

POSITIVE DISPLACEMENT BLOWERS

DELTA BLOWER GENERATION 5

Volume flows ranging from 30 m³/h to 15,000 m³/h for applications in the negative pressure range



AERZEN

DELTA BLOWERS.

SOLID, DURABLE MACHINES FOR
COUNTLESS COMPRESSION
PROCESSES.



Delta Blower Generation 5

They are the driving force behind countless processes, and the heart of a powerful machine assembly: the Delta Blower Generation 5 positive displacement blowers. They build on AERZEN's 150-year tradition of experience and progress, but today remain more innovative than ever. AERZEN has packed a number of new features into its latest generation of Delta Blowers: oil-free conveyance of air and neutral gases; a

broad control range for volume flows ranging from 30 m³/h to 15,000 m³/h; reduced life-cycle costs; easy handling; quieter operation. What has not changed: the extreme solidity, reliability, and durability that has made it a global success story. It is no wonder that their owners rely on them for continuous service – year in and year out, decade after decade.





Applications

- Pneumatic conveyance of bulk material
- Degassing
- Vehicle operation
- Unloading of ships
- Tunnel boring
- Dust removal
- Generating negative pressure
- Biogas treatment and many more

Conveying material

- Granulate
- Sugar
- Cement
- Grain
- Carbon and many more

Industries

- Chemical and process engineering
- Power plants
- Cement technology
- Foodstuffs
- Pharmacy and many more

A VERSATILE PROBLEM-SOLVER FOR EVERY APPLICATION.

Our versatile and compact Delta Blower packages can be deployed in any climate zone on Earth. in highly challenging outdoor environments just as safely as in protected indoor spaces. They can be used as both stand-alone machines or in machine combinations. They are as reliable in earthquake zones as they are aboard ships or other mobile applications.

Versatility in detail.

Delta Blowers are powerful all-round aces. Smaller assemblies can be mounted on silo vehicles, while the largest can be used for lifting stations. to unload ships – up to 1,000 tons an hour.



Control range from
25% to 100%



Volume flows from
30 m³/h to 15,000 m³/h



Negative pressure from
-500 mbar
(50 % Vacuum)



Nominal widths from
DN 50 to DN 400



Conveyance of powdery goods



Powerful performance for the loading and unloading of ships

BLOWERS ARE BLOWERS, RIGHT? AN END TO PRECONCEPTIONS.

For over 150 years, AERZEN has been one of the world's most innovative providers of compressor technology. It was almost 150 years ago – 1868, to be exact – that we produced Europe's first positive displacement blower. Since then, we have raised the bar with every succeeding generation. Let yourself be surprised. Discover the extraordinary Delta Blower Generation 5.

Extreme durability

- For a broad range of applications in control ranges from 25 to 100%
- Numerous modifications possible

Compact design

- Space-saving side-by-side setup
- Smaller machine rooms

User-friendly, low-maintenance design

- High availability in continuous operation under difficult environmental conditions
- Control and maintenance from the front of the machine

Plug & Play solution

- Pre-configured, parametrised, ready for connection
- Integrated service kit with filling funnel and initial oil fill

Oil-free per class 0

- Per ISO 8573-1, TÜV-certified

No absorption material

- For use in the pneumatic conveyance of bulk food items (no contamination).

Integrated power component (optional)

- Frequency converter, delta-star, direct/soft start
- Intelligent AERtronic control

Smart oil system

- Oil levels can be checked while machine is running
- Readable from outside the machine
- Oil instead of grease: bearings lubricated with oil last longer





A plus for the environment

- Standard use of IE3 Class energy-efficient motors
- Intake on the cold side of the assembly
- Belt drive for optimal volume flow design
- Quick and easy retrofitting

Hinged motor mounting plate maintains belt tension

- Fully automatic and maintenance-free belt tension
- No need to monitor V-belt tension
- Very easy to mount or replace V-belts

Multifunctional hoist for hinged motor mounting plate

- Safer transport
- Easy, secure V-belt installation
- Mobile installation (e.g. aboard ship/ in earthquake zones)
- Hinged motor mounting plate as support for heavy motors

Low noise levels

- To ensure compliance with noise level regulations near populated areas and production facilities
- Minimal noise levels with optimised acoustic hood
- Integrated pulsation reduction process (patented AERZEN blower stage)

ATEX-compliant

- AERZEN base support certified as spark arresters for ATEX applications

Zone separation filter (optional)

TÜV-certified

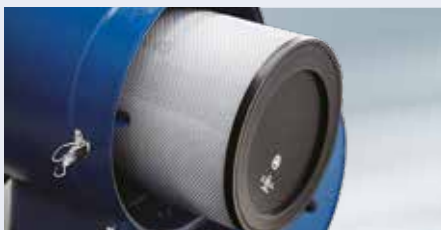
EXCEEDING STANDARDS. AERZEN DELIVERY CONCEPT.

Some do comfortable. Others do efficient. We do both. When your Delta Blower package is delivered, it comes configured, parametrised, ready to plug in and run, and tailored to your processes, of course. It includes all the standardised accessories and components you'll need for flawless operation at the push of a button.

The AERZEN 'All-in' concept: Standard scope.

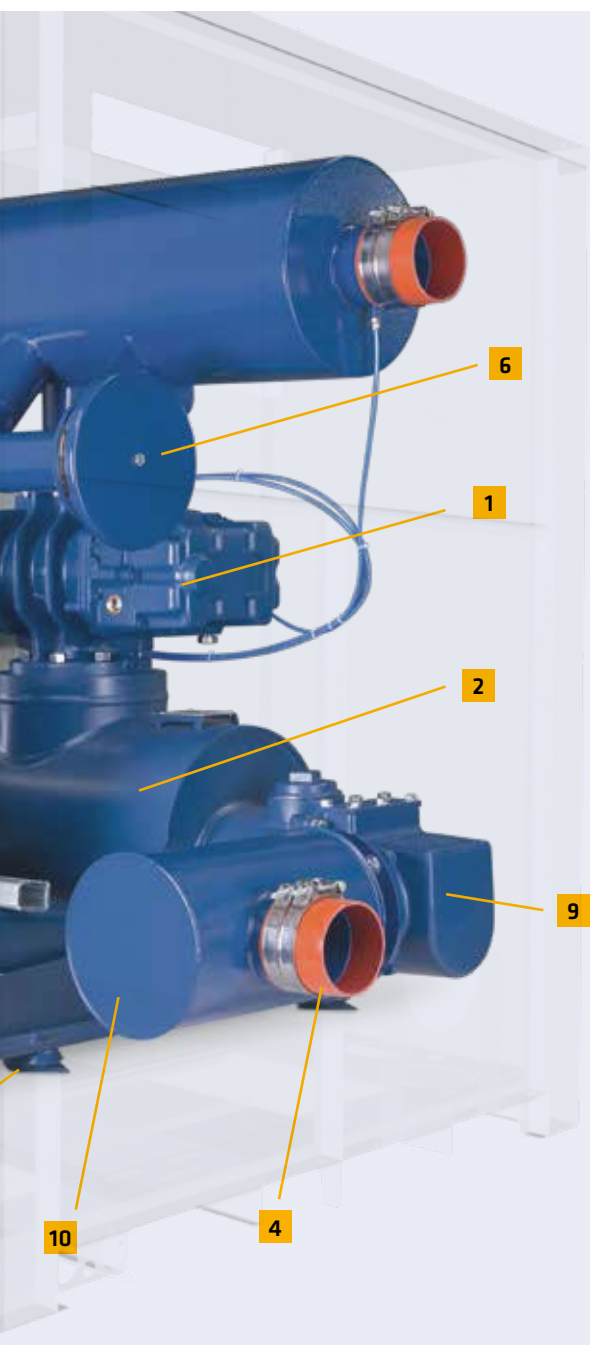


- 1 Three-lobe blower stage**
 - With integrated pulsation reduction
- 2 Base plate with integrated discharge silencer**
 - Certification as spark arrester – according to ATEX manufacturer's guideline
 - Sound insulation free of absorption material with patented discharge silencer



- 3 Intake silencer with integrated starting strainer**
 - Intake via piping
 - Intake via filter element as option
- 4 Flexible rubber sleeve**
 - With clamps
- 5 Flexible machine feet**
 - To decouple machine-borne noise
- 6 Suction valve**
 - For sealing the machine





7 Motor

- High-performance narrow V-belt drive with three-phase AC motor
- Energy-efficient class IE3 motors (up to motor size 315) as standard equipment



8 Hinged motor mounting plate

- Automatic V-belt tension
- Multifunctional hoist for hinged motor mounting plate

9 Connection housing

- Built-in non-return flap

10 Integrated blow-off silencer

- Horizontal design (to DN 125)

Instrumentation

- Vacuum meter gauge to display conveying pressure

MADE BY AERZEN. EFFICIENCY AND MAXIMUM SAFETY IN EVERY ZONE.

The Ex-design you need.

According to Directive 2014/34/EU, AERZEN positive displacement blowers, rotary lobe compressors and screw compressors are considered 'Equipment'. All AERZEN machines, components, and protective systems fall under Equipment Group II (trade, industry). They are divided into three categories, depending on their application. The following information is important for us to ensure that our machines' design completely satisfies your safety requirements.

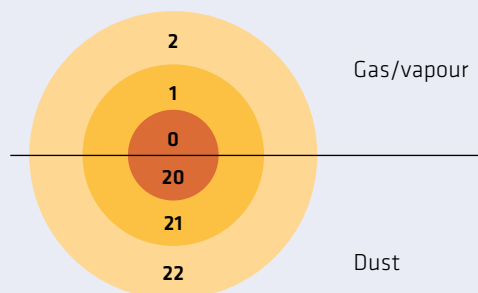
- Ex-zone
- Type of gas or dust
- Internal zone (piping, tank, etc.) and/or external zone (surrounding area)
- Explosion group
- Temperature class (for gases) and/or ignition temperature (for dust)
- Frequency converter operation yes/no
- Ambient temperature

Equipment categories 1 to 3.

Equipment Group II Equipment for industrial use in Ex-areas; hazardous mixtures of air and flammable materials in the form of gases, vapours, mists, or dusts							
Equipment category according to EU directive	Category 1		Category 2		Category 3		
Hazard	Constant, frequent, or over longer periods (> 1000 h per year)		Occasional, random (10 to 1000 h per year)		Infrequent and short-lived (< 10 h per year)		
Safety level	Very high		High		Normal		
Zone designation	Zone 0	Zone 20	Zone 1	Zone 21	Zone 2	Zone 22	
Ex-atmosphere	G (gas)	D (dust)	G (gas)	D (dust)	G (gas)	D (dust)	

Dust or gas: the Ex-atmosphere.

- Permanent hazard
- Hazardous conditions during normal operation
- Hazardous conditions limited to system failure (temporary)



ATEX is a contraction of the French "ATmosphère EXplosible" and is used for the European directive covering equipment and protective systems used in areas with a risk for explosions.

Compressors and blower packages 'made by AERZEN' have always been used in highly critical areas. The know-how and experience that we have gathered over the decades in practically every type of application are reflected especially in the processes that fall under the ATEX directive. The range of solutions that AERZEN offers customers for virtually all ATEX zones is unique in its scope and effectiveness: that's a good starting point when it comes to meeting ever more stringent requirements safely and economically.

Your requirements: our guide for ATEX-compliant designs.

Sound advice is the key to success. This is especially true when planning for applications in Ex-areas, which is why we place emphasis on careful preparation. Our engineers will

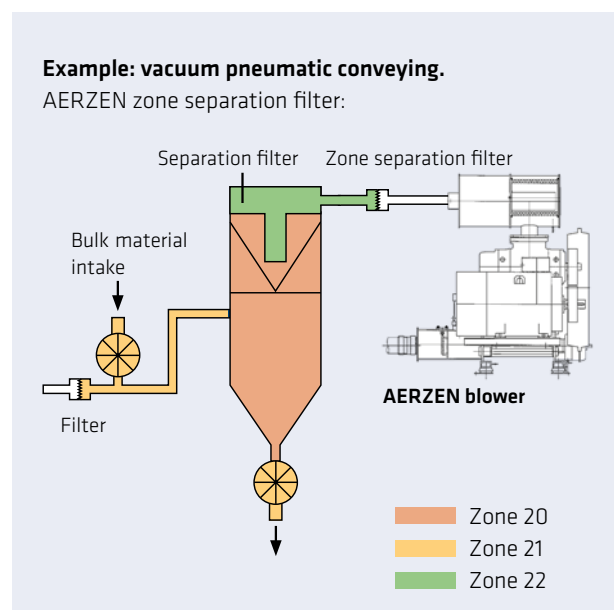
discuss the details of your project with you well in advance, then gather all ATEX-relevant information. This provides the basis for designing the right equipment for each application in accordance with ATEX zone requirements.

Positive pressures								
ATEX equipment	Internal Ex-atmosphere (intake from Ex-zone)				External Ex-atmosphere (Ex-free intake)			
	1	21	2	22	1	21	2	22
Delta Blower	x	x	x	x	x	x	x	x
Delta Hybrid				x		x		x
Delta Screw					x	x	x	x

ATEX solutions from AERZEN: always an idea ahead.

Whether they are to be used for positive or negative pressure applications, high-performance AERZEN equipment will provide you with the right solution for your ATEX zone, with TÜV certification, of course. Our technical solutions are determined by product group and zone type. Their features may include:

- Zone separation filter
- Special documentation
- Use of specialised materials for components in contact with the medium
- Ex-instrumentation
- Vibration monitoring
- Spark arrester
- Special motors designed for a specific zone



ACCESSORIES AND OPTIONS: THE SKY IS THE LIMIT.

Added value: accessory components.

- Acoustic hood for indoor and outdoor installation, forced-ventilation via mechanical fan
- Vertical blow-off silencer with base plate
- Discharge side axial compensator in place of flexible rubber sleeve
- Control cabinet: delta-star, frequency converter, soft-starter
- AERZEN AERtronic blower control
- Additional accessories on demand



Always the right choice: AERZEN original parts

Modifications.

- Special motors
- Special finishes
- ATEX-compliant design
- Acoustic hood with special sand collector for use in desert locations
- Acoustic hood for low temperatures (to -40° C) with heater and gravity blinds
- Acoustic hood for earthquake safety and increased wind resistance
- For use aboard ships and in motor vehicles
- For conveying special gases with specialised materials
- Customer-specific documentation



Always a safe choice: ATEX-compliant AERZEN design

A low-angle, upward-looking photograph of industrial structures. On the left, a complex metal framework with walkways and railings leads up towards the top of the frame. To the right, two large, cylindrical industrial silos or storage tanks are visible, constructed from corrugated metal. The sky above is a pale blue with scattered, wispy white clouds. The overall composition emphasizes the scale and height of the industrial facility.

AN ASSEMBLY'S RANGE OF APPLICATIONS IS
WIDENED CONSIDERABLY WITH ATEX-CERTIFICATION,
PARTICULARLY WITHIN THE BULK MATERIALS INDUSTRY.

A GREAT ADVANTAGE: SLIM DESIGN.

Performance data – DELTA BLOWER – negative pressure operation

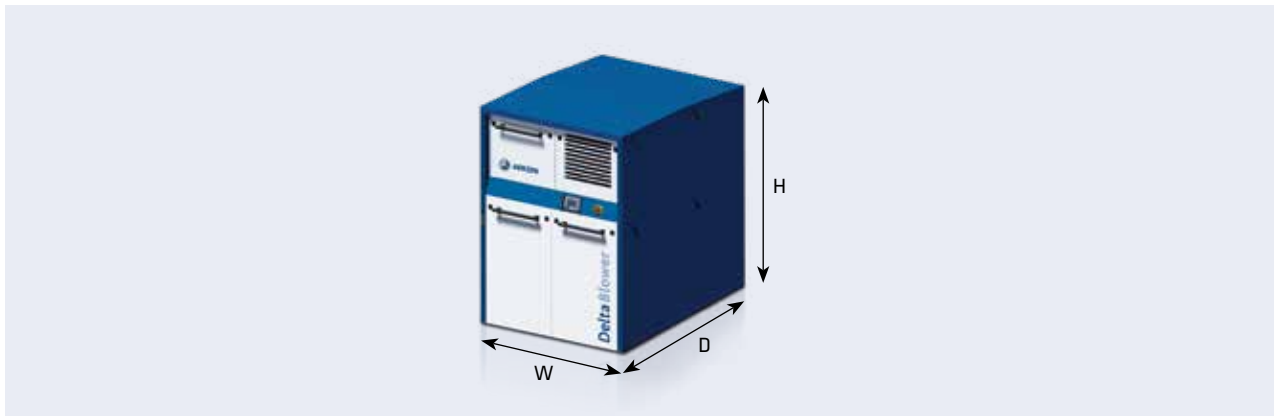


Blower size	Negative pressure	Volume flow	Motor rating	Sound pressure level without blow-off noise
	max. mbar	max. m³/h	max. kW	dB(A)
GM 3 S	-500	250	7.5	68
GM 4 S	-500	340	7.5	70
GM 7 L	-500	520	11 – 18.5	70
GM 10 S	-500	600	15 – 37	70
GM 10 S	-500	730	15 – 37	70
GM 15 L	-500	1,080	22 – 37	73
GM 25 S	-500	1,510	30 – 55	73
GM 30 L	-500	2,120	45 – 90	75
GM 35 S	-500	2,420	55 – 90	75
GM 50 L	-500	2,700	75 – 90	75
GM 50 L	-500	3,450	75 – 250	78
GM 60 S	-500	3,640	75 – 250	78
GM 80 L	-500	5,150	110 – 250	80
GM 90 S	-500	5,600	110 – 250	80
GM 110 S	-500	6,600	110 – 250	80
GM 130 S	-500	8,770	400	82
GM 150 S	-500	9,700	400	82
GM 220 L*	-500	12,800	400	82
GM 240 S*	-500	15,000	400	80

* Implementation in Kompakt IV

Ask for further pressure ranges within AERZEN's capabilities.

Dimensions and weight (Subject to technical modifications, products subject to technical changes).



Model	W	D	H	Nozzle size	Weight without acoustic hood	Weight with acoustic hood
	mm	mm	mm	DN	kg	kg
3 S	800	800	1,055	50	148	212
4 S	925	1,135	1,280	80	207	299
7 L	925	1,135	1,280	80	212	304
10 S	925	1,135	1,280	80	236	328
10 S	1,250	1,350	1,500	100	336	496
15 L	1,250	1,350	1,500	100	351	511
25 S	1,250	1,350	1,500	125	407	567
30 L	1,500	1,800	1,900	150	690	1,020
35 S	1,500	1,800	1,900	150	780	1,110
50 L	1,500	1,800	1,900	150	830	1,160
50 L	1,700	2,055	2,111	200	905	1,475
60 S	1,700	2,055	2,111	200	1,035	1,605
80 L	1,900	2,200	2,308	250	1,550	2,200
90 S	1,900	2,200	2,308	250	1,620	2,270
110 S	1,900	2,200	2,308	250	1,820	2,470
130 S	2,100	2,850	2,345	300	2,596	3,550
150 S	2,100	2,850	2,345	300	2,796	3,750
220 L*	2,800	4,304	3,500	400	4,981	8,240
240 S*	2,800	4,304	3,500	400	5,371	8,630

* Implementation in Kompakt IV

Weights without motor and belt drive



AERZEN. Compression - the key to our 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, over 2,000 experienced employees are working hard to shape the future of compression 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, stability of value and efficiency. Go ahead - challenge us!

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EXPECT PERFORMANCE