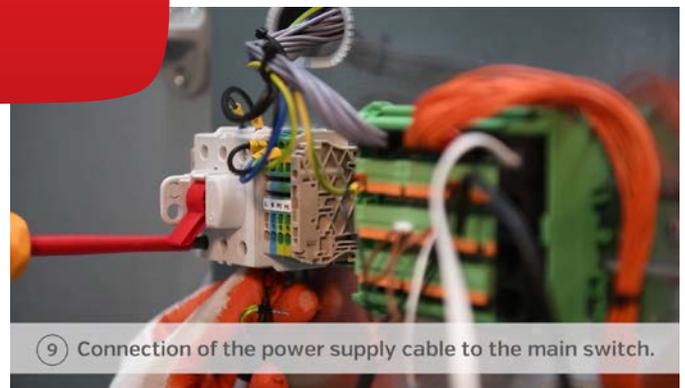




THE GLOBAL PLAYER

Newsletter 2/2018



Compact air handling units in VTS's offer The heating season starts

- | Technical seminars - summary of the 1st half-year
- | New EC motors in VOLCANO VR MINI devices!

▶ Introduction



Dear Ladies and Gentlemen,

I would like to share the most significant news from our company's life with you again.

VTS has always set out ambitious goals to itself and pursued their achievement. Placing of new air handling units on the market, made in a completely new technology, competitive in terms of price and small-sized, was one of the objectives for this year. Today, I take great pleasure in announcing that the mission has been accomplished. Since September we have been offering a full series of types of new devices referred to as VENTUS Compact. The air handling units are available in a suspended version and a floor mounted version, with the capacity from 150 to 16,500 m³/h and recovery options consistent with requirements of EcoDesign 2018.

September also commences a very intensive period in the segment of VOLCANO heaters and WING air curtains. This year, our message sounds as follows "Stay warm". VOLCANO and WING are devices which in view of their reliability and design have won a broad range of customers in the coldest corners of the globe. The seasonal campaign shows users full of passion in typical places where our products take care of heat and comfort.

In this issue, you can also find a summary of the 1st half-year within the scope of effected technical seminars. From January to June we met, exchanged observations with and presented novelties in the offer to more than 3,700 designers from 15 countries all over the world.

Hanna Siek-Zagórska, VTS Group President



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Compact air-handling units in VTS's offer

Recently, VTS has launched a new range air handling units - The VENTUS Compact – available both in a floor-mounted and suspended execution.

The floor mounted ones ranged between VVS021c and VVS150c were designed to handle an air flow rate from 840 m³/h to 16,500 m³/h. Whereas, suspended, ranged between VVS005s and VVS030s are capable to cover a flow rate between 150 m³/h and 3,300 m³/h.

While designing the new units, the guiding concept was to create a complete, highly-effective device featured by large configurational flexibility, as small as possible, equipped with a power supply installation and with a factory-made control system. And all this at a competitive price.

VENTUS Compact Floor-mounted units



The Base unit

Floor-mounted air-handling units have met all these project assumptions thanks to application of a base air-handling unit, equipped with: a highly-effective rotary heat wheels, capable for all seasons heat recovery (depending on intended use of the installation), set of ultra-short air filters with high absorption, high-performance fan sets driven by EC motors and a multifunctional control system fitted inside the air-handling unit.

The base unit is offered in three configurations:

- > a system with fans installed diagonally in regards to of the rotary heat wheel i.e. systems meant for installations for which the aspect of an increased hygienic safety of the installation is crucial,

- > a system with a mixing chamber and fans on the same side of the rotary heat wheel. The system is meant for installations which are in need of either a fast heating option or air quality management by means of CO₂ maximum concentration control. It is also an perfect configuration for minimisation of energy consumption with the use of pressure transducer supporting CAV regulation,
- > a system with fans on the same side of the rotary heat wheel – the one is meant for installations in which no air recirculation is needed but smallest possible footprint of the unit is crucial. For these configuration, length of the largest device never exceeds 2 m!

		UNIT SIZE							
		VVS021c	VVS030c	VVS040c	VVS055c	VVS075c	VVS100c	VVS120c	VVS150c
AIRFLOW	[m ³ /h]	840 - 2310	900 - 3300	1200 - 4400	1650 - 6050	2250 - 8250	3000 - 11000	3600 - 13200	4500 - 16500
LENGTH	L ₁ [mm]	1020	1200	1200	1360	1360	1260	1360	1360
	L ₂ [mm]	1200	1600	1600	1980	1980	1780	1980	1980
WIDTH	[mm]	967	967	1174	1345	1486	1666	1897	2091
HEIGHT	[mm]	991	1255	1255	1525	1765	1965	2039	2241



HIGHLY EFFICIENT ROTARY HEAT WHEELS



ENERGY SAVING AND SILENT EC MOTORS



WIRING AND CONFIGURATION IN PLUG&PLAY STANDARD



INTEGRATED MULTIFUNCTIONAL CONTROLS



MINI-PLEAT PANEL FILTERS



up to **86%** recovery efficiency

Air filters – Mini-Pleat

The air-handling unit is fitted with high-absorption ultra-thin air filters of Mini-Pleat type. This solution allows achieving high effectiveness of filtration and considerably longer service life, compared with other types of filters, maintaining relatively small external dimensions.

Pursuant to European requirements, the air-supply part is equipped with EU7 filtration class and the air-exhaust one - with EU5.

Fan sets with EC motors

High-performance fans, used in the air-handling units, with a direct drive based on EC motors, efficiency exceeding minimum requirements set for IE4 class ensure economical performance and a very low vibration level. In order to ensure an optimal operating point of the fan, an option of dynamic selection of fans was enabled both in terms of their size and their number in the section - all for reaching maximum system efficiency.

Power and control system

The air-handling units are designed to minimise works related with their installation and connection – efforts needed to start-up.

Unit is equipped with power supply circuits of the fans and rotary heat wheel, installed inside the unit and crossed to the external terminals panel, together with fully integrated, multifunctional control system.

The factory setting of the control system in the delivered unit are consistent with the parameters in the air-handling unit selection data sheet.

Connection works on a facility come down in practice to connecting power to an external connection box and connecting peripheral control elements fitted outside the base air-handling unit.

Peripheral supplementary functions

The base air-handling unit – being a basic configuration, may be extended by additional air treatment functions by adding optional modules, attached either directly to the unit's body or to the ventilating duct. The optional modules can support air heating (water heater or DXH), cooling (water cooler or DX), additional air filtration (EU9 class filter), or noise attenuation (silencer).



Ventus Compact – suspended air-handling units

The concept of suspended air-handling units is based on the base block comprising a high-efficiency energy recovery block based on counter-flow hexagonal exchanger, capable for all-seasons recovery (depending on intended use of the installation), a complete set of ultra-short air filters with high absorption, high-performance fan sets with EC motors and a multifunctional

control system fitted inside the air-handling unit. In order to additionally increase the real degree of heat recovery, dynamic calculation of the exchanger's frosting point was applied, based on measured air parameters, which considerably lengthens the recovery working time in winter, in periods with sub-zero outdoor air temperatures.

UNIT SIZE	AIRFLOW [m³/h]	LENGTH [mm]	WIDTH [mm]	HEIGHT [mm]
VVS030s	900 - 3 300	1 828	2 160	470
VVS020s	600 - 2 200	1 828	1 610	470
VVS015s	450 - 1 650	1 500	1 550	380
VVS010s	300 - 1 100	1 500	1 150	380
VVS005s	150 - 650	1 230	790	380



HIGHLY EFFICIENT HEX COUNTERFLOW RECOVERY



ENERGY SAVING AND SILENT EC MOTORS



WIRING AND CONFIGURATION IN PLUG & PLAY STANDARD



INTEGRATED MULTIFUNCTIONAL CONTROLS

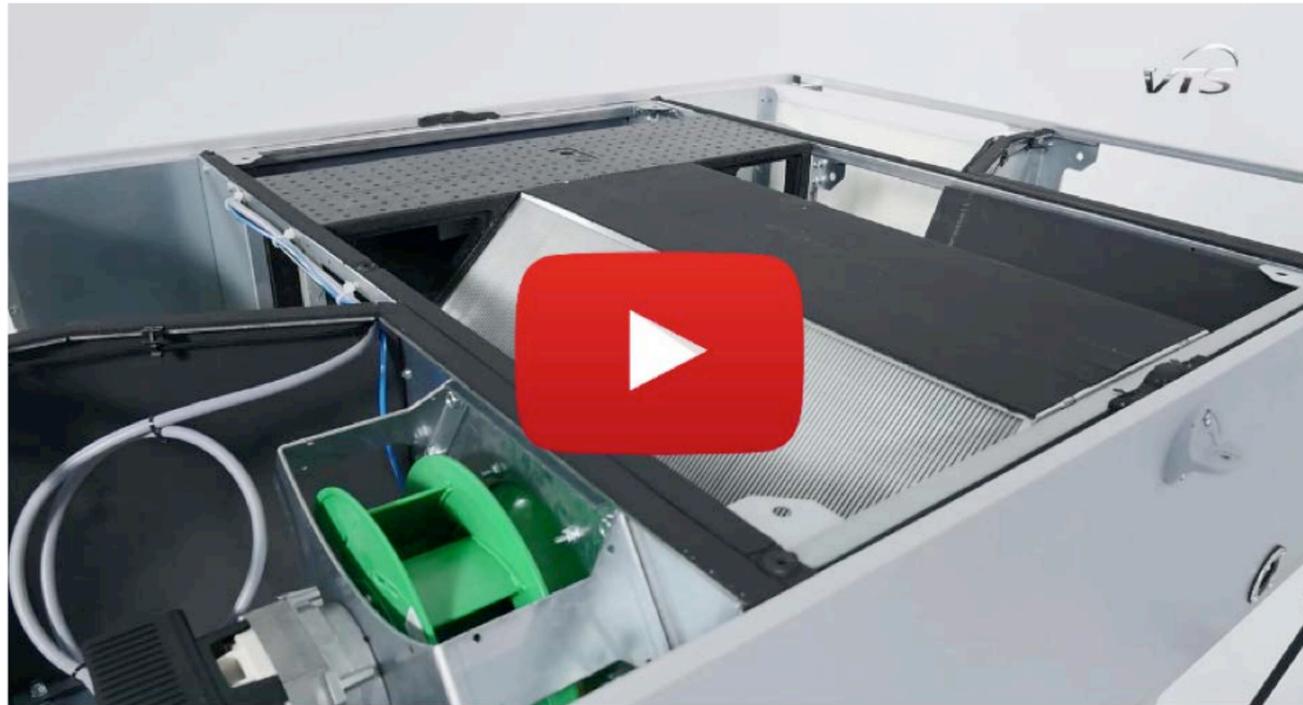


MINI-PLEAT PANEL FILTERS



up to **92%** recovery efficiency





In analogy to the compact floor-mounted air-handling units, the suspended ones are equipped with high-absorption air filters of Mini-Pleat type and high-performance EC motors. Just as for the floor-mounted air-handling units, attachments supporting air heating, cooling and noise damping are available.

The new suspended air-handling units are one of the lowest devices for appropriate air flow rates, which makes their application flexible and comfortable.

Air-supply and air-exhaust systems without recovery are available for the suspended air-handling units too.

VENTUS compact air-handling units are a perfect proposal for demanding customers who value high quality, prompt delivery and lowest possible cost to bear - both when purchasing the device and when using it.

Small size of the device makes it possible to use it for more purposes than with regard to traditional solutions.

A price of the VENTUS compact unit with factory-made wiring is lower than a price of a traditional device with a cost of installation fitted up on a facility.

Comparison

VENTUS



VENTUS

COMPACT

SUSPENDED

FLOOR MOUNTED



NUMBER OF SIZES

14

5

8

CAPACITY

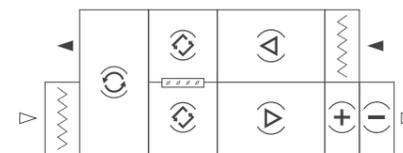
1100 – 110 000 m³/h

150 – 3300 m³/h

840 – 16500 m³/h

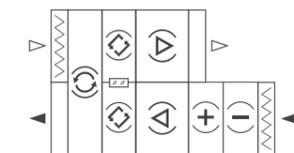
DIMENSIONS FOR THE SAME CONFIGURATION OF TYPICAL AIR HANDLING UNIT

VENTUS 055-R-FRMVHC



Length - **4082 mm**
 Width - **1339 mm**
 Height - **1520 mm**

VENTUS Compact 055-R-FRMVHC



Length - **1990 mm**
 Width - **1345 mm**
 Height - **1436 mm**

ventus

ventus

COMPACT

ADDITIONAL FUNCTIONS

- Filter
- Heater
- Cooler
- Glycol
- Silencer
- Empty section
- Humidifier

- Filter
- Heater
- Cooler
- Silencer
- Empty section

- Filter
- Heater
- Cooler
- Silencer

CASING



Non-skeleton construction based on "sandwich" type panels appropriately formed into "C" shape and reinforced by means of an inner system of frames.



The construction is made of "sandwich" type panels fixed to an inner supporting structure.

MOTORS



ventus

ventus

COMPACT

CONTROL

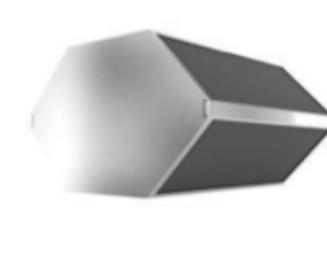
- > External control cabinet
- > CAV and VAV functions available as an option

- > Built in the device
- > CAV and VAV functions available as a standard

ENERGY RECOVERY



up to **92%** of recovery efficiency



up to **92%** of recovery efficiency

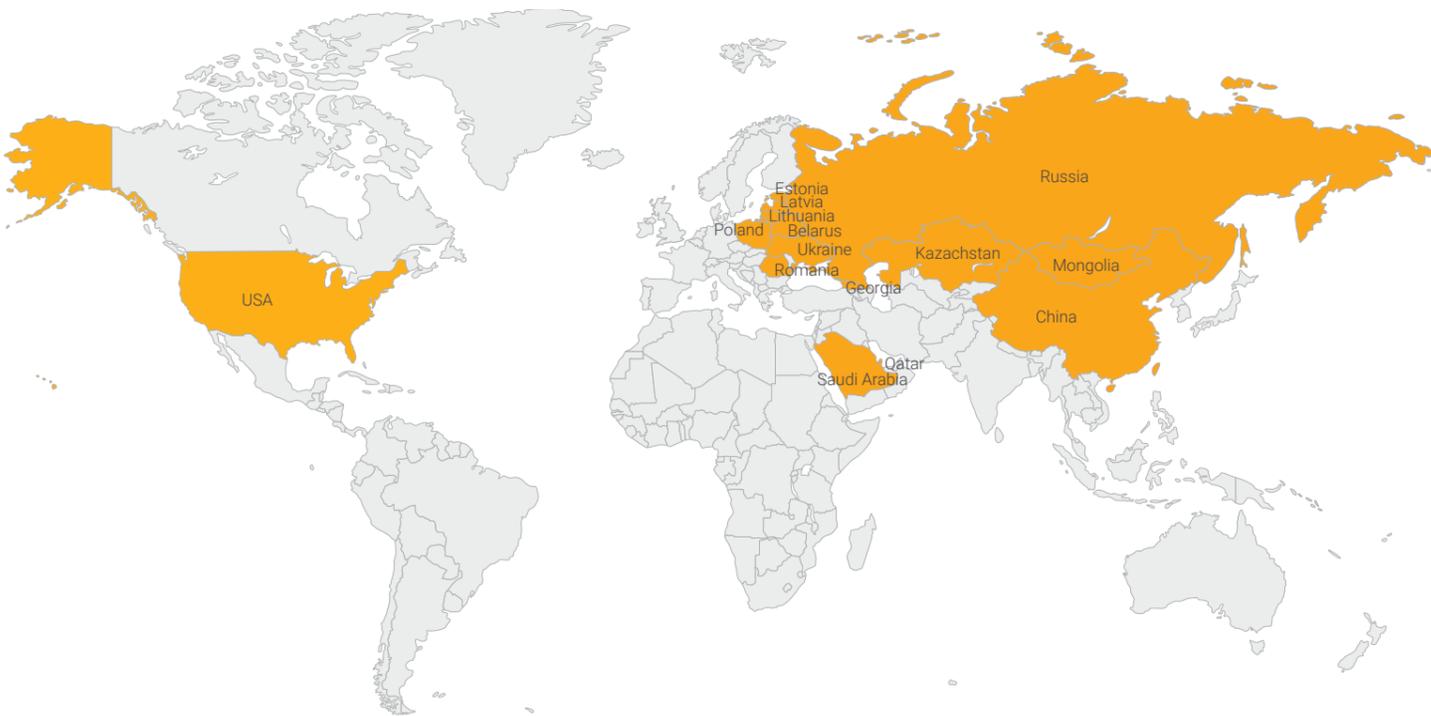


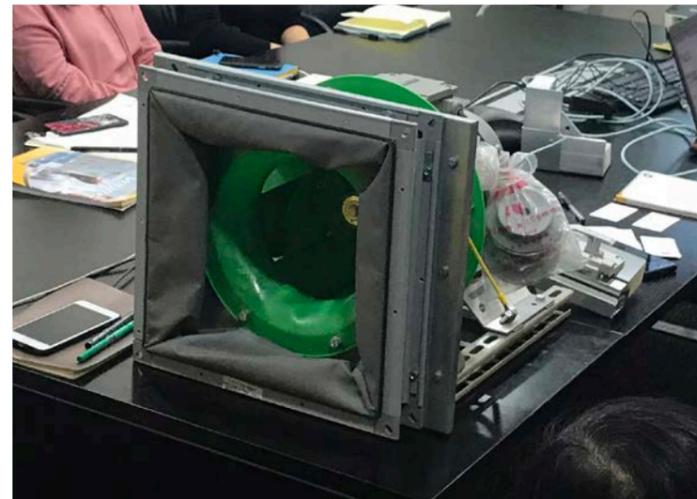
up to **86%** of recovery efficiency

Technical seminars - summary of the 1st half-year

65
SEMINARS

3700
DESIGNERS





| Let's start the heating season!

In some parts of the world there's still summer but we're ready for the heating season anyway! This year we have decided to show the whole world how does the VOLCANO heating unit help people survive a hard time of winter. We proudly present to you the brand new Volcano Heating Unit promotional movie – the core material of this year's marketing campaign.

VOLCANO – Stay warm

Our goal in this year's campaign is to show the greatness of our units to everyone who might be interested in them. We want to simplify the thinking of its purpose. VOLCANO is made to heat and helps people stay warm in the coldest parts of the world. That simple human need has to be fulfilled so they can succeed whatever they do. **This season time we wish everyone to STAY WARM.**



The Promo Movie

The core of the campaign is the movie. It is about a human passion, everyday hard work leading to success which would be impossible without realizing one of the basic people's needs – the warmth. The story is emotional like we are about our product. For us it's not only a heating unit, it is the VOLCANO heater. Every content we generate (mailing, articles, interviews, banners) leads to this movie. We also promote the movie targeting designers, installers and everyone who is recently looking for a heating solution. So far over 1 000 000 unique users watched the VOLCANO – Stay Warm promo movie.

Gifts and contests

Every year VTS prepares special gifts for our clients. This year we want it to be a useful item that will help them stay warm as our products do. So the installers get convenient and multifunctional chimney scarfs. Especially for our best clients we have prepared branded softshell jackets.

Knowledge Rewards

We constantly put a lot of effort to educate our clients. Before the season we have prepared some e-learning contents about key aspects of VOLCANO and WING, and that is what distinguishes our products from the other. For the people who will get the best results there, we have prepared another reward: cinema tickets.

Enjoy watching of our Promo movie, spread the movie all around and stay warm!

New EC motors in VOLCANO VR MINI units!

Constant development is one of the fundamental values of VTS company. When in 2016 the company added heaters and air curtains with EC motors to its offer, it was a huge surprise for the market and a large step ahead - towards the most efficient solutions. Convincing previous customers to switch over to energy-saving EC motors was a challenge.

After two years, VTS may find pleasure in the work done at ease. A number of information campaigns have been effective and users already perfectly know advantages of the electronically commuted motors, proposed by the company. It was the time of constant development of the firm - of work also on new solutions. Numerous meetings, consultations with customers, potential investors produced effects and over here in September 2018 VTS equips its VOLCANO heaters with new, even better-prepared EC motors!

Starting from VR MINI - the smallest fan heater in the portfolio, VTS commences introducing the newest EC motors into its offer. What advantages and novelties occur along with the advent of the new motors? See below: The motor generates a signal +10 V DC - a user can activate the heater without a controller. Fig. 1a, 1b present comparative connection of the heater with the previous and the new motor.

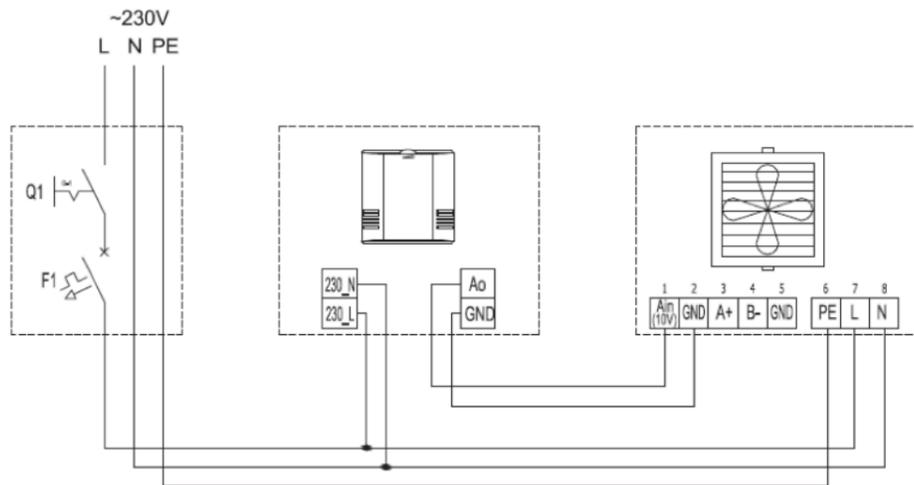


Fig. 1a. Connection of the VR MINI heater equipped with the previous EC motor, with a potentiometer

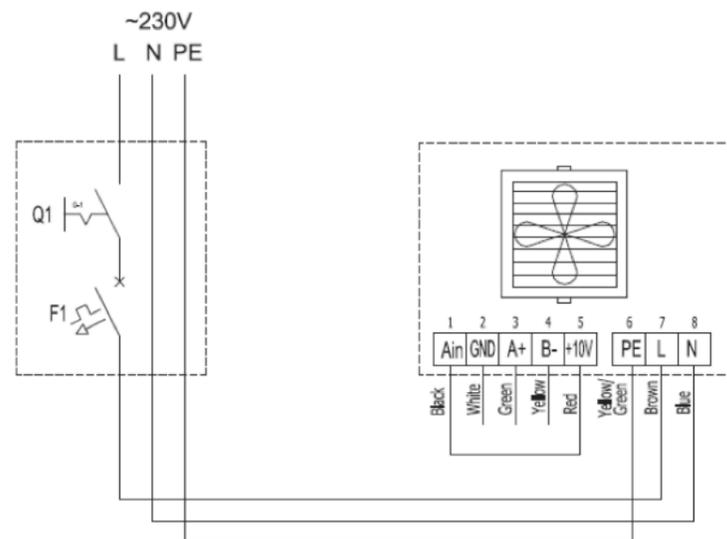
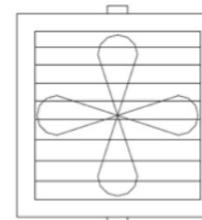


Fig. 1b. Connection of the VR MINI heater equipped with the new EC motor, without automation

- > The motor protection rating: IP 54. Pursuant to standard PN-EN 60529:2003, the first characteristic digit 5 means that the electric device casing ensures protection against dust penetration in amounts disturbing proper work of the equipment, whereas the second digit 4 means that the casing ensures protection against water splashes from all sides of the casing. Thanks to this, the VOLCANO unit may be used in rooms with more demanding conditions.
- > As a standard, the motor is equipped with a routed cable with the described clamps. This makes connection of the motor itself even simpler and intuitive. An installer does not have to unscrew the motor casing any more, and its factory-set protection rating is maintained at the same time. An installer benefits from the cable (Fig. 2) provided by VTS which minimises the risk of erroneous connection.



1	2	3	4	5	6	7	8
Ain	GND	A+	B-	+10V	PE	L	N
Black	White	Green	Yellow	Red	Yellow/Green	Brown	Blue

Fig. 2 EC motor equipped with the cable and markings of the clamps

- > The last change, but equally significant, which translates into benefits comes down to reduction of the motor size, with maintenance of all elements of its predecessor (Fig. 3).

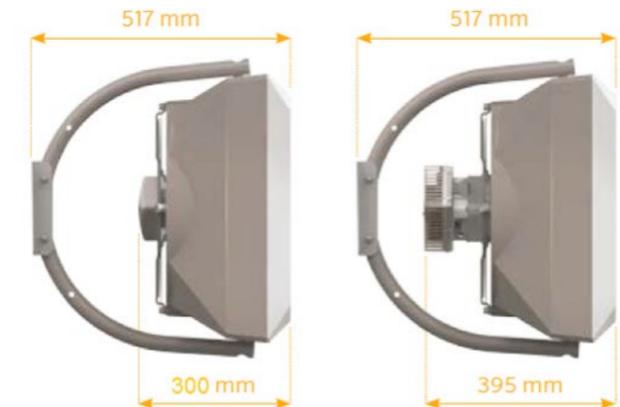


Fig. 3 New motor vs. previous motor

95 mm of gain in space behind the heater enable even higher availability of air, which contributes to undisturbed suction of air by the fan. It must also be noted that thanks to the smaller size of the motor, its weight is also less and this makes assembly and installation easier. Smaller cartons with VOLCANO VR MINI EC are a consequence of the smaller dimensions. And thanks to it, one EUR-pallet will contain as many as 12 devices, in contrast to previous 8 items (Fig. 4).



Fig. 4 Comparison of the number of VR MINI EC heaters that go on one pallet

VTS has commenced implementation of the new motors gradually - from the smallest heaters. After the solution has been accepted, the changes will also be made in the other heaters from the series i.e. VOLCANO VR1, VR2, VR3 and VR-D destratification fan which will appear in a smaller version too as VR-D MINI. The objective is to provide customers with the most effective solutions, characterised by perfect design and quality, at a competitive price accessible to clients. Thereby, the company's role in creation of the heating environment in Europe will become even greater and will strengthen the VTS position in the group of the market leaders.



Name of building: **Sattva Parcel 4**
Country: **India**
City: **Hyderabad**



Name of building: **Ritz Carlton**
Country: **India**
City: **Pune**



Name of building: **Raddisson Blu Cox Bazaar**
Country: **India**
City: **Bangladesh**



Name of building: **Moller Auto Ulemiste VW center**
Country: **Estonia**
City: **Talin**



Name of building: **Story residential house**
Country: **Russia**
City: **Moscow**



Name of building: **Amazon Logistics Complex**
Country: **UAE**
City: **Dubai**



Name of building: **Agrokoncernas Babtai**
Country: **Lithuania**
City: **Babtai**



Name of building: **Hermitage Centre, Taj Fabr**
Country: **India**
City: **Goa**



Name of building: **C-14 Hotel Apartments**
Country: **UAE**
City: **Dubai**



Name of building: **Cladire Birouri H**
Country: **Romania**
City: **Brasov**



▶ **BRAND NEW REFERENCES**



Name of building: **Karulaugu Spordikeskus**
Country: **Estonia**
City: **Talin**



Name of building: **Iolani School Campus**
Country: **USA**
City: **Honolulu**



Name of building: **Logistic center**
Country: **Lithuania**
City: **Vilnius**



Name of building: **Ford Production Area**
Country: **Romania**
City: **Craiova**



Name of building: **Tata Global Beverage**
Country: **India**
City: **Indore**



Name of building: **Four Seasons Hotel**
Country: **India**
City: **Mumbai**



Name of building: **Dubaj Arena**
Country: **UAE**
City: **Dubai**



Name of building: **Earnest & Young**
Country: **India**
City: **Bangalore**



Name of building: **Photoelectric Industry Park**
Country: **China**
City: **Jiangsu**



Name of building: **Y Tower**
Country: **UAE**
City: **Dubai**

VTS staff members have a great deal of passion and a number of interests, we are also fond of spending time together, not only in the office. Below we present a few photographs from collective excursions out of town.

