



VOLCANO

HEATING UNIT

2022



www.vtsgroup.com

VOLCANO

NEW HEATING UNITS RANGE



Volcano combines innovative technical solutions with a modern and functional design. We precisely engineer each component to achieve „The Function“, and we also strive for „The Form“, a form that is neglected on the segment.

We were capable of conceptualizing a diamond, simplicity, strength, and beauty were the key concepts that we used, allowing us to create a contemporary and functional cover design.

The Volcano is the 1st Engineer/Design Unit heater in the market with the IF design award in 2017

VOLCANO VR4



Up to 100kW
heating power

- » 4 rows heat exchanger
- » **ABS** casing is characterized by high mechanical strength
- » Durable colour thanks to **anti-UV** pigment mixture
- » Resistance to high temperatures
- » Volcanos are equipped with 1R, 2R, 3R or 4R coils heaters



Cooling
mode

- » Dedicated drain pan
- » Unique design awarded with **IF Design award**
- » Failure-free proven by **3 year warranty**



Highly effective
with heat pump

- » ECO FRIENDLY
- » Equipped with **EC motors**
- » Performance efficiency is guaranteed, even at low speeds
- » Volcano fan design + ECM can save up to 40% of energy



Classics vs Modernity

All VOLCANO devices are available with a three-speed AC motor and electronically commutated drive EC.



VOLCANO AC

High quality and low price

- » mounting bracket included
- » high capacity of the device
- » reliable three-speed motor
- » three step fan speed control
- » quick assembly and intuitive connection
- » competitive price



VOLCANO EC

Convenience and energy savings

- » mounting bracket included
- » highly efficient EC motor
- » smooth fan speed control
- » up to 40% lower operating costs
- » possibility of direct connection to the BMS system
- » quiet running at high speeds
- » advance callendar options
- » up to 8 units connection possibility

Product range



VOLCANO	VR Mini	VR Mini 3	VR-D-Mini	VR1	VR2	VR3	VR4	VR-D
Type	AC/EC	AC/EC	AC/EC	AC/EC	AC/EC	AC/EC	AC/EC	AC/EC
Heating power range	3-20 kW	4-27 kW	-	5-30 kW	8-50 kW	13-75 kW	10-90 kW	-
Maximum air output	2100 m³/h	2000 m³/h	2330 m³/h	5300 m³/h	4850 m³/h	5700 m³/h	5300 m³/h	6500 m³/h
Horizontal range (max.)	14 m	14 m	16 m	23 m	22 m	25 m	23 m	28 m
Vertical range (max.)	8 m	8 m	10 m	11 m	11 m	12 m	11 m	15 m
electricity consumption*	13-91 W	13-91 W	13-91 W	41-202 W	45-226 W	55-355 W	55-355 W	55-355 W

* EC motor power for the above specified fan outputs

Technical parameters

Parameter	Unit	VR Mini		VR Mini 3		VR1		VR2		VR3		VR4		VR-D		VR-D Mini	
		AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC
VTS article No.		1-4-0101-0445	1-4-0101-0455	1-4-0101-0625	1-4-0101-0624	1-4-0101-0446	1-4-0101-0442	1-4-0101-0447	1-4-0101-0443	1-4-0101-0448	1-4-0101-0444	1-4-0101-0627	1-4-0101-0626	1-4-0101-0449	1-4-0101-0450	1-4-0101-0506	1-4-0101-0498
Number of heater rows	-	2		3		1		2		3		4		---		---	
Maximum air output	m³/h	2100		2000		5300		4850		5700		5300		6500		2200 2330	
Heating power range	kW	3-20		4-27		5-30		8-50		13-75		10-90		---		---	
Maximum temperature of the heating medium	°C	130						100						---		---	
Maximum working pressure	MPa	1,6						---						---		---	
Water capacity	dm³	1,12		1,48		1,25		2,16		3,1		4,13		---		---	
Connection pipes diameter	"	3/4						---						---		---	
Device weight (without water)	kg	13	14	14	15	21	21	21,5	21,5	25,5	24,5	27	26,5	18	15,5	10,6	8
Power supply voltage	V/Hz	1 ~ 230/50															
Motor power	kW	0,115	0,095	0,115	0,095	0,28	0,25	0,28	0,25	0,45	0,37	0,45	0,37	0,45	0,37	0,115	0,095
Rated current	A	0,53	0,51	0,53	0,51	1,3				1,95	1,7	1,95	1,7	1,95	1,7	0,53	0,51
Rated motor rotational speed	rpm	1450	1200	1450	1200	1380	1430	1380	1430	1380	1400	1380	1400	1380	1400	1450	1200
Motor protection level	IP	54															
Casing color palette		Front: RAL 9016 Traffic White, rear + console: RAL 7036 Platinum Gray, fan (EC): RAL 6038 Green															

PIPELINE DIAMETERS*

Number of heaters connected to the main line**	VR Mini		VR Mini 3		VR1		VR2		VR3		VR4	
	Max water flow [m³/h]	Pipeline diameter ["]	Max water flow [m³/h]	Pipeline diameter ["]	Max water flow [m³/h]	Pipeline diameter ["]	Max water flow [m³/h]	Pipeline diameter ["]	Max water flow [m³/h]	Pipeline diameter ["]	Max water flow [m³/h]	Pipeline diameter ["]
1	0,9	3/4	1,4	3/4	1,3	3/4	2,2	3/4	3,3	3/4	5,0	3/4
2	1,8	3/4	2,7	1	2,6	3/4	4,4	1	6,6	1 1/4	9,9	1 1/2
3	2,7	1	4,1	1	3,9	1	6,6	1 1/4	9,9	1 1/2	14,9	1 1/2
4	3,6	1	5,4	1	5,2	1	8,8	1 1/4	13,2	1 1/2	19,8	2
5	4,5	1	6,8	1 1/4	6,5	1 1/4	11	1 1/2	16,5	2	24,8	2
6	5,4	1 1/4	8,1	1 1/4	7,8	1 1/4	13,2	1 1/2	19,8	2	29,7	2 1/2
7	6,3	1 1/4	9,5	1 1/4	9,1	1 1/4	15,4	2	23,1	2 1/2	34,7	2 1/2
8	7,2	1 1/4	10,8	1 1/2	10,4	1 1/2	17,6	2	26,4	2 1/2	39,6	2 1/2
9	8,1	1 1/4	12,2	1 1/2	11,7	1 1/2	19,8	2	29,7	2 1/2	44,6	3
10	9,0	1 1/4	13,5	1 1/2	13	1 1/2	22	2 1/2	33	3	49,5	3

* Pipeline diameters selected for maximum water flow rate up to 2,5 m/s
 ** Heaters connected successively to one main line

Controls



PARAMETERS Model	Wall controller WING/VOLCANO	VR Thermostat	Speed regulator ARW 3.0/2	Speed regulator ARW 0.6	Potentiometer VR EC (0-10V)	Potentiometer with thermostat VR EC (0-10V)	HMI VOLCANO EC controller	HMI VOLCANO EC WIFI controller
VTS product number	1-4-0101-0438	1-4-0101-0038	1-4-0101-0434	1-4-0101-0167	1-4-0101-0453	1-4-0101-0473	1-4-2801-0157	1-4-2801-0158
Motor support	AC				EC			
Power supply voltage V/ph/Hz	~230V/1/50	~230V/1/50	~230V/1/50	~230V/1/50	~230V/1/50	~230V/1/50	~230V/1/50	~230V/1/50
Permissible load current A	6(3)	3	3	0,6	0,02 A for 0-10V		1A for 230VAC 0,02A for 0-10V	1A for 230VAC 0,02A for 0-10V
Settings range °C	10...30	10...30	10...30	10...30	-	5...30	5...40	5...40
Work mode	---	manual	manual	manual	manual	manual	manual/automatic	manual/automatic
Hourly-weekly calendar	---	No	No	No	No	No	Yes	Yes
Clock	---	No	No	No	No	No	Yes	Yes
Temperature measurement	Integrated in the device		No		No		Integrated in the device	
The possibility of connecting a separate temperature sensor pcs.	---		No		No		1 or 4	
Output signal	---				on/off			
Protection rate IP	30		54		30		20	

COOPERATION OF CONTROLS AND REGULATORS WITH HEATING UNITS

VR Mini/ VR Mini 3/ VR-D Mini	pcs.	4	1	4	1	8		
VR1/ VR2	pcs.	2	1	1	0	8		
VR3/ VR4/ VR-D	pcs.	1	1	1	0	8		



Accessories



Valve with actuator

VTS article No.	1-2-1204-2019
power supply voltage	~230V/1ph /50Hz
power consumption electrical	1 W
connection	3/4"
Coefficient of Volume	4,5 m³/h
opening/ closing time	3/3 min.
protection rating	IP 54



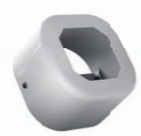
Room NTC sensor

VTS article No.	1-2-1205-0007
resistance measurement element	NTC 10K kΩ
assembly	surface-mounted
max. signal wire length	100 m
ambient	-20...+70°C
protection rating	-20...+70°C
stopień ochrony	IP 66



Flex. connecting hoses (set)

VTS article No.	1-2-2702-0076
length	0,6-0,9 m
connection type	GW 3/4"
max. fluid pressure	1,6 MPa
min. working temperature for water	5°C
min. working temperature for glycol	-20°C
max. working temperature	130°C
set includes	hose (2 pcs) gasket (4 pcs)



Surface mounted box for HMI

VTS article No.	1-2-0393-1987
dimensions	100x100x70mm
type	surface mounted
color	RAL 9016
set includes	bracket and 2 screws



Drain pan for VR Mini - VR Mini 3

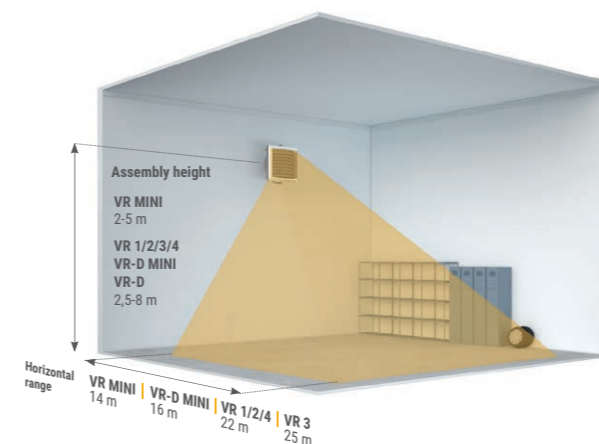
VTS article No.	1-2-2701-4021
dimensions	532x145x43 mm

Drain pan for VR1-4

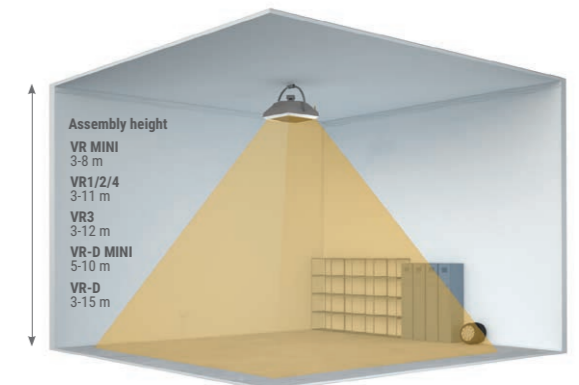
VTS article No.	1-2-2701-4019
dimensions	702x145x43

Assembly

ASSEMBLY WALL



ASSEMBLY CEILING



WING

YOUR INVISIBLE BARRIER

WING is the next generation air curtain created from a passion for a light and modern design representing characteristics of gliders.



Unique shape

A minimal casing with a streamlined form of a wing that seems to float in the air. The diamond style side panels hide the excellent components in an innovative curtain body to set new standards for air curtains. WING combines the unique design and excellent efficiency to redefine the air curtain image.

Quality and design

High quality materials, unique shape and rigid construction are the basic assumptions of the designers of the curtain. Simple cleaning of the curtain, double protective coating and efficient and durable EC motor ensure trouble-free operation of the device.

Energy efficiency

- » highly efficient EC motor
- » maximum unit efficiency even at reduced speed
- » smooth speed regulation
- » optimal fan shape and EC motor let save up to 40% of energy





HMI WiFi Wing controller

- » modern and compact design
- » high contrast and clear screen
- » advanced calendar for each day of the week
- » door sensor cooperation
- » wireless communication with a smartphone
- » preset 3-levels speed control
- » build-in thermostat
- » 3-levels of heating power
- » up to 8 air curtains connected with the one controller



DOOR OPTIMUM function

Door Optimum function allows the WING to maintain full protection of the door opening and at the same time optimize costs associated with its operation. It keeps the air curtain operating at minimum speed and continues to protect the door, from the outside air, once the door begins opening it also increases the speed of air by +1 or +2 levels, depending on user's preferences.

Product range

WING W

WATER HEAT EXCHANGER

HEATING POWER RANGE:
4 - 47 kW

EXHAUST FLOW RATE:
1850-4400 m³/h

MAXIMUM AIR COVERAGE:
3,7 m

WING 100/150/200



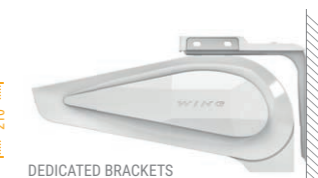
WING E

ELECTRIC HEATER

HEATING POWER RANGE:
2 - 15 kW

EXHAUST FLOW RATE:
1850-4500 m³/h

MAXIMUM AIR COVERAGE:
3,7 m

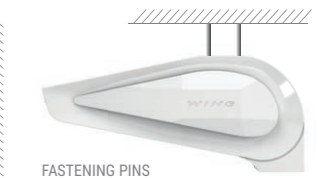


WING C

WITHOUT HEAT EXCHANGER [AMBIENT]

EXHAUST FLOW RATE:
4 m

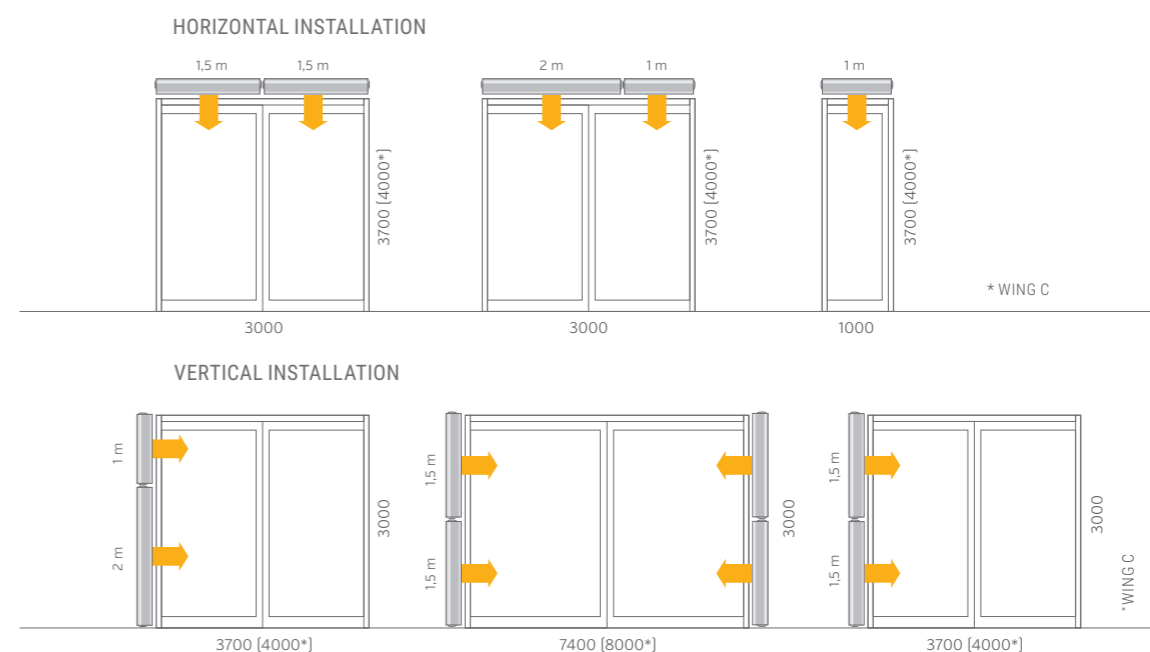
EXHAUST FLOW RATE:
1950-4600 m³/h



DEDICATED BRACKETS

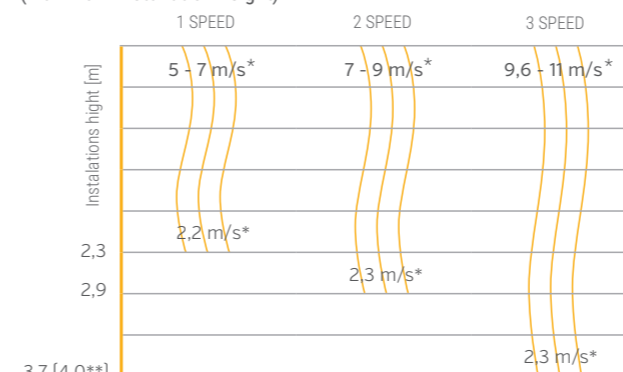
FASTENING PINS

* width does not include side covers



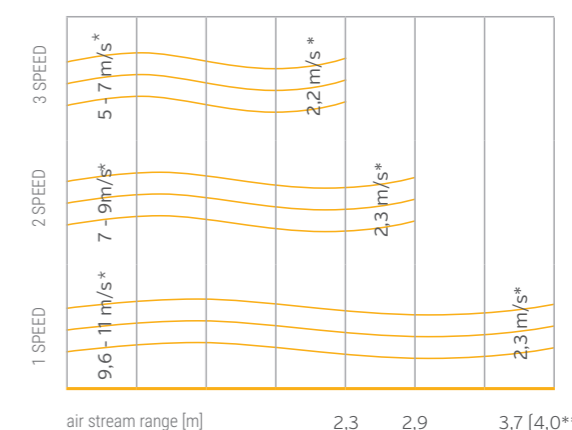
Stream range

Vertical air stream range (maximum installation height)



* air stream speed [m/s]
** ambient curtain

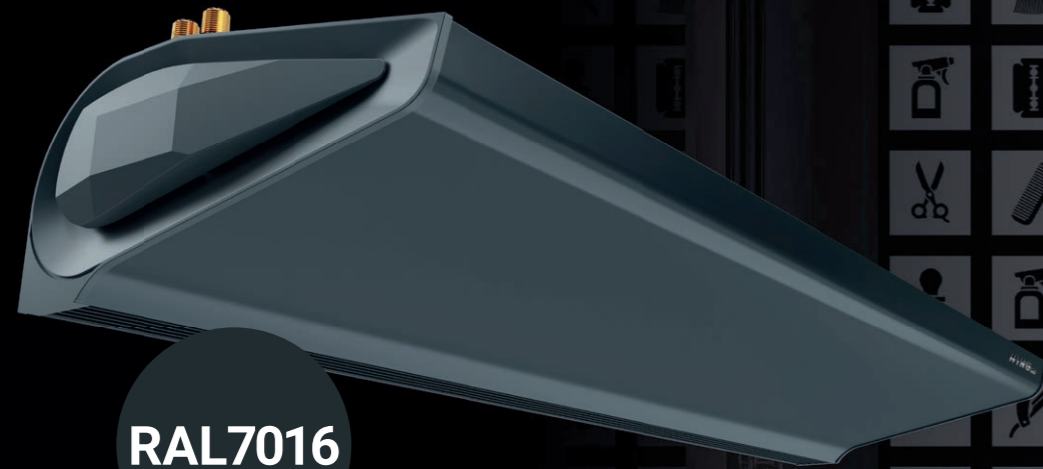
Horizontal air stream range (for vertical installation)



* air stream speed [m/s]
** ambient curtain

WING

YOUR INVISIBLE BARRIER



RAL7016

NO MORE COMPROMISES

The color RAL7016 is currently the most commonly used color in the residential construction industry. Color will no longer stand in the way of the designer's vision. WING DARK RAL7016 will effectively complement roof, doors, windows and gates.

Technical parameters

PARAMETERS	WATER AIR CURTAIN						ELECTRIC AIR CURTAIN						AMBIENT AIR CURTAIN																							
	W100		W150		W200		E100		E150		E200		C100		C150		C200																			
	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC	AC	EC																		
Colour ○ WHITE (RAL 9016) ● DARK (RAL 7016)	○	●	○	●	○	●	○	●	○	●	○	●	○	●	○	●	○	●	○	●																
VTS article No.	1-4-2801-0250	1-4-2801-0299	1-4-2801-0259	1-4-2801-0308	1-4-2801-0251	1-4-2801-0300	1-4-2801-0260	1-4-2801-0309	1-4-2801-0252	1-4-2801-0301	1-4-2801-0261	1-4-2801-0310	1-4-2801-0253	1-4-2801-0302	1-4-2801-0262	1-4-2801-0311	1-4-2801-0254	1-4-2801-0303	1-4-2801-0263	1-4-2801-0312	1-4-2801-0255	1-4-2801-0304	1-4-2801-0264	1-4-2801-0313	1-4-2801-0256	1-4-2801-0305	1-4-2801-0265	1-4-2801-0314	1-4-2801-0257	1-4-2801-0306	1-4-2801-0266	1-4-2801-0315	1-4-2801-0258	1-4-2801-0307	1-4-2801-0267	1-4-2801-0316
maximum door width (1 device)	1		1,5		2		1		1,5		2		1		1,5		2																			
maximum door height (vertical stream range)*			3,7						3,7						4																					
maximum exhaustflow rate	1850		3100		4400		1850		3150		4500		1950		3200		4600																			
heating power range**	4-17		10-32		17-47		2 lub 4/6		8/12		10/15																									
maximum temperature of heating agent °C			95																																	
maximum operating pressure MPa			1,6																																	
water volume dm³	1,6		2,6		3,6																															
number of heat exchanger rows pcs.			2																																	
supply voltage V/ph/Hz			~230/1/50				~230/1/50 for 2kW ~400/3/50 for 4/6kW		~400/3/50				~230/1/50																							
electric heating coil power kW			-				2 and 4		4 and 8		5 and 10																									
electric heating coil current draw A			-				6/max.9		11,5/max.17,3		14,5/max.21,4																									
motor power kW	0,235	0,2	0,375	0,3	0,58	0,47	0,235	0,2	0,375	0,3	0,58	0,47	0,235	0,2	0,375	0,3	0,58	0,47																		
rated current A	1,2	1,1	1,7	1,3	2,6	1,9	1,2	1,1	1,7	1,3	2,6	1,9	1,2	1,1	1,7	1,3	2,6	1,9																		
weight (without water) kg	20,8	21,2	27,8	24,5	34,6	30,4	20	17,3	26,8	23,4	33,3	29,1	17,9	15,3	23,8	20,4	29,3	25,1																		
protection rating	IP						20																													



Smart entrance protection

Accessories



Sterownik HMI WING EC

VTS article No.	1-4-2801-0155
Motor support	EC
Power supply voltage	~230V/1ph /50Hz
Permissible load	1A for 230VAC 0,02A for 0-10V
Setting range	5...40 °C
Protection rating	IP 20



Controller WING EC WIFI

VTS article No.	1-4-2801-0156
Motor support	EC
Power supply voltage	~230V/1ph /50Hz
Permissible load	1A for 230VAC 0,02A for 0-10V
Setting range	5...40 °C
Protection rating	IP 20



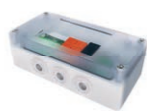
Wall controller WING/VOLCANO

VTS article No.	1-4-0101-0438
Motor support	AC
Power supply voltage	6(3) V/ph/Hz
Permissible load	1A for 230VAC 0,02A for 0-10V
Setting range	10...30 °C
Protection rating	IP 30



Door sensor (reed switch)

VTS article No.	1-4-0101-0454
Contact configuration	NO
Switching current	500 mA
Switching voltage	max 200 V
Connection	screw



Door sensor adapter WING AC

VTS article No.	1-4-0101-0578
Power supply	~230V/1ph /50Hz
Rated input power	1W
Protection rating	IP 55
Dedicated to curtains with AC motor. Adapter gives possibility to use Door sensor (1-4-0101-0454) with Wall controller (1-4-0101-0438).	



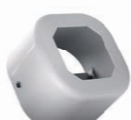
Valve with actuator

VTS article No.	1-2-1204-2019
Power supply voltage	~230V/1ph /50Hz
Opening	3/3 min
Kvs	4,5
Protection rating	IP 54



Flex. connection hoses (set)

VTS article No.	1-2-2702-0076
Lenght	0,6-0,9 m
Connection type	GW 3/4"
Max. fluid pressure	1,6 MPa
Min. working temperature for water	5 °C
Min. working temperature for glycol	-20 °C
Max. working temperature	130 °C
Set includes	hose (2 pcs) gasket (4 pcs)



Surface mounted box for HMI

VTS article No.	1-2-0393-1987
dimensions	100x100x70mm
type	surface mounted
color	RAL 9016
set includes	bracket and 2 screws

INSIDE

- ← CHILLED AIR
- ← CLEAN AIR

OUTSIDE

- WARM AIR
- DUST
- INSECTS
- POLLUTION
- UNPLEASANT SCENTS

Noise level

Fan speed	Noise level	WING W100-200			WING E100-200			WING C100-200		
		1m	1,5m	2m	1m	1,5m	2m	1m	1,5m	2m
I	dB(A)***	52	53	56	49	51	55	53	54	57
II		55	58	61	51	56	59	59	62	61
III		57	59	62	58	58	60	62	63	63

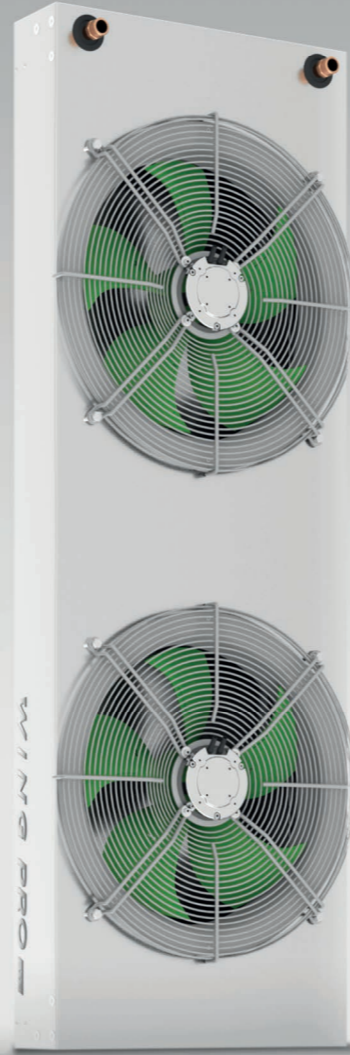
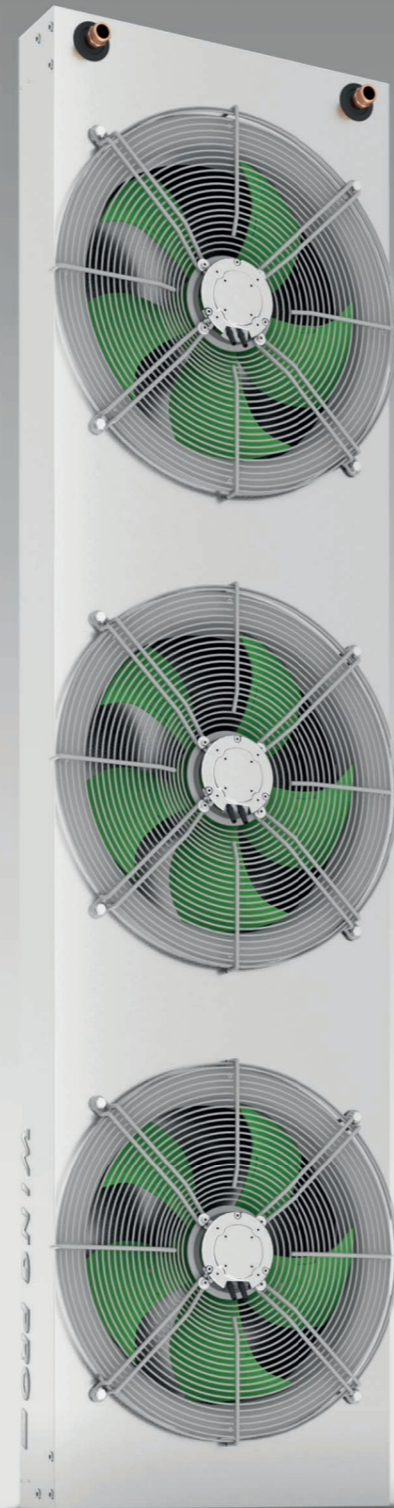
* air stream range depends on curtain operation speed

** available heating power in the control option configuration: Wing E100 2 or 4/6kW, for Wing E150 8/12kW, for Wing E200 10/15kW

*** speed measurement conditions: semi-open space, horizontal installation on the wall, measurement performed 5 m away from the device

WING PRO

AIR CURTAINS
FOR PROFESSIONALS



Energy saving

EC motor use even 40% less electrical energy and allow for **BMS direct connection**.



Power

The wide air stream, range up to **8 meters**, capacity up to 88 kW.



Installation

Vertical or horizontal mounting possibility plus easy unit connection.



Price

Intelligent design with never-before-seen performance available at a **competitive price**.



Product range

WING PRO **WR2**

DOUBLE ROW COIL

HEATING POWER RANGE:
17 - 88 kW
 EXHAUST FLOW RATE:
7 300 - 10 700 m³/h
 MAXIMUM AIR STREAM RANGE:
7 m

WING PRO **WR1**

SINGLE ROW COIL

HEATING POWER RANGE:
9 - 48 kW
 EXHAUST FLOW RATE:
7 900 - 11 900 m³/h
 MAXIMUM AIR STREAM RANGE:
7,5 m

WING PRO **C**

WITHOUT HEATING (AMBIENT)

EXHAUST FLOW RATE:
8 500 - 12 800 m³/h
 MAXIMUM AIR STREAM RANGE:
8 m

WING PRO 200



2072 mm

WING PRO 150



1556 mm

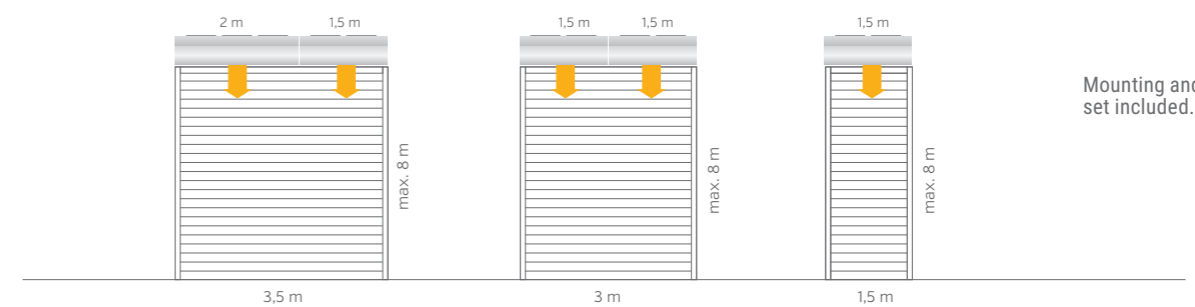
EC



536 mm

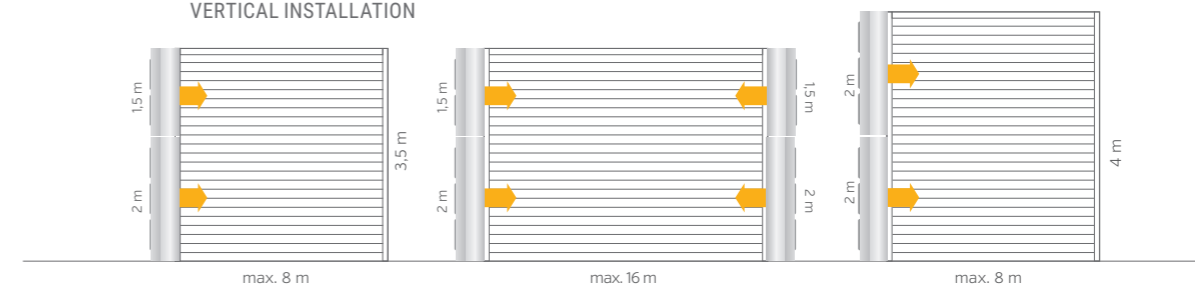
530 mm

HORIZONTAL INSTALLATION

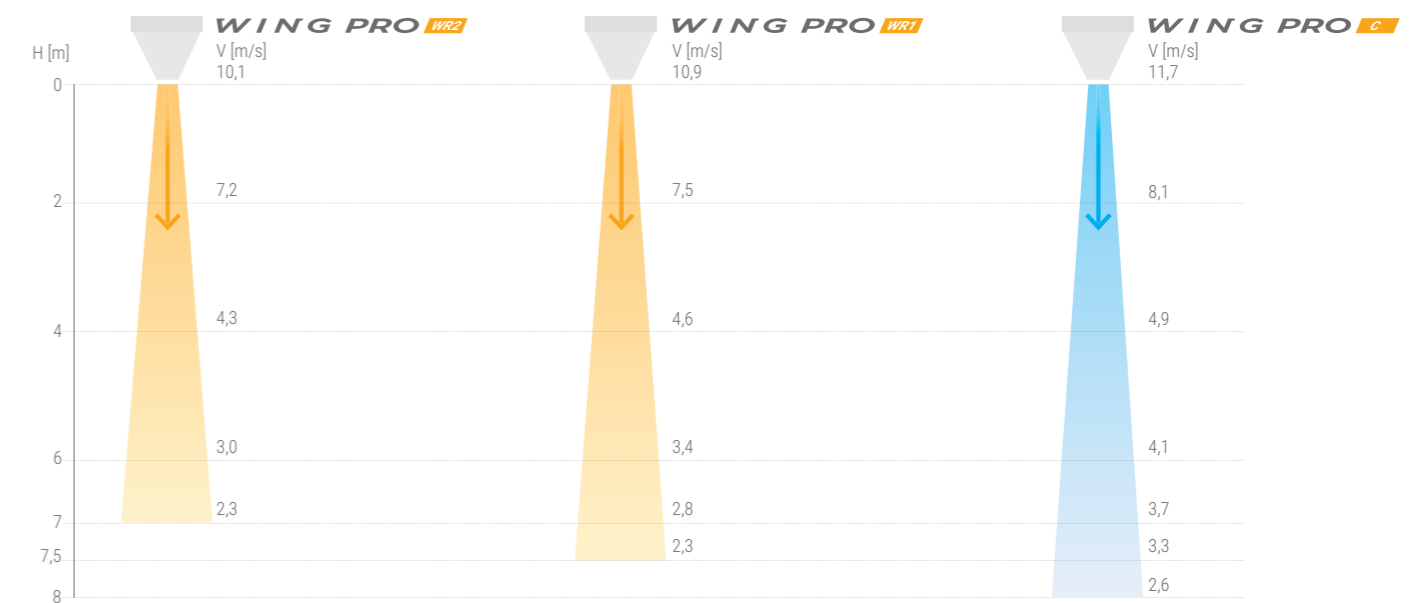


Mounting and connection set included.

VERTICAL INSTALLATION



Stream range



Technical parameters

PARAMETERS	WING PRO DOUBLE ROW COIL		WING PRO SINGLE ROW COIL		WITHOUT HEATING (AMBIENT)		
	W150 EC	W200 EC	W150 EC	W200 EC	C150 EC	C200 EC	
VTS article No.	1-4-2801-0349	1-4-2801-0355	1-4-2801-0348	1-4-2801-0354	1-4-2801-0347	1-4-2801-0353	
Max. height of door	m	1,5	2	1,5	2	1,5	2
Max. air stream range	m	7		7,5		8	
Max. flow rate	m³/h	7 300	10 700	7 900	11 900	8 500	12 800
Heating power range	kW	17-58	28-88	3-32	15-48	-	
Max. temperature of heating medium	°C	130				-	
Max. Working pressure	MPa	1,6				-	
Diameter of stub pipe connectors	"	3/4				-	
Supply voltage	V/ph/Hz	~230/1/50					
EC motor power	kW	2 x 0,25	3 x 0,25	2 x 0,25	3 x 0,25	2 x 0,25	3 x 0,25
Rated current (EC motor)	A	2 x 1,3	3 x 1,3	2 x 1,3	3 x 1,3	2 x 1,3	3 x 1,3
Weight AC/EC (without water)	kg	53,6	69,6	50,5	66,1	43,4	58,3
IP protection rating	IP	54					



Accessories



HMI WING EC controller

VTS article No.	1-4-2801-0155
Motor support	EC
Power supply voltage	~230V/1ph /50Hz
Permissible load	1A for 230VAC 0,02A for 0-10V
Setting range	5...40 °C
Protection rating	IP 20



Controller WING EC WIFI

VTS article No.	1-4-2801-0156
Motor support	EC
Power supply voltage	~230V/1ph /50Hz
Permissible load	1A for 230VAC 0,02A for 0-10V
Setting range	5...40 °C
Protection rating	IP 20



Door sensor (reed switch)

VTS article No.	1-4-0101-0454
Contact configuration	NO
Switching current	500 mA
Switching voltage	max 200 V
Connection	screw



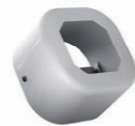
Valve with actuator

VTS article No.	1-2-1204-2019
Power supply voltage	~230V/1ph /50Hz
Opening	3/3 min
Kvs	4,5
Protection rating	IP 54



Flex. connection hoses (set)

VTS article No.	1-2-2702-0076
Lenght	0,6-0,9 m
Connection type	GW 3/4"
Max. fluid pressure	1,6 MPa
Min. working temperature for water	5 °C
Min. working temperature for glycol	-20 °C
Max. working temperature	130 °C
Set includes	hose (2 pcs) gasket (4 pcs)



Surface mounted box for HMI

VTS article No.	1-2-0393-1987
dimensions	100x100x70mm
type	surface mounted
color	RAL 9016
set includes	bracket and 2 screws

Noise level

Fan speed	Noise level	WING PRO W R1		WING PRO W R2		WING PRO C	
		1,5m	2m	1,5m	2m	1,5m	2m
I	dB(A)*	45	46	45	45	47	48
II		55	57	54	55	57	58
III		64	65	62	63	65	66

* speed measurement conditions: semi-open space, horizontal installation on the wall, measurement performed 5 m away from the device

WING

VOLCANO



Coca Cola Arena

Dubai, UAE



Green Plantations

Piaseczno, Poland



IKEA

Poznan, Poland



Claas factory

Woippy, France



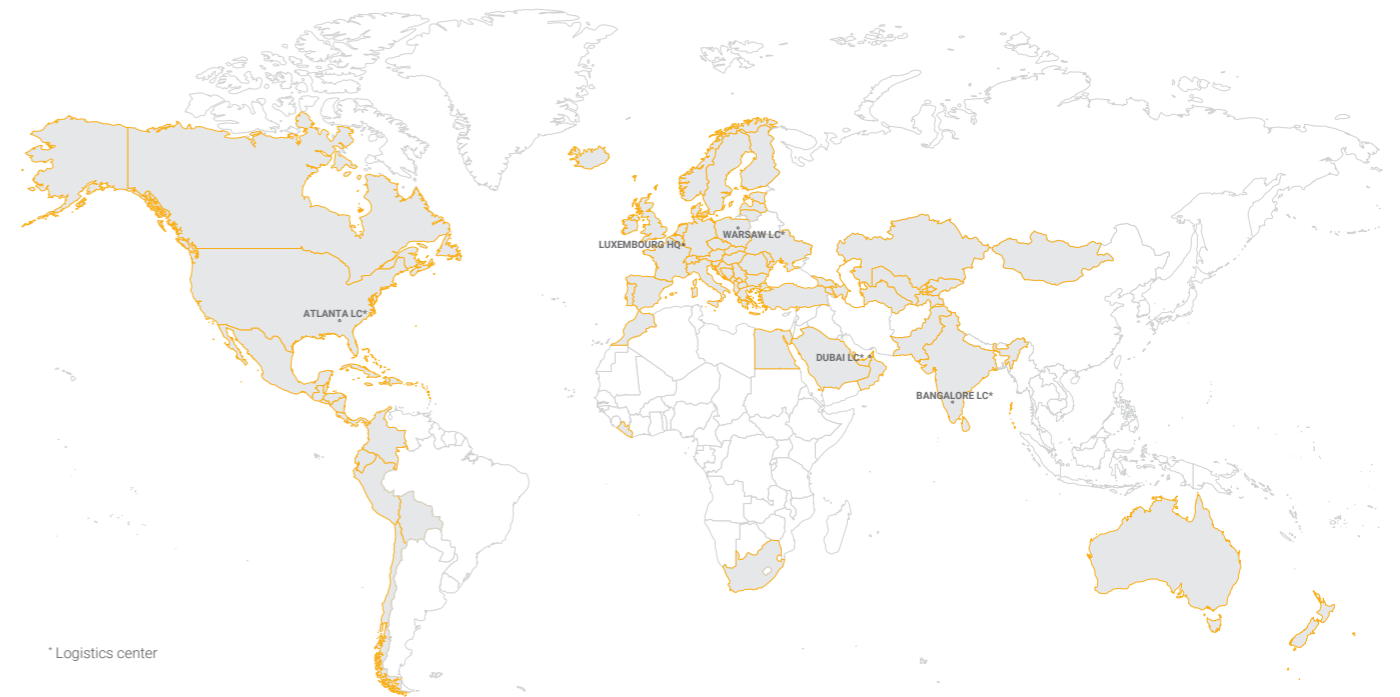
Dubai Expo Pavilions

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Daxing Airport

Beijing, China



* Logistics center

COMPETITIVE
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CROWN QUALITY

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