1 - General Data RTAC 140-200 Standard

Size		140	155	170	185	200
Cooling capacity (5) (6)	kW	491.9	537.3	585.4	648.0	714.5
Power input (7)	kW	170.1	187.8	206	224.7	244.2
Energy Efficiency Ratio (5) (6) (as Eurovent)	kW/kW	2.89	2.86	2.84	2.89	2.93
ESEER (as Eurovent)	kW/kW	3.68	3.68	3.61	3.43	3.67
IPLV (According to ARI conditions 44°F leaving water temperature, 95°C entering air temperature)	kW/kW	4.20	4.16	4.10	4.09	4.19
Compressor						
Quantity		2	2	2	2	2
Nominal Size (1)	tons	70/70	70/85	85/85	85/100	100/100
Evaporator						
Evaporator Model		H140	H155	H170	H185	H200
Water Storage	l	112	122	127	135	147
Minimum Flow	l/s	13	14	13	14	16
Maximum Flow	l/s	44	49	46	49	55
Number of water passes		2	2	2	2	2
Condenser						
Quantity of Coils		4	4	4	4	4
Coil Length	mm	3962/3962	4572/3962	4572/4572	5486/4572	5486/5486
Coil Height	mm	1067	1067	1067	1067	1067
Fin series	fins/ft	192	192	192	192	192
Number of Rows		3	3	3	3	3
Condenser Fans						
Quantity (1)		4/4	5/4	5/5	6/5	6/6
Diameter	mm	762	762	762	762	762
Total Air Flow	m ³ /s	35.45	39.19	42.94	47.23	51.53
Nominal RPM		915	915	915	915	915
Tip Speed	m/s	36.48	36.48	36.48	36.48	36.48
Motor kW	kW	1.57	1.57	1.57	1.57	1.57
Minimum Starting/Operating Ambient (2)						
Standard Unit	°C	0	0	0	0	0
Low-Ambient Unit	°C	-18	-18	-18	-18	-18
General Unit						
Refrigerant		HFC 134a	HFC 134a	HFC 134a	HFC 134a	HFC 134a
Number of Independent Refrigerant Circuits		2	2	2	2	2
% Minimum Load (3)		17	17	17	17	17
Operating Weight (4)	kg	4481	4659	4794	5366	5488
Shipping Weight (4)	kg	4525	4691	4834	5399	5508

Notes:

1. Data containing information on two circuits shown as follows: ckt1/ckt2
2. Minimum start-up/operation ambient based on a 2.22 m/s (5mph) wind across the condenser.
3. Percent minimum load is for total machine at 10°C (50°F) ambient and 7°C (44°F) leaving chilled water temperature, not each individual circuit.
4. With aluminium fins.
5. At Eurovent conditions, 7°C leaving water temperature and 35°C entering condenser air temperature.
6. Ratings based on sea level altitude and evaporator fouling factor of 0.044 m²K/kW
7. Unit kW input, including fans



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