



THE **GLOBAL** PLAYER

Newsletter 4/2016



PREMIERE! - NEW VOLCANO

A RESPONSE TO THE CHALLENGES OF MODERN
ARCHITECTURE AND BUILDING INDUSTRY

How does a successor develop relationships?

AN INTERVIEW WITH HANNA SIEK-ZAGÓRSKA, PRESIDENT OF THE MANAGEMENT BOARD OF VTS GROUP

WING with EC motor

EVEN LARGER CAPACITIES OF ENERGY EFFICIENT AIR CURTAIN

▶ Introduce



Industrial design is one of the youngest fields of the integrated design, which has become the domain of ambitious and creative people. The people who perceive the immediacy of civilisation changes, cultural diversity and varying needs of the society. The industrial design is becoming a significant element, building a competitive advantage by a sustained balance between the visual and the technical aspect of a product.

For many years, VTS have been consequently implementing a global strategy of product portfolio restructuring, with a special emphasis on maintained harmony between utility and functional features on one side and aesthetics and design of proposed solutions on the other. The products we offer have to be technically excellent and reliable, price attractive, while, at the same time, they should catch users' attention with the lightness and purity of their form.

Whereas launching the 2016 heating season, I would like to invite you to get familiar with an entirely new series of product types, designed by us in the smart segment. In May, we introduced an air curtain of the WING new generation onto the market. This product is distinctive by its excellent operation parameters and modern design. Today, I have a pleasure to present a new release of the legendary product – the VOLCANO water air heater, which is going to be offered with energy-saving EC (electronically commutated) motors.

I do hope that you will find the fourth issue of our newsletter a good and welcome source of information which will bring you closer to the advantages of the new VOLCANO solution, representing doubtlessly a new benchmark for quality and aesthetics in the field.

With cordial regards!
Hanna Siek-Zagórska



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How does a successor develop relationships? A talk with Hanna Siek-Zagórska, President of the Management Board of the VTS Group



Hanna Siek-Zagórska
President of the Management Board
of the VTS Group

Katarzyna Gierczak Grupińska: You have been managing the VTS Group for 15 years. When you took over the business, a foreign expansion started. Was it a task set by the seniors handing over the Company to you, their successor? Or was it a challenge you set yourself?

Hanna Siek-Zagórska: In fact, I guess I had always known I would work for my family's company. I had certainly moments of doubt or different ideas about my future but, as far as I remember, my life was so much steeped in the Company's life that it was only natural. That is just the way life is... Just like that... My first job, just after I graduated and joined my family's business, was to expand onto the Asian and Middle East markets. That was our company's development strategy. Why me? Most probably because it was a very challenging task that required enormous determination, thorough involvement, great strength of character, courage, ethics and honesty, but also comprehensive decision-making capabilities. I must admit I used to rack my brains wondering how come my father had dared to make such an absurd decision to send his 24-year-old daughter on a mission to develop the company on the other side of the planet. There were times I only relied on belief in his enormous wisdom that nearly bordered on infallibility (laughs). I was very young and – theoretically – inexperienced. In practice, though, in retrospect, I do not know whether anyone else could

have done it better. It must have been a simple decision – either him or me. In general, I knew everything (without realising it) about fundamental assumptions regarding our company's operations as I had, in fact, grown up inside the company. I was totally involved, motivated, determined; I was fighting for what was mine. I had been taught so, and I could not have done it otherwise. On the other hand, I was not restrained whatsoever, I was not 'affected' by detailed operational knowledge or habits typical of the markets on which we had been operating for many years. This provided me with flexibility in my operations and ability to adapt the company – within the scope required – to other conditions that prevailed on new, completely different markets into which I ventured. I think it was my key leverage. I do not believe in coincidence. It must have been that way, I suppose.

K.G.G.: You must often be asked about difficulties regarding company management in a "men's" business. Do you see such difficulties? Or is it an advantage? What are your experiences like in that respect?

H.S.Z.: I must admit different things happen. Indeed, it is a business for men. Our company employs a few women only. There are moments it looks quite funny; the meeting room is full of men, most frequently engineers, and there is a petite woman

who everybody addresses as the 'boss!' (laughs). In general, I try to maintain my distinctness in this masculine world, but I try to remain tactful in that respect. I do not manifest it openly, I do not take advantage of or abuse my femininity, but I also reject preferential treatment. Of course, there are difficult moments, you only work with men, and managing a 'masculine' company affects the way you behave or think. But I try not to ponder over that. I use feminine wisdom, empathy, softness, but I use them simply as purely human qualities in relations with other people. In that respect, it is easier for me. Still, are they purely feminine qualities? I believe in respect and partnership, at all times, everywhere, but I do not believe in equality – we are all different.

K.G.G.: What was your team's attitude when you started to manage the Group?

H.S.-Z.: Pretty equivocal. Some of them – closely linked with my Dad, did believe in my person, perhaps more for him and for the respect towards him and his decisions, being glad we would continue and being aware that, in fact, he would continue to manage the company, although not directly. And there was another group, really sceptical about my Dad's daughter who was going to take over management of the company, most probably as a 'figurehead'. And there was the third group. A group of people who had known me before, as I had always been around the company. They did know the changes to come would be beneficial and I would succeed. They were calm, they believed in me, they were truly supportive. I am especially grateful to them as they supported me at the beginning, when I did have some problems.

K.G.G.: Who was the easiest to partner with at first? And who was the most difficult?

H.S.Z.: There was no rule. I approached everybody with identical openness and willingness to collaborate. It is a matter of chemistry and flexibility. I still work with some of them, and that is great. With some, I simply had to part. But, I guess, it was not an issue of me being the successor but the decisions were most objective.

K.G.G.: How did you develop your team's confidence in you?

H.S.Z.: By work. By patient, steady and consequent work. I was courageous in decision-making, independence and my own common sense. I was strong in character and tough. I was open-hearted, fair and just. I was humble.

And, with time, as a result of what I have just mentioned, I was also successful. The obtained outcome is but a sheer evidence that the path you take, the actions you undertake, the decisions you make are right.

K.G.G.: Did you have any opportunity to work with those employees you took over management of? Did you find it more difficult to earn their esteem and respect?

H.S.Z.: Generally, no matter how well people knew me or how

much they liked me when I only worked for the company, the situation changed completely when it came to me managing them directly. Fortunately, I am, by nature, very strong and clear. I do not think I had any problems respect wise. Esteem? Well, it is a matter of time and millions of decisions or behaviours. It takes years to earn it. I did not find it easy; my father had earned absolutely enormous, if not the greatest esteem. But, in the last several years, I have managed to develop my position, my own, independent of anything else esteem in other people. And that, save for sheer results, is my greatest, certainly the most pleasant success.

K.G.G.: What may constitute an obstacle to developing good relationships? Have you come across such obstacles throughout your career? How to overcome them? Or is it possible to avoid them, to bypass them before you have to face them?

H.S.Z.: You cannot escape. Ever, anything. I pursue a principle in my life, according to which the more difficult a situation is, the more promptly you should face it. When it comes to developing relationships, you cannot accomplish anything by force. Some things just take time. I believe we meet at the company, first of all, to achieve certain goals. If, by the way, it is nice and pleasant to work together, it is an added value for me. No matter how much I like and respect the people I work with, no matter how I show it to them every time and any way I can, I first of all demand qualifications, hard work, involvement and, eventually, results, both from myself and from them.

K.G.G.: What, in your opinion, is most important in relationship development within a team?

H.S.Z.: Respect. Anytime, anyplace. In any situation, in any relationship. My internal beliefs and experiences prove so.

K.G.G.: Do you think the same rules apply to developing relationships within a family and within a company? Or do you find these areas different?

H.S.Z.: In my case, life and work intermingle a lot. You cannot have one without the other. I do not imagine to have two different personalities in myself. Consequently, it makes no difference to me if I am at work or at home. I apply very clear, straightforward rules and values. I follow them when developing any relationships, both in private and in professional life. I believe being authentic makes sense. I love coming to work. I sometimes even laugh to myself, thinking I am as enthusiastic about entering the company premises as I would have been while going to meet my friends. Even if I am about to face more difficult moments, situations or issues, as it is not always so nice and easy, the same happens in your private life, among friends or relatives. That is just the way life is. And when it comes to family companies – company and work are your life (smiles).

The talk was held by Katarzyna Gierczak Grupińska



VOLCANO

DISCOVER

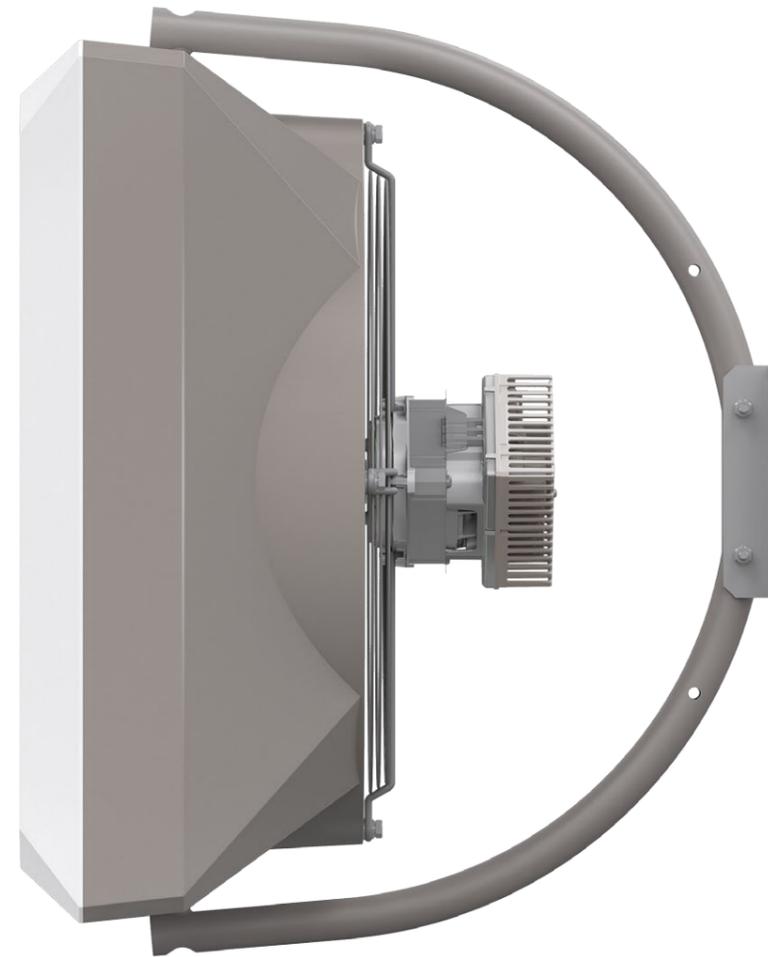
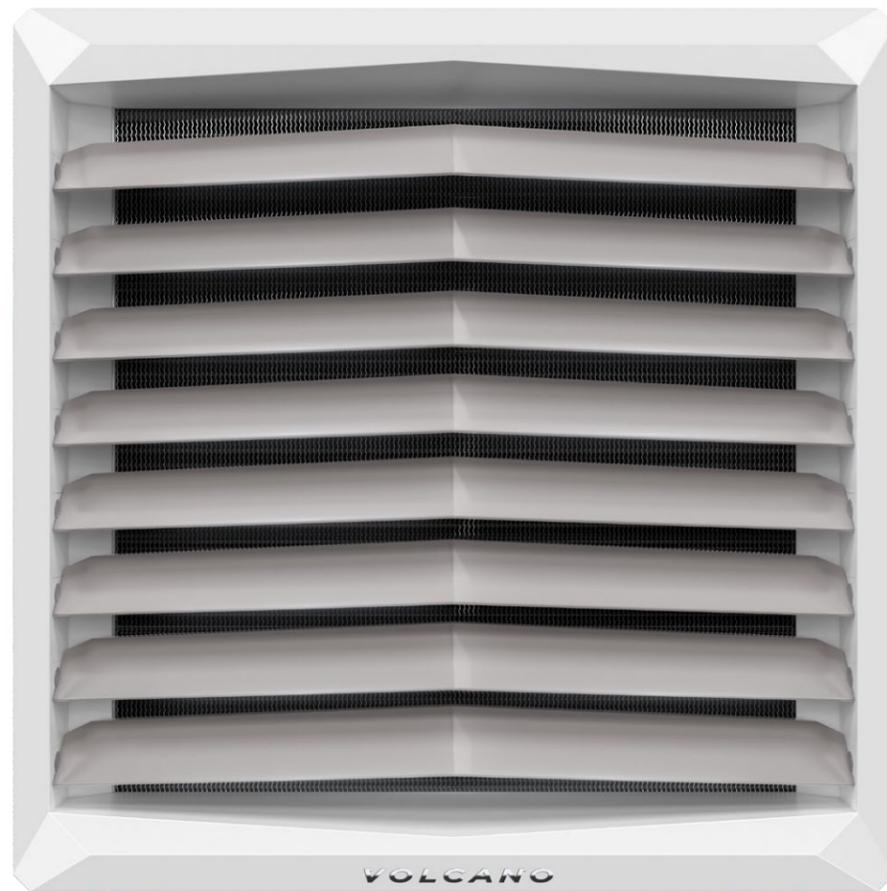
NEW

VOLCANO



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NOVELTY - premiere of a new VOLCANO water heater



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EC MOTORS



THREE-ROW HEAT
EXCHANGERS



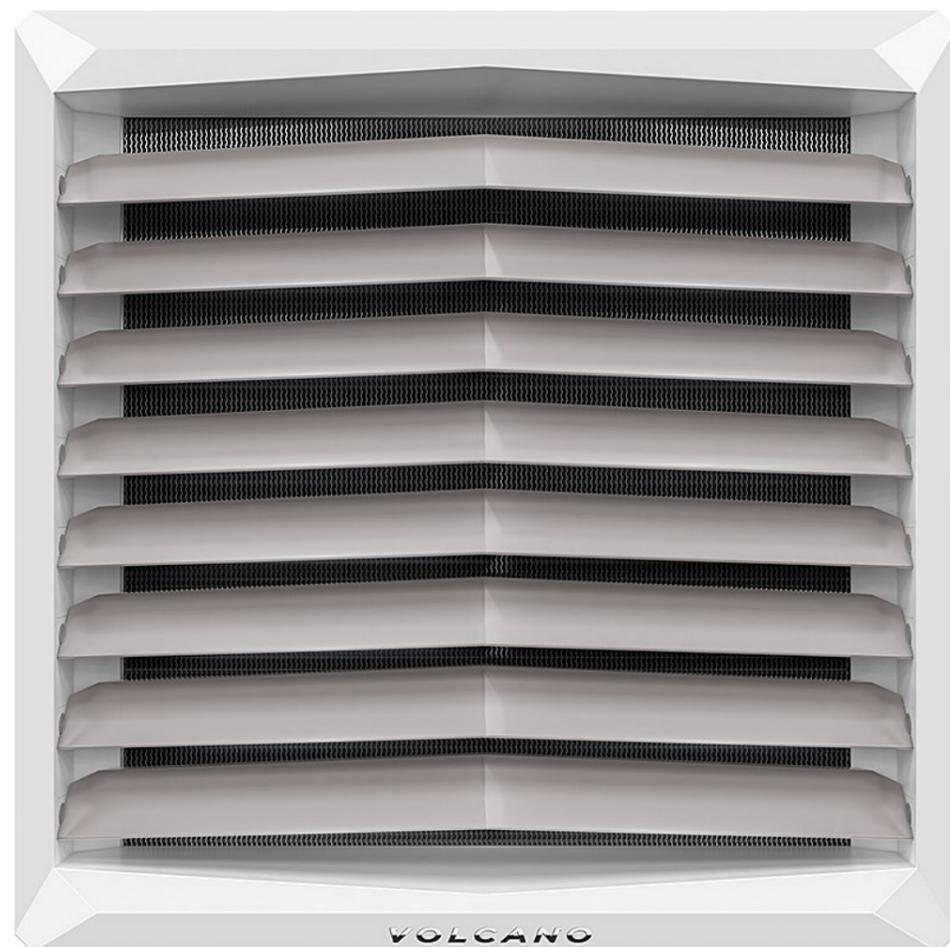
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| PREMIERE – A new release of volcano heating devices



In-door climate is a key element of comfort for the users of premises. In industry, it may have a direct impact on technological processes and, in consequence, on the quality of finished product. The in-door climate is responsible for safety and maintenance of the specific features of products, stored at warehouse areas. Modern construction industry imposes a number of qualitative requirements on the technical infrastructure of buildings including in particular their functional precision, high energy effectiveness, low noise emissions and appropriate aesthetics to fit modern interior design. The escalating energy saving demands are very clear and directly affect the trends in machinery design, creating more and more effective and energy-saving solutions.

With the awareness of growing expectations of customers, of changing market trends and legal conditions, VTS have designed a new line of VOLCANO heating devices which, with their technical parameters, the quality of applied materials and the state-of-the-art design will allow the Company for the preservation of its unquestionable leader's position on the European and Eastern markets.

With applied new technology, the VOLCANO heaters are suitable for heating warehouse, industrial, sports and other multi-use premises where, beside technical parameters, aesthetics and the visual aspect of product are also relevant.

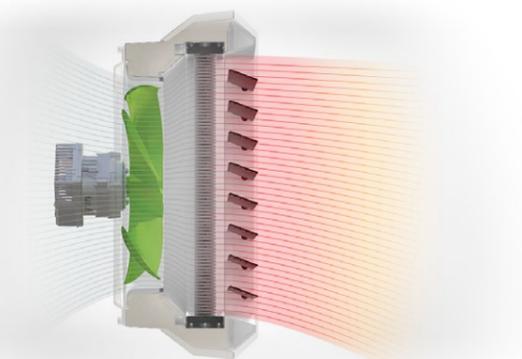
The to-date's offer of three water heater sizes: VR Mini, VR1 and VR2, has been extended by the fourth size, VR3, and by an air mixing device – a VR-D destratification fan.

EXCEPTIONALLY HIGH HEATING POWER

In all the new devices, the effectiveness of parameters is the key priority, as well as, consequently, their cost-effectiveness. In order to accomplish the goal, heat exchangers, fans and warm air flow and distribution systems have been designed from scratch. The heat distribution system has been designed to effectively use the heating power of the heat exchanger, minimising all potential energy losses. Noteworthy is the application of a special diffuser which connects the fan with the water heater.

The diffuser enables to maintain a uniform air flow through the entire device, what means that a maximal heating capacity is achieved on the whole heat exchanger surface. It also ensures low air flow resistance through the heat exchanger, thus the required performance is achieved with low fan power and at low acoustic power level. Such a solution is rarely used in devices of this type.

When the heat exchanger was designed, care was taken so that it could be supported both by low-temperature and traditional heat sources. The heaters ideally support heat pumps and condensation boilers. The end-user has a choice among high-performance one-, two- and three-row heat exchangers. Such a high flexibility provides either the user or the designer with a far-reaching convenience of choice, regarding the room heating parameters. A broad range of heating power, from 3 to 75 kW, allows tailoring of heater size to the demands of any object.



HIGH EFFECTIVENESS AND LOW NOISE

The heart of every air handling unit is a fan assembly, i.e. a fan rotor driven by a motor. And it is the fan assembly which is decisive for the main parameters of the entire device, thus it deserves particular attention. The blade area has been enlarged in the newly designed fan. The fan shape has been optimised with regards to aerodynamic demands, what, together with bigger blade surfaces, has ensured maximal air handling performance. The new rotor of the fan assembly has been extremely well-fitted with the housing. The fan's enclosure and the uniform air flow through the entire unit have minimised air turbulences, what has, in turn, provided higher efficacy of the whole device with lower noise level, generated into the environment.

The energy cost-effectiveness, obtained on the fan, has been combined with power saving, resulting from the use of high-performance electric motors in AC and EC versions. Regarding simple applications, VOLCANO air heaters are equipped with energy-saving, three-gear AC motors with coils adapted to different rotation speed levels. Speed switching is available via relay outputs. The design of the motors enables greater performance control compared with competitive solutions. They are compatible with the simplest automatic control systems without speed controller. The motors are also characterised by a much higher performance level at lower gear vs the motors with speed control systems.



imposed minimal resistance for the flowing air, thus ensuring a maximal range for its stream. The attachment of blades allows for their individual control and stable positioning. The air blades, apart from their aesthetic values, form an important utility component, enabling an individual adjustment of blown air stream width and direction to object needs.



VOLCANO heaters can be mounted in vertical and horizontal arrangements. Depending on the product, the maximum air flow range varies from 8 to 12 m in vertical and from 14 to 25 m in horizontal configuration.

PRECISE CONTROL

Exercising of all the advantages of the VOLCANO solution would not be possible without an appropriate control system. The automation system with a microprocessor controller, available in the VTS offer, can control one unit or a group of units. The controller enables also remote monitoring and control of VOLCANO air heaters by means of external building management system (BMS). The controller ensures temperature control by proper setting of the heater valve and automatic changes of fan performance depending on current demands. The user can also manually set the required fan speed level. The temperature is measured by a sensor in the controller. In the case when the controller is located outside of the heated room, it is possible to connect an external sensor installed in that room. The controller automatically identifies the sensor as superior.

The VOLCANO air heater control is possible acc. to a preset time schedule, with distinction of working and weekend days. The HMI controller allows for selection of additional temperatures, declared, for example, as maintenance temperature, beside the preset heating period, or as a minimum temperature for anti-freeze protection. Thermostats and potentiometric performance controls are available for simple applications, allowing for manual fan control settings.

The units with energy cost-effective EC motors are intended for more sophisticated control systems and applications. EC motors maintain high performance levels throughout their entire control range. Additional big savings of electric energy are possible with the automatic performance reduction function, available in the VOLCANO EC controller. It is activated in situations when it is only necessary to maintain preset temperature value at a given interior, without any demands for the maximal heating power.



HEATED AIR RANGE AND SPEED PROFILE

A longer air stream range is achieved not only by the new design of the fan structure but also by the special shape of air blades in the air outlet line. The aerodynamic shape of the air blades



lower spaces, has become an effective solution of the problem. The VOLCANO destratification system is a variant of the VOLCANO fan heater with removed water heat exchanger. The resulting air flow resistance is even lower and provides for its even greater ranges with regards to the heaters. The applied fan design and the type of its drive system, the same as those in VOLCANO heaters, provides VTS destratification fans with exceptional ventilation features, when compared with competitive solutions.

The new VOLCANO air heaters are a real eye-catcher, with their remarkable shells, enclosed in the front with the modern design of the air blades, emphasising the simultaneously light and elegant contours of the device, unobtrusive at any interior. A high quality enclosure, made of plastic with added anti-UV pigments, guarantees the stability of its colour over time. All the enclosure elements are perfectly matched with one another, making the impression of their unity. The technology of joining enclosure elements enables their easy disassembly and reassembly without leaving enclosure opening traces.

OPTIMISED MOUNTING

VOLCANO air heaters and destratification fans are mounted on walls or ceilings by means of special consoles. Their mounting requires holes to be drilled in the wall or ceiling in advance. In order to facilitate this task, a pattern with hole spacing and a line for levelling is provided on every delivered VOLCANO device packaging. It is only necessary to cut off the pattern from the carton, place it on the wall/ceiling in desired location and start drilling.

DESTRATIFICATION FANS ARE OPTIMAL TO HEAT HIGH SPACES

Heating of high spaces is characterised by natural warm air rising and creating zones of different temperatures at different heights. The use of destratification fans, "pushing down" the warm air into

SUMMARY



Zbigniew Wnukowicz
Product Board Advisor
VTS

The outstanding design of the **VOLCANO** family of fan heaters and destratifiers is the result of many years of experience of their design engineers and their determination to create an exceptional, silent, effective and energy-saving product, meeting the needs of every user at almost every object. Created with passion and professionalism, its combines excellent service and aesthetic values which have broadly been recognised and highly appreciated by many end-users.

WING with EC motor

– even larger capacities of energy efficient air curtain



EC motors in combination with the modern fan design in WING curtain ensure **up to 40% of electric energy saving**, when compared with traditional solutions.

The representative character of the entrance zone of contemporary building imposes high and strict requirements onto all the elements mounted on it. The air curtains, mounted in the entrance zone, should – beside functional performance – meet high aesthetic standards and be characterised by low noise emission. The significant features of modern machinery include energy cost-effectiveness, i.e. a minimal energy consumption at required operational parameters, as well as a possibility of dynamic support of the room heating system, started automatically when needs occur. All these criteria are fulfilled by the new **WING EC curtain of VTS**, offering – at a very attractive price – the standard which has, so far, been reserved for premium class devices only.

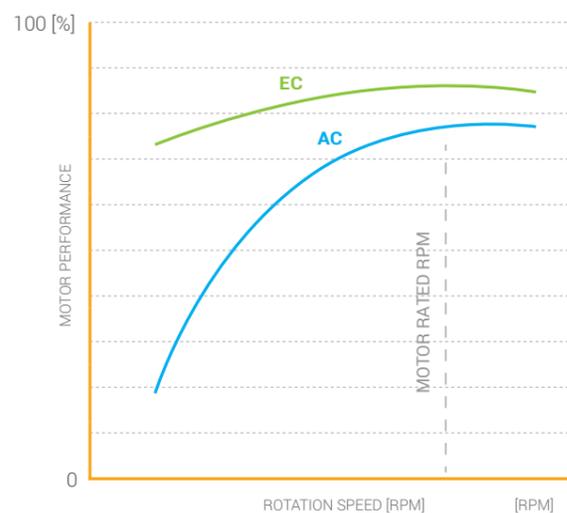
Air curtains reduce heating and cooling losses through an opened entrance door to the building. This protection is ensured by an intensive air stream, tangent to the plane of the protected opening. High curtain performance is associated with considerable noise levels, difficult to damp for the rather large size of the fan and the lack of space in the casing to mount damping elements. The new design of **WING** curtains significantly reduces the

emitted noise level, while its additional reduction is provided by an accurate, infinitely variable performance and range matching to actual object needs, achieved by the application a new **Wing EC controller**. The EC motors of IE4 performance class, applied in WING curtains, are characterised by much lower energy consumption vs AC motors. The high performance of EC motors is also maintained at reduced speed intervals.

A small increase in investment outlays, associated with the application of air curtain with EC motor and a dedicated **Wing EC controller**, is returned from obtained savings within merely 2-4 years, depending on curtain size and the average degree of its use.



Comparison of motor performance values



RETURN OF INVESTMENT COSTS FROM ENERGY SAVINGS

	WING 100	WING 150	WING 200
saving*			
» 1st gear	€ 31	€ 42	€ 80
» top gear	€ 18	€ 24	€ 37

A small increase in investment outlays, associated with the application of air curtain with EC motor and a dedicated Wing EC controller, is returned from obtained savings within merely 2-4 years, depending on curtain size and the average degree of its use.



▶ WING CURTAIN WITH EC MOTORS

A still better effect of electric energy saving, as well as of heat and cooling saving, can be achieved when the fan is activated only when the door is open. However, technical solutions are needed that enable the start-up of the device with full capacity in a fraction of a second upon door opening. It is possible with the special design of the fan rotor, made of composite materials, which, despite its high performance levels, is characterised by an exceptionally low moment of inertia. The activation of this function in **WING EC** curtains is carried out by an additionally mounted open door sensor, combined with the **Wing EC controller**.

The application of microprocessor technology to control the WING EC curtain enables, beside performance changes, the control of many other working parameters, tailored to customer's needs. It also provides a convenient display of parameter settings and measured values. The main functions, supported by the WING EC controller, include:

- > infinitely variable or manual fan performance control,
- > temperature control,
- > support of an optional, external temperature sensor at a given room,
- > support of a door opening sensor,
- > support of a weekly program of curtain operation time points for working and weekend days,
- > support of BMS systems.

A rapid heating function is available for **WING EC** curtains, both with water heater and electric ones. This function automatically changes the fan capacity, depending on the actual room temperature. For this purpose, it is possible to connect an additional temperature sensor to the controller. The microprocessor **WING EC controller**, dedicated to WING EC curtains, enables weekly programming of curtain operation time points for working and weekend days.

WING curtains with electric heaters are provided – as standard – in two-step heating power control. A HMI controller for WING EC curtains automatically cuts off the second heating stage during fan rotation with the lowest capacity. An anti-freeze function is available for curtains with water heater.

VTS engineers, taking advantage of their experience gained over the years of manufacturing and operating, have developed a new, innovative design of the **WING EC**, curtain which, together with the dedicated microprocessor HMI control system, fulfils functional and aesthetic expectations of customers, as well as meets the current requirements for performance, functionality, acoustics and energy saving.



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▶ WING - FIRST APPLICATIONS



▶ REFERENCES



Building name: **TESLA Gigafactory**
Country: **USA**
City: **Sparks**
Devices: **American VENTUS**



Building name: **EXPO-2017 pavilions**
Country: **Kazakhstan**
City: **Astana**
Devices: **VOLCANO**



Building name: **The traditional Chinese Medicine Hospital**
Country: **China**
City: **Inner Mongolia, Hohhot**
Devices: **VENTUS**



Building name: **Residential and Commercial building B+G+1P+12T in Al Jadaf**
Country: **Dubai**
City: **UAE**
Devices: **VENTUS**



Building name: **Kalyani Tech Park - Magnolia**
Country: **India**
City: **Bangalore**
Devices: **VENTUS**



Building name: **Platinia Malle**
Country: **Romania**
City: **Cluj Napoca**
Devices: **VENTUS**



Building name: **Space and Missile Center Progress**
Country: **Russia**
City: **Samara**
Devices: **VENTUS**



Building name: **Aquatics Center**
Country: **Poland**
City: **Chełm**
Devices: **VENTUS**

