Mr. Leitsch, what is the significance of hydrogen for industry and what is the significance of the different colours grey, blue and green?

Michael Leitsch:
Hydrogen has been used since the early 20th century as a process gas for the production of ammonia according to the Haber-Bosch process and nowadays plays an important role in three industries in particular: as a raw material in the chemical industry (mainly for the production of methanol and ammonia), in oil refineries for the desulphurisation of fuels and in so-called hydrocracking processes as well as in direct reduction plants for steel production.

Since hydrogen occurs in bound form in nature, it must be produced with the use of energy. Depending on the production process, a distinction is made between grey, blue and green hydrogen. Grey hydrogen is produced from natural gas by steam reforming and thus causes corresponding emissions. Currently, between 60% and 70% of hydrogen is produced from natural gas. In the case of blue hydrogen, the CO₂ produced is captured, which is then further used or stored, i.e. does not escape into the atmosphere. Alternatively, hydrogen can also be produced by water electrolysis, i.e. an electrochemical process. If the electricity used for this comes from renewable energy sources, it is called green hydrogen, which is CO₂-neutral.

Hydrogen is traded as an indispensable resource for a climate-neutral industry.

What contribution does the gas make to reducing CO₂ emissions?

Michael Leitsch:
Currently, almost all of the hydrogen produced is obtained from fossil fuels. If grey hydrogen is replaced by green hydrogen, the industry’s CO₂ footprint can be significantly reduced. At the same time, new perspectives are opening up, for example in power generation. Here, hydrogen as an energy carrier and storage medium can enable a further increase in the share and availability of renewable energies. Other areas are transport, especially long-distance and heavy-duty transport, but also rail transport, shipping and aviation, as well as heating and the application in process heat, with a focus on the metalworking industry. These are promising fields of application, which could all make an important contribution to achieving climate targets in future.

How optimistic are you about the development of green hydrogen?

Michael Leitsch: We consider green hydrogen to be an important future market. Avoiding CO₂ is becoming increasingly important. In addition,
power generation from renewable energies will be further expanded. Worldwide, more and more governments are pushing forward research, innovation and product development by means of national hydrogen strategies, which is also accompanied by a corresponding upscaling of electrolysis plants. From this point of view, we see a further strong market ramp-up for green hydrogen as very realistic. This assessment is also consistent with the opinion of our clients, whom we support in the development of projects at various stages of planning. Hydrogen still plays a subordinate role in the energy transition, but this could soon change.

As a rule, hydrogen must be compressed to a certain pressure after electrolysis for the subsequent processes. What special features need to be taken into account?

Michael Leitsch: Hydrogen is the lightest naturally occurring element, which makes compression more difficult in general. Since it has a very low energy density in relation to the volume flow (energy content per volume unit), large electrolysis plants also have to compress correspondingly high volume flows, which has an effect on the sizes and thus on the investment costs, installation areas, etc. of the machine equipment. In addition, hydrogen is very reactive, i.e. highly flammable. Special attention is, therefore, paid to the required explosion protection. The formation of an ignitable mixture with the atmospheric oxygen must be avoided at all costs. However, this also applies to other applications with flammable or combustible gases, with which AERZEN’s process gas division has extensive experience.

Where do you see the advantages in using screw compressors compared to other compressor technologies?

Michael Leitsch: Screw compressors combine decisive advantages of reciprocating and turbo machines. Due to the displacement principle, they are also suitable for compressing very light gases - in contrast to turbo machines, with which only a very small pressure difference per stage can be achieved for gases with low molecular weights. In addition, screw compressors are rotary machines which, compared to reciprocating compressors, have fewer moving parts, a much smaller space requirement and a considerably reduced effort for maintenance and for the compensation of pulsations induced in the piping.

Another important advantage is the possibility of injecting water into the conveying chamber. On one hand, this makes it possible to reduce the heat of compression, and on the other, water can act as a sealing medium between the oil and gas chambers, e.g. when using a water-purged mechanical seal. Since the hydrogen leaves the electrolysis in a water-saturated state anyway, the injection of water is not critical.

Where can screw technology best play to its strengths?

Michael Leitsch: Screw compressors can play a decisive role, especially for pre-compression in atmospheric electrolysis plants - especially for large installed electrolysis capacities from approx. 50 MW, which corresponds to a volume flow of approx. 11,000 m³/h. Reciprocating compressors usually reach their limits in terms of size (piston diameter and required installation area) with these quantities. Today’s plants are getting bigger and bigger, reaching up to several 100 MW. Screw compressors can be used here to pre-compress the hydrogen. The resulting reduced volume flow enables economical use of the downstream reciprocating compressors, which are still needed to achieve the required discharge pressures. In the meantime, however, we have also received feedback from our customers, who consider the use of screw compressors to be the favoured solution even for smaller volume flows.

What added value does AERZEN provide for the hydrogen industry?

Mr. Leitsch, thank you very much for the interview.

New oil-free screw compressor from AERZEN

Superlative hydrogen compression: higher differential pressure with only one stage

With the VRW536M, AERZEN is further expanding its portfolio of screw compressors for hydrogen compression. The design and water injection of the innovative compressor stage allow the highest differential pressure to date in a single-stage oil-free screw compressor in the competitive environment. The result: minimal footprint and significantly reduced investment and operating costs.

Barring large H₂ volume flows to intermediate and final pressures with fewer compressor stages without having to set up sizeable reciprocating compressor systems - this is exactly where the new oil-free VRW536M screw compressor from AERZEN comes in. Compression is based on the principle of oil-flooded screw compressors - with a small but important difference: here, the oil was replaced by water. The water serves both to cool the gas and to seal the internal gaps, enabling compression to higher differential pressures with highest efficiency. This stage can, thus, replace a two-stage system with classic dry screw compressors and is even more energy-efficient. For the customer, this results in significant advantages in terms of installation space as well as investment and operating costs.

Thoughtful down to the smallest detail

The VRW536M is designed for an operating pressure of up to 10 bar (abs.) and a volume flow of up to 6,000 Nm³/h at 50 Hz. The volume flow is controlled by means of a frequency inverter (speed control), the maximum speed change is 1 Hz/s. Pre-drying of the humid H₂ gas is not necessary. Double-acting, water-purged mechanical seals on the conveying chamber ensure 100% oil-free operation. The use of stainless steel on cylinders and rotors guarantees longevity and flexible shutdowns under pressure with humid gas. The synchronisation of the rotors is realised via a pair of gear wheels to avoid contact of the rotors. In this way, the conveying chambers remain un lubricated and there is no oil contamination of the conveying medium. The VRW536M is available both with and without gearbox (directly driven).

Wide range of applications

The new package was specially developed for the efficient and safe compression of hydrogen, but is also ideally suited for other critical applications, such as flare gas or contaminated gases. In principle, the VRW536M can be ideally used as a pre-compressor (booster) for subsequent compressor technologies. The scope of delivery includes the customer-specific package with auxiliaries, the drive train, the instrumentation (optionally with machine monitoring), and on request also the complete control system and the acoustic hood.

Michael Leitsch: As a process gas specialist, AERZEN has been dealing with the topic of hydrogen compression for decades. As it occurs as a component in gas mixtures for typical process gas applications, for example in hydrogen recovery in PSA applications or in direct reduction plants for steel production. For certain chemical applications we have already successfully manufactured screw compressors for pure hydrogen compression, which means that AERZEN has already gained relevant experience and masters expertise in the subject.

Compared to most competitors, we have both oil-flooded and oil-free screw compressors in our portfolio, as well as - for lower compression ratios - blowers based on the Roots principle. In addition, we are specialists for customised compressor and blower solutions in the process gas sector and thus have the necessary flexibility to offer the right solution for the respective application. In addition, we are consistently driving forward the further development of our products in this area. In August, for example, we will present a newly developed screw compressor at the Achema chemical trade fair in Frankfurt, with which we can realise significantly higher pressure differences and efficiencies in hydrogen compression. With 50 locations worldwide, we are also represented near the installation sites with contact persons, who take care of the respective service support for existing plants.

Mr. Leitsch, thank you very much for the interview.
Pneumatic conveying of bulk materials

The new Delta Hybrid Efficiency booster & Security fanatics

Pneumatic conveying systems for bulk materials, e.g. in the food industry, chemical and process engineering, cement and lime industry, and many others, have to reconcile a multitude of requirements - hygiene, explosion protection, robustness, product safety, efficiency, etc. - with one another. The new Delta Hybrid covers all the bases. The oil- and absorption material-free rotary lobe compressors with ATEX certification ensure the highest process air quality, comply with the ISO 22000 standard, are unrivalled in their reliability in operation and achieve significant energy savings of up to 30% compared to a conventional positive displacement blower.

AERZEN rotary lobe compressors, also known as screw blowers, combine the advantages of blower and compressor technology in one system and stand for maximum energy efficiency, minimum life cycle costs, 100% pure and reliable process air as well as high durability even under extreme conditions - features that make the Delta Hybrid the ultimate for pneumatic conveying processes. With the current expansion of the portfolio, AERZEN is now taking the next step and raising the successful series to the next technology level.

The four new package sizes provide absolutely oil- and absorption material-free air and cover volume flows from approx. 2 to 30 m³/min as well as drive power from 7.5 to 55 kW. Thanks to an innovative compressor stage with new high-efficiency screw profiles, internal flow optimisation, paired with motors of energy efficiency class IE4 as standard, as well as optimised routing of the cooling and exhaust air, outstanding energy savings of up to 30% are achieved compared to a conventional positive displacement blower. The self-tensioning belt drive with an efficiency of over 98% also contributes to this, providing maximum flexibility in terms of volume flow and motor power.

The patented bearing enables a service life of 70,000 hours and more. An effective sealing concept for the drive shaft and the conveying chamber minimises natural wear and also guarantees freedom from oil in accordance with ISO 8573-1 class 0. The patented reactive silencer without absorption material successfully prevents contamination of the process air as well as the customer’s products. The rotors are uncoated so that no abrasion can enter the conveying air. These are decisive factors for sustainable, safe and long-lasting operation in pneumatic conveying systems for sensitive bulk materials. In addition, the new Delta Hybrids feature a reduced final compression temperature (up to 10°C lower), enabling gentle transport of sensitive materials such as sugar or cocoa and milk powder. The rotary lobe compressors comply with the current ATEX product directive 2014/34/EU and can be used in highly critical, potentially explosive working environments (e.g. flour dust) without any problems.

Highest energy efficiency, hygienic design, first-class product quality, reliable explosion protection: with the new Delta Hybrid, AERZEN defines a new benchmark in blower and compressor technology and offers the industry directional packages for the pneumatic conveying of sensitive, powdery and granular media. The result: safe, clean and reliable processes.

New oil-flooded screw compressor from AERZEN for high volume flows

New flagship for process gas compression

AERZEN screw compressors type VMY have built-in volume control and are characterised by maximum reliability as well as low operating costs. With the VMY836H, AERZEN is expanding its successful series with a package for volume flows of up to 23,500 Nm³/h at 60 Hz, thus setting a new benchmark in the field of process gas compression.

The new VMY836H is AERZEN’s largest oil-injected compressor. It expands the VMY series and delivers more than twice the volume flow of size VMY S36, the previous flagship. The package achieves volume flows of up to 23,500 Nm³/h at 60 Hz and is designed for a maximum operating pressure of 25.0 bar (abs.) and inlet temperatures of -60 °C and above.

Volume flow control is as convenient as usual thanks to the integrated control slide. As an option, frequency inverter operation is possible. Efficient partial load operation and flexible adaptation to dynamic process parameters are, thus, guaranteed. Hydrodynamic axial tilting pad bearings guarantee maximum operational safety and service intervals.

The rotor is not driven via timing gears as in oil-free compressors, but via direct power transmission of the driven rotor. The oil injection quantity regulates the outlet temperature and enables the highest efficiencies through efficient gap sealing. A double-acting, oil-purged mechanical seal on the drive shaft guarantees 100% machine sealing.

Ideal choice for the petrochemical industry

Like all VMY compressors, the VMY836H is designed for years of continuous operation and maximum reliability. The design and oil injection make the machine flexible for fluctuating volumes, temperatures and pressures. This makes it suitable for a wide range of oil-compatible gases and mixed gases (including ammonia, refrigerants, hydrocarbon mixed gases, hydrogen, hydrogen/hydrocarbon mixed gases, natural gas, carbon dioxide, propane, propylene, butane or helium). The VMY836H can also be used for pre-compression (booster) for subsequent compressor technologies (e.g. reciprocating compressors).

The customised package is supplied including oil supply and oil separation, drive train, instrumentation (optionally with machine monitoring, complete control as well as acoustic hood). Accessories such as gas cooler, suction scrubber and gas filter are also available on request. The drive is directly coupled or, to maximise the delivery volume, with a gear ratio.

Variety of options available

- Complete ATEX compliance
- Integrated spark arrester
- Food compatible lubricant
- Outdoor installation
- and much more!
Innovative 3D laser scanning guarantees planning and design reliability when replacing blower and compressor technology

Smart Upgrade - Retrofit made easy

3D laser scanners are real Gamechangers for retrofit projects. They provide perfect planning, engineering and documentation data of entire industrial halls and thus facilitate the retrofitting and modernisation of existing plants. Thanks to the cooperation with the company Mensch und Maschine (MuM), this innovative technology has now also been implemented for AERZEN process gas blowers and compressors.

If old blower and compressor stages within a package are to be replaced by new, more efficient stages, design engineers need detailed information about the specific conditions on site. 3D laser scanners are a fast and precise method for accurate measuring of installed process gas packages in production halls and production lines. Using ultra-modern scanning technology, the plant and its surroundings are captured from various perspectives without any gaps, generating a complete 3D representation in the highest resolution and with minimal tolerance. The result is a 3D point cloud, which can be immediately transferred to all common CAD programmes and can be used as design environment (e.g. in Autodesk Inventor).

State-of-the-art technology for precise measurement

3D laser scanning takes retrofit projects or replacement projects of old AERZEN process gas compressors to a new level and supports risk minimisation with regard to project goals and budgets. Future fields of application are also in the area of installation space determination for greenfield projects and various augmented reality applications.

For customers, the use of 3D laser scanning technology means unbeatable advantages. You receive the actual “as built” condition in original colour to correct previous drawings, schemes or plans and thus have absolute planning security. The result: accelerated project planning and execution, faster installation processes, reduced downtime/shutdowns, lower service and installation costs, and increased reusability of dismantled parts.

Perfect planning and documentation data

Thanks to the 3D technology from AERZEN and MuM, for the first time, designers no longer work in an empty room when retrofitting and modernising existing systems, but directly in the customer’s original environment with all actual dimensions and full transparency - even through walls and objects or across floors. The so-called collision check is carried out completely digitally within the point cloud as part of the engineer for all scanned and later constructed objects. Assembly collisions can be detected in advance and bypassed. In addition, the handling of assemblies to be dismantled is facilitated and the installation of new equipment or rebuilding is easier and safer. Planned assembly and downtimes can be shortened and processes can be optimised.

Move to a larger location

AERZEN RENTAL builds new headquarters for European rental business

With the entry of AERZEN into the rental machine business by founding AERZEN INTERNATIONAL RENTAL B.V. in 2000, a success story began. AERZEN RENTAL has grown continuously since then and is active in many European countries. In order to be even better equipped for future challenges, the team of around 20 employees headed by Managing Director Gerben Keurentjes is expected to move into a new building at the end of 2022.

The AERZEN RENTAL product line provides our customers with AERZEN products and complete process solutions to meet temporary needs, quickly and with a high level of expertise. AERZEN RENTAL is always developing its services. “In the beginning we only rented AERZEN machines, today we offer complete process solutions,” emphasizes Gerben Keurentjes.

At the beginning of this year, construction work started on the new AERZEN RENTAL headquarters, which is located only about two kilometers from the previous site, also in Duiven. A modern building for offices and workshop as well as a separate hall for cleaning and testing are being built on a plot of land measuring around 7,100 m². A spacious open area between the two buildings provides sufficient storage space for the rental equipment.

Jeroen Boekhorst, who as Technical Manager at AERZEN RENTAL is responsible for the new building, is looking forward to the move: “At the moment we share the offices with another subsidiary, and some colleagues even work on a different property. But soon we will not only have more space than before, but the entire team will also be based at one location. This is a boost for all of us and will further increase motivation, energy and team spirit.”

For Gerben Keurentjes, the new building also sends a strategic signal: “AERZEN RENTAL already plays a key role in the AERZEN Group, and the rental business will become even more important in the future which with the new building is underlined once more. As the most important base for rental in Europe, we will be able to provide our rental solutions to customers even more quickly and efficiently thanks to the optimal conditions at the new location. We are also establishing here a firm base for the further expansion of our rental activity outside of Europe as already realized in the USA.”

AERZEN RENTAL offers a wide range of 100% oil-free rental machines and accessories, providing complete solutions covering numerous areas of application. With several depots in Europe, delivery is guaranteed to customers around the clock, every day of the year. In addition to the Duiven headquarters, AERZEN RENTAL has locations in Germany (Rinteln), Spain (Madrid), the UK (near Birmingham) and Sweden (near Stockholm). North America has been served by AERZEN RENTAL USA, based in Atlanta, since 2018.

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“Working together for a more efficient world”

AERZEN at the IFAT 2022: Successful performance with lots of passion and sustainability

Almost 2,100 stand visitors and powerful sustainability campaigns: this is the remarkably good result of the AERZEN appearance under the motto “Performance³ - The new generation - Working together for a more efficient world”. All this took place at IFAT 2022 from 30 May to 3 June in Munich.

AERZEN was, thus, able to make a strong statement at the world’s leading trade fair for water, wastewater, waste and raw materials management. Especially, the innovative AERZEN novelties and solutions received a very positive response.

Our IFAT 2022 success is mainly the result of the efforts of our team involved, which has shown a lot of passion, as well as our innovations, with which we have struck a chord with the times,” emphasizes Stephan Brand (AERZEN Vice President Marketing). One of the AERZEN highlights took place directly on the first day of the world’s largest trade fair for environmental technologies: the launch of the new and innovative generation of the AERZEN technology concept Performance³ - consisting of positive displacement, screw and turbo blowers - was presented via livestream as THE solution for maximum energy efficiency in ventilation. “This is our answer to precisely serve different load profiles in wastewater treatment plants with efficient and individual solutions,” Brand points out.

The new sizes of the Delta Hybrid and the Aerzen Turbo GSP³ series presented in Munich also contribute to this.

The four new package sizes of the Delta Hybrid cover volume flows from 2 to 30 m³/min and drive powers from 7.5 to 55 kW. The new types are characterised by further improved functionality and significant energy savings of up to 30% compared to conventional positive displacement blowers. The two new turbo sizes, Aerzen Turbo AT35 and AT60, are designed for smaller and mean volume flows from 700 to 2,700 m³/h and package capacities of up to 20 kW resp. up to 50 kW. In addition to an increased system pressure, the turbo duo can score with an extended control range and an efficiency increase of up to 10%.

With the new packages, AERZEN has developed further efficient alternatives for optimum machine design in the Performance³ composite concept, whose decisive advantages, such as:

* up to 40% increase in efficiency
* up to 30% CO₂ reduction
* amortisation in less than two years

convinced many interested parties at IFAT.

Advancing digitalisation with its new possibilities creates very good opportunities to make process air systems more intelligent and their operation more transparent. AERprogress, therefore, also attracted a lot of attention in the industrial world. This scalable Industrial Internet of Things platform from AERZEN helps to avoid downtime and ensures transparent energy consumption for sustainable cost reduction.

Another highlight was the photo campaign for AERZEN stand visitors, which ran from the second to the last day of IFAT. In line with the overriding fair motto “Working together for a more efficient world”, AERZEN has developed a sustainable photo concept in cooperation with the company Mega-mediennetz Gmbh. For every photo taken, Aerzen Maschinenfabrik plants a tree via herzmedien GmbH. For every photo taken, Aerzen Maschinenfabrik plants a tree via grow-my-tree.com, helping to make our planet CO₂-neutral. Each tree planted corresponds to the neutralisation of 22 kg/CO₂ per year, which is equivalent to a train journey from Munich to Hamburg or - extrapolated over 20 years - a flight from Munich to Stockholm.

AERZEN at the IFAT 2022 - Sustainable photo campaign with over 500 participants

In addition, the AERZEN environmental campaign was a great success: significantly more than 500 participants had their portraits taken, thus, ensuring a reduction of more than 11 t CO₂.

New and revised marketing material

AERZEN has revised or created new marketing material especially for the application areas of wastewater treatment, food technology and process gas technology.

- How can energy costs be saved in wastewater treatment? How can hygienically clean process air be generated? What requirements must modern process gas compressors fulfill? These are all questions that AERZEN customers have to ask themselves in the course of CO₂ reduction. Industry 4.0, globalisation and constantly increasing cost pressure. We support you in this and offer you answers to your questions with our new brochures. You can download the new editions as usual with CustomerNet access via our website or request a print version via our request form.

www.aerzen.com/company/request-and-contact/request/request-documents.html
AERZEN turbo blowers support the cement and lime industry on the way to climate neutrality

Aerzen Turbo for more sustainability

The production of cement and lime is very energy-intensive and, therefore, particularly harmful to the climate. In order to strengthen the ability to face the future and to compete, the industry is working intensively on reducing energy consumption and CO₂ emissions. The cooling and combustion air supply offers great potential for optimisation. By switching from the positive displacement blowers, conventionally used, to state-of-the-art AERZEN turbo blowers, energy savings of up to 30% can be achieved. This is good for the environment, reduces operating costs and improves performance. A real win-win solution.

Cement is one of the most popular and important building materials. But production is extremely energy-intensive, and the cement industry is one of the biggest emitters of CO₂ emissions. In 2020, 4.1 billion tonnes of cement were produced worldwide. In the process, 2.17 billion tonnes of CO₂ were released into the atmosphere, which corresponds to a share of 8% of the total global CO₂ production. For comparison: air transport accounts for approximately 3%. If we look at the largest carbon dioxide emitters in Germany, the cement industry is in third place with 20% - after iron and steel production (37.9%) and refineries (24.0%), followed in fourth place by the chemical industry (17.8%). If we add lime as another important building material, the cement and lime industry is responsible for 27.4% of the industry’s CO₂ emissions of the industry and thus occupies second place in the ranking. The industry has been aware of the problem for quite some time and is now working on becoming more climate-friendly. The goal: reduction of CO₂ emissions by 25% by 2030 and achieving climate neutrality by 2050.

AERZEN: technology partner of the cement industry

As a long-term partner of the cement industry, AERZEN knows exactly the diverse challenges and supports the industry in its ambitious goals. The highly efficient, oil-free and low-maintenance blower and compressor solutions from the compressor specialist ensure reliable and safe processes and have established themselves around the globe in numerous areas of cement and lime production, whether in the fields of pneumatic conveying, aeration, sintering, packaging or cooling and combustion.

The production of cement clinker is particularly energy-intensive. The burning process in the rotary kiln, in which the ground raw materials - limestone, clay, marl and others - are heated at temperatures of 1450°C and fused together and then cooled down again, accounts for 90% of a cement plant’s total energy demand. One part of the energy costs is spent on the generation of process air for cooling and combustion.

Oxygen supply is one of the most critical applications in cement production, as a turbulent and large air flow is required to transfer all the heat generated by the burner along the kiln and preheater tower. As a rule, positive displacement blowers provide the required cooling and combustion air. Positive displacement blowers optimally meet the application-specific requirements: high volume flow rates at low pressures of 400 to 500 mbar. These blowers are comparatively low-priced in purchase. In some cases, screw blowers of the Delta Hybrid type are also used. However, as these machines work according to the principle of internal compression, they are only profitable from a pressure range of at least 500 / 550 mbar.

Energy efficiency becomes a decisive competitive factor

“The choice of the solution used is always a trade-off between energy efficiency and investment costs - up to now in favour of the positive displacement blowers. However, in view of the increasing relevance of the topic of energy efficiency due to rising energy prices as well as global climate targets, it is worthwhile to broaden one’s view and consider more efficient technologies - for example, turbo blowers,” says Stephan Brand, Director Turbo Business at AERZEN, and makes clear: “Although the initial investment costs for a turbo blower are higher than for a positive displacement blower, the turbo machines are way ahead in terms of energy efficiency, keeping the life cycle costs low - a clear competitive advantage.”

The Aerzen Turbo is currently unbeatable in terms of energy

AERZEN has been building turbo blowers since 1911 and has continued to push these packages to the cutting edge of technology over many decades. Today, the Aerzen G5plus turbo blower series is one of the most compact and efficient turbo sets of its class. “Compared to conventional turbo technology, the energy efficiency is up to 10% higher, and compared to displacement machines, such as positive displacement blowers, savings of up to 30% can even be achieved,” Stephan Brand points out. This can be accomplished by highly efficient individual components, such as the extremely powerful and energy-saving permanent magnet motor, which meets the future requirements of the IES classification (Ultra Premium Efficiency) thanks to the particularly aerodynamic design with turbo impeller and spiral casing and the innovative multilevel frequency inverter technology with up to 90% less power loss in the motor compared to conventional converter technology. Speed control is required in the cooling and combustion air area, as the volume flow varies. Compared to turbo blowers with standard inverters, the turbo packages from AERZEN are less sensitive to pressure fluctuations and have a better control behaviour. As a result, Aerzen Turbo packages can be operated far more stably throughout the entire turbo performance range.

Robust, compact, low-maintenance, quiet and 100% oil-free

In addition, the turbo machines made by AERZEN score with further features, which are advantageous for cement and lime production. Thanks to the compact design, the machine footprint is extremely low. For example, a turbo machine requires only a third or a quarter of the footprint of a positive displacement blower with comparable performance. Consequently, the machine room can be much smaller. The innovative AERZEN air foil bearing with double coating ensures an increased service life of >80,000 operating hours and maximum reliability. State-of-the-art air filter solution systems ensure optimal operation, even in highly contaminated environments. The packages are sound-optimised and guarantee a quiet operation of 72-73 dB(A). In addition, the powerful turbo blowers are 100% oil-free, incredibly robust and easy to operate. The maintenance requirement is extremely low.

“The switch from positive displacement blowers to the state-of-the-art turbo machines opens up considerable efficiency and performance advantages for the cooling and combustion air supply in the cement and lime industry.” Stephan Brand emphasises and adds: “The results are more sustainable processes, optimised performance and reduced costs.”

Questions, Suggestions, Ideas?

We are looking forward to all your queries, comments and suggestions on our customer journal, and we are at your disposal for further information on AERZEN products and services. Give us a visit on our website: www.aerzen.com/news

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