



**HRAT**

**0152 - 0502**

### UNIT DESCRIPTION

This series of air cooled liquid chillers with axial fans finds a wide range of applications in modern air-conditioning systems in civil and industrial contexts calling for little-medium capacity systems. They incorporate all the features required for outdoor location. In particular the compressors are in a closed compartment. The control panel is protected by a double enclosure designed specifically for outdoor locations.

### STANDARD UNIT COMPOSITION

- Base frame made of galvanised polyester sheet.
- Frame with supporting panel made of Peraluman.
- Hermetic scroll compressors (up to size 0302).
- Hermetic reciprocating compressors (for sizes 0402 and 0502).
- Axial fans, low revving with IP54 protection ratio.
- Constant fan speed adjustment (outside air low ambient temperature device).
- Controlled by pressure transducers.
- Electrical power and control panel complying with EN 60204-1/IEC 204-1 standards.
- Integral control and adjustment by microprocessor with possibility of remote control.
- Water side exchangers with "shell and tubes" evaporator, for sizes 0302-0502 (AISI 316 steel plates for 0152-0252).
- Exchanger frost protection resistance water side.
- Differential pressure switch water side.
- Pipe connections on both sides. (rear for 0302-0502).
- Interlock door mains isolator.
- Freeze-proof oil charge and refrigerant charge.
- General testing and operational test carried out in the factory in accordance with European Standard EN 12055.

### MODELS

**HRAT** This range of units features cooling only.

### VERSIONS

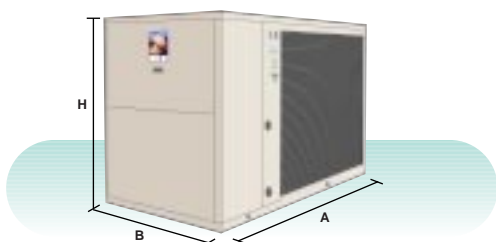
- B** Standard unit.
- HT** Unit for high ambient temperature.
- SL** Low noise units.



## GENERAL TECHNICAL DATA

R22

MODELS		0152	0182	0202	0252	0302	0402	0502
<b>HRAT</b>								
Cooling capacity	① kW	35.8	42.9	50.7	62.6	74.8	89	109.6
Compressor power input	① kW	13.6	16.1	17.7	22.6	29.4	35.9	44.5
<b>HRAT-HT</b>								
Heating capacity	① kW	37.1	45	52.3	64.2	77.4	95.2	116
Compressor power input	① kW	12.7	14.6	16.7	21.5	27.7	34.6	43
<b>HRAT-SL</b>								
Cooling capacity	① kW	35.2	43.2	49.9	61.5	73.4	89	109.1
Compressor power input	① kW	14.1	15.9	18.3	23.4	30.3	35.9	44.6
<b>OPERATING WEIGHT</b>								
HRAT - B	Kg.	535	550	625	670	970	980	1120
HRAT - HT/SL	Kg.	545	610	645	725	920	1110	1130
<b>DIMENSIONS HRAT-B/HT-SL</b>								
<b>A</b>	② mm	1695	1695/2195	2195	2195/2745	2745	2745/3245	3245
<b>B</b>	② mm	1120	1120	1120	1120	1120	1120	1120
<b>H</b>	mm	1420	1420	1420	1420	1420	1420/1620	1620



① <b>Data referred to:</b>	
Chilled water	12/7 °C
Condensing air	35 °C
② <b>Free areas required:</b>	
Condensing coil side minimum	1000 mm
Electrical panel side	600 mm
Apposite side to electrical panel	600 mm

## MAIN FUNCTIONS OF THE CVM CONTROLS

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Missing external consens led signal	•	•	Compressor start per hour and restarting time control
Remote on/off by external volt-free contact	•	•	Compressor working-hours control and display
Summer/winter mode in alternative to on/off remote switch	Par.	•	Compressor working hours balance system
Cumulative fault warning alarm	•	•	Fan speed control
Suitable to control evaporator water pump	•	•	Led display of interface board correct operation
Evaporator inlet/outlet water temperature display	•	•	Auto-diagnostic of the electrical part
Compressor/circuit failure signal	•	Opt.	Remote keyboard
Unit general-alarm signal	•		
Propor. regulating algorithm on the inlet water temp.	•		
Delayed compressor start	•		

•: standard;  
Opt.: available upon request;  
Par.: available modifying a value of the configuration parameters