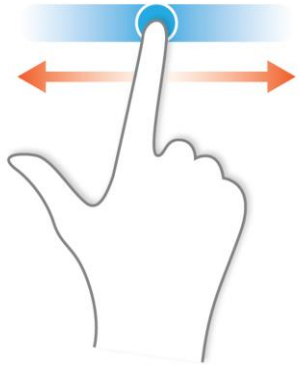
Air-Conditioning Product Overview

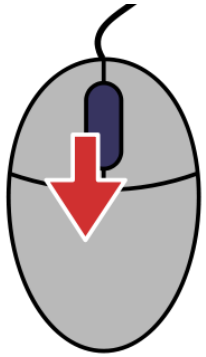
E-guide

START

Help

There are several ways to navigate through this product overview. Just like any PDF document you can browse through the pages as you normally would.





Help

For your convenience, you can jump to certain product groups or index pages using the blue coloured tiles and the top page navigation. Red coloured tiles are important; always click or tap them!

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Help

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Welcome to this product overview of the Webasto Air-Conditioning products.

Click or tap one of the blue tiles to jump to the respective group.

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?

Introduction

This e-guide is a product overview of the Webasto Air-Conditioning solutions that covers the so called “Rooftop Units” and the “Integrated Air-Conditioning” products.

It can be used as a quick reference for the selection of main parts once the cooling performance and system configuration have been decided.

Rooftop Air-Conditioning Index

Common Features

Applications

Specifications

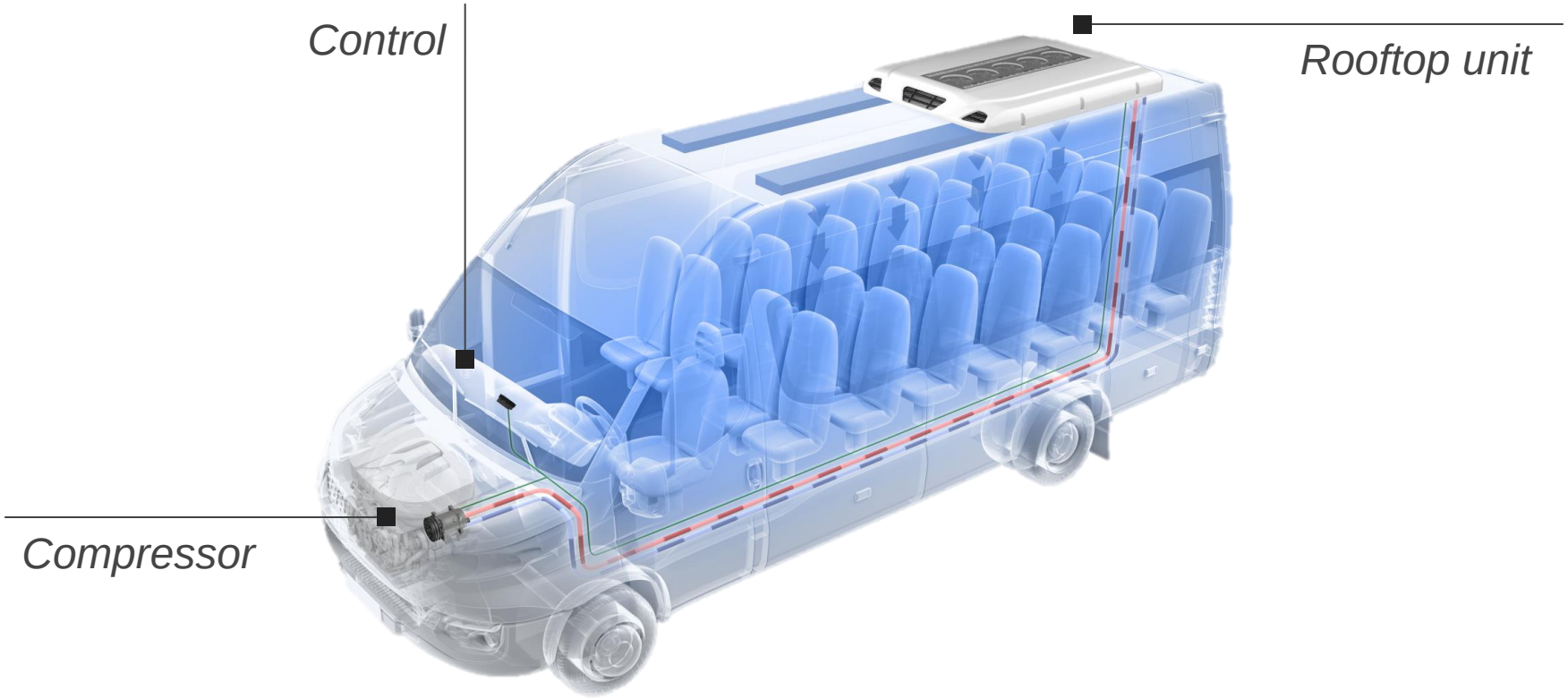
Rooftop Units
4.0 – 8.4 kW

Rooftop Units
8.5 – 14.9 kW

Rooftop Units
15.0 – 36.0 kW

Common Features

Rooftop units offer a relative quick installation because they all consist of combined Condenser / Evaporator units.



Common Features

Although rooftop units integrates many components of an air-conditioning system, most applications still need some additional components. This can include:

- Compressor and compressor installation kit
- Refrigerant hoses
- Controls
- Wiring
- Air distribution modules and ducting

Some of the rooftop units can be expanded with a heating function. The housings of these systems can be painted to match the colour of the vehicle.

Compressor

Controls

Air distribution

Applications








The applications of rooftop air-conditioning systems can be very diverse. Required performance, the region of use and the conditions of operation mainly determine the selection of a unit.

But also the air distribution requirements and the ease of control determine the final composition of the application.

Specifications – Rooftop Units 3.5 – 8.4 kW

Technical Data	Compact Cooler 4 E	Portofino	Compact Cooler 5	Rimini	Turin
Nominal cooling capacity (kW)	3.5	4.0	5.0	6.2	8.4
Heating capacity (option) (kW)	-	5.0	-	-	-
Refrigerant	R134a				
Nominal voltage (V)	24	12 / 24			
Max. total power consumption at 12 V (A)	-	20.0	15.0	20.0	29.5
Max. total power consumption at 24 V (A)	68.0	10.0	8.0	10.0	15.0
Max. volume flow of evaporator blower (m^3 / h)	550	400	630	550	760
Dimensions L x W x H (mm)	1110 x 774 x 215	900 x 600 x 190	750 x 760 x 165	800 x 605 x 165	830 x 730 x 170
Weight (kg)	52.0	15.5	23.0	23.5	29
Inlet connection	-	3/4” – 16 UNF – 2A			
Outlet connection	-	7/8” – 14 UNF – 2A			
Expansion valve	-	Block valve			
Accessories	-	Mounting support Heating kit	E-Unit	-	-

Specifications – Rooftop Units 8.5 – 14.9 kW

Technical Data	Compact Cooler 8	Cool Top 110RT-CS	Smirne	Cool Top 140 RT-C
Nominal cooling capacity (kW)	8.5	11	11.7	14
Heating capacity (option) (kW)	7.5	12	-	12
Refrigerant	R134a			
Nominal voltage (V)	12 / 24	12	12 / 24	12 / 24
Max. operating temperature (°C)	45	50	45	50
Max. total power consumption at 12 V (A)	30.0	56.0	35	90.0
Max. total power consumption at 24 V (A)	16.0	n.a.	18	48
Max. volume flow of evaporator blower (m^3 / h)	1300	1200	1100	1200
Dimensions L x W x H (mm)	1025 x 970 x 197	1600 x 1152 x 225	1045 x 930 x 170	1600 x 1152 x 225
Weight (kg)	32	44	33.5	46
Nominal roof radius (mm)	-	5200	-	5200
Inlet connection	3/4” – 16 UNF – 2A	7/8” – 14 UNF – 2A	3/4” – 16 UNF – 2A	7/8” – 14 UNF – 2A
Outlet connection	7/8” – 14 UNF – 2A	1-1/16” – 14 UNF – 2A	7/8” – 14 UNF – 2A	1-1/16” – 14 UNF – 2A
Expansion valve	Block valve	Block valve	Block valve	Block valve
Accessories	-	Heating kit	-	Heating kit Fresh air / recirculation kit

Specifications – Rooftop Units 14.9 – 36.0 kW

Technical Data	Madrid			Cool Top 190 RT-C (XL)	Cool Top 220 RT-C	Cool Top RTC 250	Cool Top RTC 300	Cool Top RTC 360
Nominal cooling capacity (kW)	15.5			19.0	22.0	25.0	30.0	36.0
Heating capacity (option) (kW)	20.0			20.0		30.0	30.0	35.0
Refrigerant	R134a							
Nominal voltage (V)	12 / 24			12/24	24	24		
Max. operating temperature (°C)	45			50				
Max. total power consumption at 12 V (A)	58.0	90.0	90.0	94	n.a.	n.a.	n.a.	n.a.
Max. total power consumption at 24 V (A)	29.0	45.0	50.0	46	69	89	97	114
Max. volume flow of evaporator blower (m^3 / h)	2100	2500	2500	3.000	4.000	4800	4800	7200
Dimensions L x W x H (mm)	1790 x 1280 x 185			2150 x 1600 x 200*	2150 x 1780 x 200	2500 x 1988 x 210		
Weight (kg)	59.0			75/78	80	140	143	150
Nominal roof radius (mm)*	7000			6000*	7500	15000 / 18000		
Inlet connection	7/8” – 14 UNF – 2A			7 / 8“ -14 UNF-2A		ORFS 1"1/ 4		
Outlet connection	1-1/16” – 14 UNF – 2A			1-1/16“-14 UNF-2A		ORFS 2"		
Expansion valve	Block valve			Block valve	TXV	Angle valve		
Accessories	Heater			Heating kit		Heating Kit		

* Dimensions and roof radius for the Cool Top 190 RT-CXL are the same as the Cool Top 220 RT-C

Rooftop Units 3.5 – 8.4 kW

Compact Cooler 4 E – 3.5 kW

Portofino – 4.0 kW

Compact Cooler 5 – 5.0 kW

Rimini – 6.2 kW

Turin – 8.4 kW

Compact Cooler 4 E

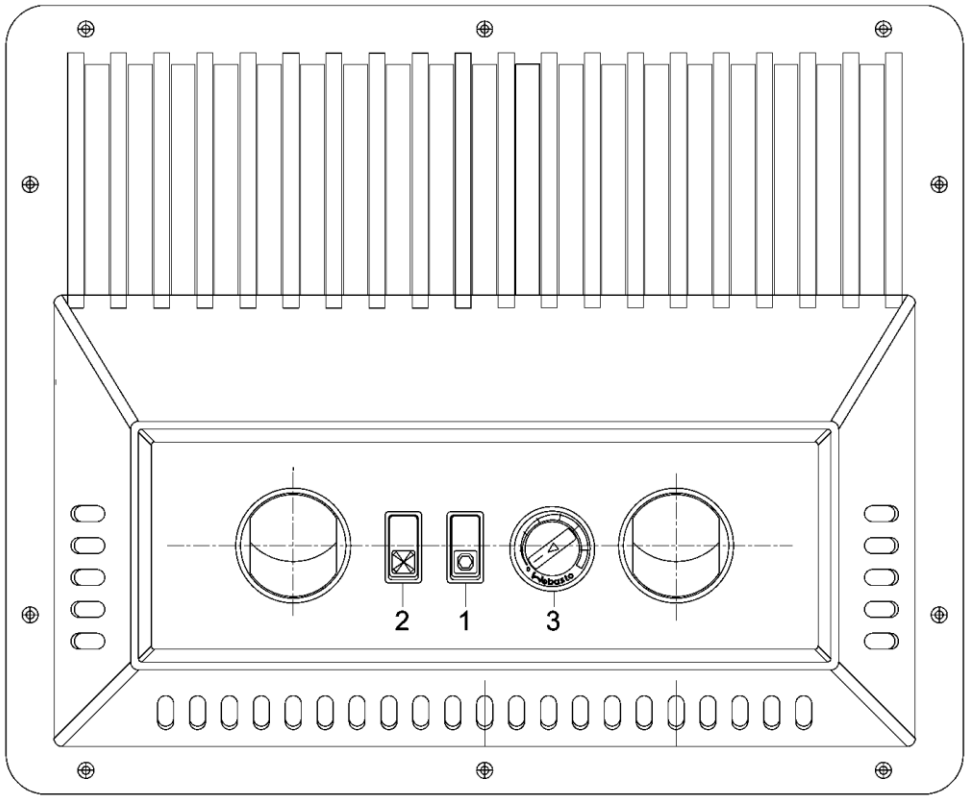
The Compact Cooler 4 E rooftop unit is a complete pre-filled unit including an electric motor driven compressor.

Further components needed to create a full working system are:

- Air distribution panel
- Controls
- Wiring

Typical applications: Single person cabins or driver area of busses.

Compact Cooler 4 E



The standard version includes an ON / OFF switch and a 3-speed fan switch.

The “Deluxe” version includes an electronic thermostat with temperature control.

1. *ON / OFF switch*
2. *3-speed fan switch*
3. *Temperature control*

Compact Cooler 4 E

Technical Data	
Nominal cooling capacity (kW)	3.5
Heating capacity (optional) (kW)	-
Refrigerant	R134a
Nominal voltage (V)	24
Max. total power consumption at 24 V (A)	68.0
Max. volume flow of evaporator blower (m^3 / h)	550
Dimensions L x W x H (mm)	1110 x 774 x 215
Weight (kg)	52.0
Inlet connection	-
Outlet connection	-
Expansion valve	-
Accessories	-

Portofino

The Portofino rooftop unit is a combined condenser / evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Air panel with or without controls
- Controls
- Hoses / wiring

Typical applications: Single person cabins.



Portofino

OR

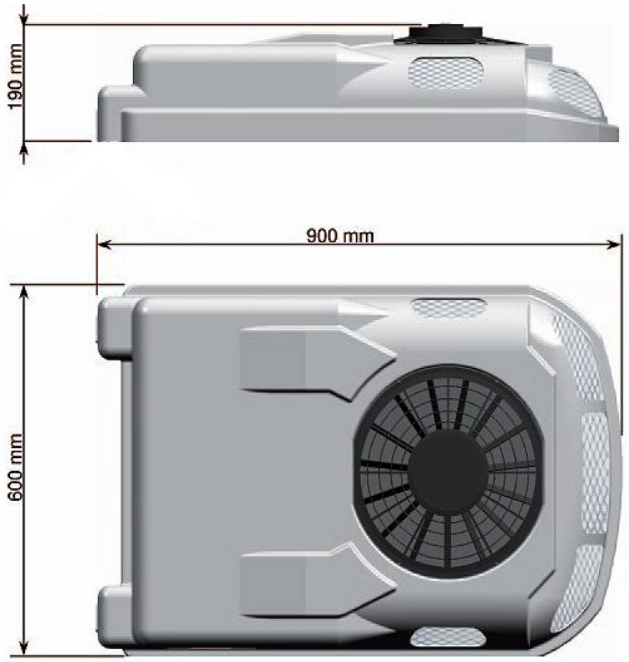
Several controls are available when applying the air panel without build in controls.

Recirculation mode only.

A heating kit is available as an option.

Portofino

Technical Data	
Nominal cooling capacity (kW)	4.0
Heating capacity (optional) (kW)	5.0
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	20.0
Max. total power consumption at 24 V (A)	10.0
Max. volume flow of evaporator blower (m^3 / h)	400
Dimensions L x W x H (mm)	900 x 600 x 190
Weight (kg)	15.5
Inlet connection	3/4” – 16 UNF – 2A
Outlet connection	7/8” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	Mounting support Heating kit



Compact Cooler 5

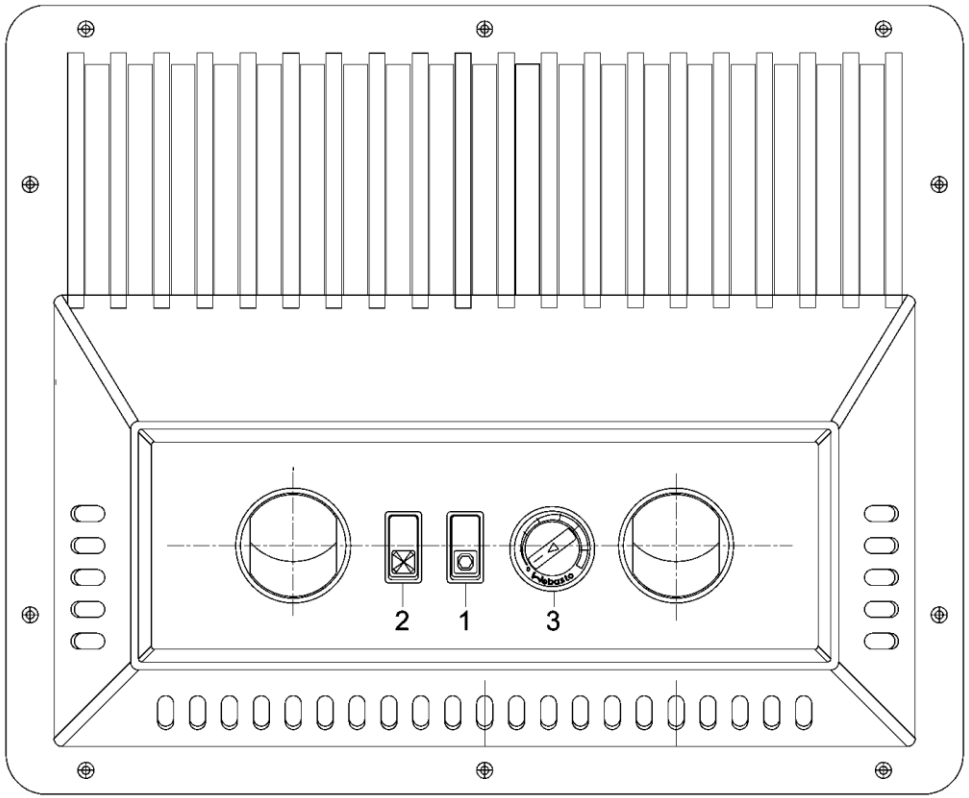
The Compact Cooler 5 rooftop unit is a combined condenser / evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Air distribution panel
- Controls
- Hoses / wiring

Typical applications: Up to 9 seat cabins.

Compact Cooler 5



The standard version includes an ON / OFF switch and a 3-speed fan switch.

The “Deluxe” version includes an electronic thermostat with temperature control.

An E-Unit is optionally available (electromotor driven compressor).

1. *ON / OFF switch*
2. *3-speed fan switch*
3. *Temperature control*

Compact Cooler 5

Technical Data	
Nominal cooling capacity (kW)	5.0
Heating capacity (optional) (kW)	-
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	15.0
Max. total power consumption at 24 V (A)	8.0
Max. volume flow of evaporator blower (m^3 / h)	630
Dimensions L x W x H (mm)	750 x 760 x 165
Weight (kg)	23.0
Inlet connection	3/4” – 16 UNF – 2A
Outlet connection	7/8” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	E-Unit

Rimini

The Rimini rooftop unit is a combined condenser / evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Air panel with or without controls
- Controls
- Hoses / wiring

Typical applications: Up to 6 seat cabins.

Rimini

OR

Modulair 1

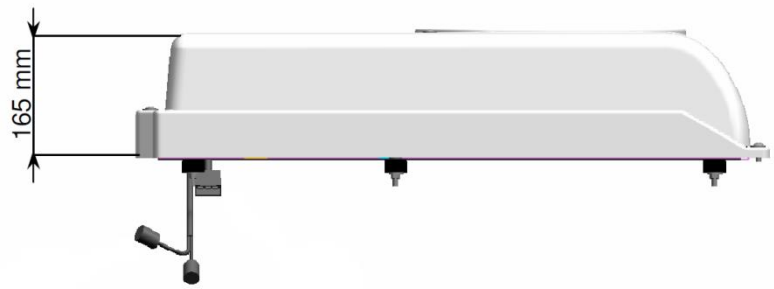
Several controls are available when applying the air panel without build in controls.

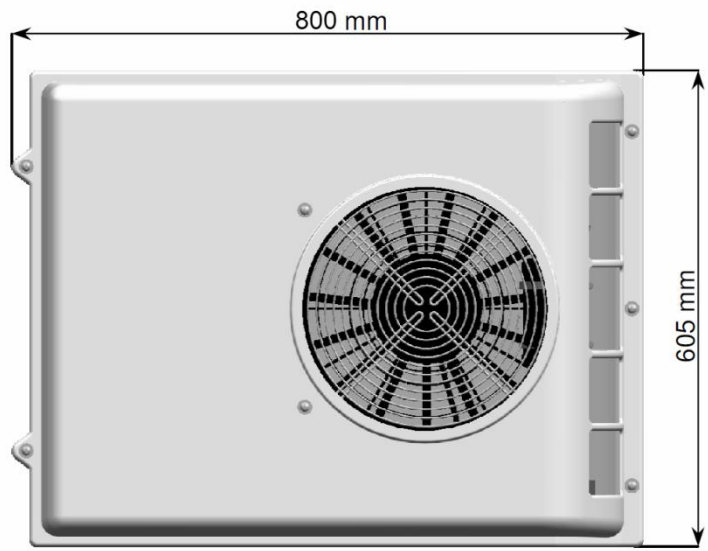
Recirculation mode only.

The “Modulair 1” air duct system can be applied with Rimini.

Rimini

Technical Data	
Nominal cooling capacity (kW)	6.2
Heating capacity (optional) (kW)	-
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. operating temperature (°C)	45
Max. total power consumption at 12 V (A)	20.0
Max. total power consumption at 24 V (A)	10.0
Max. volume flow of evaporator blower (m^3 / h)	550
Dimensions L x W x H (mm)	800 x 605 x 165
Weight (kg)	23.5
Inlet connection	3/4” – 16 UNF – 2A
Outlet connection	7/8” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	-





Turin

The Turin rooftop unit is a combined condenser / evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Air panel with or without controls
- Controls
- Hoses / wiring

Typical applications: Up to 10 seat cabins.

Turin

OR

Modulair 1

Several controls are available when applying the air panel without build in controls.

Recirculation mode only.

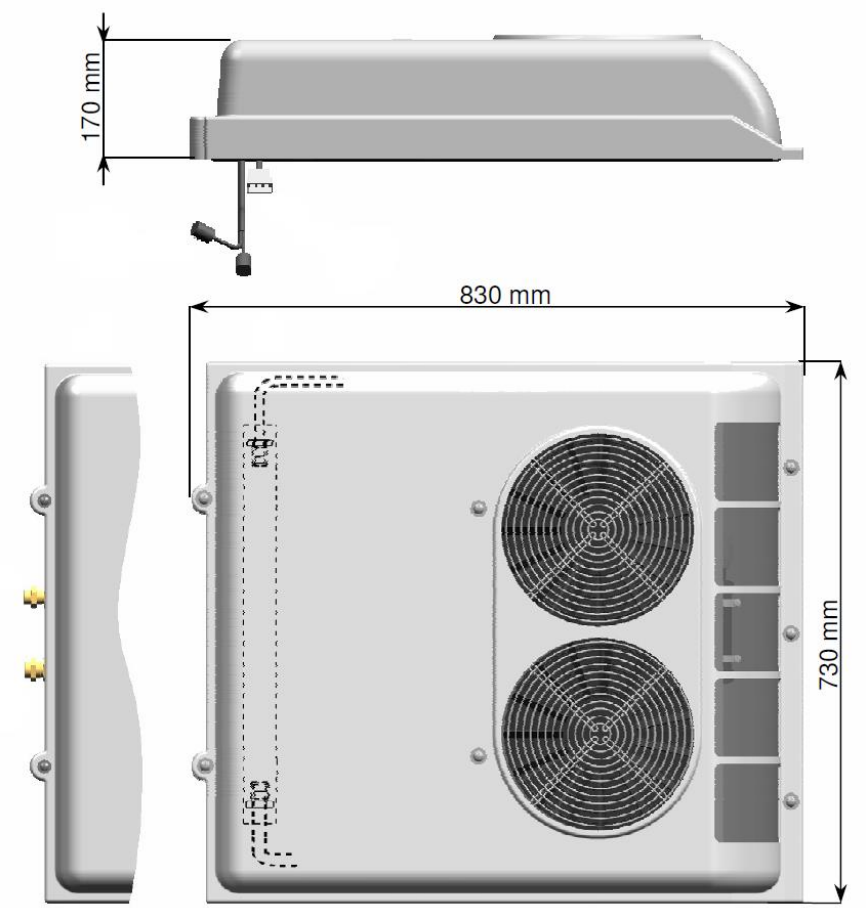
The “Modulair 1” air duct system can be applied with Turin.

The Turin rooftop unit is available in two configurations:

1. With internal refrigerant hose connections.
2. With external refrigerant hose connections.

Turin

Technical Data	
Nominal cooling capacity (kW)	8.4
Heating capacity (optional) (kW)	-
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	29.5
Max. total power consumption at 24 V (A)	15.0
Max. volume flow of evaporator blower (m^3 / h)	760
Dimensions L x W x H (mm)	830 x 730 x 170
Weight (kg)	29
Inlet connection	3/4” – 16 UNF – 2A
Outlet connection	7/8” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	-



Rooftop Units 8.5 – 14.9 kW

Compact Cooler 8 – 8.5 kW

Cool Top 110 RT-CS – 11 kW

Smirne 11.7 – kW

Cool Top 140 RT-C – 14 kW

Compact Cooler 8

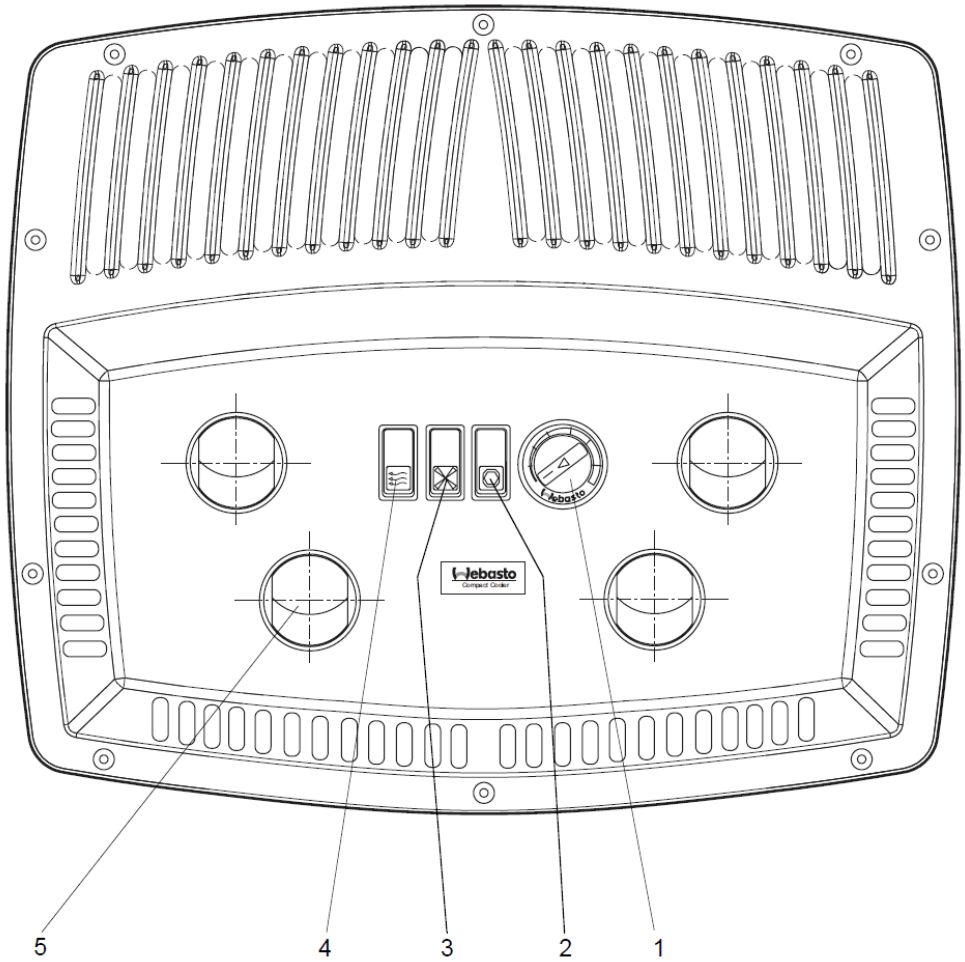
The Compact Cooler 8 rooftop unit is a combined condenser / evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Air distribution panel
- Controls
- Hoses / wiring

Typical applications: Up to 15 seat cabins.

Compact Cooler 8



The standard version includes an ON / OFF switch and a 3-speed fan switch.

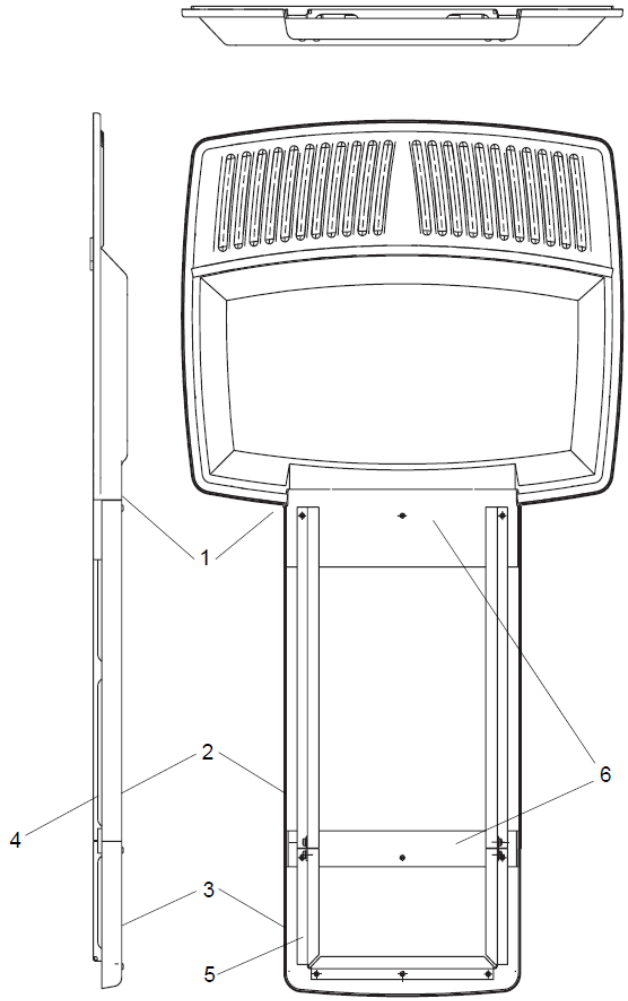
Optionally an electronic thermostat with temperature control can be installed.

Deluxe versions are available that include:
- Fresh air flap with open / close control

and / or
- 7.5 kW heater

1. *Temperature control*
2. *ON / OFF switch*
3. *3-speed fan switch*
4. *Fresh air flap control*
5. *Air nozzle*

Compact Cooler 8



A modular air ducting system can be installed optionally.

The system controls are mounted on the dashboard when installing the air ducting system. The wiring harness for "external controls" is required for this purpose.

1. *Air distribution panel*
2. *Central air duct*
3. *End air duct*
4. *Frame segment*
5. *Frame end*
6. *Segment connector*

Compact Cooler 8

Technical Data	
Nominal cooling capacity (kW)	8.5
Heating capacity (optional) (kW)	7.5
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	30.0
Max. total power consumption at 24 V (A)	16.0
Max. volume flow of evaporator blower (m^3 / h)	1300
Dimensions L x W x H (mm)	1025 x 970 x 197
Weight (kg)	32
Inlet connection	3/4” – 16 UNF – 2A
Outlet connection	7/8” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	-

Cool Top 110 RT-CS

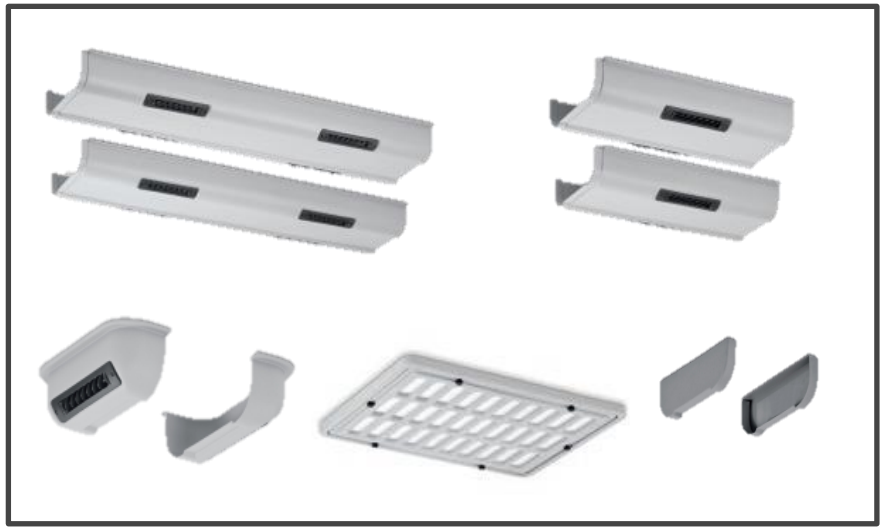
The Cool Top 110 RT-CS rooftop unit is a combined condenser / evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Modulair 3 air distribution system
- Controls
- Hoses / wiring

Typical applications: Up to 15 seat cabins.

Cool Top 110 RT-CS



Modulair 3

Use “Modulair 3” for the air distribution system.

Optional kit are available to complement the Cool Top 110 RT-CS rooftop unit:
- 12 kW Heater

Select a suitable control taking into account the selected optional kits.

Cool Top 110 RT-CS

Technical Data	
Nominal cooling capacity (kW)	11
Heating capacity (optional) (kW)	12
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. operating temperature (°C)	50
Max. total power consumption at 12 V (A)	56.0
Max. volume flow of evaporator blower (m^3 / h)	1200
Dimensions L x W x H (mm)	1600 x 1152 x 225
Weight (kg)	44
Nominal roof radius (mm)	5200
Inlet connection	7/8” – 14 UNF – 2A
Outlet connection	1-1/16” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	Heating kit

Smirne

The Smirne rooftop unit is a combined condenser / evaporator unit with fresh air flap.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Air panel with or without controls
- Controls
- Hoses / wiring

Typical applications: Up to 15 seat cabins.

Smirne

OR

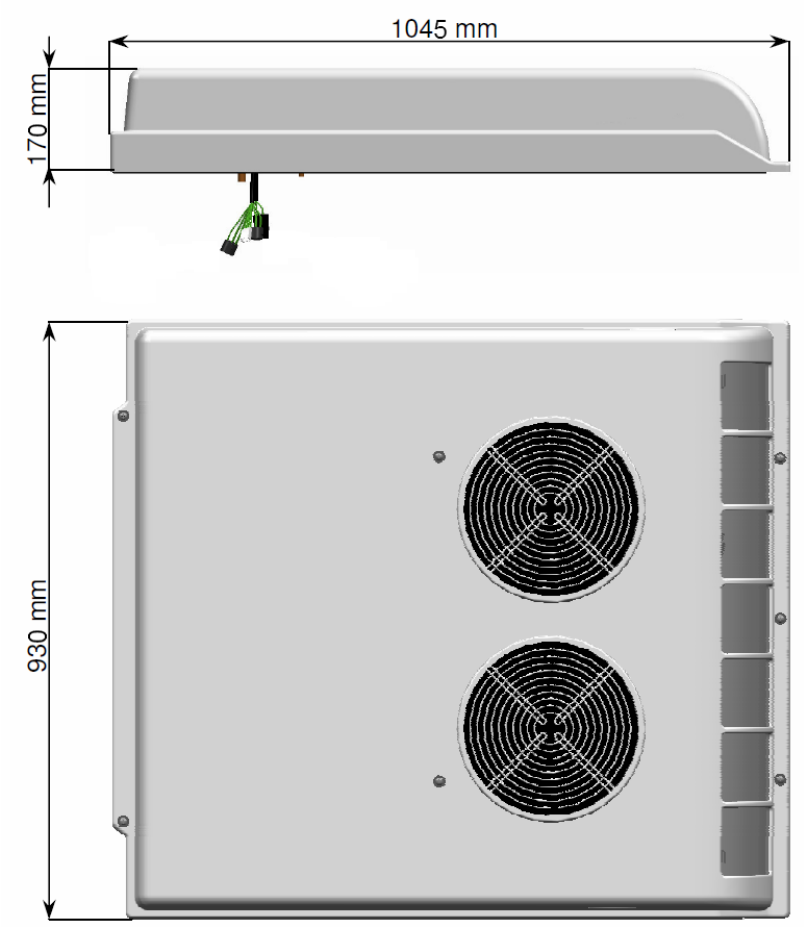
Modulair 2

Several controls are available when applying the air panel without build in controls.

The “Modulair 2” air duct system can be applied with Smirne.

Smirne

Technical Data	
Nominal cooling capacity (kW)	11.7
Heating capacity (optional) (kW)	-
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. operating temperature (°C)	45
Max. total power consumption at 12 V (A)	35.0
Max. total power consumption at 24 V (A)	18.0
Max. volume flow of evaporator blower (m^3 / h)	1100
Dimensions L x W x H (mm)	1045 x 930 x 170
Weight (kg)	33.5
Nominal roof radius (mm)	-
Inlet connection	3/4” – 16 UNF – 2A
Outlet connection	7/8” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	-



Cool Top 140 RT-C

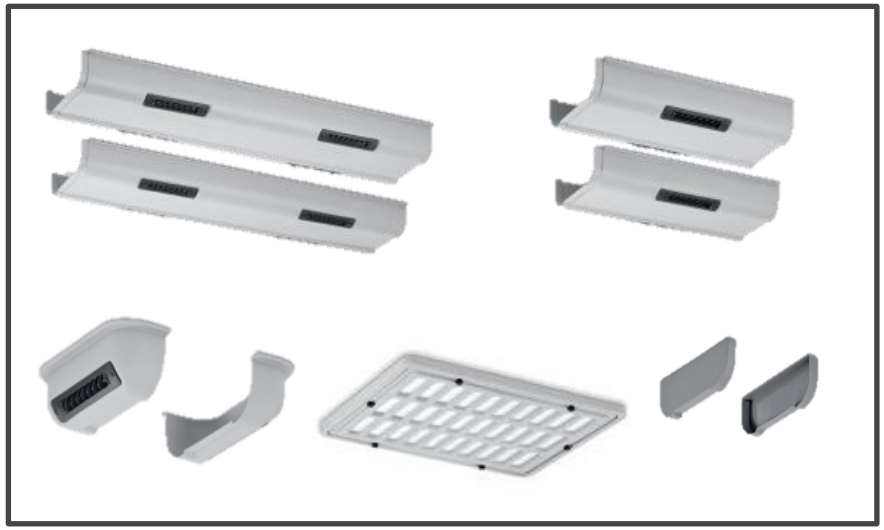
The Cool Top 140 RT-C rooftop unit is a combined condenser / evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Modulair 3 air distribution system
- Controls
- Hoses / wiring

Typical applications: Up to 16 seat cabins.

Cool Top 140 RT-C



Modulair 3

Use “Modulair 3” for the air distribution system.

Optional kits are available to complement the Cool Top 140 RT-C unit:

- Fresh air / recirculation kit
- 12 kW Heater

Select a suitable control taking into account the selected optional kits.

Cool Top 140 RT-C

Technical Data	
Nominal cooling capacity (kW)	14
Heating capacity (optional) (kW)	12
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. operating temperature (°C)	50
Max. total power consumption at 12 V (A)	90.0
Max. total power consumption at 24 V (A)	48.0
Max. volume flow of evaporator blower (m^3 / h)	1200
Dimensions L x W x H (mm)	1600 x 1152 x 225
Weight (kg)	46
Nominal roof radius (mm)	5200
Inlet connection	7/8” – 14 UNF – 2A
Outlet connection	1-1/16” – 14 UNF – 2A
Expansion valve	Block valve
Accessories	Heating kit Fresh air / recirculation kit

Rooftop Units 15.0 – 36.0 kW

Madrid – 15.5 kW

Cool Top 190 / 220 RT-C(XL)– 18.0 / 22.0 kW

Cool Top 250 RT-C – 25.0 kW

Cool Top 300 RT-C – 30.0 kW

Cool Top 360 RT-C – 36.0 kW

Madrid

The Madrid rooftop unit is a combined condenser / evaporator unit with fresh air flap.

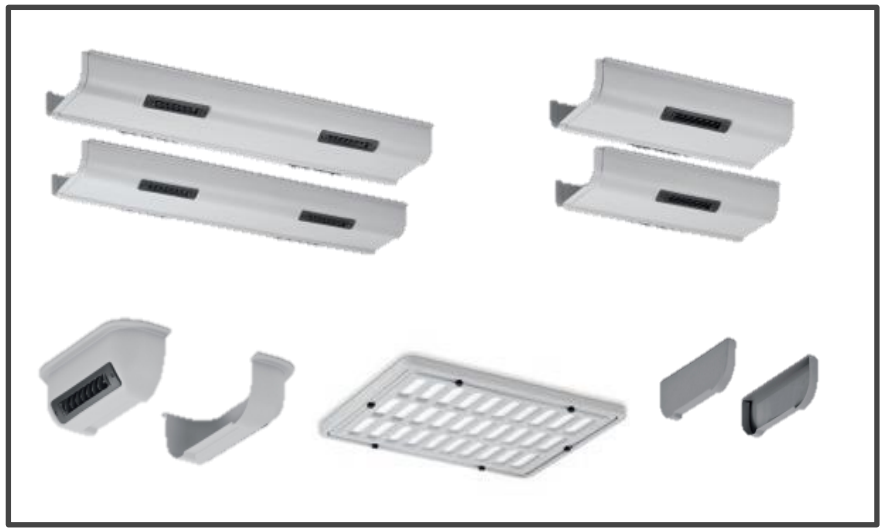
Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Air duct system Modulair 3
- Controls
- Hoses / wiring

Typical applications: Up to 17 seat cabins.

Also available with linear blowers and electronic control unit (ECU) with PWM-module

Madrid



Modulair 3

Madrid is available in two versions with regards to evaporator blower volume flow:

- 2100 m^3

or

- 2500 m^3

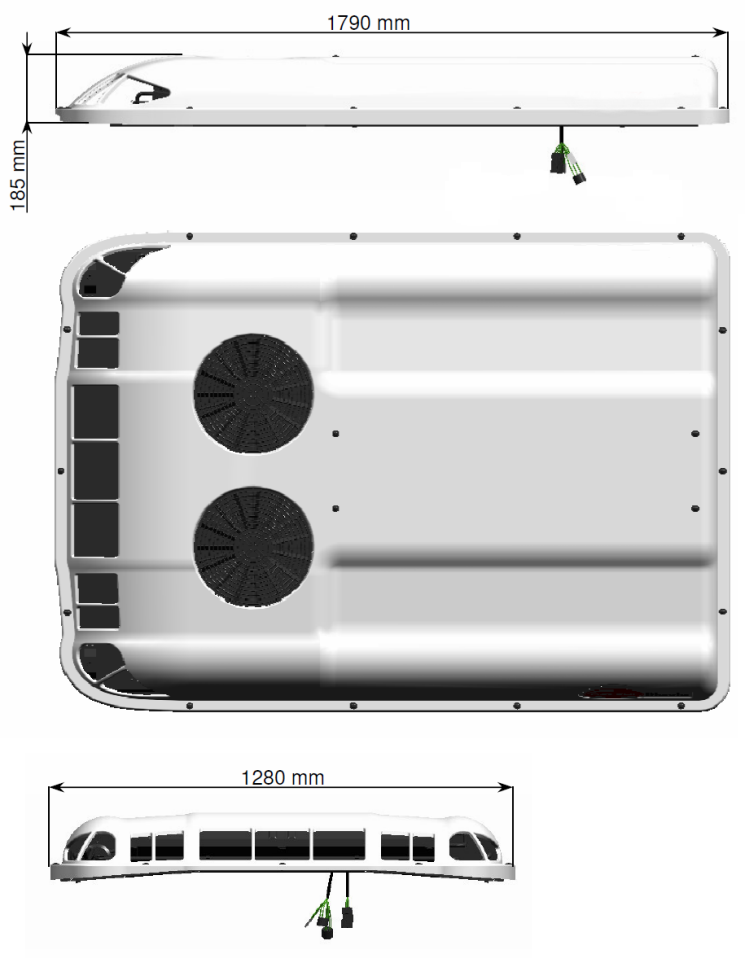
Select the “Modulair 3” for the air distribution system.

A 20 kW heater kit is available as an option.

Select a suitable control taking into account the ECU type (with or without PWM), the fresh air flap and the optional heater.

Madrid

Technical Data			
Nominal cooling capacity (kW)	15.5		
Heating capacity (optional) (kW)	20.0		
Refrigerant	R134a		
Nominal voltage (V)	12 / 24		
Max. operating temperature (°C)	45		
Max. total power consumption at 12 V (A)	58.0	90.0	90.0
Max. total power consumption at 24 V (A)	29.0	45.0	50.0
Max. volume flow of evaporator blower (m^3 / h)	2100	2500	2500
Dimensions L x W x H (mm)	1790 x 1280 x 185		
Weight (kg)	59.0		
Nominal roof radius (mm)	7000		
Inlet connection	7/8” – 14 UNF – 2A		
Outlet connection	1-1/16” – 14 UNF – 2A		
Expansion valve	Block valve		
Accessories	Heater		



Cool Top 190 / 220 RT-C(XL)

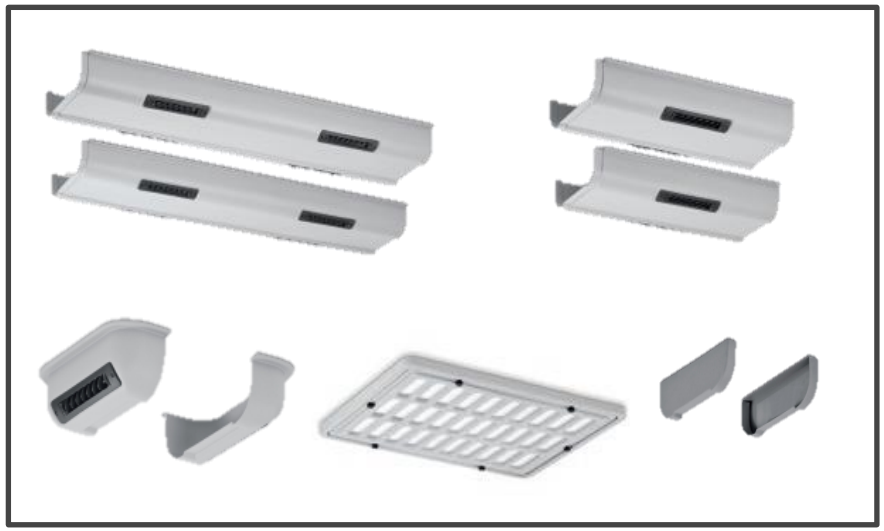
The Cool Top 190 / 220 RT-C(XL) rooftop units are combined condenser / evaporator units.
The Cool Top 190 RT-C has a width of 1600 mm.
The Cool Top 190 RT-CXL and the Cool Top 220 RT-C have a width of 1780 mm.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of either 310 cc or 470 cc
- Air duct system Modulair 3
- Hoses / wiring

Typical applications: Up to 35 seat cabins.

Cool Top 190 / 220 RT-C(XL)



Modulair 3

Use “Modulair 3” for the air distribution system.

A 20 kW heater kit is available as an option.

The automatic control and the fresh air intake are available as standard for all versions.

Cool Top 190 / 220 RT-C(XL)

Technical Data	Cool Top 190 RT-C	Cool Top 190 RT-CXL	Cool Top 220 RT-C
Nominal cooling capacity (kW)	19.0	19.0	22.0
Cooling capacity (kW) at T_{amb} = 35° C, rel. humidity = 46%, T_{in} = 27°C	15.0	15.0	18.7
Heating capacity (optional) (kW)	20.0	20.0	20.0
Refrigerant	R134a	R134a	R134a
Nominal voltage (V)	12/24	12/24	24
Max. operating temperature (°C)	50	50	50
Max. current consumption at 12/24 V (A) (with forced fresh air)	94/46	94/46	-/69
Max. volume flow of evaporator blower (m^3 / h) (free blowing)	3.000 (3.680)	3.000(3.680)	4.000(4.800)
Fresh air (%)	0-30	0-30	0-30
Number of axial fans/radial blowers	3/4	3/4	¾
Dimensions L x W x H (mm)	2.150 x 1.600 x 200	2.150 x 1.780 x 200	
Nominal roof radius R (mm)	6.000(*)	7.500(*)	
Compressor (cm^3)	310		470
Weight (kg)	75	78	80
Expansion valve	Block valve		TXV

- Different roof radius can be available on demand

Cool Top 250 RT-C

The Cool Top 250 RT-C rooftop unit is a combined condenser / evaporator unit.

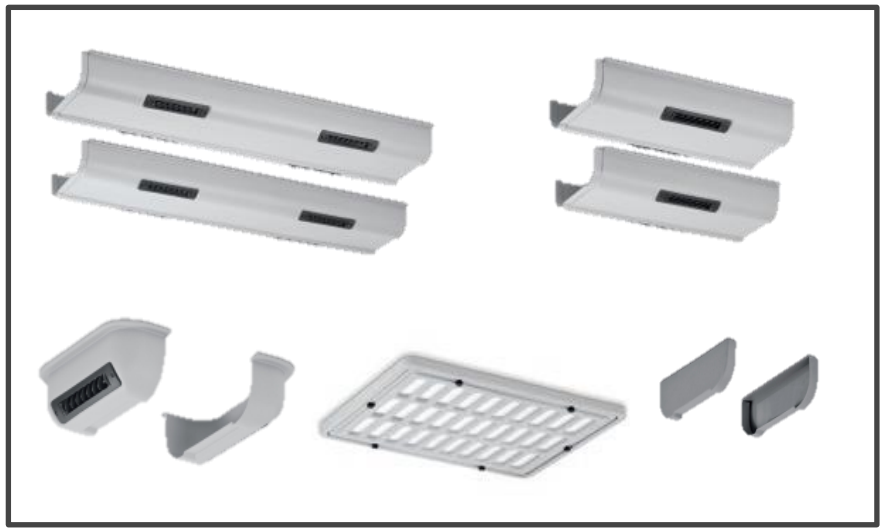
Further components needed to create a full working system are:

- Compressor with a minimum displacement of 470 cc
- Modulair 3 air distribution system
- Controls
- Hoses / wiring

A fresh air flap is pre-installed as standard

Typical applications: Up to 25 seat cabins.

Cool Top 250 RT-C



Modulair 3

Use “Modulair 3” for the air distribution system.

Optional kits are available to complement the Cool Top 250 RT-C rooftop unit:

- 30 kW Heating kit
- Condense discharger kit
- Front box kit

Select a suitable control taking into account the selected optional kits.

Cool Top 250 RT-C

Technical Data	
Nominal cooling capacity (kW)	25.0
Heating capacity (optional) (kW)	30.0
Refrigerant	R134a
Nominal voltage (V)	24
Max. operating temperature (°C)	50
Max. total power consumption at 24 V (A) / with forced fresh air	76 / 89
Max. volume flow of evaporator blower (m^3 / h) / free blowing	4000 / 4800
Dimensions L x W x H (mm)	2500 x 1988 x 210
Weight (kg)	138
Nominal roof radius (mm)	15.000 / 18.000 *
Inlet connection	ORFS 1"1/ 4
Outlet connection	ORFS 2"
Expansion valve	Angle valve
Accessories	Heating Kit

*
from 8,500 mm with adaptation plate

Cool Top 300 RT-C

The Cool Top 300 RT-C rooftop unit is a combined condenser / evaporator unit.

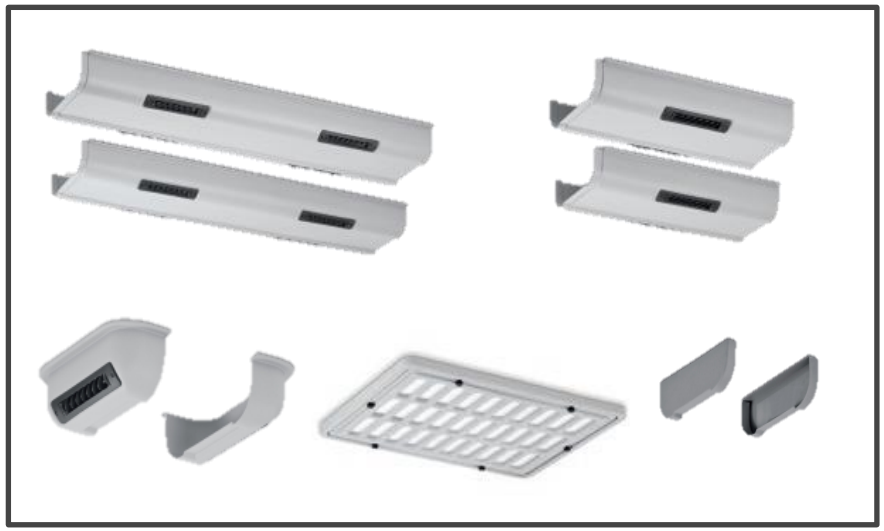
Further components needed to create a full working system are:

- Compressor with a minimum displacement of 560 cc
- Modulair 3 air distribution system
- Controls
- Hoses / wiring

A fresh air flap is pre-installed as standard

Typical applications: Up to 33 seat cabins.

Cool Top 300 RT-C



Modulair 3

Use “Modulair 3” for the air distribution system.

Optional kits are available to complement the Cool Top 300 RT-C rooftop unit:

- 30 kW Heater
- Condense discharger kit
- Front box kit

Select a suitable control taking into account the selected optional kits.

Cool Top 300 RT-C

Technical Data	
Nominal cooling capacity (kW)	30.0
Heating capacity (optional) (kW)	30.0
Refrigerant	R134a
Nominal voltage (V)	24
Max. operating temperature (°C)	50
Max. total power consumption at 24 V (A) / with forced fresh air	85 / 97
Max. volume flow of evaporator blower (m^3 / h) / free blowing	4000 / 4800
Dimensions L x W x H (mm)	2500 x 1988 x 210
Weight (kg)	143
Nominal roof radius (mm)	15.000 / 18.000 *
Inlet connection	ORFS 1"1/ 4
Outlet connection	ORFS 2"
Expansion valve	Angle valve
Accessories	Heating Kit

*
from 8,500 mm with adaptation plate

Cool Top 360 RT-C

The Cool Top 360 RT-C rooftop unit is a combined condenser / evaporator unit.

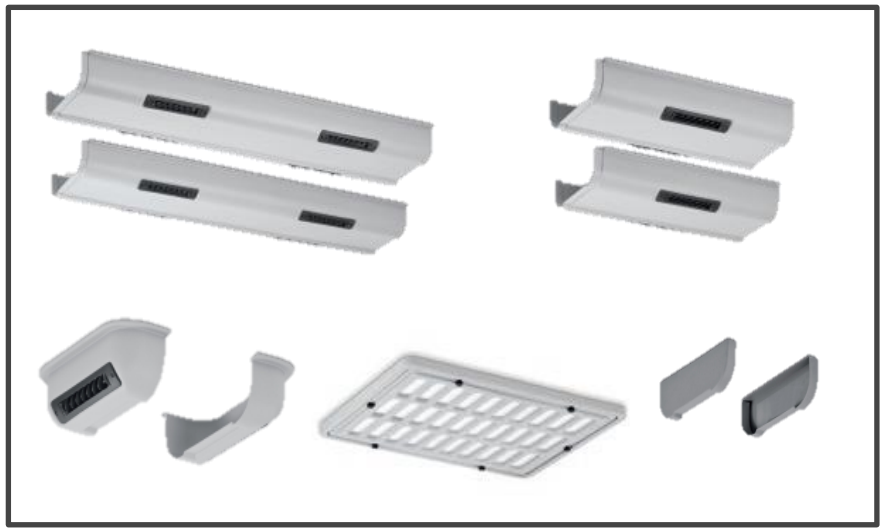
Further components needed to create a full working system are:

- Compressor with a minimum displacement of 560 cc
- Modulair 3 air distribution system
- Controls
- Hoses / wiring

A fresh air flap is pre-installed as standard

Typical applications: Up to 40 seat cabins.

Cool Top 360 RT-C



Modulair 3

Use “Modulair 3” for the air distribution system.

Optional kits are available to complement the Cool Top 360 RT-C rooftop unit:

- 35 kW Heater
- Condense discharger kit
- Front box kit

Select a suitable control taking into account the selected optional kits.

Cool Top 360 RT-C

Technical Data	
Nominal cooling capacity (kW)	36.0
Heating capacity (optional) (kW)	35.0
Refrigerant	R134a
Nominal voltage (V)	24
Max. operating temperature (°C)	50
Max. total power consumption at 24 V (A) / with forced fresh air	101 / 114
Max. volume flow of evaporator blower (m^3 / h) / free blowing	6000 / 7200
Dimensions L x W x H (mm)	2500 x 1988 x 210
Weight (kg)	154
Nominal roof radius (mm)	15.000 / 18.000 *
Inlet connection	ORFS 1"1/ 4
Outlet connection	ORFS 2"
Expansion valve	Angle valve
Accessories	Heating Kit

*
from 8,500 mm with adaptation plate

Integrated Air-Conditioning Index

Common Features

Applications

Specifications

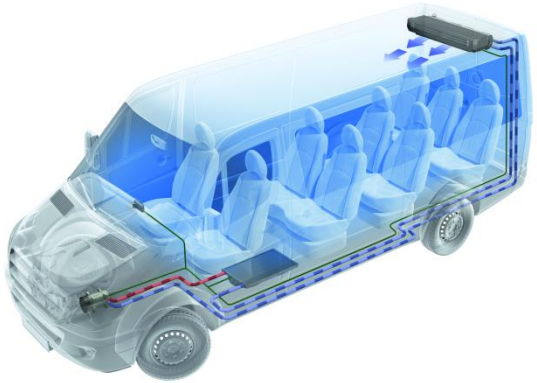
Integrated Products

Common Features

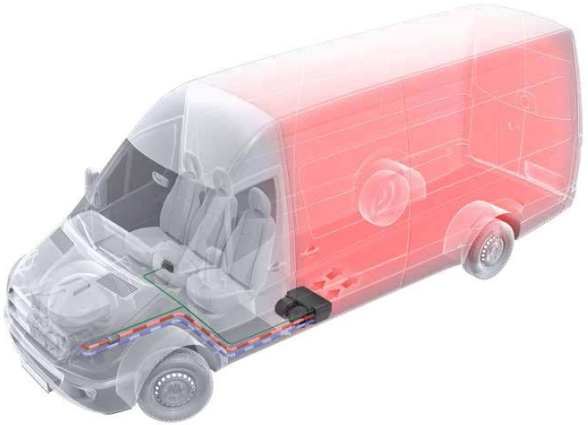
Webasto offers all components to create a custom integrated air-conditioning or heat exchanger in a vehicle.

The integrated products can be categorised as follows:

- Ventilation and Cooling (VAC)
- Heating, Ventilation and Cooling (HVAC)
- Heating and Ventilation (HV)



VAC / HVAC integrated air-conditioning

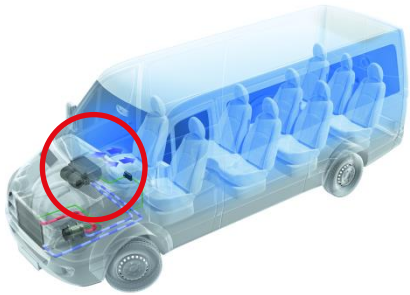


HV integrated heat exchanger

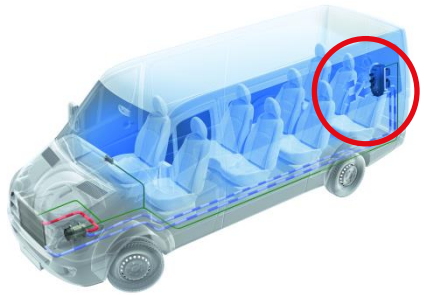
Common Features

The product range offers a wide performance window and various positions of the interior units can be selected. Find below some examples of evaporator positions:

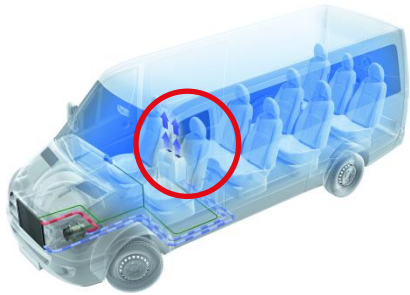
Under roof



Under dashboard



Vertical in a corner

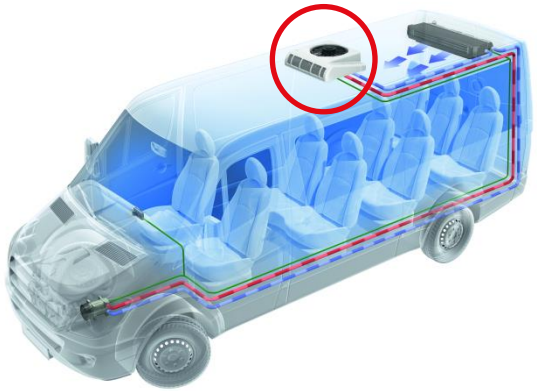


Vertical

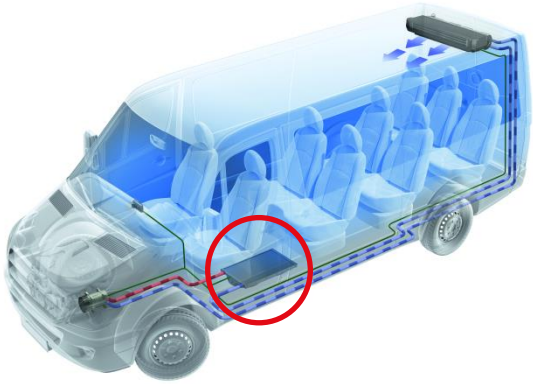
Common Features

For the VAC and HVAC products a condenser must be mounted either:

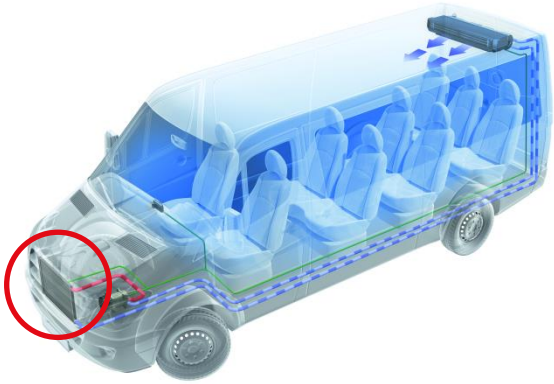
- on the roof (rooftop condensers),
- to the underbody (under chassis condensers) or
- at the front of the vehicle (under chassis condensers).



Rooftop mounted condenser



Underbody mounted condenser



Front of vehicle mounted condenser

Common Features

Be aware that next to the evaporator unit and the condenser, several other items are required to make the integrated system complete. Depending on the application this can include:

- Compressor and compressor installation kit
- Refrigerant lines, connections, receiver / dryer
- Controls, water valve
- Wiring
- Air distribution modules and ducting

Compressor

Controls

Water valve

Air distribution

Applications








The applications of integrated air-conditioning systems can be very diverse. Required performance, the region of use and the conditions of operation mainly determine the selection of components.

But also the positioning of components, the air distribution requirements and the ease of control determine the final composition of the application.

Specifications – VAC 4.0 – 9.0 kW

Technical Data	Oakland	Osaka	Montreal	Minsk	Wyoming	Glasgow	Monaco	Marbella
Nominal cooling capacity (kW)	4.0	4.6	5.0	5.0	5.5	6.2	7.7	9.0
Installation position	Under dash / Under roof	Vertical		Rooftop	Cabin ceiling	Under dash / Under roof		Vertical
Refrigerant	R134a							
Nominal voltage (V)	12 / 24							
Max. total power consumption at 12 V (A)	7.4	9.5	9.5	9.0	12.7	14.8	18.6	20.5
Max. total power consumption at 24 V (A)	3.7	4.7	4.7	4.5	6.4	7.4	9.3	
Max. volume flow of evaporator blower (m^3 / h)	450	350	450	450	350	650	634	800
Dimensions L x W x H (mm)	235 x 365 x 130	165 x 410 x 320	160 x 370 x 350	460 x 505 x 145	380 x 590 x 185	360 x 400 x 170	340 x 580 x 135	180 x 640 x 355
Weight (kg)	3.5	5.5	5.5	6.0	7.5	6.0	4.7	8.0
Expansion valve	Angle valve	Block valve						
Air duct connection	-							

Specifications – VAC 9.5 – 16.0 kW

Technical Data	Vancouver	Riga		Moscow	Newport	
Nominal cooling capacity (kW)	9.5	12.0	14.0	13.4	14.0	16.0
Installation position	Under dash / Under roof	Under roof				
Refrigerant	R134a					
Nominal voltage (V)	12 / 24					
Max. total power consumption at 12 V (A)	22.0	31.0		19.0	40.0	
Max. total power consumption at 24 V (A)	11.0	15.5			20.0	
Max. volume flow of evaporator blower (m^3 / h)	800	1350		1000	1300	
Dimensions L x W x H (mm)	365 x 500 x 170	320 x 1240 x 175		355 x 856 x 170	385 x 925 x 180	
Weight (kg)	6.7	18.0		11.5	12.5	
Expansion valve	Block valve	Block valve, 2 tons	Angle valve, 3 tons	Block valve	Block valve, 2 tons	Angle valve, 3 tons
Air duct connection	-	6 connectors for air duct Ø 72 mm		-	-	

Specifications – HVAC 4.0 – 7.7 kW

Technical Data	Baltimore	Quebec	Milano	Michigan Electric	Michigan Water	Oslo	Norway	Paris
Nominal cooling capacity (kW)	4.0	5.0	5.5	5.5		6.2	6.3	7.7
Nominal heating capacity (kW)	2.0	6.7	11.0	2.8	6.3	8.5	10.2	6.3
Installation position	Under dash / Under roof	Vertical	Under dash / Under roof	Cabin ceiling		Under dash / Under roof	Vertical	Under dash / Under roof
Refrigerant	R134a							
Nominal voltage (V)	12 / 24			12	24	12 / 24		
Max. total power consumption at 12 V (A)	7.4	9.5	13.0	13.0		14.8	16.0	17.6
Max. total power consumption at 24 V (A)	3.7	4.7	6.5	6.4		7.4	8.0	8.8
Max. volume flow of evaporator blower (m^3 / h)	450	450	450	450		650	630	634
Dimensions L x W x H (mm)	235 x 365 x 130	185 x 370 x 330	328 x 414 x 233	380 x 590 x 185		360 x 400 x 170	225 x 425 x 440	340 x 580 x 135
Weight (kg)	3.7	6.5	6.4	8.7		5.3	10.0	5.2
Expansion valve	Angle valve	Block valve						
Air duct connection	-		4 x Ø 60 mm	-				

Specifications – HVAC 9.0 – 16.0 kW

Technical Data	Ibiza	London	Oxford	Kiev	Monterrey	
Nominal cooling capacity (kW)	9.0	9.5	9.5	13.4	14.0	16.0
Nominal heating capacity (kW)	12.0	13.0	13.0	11.5	14.6	
Installation position	Vertical	Under dash / Under roof	Vertical	Under roof		
Refrigerant	R134a					
Nominal voltage (V)	12 / 24					
Max. total power consumption at 12 V (A)	21.5	21.0	17.0	18.0	39.0	
Max. total power consumption at 24 V (A)	10.8	10.5	10.5	9.0	19.5	
Max. volume flow of evaporator blower (m^3 / h)	800	800	800	1000	1300	
Dimensions L x W x H (mm)	180 x 640 x 355	400 x 550 x 180	420 x 175 x 560	380 x 890 x 170	385 x 925 x 180	
Weight (kg)	10.0	7.7	8.0	12.5	13.5	
Expansion valve	Block valve				Block valve, 2 tons	Angle valve, 3 tons
Air duct connection	-	-	5/7 connections for air duct Ø 60 mm	-	-	

Specifications – HV 3.8 – 13.0 kW

Technical Data	Sydney	Stoccolma	Houston	Toronto	Phoenix	Cyprus
Nominal heating capacity (kW)	3.8	3.8	6.5	7.0	8.6	13.0
Installation position	Under dash / Under roof			Cabin ceiling	Under dash / Under roof	
Nominal voltage (V)	12 / 24	12	12 / 24	12	12 / 24	
Max. total power consumption at 12 V (A)	4.2	3.5	14.0	8.6	8.4	24.0
Max. total power consumption at 24 V (A)	2.1	-	7.0	-	4.2	12.0
Max. volume flow of blower (m^3 / h)	170	170	420	450	450	800
Dimensions L x W x H (mm)	180 x 260 x 130	270 x 195 x 330	230 x 220 x 165	380 x 590 x 160	235 x 385 x 125	300 x 545 x 175
Weight (kg)	1.3	2.5	2.8	4.2	3.0	4.0

Specifications – Rooftop Condensers

Technical Data	Venezia		Trieste		Napoli		Capri		Valencia
	Tube & Fin	HTC	Fin Pitch 3.5 mm	Fin Pitch 2.5 mm	Tube & Fin	HTC	Fin Pitch 3.5 mm	Fin Pitch 2.5 mm	
Performance (kW)	2.8	5.5	5.0	6.5	6.0	11.5	8.0	10.5	12.5
Refrigerant	R134a								
Nominal voltage (V)	12 / 24								
Max. total power consumption at 12 V (A)	7.0		13		18		18		27.0
Max. total power consumption at 24 V (A)	3.5		6		9		9		13.5
Dimensions L x W x H (mm)	570 x 370 x 150		575 x 480 x 180		830 x 485 x 150		815 x 600 x 150		955 x 600 x 150
Weight (kg)	8.0		8.0		12.0		12.0		14.0

Specifications – Under Chassis Condensers

Technical Data	Taormina	Sicilia	Verona	HTC					
				Size 1	Size 2		Size 3	Size 4	
				Fin Pitch 2.5 mm	Fin Pitch 3.5 mm	Fin Pitch 2.5 mm	Fin Pitch 2.5 mm	Fin Pitch 3.5 mm	Fin Pitch 2.5 mm
Performance (kW)	4	5	5	6.5	5.0	7.0	12.0	12.0	14.0
Refrigerant	R134a								
Nominal voltage (V)	12 / 24				12		12 / 24	12	12 / 24
Max. total power consumption at 12 V (A)	13				18		32	18	
Max. total power consumption at 24 V (A)	6				-		16	-	9
Number of ventilators	3	2		1	2		2	2	
Dimensions L x W x H (mm)	710 x 165 x 178	690 x 157 x 230	690 x 157 x 230	480 x 110 x 350	606 x 110 x 350		606 x 160 x 350	725 x 105 x 450	
Weight (kg)	9.5	8.0	9.5	3.7	4.5		7.5	6.0	4.6

Integrated Products

Ventilation & Cooling
4.0 – 9.0 kW

Ventilation & Cooling
9.0 – 16.0 kW

Heating, Ventilation & Cooling
4.0 – 7.7 kW

Heating, Ventilation & Cooling
9.0 – 16.0 kW

Heating & Ventilation
3.8 – 13.0 kW

Rooftop Condensers

Under-Chassis Condensers

Ventilation & Cooling 4.0 – 9.0 kW

Oakland – 4.0 kW

Osaka – 4.6 kW

Montreal – 5.0 kW

Minsk – 5.0 kW

Wyoming – 5.5 kW

Glasgow – 6.2 kW

Monaco – 7.7 kW

Marbella – 9.0 kW

Oakland

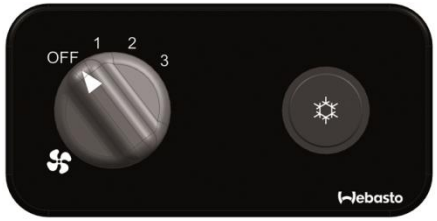
The Oakland integrated unit is an evaporator unit. The size of the unit makes it especially suitable for under dash mounting.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Controls
- Front panel with air vents or ducting
- Hoses / wiring

Typical applications: Small 2 seat cabins.

Oakland

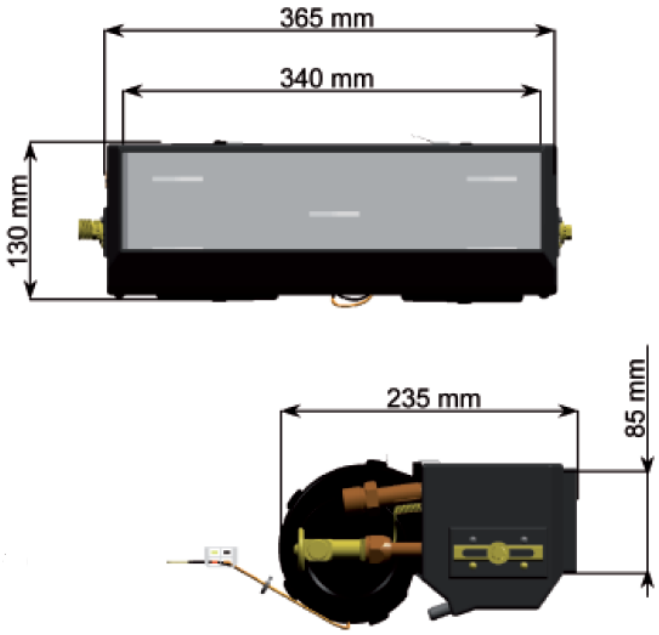


Several air distribution panels are available (black and grey) of which one type is equipped with controls.

Depending on further system integration, blower speed and AC ON / OFF are the minimum requirements for control.

Oakland

Technical Data	
Nominal cooling capacity (kW)	4.0
Installation position	Under dashboard
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	7.4
Max. total power consumption at 24 V (A)	3.7
Max. volume flow of evaporator blower (m^3 / h)	450
Dimensions L x W x H (mm)	235 x 365 x 130
Weight (kg)	3.5
Expansion valve	Angle valve
Air duct connection	-



Osaka

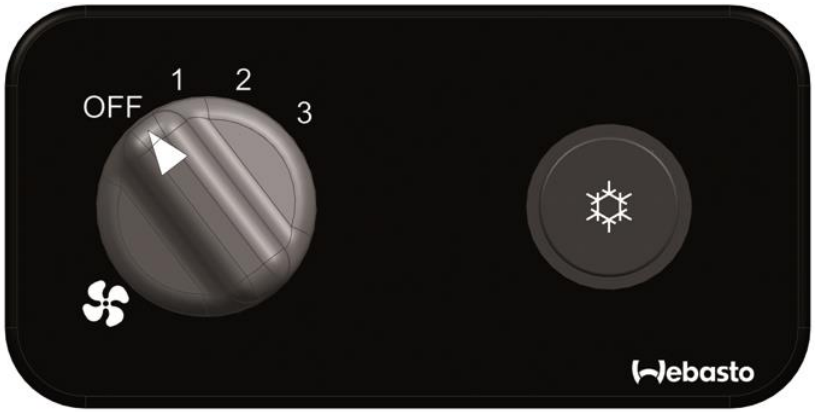
The Osaka integrated unit is an evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Controls
- Condenser with mounting
- Hoses / wiring

Typical applications: Single seat cabins and ambulances.

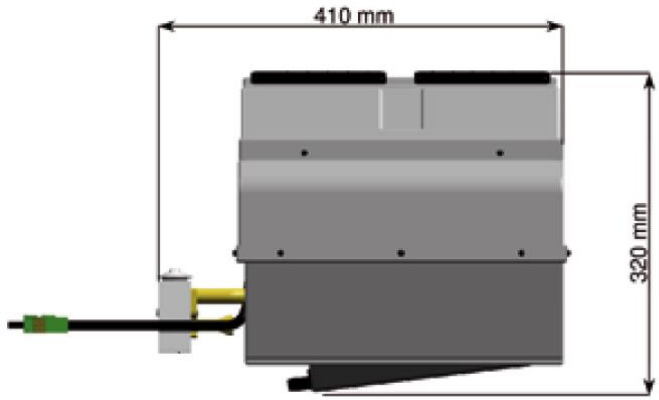
Osaka

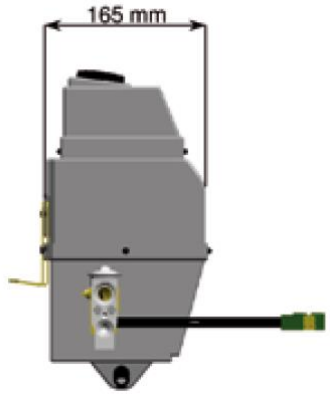


Depending on further system integration, blower speed and AC ON / OFF control are the minimum requirements.

Osaka

Technical Data	
Nominal cooling capacity (kW)	4.6
Installation position	Vertical
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	9.5
Max. total power consumption at 24 V (A)	4.7
Max. volume flow of evaporator blower (m^3 / h)	350
Dimensions L x W x H (mm)	165 x 410 x 320
Weight (kg)	5.5
Expansion valve	Block valve
Air duct connection	-





Montreal

The Montreal integrated unit is an evaporator unit available in grey and black (picture). Manual controls are included.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Panel with air ducts
- Hoses / wiring

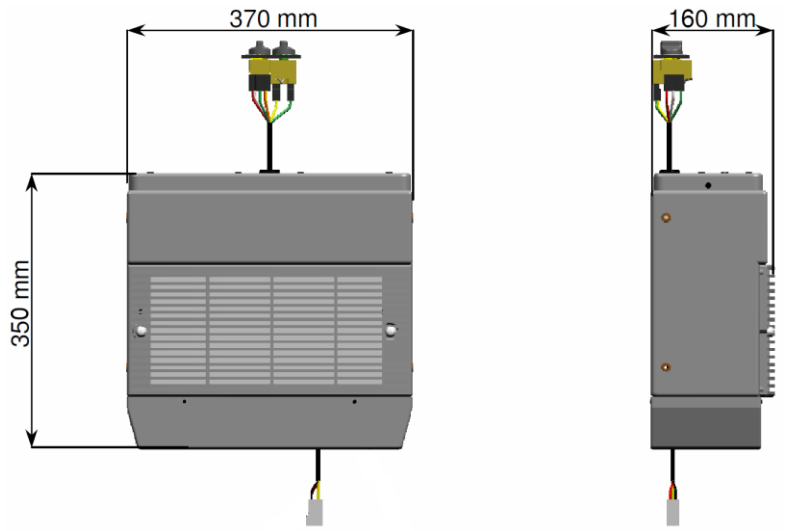
Typical applications: Recreation vehicles and ambulances.

Montreal

Several air distribution panels are available to suit the application.

Montreal

Technical Data	
Nominal cooling capacity (kW)	5.0
Installation position	Vertical
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	9.5
Max. total power consumption at 24 V (A)	4.7
Max. volume flow of evaporator blower (m^3 / h)	450
Dimensions L x W x H (mm)	160 x 370 x 350
Weight (kg)	5.5
Expansion valve	Block valve
Air duct connection	-



Minsk

Minsk is a rooftop evaporator.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Air panel with or without controls
- Controls
- Hoses / wiring

Typical applications: Single seat cabins and ambulances.

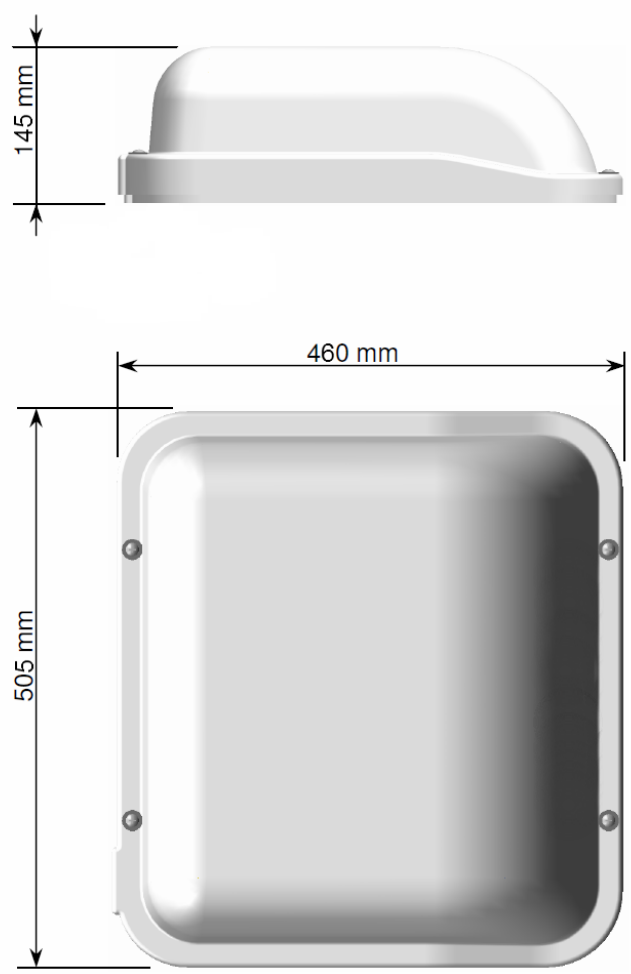
Minsk

Several controls are available when applying the air panel without build in controls.

OR

Minsk

Technical Data	
Nominal cooling capacity (kW)	5.0
Installation position	Rooftop
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	9.0
Max. total power consumption at 24 V (A)	4.5
Max. volume flow of evaporator blower (m^3 / h)	450
Dimensions L x W x H (mm)	460 x 505 x 145
Weight (kg)	6.0
Expansion valve	Block valve
Air duct connection	-



Wyoming

The Wyoming integrated unit is an evaporator unit intended for mounting in the ceiling of a cabin. Controls and air vents are part of the assembly.

Further components needed to create a full working system are:

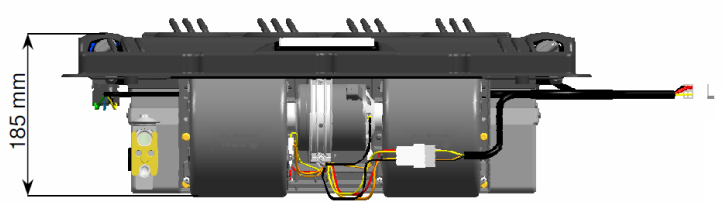
- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Hoses / wiring

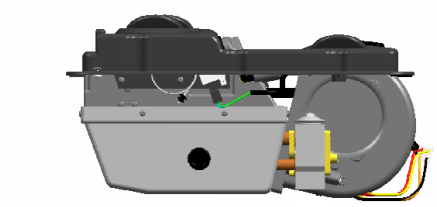
Typical applications: Single seat cabins.



Wyoming

Technical Data	
Nominal cooling capacity (kW)	5.5
Installation position	Cabin ceiling
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	12.7
Max. total power consumption at 24 V (A)	6.4
Max. volume flow of evaporator blower (m^3 / h)	350
Dimensions L x W x H (mm)	380 x 590 x 185
Weight (kg)	7.5
Expansion valve	Block valve
Air duct connection	-





Glasgow

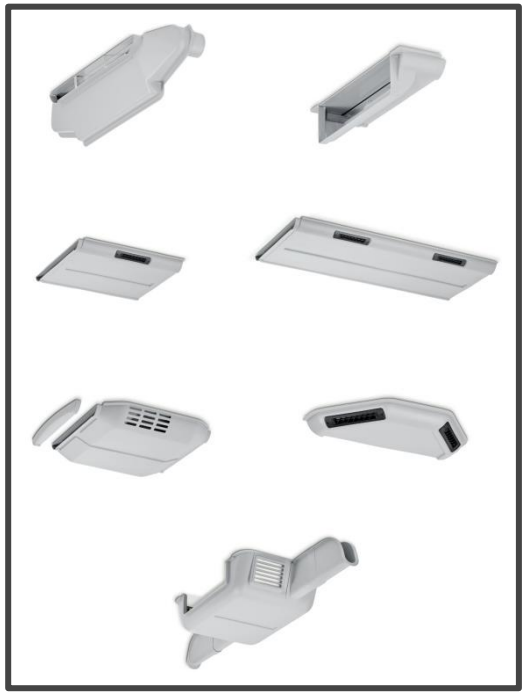
The Glasgow integrated unit is an evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Controls
- Air vent panel or air ducts
- Hoses / wiring

Typical applications: Up to 15 seat cabins.

Glasgow



Modulair 1

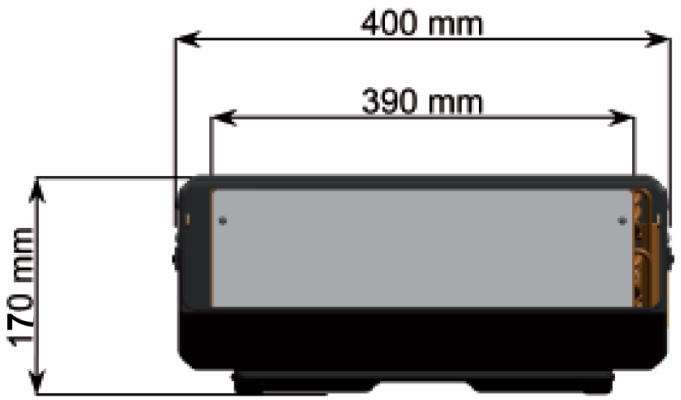
Several air distribution panels are available (black and grey) of which one type is equipped with controls.

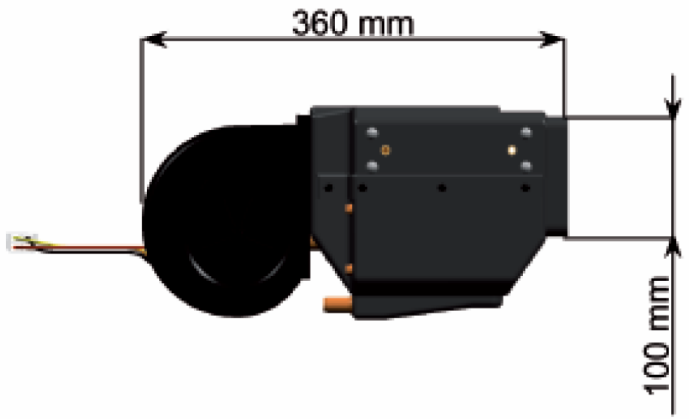
The “Modulair 1” air duct system can be applied with Glasgow.

Depending on further system integration, blower speed and AC ON / OFF are the minimum requirements for control.

Glasgow

Technical Data	
Nominal cooling capacity (kW)	6.2
Installation position	Under dash / Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	14.8
Max. total power consumption at 24 V (A)	7.4
Max. volume flow of evaporator blower (m^3 / h)	650
Dimensions L x W x H (mm)	360 x 400 x 170
Weight (kg)	6.0
Expansion valve	Block valve
Air duct connection	-





Monaco

The Monaco integrated unit is an evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air vent panel or ducting
- Hoses / wiring

Typical applications: Up to 6 seat cabins and ambulances.

Monaco

An air distribution panel is available to suit the application.

The air ventilation panels for Monaco are available in grey and black, with or without controls.

When selecting separate controls, blower speed and AC ON / OFF control are the minimum requirements, depending on further integration of the system.

Monaco

Technical Data	
Nominal cooling capacity (kW)	7.7
Installation position	Under dash / Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	18.6
Max. total power consumption at 24 V (A)	9.3
Max. volume flow of evaporator blower (m^3 / h)	634
Dimensions L x W x H (mm)	340 x 580 x 135
Weight (kg)	4.7
Expansion valve	Block valve
Air duct connection	-

Marbella

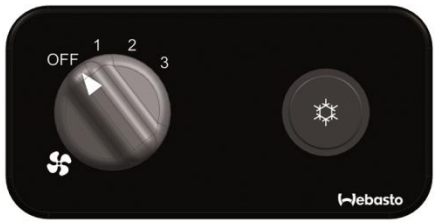
The Marbella integrated unit is an evaporator unit.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Panel with air ducts
- Hoses / wiring

Typical applications: Up to 6 seat cabins and ambulances.

Marbella

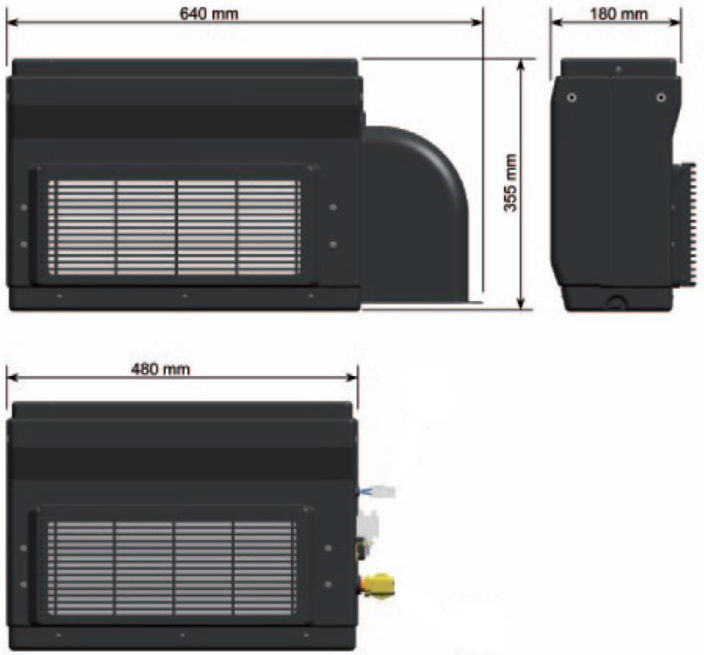


An air diffuser with flap and an air distribution panel are available to suit the application.

Depending on further system integration, blower speed and AC ON / OFF control are the minimum requirements.

Marbella

Technical Data	
Nominal cooling capacity (kW)	9.0
Installation position	Vertical
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	20.5
Max. total power consumption at 24 V (A)	
Max. volume flow of evaporator blower (m^3 / h)	800
Dimensions L x W x H (mm)	180 x 640 x 355
Weight (kg)	8.0
Expansion valve	Block valve
Air duct connection	-



Ventilation & Cooling 9.5 – 16.0 kW

Vancouver – 9.5 kW

Riga – 12.0 / 14.0 kW

Moscow - 13.4 kW

Newport – 14.0 / 16.0 kW

Vancouver

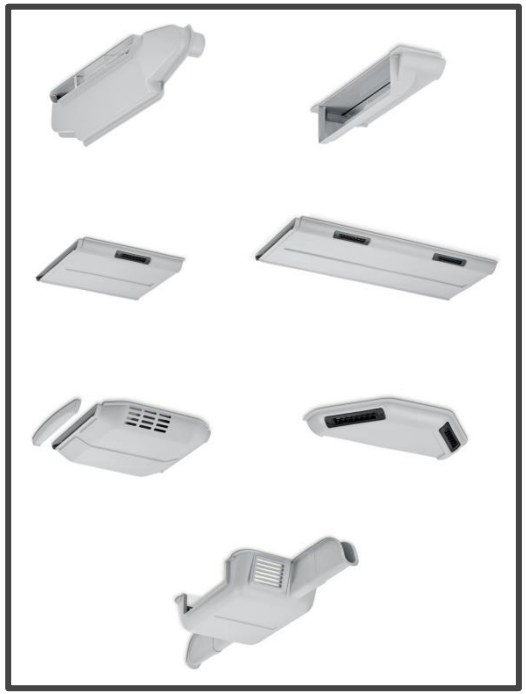
The Vancouver integrated unit is an evaporator unit.

Further components needed to create a full working system are:

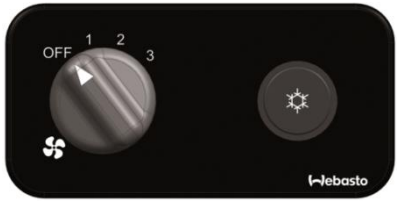
- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air vent panel or ducting
- Hoses / wiring

Typical applications: Up to 9 seat cabins and ambulances.

Vancouver



Modulair 1



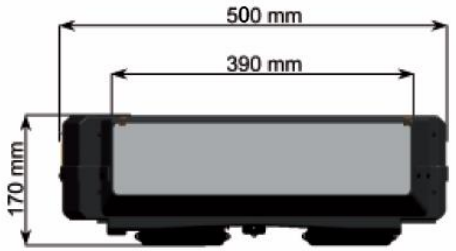
Several air distribution panels are available (black and grey) of which one type is equipped with controls.

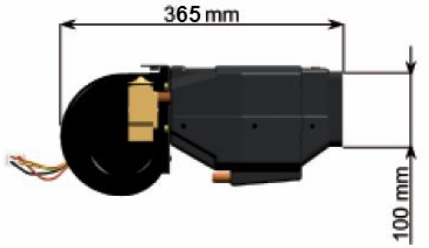
The “Modulair 1” air duct system can be applied with Vancouver.

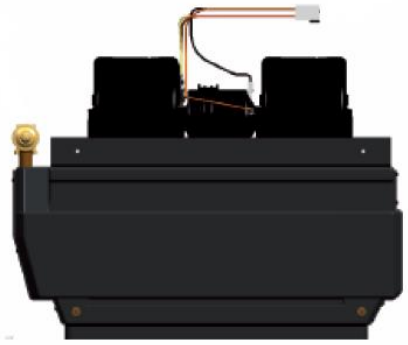
Depending on further system integration, blower speed and AC ON / OFF are the minimum requirements for control.

Vancouver

Technical Data	
Nominal cooling capacity (kW)	9.5
Installation position	Under dash / Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	22.0
Max. total power consumption at 24 V (A)	11.0
Max. volume flow of evaporator blower (m^3 / h)	800
Dimensions L x W x H (mm)	365 x 500 x 170
Weight (kg)	6.7
Expansion valve	Block valve
Air duct connection	-







Riga

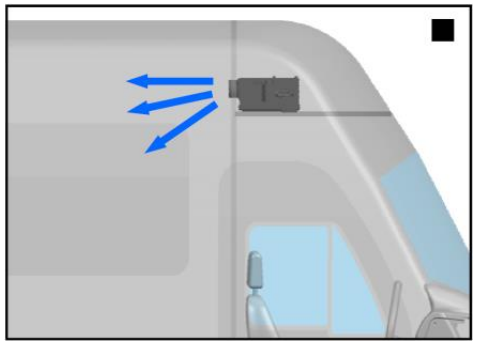
The Riga integrated unit is an evaporator unit.

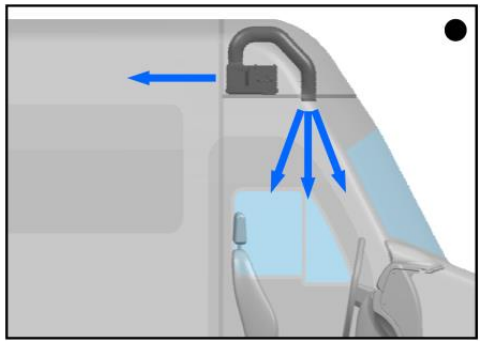
Further components needed to create a full working system are:

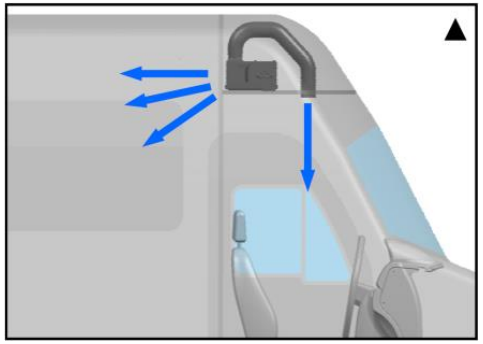
- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air vent panel or ducting
- Hoses / wiring

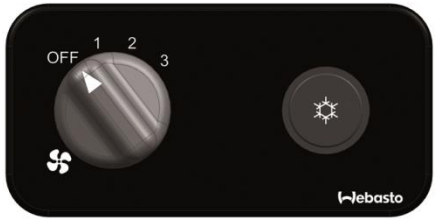
Typical applications: Up to 15 to 20 seat cabins.

Riga









Regarding air distribution, 3 versions are available:

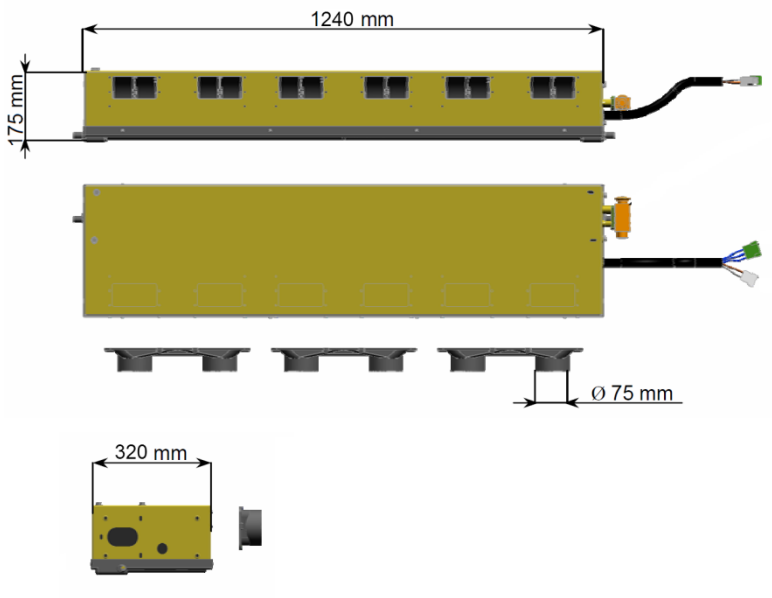
- ■ All air exits at the rear
- ● 2 air exits at the rear, 4 at the top
- ▲ 4 air exits at the rear, 2 at the top

Availability	Riga 2t	Riga 3t
12 V	■ / ● / ▲	■
24 V	■	■

Depending on further system integration, blower speed and AC ON / OFF control are the minimum requirements.

Riga

Technical Data	2t	3t
Nominal cooling capacity (kW)	12.0	14.0
Installation position	Under roof	
Refrigerant	R134a	
Nominal voltage (V)	12 / 24	
Max. total power consumption at 12 V (A)	31.0	
Max. total power consumption at 24 V (A)	15.5	
Max. volume flow of evaporator blower (m^3 / h)	1350	
Dimensions L x W x H (mm)	320 x 1240 x 175	
Weight (kg)	18.0	
Expansion valve	Block valve, 2 tons	Angle valve, 3 tons
Air duct connection	6 connectors for air duct Ø 72 mm	



Moscow

The Moscow integrated unit is an evaporator unit.

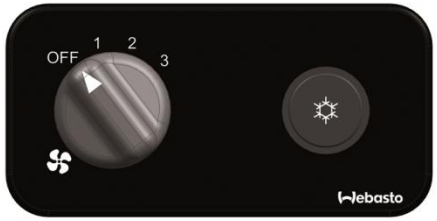
Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air duct system Modulair 2
- Hoses / wiring

Typical applications: Up to 15 to 20 seat cabins.

Moscow

Modulair 2

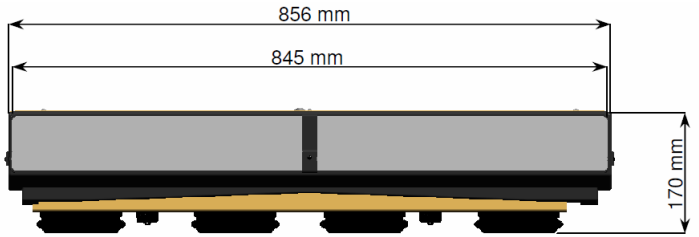


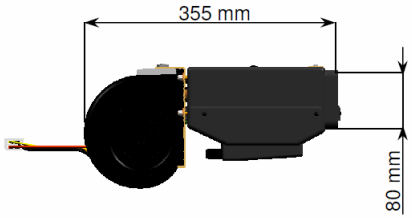
Next to several air distribution and air duct panels, the “Modulair 2” air duct system can be applied with Moscow.

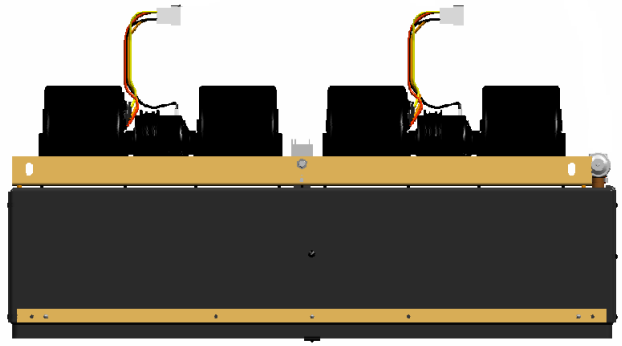
Depending on further system integration, blower speed and AC ON / OFF control are the minimum requirements.

Moscow

Technical Data	
Nominal cooling capacity (kW)	13.4
Installation position	Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	19.0
Max. total power consumption at 24 V (A)	
Max. volume flow of evaporator blower (m^3 / h)	1000
Dimensions L x W x H (mm)	355 x 856 x 170
Weight (kg)	11.5
Expansion valve	Block valve
Air duct connection	-







Newport

The Newport integrated unit is an evaporator unit.

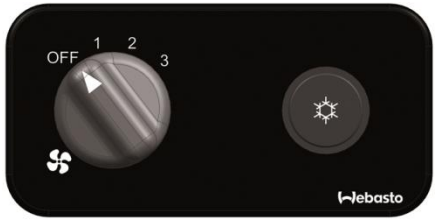
Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc for 2t version
- Compressor with a minimum displacement of 200 cc for 3t version
- Condenser with mounting
- Controls
- Air duct system Modulair 2
- Hoses / wiring

Typical applications: Up to 25 seat cabins.

Newport

Modulair 2

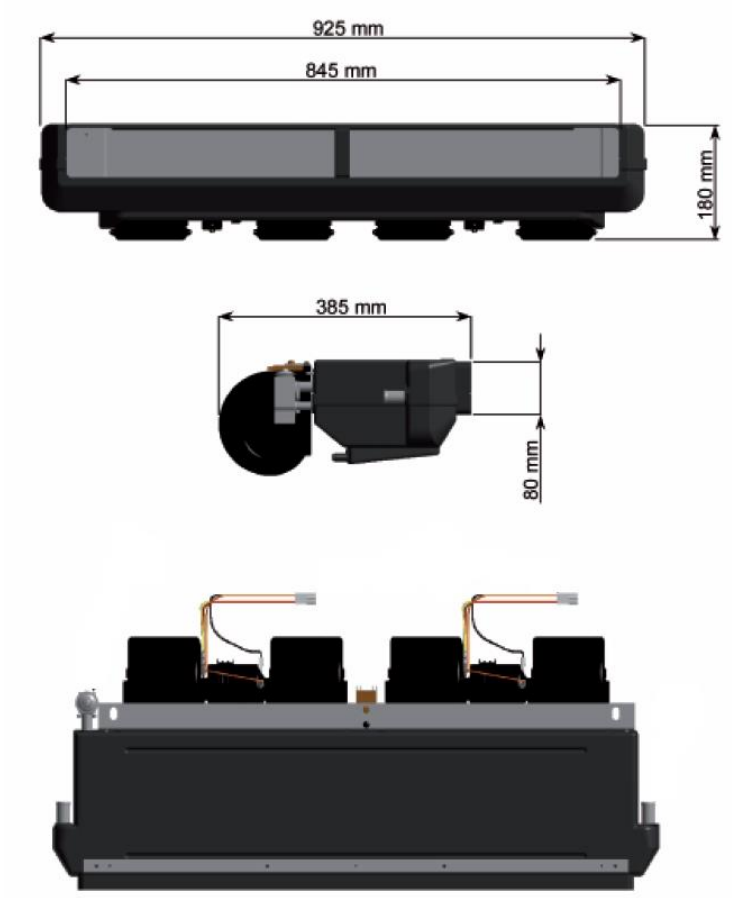


Next to several air distribution and air duct panels, the “Modulair 2” air duct system can be applied with Newport.

Depending on further system integration, blower speed and AC ON / OFF control are the minimum requirements.

Newport

Technical Data	2t	3t
Nominal cooling capacity (kW)	14.0	16.0
Installation position	Under roof	
Refrigerant	R134a	
Nominal voltage (V)	12 / 24	
Max. total power consumption at 12 V (A)	40.0	
Max. total power consumption at 24 V (A)	20.0	
Max. volume flow of evaporator blower (m^3 / h)	1300	
Dimensions L x W x H (mm)	385 x 925 x 180	
Weight (kg)	12.5	
Expansion valve	Block valve, 2 tons	Angle valve, 3 tons
Air duct connection	-	



Heating, Ventilation & Cooling 4.0 – 7.7 kW

Baltimore – 4.0 kW

Quebec – 5.0 kW

Milano – 5.5 kW

Michigan – 5.5 kW

Oslo – 6.2 kW

Norway – 6.3 kW

Paris – 7.7 kW

Baltimore

The Baltimore integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Controls
- Front panel with air vents or ducting
- Hoses / wiring

Typical applications: Small 2 seat cabins.

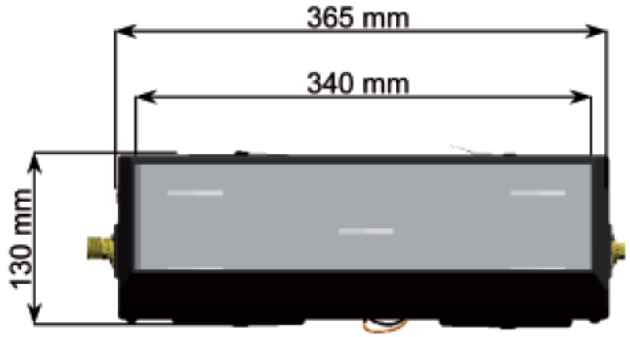
Baltimore

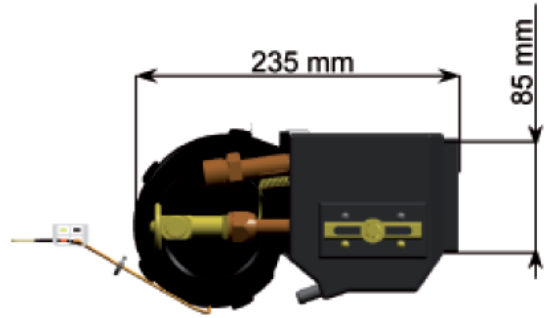
Several air distribution panels are available (black and grey) of which one type is equipped with controls.

Depending on further system integration, blower speed, heat control and AC ON / OFF are the minimum requirements for control.

Baltimore

Technical Data	
Nominal cooling capacity (kW)	4.0
Nominal heating capacity (kW)	2.0
Installation position	Under dashboard
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	7.4
Max. total power consumption at 24 V (A)	3.7
Max. volume flow of evaporator blower (m^3 / h)	450
Dimensions L x W x H (mm)	235 x 365 x 130
Weight (kg)	3.7
Expansion valve	Angle valve
Air duct connection	-





Quebec

The Quebec integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes. It is available in grey and black. Manual controls are included.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Panel with air ducts
- Hoses / wiring

Typical applications: Recreation vehicles and ambulances.

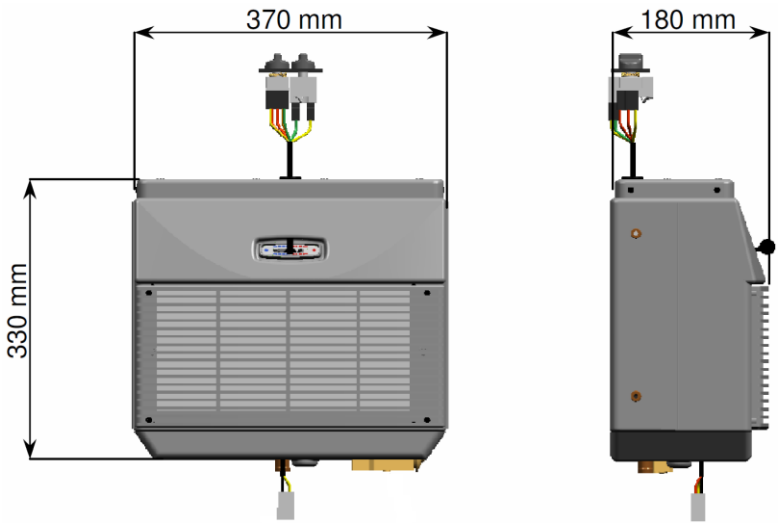
Quebec

Several air distribution panels are available to suit the application.

Same counts for separate controls; depending on further system integration, blower speed, heat control and AC ON / OFF control are the minimum requirements.

Quebec

Technical Data	
Nominal cooling capacity (kW)	5.0
Nominal heating capacity (kW)	6.7
Installation position	Vertical
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	9.5
Max. total power consumption at 24 V (A)	4.7
Max. volume flow of evaporator blower (m^3 / h)	450
Dimensions L x W x H (mm)	185 x 370 x 330
Weight (kg)	6.5
Expansion valve	Block valve
Air duct connection	-



Milano

The Milano integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Controls
- Air ducting
- Hoses / wiring

Typical applications: Up to 6 seat cabins.

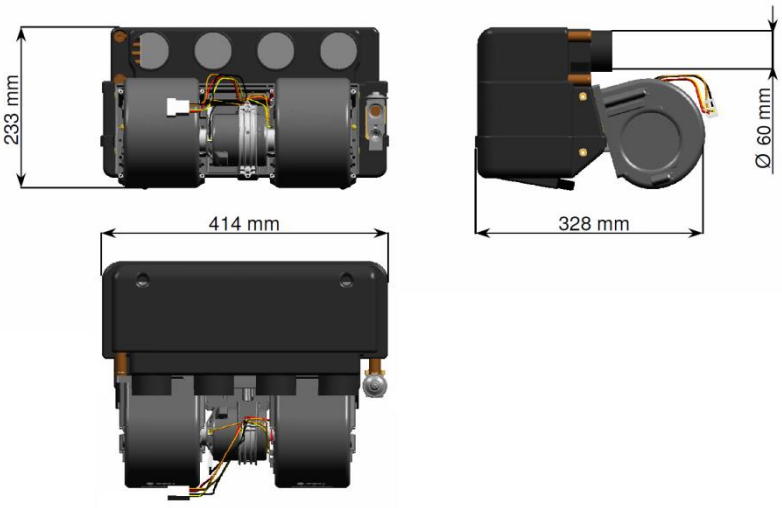
Milano

Air distribution needs to be constructed by the installer using standard elements. Milano has 4 air duct connections, diameter 60 mm.

Depending on further system integration, blower speed, heat control and AC ON / OFF are the minimum requirements for control.

Milano

Technical Data	
Nominal cooling capacity (kW)	5.5
Nominal heating capacity (kW)	11.0
Installation position	Under dashboard
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	13.0
Max. total power consumption at 24 V (A)	6.5
Max. volume flow of evaporator blower (m^3 / h)	450
Dimensions L x W x H (mm)	328 x 414 x 233
Weight (kg)	6.4
Expansion valve	Block valve
Air duct connection	4 x Ø 60 mm



Michigan

The Milano integrated unit is an evaporator unit combined with a heater intended for mounting in the ceiling of a cabin. Controls and air vents are part of the assembly.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Hoses / wiring

Typical applications: Single seat cabins.



Michigan

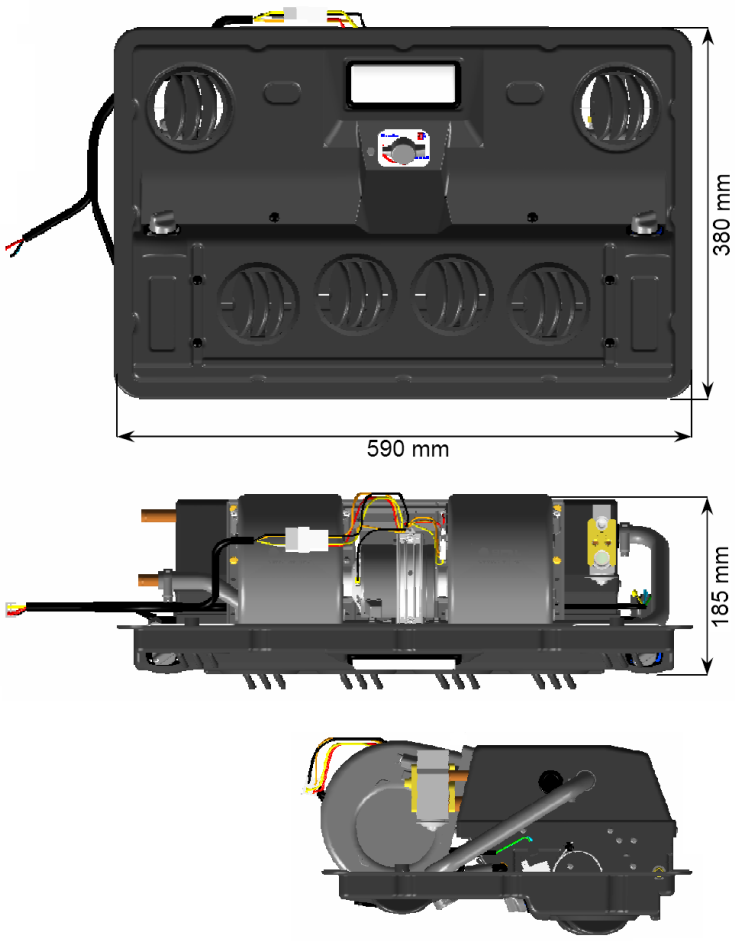
Two types of heater are available for the 12 V version of the Michigan integrated unit:

- Electric heater 2.8 kW
- Water heater 6.3 kW

The 24 V version is only available with 6.3 kW water heater.

Michigan

Technical Data	
Nominal cooling capacity (kW)	5.5
Nominal heating capacity (kW) (water)	6.3
Nominal heating capacity (kW) (electric)	2.8
Installation position	Cabin ceiling
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	13.0
Max. total power consumption at 24 V (A)	6.4
Max. volume flow of evaporator blower (m^3 / h)	450
Dimensions L x W x H (mm)	380 x 590 x 185
Weight (kg)	8.7
Expansion valve	Block valve
Air duct connection	-



Oslo

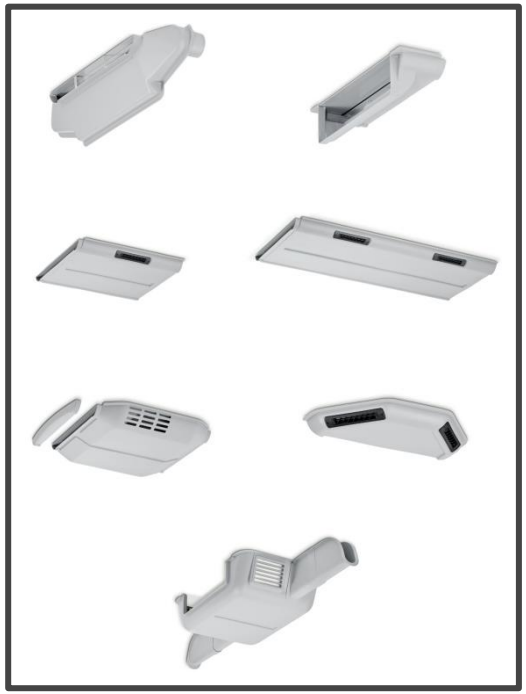
The Oslo integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Controls
- Air vent panel or air ducts
- Hoses / wiring

Typical applications: Up to 6 seat cabins and ambulances.

Oslo



Modulair 1

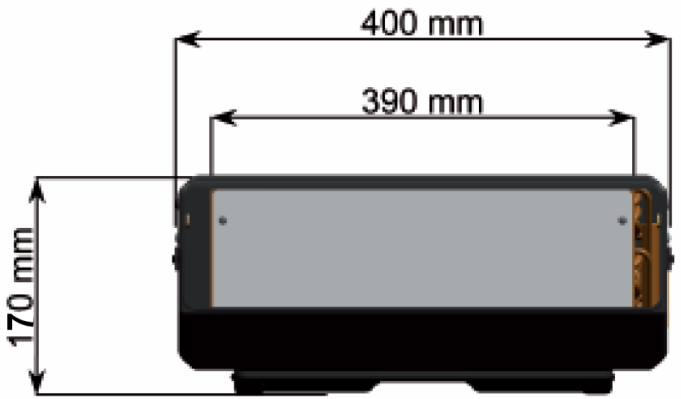
Several air distribution panels are available (black and grey) of which one type is equipped with controls.

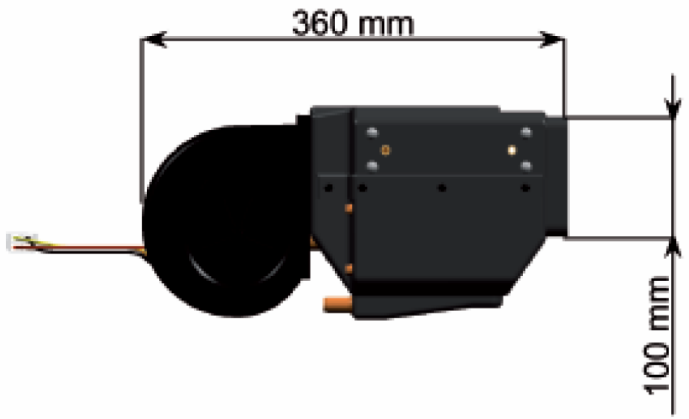
The “Modulair 1” air duct system can be applied with Oslo.

Depending on further system integration, blower speed, heat control and AC ON / OFF are the minimum requirements for control.

Oslo

Technical Data	
Nominal cooling capacity (kW)	6.2
Nominal heating capacity (kW)	8.5
Installation position	Under dash / Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	14.8
Max. total power consumption at 24 V (A)	7.4
Max. volume flow of evaporator blower (m^3 / h)	650
Dimensions L x W x H (mm)	360 x 400 x 170
Weight (kg)	5.3
Expansion valve	Block valve
Air duct connection	-





Norway

The Norway integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Norway is standard equipped with controls and air distribution louvers.

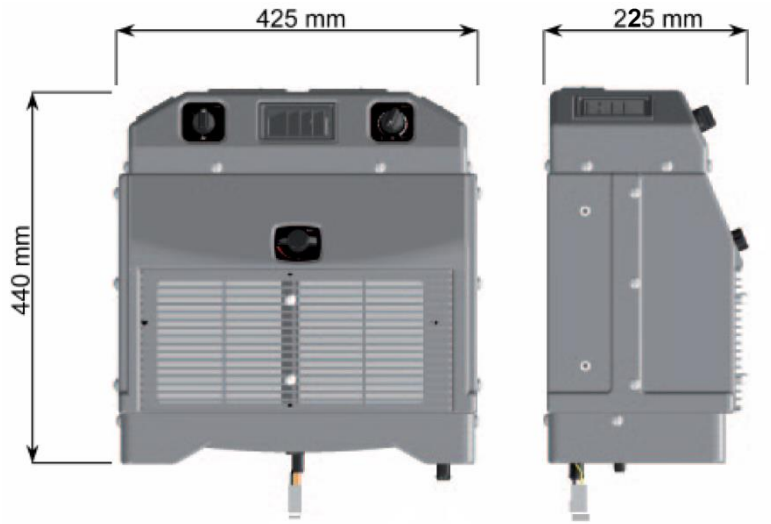
Further components needed to create a full working system are:

- Compressor with a minimum displacement of 100 cc
- Condenser with mounting
- Hoses / wiring

Typical applications: Small cabins and ambulances.

Norway

Technical Data	
Nominal cooling capacity (kW)	6.3
Nominal heating capacity (kW)	10.2
Installation position	Vertical
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	16.0
Max. total power consumption at 24 V (A)	8.0
Max. volume flow of evaporator blower (m^3 / h)	630
Dimensions L x W x H (mm)	225 x 425 x 440
Weight (kg)	10.0
Expansion valve	Block valve
Air duct connection	-



Paris

The Paris integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air vent panel or ducting
- Hoses / wiring

Typical applications: Up to 6 seat cabins and ambulances.

Paris

An air distribution panel is available to suit the application.

The air ventilation panels for Paris are available in grey and black, with or without controls.

When selecting separate controls, blower speed, heat control and AC ON / OFF control are the minimum requirements, depending on further integration of the system.

Paris

Technical Data	
Nominal cooling capacity (kW)	7.7
Nominal heating capacity (kW)	6.3
Installation position	Under dash / Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	17.6
Max. total power consumption at 24 V (A)	8.8
Max. volume flow of evaporator blower (m^3 / h)	634
Dimensions L x W x H (mm)	340 x 580 x 135
Weight (kg)	5.2
Expansion valve	Block valve
Air duct connection	-

Heating, Ventilation & Cooling 9.0 – 16.0 kW

Ibiza – 9.0 kW

London – 9.5 kW

Oxford 9.5 kW

Kiev – 13.4 kW

Monterrey – 14.0 / 16.0 kW

Ibiza

The Ibiza integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Panel with air ducts
- Hoses / wiring

Typical applications: Up to 6 seat cabins and ambulances.

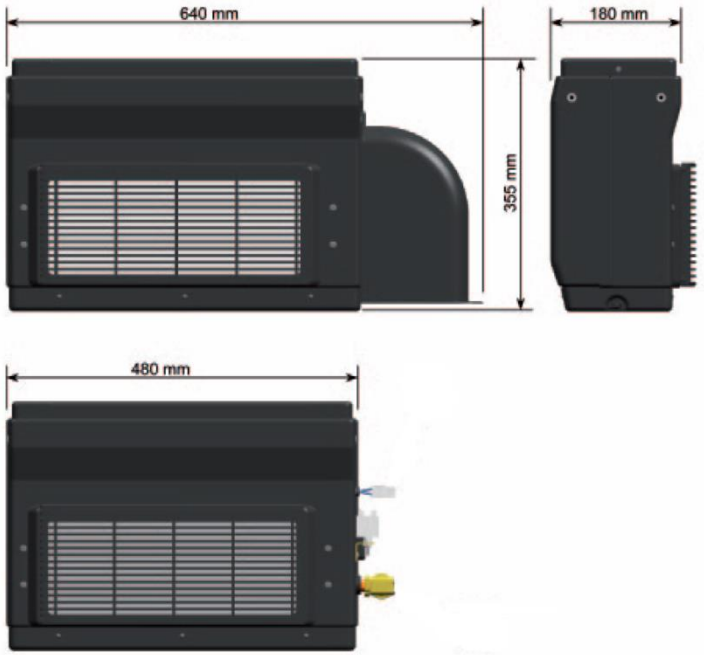
Ibiza

An air diffuser with flap and an air distribution panel are available to suit the application.

Depending on further system integration, blower speed, heat control and AC ON / OFF control are the minimum requirements.

Ibiza

Technical Data	
Nominal cooling capacity (kW)	9.0
Nominal heating capacity (kW)	12.0
Installation position	Vertical
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	21.5
Max. total power consumption at 24 V (A)	10.8
Max. volume flow of evaporator blower (m^3 / h)	800
Dimensions L x W x H (mm)	180 x 640 x 355
Weight (kg)	10.0
Expansion valve	Block valve
Air duct connection	-



London

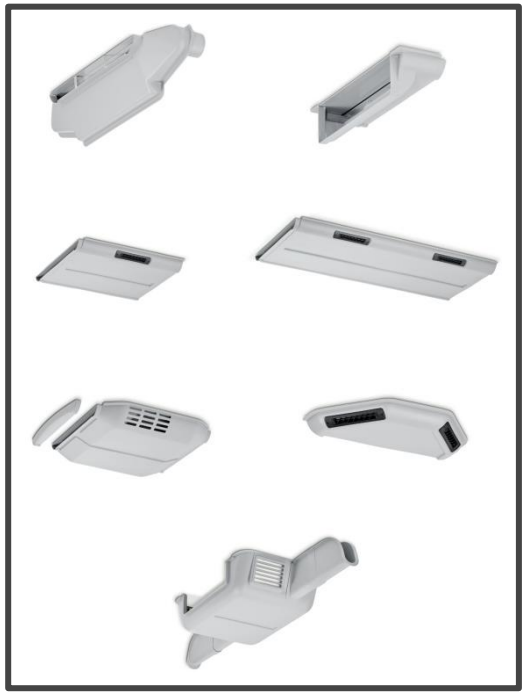
The London integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air vent panel or air ducts
- Hoses / wiring

Typical applications: Up to 15 seat cabins.

London



Modulair 1

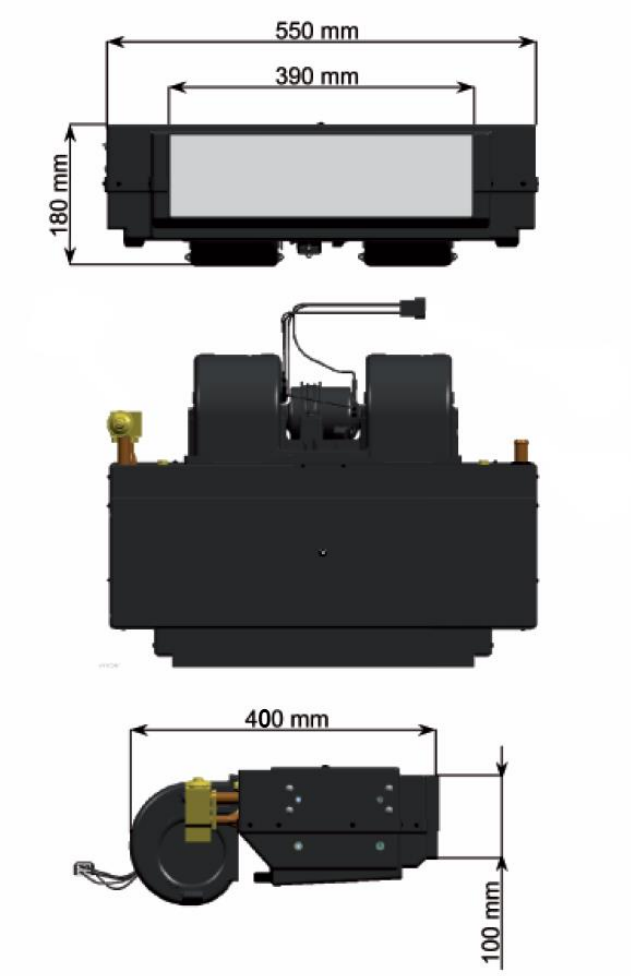
Several air distribution panels are available (black and grey) of which one type is equipped with controls.

The “Modulair 1” air duct system can be applied with London.

Depending on further system integration, blower speed, heat control and AC ON / OFF are the minimum requirements for control.

London

Technical Data	
Nominal cooling capacity (kW)	9.5
Nominal heating capacity (kW)	13.0
Installation position	Under dash / Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	21.0
Max. total power consumption at 24 V (A)	10.5
Max. volume flow of evaporator blower (m^3 / h)	800
Dimensions L x W x H (mm)	400 x 550 x 180
Weight (kg)	7.7
Expansion valve	Block valve
Air duct connection	-



Oxford

The Oxford integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air ducting
- Hoses / wiring

Typical applications: Up to 15 seat cabins and recreation vehicles.

Oxford

Oxford has 5 to 7 air distribution connections for Ø 60 mm ducting.

Depending on further system integration, blower speed, heat control and AC ON / OFF are the minimum requirements for control.

Oxford

Technical Data	
Nominal cooling capacity (kW)	9.5
Nominal heating capacity (kW)	13.0
Installation position	Vertical
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	17.0
Max. total power consumption at 24 V (A)	10.5
Max. volume flow of evaporator blower (m^3 / h)	800
Dimensions L x W x H (mm)	420 x 175 x 560
Weight (kg)	8.0
Expansion valve	Block valve
Air duct connection	5/7 connections for air duct Ø 60 mm

Kiev

The Kiev integrated unit is an evaporator unit combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc
- Condenser with mounting
- Controls
- Air duct system Modulair 2
- Hoses / wiring

Typical applications: Up to 20 seat cabins and ambulances.

Kiev

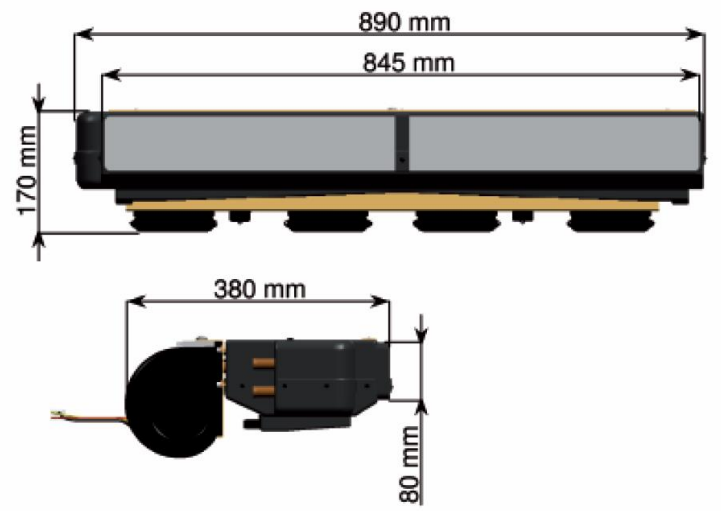
Modulair 2

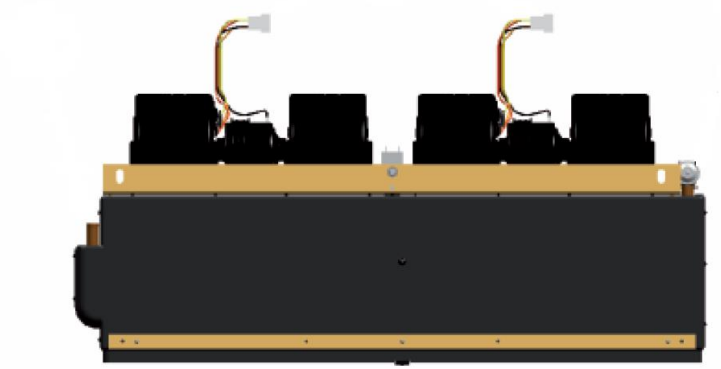
Next to several air distribution and air duct panels, the “Modulair 2” air duct system can be applied with Kiev.

Depending on further system integration, blower speed, heat control and AC ON / OFF control are the minimum requirements.

Kiev

Technical Data	
Nominal cooling capacity (kW)	13.4
Nominal heating capacity (kW)	11.5
Installation position	Under roof
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	18.0
Max. total power consumption at 24 V (A)	9.0
Max. volume flow of evaporator blower (m^3 / h)	1000
Dimensions L x W x H (mm)	380 x 890 x 170
Weight (kg)	12.5
Expansion valve	Block valve
Air duct connection	-





Monterrey

The Monterrey integrated unit is an evaporator units combined with a water / air heat exchanger for heating purposes.

Further components needed to create a full working system are:

- Compressor with a minimum displacement of 150 cc for 2t version
- Compressor with a minimum displacement of 200 cc for 3t version
- Condenser with mounting
- Controls
- Air duct system Modulair 2
- Hoses / wiring

Typical applications: Up to 25 seat cabins.

Monterrey

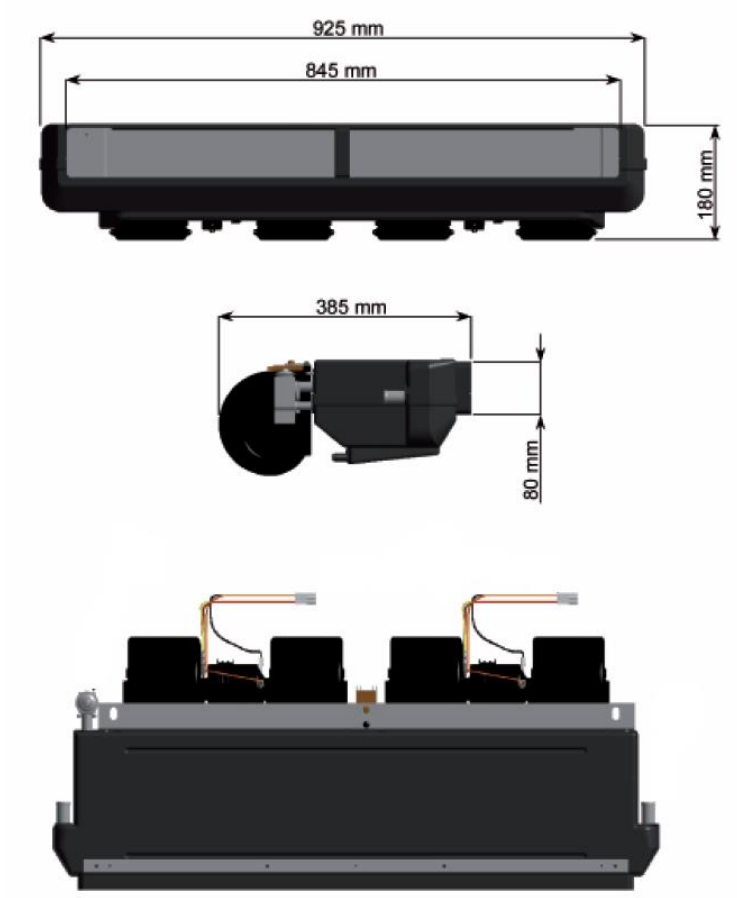
Modulair 2

Next to several air distribution and air duct panels, the “Modulair 2” air duct system can be applied with Monterrey.

Depending on further system integration, blower speed, heat control and AC ON / OFF control are the minimum requirements.

Monterrey

Technical Data	2t	3t
Nominal cooling capacity (kW)	14.0	16.0
Nominal heating capacity (kW)	14.6	
Installation position	Under roof	
Refrigerant	R134a	
Nominal voltage (V)	12 / 24	
Max. total power consumption at 12 V (A)	39.0	
Max. total power consumption at 24 V (A)	19.5	
Max. volume flow of evaporator blower (m^3 / h)	1300	
Dimensions L x W x H (mm)	385 x 925 x 180	
Weight (kg)	13.5	
Expansion valve	Block valve, 2 tons	Angle valve, 3 tons
Air duct connection	-	



Heating & Ventilation 3.8 – 13.0 kW

Sydney – 3.8 kW

Stoccolma – 3.8 kW

Houston – 6.5 kW

Toronto – 7.0 kW

Phoenix – 8.6 kW

Cyprus – 13.0 kW

Sydney

The Sydney heater unit is an integrated heat exchanger. The size of the unit makes it especially suitable for under dash mounting or under roof mounting.

Further components needed to create a full working system are:

- Controls
- Water valve
- Front panel with air vents or ducting
- Hoses / wiring

Typical applications: Small 2-seat cabins.

Sydney

Controls for blower speed and temperature are required for the heater system to function.

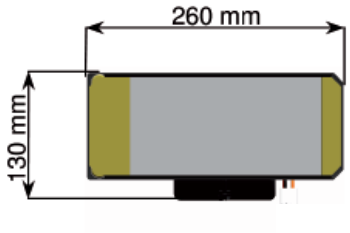
Mechanic and electric water valves are available to suit the application.

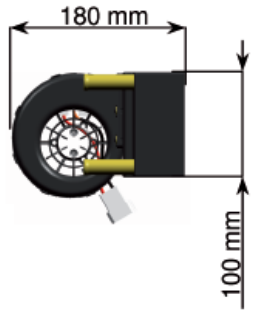
Sydney

Several air distribution panels are available for Sydney to suit the application.

Sydney

Technical Data	
Nominal heating capacity (kW)	3.8
Installation position	Under dash / Under roof
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	4.2
Max. total power consumption at 24 V (A)	2.1
Max. blower volume flow (m^3 / h)	170
Dimensions L x W x H (mm)	180 x 260 x 130
Weight (kg)	1.3





Stoccolma

The Stoccolma heater unit (12 V only) is a water / air integrated heater. The size of the unit makes it universal. It can be installed in many different positions and locations in cabins.

Stoccolma is equipped with controls for heating and blower speed.

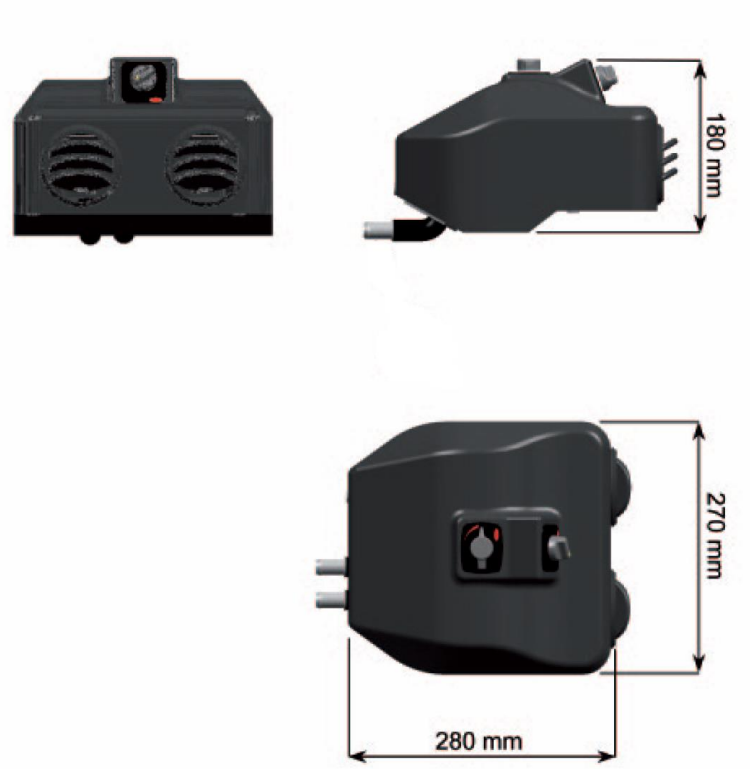
Further components needed to create a full working system are:

- Hoses / wiring

Typical applications: Single seat cabins.

Stoccolma

Technical Data	
Nominal heating capacity (kW)	3.8
Installation position	Under dash / Under roof
Nominal voltage (V)	12
Max. total power consumption at 12 V (A)	3.5
Max. blower volume flow (m^3 / h)	170
Dimensions L x W x H (mm)	270 x 195 x 330
Weight (kg)	2.5



Houston

The Houston heater unit is a water / air integrated heater. The size of the unit makes it especially suitable for under dash mounting or under roof mounting.

Further components needed to create a full working system are:

- Controls
- Water valve
- Hoses / wiring

Typical applications: Small 2-seat cabins.



Houston

Controls for blower speed and temperature are required for the heater system to function.

Mechanic and electric water valves are available to suit the application.

Houston

Technical Data	
Nominal heating capacity (kW)	6.5
Installation position	Under dash / Under roof
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	14.0
Max. total power consumption at 24 V (A)	7.0
Max. blower volume flow (m^3 / h)	420
Dimensions L x W x H (mm)	230 x 220 x 165
Weight (kg)	2.8

Toronto

The Toronto heater unit (12 V only) is a water / air integrated heater for cabin ceiling installation. The size of the unit makes it universal.

Toronto is equipped with controls for heating and blower speed.

Further components needed to create a full working system are:

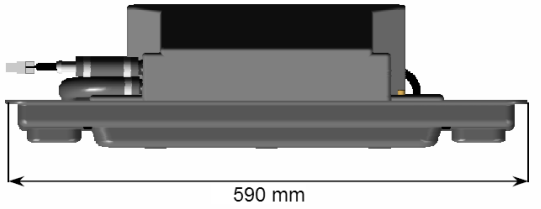
- Hoses / wiring

Typical applications: Single seat cabins.



Toronto

Technical Data	
Nominal heating capacity (kW)	7.0
Installation position	Cabin ceiling
Nominal voltage (V)	12
Max. total power consumption at 12 V (A)	8.6
Max. blower volume flow (m^3 / h)	450
Dimensions L x W x H (mm)	380 x 590 x 160
Weight (kg)	4.2



Phoenix

The Phoenix integrated unit is a water / air heat exchanger for heating purposes. The size of the unit makes it especially suitable for under dash mounting.

Further components needed to create a full working system are:

- Controls
- Water valve
- Front panel with air vents or ducting
- Hoses / wiring

Typical applications: Small 2 seat cabins.

Phoenix

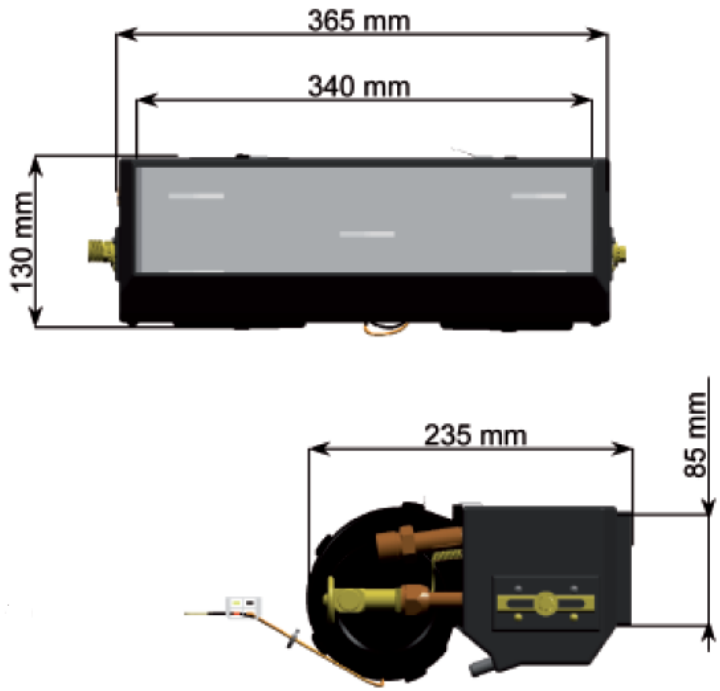
Several air distribution panels are available (black and grey) of which one type is equipped with controls.

Controls for blower speed and temperature are required for the heater system to function.

Mechanic and electric water valves are available to suit the application.

Phoenix

Technical Data	
Nominal heating capacity (kW)	8.6
Installation position	Under dash / Under roof
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	8.4
Max. total power consumption at 24 V (A)	4.2
Max. blower volume flow (m^3 / h)	450
Dimensions L x W x H (mm)	235 x 385 x 130
Weight (kg)	3.0



Cyprus

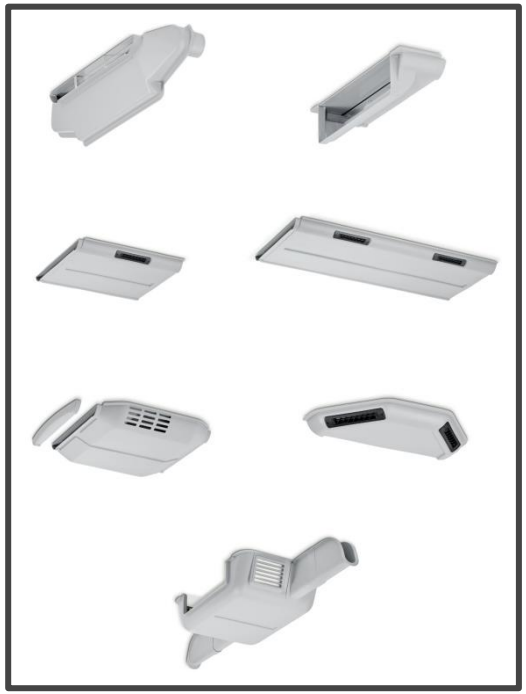
The Cyprus integrated unit is a water / air heat exchanger for heating purposes. The size of the unit makes it especially suitable for under dash mounting.

Further components needed to create a full working system are:

- Controls
- Water valve
- Air duct system
- Hoses / wiring

Typical applications: 15 to 25 seat cabins.

Cyprus



Modulair 1

Several air distribution panels are available (black and grey) of which one type is equipped with controls.

The “Modulair 1” air duct system can be applied with Cyprus.

Cyprus

Controls for blower speed and temperature are required for the heater system to function.

Mechanic and electric water valves are available to suit the application.

Cyprus

Technical Data	
Nominal heating capacity (kW)	13.0
Installation position	Under roof
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	24.0
Max. total power consumption at 24 V (A)	12.0
Max. blower volume flow (m^3 / h)	800
Dimensions L x W x H (mm)	300 x 545 x 175
Weight (kg)	4.0

Rooftop Condensers

Venezia – 2.8 / 5.5 kW

Trieste – 5.0 / 6.5 kW

Napoli – 6.0 / 11.5 kW

Capri – 8.0 / 10.5 kW

Valencia – 12.5 kW

Venezia

The Venezia rooftop condenser is available in two versions regarding performance. The dissipating thermal power is either 2.8 kW or 5.5 kW.

The 2.8 kW version has a tube and fin type condenser core, making it robust.

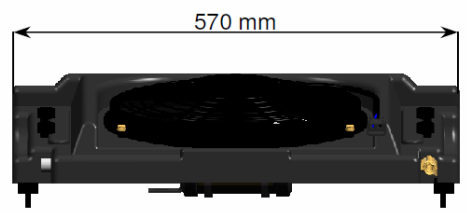
The 5.5 kW version has a Headered Tube Centre (HTC) condenser core which gives this unit the high performance but reduces shock- and vibration resistance.

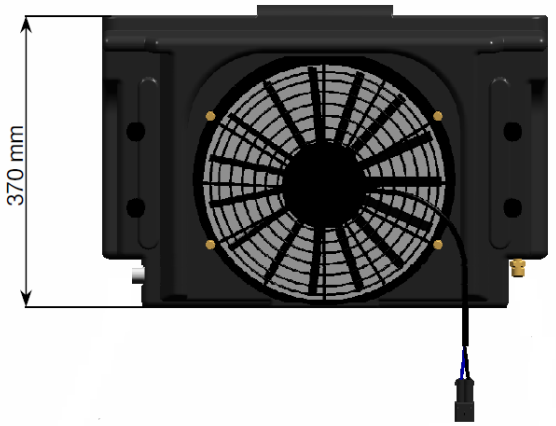
Typical application: Small cabins, heavy duty.



Venezia

Technical Data	Tube & Fin	HTC
Performance (kW)	2.8	5.5
Refrigerant	R134a	
Nominal voltage (V)	12 / 24	
Max. total power consumption at 12 V (A)	7.0	
Max. total power consumption at 24 V (A)	3.5	
Dimensions L x W x H (mm)	370 x 570 x 150	
Weight (kg)	8.0	





Trieste

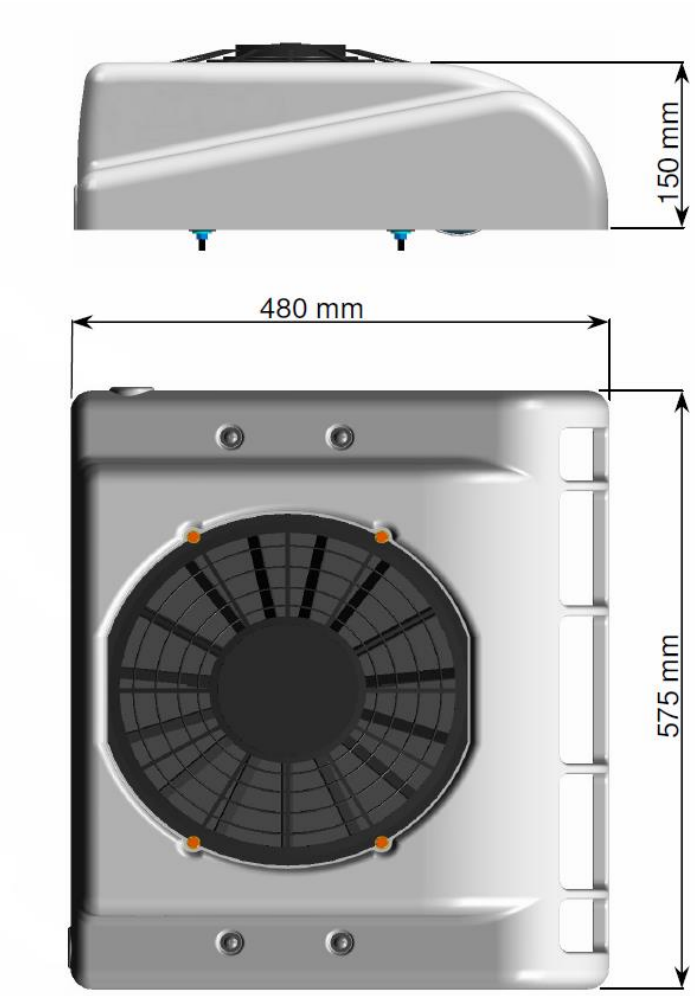
The Trieste rooftop condenser is available in two versions regarding performance. The dissipating thermal power is either 5.0 kW or 6.5 kW.

Both versions have a Headered Tube Centre (HTC) condenser core but differ in fin pitch of the core.

Typical application: Small cabins.

Trieste

Technical Data	Fin Pitch 3.5 mm	Fin Pitch 2.5 mm
Performance (kW)	5.0	6.5
Refrigerant	R134a	
Nominal voltage (V)	12 / 24	
Max. total power consumption at 12 V (A)	13	
Max. total power consumption at 24 V (A)	6	
Dimensions L x W x H (mm)	480 x 575 x 150	
Weight (kg)	8.0	



Napoli

The Napoli rooftop condenser is available in two versions regarding performance. The dissipating thermal power is either 6.0 kW or 11.5 kW.

The 6.0 kW version has a tube and fin type condenser core, making it robust.

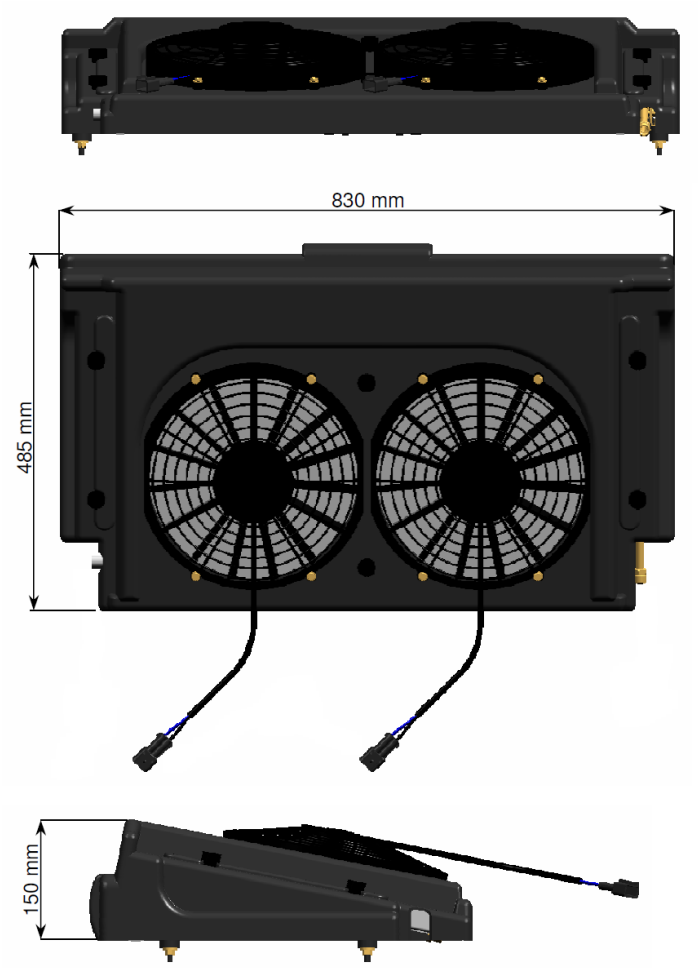
The 11.5 kW version has a Headered Tube Centre (HTC) condenser core which gives this unit a higher performance but reduces shock- and vibration resistance.

Typical application: Medium cabins, heavy duty.



Napoli

Technical Data	Tube & Fin	HTC
Performance (kW)	6.0	11.5
Refrigerant	R134a	
Nominal voltage (V)	12 / 24	
Max. total power consumption at 12 V (A)	18	
Max. total power consumption at 24 V (A)	9	
Dimensions L x W x H (mm)	485 x 830 x 150	
Weight (kg)	12.0	



Capri

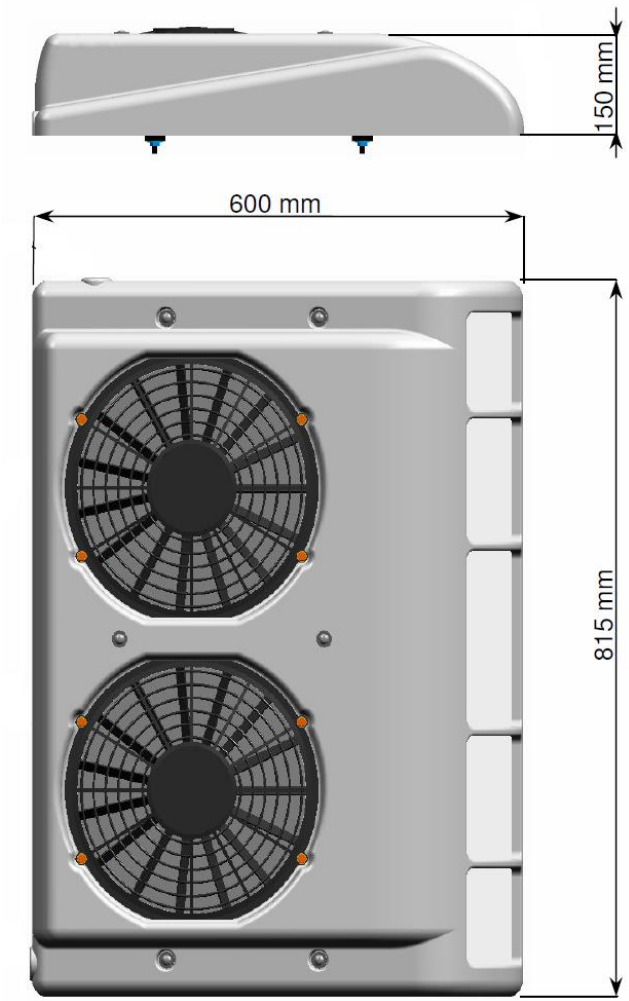
The Capri rooftop condenser is available in two versions regarding performance. The dissipating thermal power is either 8.0 kW or 10.5 kW.

Both versions have a Headered Tube Centre (HTC) condenser core but differ in fin pitch of the core.

Typical application: Medium cabins.

Capri

Technical Data	Fin Pitch 3.5 mm	Fin Pitch 2.5 mm
Performance (kW)	8.0	10.5
Refrigerant	R134a	
Nominal voltage (V)	12 / 24	
Max. total power consumption at 12 V (A)	18	
Max. total power consumption at 24 V (A)	9	
Dimensions L x W x H (mm)	600 x 815 x 150	
Weight (kg)	12.0	



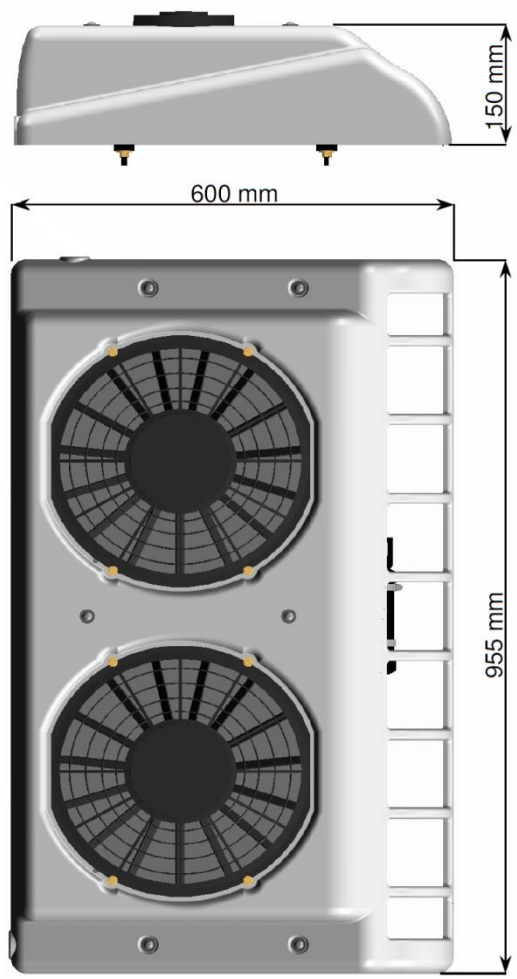
Valencia

The Valencia rooftop condenser has a dissipating thermal power of 12.5 kW.

Typical application: Medium cabins.

Valencia

Technical Data	
Performance (kW)	12.5
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	27.0
Max. total power consumption at 24 V (A)	13.5
Dimensions L x W x H (mm)	600 x 955 x 150
Weight (kg)	14.0



Under Chassis Condensers

Taormina – 4.0 kW

Sicilia – 5.0 kW

Verona – 5.0 kW

HTC – 5.0 to 14.0 kW

Taormina

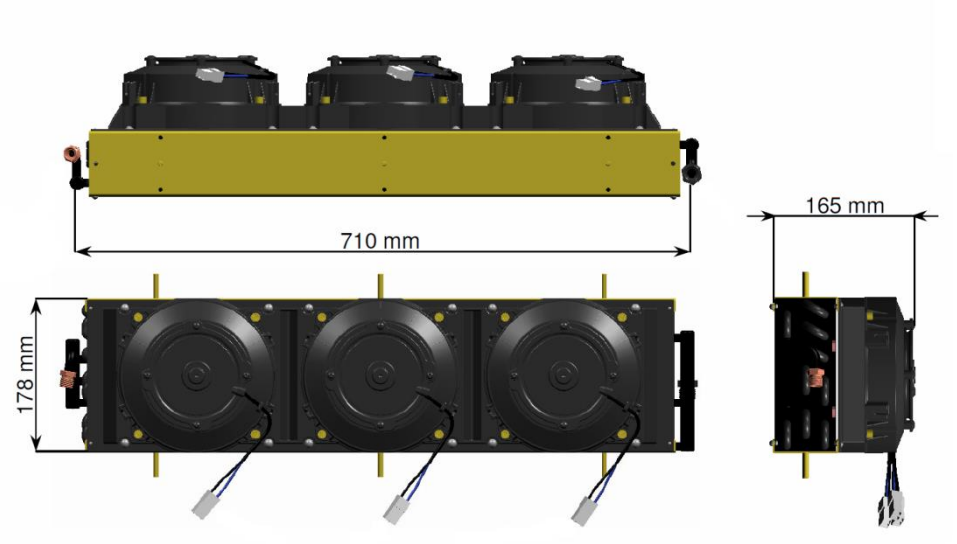
The Taormina condenser has a dissipating thermal power of 4.0 kW.

It has a tube and fin condenser core with a fin pitch of 2.1 mm.

Optionally this condenser can be pre-equipped with a receiver drier (vertical use only).

Taormina

Technical Data	
Performance (kW)	4
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	13.0
Max. total power consumption at 24 V (A)	6.0
Dimensions L x W x H (mm)	710 x 165 x 178
Weight (kg)	9.5



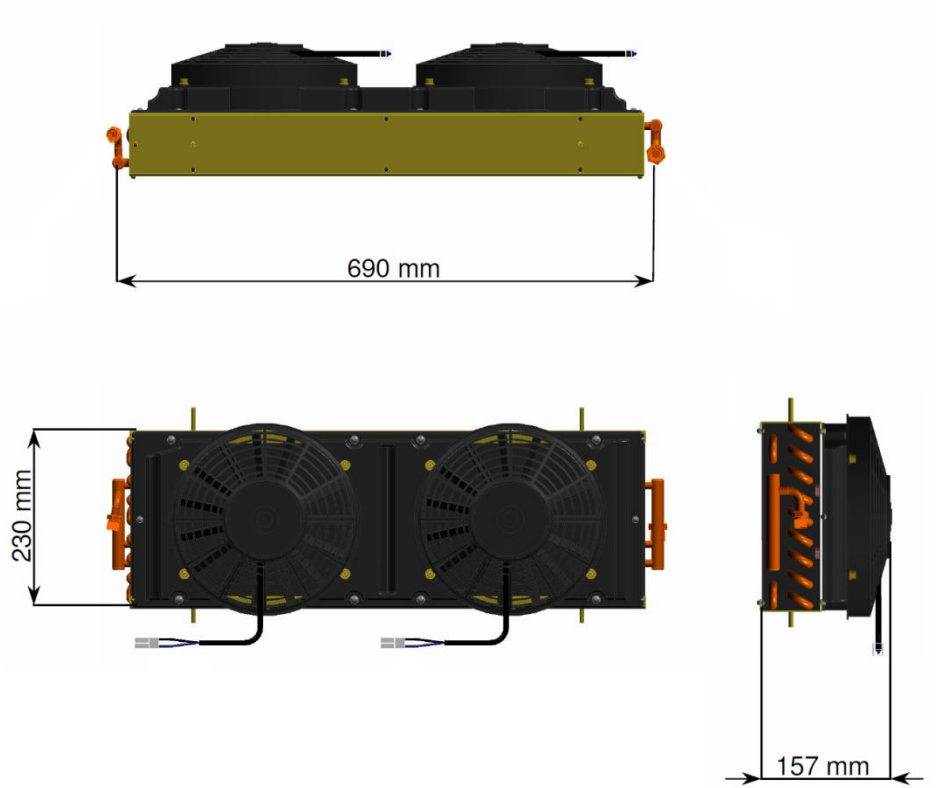
Sicilia

The Sicilia condenser has a dissipating thermal power of 5.0 kW.

It has a tube and fin condenser core with a fin pitch of 2.1 mm.

Sicilia

Technical Data	
Performance (kW)	5
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	13.0
Max. total power consumption at 24 V (A)	6.0
Dimensions L x W x H (mm)	690 x 157 x 230
Weight (kg)	8.0



Verona

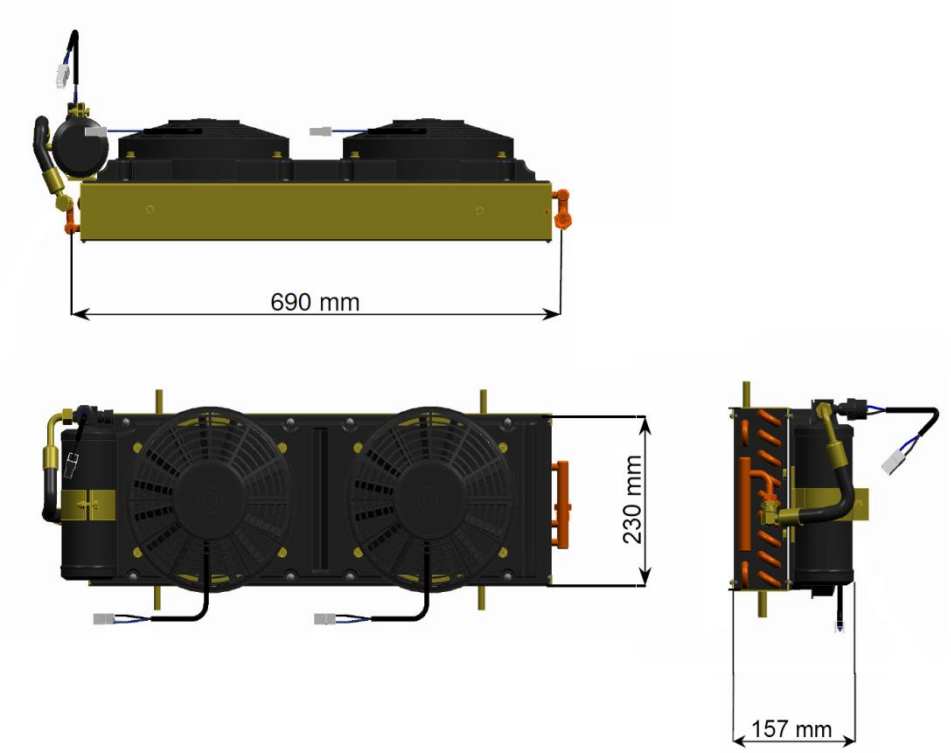
The Verona condenser has a dissipating thermal power of 5.0 kW.

It has a tube and fin condenser core with a fin pitch of 2.1 mm.

This condenser is equipped with a receiver drier (vertical use only).

Verona

Technical Data	
Performance (kW)	5
Refrigerant	R134a
Nominal voltage (V)	12 / 24
Max. total power consumption at 12 V (A)	13.0
Max. total power consumption at 24 V (A)	6.0
Dimensions L x W x H (mm)	690 x 157 x 230
Weight (kg)	9.5

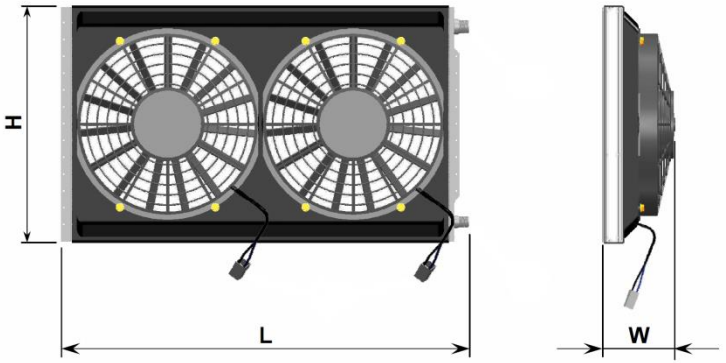


HTC

The HTC electro-ventilated condenser is available in a performance range from 5.0 to 14.0 kW.

HTC

Technical Data	Size 1	Size 2		Size 3	Size 4	
Performance (kW)	6.5	5.0	7.0	12.0	12.0	14.0
Fin pitch (mm)	2.5	3.5	2.5	2.5	3.5	2.5
Refrigerant	R134a	R134a		R134a	R134a	
Nominal voltage (V)	12 / 24	12		12 / 24	12	12 / 24
Max. total power consumption at 12 V (A)	13	18		32	18	18
Max. total power consumption at 24 V (A)	6	-		16	-	9
Number of ventilators	1	2		2	2	
Dimensions L x W x H (mm)	480 x 110 x 350	606 x 110 x 350		606 x 160 x 350	725 x 105 x 450	
Weight (kg)	3.7	4.5		7.5	6.0	4.6



Additional Accessories Index

Introduction

Control Panels

Compressors

Introduction

The Webasto product range for additional accessories is very comprehensive:

- Control elements
- Compressors, tensioning
- Condensers
- Evaporators, heater cores
- Fans and blowers
- Air ducts and louvres
- Receiver dryers and expansion valves
- Fittings
- Hoses (refrigerant- , water- and air-hoses)
- Electrical material (wiring, relays, water valves, etcetera)
- Maintenance products and tools

Most of these accessories can be found in the “Webasto Accessories Catalogue – Air-Conditioning Solutions”.

This e-guide shows some frequently used control elements and compressors.

Controls – Single Controls

Separate controls are available for each function:

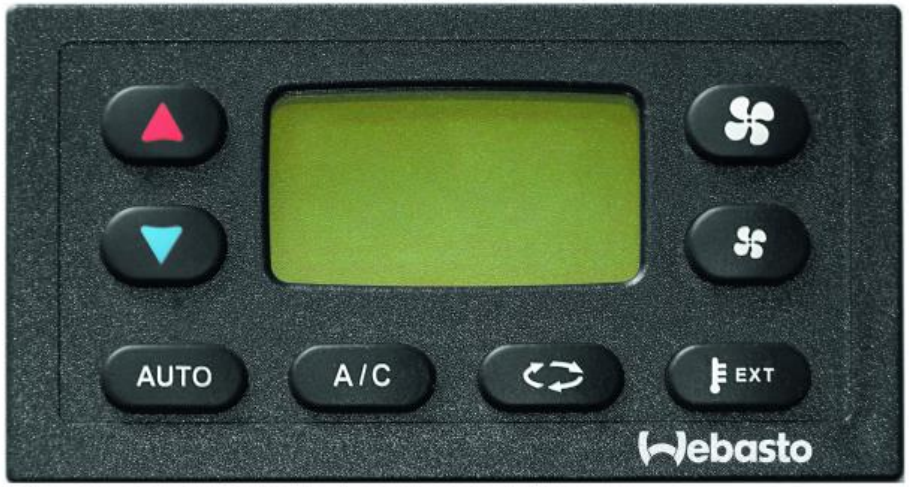
- Blower speed
- Temperature control
- AC ON / OFF switch
- Temperature control for AC operation

Controls – Combined Controls

Several versions of combined controls can be ordered. Depending on the application (VAC, HVAC or HV) these control panels have at least blower control and one additional function.

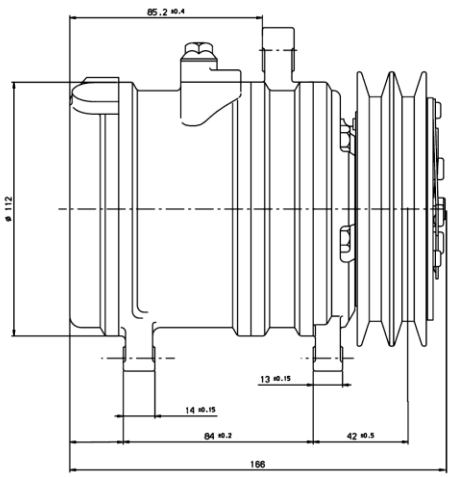
Many of these combined controls are available on a horizontal panel and on a vertical panel.

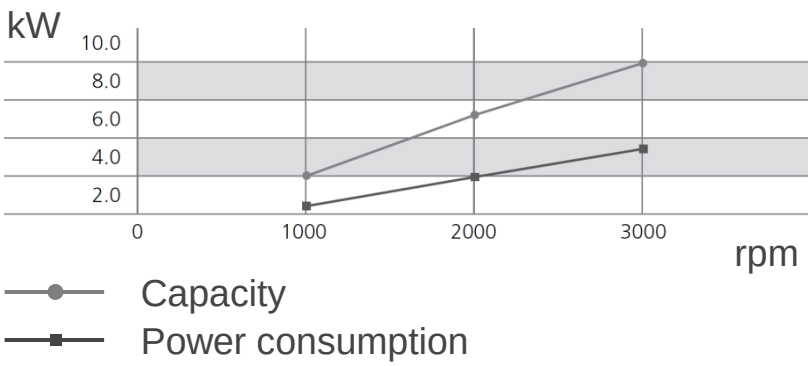
Controls – Automatic Controls



Some of these controls have an LCD showing operating information and depending the model you can assign additional functions to the control, such as exterior temperature and air distribution.

Compressors – Delphi SP10





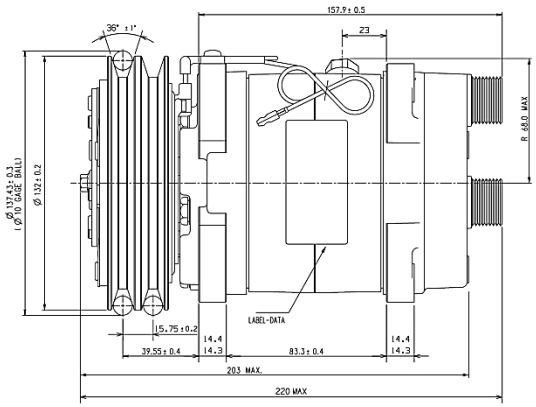
The SP10 compressor is a standard compressor used in Webasto vehicle specific compressor kits.

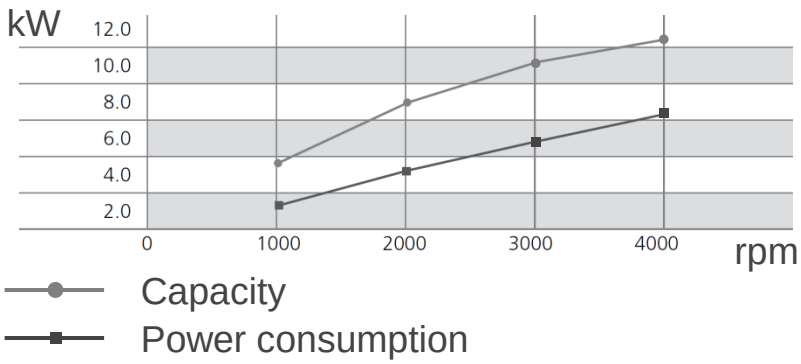
With a maximum capacity of 8 kW performance this is the suggested compressor for systems with a maximum cooling capacity of 8 kW.

Refrigerant connectors are 3/4” pressure side and 7/8” suction side.

Should be lubricated with 250 ml PAG ISO 46 oil.

Compressors – Delphi SP15





The SP15 compressor is a standard compressor used in Webasto vehicle specific compressor kits.

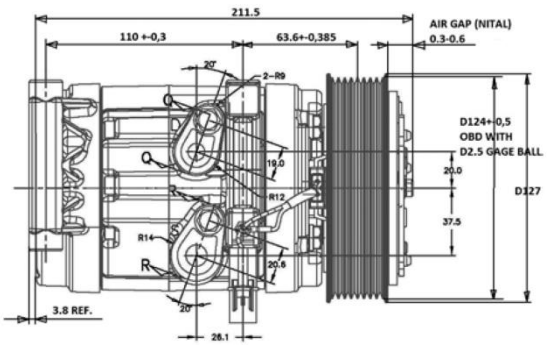
With a maximum capacity of 13 kW performance this is the suggested compressor for systems with a maximum cooling capacity of 13 kW.

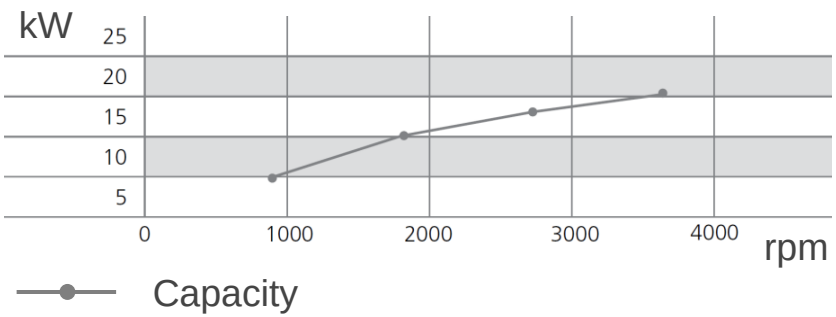
The SP15 is available with either:

- Rotalock ports (1” 14 UNS)
- O-ring ports (3/4” 16 UNF ; 7/8” 14 UNF)

Should be lubricated with 230 ml PAG ISO 46 oil.

Compressors – Delphi SP20





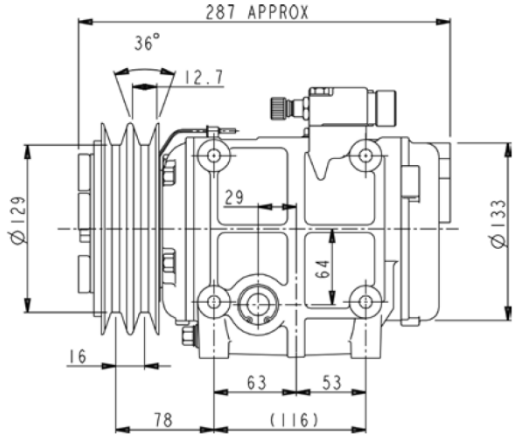
The SP20 compressor is a standard compressor used in Webasto vehicle specific compressor kits.

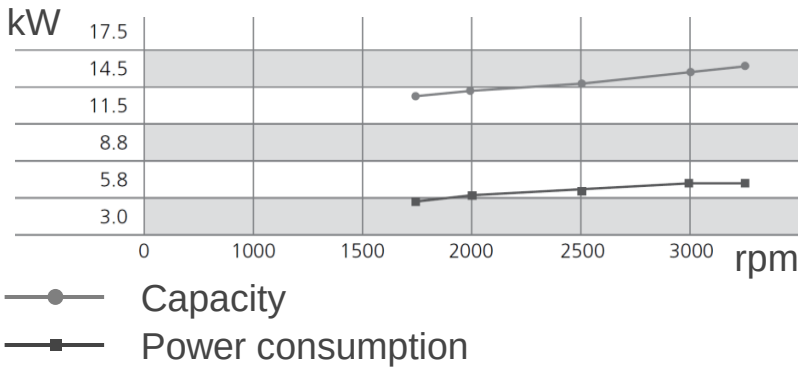
With a maximum capacity of 18 kW performance this is the suggested compressor for systems with a maximum cooling capacity of 18 kW.

The SP20 is available with flanged ports but an adapter to Rotalock connections is available.

Should be lubricated with 230 ml PAG ISO 46 oil.

Compressors – Tama TM31





The TM31 compressor is the highest capacity compressor available.

With a capacity above 18 kW performance this is the suggested compressor for systems with a maximum cooling over 18 kW.

The TM31 is delivered with 7/8” 14 UNF suction connector and a 1 1/16” 14 UNF discharge connector.
Both connectors are equipped with service ports.

Should be lubricated with 500 ml PAG ISO 100 oil.