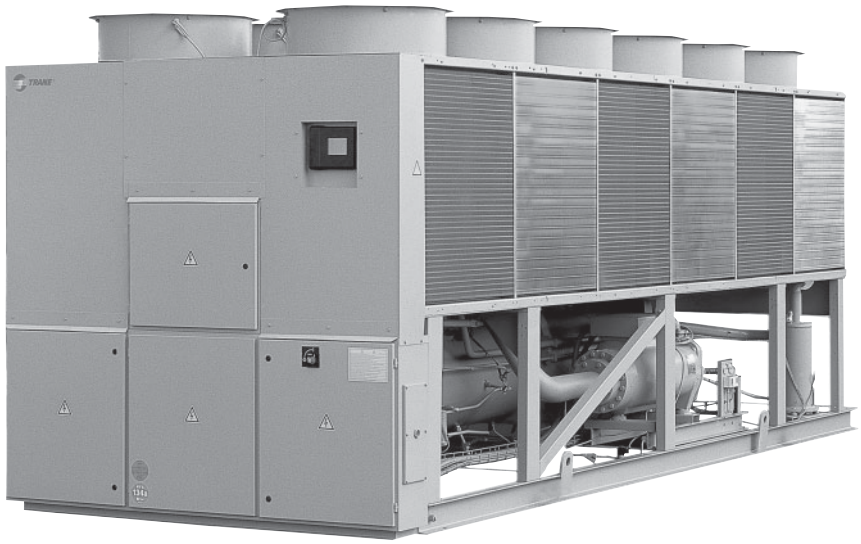
TRANE®

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

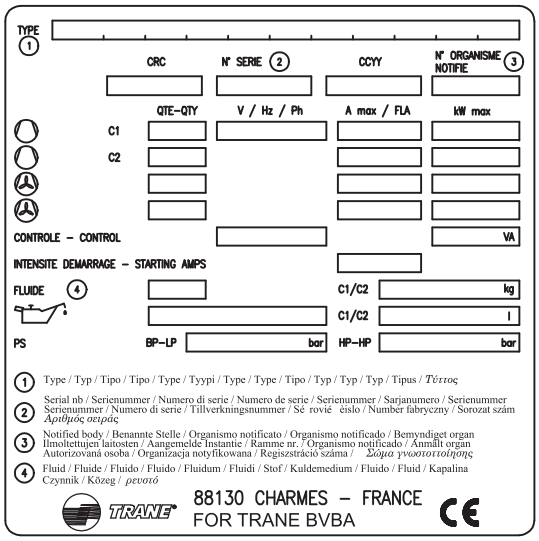
On arrival, inspect the unit before signing the delivery note. Specify any visible damage on the delivery note, and send a registered letter of protest to the last carrier of the goods within 72 hours of delivery. Notify the local TRANE sales office at the same time. The delivery note must be clearly 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-7 - General Data RTAC 230-400 Standard

Size		230	240	250	275	300	350	375	400
Cooling capacity (5) (6)	kW	**769.7**	**857.9**	**850.9**	**947.2**	**1077.3**	**1191.6**	**1322.4**	**1451.4**
Power input (7)	kW	**263**	**293.6**	**293.4**	**330.5**	**370.2**	**418.9**	**458.8**	**498.4**
Energy Efficiency Ratio (5) (6) (as Eurovent)	kW/kW	**2.93**	**2.92**	**2.9**	**2.87**	**2.91**	**2.85**	**2.88**	**2.91**
ESEER (as Eurovent)	kW/kW	**3.94**	**4.17**	**3.82**	**3.86**	**3.94**	**4.10**	**4.14**	**4.18**
IPLV (According to ARI conditions 44°F leaving water temperature, 95°F entering air temperature)	kW/kW	**4.31**	**4.35**	**4.05**	**4.05**	**3.97**	**4.47**	**4.50**	**4.54**
Compressor									
Quantity		3	3	3	3	3	4	4	4
Nominal Size (1)	tons	60-60/100	70-70/100	70-70/100	85-85/100	100-100/100	85-85/85-85	100-100/85-85	100-100/100-100
Evaporator									
Evaporator Model		EH270	EH270	EH250	EH270	EH301	EH340	EH370	EH401
Water Storage	l	223	223	198	223	239	264	280	294
Minimum Flow	l/s	20	20	17	20	22	22	24	26
Maximum Flow	l/s	71	71	60	71	77	80	87	92
Number of water passes		2	2	2	2	2	2	2	2
Condenser									
Quantity of Coils		2/2	2/2	4/4	4/4	4/4	4/4	4/4	4/4
Coil Length	mm	6401/6401	6401/6401	3962/2743	4572/2743	5486/2743	4572/4572	5486/4572	5486/5486
Coil Height	mm	1067	1067	1067	1067	1067	1067	1067	1067
Fin series	fins/ft	192	180	192	192	192	192	192	192
Number of Rows		3	4	3	3	3	3	3	3
Condenser Fans									
Quantity (1)		7/7	7/7	8/6	10/6	12/6	10/10	12/10	12/12
Diameter	mm	762	762	762	762	762	762	762	762
Total Air Flow	m3/s	60.09	58.27	61.21	68.7	77.29	85.88	94.47	103.06
Nominal RPM		915	915	915	915	915	915	915	915
Tip Speed	m/s	36.48	36.48	36.48	36.48	36.48	36.48	36.48	36.49
Motor kW	kW	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57
Minimum Starting/Operating Ambient (2)									
Standard Unit	°C	0	0	0	0	0	0	0	0
Low-Ambient Unit	°C	-18	-18	-18	-18	-18	-18	-18	-18
General Unit									
Refrigerant		HFC 134a	HFC 134a	HFC 134a	HFC 134a	HFC 134a	HFC 134a	HFC 134a	HFC 134a
Number of Independent Refrigerant Circuits		2	2	2	2	2	2	2	2
% Minimum Load (3)		13	13	13	13	13	10	10	10
Operating Weight (4)	kg	8040	8040	7892	8664	9375	10684	11330	11929
Shipping Weight (4)	kg	7660	7660	7694	8441	9136	10420	11050	11635

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