



REZNOR

RTU Installation & Operating

Packaged Air Conditioning Unit

 **NORTEK**[™]
GLOBAL HVAC



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SAFETY RECOMMENDATIONS



Use PPE for intervention in the unit. Goggles, gloves, boots, clothing and helmet if necessary.



It is mandatory to follow the recommendations and guidelines contained within the maintenance manuals, labels and specific instructions. It is necessary to obey rules and regulations in force.



Before of manipulating the equipment, check that the unit general supply is cut to prevent electric shock.

To prevent accidents during installation, implementation or maintenance, is required to take into consideration the following specifications. The implementation of the equipment as well as repair and maintenance must be carried out by qualified personnel.

Always use the provided cooling connections for measuring pressure, vacuum or make charging refrigerant. Before working on the refrigerant lines to remove any component or desoldering, it should be empty. Welds must be performed by a qualified welder. rod to use 30% silver content at least in all brazings.



Wear goggles and safety gloves for work. Always avoid skin contact with the refrigerant and beware of parts or cutting elements of the unit.



Always ensure proper ventilation in the work area

Refrigerant leaks can cause:

Asphyxiation due to displacement of oxygen in the air in confined work areas and narcotic effect or cardiac arrhythmia by inhalation of refrigerant.

Eye irritation and burns from splashing or skin contact:

In case of accident by inhalation of refrigerant act according to the following instructions:

Remove victim to fresh air. Keep the victim lying down and if the victim is unconscious, place him on the side with the head facing sideways.

When in doubt or symptoms persist, seek medical attention



In certain circumstances, the scroll compressors the top of the housing and the compressor discharge line may reach temperatures above 160 ° C.

In case of contact with eyes:

If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes. Never rub your eyes or skin if you have come in contact with refrigerant and do not allow the patient to tightly shut the eyes. If contact lenses are used, they must be removed. It is important to get the person to a doctor immediately.

In case of burn by refrigerant skin contact:

Immediately flush skin with plenty of water for at least 15 minutes, take off all contaminated clothing immediately.

Do not cover the affected area with clothes, oil, bandages

Always use original spare parts to ensure proper operation of the unit.

You should only use the coolant shown on the nameplate of the unit. Always use refrigerants premium. Never use other unapproved products. (Mixture of refrigerants, hydrocarbons, etc.). Use oils recommended by the manufacturer, respecting the specifications of the oils.



If you install the indoor units it is necessary to pay attention to the safety recommendations of working at heights, and as appropriate restraint harnesses out.



Pay attention to the prevailing wind in the area. Removing the panels with excessive wind may incur danger of injury from falling, keep in mind that the panels can throw you off the working area due to wind force effect

NOMENCLATURE

R T U 1 045 I N S 4 W SSF

RTU: Rooftop Unit

1: Construction size

042: Nominal Power (refrigeration if there would be several values) In ARI conditions..

I: Application type (I: Reversible; Q: Only Heating; R: Only Cooling; S: Cooling & Gas Fired)

N: Compressors type (N: Standard; D: Digital Scroll; V: Inverter; O: Others)

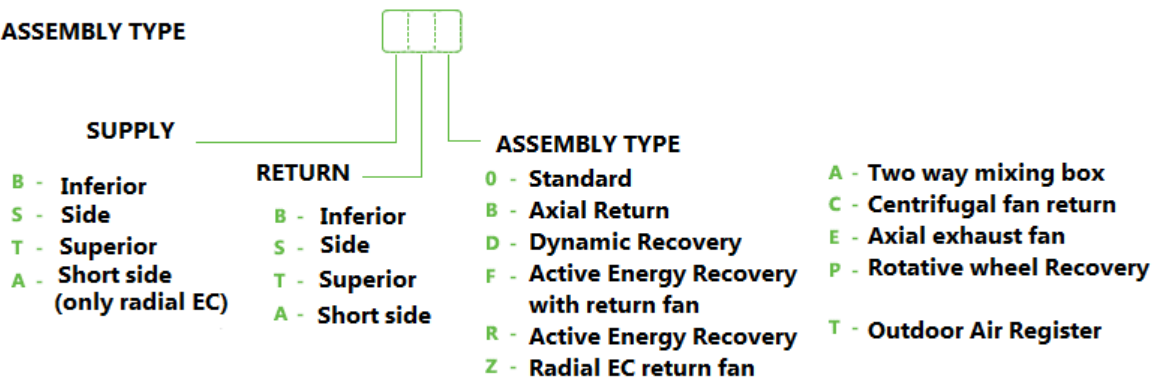
P: Version: (S: Standard; F: Free Cooling; R: Recovery)

3: Electrical Voltage: (1: 230V/I/50Hz, 2: 230V/III/50Hz, 3: 400/III/50Hz non neutral, 4: 400/III/50Hz + neutral, 5: 230V/I/60Hz, 6: 230V/III/60Hz, 7: 400/III/60Hz non neutral, 8: 400/III/60Hz + neutral, 9: 440/III/60Hz + neutral, E: Special

W: Refrigerant: (F: R404A; W: R410A; Z: R407C; U: R407F; Y: R134A; L: R407A; E: R1234ze; H: Water; N: None, nitrogen loading)

In addition to this coding, the equipment is defined by an assembly code. These codes are three digits behind the letter A (Assembly).

ASSEMBLY TYPE



CHARACTERISTICS PLATE

All Roof Top Units have a characteristics plate with the following information:

CE		REZNOR				Manufacturing identification		
NORTEK GLOBAL HVAC (UK) LTD Fens Pool Avenue Brierley Hill West Midlands DY5 1QA United Kingdom								
Supply Voltage	Serial num Nº Serie	140218A001		Model Modelo	KCR1039INR4W		Date Fecha	2014
	Voltage V Tensión V	400	Hz Hz	50	Ph Ph	3	Weight (Kg) Peso (Kg)	928.00
Max. Absorbed Power	P elect Max (Kw) P elect Max (Kw)	33.30		I Elect Max (A) I Elect Max (A)	57.10		LRA (A) LRA (A)	162.10
Nominal Power	P refrigeration (Kw) P refrigeración (Kw)	50.30		P heating (Kw) P calefacción (Kw)	52.20			
Max. Admissible Pressure	High Press (Bar) P. Alta (Bar)	42.00		Low Press (Bar) P. Baja (Bar)	1.70		Refrigerant type Refrigerante	R410A
	Electrical Heater (Kw) Resistencia Electrica (Kw)	-		Refrigerant weight (kg) Carga Refrig. gr.	14.00			

Note: For all communication with the manufacturer is necessary to indicate the machine's serial number. The first two digits of the serial number indicate the year of manufacture.

The voltage on the plate should be respected, within the limits -10% / + 10%. It is your responsibility to have proper mains voltage within limits. It is important to check that the voltage of the plate matches the mains voltage.

The plate indicates the correct type of refrigerant. always use the refrigerant indicated on the plate at its best. Avoid using refrigerant blends or other substances.

COMMISSIONING AND TEST REPORT

CUSTOMER AND PROJECT SITE DATA

Customer:

Contact person:

Telephone contact:

Site Address:

models:

Serial number:

Date:

Dates for implementation:

GENERAL CONDITIONS:

- The following preparatory work must be performed prior to commissioning:
 - Connect the power supply.
 - Check the phase sequence.
 - Differential protection of line power supply.
 - Power supply equipment for 12 hours prior to commissioning.
 - Connecting the air ducts and checking filters (air-air equipment).
 - Hydraulic piping connected to the computer, filter the water entering the equipment and filling and purging the hydraulic circuit (air-water equipment).
- It shall check thermal load demand for the launch of the team.
- The equipment should be placed in its final position. If access to the equipment should be performed by auxiliary means, these are borne by the customer.
- Teams have adjusted load refrigerant from factory. Therefore, if required additional refrigerant charge must be provided by the customer.
- The supply voltage of the equipment shall be final. The teams are exempt from warranty if the implementation is not done with final tension.
- By sending the document for start-up documentation shall communicate safety and PPE required for access to the facility.
- The document application startup should be sent at least 5 working days before the date of implementation required.
- From sending the document to launch the availability of dates in the next 24 hours will be confirmed.

Delays or subsequent treatment due to non-compliance of the points made in the document to be billed.

TECHNICIAN DATA

Made by:

Date of commissioning:

Unit ID

Model: RTU

Serial No.:

Refrigerant:

Electronic Control:

Version parameters:

ELECTRIC SECURITY TEST

1- General Check operation of switch:

- Cut off voltage properly
- Give all the thermal voltage / differential ON

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2.- Check magnetic switches operation:

- Cut voltage properly in OFF
- Provides voltage properly when ON

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3.- Check thermal relays to requested values

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4.-Check earth continuity

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5.- Check that access logs turbines and box stickers carry risk

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HEATING MODE TESTING REPORT

1- Check rotation direction of fans / pumps / compressors

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2- Check sensors are working correctly:

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3-

B1: Return air

B2: Supply air

B3: Air Ambient

4-Check **cooling values** on the technical sheet.

GROUP 1		GROUP 2	
Refrigerant charge	= gr	Refrigerant charge	= gr
Temperature Evaporation	= °C	Temperature Evaporation	= °C
Superheating	= °C	Superheating	= °C
Temperature Condensation	= °C	Temperature Condensation	= °C
Sub-cooling	= °C	Sub-cooling	= °C

GROUP 3		GROUP 4	
Refrigerant charge	= gr	Refrigerant charge	= gr
Temperature Evaporación	= °C	Temperature Evaporación	= °C
Superheating	= °C	Superheating	= °C
Temperature Condensation	= °C	Temperature Condensation	= °C
Sub-cooling	= °C	Sub-cooling	= °C

5-Check air sensor measurements :

Supply air flow	=	m3/hr
Temperature Ambient	=	°C
Air Exhaust Temperature	=	°C
Temperature Difference	=	°C

6-Check Electric Supply data:

Voltage	=	V
Frequency	=	Hz
Cos Phi (0.8)	=	
Electric Power.	=	kW
Intensity	=	A

7-Make Freecooling operation heating the return air sensor and check the right operation order of the components

(Outdoor Temperature/Enthalpy > Temperature/Return Enthalpy – Differential Freecooling)

Outdoor air register / air damper 0-100% / mixed air 100-0%
Exhaust fans ON mixing damper 50-100%
Compressor 1
Compressor 2

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8-Verify a defrosting cycle, and verify the standard operation

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9-Verify that when turning off the machine and defrosting cycle is active, it turns on in standard mode

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COOLING MODE OPERATION

10- Check **thermal data** of the cooling circuit in the testing sheet

GROUP 1		GROUP 2	
Refrigerant charge	= gr	Refrigerant charge	= gr
Evaporation Temperature	= °C	Evaporation Temperature	= °C
Superheating	= °C	Superheating	= °C
Condensation Temperature	= °C	Condensation Temperature	= °C
Sub-cooling	= °C	Sub-cooling	= °C

GROUP 3		GROUP 4	
Refrigerant charge	= gr	Refrigerant charge	= gr
Evaporation Temperature	= °C	Evaporation Temperature	= °C
Superheating	= °C	Superheating	= °C
Temperature	= °C	Temperature	= °C
Condensation	= °C	Condensation	= °C
Sub-cooling	= °C	Sub-cooling	= °C

11- Check **sensors**

Supply Air Flow	= m3/hr
Temperature Ambient	= °C
Temperature Outdoor Air	= °C
Temperature difference	= °C

12- Check the electric supply values:

Voltage	= V
Frequency	= Hz
Cos Phi (0.8)	=
Electric Power.	= kW
Intensity	= A

13.- Produce a Free Cooling heating return sensor and check the correct order of input components:

(Outdoor temperature / Enthalpy > Temperature / Enthalpy Return - Differential Freecooling) fresh air dampers 0-100% / 100-0% mixing

Outdoor Exhaust Fans ON with mixing damper at 50-100%

Compressor 1

Compressor 2

13- Produce a high pressure switch failure circuit 1 / 2 / 3 / 4

14- Produce a low pressure switch failure circuit 1 / 2 / 3 / 4

FINISHING AND PACKING INSPECTION

15.- Cleaning machine, check that there is no defect in appearance

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16.- Check stickers and plate

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17.- Check packing and handling parts

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SAFETY, TRANSPORT AND OFF LOADING RECOMMENDATIONS

HANDLING AND TRANSPORT

The unit must be handled carefully to prevent damage during transport. Please note the following instructions:

Always carry and operate the equipment in its vertical position.

Never stack the equipment during transport.

To move the unit uses a forklift or hand pallet.

Do not remove the pallet until the machine is in its final location.

Before moving the unit, make sure that if it takes skies for container. The skies or skates for containers should be used to get the equipment for transport in containers, but must be removed after this operation.

If you move the machine using a pallet jack or forklift. Be careful not to damage the lower parts of the machine to move the machine with a forklift or pallet jack. Check that the forks can not damage the machine bottoms.

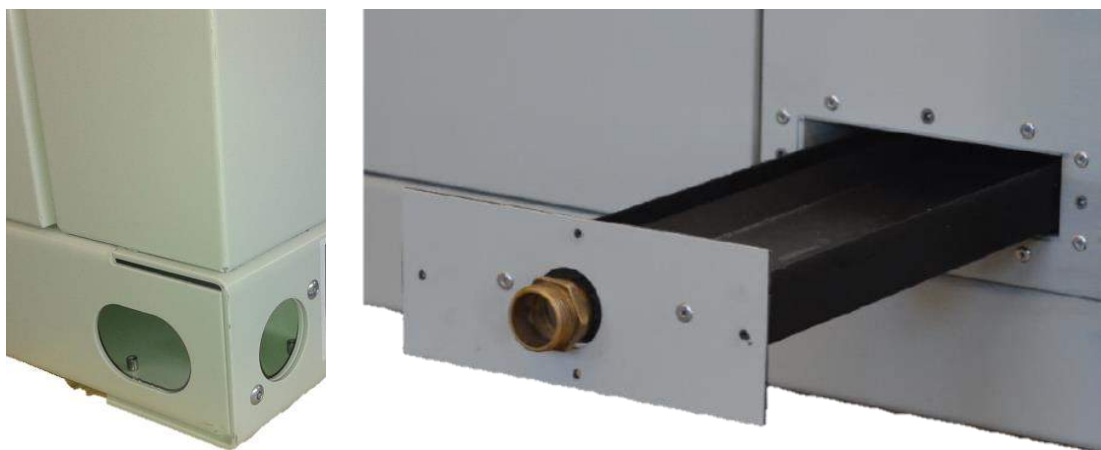
To facilitate the equipment rising by crane, the unit has two holes in each of the four lower corners for the anchoring with slings. It must be used fabric slings with rings, separated by a brace to prevent deterioration of the unit body.

Units are shipped on a wooden pallet under request. All machines are shipped properly packed and protected. Accessories and technical documentation are inside of the units.



The following checks should be taken into account upon receipt of the unit:

- The packaging is in perfect condition
- The outside of the machine is not damaged
- The equipment supplied is in accordance with the order placed.
- Hydraulic, refrigeration and sewage connections are not damaged (check condensate removable tray).
- The accessories are inside the unit. Check that they have been delivered in accordance with relative job.



Left: Hole in the corners to anchor slings. Right: Removable condensate tray.

If the product is damaged, it should be noted on the delivery note signed, a copy will be sent to the factory in the shortest possible time. It is your responsibility to ensure that the goods have arrived in perfect condition. Failure to indicate the damage and the absence of communication of the same invalidate any claim. In the event that the product conforms to thereafter transport and maintenance is your responsibility.

If units are going to remain stored until placement need to verify that they are located in a clean, dry place. Avoid leaving the equipment packaged with protective film to the sun for long. The direct sunlight over a period of prolonged exposure on the protective film may deteriorate paint equipment. Check that all panels and the electrical panel are closed. Check inside remains protected circuits.

The units may be accompanied by matching structure or curb for placement. In the event that it is included in the order, check the adjustment curb meets the specifications. If a rooftop curbe for special adaptation to a pre-existing installation is going to be used, prior to manufacture the customer approval is required to a drawing prepared by the technical office of Nortek Global HVAC, to verify that the design meets the curbs need for installation. It is your responsibility to ensure that the curb corresponds to the design shown in the drawings when material has arrived on site

INSTALLATION AND SET-UP

The final location of the unit will determine largely the proper functioning of equipment. For the best performance use the following guidelines:

Upon receiving your unit, please inspect your machine and its components for damage during shipping. Install the unit outdoors and away from heat sources. Before to install the equipment it is important to check that the selected surface has sufficient strength to support the weight of the

machine, vibrations and effort that it can transmit. Ensuring the integrity and security of the installation.

Do not obstruct air inlet or outlet spaces of the unit to facilitate the air intake and exhaust flow and avoid as far as possible recirculation of air into the unit.

To ensure proper operation of the equipment and allow access for maintenance, respect the minimum distances recommended.

Install in their location on type silentblock shock absorbers

Make sure the electric panel is in good condition before making the electrical connection, and please follow the guidelines:

Follow the wiring diagram provided by the manufacturer.

Note that models to 400V/III/50Hz have a supply connection to 5 wires, being always the grounding in colour green-yellow.

Install appropriate protective device on the undertaken line, thermomagnetic or thermomagnetic differential. In cases where it is installed more than a machine it must be provided of its own system of protection to each line.

To calculate the section of wires of the supply connection it should be considered electrical data provided in the unit's nameplate and other factors such as the length of the supply connection, the type of wiring used, etc.; always respecting current regulations for electrical installations.

START-UP

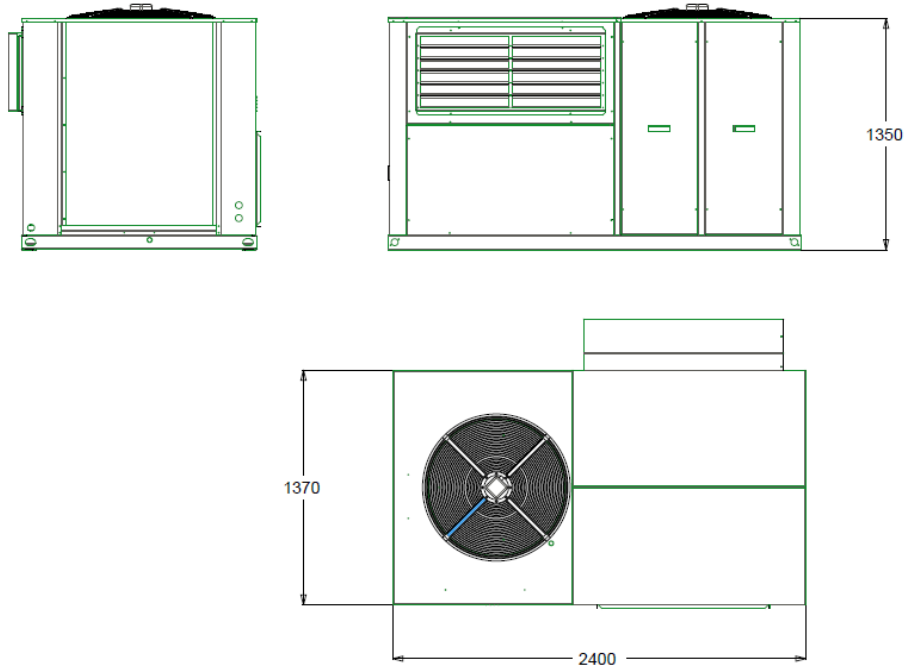
Before starting/using the unit, please make sure all screws are tightened securely and the electrical connections are properly installed. If you have worked inside the machine check that you have not left extraneous objects or tools inside, make sure there are no gas leaks and that both assembly units and hydraulic connections have been made properly.

Before initial startup of the gear unit or after a prolonged standstill period it is recommended to activate the sump resistor twelve hours in advance. If the resistor cannot be enabled early enough, the compressor must be heated otherwise to separate the oil from the refrigerant. This operation is important, especially at low ambient temperatures start-ups.

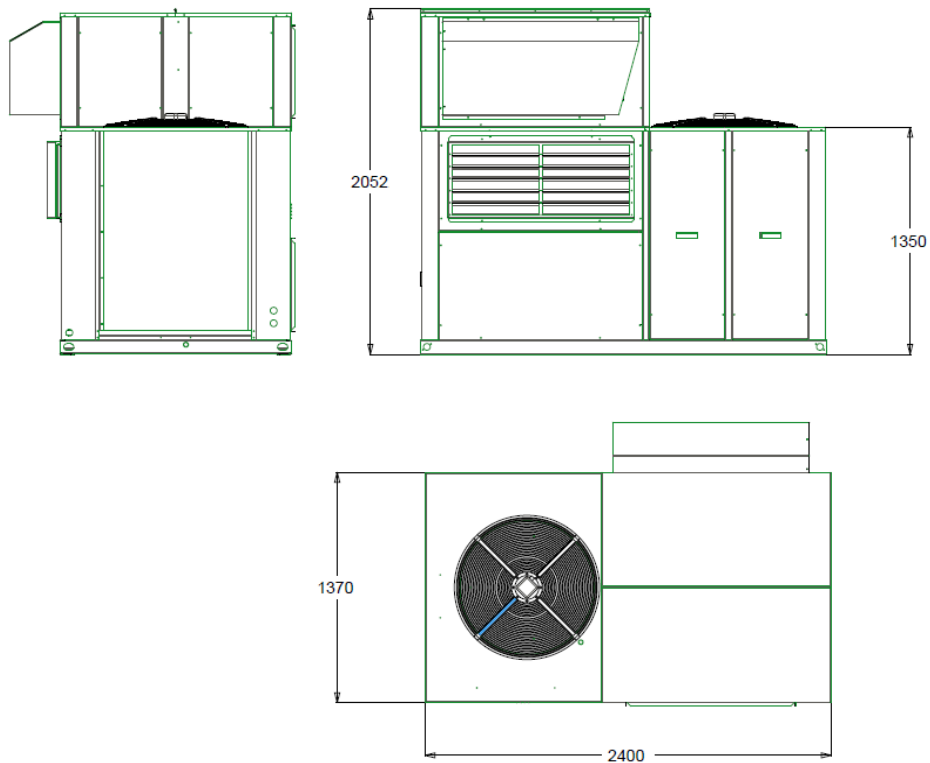
Connect the power supply and turn on the system following the instructions given in annex of regulation. Check subcooling and overheating to verify that the refrigerant charge is appropriate to the operating conditions. After having been working several hours, key system parameter should be verified to be sure that the system is working properly or it is needed to make some adjustment. Compare temperatures of evaporation and condensation with the design conditions. Check security features.

DIMENSION PLANS

SERIES 0000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT

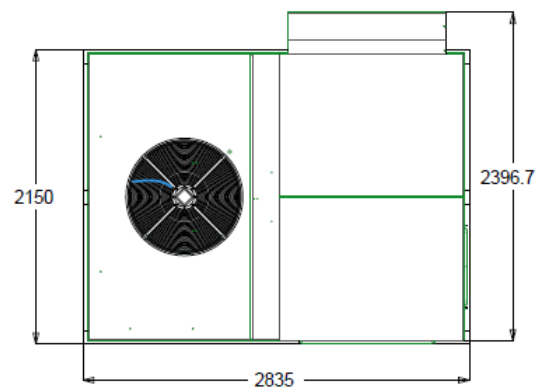
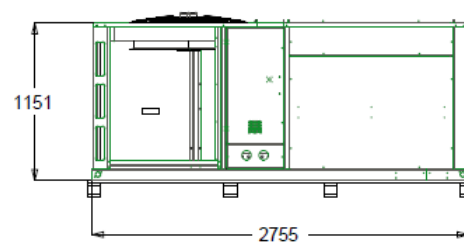
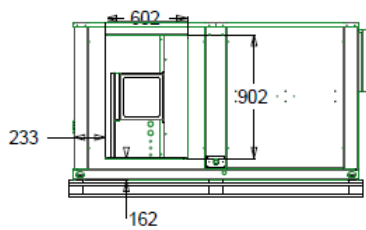
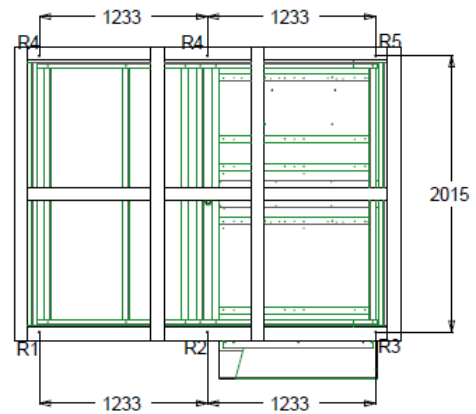


SERIES 0000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



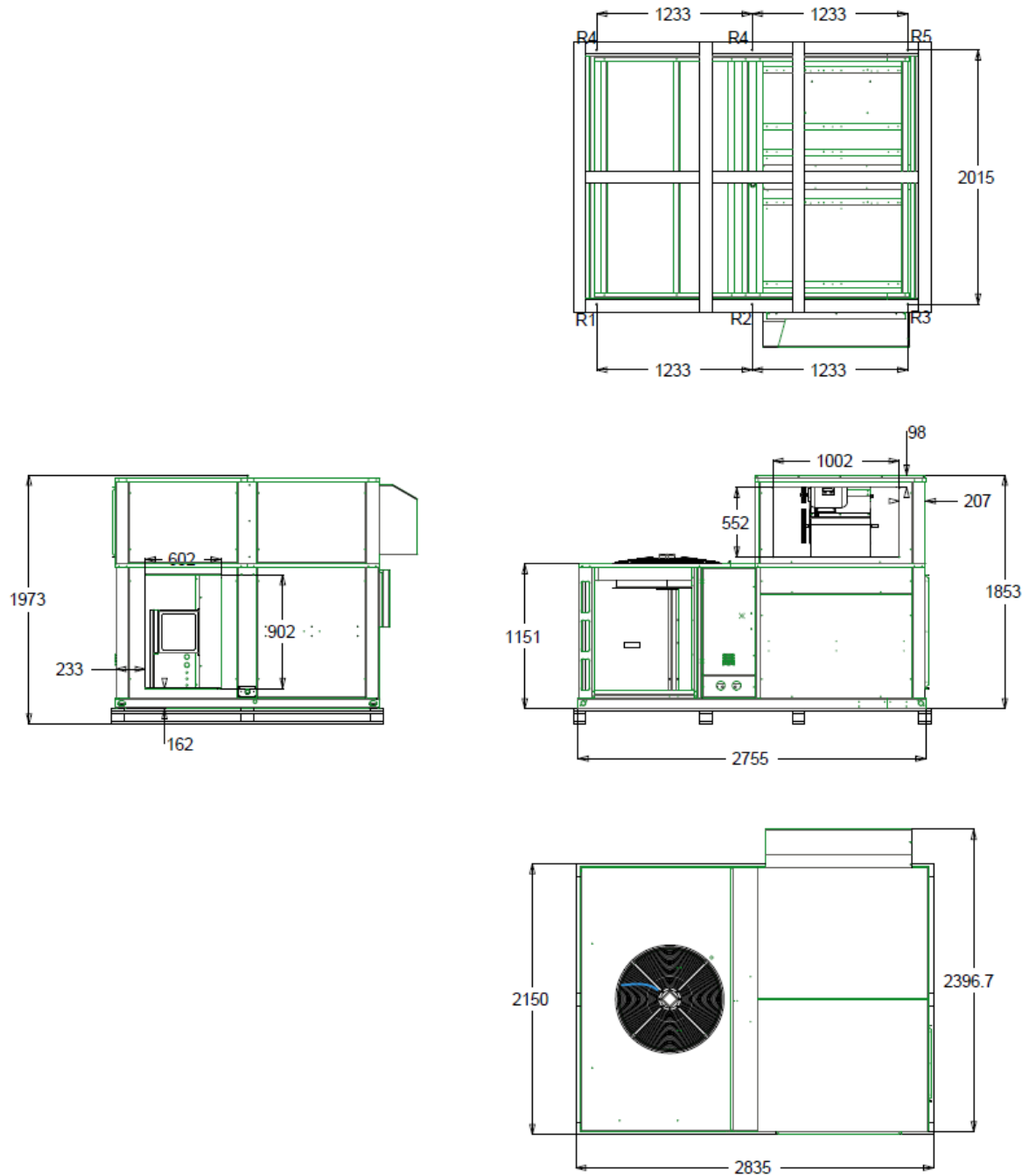
Note. Plan includes transport pallet. Plan with short side supply.

SERIES 1000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



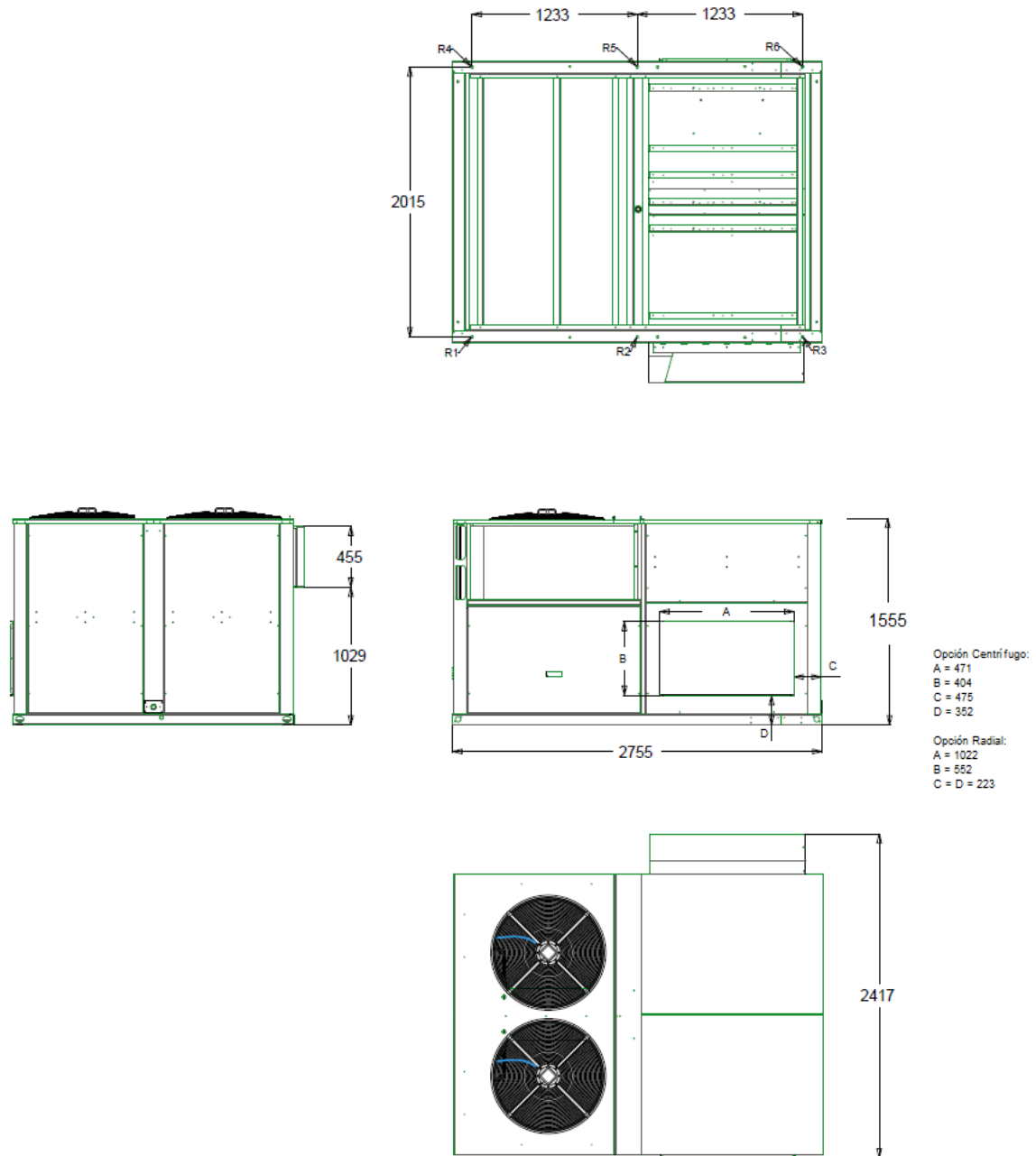
Note. Plan includes transport pallet. Plan with short side supply.

SERIES 1000, STANDARD ASSEMBLY WITH UPPER RETURN UNIT (SF)



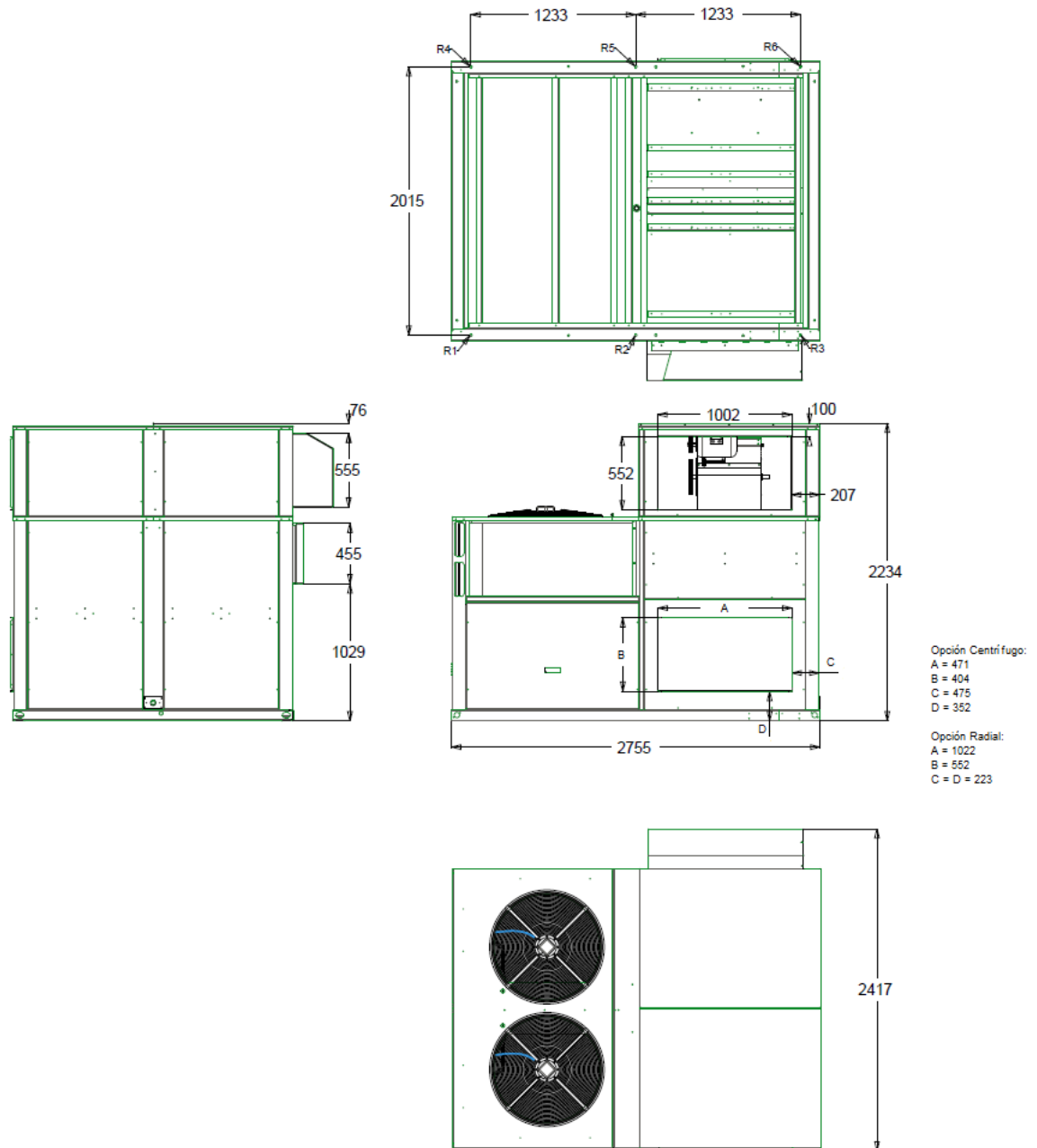
Note. Plan includes transport pallet. Plan with short side supply.

SERIES 2000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



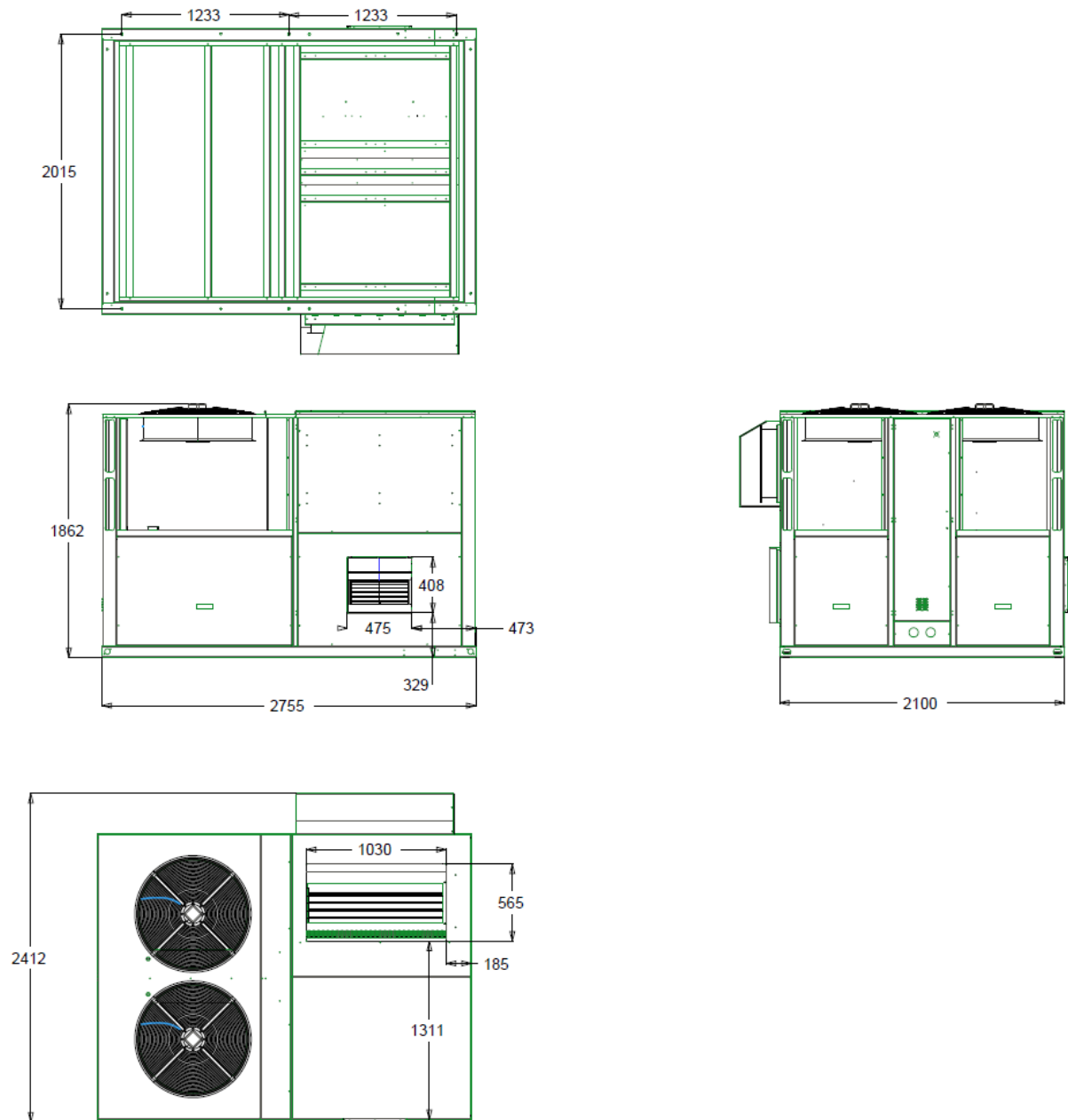
Note. Plan not includes transport pallet. Plan with long side supply, lateral return.

SERIES 2000, STANDARD ASSEMBLY WITH UPPER RETURN UNIT (SF)



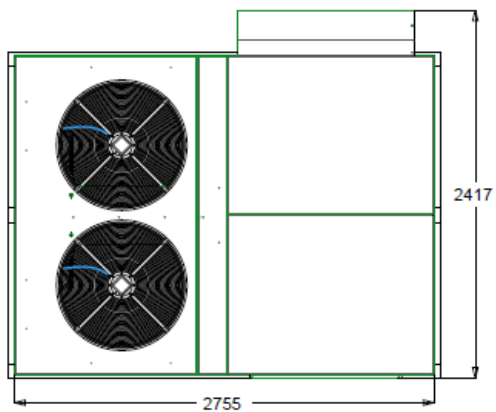
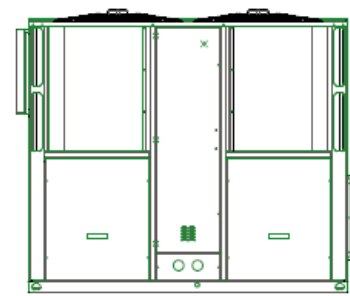
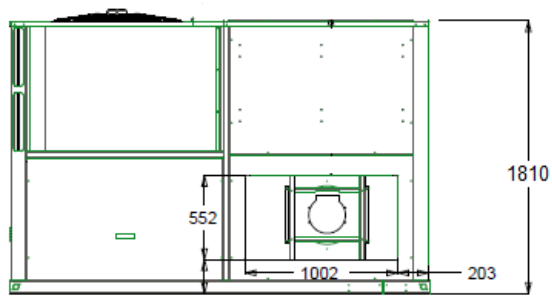
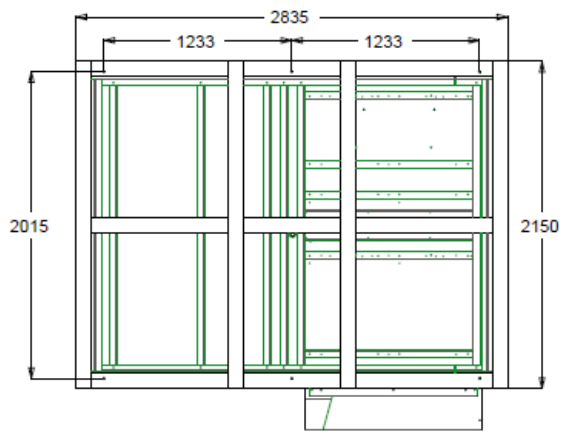
Note. Plan not includes transport pallet. Plan with long side supply.

SERIES 3000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



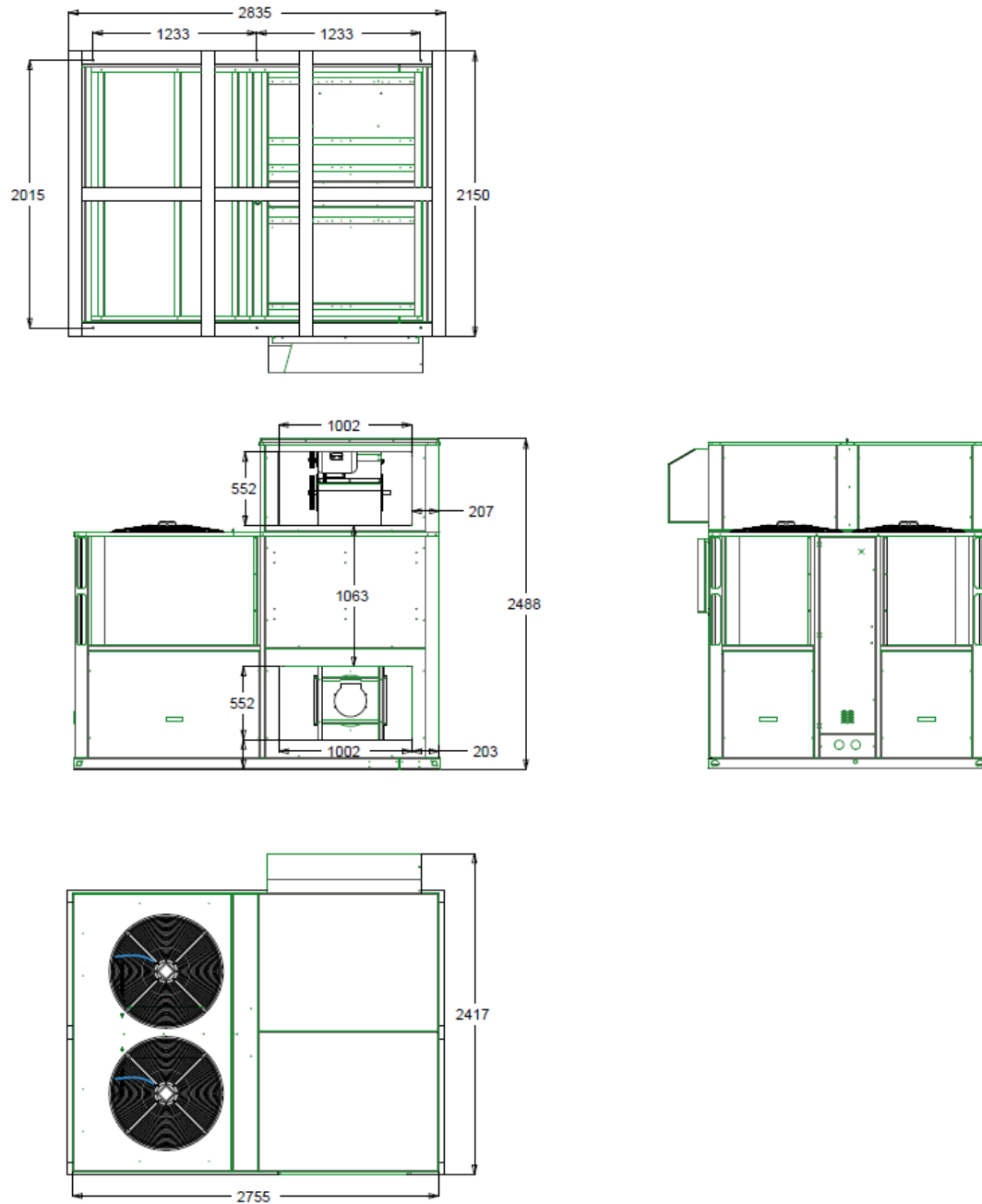
Note. Plan not includes transport pallet. Plan with long side centrifugal supply, upper return.

SERIES 3000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



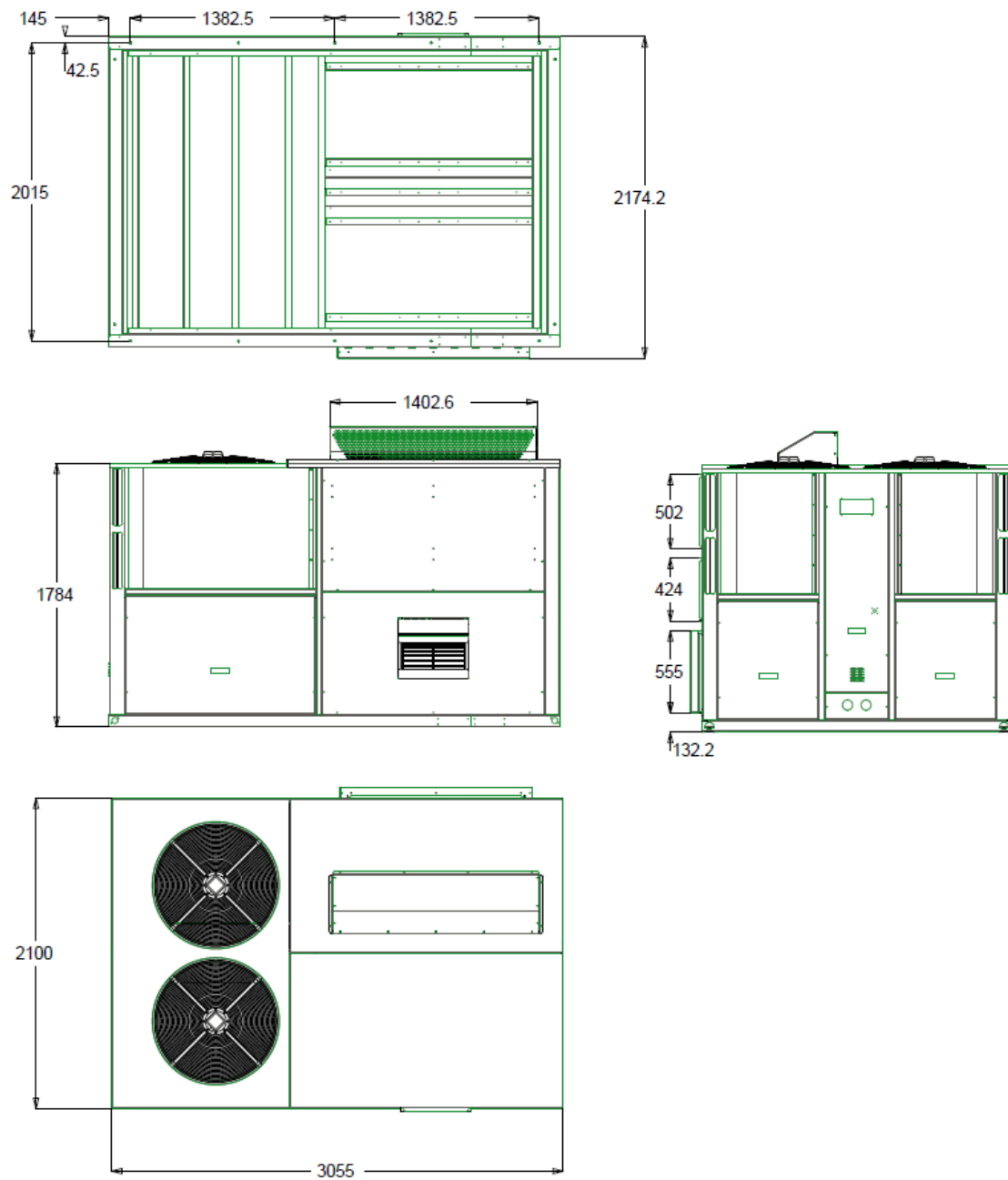
Note. Plan not includes transport pallet. Plan with long side radial supply, lateral return.

SERIES 3000, STANDARD ASSEMBLY WITH UPPER RETURN UNIT (SF)



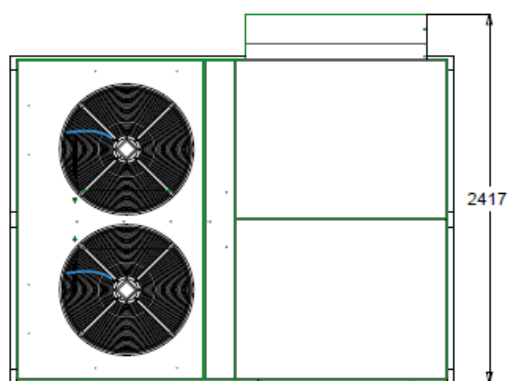
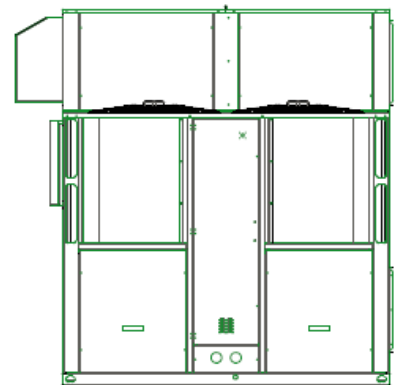
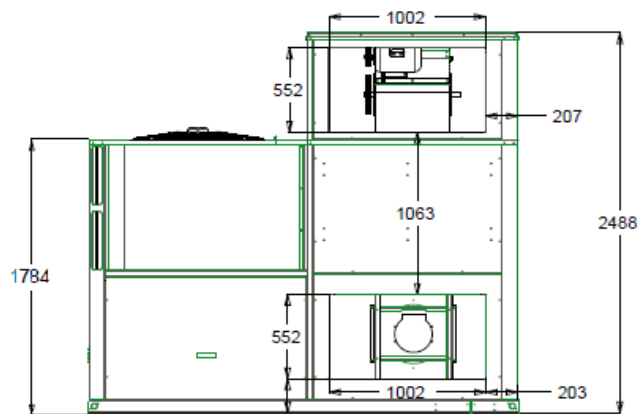
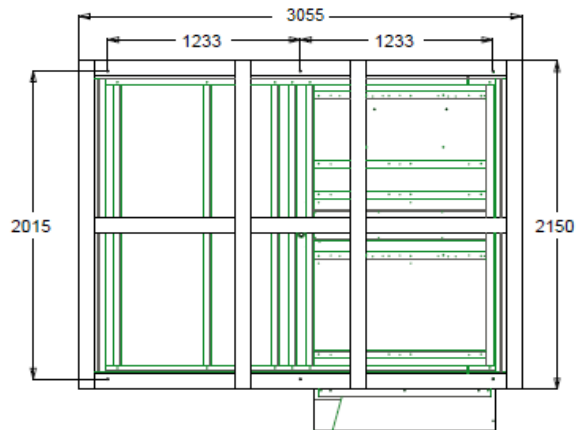
Note. Plan not includes transport pallet. Plan with long side radial supply, lateral return.

SERIES 4000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



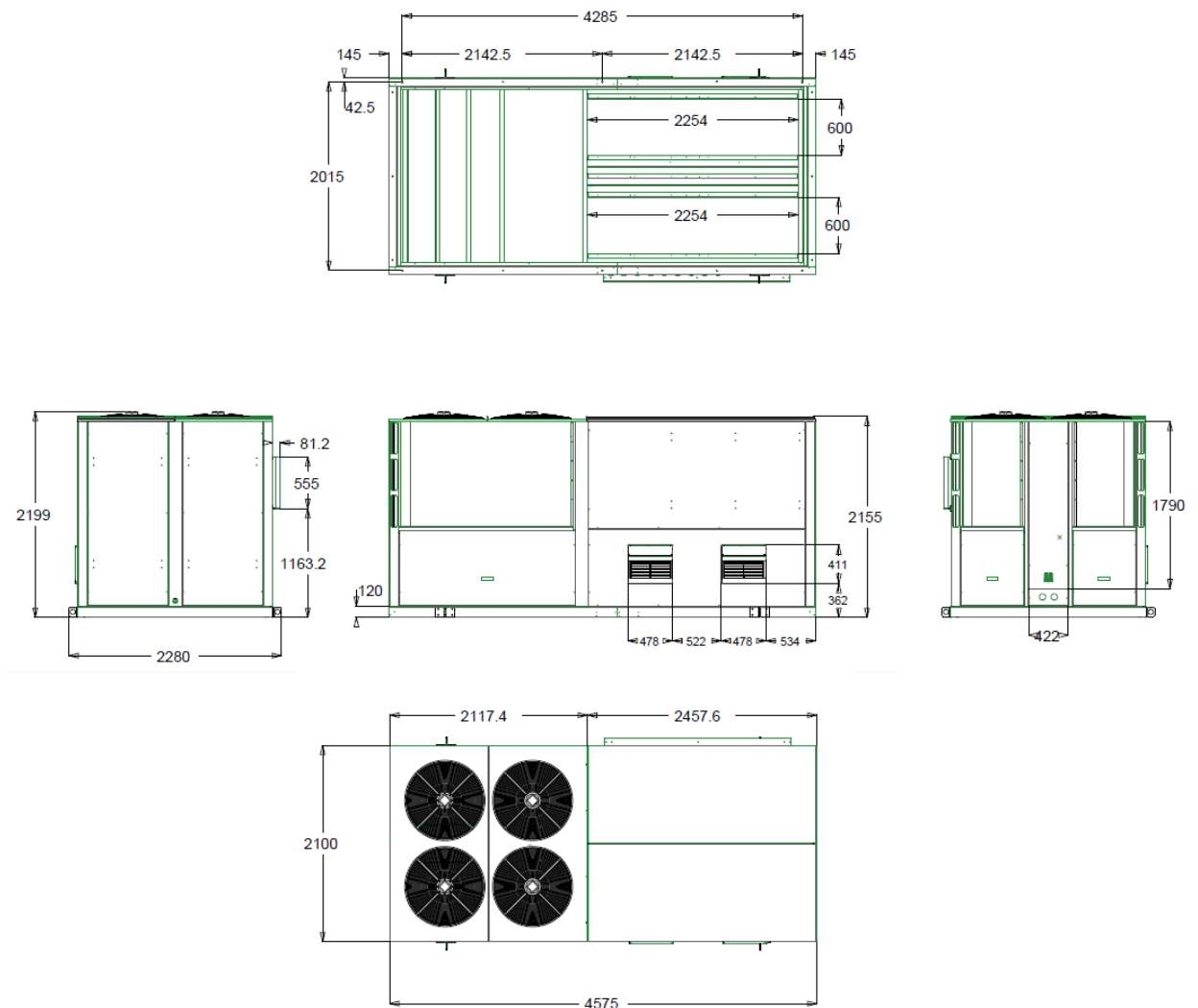
Note. Plan not includes transport pallet. Plan with long side centrifugal supply, upper return.

SERIES 4000, STANDARD ASSEMBLY WITH UPPER RETURN UNIT (SF)



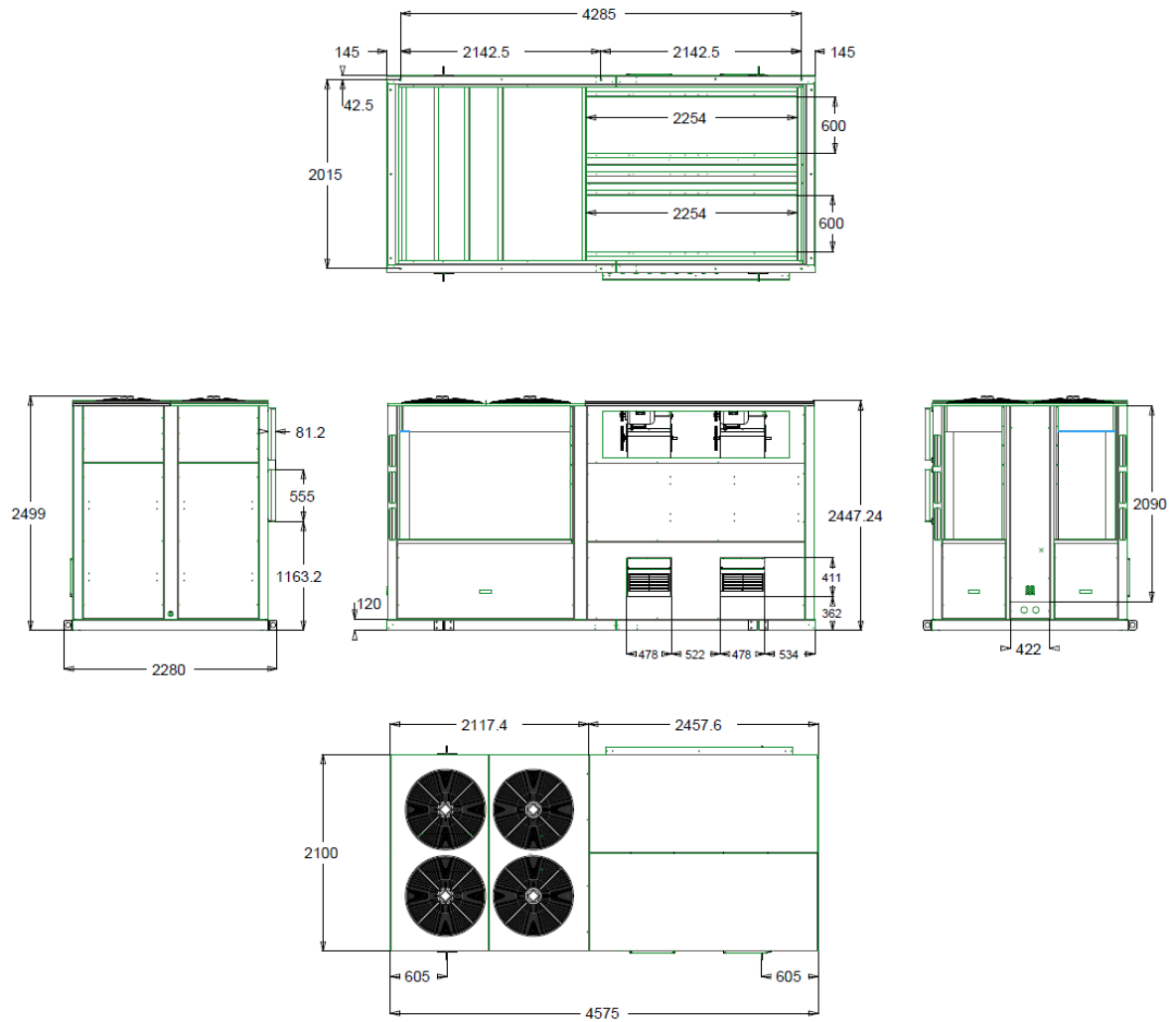
Note. Plan not includes transport pallet. Plan with long side radial supply, lateral return.

SERIES 5000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



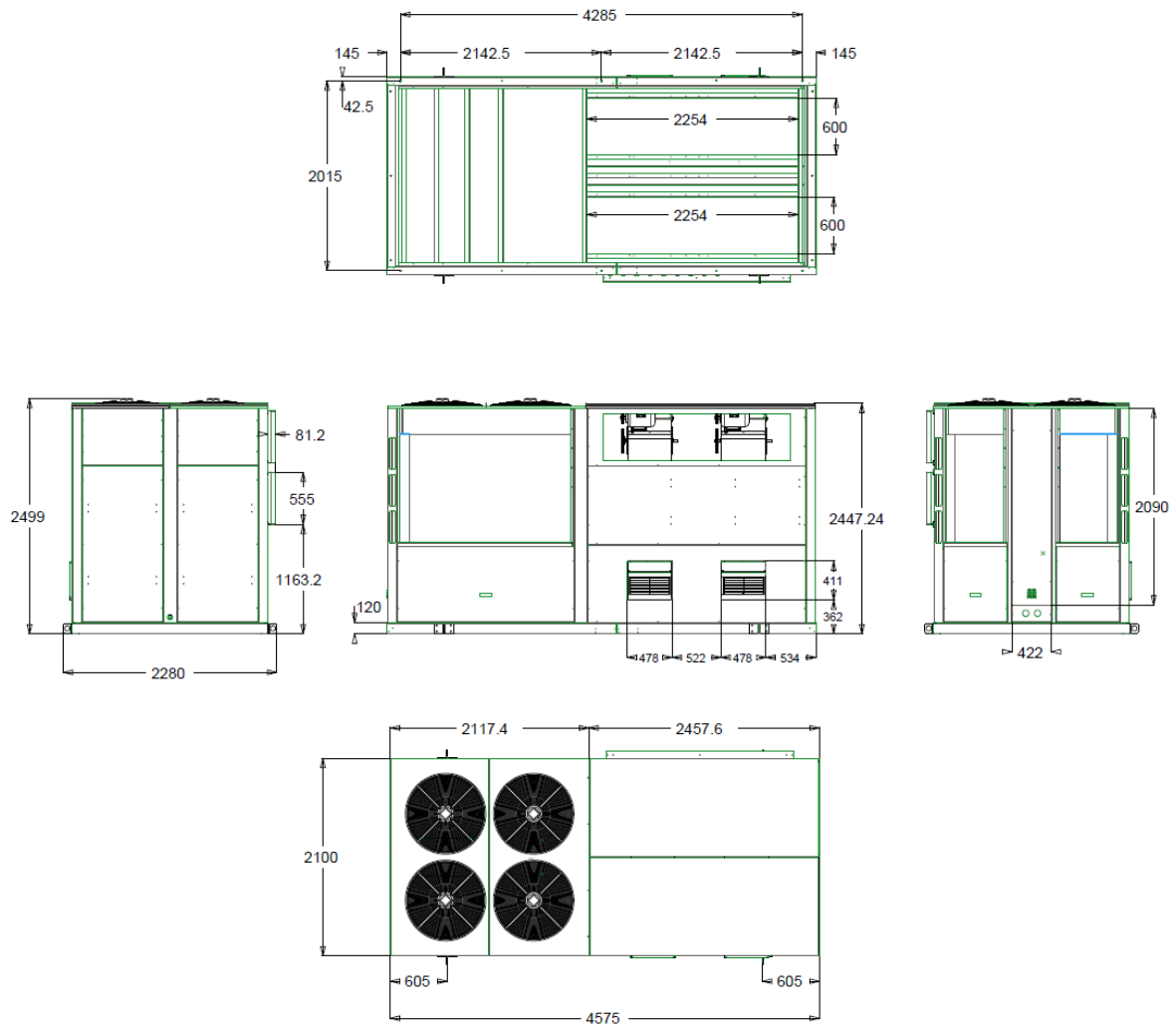
Note. Plan not includes transport pallet. Plan with long side centrifugal supply, lateral return.

SERIES 5000, STANDARD ASSEMBLY WITH UPPER RETURN UNIT (SF)



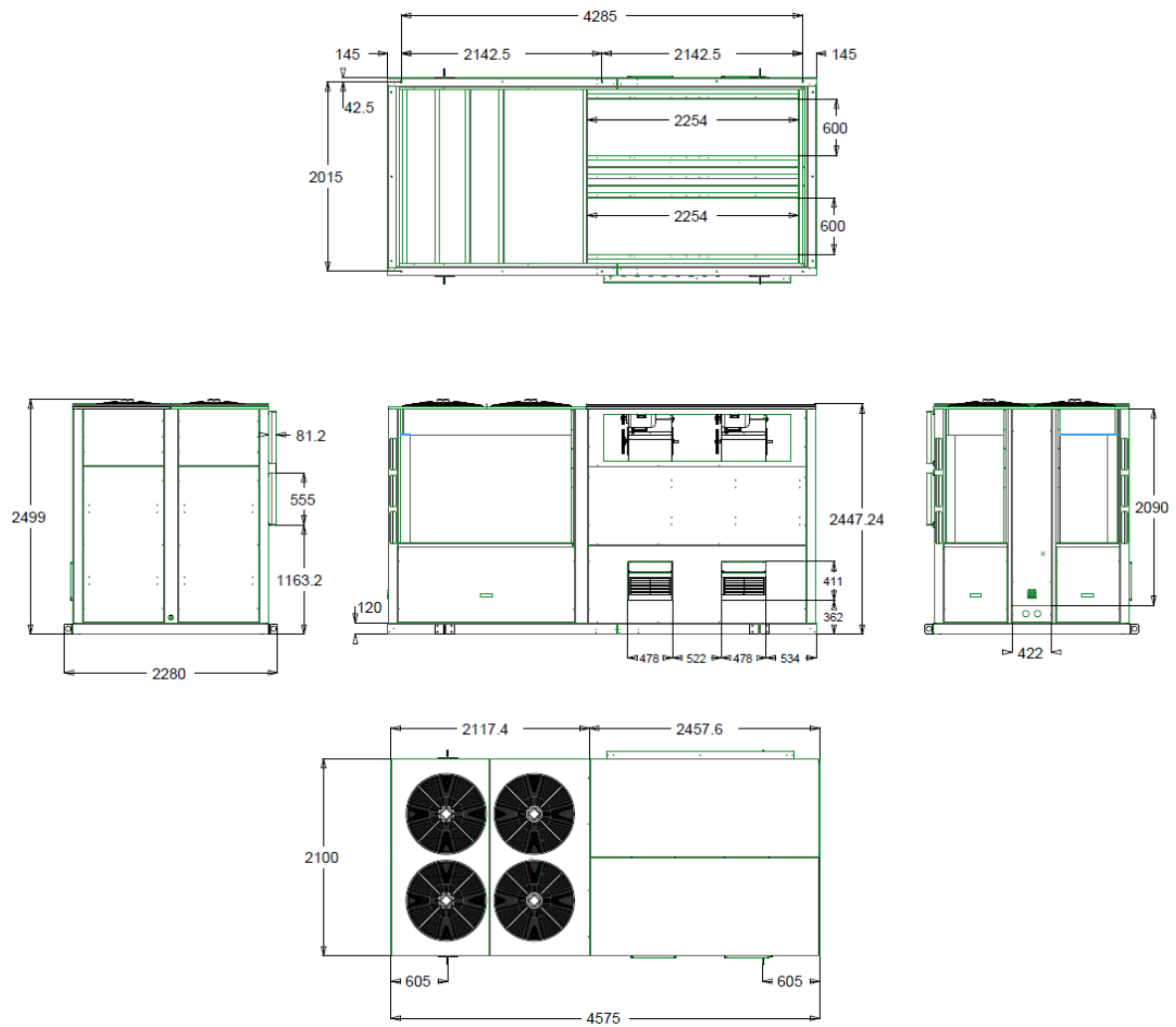
Note. Plan not includes transport pallet. Plan with long side centrifugal supply, lateral return.

SERIES 6000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



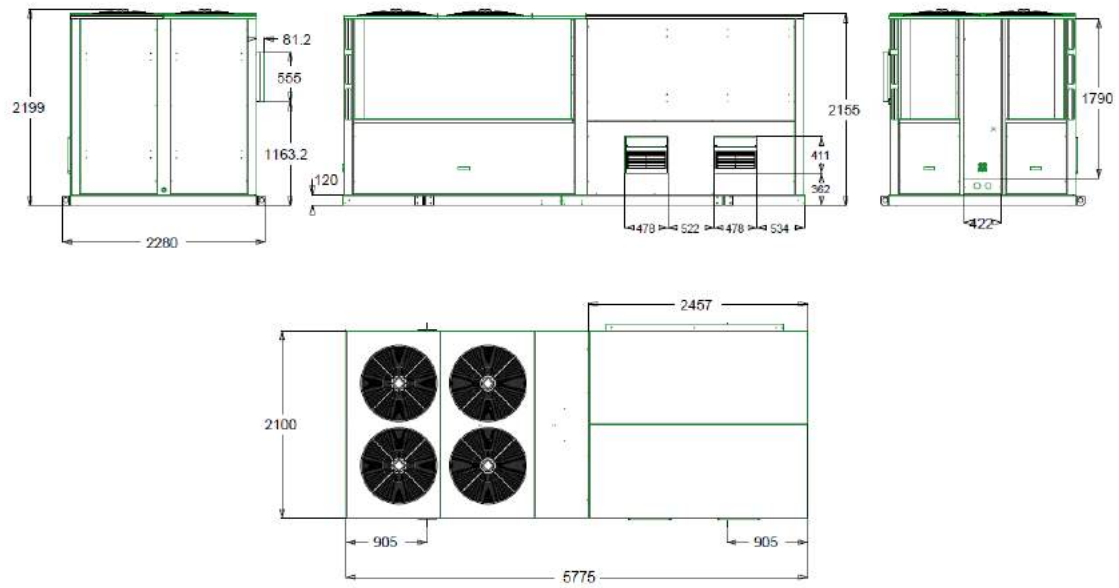
Note. Plan not includes transport pallet. Plan with long side centrifugal supply, lateral return.

SERIES 6000, STANDARD ASSEMBLY WITH UPPER RETURN UNIT (SF)

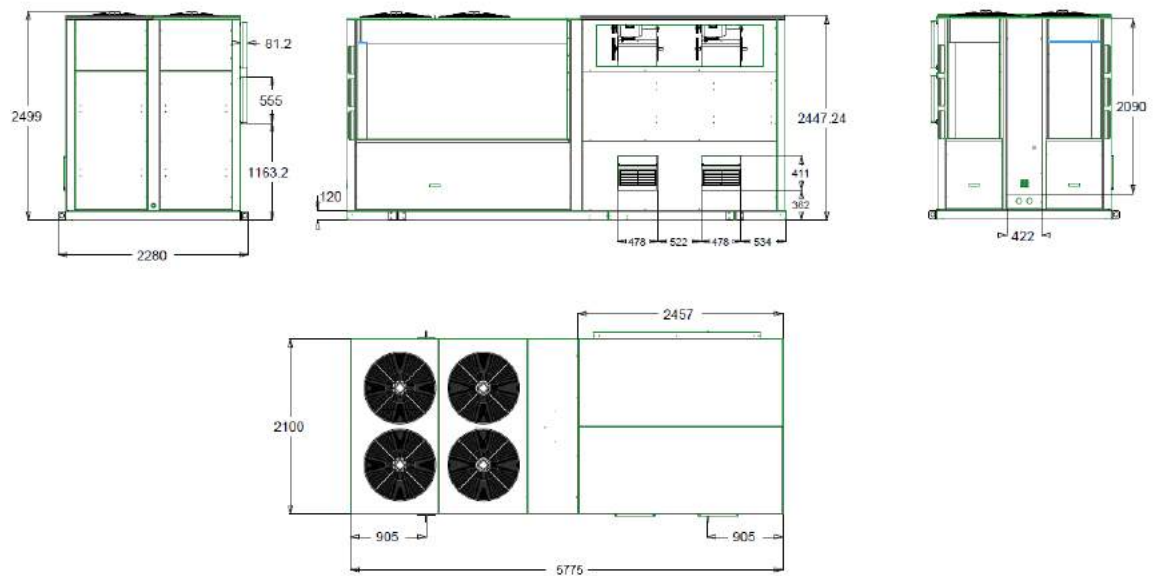


Note. Plan not includes transport pallet. Plan with long side centrifugal supply, lateral return.

SERIES 7000, STANDARD ASSEMBLY WITHOUT UPPER RETURN UNIT



SERIES 7000, STANDARD ASSEMBLY WITH UPPER RETURN UNIT (SF)



INSTALLATION AND COMMISSIONING

The air conditioning units are autonomous Reznor RTU compact air conditioning units. The following diagrams indicate the outer dimensions of the equipment:

The final location of the unit will determine largely the proper functioning of equipment. Install the condensing unit outdoors or a place with good air exchange and away from heat sources.



For installation of the equipment will be necessary to check that the selected surface has sufficient strength to support its weight and vibrations and efforts that can transmit, ensuring the integrity and security of the facility.

Minimum distances for commissioning and maintenance

It is necessary to maintain the minimum clearances for maintenance and security. Clear the air intake areas of the unit for easy intake and exhaust air, and avoid as far as possible the recirculation of air into the unit.



To ensure reliable operation of the equipment and allow access for maintenance, observe the minimum distances recommended.



In the case of installing multiple units next, avoid installing units too close, so that it can restrict airflow to the condenser. Not respecting the minimum distances can lead to malfunction of the unit.

Please check minimal distances drawings



In the case of installing indoor units it is necessary to pay attention to the prevailing wind in the area. In areas of excessive wind you need to check the placement of the registers and dampers covering parts, and that they do their task properly

Before installing the equipment, make sure that they are to be installed on a clean surface free of obstacles. Avoid non-horizontal surfaces.

When installing the equipment on the rooftop deck or on the bed, check that all lines are connected correctly to take the unit, and properly seal ducts and intakes to prevent any air leakage during operation of the unit.

For bench mounting adaptation, ensure that the unit is correctly placed over the curb and the tightness of the whole rooftop unit and bench remains after assembly. A bad installation can lead to air leaks. In some areas, a bad installation can mean that the rules of local regulations heating systems

and fire protection are not met. The assembly of the rooftop unit and the curb is responsibility of the customer.



Electrical installation

Check that the electrical installation of the work to local regulations apply. Do not connect the units to provisional light work. The units must be connected up in the final wiring. Check that the section of the wires complies with current regulations under the conditions of operation. If the unit is three-phase with neutral and ground, verify that the installation is equipped with three-phase network with neutral and ground. The unit must be connected to the network correctly. Otherwise it may not make the launch.

Make sure that all connections are properly made machine before putting the unit on. Check with the wiring diagram that all components are properly seated and connected, especially the security features, such as circuit breakers and the main switch.

To start the unit, check that all circuit breakers are open, and turn the main switch. To start the unit you must have a thermostat control unit or connect the remote maintenance CLIMANAGER regulation.

After opening the general cut-off switch if the contactor coils are turned all the elements will start. Check the direction of rotation of the elements. Compressors and fan motors are equipped in header with a phase control relay. The (standard) Basic model has only phase failure and direction of rotation. The sophisticated model (optional) also detects phase unbalance, undervoltage and overvoltage. If all parameters are correct, the compressors will properly rotate.



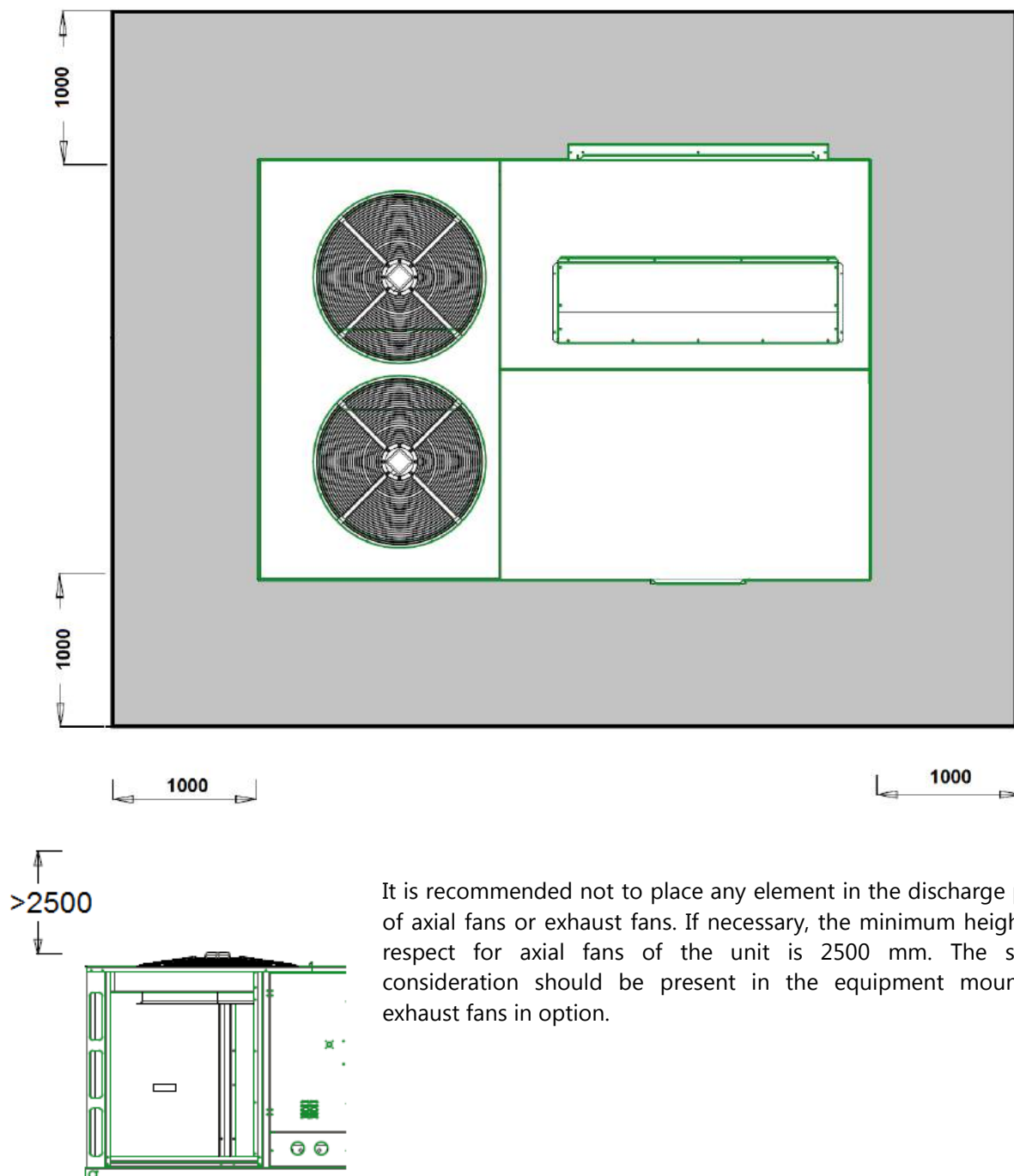
A compressor runs backwards makes an abnormal noise. The compressor will turn upside down for a while until it fails completely. Avoid rotating compressors backwards long

If any of the elements counter-rotating to the right, cut off the main supply voltage by cutting off the main switch and reverse the two phases, until all elements rotate in right direction.

CLEARANCES

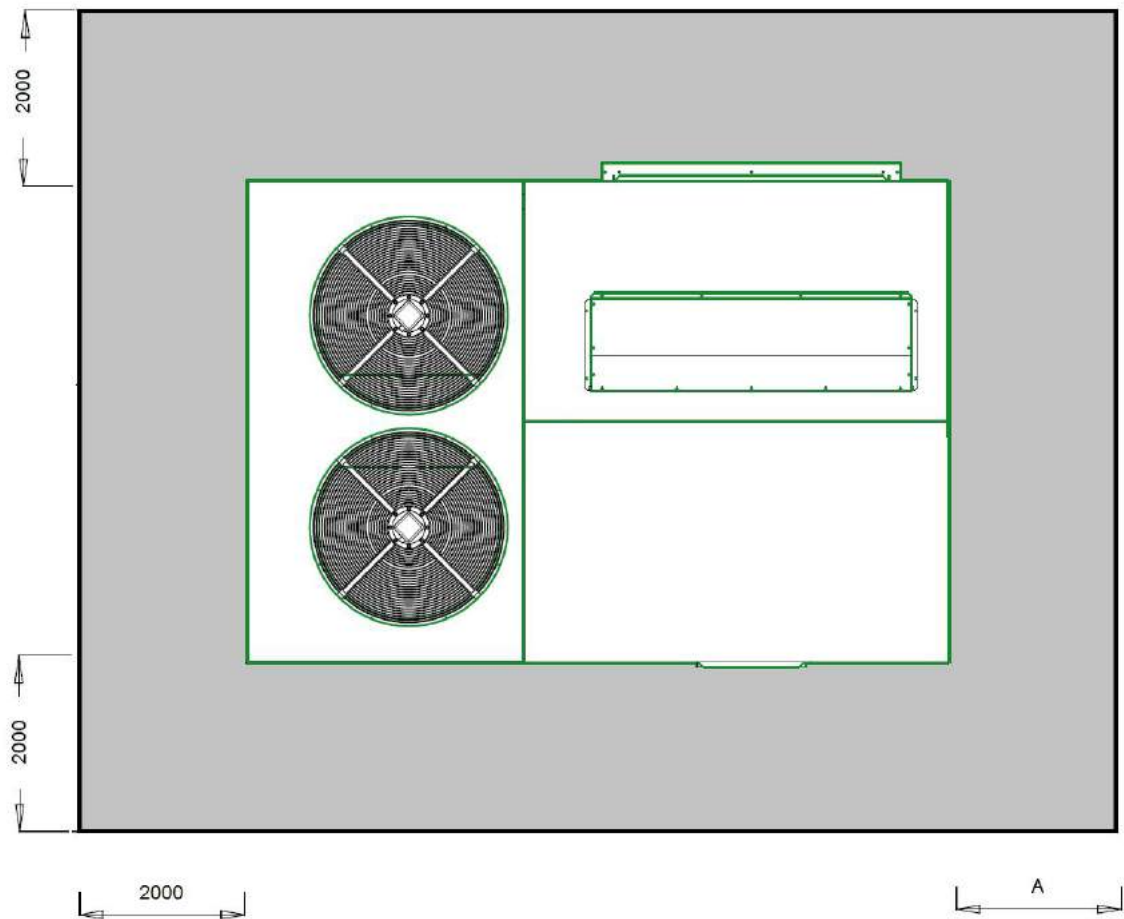
Clearances must be respected according to below drawing. The safety distance must be respected in order to access maintenance or replacement of items in case you need to install spare parts.

Units series 1000 to 3000.



It is recommended not to place any element in the discharge path of axial fans or exhaust fans. If necessary, the minimum height to respect for axial fans of the unit is 2500 mm. The same consideration should be present in the equipment mounting exhaust fans in option.

Units series 4000 to 7000.

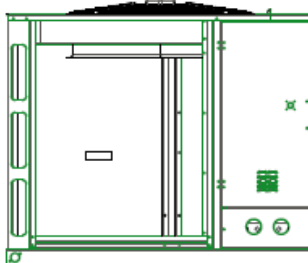


Series 4000; A = 2000.

Series 5000 & 6000; A = 2500.

Series 7000; A = 3000

>2500



It is recommended not to place any element in the discharge path of axial fans or exhaust fans. If necessary, the minimum height to respect for axial fans of the unit is 2500 mm. The same consideration should be present in the equipment mounting exhaust fans in option.

VENTILATION

Once it has been verified that all elements revolve right direction, connecting the gauges to measure pressure and start the computers in cooling mode. Check readings of the manometers. The value of the readings depend on weather conditions.

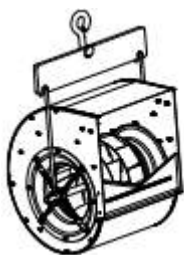


It must be checked the operation of all elements of the ventilation system. If the computer is equipped with belt drive and pulleys, ensure correct installation of these elements. It is necessary to check the operation of the dirty filter pressure switch, pressure switch air flow sensing probes, when the units carry these items. Disconnect the circuit breakers of the fans and blowing units, and check the high pressure reading gauges must be verified.

If the equipment is mounted with radial fans with electronic EC motors, it should be connected to the computer with the right software and the set-point of the fan flow should be introduced into the system.

Centrifugal fans are made of galvanized steel. EC radial fans can be of high strength polymers or aluminum, depending on sizes.

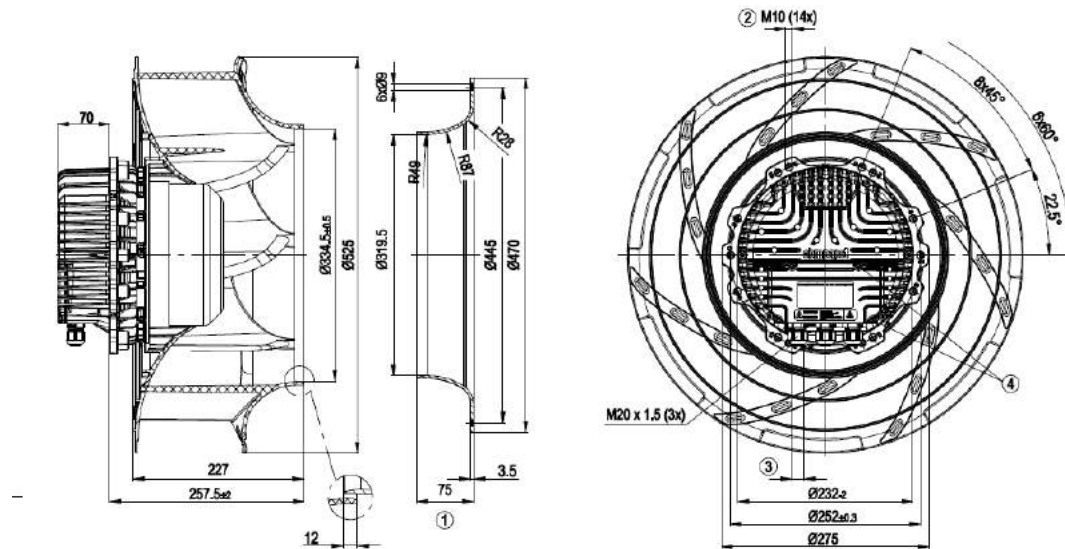
The fans are suitable for outdoor air transport, free of particulate or corrosive vapors and gases. For high humidity or excessive closeness to the sea should be consulted installing epoxy painted fans.



The fans are all mechanically balanced at the factory. When replacing a fan and have to be transported and elevated, take special care to use separators chains or slings to avoid damage to the fan.

The operating temperature limits of centrifugal fans are $-20 \dots + 45 \text{ }^{\circ} \text{C}$.

Characteristics of the radial fans with EC motors.

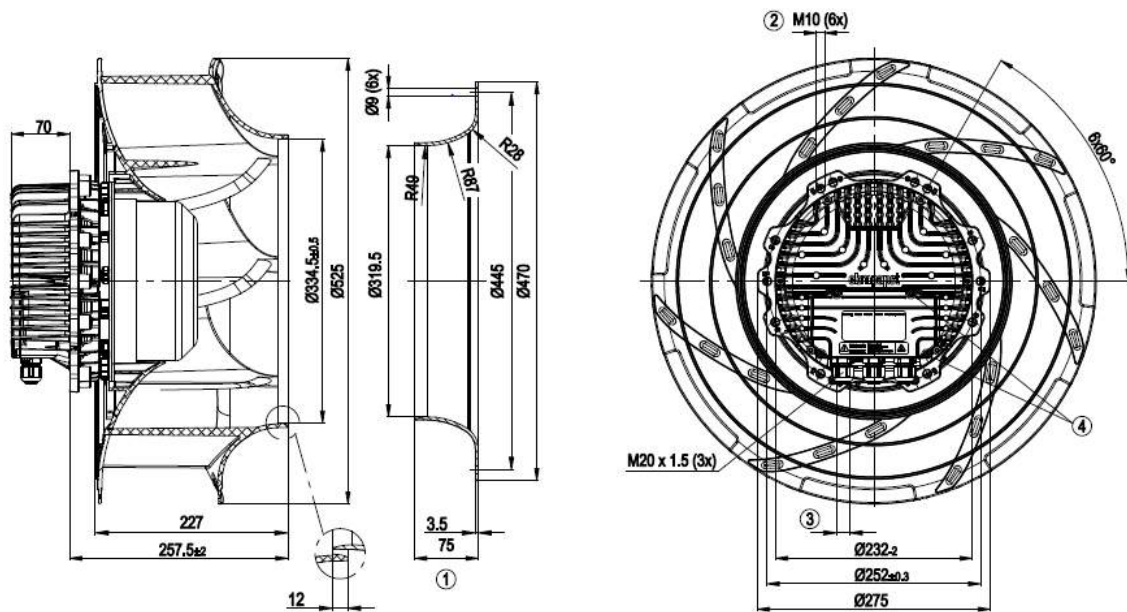


The teams riding EC centrifugal fans backward curved blades series assembled a group of one or more fans R3G500RA2501. Reference 0M002C001. For heavy duty facilities, this fans can be changed by other references that withstand heavier flow and pressure operation. The following tables show the characteristics of the standard EC fans.

Reference	0M002C001
Motor	M3G150-FF
Supply Phases	3~
Nominal Voltage	400 (VAC)
Nominal Voltage range	380 ... 480 (VAC)
Frequency	50/60 Hz
Nominal velocity	1700 rpm
Max. Absorbed Power	2680 (W)
Intensity Absorbed	4.2 (A)
Min. Temperature in ambient	-25°C
Máx. Temperatue in ambient	60°C



These fans have three phase motors and have speed regulation by electronic switching. The units comprise a pressure transducer for control that is located on suction plenum fans.



Type	R3G500-RA25-01	
Motor	M3G150-FF	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min ⁻¹	1700
Power input	W	2680
Current draw	A	4.18
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

* Specific ratio = $1 + p_g / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		63.3	52	56
Efficiency grade N		69.3	58	62
Power input P_{ed}	kW	2.67		
Air flow q_v	m ³ /h	6845		
Pressure increase p_{fs}	Pa	842		
Speed n	min ⁻¹	1710		

Data established at point of optimum efficiency

Mass	22.8 kg
Size	500 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing

Technical features	<ul style="list-style-type: none"> - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Operation and alarm display - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - External release input - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	UL 1004-7 + 60730; GOST; C22.2 Nr.77 + CAN/CSA-E60730-1

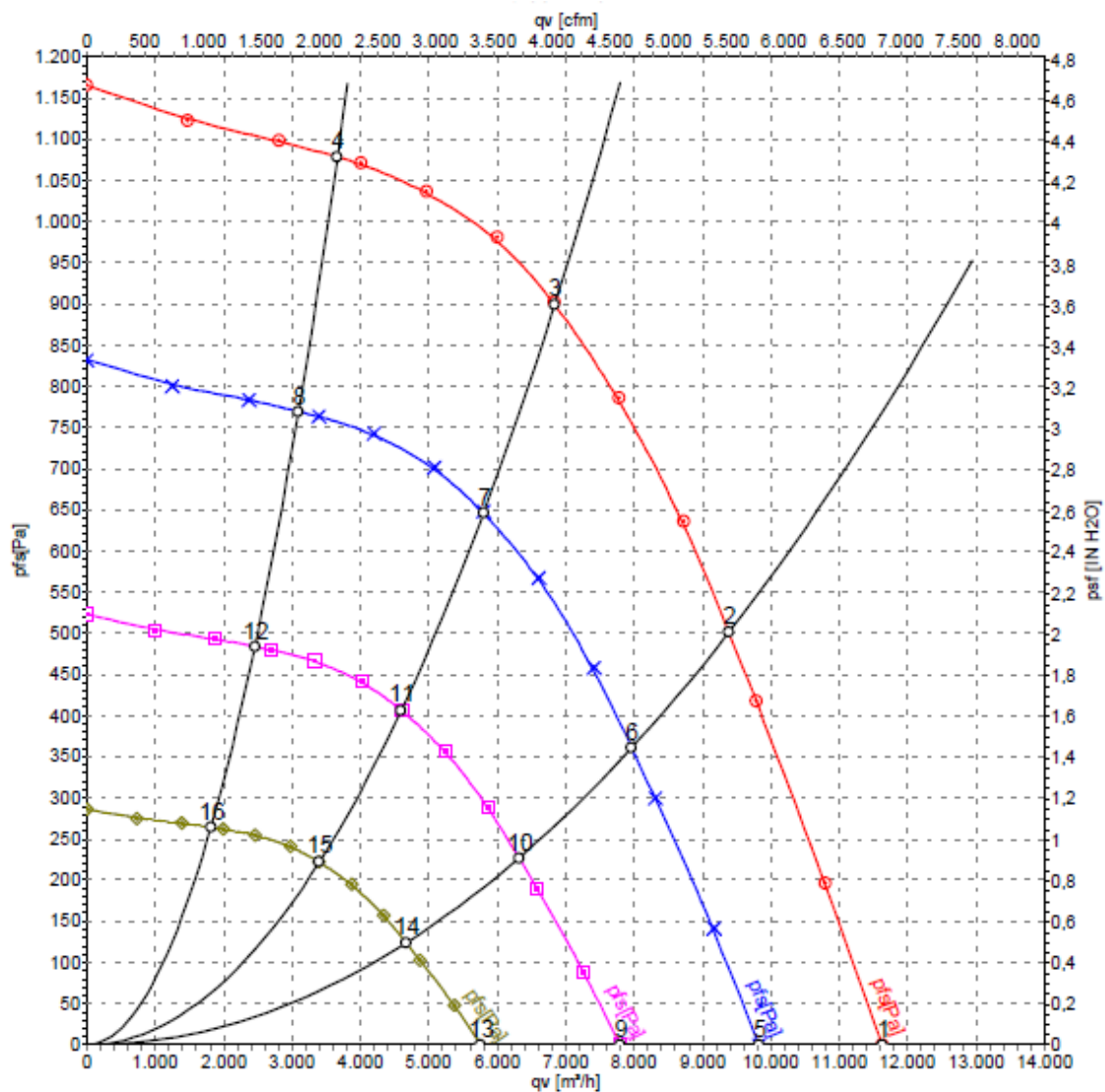
1	RSA	Din 2	8
2	RSB	Din 3	9
3	GND	GND	10
4	Ain 1 U	Ain 2 U	11
5	+10 V	+20 V	12
6	Ain 1 I	Ain 2 I	13
7	Din 1	Aout	14

1	NO
2	COM
3	NC

PE

1	L 1
2	L 2
3	L 3

No.	Pin	Signal	Function / assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	NO	Status relay, floating status contact; normally open; close with error
KL2	2	COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / 2 A (AC1)
KL2	3	NC	Status relay, floating status contact; break with error
KL 3	1	RSA	Bus connection RS485; RSA; MODBUS RTU
KL 3	2	RSB	Bus connection RS485; RSB; MODBUS RTU
KL 3	3 / 10	GND	Signal ground for control interface KL3
KL 3	4	Ain1 U	Analogue input 1 (set value); 0-10 V; Ri= 100 kΩ; parametrisable curves; only usable as alternative to input Ain1 I
KL 3	5	+ 10 V	Fixed voltage output 10 VDC; + 10 V +/-3%; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)
KL 3	6	Ain1 I	Analogue input 1 (set value); 4-20 mA; Ri= 100 Ω; parametrisable curves; only usable as alternative to input Ain1 U
KL 3	7	Din1	Digital input 1: enabling of electronics; enabling: open pin or applied voltage 5 to 50 VDC; disabling: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to <1 V
KL 3	8	Din2	Digital input 2: parameter set switch 1/2; according to EEPROM setting, the valid/used parameter set is selectable per BUS or per digital input DIN2. Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC
KL 3	9	Din3	Digital input 3: Control characteristic of the integrated controller; according to EEPROM setting, the control characteristic of the integrated controller is normally/inversely selectable per BUS or per digital input; normal: open pin or applied voltage 5 to 50 VDC (control deviation = actual sensor value - set value) inverse: bridge to GND or applied voltage < 1 VDC (control deviation = set value - actual sensor value)
KL 3	11	Ain2 U	Analogue input 2; actual sensor value 0-10 V; Ri= 100 kΩ; parametrisable curve; only usable as alternative to input Ain2 I
KL 3	12	+ 20 V	Fixed voltage output 20 VDC; + 20 V +/-25/-10 %; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)
KL 3	13	Ain2 I	Analogue input 2; actual sensor value 4-20 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain2 U
KL 3	14	Aout	Analogue output 0-10 V; max. 5 mA; output of the actual motor control factor (output voltage of electronics)/ of the actual motor speed; function selectable per bus; parametrisable curve.



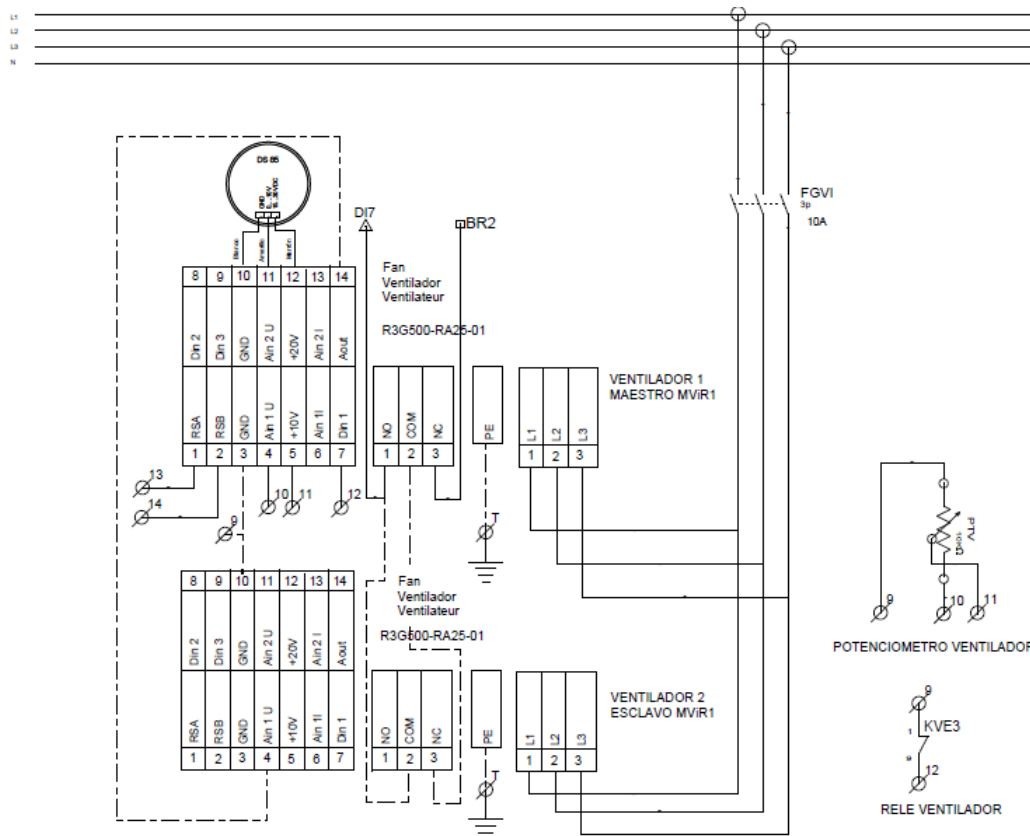
Radia EC fan curve / 0M002C001(R3G500RA2501)

Commisioning the radial fan

The configuration of the electronic radial fan is only necessary to do it in connection differential pressure transducer air. In case of several fans, the fan configured will act as Master mode and the other assembled radial fans will act in Slave mode. It is therefore necessary to make settings for these fans.

For fan configuration should be used "EC CONTROL" software. Connection with an electronic radial fan with potentiometer.

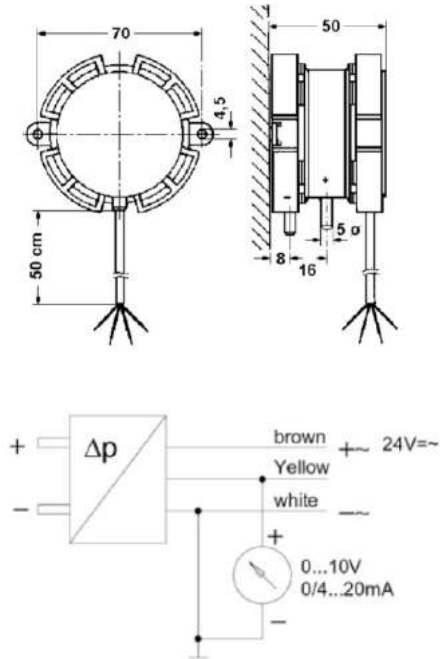
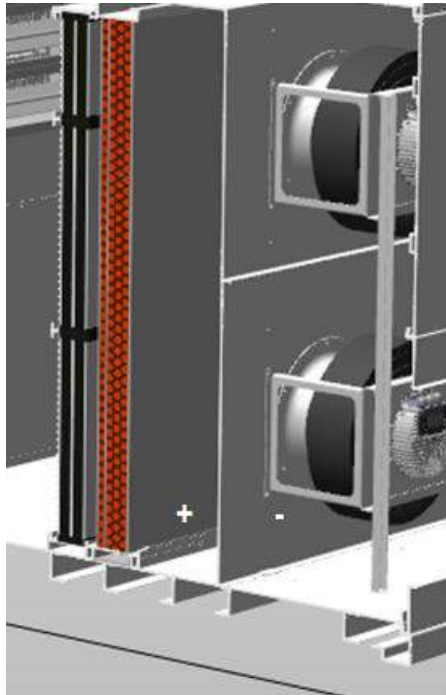
CONNECTING TWO RADIAL FANS WITH POTENTIOMETER



T	GROUND CONN.	SUPPLY CONNECTIONS
1	L VAC 50Hz	
2	N	
3	REMOTE ON OFF	DIGITAL INPUT
4		
5		
6	WINTER SUMMER	
7	L 24VAC	REGISTER MOTORS ELECTRIC SUPPLY
8	N	
9	GND	
10	Ain1 U(0-10V)	FANS CONNECTIONS
11	+10VDC	
12	Din1 (on/off)	
13	RSB MODBUS	
14	RSB MODBUS	

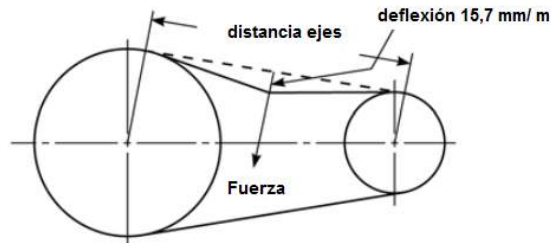
SCHEME OF POSITION AND CONNECTION OF PRESSURE SENSOR.

The sensor is connected by a $\frac{1}{4}$ " flexible hose, affirmative decision is connected to the suction side (the outlet must be perpendicular to the direction of air)



Centrifugal fan units with belts and pulleys

For equipment with motor driven centrifugal fans with coupling pulleys and belts, is necessary to check at receiving equipment the belts are positioned correctly and stressed. All equipment is tested at the factory, so that the belts have operated for testing at least 10 hours. However during transport they may slacken. Is necessary to check the belt tension, the axle alignment and positioning of the boss or tappers. Normally if the belts are not positioned correctly produce abnormal noise.



To tighten the belts, using the motor mount screw. To measure the belt tension can be used the method of force - deflection. Applying a force perpendicular to the belt, you should check that the recommended deflection is 15.7 mm per meter from center to center.



The belts must be replaced when they fail to properly stress or when show visible damage. Excessively loose belt can slide and this generates heat and may result in premature deterioration of the strap and its ruling. On the other hand if the belts are too tight, it can cause failure of the same or becomes excessively suffer bearings fans and motors, which can in turn fail. Typically fails fan shaft bearing.

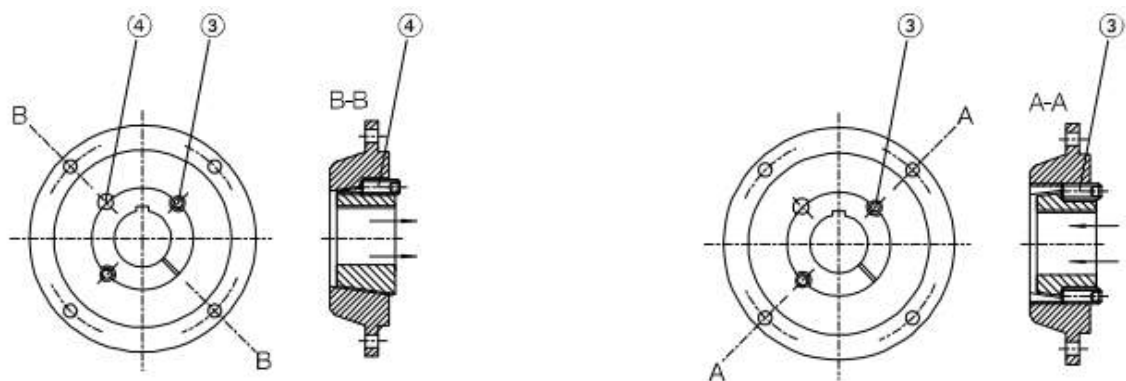
The most appropriate method to control and measure the tension is to use a suitable gauge, usually supplied by the suppliers of belts. There are also electronic meters that are more accurate. In case you need to change the belts for wear and tear over time, it is always recommended to check the original specification and use original belts or the same quality as the original. Poor selection of the belt can lead to a serious failure of other components such as the fan or motor.

Pulleys

The fans are equipped with bearings designed with a rated average life 40,000 hours of operation. (L10 according to ISO 281-1), provided they do not exceed the load limit. Not to exceed the limit load is recommended not to install smaller diameter pulleys to the minimum diameter. Minimum pulley diameters are applicable provided that the straps are tensioned according to specifications. Excessive belt tension can lead to premature deterioration of bearings or even fan shaft breakage.

The following table shows the minimum diameters of the pulleys to be installed in the AT fans voltage conditions suitable belts, depending on engine power. The maximum recommended number of belts is two. Only under certain conditions it supports up to three belts.

Taglia/size		12-12					15-11					15-15					18-13					18-18				
		S/SC	AR	G2L/GC2	G2C	G3C	S/SC	AR	G2L/GC2	G2C	G3C	S/SC	AR	G2L/GC2	G2C	G3C	S/SC	AR	G2L/GC2	G2C	G3C	S/SC	AR	G2L/GC2	G2C	G3C
Kw Installat / Installed Kw	2,2	90		80			85		80			80		80												
	3	112		112			112		100			100		100			100		95			100		90		
	4	140	100	140	85	90	132	90	140	85		132	95	132	85		132		125			132		118		
	5,5	200	140	200	112	112	180	118	200	112	100	180	132	180	100	100	180	100	180	95	100	180	100	180	95	100
	7,5		190		140	140		160		150	118		180		132	118	250	140	250	112	112	250	132	224	112	112
	11		280		200	200		236		224	180		250		200	160		200		160	160		190		160	140
15										250					224		280		224	224		280		224	200	



To proceed to change pulleys, unscrew the screws (3), tighten the Allen head screw (4), press the hub and remove the pulley.

To proceed to fix the pulley, pull the pulley and the hub and place the allen head screw (3) connecting the two parts. Align the motor pulley and the fan, exactar way, using an aligner, and place and tension the belt according to instructions.

Axles and bearings

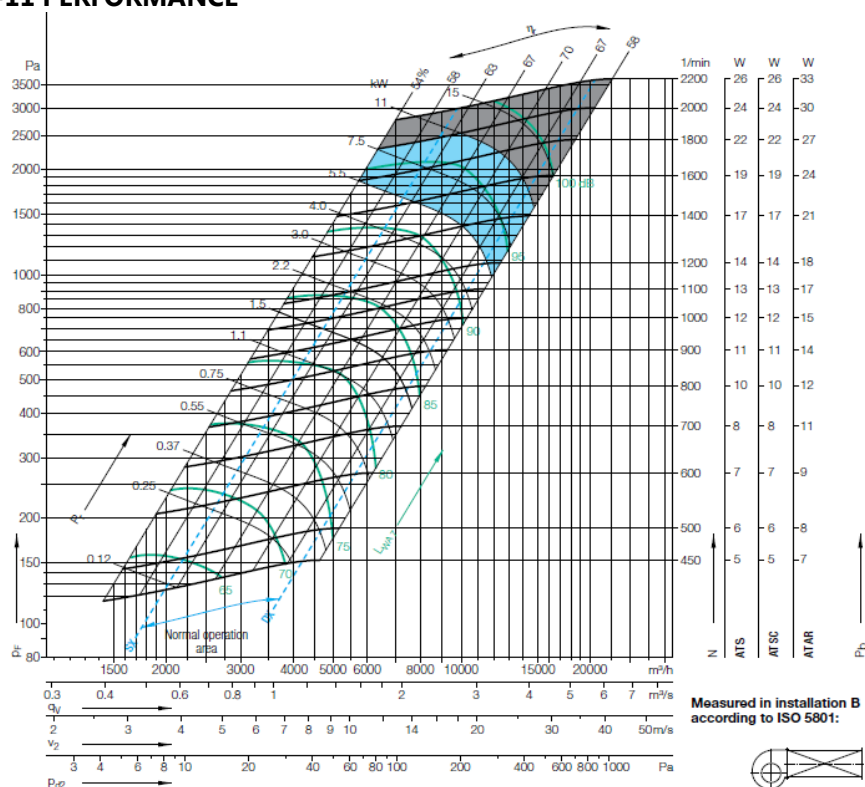


The fan shafts are made of carbon steel C40. The axes are equipped with a keyway. The axes are protected against corrosion. The bearings are maintenance-free, and use grease lubrication high performance and high durability. In case of continuous use at high temperatures or has exceeded the hours of operation, can be relubricated using recommended fat

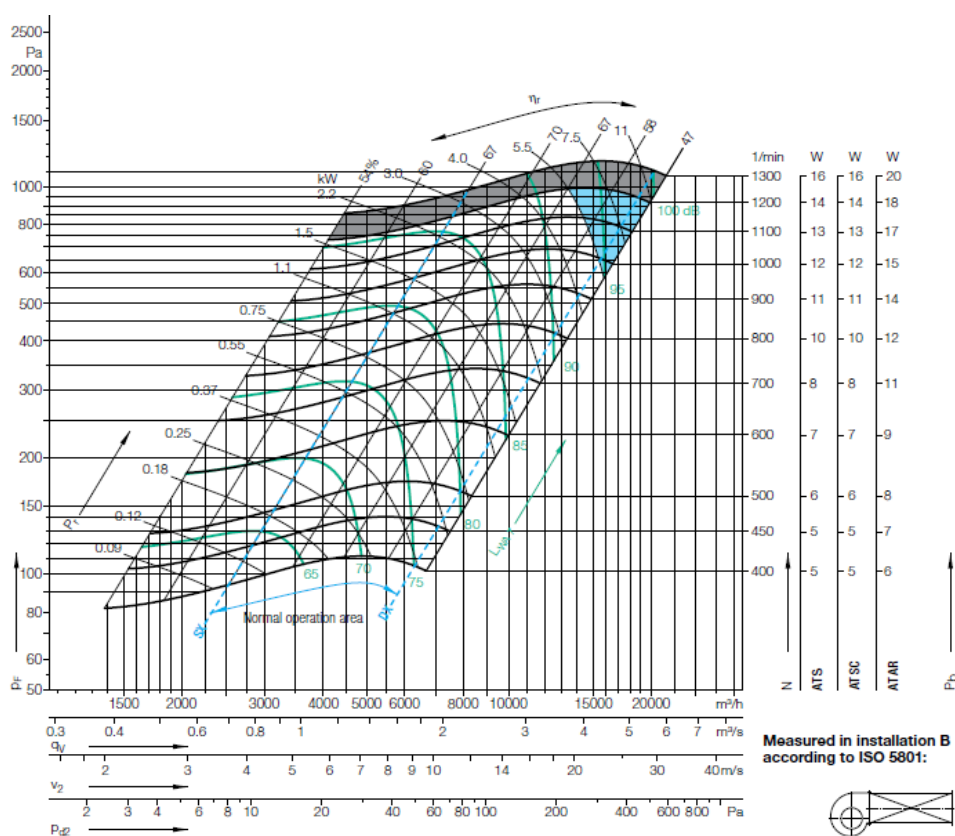
A IWN 01 - Standard grease, Gadus S2 V100 3

A IWN 11 - Klüber-Staburags NBU12/300KP

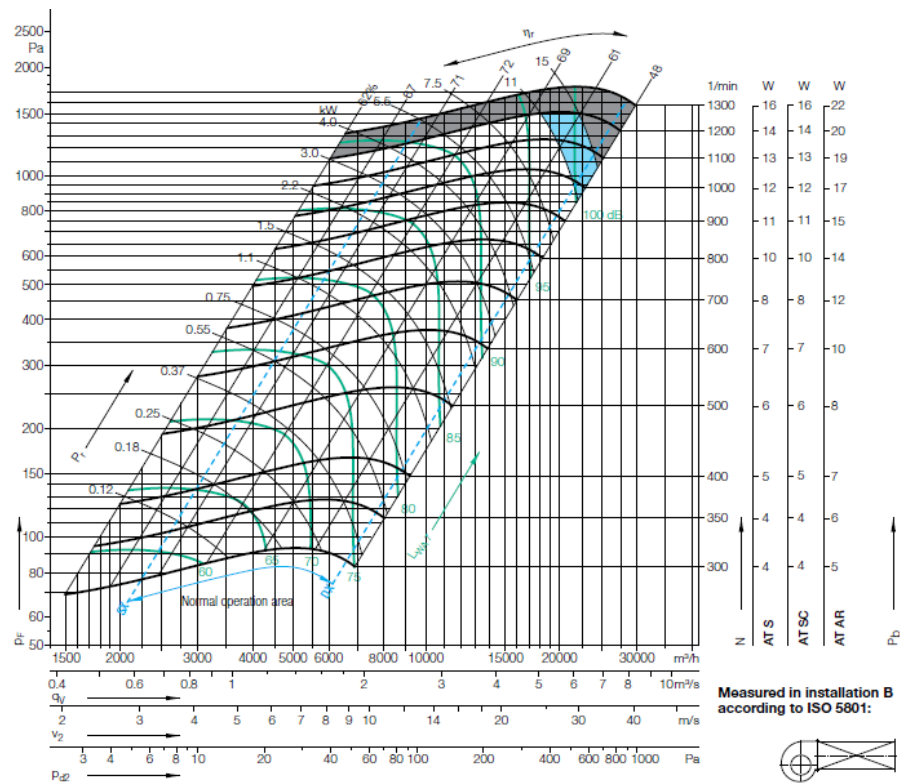
FAN AT 15-11 PERFORMANCE



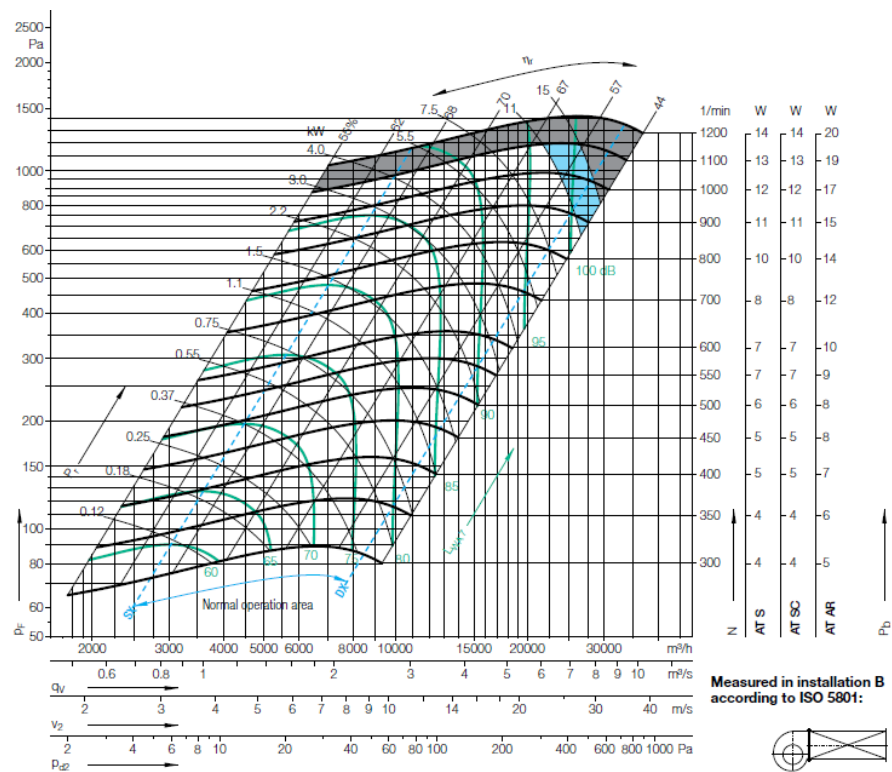
FAN AT 15-15 PERFORMANCE



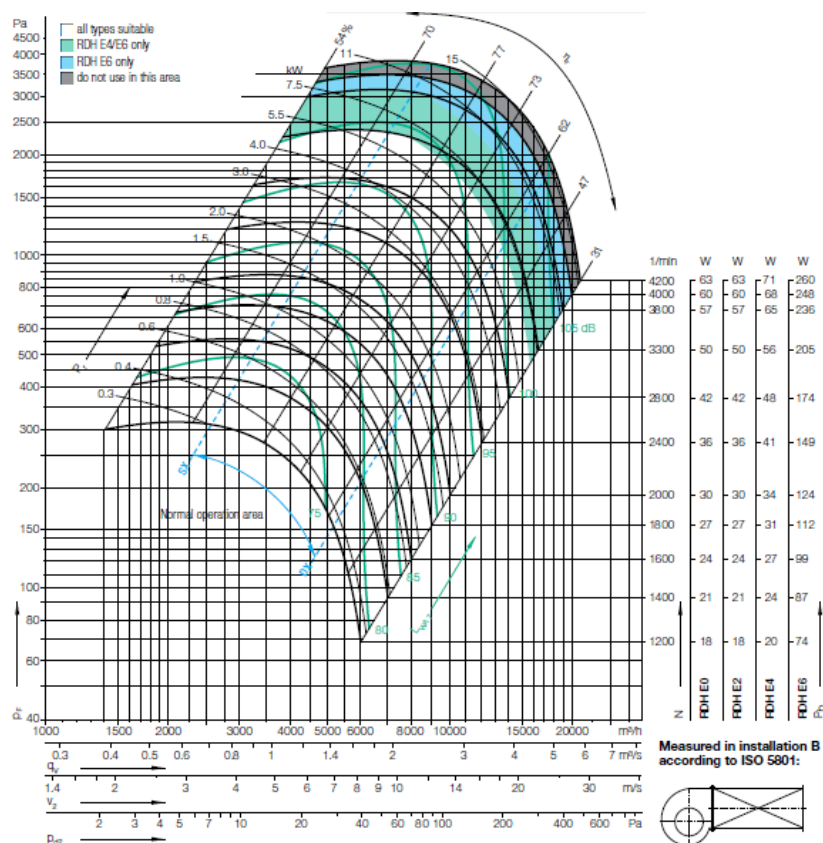
FAN PERFORMANCE AT 18-13



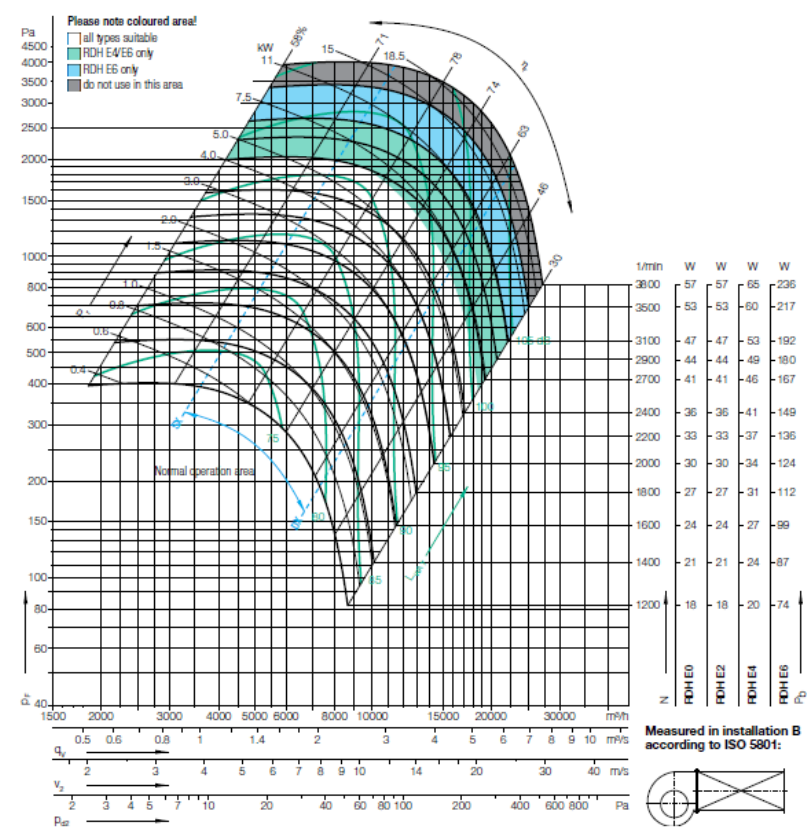
FAN PERFORMANCE AT 18-18



FAN PERFORMANCE RDH 355



FAN PERFORMANCE RDH 400



The following table lists the fan models and pressure drops in the various elements of equipment as standard construction. For dimensioning the transmission has to take into account the fan model, the available pressure and flow required in the installation required.

The capacity of the equipment can vary generally $\pm 20\%$ from the nominal values, except models 200 and 230, the maximum flow rate is 15%, without application of the mist eliminator. The optional stop-drop can be used to exceed the value of flow rate up to 5% more than the maximum, or for applications where moisture conditions are very high and the production of excessive condensation, to protect facilities crawl drops.

Model	Standard Centrifugal Fan	Standard Fan Number	Indoor Air flow (m ³ /h)	options											
				Indoor coil press. drop (Pa)	Indoor .coil Rec. (Pa)	Unit pressure drop (Pa)	Prefilter pressure drop PPI 15 (Pa)	Filter pressure drop G4 (Pa)	Filter pressure drop F6 (Pa)	Filter pressure drop F7 (Pa)	Filter pressure drop F8 (Pa)	Filter pressure drop F9 (Pa)	Water heating coil (Pa)	Mist eliminator (Pa)	Available pressure (Pa)
1039	AT 15-15 S	1	6800	45	15	20	38	109	160	179	208	212	30.15	32	100
1041	AT 15-15 S	1	6800	45	15	20	19	96	146	160	180	184	30.15	19	100
1044	AT 15-15 S	1	7400	50	17	20	23	99	149	164	186	190	33.5	22	100
1045	AT 15-15 S	1	7400	50	17	20	23	99	149	164	186	190	33.5	22	100
2050	AT 15-15 S	1	8900	40	13	25	33	106	157	175	201	206	26.8	29	120
2060	AT 15-15 S	1	10300	50	17	25	22	98	148	163	184	188	33.5	21	120
3070	AT 15-15 S	1	12000	50	17	25	30	104	154	171	196	201	33.5	26	120
3080	AT 15-15 S	1	13300	55	18	25	25	101	151	167	190	194	36.85	23	120
4090	AT 18-18 S	1	15400	50	17	25	22	98	148	163	184	188	33.5	21	150
4095	AT 18-18 S	1	15400	50	17	25	22	98	148	163	184	188	33.5	21	150
4100	AT 15-15 S	2	17700	60	20	30	29	103	154	170	195	199	40.2	25	150
5120	AT 15-15 S	2	19800	46	15	30	20	96	147	160	181	184	30.82	19	150
5135	AT 15-15 S	2	22700	43	14	30	18	94	145	158	177	181	28.81	18	150
5140	AT 15-15 S	2	23500	46	15	30	19	96	146	160	180	183	30.82	19	150
5150	AT 15-15 S	2	24900	50	17	30	21	97	148	162	184	187	33.5	20	150
6170	AT 18-18 S	2	28600	80	20	30	28	103	153	170	194	198	40	25	150
6200	AT 18-18 S	2	31900	70	18	30	35	107	158	176	204	208	35	30	150
7230	AT 18-18 S	3	37800	75	19	30	32	105	156	173	199	203	37.5	27	150
7260	AT 18-18 S	2	39000	75	19	30	32	105	156	173	199	203	37.5	27	150
7300	AT 18-18 S	3	42500	75	19	30	32	105	156	173	199	203	37.5	27	150

For the purpose of calculating the transmission must be added losses of standard features, indoor coil, indoor air channel, the losses of the corresponding filters of the unit, and the available pressure. The sum of these values gives the total static pressure for selection of the fan.

If the airflow is not the nominal value, it must be corrected by a factor equal to the ratio of the flow squared. With the value of the pressure and flow rate, it is entered in the chart of the fan, and electrical power consumption and speed of the fan is obtained. The motors are fitted as standard IE2 high efficiency, so that the value of the power required to be increased inversely with the engine efficiency. The engine speed is used to select transmission. The ratio of the diameter of the smallest and largest pulley must be equal to the ratio between the recommended regimen of graphic rotation and the rate of nominal rotation of the electric motor. Conventional engines used on rooftops, unless specific constructs are four poles. You should always check that the size of the pulleys are eligible for motor shafts and fan to avoid mechanical failure.

In any case, it is recommended to consult Reznor technical department with plant data for selecting items that best suits the particular application.

In special applications are available centrifugal fans with backward curved blades or reaction, for working with higher pressures available than standard fans action.

EXTERNAL FANS OPTIONS

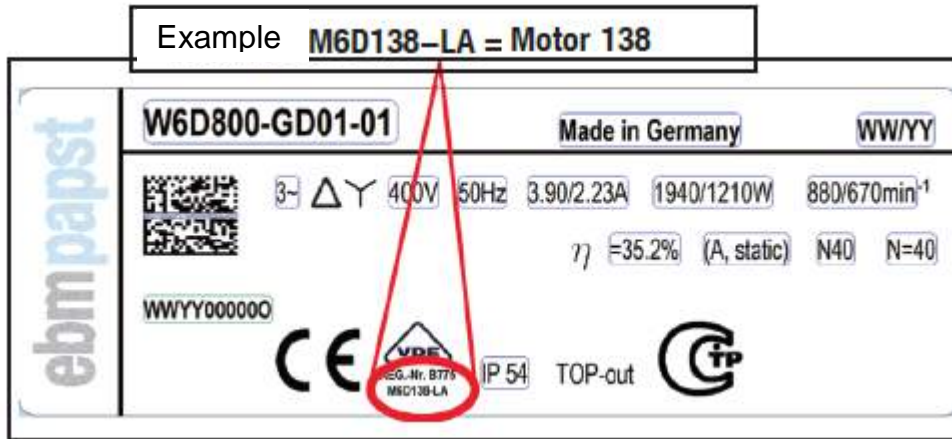
Equipped with axial AC as standard construction HyBlade® outdoor fans, which are designed and manufactured with the highest quality standards, built with an innovative and unique support structure coated aluminum blades constructed reinforced plastic fiberglass. Its aerodynamic shape results in a huge reduction of noise while also increases the efficiency compared to conventional blades.

Groups of serial axial fan assembly motors two speed motors class F, IP54 protection and internal thermal protection, low noise and low weight, factory balanced for less vibration and external protection grille lacquered with polyester.

Rooftop	Low noise	High Efficiency + Low noise	Standard Fan AC	High Energy Efficiency	Powered fan
1039	Axitop	Axitop + EC	800-6 AC	800 EC	-
1041	Axitop	Axitop + EC	800-6 AC	800 EC	-
1044	Axitop	Axitop + EC	800-6 AC	800 EC	-
1045	Axitop	Axitop + EC	800-6 AC	800 EC	-
2050	Axitop	Axitop + EC	2x800-8 AC	2x800 EC	2x800-6
2060	Axitop	Axitop + EC	2x800-8 AC	2x800 EC	2x800-6
3070	Axitop	Axitop + EC	2x800-8 AC	2x800 EC	2x800-6
3080	Axitop	Axitop + EC	2x800-8 AC	2x800 EC	2x800-6
4090	Axitop	Axitop + EC	2x800-6 AC	2x800 EC	-
4095	Axitop	Axitop + EC	2x800-6 AC	2x800 EC	-
4100	Axitop	Axitop + EC	2x800-6 AC	2x800 EC	-
5120	Axitop	Axitop + EC	2x800-6 AC	2x800 EC	-
5135	Axitop	Axitop + EC	2x800-6 AC	2x800 EC	-
5140	Axitop	Axitop + EC	4x800-8 AC	4x800 EC	4X800-6
5150	Axitop	Axitop + EC	4x800-8 AC	4x800 EC	4X800-6
6170	Axitop	Axitop + EC	4x800-8 AC	4x800 EC	4X800-6
6200	Axitop	Axitop + EC	4x800-6 AC	4x800 EC	-
7230	Axitop	Axitop + EC	4x800-6 AC	4x800 EC	-
7260	Axitop	Axitop + EC	6x800-6 AC	6x800 EC	
7300	Axitop	Axitop + EC	6x800-6 AC	6x800 EC	-

Ventilation options for the condensing unit of rooftops we contemplate the option of High Energy Efficiency with axial fans with EC technology and electronic control of condensation (High Energy Efficiency), Low Sound, enhanced axial and radial centrifugal fans with available pressure for indoor installation with ducted air condensation, all available with AC or EC motors. Units are prepared in standard with condensate tray in the outdoor unit for indoor installation technical rooms.

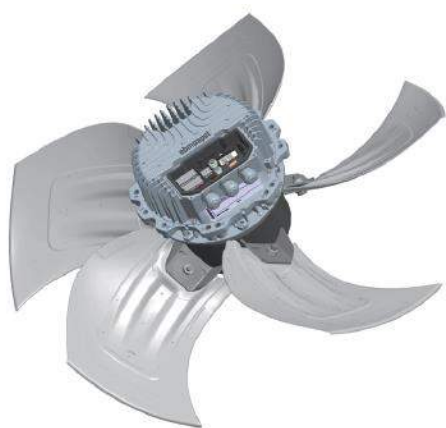
Axitop is a diffuser which is placed directly over the fence of axial fans diameters 800 and 910, and that reduces the noise level of acoustic pressure directly up to 7.2 dB (A). It can also be used to enhance the fan, giving a 9% performance.



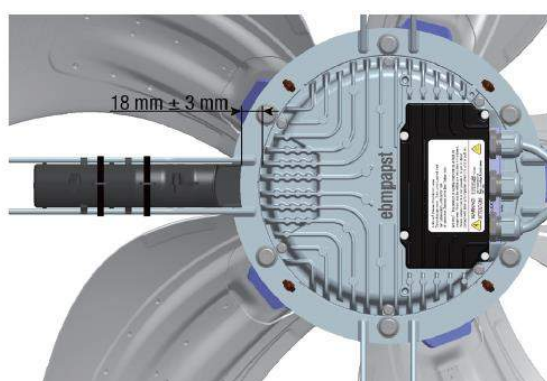
Before beginning assembly, make sure the engine model corresponds to the model supplied AXITOP. Several types of AXITOP depending on the engine and the diameter of the nozzle. To do so check the label (see diagram above). Check that you have the support rings (A) and the terminal box (E).



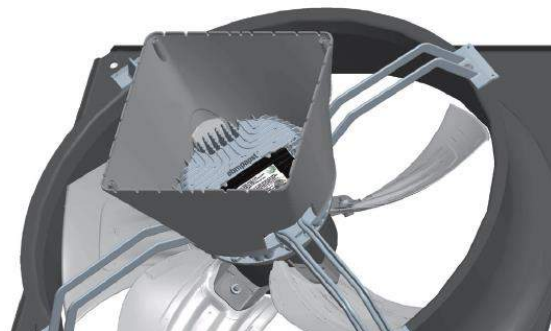
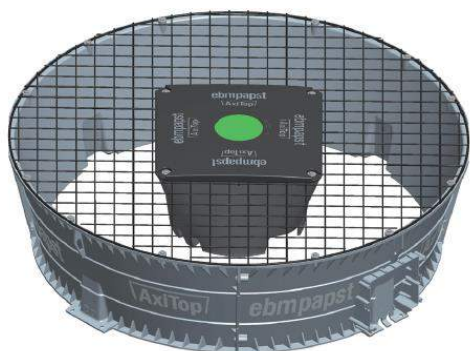
Motor size 112	Motor size 138	Motor size 150
5 Pcs. M6 x 14	4 Pcs. M10 x 25	6 Pcs. M10 x 25
6 Nm \pm 0.9 Nm (4.4 lbf-ft \pm 0.6 lbf-ft)	30 Nm \pm 4.5 Nm (22.1 lbf-ft \pm 3.3 lbf-ft)	30 Nm \pm 4.5 Nm (22.1 lbf-ft \pm 3.3 lbf-ft)



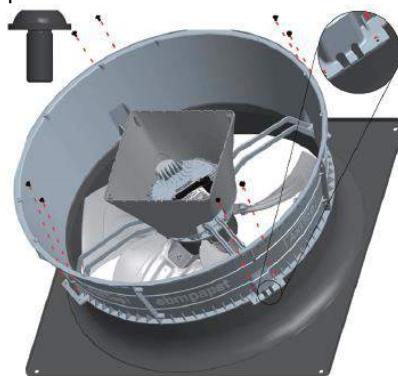
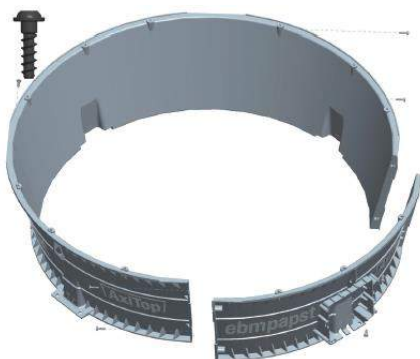
Position the fan with the support ring, making sure the press screwed into the final assembly position pointing downward (this only applies to vertical mounting). Insert and tighten the screws. Then proceed to the connection of the terminal box, being careful to follow the same order of wiring was observed when removing the connection. In the case of engines 150 (of size 910 fans), install the cooling tube (see picture)



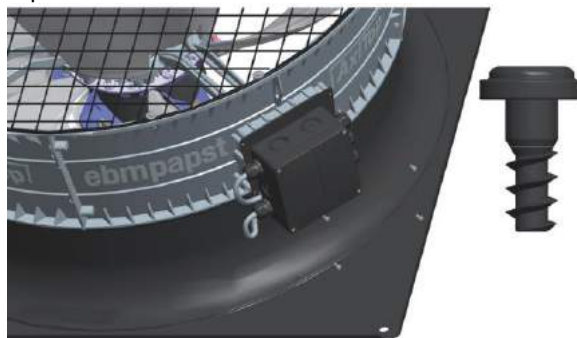
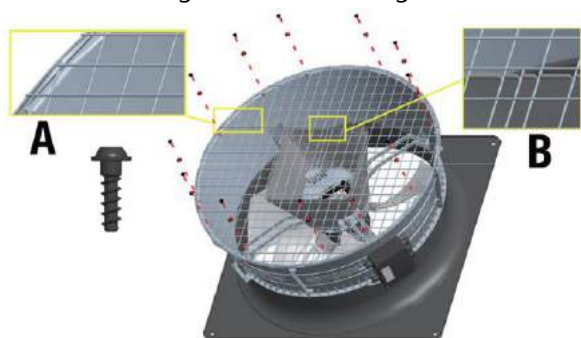
Finally, mounting the diffuser as shown in Fig. If the diffuser is removed, it must be mounted to be placed on the fan.



Left: diffuser mounted. Right: dismantled internal diffuser placed on the EC motor.



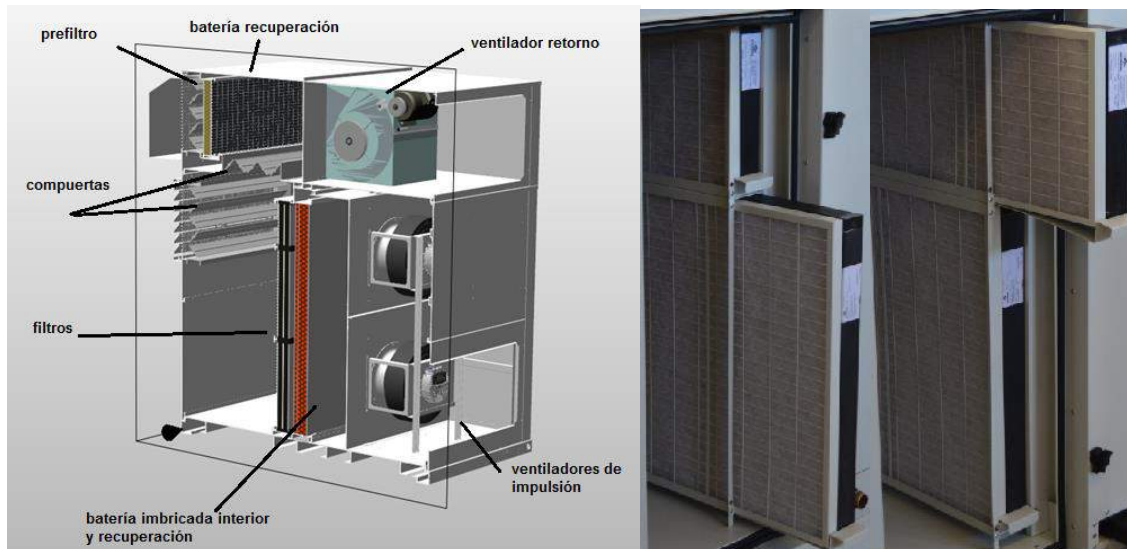
Left: assembling outer diffuser. Right: outer diffuser placement on the EC motor



Left: Mount protection grid. Right: placing external connection box

Assembly and filter replacement

The access panel of the indoor unit provides access to maintenance of filters and motorized dampers. The graph on the left shows the position of the main elements of the indoor unit mounted active recovery.



The image shows a unit with EC radial fans in drive, mounting free cooling and three registers, and return centrifugal fan mounted filters before the coil. The photo on the right shows a detail of the F7 compact filters in its rails. The rail allows the extraction of the filters easily for replacement and cleaning. The rails are removable and are completely painted with epoxy-polyester paint thermally oven-cured.

Standard equipment incorporate a pre-filtration stage and up to two stages of filtration. The filters are mounted in a self-supporting structure made of galvanized sheet steel painted with epoxy-polyester paint oven cured, removable rating and air leakage L2 according to the EN1886 standard.

Optionally, depending on the type of installation, the equipment can also manufacture:

- Only the prefiltration step
- With the prefiltration step and a filtration step

The pre-filtration stage can be set from the following types.

- Prefilter very low pressure drop, washable 15 mm thick.
- Prefilter efficiency G2, G3 or G4 extractable metallic rail painted galvanized steel 25 mm wide, cleanable.

The electronic control allows EC radial fans by keeping the air flow, which will regulate according to the fouling of filters.

Hot water coils for heating

The hot water coil is an optional recommended in applications where the outdoor temperature drops below 5 ° C a high number of hours during the year. The backup coil is a tube and fins heat exchanger for hot water with two rows. The hydraulic connections are located inside the supply air module.

The backup coil optionally assembles hot water valve three-way on / off or proportional valve actuator.

The use of glycol for freeze protection for all applications is recommended. In low temperature conditions the use of glycol is mandatory, as it is the only protection against freezing. When the installation is left unused for a long time, you should check that the facility is clean, drained and empty water. It is important to remember that the mixture of monoethylene in the presence of air can cause corrosive agents. Check that the circuit has drain valves at a low point to allow emptying of the installation.

It should be checked that the hydraulic system has traps in the highest point of the pipe to allow the purging of air.



Use glycol to protect the coil from freezing. The warranty does not cover damage caused by freezing the coil.

Electric heaters for heating

Electric coils are built to support independent modules which are mounted on brackets inside the unit module, next to the cooling coil.

Electric coils are formed by modules of finned steel tube 1, 2 and 3 kW. The resistors feature a thermistor high temperature safety.

Model RoofTop	Low Power	Medium Power	High Power
Serie 1000	12 kW	18 kW	27 kW
Serie 2000 y 3000	27 kW	36 kW	45 kW
Serie 4000 y 5000	36 kW	45 kW	54 kW
Serie 6000 y 7000	54 kW	72 kW	90 kW

OPERATION LIMITS

The specially designed frigorific circuit equipment "CR" allows efficient and reliable operation in all weather conditions refrigerated between -8°C and $+48^{\circ}\text{C}$ as standard and up to $+52^{\circ}\text{C}$ in its Tropicalized option without changing coolant. In heating mode, the "CR" units allow operation in wet conditions environmental temperature between -10 and $+18^{\circ}\text{C}$.

AIR TEMPERATURE	OUTDOOR CONDITIONS		INSIDE UNIT CONDITIONS	
STANDAR	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
COOLING	-8°C	$+48^{\circ}\text{C}$	14°C BH	22°C BH
HEATING	-10°C BH	$+18^{\circ}\text{C BH}$	10°C	27°C
TROPICALIZED	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
COOLING	-8°C	$+52^{\circ}\text{C}$	14°C BH	22°C BH
HIGH TEMPERATURE R134A	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
COOLING	-8°C	$+55^{\circ}\text{C}$	14°C BH	22°C BH



TECHNICAL SPECIFICATIONS

The Reznor RTU roof top units are manufactured in steel sheetmetal structure of high mechanical strength and corrosion resistance.

Main features

- Optimized design for HCF-410A refrigerant.
- High energy efficiency with full load and partial load which reduces operating costs.
- Low noise level through the high performance fans, as well as the anti-vibration silent-blocks assembled for compressors and refrigerant circuits.
- Centrifugal fans, or optionally radial plug-fan with EC motor in impulsion and return.
- High performance electronic control until four phases.
- Easily integrated with communication systems.
- All components and the control are checked and tested in the factory..
- Designed and conceived for maintenance. All components are near to the machine's perimeter for a better maintenance and ease of service.

Developed with the HFC410A a non-ozone depleting refrigerant with high performance latest generation scroll compressors developed by top brands, control by advanced microprocessor and high performance fans made of a composite material.

All these options are designed to simplify installation to simple operations such as refrigeration and electrical connection. The design of the units is also conceived for maximum access for maintenance and service, saving money and time throughout its operational life.

The Reznor rooftops include the latest technologies into its components and they have been laboratory tested under extreme conditions, proving that they are capable of operating in a wide range of climatic conditions of functioning. Our laboratories are continuously working on performance and durability tests in permanently monitored conditions, this allows our teams of technical specialists develop new solutions that are tailored to the needs of our customers.

Structure

The Reznor rooftops are manufactured as standard with self-supporting chassis of galvanized steel high zinc content. Some non-structural elements are made of aluminum for weight reduction. All machine parts are coated with oven cured polyester paint treatment.

The stainless steel condensate pan is removable for an easy cleaning.



Structure finishing details: On the top left, stainless removable isolated pan; on the top right, F7 filtering section, structure completely painted with thermally treated powder paint; at the bottom left, corner detail totally painted inside and out; at the bottom in the middle, motorized gate made of aluminium and completely painted inside; at the bottom right, air tightness draught excluder and completely painted inside.

Optionally, it is possible to produce the series AL 5000 equipments with galvanized steel self-supporting frame and non-structural aluminium panels with high corrosion resistance.

Frigorific Circuit

High efficiency designed in staggered rows coils of copper tubes and high performance aluminium fins.

The condensate pan is incorporated in the external coils of reversible models standard chassis, allowing the assembly of the equipment in an indoor technical room or designated areas, maintaining the floors clean.

Hermetic compressors scroll technology, with acoustic insulation as standard, mounted on anti vibration supports. It includes check valve in all compressors discharge, either internal or external mounted and discharge temperature sensor.

Full charge of refrigerant from factory.

Thermally isolated in all cold metallic lines of refrigerant or water.

Electrical board with compressor protection relay with detection of phase loss, phase equilibrium control and rotation.

Carter resistance electric heater for heat pump design.

Thermostatic expansion valve with external equalisation specifically selected for each heat exchanger that can be used as evaporator. Heat pump systems are equipped with two expansion valves, one of them for the internal exchanger and the other for the external one.

Anti acid dehydrating filter, accumulator tank of refrigerant liquid in the heat pump systems and refrigerant liquid viewfinder.

Four ways cycle reversing valve for heat pump systems. Defrost cycle through cycle reversing by four ways valve.

Droplet separator in aspiration of compressor standard in heat pump version.



Protections

The following protections are included as standard:

- Pressure switch of low and high pressure, and thermostat of high temperature of compressor discharge
- Differential pressure switch of dirty filter as standard, optionally for F filters.
- Thermal protection of compressor, thermomagnetic and protection relay of phases. Differential switches as optional.
- Thermomagnetic switch for the supply line of fans

- General switch in electric panel.
- Transport packaging for maximum protection, with pallet of reinforced wood and phytosanitary treatment according to international transport regulations.
- Design of enhanced evaporator in only-cooling systems

External and internal ventilation

Internal fans are equipped in centrifugal supply and return version as standard, and optionally in radial backward curved fins with EC motor incorporated.

The machines are equipped with HyBlade® axial external fans as standard, constructed with an innovative and unique support structure of aluminum coated fins made of reinforced plastic with fiberglass. Its aerodynamic shape results in a huge noise reduction while as well increases its efficiency comparing with other traditional fins.

Axial motor-fan units of two speeds as standard, with motor class F, protection IP54 and thermal internal protection, of low noise level and reduced weight, they have been balanced in factory for less vibration with external protection grid lacquered with polyester.

Among the options of the condensing ventilation there is the high energy efficiency option with axial fans with EC technology and electronic control of condensation (XEE), low noise level (LNA), axial enhanced fans and centrifuge radials with available pressure for indoor installation with condensation driven air, all of them available with motor AC or EC. The standards units are prepared with condensate pan in the internal unit for its installation in indoor technical rooms.

Electronic control

The Reznor RTU rooftop equipment integrates the electronic control platform CLIMANAGER that allows the air-to-air heat pump system complete control. It also allows the following elements connection:

- Other platforms CLIMANAGER or PCO
- Temperature and/up humidity probes (up to maximum 6 units)
- Network analyzer (energy analyzer)
- Electronic EBM fans
- Gates servomotors.
- Electronic Expansion Valves driver modules
- Inverter Compressor driver modules
- Digital-Scroll Compressor driver modules

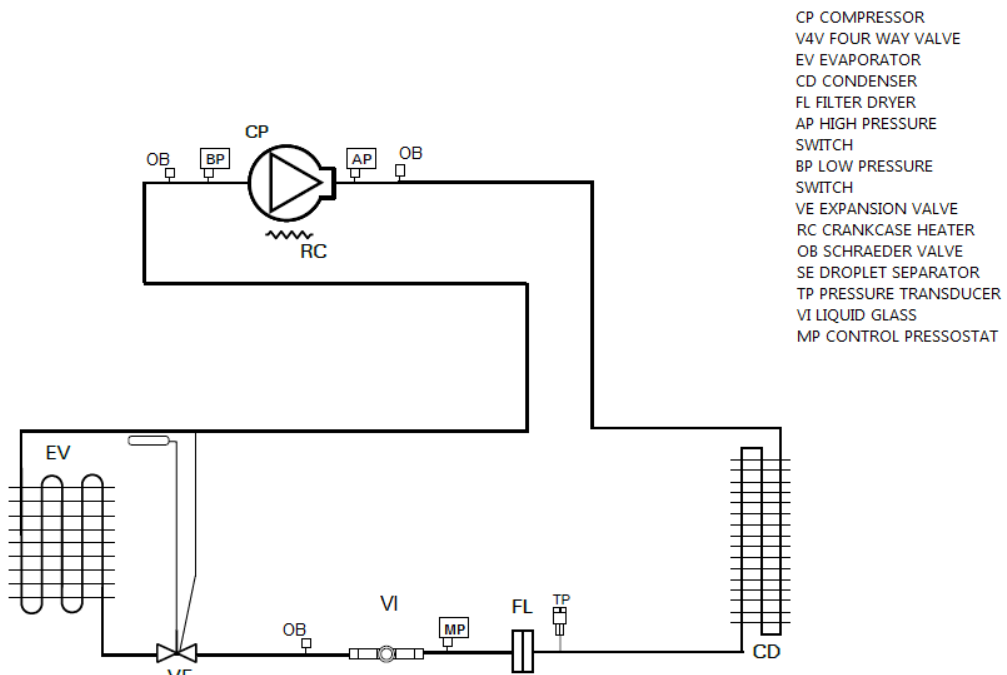
The CLIMANAGER platform can use three different types of connectivity systems:

- 1- By BMS platform it can be connected to a technical management system centralized in RS485 or Ethernet connection and using the communication protocols Carel, Modbus, LonWorks, BACnet, Ethernet or Konnex.
- 2- By Field-Bus platform it allows the communication with probes and other equipments in RS485 connection and MODBUS protocol.
- 3- By pLAN platform it allows the with PDG1 / remote PLD PRO (up to 2 units) and other CLIMANAGER platforms.

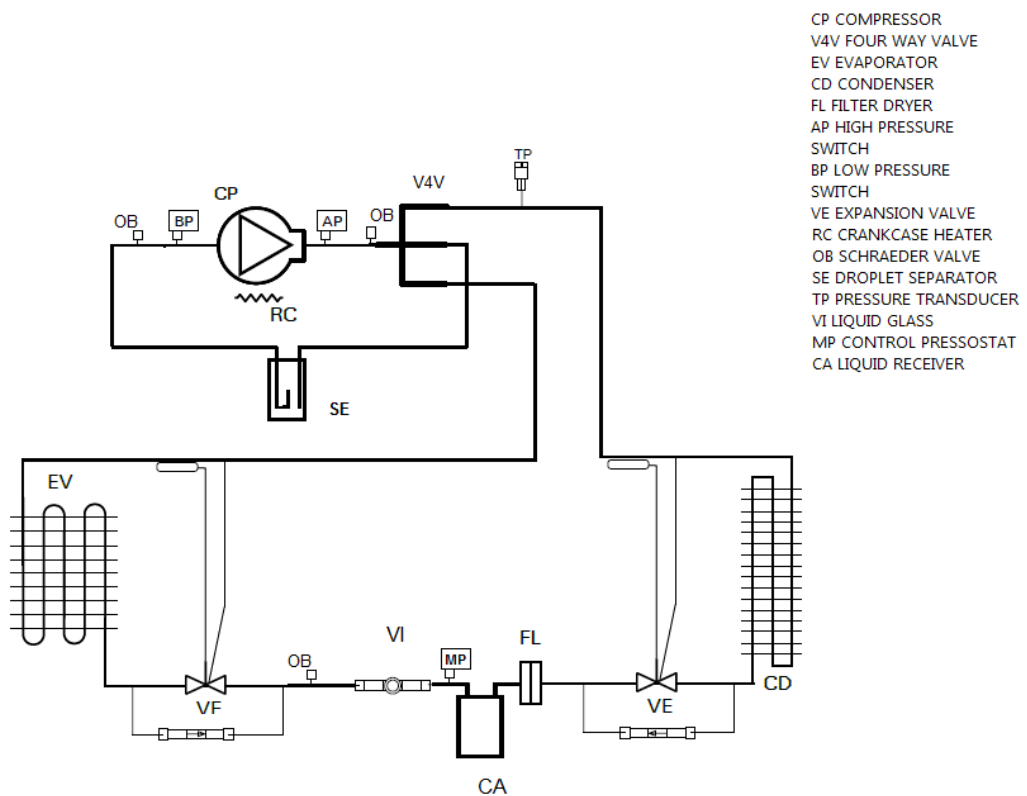
The board is prepared to be able to remotely connect with another devices (up to maximum 15 units) by a PGD1 control without any optional element (TCONN card only).

COOLING SCHEMES

COOLING ONLY UNIT



HEAT PUMP UNIT



NOMINAL POWER TABLE

Model	0017	0020	0022	0026	0030	0035	0039	0044	1039	1041
Size	0	0	0	0	0	0	0	0	1	1
Indoor air flow (m3/h)	3300	3700	4000	4600	5100	6000	6800	7800	6800	6800
Only cooling rooftop										
Refrigeration capacity (kW) Gross	17.8	20.7	23.1	25.8	30.5	34.2	37.5	43.3	41.3	42.5
Refrigeration capacity (kW) Net	17.5	20.3	22.7	25.2	29.7	33.3	36.5	41.9	40.4	41.6
Refrigeration sensitive capacity (kW)	13.3	15.6	17.3	19.3	22.5	25.6	28.4	32.7	28.8	29.2
Sensitive Heat Factor	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.71	0.70
Compressor Absorbed Power (kW) (1)	4.9	5.8	6.4	7.0	8.5	9.3	10.3	12.7	10.9	10.6
Compressor nominal current (A)	8.9	10.5	11.6	12.6	15.4	16.8	18.6	23.0	19.1	24.3
Total absorbed power (kW)	5.7	6.6	7.6	8.4	10.1	12.1	13.2	15.9	13.5	13.2
EER Gross	3.6	3.6	3.6	3.7	3.6	3.7	3.6	3.4	3.2	3.4
EER Net	3.2	3.1	3.1	3.1	3.0	2.8	2.9	2.7	3.1	3.3
Clasification	A	A	A	A	A	B	B	C	A	A
Heat pump unit reversible rooftop										
Cooling mode										
Refrigeration capacity (kW) Gross	17.7	20.6	23.0	25.6	30.3	33.9	37.1	42.9	40.6	41.6
Refrigeration capacity (kW) Net	17.4	20.2	22.6	25.0	29.5	33.1	36.1	41.4	39.7	40.7
Refrigeration sensitive capacity (kW)	13.2	15.5	17.2	19.2	22.4	25.4	28.2	32.5	28.4	28.8
Sensitive Heat Factor	0.76	0.77	0.76	0.77	0.76	0.77	0.78	0.79	0.71	0.71
Compressor Absorbed Power (kW) (1)	4.9	5.8	6.4	7.0	8.5	9.3	10.3	12.7	11.3	11.58
Compressor nominal current (A)	8.9	10.5	11.6	12.6	15.4	16.8	18.6	23.0	19.6	25.4
Total absorbed power (kW)	5.7	6.6	7.6	8.4	10.1	12.1	13.2	15.9	13.9	14.2
EER Gross	3.60	3.60	3.60	3.70	3.60	3.70	3.60	3.40	3.15	3.16
EER Net	3.20	3.10	3.10	3.10	3.00	2.80	2.90	2.70	2.98	3.00
Clasification	A	A	A	A	A	B	B	C	B	A
Heating mode										
Heating Power (kW)	18.8	21.6	24.4	27.1	32.2	37.3	41.3	46.7	40.4	42.0
Compressor Absorbed Power (kW) (1)	4.5	5.1	6.2	6.4	7.7	9.0	10.1	11.8	10.07	11.3
Compressor nominal current (A)	8.1	9.2	11.1	11.6	13.9	16.3	18.2	21.3	18.5	24.4
Total absorbed power (kW)	5.3	5.9	7.3	7.8	9.3	11.8	13.0	15.0	14.3	15.5
COP Gross	4.1	4.2	3.9	4.1	4.1	4.0	4.0	3.8	3.46	3.26
COP Net	3.5	3.5	3.3	3.4	3.4	3.1	3.1	3.0	3.42	3.23
Clasification	A	A	B	A	A	C	C	C	A	B

- (1) Nominal absorbed Power only for compressors
- (2) Refrigeration data for return air 27°C -50% (77°F), external temperature 35°C (95°F).
- (3) Refrigeration data for return air 20°C – 50%, external temperature 6°C BH.
- (4) Nominal absorbed power (compressor motors, external and internal standar fan)

Model	0017	0020	0022	0026	0030	0035	0039	0044	1039	1041
Size	0	0	0	0	0	0	0	0	1	1
Internal air flow (m3/h)	3300	3700	4000	4600	5100	6000	6800	7800	6800	6800
No. Compressors	1	1	1	1	1	1	1	1	1	2
No. Refrigerant circuits	1	1	1	1	1	1	1	1	1	1
No. Control Stages	1	1	1	1	1	1	1	1	1	2
Max. Absorbed Current (A)	14,9	17,7	19,5	21,3	25,9	28,3	31,4	38,8	45,1	45,2
Length (mm)	2205	2205	2205	2205	2205	2205	2205	2205	2755	2755
Width (mm)	1370	1370	1370	1370	1370	1370	1370	1370	2100	2100
Height (mm)	1600	1600	1600	1600	1600	1600	1600	1600	1175	1175
Standar unladen weight (kg)	489	495	504	521	538	561	587	621	641	660
SSF assembly unladen weight (kg)	611	619	630	651	673	701	734	776	913	940
Noise pressure level Lw (db(A))	77	78	78	80	83	85	88	90	85	84
Noise pressure level Lp at 10 m (dbA) (4)	49	50	50	52	55	57	60	62	57	56
Only cooling rooftop										
Refrigerant power (kW) Net (2)	17.5	20.3	22.7	25.2	29.7	33.3	36.5	41.9	40.4	41.6
Heat pump unit reversible rooftop										
Cooling mode										
Refrigerant power (kW) Net (2)	17.4	20.2	22.6	25.0	29.5	33.1	36.1	41.4	39.7	40.7
Heating mode										
Heating power (kW) (3)	18.8	21.6	24.4	27.1	32.2	37.3	41.3	46.7	40.4	42.0
External Circuit Battery										
External air flow (m3/h)	14400	14400	14000	14000	14000	20000	20000	20000	20000	20000
No. fans	1	1	1	1	1	1	1	1	1	1
Diameter	800	800	800	800	800	800	800	800	800	800
Poles	8	8	8	8	8	6	6	6	6	6
Fan Absorbed Power (kW)	0.7	0.7	0.7	0.7	0.7	1.6	1.6	1.6	1.58	1.58
Internal Circuit Battery										
Internal air flow (m3/h)	3300	3700	4000	4600	5100	6000	6800	7800	6800	6800
Available nominal pressure (Pa)	80	80	100	100	100	100	100	100	100	100
Maximun available pressure (Pa)	750	750	750	750	750	700	700	700	680	680
No. Plugfan Units	1	1	1	1	1	1	1	1	1	1
Standar Centrifugal fan motor (5)	0,75	0,75	0,75	1,0	1,0	1,5	2,2	2,2	2,2	2,2
Standar Centrifugal fan Absorbed Power (5)	0,50	0,55	0,55	0,80	0,90	1,15	1,30	1,50	1,45	1,55
Plugfan absorbed power (kW) (5)	0.40	0.50	0.60	0.70	0.80	0.90	1.0	1.1	1.0	1.0

(1) Nominal absorbed Power only for compressors

(2) Refrigeration data for return air 27°C-50% (77°F), external temperature 35°C (95°F).

(3) Refrigeration data for return air 20°C – 50%, external temperature 6°C BH.

(1) Noise pressure level at 10 m distance, in free field, directivity 2 and 1,5 meters above the floor, according to standard ISO3744

(4) Absorbed power data for standard nominal point without filtering options.

Model	1044	1045	2050	2060	3070	3080	4090	4095	4100
Size	1	1	2	2	3	3	4	4	4
Internal Air Flow (m3/h)	7400	7400	8900	10300	12000	13300	15400	15400	17700
Only cooling rooftop									
Refrigerant power (kW) Gross	46.2	47.1	52.6	66.4	74.3	80.8	95.5	95.3	105.8
Refrigerant power (kW) Net	45.0	45.9	51.2	64.9	72.6	78.7	92.6	91.3	102.0
Sensitive refrigerant power (kW)	33.0	33.0	38.7	47.2	51.1	55.8	65.6	65.4	73.2
Sensitive heat factor	0.73	0.72	0.76	0.73	0.70	0.71	0.71	0.72	0.73
Compressor absorbed power (kW) (1)	11.67	11.8	15.4	17.2	19.3	21.9	24.4	24.2	28.0
Compressor nominal current (A)	22.8	22.6	36.1	34.8	35.4	38.2	47.4	42.6	49.3
Total absorbed power (kW)	14.3	14.4	18.1	19.9	22.3	25.2	29.7	32.0	35.3
EER Gross	3.40	3.43	3.06	3.51	3.50	3.36	3.35	3.34	3.27
EER Net	3.26	3.30	2.93	3.35	3.34	3.19	3.17	3.26	3.21
Clasification	A	A	B	A	A	A	A	A	A
Heat pump unit reversible rooftop									
Cooling mode									
Refrigerant power (kW) Gross	46.0	45.9	52.2	60.1	71.3	77.1	91.4	90.4	99.8
Refrigerant power (kW) Net	44.8	44.9	50.8	58.6	69.6	75.0	88.5	87.4	96.8
Sensitive refrigerant power (kW)	31.5	31.7	36.9	44.1	49.9	54.3	63.9	63.78	73.8
Sensitive heat factor	0.70	0.71	0.73	0.75	0.72	0.72	0.72	0.74	0.78
Compressor Absorbed power (kW) (1)	12.29	13	16.2	18.2	20.7	23.7	26.0	26.28	29.2
Compressor nominal current (A)	23.7	23.8	28	36	37	40.6	49.4	50.8	55.6
Total absorbed power (kW)	14.9	15.6	18.9	20.9	23.7	27.0	31.3	31.4	33.9
EER Gross	3.31	3.31	2.97	3.08	3.22	3.06	3.13	3.07	3.08
EER Net	2.99	3.10	2.75	2.87	2.99	2.80	2.81	2.91	2.94
Clasification	B	A	C	B	B	B	B	B	B
Heating mode									
Heating power (kW)	47.0	47.6	54.2	62.1	73.4	79.6	92.4	93.7	103.0
Compressor Absorbed power (kW) (1)	12.24	13.2	13.6	16.6	19.1	21.5	23.8	25.7	27.8
Compressor nominal current (A)	23.6	24.6	33	34	35.2	37.6	46.2	47.2	52.0
Potencia absorbida total (kW)	16.6	17.6	17.7	20.8	23.8	30.1	32.8	32.9	35.2
COP Gross	3.40	3.22	3.48	3.47	3.56	3.46	3.42	3.24	3.32
COP Net	3.34	3.16	3.39	3.34	3.39	3.25	3.29	3.22	3.30
Clasification	B	C	B	B	B	B	B	B	B

- (1) Nominal absorbed Power only for compressors
- (2) Refrigeration data for return air 27°C-50% (77°F), external temperature 35°C (95°F).
- (3) Refrigeration data for return air 20°C – 50%, external temperature 6°C BH.
- (4) Nominal absorbed power (compressor motors, external and internal standar fan)

Model	1044	1045	2050	2060	3070	3080	4090	4095	4100
Size	1	1	2	2	3	3	4	4	4
Internal Air Flow (m3/h)	7400	7400	8900	10300	12000	13300	15400	15400	17700
No. Compressors (5)	1	2	2	2	2	2	2	4	4
No. Refrigerant circuits	1	1	2	2	2	2	2	2	2
No. Control Stages	1	2	2	2	2	2	2	4	4
Maximum Absorbed Current (A)	47,5	47,6	61,9	75,3	83,4	89,3	91,7	105,1	119,1
Length (mm)	2755	2755	2755	2755	2755	2755	3055	3055	3055
Width (mm)	2100	2100	2100	2100	2100	2100	2100	2100	2100
Height (mm)	1175	1175	1555	1555	1810	1810	1810	1810	1810
Standar unladen weight (kg)	682	694	948	1075	1155	1210	1355	1419	1560
SSF assembly unladen weight (kg)	922	938	1282	1453	1562	1572	1699	1702	1872
Noise pressure level Lw (db(A))	86	85	85	85	86	85	86	86	88
Noise pressure level Lp at 10 m (dbA) (4)	58	57	57	57	58	57	58	58	60
Only cooling rooftop									
Refrigerant power (kW) Net (2)	45.0	45.9	51.2	64.9	72.6	78.7	92.6	91.3	102.0
Heat pump unit reversible rooftop									
Cooling mode									
Refrigerant power (kW) Net (2)	44.8	44.9	50.8	58.6	69.6	75.0	88.5	87.4	96.8
Heating mode									
Heating power (kW) (3)	46.9	47.6	52.2	62.1	73.4	79.6	92.4	93.7	103.0
External Circuit Battery									
External Air Flow (m3/h)	20000	20000	25000	24000	26000	26000	36000	36000	36000
No. fans	1	1	2	2	2	2	2	2	2
Diameter	800	800	800	800	800	800	800	800	800
Poles	6	6	8	8	8	8	6	6	6
Fan Absorbed Power (kW)	1.58	1.58	1.4	1.3	1.5	1.5	3.2	3.2	3.2
Internal Circuit Battery									
Internal Air Flow (m3/h)	7400	7400	8900	10300	12000	13300	15400	15400	17700
Available nominal pressure (Pa)	100	100	120	120	120	120	120	150	150
Maximum available pressure (Pa)	610	610	830	800	760	700	580	580	410
No. Plugfan units (6)	1	1	2	2	2	2	2	2	2
Plugfan Absorbed Power(kW) (6)	1.0	1.0	1.3	1.4	1.5	1.8	2.1	2.5	2.9

- (1) Nominal absorbed Power only for compressors
- (2) Refrigeration data for return air 27°C-50% (77°F), external temperature 35°C (95°F).
- (3) Refrigeration data for return air 20°C – 50%, external temperature 6°C BH.
- (4) Noise pressure level at 10 m distance, in free field, directivity 2 and 1,5 meters above the floor, according to standard ISO3744
- (5) Series 2000 and 3000 equipments available in multiscroll option with tandem compressor, 4 compressors and 2 circuits.
- (6) Absorbed power data for standard nominal point without filtering optionals.

Model	5120	5135	5140	5150	5170	6200	6230	7230	7260	7290
Size	5	5	5	5	5	6	6	7A	7B	7B
Internal Air Flow (m3/h)	19800	22700	23500	24900	28600	31900	35500	36000	39000	42500
Only cooling rooftop										
Refrigerant power (kW) Gross (2)	123.6	144.0	149.8	159.8	182.1	208.9	230.5	230.5	270.4	299.8
Refrigerant power (kW) Net	118.8	137.8	143.0	152.0	174.5	199.5	221.8	221.8	260.2	287.1
Sensitive refrigerant power (kW)	85.2	99.1	102.7	108.9	132.3	150.2	176.5	176.5	202.4	224.9
Sensitive Heat Factor	0.72	0.72	0.72	0.72	0.76	0.76	0.77	0.77	0.73	0.74
Compressor Absorbed Power (kW) (1)	32.6	38.9	41.0	43.0	50.7	58.5	65.8	65.8	75.1	84.2
Compressor Nominal Current (A)	57.4	68.6	72.3	75.8	89.4	103.0	114.0	114.0	138.9	155.7
Total Absorbed Power	44.1	49.4	52.9	53.9	61.3	70.6	82.5	82.5	94.9	106.6
EER Gross	3.30	3.25	3.27	3.32	3.24	3.06	3.05	3.05	3.07	3.06
EER Net	3.20	3.11	3.09	3.10	3.10	2.90	2.97	2.97	3.02	2.97
Energetic clasification	A	A	A	A	A	B	B	B	A	B
Heat pump unit reversible rooftop										
Cooling mode										
Refrigerant power (kW) Gross (2)	118.9	134.0	144.4	155.1	173.4	200.6	218.7	231.0	261.2	288.6
Refrigerant Power (kW) Net	115.9	131.0	141.4	152.1	169.4	196.6	212.7	227.0	251.0	275.9
Sensitive refrigerant power (kW)	83.4	98.4	100.5	107.2	129.1	146.8	166.9	177.9	192.5	211.4
Sensitive Heat Factor	0.74	0.77	0.73	0.73	0.78	0.76	0.78	0.81	0.74	0.73
Compressor Absorbed Power (kW) (1)	37.4	42.3	46.1	46.7	53.2	58.5	71.6	69.8	79.2	89.9
Compressor Absorbed Current (A)	73.6	75.2	80.0	80.0	98.8	103.1	122.2	119.2	137.9	156.5
Total Absorbed Power	41.7	45.1	47.7	50.8	54.7	69.0	84.5	82.5	99.0	112.3
EER Gross Version	2.92	2.93	2.95	3.13	3.07	3.07	2.89	3.01	2.94	2.90
EER Net Version	2.77	2.75	2.76	2.89	2.89	2.86	2.74	2.89	2.79	2.71
Energetic clasification	C	C	C	B	B	B	C	B	C	C
Heating mode										
Heating power (kW) (3)	118.9	142.4	149.1	158.7	183.2	210.2	234.1	234.1	286.6	308.3
Compressor Absorbed power (kW) (1)	31.7	38.0	40.9	43.6	46.6	56.9	66.8	66.8	70.2	76.3
Compressor nominal current (A)	62.2	70.0	73.2	76.0	90.4	104.0	112.4	112.4	126.8	137.8
Total absorbed power (kW) (4)	37.4	47.6	50.5	54.2	57.4	73.1	87.5	87.5	90.0	98.7
COP Gross	3.38	3.44	3.42	3.42	3.68	3.30	3.20	3.20	3.59	3.59
COP Net	3.31	3.34	3.30	3.28	3.57	3.20	3.14	3.14	3.56	3.52
Energetic clasification	B	B	B	B	A	B	C	C	A	A

- (1) Nominal absorbed Power only for compressors
- (2) Refrigeration data for return air 27°C-50% (77°F), external temperature 35°C (95°F).
- (3) Refrigeration data for return air 20°C – 50%, external temperature 6°C BH.
- (4) Nominal absorbed power (compressor motors, external and internal standar fan)

Technical Specification										
Model	5120	5135	5140	5150	5170	6200	6230	7230	7260	7300
Size	5	5	5	5	5	6	6	7	8	8
Internal air flow (m3/h)	19800	22700	23500	24900	28600	31900	35500	36000	39000	42500
No. Compressors	4	4	4	4	4	4	4	4	6	6
No. Refrigerant circuits	2	2	2	2	4	4	4	4	3	3
No. Control Stages	4	4	4	4	4	4	4	4	6	6
Maximun Absorbed Current (A)	135,1	144,5	153,8	166,8	173,2	217,3	247,5	247,5	248.1	275.5
Length (mm)	4575	4575	4575	4575	4575	4575	4575	5775	6375	6375
Width (mm)	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
Height (mm)	2200	2200	2200	2200	2200	2475	2475	2200	2200	2200
Standar unladen weight (kg)	2024	2093	2223	2140	2285	2579	2646	2798	3045	3130
SSF assembly unladen weight (kg)	2752	2511	2670	2568	2742	3094	3175	3358	3654	3756
Noise pressure level (db(A))	89	90	90	89	89	92	93	93	96	97
Noise pressure level Lp at 10 m (dbA) (4)	61	62	62	61	61	64	65	65	68	69
Only cooling rooftop										
Refrigerant Power (kW) Net (2)	118.8	137.8	143.0	152.0	174.5	199.5	221.8	221.8	260.2	287.1
Heat pump unit reversible rooftop										
Cooling mode										
Refrigerant Power (kW) Net (2)	115.9	131.0	141.4	152.1	169.4	196.6	212.7	217.0	251.0	275.9
Heating mode										
Heating Power (kW) (3)	118.9	142.4	149.1	158.7	183.2	210.2	234.1	234.1	286.6	308.3
External Circuit Battery										
External Air Flow (m3/h)	56000	56000	56000	56000	76000	76000	76000	76000	118000	118000
No. Fans	4	4	4	4	4	4	4	4	6	6
Diameter	800	800	800	800	800	800	800	800	800	800
Poles	8	8	8	8	6	6	6	6	6	6
Fan Absorbed power (kW) (1)	2.8	2.8	2.8	2.8	6.8	6.8	6.9	6.9	9.6	9.6
Internal Circuit Battery										
Internal air flow (m3/h)	19800	22700	23500	24900	28600	31900	35500	36000	39000	42500
Available nominal pressure (Pa)	150	150	150	150	150	150	150	150	150	180
Maximum available pressure (Pa)	690	590	570	500	650	550	390	390	450	450
Fan Useful Power (kW)	2.8	3.2	3.3	3.5	4.0	4.4	5.0	5.0	6.0	7.5
No. Plugfan Units (6)	3	3	3	3	4	4	4	4	5	5
Plugfan absorbed power(kW) (6)	3.4	3.7	4.0	4.4	4.9	5.3	5.8	5.8	7.2	7.2

(1) Nominal absorbed Power only for compressors

(2) Refrigeration data for return air 27°C-50% (77°F), external temperature 35°C (95°F).

(3) Refrigeration data for return air 20°C – 50%, external temperature 6°C BH.

(4) Noise pressure level at 10 m distance, in free field, directivity 2 and 1,5 meters above the floor, according to standard ISO3744

OPTIONAL TECHNICAL SPECIFICATIONS

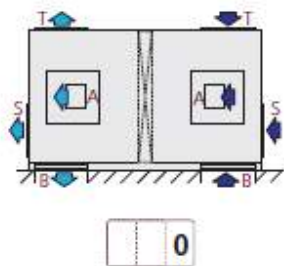
INTERNAL CIRCUIT OPTIONS

AIR TREATMENT UNIT ASSEMBLY OPTIONS

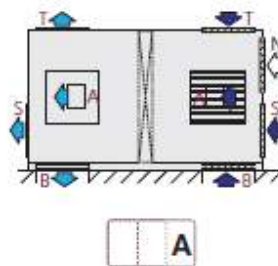
Reznor RTU range units are designed to facilitate assembly and installation. For that reason, all propulsion, return and new air location combinations are possible, indicating outlets position.

The assemblies are defined by three digits behind the letter A (Assembly), that make reference to supply and return locations and assembly type.

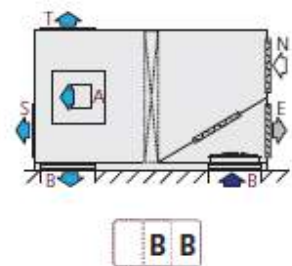
0 - Standard



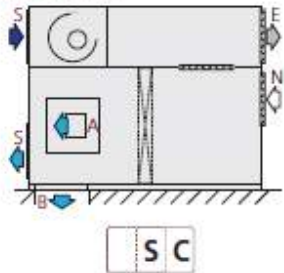
A - Two way mixing box



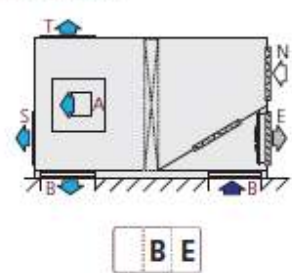
B - Return EC plug fan



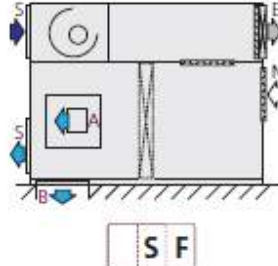
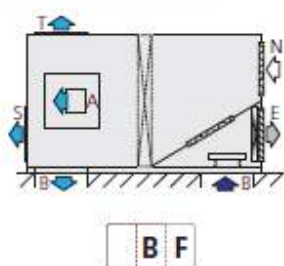
C - Centrifugal return



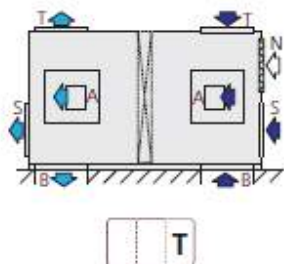
E - Extract EC plug fan



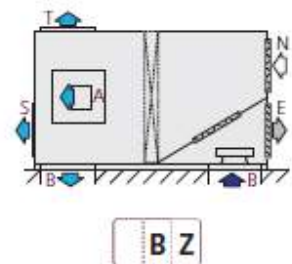
F - Active recovery with return fan



T - Fresh air intake



Z - Return EC plug fan



SUPPLY

B: Lower supply, the supply outlet is under the unit.

S: Long side supply (in a perpendicular direction to the unit)

T: Upper supply, the supply outlet is above the unit.

A: Short side supply (longitudinal direction to the unit). This option is available with standard radial supply fans. This option is not possible with the optional centrifugal fan.

RETURN

B: Lower return, the return outlet is under the unit.

S: Long side return (in a perpendicular direction to the unit)

T: Upper return, the return outlet is above the unit.

A: Short side return (longitudinal direction to the unit).

ASSEMBLY TYPE

0: Standard. The standard assembly includes centrifugal supply fans with electric IE2 motor with belts and pulleys coupling. Optionally, a radial plug-fan fan with EC technology, in supply and in return outlets.

A: Two ways mixing box

B: Axial return and air extraction with three ways mixing box, with mixed aluminium gates motorized with servomotors. Lower return (B) is required.

C: Centrifugal EC plug-fan return with three ways mixing box, with mixed aluminium gates motorized with servomotors. Long side return (S) is required.

D: Dinamic energy recovery (by subcooler) and two ways mixing box. Available option for one compressor units. Lower return (B) is required. Ask for other options.

E: Axial air extraction fan with three ways mixing box, with mixed aluminium motorized gates. Lower return (B) is required.

F: Radial EC return with three ways mixing box and active refrigerant recovery, includes the aluminium motorized gates, and refrigerant recovery group with compressor. If lateral return (S), the unit incorporates an upper return drawer. It allows Active Energy Recovery (AER standard, AERH-enhanced, AER+Digital Scroll). Centrifugal return fans with IE2 electric motors with belts coupling are incorporated as standard. Optionally, EC technoly plug-fan fans are available.

R: Active energy recovery and two ways mixing box. Active recovery option without return fan. Long side (S) return is required. Ask for other needs.

T: External air outlet.

Z: Radial EC plug-fan return with three ways mixing box. It incorporates aluminium motorized gates and allows lower return without upper drawer. It can be only made with plug-fan, it is not possible with centrifugal fans and pulleys coupling motor.

VENTILATION OPTIONALS AND FILTERING IN THE INTERNAL UNIT

INTERNAL FLOW OPTION

The unit can work with flows between 20% more and 20% less than the nominal flow, except of 7230 model, that it limited to 12% of nominal flow (maximum flow 40,000 m³/h).

For high rates of flow, it is recommended the incorporation of the stop-drop optional to avoid drop dragging. The load loss in this element must be considered to calculate the available pressure and the unit consumption.

INTERNAL RADIAL EC FAN OPTION

The standard fan are centrifugal with IE2 motors and pulleys coupling, in supply and in return. Optionally, it is available radial EC version with backward curved plates.

FILTERING OPTIONALS

The units incorporate one prefiltering stage as standard and, optionally, one or two filtering stages. The filters are equipped in a galvanized steel self-supporting frame protected with thermally treated polyester paint, removable with air leaks clasification L2 according to standard EN1886.



Optionally, depending on the installation type, units can be made with:

- Prefiltering stage only.
- Prefiltering stage and F filter stage.
- Prefiltering stage and two F filtering stages.

Prefiltering stage can be configured as the following types:

- Very low load loss prefilter, cleanable 15-mm-thickness.
- Efficiency G2, G3 or G4 25-mm-wide prefilter made of galvanized steel in metallic removable rail, cleanable.

Filtrating stages can be configured with compact efficiency F6, F7, F8 and F9 48-mm-thickness filters made of galvanized steel in metallic removable rail.

Axial removal fans (E assembly)

Model	1039	1041	1044	1045	2050	2060	3070	3080	4090
Removal air flow (m3/h)	3400	3400	3700	3700	4450	5150	6000	6650	7700
No. Fans	1				2				
Diameter (mm)	450								
Power (kW)	0,19				2x0,19				
Max. Speed (r.p.m.)	940								
Max. Absorbed Current (A)	0,9				1,8				
Modelo	4095	4100	5120	5135	5140	5150	6170	6200	6230
Removal air flow (m3/h)	7700	8850	9900	11350	11750	12450	14300	15950	16500
No. Fans	2		3				4		
Diameter (mm)	450								
Power (kW)	2x0,19		3x0,19				4x0,19		
Max. Speed (r.p.m.)	940								
Max. Absorbed Current (A)	1,8		2,7				3,6		

Axial return fans (B assembly)

Model	1039	1041	1044	1045	2050	2060	3070	3080	4090
Return air flow (m3/h)	6800	6800	7400	7400	8900	10300	12000	13300	15400
No. Fans	2				2				
Diameter (mm)	450				500				
Power (kW)	2x0,19				2x0,72				
Max. Speed (r.p.m.)	940				1390				
Max. Absorbed Current (A)	1,8				2,82				
Modelo	4095	4100	5120	7135	5140	5150	6170	9200	7230
Return air flow (m3/h)	15400	17700	19800	22700	23500	24900	28600	31900	36000
No. Fans	2	4							
Diameter (mm)	500								
Power (kW)	2x0,72	4x0,72							
Max. Speed (r.p.m.)	1390								
Max. Absorbed Current (A)	2,82	5,64							

Radial EC return fan (Z assembly)

Model	1039	1041	1044	1045	2050	2060	3070	3080	4090
Return air flow (m3/h)	6800	6800	7400	7400	8900	10300	12000	13300	15400
Max. Available Static Pressure (Pa)	800	800	730	730	500	230	850	810	680
No. Fans	1						2		
Diameter (mm)	500								
Power (kW)	2,7						2x2,7		
Max. Speed (r.p.m.)	1700								
Max Absorbed Current (A)	4,2						8,4		
Modelo	4095	4100	5120	7135	5140	5150	6170	9200	7230
Return air flow (m3/h)	15400	17700	19800	22700	23500	24900	28600	31900	36000
Max. Available Static Pressure (Pa)	680	520	310	700	660	600	380	190	120
No. Fans	2			3					
Diameter (mm)	500								
Power (kW)	2x2,7			3x2,7					
Max. Speed (r.p.m.)	1700								
Max Absorbed Current (A)	8,4			12,6					

Refrigerant recovery unit (F assembly)

Model	1039	1041	1044	1045	2050	2060	3070	3080	4090
Total Refrigerant Power (20% A.E.)	50,3	51,6	58,0	57,1	65,8	74,3	90,4	95,0	114,9
Total Heating Power (20% A.E.)	52,2	55,5	62,4	63,2	68,4	81,1	97,6	103,7	121,0
Total Refrigerant Power (60% A.E.)	59,1	59,6	66,7	66,6	74,6	86,5	102,2	112,1	129,9
Total Heating Power (60% A.E.)	61,6	64,1	71,2	72,6	79,7	92,8	111,0	120,4	138,3
Nominal air flow (m3/h)	6800	6800	7400	7400	8900	10300	12000	13300	15400
Max. Available Static Pressure (Pa)	710	710	640	640	410	140	760	720	590
Compressor type	Scroll								
Nº compressors / circuits	1 / 1								
Model	4095	4100	5120	7135	5140	5150	6170	9200	7230
Total Refrigerant Power (20% A.E.)	115,1	126,1	148,2	168,1	183,4	192,8	215,4	254,4	N.A.
Total Heating Power (20% A.E.)	124,2	134,3	157,4	184,8	194,9	211,5	242,5	274,3	N.A.
Total Refrigerant Power (60% A.E.)	130,3	142,0	172,4	191,1	210,1	220,6	247,4	287,3	N.A.
Total Heating Power (60% A.E.)	142,8	155,0	180,5	212,3	225,2	240,7	274,3	315,0	N.A.
Nominal air flow (m3/h)	15400	17700	19800	22700	23500	24900	28600	31900	N.A.
Max. Available Static Pressure (Pa)	590	430	220	610	570	510	290	100	N.A.
Compressor type	Scroll								N.A.
Nº compressors / circuits	1 / 1								N.A.

N.A. Not Available (under development)

DROPLET SEPARATOR IN INTERNAL AIR COIL

Air flow from which it is recommended the droplet separator installation:

Model	1039	1041	1044	1045	2050	2060	3070	3080	4090
Air flow (m ³ /h)	10190	10190	10190	10190	14570	14570	17480	17480	21920
Model	4095	4100	5120	7135	5140	5150	6170	9200	7230
Air flow (m ³ /h)	21920	21920	29630	35550	35550	35550	35550	41480	41480

ELECTRICAL POWER OPTIONS

The standard version's operating voltage is 380-400V/3/50Hz + neutral. Optionally, the systems can be configured with the following voltages of power supply:

- 2) 200-220V/3/50Hz
- 3) 380-400V/3/50Hz + neutral.
- 4) 380-400V/3/50Hz + neutral. (Standard)
- 6) 208-230V/3/60Hz
- 7) 380-400V/3/60Hz + neutral.
- 8) 380-400V/3/60Hz + neutral.
- 9) 460V/3/60Hz

OPTIONS FOR THE EXTERNAL CIRCUIT

HIGH ENERGY EFFICIENCY (HEE) OPTION

The High Energy Efficiency [HEE] option includes the following available features:

[HEE] High Energy Efficiency external circuit coil design. Ventilation motors with EC technology.

[EXV] Electronic Expansion Valve in the refrigerant circuits.

[MSC] Multi-scroll. Systems with several scroll compressors, for a better power partialization and a better seasonal performance.

[FRC] Free-cooling with several control strategies, thermal free-cooling, enthalpy or hybrid, for maximum energy savings. Depending on the type of strategy, two or three gates are available.

HELICAL ELECTRONIC FAN WITH EC TECHNOLOGY

Model	1039	1041	1044	1045	2050	2060	3070	3080	4090
External Air Flow (m3/h)	20000	20000	20000	20000	25000	24000	26000	26000	36000
Max. Available Static Pressure (Pa)	80				150		170		100
No. fans	1				2				
Diameter (mm)	1x800				2x800				
Power (kW)	1x2,2				2x2,2				
Max. Speed (r.p.m.)	1000								
Max. Absorbed Current (A)	3,4				6,8				
Model	4095	4100	5120	5135	5140	5150	6170	6200	7230
External Air Flow (m3/h)	36000	36000	39000	44000	56000	56000	56000	76000	76000
Max. Available Static Pressure (Pa)	100		80	170			90		
No. Fans	2				4				
Diameter (mm)	2x800				4x800				
Power (kW)	2x2,2				4x2,2				
Max. Speed (r.p.m.)	1000								
Max. Absorbed Current (A)	6,8				13,6				

UNIT APPLICATIONS UNDER DIFFERENT CLIMATIC CONDITIONS

[High Temperature Resistance] High outdoor temperature (up to 52°C). It has the following features:

- Forced ventilation in the electric panel as standard.
- Design of electric equipment as standard for high temperature.
- Enhanced fans in option (check availability depending on the model).

[Low Temperature Resistance] Low outdoor temperature. The following features can be installed in the unit optionally:

- Antifreeze electrical resistance in electric panel.
- Antifreeze electrical resistance in plate exchanger in case of condensation of water or plates exchangers of sanitary hot water recovery.
- Electric resistance in external condensate pan for low temperatures.

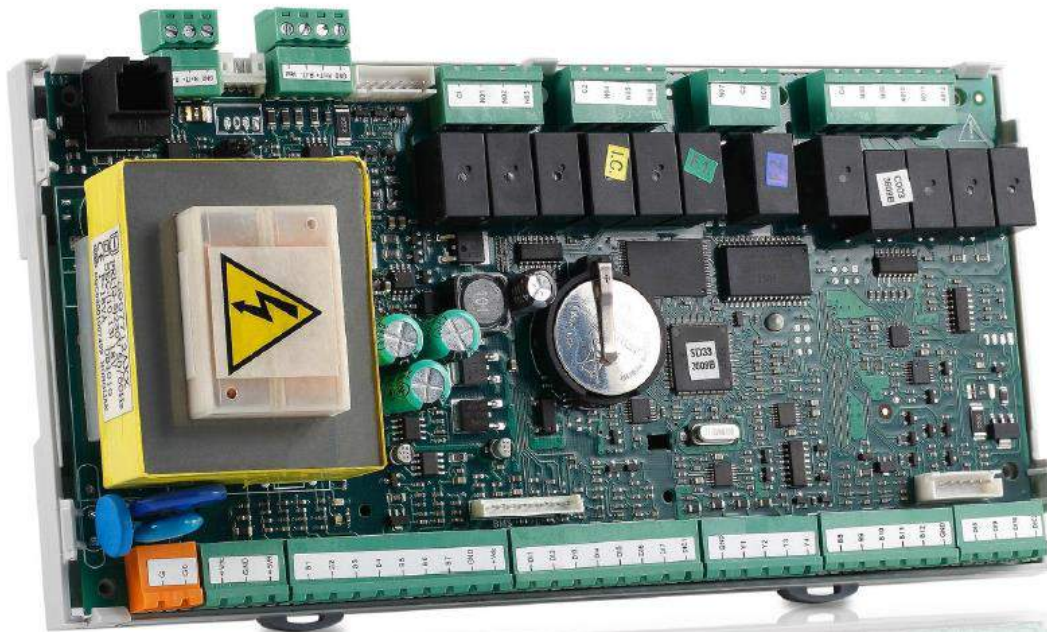
CLIMATE PROTECTION FOR EXTERNAL BATTERY

- **COPPERFIN™**: Condensing battery of copper tube and copper fins (coastal protection) and high resistance aluminium alloy framework.
- **ALUCOAST™**: Condensing battery of copper tube and fins of high resistance marine aluminium (coastal protection), with aluminium alloy framework.
- **PAINTCOAST™**: Condensing battery of copper tube and post-lacquered with oven cured epoxy aluminium fins (chemical protection).
- **BLYGOLD®**: Condensing battery of copper tube and aluminium fins, coated with post-lacquered Blygold Polual (coastal protection).
- **BLUECOAST™**: Condensing battery of copper tube and aluminium fins, pre-lacquered with hydrophilic or hydrophobic blue polyurethane (basic protection).

HOT WATER SUPPORT COIL. OPERATION DATA.

Model	Internal flow (m3/h)		Air inlet temp. 20 (°C)			Air inlet temp. 20 (°C)			Air inlet temp. 20 (°C)		
		Hot water support coil	Water (50-40)(°C)			Water (50-30)(°C)			Water (60-40)(°C)		
		(Pa)	Heating power (kW)	Water flow (m3/h)	Water load loss (mca)	Heating power (kW)	Water flow (m3/h)	Water load loss (mca)	Heating power (kW)	Water flow (m3/h)	Water load loss (mca)
KCR0017	3300	28.5	14.3	1.2	0.4	6.1	0.3	0.1	14.7	0.6	0.1
KCR0020	3700	30.0	16.6	1.4	0.4	7.1	0.3	0.1	17.1	0.7	0.1
KCR0022	4000	31.0	18.1	1.5	0.5	7.7	0.3	0.1	18.5	0.8	0.2
KCR0026	4600	28.0	22.5	1.9	0.4	9.6	0.4	0.1	23.1	1.0	0.1
KCR0030	5100	29.0	24.4	2.0	0.4	10.4	0.4	0.1	25.0	1.1	0.1
KCR0035	6000	29.5	28.0	2.3	0.5	11.9	0.5	0.1	28.7	1.2	0.2
KCR0039	6800	30.5	31.4	2.6	0.6	13.3	0.6	0.1	32.2	1.4	0.2
KCR0044	7800	29.5	31.8	2.6	0.6	13.5	0.6	0.1	32.6	1.4	0.2
KCR1039/41	6800	30.2	32.0	2.7	0.3	13.6	0.6	0.1	32.8	1.4	0.1
KCR1044/45	7400	33.5	33.8	2.8	0.3	14.3	0.6	0.1	34.6	1.5	0.1
KCR2050	8900	26.8	37.8	3.2	0.4	16.1	0.7	0.1	38.8	1.7	0.1
KCR2060	10300	33.5	42.6	3.5	0.5	18.1	0.8	0.1	43.7	1.8	0.1
KCR3070	12000	33.5	51.1	4.3	0.3	21.7	0.9	0.1	52.4	2.3	0.1
KCR3080	13300	36.9	54.5	4.6	0.4	23.2	1.0	0.1	55.9	2.4	0.1
KCR4090	15400	33.5	67.2	5.7	0.6	28.5	1.3	0.1	68.8	3.0	0.2
KCR4095	15400	33.5	67.2	5.7	0.6	28.5	1.3	0.1	68.8	3.0	0.2
KCR4100	17700	40.2	73.0	6.2	0.7	31.0	1.4	0.1	74.8	3.3	0.2
KCR5120	19800	30.8	77.4	6.7	0.5	32.9	1.5	0.1	79.3	3.5	0.1
KCR5135	22700	28.8	93.9	7.8	0.3	39.9	1.7	0.1	96.3	4.1	0.1
KCR5140	23500	30.8	96.8	8.3	0.4	41.1	1.8	0.1	99.3	4.3	0.1
KCR5150	24900	33.5	99.5	8.8	0.4	42.3	1.9	0.1	102.0	4.6	0.1
KCR6170	28600	40.0	108.4	9.2	0.4	46.0	2.0	0.1	111.1	4.9	0.1
KCR6200	31900	35.0	115.8	9.9	0.5	49.2	2.2	0.1	118.7	5.2	0.1
KCR6230	35500	30.8	121.9	10.1	0.4	51.8	2.2	0.1	125.0	5.3	0.1
KCR7230	36000	33.5	124.4	10.3	0.4	52.8	2.3	0.1	127.5	5.4	0.1
KCR7260	39000	36.5	145.9	12.1	0.4	62.0	2.7	0.1	149.5	6.4	0.1
KCR7300	42500	37.5	143.8	12.3	0.8	61.1	2.7	0.1	147.4	6.5	0.2

ELECTRONIC REGULATION



The electronic microprocessor control Reznor CLIMANAGER is specifically developed for the management of Reznors Rooftop air-to-air equipments. This control serves to the market requirements in terms of energy management, operation simplicity and installations maintenance, for which Reznor has developed a management software exclusively dedicated to rooftops on the basis of the latest electronic microprocessor technology.



Please, read carefully the information in this manual before handling the control of the unit.

Any parameter modification must be carried out by a qualified technician authorised by Reznor. In case of improper handling or wrong connection the unit may operate incorrectly or even suffer irreversible damage. Reznor is not responsible for the effects of any mishandling or unauthorised modification of operating parameters, in which case the warranty may be voided.

The main specifications of the electronic board are the following:

- Microprocessor 32 bits 24Mhz
- Programmable Flash Memory 2MB;
- RAM Memory 512kB;
- 3 Serial bus:
 - o pLAN (PC, pGD, pCO, CLIMANAGER connection)
 - o BMS with optional card
 - o Fieldbus for intelligent actuators and THT terminal
- Voltage supply 24 Vac and 230 Vac
- Medium size 13 DIN
- BMS plug-in card
- Real time clock RTC (allows scheduling)
- Operation conditions: -10°C/+60°C

The interface between the human and the unit can be performed through the following compatible terminals:

- Connection by terminal/pLAN
- Graphic Display PLDPRO (Optional)
- Graphic Display PGD1: remote installation up to 50 m, mayores con 2 tarjetas TCONN y cable apantallado hasta 200 m y superior meter fuente de alimentación. (Optional)

Connection by MODBUS

- Environment terminal THT. (Standard)
- Tactile display PGD Touch: remote installation up to 500 m and 15 machines. (Optional)

The next figure shows the RS485 output integrated for field actuators, which allows to connect up to five devices. Through J14 connector it is possible to change from RS485 connection to tLAN and vice versa.

Management by remote control and kind of probes supported

The board is prepared to support remote control type THT, as well as inputs for external signals of Start /Stop, Cooling/Heating mode and an alarm output from the machine.

The following list contains each of the active/passive probes for which the board's hardware and firmware alike are prepared:

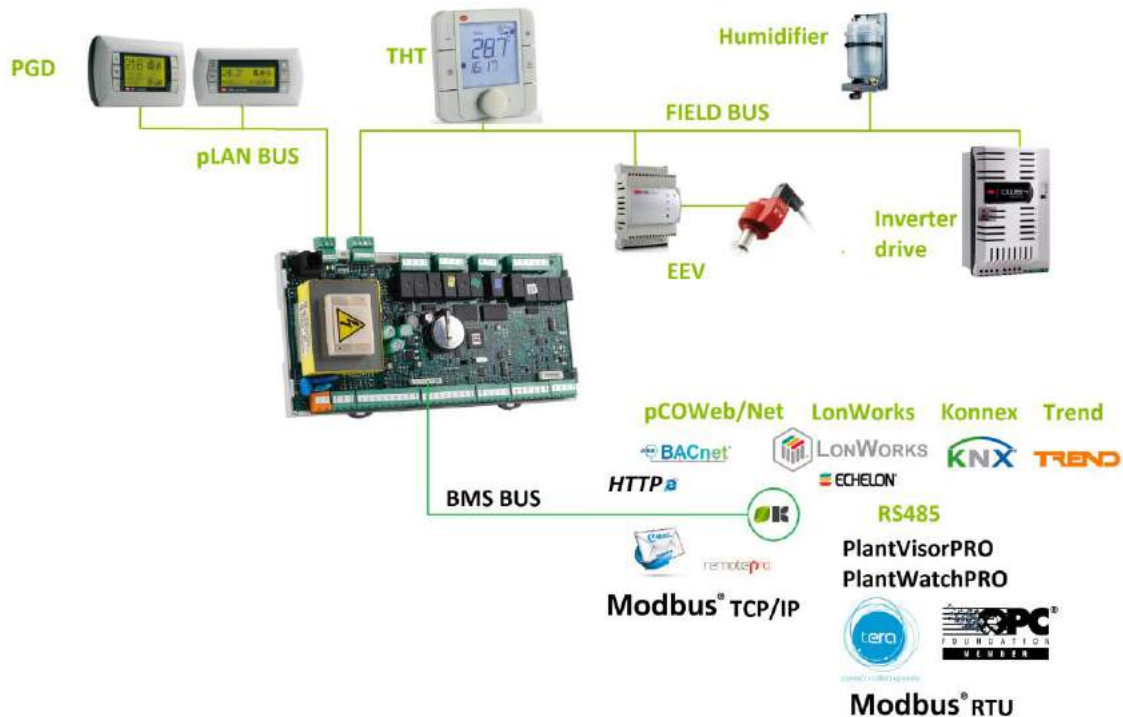
Analog sensors

- NTC probes: passive analog input (resistive).
(AIR/AIR: pumped, return, mix and exterior air in addition to extra-pumping in the event of gas burner).
- Freon pressure transducers: analog input 0-1VDC. / 0-5VDC.
- Air pressure transducers: analog input 0-1VDC. / 0-5VDC.
- Interior/exterior temperature and/or humidity probes: 4-20 mA / 0-1VDC/ passive resistive / RS485 Modbus or Carel.
- CO2 sensors: 0-1VDC / 4-20 mA.

- Air quality sensors VOC: 0-1VDC / 4-20 mA
- Combined sensors VOC+CO2: 0-1VDC / 4-20 mA

Digital sensors

- High pressure switch: digital input.
- Low pressure switch: digital input.



Through the Field-Bus card, the communication with probes and with other enabled equipment is allowed by RS485 transmission and MODBUS protocol.

- Other CLIMANAGER cards
- Temperature and/or Humidity probes.
- Network analyser (energy analyser)
- EBM electronic fans
- Gate servomotors.
- Driver modules for Electronic Expansion Valves
- Driver modules for Inverter Compressors
- Driver modules for Digital-Scroll Compressors

The pLAN card allows the connection with PDG1 / remote PLD PRO and with other CLIMANAGER cards.

The board is prepared without any optional equipment (no more than TCONN card) to be remotely connected to other machines or devices (15 units maximum) by means of a PGD1 remote control.

Fan management

CLIMANAGER platform allows the connection of EC technology electronic fans, two External Unit circuits, Pumping and Return.

- Control through 0-10V signal or PWM without driver or additional module.
- Digital input so that the fan communicates state or alarm.
- Likewise the board allows communication with these equipment through RS-485 in the event of setting up these fans in a network.

CLIMANAGER platform allows a double Star-Triangle output for the External Unit fans.

The Return and Extraction Fans are simultaneously incompatible, these fans can be Centrifugal, Radial or Plug-Fan, using analogic or digital outputs.

The extraction fan operates according to the following functioning logic:

- Mixing Gate Completely Closed (0%): speed 100%
(ON in the case of ALL/NOTHING)
- Mixing Gate at 30%: speed 70%
(ON in the case of ALL/NOTHING)
- Mixing Gate at 50% and higher opening: speed 0%
(OFF in the case of ALL/NOTHING)

Electronic Expansion Valve Management

The board enables the control of the electronic expansion valve driver by means of FieldBus (RS458@MODBUS). For that purpose universal drivers are used to work with electronic valves.

Gate Management

The board enables the control of 0-10 VDC or ON/OFF proportional Servomotors for gates. In the same way, the board allows communication with these equipment through RS-485 in the event of setting up these fans in a network.

The 3 gates are controlled by means of 2 signals.

- External and Exhaust Air: simultaneous functioning
- Mixed Air: with an independent signal from the previous ones, this gate will be 90° out of phase in relation to such signals with a parametrizable differential depending on the installation specific needs.

Compressor Management

The board allows the control of the following compressors without an external driver.

- ON / OFF
- Digital-Scroll Copeland: based on Triac and suitable for the **Active +** recovery option
- Inverter: DC and AC versions

The maximum number of compressors managed is four in two main circuits +2 of the recovery circuit.

Support accessories management and other options

CLIMANAGER platform allows the communication with a network analyser per machine through Fieldbus, showing consumption, intensity and cosPhi on screen. Consumption lever alarms may be enabled.

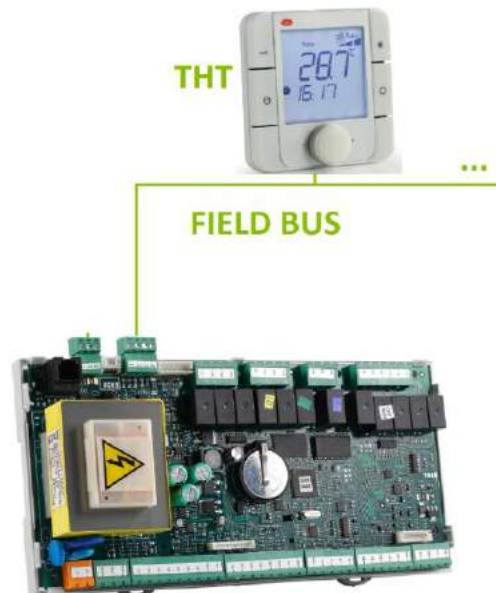
The platform can control a 0-10VDC three ways proportional valve unit for Hot Water Back-up Battery, and can control pumping back-up or anti-icing resistances, in two stages on/off. It counts on firmware and outputs for at least one humidifier type ON/OFF, 0-10Vdc or FieldBus.

It has an output for a one-or-two-stage gas burner unit.

To that end it must have enabled: gas burner alarm signal input, burner discharge probe connection and ON / OFF output for the two burner stages.

THT TERMINAL

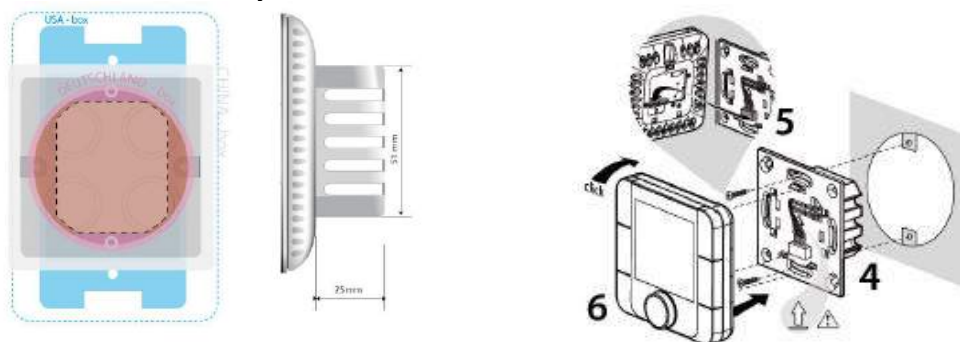
The terminal THT is an user terminal as well as a tool that facilitates the start-up, being compatible with the connectors commonly used in the market.



The terminal main features are:

- Standard power supply (24Vac/dc...230Vac)
- Valid for temperature and humidity control
- Compatible with Europe and USA power connections
- Possibility of nocturnal functioning or delay.
- Possibility of joint usage with other PGC terminals

Possibility of installation in every socket available in the market.



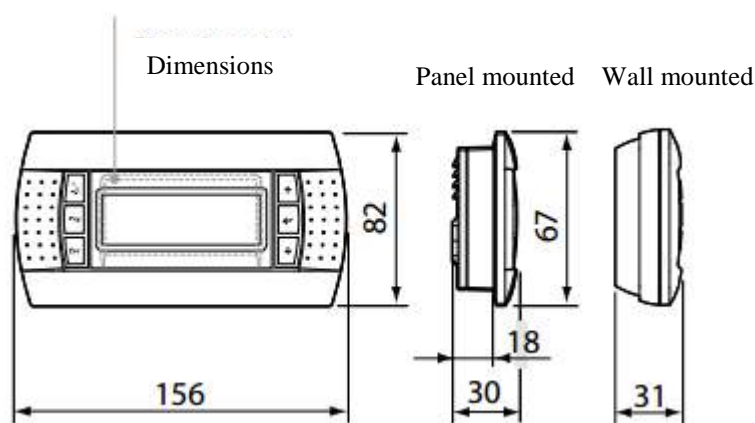
3.- PGD TERMINAL

The PGD1 terminal is a device which allows the management and access to the CLIMANAGER control parameters. PGD1 is a monochromatic LCD graphic terminal with a 132x64 pixel resolution and LED backlighting. It is available in panel mounting version or in wall version.



The PGD1 display has FSTN graphics, feedback with green and white LEDs, 132x64 pixel resolution, two text modes, 8 rows x 22 columns (5x7 and 11x15 pixel font management), or 4 rows x 11 columns (11x15 pixel font), or mixed mode. Character height, 3,5 mm (5x7 pixel font), or 7 mm (11x15 pixel font). Power supply: Supply from electronic board via phone jack or by means of a 18/30 Vdc outside source protected by an external 250 mA fuse. Max power: 1,2W.

The following figure shows the PGD terminal dimensions for panel or wall mounting.



The connection between the terminal and the controller is carried out by using a 6 wire telephone cable. To make the connection, simply plug the phone jack into the RJ12 socket at the terminal's back, and into the corresponding electronic board connector.

REZNOR



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Nortek Global HVAC 6Y[]i a bj
J&M Sabbestraat 130/A000
B-8930 Menen
Belgium

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Year of manufacturing / año de construcción / année de fabrication / Anno	2014
Serial number / Número de serie / Numéro de série / Numero di serie / Serienummer / Serienummer:	140218A001



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