

# SCREW COMPRESSORS

## DELTA SCREW G5<sup>plus</sup>

Oil-free compression in the pressure range up to 4,5 bar (a)  
for volume flows of 120 m<sup>3</sup>/h to 2,650 m<sup>3</sup>/h



**AERZEN**

# MAXIMISE ENERGY EFFICIENCY.

The development of the successful compressor generation made by AERZEN already now states the future requirements as a principle.

- Unique range of applications
- High efficiency
- Low life cycle costs
- Extremely resilient and durable
- Low maintenance
- Oil-free according to ISO 8573-1 class 0
- 100% free of absorption material
- Made by AERZEN – made in Germany
- Installed spark arrester
- AERZEN AERtronic control system
- Compact design

**The reference class: Delta Screw G5plus.**

Today's process industry's demands for increased performance and ever higher gas compression efficiency are among the greatest technological challenges. For decades, the most successful solutions have been coming from AERZEN. And now the renowned

compressor specialist has made its premium class even better. New developments in the successful belt-driven Delta Screw Generation 5 compressors are setting new standards for reliability, performance and low life cycle costs (LCC).





# INCREASE EFFICIENCY. INNOVATION AND PERFECTION DEFINE THE NEW ECONOMY.

The significant increase in energy efficiency was the focus of the further development of the Delta Screw packages. Associated with the goal of reducing energy costs and CO2emissions for our customers. To do this, we put the entire series to the test and scrutinised every detail. The result: the perfect symbiosis of high-performance stages, a lot of innovations and flow-optimised package components. Each component precisely matched to the respective volume flow. For the decisive advantage in terms of efficiency and cost-effectiveness.

**IE3 or IE4. These motor generations exemplify highest efficiency.**  
IE3 motors have been a legal requirement since 2015 - AERZEN declared them to be standard long before that and optionally equips its Delta Screw G5<sup>plus</sup> with motors of energy efficiency class IE3 or IE4.

The elaborately designed premium motors stand for the highest efficiency class "Premium Efficiency" or "Super Premium Efficiency" of the worldwide motor standard. And enormous saving potentials. As a generation 5<sup>plus</sup> assembly user, you should benefit from them straight away.

IE4 motor used by AERZEN



**The current IEC 60034-30-1 standard.**  
It defines and harmonises efficiency classes for low-voltage asynchronous motors of 50 and 60 Hz worldwide. Since 01.01.2017, motors in the power range from 0.75 kW to 375 kW must at least comply with efficiency class IE3, or IE2 for frequency inverter operation.

- IE1= former efficiency class ("standard efficiency" - comparable to EFF2)
- IE2 = former efficiency class, today's minimum standard ("high efficiency" - comparable to EFF1)
- IE3 = today's minimum standard ("premium efficiency")
- IE4 = future requirement ("super premium efficiency")

**Inflow optimised. Capacity increased.**  
The interaction of all components is decisive for the exceptional energy efficiency of the innovative Delta Screw G5<sup>plus</sup> compressor package. Only the precise matching of all components to the system ensures that peak values are achieved.

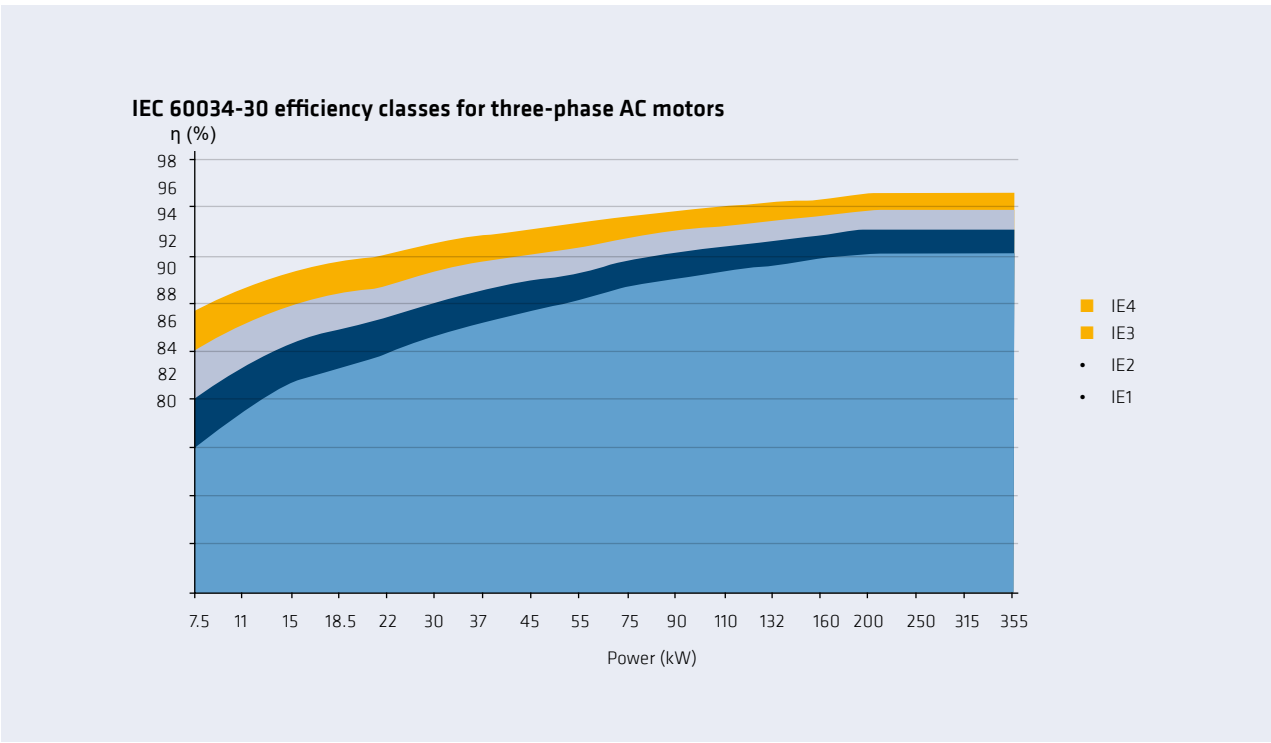
In order to realise low pressure losses of the assembly, large-dimensioned nominal sizes and check valves with large cross-sections are used. Flow-optimised inlet and outlet openings, together with the new silencer concept, ensure an ideal flow pattern within the compressor.

**Innovation sound insulation. Less pressure loss, more efficiency.**  
Significantly reducing pressure losses was one of the primary goals in the further development of the powerful compressor generation. We achieved this on the discharge side by eliminating the absorption material in the silencers while improving their fluid dynamics. This horizontally structured, 5-chamber reflective silencer is the result of years of research work by AERZEN's development team (European patent no. 1857682).

Thanks to optimised internal silencer geometry, the sound pressure level in the piping could be decisively minimised. At the same time, the machine noise of the assembly was also reduced to below 80 dB(A), depending on the operating mode, by means of an innovative sound hood concept.

And by the way: the silencer on the discharge side is also certified as a spark arrester in accordance with ATEX Directive 137 for explosion-proof plants. And this is the best part: It absolutely needs no absorption material, which tends to disintegrate and to contaminate the following process. A knock-out criterion for the food and chemical industries.

All screw compressors of Aerzener Maschinenfabrik are equipped with motors of the energy efficient class IE3 or higher.



# INCREASING VERSATILITY. BECAUSE ECONOMIC EFFICIENCY BEGINS WHERE COMPRESSOR SYSTEMS ARE PRECISELY TAILORED TO THE PROCESS.

Leading companies in industries ranging from petrochemicals to cement have been relying on AERZEN for decades. And for good reason. The Delta Screw series is unrivalled in the assortment and flexibility of available models, and how they can be adapted to a wide range of customer requirements. Delta Screw G5plus sets further standards here as well. The new benchmark class of dry-running screw compressors.

## Strong types. The right size for your application.

The Delta Screw G5plus compressor packages are designed for the compression of air, nitrogen and other neutral gases. However, they do not only develop their great strength there: With their exceptional versatility, they are ideal solutions for a range of other applications.

For example, for special gases, in vacuum operation or for pre-pressure applications. With 7 sizes in the volume flow range from 120 to 2,650 m<sup>3</sup>/h alone, AERZEN offers by far the largest portfolio on the market. In addition, the direct-coupled compressor models extend the range up to 15,000 m<sup>3</sup>/h.

## Ranges of application:

- Compression of air and neutral gases
- Pneumatic conveying of bulk materials
- Homogenisation of cement
- Aeration of water tanks
- Keeping feeders free of ice
- Compressed air for the glass industry
- Food industry
- Beverage industry
- Textile industry
- Tobacco industry
- Pressurised aeration of basins in wastewater treatment plants
- Vacuum generation in glass and paper industry.



# OUTSTANDING ROTOR GEOMETRIES. FOR THE PERFORMANCE PLUS IN NEGATIVE AND POSITIVE PRESSURE OPERATION:

This is also unique - for a further plus in application flexibility, the screw compressor Generation 5plus two specially designed rotor profiles are available: VML compressors have a 3+4 profile and are ideal for applications up to pressure ratio 3 (final pressure to intake pressure). This makes them ideally suited for vacuum operation up to 70% vacuum (0.3 bar abs.) or 85% vacuum (0.15 bar abs.) with the pre-inlet version.



3+4 screw profile (VML compressors)



4+6 screw profile (VM compressors)

VM compressors are characterised by a 4 + 6 profile. They are tailor-made for positive pressure ranges (up to pressure ratio 4.5) and for intake volume flows\* of approx. 120 m<sup>3</sup>/h to 2,030 m<sup>3</sup>/h.

- VML compressors up to max.  $p_e = 2 \text{ bar (g)}$
- VM compressors up to max.  $p_e = 3.5 \text{ bar (g)}$

\* corresponds to the measured volume flow rate converted to the reference intake conditions [intake pressure = 1.0 bar / intake temperature = 20°C, RH = 0%]

## $\pi_i$ . Adjusted outlet openings. For the perfect design.

With different outlet openings, the compressor stages offer a further adjustment screw for precise adaptation to the process. These different outlet openings in the cylinder, so-called  $\pi_i$ , are a measure for the internal compression. This flexibility is decisive. By selecting the compressor type and  $\pi_i$ , each compressor in the Delta Screw G5<sup>plus</sup> series can be designed with pinpoint accuracy and maximum efficiency depending on the pressure and volume flow. Under- or over-compression is limited and the efficiency of your compressor is significantly improved. For comparison: conventional compressors with fixed discharge openings have a significantly higher energy consumption of up to 50 percent in the worst case.

## 100% oil-free compression.

### Green light for sensitive applications.

Sensitive processes such as those in the food or pharmaceutical industries require oil-free compression. The Delta Screw G5<sup>plus</sup> concept meets these requirements 100 per cent.

A special sealing of the oil chamber ensures that no oil enters the compressor room. In addition, a vacuum generator evacuates any oil vapours produced, separates the oil from the air and returns it to the sealed oil circuit. This new design guarantees long-term oil-free operation.

This has been confirmed according to ISO 8573-1, class 0 by the TÜV Rheinland.



"All for nothing": Delta Screw G5<sup>plus</sup> for vacuum generation in glass production



Also the right choice for special gases in the petrochemical industry: Delta Screw G5<sup>plus</sup>

# COMFORT REDESIGNED.

## INTELLIGENCE SHOWS ITSELF IN MANY DETAILS

Ease of use and reliability are not ends in themselves. They stand for reduced LCC and a further plus in efficiency in energy-intensive compressor processes. With the assemblies of the Delta Screw G5 reference classplus, these advantages begin with the new AERtronic digital control system and do not stop at 16,000 maintenance free operating hours.

### Technical data at a glance.

- Voltages: 230V - 460V 50/60Hz
- 7" resistive touch with 800 x 480 pixels
- IP65
- Linux operating system
- Common certificates like UL, CSA, EAC and many more
- Ambient temperature during operation: -20°C to +55°C
- Micro SD slot
- Modbus RTU/TCP, ProfiNet, Profibus and EtherNet/IP



### AERtronic. The intelligent control system for even more efficient operation.

The new AERZEN control system is standard for all Generation 5<sup>plus</sup> belt-driven compressors. It monitors the process parameters, displays the operating data, keeps the working hour meter, reports operating events at an early stage and records them with corresponding data in the memory for later traceability.

Even the basic module covers all basic functionalities for controlling the compressor package. In addition, the inputs and outputs for communication and sensor technology can be expanded modularly almost at will. The entire visualisation, navigation and operation is carried out intuitively via a clear 7" TFT colour display with touch screen. It is easily accessible and integrated in the front of the acoustic hood.

### AERtronic - the performance spectrum:

- ✓ modern, adaptable control of the machine, accessories and process
- ✓ comprehensive insight into all operating parameters, maintenance information and events
- ✓ enables easy integration of AERZEN machines into the customer control system thanks to availability of all common interfaces
- ✓ Possibility of holistic process observation and analysis
- ✓ Safeguarding of the entire plant and avoidance of downtimes
- ✓ Intuitive operation of the control system
- ✓ large 7" touch display
- ✓ Use of digital services (AERprogress) and the AERZEN Cloud

### Compact design. Comfortable handling.

Special focus in the development of Generation 5<sup>plus</sup> was on reducing the installation and maintenance effort. This already starts with the extremely compact design. The footprint is reduced by 50% compared to conventional assemblies. They can be conveniently transported on site with pallet trucks or forklift trucks. Another plus of the intelligent design:

the assemblies can be installed side by side while maintaining accessibility for later service and maintenance work. The reduction in space requirements means: smaller dimensioning of machine rooms, additional cost advantages.

### The operating and maintenance concept. Intelligent, simple, head-on.

The assemblies can be operated directly from the front. All components requiring maintenance are also easily accessible from the front.

When setting up, only a service area of approx. 0.8 m width is required at the front of the machine. A complete service package has already been integrated. Consisting of motor lifting device, oil filling funnel and first oil filling, it facilitates commissioning and subsequent service work.

Minimum space requirement due to compact design. "Side-by-side" installation variant.



### Inspiring. The new oil level check during running operation.

The new oil system is one of the outstanding advantages of the assembly Generation 5<sup>plus</sup>. The AERZEN AERtronic control system displays and monitors the oil level even during operation. In practice, this means: necessary shutdowns for control and thus, process or production interruptions are a thing of the past. In addition, the intervals between necessary oil changes can be doubled to 16,000 operating hours by using AERZEN's Delta Lube 06.

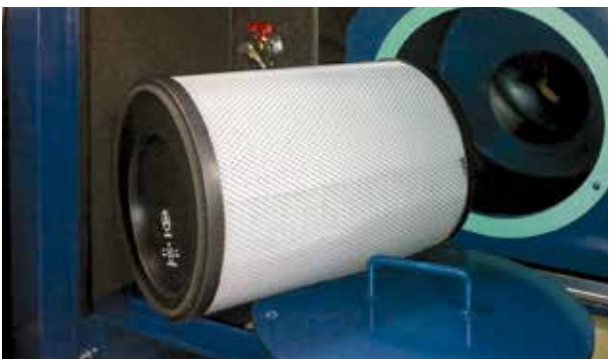
### Patented belt drive.

#### For reduced maintenance and even more flexibility.

Generation 5<sup>plus</sup> screw compressors are equipped with a belt drive as standard. This allows a wide range of different transmission ratios, which can be quickly realised by selecting the right pulley. Subsequent adjustments, e.g. in the case of changed operating parameters, can also be implemented easily and cost-effectively in this way. The drive motor is mounted on the hinged motor support. Thanks to its own weight, an optimum belt tension is guaranteed. There is no need for any retensioning at all.



Easy filling of the compressor with lube oil.



Simple and quick removal of the intake filter.

# LIVE QUALITY. SUSTAINABILITY IS THE KEYWORD OF THE DAY. AND A PRINCIPLE OF AERZEN.

Compressor technology from AERZEN is a byword worldwide for premium quality and pioneering new developments. The decisive driving force has always been the high demand for sustainable solutions, which make a measurable contribution to value. For our customers and for our environment. It is not for nothing that we have been shaping technological progress in compressor technology with our pioneering achievements since 1864.

**Reduced life cycle costs.**

**This is where we focus our innovative strength.**

More than 80 per cent energy costs - considered over the life cycle of a system, they represent the largest share of the total costs. Far more than acquisition and maintenance costs.

For this reason, with the Delta Screw generation, a compressor series was created, which significantly reduces the energy content. To give you the edge in your market environment to meet the requirements of the future safely, economically and sustainably.

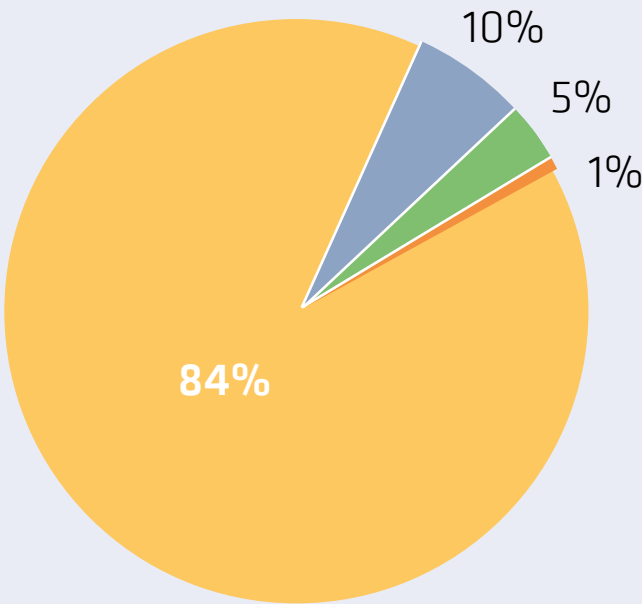
**High-end quality.**

**For a long service life and high value stability.**

More than 70 years of experience in the manufacture and use of screw compressors and the know-how as a world market leader contribute to the fact that AERZEN compressors are demonstrably characterised by lower downtimes. However, our extremely high quality standards also stand for unusually long service lives. No matter whether we apply them to the performance of our own research and development department, to materials and processing or to precision components from renowned partners. All this leads to the high value stability and reliability of our assemblies.

The average operating costs of a screw compressor over 10 years with high utilisation:

- Energy
- Investment
- Maintenance
- Installation



**Delta Screw G5<sup>plus</sup>: the efficiency principle**



**Sustainability.**

**Here, economy and ecology are combined.**

Sustainability and the responsible use of resources have always been part of AERZEN's corporate philosophy. Of course, they also apply to the product concept. Screw compressors of the Delta Screw G5<sup>plus</sup> series are almost completely recyclable. Noise levels are among the lowest in the competition.

The lube oil used does not get into the conveying chamber at any time due to the proven sealing. It is not for nothing that the new assemblies are certified for 100 percent oil-free compression.



# DISCOVER DELTA SCREW G5<sup>plus</sup>.

## THIS ASSEMBLY CLASS IS FULL OF SURPRISES.

**This is the reference class. A class of its own.**

The single-stage, oil-free screw compressors of the Delta Screw G5<sup>plus</sup> series are universal tools. They bundle the entire know-how of the world market leader in compressor technology and offer you, the user, maximum efficiency. The innovative series is available as a belt-driven version for air and nitrogen applications, in positive and negative pressure, with various nominal diameters (see page 22 ff.). A flexible modular system makes it possible to combine all compressors and ac-

cessory components in almost any way. Optimum adjustment to the respective power requirement is possible at any time without any problems thanks to the belt drive - even retroactively. In addition, the belt drive version offers the advantage of pinpoint design. Especially as the greatest savings are achieved through the energy that does not have to be expended in first place. For example, a deviation of 5% in the volume flow also means a 5% increase in energy consumption.

**G5<sup>plus</sup>. Five key advantages.**

AERZEN has been manufacturing oil-free screw compressors since 1943, making it one of the most experienced manufacturers in the world. Delta Screw G5<sup>plus</sup> is the fifth generation of the successful AERZEN compressor assemblies. It is characterised by five main advantages:

- Energy efficiency and reduction of life cycle costs
- Greatly reduced sound pressure levels
- ATEX certification as spark arrester
- Space-saving thanks to compact design
- Easy handling: user-friendly and low maintenance

**Adaptable.**

Extensive range of special accessories and various options.

**Efficient.**

Lowest costs per m<sup>3</sup> of compressed gas or air.

**Low emission.**

Lowest sound pressure levels due to the perfect interaction of silencer and acoustic hood.

**Intelligent.**

Fail-safe electronics with numerous interfaces and communication options.

**Complete.**

Fully integrated compressor package with filter, silencer, oil system and system.

**Ecological.**

Motors of energy efficiency class IE3 (Premium Efficiency) or IE4 (Super Premium Efficiency), long oil change intervals, low energy consumption.



**Oil-free.**

100 percent oil-free compression for sensitive processes.

**Premium technology.**

High material and manufacturing quality for extremely long service lives for all requirements.

**Process-safe.**

Reflective silencer, free of absorption material

**Service-friendly.** Compact assembly and easy access to all wearing parts.

**Ready to go immediately.**

Engineering and assembly completely from one source  
Plug & Play

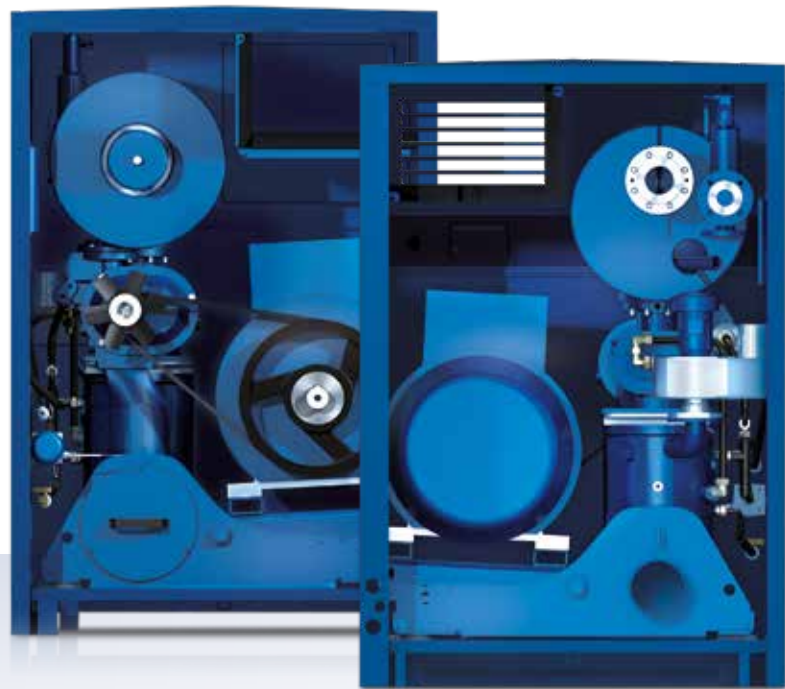
**Universal.**

Can also be used in explosion-hazardous ATEX areas and under the most difficult ambient conditions



# EVERY PROCESS HAS ITS OWN PARTICULARITIES. IT HAS NEVER BEEN SO EASY TO MATCH THE COMPRESSOR TO IT.

As an AERZEN customer, you can be sure that you will always receive the optimum machine for your process. We use special calculation tools for this. Individually generated shell diagrams show at which pressure ratios and volume flows the compressor operates at the highest isentropic efficiency. AERZEN assemblies are 100% tested on the in-house test bench in accordance with the design data and subsequent application data. Guaranteed.

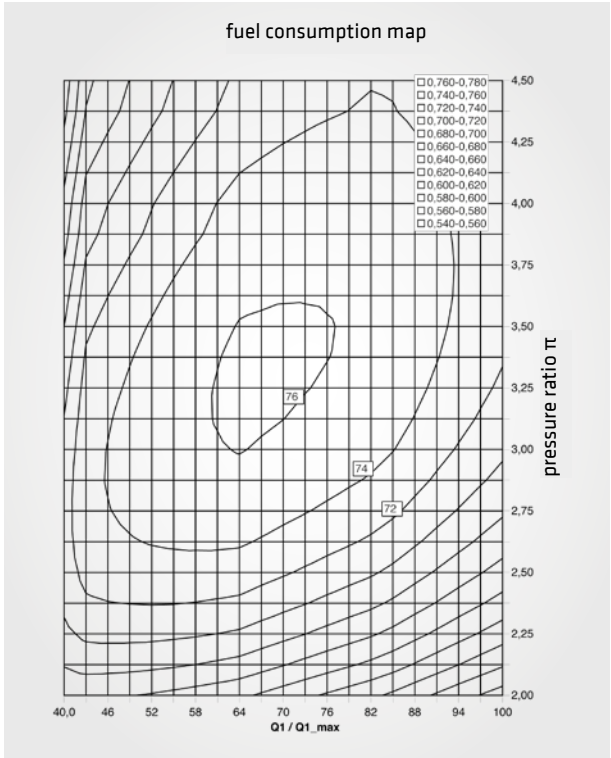


### Scope of supply.

#### Everything important already in the base package.

- Proven AERZEN VM or VML screw compressor stage with forced feed oil lubrication, including mechanical oil pump, oil filter, oil pressure control valve as well as air-flow oil cooler; completely piped oil circuits
- Torsion stable base frame with integrated oil sump for safe transport with forklift or crane
- Mechanical vacuum generator for safe oil chamber deaeration
- Base support with hinged motor mounting plate for AC motors
- Intake filter and intake silencer integrated in the base support to save space
- Optimised, self-tensioning belt drive

- Discharge-side reactive silencer (without absorption material); certified as spark arrester
- Safety valve (type tested) with piping connection option
- Double check valve
- Axial compensator for connection to the discharge piping
- Vibration-damped, flexible machine feet
- Completely connected and wired pressure sensors and temperature sensors
- Electronic AERZEN control AERtronic for efficient and safe operation of the system with display and monitoring of intake, final and oil pressure, oil level as well as final and oil temperature
- Initial oil filling and commissioning package
- Complete documentation



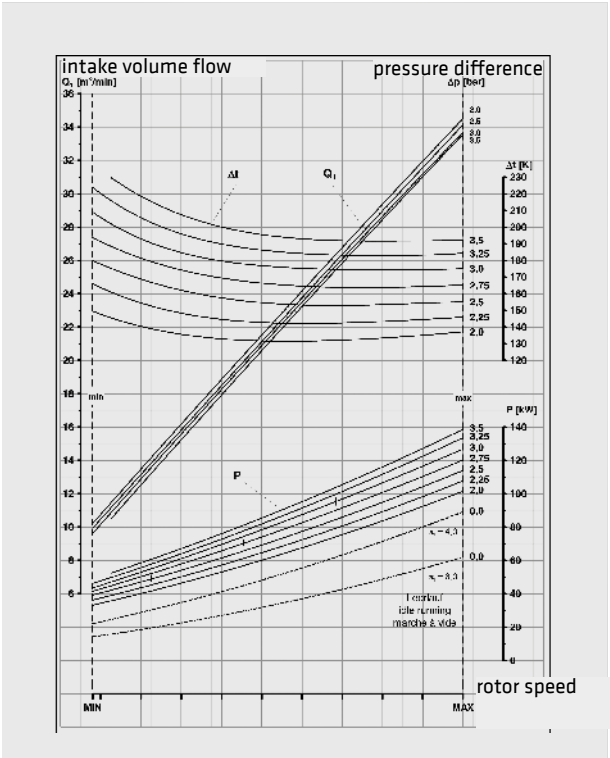
AERZEN customers can be sure that they will always receive the optimum machine for their process. Special calculation tools ensure this. Individually generated shell diagrams show you at which pressure ratios and volume flows the compressor operates at the highest isentropic efficiency.



The AERZEN service package - original parts in a complete set

### The accessories. The plus in efficiency.

- Drive motors from renowned manufacturers as AC motors, including complete assembly at AERZEN - customer motors can also be used on request; motors also to NEMA standards
- Acoustic hood for the complete compressor package suitable for indoor or outdoor installation
- Start unloading devices depending on compressor type: Start unloading valve for VML compressors (own medium controlled) or constant speed unloading device for VM compressors, including suction throttle. Relief valve and pressure switch



The performance data of the compressors can be displayed in various ways. Industry-standard performance diagrams show all performance values (drive power, temperature difference, volume flow) as a function of the main rotor speed and the pressure difference.



Start unloading device for a VML compressor

- Power module for machine start-up (e.g. direct start-up, star-delta)
- Frequency inverter as separate cabinet
- Overflow control valve (own medium controlled) for keeping the discharge pressure or vacuum constant
- Aftercooler (also as integrated solution), designed as air/air cooler or air/water cooler; additionally also with cyclone separator and automatic condensate drain
- Service packages for 2-year or 5-year operation



# ACCESSORIES AND OPTIONS.

## THE SKY IS THE LIMIT.

**The modular system. For customised options.**

- Version for compressing nitrogen with intake silencer, starting strainer and compensator (intake side)
- Special varnishes
- Aertronic, incl. Profibus or Profinet connection
- Flanges on suction/discharge side according to ANSI
- Pressure vessel design according to ASME Code VIII
- Compressor suitable for ship installation
- Acoustic hoods for increased sound requirements or for extreme ambient conditions:
  - Desert installation with special sand collector
  - Application in polar regions with integrated heating and gravity louvers
- Earthquake-proof installation
- Sealing gas version for the compression of special gases
- Coating for all parts in contact with medium
- Use of lubricants suitable for foodstuffs
- Vibrational monitoring
- Device for changing the oil filter while the machine is running (double filter)
- Possibility of connecting the blow-off line for the safety valve and the vacuum generator
- Adjustment transformers for deviating voltages for electrical components
- ATEX certification, including motors according to the relevant ATEX zone, intrinsically safe instrument panel and ATEX documentation
- Special instrumentation according to customer specification
- Vacuum version
- Valves according to API
- Design/approval according to PED 2014/68/EU (AD2000 and EN13445), ASME Code VIII Div.1, SEL0 (China License), EAC (Certification in Russia)
- Customer acceptance or acceptance certificates according to Lloyd's Register, Det Norske Veritas, Germanischer Lloyd and ABS



Sealing gas regulator for compressors for exhaust gas compression

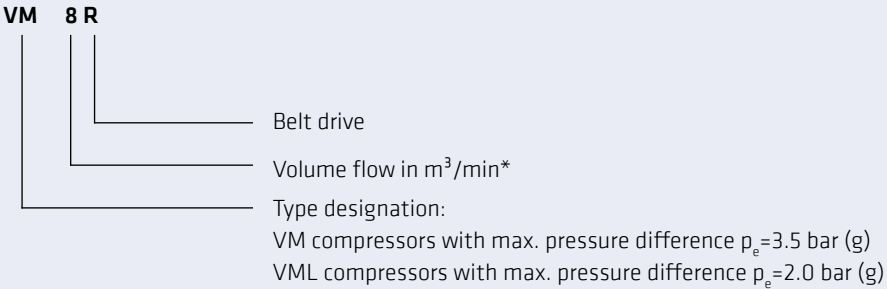


Pressure and temperature transmitter for monitoring the operating data of an argon compressor

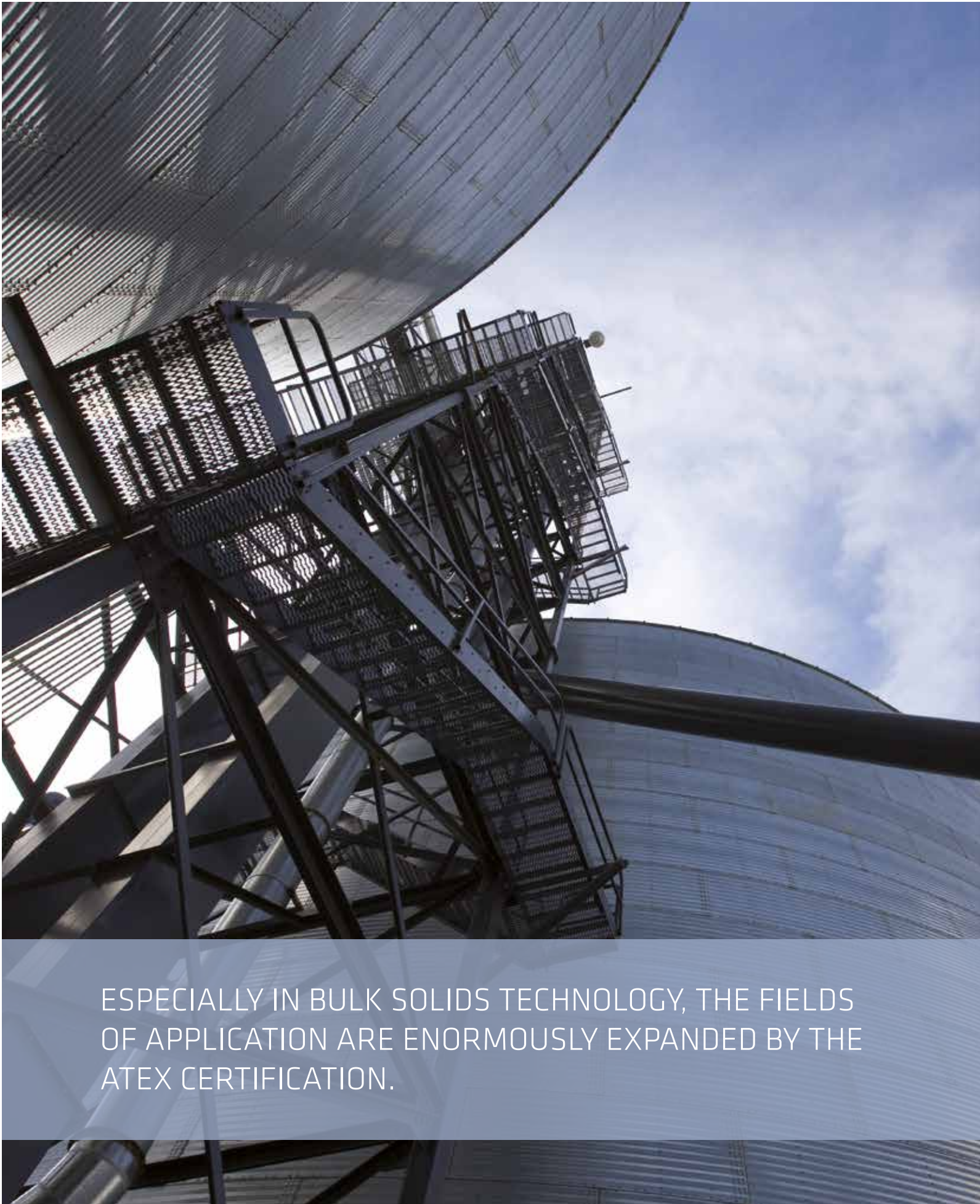


Intrinsically safe special transmitter instrumentation - for use in hazardous areas

**Explanations of type reference.**



\* corresponds to the measured delivery volume flow, converted to the reference inlet conditions [intake pressure = 1.0 bar / intake temperature = 20°C, rF = 0%]



ESPECIALLY IN BULK SOLIDS TECHNOLOGY, THE FIELDS OF APPLICATION ARE ENORMOUSLY EXPANDED BY THE ATEX CERTIFICATION.



# EVERYTHING – EXCEPT ORDINARY. THE SERVICE WORLD OF AERZEN.

The long service life of AERZEN machines is legendary. So why is service an issue at all?

Because it's about more than availability and OEM original parts. AERZEN's services secure investments, productivity and the decisive competitive spigot.

And this worldwide.



## **AERZEN on-site service.**

Our service teams work where our machines are. All over the world. Onshore or offshore. Often under extreme conditions. How do we achieve this? With short distances. AERZEN has a dense network of service centres and decentralised parts warehouses around the globe. More than 200 excellently trained service technicians can come to your aid from there. Any time and anywhere you need us.

## **For rental service and other services.**

AERZEN's service world has a lot on offer. Tailor-made service kits, for example. Replacement stages, machine diagnostics, sound optimisations. One of our most important services is AERZEN Rental Division, which provides a large fleet of rental machines. Blowers, turbo machines and compressors - made by AERZEN. In a wide range of performance classes. For all common pressure ranges. Can be used immediately and delivered turnkey on request. What does that mean for you? You are also well prepared for unexpectedly upcoming needs [www.aerzenrental.com](http://www.aerzenrental.com)

## **Contact around the world**

2,500 employees work for AERZEN. On every continent. With six sales offices in Germany alone, we're there for you. And with 50 subsidiaries in over 100 countries around the world. So we're never far away - should you ever need us. Give us a call: **+49 5154 81 0**

## **Service Hotline**

We are there for you, even if we are not actually there - outside our business hours. Use the direct line to AERZEN via our regional service hotlines: **0700 49318551**

## **Customer Net**

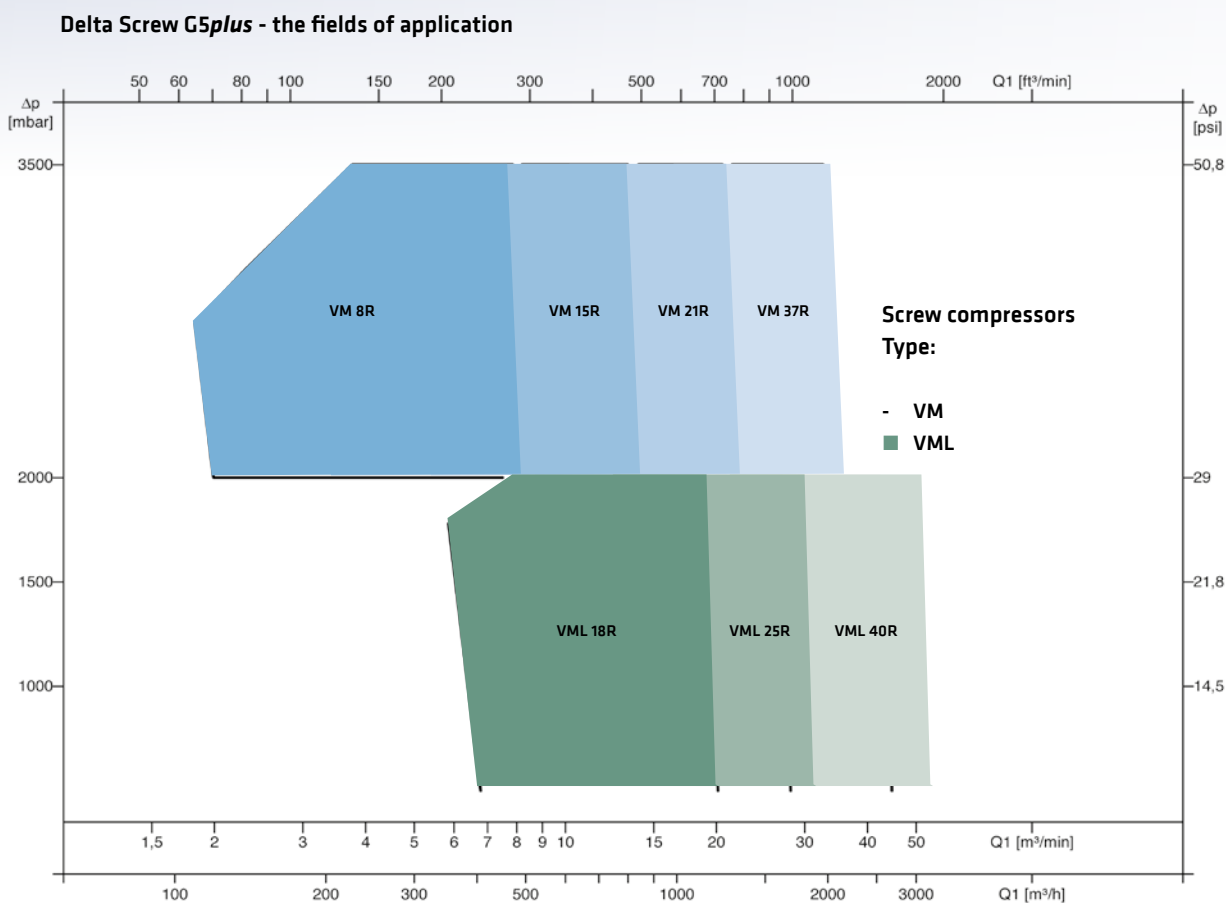
Where you can learn more about the company and the leading compressor technologies from Aerzen? It's simple: in our Customer Net on our homepage. There you will find everything there is to know: [www.aerzen.com](http://www.aerzen.com)



THE SERVICE CENTER PERFECTLY INTEGRATED INTO  
THE FACTORY CENTER GUARANTEES SHORT  
PROCESSING TIMES.

# PRODUCT DIVERSITY. THE RIGHT SIZE ENSURES EFFICIENCY. THE MANUFACTURER'S REPUTATION FOR SAFETY.

Up to a volume flow range of 2,650 m³/h alone, 7 oil-free screw compressors with belt drive of the Delta Screw G5plus series are available. With the second series, the direct-coupled compressors, the field of application is extended to 15,000 m³/h.



AERZEN offers the largest variety of screw compressors available on the market. This means that it is almost always possible to select the compressor that can be operated at the optimum specific efficiency. Systems in which compressors that are defined too small run "at high speed" in an unfavourable range or accessories with cross-sections that

are too small are a thing of the past. The seven belt-driven machines mentioned above can be supplemented by further direct-drive compressor sizes, so that the volume flow range can be extended to 15,000 m³/h.

3 examples of the AERZEN product portfolio: rotary lobe blowers, rotary lobe compressors and screw compressors result in highly efficient compound solutions. Of course with side-by-side installation.



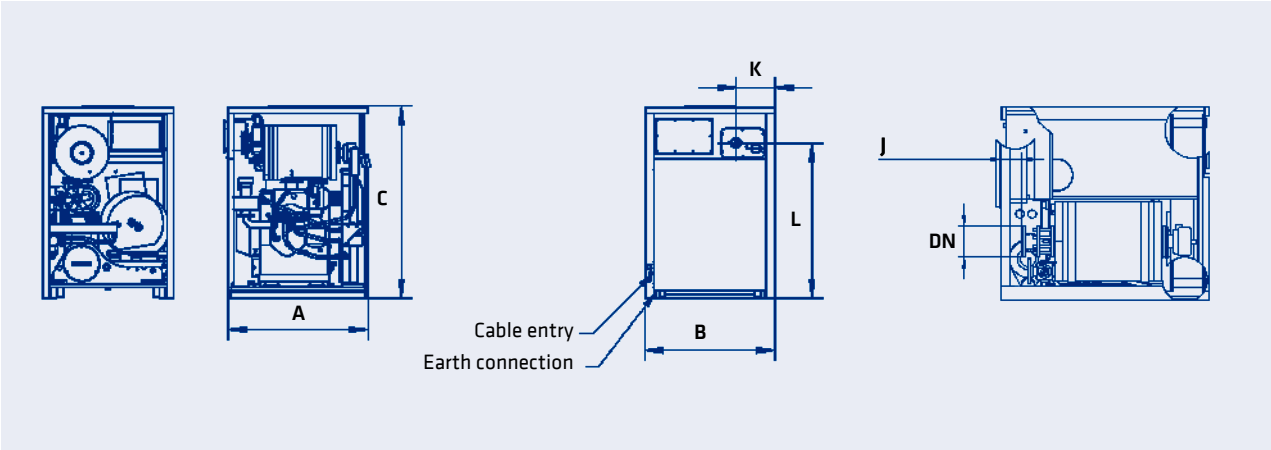
### AERZEN services – for your Plusof safety

- Commissioning by qualified personnel
- Individual training of your specialist personnel
- Customer-specific service and maintenance contracts
- Condition Monitoring
- Energy Management
- Machine Park Management
- AERZEN re-lubrication device for automatic lubrication of electric motors
- Machine revision also possible on site
- Rental machines are available worldwide through our subsidiary Aerzen International Rental





# THE ASSEMBLY GENERATION 5<sup>plus</sup> CONVINCES WITH CLARITY AND SPACE-SAVING DESIGN.



Simply compact. The dimensions of the Delta Screw G5<sup>plus</sup> series with acoustic hood.

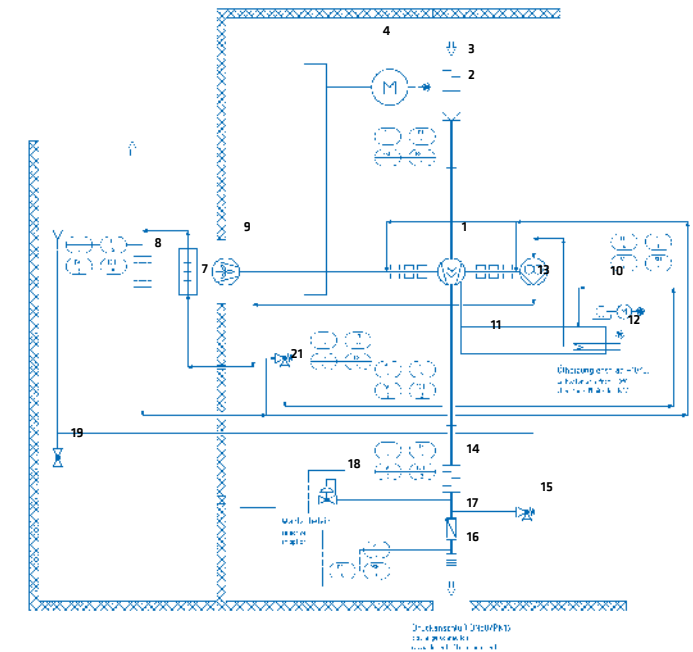
Size	A mm	B mm	C mm	J mm	K mm	L mm	DN DS	PN	Oil filling l	Weight (without motor, incl. acoustic hood) kg
VML 18R	1,350	1,250	1,847	132	376	1,491	80	16	20	840
VML 25R	1,800	1,500	1,973	299	440	1,652	125	16	20	1,100
VML 40R	2,055	1,700	2,111	140	483	1,769	150	16	30	2,100
VM 8R	1,350	1,250	1,776	203	374	1,492	65	16	20	770
VM 15R	1,350	1,250	1,776	188	376	1,491	65	16	20	900
VM 21R	1,800	1,500	1,973	485	440	1,579	80	16	20	1,100
VM 37R	2,055	1,700	2,111	140	483	1,771	150	16	30	2,100

Dimensions and weight of the assemblies without acoustic hood.

Size	Length mm	Width mm	Height mm	Weight (without motor and acoustic hood) kg
VML 18R	1,217	1,684	1,663	700
VML 25R	1,345	1,782	1,736	750
VML 40R	1,666	1,998	1,888	1,400
VM 8R	1,118	1,582	1,667	700
VM 15R	1,180	1,711	1,667	725
VM 21R	1,302	1,802	1,714	750
VM 37R	1,666	1,871	1,890	1,300

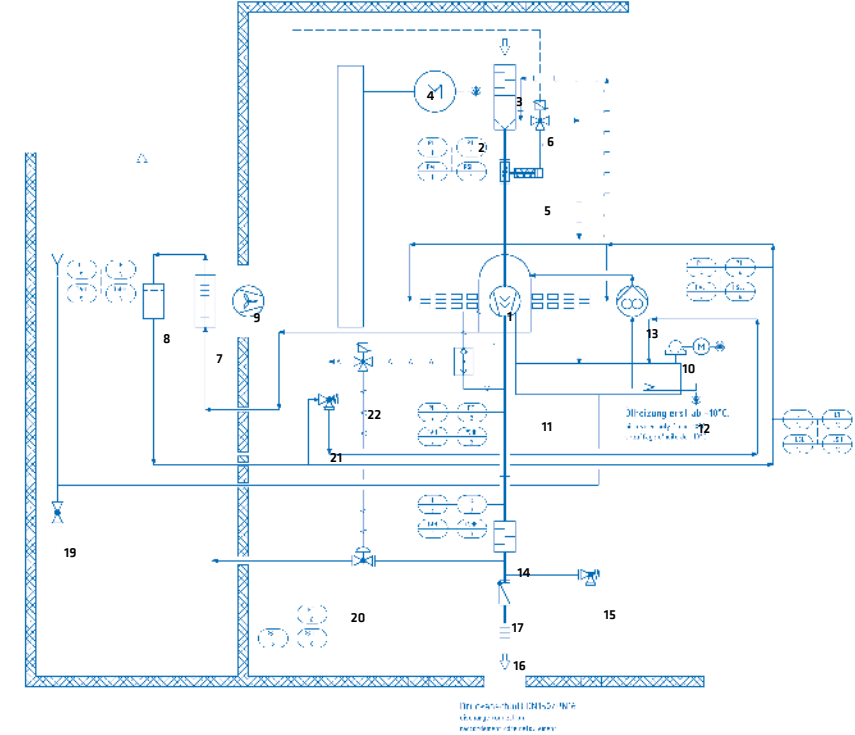
(Dimensions are not binding! Subject to technical modifications!)

Exemplary flow diagram:  
VML 18R G5 with filter suction and control (start unloading valve)



- 1 Compressor stage
- 2 Intake filter
- 3 Intake silencer
- 4 Electric motor
- 5 Throttle valve control
- 6 3-way solenoid valve
- 7 Oil cooler
- 8 Oil filter
- 9 Acoustic hood with fan
- 10 Vacuum generator
- 11 Oil sump
- 12 Oil heating
- 13 Oil pump
- 14 Discharge-side silencer
- 15 Safety valve
- 16 Axial compensator
- 17 Check valve
- 18 Start unloading device
- 19 Oil drain
- 20 Relief valve
- 21 Pressure adjustment valve
- 22 3/2-way valve

Exemplary flow diagram.  
VM 37R G5 with filter suction and control (no-load operation/full load)



# PROVE PERFORMANCE. FROM MINIMUM TO MAXIMUM VOLUME FLOW.

If you are looking for low LCC or fast payback times, you will choose the right VM or VML assembly. Because the investment in Generation 5plus is also worthwhile from a commercial point of view. We will be happy to help you with the exact design. Our advisors will be happy to answer any questions you may have about equipment and application possibilities. Motor output

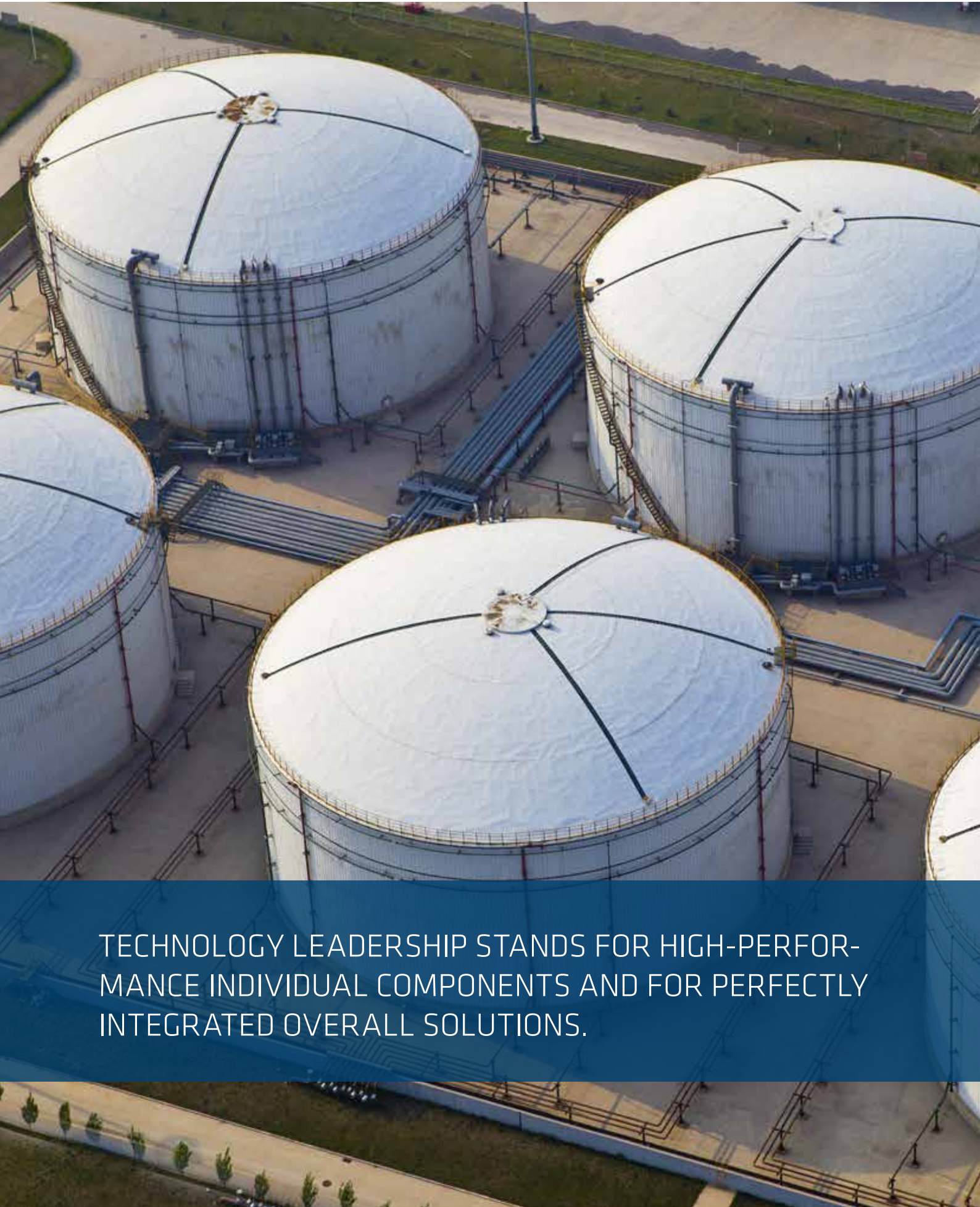
Type designation. VM compressors with short rotor profile; differential pressures up to max. pe = 3.5 bar (g) VML compressors with long rotor profile; differential pressures up to max. pe = 2 bar (g)					
Overpressure					
Compressor size	max. perm. inlet pressure [bar a]	Differential pressure pe [bar]	Volume flow [m³/h]***	Motor power rating [kW]	max. sound pressure level [dB (A)]*
VM 8R	5.0	up to 3.5	120 to 500	18.5 to 55 kW	74
VM 15R	5.0	up to 3.5	220 to 810	18.5 to 90 kW	77
VML 18R	1.2	up to 2	380 to 1,190	18.5 to 75 kW	80
VM 21R	2.0	up to 3.5	320 to 1,250	18.5 to 132 kW	76
VML 25R	1.2	up to 2	420 to 1,700	18.5 to 110 kW	78
VM 37R	2.0	up to 3.5	610 to 2,030	55 to 200 kW	77
VML 40R	1.2	up to 2	910 to 2,650	30 to 132 kW	78

Negative pressure		
Compressor size	max. Negative pressure [bar g]	max. Volume flow [m³/h]
VML 18R	-0.7	1,130
	-0.85**	840
VML 25R	-0.7	1,610
	-0.85**	1,270
VML 40R	-0.7	2,570
	-0.85**	2,210

Success figures in black and white.  
The following pages show the performance data of all 7 VM or VML compressors with belt drive. The following process conditions are assumed when determining these data:

- Medium to be compressed: Air
- Relative humidity: 0%
- Air inlet temperature: 20 °C
- Intake pressure: 1 bar (absolute)

Performance data without obligation!  
Products are subject to technical changes!  
\* Machine noise with acoustic hood and connected, insulated piping. Tolerance: +/- 2 dB(A); at max. speed and at max. pressure  
\*\* with pre-inlet  
\*\*\* Inlet conditions 1 bar, 20 °C, VML with 1 bar, overpressure or VM with 2 bar overpressure



TECHNOLOGY LEADERSHIP STANDS FOR HIGH-PERFORMANCE INDIVIDUAL COMPONENTS AND FOR PERFECTLY INTEGRATED OVERALL SOLUTIONS.



### **AERZEN. Compression is the key to success.**

The Aerzener Maschinenfabrik was founded in 1864. In 1868, we built Europe's first positive displacement blower. The first Turbo blowers followed in 1911, the first screw compressors in 1943, and in 2010 the world's first rotary lobe compressor package. Innovations made by AERZEN keep driving forward the development of compressor technology. Today, AERZEN is among the world's longest established and most significant manufacturers of positive displacement blowers, rotary lobe compressors, screw compressors and turbo blowers. And in many applica-

tion areas, AERZEN is among the undisputed market leaders. In more than 50 subsidiary companies around the world, over 2,500 experienced employees are working hard to shape the future of compressor technology. Their technical competence, our international network of experts and the constant feedback with our customers are the basis of our success. AERZEN products and services set standards. In terms of reliability, value and efficiency. Challenge us.



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