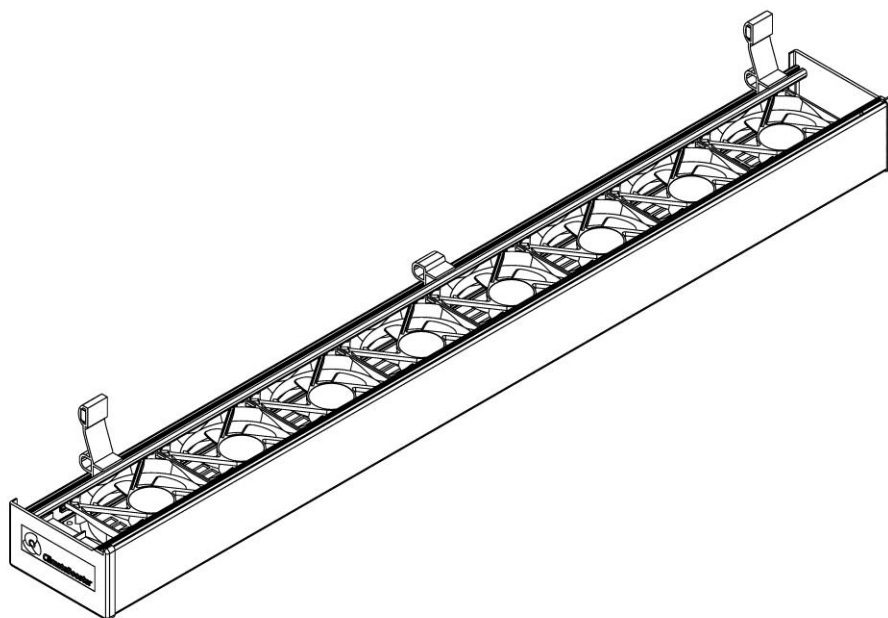


ClimateBooster

Radiator Pro

For radiator type 20, 21, 22 and 33

Technical Data



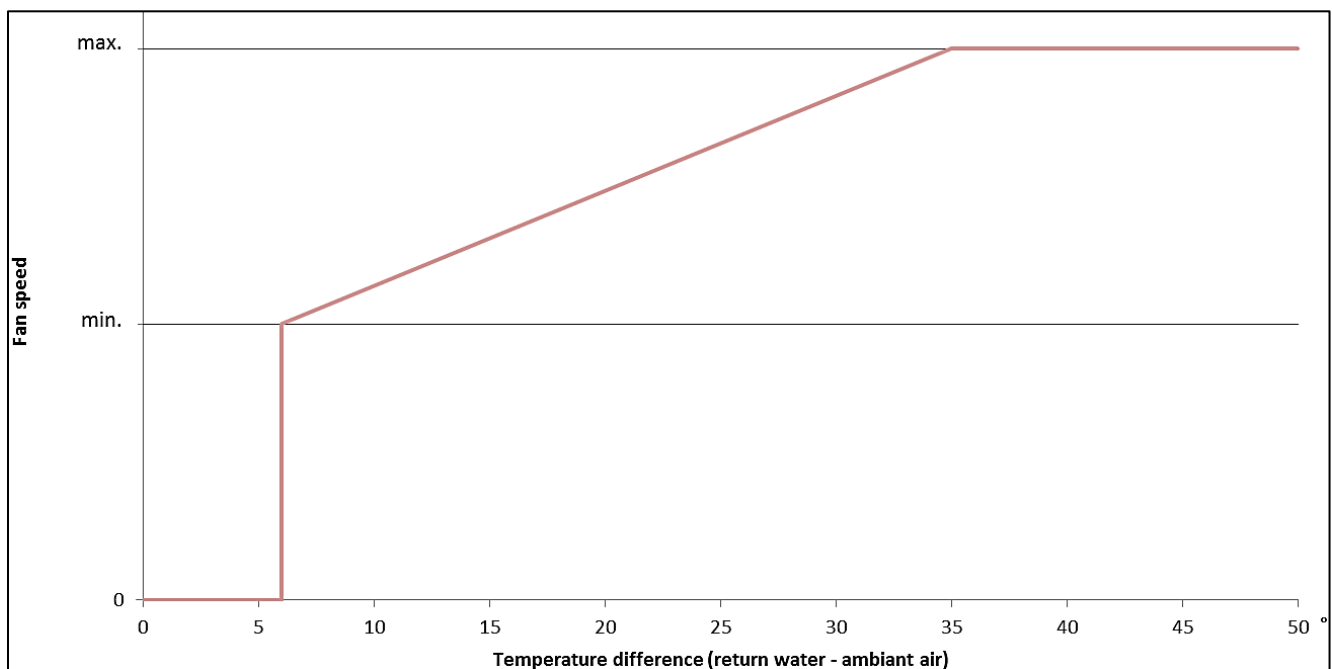
Basic functions ClimateBooster Radiator Pro

The ClimateBooster Radiator Pro contains multiple active controlled fans which are activated when the radiator is in heating or in cooling mode. The fans increase the airflow through the radiator whereby 50% till 80% more heat is extracted from the radiator. This benefits the distribution of heat inside the room and makes it possible to lower the overall heating temperature of the heating system, for example when heat pumps are installed.

A ClimateBooster Radiator Pro can be mounted underneath a radiator by the usage of magnets. The product contains an integrated control print which modulates the fan speed. The Radiator Pro can be used in every Heating or Cooling system in combination with wall radiators type 20, 21, 22 and 33.

The required fan speed (revolutions per minute) is determined based on two temperature sensors. The first sensor measures the incoming ambient air whereby the second sensor measures the water temperature near the outlet of the radiator. The temperature difference between those sensors determines the rotational speed of the fans. The ClimateBooster Radiator Pro temperature profile is optimized in a way that it is suitable for a wide range of radiator configurations. Optionally cooling can be activated by installing an additional sensor.

The Radiator Pro will be activated when the temperature difference between the ambient air and radiator temperature is above 6°C. Below 6°C the Radiator Pro will be hold in stand-by mode. The speed fan is linearly controlled by the control print according to the temperature profile as can be seen in the figure. Maximum fan speed is reached at 35°C of temperature difference.

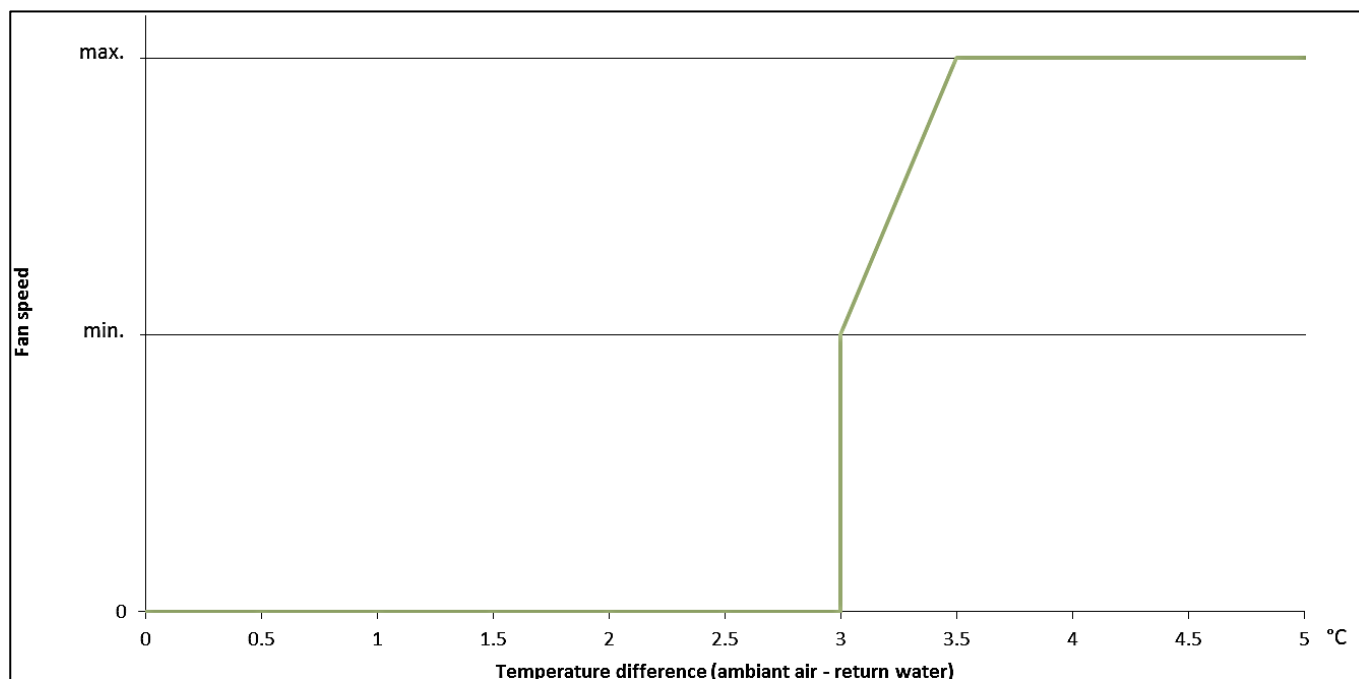


ClimateBooster Radiator Pro for Cooling

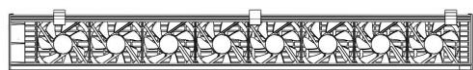
Most hybrid heat pumps, water-to-water heat pump and air-to-water heat pump are able to supply cooling. The additional temperature sensor has to be installed into the control print in order to activate the cooling mode of the Radiator Pro. The ClimateBooster is active when the temperature difference between ambient air and water temperature is above 2,5°C. Below 2,5°C the ClimateBooster will be hold in stand-by mode.

In order to increase the cooling performance of the radiator the flow direction has to be changed from downwards to upwards. This prevents cooling shortcuts inside the radiator. The speed fan is linearly controlled by the control print according to the temperature profile as can be seen in the figure. Maximum fan speed is reached at 3°C of temperature difference.

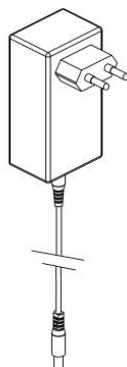
Please note: ClimateBooster products are not equipped with dew point protection software or equipment. Make sure that the cold water temperature is always above the dew point of the air in order to prevent undesired water condensation on the outside of the radiator.



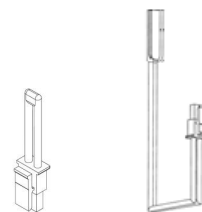
General data



ClimateBooster



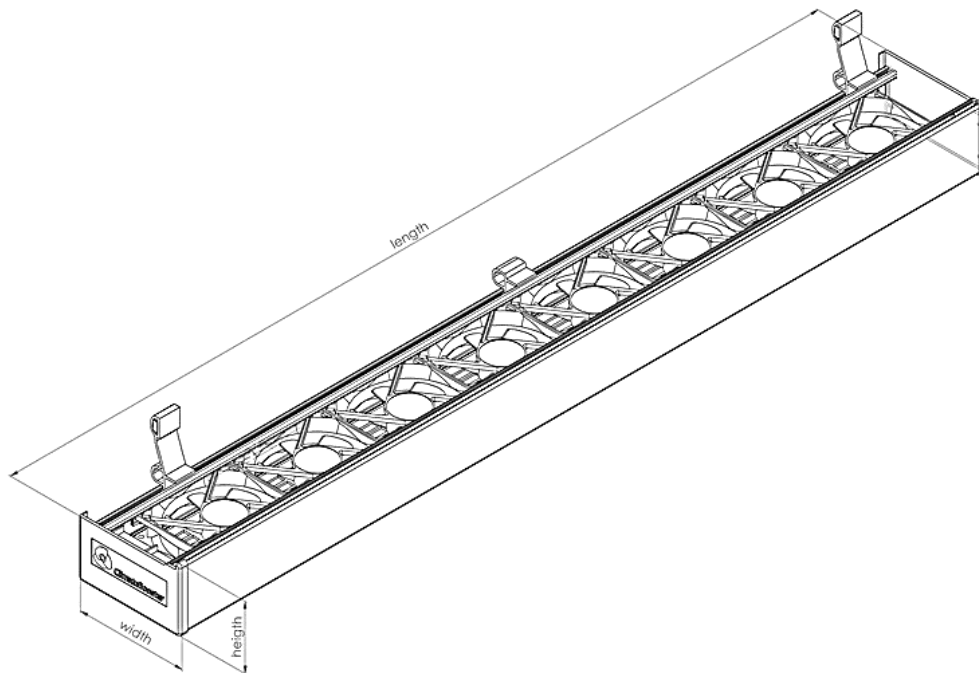
AC/DC power supply

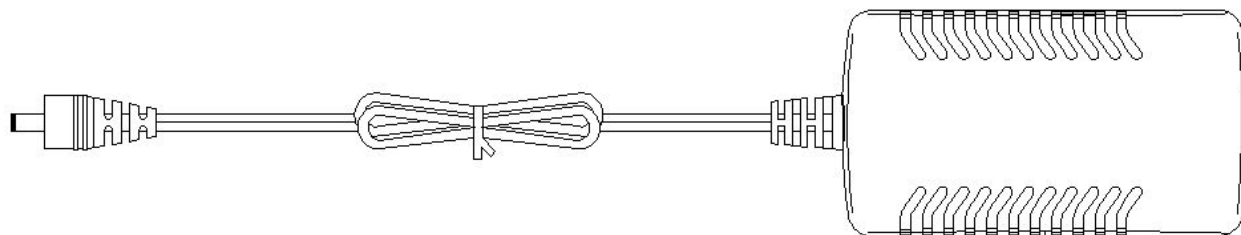


Temperature sensors

Stand-by power consumption	:	$\leq 0,3 \text{ W}$
Operating Temperature	:	ambient 0 to +40 °C / contact to radiator 0 to 90°C
Relative humidity	:	10 – 90 % RH (non-condensing)
Storage temperature	:	0 to 60°C (with package)
IP rating	:	IP20 (when correctly installed underneath the radiator)
Indoor/outdoor use	:	indoor use only
Noise level	:	$\leq 25\text{dB}$. <i>Depending on system state and length</i>
Temperature accuracy heating mode	:	+/- 1,5 °C
Temperature accuracy cooling mode	:	+/- 1,5 °C
DC voltage range	:	5-12V DC (7,5V DC normal value)
DC load ClimateBooster	:	Max. 3A
Stand-by power ClimateBooster	:	$\leq 0,3\text{W}$
Fan rotation range (PWM controlled)	:	0 to 100% of specification fan

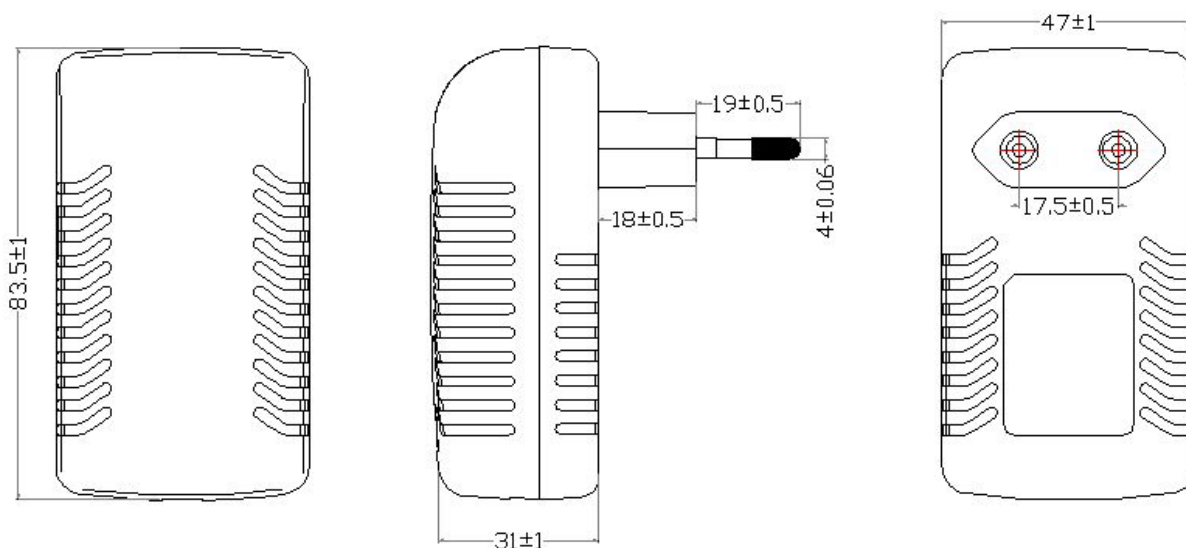
Product Length	EAN	Width	Height	AC Operating power at 7,5VDC:	Product weight
50cm	7432228396314	10cm	6cm	: ≤ 1.60 to 5.00 watts	1,4 kg
60cm	7432228393313			: ≤ 1.75 to 5.40 watts	1,6 kg
70cm	7432228393320			: ≤ 1.90 to 5.80 watts	1,8 kg
80cm	7432228393337			: ≤ 1.90 to 6.20 watts	2,0 kg
90cm	7432228393344			: ≤ 2.05 to 6.60 watts	2,3 kg
100cm	7432228393351			: ≤ 2.20 to 7.00 watts	2,5 kg
110cm	7432228393368			: ≤ 2.35 to 7.40 watts	2,7 kg
120cm	7432228393375			: ≤ 2.50 to 7.80 watts	2,9 kg
130cm	7432228393382			: ≤ 2.65 to 8.20 watts	3,2 kg
140cm	7432228393399			: ≤ 2.80 to 8.60 watts	3,4 kg
150cm	7432228394303			: ≤ 2.95 to 9.00 watts	3,6 kg
160cm	7432228394310			: ≤ 3.10 to 9.40 watts	3,8 kg
170cm	7432228394327			: ≤ 3.25 to 9.80 watts	4,1 kg
180cm	7432228394334			: ≤ 3.40 to 9.80 watts	4,3 kg
190cm	7432228394341			: ≤ 3.55 to 10.20 watts	4,5 kg
200cm	7432228394358			: ≤ 3.70 to 10.60 watts	4,7 kg
210cm	7432228394365			: ≤ 3.85 to 11.00 watts	5,0 kg
220cm	7432228394372			: ≤ 4.00 to 11.40 watts	5,2 kg
230cm	7432228394389			: ≤ 4.15 to 11.80 watts	5,4 kg
240cm	7432228394396			: ≤ 4.30 to 12.20 watts	5,6 kg
250cm	7432228395300			: ≤ 4.45 to 12.60 watts	5,9 kg
260cm	7432228395317			: ≤ 4.60 to 13.00 watts	6,1 kg
270cm	7432228395324			: ≤ 4.75 to 13.40 watts	6,3 kg
280cm	7432228395331			: ≤ 4.90 to 13.80 watts	6,5 kg
290cm	7432228395348			: ≤ 5.05 to 14.20 watts	6,8 kg
300cm	7432228395355			: ≤ 5.20 to 14.60 watts	7,0 kg





AC/DC Power supply:

Part Number	:	7.02
Model	:	SJ-0730-E
Efficiency level	:	Ⓥ
Efficiency	:	more than 81,7% full load
Stand-by power consumption	:	≤ 0,3 W
IP rating	:	IP20
Indoor/outdoor use	:	indoor use only
AC input:		
AC voltage:	:	100-240V AC
Frequency	:	50-60 Hz
Max. AC load	:	0.8 A
Input connector	:	2 Pin EU / two input plug of EU
DC output :		
DC voltage	:	7.5V DC
Max. DC load	:	3 A
Max. DC power	:	22.8 W
Output connector	:	DC jack 5.5*2.1*11mm 
AC/DC power supply Dimensions (L x W x H)	:	L = 83.5 mm W = 47mm H = 31 mm
Weight	:	approx. 165g
Cable length	:	approx.1500mm



Temperature sensors:

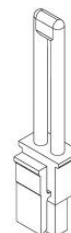
Heating modus

Sensor type	:	Water sensor Radiator
Part Number	:	5.08
Cable sensor length	:	approx. 250mm
Weight	:	approx. 15g
Temperature accuracy	:	+/- 1,5 °C



Ambient air sensor Radiator (Cooling only)

Sensor type	:	Ambient air sensor
Part number	:	5.09
Sensor length	:	approx. 15mm
Weight	:	approx. 1g
Temperature accuracy	:	+/- 1,5 °C



Danger 	Swallowing
	Children could swallow small magnets.
	If several magnets are swallowed, they could get stuck in the intestine and cause perilous complications.
	Magnets are not toys! Make sure that children don't play with magnets.

Warning 	Pacemaker
	Magnets could affect the functioning of pacemakers and implanted heart defibrillators.
	• A pacemaker could switch into test mode and cause illness. • A heart defibrillator may stop working.
	• If you wear these devices keep sufficient distance to magnets: www.supermagnete.nl/eng/faq/distance • Warn others who wear these devices from getting too close to magnets.

Caution 	Magnetic field
	Magnets produce a far-reaching, strong magnetic field. They could damage TVs and laptops, computer hard drives, credit and ATM cards, data storage media, mechanical watches, hearing aids and speakers.
	• Keep magnets away from devices and objects that could be damaged by strong magnetic fields. • Please refer to our table of recommended distances: www.supermagnete.nl/eng/faq/distance

Caution 	Nickel allergy Many of our magnets contain nickel, also those without nickel coating. • Some people have an allergic reaction when they come into contact with nickel. • Nickel allergies could develop from perpetual contact with nickel-plated objects. • Avoid perpetual skin contact with magnets. • Avoid contact with magnets if you already have a nickel allergy.
Caution 	Airfreight Magnetic fields of improperly packaged magnets could influence airplane navigation devices. In the worst case it could lead to an accident. • Airfreight magnets only in packaging with sufficient magnetic shielding. • Please refer to the respective regulations: www.supermagnete.nl/eng/faq/airfreight

Additional ClimateBooster products

Extension Cable 1.5m:

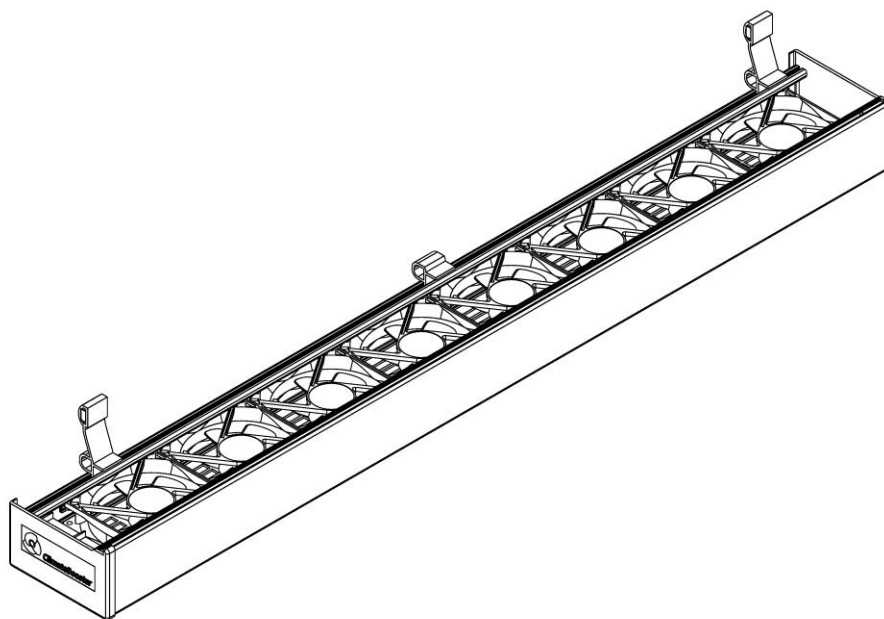


Part number	:	11.0007
model	:	1.5M 5.5x2.1x11S jack to plug
IP rating	:	IP20
Indoor/outdoor use	:	indoor use only
DC voltage range	:	5 to 12V DC
Max. DC load	:	5 A
Output connector	:	DC jack 5.5*2.1*11mm 
Weight	:	approx. 50g
Cable length	:	approx. 1500mm

Extension Cable 4.0m:



Part number	:	11.0008
model	:	4.0M 5.5x2.1x11S jack to plug
IP rating	:	IP20
Indoor/outdoor use	:	indoor use only
DC voltage range	:	5 to 12V DC
Max. DC load	:	5 A
Output connector	:	DC jack 5.5*2.1*11mm 
Weight	:	approx. 110g
Cable length	:	approx. 4000mm



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