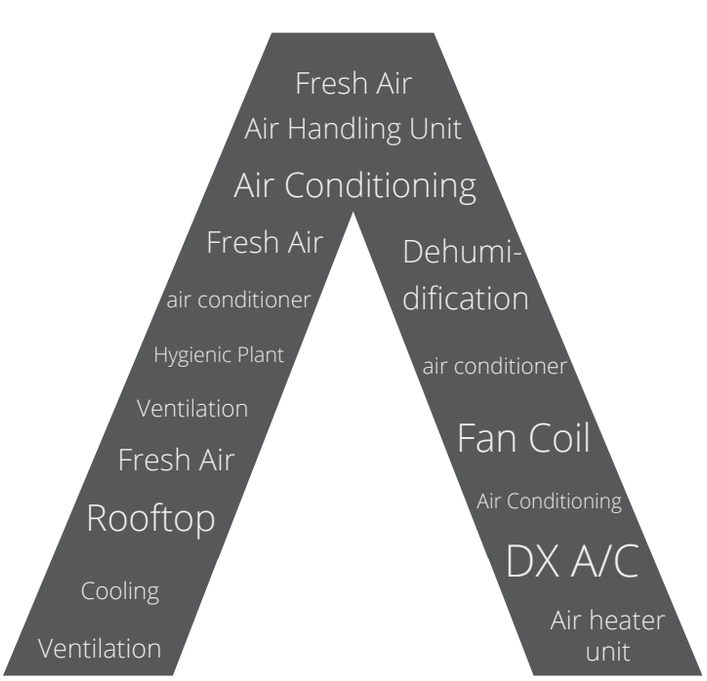

AIR+PLUS

Air Conditioning Technologies

AP-RT Roof Type Package
Air Handling Unit

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AIR+PLUS
Air Conditioning Technologies

Plug & Play

AIR PLUS

We Offer "Comfort" to the Living Spaces

AP-RT Roof Type Package Air Handling Unit

AP-RT series consist of 13 different models with 30% fresh air, single fan, 43 kW to 203 kW cooling capacity range. AP-MRT series consist of 13 different models with 30% fresh air, double fans, and a cooling capacity range of 43 kW to 203 kW. AP-RRT series consist of 11 models with 100% fresh air, double fans, high efficient enthalpy rotary heat recovery system, and 80 kW to 297 kW total cooling capacity range.

▶ Product Material

The casing of AP-RRT series is manufactured from natural anodized aluminum profile and galvanized sheet panels filled with rockwool having a density of 70 kg/m³. There are frame feet made of galvanized sheet having eyebolts for crane transport and blade slots for forklift transport in all the series. The devices have been designed to operate outdoors. The casing of AP-RT series are manufactured from panels having electrostatic powder coated galvanized sheet and nonflammable 25 mm sound insulation. There are frame feet made of galvanized sheet having eyebolts for crane transport and blade slots for forklift transport in all the series. The devices have been designed to operate outdoors.

AIRPLUS Roof Type Package Air Handling Unit Features

- EC fans providing energy efficiency.
- Easy to install, low running and initial investment cost.
- Fresh air control and Free-Cooling. (economizer)
- Auto setting fresh air ratio between 0% - 100%.
- Ability to connect to building management system.
- Standard heat pump.
- Electronic expansion valve.
- Dirty filter alarm.
- Maximum efficiency and low noise level with tandem SCROLL compressor in all units.
- Condenser surface hydrophilic coating.
- Condenser surface protection frame.
- Stainless drain pan.
- CE and ISO 9001 certified.
- R410A refrigerant.
- Possibility to use heat recovery with drum or plate depending upon the project.
- Multiple heating options. (Heat pump, natural gas, electric heater, water heater coil, steam coil)
- Variable air flow and low energy consumption with models having EC plug fan or depending on the project, AC fan with frequency inverter.
- Options in scenarios. (CO2 sensor, VOC sensor, snow sensor, smoke detector, etc.)
- Filtration possibility with G4; G4 + F7 in AP-RRT series.
- According to the project requirement, models conforming to hibh outdoor air temp can be designed.
- Flexibility in design and manufacture suitable for special projects.

▶ Usage Features

Roof top compact air handling units are employed on the flat roofs or terraces of hypermarkets, shopping malls, theaters, movie theaters, recreational facilities, airports, restaurants, conference halls, factories and similar places.

AIRPLUS Roof Top Compact Air Handling Units are designed for cooling and heat pump heating. Otherwise, depending on the project, a hot water coil, electric heater or natural gas fired hot air generator can be placed in it. The roof-top compact air handling units, which are completely assembled in a solid body and shipped with R410A refrigerant, provide great ease of installation to the customer.
AIRPLUS roof-top compact air handling units have efficient plug fans with AC motor, R10A gas-powered scroll compressors, axial fans with direct coupled EC motor, a condenser, an evaporator, G4 panel filter F7 compact filter (in AP-PRT series), coolant system equipment working with heat pump, and a control unit.
An economizer is found in all the devices as the standard. When the outside temperature is low, air-conditioning is done without cooling with 100% outside air thus, saving energy. In addition, the return air is mixed with fresh air by means of exhaust-fresh air and mixing dampers to obtain a quality mixture. While a part of the air, which will be renewed is used in the mixture, a part of the return air is dicharged via exhaust fan.

Airplus Rooftop Package Air Conditioner Features

▶ Smart Defrost - Uninterrupted Heating

Because of the principle of operating in winter mode in modular air conditioners (in Heatpump Operation), when the outdoor air temperature starts to decrease, snowing and icing occurs on the condenser; these formations prevent required air from passing through the lamella, and as this time period of prevention increases, the modular air conditioner tends to enter defrost mode in order to remove this snowing and icing effect. The smart defrost feature has been developed in the Airplus modular air conditioners in order to make a minimal compromise on the comfort while meeting this requirement. With the smart defrost feature, while half of the system defrosts, the other half continues to heat, and thanks to this operation, minimum comfort deterioration is ensured by carrying out continuous heating.

▶ Automatic Condenser Cleaning

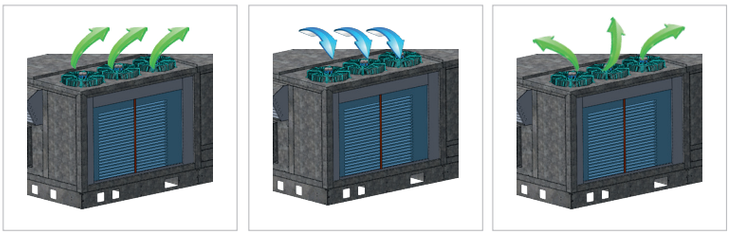
While the modular air conditioners are operating especially in the summer mode, condenser lamella spacings get dirty, and required air transition cannot be provided as a result of this contamination, when required air cannot be passed through between the lamellas, the modular air conditioner cannot reach designed capacity; this situation gives rise to failure to ensure the comfort, and consumption of more energy than required. With the automatic condenser cleaning feature of Airplus modular air conditioners, it is possible to provide required capacity continuously. Airplus modular air conditioner automatic condenser cleaning feature, also making sure that the condenser is less exposed to chemical agents with its feature of decreasing chemical cleaning times, increases the material life of the condenser, thus making sure it will give uninterrupted service for many years.

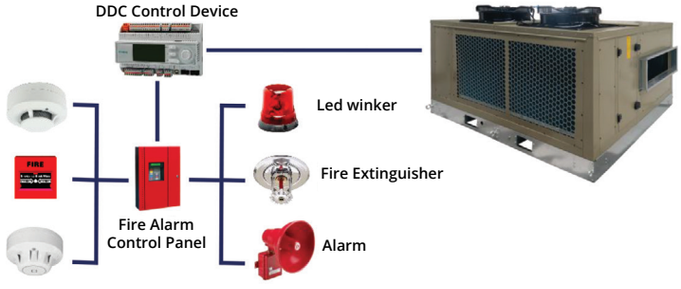
▶ Multialternative Fire Scenario

The rooftop fire scenario is activated with the dry contact signal coming from the fire automation. It is possible to select from the service menu, which scenario will be activated in case of a fire.

▶ Condenser Fan Snow Removal and Ice Breaking Mode

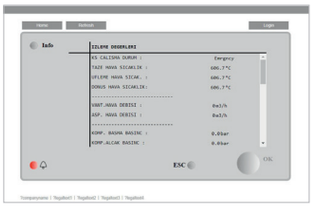
Thanks to the condenser fan snow sensor as the advanced feature of the heat-pump components in winter mode of the Airplus modular air conditioner, it senses the snow accumulated on the condenser fan while energized in the time period, in which the modular air conditioner does not operate, and when the snow is above 100 mm it starts the condenser fan to throw and eliminate the snow; thanks to this feature, it aims that Airplus modular air conditioner produces uninterrupted service as the failure preventer, which prevents the blades of the condenser fan exposing to snow load at the startup moment from damage by preventing snow load formation on the condenser fan. And with the advanced condenser fan ice breaking feature of Airplus modular air conditioner, by activating the ice breaking feature at startup against the risk of icing and adherence of condenser fan blades, it was aimed to produce uninterrupted service as the failure preventer to prevent damage to the fan blades because of icing.

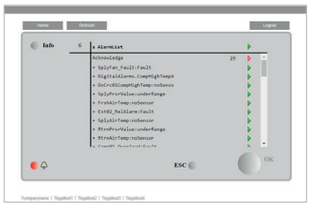




▶ Internal Web Server

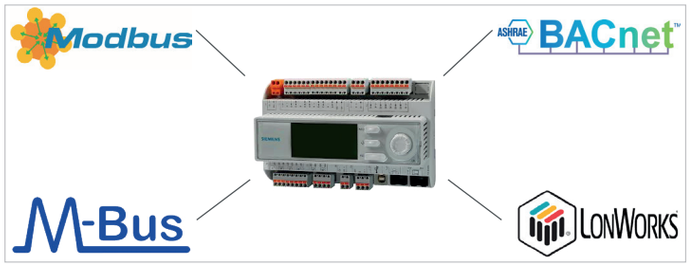
Thanks to the internal web server, all the control devices can be accessed over local network through browser with IP address without paying an extra fee, and all data belonging to the device are accessible.
In case static IP is used, remote access is also available by performing port routing.





BMS Integration

Thanks to the ability to communicate with different protocols, easy integration to upper automation is provided without requiring an external gateway. Modbus-TCP access is the standart hardware through TCP-IP port located on the PLC, and a communication board needs to be used for communication with Modbus RTU, BACnet-IP, BACnet-MS/TP, LonWorks, and M-Bus protocols.



POL902.0
Modbus RTU

POL904.0
BACnet MS/TP

POL908.0
BACnet-IP

POL906.0
LonWork s

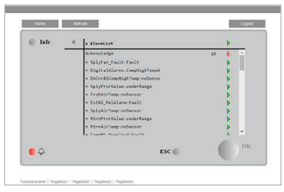
POL907.0
M-Bus

Scada Follow-Up

In case optional scada software packages are purchased; controlling, observing the operating values of and failure follow-up of the multiple rooftop plants can only be done via a single PC.

Detailed Failure Follow-Up Possibility

In a rooftop device with double-circuit, possibility of early and fast detection of a problem of the device through average 80 different alarm follow-ups.



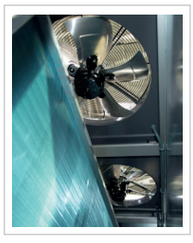
Network and Current Control with Multimeter

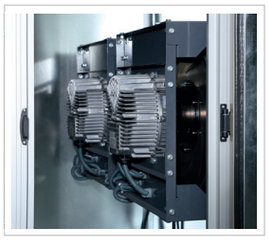
The mains voltage ratings and the operating current of the device can be monitored instantly on the screen of the control device thanks to the communication type multimeter used in the rooftop devices as the standard.

Thanks to the trend feature; the minimum and maximum voltage values the network experiences during all the time the device is energized can be seen individually for each phase. Similarly, the maximum current ratings drawn by the device during all the time, in which it operates can be seen individually for each phase.

Condenser Cell

In this cell, there are a condenser coil with high thermal efficiency having a copper pipe and hydrophilic coated aluminum blade, an axial fan together with directly coupled EC motor, which provides airflow over the coil, and R410A gas-powered tandem scroll compressor. Besides, there are cooling circuit elements (four-way valve, expansion valve, duplex drier, check valve, suction accumulator, sight glass, low-high pressure pressurestat, etc.) and control unit.





Evaporator Cell

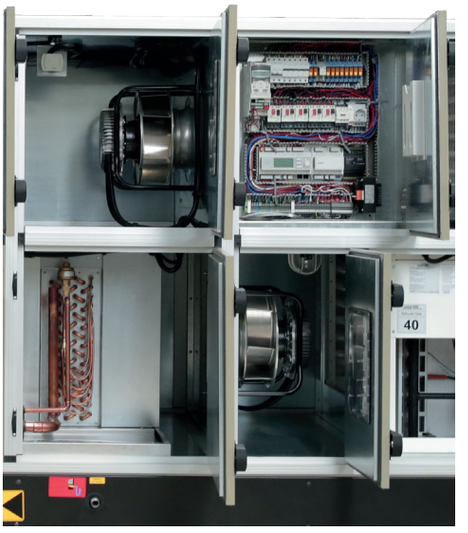
This cell includes a highly thermal efficient evaporator coil with copper pipe and aluminum blade, expansion valve drift eliminator and drain pan, highly efficient plug-in evaporator fan with EC motor, G4 cassette filter (F7 filter in AP- RRT series), and air dampers with engine in the air intake section and in the return section.

Optional Equipment

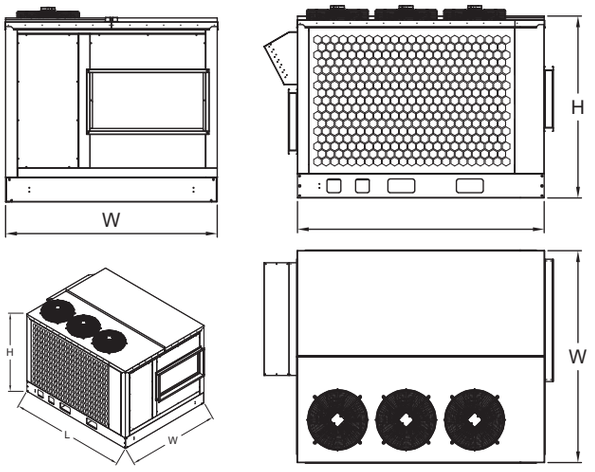
- F7 filter for AP-RT series (available in AP-RRT series)
- Electric motor with frequency inverter with AC motor in evaporator and condenser fans.
- Steam humidifier
- Aluminum plate type heat recovery.
- Inside air quality sensor
- Smoke detector
- Hot water coil
- Motorizated valve for hot water coil
- Electric heater

Distribution Board and Microprocessor control

The distribution board is manufactured fully closed as suitable for outdoor air conditions and is within the device. In this board, there are contactors, thermics, automatic switches and automatic microprocessor controller required for the power and operation circuit. Thanks to the microprocessor, it can be integrated in the building automation systems, thus making sure remote monitoring and controlling of the unit. As standard, there are filter pollution warning, non-operational fan warning, high pressure and low pressure pressurestat.



General Features of **AP-RT Series Devices** (Ventilator)

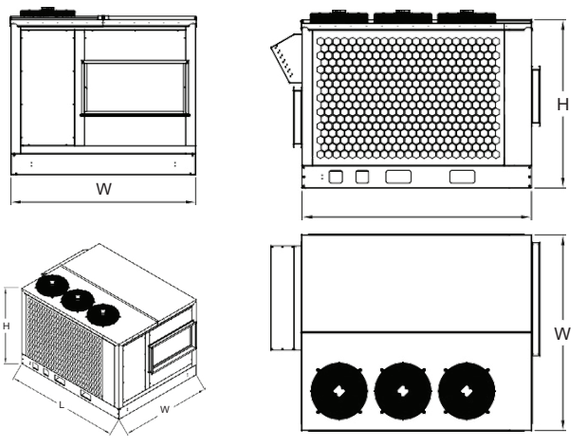


Note: Tm °C=Room Temperature, Td °C=Outdoor Temperature RH=Relative Humidity

Model	Ventilator	AP-RT-7000 V	AP-RT-8500 V	AP-RT-10000 V	AP-RT-11500 V	AP-RT-13000 V	AP-RT-14000 V	AP-RT-16000 V
Tm °C-RH	Td °C-RH	COOLING CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.						
27 - 50%	35 - 50%	43,7	51,2	63,1	71,9	81,8	87,3	101,8
Tm °C	Td °C	HEAT PUMP HEATING CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.						
20	7	39,36	46,12	56,84	64,77	73,69	78,64	91,71
Device Flowrate (m³/h)	EC Plug	7000	8500	10000	11500	13000	14000	16000
External Static Pressure Loss (Pa)		500	500	500	500	500	500	500
Ventilator Motor Power (kW)		2,66	1,58 * 2	1,88 * 2	2,13 * 2	2,44 * 2	2,64 * 2	3,17 * 2
Compressor Power (kW)		6,57+6,57	8,64+6,57	9,66+8,64	11,03+9,66	12,61+11,03	12,61+12,61	
Condenser Fan Power (kW) EC Axial		2,118	2,097	2,368 * 2	2,297 * 2	2,553 * 3	2,427 * 3	2,289 * 3
Installed Power of the Device (kW)		17,918	20,467	26,796	29,544	36,179	37,781	42,657
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
Filter Type		G4	G4	G4	G4	G4	G4	G4
Device Width (W) (mm)		1950	2175	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		2500	2500	2500	2500	3200	3200	3200
Optional Electric Pre-Heater (kW)		19	23	27	31	35	38	43
30% T.H. (-5/20 °C) Outlet Temperature°C		20	20	20	20	20	20	20
Device Width (W) (mm)		1950	2175	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		2800	2800	2800	2800	3500	3500	3500
Optional Water Heater (80/60 °C) kW		57,8	69,7	82,5	96,1	107,7	114,6	131
30% T.H. (-5/20 °C) Outlet Temperature°C		36,4	36,2	36,4	36,6	36,5	36,2	36,2
Device Width (W) (mm)		1950	2175	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		2800	2800	2800	2800	3500	3500	3500
Optional Natural Gas Heater (kW)		51 - 61	61 - 75	75	75 - 100	100 -112	100 -112	112 - 126
30% T.H. (-5/20 °C) Outlet Temperature°C		32,8 - 36,7	32,5 - 37	33,4	30,7 - 36,7	33,9 - 36,5	32,4 - 34,8	32 - 34,4
Device Width (W) (mm)		2250	2250	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		3450	3450	3450	3450	4280	4280	4280

Model	Ventilator	AP-RT-18500 V	AP-RT-20000 V	AP-RT-22500 V	AP-RT-25000 V	AP-RT-27000 V	AP-RT-31000 V
Tm °C-RH	Td °C-RH	COOLING CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.					
27 - 50%	35 - 50%	116,8	126,5		163,5	174,7	203,9
Tm °C	Td °C	HEAT PUMP HEATING CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.					
20	7	105,2	113,7	129,6	147,4	157,3	183,5
Device Flowrate (m³/h)	EC Plug	18500	20000	22500	25000	27000	31000
External Static Pressure Loss (Pa)		500	500	500	500	500	500
Ventilator Motor Power (kW)		2,21 * 3	2,41 * 3	2,81 * 3	2,26 * 4	2,49 * 4	2,97 * 4
Compressor Power (kW)		16,84 + 16,84	9,66*2+8,64*2	11,03*2+9,66*2	12,61*2+11,03*2	12,61 * 4	16,84*2+12,61*2
Condenser Fan Power (kW) EC Axial		2,284 * 3	2,406 * 4	2,344 * 4	2,209 * 4	2,236 * 4	2,333 * 6
Installed Power of the Device (kW)		47,162	53,454	59,186	65,156	69,344	84,778
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
Filter Type		G4	G4	G4	G4	G4	G4
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	1730	1890	2160
Device Length (L) (mm)		4300	3860	3910	4760	4760	5630
Optional Electric Pre-Heater (kW)		50	54	61	68	73	84
30% T.H. (-5/20 °C) Outlet Temperature°C		20	20	20	20	20	20
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	1730	1890	2160
Device Length (L) (mm)		5800	5360	5360	5470	5520	6480
Optional Water Heater (80/60 °C) kW		154,2	168	182,7	205,2	218,9	260,5
30% T.H. (-5/20 °C) Outlet Temperature°C		36,6	36,8	36	36,3	36	36,8
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	1730	1890	2160
Device Length (L) (mm)		5800	5360	5360	5470	5520	6480
Optional Natural Gas Heater (kW)		126 - 151	151 - 175	151 - 175	175 -199	175 - 199	199
30% T.H. (-5/20 °C) Outlet Temperature°C		31,5 - 35,2	33,5 - 36,9	31,2 - 34,2	32 - 34,7	30,6 - 33	30,4
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	2310	2310	2310
Device Length (L) (mm)		6580	6140	6140	6250	6300	7260

General Features of **AP-RT Series Devices** (Ventilator+ Aspirator)



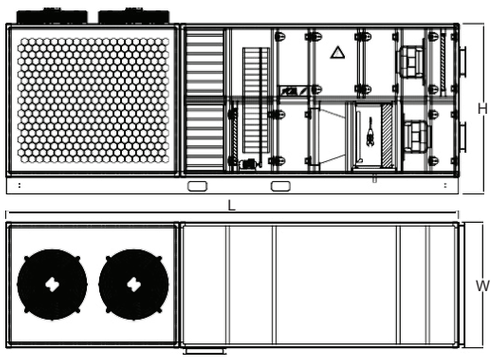
Note: Tm ºC=Room Temperature, Td ºC=Outdoor Temperature RH=Relative Humidity

Model	Van.+Asp.	AP-RT-7000 V+A	AP-RT-8500 V+A	AP-RT-10000 V+A	AP-RT-11500 V+A	AP-RT-13000 V+A	AP-RT-14000 V+A	AP-RT-16000 V+A
Tm ºC-RH	**Td ºC-RH**	COOLING CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.						
27 - 50%	**35 - 50%**	43,7	51,2	63,1	71,9	81,8	87,3	101,8
Tm ºC	**Td ºC**	CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.						
20	**7**	39,36	46,12	56,84	64,77	73,69	78,64	91,71
Ventilator Flow Rate (m³/h) EC Plug		7000	8500	10000	11500	13000	14000	16000
Ventilator C.D.S. Pressure Loss (Pa)		500	500	500	500	500	500	500
Aspirator Flow Rate (m³/h) EC Plug		7000	8500	10000	11500	13000	14000	16000
Aspirator C.D.S. Pressure Loss (Pa)		500	500	500	500	500	500	500
Ventilator Motor Power (kW)		2,66	1,58 * 2	1,88 * 2	2,13 * 2	2,44 * 2	2,64 * 2	3,17 * 2
Aspirator Motor Power (kW)		2,04	1,12 * 2	1,3 * 2	1,54 * 2	1,81 * 2	2,04 * 2	2,53 * 2
Compressor Power (kW)		6,57+6,57	8,64+6,57	9,66+8,64	11,03+9,66	12,61+11,03	12,61+12,61	16,84+12,61
Condenser Fan Power (kW) EC Axial		2,118	2,097	2,368 * 2	2,297 * 2	2,553 * 3	2,427 * 3	2,289 * 3
Installed Power of the Device (kW)		20,036	22,707	29,396	32,624	39,799	41,861	47,717
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
Filter Type		G4	G4	G4	G4	G4	G4	G4
Device Width (W) (mm)		1950	2175	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		2500	2500	2500	2500	3200	3200	3200
Optional Electric Pre-Heater (kW)		19	23	27	31	35	38	43
30% T.H. (-5/20 °C) Outlet Temperature°C		20	20	20	20	20	20	20
Device Width (W) (mm)		1950	2175	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		2800	2800	2800	2800	3500	3500	3500
Optional Water Heater (80/60 °C) kW		57,8	69,7	82,5	96,1	107,7	114,6	131
30% T.H. (-5/20 °C) Outlet Temperature°C		36,4	36,2	36,4	36,6	36,5	36,2	36,2
Device Width (W) (mm)		1950	2175	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		2800	2800	2800	2800	3500	3500	3500
Optional Natural Gas Heater (kW)		51 - 61	61 - 75	75	75 - 100	100 -112	100 -112	112 - 126
30% T.H. (-5/20 °C) Outlet Temperature°C		32,8 - 36,7	32,5 - 37	33,4	30,7 - 36,7	33,9 - 36,5	32,4 - 34,8	32 - 34,4
Device Width (W) (mm)		2250	2250	2300	2300	2300	2300	2300
Device Heigth (H) (mm) excluding fan		1500	1500	1500	1640	1810	1870	2120
Device Length (L) (mm)		3450	3450	3450	3450	4280	4280	4280

Note: Tm °C=Room Temperature, Td °C=Outdoor Temperature RH=Relative Humidity

Model	Van.+Asp.	AP-RT-18500 V+A	AP-RT-20000 V+A	AP-RT-22500 V+A	AP-RT-25000 V+A	AP-RT-27000 V+A	AP-RT-31000 V+A
Tm °C-RH	**Td °C-RH**	COOLING CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.					
27 - 50%	**35 - 50%**	116,8	126,5	143,9	163,5	174,7	203,9
Tm °C	**Td °C**	HEAT PUMP HEATING CAPACITY (kW) NOTE: It was calculated so that it will include 30% fresh air.					
20	**7**	105,2	113,7	129,6	147,4	157,3	183,5
Ventilator Flow Rate (m³/h) EC Plug		18500	20000	22500	25000	27000	31000
Ventilator C.D.S. Pressure Loss (Pa)		500	500	500	500	500	500
Aspirator Flow Rate (m³/h) EC Plug		18500	20000	22500	25000	27000	31000
Aspirator C.D.S. Pressure Loss (Pa)		500	500	500	500	500	500
Ventilator Motor Power (kW)		2,21 * 3	2,41 * 3	2,81 * 3	2,26 * 4	2,49 * 4	2,97 * 4
Aspirator Motor Power (kW)		1,67 * 3	1,89 * 3	2,26 * 3	1,7 * 4	1,92 * 4	2,38 * 4
Compressor Power (kW)		16,84 + 16,84	9,66*2+8,64*2	11,03*2+9,66*2	12,61*2+11,03*2	12,61 * 4	16,84*2+12,61*2
Condenser Fan Power (kW) EC Axial		2,284 * 3	2,406 * 4	2,344 * 4	2,209 * 4	2,236 * 4	2,333 * 6
Installed Power of the Device (kW)		52,172	59,124	65,966	71,956	77,024	94,298
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
Filter Type		G4	G4	G4	G4	G4	G4
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	1730	1890	2160
Device Length (L) (mm)		4300	3860	3910	4760	4760	5630
Optional Electric Pre-Heater (kW)		50	54	61	68	73	84
30% T.H. (-5/20 °C) Outlet Temperature°C		20	20	20	20	20	20
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	1730	1890	2160
Device Length (L) (mm)		5800	5360	5360	5470	5520	6480
Optional Water Heater (80/60 °C) kW		154,2	168	182,7	205,2	218,9	260,5
30% T.H. (-5/20 °C) Outlet Temperature°C		36,6	36,8	36	36,3	36	36,8
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	1730	1890	2160
Device Length (L) (mm)		5800	5360	5360	5470	5520	6480
Optional Natural Gas Heater (kW)		126 - 151	151 - 175	151 - 175	175 -199	175 - 199	199
30% T.H. (-5/20 °C) Outlet Temperature°C		31,5 - 35,2	33,5 - 36,9	31,2 - 34,2	32 - 34,7	30,6 - 33	30,4
Device Width (W) (mm)		2350	2350	2350	2350	2350	2350
Device Heigth (H) (mm) excluding fan		2130	2230	2230	2310	2310	2310
Device Length (L) (mm)		6580	6140	6140	6250	6300	7260

General Features of **AP-RRT Series Devices**



Note: Tm °C=Room Temperature, Td °C=Outdoor Temperature RH=Relative Humidity

ModelR	Rotorlu IGK	AP-RRT-7000A	P-RRT-8500A	P-RRT-10000A	P-RRT-11500A	P-RRT-13000A	P-RRT-14000
Tm °C-RH	**Td °C-RH**	HEAT RECOVERY COOLING CAPACITY WITH ROTOR (kW)					
27 - 50%	**35 - 50%**	17,56	21,8	26,34	31,15	36,22	37,29
		EVAPORATOR COOLING CAPACITY (kW)					
		63,21	71,94	87,32	101,93	116,76	126,42
Tm °C-RH	**Td °C-RH**	TOTAL COOLING CAPACITY (kW)					
27 - 50%	**35 - 50%**	80,77	93,74	113,66	133,08	152,98	163,71
Tm °C	**Td °C**	HEAT RECOVERY HEATING CAPACITY WITH ROTOR (kW)					
20	**-5**	54,95	67,45	80,4	93,74	107,42	113,18
		HEAT PUMP HEATING CAPACITY (kW)					
		56,84	64,77	78,64	91,71	105,2	113,7
Tm °C	**Td °C**	TOTAL HEATING CAPACITY (kW)					
20	**-5**	111,79	132,22	159,04	185,45	212,62	226,88
Ventilator Flow Rate (m³/h) EC Plug		7000	8500	10000	11500	13000	14000
Ventilator C.D.S. Pressure Loss (Pa)		400	500	500	500	500	500
Aspirator Flow Rate (m³/h) EC Plug		7000	8500	10000	11500	13000	14000
Aspirator C.D.S. Pressure Loss (Pa)		400	600	500	500	500	500
Ventilator Motor Power (kW)		3,28	2,4 * 2	2,734 * 2	2,87 * 2	3,27 * 2	2,55 * 3
Aspirator Motor Power (kW)		2,64	2,06 * 2	2,023 * 2	2,25 * 2	2,46 * 2	2,81 * 2
Compressor Power (kW)		9,66 + 8,64	11,03 + 9,66	12,61 + 12,61	16,84 + 12,61	16,84 + 16,84	9,66*2+8,64*2
Condenser Fan Power (kW) EC Axial		2,163 * 2	2,174 * 2	2,091 * 2	2,243 * 3	2,284 * 3	2,294 * 4
Installed Power of the Device (kW)		28,546	33,958	38,916	46,419	51,992	59,046
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
Filter Type		G4 + F7	G4 + F7	G4 + F7	G4 + F7	G4 + F7	G4 + F7
Device Width (W) (mm)		1320	1550	1750	1750	1800	2060
Device Heigth (H) (mm) excluding fan		2180	2180	2180	2430	2480	2480
Device Length (L) (mm)		5540	5640	6080	6860	7060	6050
Optional Electric Pre-Heater (kW)		20	24	28	31	34	39
Outlet Temperature °C		20	20	20	20	20	20
Device Width (W) (mm)		1320	1550	1750	1750	1800	2060
Device Heigth (H) (mm) excluding fan		2180	2180	2180	2430	2480	1480
Device Length (L) (mm)		5840	5940	6380	7160	7360	6350
Optional Water Heater (80/60 °C) kW		59,7	70,5	84,4	93,4	106	116,1
Outlet Temperature °C		36,7	36,2	36,8	36,1	36,4	36,5
Device Width (W) (mm)		1320	1550	1750	1750	1800	2060
Device Heigth (H) (mm) excluding fan		2180	2180	2180	2430	2480	2480
Device Length (L) (mm)		5840	5940	6380	7160	7360	6350
Optional Natural Gas Heater (kW)		51 - 61	61 - 75	75	75 - 100	100 - 112	100 - 112
Outlet Temperature °C		32 - 35,8	31,8 - 36,3	32,9	30,4 - 36,3	33,8 - 36,3	32 - 34,3
Device Width (W) (mm)		1630	1630	1750	1750	1800	2060
Device Heigth (H) (mm) excluding fan		2180	2180	2180	2430	2530	2530
Device Length (L) (mm)		6490	6590	7030	7810	8140	7130

Note: Tm °C=Room Temperature, Td °C=Outdoor Temperature RH=Relative Humidity

Model	Rotorlu IGK	AP-RRT-16000	AP-RRT-18500	AP-RRT-20000	AP-RRT-22500	AP-RRT-25000
Tm °C-RH	**Td °C-RH**	HEAT RECOVERY COOLING CAPACITY WITH ROTOR (kW)				
27 - 50%	**35 - 50%**	41,92	48,56	49,86	56,87	64,19
		EVAPORATOR COOLING CAPACITY (kW)				
		143,88	163,42	174,64	203,86	233,52
Tm °C-RH	**Td °C-RH**	TOTAL COOLING CAPACITY (kW)				
27 - 50%	**35 - 50%**	185,8	211,98	224,5	260,73	297,71
Tm °C	**Td °C**	HEAT RECOVERY HEATING CAPACITY WITH ROTOR (kW)				
20	**-5**	128,31	148,5	156,51	177,27	198,5
		HEAT PUMP HEATING CAPACITY (kW)				
		129,6	147,4	157,3	183,5	211,9
Tm °C	**Td °C**	TOTAL HEATING CAPACITY (kW)				
20	**-5**	257,91	295,9	313,81	360,77	410,4
Ventilator Flow Rate (m³/h) EC Plug		16000	18500	20000	22500	25000
Ventilator C.D.S. Pressure Loss (Pa)		500	500	500	500	500
Aspirator Flow Rate (m³/h) EC Plug		16000	18500	20000	22500	25000
Aspirator C.D.S. Pressure Loss (Pa)		500	500	500	500	500
Ventilator Motor Power (kW)		2,81 * 3	3,19 * 3	3,43 * 3	2,88 * 4	3,17 * 4
Aspirator Motor Power (kW)		2,132 * 3	2,36 * 3	2,72 * 3	3,06 * 3	2,5 * 4
Compressor Power (kW)		11,03*2+9,66*2	12,61*2+11,03*2	12,61 * 4	16,84*2+12,61*2	16,84 * 4
Condenser Fan Power (kW) EC Axial		2,215 * 4	2,11 * 4	2,091 * 4	2,237 * 6	2,176 * 6
Installed Power of the Device (kW)		65,066	72,370	77,254	93,022	103,096
Refrigerant		R410A	R410A	R410A	R410A	R410A
Filter Type		G4 + F7	G4 + F7	G4 + F7	G4 + F7	G4 + F7
Device Width (W) (mm)		2060	2060	2150	2370	2370
Device Heigth (H) (mm) excluding fan		2630	3030	3030	3180	3330
Device Length (L) (mm)		6150	6190	6490	7260	7360
Optional Electric Pre-Heater (kW)		45	52	59	65	71
Outlet Temperature °C		20	20	20	20	20
Device Width (W) (mm)		2060	2060	2150	2370	2370
Device Heigth (H) (mm) excluding fan		2630	3030	3030	3180	3330
Device Length (L) (mm)		6450	6490	6790	7560	7660
Optional Water Heater (80/60 °C) kW		135,1	155,8	168,8	189	212,5
Outlet Temperature °C		36,8	36,7	36,4	36,4	36,8
Device Width (W) (mm)		2060	2060	2150	2370	2370
Device Heigth (H) (mm) excluding fan		2630	3030	3030	3180	3330
Device Length (L) (mm)		6450	6490	6790	7560	7660
Optional Natural Gas Heater (kW)		112 - 126	126 - 151	151 - 175	151 - 175	175 - 199
Outlet Temperature °C		31,5 - 33,9	31 - 34,7	32,6 - 35,9	30,5 - 33,4	31,4 - 34
Device Width (W) (mm)		2060	2060	2150	2370	2370
Device Heigth (H) (mm) excluding fan		2670	3180	3390	3540	3740
Device Length (L) (mm)		7230	7270	7570	8340	8440

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AIRPLUS

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