



Reversible air-to-water screw heat pumps

Model RTXB 140 to 300

Cooling capacity: 480 - 1050 kW

Heating capacity: 540 - 1095 kW



RLC-PRC048A-GB

Table of Contents

Model number description	4
Technical specifications.....	6
Standard configuration	6
Energy versions	6
Acoustic versions	6
Casing	6
Compressor	6
Fans.....	8
User heat exchanger.....	8
Source heat exchanger.....	8
Refrigerant circuit	8
Electrical panel.....	8
Electronic controls.....	8
Options and accessories / Standards and Certifications	10
Options	10
Accessories	10
Reference standards.....	10
Certifications	10
Technical data	11
General technical data.....	11
Cooling capacity performances - RTX B	14
Heating capacity performances - RTX B	16
Cooling capacity performances - RTX B L	18
Heating capacity performances - RTX B L	20
Cooling capacity performances - RTX B S.....	22
Heating capacity performances - RTX B S.....	24
Operating range.....	26
Power correction factors	27
Scaling correction schedules	28
Ethylene glycol correction schedule	28
Glycol percentage depending on freezing temperature	28
Scaling correction table	28
Hydraulic data	29
Water flow and pressure drop	29

Electrical data	35
Acoustic data	37
Noise correction factors for hydraulic version.....	39
Installation sketch	40
Installation sketch partial recovery (customer care)	40
Dimensional drawings and weights	41
Operating weights	53
Shipping weights.....	53
Tube diameters	53
Notes	54

Model number description

Digit 1-4 — Unit Model

RTXB= Reversible air-to-water screw heat pumps

Digit 5-7 — Unit Model Nominal Tonage

140 = 140 Tons
 150 = 150 Tons
 160 = 160 Tons
 180 = 180 Tons
 190 = 190 Tons
 220 = 220 Tons
 250 = 250 Tons
 300 = 300 Tons

Digit 8 — Acoustics

L = Low Noise
 X = Standard Noise
 S = Super Low Noise

Digit 9 — Pump Package

1 = Single pump - Low Head Pressure
 2 = Single pump - Medium Head Pressure
 3 = Single pump - High Head Pressure
 4 = Dual Pump - Low Head Pressure
 5 = Dual Pump - Medium Head Pressure
 6 = Dual Pump - High Head Pressure
 X = Without (Standard)

Digit 10 — Remote Control Display

1 = With Remote Control Display
 X = Without (Standard)

Digit 11 — Power Factor Correction

1 = Cos Phi = 0.91
 X = Without (Standard)

Digit 12 — Control Panel Electric Heater with Thermostat

1 = With
 X = Without (Standard)

Digit 13 — Phase Failure Protection Relay + Under Over Voltage Protection

1 = With
 X = Without (Standard)

Digit 14 — Communication Card

1 = RS485
 2 = LON Adapter
 3 = BACnet Adapter
 X = Without (Standard)

Digit 15 — Soft starter

1 = Soft Starter
 2 = Star-Delta
 3 = Part Winding Starter
 X = Without (Standard)

Digit 16 — Automatic Circuit Breakers (Fan and Compressors)

1 = With
 X = Without (Standard)

Digit 17 — Condensing control

1 = ON/OFF pressostatic control
 2 = With variable fan speed modulation
 3 = EC fans
 X = ON/OFF AC fan (Standard)

Digit 18 — Low Ambient Kit

1 = With
 X = Without (Standard)

Digit 19 — Flow Switch

1 = With
 X = Without (Standard)

Digit 20 — Automatic Water Filling

1 = With
 X = Without (Standard)

Digit 21 — Victaulic Water Strainer

1 = With
 X = Without (Standard)

Digit 22 — Water Gauges

1 = With
 X = Without (Standard)

Digit 23 — Gas Gauges

1 = With
 X = Without (Standard)

Model number description

Digit 24 — Protection Grilles

- 1 = Full Protection Grilles
- 2 = Only Condenser Protection Grilles
- X = Without (Standard)

Digit 25 — Isolators

- 1 = Rubber anti vibration mounts
- 2 = Spring anti vibration mounts
- X = Without (Standard)

Digit 26 — Water Pump Automatic Change Over

- 1 = With
- X = Without (Standard)

Digit 27 — Condenser coil

- 1 = Aluminum epoxy coated condensing coils
- 2 = Aluminum pre-painted condensing coils
- 3 = Copper/Copper condensing coils
- 4 = Tinned copper/copper condensing coils
- X = Aluminum (Standard)

Digit 28 — Heat Recovery

- H = With
- X = Without (Standard)

Digit 29 — Water Connection Type

- 1 = Flange adaptor
- 2 = Victaulic kit
- X = Without (Standard)

Digit 30 — With High Static Pressure Fans

- 1 = With
- X = Without (Standard)

Digit 31 — Sea Container Package

- 1 = With
- X = Without (Standard)

Digit 32 — Compressor Stepless Capacity Control

- 1 = With
- X = Without (Standard)

Digit 33 — Compressor Suction Service Valves

- 1 = With
- X = Without (Standard)

Digit 34 — Literature language

- 1 = English
- 2 = Turkish
- 3 = Dutch
- 4 = German
- 5 = Greek
- 6 = French
- 7 = Italian
- 8 = Polish
- 9 = Spanish

Digit 35 — Special

- 1 = Special request
- X = Without (Standard)

Technical specifications

Standard configuration

The units belonging to the RTX range are air cooled packaged heat pumps, for outdoor installation, equipped with semihermetic screw compressors and axial fans, available in 8 sizes and in the following versions.

Energy versions

H version: (partial recovery stainless steel brazed plate type desuperheater, externally insulated): the unit is equipped with an additional water/refrigerant heat exchanger fitted on the compressor discharge line, in series with the condensing coil. This solution enables desuperheating heat recovery of up to 25% of condensing heat, useful for sanitary or other applications.

Acoustic versions

L version: units in low noise versions. The noise reduction is achieved by a compressor sound proofing box, fans with two speed motors and automatic switch over in accordance with the condensing pressure. Compared to standard versions, L versions allow a reduction of about 2 dB(A) in sound levels.

S version: units in super low noise versions. The noise reduction is achieved by a compressor sound proofing box, oversized condensing coil, and fans controlled by a variable speed electronic control in accordance with the condensing pressure. Compared to standard versions, S versions allow a reduction of about 5 dB(A) in sound levels.

HYDRAULIC VERSION (Packaged hydraulic kit)

SINGLE PUMP AND EXPANSION VESSEL

Model Number

- | | |
|----------|-----------------------------|
| 1 | Low head pressure 150kPa |
| 2 | Medium head pressure 250kPa |
| 3 | High head pressure 450kPa |

DUAL PUMPS AND EXPANSION VESSELS

Model Number

- | | |
|----------|-----------------------------|
| 4 | Low head pressure 150kPa |
| 5 | Medium head pressure 250kPa |
| 6 | High head pressure 450kPa |

Casing

Casing made with heavy gauge structure in galvanized steel. The powder paint anti-corrosive treatment over the entire frame provides long lasting resistance for outdoor installation, even in aggressive environmental conditions. Its design allows these machines to be manufactured in modular units and, at the same time, it ensures a constant air flow through the finned coils and makes for easy maintenance and service.

Compressor

Semi-hermetic twin screw helical oil injection, complete with oil separator built in three stages, the latest generation, and oil filter, both for increased efficiency. The compressor is birotor compressor with male and female screws with very high precision workmanship.

The five-lobe rotor is directly mounted on the two pole motor without the interposition of gearboxes. The bearings mounted on the axis of the rotors, in a special chamber isolated from the compression chamber, are made of carbon steel.

The screws with the innovative profile with N-type "rolling" operation allow you to obtain the maximum discharge at the lowest power consumption with an extremely low noise generation.

The robust mechanics allow efficient operation in the entire field of application and in all speeds of rotation permitted. The bearings, mounted in tandem with a high degree of rigidity and precision of operation and resistant to the combination of axial and radial loads, protect the screws against any rotations that might occur during system shutdown. These bearings have special cages to reduce noise and to increase the operational life of the compressors.

In the starting phase, since the pressures are always equalized inside the compressor, there is no circulation of oil. However, the bearings and the screws are designed to tolerate short periods (a few seconds) of dry operation, until they establish the necessary pressure difference.

Technical specifications

The three-stage oil separator ensures less migration of oil into the refrigerant circuit and at the same time better lubrication of the mechanical components of the compressors with a significant reduction in noise.

The semi-hermetic screw compressors are available, depending on size, with star-delta starter or part winding, with a considerable reduction of inrush currents, which in an engine with direct starting could reach 3 to 8 times higher values than the maximum rated currents of operation. The semi-hermetic screw compressors are available with adjustment in steps or continuously with slide valve.

The first type of adjustment is obtained by the combination of three solenoid valves positioned in fixed positions on the body of the compressor that guarantee 4 steps of adjustment; the second is obtained from the combination of two solenoid valves: the first valve has a fixed position and the other one is pulsing, both placed on the compressor body.

The capacity regulation is realized through a sliding drawer "shutter", activated by oil pressure of the hydraulic circuit and controlled by solenoid valves positioned on the body of the compressor. By acting on the volume aspirated by the bolts, the sliding drawer regulates the flow outlet and the cooling capacity generated by the compressor, resulting in a step change of 25% (used only for the compressor start up), 50%, 75% and 100% in the first case.

The second type of compressor capacity regulation is performed by a sliding valve able to continuously adjust the capacity from the minimum step up to 100%.

The cooling capacity control of the compressor allows increased performance at partial loads with a consequent increase in the ESEER value.

The perfect centering of the rotors, in the axial and radial directions, is ensured by bearings mounted on the ends of the shafts.

The oil circuit will perform the following functions:

- Dynamic seal between the chambers
- Maintenance of a sliding drawer
- Lubricate the bearings and rotors
- Cooling of the moving parts
- Synchronization gear

The oil circulation takes place by the pressure difference between the flow and the pressure of injection of oil, slightly higher than the suction pressure.

The oil and refrigerant mixture undergoes a first separation thanks to the speed difference between the gas and the oil drops obtained through the "Venturi" effect, a second separation as a result of centrifugal forces produced by special propellers and a third separation due to a filtering effect. Through a demister filter in which the oil droplets are subject to continuous changes of direction and speed. The oil, thus separated, is collected inside the oil pan, leaving free the surface of the "demister filter", while the gas flows through the discharge valve.

This innovative system ensures a pressure drop below 0.6 bar and a separation efficiency of 99.98% even in the most critical conditions.

The compressor is equipped with a non-return valve to protect the rotors from rotating in opposite direction in case of shutdown.

The compressor is equipped with a safety valve that connects high and low pressure areas. The valve is sized according to EN 60335-2-34 and opens at a differential pressure of 26 bar.

The motors are equipped with an electronic protection device model INT 69 FRY that controls the temperature of the windings, and the temperature of the gas flow in through PTC thermistors and probes mounted on the windings and on the high pressure side also the correct direction of rotation and the presence of the three phases. Furthermore, it enables a 5 minutes delay at start in the case of overheating windings, and a maximum number of 10 starts. The screw compressors used have wide ranges of operation and high values of COP.

The limited number of moving parts dramatically reduces maintenance.

The screw compressors used have a number of special features: extremely quiet, no vibration and therefore reduced pressure at the inlet pipes and discharge pipes and low maintenance.

The compressors are also equipped as standard with:

- Taps delivery
- Upload oil
- Crankcase heater
- Oil flow

Technical specifications

Fans

The ECOPROFILE propeller fan technology has blades statically and dynamically balanced, driven directly by the electric motors, closed type, external rotor and thermal protection for outdoor installation. Class F windings have protection according to VDE 0730. Ecoprofile fans are characterized by low speed and "owlet" profile to reduce the effect of vortices, thereby reducing the energy consumed for operation and noise, reducing it by an average of 6 dB(A) compared with standard fans. They are suitable for:

- Two speed operation by automatic speed changeover (chiller units in L setup);
- Variable speed control by means of additional electronic card (chiller units in S setup).

User heat exchanger

Direct expansion shell and tube type. The steel shell is complete with flanged water connections and externally insulated with closed cell anticondensation neoprene layer. The U-bent inner copper tubes are mechanically expanded onto the steel tube plate and come with water baffles in order to improve the thermal exchange. The evaporator is protected against freezing through an antifreeze protection electric heater controlled by a thermostat, fitted around the exterior of the shell beneath the insulation and it is supplied with differential pressure switch against absence of water flow.

Source heat exchanger

Condenser coils with seamless copper tubes expanded into aluminum corrugated fins. They are of high efficiency type, complete with subcooling circuit which allows an increase of cooling capacity without an increase of the power input.

Refrigerant circuit

The units are equipped with two independent refrigerant circuits entirely constructed with copper tubes, each supplied by its own compressor. Each circuit includes:

- Electronic expansion valve;
- Filter drier with replaceable cartridge;
- Sight glass;
- Liquid line solenoid valve;
- High pressure switch;
- Low pressure switch;
- Relief valve on high and low pressure line;
- Economizer, which can provide efficiency gains of up to 5% compared to standard compressors; with plate heat exchanger, sight glass, filter and expansion valve;
- 4-way reverse valve, liquid receiver and liquid accumulator on suction line.

Electrical panel

Electrical control panel made in accordance with standards CEI 44-5/IEC 204-2, mounted inside the unit, including:

- Safety locked main switch;
- Fuses and contactors for compressors;
- Fuses and contactors for the fans;
- Fuses 220V auxiliary circuit;
- Fuses 24V auxiliary circuit;
- Transformer for 24Vac auxiliary circuit power supply;
- Low-voltage user terminals board.

Electronic controls

All versions are controlled through a 16bit microprocessor with a 2MB storage memory, real time clock for alarms storage, and multi-language control software.

Using only one terminal with 6 keys and LCD graphic display the user can manage each card in the net and can:

- Change the set point of the whole unit;
- Monitor the analog state variables of the system (in/out water temperature, pressures on each circuit);
- Monitor the state of the compressors, capacity control valves, heaters etc.;
- Read the text and the code of the occurred alarm;
- Turn on/off the whole unit and change its mode (summer/winter for the heat pumps);

Technical specifications

- Modify the following parameters by entering the right password:
 - High/low pressure;
 - On/off compressor timings;
 - Defrost timings (for the heat pumps);
 - Antifreeze threshold;
 - Condensation control law as a function of the instantaneous high pressure;
 - Water pump pre-starting time.



There are three types of alarm:

- Serious alarms: managed by the master-addressed card, they deactivate the whole system, give a text alarm on the display, activate the buzzer and the general alarm output relay fitted on the master card. They are:
 - No water flow across the evaporator;
 - Serious alarm signal given on the master card by digital input (see accessories for details);
- Circuit alarms: they deactivate only the circuit where they have occurred, give a text alarm on the display, activate the buzzer and the general alarm output relay fitted on the master card. These are:
 - High/low pressure;
 - Compressor thermal protection;
 - Fans thermal protection;
 - Temperature or pressure probe failure.
- Signal-only alarms: they only give a signal text on the display and activate the buzzer and the general alarm output relay fitted on the master card. These are:
 - Compressor maintenance time over limits;
 - Water pump maintenance time over limits;
 - Net self-control failure: for the multi-card cooling units, this means that one or more slave-addressed cards are off-line.

Through contacts (included) in the control panel you can manage the unit in its basic functions in the BMS system:

- Remote on/off selection;
- Remote summer/winter selection (for the heat pump versions);
- Additional water flow control (external flow switch);
- Fine-setting of the setpoint using an external 4-20mA or 0-1Vdc signal (for leaving water temperatures < - 4°C please refer to the ACCESSORIES section);
- External water pump on/off signal (for versions without hydronic kit);
- General alarm relay contacts;
- On/off compressors status.

The electronic controller can be interfaced with supervision software on a local or remote PC that uses a manufacturer communication protocol, or with complex BMS systems using ModBus, BACnet, LonWorks, Trend or Johnson Metasys protocols.

Options and accessories / Standards and Certifications

Options

- ECO-PROFILE ELECTRONIC fans (EC motor brushless fan)
- Compressor stepless capacity control
- Soft starter
- On/off condensing control
- Condensing control with variable fan speed modulation
- Power factor correction to cos phi 0.91
- Automatic circuit breakers for compressors and fans
- Numbered wires
- Part winding start
- Star Delta
- Control panel electric heater with thermostat
- Phase failure protection relay
- Water pumps automatic changeover
- Condensing coil protection grilles
- Complete anti intrusion grilles
- Gas gauges
- Compressor suction service valves
- Pre painted condensing coils
- Epoxy coated condensing coil fins
- Copper/copper condensing coils
- Tinned copper/copper condensing coils
- High static pressure fans 100 Pa

Accessories

- Remote control display
- Communication card RS485
- LON adapter
- BacNet adapter
- Flow switch
- Automatic water filling
- Water Victaulic Kit
- Water strainer
- Water gauges
- Rubber anti vibration mounts
- Spring anti vibration mounts

Reference standards

THE PRESSURE EQUIPMENT DIRECTIVE (97/23/EC)

UNI EN ISO 3744 ACOUSTIC REGULATION

UNI-EN-ISO 9001:2008: QUALITY MANAGEMENT SYSTEMS

LOW VOLTAGE DIRECTIVE (LVD) 2006/95/EC.

MACHINERY DIRECTIVE 2006/42/EC

DIRECTIVE FOR ELECTROMAGNETIC COMPATIBILITY 2004/108/CE

CEI-EN 60204-1 DIRECTIVE (CEI44-5; CEI EN 62061) MACHINERY SAFETY – ELECTRIC MACHINERY – EQUIPMENTS

ERP DIRECTIVE (ENERGY-RELATED-PRODUCTS ECODESIGN 2009/125/CE)

UNI EN 14511-1-2-3-4 TESTING CONDITIONS.

Certifications

PED RELEASED FROM IMQ SPA - NOTIFIED BODY FOR REGULATION 97/23/EC (NO. 0051) ACCORDING TO THE FOLLOWING STATEMENTS:

- DECLARATION OF QUALITY SYSTEM APPROVAL - FORM H1 (QUALITY ASSURANCE WITH DESIGN CONTROL AND MONITORING OF FINAL CHECK DETAIL): CERTIFICATE N. PEC-0051-1105003
- CERTIFICATES OF EXAMINATION OF THE PROJECT N. 0051-PEC-1105004/05/06/07/08

QUALITY CERTIFICATION ACCORDING TO THE STANDARD UNI EN ISO 9001:2008 ISSUED BY CSQ (ACCREDITED BY ACCREDIA)

PERFORMANCE CERTIFICATION OF THE UNIT WITH THE PRESENCE OF RINA SPA DURING THE TESTING PROCESS (OPTIONAL)

GOST CERTIFICATION - (OPTIONAL) FOR PRESSURE RECIPIENTS OF THE RUSSIAN FEDERATION.

Technical data

RTXB		140	150	160	180	190	220	250	300
COOLING									
Total capacity in cooling mode	kW	476.3	514.7	555.4	633.7	648.6	766.6	908.7	1051.9
Compressor power input in cooling mode	kW	154.6	169.8	177.6	193.3	199.1	236.7	282.6	345.7
Total EER		2.76	2.74	2.80	2.92	2.91	2.91	2.91	2.78
ESEER		3.42	3.54	3.44	3.50	3.55	3.61	3.74	3.59
HEATING									
Total capacity in heating mode	kW	539.5	562.6	607.4	664.1	702.9	806.4	948.0	1094.1
Compressor power input in heating mode	kW	150.8	158.5	167.9	178.5	189.8	220.3	257.5	311.2
Total COP		3.20	3.19	3.22	3.28	3.29	3.26	3.30	3.18
COOLING + PARTIAL RECOVERY (H VERSION)									
Desuperheater heating capacity	kW	111.0	116.0	129.0	137.0	144.0	171.0	184.0	252.0
Water flow	m ³ /h	19.4	20.2	22.4	23.8	25.1	29.8	32.1	44.0
Pressure drop	kPa	15.0	15.0	15.0	15.0	15.0	16.0	14.0	17.0
COMPRESSORS									
Compressor number	n	2	2	2	2	2	2	2	2
Refrigerant circuits	n	2	2	2	2	2	2	2	2
Part load	n	10	10	10	7	10	10	10	10
Refrigerant charge	kg	171.6	171.6	192.2	235.6	235.6	255.6	313.0	333.6
Oil charge	kg	40.0	44.0	44.0	44.0	44.0	58.0	72.0	72.0
WATER EXCHANGER									
Water flow	m ³ /h	82	88	95	109	111	132	156	180
Water pressure drop	kPa	42.3	39.3	44.8	34.0	35.8	37.4	30.8	42.4
Water flow (PDC)	m ³ /h	94.0	98.0	105.8	116	122	140	165	191
Water pressure drop (PDC)	kPa	54	47	54	37.7	41.5	41.1	33.8	45.9
FANS									
Fan number	n	12	12	14	16	16	18	20	22
Air flow	m ³ /h	261600	261600	311440	356480	348800	392400	436000	480400
Power input for each fan	kW	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Absorbed current for each fan	A	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
SOUND LEVEL									
Sound power level (ISO 3744)	dB(A)	93.1	94.2	94.4	94.6	94.8	95.0	95.2	95.9
Sound pressure level at 10 m (ISO 3744)	dB(A)	61.0	62.0	62.0	62.0	62.0	62.0	62.0	63.0
DIMENSIONS AND WEIGHT									
Length	mm	6475	6475	7645	8610	8610	9580	10550	11520
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2400	2400	2400	2400	2400	2400	2400	2400
Weight	kg	5604	6034	7161	8126	8228	9647	11543	11677

Cooling: Outdoor air temperature 35°C; Chilled water temperature 12/7°C.

Heating: Outdoor air temperature 7°C - 90% R.H.; Outlet water temperature 40/45°C.

Water flow rate and sound pressure levels refer to summer period.

Technical data

RTXB L		140	150	160	180	190	220	250	300
COOLING									
Total capacity in cooling mode	kW	469.4	506.2	548.0	627.2	639.9	757.4	888.1	1034.4
Compressor power input in cooling mode	kW	163.1	178.2	186.2	201.2	210.0	248.8	289.9	360.3
Total EER		2.66	2.64	2.71	2.86	2.81	2.82	2.84	2.69
ESEER		3.34	3.46	3.37	3.46	3.46	3.54	3.69	3.51
HEATING									
Total capacity in heating mode	kW	531.5	553.5	607.5	660.5	694.1	803.1	884.5	1082.6
Compressor power input in heating mode	kW	151.8	159.1	169.5	179.6	190.8	222.0	245.8	310.9
Total COP		3.22	3.21	3.28	3.34	3.32	3.32	3.30	3.23
COOLING + PARTIAL RECOVERY (H VERSION)									
Desuperheater heating capacity	kW	111.0	115.0	128.0	136.0	144.0	170.0	183.0	251.0
Water flow	m ³ /h	19.3	20.1	22.3	23.7	25.0	29.7	31.9	43.8
Pressure drop	kPa	15.0	14.0	15.0	15.0	15.0	15.0	14.0	17.0
COMPRESSORS									
Compressor number	n	2	2	2	2	2	2	2	2
Refrigerant circuits	n	2	2	2	2	2	2	2	2
Part load	n	10	10	10	7	10	10	10	10
Refrigerant charge	kg	171.6	171.6	192.2	235.6	235.6	255.6	313.0	333.6
Oil charge	kg	40.0	44.0	44.0	44.0	44.0	58.0	72.0	72.0
WATER EXCHANGER									
Water flow	m ³ /h	81	87	94	108	110	130	152	177
Water pressure drop	kPa	39.7	36.3	42.2	32.1	33.7	35.3	28.5	39.7
Water flow (PDC)	m ³ /h	93	96	106	115	121	140	154	189
Water pressure drop (PDC)	kPa	53.5	46.6	55.1	38.0	41.1	41.4	29.9	45.7
FANS									
Fan number	n	12	12	14	16	16	18	20	22
Air flow	m ³ /h	196200	196200	233580	267360	261600	294300	327000	360300
Power input for each fan	kW	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Absorbed current for each fan	A	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
SOUND LEVEL									
Sound power level (ISO 3744)	dB(A)	91.1	92.2	92.4	92.6	92.8	93.0	93.2	93.9
Sound pressure level at 10 m (ISO 3744)	dB(A)	59.0	60.0	60.0	60.0	60.0	60.0	60.0	61.0
DIMENSIONS AND WEIGHT									
Length	mm	6475	6475	7645	8610	8610	9580	10550	11520
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2400	2400	2400	2400	2400	2400	2400	2400
Weight	kg	5954	6384	7511	8526	8628	10047	11943	12077

Cooling: Outdoor air temperature 35°C; Chilled water temperature 12/7°C.

Heating: Outdoor air temperature 7°C - 90% R.H.; Outlet water temperature 40/45°C.

Water flow rate and sound pressure levels refer to summer period.

Technical data

RTXB S		140	150	160	180	190	220	250	300
COOLING									
Total capacity in cooling mode	kW	468.2	506.7	546.1	595.7	634.0	744.9	870.1	1009.6
Compressor power input in cooling mode	kW	164.7	177.3	187.9	194.7	209.1	246.8	280.0	348.1
Total EER		2.64	2.67	2.70	2.82	2.81	2.80	2.89	2.70
ESEER		3.24	3.40	3.27	3.30	3.33	3.43	3.67	3.42
HEATING									
Total capacity in heating mode	kW	482.3	498.6	552.8	638.4	687.2	798.2	895.5	1087.6
Compressor power input in heating mode	kW	149.6	155.6	166.8	177.7	190.0	221.1	260.2	315.6
Total COP		2.97	2.96	3.05	3.28	3.32	3.33	3.18	3.19
COOLING + PARTIAL RECOVERY (H VERSION)									
Desuperheater heating capacity	kW	109.0	114.0	126.0	128.0	132.0	166.0	179.0	235.0
Water flow	m ³ /h	19.1	19.8	21.9	22.3	22.9	29.0	31.1	40.9
Pressure drop	kPa	15.0	14.0	15.0	13.0	13.0	15.0	13.0	15.0
COMPRESSORS									
Compressor number	n	2	2	2	2	2	2	2	2
Refrigerant circuits	n	2	2	2	2	2	2	2	2
Part load	n	10	10	10	7	10	10	10	10
Refrigerant charge	kg	171.6	171.6	192.2	235.6	235.6	255.6	313.0	333.6
Oil charge	kg	40.0	44.0	44.0	44.0	44.0	58.0	72.0	72.0
WATER EXCHANGER									
Water flow	m ³ /h	80	87	94	102	109	128	149	173
Water pressure drop	kPa	40.5	37.6	43.0	30.5	34.3	36.0	29.4	38.8
Water flow (PDC)	m ³ /h	84	87	96	111	120	139	156	189
Water pressure drop (PDC)	kPa	44.5	38.3	46.2	31.9	37.0	36.6	30.5	41.5
FANS									
Fan number	n	12	12	14	16	16	18	20	24
Air flow	m ³ /h	183120	183120	218008	249536	244160	274680	305200	336280
Power input for each fan	kW	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Absorbed current for each fan	A	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
SOUND LEVEL									
Sound power level (ISO 3744)	dB(A)	88.1	89.2	89.4	89.6	89.8	90.0	90.2	90.9
Sound pressure level at 10 m (ISO 3744)	dB(A)	56.0	57.0	57.0	57.0	57.0	57.0	57.0	58.0
DIMENSIONS AND WEIGHT									
Length	mm	6475	6475	7645	8610	8610	9580	10550	12490
Width	mm	2260	2260	2260	2260	2260	2260	2260	2260
Height	mm	2400	2400	2400	2400	2400	2400	2400	2400
Weight	kg	6590	7019	7523	8534	8646	10067	12283	13215

Cooling: Outdoor air temperature 35°C; Chilled water temperature 12/7°C.

Heating: Outdoor air temperature 7°C - 90% R.H.; Outlet water temperature 40/45°C.

Water flow rate and sound pressure levels refer to summer period.

Technical data

Cooling capacity performances

RTXB

Twout			140						150					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	481.4	467.3	460.9	450.6	431.1	418.0	534.8	511.2	501.0	485.0	456.4	438.1
	Pa	kW	121.7	135.8	142.0	151.9	170.1	182.0	136.7	150.6	156.6	166.3	184.1	195.9
	qw	m³/h	82.51	80.08	78.99	77.22	73.88	71.63	91.66	87.60	85.86	83.12	78.22	75.08
	dpw	kPa	43.1	40.6	39.5	37.8	34.6	32.5	42.3	38.7	37.1	34.8	30.8	28.4
6	Pf	kW	495.1	480.5	474.0	463.3	443.3	429.8	551.0	526.6	516.2	499.7	470.3	451.6
	Pa	kW	122.8	137.0	143.3	153.2	171.6	183.7	138.2	152.2	158.3	168.0	186.0	197.9
	qw	m³/h	84.90	82.40	81.28	79.45	76.01	73.70	94.48	90.30	88.51	85.69	80.65	77.44
	dpw	kPa	45.7	43.0	41.8	40.0	36.6	34.4	45.0	41.1	39.5	37.0	32.8	30.2
7	Pf	kW	509.0	494.0	487.3	476.3	455.7	441.9	567.4	542.4	531.7	514.7	484.6	465.3
	Pa	kW	124.0	138.3	144.6	154.6	173.1	185.3	139.8	153.8	160.0	169.8	187.9	199.9
	qw	m³/h	87.34	84.76	83.61	81.72	78.19	75.82	97.36	93.07	91.22	88.32	83.15	79.84
	dpw	kPa	48.3	45.5	44.3	42.3	38.7	36.4	47.8	43.6	41.9	39.3	34.8	32.1
8	Pf	kW	523.3	507.8	500.8	489.5	468.4	454.2	584.3	558.6	547.5	530.1	499.2	479.4
	Pa	kW	125.2	139.5	145.9	156.0	174.7	187.0	141.4	155.5	161.7	171.6	189.8	201.9
	qw	m³/h	89.83	87.18	85.98	84.04	80.41	77.97	100.31	95.89	93.99	91.01	85.70	82.31
	dpw	kPa	51.1	48.1	46.8	44.7	41.0	38.5	50.7	46.3	44.5	41.7	37.0	34.1
9	Pf	kW	537.8	521.8	514.7	503.0	481.3	466.7	601.5	575.1	563.7	545.8	514.0	493.8
	Pa	kW	126.4	140.8	147.2	157.4	176.2	188.6	143.1	157.2	163.4	173.4	191.8	203.9
	qw	m³/h	92.38	89.64	88.41	86.41	82.67	80.18	103.33	98.78	96.83	93.76	88.30	84.82
	dpw	kPa	54.1	50.9	49.5	47.3	43.3	40.7	53.8	49.2	47.2	44.3	39.3	36.2
10	Pf	kW	552.6	536.2	528.8	516.8	494.5	479.5	619.1	591.9	580.2	561.9	529.2	508.5
	Pa	kW	127.6	142.1	148.5	158.8	177.8	190.3	144.7	159.0	165.2	175.2	193.7	206.0
	qw	m³/h	95.08	92.26	90.98	88.92	85.08	82.51	106.52	101.84	99.83	96.68	91.06	87.49
	dpw	kPa	57.3	53.9	52.4	50.1	45.8	43.1	57.2	52.3	50.2	47.1	41.8	38.6

Twout			160						180					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	563.2	545.6	537.7	525.1	501.8	486.5	644.2	622.9	613.6	598.6	571.3	553.6
	Pa	kW	140.7	156.4	163.3	174.3	194.5	207.9	154.2	170.4	177.6	189.2	210.7	224.9
	qw	m³/h	96.51	93.50	92.16	89.99	86.01	83.38	110.41	106.76	105.16	102.58	97.90	94.87
	dpw	kPa	46.0	43.1	41.9	40.0	36.5	34.3	35.1	32.8	31.8	30.3	27.6	25.9
6	Pf	kW	579.2	561.1	553.1	540.1	516.2	500.5	662.7	640.9	631.3	615.9	588.0	570.0
	Pa	kW	142.2	157.9	164.9	175.9	196.4	209.9	156.0	172.3	179.5	191.2	212.9	227.3
	qw	m³/h	99.32	96.22	94.84	92.61	88.52	85.83	113.63	109.90	108.25	105.62	100.84	97.74
	dpw	kPa	48.7	45.7	44.4	42.3	38.7	36.3	37.1	34.7	33.7	32.1	29.2	27.5
7	Pf	kW	595.6	577.0	568.7	555.4	530.9	514.8	681.5	659.2	649.4	633.7	605.2	586.7
	Pa	kW	143.7	159.5	166.5	177.6	198.2	211.8	157.8	174.2	181.5	193.3	215.1	229.6
	qw	m³/h	102.19	99.00	97.58	95.29	91.09	88.33	116.93	113.10	111.42	108.72	103.83	100.67
	dpw	kPa	51.5	48.4	47.0	44.8	40.9	38.5	39.3	36.8	35.7	34.0	31.0	29.1
8	Pf	kW	612.3	593.1	584.6	570.9	545.8	529.3	700.7	677.9	667.8	651.8	622.6	603.8
	Pa	kW	145.2	161.1	168.1	179.3	200.0	213.7	159.7	176.1	183.5	195.3	217.3	231.9
	qw	m³/h	105.11	101.83	100.37	98.02	93.70	90.88	120.30	116.38	114.65	111.89	106.89	103.66
	dpw	kPa	54.5	51.2	49.7	47.4	43.3	40.7	41.6	39.0	37.8	36.0	32.9	30.9
9	Pf	kW	629.3	609.7	600.9	586.8	561.1	544.2	720.4	697.0	686.7	670.2	640.5	621.3
	Pa	kW	146.8	162.7	169.7	181.0	201.9	215.7	161.6	178.1	185.5	197.4	219.5	234.2
	qw	m³/h	108.10	104.73	103.22	100.81	96.38	93.48	123.74	119.72	117.96	115.13	110.02	106.72
	dpw	kPa	57.7	54.1	52.6	50.1	45.8	43.1	44.0	41.2	40.0	38.1	34.8	32.8
10	Pf	kW	646.7	626.5	617.5	603.0	576.6	559.3	740.4	716.5	705.9	689.1	658.7	639.1
	Pa	kW	148.3	164.3	171.4	182.7	203.7	217.6	163.6	180.1	187.5	199.4	221.7	236.6
	qw	m³/h	111.27	107.79	106.25	103.76	99.21	96.24	127.40	123.28	121.46	118.57	113.33	109.96
	dpw	kPa	61.1	57.3	55.7	53.1	48.6	45.7	46.7	43.7	42.4	40.4	36.9	34.8

Twout = Leaving water temperature (°C); Pf = Cooling capacity (kW); Pa = Compressors power input (kW); qw = Water flow (m³/h)
dpw = Pressure drop (kPa).

Technical data

Cooling capacity performances

RTXB

Twout			190						220					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	658.0	637.0	627.8	613.2	586.7	569.6	777.3	752.9	742.1	724.8	693.3	672.8
	Pa	kW	158.4	175.4	182.9	195.1	217.7	232.7	188.0	208.6	217.7	232.3	259.4	277.6
	qw	m ³ /h	112.77	109.17	107.60	105.09	100.55	97.62	133.22	129.03	127.19	124.23	118.82	115.30
	dpw	kPa	36.8	34.4	33.5	31.9	29.2	27.5	38.4	36.0	35.0	33.4	30.5	28.7
6	Pf	kW	676.7	655.1	645.7	630.7	603.6	586.1	799.5	774.3	763.3	745.5	713.2	692.1
	Pa	kW	160.1	177.2	184.8	197.1	219.9	235.0	189.8	210.6	219.7	234.4	261.9	280.2
	qw	m ³ /h	116.04	112.35	110.73	108.16	103.51	100.51	137.10	132.79	130.89	127.84	122.29	118.68
	dpw	kPa	38.9	36.5	35.4	33.8	31.0	29.2	40.6	38.1	37.0	35.3	32.3	30.4
7	Pf	kW	695.8	673.7	664.0	648.6	620.9	603.0	822.1	796.2	784.9	766.6	733.4	711.8
	Pa	kW	161.8	179.1	186.7	199.1	222.1	237.4	191.6	212.5	221.8	236.7	264.4	282.9
	qw	m ³ /h	119.39	115.59	113.93	111.30	106.54	103.47	141.05	136.62	134.67	131.54	125.84	122.13
	dpw	kPa	41.2	38.6	37.5	35.8	32.8	30.9	43.0	40.3	39.2	37.4	34.2	32.2
8	Pf	kW	715.3	692.6	682.7	666.9	638.5	620.3	845.1	818.6	806.9	788.1	754.0	731.9
	Pa	kW	163.6	181.0	188.7	201.1	224.4	239.8	193.4	214.6	223.9	238.9	266.9	285.6
	qw	m ³ /h	122.80	118.91	117.21	114.50	109.63	106.49	145.09	140.53	138.52	135.30	129.45	125.65
	dpw	kPa	43.6	40.9	39.7	37.9	34.7	32.8	45.5	42.7	41.5	39.6	36.2	34.1
9	Pf	kW	735.2	711.9	701.8	685.6	656.5	637.8	868.6	841.3	829.3	810.0	775.0	752.3
	Pa	kW	165.4	182.9	190.6	203.2	226.6	242.2	195.3	216.6	226.0	241.2	269.5	288.4
	qw	m ³ /h	126.30	122.30	120.55	117.77	112.78	109.57	149.21	144.52	142.45	139.14	133.13	129.23
	dpw	kPa	46.1	43.2	42.0	40.1	36.8	34.7	48.1	45.2	43.9	41.9	38.3	36.1
10	Pf	kW	755.6	731.7	721.2	704.7	674.9	655.8	892.6	864.5	852.1	832.4	796.4	773.2
	Pa	kW	167.2	184.8	192.6	205.3	228.9	244.7	197.2	218.7	228.2	243.5	272.1	291.1
	qw	m ³ /h	130.00	125.89	124.09	121.25	116.13	112.84	153.58	148.76	146.62	143.22	137.04	133.03
	dpw	kPa	48.8	45.8	44.5	42.5	39.0	36.8	51.0	47.8	46.5	44.3	40.6	38.3

Twout			250						300					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	922.9	893.6	880.6	859.6	821.5	796.9	1065.2	1031.9	1017.5	994.4	952.7	925.6
	Pa	kW	222.3	248.4	259.8	277.9	311.2	333.1	275.3	305.6	318.6	339.1	376.7	401.4
	qw	m ³ /h	158.18	153.16	150.92	147.33	140.79	136.57	182.55	176.86	174.38	170.43	163.27	158.64
	dpw	kPa	31.7	29.7	28.9	27.5	25.1	23.6	43.4	40.7	39.6	37.8	34.7	32.8
6	Pf	kW	948.9	918.9	905.5	883.9	844.8	819.5	1095.7	1061.5	1046.6	1022.9	980.0	952.3
	Pa	kW	224.2	250.5	261.9	280.2	313.8	336.0	278.0	308.6	321.7	342.4	380.2	405.2
	qw	m ³ /h	162.73	157.57	155.27	151.58	144.87	140.53	187.89	182.02	179.47	175.40	168.05	163.30
	dpw	kPa	33.5	31.5	30.5	29.1	26.6	25.0	46.0	43.2	42.0	40.1	36.8	34.7
7	Pf	kW	975.4	944.6	930.8	908.7	868.5	842.6	1126.8	1091.6	1076.3	1051.9	1007.9	979.5
	Pa	kW	226.1	252.5	264.1	282.6	316.5	338.8	280.8	311.6	324.8	345.7	383.9	409.0
	qw	m ³ /h	167.37	162.08	159.71	155.92	149.03	144.57	193.34	187.30	184.68	180.49	172.94	168.06
	dpw	kPa	35.5	33.3	32.3	30.8	28.1	26.5	48.7	45.7	44.4	42.4	39.0	36.8
8	Pf	kW	1002.5	970.8	956.7	934.0	892.7	866.1	1158.6	1122.4	1106.7	1081.6	1036.4	1007.3
	Pa	kW	228.0	254.6	266.3	284.9	319.1	341.7	283.6	314.6	328.0	349.0	387.5	412.9
	qw	m ³ /h	172.10	166.67	164.24	160.34	153.26	148.69	198.91	192.70	189.99	185.69	177.93	172.93
	dpw	kPa	37.5	35.2	34.2	32.6	29.8	28.0	51.5	48.4	47.0	44.9	41.2	39.0
9	Pf	kW	1030.0	997.5	983.0	959.7	917.4	890.0	1191.1	1153.9	1137.7	1111.9	1065.5	1035.7
	Pa	kW	229.9	256.7	268.5	287.2	321.8	344.5	286.5	317.8	331.2	352.4	391.2	416.8
	qw	m ³ /h	176.94	171.35	168.85	164.85	157.58	152.89	204.61	198.22	195.43	191.00	183.03	177.90
	dpw	kPa	39.7	37.2	36.1	34.4	31.5	29.6	54.5	51.2	49.8	47.5	43.6	41.2
10	Pf	kW	1058.1	1024.7	1009.8	985.9	942.4	914.4	1224.3	1186.0	1169.3	1142.8	1095.2	1064.6
	Pa	kW	231.9	258.8	270.7	289.6	324.4	347.4	289.4	320.9	334.4	355.9	395.0	420.8
	qw	m ³ /h	182.06	176.31	173.75	169.64	162.16	157.34	210.66	204.07	201.19	196.64	188.44	183.18
	dpw	kPa	42.0	39.4	38.2	36.5	33.3	31.4	57.8	54.3	52.7	50.4	46.3	43.7

Twout = Leaving water temperature (°C); Pf = Cooling capacity (kW); Pa = Compressors power input (kW); qw = Water flow (m³/h)

dpw = Pressure drop (kPa).

Technical data

Heating capacity performances

RTXB

Ta			140						150					
			Twout						Twout					
			30	35	40	45	50	55	30	35	40	45	50	55
-5°C	Pt	kW	397.1	398.7	399.8	400.2	399.8	398.6	417.4	412.4	407.2	401.7	396.4	391.2
	Pat	kW	105.7	118.2	132.0	147.2	164.1	182.5	111.9	123.6	136.8	151.4	167.8	186.0
	qw	m³/h	68.75	69.17	69.51	69.71	71.04	69.69	72.26	71.55	70.79	69.98	70.43	68.40
	dpw	kPa	29.0	29.4	29.6	29.8	31.0	29.8	25.7	25.2	24.6	24.1	24.4	23.0
-2°C	Pt	kW	429.9	431.2	431.9	431.9	431.1	429.4	456.1	450.3	444.2	437.8	431.3	425.0
	Pat	kW	106.2	118.8	132.9	148.4	165.6	184.6	113.2	125.1	138.4	153.4	170.0	188.6
	qw	m³/h	74.44	74.81	75.10	75.24	76.60	75.07	78.96	78.13	77.23	76.26	76.64	74.31
	dpw	kPa	34.0	34.3	34.6	34.7	36.0	34.6	30.7	30.0	29.3	28.6	28.9	27.2
0°C	Pt	kW	453.8	454.7	455.2	454.8	453.6	451.5	484.4	478.0	471.2	464.0	456.7	449.5
	Pat	kW	106.6	119.2	133.4	149.1	166.5	185.8	114.2	126.1	139.5	154.6	171.4	190.2
	qw	m³/h	78.57	78.90	79.14	79.22	80.60	78.94	83.87	82.93	81.93	80.83	81.15	78.59
	dpw	kPa	37.9	38.2	38.4	38.5	39.9	38.2	34.6	33.8	33.0	32.1	32.4	30.4
5°C	Pt	kW	515.5	515.5	514.9	513.4	511.1	507.8	558.2	550.1	541.3	532.0	522.4	512.6
	Pat	kW	107.5	120.1	134.3	150.3	168.2	188.1	116.6	128.6	142.1	157.4	174.5	193.7
	qw	m³/h	89.26	89.44	89.52	89.44	90.81	88.78	96.65	95.44	94.12	92.67	92.82	89.63
	dpw	kPa	48.9	49.1	49.2	49.1	50.6	48.4	46.0	44.8	43.6	42.2	42.4	39.5
7°C	Pt	kW	543.2	542.7	541.6	539.5	536.6	532.7	591.6	582.6	572.9	562.6	551.9	541.0
	Pat	kW	107.9	120.4	134.7	150.8	168.8	188.8	117.7	129.7	143.2	158.5	175.7	194.9
	qw	m³/h	94.05	94.16	94.16	93.99	95.35	93.14	102.43	101.08	99.61	98.00	98.06	94.59
	dpw	kPa	54.3	54.4	54.4	54.2	55.8	53.2	51.6	50.3	48.8	47.2	47.3	44.0

Ta			160						180					
			Twout						Twout					
			30	35	40	45	50	55	30	35	40	45	50	55
-5°C	Pt	kW	447.5	447.2	446.6	445.6	444.4	443.2	491.2	488.0	484.2	479.9	475.5	471.2
	Pat	kW	117.6	130.9	145.9	162.7	181.4	202.3	125.1	138.4	153.4	170.2	188.7	209.3
	qw	m³/h	77.47	77.60	77.65	77.62	78.97	77.49	85.04	84.67	84.19	83.60	84.49	82.39
	dpw	kPa	29.1	29.1	29.2	29.2	30.2	29.1	20.4	20.2	20.0	19.7	20.1	19.1
-2°C	Pt	kW	485.6	485.0	484.1	482.5	480.8	478.9	533.9	530.5	526.6	522.1	517.4	512.9
	Pat	kW	118.5	132.0	147.3	164.3	183.4	204.7	126.2	139.9	155.3	172.6	191.9	213.3
	qw	m³/h	84.07	84.16	84.16	84.06	85.43	83.74	92.43	92.05	91.55	90.95	91.94	89.67
	dpw	kPa	34.2	34.3	34.3	34.2	35.3	33.9	24.1	23.9	23.6	23.3	23.8	22.7
0°C	Pt	kW	513.3	512.4	511.1	509.1	506.9	504.5	564.9	561.3	557.1	552.4	547.5	542.6
	Pat	kW	119.1	132.7	148.1	165.3	184.6	206.1	127.1	140.9	156.5	174.2	193.9	215.7
	qw	m³/h	88.87	88.91	88.86	88.69	90.07	88.21	97.80	97.39	96.87	96.23	97.28	94.87
	dpw	kPa	38.2	38.3	38.2	38.1	39.3	37.7	27.0	26.7	26.5	26.1	26.7	25.4
5°C	Pt	kW	584.8	582.9	580.4	577.2	573.5	569.5	645.1	640.6	635.5	629.7	623.7	617.8
	Pat	kW	120.8	134.4	149.8	167.2	186.8	208.8	129.5	143.4	159.3	177.3	197.7	220.4
	qw	m³/h	101.25	101.14	100.91	100.54	101.90	99.57	111.69	111.15	110.49	109.70	110.83	108.02
	dpw	kPa	49.6	49.5	49.3	48.9	50.3	48.0	35.2	34.8	34.4	33.9	34.6	32.9
7°C	Pt	kW	616.9	614.5	611.4	607.4	603.0	598.3	681.2	676.1	670.5	664.1	657.5	650.9
	Pat	kW	121.6	135.1	150.5	167.9	187.6	209.7	130.7	144.5	160.4	178.5	199.1	222.0
	qw	m³/h	106.80	106.61	106.29	105.81	107.15	104.60	117.93	117.31	116.57	115.69	116.83	113.81
	dpw	kPa	55.2	55.0	54.7	54.2	55.6	53.0	39.2	38.8	38.3	37.7	38.5	36.5

Ta = Outdoor temperature (°C)

Twout = Leaving water temperature (°C)

Pt = Heating capacity (kW)

Pat = Compressors power input (kW)

qw = Water flow (m³/h)

dpw = Pressure drop (kPa)

Technical data

Heating capacity performances

RTXB

Ta		190							220						
		Twout							Twout						
		30	35	40	45	50	55	30	35	40	45	50	55		
-5°C	Pt	kW	518.3	517.4	516.4	515.4	514.7	514.4	594.6	593.8	593.2	592.8	593.2	594.7	
	Pat	kW	133.4	148.2	164.9	183.7	204.7	228.2	156.5	173.7	193.2	215.6	241.1	270.2	
	qw	m³/h	89.74	89.77	89.79	89.78	91.45	89.95	102.95	103.03	103.13	103.26	105.40	103.99	
	dpw	kPa	22.3	22.3	22.3	22.3	23.1	22.4	22.1	22.1	22.1	22.2	23.1	22.5	
-2°C	Pt	kW	562.6	561.1	559.6	557.9	556.5	555.6	645.7	644.2	642.8	641.4	640.5	640.7	
	Pat	kW	134.5	149.4	166.2	185.3	206.7	230.7	157.4	174.6	194.3	216.8	242.5	271.8	
	qw	m³/h	97.40	97.35	97.29	97.19	98.89	97.15	111.79	111.78	111.75	111.72	113.82	112.03	
	dpw	kPa	26.2	26.2	26.2	26.1	27.0	26.1	26.0	26.0	26.0	26.0	27.0	26.1	
0°C	Pt	kW	594.7	592.8	590.8	588.6	586.7	585.3	682.6	680.7	678.6	676.4	674.7	673.9	
	Pat	kW	135.3	150.2	167.1	186.4	208.0	232.3	158.0	175.3	195.0	217.6	243.4	272.8	
	qw	m³/h	102.96	102.85	102.71	102.54	104.25	102.33	118.19	118.10	117.98	117.83	119.89	117.83	
	dpw	kPa	29.3	29.3	29.2	29.1	30.1	29.0	29.1	29.0	29.0	28.9	29.9	28.9	
5°C	Pt	kW	677.9	674.6	671.2	667.6	664.1	661.1	777.7	774.4	770.5	766.3	762.3	758.9	
	Pat	kW	137.5	152.3	169.3	188.8	210.8	235.7	159.7	177.0	196.8	219.5	245.5	275.2	
	qw	m³/h	117.37	117.05	116.70	116.30	118.01	115.60	134.66	134.36	133.97	133.49	135.45	132.69	
	dpw	kPa	38.1	37.9	37.7	37.4	38.5	37.0	37.7	37.6	37.4	37.1	38.2	36.6	
7°C	Pt	kW	715.2	711.3	707.2	702.9	698.7	694.9	820.2	816.2	811.5	806.4	801.3	796.7	
	Pat	kW	138.6	153.3	170.3	189.8	211.9	237.0	160.5	177.7	197.5	220.3	246.4	276.1	
	qw	m³/h	123.83	123.41	122.96	122.44	124.15	121.50	142.01	141.61	141.10	140.47	142.38	139.30	
	dpw	kPa	42.4	42.1	41.8	41.5	42.6	40.8	42.0	41.7	41.4	41.1	42.2	40.4	

Ta		250							300						
		Twout							Twout						
		30	35	40	45	50	55	30	35	40	45	50	55		
-5°C	Pt	kW	691.7	691.5	691.6	692.3	694.5	698.8	811.1	810.8	809.9	808.8	808.1	808.6	
	Pat	kW	181.1	202.0	225.1	250.7	278.9	310.2	220.9	245.3	272.3	302.5	336.5	375.0	
	qw	m³/h	119.75	119.99	120.25	120.60	123.40	122.18	140.44	140.67	140.81	140.88	143.59	141.38	
	dpw	kPa	17.8	17.8	17.9	18.0	18.9	18.5	24.9	25.0	25.0	25.1	26.0	25.2	
-2°C	Pt	kW	752.8	752.4	752.0	751.7	752.6	755.3	879.0	877.7	875.6	873.1	870.8	869.5	
	Pat	kW	182.3	203.5	227.1	253.2	282.2	314.3	222.4	247.2	274.4	304.8	339.0	377.7	
	qw	m³/h	130.34	130.55	130.74	130.95	133.73	132.07	152.18	152.28	152.24	152.09	154.74	152.04	
	dpw	kPa	21.1	21.1	21.2	21.3	22.2	21.6	29.2	29.3	29.3	29.2	30.2	29.2	
0°C	Pt	kW	796.6	796.0	795.0	794.0	793.9	795.5	928.3	926.2	923.3	919.7	916.3	913.6	
	Pat	kW	182.9	204.3	228.1	254.6	284.0	316.6	223.5	248.4	275.7	306.3	340.6	379.4	
	qw	m³/h	137.92	138.10	138.22	138.31	141.07	139.09	160.72	160.70	160.53	160.21	162.81	159.75	
	dpw	kPa	23.6	23.6	23.7	23.7	24.7	24.0	32.6	32.6	32.5	32.4	33.5	32.2	
5°C	Pt	kW	908.0	906.4	904.0	900.9	898.3	896.7	1056.0	1051.9	1046.5	1040.1	1033.5	1027.4	
	Pat	kW	184.0	205.6	229.8	256.9	287.2	320.8	226.1	251.3	278.9	309.7	344.3	383.2	
	qw	m³/h	157.21	157.27	157.16	156.94	159.61	156.79	182.83	182.50	181.95	181.19	183.65	179.64	
	dpw	kPa	30.6	30.7	30.6	30.5	31.6	30.5	42.2	42.1	41.8	41.5	42.6	40.8	
7°C	Pt	kW	957.4	955.2	952.0	948.0	944.1	941.2	1113.4	1108.2	1101.8	1094.1	1086.0	1078.3	
	Pat	kW	184.4	206.0	230.3	257.5	288.1	322.1	227.3	252.6	280.3	311.2	345.8	384.8	
	qw	m³/h	165.76	165.74	165.52	165.14	167.77	164.56	192.76	192.28	191.55	190.58	192.97	188.54	
	dpw	kPa	34.1	34.1	34.0	33.8	34.9	33.6	46.9	46.7	46.3	45.9	47.0	44.9	

Ta = Outdoor temperature (°C)

Twout = Leaving water temperature (°C)

Pt = Heating capacity (kW)

Pat = Compressors power input (kW)

qw = Water flow (m³/h)

dpw = Pressure drop (kPa)

Technical data

Cooling capacity performances

RTXB L

Twout		140							150						
		Outdoor air temperature							Outdoor air temperature						
		25	30	32	35	40	43	25	30	32	35	40	43		
5	Pf	kW	476.9	461.9	455.1	444.1	431.9	418.8	528.8	504.1	493.5	476.8	459.0	440.6	
	Pa	kW	128.1	143.1	149.7	160.2	172.0	184.1	143.2	157.9	164.3	174.5	186.1	198.0	
	qw	m³/h	81.73	79.16	77.99	76.11	74.03	71.78	90.63	86.39	84.57	81.72	78.67	75.52	
	dpw	kPa	40.9	38.4	37.2	35.5	33.5	31.5	39.5	35.9	34.4	32.1	29.8	27.4	
6	Pf	kW	490.4	474.9	468.0	456.6	444.1	430.7	544.8	519.4	508.5	491.4	473.1	454.2	
	Pa	kW	129.3	144.4	151.0	161.6	173.5	185.7	144.8	159.6	166.0	176.4	188.1	200.0	
	qw	m³/h	84.10	81.44	80.25	78.30	76.16	73.85	93.42	89.06	87.19	84.26	81.12	77.89	
	dpw	kPa	43.3	40.6	39.4	37.5	35.5	33.4	42.0	38.2	36.6	34.2	31.7	29.2	
7	Pf	kW	504.2	488.3	481.1	469.4	456.6	442.8	561.1	535.0	523.8	506.2	487.4	468.0	
	Pa	kW	130.5	145.7	152.4	163.1	175.1	187.4	146.4	161.3	167.8	178.2	190.0	202.1	
	qw	m³/h	86.52	83.78	82.54	80.55	78.34	75.97	96.27	91.79	89.87	86.85	83.63	80.31	
	dpw	kPa	45.8	43.0	41.7	39.7	37.6	35.3	44.6	40.6	38.9	36.3	33.7	31.0	
8	Pf	kW	518.3	501.9	494.5	482.5	469.3	455.1	577.8	550.9	539.4	521.4	502.0	482.2	
	Pa	kW	131.7	147.0	153.8	164.5	176.6	189.1	148.0	163.0	169.6	180.0	191.9	204.1	
	qw	m³/h	88.99	86.16	84.89	82.84	80.57	78.13	99.19	94.58	92.60	89.51	86.19	82.78	
	dpw	kPa	48.5	45.4	44.1	42.0	39.7	37.4	47.4	43.1	41.3	38.6	35.8	33.0	
9	Pf	kW	532.7	515.7	508.1	495.8	482.2	467.7	594.8	567.2	555.4	536.8	517.0	496.6	
	Pa	kW	133.0	148.4	155.1	166.0	178.2	190.8	149.7	164.8	171.4	181.9	193.9	206.2	
	qw	m³/h	91.51	88.59	87.29	85.17	82.84	80.34	102.17	97.43	95.40	92.22	88.81	85.31	
	dpw	kPa	51.3	48.1	46.6	44.4	42.0	39.5	50.2	45.7	43.8	40.9	38.0	35.0	
10	Pf	kW	547.4	529.9	522.1	509.4	495.4	480.5	612.2	583.8	571.7	552.7	532.3	511.4	
	Pa	kW	134.2	149.7	156.5	167.4	179.8	192.5	151.4	166.5	173.2	183.8	195.9	208.2	
	qw	m³/h	94.19	91.17	89.83	87.65	85.25	82.67	105.34	100.45	98.36	95.09	91.59	87.99	
	dpw	kPa	54.3	50.9	49.4	47.0	44.5	41.8	53.4	48.6	46.6	43.5	40.4	37.3	

Twout		160						180						
		Outdoor air temperature						Outdoor air temperature						
		25	30	32	35	40	43	25	30	32	35	40	43	
5	Pf	kW	558.4	539.7	531.4	518.1	503.6	488.3	640.6	618.1	608.1	592.3	575.4	557.5
	Pa	kW	147.3	163.8	171.1	182.7	195.8	209.3	160.0	177.2	184.8	197.0	210.9	225.1
	qw	m³/h	95.70	92.50	91.07	88.79	86.31	83.68	109.79	105.92	104.22	101.52	98.61	95.55
	dpw	kPa	43.7	40.8	39.6	37.6	35.6	33.4	33.4	31.1	30.1	28.6	27.0	25.3
6	Pf	kW	574.3	555.1	546.6	532.9	518.1	502.3	659.0	635.9	625.7	609.6	592.3	574.1
	Pa	kW	148.8	165.4	172.7	184.4	197.7	211.3	161.8	179.1	186.8	199.1	213.1	227.5
	qw	m³/h	98.48	95.19	93.73	91.38	88.84	86.14	113.00	109.05	107.30	104.54	101.56	98.44
	dpw	kPa	46.3	43.3	41.9	39.9	37.7	35.4	35.4	33.0	31.9	30.3	28.6	26.9
7	Pf	kW	590.5	570.8	562.0	548.0	532.8	516.6	677.7	654.1	643.7	627.2	609.5	590.9
	Pa	kW	150.3	167.0	174.4	186.2	199.5	213.2	163.7	181.1	188.8	201.2	215.3	229.8
	qw	m³/h	101.32	97.94	96.43	94.03	91.41	88.65	116.29	112.23	110.45	107.62	104.58	101.39
	dpw	kPa	49.0	45.8	44.4	42.2	39.9	37.5	37.5	34.9	33.8	32.1	30.3	28.5
8	Pf	kW	607.1	586.8	577.8	563.4	547.8	531.2	696.9	672.7	662.1	645.2	627.1	608.1
	Pa	kW	151.8	168.7	176.1	187.9	201.3	215.2	165.6	183.1	190.8	203.3	217.5	232.1
	qw	m³/h	104.22	100.74	99.20	96.73	94.04	91.20	119.64	115.49	113.67	110.77	107.66	104.41
	dpw	kPa	51.9	48.4	47.0	44.7	42.2	39.7	39.7	37.0	35.8	34.0	32.2	30.2
9	Pf	kW	624.0	603.1	593.9	579.1	563.1	546.1	716.5	691.7	680.8	663.6	645.1	625.7
	Pa	kW	153.4	170.3	177.7	189.7	203.2	217.1	167.5	185.1	192.9	205.4	219.7	234.5
	qw	m³/h	107.19	103.60	102.01	99.48	96.72	93.81	123.08	118.82	116.95	113.99	110.81	107.49
	dpw	kPa	54.9	51.2	49.7	47.2	44.7	42.0	42.0	39.2	37.9	36.1	34.1	32.1
10	Pf	kW	641.2	619.8	610.3	595.1	578.7	561.3	736.5	711.1	700.0	682.3	663.4	643.7
	Pa	kW	155.0	172.0	179.4	191.4	205.1	219.1	169.5	187.1	194.9	207.5	221.9	236.8
	qw	m³/h	110.33	106.64	105.00	102.40	99.56	96.58	126.72	122.35	120.44	117.40	114.15	110.75
	dpw	kPa	58.1	54.3	52.6	50.1	47.3	44.5	44.6	41.5	40.2	38.2	36.2	34.0

Twout = Leaving water temperature (°C); **Pf** = Cooling capacity (kW); **Pa** = Compressors power input (kW); **qw** = Water flow (m³/h)

dpw = Pressure drop (kPa).

Technical data

Cooling capacity performances

RTXB L

Twout			190						220					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	651.7	629.7	620.0	604.8	588.4	571.2	771.4	745.6	734.2	716.1	696.5	675.9
	Pa	kW	166.6	184.8	192.8	205.8	220.6	235.8	197.1	219.0	228.6	244.1	261.8	280.1
	qw	m ³ /h	111.70	107.91	106.26	103.65	100.84	97.90	132.21	127.78	125.83	122.72	119.37	115.83
	dpw	kPa	34.9	32.5	31.6	30.0	28.4	26.8	36.6	34.2	33.1	31.5	29.8	28.1
6	Pf	kW	670.3	647.6	637.8	622.1	605.4	587.8	793.4	766.9	755.2	736.5	716.4	695.3
	Pa	kW	168.3	186.7	194.8	207.9	222.8	238.1	199.0	221.0	230.8	246.4	264.3	282.8
	qw	m ³ /h	114.94	111.06	109.37	106.68	103.81	100.80	136.06	131.50	129.50	126.30	122.86	119.23
	dpw	kPa	36.9	34.5	33.4	31.8	30.1	28.4	38.7	36.2	35.1	33.4	31.6	29.7
7	Pf	kW	689.2	666.0	655.9	639.9	622.7	604.8	815.9	788.5	776.5	757.4	736.8	715.1
	Pa	kW	170.1	188.6	196.8	210.0	225.0	240.6	200.9	223.1	233.0	248.8	266.8	285.5
	qw	m ³ /h	118.26	114.27	112.54	109.79	106.84	103.77	139.98	135.30	133.24	129.96	126.42	122.69
	dpw	kPa	39.1	36.5	35.4	33.7	31.9	30.1	41.0	38.3	37.1	35.3	33.4	31.5
8	Pf	kW	708.6	684.7	674.4	658.0	640.4	622.0	838.7	810.6	798.3	778.7	757.5	735.2
	Pa	kW	171.9	190.6	198.8	212.2	227.3	243.0	202.8	225.3	235.2	251.1	269.4	288.2
	qw	m ³ /h	121.65	117.55	115.77	112.96	109.94	106.79	143.99	139.17	137.05	133.68	130.04	126.22
	dpw	kPa	41.4	38.6	37.5	35.7	33.8	31.9	43.4	40.5	39.3	37.4	35.4	33.3
9	Pf	kW	728.3	703.8	693.2	676.4	658.4	639.7	862.1	833.2	820.5	800.4	778.6	755.8
	Pa	kW	173.8	192.6	200.9	214.3	229.6	245.4	204.7	227.4	237.4	253.5	271.9	291.0
	qw	m ³ /h	125.11	120.91	119.08	116.20	113.10	109.88	148.08	143.12	140.94	137.48	133.75	129.83
	dpw	kPa	43.7	40.9	39.6	37.7	35.8	33.7	45.9	42.9	41.6	39.5	37.4	35.3
10	Pf	kW	748.5	723.4	712.5	695.3	676.9	657.7	885.9	856.2	843.1	822.5	800.1	776.7
	Pa	kW	175.7	194.6	203.0	216.5	232.0	247.9	206.7	229.6	239.7	256.0	274.6	293.8
	qw	m ³ /h	128.78	124.46	122.59	119.63	116.46	113.16	152.42	147.31	145.07	141.51	137.67	133.65
	dpw	kPa	46.4	43.3	42.0	40.0	37.9	35.8	48.6	45.4	44.0	41.9	39.7	37.4

Twout			250						300					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	906.3	875.5	861.8	840.0	816.6	792.1	1051.6	1016.9	1001.8	977.8	952.1	925.1
	Pa	kW	227.9	254.7	266.4	285.1	306.2	327.7	286.9	318.4	332.0	353.5	377.7	402.5
	qw	m ³ /h	155.33	150.04	147.70	143.97	139.96	135.76	180.23	174.29	171.69	167.58	163.17	158.55
	dpw	kPa	29.6	27.6	26.8	25.4	24.0	22.6	41.0	38.3	37.2	35.4	33.6	31.7
6	Pf	kW	931.9	900.2	886.2	863.9	839.8	814.7	1081.7	1046.0	1030.5	1005.8	979.4	951.7
	Pa	kW	229.8	256.8	268.6	287.5	308.7	330.5	289.8	321.5	335.2	356.8	381.3	406.3
	qw	m ³ /h	159.80	154.37	151.96	148.14	144.01	139.70	185.50	179.38	176.71	172.48	167.95	163.20
	dpw	kPa	31.3	29.2	28.3	26.9	25.4	23.9	43.4	40.6	39.4	37.5	35.6	33.6
7	Pf	kW	957.9	925.4	911.0	888.1	863.4	837.6	1112.5	1075.8	1059.7	1034.4	1007.3	978.9
	Pa	kW	231.7	259.0	270.9	289.9	311.3	333.3	292.6	324.6	338.4	360.3	384.9	410.1
	qw	m ³ /h	164.36	158.78	156.31	152.38	148.14	143.72	190.88	184.58	181.83	177.49	172.84	167.96
	dpw	kPa	33.1	30.9	30.0	28.5	26.9	25.3	46.0	43.0	41.7	39.7	37.7	35.6
8	Pf	kW	984.5	951.1	936.3	912.8	887.4	861.0	1143.9	1106.1	1089.6	1063.6	1035.8	1006.7
	Pa	kW	233.6	261.1	273.1	292.3	313.9	336.1	295.5	327.8	341.7	363.7	388.6	414.0
	qw	m ³ /h	169.02	163.28	160.74	156.71	152.35	147.81	196.39	189.89	187.07	182.60	177.83	172.83
	dpw	kPa	35.0	32.7	31.7	30.1	28.5	26.8	48.6	45.5	44.1	42.1	39.9	37.7
9	Pf	kW	1011.6	977.3	962.1	938.0	911.9	884.8	1176.0	1137.1	1120.2	1093.5	1064.9	1035.0
	Pa	kW	235.6	263.2	275.3	294.7	316.5	338.9	298.5	331.0	345.0	367.2	392.3	417.9
	qw	m ³ /h	173.77	167.87	165.27	161.13	156.65	151.98	202.01	195.33	192.42	187.83	182.92	177.80
	dpw	kPa	37.0	34.6	33.5	31.8	30.1	28.3	51.5	48.1	46.7	44.5	42.2	39.9
10	Pf	kW	1039.2	1003.9	988.4	963.6	936.9	909.0	1208.8	1168.7	1151.3	1123.9	1094.6	1064.0
	Pa	kW	237.5	265.4	277.6	297.1	319.2	341.8	301.5	334.3	348.4	370.8	396.0	421.9
	qw	m ³ /h	178.80	172.74	170.06	165.80	161.20	156.40	207.98	201.09	198.10	193.38	188.33	183.07
	dpw	kPa	39.2	36.6	35.5	33.7	31.9	30.0	54.6	51.0	49.5	47.2	44.7	42.3

Twout = Leaving water temperature (°C); **Pf** = Cooling capacity (kW); **Pa** = Compressors power input (kW); **qw** = Water flow (m³/h)

dpw = Pressure drop (kPa).

Technical data

Heating capacity performances

RTXB L

Ta			140						150					
			Twout						Twout					
			30	35	40	45	50	55	30	35	40	45	50	55
-5°C	Pt	kW	391.5	393.0	394.1	394.4	394.0	392.7	410.9	406.0	400.8	395.4	390.1	384.9
	Pat	kW	106.4	119.0	132.9	148.3	165.3	183.9	112.3	124.1	137.3	152.1	168.5	186.8
	qw	m³/h	67.78	68.18	68.51	68.70	70.01	68.67	71.15	70.44	69.69	68.88	69.31	67.31
	dpw	kPa	28.7	29.0	29.3	29.4	30.6	29.4	25.4	24.9	24.3	23.8	24.1	22.7
-2°C	Pt	kW	423.8	425.0	425.7	425.6	424.7	423.0	449.0	443.3	437.3	430.9	424.4	418.1
	Pat	kW	106.9	119.6	133.8	149.5	166.8	186.0	113.7	125.6	139.0	154.0	170.7	189.4
	qw	m³/h	73.38	73.73	74.01	74.14	75.47	73.96	77.74	76.91	76.02	75.06	75.42	73.10
	dpw	kPa	33.6	33.9	34.2	34.3	35.5	34.1	30.3	29.7	29.0	28.2	28.5	26.8
0°C	Pt	kW	447.3	448.2	448.5	448.1	446.9	444.7	476.9	470.5	463.8	456.6	449.4	442.1
	Pat	kW	107.3	120.0	134.3	150.1	167.7	187.1	114.6	126.6	140.1	155.2	172.1	191.0
	qw	m³/h	77.45	77.76	77.98	78.06	79.40	77.76	82.56	81.64	80.64	79.55	79.85	77.31
	dpw	kPa	37.4	37.7	37.9	38.0	39.3	37.7	34.2	33.4	32.6	31.7	32.0	30.0
5°C	Pt	kW	508.1	508.0	507.3	505.8	503.4	500.1	549.5	541.4	532.7	523.4	513.9	504.2
	Pat	kW	108.2	120.9	135.2	151.3	169.4	189.4	117.1	129.1	142.7	158.0	175.2	194.4
	qw	m³/h	87.97	88.14	88.20	88.11	89.45	87.44	95.13	93.93	92.62	91.18	91.31	88.16
	dpw	kPa	48.3	48.5	48.5	48.4	49.9	47.7	45.4	44.2	43.0	41.7	41.8	39.0
7°C	Pt	kW	535.4	534.8	533.6	531.5	528.5	524.6	582.3	573.3	563.8	553.5	542.9	532.1
	Pat	kW	108.6	121.2	135.6	151.8	169.9	190.1	118.3	130.2	143.8	159.1	176.3	195.7
	qw	m³/h	92.69	92.78	92.77	92.59	93.92	91.73	100.82	99.48	98.02	96.42	96.46	93.03
	dpw	kPa	53.6	53.7	53.7	53.5	55.0	52.5	51.0	49.6	48.2	46.6	46.6	43.4

Ta			160						180					
			Twout						Twout					
			30	35	40	45	50	55	30	35	40	45	50	55
-5°C	Pt	kW	447.8	447.6	446.9	445.9	444.6	443.4	488.8	485.6	481.9	477.7	473.3	469.0
	Pat	kW	118.7	132.2	147.4	164.3	183.3	204.3	125.8	139.3	154.4	171.3	190.0	210.8
	qw	m³/h	77.53	77.65	77.70	77.67	79.01	77.52	84.63	84.26	83.79	83.21	84.10	82.01
	dpw	kPa	29.6	29.7	29.7	29.7	30.7	29.6	20.6	20.4	20.1	19.9	20.3	19.3
-2°C	Pt	kW	485.9	485.3	484.3	482.7	480.9	479.0	531.2	527.9	524.0	519.5	514.9	510.3
	Pat	kW	119.6	133.3	148.7	165.9	185.2	206.8	127.0	140.7	156.3	173.7	193.2	214.8
	qw	m³/h	84.13	84.21	84.20	84.09	85.45	83.75	91.97	91.59	91.10	90.50	91.49	89.23
	dpw	kPa	34.9	34.9	34.9	34.8	36.0	34.5	24.3	24.1	23.8	23.5	24.0	22.8
0°C	Pt	kW	513.6	512.7	511.3	509.3	507.0	504.5	562.0	558.4	554.3	549.6	544.6	539.8
	Pat	kW	120.2	134.0	149.5	166.9	186.4	208.2	127.9	141.7	157.5	175.3	195.1	217.1
	qw	m³/h	88.92	88.95	88.89	88.72	90.08	88.21	97.30	96.89	96.37	95.73	96.78	94.38
	dpw	kPa	38.9	39.0	38.9	38.8	40.0	38.3	27.2	26.9	26.7	26.3	26.9	25.6
5°C	Pt	kW	585.1	583.1	580.6	577.2	573.4	569.4	641.7	637.2	632.1	626.3	620.3	614.4
	Pat	kW	122.0	135.6	151.2	168.8	188.6	210.8	130.3	144.2	160.2	178.4	198.9	221.8
	qw	m³/h	101.30	101.18	100.94	100.55	101.89	99.55	111.11	110.56	109.90	109.11	110.23	107.42
	dpw	kPa	50.5	50.4	50.2	49.8	51.1	48.8	35.4	35.1	34.7	34.2	34.9	33.1
7°C	Pt	kW	617.1	614.6	611.5	607.5	602.9	598.1	677.6	672.5	666.8	660.5	653.8	647.2
	Pat	kW	122.8	136.4	151.9	169.5	189.4	211.7	131.6	145.4	161.4	179.6	200.2	223.4
	qw	m³/h	106.85	106.64	106.31	105.82	107.14	104.58	117.31	116.68	115.94	115.05	116.18	113.17
	dpw	kPa	56.2	56.0	55.7	55.1	56.5	53.9	39.5	39.1	38.6	38.0	38.7	36.8

Ta = Outdoor temperature (°C)

Twout = Leaving water temperature (°C)

Pt = Heating capacity (kW)

Pat = Compressors power input (kW)

qw = Water flow (m³/h)

dpw = Pressure drop (kPa)

Technical data

Heating capacity performances

RTXB L

Ta		190							220						
		Twout							Twout						
		30	35	40	45	50	55	30	35	40	45	50	55		
-5°C	Pt	kW	512.2	511.2	510.2	509.2	508.4	508.1	592.7	591.9	591.1	590.6	590.9	592.3	
	Pat	kW	134.1	149.0	165.8	184.7	205.9	229.5	157.7	175.0	194.7	217.3	243.0	272.2	
	qw	m³/h	88.68	88.70	88.71	88.70	90.33	88.84	102.62	102.69	102.78	102.89	104.99	103.56	
	dpw	kPa	22.1	22.1	22.1	22.1	23.0	22.2	22.3	22.3	22.4	22.4	23.3	22.7	
-2°C	Pt	kW	555.8	554.3	552.8	551.1	549.6	548.7	643.5	642.0	640.5	638.9	638.0	638.0	
	Pat	kW	135.2	150.2	167.1	186.3	207.9	232.0	158.6	176.0	195.8	218.5	244.4	273.8	
	qw	m³/h	96.24	96.18	96.11	96.00	97.66	95.93	111.41	111.39	111.35	111.30	113.36	111.56	
	dpw	kPa	26.1	26.0	26.0	25.9	26.8	25.9	26.3	26.3	26.2	26.2	27.2	26.3	
0°C	Pt	kW	587.6	585.6	583.6	581.4	579.4	577.9	680.3	678.3	676.1	673.8	672.0	671.0	
	Pat	kW	136.1	151.0	168.0	187.4	209.2	233.6	159.2	176.6	196.5	219.3	245.3	274.9	
	qw	m³/h	101.73	101.61	101.46	101.28	102.95	101.04	117.78	117.68	117.55	117.37	119.40	117.32	
	dpw	kPa	29.1	29.0	29.0	28.9	29.8	28.7	29.4	29.3	29.3	29.2	30.2	29.1	
5°C	Pt	kW	669.7	666.4	662.9	659.3	655.8	652.7	774.9	771.5	767.6	763.2	759.1	755.5	
	Pat	kW	138.3	153.1	170.2	189.8	212.0	237.0	161.0	178.3	198.3	221.2	247.4	277.3	
	qw	m³/h	115.95	115.62	115.26	114.85	116.52	114.12	134.16	133.85	133.45	132.95	134.88	132.10	
	dpw	kPa	37.8	37.6	37.4	37.1	38.2	36.6	38.1	37.9	37.7	37.4	38.5	36.9	
7°C	Pt	kW	706.5	702.6	698.5	694.1	689.8	686.0	817.2	813.0	808.3	803.1	797.8	793.1	
	Pat	kW	139.4	154.1	171.2	190.8	213.1	238.2	161.7	179.1	199.1	222.0	248.2	278.2	
	qw	m³/h	122.33	121.90	121.44	120.91	122.57	119.94	141.48	141.07	140.54	139.89	141.77	138.68	
	dpw	kPa	42.1	41.8	41.5	41.1	42.3	40.5	42.4	42.1	41.8	41.4	42.5	40.7	

Ta		250							300						
		Twout							Twout						
		30	35	40	45	50	55	30	35	40	45	50	55		
-5°C	Pt	kW	646.2	646.0	646.1	646.6	648.5	652.3	803.2	802.7	801.7	800.5	799.7	799.9	
	Pat	kW	172.9	192.9	215.0	239.4	266.5	296.4	220.7	245.2	272.1	302.3	336.3	374.7	
	qw	m³/h	111.87	112.09	112.33	112.64	115.22	114.05	139.06	139.27	139.39	139.44	142.09	139.87	
	dpw	kPa	15.8	15.8	15.9	16.0	16.7	16.4	24.9	24.9	25.0	25.0	26.0	25.2	
-2°C	Pt	kW	703.1	702.7	702.2	701.8	702.5	704.8	870.2	868.9	866.7	864.1	861.7	860.2	
	Pat	kW	174.0	194.3	216.8	241.8	269.5	300.2	222.3	247.0	274.2	304.5	338.7	377.4	
	qw	m³/h	121.73	121.92	122.08	122.26	124.83	123.24	150.67	150.75	150.69	150.52	153.11	150.40	
	dpw	kPa	18.7	18.7	18.8	18.8	19.6	19.1	29.2	29.2	29.2	29.1	30.1	29.1	
0°C	Pt	kW	743.8	743.2	742.2	741.2	740.9	742.2	919.0	916.9	913.9	910.2	906.6	903.8	
	Pat	kW	174.5	195.0	217.7	243.0	271.2	302.4	223.3	248.2	275.5	306.0	340.3	379.1	
	qw	m³/h	128.78	128.94	129.04	129.11	131.66	129.77	159.12	159.08	158.89	158.55	161.09	158.02	
	dpw	kPa	20.9	21.0	21.0	21.0	21.8	21.2	32.6	32.5	32.5	32.3	33.4	32.1	
5°C	Pt	kW	847.6	846.0	843.6	840.7	838.0	836.4	1045.4	1041.2	1035.7	1029.2	1022.5	1016.3	
	Pat	kW	175.6	196.2	219.3	245.2	274.1	306.3	225.9	251.1	278.7	309.5	344.0	382.9	
	qw	m³/h	146.75	146.79	146.68	146.45	148.91	146.24	180.99	180.65	180.08	179.29	181.69	177.69	
	dpw	kPa	27.1	27.2	27.1	27.0	27.9	27.0	42.1	42.0	41.7	41.3	42.5	40.6	
7°C	Pt	kW	893.6	891.5	888.4	884.5	880.8	877.8	1102.1	1096.9	1090.4	1082.6	1074.5	1066.7	
	Pat	kW	175.9	196.5	219.7	245.8	274.9	307.4	227.1	252.4	280.1	310.9	345.5	384.4	
	qw	m³/h	154.71	154.68	154.46	154.09	156.50	153.48	190.82	190.32	189.57	188.59	190.92	186.50	
	dpw	kPa	30.2	30.2	30.1	29.9	30.9	29.7	46.8	46.6	46.2	45.7	46.9	44.7	

Ta = Outdoor temperature (°C)

Twout = Leaving water temperature (°C)

Pt = Heating capacity (kW)

Pat = Compressors power input (kW)

qw = Water flow (m³/h)

dpw = Pressure drop (kPa)

Technical data

Cooling capacity performances

RTXB S

Twout			140						150					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	473.9	459.7	453.3	442.9	428.7	419.7	527.3	503.6	493.4	477.4	456.4	443.6
	Pa	kW	129.6	144.7	151.3	161.8	176.3	185.2	142.7	157.2	163.5	173.7	187.6	196.2
	qw	m³/h	81.22	78.79	77.69	75.91	73.47	71.93	90.36	86.30	84.56	81.82	78.22	76.03
	dpw	kPa	41.4	38.9	37.9	36.1	33.8	32.4	40.6	37.0	35.6	33.3	30.4	28.7
6	Pf	kW	487.4	472.7	466.1	455.4	440.8	431.6	543.2	518.8	508.3	491.9	470.3	457.2
	Pa	kW	130.8	146.0	152.6	163.3	177.8	186.9	144.3	158.9	165.3	175.5	189.5	198.2
	qw	m³/h	83.58	81.06	79.94	78.10	75.59	74.01	93.14	88.97	87.17	84.35	80.65	78.40
	dpw	kPa	43.8	41.2	40.1	38.2	35.8	34.3	43.1	39.4	37.8	35.4	32.3	30.6
7	Pf	kW	501.1	486.0	479.2	468.2	453.2	443.7	559.4	534.4	523.6	506.7	484.6	471.1
	Pa	kW	132.0	147.3	154.0	164.7	179.4	188.5	145.9	160.6	167.0	177.3	191.4	200.2
	qw	m³/h	85.98	83.39	82.23	80.33	77.75	76.13	95.98	91.69	89.84	86.94	83.14	80.83
	dpw	kPa	46.4	43.6	42.4	40.5	37.9	36.3	45.8	41.8	40.1	37.6	34.4	32.5
8	Pf	kW	515.1	499.6	492.6	481.2	465.8	456.0	576.0	550.3	539.2	521.9	499.1	485.3
	Pa	kW	133.3	148.6	155.4	166.2	181.0	190.2	147.6	162.4	168.8	179.2	193.4	202.3
	qw	m³/h	88.44	85.77	84.56	82.61	79.96	78.29	98.89	94.47	92.58	89.59	85.69	83.32
	dpw	kPa	49.0	46.1	44.8	42.8	40.1	38.4	48.6	44.4	42.6	39.9	36.5	34.5
9	Pf	kW	529.4	513.4	506.2	494.5	478.6	468.6	593.0	566.5	555.2	537.3	514.0	499.8
	Pa	kW	134.5	150.0	156.8	167.7	182.6	191.9	149.3	164.1	170.6	181.1	195.4	204.3
	qw	m³/h	90.94	88.19	86.95	84.94	82.21	80.50	101.87	97.32	95.37	92.30	88.29	85.86
	dpw	kPa	51.9	48.8	47.4	45.2	42.4	40.6	51.6	47.1	45.2	42.4	38.8	36.7
10	Pf	kW	544.0	527.5	520.1	508.0	491.7	481.4	610.4	583.1	571.5	553.2	529.2	514.6
	Pa	kW	135.8	151.4	158.2	169.2	184.3	193.6	151.0	165.9	172.5	183.0	197.4	206.4
	qw	m³/h	93.60	90.76	89.48	87.41	84.60	82.84	105.02	100.34	98.33	95.18	91.05	88.55
	dpw	kPa	54.9	51.7	50.2	47.9	44.9	43.0	54.8	50.1	48.1	45.0	41.2	39.0

Twout			160						180					
			Outdoor air temperature						Outdoor air temperature					
			25	30	32	35	40	43	25	30	32	35	40	43
5	Pf	kW	554.6	536.9	529.1	516.4	499.4	488.8	606.4	586.0	577.0	562.7	543.6	531.9
	Pa	kW	148.8	165.4	172.7	184.4	200.4	210.3	155.2	171.7	178.9	190.7	206.8	216.9
	qw	m³/h	95.05	92.02	90.67	88.50	85.58	83.77	103.93	100.43	98.89	96.43	93.16	91.16
	dpw	kPa	44.2	41.4	40.2	38.3	35.8	34.3	31.6	29.5	28.6	27.2	25.4	24.3
6	Pf	kW	570.4	552.2	544.1	531.1	513.6	502.8	623.8	602.9	593.7	579.0	559.5	547.6
	Pa	kW	150.4	167.1	174.4	186.2	202.3	212.3	157.0	173.5	180.9	192.7	209.0	219.2
	qw	m³/h	97.81	94.70	93.31	91.08	88.08	86.22	106.96	103.38	101.81	99.29	95.95	93.90
	dpw	kPa	46.8	43.9	42.6	40.6	38.0	36.4	33.4	31.2	30.3	28.8	26.9	25.8
7	Pf	kW	586.5	567.8	559.5	546.1	528.2	517.1	641.5	620.1	610.7	595.7	575.8	563.6
	Pa	kW	151.9	168.7	176.1	187.9	204.2	214.3	158.9	175.5	182.8	194.7	211.2	221.4
	qw	m³/h	100.64	97.43	96.00	93.71	90.63	88.73	110.07	106.40	104.79	102.21	98.79	96.70
	dpw	kPa	49.6	46.5	45.1	43.0	40.2	38.5	35.4	33.1	32.1	30.5	28.5	27.3
8	Pf	kW	603.0	583.8	575.2	561.5	543.1	531.7	659.6	637.7	628.1	612.7	592.4	579.9
	Pa	kW	153.5	170.4	177.8	189.7	206.1	216.2	160.7	177.4	184.8	196.8	213.3	223.7
	qw	m³/h	103.52	100.22	98.75	96.39	93.24	91.28	113.24	109.48	107.83	105.19	101.70	99.56
	dpw	kPa	52.4	49.2	47.7	45.5	42.5	40.8	37.5	35.0	34.0	32.3	30.2	29.0
9	Pf	kW	619.8	600.0	591.2	577.1	558.2	546.6	678.1	655.7	645.8	630.1	609.3	596.6
	Pa	kW	155.2	172.1	179.5	191.5	208.0	218.2	162.7	179.4	186.8	198.9	215.5	225.9
	qw	m³/h	106.46	103.07	101.56	99.14	95.90	93.89	116.48	112.63	110.94	108.24	104.67	102.48
	dpw	kPa	55.5	52.0	50.5	48.1	45.0	43.1	39.6	37.1	36.0	34.2	32.0	30.7
10	Pf	kW	636.9	616.6	607.5	593.1	573.7	561.7	697.0	674.0	663.9	647.9	626.6	613.6
	Pa	kW	156.8	173.8	181.3	193.3	209.9	220.2	164.6	181.4	188.9	201.0	217.7	228.2
	qw	m³/h	109.59	106.09	104.53	102.04	98.71	96.66	119.93	115.98	114.24	111.47	107.82	105.58
	dpw	kPa	58.8	55.1	53.5	51.0	47.7	45.7	42.0	39.3	38.1	36.3	34.0	32.6

Twout = Leaving water temperature (°C); **Pf** = Cooling capacity (kW); **Pa** = Compressors power input (kW); **qw** = Water flow (m³/h)

dpw = Pressure drop (kPa).

Technical data

Cooling capacity performances

RTXB S

Twout		190							220						
		Outdoor air temperature							Outdoor air temperature						
		25	30	32	35	40	43		25	30	32	35	40	43	
5	Pf	kW	642.9	622.4	613.5	599.3	580.5	569.0	756.4	732.1	721.4	704.3	681.5	667.5	
	Pa	kW	166.4	184.2	192.1	204.9	222.5	233.5	195.9	217.4	226.9	242.2	263.3	276.5	
	qw	m³/h	110.17	106.68	105.15	102.72	99.49	97.52	129.63	125.47	123.64	120.71	116.80	114.40	
	dpw	kPa	35.1	33.0	32.0	30.5	28.7	27.5	37.0	34.6	33.6	32.1	30.0	28.8	
6	Pf	kW	661.1	640.2	631.1	616.5	597.2	585.4	777.9	753.0	742.0	724.4	701.0	686.6	
	Pa	kW	168.2	186.1	194.1	207.0	224.8	235.9	197.7	219.5	229.0	244.5	265.8	279.2	
	qw	m³/h	113.37	109.78	108.21	105.72	102.41	100.39	133.40	129.12	127.24	124.23	120.22	117.75	
	dpw	kPa	37.2	34.9	33.9	32.4	30.4	29.2	39.2	36.7	35.6	34.0	31.8	30.5	
7	Pf	kW	679.8	658.3	648.9	634.0	614.3	602.2	799.9	774.3	763.0	744.9	720.9	706.1	
	Pa	kW	170.0	188.1	196.1	209.1	227.0	238.3	199.6	221.5	231.2	246.8	268.3	281.8	
	qw	m³/h	116.64	112.95	111.34	108.78	105.40	103.33	137.25	132.85	130.91	127.81	123.70	121.16	
	dpw	kPa	39.4	36.9	35.9	34.3	32.2	30.9	41.5	38.8	37.7	36.0	33.7	32.3	
8	Pf	kW	698.8	676.8	667.2	651.9	631.7	619.3	822.3	796.0	784.4	765.8	741.2	726.0	
	Pa	kW	171.9	190.1	198.2	211.2	229.3	240.7	201.5	223.6	233.4	249.1	270.9	284.5	
	qw	m³/h	119.98	116.19	114.54	111.91	108.45	106.33	141.18	136.66	134.66	131.47	127.25	124.64	
	dpw	kPa	41.7	39.1	38.0	36.3	34.1	32.7	43.9	41.1	39.9	38.0	35.6	34.2	
9	Pf	kW	718.3	695.7	685.8	670.1	649.4	636.8	845.2	818.1	806.2	787.1	761.8	746.3	
	Pa	kW	173.8	192.1	200.2	213.4	231.7	243.1	203.5	225.8	235.6	251.5	273.5	287.3	
	qw	m³/h	123.39	119.50	117.81	115.11	111.56	109.39	145.19	140.54	138.48	135.21	130.87	128.20	
	dpw	kPa	44.1	41.4	40.2	38.4	36.0	34.6	46.4	43.5	42.2	40.2	37.7	36.2	
10	Pf	kW	738.1	714.9	704.8	688.7	667.6	654.6	868.5	840.7	828.4	808.8	782.9	766.9	
	Pa	kW	175.7	194.1	202.3	215.6	234.0	245.6	205.4	227.9	237.9	253.9	276.1	290.0	
	qw	m³/h	127.01	123.02	121.27	118.51	114.86	112.64	149.44	144.65	142.54	139.17	134.70	131.96	
	dpw	kPa	46.7	43.8	42.6	40.7	38.2	36.7	49.1	46.0	44.7	42.6	39.9	38.3	

Twout		250							300						
		Outdoor air temperature							Outdoor air temperature						
		25	30	32	35	40	43		25	30	32	35	40	43	
5	Pf	kW	886.5	857.0	844.0	823.1	795.4	778.5	1025.8	992.2	977.6	954.3	923.6	904.9	
	Pa	kW	220.2	246.1	257.4	275.4	300.0	315.2	277.2	307.7	320.8	341.5	369.8	387.3	
	qw	m³/h	151.92	146.88	144.64	141.06	136.32	133.42	175.80	170.05	167.54	163.55	158.30	155.08	
	dpw	kPa	30.4	28.4	27.6	26.2	24.5	23.5	40.0	37.4	36.3	34.6	32.4	31.1	
6	Pf	kW	911.4	881.2	867.8	846.4	818.0	800.6	1055.2	1020.6	1005.5	981.6	950.2	930.9	
	Pa	kW	222.0	248.1	259.5	277.7	302.5	317.9	280.0	310.7	323.9	344.8	373.3	391.0	
	qw	m³/h	156.30	151.12	148.81	145.14	140.27	137.29	180.94	175.02	172.43	168.33	162.94	159.64	
	dpw	kPa	32.2	30.1	29.2	27.8	25.9	24.9	42.4	39.6	38.5	36.7	34.4	33.0	
7	Pf	kW	936.9	905.9	892.1	870.1	841.0	823.1	1085.2	1049.6	1034.1	1009.6	977.2	957.5	
	Pa	kW	223.9	250.2	261.7	280.0	305.1	320.6	282.7	313.7	327.0	348.1	376.9	394.7	
	qw	m³/h	160.76	155.44	153.07	149.30	144.29	141.24	186.19	180.09	177.43	173.22	167.67	164.29	
	dpw	kPa	34.1	31.9	30.9	29.4	27.5	26.3	44.9	42.0	40.7	38.8	36.4	34.9	
8	Pf	kW	962.9	931.0	916.9	894.3	864.4	846.1	1115.8	1079.2	1063.3	1038.1	1004.9	984.7	
	Pa	kW	225.7	252.2	263.8	282.3	307.6	323.3	285.6	316.7	330.2	351.4	380.4	398.5	
	qw	m³/h	165.31	159.84	157.41	153.54	148.39	145.26	191.56	185.28	182.54	178.21	172.52	169.05	
	dpw	kPa	36.0	33.7	32.7	31.1	29.0	27.8	47.5	44.4	43.1	41.1	38.5	37.0	
9	Pf	kW	989.4	956.7	942.1	919.0	888.2	869.5	1147.1	1109.4	1093.1	1067.2	1033.1	1012.4	
	Pa	kW	227.6	254.3	266.0	284.6	310.2	326.0	288.4	319.8	333.4	354.8	384.1	402.3	
	qw	m³/h	169.95	164.33	161.84	157.86	152.58	149.36	197.05	190.58	187.76	183.32	177.46	173.90	
	dpw	kPa	38.1	35.6	34.5	32.9	30.7	29.4	50.3	47.0	45.6	43.5	40.8	39.1	
10	Pf	kW	1016.4	982.8	967.8	944.1	912.5	893.3	1179.1	1140.3	1123.5	1096.9	1061.9	1040.7	
	Pa	kW	229.6	256.4	268.2	287.0	312.7	328.7	291.3	323.0	336.6	358.3	387.8	406.1	
	qw	m³/h	174.88	169.10	166.53	162.44	157.01	153.70	202.88	196.20	193.31	188.73	182.71	179.06	
	dpw	kPa	40.3	37.7	36.6	34.8	32.5	31.1	53.3	49.8	48.4	46.1	43.2	41.5	

Twout = Leaving water temperature (°C); Pf = Cooling capacity (kW); Pa = Compressors power input (kW); qw = Water flow (m³/h)

dpw = Pressure drop (kPa).

Technical data

Heating capacity performances

RTXB S

Ta			140						150					
			Twout						Twout					
			30	35	40	45	50	55	30	35	40	45	50	55
-5°C	Pt	kW	355.2	356.6	357.6	357.9	357.5	356.4	370.1	365.7	361.0	356.2	351.4	346.8
	Pat	kW	104.9	117.3	131.0	146.2	162.9	181.3	109.9	121.4	134.3	148.8	164.8	182.8
	qw	m³/h	61.50	61.87	62.17	62.34	63.53	62.31	64.08	63.45	62.77	62.05	62.44	60.63
	dpw	kPa	23.9	24.1	24.4	24.5	25.5	24.5	20.8	20.4	20.0	19.5	19.8	18.7
-2°C	Pt	kW	384.6	385.6	386.2	386.2	385.4	383.8	404.4	399.3	393.9	388.1	382.3	376.7
	Pat	kW	105.4	118.0	131.9	147.4	164.5	183.3	111.2	122.9	136.0	150.6	167.0	185.3
	qw	m³/h	66.58	66.91	67.15	67.27	68.48	67.11	70.02	69.28	68.48	67.61	67.94	65.86
	dpw	kPa	28.0	28.2	28.4	28.5	29.6	28.4	24.9	24.4	23.8	23.2	23.4	22.0
0°C	Pt	kW	405.9	406.7	407.0	406.6	405.5	403.6	429.5	423.8	417.8	411.4	404.8	398.3
	Pat	kW	105.8	118.3	132.4	148.0	165.3	184.5	112.1	123.9	137.1	151.8	168.4	186.9
	qw	m³/h	70.27	70.56	70.76	70.83	72.05	70.56	74.36	73.53	72.63	71.66	71.93	69.65
	dpw	kPa	31.1	31.4	31.6	31.6	32.7	31.4	28.1	27.5	26.8	26.1	26.3	24.6
5°C	Pt	kW	461.0	460.9	460.4	459.0	456.8	453.8	495.0	487.7	479.9	471.5	462.9	454.3
	Pat	kW	106.7	119.2	133.3	149.2	167.0	186.7	114.6	126.3	139.6	154.5	171.4	190.2
	qw	m³/h	79.82	79.98	80.04	79.95	81.17	79.35	85.69	84.61	83.43	82.14	82.26	79.43
	dpw	kPa	40.2	40.3	40.4	40.3	41.6	39.7	37.3	36.3	35.3	34.3	34.4	32.0
7°C	Pt	kW	485.8	485.2	484.2	482.3	479.6	476.1	524.5	516.5	507.9	498.6	489.1	479.4
	Pat	kW	107.1	119.5	133.7	149.6	167.5	187.4	115.7	127.4	140.6	155.6	172.5	191.4
	qw	m³/h	84.11	84.19	84.18	84.02	85.23	83.25	90.82	89.61	88.30	86.86	86.90	83.82
	dpw	kPa	44.6	44.7	44.7	44.5	45.8	43.7	41.9	40.8	39.6	38.3	38.3	35.7

Ta			160						180					
			Twout						Twout					
			30	35	40	45	50	55	30	35	40	45	50	55
-5°C	Pt	kW	407.2	407.0	406.5	405.5	404.4	403.3	470.8	467.5	463.8	459.5	455.1	450.9
	Pat	kW	116.8	130.1	145.0	161.7	180.3	201.0	124.6	137.7	152.4	168.8	187.0	207.0
	qw	m³/h	70.51	70.62	70.67	70.64	71.87	70.52	81.51	81.12	80.63	80.05	80.87	78.83
	dpw	kPa	24.8	24.8	24.9	24.9	25.7	24.8	17.1	17.0	16.8	16.5	16.9	16.0
-2°C	Pt	kW	441.9	441.4	440.5	439.1	437.5	435.8	512.0	508.8	505.0	500.6	496.1	491.7
	Pat	kW	117.7	131.2	146.3	163.3	182.2	203.4	125.7	139.2	154.4	171.5	190.4	211.4
	qw	m³/h	76.51	76.59	76.59	76.50	77.75	76.21	88.65	88.27	87.79	87.20	88.15	85.96
	dpw	kPa	29.2	29.2	29.2	29.1	30.1	28.9	20.3	20.1	19.9	19.6	20.1	19.1
0°C	Pt	kW	467.1	466.4	465.1	463.4	461.3	459.1	541.9	538.5	534.6	530.0	525.3	520.7
	Pat	kW	118.3	131.9	147.1	164.2	183.4	204.8	126.5	140.2	155.7	173.1	192.5	214.0
	qw	m³/h	80.88	80.91	80.87	80.71	81.97	80.27	93.83	93.44	92.94	92.33	93.34	91.04
	dpw	kPa	32.6	32.6	32.6	32.4	33.5	32.1	22.7	22.5	22.3	22.0	22.5	21.4
5°C	Pt	kW	532.2	530.5	528.2	525.3	521.9	518.3	619.3	615.2	610.5	605.1	599.4	593.9
	Pat	kW	120.0	133.5	148.8	166.1	185.6	207.5	128.7	142.6	158.5	176.5	196.7	219.2
	qw	m³/h	92.14	92.05	91.84	91.50	92.73	90.62	107.23	106.74	106.14	105.40	106.52	103.84
	dpw	kPa	42.3	42.2	42.0	41.7	42.8	40.9	29.7	29.4	29.1	28.7	29.3	27.8
7°C	Pt	kW	561.4	559.2	556.4	552.8	548.8	544.5	654.1	649.5	644.3	638.4	632.2	626.1
	Pat	kW	120.8	134.2	149.5	166.8	186.4	208.4	129.8	143.7	159.6	177.7	198.1	220.9
	qw	m³/h	97.20	97.02	96.73	96.30	97.51	95.20	113.25	112.69	112.01	111.20	112.34	109.47
	dpw	kPa	47.1	46.9	46.6	46.2	47.4	45.1	33.1	32.8	32.4	31.9	32.6	30.9

Ta = Outdoor temperature (°C)

Twout = Leaving water temperature (°C)

Pt = Heating capacity (kW)

Pat = Compressors power input (kW)

qw = Water flow (m³/h)

dpw = Pressure drop (kPa)

Technical data

Heating capacity performances

RTXB S

Ta		190							220						
		Twout							Twout						
		30	35	40	45	50	55		30	35	40	45	50	55	
-5°C	Pt	kW	503.9	503.3	502.7	502.0	501.7	502.0	588.3	587.6	587.0	586.6	587.1	588.8	
	Pat	kW	133.6	148.4	165.0	183.6	204.4	227.6	157.0	174.3	193.9	216.4	242.0	271.1	
	qw	m³/h	87.24	87.32	87.39	87.45	89.15	87.77	101.86	101.94	102.05	102.19	104.32	102.94	
	dpw	kPa	19.7	19.7	19.7	19.8	20.5	19.9	19.6	19.7	19.7	19.8	20.6	20.1	
-2°C	Pt	kW	547.4	546.3	545.3	544.1	543.3	543.0	638.9	637.5	636.1	634.8	634.0	634.3	
	Pat	kW	134.6	149.6	166.4	185.4	206.6	230.4	157.9	175.3	195.0	217.6	243.4	272.7	
	qw	m³/h	94.77	94.79	94.80	94.79	96.54	94.94	110.61	110.61	110.59	110.57	112.66	110.91	
	dpw	kPa	23.2	23.2	23.2	23.2	24.1	23.3	23.2	23.2	23.1	23.1	24.0	23.3	
0°C	Pt	kW	578.9	577.5	576.1	574.5	573.2	572.4	675.5	673.6	671.6	669.5	667.9	667.2	
	Pat	kW	135.4	150.4	167.3	186.5	208.0	232.1	158.6	175.9	195.7	218.4	244.3	273.8	
	qw	m³/h	100.23	100.20	100.15	100.07	101.85	100.08	116.95	116.88	116.77	116.63	118.68	116.66	
	dpw	kPa	26.0	26.0	25.9	25.9	26.8	25.9	25.9	25.9	25.8	25.7	26.7	25.8	
5°C	Pt	kW	660.6	658.0	655.3	652.4	649.7	647.5	769.7	766.4	762.7	758.6	754.6	751.4	
	Pat	kW	137.4	152.4	169.5	189.0	211.1	235.8	160.3	177.6	197.5	220.3	246.4	276.2	
	qw	m³/h	114.38	114.17	113.93	113.65	115.45	113.22	133.26	132.98	132.60	132.14	134.09	131.38	
	dpw	kPa	33.8	33.7	33.6	33.4	34.5	33.1	33.6	33.5	33.3	33.0	34.0	32.7	
7°C	Pt	kW	697.3	694.1	690.7	687.2	683.8	680.9	811.8	807.8	803.3	798.2	793.3	788.8	
	Pat	kW	138.3	153.3	170.4	190.0	212.2	237.2	161.0	178.4	198.3	221.1	247.3	277.1	
	qw	m³/h	120.72	120.42	120.09	119.70	121.50	119.05	140.55	140.16	139.66	139.05	140.96	137.93	
	dpw	kPa	37.7	37.5	37.3	37.0	38.2	36.6	37.4	37.2	36.9	36.6	37.6	36.0	

Ta		250							300						
		Twout							Twout						
		30	35	40	45	50	55		30	35	40	45	50	55	
-5°C	Pt	kW	652.5	652.4	652.6	653.3	655.5	659.7	803.2	803.4	803.2	802.8	803.2	804.8	
	Pat	kW	182.9	204.0	227.3	253.0	281.5	313.0	224.0	248.7	276.0	306.5	341.0	380.1	
	qw	m³/h	112.97	113.20	113.45	113.80	116.47	115.35	139.06	139.39	139.64	139.85	142.72	140.72	
	dpw	kPa	16.0	16.1	16.1	16.2	17.0	16.7	22.3	22.4	22.5	22.6	23.5	22.9	
-2°C	Pt	kW	710.4	710.1	709.7	709.6	710.6	713.3	870.8	870.1	868.8	867.1	865.9	865.8	
	Pat	kW	184.1	205.5	229.3	255.7	284.9	317.3	225.6	250.6	278.2	309.0	343.7	383.0	
	qw	m³/h	123.00	123.21	123.39	123.61	126.26	124.72	150.77	150.97	151.06	151.06	153.87	151.39	
	dpw	kPa	19.0	19.0	19.1	19.1	20.0	19.5	26.3	26.3	26.4	26.4	27.3	26.5	
0°C	Pt	kW	751.9	751.3	750.5	749.6	749.7	751.4	920.0	918.6	916.4	913.7	911.3	909.9	
	Pat	kW	184.8	206.4	230.4	257.1	286.8	319.7	226.7	251.9	279.6	310.6	345.4	384.9	
	qw	m³/h	130.18	130.36	130.48	130.59	133.22	131.38	159.28	159.38	159.33	159.17	161.94	159.10	
	dpw	kPa	21.2	21.3	21.3	21.4	22.2	21.6	29.3	29.3	29.3	29.3	30.3	29.2	
5°C	Pt	kW	857.3	855.9	853.6	850.9	848.5	847.3	1047.1	1043.8	1039.3	1033.8	1028.3	1023.5	
	Pat	kW	185.9	207.7	232.2	259.5	290.1	324.0	229.2	254.8	282.9	314.1	349.2	388.9	
	qw	m³/h	148.43	148.50	148.41	148.22	150.77	148.14	181.30	181.10	180.69	180.09	182.72	178.95	
	dpw	kPa	27.6	27.6	27.6	27.5	28.5	27.5	38.0	37.9	37.7	37.5	38.6	37.0	
7°C	Pt	kW	904.0	902.0	899.1	895.5	892.0	889.4	1104.3	1099.9	1094.3	1087.6	1080.7	1074.3	
	Pat	kW	186.3	208.1	232.7	260.2	291.0	325.4	230.4	256.0	284.2	315.6	350.8	390.5	
	qw	m³/h	156.51	156.51	156.32	155.99	158.49	155.50	191.19	190.84	190.26	189.46	192.03	187.83	
	dpw	kPa	30.7	30.7	30.6	30.5	31.5	30.3	42.2	42.1	41.8	41.5	42.6	40.8	

Ta = Outdoor temperature (°C)

Twout = Leaving water temperature (°C)

Pt = Heating capacity (kW)

Pat = Compressors power input (kW)

qw = Water flow (m³/h)

dpw = Pressure drop (kPa)

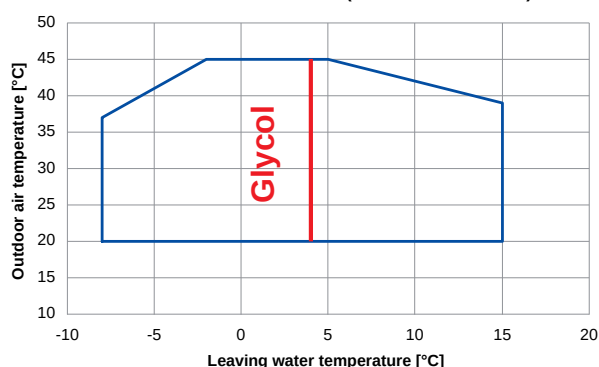
Operating range

Version	Operating mode	Ta		Tw out	
		Min	Max	Min	Max
Standard - L - S	Cooling	20	45	-8	15
Standard	Heating	-7	20	26	54
L - S	Heating	-8	35	26	54

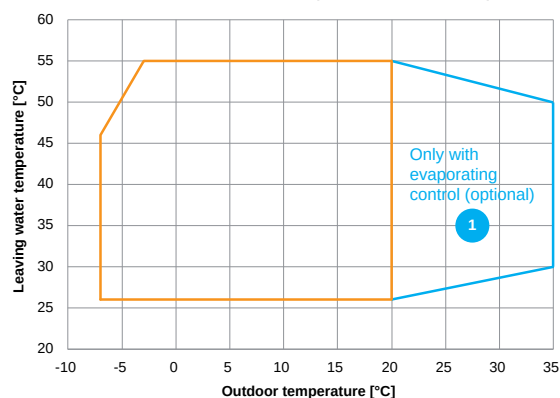
Ta = Outdoor air temperature (°C)

Tw out = Leaving water temperature (°C)

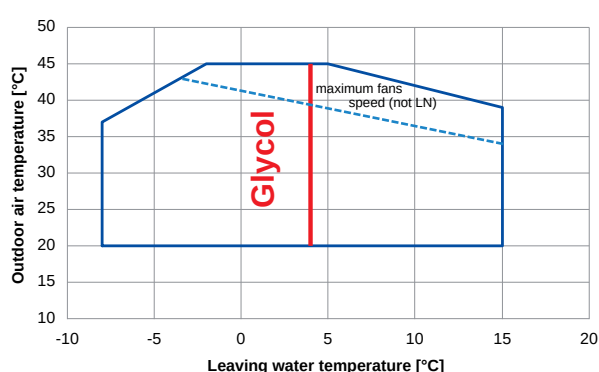
CHILLER OPERATING MODE (STANDARD VERSION)



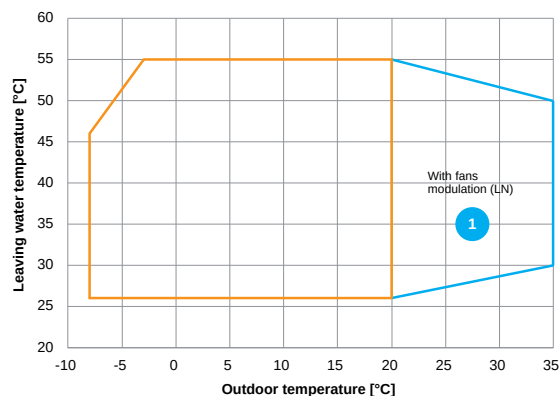
HEATING OPERATING MODE (STANDARD VERSIONS)



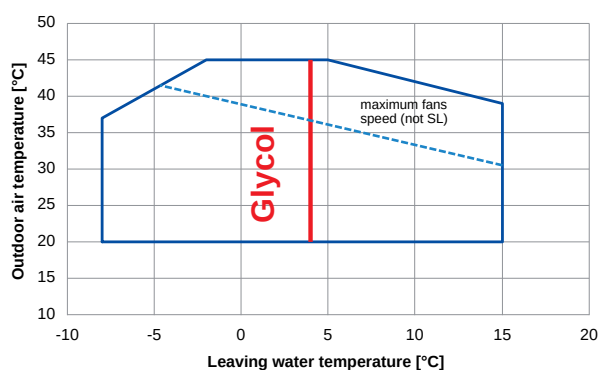
CHILLER OPERATING MODE (L VERSIONS)



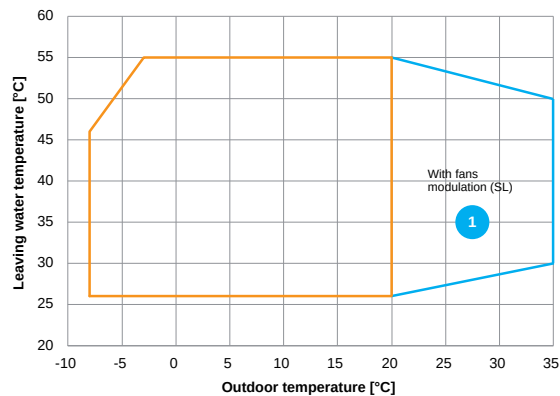
HEATING OPERATING MODE (L VERSIONS)



CHILLER OPERATING MODE (S VERSIONS)

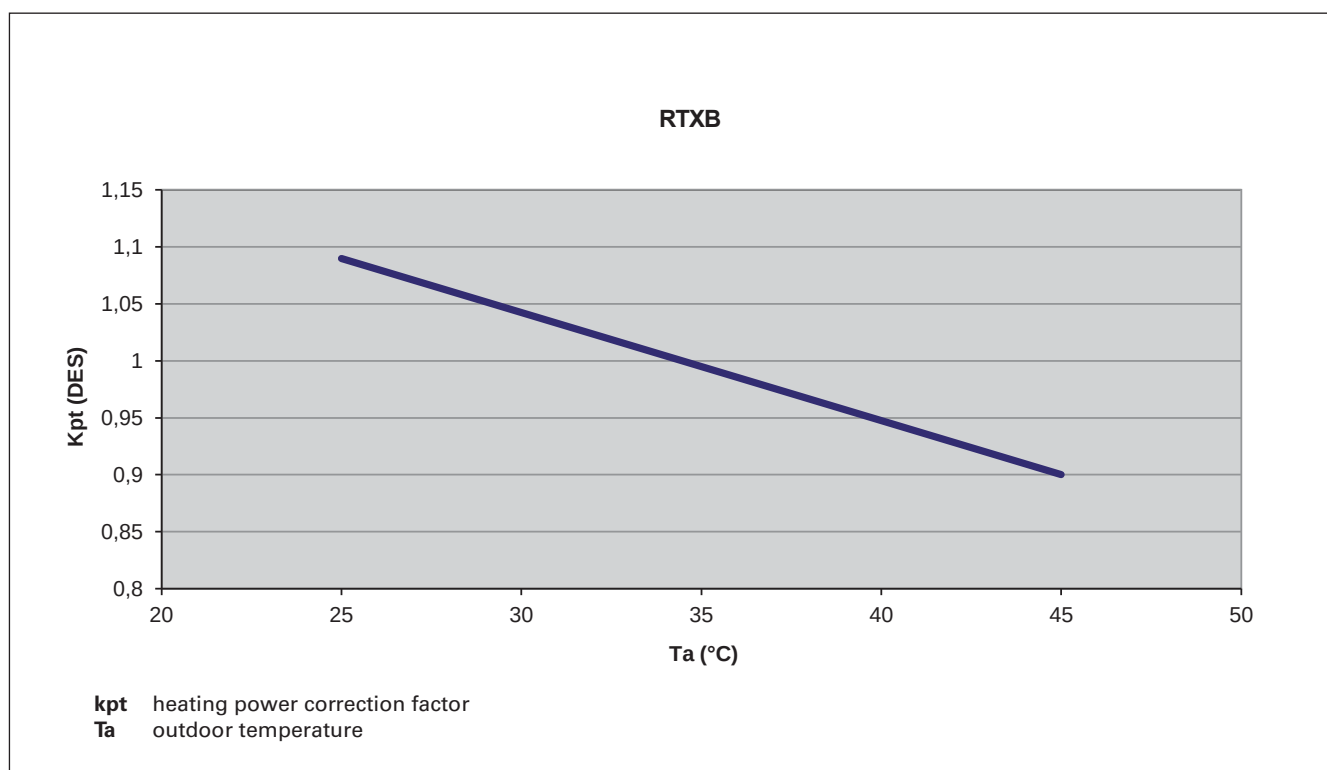
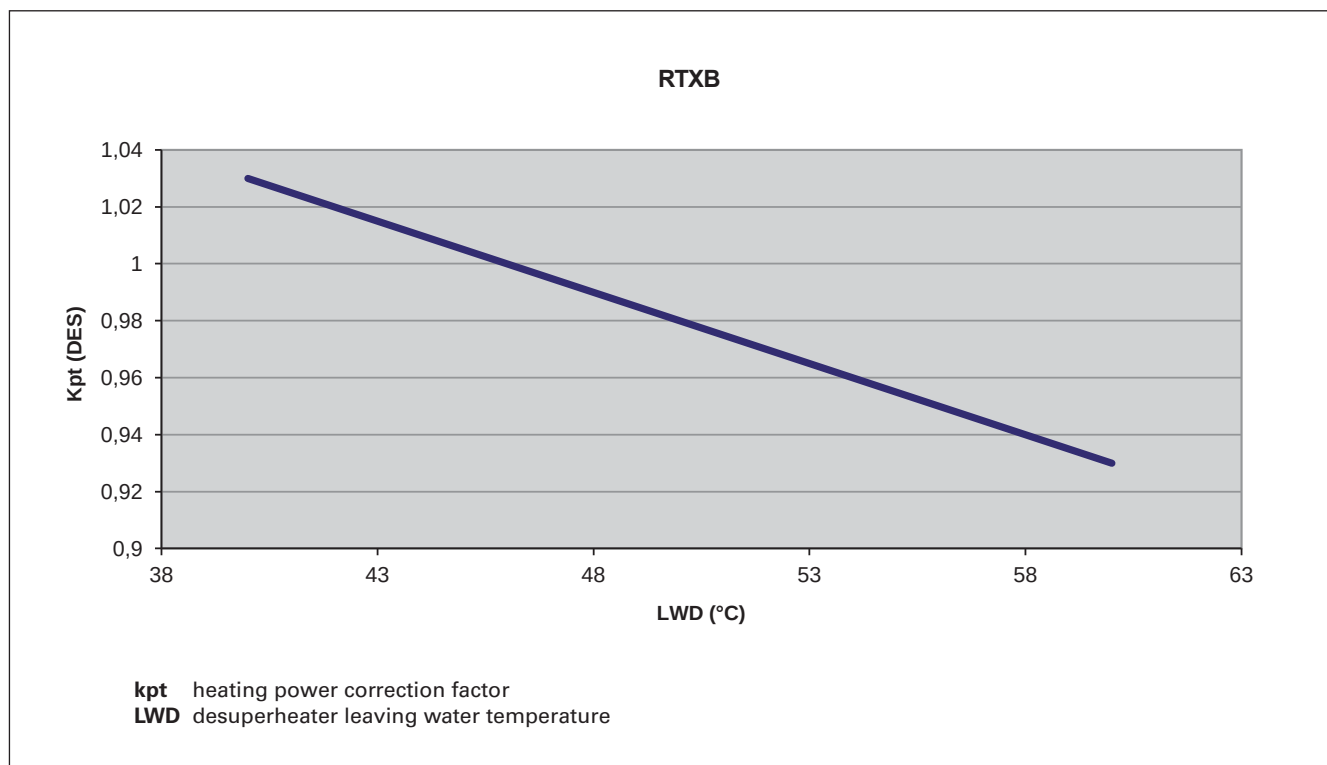


HEATING OPERATING MODE (S VERSIONS)



1 In this area the fans modulate in order to control the evaporating temperature. The performances may be different from the declared ones.

Power correction factors



Scaling correction schedules

Ethylene glycol correction schedule

% Ethylene glycol weight		5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %
Freezing temperature	°C	-2	-3.9	-6.5	-8.9	-11.8	-15.6	-19	-23.4
Suggested security limit	°C	3	1	-1	-4	-6	-10	-14	-19
Cooling capacity coefficient	-	0.995	0.99	0.985	0.981	0.977	0.974	0.971	0.968
Power input coefficient	-	0.997	0.993	0.99	0.988	0.986	0.984	0.982	0.981
Flow rate coefficient	-	1.003	1.01	1.02	1.033	1.05	1.072	1.095	1.124
Pressur dropo coefficient	-	1.029	1.06	1.09	1.118	1.149	1.182	1.211	1.243

In order to calculate performance with glycoled solutions multiply main sizes by respective coefficients.

Glycol percentage depending on freezing temerature

% glycol according to the freezing temperature						
Freezing temperature	0°C	-5°C	-10°C	-15°C	-20°C	-25°C
% Ethilene glycol	5%	12%	20%	28%	35%	40%
Flow rate coefficient	1.02	1.033	1.05	1.072	1.095	1.124

In order to calculate performance with glycoled solutions multiply main sizes by respective coefficients.

Scaling correction table

Fouling Factor	Plant side cold heat exchanger			Plant side hot heat exchanger		
F.F. [m ² °C*W]	A1	B1	Tmin	A2	B2	Tmax
0	1	1	0	1	1	0
1.80E-05	1	1	0	1	1	0
4.40E-05	1	1	0	0.99	1.03	1
8.80E-05	0.96	0.99	0.7	0.98	1.04	1.5
1.32E-04	0.94	0.99	1	0.96	1.05	2.3
1.72E-04	0.93	0.98	1.5	0.95	1.06	3

A factor = Capacity correction factor

B factor = Compressor power input correction factor

Tmin = Minimum evaporator outlet water temperature increase

T max = Maximum condenser outlet water temperature decrease

Hydraulic data

Water flow and pressure drop

Table 1/2

Size	Acoustic version	Energetic Version	Cooling mode				Heating mode				Partial recovery		
			V	K	Q min	Q max	V	K	Q min	Q max	K	Q min	Q max
			[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]	[m ³ /h]
140			4.8	6.3	51.2	95.3	15.5	6.5	58.0	154.7	-	-	-
150			5.2	5.0	55.3	102.9	16.1	5.2	60.5	161.3	-	-	-
160			5.6	4.9	59.7	111.1	17.4	5.1	65.3	174.1	-	-	-
180			6.4	2.9	68.1	126.7	19.0	3.0	71.4	190.4	-	-	-
190			6.6	2.9	69.7	129.7	20.1	3.0	75.6	201.5	-	-	-
220			7.8	2.2	82.4	153.3	23.1	2.2	86.7	231.2	-	-	-
250			9.2	1.3	97.7	181.7	27.2	1.3	101.9	271.8	-	-	-
300			10.6	1.3	113.1	210.4	31.4	1.3	117.6	313.6	-	-	-
140	L		4.7	6.3	50.5	93.9	15.2	6.5	57.1	152.4	-	-	-
150	L		5.1	5.0	54.4	101.2	15.9	5.1	59.5	158.7	-	-	-
160	L		5.5	4.9	58.9	109.6	17.4	5.0	65.3	174.1	-	-	-
180	L		6.3	2.8	67.4	125.4	18.9	2.9	71.0	189.3	-	-	-
190	L		6.5	2.9	68.8	128.0	19.9	2.9	74.6	199.0	-	-	-
220	L		7.7	2.1	81.4	151.5	23.0	2.2	86.3	230.2	-	-	-
250	L		9.0	1.3	95.5	177.6	25.4	1.3	95.1	253.6	-	-	-
300	L		10.5	1.3	111.2	206.9	31.0	1.3	116.4	310.3	-	-	-
140	S		4.7	6.5	50.3	93.6	13.8	6.7	51.8	138.3	-	-	-
150	S		5.1	5.1	54.5	101.3	14.3	5.3	53.6	142.9	-	-	-
160	S		5.5	5.0	58.7	109.2	15.8	5.2	59.4	158.5	-	-	-
180	S		6.0	3.2	64.0	119.1	18.3	3.3	68.6	183.0	-	-	-
190	S		6.4	3.0	68.2	126.8	19.7	3.1	73.9	197.0	-	-	-
220	S		7.5	2.3	80.1	149.0	22.9	2.3	85.8	228.8	-	-	-
250	S		8.8	1.4	93.5	174.0	25.7	1.4	96.3	256.7	-	-	-
300	S		10.2	1.4	108.5	201.9	31.2	1.4	116.9	311.8	-	-	-
140		H	4.8	6.3	51.2	95.3	15.5	6.5	58.0	154.7	43.9	-	31.8
150		H	5.2	5.0	55.3	102.9	16.1	5.2	60.5	161.3	37.7	-	33.3
160		H	5.6	4.9	59.7	111.1	17.4	5.1	65.3	174.1	32.5	-	37.0
180		H	6.4	2.9	68.1	126.7	19.0	3.0	71.4	190.4	28.8	-	39.3
190		H	6.6	2.9	69.7	129.7	20.1	3.0	75.6	201.5	26.1	-	41.3
220		H	7.8	2.2	82.4	153.3	23.1	2.2	86.7	231.2	18.5	-	49.0
250		H	9.2	1.3	97.7	181.7	27.2	1.3	101.9	271.8	14.0	-	52.7
300		H	10.6	1.3	113.1	210.4	31.4	1.3	117.6	313.6	9.0	-	72.2
140	L	H	4.7	19.0	19.0	19.0	15.2	6.5	57.1	152.4	43.9	-	31.8
150	L	H	5.1	18.0	18.0	18.0	15.9	5.1	59.5	158.7	38.3	-	33.0
160	L	H	5.5	18.0	18.0	18.0	17.4	5.0	65.3	174.1	33.0	-	36.7
180	L	H	6.3	18.0	18.0	18.0	18.9	2.9	71.0	189.3	27.4	-	39.0
190	L	H	6.5	2.9	68.8	128.0	19.9	2.9	74.6	199.0	26.1	-	41.3
220	L	H	7.7	2.1	81.4	151.5	23.0	2.2	86.3	230.2	18.7	-	48.7
250	L	H	9.0	1.3	95.5	177.6	25.4	1.3	95.1	253.6	14.1	-	52.5
300	L	H	10.5	1.3	111.2	206.9	31.0	1.3	116.4	310.3	9.1	-	72.0
140	S	H	4.7	6.5	50.3	93.6	13.8	6.7	51.8	138.3	42.7	-	31.2
150	S	H	5.1	5.1	54.5	101.3	14.3	5.3	53.6	142.9	39.0	-	32.7
160	S	H	5.5	5.0	58.7	109.2	15.8	5.2	59.4	158.5	31.9	-	36.1
180	S	H	6.0	3.2	64.0	119.1	18.3	3.3	68.6	183.0	28.9	-	36.7
190	S	H	6.4	3.0	68.2	126.8	19.7	3.1	73.9	197.0	25.2	-	37.8
220	S	H	7.5	2.3	80.1	149.0	22.9	2.3	85.8	228.8	18.4	-	47.6
250	S	H	8.8	1.4	93.5	174.0	25.7	1.4	96.3	256.7	14.8	-	51.3
300	S	H	10.2	1.4	108.5	201.9	31.2	1.4	116.9	311.8	9.8	-	67.4

V: recommended water content of the plant with dT 5°C on the heat exchanger

Q min: minimum water flow to the heat exchanger

Q max: maximum water flow to the heat exchanger

dpw = $K \cdot Q^2 / 1000$

$Q = 0.86 P / \Delta T$

P: Heating or cooling capacity [kW]

Δt: ΔT at the heat exchanger (min = 3, max = 8) [°C]

Δt: ΔT at the desuperheater = 4°C

dpw: Pressure drop [kPa]

Hydraulic data

The units of the RTXB range are also available in multiple hydraulic versions, characterized by complete kits of all major hydraulic components for an easier installation, with reduced time, cost and space.

The wide range of hydraulic versions available makes the unit suitable for any type of installations.

HYDRAULIC VERSIONS

1/2/3: Single pump and expansion vessel

4/5/6: Dual pump and expansion vessel

PUMPS KIT

Normalized and Monoblock centrifugal electropumps conforming to EN 733 (EX DIN 24255).

Hydraulic part with single centrifugal impeller, casing with flanges, axial suction and radial discharge.

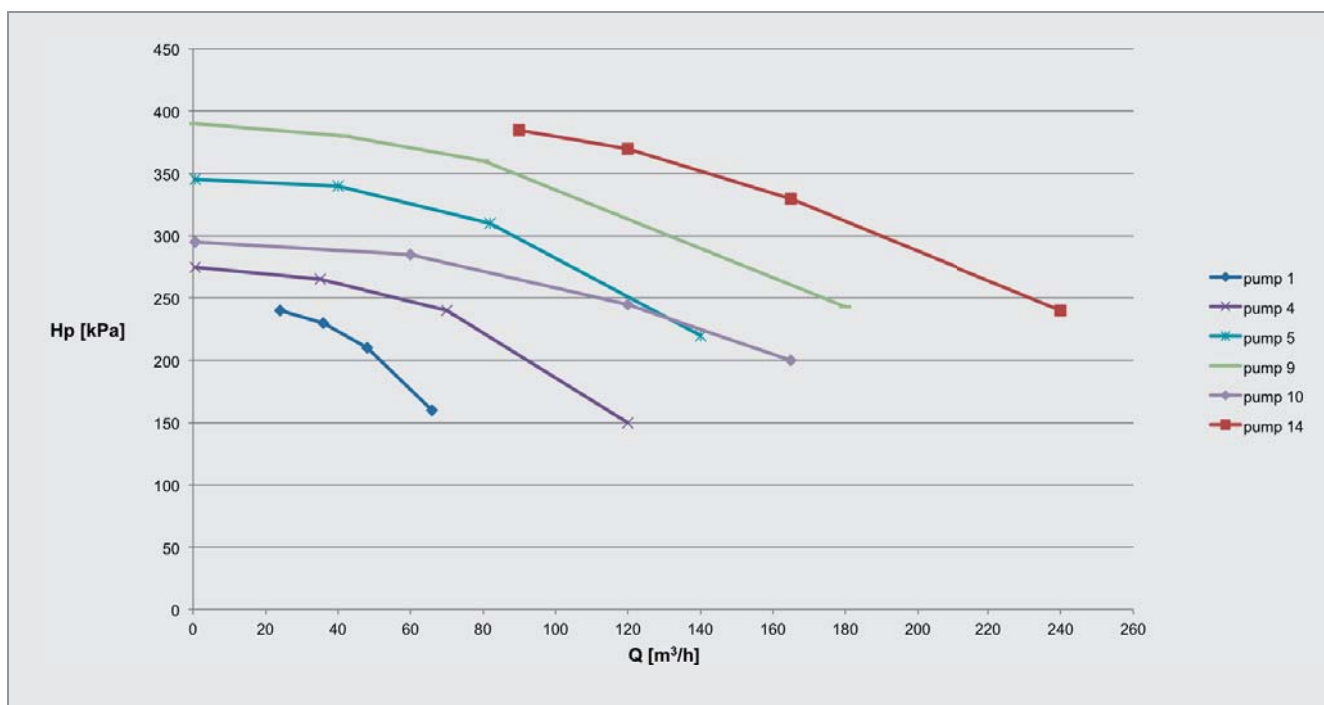
Motor coupled to the pump by rigid coupling, insulating category F, protection index IP55.

HYDRONIC ACCESORIES ON REQUEST

- Water pumps automatic changeover for 2-pump hydraulic kits, which also includes the secondary pump pressure switch.
- "Y" water strainer (sold separately), consists of body and stainless steel mesh, with replaceable filter trough the inspection cap.
- Automatic water filling (sold separately).

Hydraulic data

LOW HEAD PRESSURE PUMP (150 kPa)



Size	Pf [kW]	qw [m³/h]	dpw [kPa]	Ref. curve	Expansion vessel [l]	F.L.I. [kW]	F.L.A. [A]	Hp [kPa]	Hu [kPa]
140	476.3	81.7	42.3	pump 4	2 x 24	7.5	14.6	226	183.7
150	514.7	88.3	39.3	pump 5	2 x 24	11	20.8	303	263.7
160	555.4	95.3	44.8	pump 5	2 x 24	11	20.8	295	250.2
180	633.7	108.7	34.0	pump 10	2 x 24	15	32	254	220.0
190	648.6	111.3	35.8	pump 10	2 x 24	15	32	252	216.2
220	766.6	131.5	37.4	pump 10	2 x 24	15	32	235	197.6
250	908.7	155.9	30.8	pump 9	2 x 24	15	32	281	250.2
300	1051.9	180.5	42.4	pump 14	2 x 24	22	44.5	313	270.6

Pf Cooling capacity (kW)

qw Water flow (m³/h)

dpw Pressure drop (kPa)

F.L.I. Full load electrical power

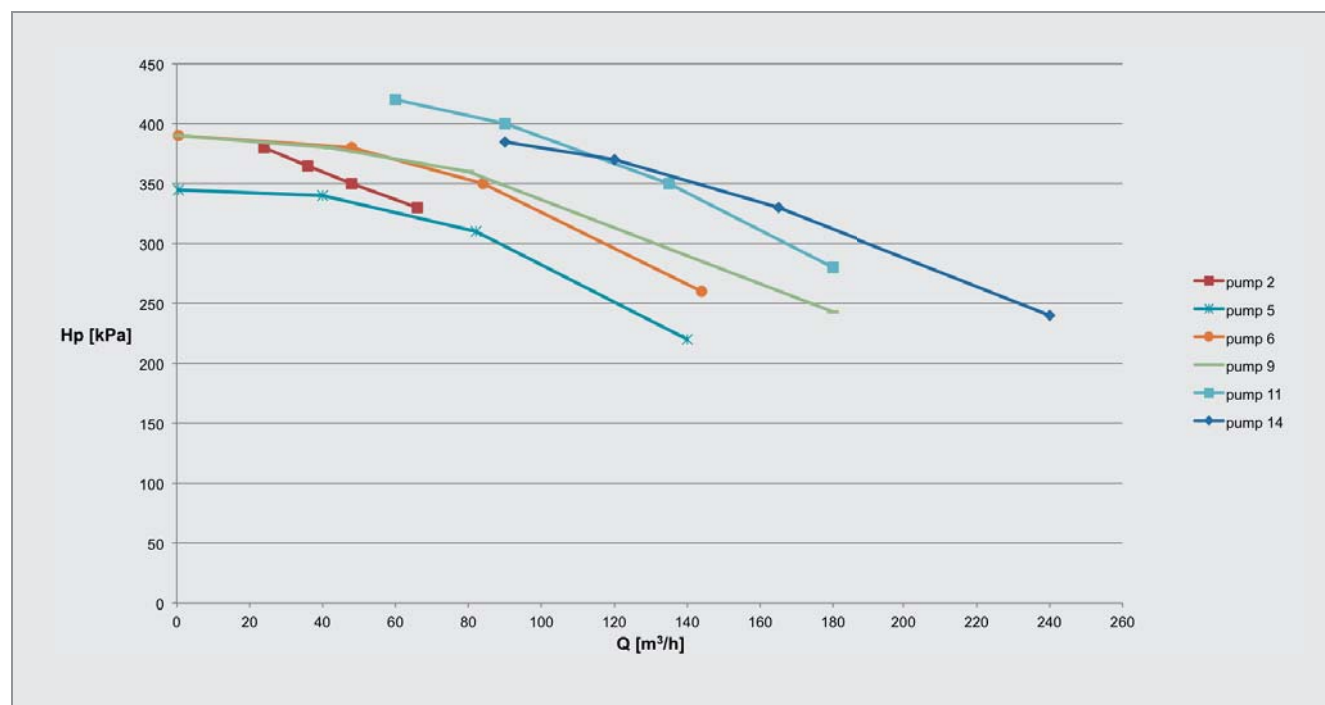
F.L.A. Full load operating current

Hp Pump head pressure

Hu Available pressure

Hydraulic data

MEDIUM HEAD PRESSURE PUMP (250 kPa)



Size	Pf	qw	dpw	Ref. curve	Expansion vessel	F.L.I.	F.L.A.	Hp	Hu
	[kW]	[m³/h]	[kPa]		[l]	[kW]	[A]	[kPa]	[kPa]
140	476.3	81.7	42.3	pump 6	2 x 24	15	27	352	309.7
150	514.7	88.3	39.3	pump 9	2 x 24	15	32	352	312.7
160	555.4	95.3	44.8	pump 9	2 x 24	15	32	300	255.2
180	633.7	108.7	34.0	pump 11	2 x 24	18.5	38	382	348.0
190	648.6	111.3	35.8	pump 11	2 x 24	18.5	38	379	343.2
220	766.6	131.5	37.4	pump 11	2 x 24	18.5	38	355	317.6
250	908.7	155.9	30.8	pump 11	2 x 24	18.5	38	320	289.2
300	1051.9	180.5	42.4	pump 14	2 x 24	22	44.5	313	270.6

Pf Cooling capacity (kW)

qw Water flow (m³/h)

dpw Pressure drop (kPa)

F.L.I. Full load electrical power

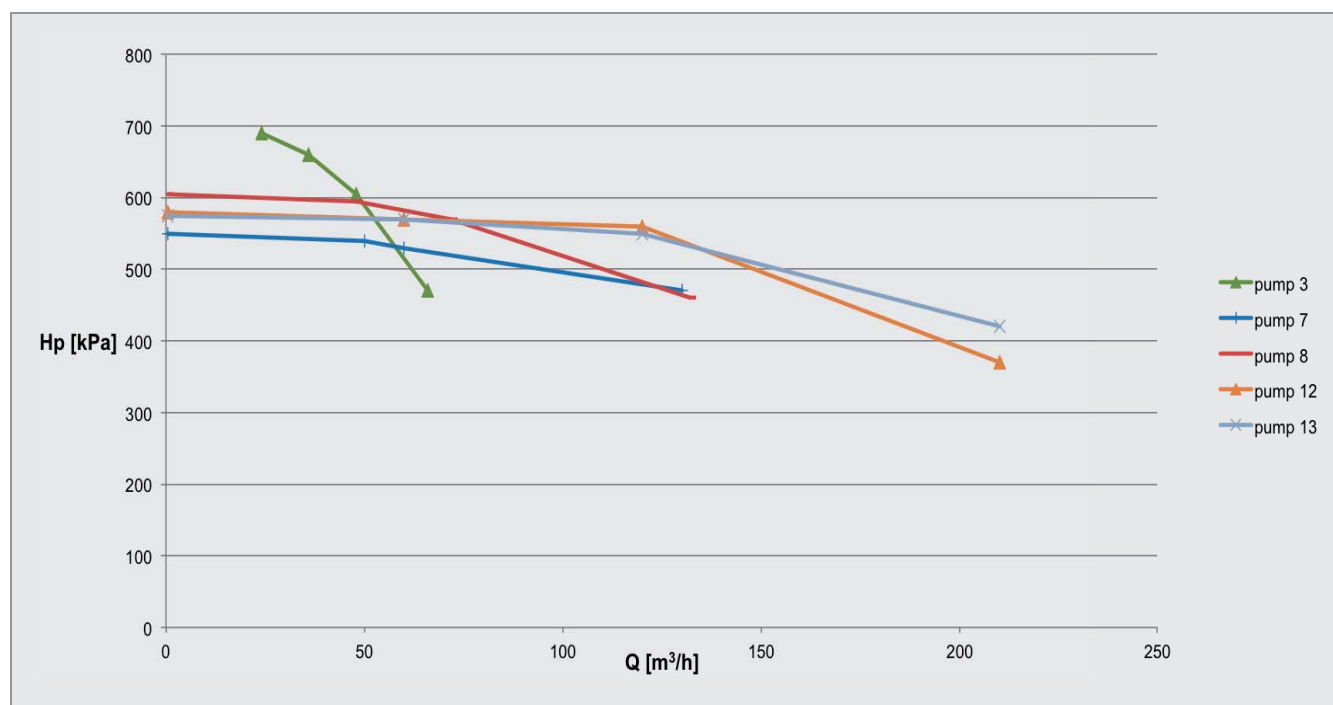
F.L.A. Full load operating current

Hp Pump head pressure

Hu Available pressure

Hydraulic data

HIGH HEAD PRESSURE PUMP (450 kPa)



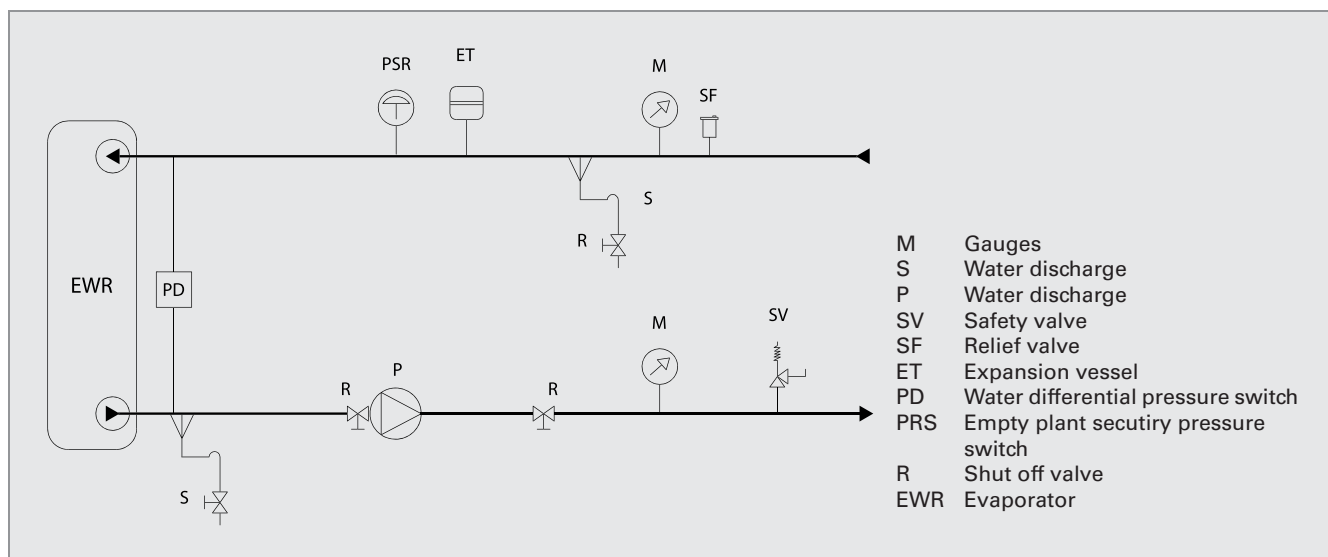
Size	Pf	qw	dpw	Ref. curve	Expansion vessel	F.L.I.	F.L.A.	Hp	Hu
	[kW]	[m³/h]	[kPa]		[l]	[kW]	[A]	[kPa]	[kPa]
140	476.3	81.7	42.3	pump 8	2 x 24	22	43	557	515
150	514.7	88.3	39.3	pump 8	2 x 24	22	43	546	507
160	555.4	95.3	44.8	pump 12	2 x 24	30	58	569	524
180	633.7	108.7	34.0	pump 12	2 x 24	30	58	566	532
190	648.6	111.3	35.8	pump 13	2 x 24	37	71	555	519
220	766.6	131.5	37.4	pump 13	2 x 24	37	71	542	505
250	908.7	155.9	30.8	pump 13	2 x 24	37	71	517	486
300	1051.9	180.5	42.4	pump 13	2 x 24	37	71	481	439

Pf Cooling capacity (kW)
qw Water flow (m³/h)
dpw Pressure drop (kPa)

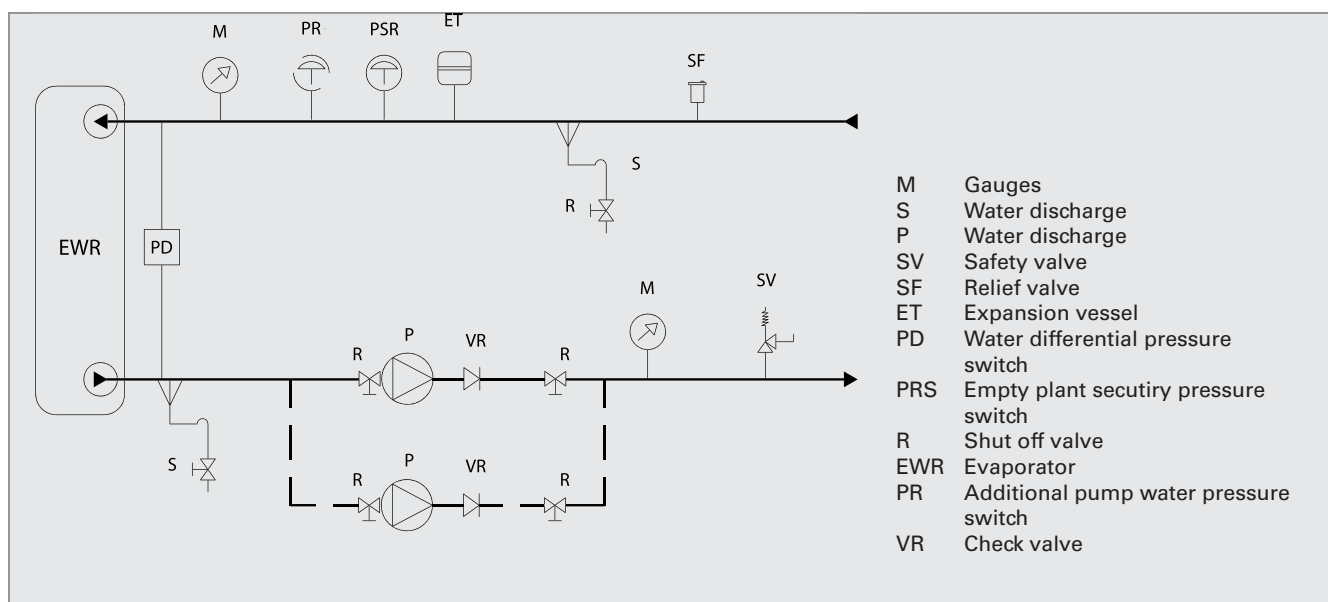
F.L.I. Full load electrical power
F.L.A. Full load operating current
Hp Pump head pressure
Hu Available pressure

Hydraulic data

Hydronic kit with 1 pump - 1-2-3 versions



Hydronic kit with 2 pumps - 4-5-6 versions



Electrical data

RTXB

Size	NOMINAL VALUES Outdoor air temperature 35°C, evaporator water temperature in/out 12/7°C								MAXIMUM VALUES (1)		
	Compressors (2)			Fan motors		TOTAL			TOTAL		
	F.L.I.	F.L.A.	L.R.A.	E.P.	O.C.	F.L.I.	F.L.A.	S.A.	F.L.I.	F.L.A.	S.A.
	kW	A	A	kW	A	kW	A	A	kW	A	A
140	154.6	270.6	488.0	18.0	36.0	172.6	306.6	524.0	203.7	361.0	669.0
150	169.8	297.2	530.0	18.0	36.0	187.8	333.2	566.0	234.0	414.0	746.0
160	177.6	310.8	530.0	21.0	42.0	198.6	352.8	572.0	237.0	420.0	752.0
180	193.3	338.2	530.0	24.0	48.0	217.3	386.2	578.0	250.3	444.0	776.0
190	199.1	348.4	587.0	24.0	48.0	223.1	396.4	635.0	277.1	491.0	833.0
220	236.7	414.2	587.0	27.0	54.0	263.7	468.2	641.0	328.7	582.0	886.0
250	282.6	494.5	465.0	30.0	60.0	312.6	554.5	525.0	371.7	658.0	808.0
300	345.7	605.0	586.0	33.0	66.0	378.7	671.0	652.0	439.9	778.0	1008.0

RTXB L

Size	NOMINAL VALUES Outdoor air temperature 35°C, evaporator water temperature in/out 12/7°C								MAXIMUM VALUES (1)		
	Compressors (2)			Fan motors		TOTAL			TOTAL		
	F.L.I.	F.L.A.	L.R.A.	E.P.	O.C.	F.L.I.	F.L.A.	S.A.	F.L.I.	F.L.A.	S.A.
	kW	A	A	kW	A	kW	A	A	kW	A	A
140	163.1	285.3	488.0	13.5	27.0	176.6	312.3	515.0	203.7	361.0	669.0
150	178.2	311.8	530.0	13.5	27.0	191.7	338.8	557.0	234.0	414.0	746.0
160	186.2	325.8	530.0	15.8	31.5	201.9	357.3	561.5	237.0	420.0	752.0
180	201.2	352.1	530.0	18.0	36.0	219.2	388.1	566.0	250.3	444.0	776.0
190	210.0	367.5	587.0	18.0	36.0	228.0	403.5	623.0	277.1	491.0	833.0
220	248.8	435.3	587.0	20.3	40.5	269.0	475.8	627.5	328.7	582.0	886.0
250	289.9	507.3	465.0	22.5	45.0	312.4	552.3	510.0	371.7	658.0	808.0
300	360.3	630.5	586.0	24.8	49.5	385.0	680.0	635.5	439.9	778.0	1008.0

Electrical data

RTXB S

Size	NOMINAL VALUES								MAXIMUM VALUES (1)		
	Outdoor air temperature 35°C, evaporator water temperature in/out 12/7°C										
	Compressors (2)			Fan motors		TOTAL			TOTAL		
	F.L.I.	F.L.A.	L.R.A.	E.P.	O.C.	F.L.I.	F.L.A.	S.A.	F.L.I.	F.L.A.	S.A.
	kW	A	A	kW	A	kW	A	A	kW	A	A
140	164.7	288.3	488.0	12.6	25.2	177.3	313.5	513.2	203.7	361.0	669.0
150	177.3	310.3	530.0	12.6	25.2	189.9	335.5	555.2	234.0	414.0	746.0
160	187.9	328.9	530.0	14.7	29.4	202.6	358.3	559.4	237.0	420.0	752.0
180	194.7	340.8	530.0	16.8	33.6	211.5	374.4	563.6	250.3	444.0	776.0
190	209.1	365.9	587.0	16.8	33.6	225.9	399.5	620.6	277.1	491.0	833.0
220	246.8	431.8	587.0	18.9	37.8	265.7	469.6	624.8	328.7	582.0	886.0
250	280.0	490.0	465.0	21.0	42.0	301.0	532.0	507.0	371.7	658.0	808.0
300	348.1	609.1	586.0	25.2	50.4	373.3	659.5	636.4	442.9	784.0	1014.0

Electrical data referred to 400V - 3PH+N-50Hz

Maximum operating admitted conditions: 10%.

Maximum phase unbalance: 3%.

FLI Full load power input at the conditions of the selection.

FLA Full load current at the conditions of the selection.

SA Inrush current (sum of LRA of the biggest compressor, current of the other compressors, total current of the fans).

LRA Locked rotor amperes for the biggest compressor.

FLI_{max} Full load power input at the worst conditions for compressors and fans (at the limit of the unit envelope).

FLA_{max} Full load current at the worst conditions for compressors and fans (at the limit of the unit envelope).

Samax Inrush current (sum of LRA of the biggest compressor, current of the other compressors calculated at the worst conditions, total current of the fans).

(1) maximum operating admitted conditions by the compressors manufacturer.

(2) data referred to biggest compressor for units with different compressors.

Acoustic data

RTXB

Size	Octave bands (Hz)								Lw dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound pressure level (dB(A))								
140	69.9	65.9	61.3	57.1	54.7	69.9	52.4	41.4	93.1
150	71.0	67.0	62.4	58.2	55.8	71.0	53.5	42.5	94.2
160	71.1	67.1	62.5	58.3	55.9	71.1	53.6	42.6	94.4
180	71.2	67.2	62.6	58.4	56.0	71.2	53.7	42.7	94.6
190	71.4	67.4	62.8	58.6	56.2	71.4	53.9	42.9	94.8
220	71.5	67.5	62.9	58.7	56.3	71.5	54.0	43.0	95.0
250	71.6	67.6	63.0	58.8	56.4	71.6	54.1	43.1	95.2
300	72.2	68.2	63.6	59.4	57.0	72.2	54.7	43.7	95.9

RTXB L

Size	Octave bands (Hz)								Lw dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound pressure level (dB(A))								
140	67.9	63.9	59.3	55.1	52.7	67.9	50.4	39.4	91.1
150	69.0	65.0	60.4	56.2	53.8	69.0	51.5	40.5	92.2
160	69.1	65.1	60.5	56.3	53.9	69.1	51.6	40.6	92.4
180	69.2	65.2	60.6	56.4	54.0	69.2	51.7	40.7	92.6
190	69.4	65.4	60.8	56.6	54.2	69.4	51.9	40.9	92.8
220	69.5	65.5	60.9	56.7	54.3	69.5	52.0	41.0	93.0
250	69.6	65.6	61.0	56.8	54.4	69.6	52.1	41.1	93.2
300	70.2	66.2	61.6	57.4	55.0	70.2	52.7	41.7	93.9

Acoustic data

RTXB S

Size	Octave bands (Hz)								Lw dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound pressure level (dB(A))								
140	64.9	60.9	56.3	52.1	49.7	64.9	47.4	36.4	88.1
150	66.0	62.0	57.4	53.2	50.8	66.0	48.5	37.5	89.2
160	66.1	62.1	57.5	53.3	50.9	66.1	48.6	37.6	89.4
180	66.2	62.2	57.6	53.4	51.0	66.2	48.7	37.7	89.6
190	66.4	62.4	57.8	53.6	51.2	66.4	48.9	37.9	89.8
220	66.5	62.5	57.9	53.7	51.3	66.5	49.0	38.0	90.0
250	66.6	62.6	58.0	53.8	51.4	66.6	49.1	38.1	90.2
300	67.1	63.1	58.5	54.3	51.9	67.1	49.6	38.6	90.9

Operating conditions:

S: evaporator water temp. in/out 12°/7°C - outdoor temp. 35°C.

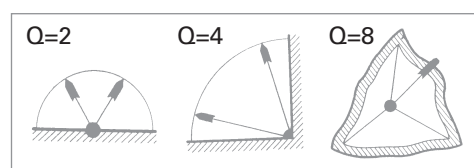
L: evaporator water temp. in/out 12°/7°C - outdoor temp. 35°C.

Testing point:

Average sound pressure levels calculated according to ISO 3744 at 10 mt distance from unit.

Measurement conditions:

Free field on reflecting surface (Q factor Q=2).



- For units installed in the presence of 2 reflecting surfaces (Q factor Q=4) 3 dB(A) have to be added at above mentioned values.
- For units installed in the presence of 3 reflecting surfaces (Q factor Q=8) 6 dB(A) have to be added at above mentioned values.
- For units installed at a certain height from the ground, the sound energy coming out from the bottom of the unit leads an increase of the noise pressure level of around 3 dB(A).

Sound emission values in octave bands are shown just as an indication and they are not to be considered as a commitment.

Sound pressure values, according to ISO 3744 standards and in observance of EUROVENT certification program, are the only ones to be used for every calculation to make a prevision of the sound pressure level at the operating conditions.

The sound pressure level data are not binding. For a more precise value please refer to the sound power level.

NOTE: Table data are referred to the unit without 1/2/3, 4/5/6 set up.

Acoustic data

Noise correction factors for hydraulic version

For the Hydraulic version please consider the noise output increase due to the addition of the hydraulic group.

RTXB

MODEL			140	150	160	180	190	220	250	300
Low head pressure	1 pump	dB(A)	0	1	1	2	2	1	1	1
	2 pumps	dB(A)	1	2	2	3	3	3	2	2
Medium head pressure	1 pump	dB(A)	2	2	2	1	1	1	1	1
	2 pumps	dB(A)	3	3	3	2	2	2	2	1
High head pressure	1 pump	dB(A)	1	1	2	2	2	1	1	1
	2 pumps	dB(A)	2	2	3	3	3	3	2	2

RTXB L

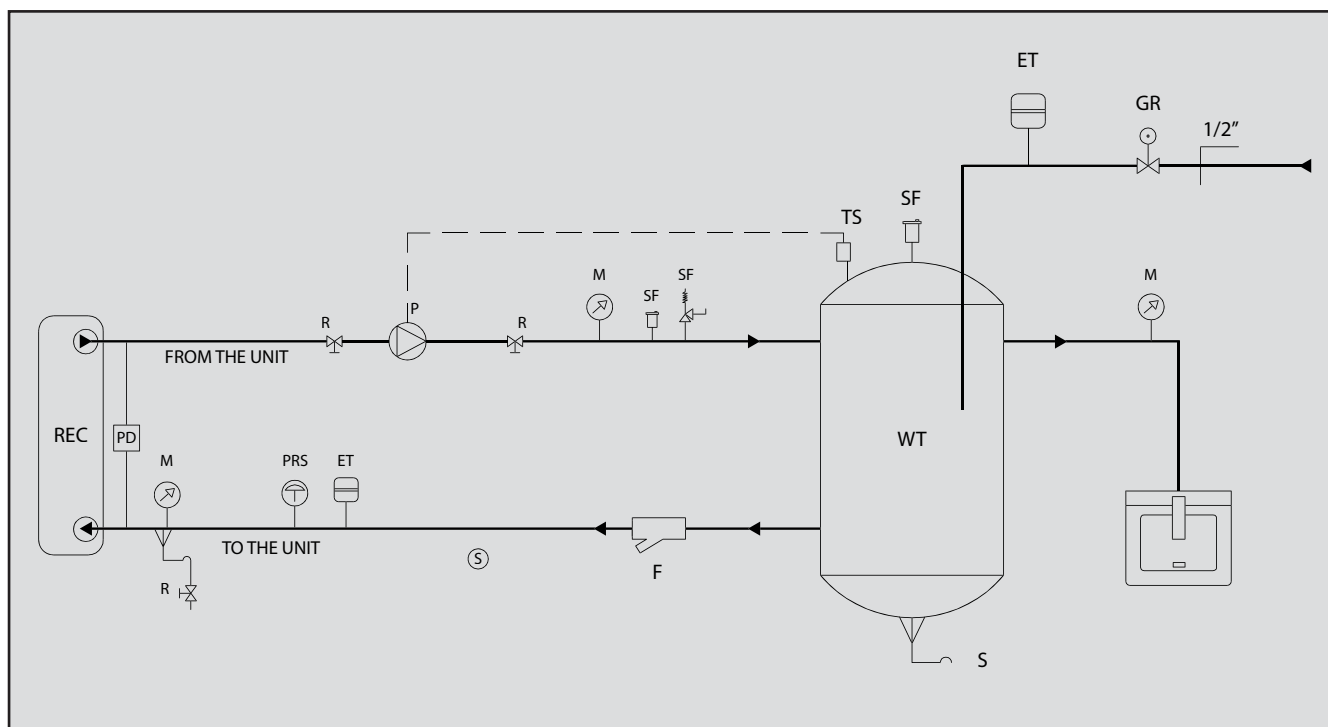
MODEL			140	150	160	180	190	220	250	300
Low head pressure	1 pump	dB(A)	1	1	1	2	2	2	2	2
	2 pumps	dB(A)	1	2	2	4	4	4	3	3
Medium head pressure	1 pump	dB(A)	3	2	2	2	2	1	1	1
	2 pumps	dB(A)	5	4	4	3	3	3	2	2
High head pressure	1 pump	dB(A)	2	2	2	2	2	2	2	2
	2 pumps	dB(A)	3	3	4	4	4	4	3	3

RTXB S

MODEL			140	150	160	180	190	220	250	300
Low head pressure	1 pump	dB(A)	1	2	2	4	4	4	3	3
	2 pumps	dB(A)	2	4	4	6	6	5	5	5
Medium head pressure	1 pump	dB(A)	5	4	4	3	3	3	2	2
	2 pumps	dB(A)	7	6	6	4	4	4	4	4
High head pressure	1 pump	dB(A)	3	3	4	4	4	4	3	3
	2 pumps	dB(A)	5	5	6	6	6	5	5	5

Installation sketch

Installation sketch partial recovery (customer care)



- M Gauges
- S Water discharge
- P Pump
- SV Safety valve
- SF Relief valve
- ET Expansion vessel
- PD Water differential pressure switch
- PRS Empty plant security pressure switch
- R Shut-off valve
- REC Total or partial recovery
- PR Additional pump water pressure switch
- VR Check valve
- WT Water tank
- GR Automatic water filling
- TS Thermostat for pump

NOTES:

The installation of pump thermostat and control has to be provided by the customer.

Technical drawings of the EVO 1000 desuperheater unit, showing side, front, and top views with dimensions and a legend.

Legend:

- ① USCITA ACQUA EVAPORATORE
EVAPORATOR WATER OUTLET
- ② ENTRATA ACQUA EVAPORATORE
EVAPORATOR WATER INLET
- ③ ALIMENTAZIONE ELETTRICA
ELECTRIC POWER SUPPLY
- ④ FORI DI SOLLEVAMENTO
LIFTING HOLES
- ⑤ PUNTI DI CARICO
LOADING POINTS
- ⑥ INGRESSO ACQUA DESURRISCALDATORE
DESUPERHEATER WATER INLET
- ⑦ USCITA ACQUA DESURRISCALDATORE
DESUPERHEATER WATER OUTLET

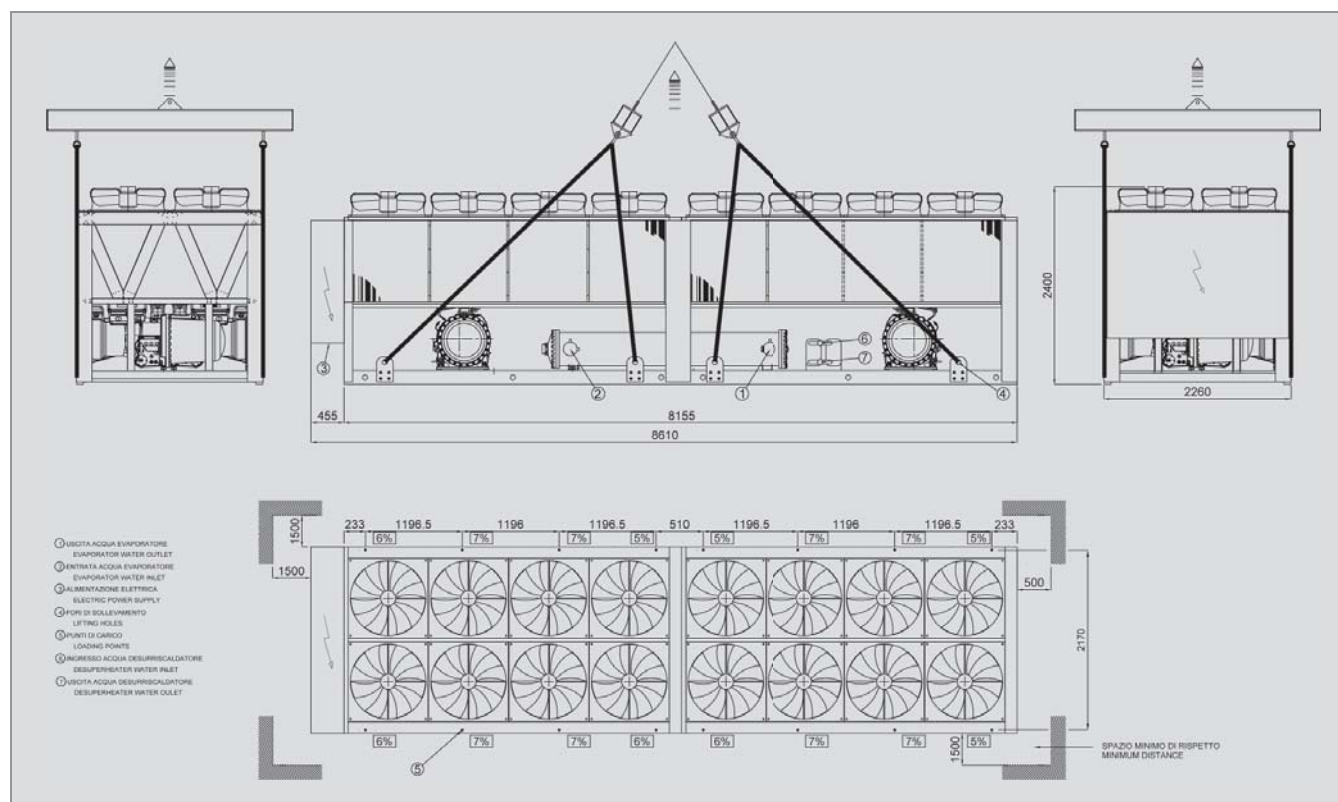
Dimensions:

- Overall width: 6475
- Overall height: 2400
- Front panel width: 2260
- Front panel height: 2170
- Top panel width: 245
- Top panel height: 1500
- Bottom panel width: 1500
- Bottom panel height: 500
- Internal dimensions (top): 245, 1106, 1106, 1106, 1106, 1106, 245
- Internal dimensions (bottom): 8%, 7%, 9%, 9%, 7%, 7%

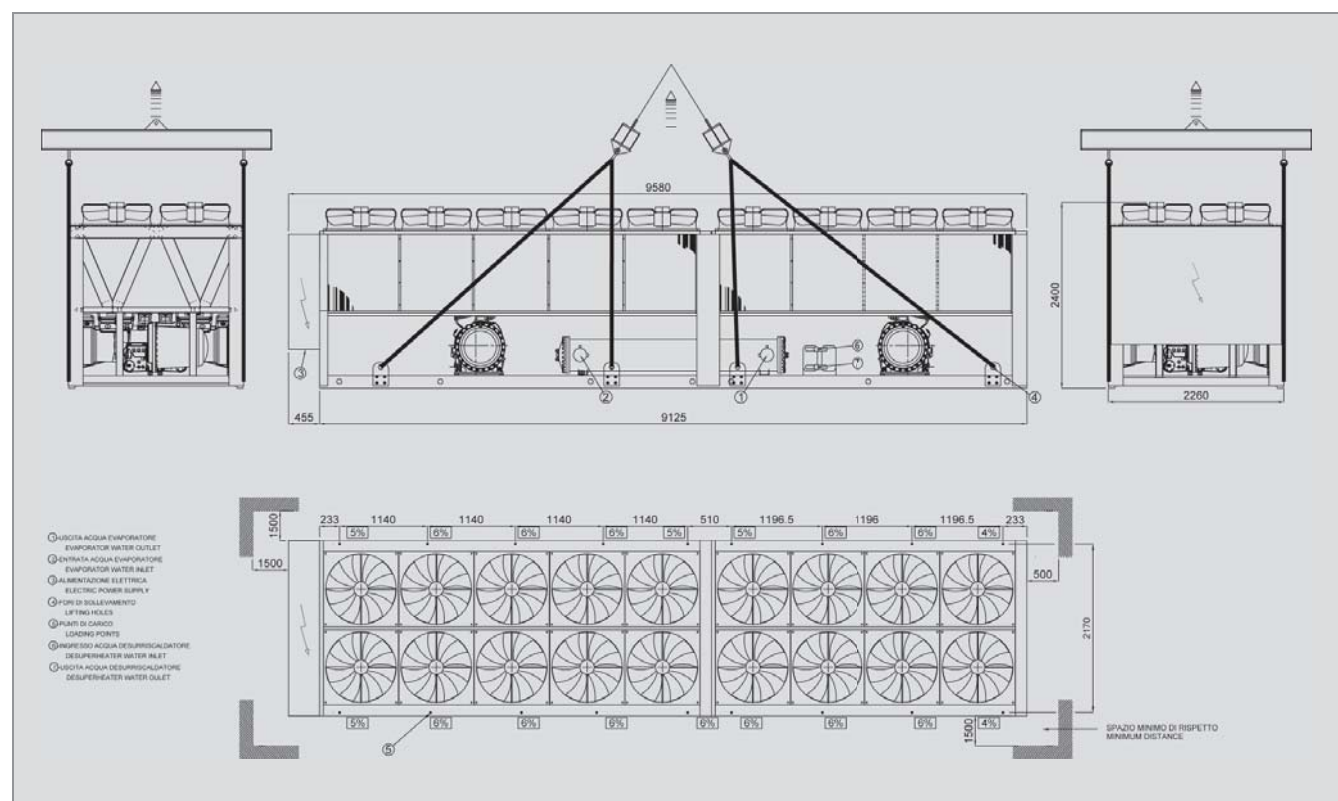
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Dimensional drawings and weights

Standard / L 180/190

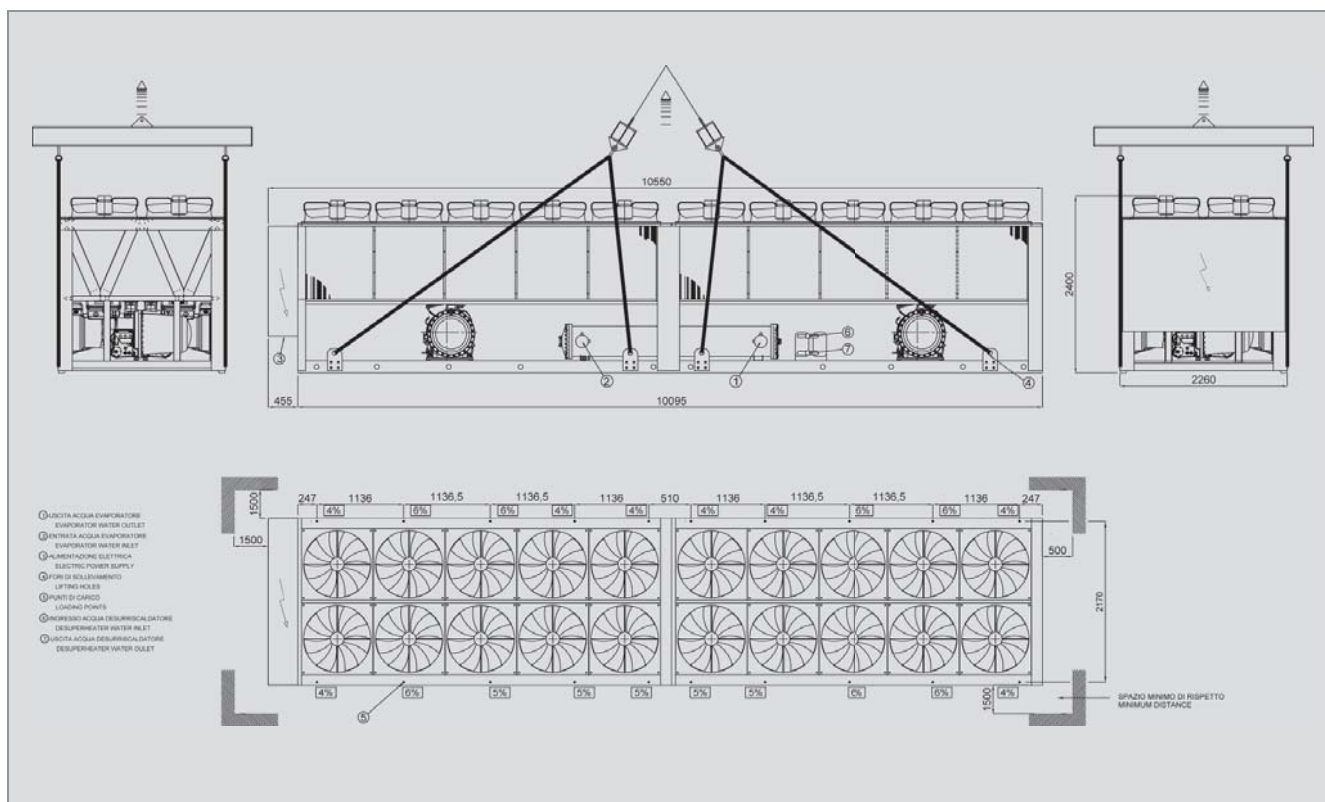


Standard / L 220

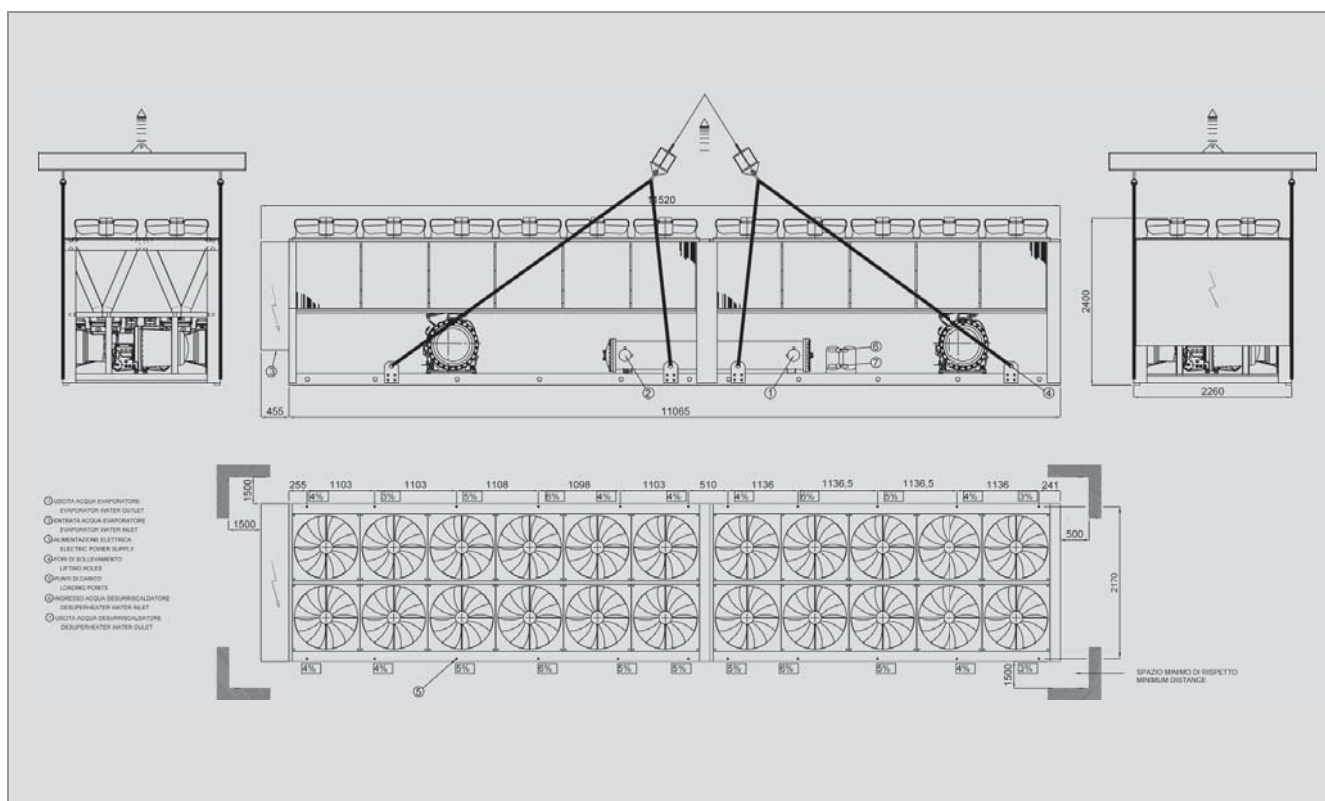


Dimensional drawings and weights

Standard / L 250

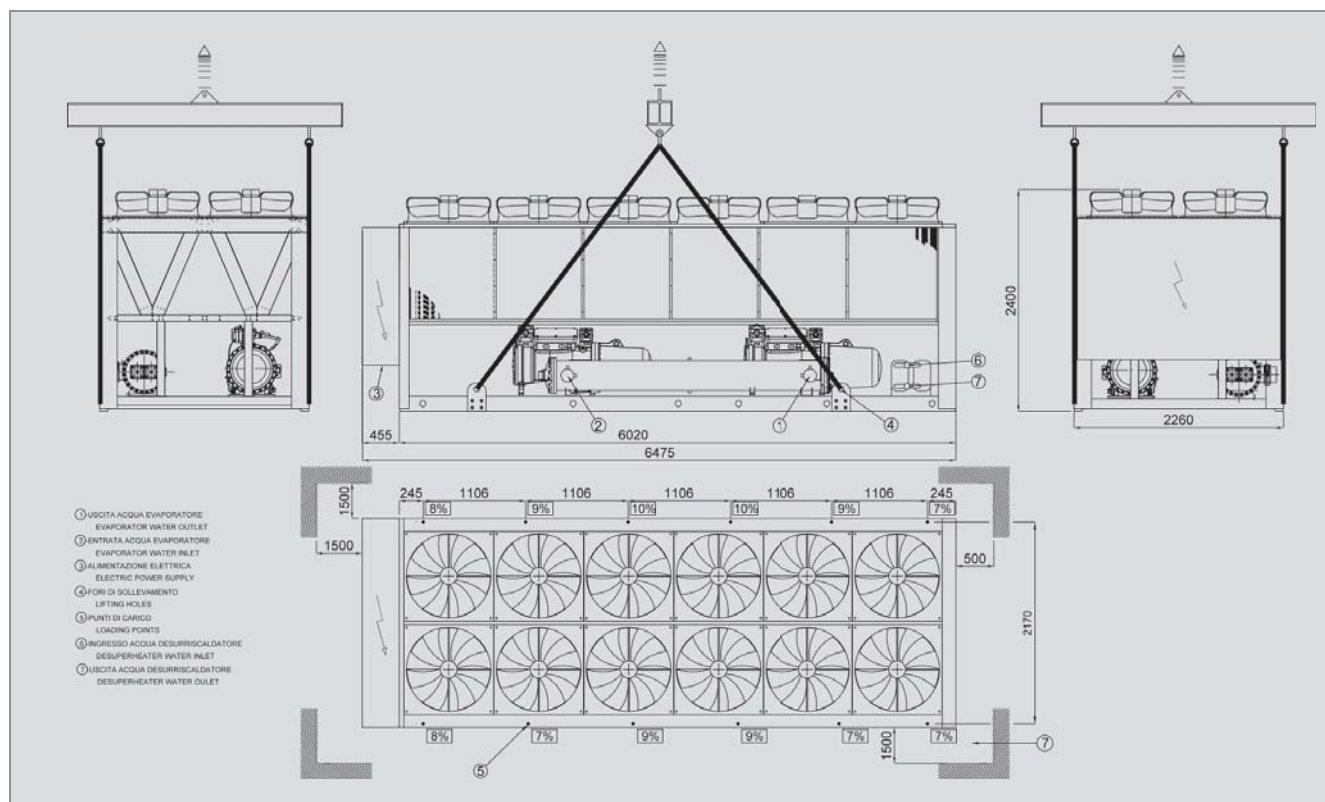


Standard / L 300

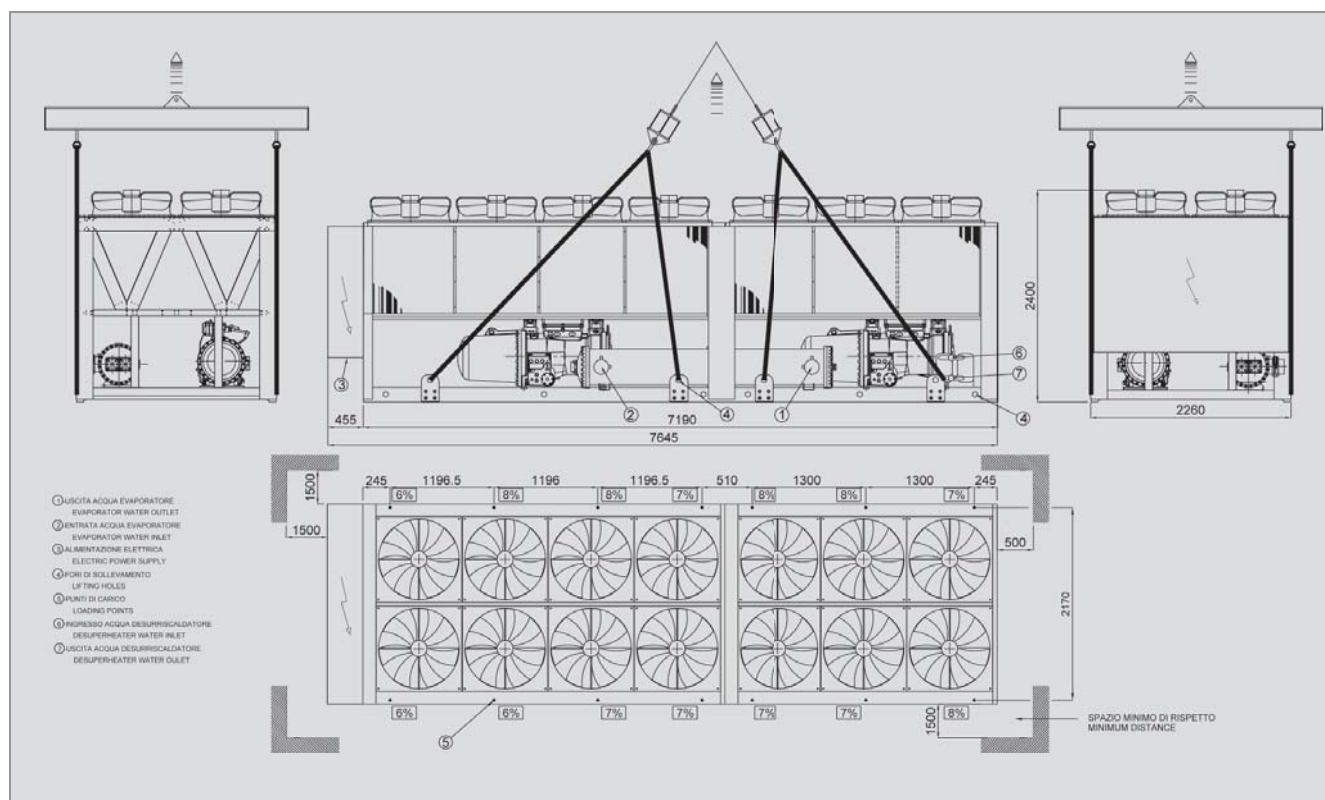


Dimensional drawings and weights

S 140/150

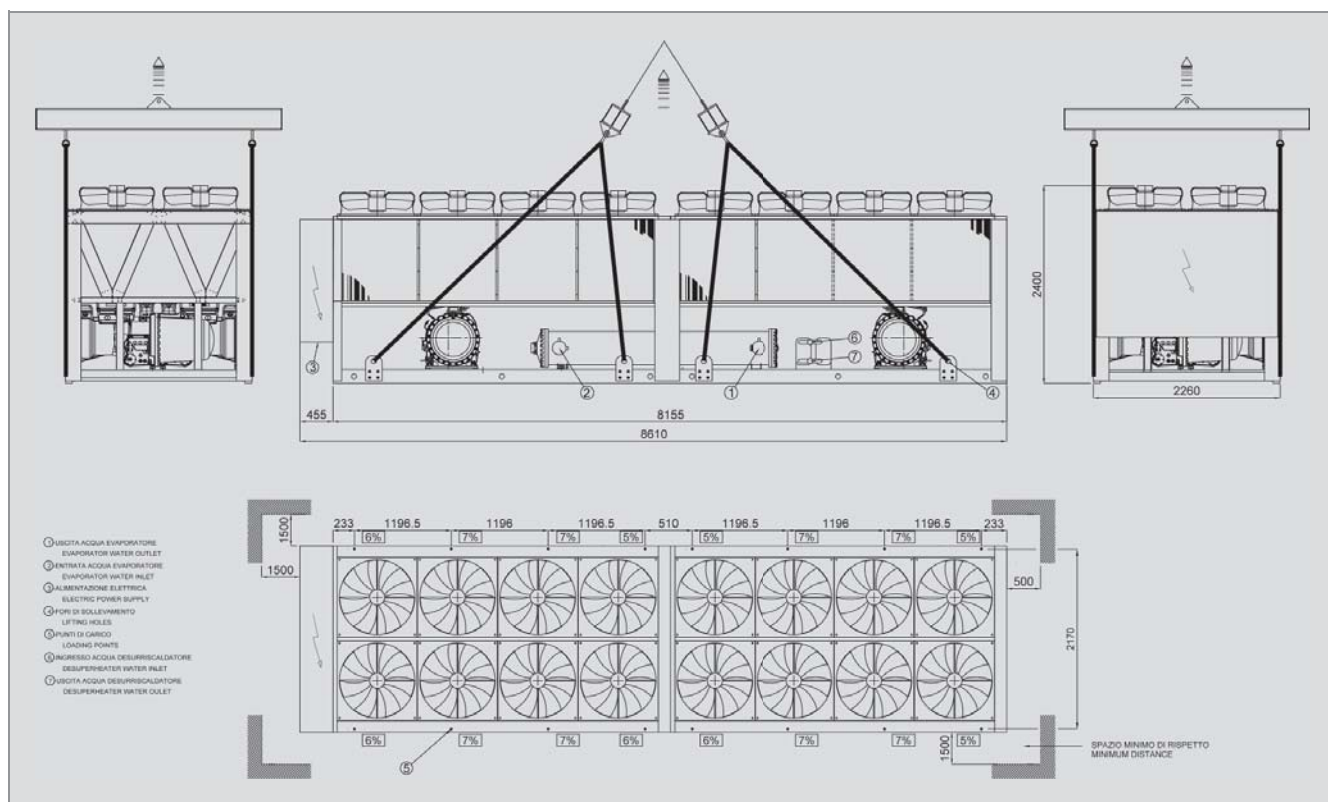


S 160

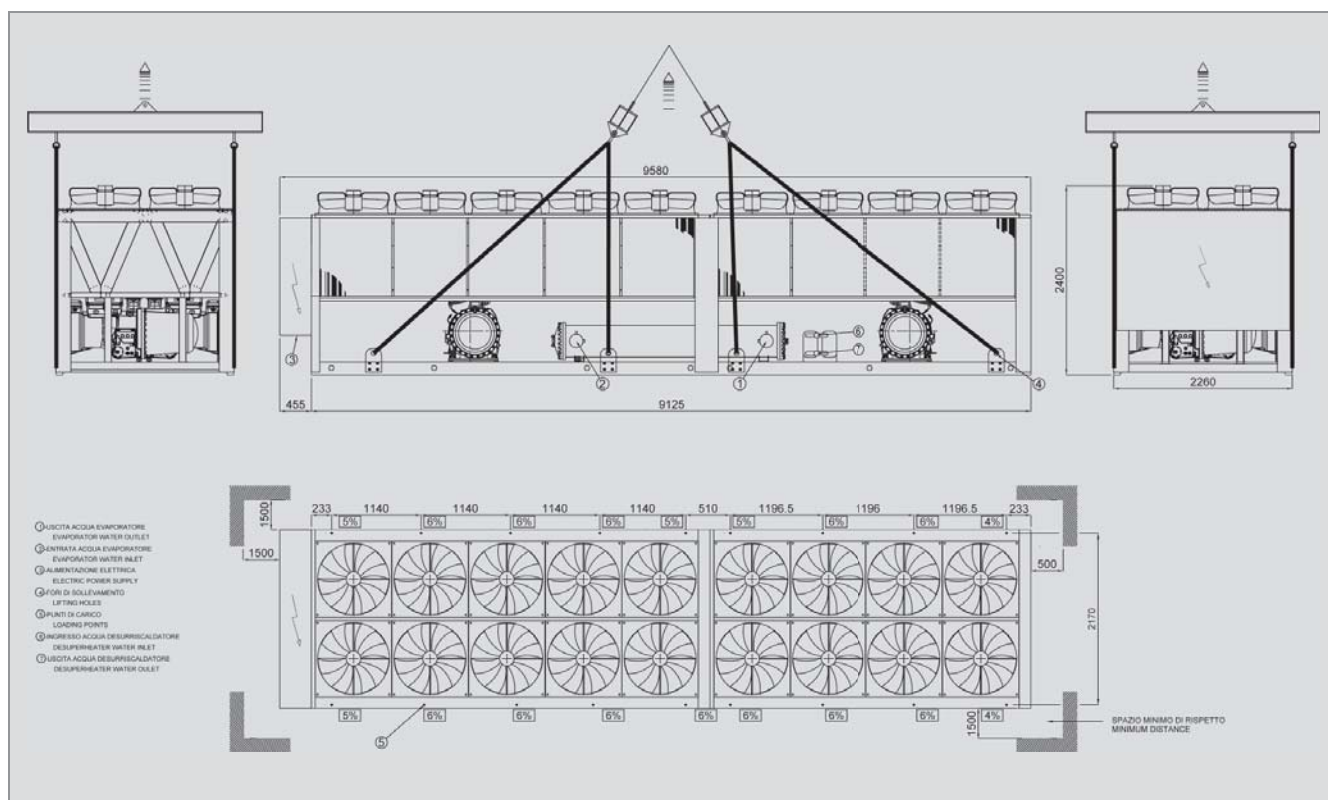


Dimensional drawings and weights

S 180/190

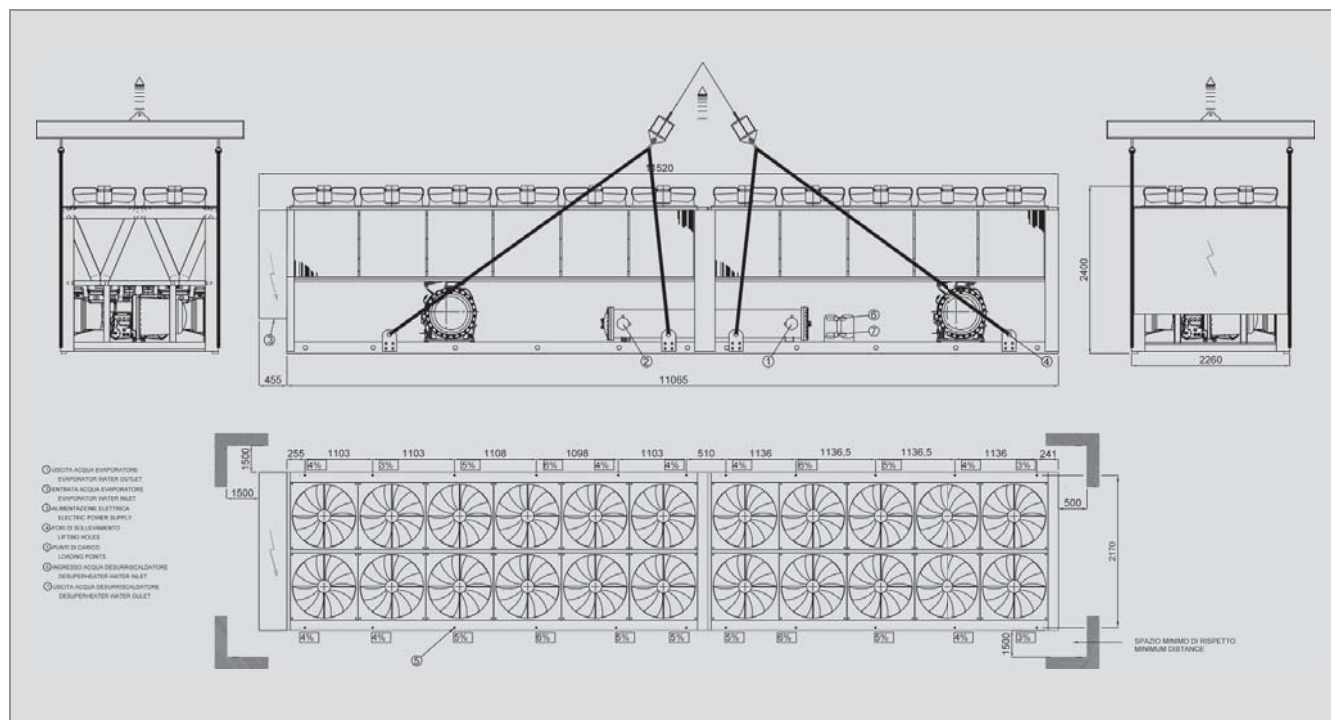


S 220

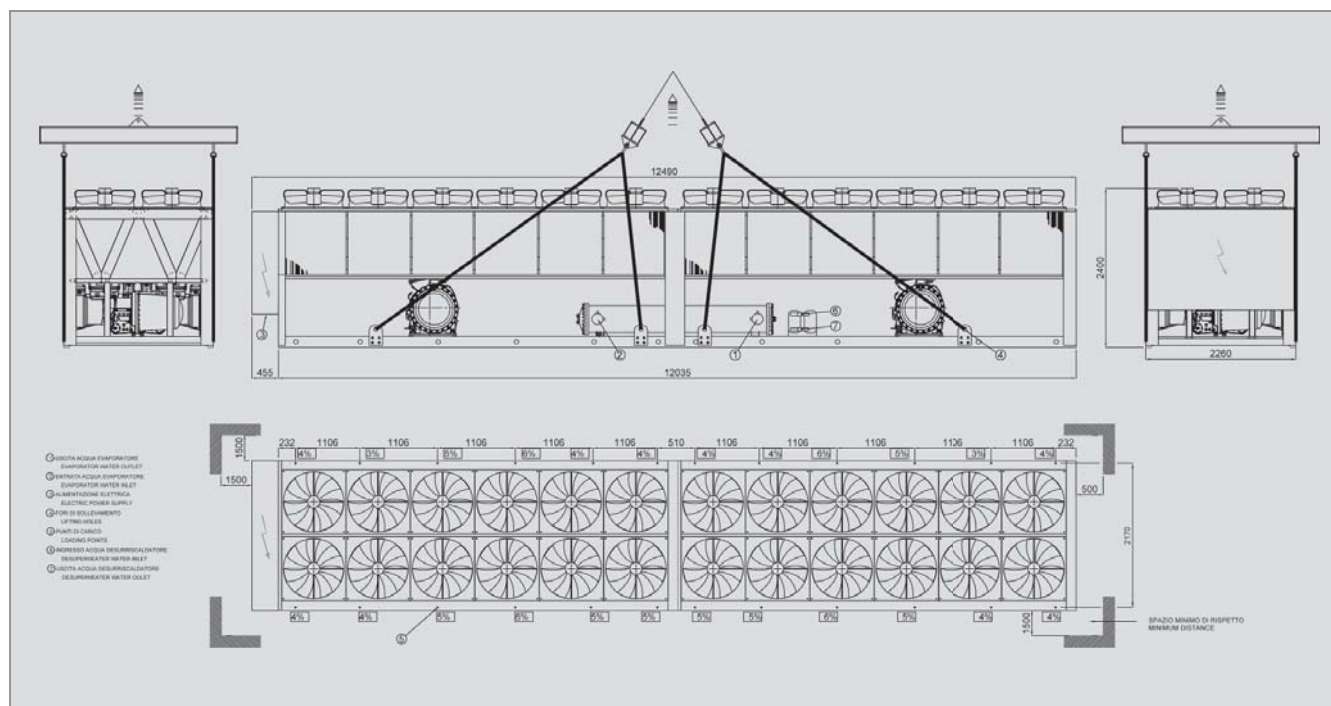


Dimensional drawings and weights

S 250

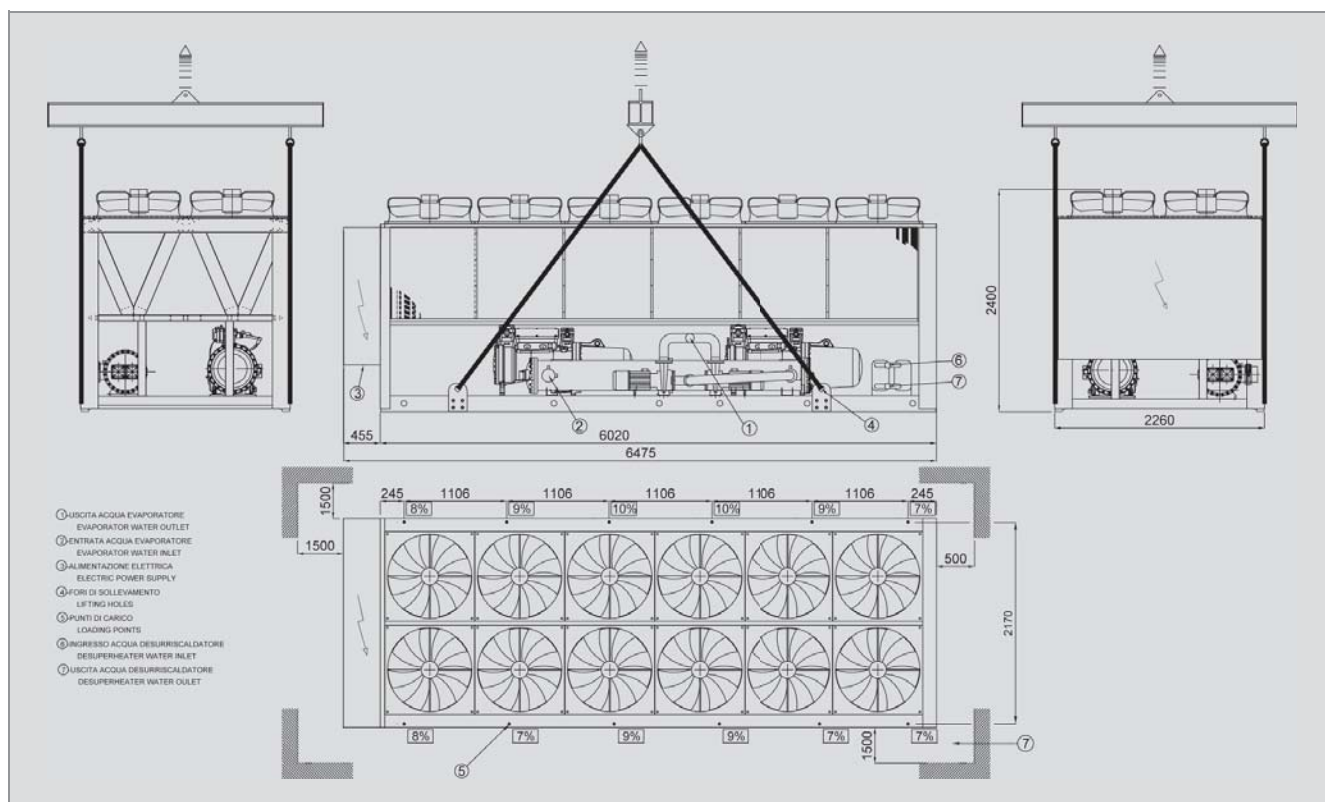


S 300

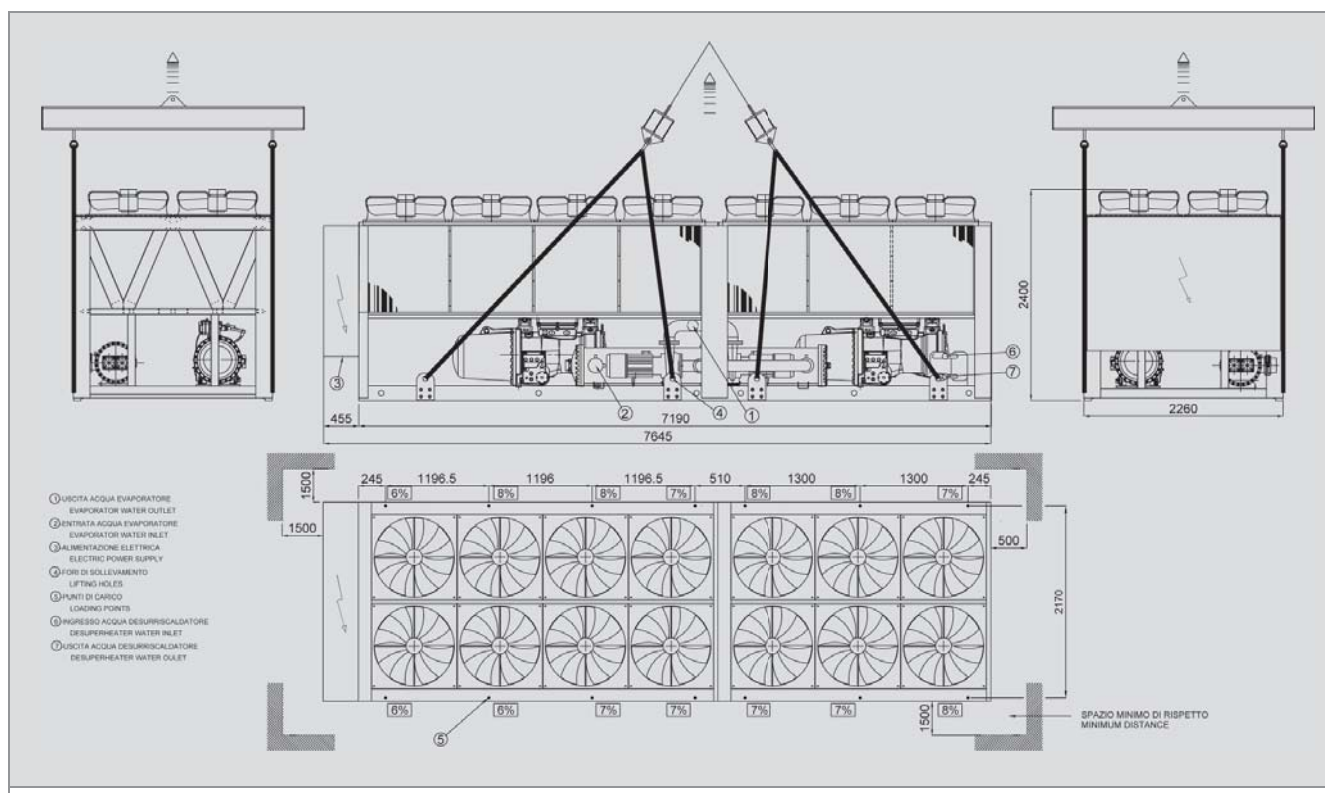


Dimensional drawings and weights

L + 1/2/3/4/5/6 140/150

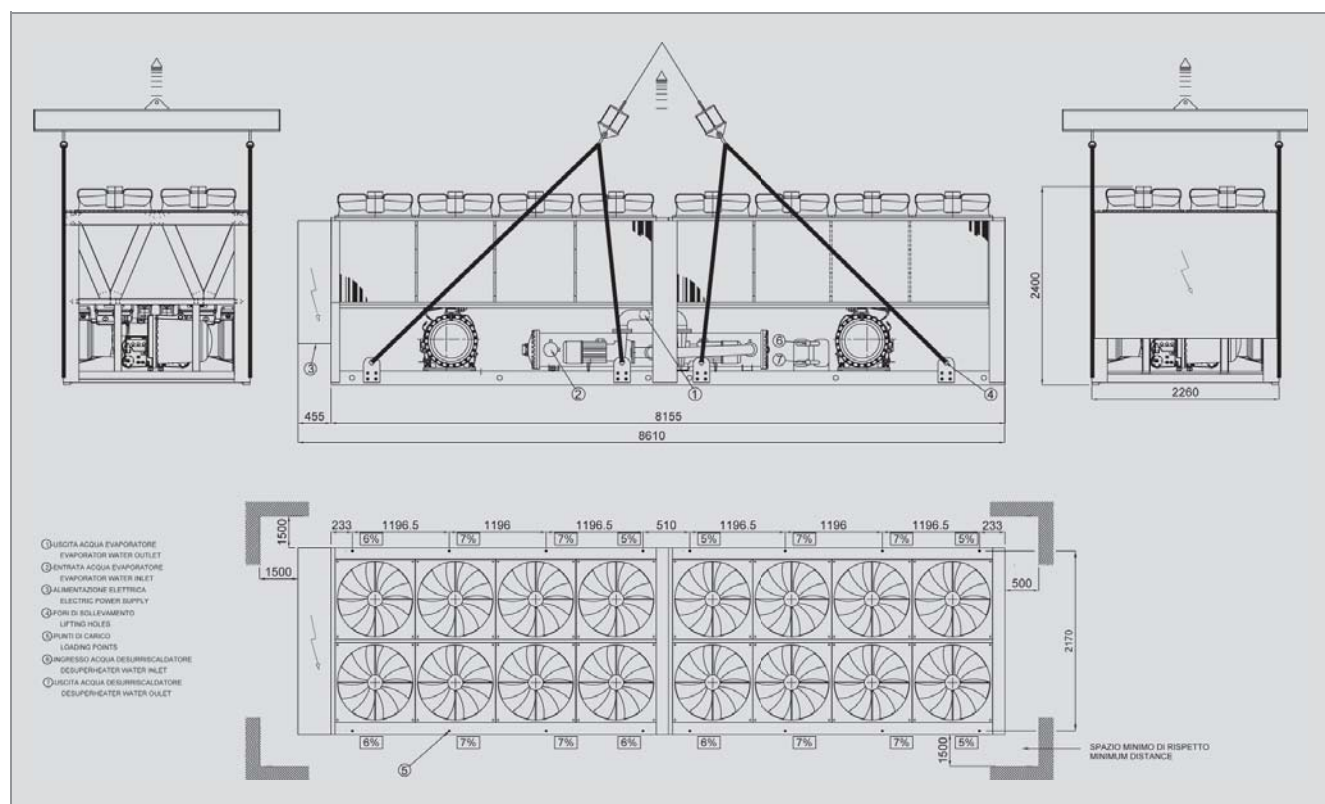


L + 1/2/3/4/5/6 160

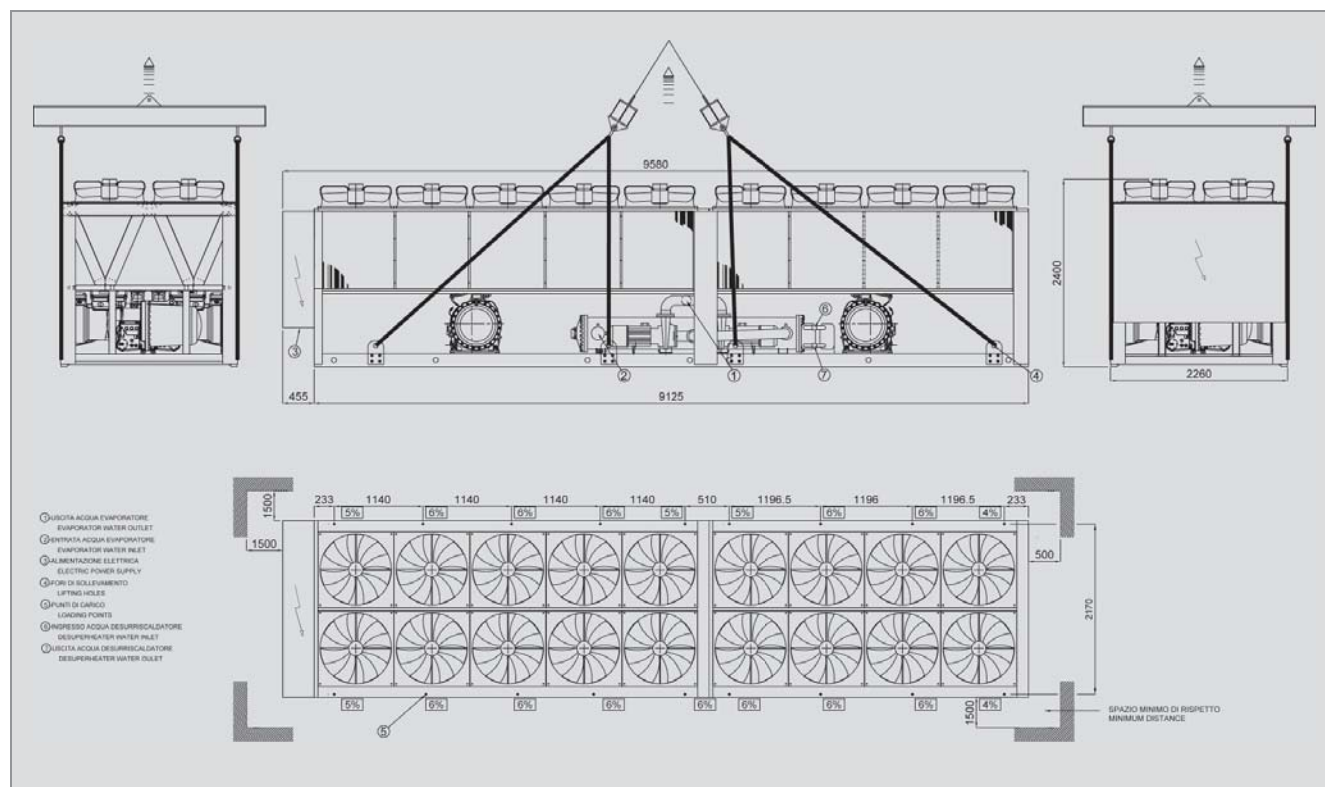


Dimensional drawings and weights

L + 1/2/3/4/5/6 180/190

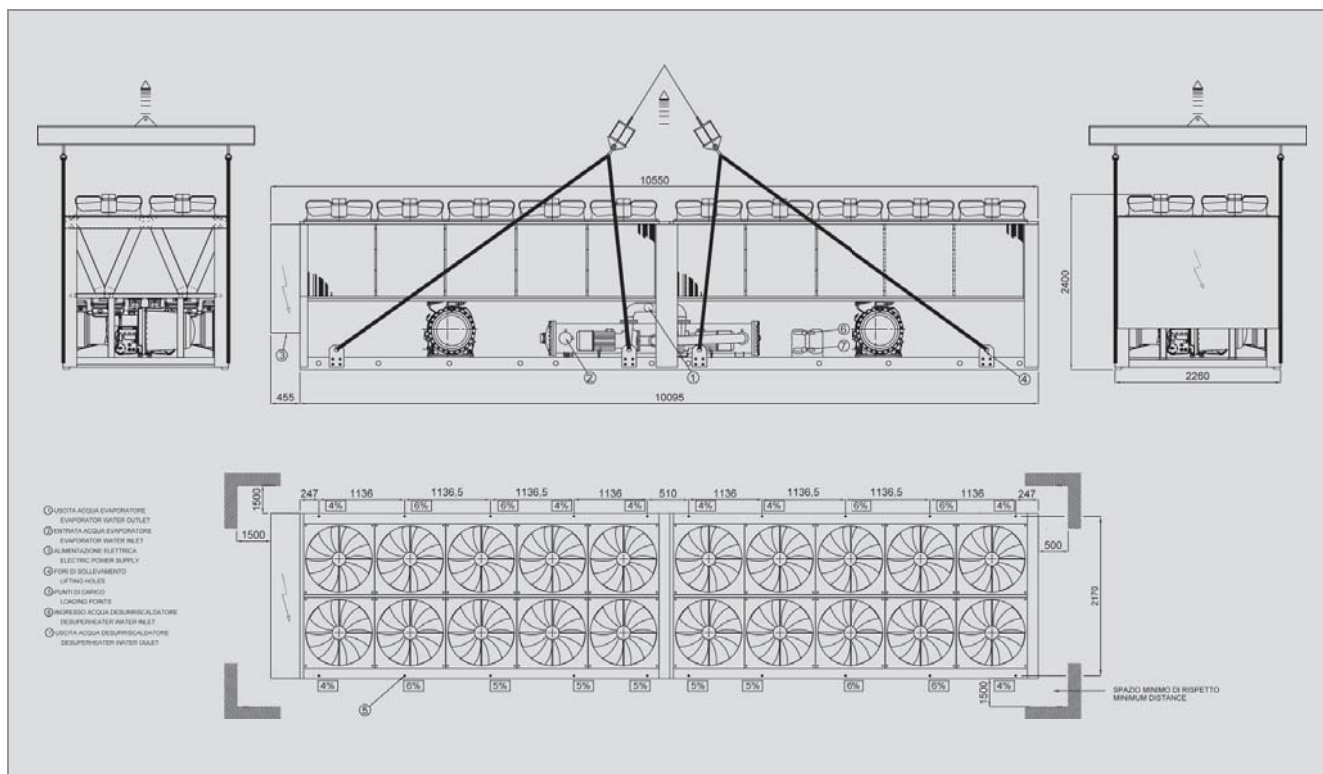


L + 1/2/3/4/5/6 220

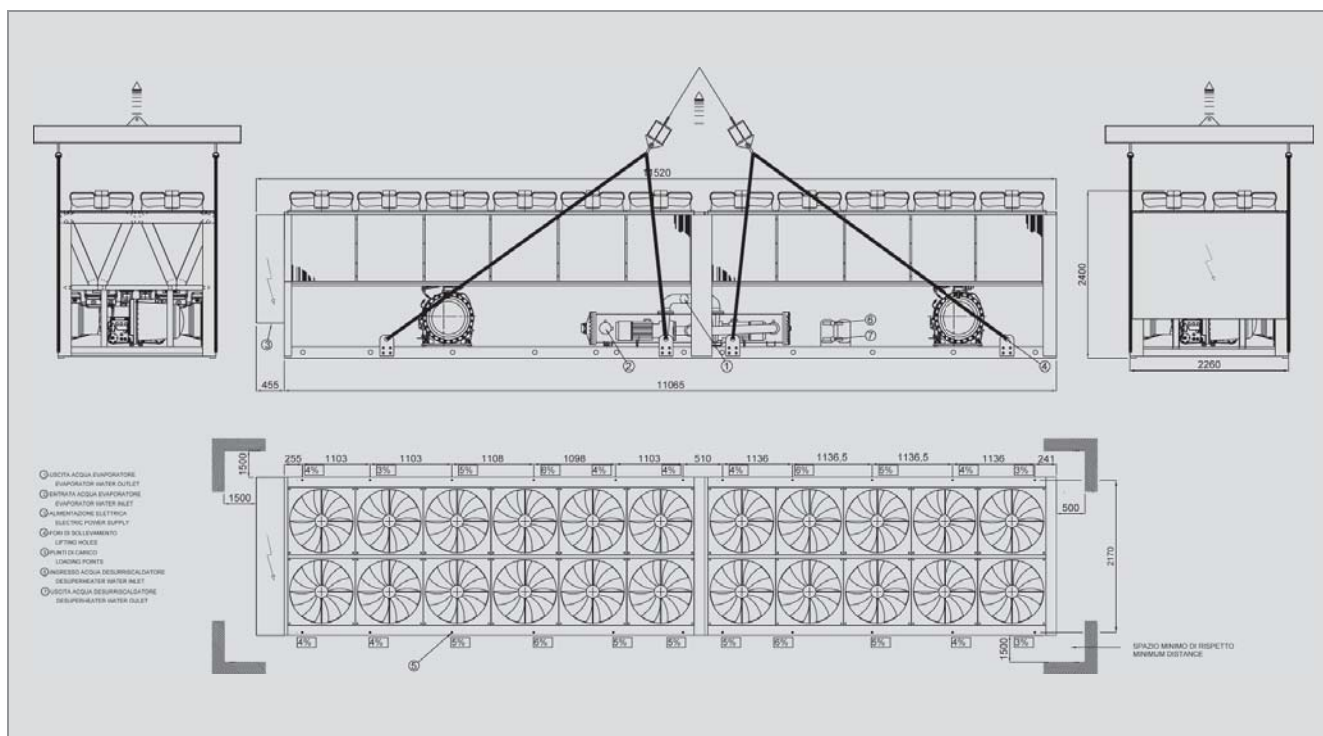


Dimensional drawings and weights

L + 1/2/3/4/5/6 250

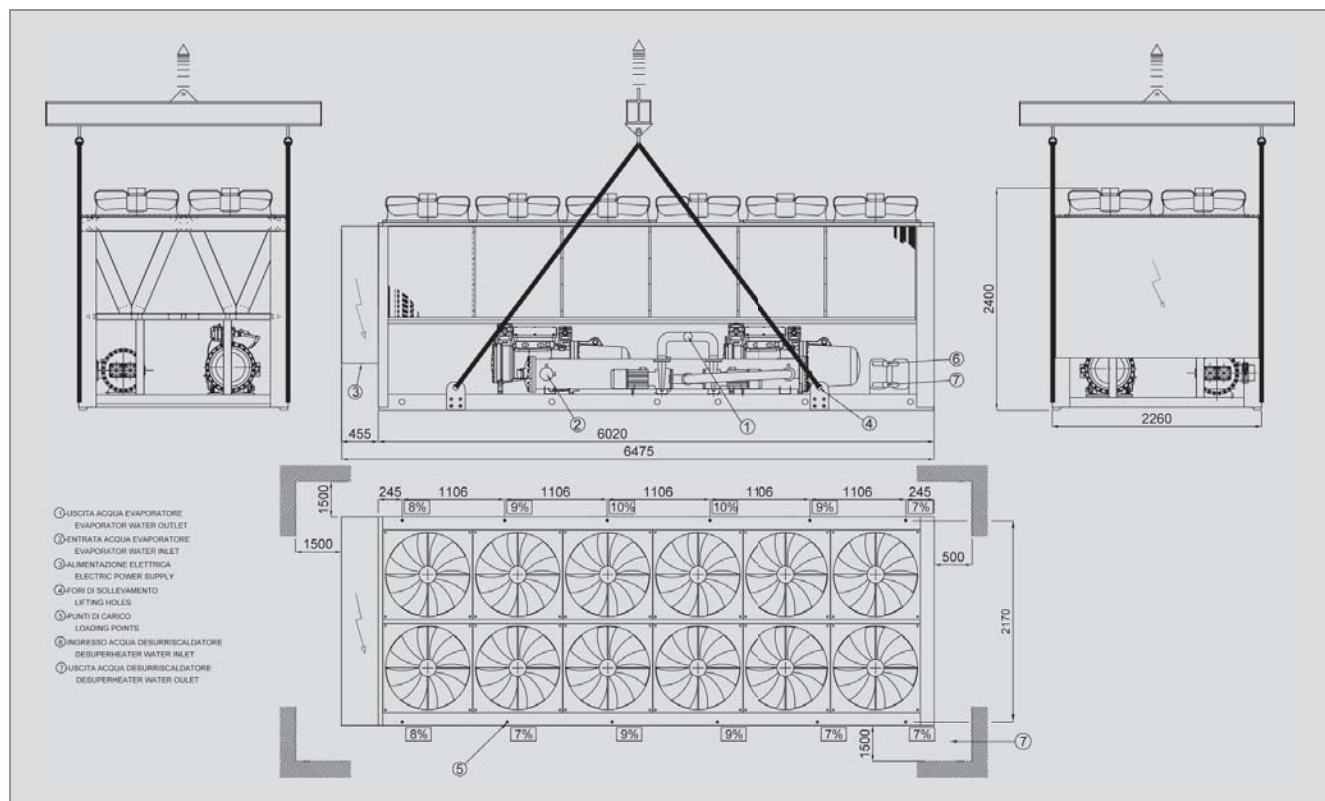


L + 1/2/3/4/5/6 300

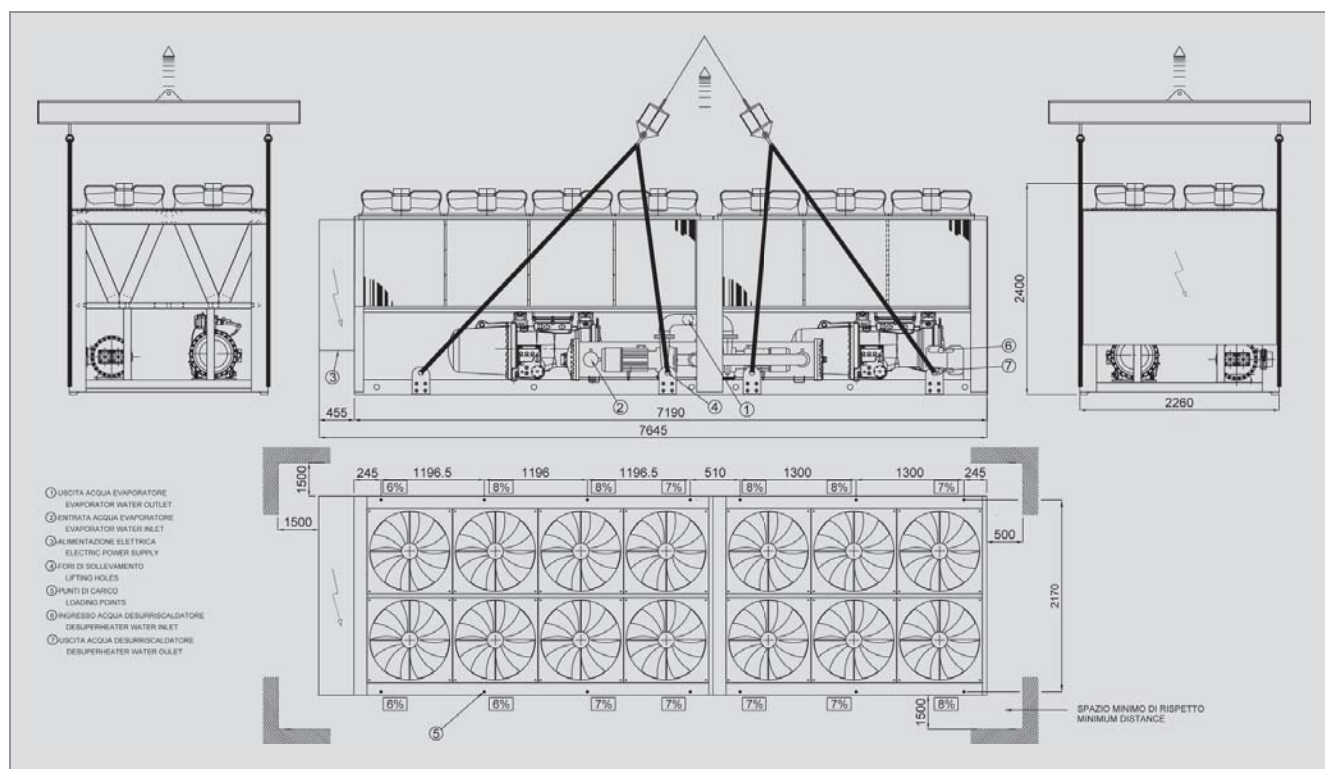


Dimensional drawings and weights

S + 1/2/3/4/5/6 140/150

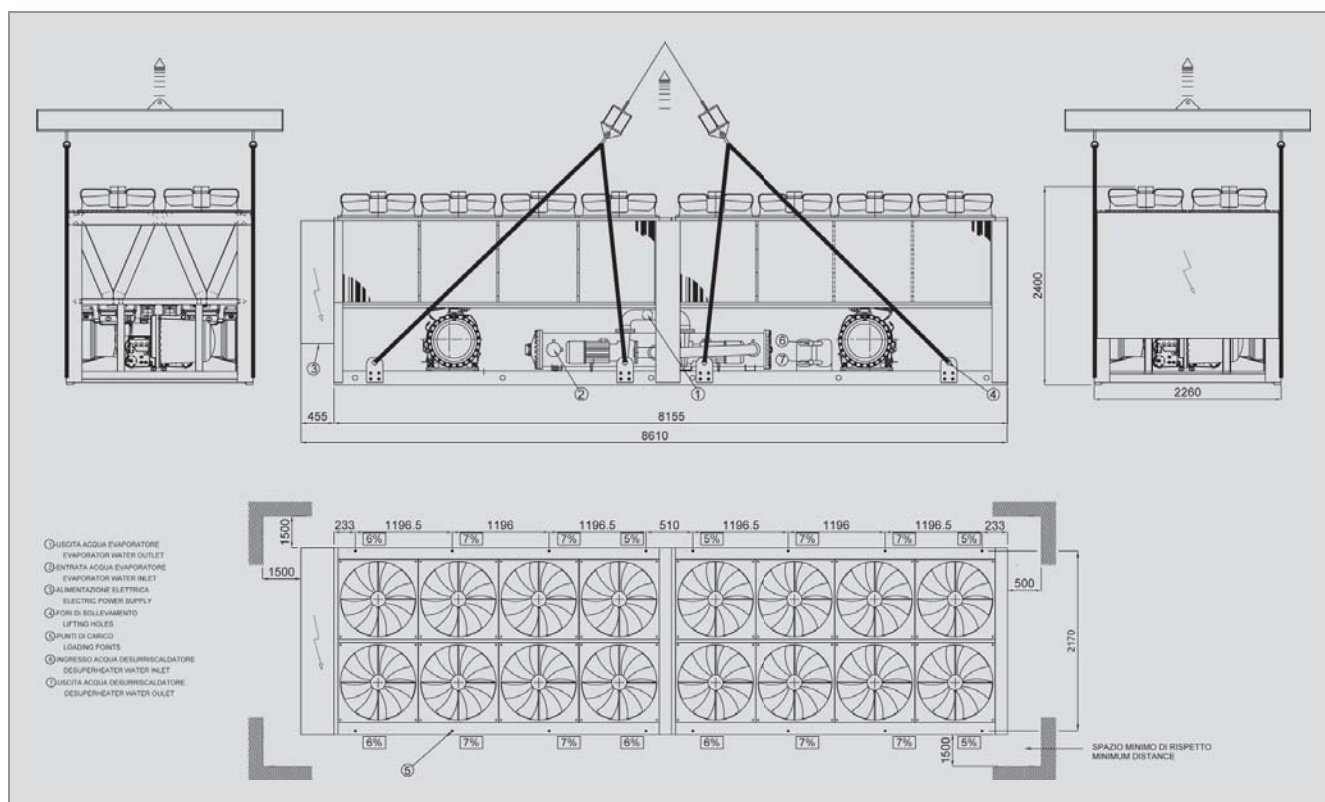


S + 1/2/3/4/5/6 160

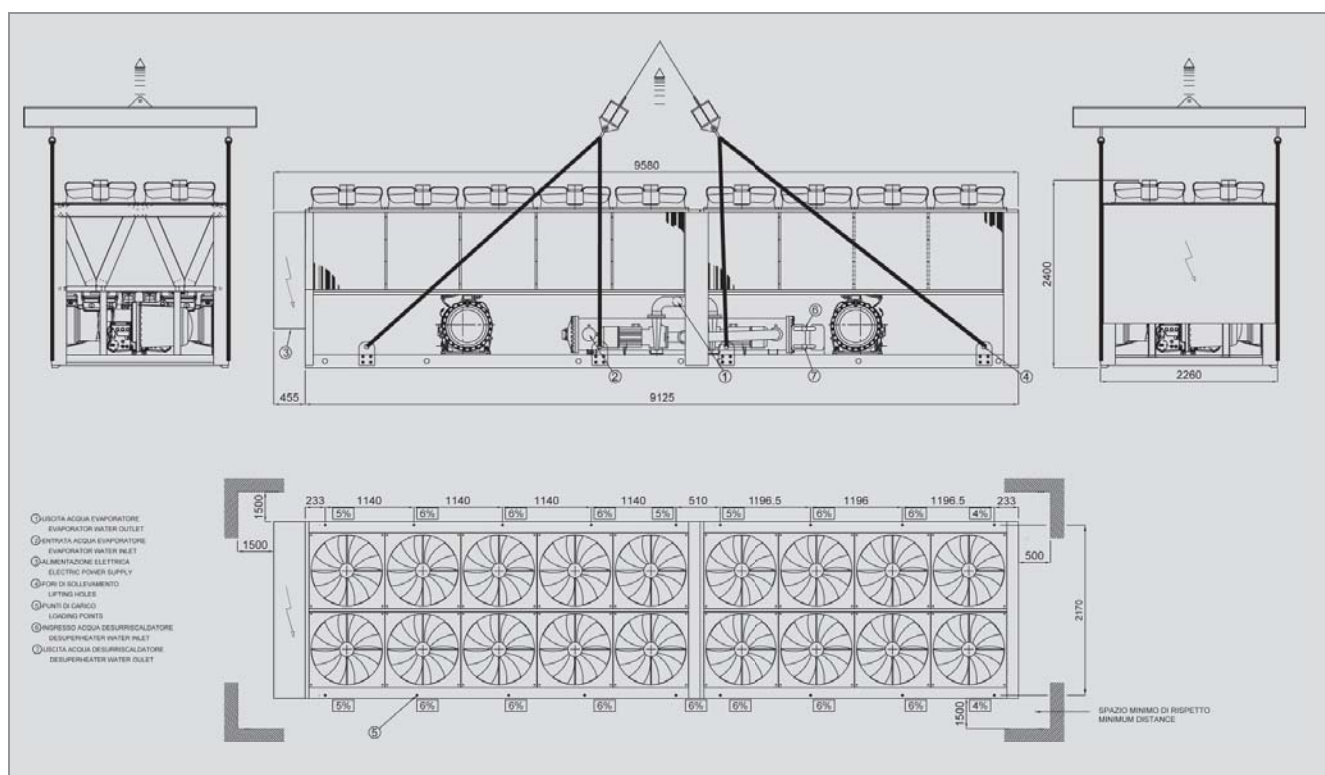


Dimensional drawings and weights

S + 1/2/3/4/5/6 180/190

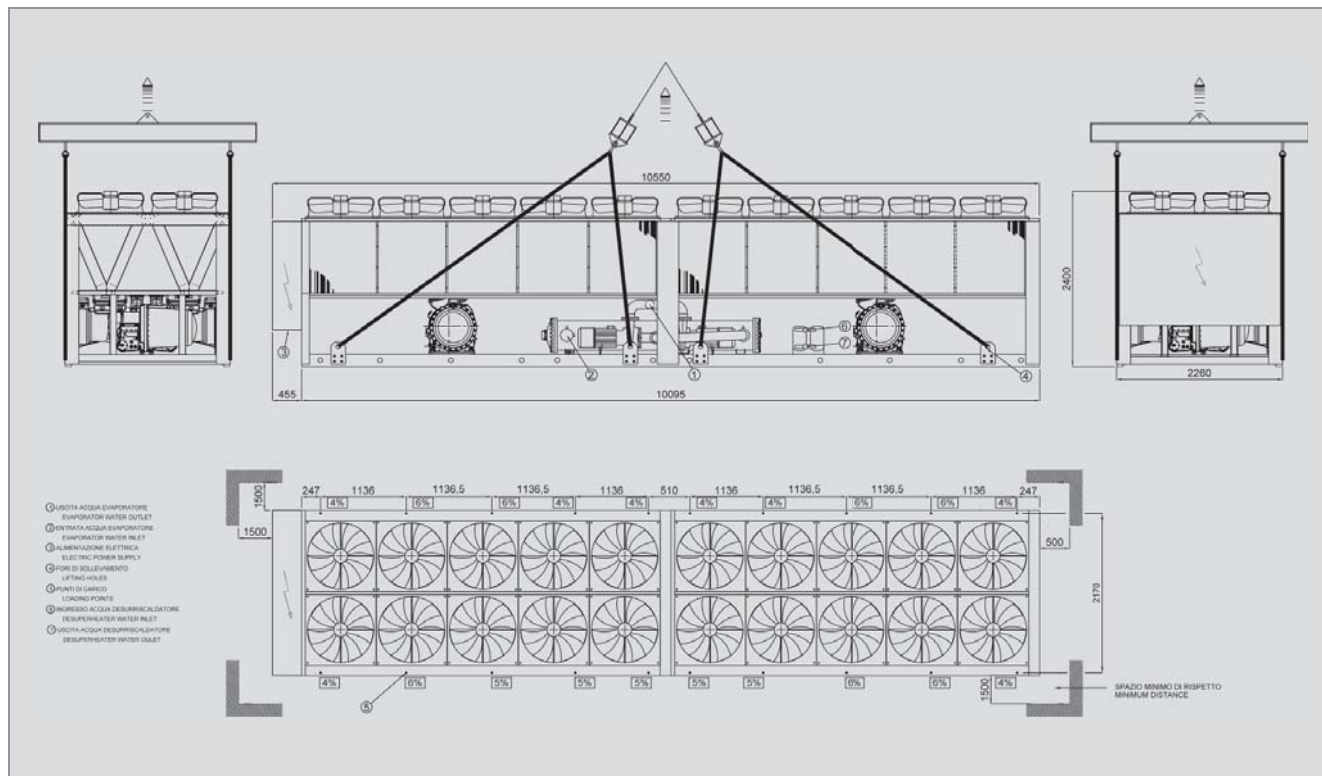


S + 1/2/3/4/5/6 220

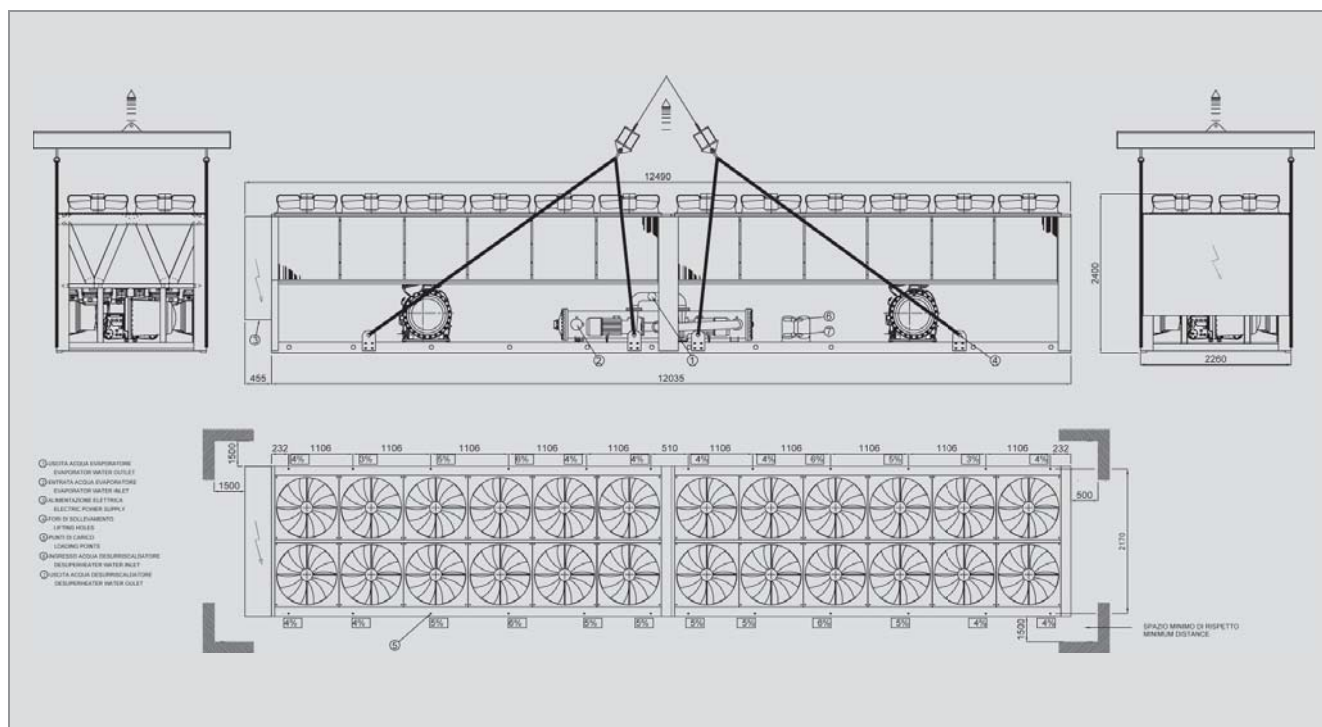


Dimensional drawings and weights

S + 1/2/3/4/5/6 250



S + 1/2/3/4/5/6 300



Dimensional drawings and weights

Operating weights

Size			140	150	160	180	190	220	250	300
Standard Version	X	kg	5604	6034	7161	8126	8228	9647	11543	11677
Low Noise	L	kg	5954	6384	7511	8526	8628	10047	11943	12077
Super low Noise	S	kg	6590	7019	7523	8534	8646	10067	12283	13215
INCREASE FOR VERSION										
Desuperheater	H	kg	56	57	57	57	57	57	57	57
1 Pump - Low head pressure	1	kg	76	112	112	115	115	115	115	115
1 Pump - Medium Head pressure	2	kg	112	115	115	172	172	172	172	172
1 Pump - High head pressure	3	kg	176	176	250	250	273	273	273	273
2 Pumps - Low head pressure	4	kg	157	233	233	239	239	239	239	239
2 Pumps - Medium head pressure	5	kg	233	239	239	356	356	356	356	356
2 Pumps - High head pressure	6	kg	365	365	518	518	567	567	567	567

Shipping weights

Size			140	150	160	180	190	220	250	300
Standard Version	X	kg	5446	5882	7009	7879	7981	9415	11160	11303
Low Noise	L	kg	5796	6232	7359	8279	8381	9815	11560	11703
Super low Noise	S	kg	6432	6867	7371	8287	8399	9835	11893	12832
INCREASE FOR VERSION										
Desuperheater	H	kg	51	52	52	52	52	52	52	52
1 Pump - Low head pressure	1	kg	76	112	112	115	115	115	115	115
1 Pump - Medium Head pressure	2	kg	112	115	115	172	172	172	172	172
1 Pump - High head pressure	3	kg	176	176	250	250	273	273	273	273
2 Pumps - Low head pressure	4	kg	157	233	233	239	239	239	239	239
2 Pumps - Medium head pressure	5	kg	233	239	239	356	356	356	356	356
2 Pumps - High head pressure	6	kg	365	365	518	518	567	567	567	567

Tube diameters

Size			140	150	160	180	190
④ - ⑤	X - L - S + 1/2/3/4/5/6	Ø	5" VICTAULIC	5" VICTAULIC	5" VICTAULIC	6" VICTAULIC	6" VICTAULIC
⑦ - ⑧	H	Ø	2"	2"	2"½	2"½	2"½

Size			220	250	330
④ - ⑤	X - L - S + 1/2/3/4/5/6	Ø	6" VICTAULIC	8" VICTAULIC	8" VICTAULIC
⑦ - ⑧	H	Ø	2"½	3"	3"

- ④ Water inlet evaporator
- ⑤ Water outlet evaporator
- ⑦ Water inlet desuperheater
- ⑧ Water outlet desuperheater



Notes

Notes



Trane optimizes the performance of homes and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable and energy efficient environments, Trane offers a broad portfolio of advanced controls and HVAC systems, comprehensive building services and parts. For more information visit www.Trane.com

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