



**TRANE®**

Cooling and Heating  
Systems and Services

## **Air-Cooled Series R® Helical-rotary liquid chillers**

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*RTAD 85-100-115-125-145-150-165-180*





## *A Reference in Chillers*

The RTAD range, successfully sold in various markets all over the world since 2001, is already used in multiple types of industrial and commercial applications where it established a "reference" in terms of performance and reliability. Trane has decided to extend the range up to 650kW to allow even more customers and users to benefit from the numerous advantages the RTAD design offers.





## Reliability

The Trane Company is the world's largest manufacturer of large helical-rotary compressors. Continuous, extensive research and development, testing, and advanced manufacturing processes provide the most reliable compressor in the air conditioning and refrigeration industry.

Tens of thousands of commercial and industrial installations worldwide have proven that the Trane helical-rotary compressor has an unequaled reliability rate of 99.5 percent in the first year of operation.

How does Trane achieve these world-class standards?

The Trane Series® chiller uses a direct-drive, low speed, semihermetic compressor design with fewer moving parts than other compressors available on the market.

***Model RTAD chillers: Built to last, designed to perform.***



## Controls

Model RTAD chillers are equipped with a unique micro-processor control: Adaptive Control®. It means that the system takes corrective action when any of the control variables approaches a limit condition at which the protection function of previous control schemes would normally have shut-down the chiller.

The control system integrates all the functions that are necessary to ensure safe operation of the chiller in all applications and duty conditions.

***Thanks to Adaptive control® installation, start-up and operation will be safe and trouble free.***

## Package Solutions

RTAD with **hydraulic module** is available on RTAD Standard Efficiency sizes 145 to 180 and RTAD High Efficiency sizes 115 to 150. This option supplies:

- Single or dual pump offered with 4 available static head pressures
- Flow switch
- Isolating valves
- Strainer
- Pressure gauge
- Insulation and freeze protection
- Expansion tank and relief valve (option)

This feature helps reduce installation time and minimize space requirement.

RTAD with **Heat Recovery** allows recovery of condensing heat to warm water for sanitary needs. It is available as Partial heat recovery or Total heat recovery.

RTAD with **Free Cooling** takes advantage of the outside ambient temperature during the colder season instead of using compressor operation.



## Acoustical performance

Besides helical-rotary compressor proven design and excellent sound characteristics, Trane has developed a highly engineered condenser fan to meet the most severe requirements of acoustical performance: **ZephyrWing**. The **ZephyrWing** fan makes use of the most recent fan technologies available and is specifically designed to accommodate the various operation conditions experienced in chiller applications.

***Model RTAD chillers fit into most applications even in noise-sensitive environments.***



## Refrigerant

Model RTAD helical-rotary chillers have been optimized for exclusive use of chlorine-free and ozone layer-friendly, R134a refrigerant.

***Model RTAD chillers guarantee a refrigerant that has a future and that complies with current and upcoming environmental regulations.***



## Communication

Model RTAD chillers are compatible with Trane building management systems. A single twisted pair of wires tied directly between the chiller and a Tracer Summit® system provides control, monitoring, diagnostic and integration capabilities.

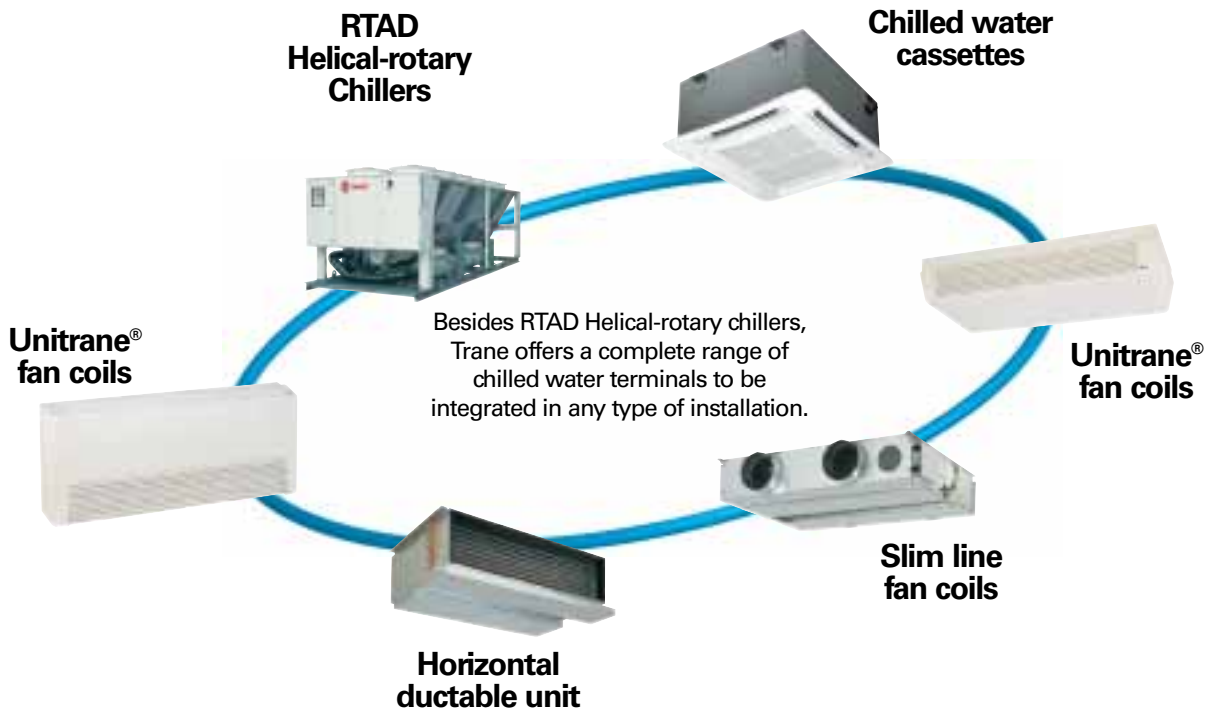
***Model RTAD chillers monitored with a Tracer Summit® building management will maximize comfort of the people occupying the building.***

**General Data**

<b>Standard Efficiency unit</b>		<b>085</b>	<b>100</b>	<b>115</b>	<b>125</b>	<b>145</b>	<b>150</b>	<b>165</b>	<b>180</b>
Cooling capacity (1)	(kW)	273	336	393	449	515	551	600	644
Power input (2)	(kW)	99.5	128	148	185	190	209	222	242
Energy efficiency ratio		2.74	2.63	2.66	2.43	2.71	2.64	2.7	2.66
<b>High Efficiency units</b>									
Cooling capacity (1)	(kW)	297	360	417	488	522	560	-	-
Power input (2)	(kW)	95.7	122	144	176	183	201	-	-
Energy efficiency ratio		3.10	2.95	2.90	2.77	2.85	2.79	-	-
Refrigerant		R134a							
Number of refrigerant circuits		2							
Number of compressors		2							
Evaporator water connection diameter	(inches)	5	6	6	6	6	6	6	6
Sound power level (3)	(dB(A))	97	97	96	97	98	101	102	102
Sound pressure level (3)	(dB(A))	65	65	64	65	66	69	70	70
Length	(mm)	3460	4380	4380	4380	5300	5300	6370	6370
Width	(mm)	2260	2260	2260	2260	2260	2260	2260	2260
Height	(mm)	2100	2100	2100	2100	2120	2120	2220	2220
Operating weight (4)	(kg)	2660	3105	3555	3570	4260	4520	5440	5525

(1) Evaporator temperatures 12/7°C, fouling factor 0.044 m<sup>2</sup>·°K/kW, ambient temperature 35°C  
 (2) Net power input = Compressors/fans power input + Control, in accordance with Eurovent Certification Program  
 (3) RTAD Standard Efficiency. Under free field conditions, on a reflecting surface, data in accordance with ISO 3746-1996  
 (4) With aluminium fins without hydraulic module

# TRANE comfort chilled water systems



Literature Order Number	RLC-SLB008-E4
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Supersedes	RLC-SLB008-E4_0903
Literature Stocking Location	Europe

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.

[www.trane.com](http://www.trane.com)

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