

Screw Compressor

Delta Screw

Direct drive. Oil-free. Pressure range up to 4.5 bar (a)
Volume flows from 350 m³/h to 15,000 m³/h



AERZEN
EXPECT PERFORMANCE

Delta Screw

One line for all volume flows



Your advantages

- ✓ 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 % absorbent-free*
- ✓ Made by AERZEN – made in Germany**

They are among the best-selling compressors in the world: the directly coupled assemblies with the name Delta Screw. Why? Because there are probably no compressors that meet even unusual customer requirements so uncompromisingly. Because you cover the largest volume flow with one machine. Because these compressors are enormously efficient. Because their availability and durability are legendary, even under extreme loads. And finally, probably also because these universal geniuses enjoy a great advantage of trust: The "Made by AERZEN" trademark.

* applies to Delta Screw E compressor discharge silencer

**applies to the manufacture and assembly of all Delta Screw stages



Countless processes

Not a single compromise

In terms of versatility, the compressors of series Delta Screw exceed all expectations. And, thus, the possibilities of all other machines in the competition. The fact is that the flexible and highly efficient packaged assemblies made by AERZEN offer the most type diversity. These machines allow many modifications and provide a wide range of accessories. In other words: you choose the correct compressor for all kinds of process conditions. Right-sized. No compromises.

11 types, All possibilities

They work reliably in all temperature zones of the world, indoors or outdoors, mobile or stationary. What makes the Delta Screw series so flexible? Reply: 11 machines with direct drive. Two compressor groups with the special AERZEN VM or VML rotor profiles. Different outlet openings in the cylinder for ideal internal compression. And: an almost limitless range of adaptation options and versatile accessories. Designed

for the compression of air, nitrogen and special gases, Delta Screw are the perfect compressors in almost every conceivable application. The range of the entire Delta Screw series additionally includes 7 compressor models with belt drive for volume flows (=volume flow converted to intake conditions) from 120 m³/h to 2,650 m³/h.

				
Control range from 30 to 100%	Volume flows from 350 m ³ /h to 15,000 m ³ /h	Pressure range Overpressure up to 4.5 bar (a), negative pressure up to -850 mbar	Wind loads up to 210 km/h	Ambient temperatures -40° C to +60° C

Compression under extreme conditions

Wherever you produce, Delta Screw makes the pressure. As reliable at ambient temperatures of +60° C as at -40° C. As safe in calm conditions as at wind speeds of up to 210 km/h. In the desert,

in the Arctic, in earthquake zones, on ships, on trucks and in any other stationary or mobile application. Exceptions? None so far. Challenge us.



Refinery



Power plant technology





Applications

- Conveying and compressing neutral gases or special gases
- Pneumatic transport with air or nitrogen, e.g. powder, granulates, ash
- Homogenisation and loading/unloading of cement, lime, etc.
- Vacuum generation in container glass production
- Gas/air mixing systems
- Flue gas desulphurisation and oxidation air for power plants
- Truck applications (e.g. stationary discharge, combined suction/pressure operation)
- Blowing air for spunbond production
- Fermentation
- Instrument air
- Pre-pressure applications (Booster)



Industries

- Chemistry and petrochemical industry
- Cement industry
- Food and luxury food industry
- Power plant technology
- Glass industry
- Paper industry
- Plastic industry
- Steel and iron industry
- Textile industry
- Pharmaceutical and cosmetics industry
- Medical industry
- Mining and metallurgy
- Electronics industry, solar
- Oil and gas industry
- Biogas

Areas of application in the shipbuilding and port industries

- Powerful for ship loading and unloading
- Levelling of the vessel (anti-heeling system)
- Icebreaker operation (Duckwalk)
- Reduction of propeller noises (cavitation interruption)
- Water treatment, e.g. ship wastewater treatment plants or purification of ballast water
- Pre-compressor for sound investigation in seismic applications
- Creation of oil barriers
- Compressor charging or pre-compressor for compressed air generation in submarines
- Air lubrication of the hull (creation of air cushions on the water surface through bubble formation)
- Keeping lakes, harbours and locks free of ice (air bubbling)
- Aeration of lakes
- Pneumatic conveying
- Generation of air curtains during pile driving of foundations for the offshore industry

Class 0. Oil-free for sensitive processes

Some processes do not allow tolerances. Example: The food or pharmaceutical industry. 100 % oil-free processes are a must here. Delta Screw guarantees this through a sophisticated concept. Long-term. This includes the closed oil circuit as well as the special conveying chamber seal and the permanent generation of a vacuum in the oil chamber. The absence of oil in the compressed air supplied is certified by TÜV Rheinland in accordance with ISO 8573-1 Class 0.

And ensure the decisive performance plus in negative and positive pressure

Proven for years and constantly further developed: AERZEN's special rotor profile saves up to 15 % energy compared to conventional screw rotor profiles on the market. The specially developed low-pressure profiles are used in every AERZEN screw

compressor block. As a 3+4 or 4+6 profile, they guarantee that your compressors run at the specifically most favourable operating point. Always and with the highest efficiency.

Guaranteed safety

Wearing absorbent materials are a risk in the production process. The best, then: they are not used at all. In all models of the Delta Screw E compressor, the discharge silencing is completely free of absorbent.

The innovative AERZEN design (European patent no.1857682) provides safety. To ensure that a downstream process system is not contaminated. This makes it suitable for use in pneumatic conveying systems in the food industry. By the way, special filter classes (suction) and food-grade lubricants also stand for this.



3+4 rotors characterise the VML compressor group for volume flows* from 920 m³/h up to 15,000 m³/h. In positive pressure ideal for applications up to pressure ratio 3 (discharge to suction pressure) and excellently suited for negative pressure operation up to 70 % vacuum (-700 mbar) or 85 % vacuum (-850 mbar) with the pre-inlet version.



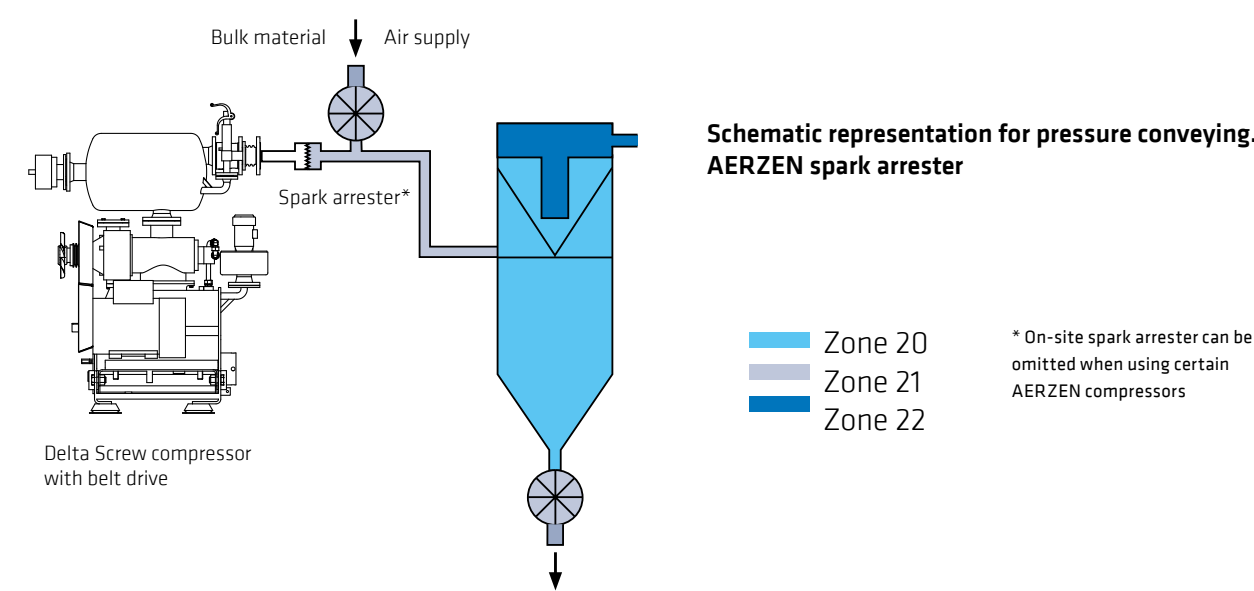
4+6 rotors stand for the VM compressor stages from AERZEN. Tailor-made for the positive pressure range (up to pressure ratio 4.5) and for volume flows from 350 m³/h to 9,220 m³/h.

* corresponds to the measured delivery volume flow, converted to the reference suction conditions p = 1.0 bar, t = 20°C, rH = 0%.

ATEX applications

Safety in all zones

AERZEN compressor packages have always been used in highly critical areas. The solution portfolio that AERZEN offers you today with the Delta Screw series for almost all ATEX zones is probably unique in terms of width and performance.



Expertise - The safety plus from AERZEN

Your processes fall under the EU's special protection regulation, the ATEX Product Directive 2014/34/EU? Good. Because you now have the solution. Thanks to the experience gained from a multitude of projects of the most diverse dimensions, hardly any question is new to our ATEX specialists. You develop the optimal assembly concept for your process environment. Including accessories and all required documentation.

Technology - Win the lead

Assemblies from the Delta Screw range offer the solution for your ATEX zone. Tailor made. TÜV tested, of course. And regardless of whether they are used in positive or negative pressure. The technologies for this are designed individually. Depending on the type of zone and requirement.

This is what our scope of supply includes

- Special documentation
- Use of special materials for parts in contact with medium
- Ex-Instrumentation
- Special coupling
- Vibrational monitoring
- Spark arrester
- Special motors according to the corresponding zone
- Certificate of conformity according to 2014/34/EU
- Filter monitoring
- Special painting for II C gases



5 x E Discover the success principle of Delta Screw

Efficiency. Essentials. Ecology. Elasticity. Evolution:

The principle of success is condensed in the 5 large "E". It finds its expression in a wealth of intelligent details. And in a consistently well thought-out compressor generation: Delta Screw.

Efficiency

Plus points for energy efficiency

- Motors of the current energy efficiency class
- Efficient acoustic hood ventilation
- Reduced pressure losses in the entire assembly and in the accessories (including aftercooler, cyclone separator)
- Internal compression adjusted to the system pressure, thereby significant energy savings

Lowered TCO

- Energy savings of up to 6 %
- Low maintenance costs
- Flexible on-site service

Cool supply air from outside (E compressor)

- Air intake of the compressor outside the acoustic hood
- Up to 10 Kelvin lower intake temperatures
- Separate intake of process and cooling air

Essentials

Just plug & play

- Completely pre-installed assembly (all-in)
- Immediately ready for connection
- First oil filling with AERZEN Delta Lube 06 included

Convenient operation

- Exclusively from the front
- Intelligent AERZEN AERtronic control system
- Extensive interfaces for communication with Process control room

Sophisticated oil system

- Unusually long oil change intervals 16,000 operating hours
- Elimination of the first oil change after 500 hours
- Oil instead of grease: Oil-lubricated bearings increase the service life

Extremely robust compressor package

- High reliability in all environmental conditions
- Exceptional longevity
- AERZEN bearing for extremely long bearing life of 40,000 Bh and more

Simple maintenance conditions

- Large maintenance flaps on the operating and rear side
- Secure and fast access to service components
- Intelligent acoustic hood concept for problem-free quick motor replacement
- Optional: Vibrational monitoring and analysis

Elasticity

AERZEN low pressure profiles

- Significant energy savings also through profile optimisation
- Two profiles: 3+4 and 4+6 for VML or VM compressors



Volume flexibility

- Leading: Largest volume flows with *one* machine
- Wide range of applications in the control range from 30 to 100%
- Volume flows from 350 m³/h to 15,000 m³/h
- Expandable by the range 120 m³/h to 2,650 m³/h through models with belt drive
- Extensive modifications and accessories:

Large variety of types

- So far 11 directly coupled screw compressors
- Type VM, VML and E compressors G5-E

Special acoustic hoods for the most difficult environmental conditions

- Increased noise requirements
- For desert installations (with sand separators)
- For truck, ship or earthquake installations
- For installation in polar regions with integrated heater and gravity blinds
- For wind loads up to 210 km/h (special statics)

Evolution

Customised solutions

- Compressors, accessories and documentation according to customer requirements

Approvals according to current legal requirements

- According to Pressure Equipment Directive PED 2014/68/EU
- Or any desired local certificate for worldwide use
- Design of safety valve and discharge side silencer also according to ASME
- Customer acceptance or acceptance certificates according to Lloyd's Register, among others,
- DET Norske Veritas, Germanischer Lloyd and ABS

ATEX certified

- Machine design compliant with ATEX product directive 2014/34/EU

Ecology

Oil-free as per class 0

- Integrated vacuum generator for guaranteed oil-free operation
- 100% oil-free, according to ISO 8573-1, TÜV certified

Intelligently lowered sound levels

- Multifunctional acoustic hood concept for reducing the machine noise
- Innovative, absorbent-free, 3-chamber reflection silencer (European patent no. 1857682)

Very good for the eco-balance

- Low emission values
- Compressors of the Delta Screw series are almost completely recyclable

Delta Screw E Compressors

The savings are paid for by the assembly

6 per cent less energy consumption compared with conventional compressors - the E class made by AERZEN makes a decisive contribution for fulfilment of legal and entrepreneurial saving programmes. With energy accounting for around 90 % of total costs, you, thus, release important potential in terms of environmental protection, improved corporate liquidity and low life cycle costs.

E stands for energy gain

Up to 6% less energy use: The E Class among the Delta Screw assemblies sets the standards in terms of contemporary compressor technology.

The basis for this is a series of intelligent ideas from our R&D department that have a decisive effect on energy and maintenance costs. They create the advantages between the conventional compressor and the E compressor.

Advantages:

- Exclusively direct drive
- External intake of process air
- Smart cooling concept. Electrical fan instead of mechanically driven acoustic hood fan. It provides for perfect ventilation under the acoustic hood - with lowest power requirement. The cooling air for the oil cooler is also now fed in directly from the outside via an inlet channel.
- Intelligently reduced pressure losses in stage and accessories by means of:

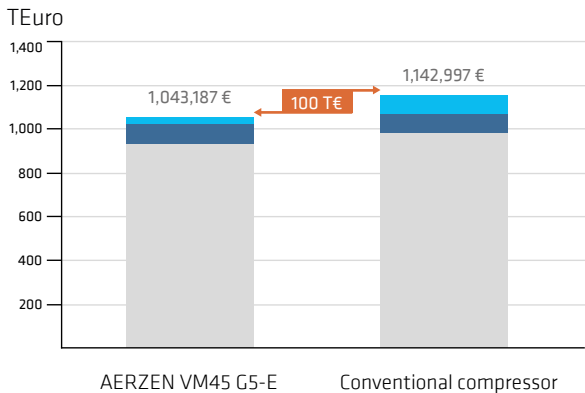
1. Direct supply of outdoor air to intake filter
2. Optimised inflow channels
3. Adapted flow cross-sections for accessory components
5. The innovative fluidically improved absorption-free silencer from AERZEN. Arranged vertically directly on the compressor stage, it is 100 % power decoupled (two compensators). It reduces the sound pressure level in the piping by up to 35 dB. And this is the best part: And most important: it absolutely needs no absorption material, which tends to disintegrate and to contaminate the following process.

E compressors vs. conventional compressors: Comparison of life cycle costs

The calculations apply to an operating period of 10 years and are based on the following assumptions: Annual operating hours 6,000. Electricity costs 13 cents per kW/h.

Differential pressure 3.5 bar (g). Volume flow 1,550 m³/h. Residual value of the machine after 10 years 15 %. Costs for insurance, halls and piping construction are not included.

Life cycle costs



The efficiency plus:
the E compressor from AERZEN is self-financing.

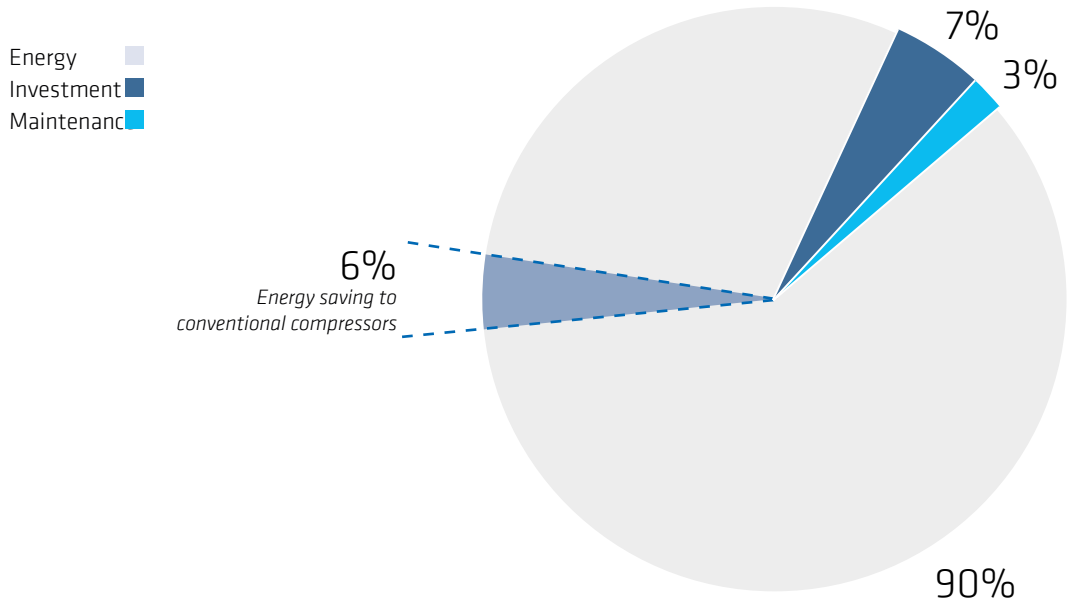


Results

The comparative calculation shows: E compressors have significant efficiency advantages over conventional compressors (Non AERZEN). At around € 54,600, they save around 6 % in energy costs over the operating period of 10 years. Over the same period, maintenance costs are reduced by about 61 %. The E compressors are significantly better in terms of revisi-

on or general inspection compared to the competitor machine due to the on-site service. A complete stage exchange as in the competition is not necessary. The savings in relation to the total costs: Around € 100,000. Conclusion: With an investment cost share of approx. 7 %, the savings almost pay for the as-

E compressor Average life cycle costs more than 10 years.



Already legendary today: The extreme resilience of the universal geniuses

Their longevity is legendary. Just like their reliability under extreme loads. No wonder, since all Delta Screw compressor stages are backed by the quality promise "Made in Germany". In addition, an intelligent service and maintenance concept as well as a seamless network of worldwide service teams. Three of many important decision criteria for the universal geniuses from AERZEN.

Quality made in Germany.

Delta Screw is a premium product from AERZEN. That means: these compressors combine 150 years of experience in the development and design of high-performance compressed air machines. The know-how of a world market leader. And the quality standards of a traditional

German family business. We apply this standard to the engineering of our machines and core components, as well as to materials, processing and the selection of our partners. The basis for the exceptionally high value stability of our assemblies.



The AERZEN compressor stages: A compact unit incl. oil cooler, oil pump, oil filter and oil piping, fan wheel and transmission gear. Today, AERZEN offers more than 20 different stages that are assembled into powerful assemblies.

Intelligently designed

What do you get from the intelligently thought-out design of our assemblies? Reply: You save resources. This already starts with the transport. Delta Screw compressors can be easily moved to where they are needed by pallet truck, forklift or crane. Let's get on with it: The low space requirement also saves re-

Just maintained

Let's start with this: AERZEN assemblies require less maintenance than any other commercially available compressor. Firstly, this is due to the modular hood concept and the large maintenance flaps on the operating and rear side. Motor, electrics and compressor stage can be easily accessed or removed, if necessary. In case of the E compressor, even without dismantling the acoustic hood. Secondly, in many smart design details. Example: the oil system. It stands for oil-lubricated bearings (they significantly increase the service life), elimination of the first oil change after 500 hrs and extremely long oil change intervals of 16,000 hrs. And if a service call does become necessary: all relevant service parts are easily and conveniently available in a cost-effective kit.

Comfortably operated

The Delta Screw operating concept is as simple as it is intelligent. The assembly can be operated manually directly from the front. All control elements are placed here for easy access. The AERZEN AERtronic control system digitally controls the assembly. Intuitive. And above all, safe. Because the smart control system from AERZEN guarantees that your system is running at the optimum operating point at all times. This

sources. The simple installation and commissioning according to the motto "just plug & play". And - cue: ease of maintenance - easy access to all wear parts. And this is the best part: we carry out the complete service for you on site. This is also what you can expect from premium quality.



AERZEN service kit - always a good choice

increases the efficiency and service life of your system. AERtronic visualises and monitors all important parameters. It has numerous interfaces and communication options. And: the AERtronic harmonises perfectly with all external power supply panels. Thanks to the additional module "WebView", operating and service data can be called up and monitored via a smart device from anywhere in the world.

The AERtronic 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 is a standard feature of the E compressors for standard version

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



Contact worldwide

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. Hence we're never far away – should you ever need us. Give us a call: [+49 5154 81 0](tel:+495154810)

Service-Infoline

Our German Service Centre is available for customers and operators. We are happy to help you. We look forward to your call: [+49 700 49318551](tel:+4970049318551)

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 website, where we have stored everything that is worth knowing for you: www.aerzen.com



LET'S TALK

Find your local contact

www.aerzen.com/worldwide

All-in already in the basic package

The delivery concept

Delta Screw

All-in is the name of AERZEN's delivery concept and means: Even the basic package of the Delta Screw series has everything you need for flawless operation at the push of a button. Of course, completely pre-installed at the factory, fully parameterised, with first oil filling and immediately ready for connection. Gladly also including power supply panel and extensive accessories. Just plug & play.



The scope of supply for all Delta Screw packages

Compressor stages in VM or VML design

- Pressure oil lubrication including mechanical oil pump, oil filter, oil pressure regulating valve as well as air-flow oil cooler
- Completely piped oil circuits

Torsion stable base frame

- For safe transport of the entire unit per forklift truck or crane
- For easy mounting of special three-phase motors as well

Acoustic hood with aeration

- For indoor or outdoor installation
- With integrated oil drip pan
- Electrical acoustic hood fan

Electrical vacuum generator

- For safe oil chamber deaeration
- Guaranteed 100% oil-free

Intake filter

- With integrated intake sound insulation

Brand coupling for continuous operation

- Highly elastic and easy to maintain

Discharge side silencer

- Significantly reduces pipe noise

Safety valve (type tested)

- With pipe connection option for safe drainage

Axial compensators

- Designed according to PED or ASME
- Drilled according to DIN or ANSI

Flexible machinery mountings

- Vibration damped
- With Breakaway quick-closing device

Double non-return flap

- Requires low pressure to open

Instrumentation or control

- Completely wired pressure transducers and temperature sensors

Initial oil filling

- AERZEN Delta Lube 06

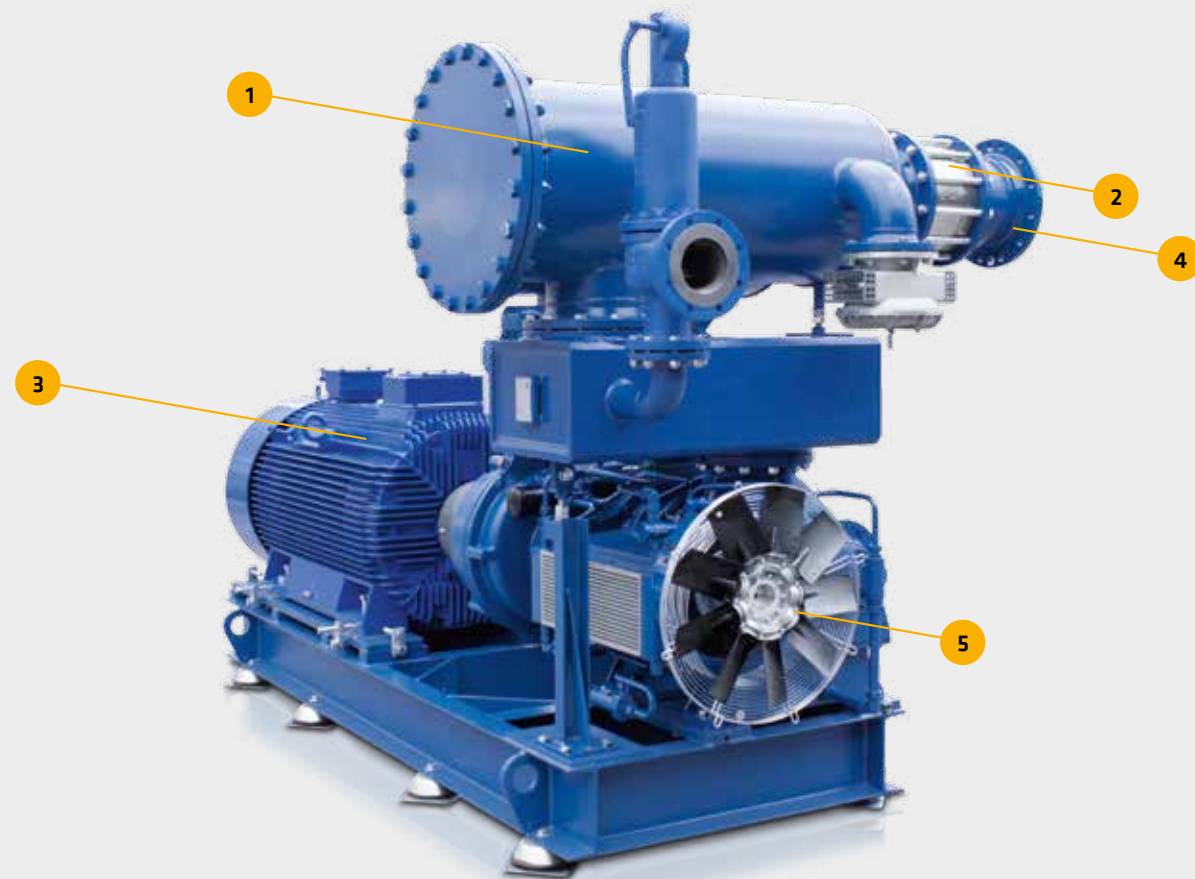
Complete documentation

Modifications. For customised options.

- Version for compressing nitrogen with suction silencer, starting strainer and compensator (suction side)
- Vacuum version for VML packages, also with pre-inlet for vacuum operation down to -850 mbar
- Special varnishes
- AERtronic with Profibus or Profinet connection, frequency inverter module, Modbus gateway (Ethernet), WebView
- Flanges on suction / discharge side according to ANSI
- Compressor for ship installation or truck installation
- Acoustic hoods for increased sound requirements or extreme ambient conditions
- Sealing gas version for special gases
- Coating for all parts in contact with media, incl. rotors in stainless steel for corrosive gases
- Complete suction and discharge side in stainless steel design
- Use of lubricants suitable for foodstuffs
- Water-cooled oil cooler
- Device for changing the oil or air filter while the machine is running
- Connection options for pipings individually tailored to customer requirements
- Possibility of connecting a blow-off line for safety valve and vacuum generator
- Special power supplies and adaptation 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 or control according to customer specification
- Assembly design/approval according to, among others:
 - PED 2014/68/EU (AD2000 and EN13445)
 - ASME Code VIII
 - Div.1, SELO (China License),
 - EAC (certification in Russia)
 - CRN (certification in Canada)
- Safety valves according to API
- Customer acceptance or acceptance certificates according to Lloyd's Register, Det Norske Veritas, Germanischer Lloyd and ABS, among others
- Diesel drive with special clutch
- Special documentation, including balancing protocols, material certificates, leak tests, test runs, etc.
- Extended liability for defects
- AERZEN Service contracts

The choice is yours

Delta Screw as standard concept or E compressor



The standard concept Delta Screw

- | | |
|---|---|
| <p>1 Horizontally positioned discharge silencers</p> <ul style="list-style-type: none"> • With connection chamber for pulsation reduction <p>2 An axial compensator</p> <ul style="list-style-type: none"> • for voltage-free connection to the pressure pipe <p>3 Installation option for almost any available motor</p> <ul style="list-style-type: none"> • Quick adjustment of base frame and acoustic hood | <p>4 Discharge side connection</p> <ul style="list-style-type: none"> • Optionally positioned upwards or to the side <p>5 Aeration inside the acoustic hood</p> <ul style="list-style-type: none"> • Is effected by means of a mechanically driven fan Without representation: <ul style="list-style-type: none"> • with round instruments • Supply and exhaust air louvers outside the acoustic hood |
|---|---|



The Delta Screw E compressor concept

- | | |
|---|---|
| <p>1 Vertically positioned discharge silencer</p> <ul style="list-style-type: none"> • 3-chamber reflective silencer • without absorption material <p>2 Two axial compensators</p> <ul style="list-style-type: none"> • Vertically and horizontally installed • For voltage-free connection to the pressure pipe <p>3 AERZEN AERtronic control system</p> <ul style="list-style-type: none"> • Transmitter technology • For efficient and safe operation of the system • with display and monitoring of the intake, final and oil pressure, as well as the final and oil temperature • Control of the power supply panel | <p>4 Flow-optimised intake ducts</p> <ul style="list-style-type: none"> • For process and cooling air <p>5 Inlet air - and exhaust air louver</p> <ul style="list-style-type: none"> - Integrated into the acoustic hood to save space <p>6 Discharge side connection</p> <ul style="list-style-type: none"> • Above the acoustic hood <p>7 Aeration inside the acoustic hood</p> <ul style="list-style-type: none"> • With electrically driven fan |
|---|---|

Installation component or complete turnkey system?

In any case AERZEN

An elastic stage concept combined with an almost limitless wealth of options and accessories: Delta Screw offers the most comprehensive compression principle worldwide. And by the way: No matter whether you use these universal geniuses as the centrepiece in plant construction. Or as turnkey and perfectly integrated assembly directly in your production process.

First class - AERZEN and its partners

AERZEN develops all core components itself. For the rest, we have chosen partners who share our commitment to excellence. Worldwide renowned brand-name manufacturers and experienced specialists in their field. In this way, we sustainably ensure our high quality requirements. What you can rely on with AERZEN.

Always fits: The connection concept

The multitude of applicable accessory components is anything but ordinary. However, Delta Screw's connection concept is unique and a clear advantage over other compressors. It allows the integration of almost any external component - without immense loss of pressure and, thus, efficiency. Too small diameters, poorly defined drive trains etc. can be found elsewhere.

Power supply panels: They ensure the perfect start

The external power supply panels for starting the machines:

- Star-delta starting
- Frequency inverter
- Soft start
- Direct Online

Each of them is fully pre-parameterised and specially adapted to the respective Delta Screw package.

Vibration sensor technology

Machine monitoring and vibration analysis

Identify possible damage at an early stage and take appropriate measures in good time. AERZEN offers you the possibilities for this. Whether permanent vibration monitoring - and analysis on site or remotely by AERZEN technicians - we have the right solution for you.

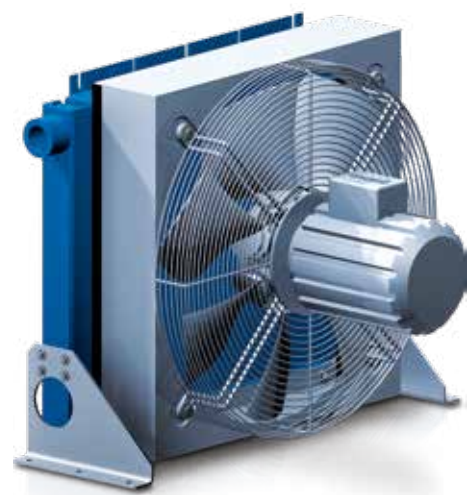


Power supply panels from AERZEN - the perfect motor start, whether standard or customised



Suitable for all AERZEN machines

Matched to your application



The perfectly designed air/air aftercooler



IE4 motor used by AERZEN



Overflow regulators and pressure-retaining valves ensure stable space requirements



AERZEN Start unloading device

Aftercooler. Proven at extreme discharge temperatures up to 280 °C.

The aftercoolers for Delta Screw set standards with regard to lowest pressure losses. The portfolio offers you a wide range of choices: these include air/air aftercoolers and water/air aftercoolers. Depending on requirements, with cyclone separator and condensate drain. And always the efficient solution for temperature critical downstream processes.

- Complete stand-alone range of air/air aftercoolers, specially matched to the Delta Screw compressor package series
- AERZEN Highlight: Optionally with speed control of the fan according to the preset final air temperature
- Numerous options for the air/air aftercooler: Special painting, special coating, special motors for the fan and much more.
- Already available as standard: aluminium cooler, motor, motor mount, fan box, protective guard, fan
- From 250°C with integrated stainless steel pre-cooler
- Delta Screw aftercooler also available as water/air aftercooler variant

Motors. Energy-efficient IE3 motors or higher

The premium motors from renowned manufacturers are standard on all Delta Screw packages. However, this line is open to almost all types and brands that drive the compression process:

- three-phase motors according to IEC, NEMA or China GB18613-2012
 - Efficiency class optionally IE3 (Premium Efficiency) or IE4 (Super Premium Efficiency)
 - Motors for 50/60 Hz mains and different voltages
 - Medium-voltage and high-voltage motors
 - ATEX compliant motors
 - Customer or locally produced motors
- Diesel engines and many more

P.S.: all motors are, of course, supplied by AERZEN with a suitable coupling.

This spectrum is unique. Just like the wide range of motor options. Take, for example, relubrication device, frequency inverter operation, temperature monitoring of the windings or bearings, standstill heating, SPM nipples (vibration sensors) or special protection classes. Everything, of course, including the complete assembly in Aerzen.

Pressure relief and overflow valves. Ensure constant pressure conditions.

AERZEN offers premium class pressure retaining valves for its Delta Screw series. These always provide the required counterpressure, even with fluctuating pressure conditions. This protects your system and significantly extends the service life of your compressor.

You need less compressed air from time to time? Then, the excess can be conveniently discharged by means of overflow valves - without the compressor having to be stopped all the time.

Other accessories. Start unloading devices.

Depending on compressor type: Start unloading valve for VML compressors (own medium controlled), idle full load control for VM compressors. Including suction throttle, relief valve and pressure switch.



Maintenance and overhaul kits

For 1-year, 2-year or 5-year operation.

The maintenance and service kits contain all service and wear parts and, thus, facilitate subsequent maintenance or revision work on the compressor stage.

Compact line

Delta Screw in mm and kg

A lot of technology in a very small space. In addition to their impressive performance data, the compact compressors also have the smallest dimensions. An intelligent arrangement of the components enables a small footprint with a low overall height. And yet the flexibility with regard to special motors is given.

Dimensions and weight of the assemblies without acoustic hood:

Compressor size	W mm	D mm	H 2 mm	Weight (without motor, without acoustic hood) kg
VM 30 G5-E	2,700	696	1,921	1,000
VML 35 G5-E	2,700	696	1,921	1,100
VM 45 G5-E	2,412	1,508	2,223	1,870
VML 60 G5-E	2,412	1,508	2,273	1,970
VM 75 G5-E	2,778	1,734	2,476	2,500
VM 85	3,000	1,550	2,530	3,220
VML 95 G5-E	2,778	1,734	2,583	2,600
VM 100 G5-E	4,100	2,150	2,968	4,850
VM 140	4,000	1,800	3,200	5,250
VML 150	4,900	1,800	3,000	5,000
VML 250	5,100	2,100	3,500	7,100



Subject to technical changes
- Product is subject to technical change.

Dimensions and weights of the assemblies with acoustic hood.

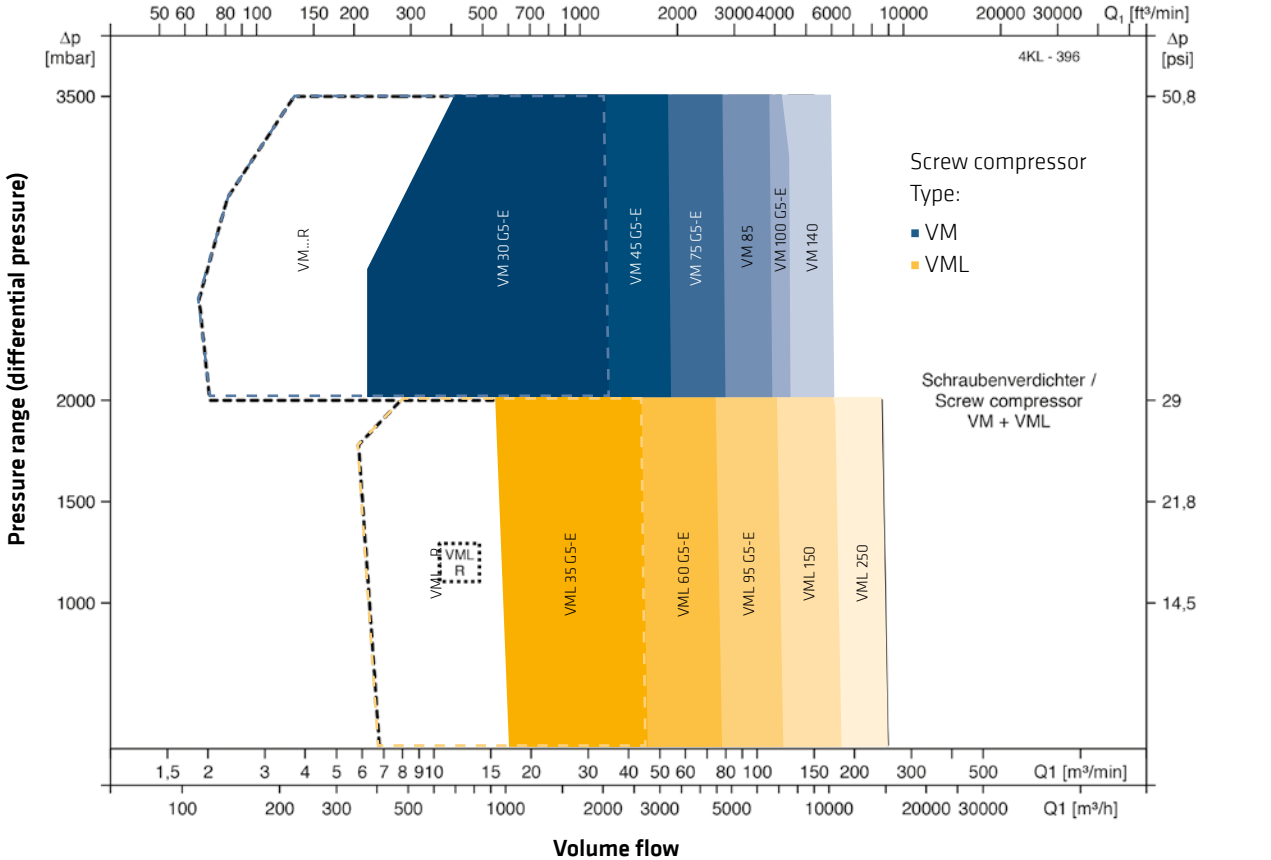
Compressor size	W mm	D mm	H 1 mm	H 2 mm	Di- charge side DN	PN	Oil filling l	Position Pressure connec- tion	Weight (without motor, incl. acoustic hood) kg
VM 30 G5-E	2,900	1,450	1,900	2,357	150	16	12	top	1,950
VML 35 G5-E	2,900	1,450	1,900	2,357	150	16	12	top	2,000
VM 45 G5-E	3,200	1,650	2,200	2,681	150	16	28	top	3,000
VML 60 G5-E	3,200	1,650	2,200	2,741	200	10	28	top	3,100
VM 75 G5-E	4,100	1,780	2,375	2,944	200	10	30	top	4,300
VM 85	4,500	1,800	2,320	2,750	200	10	50	lateral or above	6,000
VML 95 G5-E	4,100	1,780	2,375	3,051	250	10	30	top	4,400
VM 100 G5-E	5,400	2,240	2,466	3,114	250	10	70	top	7,000
VM 140	5,250	2,200	2,870	3,400	250	10	65	lateral or above	8,500
VML 150	5,300	2,300	2,500	3,000	300	10	50	lateral or above	9,000
VML 250	5,500	2,600	3,000	3,500	400	10	90	lateral or above	11,600

Right-sized

For every pressure and volume flow

Delta Screw compressors from AERZEN are the most versatile machines in compressed air technology. This is what makes them so superior in their efficient adaptation to most different process conditions. The elastic modular concept of the assemblies with direct drive already comprises 11 sizes, extended by 7 further models with belt drive (VM...R or VML...R). Where are the limits to flexibility?

Delta Screw - the fields of application.



Explanations of type designation

- VM 45 G5-E
- E compressor (=energy efficient assembly concept)
- 5. Generation
- Volume flow in m³/min
- Compressor groups:
 - VM compressor with max. differential pressure $\Delta p=3.5$ bar
 - VML compressor with max. differential pressure $\Delta p=2.0$ bar

AERZEN Compression is the key to success

AERZEN was founded in 1864 as Aerzener Maschinenfabrik. 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.

AERZEN is among the undisputed market leaders in many areas of application. At our 50 subsidiaries around the world, more than 2,500 experienced employees are working hard to shape the future of compressor technology. Their technological expertise, our international network of experts, and the constant feedback we get from our customers provide the basis for our success. AERZEN products and services set the standard in terms of reliability, value and efficiency. Challenge us.



LET'S TALK

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