Oil-free air blowers & low pressure compressors

Oil-free air solutions up to 4 bar(g) / 58 psig

Why blower and low pressure technologies?

Blowers and low pressure compressors are specifically engineered for applications that require a pressure between 0.3 and 4 bar(g). Enormous energy gains can be made by choosing the right type and size of compressor for your applications. That is why Atlas Copco introduced several low pressure technologies into the market, each of them engineered to match the exact pressure and flow requirements of your application, helping you to create a more sustainable production process.

Maximizing your energy savings with a Variable Speed Drive (VSD)

Operations have a fluctuating demand for air, that is why we pioneered the Variable Speed Drive (VSD) technology for blowers and low pressure compressors to make sure that your processes get the required air at the required time. This makes sure that your units are not using more energy than needed, effectively decreasing your energy consumption. This effectively decreases the average lifecycle cost of a blower or low pressure compressor by 22%.

Simplifying supervision and maintenance

To further enhance the efficiency of your process and ease of use of your blower or compressed air installation, we offer you different ways to monitor and control your units, minimizing energy consumption, monitoring the equipment's running conditions and providing you with relevant information on the maintenance status. And should your installation require any maintenance: with our worldwide service network, there is always a service technician near you, available to help you keep your installation in optimal shape and prevent costly downtime of your production.

Your process

Blowers and low pressure compressors are an essential part of the production processes, being used in a wide and diverse range of industries around the world. Our experts are always available to help you define the most fitting solution for your industry and application.

Wastewater treatment	Lobe	Screw		Turbo				Claw
	blowers (ZL)	blowers (ZS)	compressors (ZE/ZA)	high speed blowers (ZB VSD+)	geared blowers (ZB+)	geared compressors (ZHL/ZH)	multistage blowers (ZM)	blowers (DZS)
Filter backwash	✓	✓					✓	✓
Aerated lagoon		✓		✓	✓		✓	✓
Oxidation ditch		✓		✓	✓		✓	✓
Activated sludge	✓	✓		✓	✓		✓	✓
Sequencing batch reactor	✓	✓					✓	
Membrane bioreactor	✓	✓		✓	✓		✓	
Bio aerated filters		✓		✓	✓		✓	✓
Channel aeration	✓	✓		✓	✓		✓	✓
Digesters	✓	✓						

Cement

	Lobe	Screw		Turbo				Claw
	blowers (ZL)	blowers (ZS)	compressors (ZE/ZA)	high speed blowers (ZB VSD+)	geared blowers (ZB+)	geared compressors (ZHL/ZH)	multistage blowers (ZM)	blowers (DZS)
Pneumatic conveying (pressure)	✓	✓	✓	✓	✓	✓		✓
Pneumatic conveying (vacuum)	✓						✓	
Truck, train and bulk unloading	✓	✓	✓	✓	✓			✓
Airlift system	✓	✓	✓					✓
Silo fluidization	✓	✓					✓	✓
Combustion air for kilns	✓	✓		✓	✓		✓	
Filter dust bin aeration	✓	✓	✓					✓

Food & beverage

	Lobe	Screw		Turbo				Claw
	blowers (ZL)	blowers (ZS)	compressors (ZE/ZA)	high speed blowers (ZB VSD+)	geared blowers (ZB+)	geared compressors (ZHL/ZH)	multistage blowers (ZM)	blowers (DZS)
Pneumatic conveying (pressure)	✓	✓	✓	✓	✓	✓		✓
Pneumatic conveying (vacuum)	✓						✓	
Fermentation	✓	✓	✓	✓	✓	✓		✓
Packaging (vacuum)							✓	
Truck unloading	✓	✓	✓	✓	✓			✓
Wastewater treatment	✓	✓		✓	✓		✓	✓

Mining

	Lobe	Screw		Turbo			Claw
	blowers (ZL)	blowers (ZS)	compressors (ZE/ZA)	high speed blowers (ZB VSD+)	geared blowers (ZB+)	geared compressors (ZHL/ZH)	multistage blowers (ZM)	blowers (DZS)
Leaching	✓	✓	✓				✓	
Pneumatic conveying (pressure)	✓	✓	✓	✓	✓	✓		✓
Pneumatic conveying (vacuum)	✓						✓	
Flotation cells			✓				✓	
Combustion air for kilns, roasters & fluidized bed	✓	✓		✓	✓		✓	
Coal bed methane	✓	✓					✓	
Wastewater treatment	✓	✓		✓	✓		✓	✓

Energy

	Lobe	Screw		Turbo			Claw
	blowers (ZL)	blowers (ZS)	compressors (ZE/ZA)	high speed blowers (ZB VSD+)	geared blowers (ZB+)	geared compressors (ZHL/ZH)	multistage blowers (ZM)	blowers (DZS)
Oxidation air	✓	✓		✓	✓	✓	✓	✓
LFG Extraction	✓	✓					✓	
CO_2 Recovery System		✓					✓	
Combustion Air	✓	✓	✓	✓	✓		✓	✓
Fluidization Air	✓	✓	✓				✓	✓
Pneumatic conveying (pressure)	✓	✓	✓	✓	✓	✓		✓
Pneumatic conveying (vacuum)	✓	✓					✓	
Wastewater treatment	✓	✓		✓	✓		✓	✓

Oil & gas

	Lobe	Screw		Turbo				Claw
	blowers (ZL)	blowers (ZS)	compressors (ZE/ZA)	high speed blowers (ZB VSD+)	geared blowers (ZB+)	geared compressors (ZHL/ZH)	multistage blowers (ZM)	blowers (DZS)
Sulphur recovery	✓			✓	✓		✓	
Thermal incineration/ oxidation (tail gas)				✓	✓		✓	
Carbon black			✓				✓	
Sour gas							✓	
Gas boosters	✓						✓	
Offload gas recovery	✓						✓	
Vapor control	✓						✓	
Conveying	✓	✓	✓	✓	✓		✓	
Wastewater treatment	✓	✓		✓	✓		✓	✓

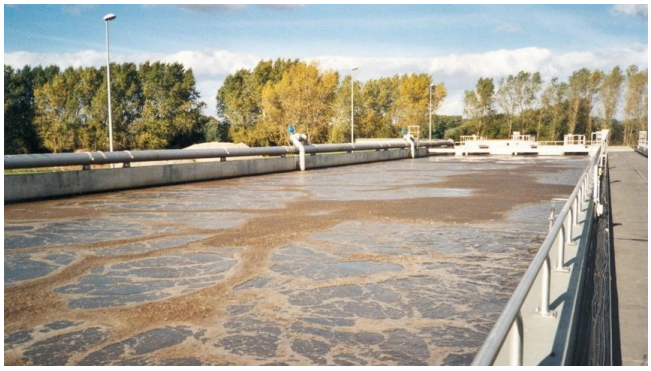
Aquaculture

	Lobe	Screw		Turbo				Claw
	blowers (ZL)	blowers (ZS)	compressors (ZE/ZA)	high speed blowers (ZB VSD+)	geared blowers (ZB+)	geared compressors (ZHL/ZH)	multistage blowers (ZM)	blowers (DZS)
Basin aeration	✓	✓	✓	✓	✓		✓	✓
Feeding systems (pneumatic conveying)	✓	✓	✓	✓	✓			✓
Bubble curtain	✓	✓	✓	✓	✓		✓	✓
Live fish handeling	✓	✓						✓
Dead fish removal		✓	✓					✓

Zoom in on industry & application

Municipal & industrial wastewater treatment

As most applications in wastewater treatment require a continuous air flow with a variable volume, you need a solution that can handle a continuous uptime whilst also keeping energy consumption low. Engineered with the highest reliability and lowest energy consumption in mind, our energy-efficient units ensure your process gets the air supply it needs. On top of that, we offer different service plans and ways to monitor, control and optimize your blower unit(s) to make sure your units are always in optimal condition.



Applications in the cement industry

In a cement factory, compressed air is an integral part of the operation. Compressed air is used as energy source to assist in movement of materials in the cement making process or for powering tools that can withstand the dust, moisture and high temperatures of the process, or for plant and instrument air. We offer you a comprehensive range of oil-free air blower and low pressure compressor technologies that are suited for harsh conditions and environments, making them ideal for operation in cement plants all around the world.

Applications in the food & beverage industry

When dealing with products that have high product safety and quality standards such as food and beverage products, you need the equipment in your production process to comply to those standards. Our oil-free compressors deliver ISO 8573-1 (2010) Class 0 oil free air and are also compliant with the ISO 22000 food safety management system, helping you safeguard the end quality of your product. For applications that require a variable volume of air supply, such as fermentation and wastewater treatment, we offer you Variable Speed Drive (VSD) packages that constantly match the air
low to the exact demand of your process.

Our solutions

The perfect fit for your production process depends on a number of factors such as compressor or blower size (depending on, among other things, pressure and flow) and the flow demand (constant or variable) specific to your application. To select the perfect fit for your business you might consider other aspects such as initial capital investment, return on investment and serviceability. That is why we at Atlas Copco offer you the complete range of low pressure compressor and blower technologies, making sure every single solution we offer helps you to achieve operational excellence.

Technology	Product	Pressure				Flow (FAD)			
		bar(g)		psig		m^3/h		cfm	
		min.	max.	min.	max.	min.	max.	min.	max.
Lobe	blower	ZL	0.3	1.0	4.4	14.5	30	9,500	20	5,600
Screw	blower	ZS	0.3	1.5	4.4	22	270	9,100	160	5,300
	compressor	ZE/ZA	1.0	4.0	14.5	58	240	8,900	140	5,200
Turbo	high speed blower	ZB VSD+	0.3	1.4	4.4	20	1,300	12,000	750	7,100
	geared blower	ZB+	0.3	1.2	4.3	17	6,000	30,000	3,500	17,600
	geared compressor	ZHL/ZH	1.0	4.0	14.5	58	2,400	38,000	1,400	22,000
	multistage blower	ZM	0.1	1.4	1.5	20	350	70,000	200	41,000
Claw	blower	DZS	0.5	2.3	7.3	33	50	340	30	200

ZL - lobe blowers

High uptime at low capital costs

Our trusted tri-lobe technology with its simple and reliable design has been used for over 20 years in numerous applications. The low capital and maintenance costs make our ZL lobe blowers a cost effective solution for all applications that require an air supply between 0.3 and 1 bar(g) / 4.4 and 14.5 psig. Thanks to the innovative design, our units require a minimum amount of floor space and are suited for use in harsh environments such as those with ambient temperatures of +50°C / 120°F.

- Fixed speed or variable speed (VSD)
- Optional Elektronikon® controller
- Plug and Play solution

ZS - screw blowers

High uptime at low lifecycle costs

Our ZS series combines Atlas Copco's trusted screw technology with our latest innovations to deliver you Class 0 certified oil-free air up to 1.5 bar(g) / 22 psig at the lowest lifecycle cost. It's a small and compact solution that can be installed anywhere side-by-side. These blower units are known for their energy efficiency and are easy to maintain, fit perfectly into your existing blower room and can be placed outside in the toughest environments, allowing an ambient temperature up to 50°C/120°F, making them the prefect solution for anyone looking for a replacement that will drastically reduce lifecycle costs.

- Fixed speed or variable speed (VSD)
- Class 0 certified oil-free air
- Plug & Play solution

ZE/ZA - low pressure screw compressors

Providing rugged performance at the lowest operational cost

With our ZE/ZA range we offer you a robust source of Class 0 certified oil-free air supply for all your applications between 1 and 4 bar(g) / 14.5 and 58 psig. Our low pressure screw compressors are specifically designed to be used in arduous dusty and humid environments. Our ZE/ZA units are engineered to ensure reliable operation while maximizing energy savings.

- Fixed speed or variable speed (VSD)
- Class 0 certified oil-free air
- Air or water cooled

ZB VSD^{+} - turbo blowers (high speed)

Unique design, proven efficiency

Our ZB VSD^{+} oil-free turbo blowers with frictionless direct drive and magnetic bearings are specifically designed for medium sized applications that require air at a variable volume flow and a low pressure. With our ZB^{+} range, we offer you a premium, reliable solution that delivers you Class 0 certified oil-free air up to 1.4 bar(g) / 20.3 psig, at the lowest lifecycle cost.

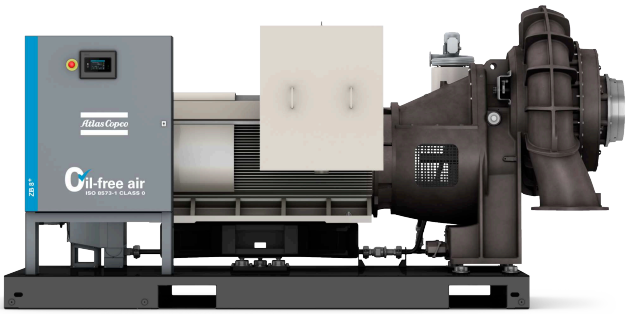
- High speed permanent magnet motor with variable speed drive (VSD)
- Class 0 certified oil-free air
- Plug & Play solution

ZB^{+} - turbo blowers (integrally geared)

High flow, low lifecycle costs

Building on more than 40 years of experience in geared turbo blowers, Atlas Copco further completes its low pressure portfolio with a reliable and energy-efficient solution specifically manufactured for applications that require air flows above 6,000 m^{3}/hr / 3,500 cfm and a pressure below 1.2 bar(g) / 17 psig. The ZB^{+} geared turbo blower is an ideal fit for customers dealing with low pressure applications that require a high air flow and are looking to minimize the lifecycle costs of their blower solution. Thanks to the IGV, the optional DGV and the backwards leaned impeller design, our ZB^{+} fixed speed geared turbo has a turndown up to 55% without compromising on efficiency, making them highly suited for application that have a variable air demand.

- Fixed speed with high turndown
- Class 0 certified oil-free air



ZHL/ZH

High flow, reliable operation

Available as one-stage (ZHL) or two-stage (ZH) solution, our geared turbo compressors have been providing Class 0 certified air for applications with a high air volume flow demand and pressure between 1 and 4 bar(g) / 14.5 and 58 psig for over many years. Thanks to the experience we built throughout the years, we are able to offer you a reliable, efficient and service-friendly unit with a low lifecycle cost.

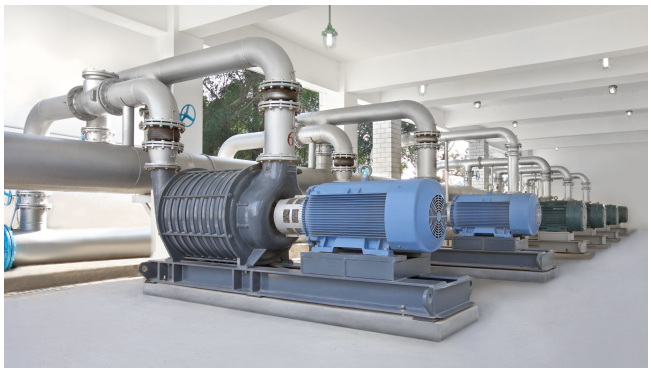
- Fixed speed with variable inlet guide vanes
- Class 0 certified oil-free air

ZM - multistage centrifugal blowers

A flexible solution adaptable to your needs

Whether you need air, gas, pressure or vacuum, the ZM multistage centrifugal blowers and exhausters provide you with the quality you need. In thousands of installations around the world, our oil-free multistage centrifugal blowers and exhausters are a reliable compressed air source for all applications up to 1.4 bar(g) / 20.3 psig.

- Fixed speed or variable speed (VSD)
- Air, gas, pressure and vacuum applications



DZS - dry claw blowers

Reliability at a low lifecycle cost

Our DZS dry claw blowers are an ideal solution for applications that require a low air volume flow and pressure up to 2.3 bar(g). The small and compact unit are suited for both centralized and decentralized systems and require a low level of maintenance.

- Fixed speed
- Class 0 certified oil-free air

Maximize your resources with a Service Plan

Properly caring for your air compressor helps you lower your operating costs and minimises the risk for unplanned breakdowns or production stops. Atlas Copco offers energy efficiency checks, service, repairs, spare parts and maintenance plans for all air compressors.

Entrust your servicing to our expert professionals and ensure your business continues to run efficiently. Our plans cover repairs, preventative maintenance, spare parts, and more.

Reduce your total cost of ownership and benefit from optimal performance

- Save costs - Optimal maintenance will reduce the operational cost of your compressor system.
- Increase operational efficiency - Our maintenance expertise makes your life easier when it comes to resource management.
- High uptime and performance - Specialist service keeps your equipment running and protect your investment.

Compressor parts at your doorstep: our Parts Plan

Genuine Parts, designed and produced to the exact specifications of your compressors, delivered right where and when you need them.

- All parts, one package - Always have the needed part for your service intervention at hand.
- Save money - A Service Kit costs less than the sum of its components if ordered separately
- Less administration - Every Service Kit has a single part number, allowing you to create a simple purchase order which can be easily followed-up.

Fixed Price Services: best compressor parts & maintenance

Avoid financial surprises. Our Fixed Price Services combine the expertise of factory-trained technicians with the quality of our genuine compressor parts.

- The best compressor parts - The unrivalled quality of our genuine parts results in optimal uptime, energy consumption and reliability.
- An expert maintenance plan - Rely on the expertise of factory-trained Atlas Copco technicians.
- Clear and easy - Tailored to your installation, site conditions, and production planning, every Fixed Price Service has a clear scope and price.

Preventive Maintenance Plan for optimal compressor uptime

Rely on trained Atlas Copco technicians and the unrivalled quality of our genuine parts.

- Service reports - We help you achieving maximum energy efficiency by keeping you up to date of the status of your system.
- Prevent breakdown - If our technicians spot an additional developing problem, they will propose a solution.
- Top-priority emergency call out system - If an urgent repair is needed, you get priority assistance.

Complete compressor care with our Total Responsibility Plan

We take care of all your compressor maintenance, upgrades, repairs and even breakdowns at an all-inclusive price.

- Complete compressor care - On-time maintenance by expert service engineers, genuine parts, proactive upgrades and compressor overhauls.
- Total risk coverage - This means we take care of all your compressor repairs and even breakdowns, without extra charges.
- Ultimate efficiency - Fitting the latest drive line components gives you high standards of compressor efficiency and reliability.

Monitoring and control

Get the best out of your installation!

Elektronikon®

The Elektronikon® unit controller is specially designed to maximize the performance of your blowers under a variety of conditions. Optimizer 4.0 takes charge of the management of your full blower room. Key benefits are increased energy-efficiency by lowering energy consumption, reduced maintenance times and less stress… less stress for both you and your entire air system.

Elektronikon® MK5 Touch - Intelligence is part of the package

The full color touch display gives you an easy-to-understand readout of the equipment's running conditions.

- Clear icons and intuitive navigation provides you fast access to all of the important settings and data.
- Monitoring of the equipment running conditions and maintenance status; bringing this information to your attention when needed.
- Operation of the equipment to deliver specifically and reliably to your compressed air needs.
- Built-in remote control- and notification functions provided as standard, including simple to use integrated webpage.
- Support for 31 different languages, including character based languages.

Connectivity, with SMARTLINK

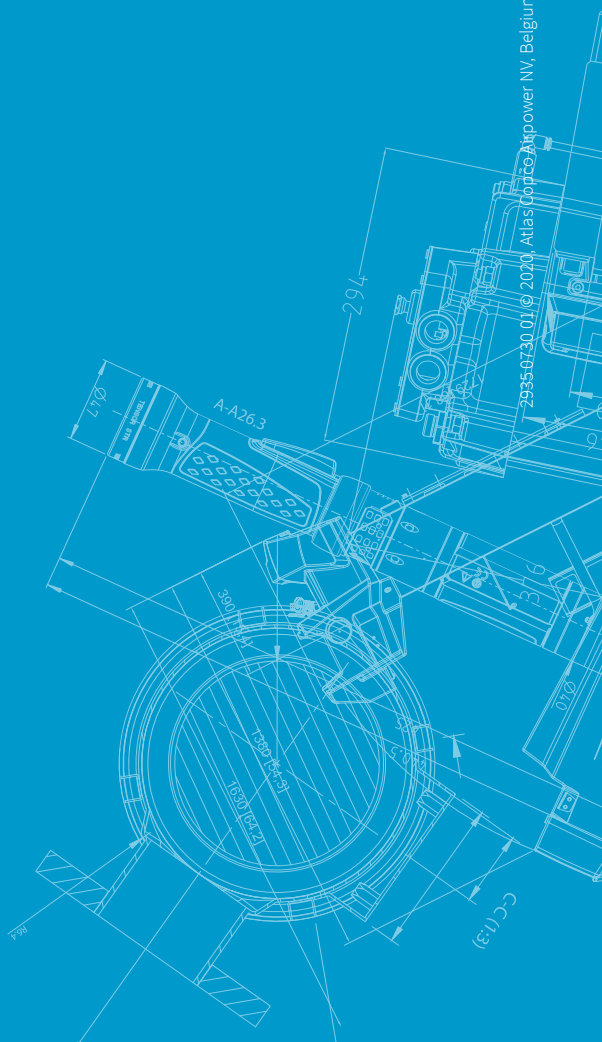
Monitor your machines over the ethernet with the Elektronikon® unit controller and the **SMART**LINK service. Monitoring features include warning indications, compressor shut-down, sensor trending and maintenance scheduling.

Go for enery efficiency: customized reports will be generated on the energy efficiency of your blower room, in compliance with ISO 50001.

Sit back and relax, Optimizer 4.0 has it under control

A properly managed compressed air network will save energy, reduce maintenance, decrease downtime, increase production and improve product quality. Atlas Copco's Optimizer 4.0 monitors and controls multiple blowers simultaneously; it is one central point of control for the whole compressed air network, ensuring all blowers provide optimum performance for your process. The result is a completely autonomous and energy-efficient network, giving you peace of mind and keeping your costs minimized.

Notes



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