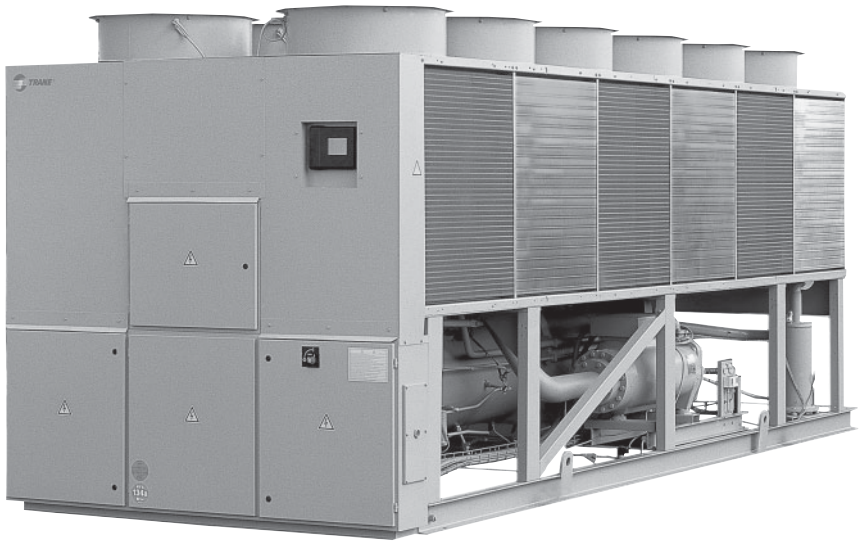
TRANE®

*Cooling and Heating Systems and Services*

# Installation Operation Maintenance

## Series R™ Air-Cooled Helical-Rotary Liquid Chiller



**Model RTAC 120-400 (50 Hz)**
**400-1500 kW**

**RLC-SVX02G-E4**

# General Information

This manual describes installation, operation, and maintenance of RTAC units, manufactured in Charmes, France.

A separate manual is available for the use and maintenance of the unit's controls – Tracer™ CH.530.

## Unit Inspection

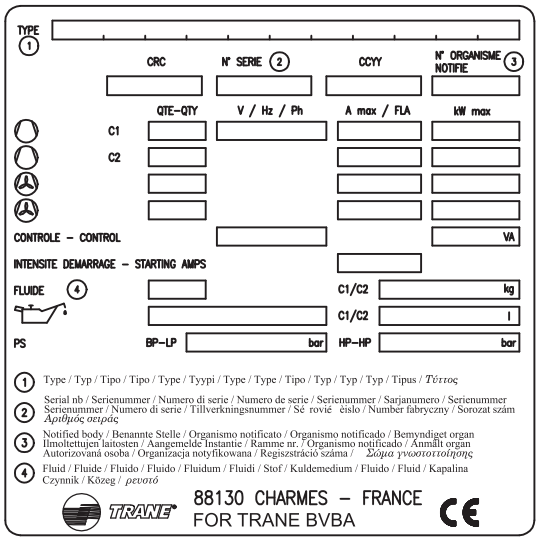
On arrival, inspect the unit before signing the delivery note. Specify any visible damage on the delivery note, and send a registered letter of protest to the last carrier of the goods within 72 hours of delivery. Notify the local TRANE sales office at the same time. The delivery note must be clearly signed and countersigned by the driver. Any concealed damage shall be notified by a registered letter of protest to the last carrier of the goods within 72 hours of delivery. Notify the local TRANE sales office at the same time.

Important notice: No shipping claims will be accepted by TRANE if the above mentioned procedure is not respected.

Note: More stringent national rules can apply in some countries.

For more information, refer to the general sales conditions of your local TRANE sales office.

***Figure 1 – Typical Unit Nameplate***




## Loose Parts Inventory

Check all the accessories and loose parts that are shipped with the unit against the shipping list. Included in these items will be water vessel drain plugs, rigging and electrical diagrams, and service literature, which are placed inside the control panel and/or starter panel for shipment.

# 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°F 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 | 85/70 | 85/85 | 100/85 | 100/100 |
| **Evaporator** | | | | | | |
| Evaporator Model | | EH140 | EH155 | EH170 | EH185 | EH200 |
| 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 | 4363 | 4411 | 4692 | 5257 | 5367 |

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 0.017615 $m^2K/kW$
7. Unit kW input, including fans

Quality Management System Approval

TRANE®

*Cooling and Heating Systems and Services*

| | |
|---|---|
| Literature Order Number | RLC-SVX02G-E4 |
| Date | 0410 |
| Supersedes | RLC-SVX02F-E4_0409 |

*Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice. Only qualified technicians should perform the installation and servicing of equipment referred to in this publication.*

**www.trane.com**

*For more information, contact your local sales office or e-mail us at comfort@trane.com*

*Trane bvba*
*Lenneke Marelaan 6 -1932 Sint-Stevens-Woluwe, Belgium*
*ON 0888.048.262 - RPR BRUSSELS*