



## Air-Cooled Liquid Chillers with Integrated Hydronic Module

**AQUASNAP™**  
with PURON® refrigerant



Carrier is participating in the Eurovent Certification Programme. Products are as listed in the Eurovent Directory of Certified Products.



Model shown is with Euro Pack option



# 30RB 262-802

**Nominal cooling capacity 260-760 kW**

The new generation of Aquasnap Puron liquid chillers features the latest technological innovations: ozone-friendly refrigerant R410A, scroll compressors, low-noise fans made of a composite material, auto-adaptive microprocessor control. The Aquasnap can be equipped with an integrated hydronic module, limiting the installation to straightforward operations like connection of the power supply and the chilled water supply and return piping.

## Features

### Quiet operation

- Compressors
  - Low-noise scroll compressors with low vibration level
  - The compressor assembly is installed on an independent chassis and supported by flexible anti-vibration mountings
  - Dynamic suction and discharge piping support, minimising vibration transmission (Carrier patent)
  - Acoustic compressor enclosure, reducing radiated noise emissions (Euro Pack option)
- Condenser section
  - Condenser coils in V-shape with an open angle, allowing quieter air flow across the coil
  - Low-noise 4th generation Flying Bird fans, made of a composite material (Carrier patent) are now even quieter and do not generate intrusive low-frequency noise
  - Rigid fan installation preventing start-up noise (Carrier patent)

### Easy and fast installation

- Integrated hydronic module (option)
  - Centrifugal low or high-pressure water pump (as required), based on the pressure loss of the hydronic installation
  - Single or dual pump (as required) with operating time balancing and automatic changeover to the back-up pump if a fault develops
  - Water filter protecting the water pump against circulating debris
  - High-capacity membrane expansion tank ensures pressurisation of the water circuit
  - Thermal insulation and frost protection down to -20°C, using an electric resistance heater
  - Pressure gauge to check filter pollution and measure the system water flow rate
  - Water flow control valve (18 control turns)
- Simplified electrical connections
  - A single power supply point without neutral (30RB 262-522)
  - Main disconnect switch with high trip capacity (Euro Pack option)
  - 24 V control circuit without risk from a transformer included
- Fast commissioning
  - Systematic factory operation test before shipment
  - Quick-test function for step-by-step verification of the instruments, electrical components and motors

## Economical operation

- Increased energy efficiency at part load
  - The refrigerant circuit includes two to four compressors connected in parallel. At part load, around 99% of the operating time, only the compressors that are absolutely necessary operate. At these conditions the compressors operating are even more energy efficient, as they use the total condenser and evaporator capacity.
  - The electronic expansion device (EXV) allows operation at a lower condensing pressure (EER optimisation).
  - Dynamic superheat management for better utilisation of the evaporator heat exchange surface.
- Heat reclaim (option)
  - Free hot water production by the water condenser (recovery of 100% of the rejected heat)
- Reduced maintenance costs
  - Maintenance-free scroll compressors
  - Fast diagnosis of possible incidents and their history via the Pro-Dialog Plus control
  - R410A refrigerant is easier to use than other refrigerant blends

## Environmental care

- Ozone-friendly R410A refrigerant
  - Chlorine-free refrigerant of the HFC group with zero ozone depletion potential
  - High-density refrigerant, therefore less refrigerant required
  - Very efficient - gives an increased energy efficiency ratio (EER)
- Leak-tight refrigerant circuit
  - Brazed refrigerant connections for increased leak-tightness
  - Reduction of leaks as no capillary tubes and flare connections are used
  - Verification of pressure transducers and temperature sensors without transferring refrigerant charge
  - Discharge shut-off valve allows storage of the refrigerant charge in the condenser for simplified maintenance.

## Superior reliability

- State-of-the-art concept
  - Cooperation with specialist laboratories and use of limit simulation tools (finite element calculations) for the design of the critical components, e.g. motor supports, suction/discharge piping
  - Compressor control box installed on the cold side of the compressor (Carrier patent)

- Auto-adaptive control
  - Control algorithm prevents excessive compressor cycling and permits reduction of the water quantity in the hydronic circuit (Carrier patent)
  - Automatic compressor unloading in case of abnormally high condensing pressure. If an anomaly occurs (e.g. fouled condenser coil, fan failure) Aquasnap continues to operate, but at reduced capacity.
- Exceptional endurance tests
  - Corrosion resistance tests in salt mist in the laboratory
  - Accelerated aging test on components that are submitted to continuous operation: compressor piping, fan supports
  - Transport simulation test in the laboratory on a vibrating table. The test is based on a military standard and equivalent to 4000 km by truck.

## Pro-Dialog Plus control

Pro-Dialog Plus combines intelligence with operating simplicity. The control constantly monitors all machine parameters and precisely manages the operation of compressors, expansion devices, fans and of the evaporator water pump for optimum energy efficiency.

- Energy management
  - Internal time schedule clock: permits chiller on/off control and operation at a second set-point
  - Set-point reset based on the outside air temperature or the return water temperature
  - Master/slave control of two chillers operating in parallel with operating time equalisation and automatic change-over in case of a unit fault
  - Start/stop control based on the air temperature.
- Ease-of-use
  - User interface with synoptic diagram for intuitive display of the principal operating parameters: number of compressors operating, suction/discharge pressure, compressor operating hours, set-point, air temperature, entering/leaving water temperature
  - Ten menus for direct access to all machine commands, including fault history, allowing fast and complete chiller diagnostics



Pro-Dialog Plus operator interface

### Remote management (standard)

A simple two-wire communication bus between the RS485 port of the Aquasnap and the Carrier Comfort Network offers multiple remote control, monitoring and diagnostic possibilities. Carrier offers a vast choice of control products, specially designed to control, manage and supervise the operation of an air conditioning system. Please consult your Carrier representative for more information on these products.

- Start/stop: opening of this contact will shut down the unit
- Dual set-point: closing of this contact activates a second set-point (example: unoccupied mode)
- Demand limit: closing of this contact limits the maximum chiller capacity to a predefined value
- User safety: this contact is connected in series with the water flow switch and can be used for any customer safety loop
- Heat reclaim (option): closing of this contact allows heat reclaim mode operation
- Water pump 1 and 2 control\*: these outputs control the contactors of one or two evaporator water pumps
- Water pump on reversal\*: these contacts are used to detect a water pump operation fault and automatically change over to the other pump
- Operation indication: this volt-free contact indicates that the chiller is operating (cooling load) or that it is ready to operate (no cooling load)
- Alert indication: this volt-free contact indicates the presence of a minor fault
- Alarm indication: this volt-free contact indicates the presence of a major fault that has led to the shut-down of one or two refrigerant circuits

\* contacts already supplied with the hydronic module option

### Remote management (EMM option)

- Room temperature: permits set-point reset based on the building indoor air temperature (with Carrier thermostat)
- Set point reset: ensures reset of the cooling set-point based on a 4-20 mA or 0-5 V signal
- Demand limit: permits limitation of the maximum chiller demand based on a 4-20 mA or 0-5 V signal
- Demand limit 1 and 2: closing of these contacts limits the maximum chiller capacity to three predefined values
- User safety: this contact can be used for any customer safety loop, closing of the contact generates a specific alarm
- Ice storage end: when ice storage has finished, this input permits return to the second set-point (unoccupied mode)
- Time schedule override: closing of this contact cancels the time schedule effects
- Out of service: this signal indicates that the chiller is completely out of service
- Chiller capacity: this analogue output (0-10 V) gives an immediate indication of the chiller capacity
- Compressor operation: this contact signals that one or several compressors are in operation.



# Options and accessories

Options	Description	Advantages	Use
Euro Pack	This option contains the options enclosure panels, evaporator frost protection, main disconnect switch and low noise level	Aesthetics, ease-of-installation and low operating noise	30RB 262-802
Condenser with pretreated fins	Fins made of pre-treated aluminium (polyurethane and epoxy)	Improved corrosion resistance, recommended for marine environments	30RB 262-802
Condenser with anti-corrosion post-treatment	Factory application of Blygold Polual treatment on the coils	Improved corrosion resistance, recommended for urban, industrial and rural environments	30RB 262-802
Suction valve	Shut-off valves on the compressor suction piping	Simplified maintenance	30RB 262-802
Enclosure panels	Side panels on each end of the coils	Improved aesthetics	30RB 262-802
Grilles	Metallic grilles on all four unit faces (requires the enclosure panel option)	Improved aesthetics	30RB 262-802
Evaporator with aluminium jacket	Evaporator thermal insulation protection by aluminium sheets	Improved resistance to climatic aggression	30RB 262-522
Evaporator and hydronic module with aluminium jacket	Evaporator and water piping thermal insulation protection by aluminium sheets	Improved resistance to climatic aggression	30RB 262-522
Low-pressure single-pump hydronic module	See hydronic module chapter	Easy and fast installation	30RB 262-522
Low-pressure dual-pump hydronic module	See hydronic module chapter	Easy and fast installation, operating safety	30RB 262-522
High-pressure single-pump hydronic module	See hydronic module chapter	Easy and fast installation	30RB 262-522
High-pressure dual-pump hydronic module	See hydronic module chapter	Easy and fast installation, operating safety	30RB 262-522
Evaporator frost protection	Resistance heater on the evaporator	Evaporator frost protection at low outside temperatures	30RB 262-802
Winter operation	Fan speed control via frequency converter	Stable unit operation when the air temperature is between 0°C and -20°C	30RB 262-802
Low noise level	Acoustic compressor enclosure	Noise emission reduction	30RB 262-802
Very low noise level	Acoustic compressor enclosure and low-speed fans	Noise emission reduction	30RB 262-802
Twinning	Unit equipped with an additional field-installed leaving water temperature sensor, allowing master/slave operation of two chillers connected in parallel	Optimised operation of two chillers connected in parallel with operating time equalisation	30RB 262-802
Heat reclaim condenser	Water condenser, allowing recovery of 100% of the rejected heat	Free hot water production simultaneously with chilled water production	30RB 262-522
Main disconnect switch without fuse	Factory-installed main electric disconnect switch in the control box	Ease-of-installation and compliance with local electrical regulations	30RB 262-802
Main disconnect switch with fuse	Factory-installed main electric disconnect switch with fuse in the control box	Same advantage as main disconnect switch and reinforced anti-short circuit protection	30RB 262-802
JBus gateway	Two-directional communications board, complies with JBus protocol	Easy connection by communication bus to a building management system	30RB 262-802
LonTalk gateway	Two-directional communications board, complies with LonTalk protocol	Easy connection by communication bus to a building management system	30RB 262-802
Energy Management module EMM	See controls manual	Easy connection by wired connection to a building management system	30RB 262-802

Accessories	Description	Advantages	Use
Connection sleeve	Piping to be welded with Victaulic connection	Ease-of-installation	30RB 262-802
Energy Management Module EMM	See controls manual	Easy connection by wired connection to a building management system	30RB 262-802
Scrolling Marquee Interface	Remotely installed user interface (communication bus)	Remote chiller control up to 300 m	30RB 262-802
Power cable connection side extension	Side extension on the power control to allow a reduced cable bend radius	Use of thicker power cables	30RB 262-802

## Sound levels

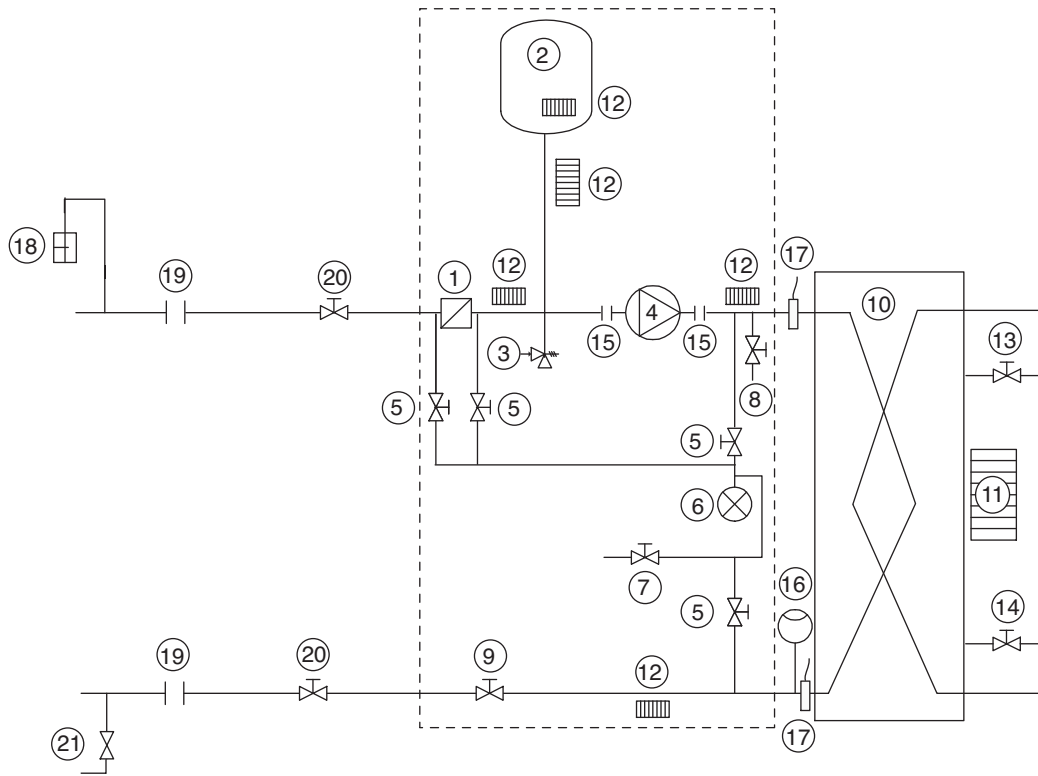
30RB	262	302	342	372	402	432	462	522	602	672	732	802
<b>Unit with Euro Pack</b>												
Sound power level dB(A) 10 <sup>-12</sup> W*	90	90	90	91	91	92	92	93	93	94	94	94
Sound pressure level dB(A) at 10 m**	57	58	58	59	59	60	60	60	61	61	61	62
<b>Standard unit</b>												
Sound power level dB(A) 10 <sup>-12</sup> W*	91	92	92	93	93	94	94	94	95	95	96	96
Sound pressure level dB(A) at 10 m**	59	60	60	61	61	62	62	62	62	63	63	64

**Note:**

\* In accordance with ISO 9614-1 and certified by Eurovent

\*\* Average sound pressure level, unit in a free field on a reflective surface.

# Hydronic module (option)



Typical hydronic circuit diagram



Hydronic module

### Legend

#### Components of unit and hydronic module

- 1 Victaulic screen filter
- 2 Expansion tank
- 3 Safety valve
- 4 Available pressure pump
- 5 Pressure tap valve (see Installation Manual)
- 6 Pressure gauge to measure the component pressure loss (see Installation Manual)
- 7 System vent valve, pressure gauge
- 8 Drain valve
- 9 Water flow control valve
- 10 Heat exchanger
- 11 Evaporator defrost heater (option)
- 12 Hydronic module defrost heater
- 13 Air vent (evaporator)
- 14 Water purge (evaporator)
- 15 Expansion compensator (flexible connections)
- 16 Flow switch
- 17 Water temperature sensor

#### System components

- 18 Air vent
- 19 Flexible connection
- 20 Shut-down valves
- 21 Charge valve

----- Hydronic module (units with hydronic module)

### Notes:

**The system includes frost protection (anti-freeze solution or electric heater).**

**The hydronic module includes frost protection via electric heaters.**

**The unit evaporator includes frost protection via a factory-installed optional electric heater (evaporator frost protection option)**

# Physical data

<b>30RB</b>		<b>262</b>	<b>302</b>	<b>342</b>	<b>372</b>	<b>402</b>	<b>432</b>	<b>462</b>	<b>522</b>	<b>602</b>	<b>672</b>	<b>732</b>	<b>802</b>
<b>Nominal cooling capacity*</b>	kW	256	291	325	356	388	415	444	503	593	648	700	753
<b>Operating weight**</b>													
Standard unit with Euro Pack option	kg	2510	3160	3360	3440	3570	4160	4300	4510	5810	6020	6740	6950
Standard unit with Euro Pack option and high-pressure dual-pump hydronic module option	kg	2755	3465	3665	3785	3915	4505	4695	4925	-	-	-	-
Unit without options	kg	2320	2920	3120	3180	3310	3860	4000	4190	5440	5640	6320	6510
<b>Refrigerant</b>		R410A											
Circuit A	kg	24.0	35.5	37.0	38.0	38.5	46.0	47.5	47.5	39.0	39.0	48.0	48.0
Circuit B	kg	24.0	26.0	26.0	38.0	38.5	39.0	39.0	47.5	39.0	39.0	48.0	48.0
Circuit C	kg	-	-	-	-	-	-	-	-	39.0	48.0	39.0	48.0
<b>Compressors</b>		Hermetic scroll, 48,3 r/s											
Circuit A		2	3	3	3	3	4	4	4	3	3	4	4
Circuit B		2	2	2	3	3	3	3	4	3	3	4	4
Circuit C		-	-	-	-	-	-	-	-	3	4	3	4
No. of control stages		4	5	5	6	6	7	7	8	9	10	11	12
Minimum capacity	%	25	18	20	15	17	13	14	13	11	10	9	8
<b>Control</b>		PRO-DIALOG Plus											
<b>Condensers</b>		Grooved copper tubes and aluminium fins											
Fans		Axial FLYING BIRD IV with rotating shroud											
Quantity		4	5	5	6	6	7	7	8	9	10	11	12
Total air flow	l/s	18056	22569	22569	27083	27083	31597	31597	36111	40625	45139	49653	54167
Speed	r/s	16	16	16	16	16	16	16	16	16	16	16	16
<b>Evaporator</b>		Direct expansion, shell-and-tube											
Water volume	l	110	110	125	125	125	113	113	113	284	284	284	284
Max. water-side operating pressure without hydronic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
<b>Hydronic module (option)</b>		Centrifugal, monocell, low or high pressure (as required)											
Water pump		Single or twinned dual pump (as required)											
Quantity		1	1	1	1	1	1	1	1	-	-	-	-
Expansion tank volume	l	50	80	80	80	80	80	80	80	-	-	-	-
Max. water-side operating pressure	kPa	400	400	400	400	400	400	400	400	-	-	-	-
<b>Water connections without hydronic module</b>		Victaulic											
Diameter	in.	4	4	4	4	4	6	6	6	6	6	6	6
Outside tube diameter	mm	114.3	114.3	114.3	114.3	114.3	168.3	168.3	168.3	168.3	168.3	168.3	168.3
<b>Water connections with hydronic module</b>		Victaulic											
Diameter	in.	4	4	4	4	4	5	5	5	-	-	-	-
Outside tube diameter	mm	114.3	114.3	114.3	114.3	114.3	139.7	139.7	139.7	-	-	-	-

**Legend:**

\* Nominal conditions: evaporator entering/leaving water temperature 12°C/7°C, outside air temperature 35°C, evaporator fouling factor 0.000018 m<sup>2</sup> K/W

\*\* Weights are for guidance only

# Electrical data

30RB (without hydronic module)		262	302	342	372	402	432	462	522	602	672	732	802
<b>Power circuit</b>													
Nominal power supply	V-ph-Hz	400-3-50											
Voltage range	V	360-440											
<b>Max. connectable power cable section</b>													
Circuits A+B	mm <sup>2</sup>	2x240	2x240	2x240	2x240	2x240	3x240	3x240	3x240	2x240	2x240	3x240	3x240
Circuit C	mm <sup>2</sup>	-	-	-	-	-	-	-	-	2x185	2x185	2x185	2x185
<b>Control circuit supply</b>													
24 V, via internal transformer													
<b>Maximum unit power input*</b>													
Circuits A+B	kW	132	143	151	176	198	209	231	264	198	198	264	264
Circuit C	kW	-	-	-	-	-	-	-	-	99	132	99	132
<b>Nominal unit current draw**</b>													
Circuits A+B	A	167	185	193	226	250	268	292	334	250	250	334	334
Circuit C	A	-	-	-	-	-	-	-	-	125	167	125	167
<b>Maximum unit current draw***</b>													
Circuits A+B	A	222	244	255	299	332	355	388	443	332	332	443	443
Circuit C	A	-	-	-	-	-	-	-	-	166	222	166	222
<b>Maximum start-up current Standard unit†</b>													
Circuits A+B	A	426	448	459	502	535	557	590	645	535	535	645	645
Circuit C	A	-	-	-	-	-	-	-	-	371	426	371	426
<b>Cosine phi, unit at nom. capacity</b>													
0.84													
<b>Stability for three-phase short circuits (TN system)</b>													
<b>Unit with main disconnect without fuse (option)</b>													
Short-time current (1 s)-rms/peak value													
Circuits A+B	kA/kA	13/26	13/26	13/26	13/26	13/26	15/30	15/30	15/30	13/26	13/26	15/30	15/30
Circuit C	kA/kA	-	-	-	-	-	-	-	-	13/26	13/26	13/26	13/26
<b>Unit with main disconnect with fuse (option)</b>													
Current value, rms													
Circuits A+B	kA	50	50	50	50	50	50	50	50	50	50	50	50
Circuit C	kA	-	-	-	-	-	-	-	-	50	50	50	50

\* Power input of the compressor(s) + fan(s) at maximum unit operating conditions. Values given on the unit name plate.

\*\* Nominal unit current draw at nominal conditions: evaporator entering/leaving water temperature 12°C/7°C, outdoor air temperature 35°C. The current values are given at 400 V nominal voltage.

\*\*\* Maximum unit operating current at maximum unit power input and 400 V.

† Maximum instantaneous starting current at 400 V nominal voltage and with compressor in across-the-line start (maximum operating current of the smallest compressor(s) + fan current + locked rotor current of the largest compressor).

Note: Units 30RB 602-802 have two electrical connection points.

Hydronic module (option)		262	302	342	372	402	432	462	522	602	672	732	802
<b>Single and dual low-pressure pump</b>													
Shaft power	kW	2	3	3	4	4	4	6	6	-	-	-	-
Power input*	kW	2.7	3.6	3.6	4.6	4.6	4.6	6.3	6.3	-	-	-	-
Maximum current draw at 400 V**	A	4.7	6.4	6.4	8.2	8.2	8.2	11.2	11.2	-	-	-	-
<b>Single and dual high-pressure pump</b>													
Shaft power	kW	4	6	6	8	8	8	11	11	-	-	-	-
Power input*	kW	4.7	6.4	6.4	8.5	8.5	8.5	12.2	12.2	-	-	-	-
Maximum current draw at 400 V**	A	8.2	11.2	11.2	15.2	15.2	15.2	21.2	21.2	-	-	-	-

Note: The water pump power input values are given for guidance only.

\* To obtain the maximum power input for a unit with hydronic module add the maximum unit power input from the top table to the pump power input (\*) from the table above.

\*\* To obtain the maximum unit operating current draw for a unit with hydronic module add the maximum unit current draw from the top table to the pump current draw (\*\*) from the table above.

#### Electrical data notes for 30RB units:

- 30RB 262-522 units have a single power connection point at the main disconnect switch; 30RB 602-802 units have two connection points at the main disconnect switch.
- The control box includes the following standard features:
  - Starter and motor protection devices for each compressor and the fan(s)
  - Control devices

#### • Field connections:

- All connections to the system and the electrical installations must be in full accordance with all applicable local codes.
- The Carrier 30RB units are designed and built to ensure conformance with these codes. The recommendations of European standard EN 60204-1 (corresponds to IEC 60204-1) (machine safety - electrical machine components - part 1: general regulations) are specifically taken into account, when designing the electrical equipment.

#### • Electrical reserves:

- Circuit A has disconnect switches and branch sections, designed to supply the evaporator pump power input.

#### IMPORTANT:

- Generally the recommendations of IEC 60364 are accepted as compliance with the requirements of the installation directives. Conformance with EN 60204 is the best means of ensuring compliance with the Machines Directive § 1.5.1.
- Annex B of EN 60204-1 describes the electrical characteristics used for the operation of the machines.

1. The operating environment for the 30RB units is specified below:

- Environment\* - Environment as classified in EN 60721 (corresponds to IEC 60721):
    - outdoor installation\*
    - ambient temperature range: -20°C to +48°C, class 4K3\*
    - altitude: ≤ 2000 m
    - presence of hard solids, class 4S2 (no significant dust present)
    - presence of corrosive and polluting substances, class 4C2 (negligible)
    - vibration and shock, class 4M2
  - Competence of personnel, class BA4\* (trained personnel - IEC 60364)
2. Power supply frequency variation: ± 2 Hz.

3. The neutral (N) line must not be connected directly to the unit (if necessary use a transformer).
4. Overcurrent protection of the power supply conductors is not provided with the unit.
5. The factory-installed disconnect switch(es)/circuit breaker(s) is (are) of a type suitable for power interruption in accordance with EN 60947-3 (corresponds to IEC 60947-3).
6. The units are designed for simplified connection on TN(s) networks (IEC 60364). For IT networks derived currents may interfere with network monitoring elements, and it is recommended to create an IT type divider for the system units that require this and/or a TN type divider for Carrier units. Please consult the appropriate local organisations to define the monitoring and protection elements and carry out the electrical installation.

If short circuit currents above those given in the electrical data table are likely, modifications are required. Please contact your local Carrier representative.

#### NOTE

**If particular aspects of an actual installation do not conform to the conditions described above, or if there are other conditions which should be considered, always contact your local Carrier representative.**

\* The required protection level for this class is IP43B (according to reference document IEC 60529). All 30RB units are protected to IP44CW and fulfil this protection condition.

# Operating limits

## Evaporator water flow rate

30RB	Min. water flow l/s	Max. water flow* l/s
262	3.5	26.7
302	3.9	26.7
342	4.4	29.4
372	4.9	29.4
402	5.2	29.4
432	5.8	31.1
462	6.1	31.1
522	6.9	31.1
602	7.9	50.6
672	8.7	50.6
732	9.6	50.6
802	10.3	50.6

### Legend

\* Maximum flow rate for an evaporator pressure drop of 100 kPa (unit with hydronic module)

## Outdoor air temperature °C

30RB	During operation (standard)		During operation (winter operation option)	
	Minimum	Maximum	Minimum	Maximum
262-802	0	48	-20	48

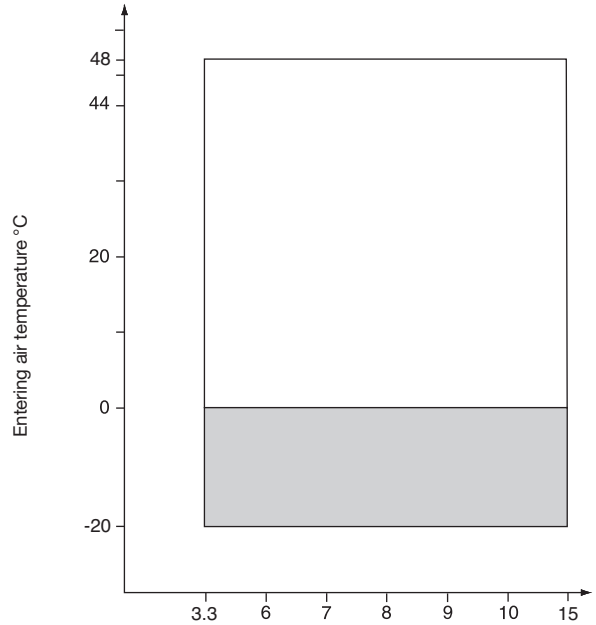
### Note

The evaporator must be protected against frost (water-glycol solution or frost protection option), if the air temperature at shut-down or during operation is below 3°C

## Entering water temperature °C

30RB	At shut-down (standard)	At start-up	During operation	
	Maximum, °C	Maximum, °C	Minimum, °C	Maximum °C
262-802	48	40	6.8	25

## Operating range



Evaporator leaving water temperature °C

### Notes

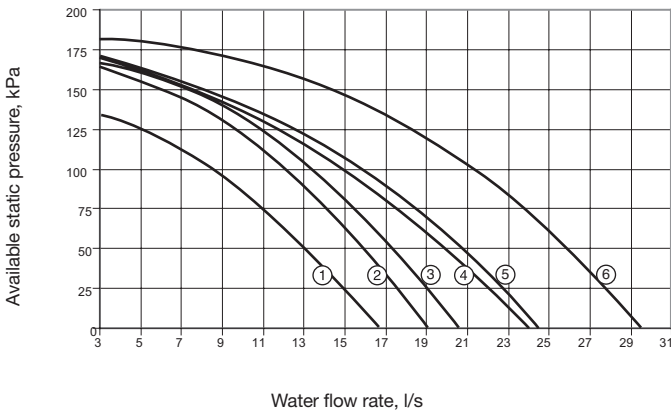
- 1 Evaporator  $\Delta t = 5$  K
- 2 With the evaporator frost protection option the evaporator is protected against frost down to  $-20^{\circ}\text{C}$ .

### Legend

■ Operating range with winter operation option and evaporator frost protection option, if the circuit does not contain any anti-freeze solution.

# Available static system pressure

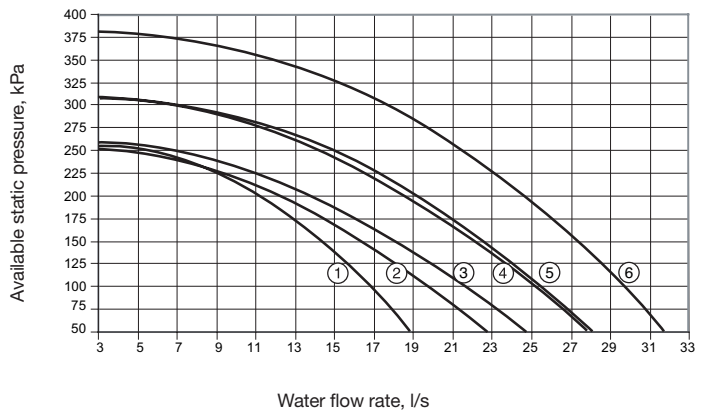
## Low-pressure pump (hydronic module option)



### Legend

- 1 30RB 262
- 2 30RB 302
- 3 30RB 342
- 4 30RB 372-402
- 5 30RB 432
- 6 30RB 462-522

## High-pressure pump (hydronic module option)

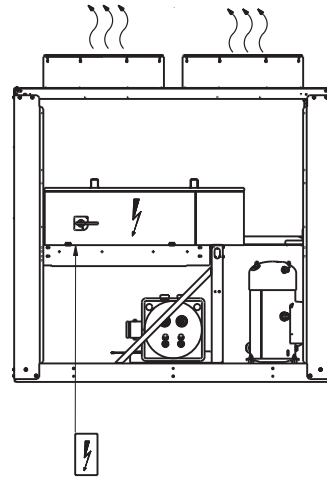
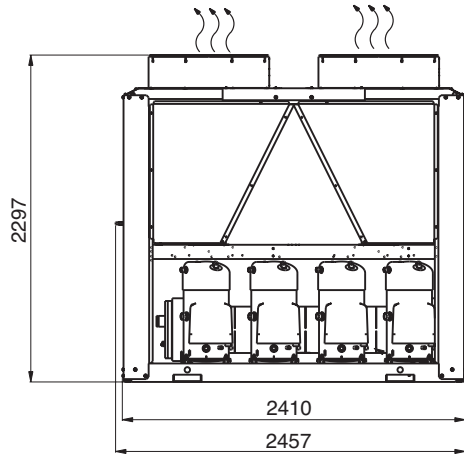


### Legend

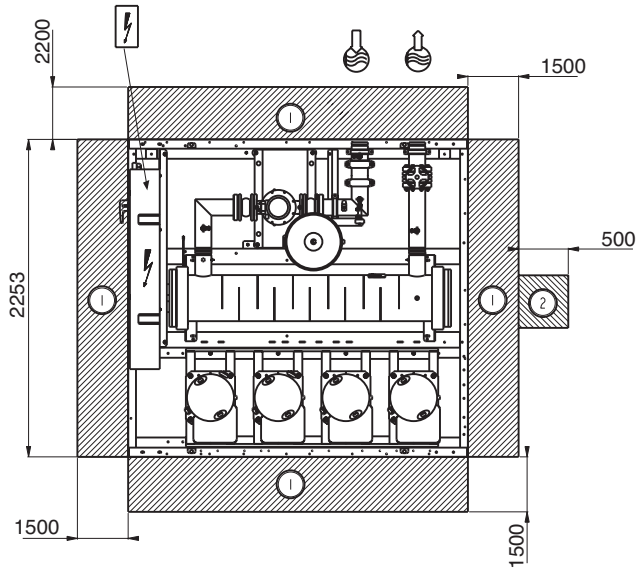
- 1 30RB 262
- 2 30RB 302
- 3 30RB 342
- 4 30RB 372-402
- 5 30RB 432
- 6 30RB 462-522

# Dimensions/clearances

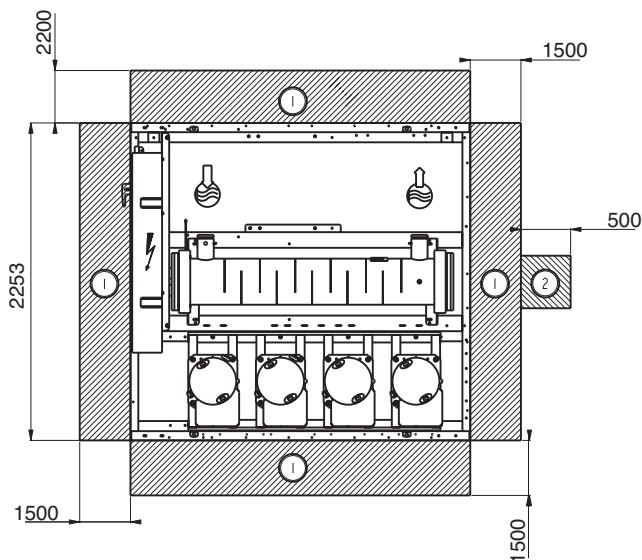
30RB 262



**Unit with hydronic module**



**Unit without hydronic module**



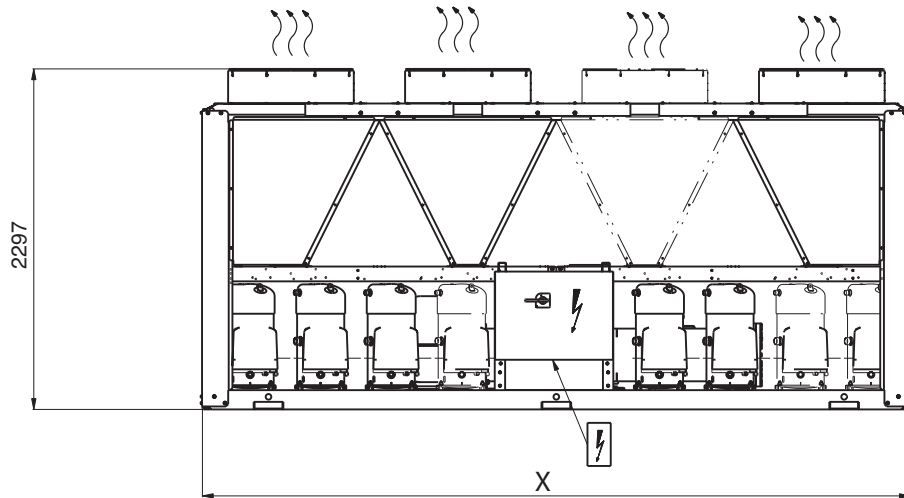
**Legend:**  
All dimensions are given in mm.

- ① Required clearances for maintenance and air flow
- ② Recommended space for evaporator tube removal
- Water inlet
- Water outlet
- Power supply inlet
- Air outlet, do not obstruct

**NOTE:**  
Drawings are not contractually binding. Before designing an installation, consult the certified dimensional drawings, available on request.

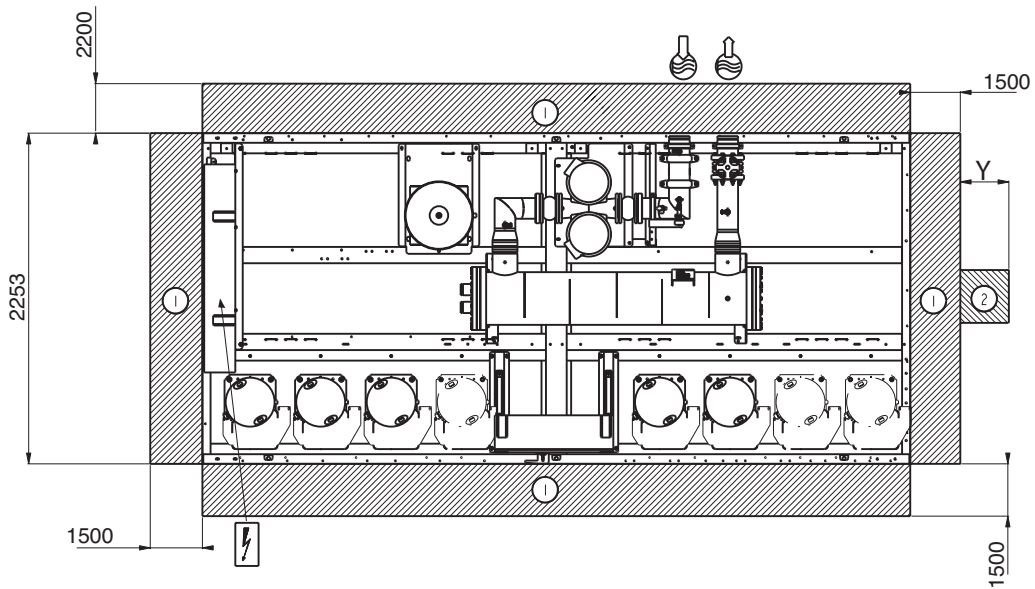
# Dimensions/clearances

30RB 302-522

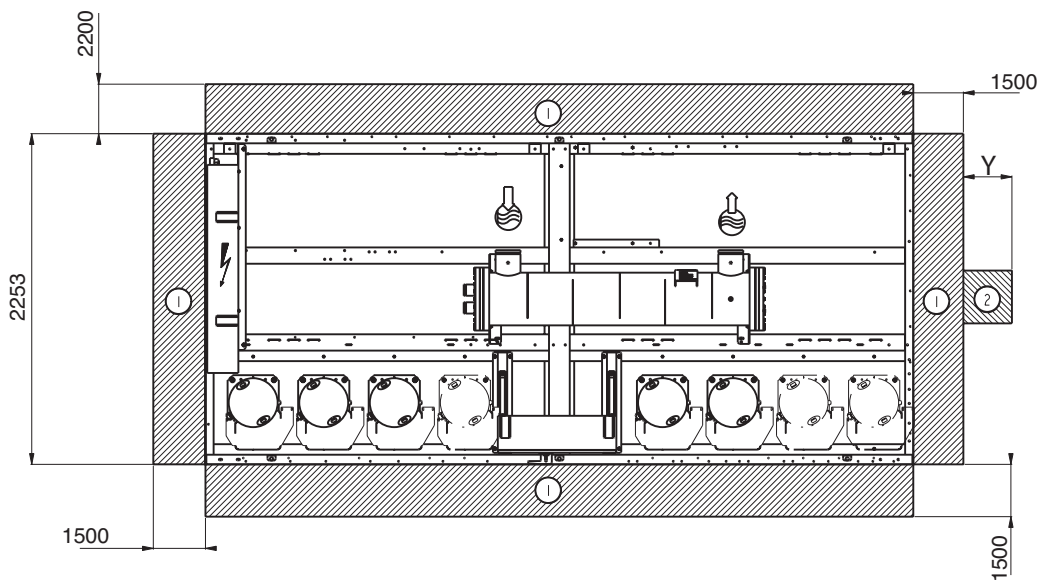


30RB	X	Y
302-402	3604	200
432-522	4798	0

Unit with hydronic module

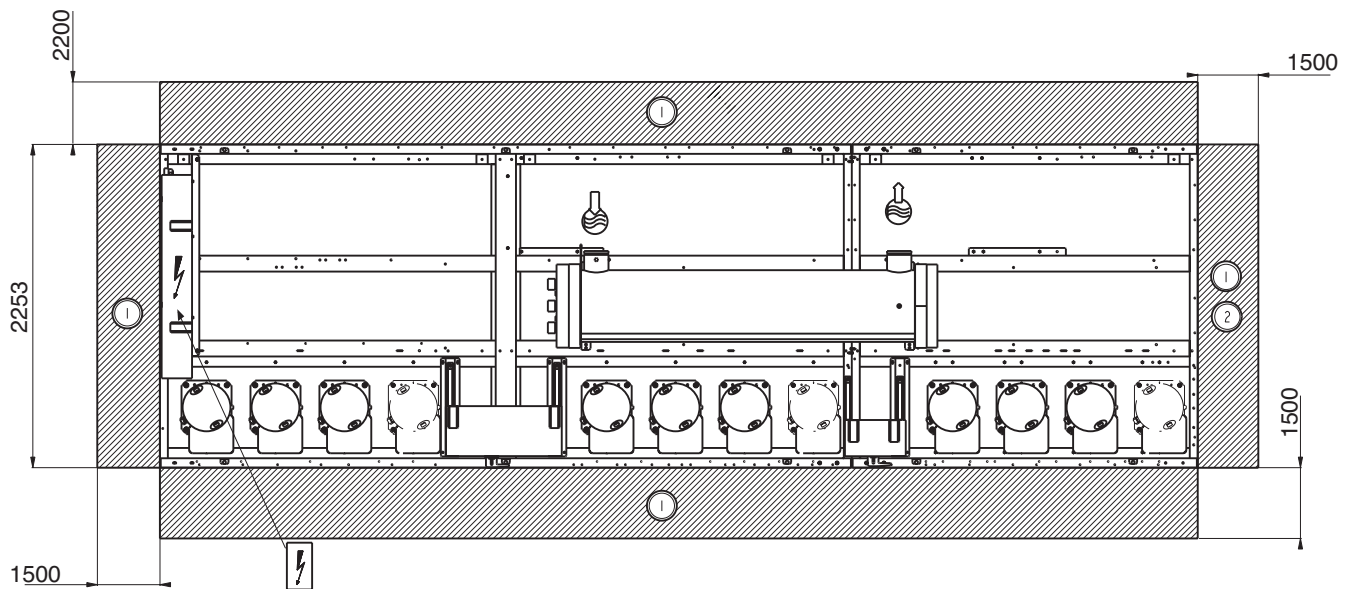
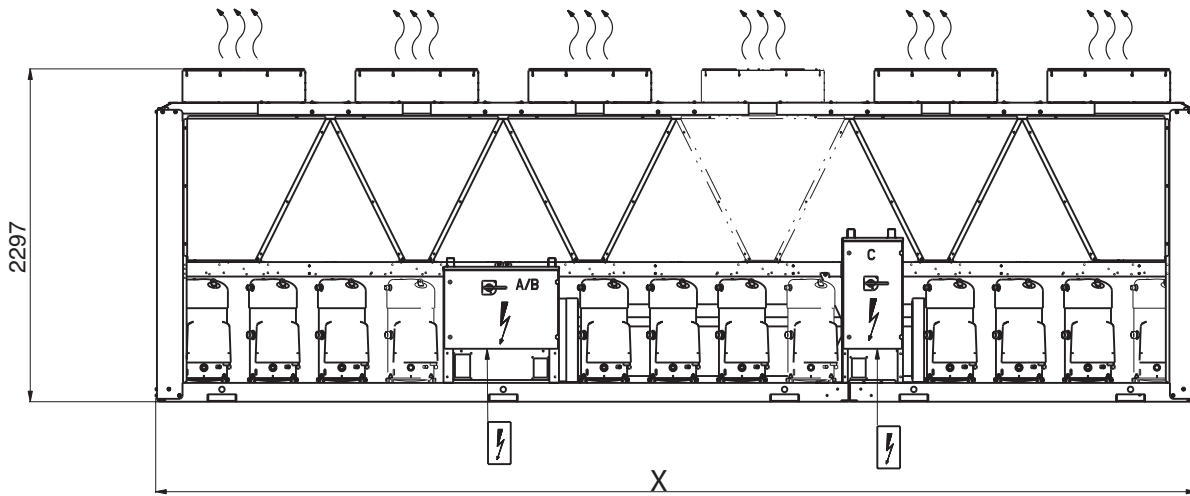


Unit without hydronic module



# Dimensions/clearances





30RB 602-802



30RB	X
602-672	5992
732-802	7186

**Legend:**

All dimensions are given in mm.

- ① Required clearances for maintenance and air flow
- ② Recommended space for evaporator tube removal
-  Water inlet
-  Water outlet
-  Power supply inlet
-  Air outlet, do not obstruct

**NOTE:**  
Drawings are not contractually binding. Before designing an installation, consult the certified dimensional drawings, available on request.

# Cooling capacities

30RB 262-802

Condenser entering air temperature, °C

LWT °C	25										30										35										40										45									
	CAP kW	COMP kW	UNIT kW	COOL I/s	COOL kPa	PRES kPa <sup>(1)</sup>	PRES kPa <sup>(2)</sup>	CAP kW	COMP kW	UNIT kW	COOL I/s	COOL kPa	PRES kPa <sup>(1)</sup>	PRES kPa <sup>(2)</sup>	CAP kW	COMP kW	UNIT kW	COOL I/s	COOL kPa	PRES kPa <sup>(1)</sup>	PRES kPa <sup>(2)</sup>	CAP kW	COMP kW	UNIT kW	COOL I/s	COOL kPa	PRES kPa <sup>(1)</sup>	PRES kPa <sup>(2)</sup>	CAP kW	COMP kW	UNIT kW	COOL I/s	COOL kPa	PRES kPa <sup>(1)</sup>	PRES kPa <sup>(2)</sup>															
262	270	74	80	13	36	54	176	256	81	88	12	33	62	186	241	89	95	11	30	70	196	225	97	104	11	28	79	206	207	107	113	10	25	87	215															
302	306	77	86	15	43	70	174	291	85	94	14	40	79	183	274	94	102	13	36	89	192	255	104	112	12	33	99	201	235	115	123	11	29	109	210															
342	343	91	99	16	37	66	173	325	100	108	15	34	77	183	306	110	118	15	30	88	193	284	120	128	14	27	100	203	262	132	140	12	23	111	213															
372	373	95	105	18	42	74	211	354	105	114	17	39	82	222	333	115	125	16	35	92	233	309	127	136	15	31	101	245	284	139	149	14	27	111	256															
402	409	111	121	19	49	56	189	388	122	132	18	45	66	202	365	134	143	17	41	77	216	340	147	156	16	36	89	230	314	161	171	15	32	100	243															
432	433	112	123	21	47	50	180	413	124	135	20	43	61	194	391	136	147	19	39	72	208	365	150	161	17	34	84	223	337	165	176	16	29	97	238															
462	464	127	138	22	53	91	241	442	140	151	21	49	101	257	416	153	164	20	44	112	274	388	168	179	18	38	123	291	358	184	195	17	33	133	307															
522	528	144	158	25	68	59	191	503	159	172	24	62	73	212	474	174	187	23	55	87	234	442	191	203	21	49	101	257	409	209	222	19	42	115	278															
602	626	165	180	30	38	-	594	181	196	28	34	-	-	560	199	213	27	31	-	-	521	218	232	25	27	32	-	-	482	239	253	23	23	-	-															
672	683	182	198	32	44	-	649	200	216	31	40	-	-	611	219	235	29	36	-	-	570	240	256	27	32	-	-	528	264	280	25	28	-	-																
732	738	200	218	35	51	-	701	220	238	33	47	-	-	660	241	258	31	42	-	-	615	264	281	29	37	-	-	569	289	306	27	32	-	-																
802	794	218	237	38	59	-	754	239	258	36	53	-	-	709	262	281	34	48	-	-	661	286	305	31	42	-	-	612	314	332	29	36	-	-																
262	279	75	81	13	37	49	170	265	82	89	13	35	57	180	249	90	96	12	32	66	191	232	99	105	11	29	75	201	214	108	114	10	26	84	211															
302	315	79	87	15	44	64	169	300	87	95	14	41	73	178	282	95	103	13	38	84	187	263	105	113	13	34	95	197	243	116	124	12	31	105	207															
342	353	93	101	17	39	59	167	336	102	110	16	35	70	177	315	111	119	15	32	82	188	294	122	130	14	28	95	199	271	134	142	13	25	106	209															
372	386	96	106	18	45	67	204	366	106	116	17	41	77	215	344	117	126	16	37	87	227	320	128	138	15	33	97	240	294	141	150	14	28	107	251															
402	422	112	122	20	52	49	181	400	123	133	19	48	60	195	376	135	145	18	43	72	209	320	149	158	17	38	84	224	325	163	173	15	34	95	237															
432	446	114	125	21	50	42	171	426	125	136	20	45	54	185	403	138	149	19	41	66	200	376	151	163	18	36	79	216	348	167	178	17	31	92	232															
462	481	129	140	23	57	84	229	457	142	153	22	52	95	246	431	155	166	21	46	106	264	402	170	181	19	41	118	282	371	186	197	18	35	128	300															
522	545	147	160	26	72	49	176	519	161	174	25	66	64	199	489	177	189	23	59	79	223	457	193	206	22	52	95	246	424	212	225	20	45	109	269															
602	645	167	182	31	40	-	612	184	198	29	36	-	-	576	201	216	27	32	-	-	537	220	234	26	29	-	-	497	241	255	24	25	-	-																
672	703	184	200	33	47	-	668	202	218	32	43	-	-	629	222	238	30	38	-	-	587	243	259	28	34	-	-	544	267	282	26	29	-	-																
732	761	203	221	36	54	-	723	223	241	34	49	-	-	680	244	262	32	44	-	-	634	267	285	30	39	-	-	587	293	310	28	34	-	-																
802	819	221	241	39	62	-	777	243	262	37	56	-	-	731	265	284	35	50	-	-	682	290	309	32	44	-	-	631	318	336	30	38	-	-																
262	287	76	82	14	39	43	163	273	83	90	13	36	52	174	256	91	98	12	33	62	186	239	100	106	11	30	71	197	221	109	116	11	27	81	208															
302	325	80	88	15	46	57	163	309	88	96	15	43	68	172	291	96	104	14	40	79	182	271	106	114	13	36	90	193	250	117	125	12	32	101	203															
342	365	94	102	17	41	51	160	346	103	111	16	37	64	171	325	113	121	15	34	76	182	303	123	131	14	30	89	194	280	135	143	13	26	102	205															
372	399	97	107	19	47	61	195	378	107	117	18	43	71	208	356	118	128	17	39	81	221	330	130	139	16	35	93	234	304	142	152	14	30	103	247															
402	435	114	123	21	55	42	172	413	125	135	20	50	54	187	388	137	147	19	45	66	202	362	150	160	17	40	79	217	335	165	174	16	35	91	232															
432	460	115	126	22	53	34	161	439	127	138	21	48	47	176	415	139	151	20	43	60	192	388	153	164	18	38	73	209	359	168	179	17	33	87	226															
462	485	131	142	24	60	76	217	471	144	155	22	55	88	236	444	157	169	21	49	100	255	414	172	183	20	43	113	275	383	189	200	18	37	124	293															
522	560	148	162	27	76	40	162	533	163	176	25	69	56	186	503	179	191	24	62	72	212	470	196	208	22	55	89	237	436	215	227	21	48	104	261															
602	666	170	185	32	42	-	632	187	201	30	39	-	-	593	204	218	28	34	-	-	553	223	237	26	30	-	-	512	244	258	24	26	-	-																
672	724	187	203	34	49	-	688	205	221	33	45	-	-	648	225	240	31	40	-	-	605	246	262	29	35	-	-	561	270	285	27	31	-	-																
732	786	207	224	37	58	-	745	227	244	35	52	-	-	700	248	265	33	47	-	-	653	271	288	31	41	-	-	605	296	314	29	36	-	-																
802	845	224	244	40	66	-	801	246	266	38	60	-	-	753	269	288	36	53	-	-	702	294	313	33	47	-	-	650	322	341	31	41	-	-																

Legend:

- LWT Leaving water temperature
- CAP kW Cooling capacity
- COMP kW Compressor power input
- UNIT kW Unit power input (compressors, fans and control circuit)
- COOL I/s Evaporator water flow rate
- COOL kPa Evaporator pressure drop
- PRES kPa<sup>(1)</sup> Available pressure at the unit outlet with hydronic module with low-pressure pump (option)
- PRES kPa<sup>(2)</sup> Available pressure at the unit outlet with hydronic module with high-pressure pump (option)

Full load correction factors for Eurovent laboratory test:

- Net cooling capacity 1.000
- Energy efficiency ratio 1.000
- Evaporator pressure drop 1.000

Application data:

- Standard units, refrigerant: R410A
- Evaporator temperature rise: 5 K
- Evaporator fluid: chilled water
- Fouling factor: 0.18 x 10<sup>-4</sup> (m<sup>2</sup> K/W)
- Performances in accordance with EN 12055

# Cooling capacities (cont.)

## 30RB 262-802

### Condenser entering air temperature, °C

LMT C°	25						30						35						40						45									
	CAP kW	COMP kW	UNIT kW	COOL l/s	COOL kPa	PRES kPa <sup>a</sup>	CAP kW	COMP kW	UNIT kW	COOL l/s	COOL kPa	PRES kPa <sup>a</sup>	CAP kW	COMP kW	UNIT kW	COOL l/s	COOL kPa	PRES kPa <sup>a</sup>	CAP kW	COMP kW	UNIT kW	COOL l/s	COOL kPa	PRES kPa <sup>a</sup>	CAP kW	COMP kW	UNIT kW	COOL l/s	COOL kPa	PRES kPa <sup>a</sup>				
8	295	77	83	14	41	38	156	280	84	91	13	38	47	168	264	92	99	107	107	107	107	11	28	31	67	193	227	111	117	11	28	34	77	204
<b>302</b>	336	81	89	16	49	49	156	320	89	97	15	45	60	166	301	98	106	115	115	115	115	12	34	38	85	188	258	118	126	12	34	34	97	199
<b>342</b>	376	96	104	18	43	43	153	357	105	113	17	39	56	164	335	114	122	125	125	125	125	14	28	31	84	189	289	137	145	14	28	97	201	
<b>372</b>	412	99	108	20	50	54	187	391	109	118	19	46	65	200	367	119	129	131	131	131	131	15	32	37	88	228	314	144	153	15	32	99	242	
<b>402</b>	448	115	125	21	58	64	162	425	127	136	20	53	47	178	400	139	148	148	148	148	148	16	37	42	73	211	345	167	176	16	37	86	226	
<b>432</b>	474	116	128	23	56	26	150	452	128	140	22	51	39	167	427	141	152	152	152	152	152	18	35	41	67	202	370	170	181	18	35	82	219	
<b>462</b>	511	133	144	24	64	68	204	486	146	157	23	58	81	225	457	160	171	171	171	171	171	20	46	52	108	267	395	191	202	19	40	120	286	
<b>522</b>	577	151	164	28	80	30	146	548	178	26	73	47	173	516	181	194	25	65	65	65	65	23	58	82	227	448	217	229	21	50	98	252		
<b>602</b>	687	173	187	33	45	-	-	651	189	204	31	41	-	-	611	207	221	29	36	-	-	27	32	-	-	527	247	261	25	28	-	-	-	
<b>672</b>	744	189	205	35	52	-	-	708	208	224	34	47	-	-	667	227	243	32	43	-	-	30	37	-	-	577	273	288	27	33	-	-	-	
<b>732</b>	811	210	228	39	61	-	-	769	230	248	37	55	-	-	721	251	269	34	49	-	-	32	43	-	-	623	300	317	30	38	-	-	-	
<b>802</b>	873	228	247	42	70	-	-	827	250	269	39	63	-	-	776	273	292	37	56	-	-	34	49	-	-	670	326	345	32	43	-	-	-	
<b>262</b>	10	313	79	86	15	44	26	140	297	87	93	14	41	37	154	279	95	101	101	101	12	34	34	59	183	241	113	120	12	31	70	196		
<b>302</b>	358	83	91	17	53	33	141	340	92	100	16	50	46	153	320	101	109	110	110	110	14	41	41	74	178	276	121	129	13	37	87	190		
<b>342</b>	400	99	107	19	48	25	137	380	108	116	18	44	41	150	356	118	126	126	126	126	16	35	35	72	179	307	140	148	15	31	87	192		
<b>372</b>	440	102	111	21	56	38	168	417	112	121	20	51	51	183	392	122	132	132	132	132	17	41	41	77	216	335	147	156	16	36	90	232		
<b>402</b>	475	119	129	23	64	18	142	452	131	140	22	59	32	159	424	142	152	152	152	152	19	47	47	62	197	366	170	180	17	41	76	215		
<b>432</b>	502	120	131	24	62	7	127	479	132	143	23	57	22	146	453	145	156	156	156	156	20	45	45	55	186	393	174	185	19	39	71	206		
<b>462</b>	544	137	149	26	72	49	176	518	151	162	25	66	64	199	486	164	175	175	175	175	23	58	58	96	249	419	196	207	20	44	110	271		
<b>522</b>	613	155	168	29	90	5	109	583	170	183	28	82	25	139	548	186	199	199	199	199	26	73	73	64	205	473	222	234	23	56	87	234		
<b>602</b>	730	179	193	35	50	-	-	693	196	210	33	46	-	-	650	213	227	31	41	-	-	29	36	-	-	559	253	268	27	31	-	-	-	
<b>672</b>	787	195	211	37	58	-	-	748	214	230	36	53	-	-	704	233	249	34	47	-	-	31	42	-	-	611	279	295	29	36	-	-	-	
<b>732</b>	864	216	234	41	69	-	-	819	237	255	39	62	-	-	768	258	276	37	55	-	-	34	48	-	-	660	308	325	32	42	-	-	-	
<b>802</b>	930	235	254	44	79	-	-	882	257	277	42	71	-	-	827	281	300	39	63	-	-	37	55	-	-	710	335	353	34	48	-	-	-	

### Legend:

- LWT Leaving water temperature
  - CAP kW Cooling capacity
  - COMP kW Compressor power input
  - UNIT kW Unit power input (compressors, fans and control circuit)
  - COOL l/s Evaporator water flow rate
  - COOL kPa Evaporator pressure drop
  - PRES kPa<sup>a</sup> Available pressure at the unit outlet with hydronic module with low-pressure pump (option)
  - PRES kPa<sup>a</sup> Available pressure at the unit outlet with hydronic module with high-pressure pump (option)
- Full load correction factors for Eurovent laboratory test:
- Net cooling capacity 1,000
  - Energy efficiency ratio 1,000
  - Evaporator pressure drop 1,000
- Application data:
- Standard units, refrigerant: R410A
  - Evaporator temperature rise: 5 K
  - Evaporator fluid: chilled water
  - Fouling factor: 0.18 x 10<sup>-4</sup> (m<sup>2</sup>·K)/W
  - Performances in accordance with EN 12055





Order No. 13438-20, 12.2004. Supersedes order No.: 13438-20, 09.2004  
Manufacturer reserves the right to change any product specifications without notice.  
The cover photo is solely for illustration purposes and not contractually binding.



Environmental Management System Approval

Manufactured by: Carrier SA, Montluel, France  
Printed on Totally Chlorine Free Paper.  
Printed in the Netherlands.