

SIMPLEXX

Screw compressor

**100% oil-free
compression process**

oil-free



AirCare
CERTIFIED WARRANTY
COVERED BY ALMiG

TERMS & CONDITIONS APPLY



**TOP
ENERGIE
EFFIZIENZ**

SIMPLEXX

OIL-FREE, EFFICIENT, QUIET



100% OIL-FREE – IN ACCORDANCE WITH ISO 8573-1

Two-stage, dry screw technology for guaranteed oil-free compressed air and maximum energy efficiency



RELIABLE AND DURABLE

Excellent corrosion protection, long-lasting bearings and optimised seals for maximum operational reliability



WHISPER-QUIET AND USER-FRIENDLY

Innovative sound insulation, simple maintenance and intelligent control for maximum ease of use



HEAT RECOVERY AND ENERGY SAVING

Optional heat recovery, as well as speed-controlled models and stable pressure regulation, reduce pressure losses and adapt to your needs

SIMPLEXX

EFFICIENCY REDEFINED

The SIMPLEXX series combines two-stage, oil-free compression with state-of-the-art drive and control technology – ensuring maximum energy savings, stable pressure conditions and the highest level of operational reliability. It also features a maintenance-friendly design and exceptionally low noise levels.

Drive & Compression

- Two-stage, dry screw technology for oil-free compressed air
- High efficiency thanks to optimised rotor profiles
- Available with fixed-speed or variable-speed drive
- High-efficiency IE4 motors with IP55 protection rating, insulation class F
- Direct drive with gearbox – no belts, no slip, minimal losses
- Power range: 132 – 275 kW

Cooling & Assembly

- Available in air-cooled or water-cooled versions
- Efficient heat dissipation thanks to 3-BOX structure (cooling, drive and suction chambers)
- Optimised airflow for quiet operation and long service life
- Water-cooled version with low-maintenance plate fin cooler

Controls & Operation

- Integrated ACHE control as standard
- Monitoring of all operating parameters for maximum operational reliability
- Networkable via RS-485 or optional web server for remote monitoring included free of charge
- Automatic restart after power failure
- User-friendly display with intuitive menu navigation

Reliability & Maintenance

- Proven dual vent hole prevents oil from entering the compression chamber
- Teflon-coated stainless steel rotors for high corrosion protection
- Durable bearings for extended overhaul intervals
- Generously sized maintenance doors and reduced pipework for easy access
- **Cooling:** Air-cooled (standard) or water-cooled (optional)

Sample calculation for heat recovery*

Power (kW)	Heatrecovery usage	Cost savings		CO ₂ -Reduction	
	kW	€/year	T/year	kg/year	
132	118,8	105,600	191	191,030	
145	130,5	116,000	210	209,844	
160	144	128,000	232	231,552	
250	225	200,000	362	361,800	

For a 250 kW compressor

CO₂ reduction **362 t-CO₂/year**

Cost advantage **200,000 €/year**

*based on 8,000 working hours per year

SIMPLEXX

ENERGY-SAVING COMPLETE SOLUTION

Energy savings comparison

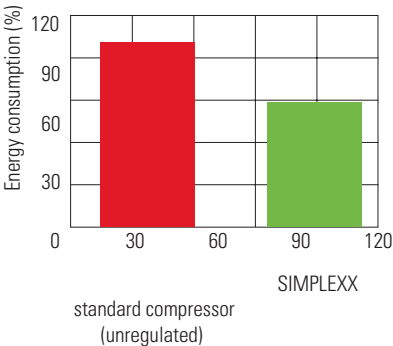
The diagram* compares the energy consumption of an unregulated standard compressor with the SIMPLEXX system.

Whilst the standard compressor constantly consumes 100% of its energy, the SIMPLEXX significantly reduces consumption thanks to intelligent speed control.

The result: up to 15% energy savings, lower operating costs and a smaller carbon footprint.

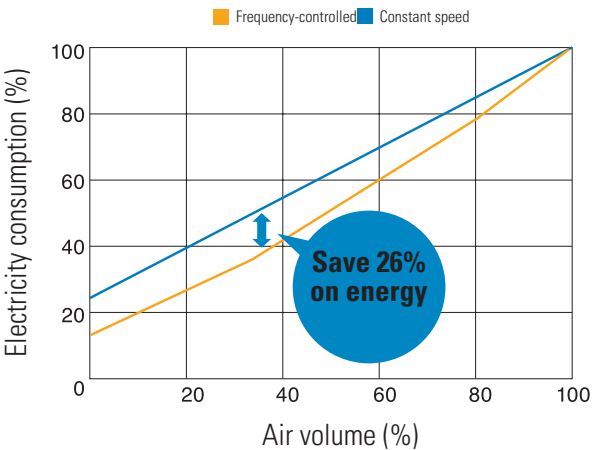
*Sample calculation based on 8,000 operating hours and 75 kW output

up to
15%
energy savings



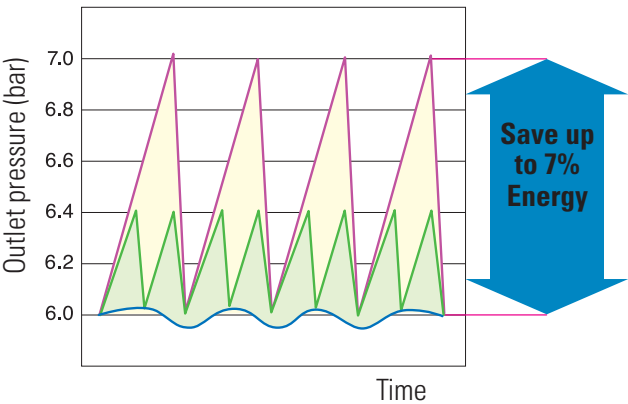
Part-load performance of the inverter model

The part-load performance of the inverter model has been improved thanks to the induction motor and the superior rotor design. The inverter model delivers the required air flow with reasonable power consumption.



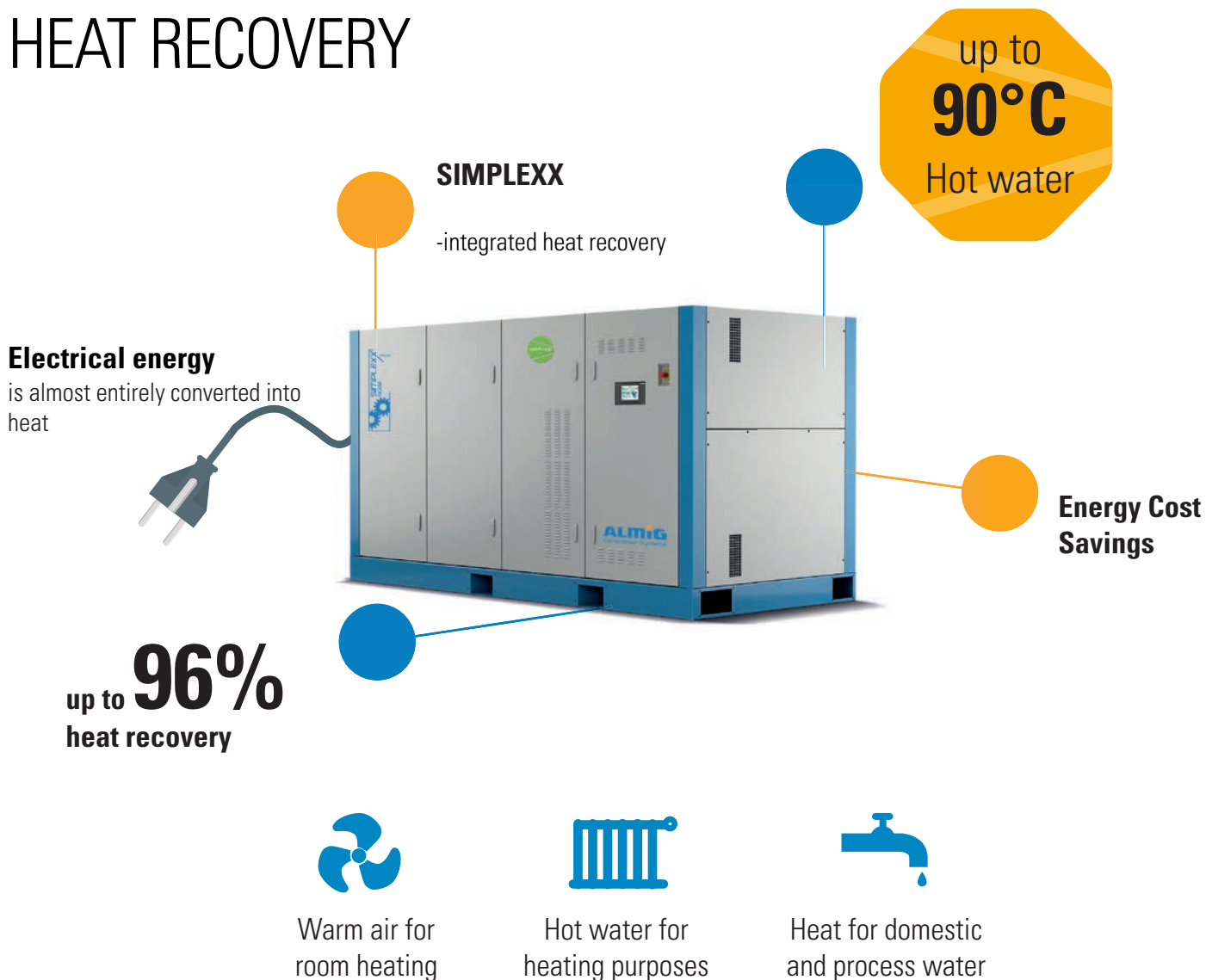
Pressure control of the inverter model, energy-saving logic of the fixed-speed model

The stable pressure control of the inverter model keeps the line pressure lower. Pressure fluctuations are kept within 0.1 bar. The energy-saving logic of the fixed-speed model forcibly switches from load to idle during every power control cycle. This prevents excessive pressure build-up and minimises energy loss.



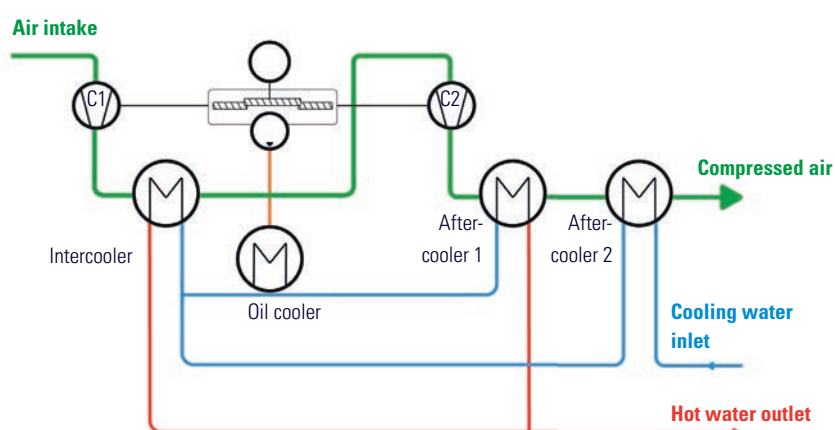
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HEAT RECOVERY



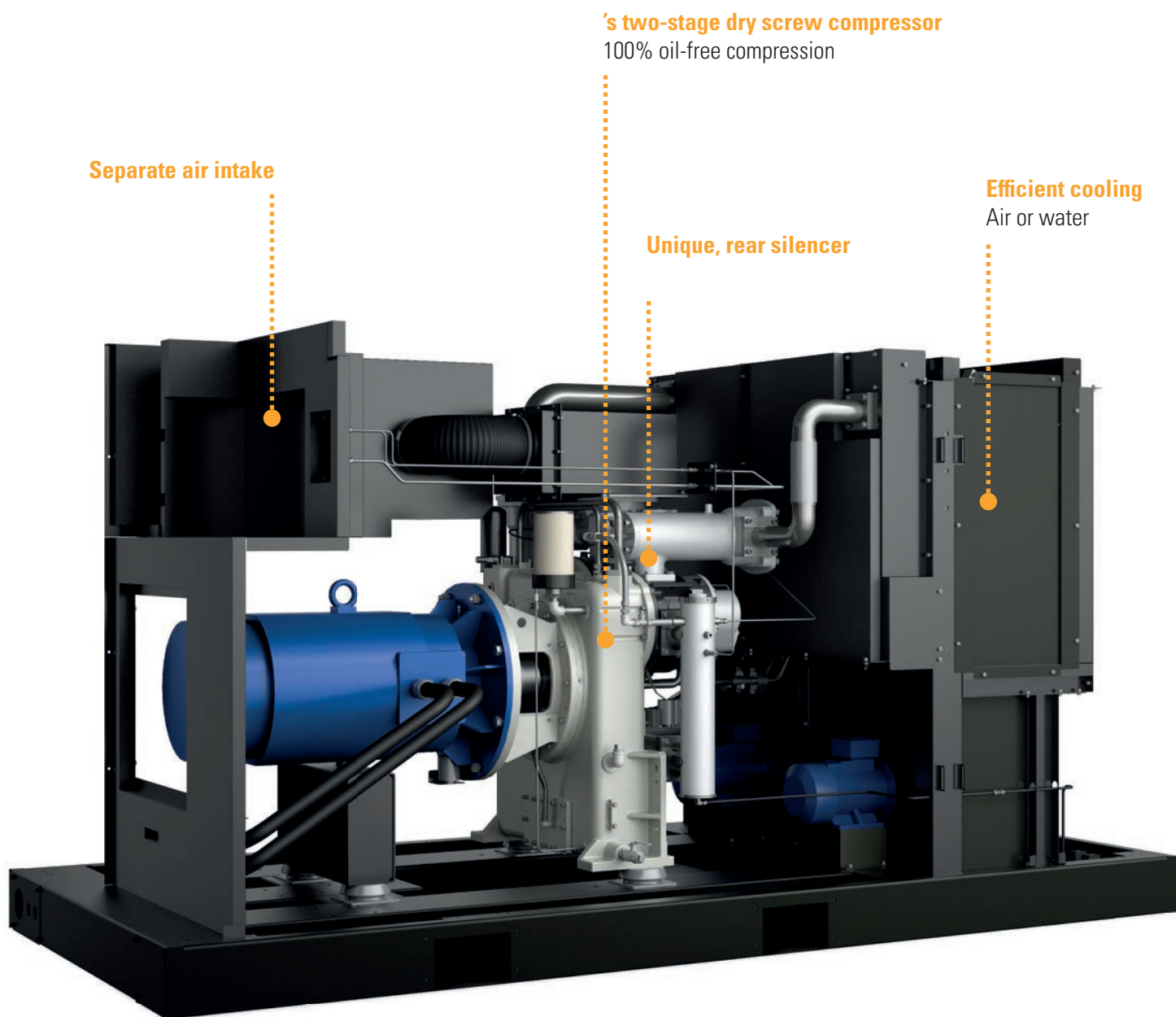
How heat recovery works

Compression generates heat, which is specifically utilised in this system for energy recovery. The intake air is compressed in two stages and cooled via an intermediate and after-cooler. The cooling water heated during this process absorbs the heat from the oil and air coolers and is subsequently available as hot water for further use – for example, for heating or process heat. In this way, a large proportion of the energy used can be efficiently recovered, significantly increasing the overall efficiency of the plant.



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PERFORMANCE FROM WITHIN



's two-stage dry screw compressor
100% oil-free compression

Separate air intake

Unique, rear silencer

Efficient cooling
Air or water

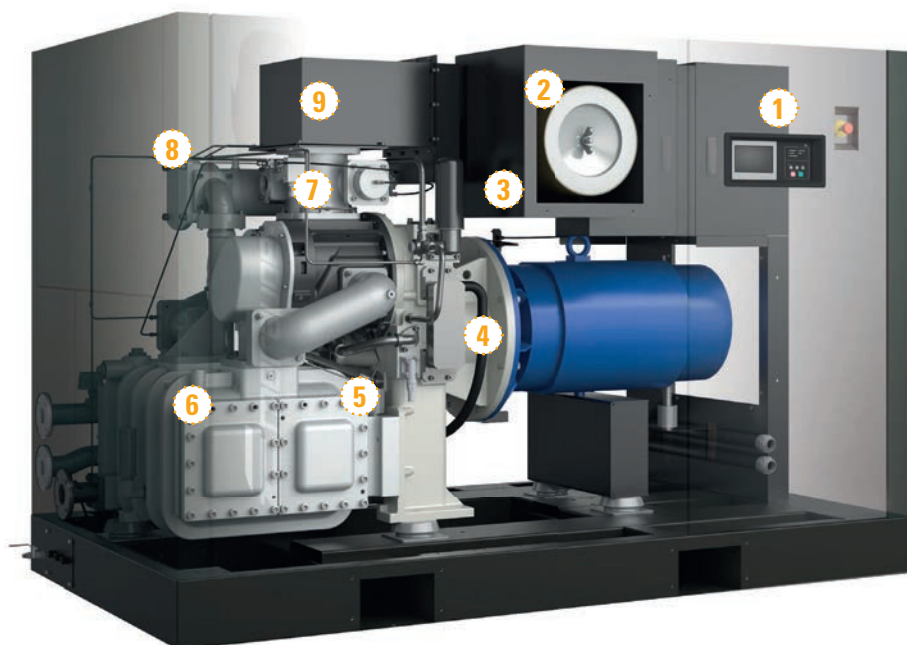


AirControl HE Control System
Intelligent control system that monitors, visualises and documents

SIMPLEXX

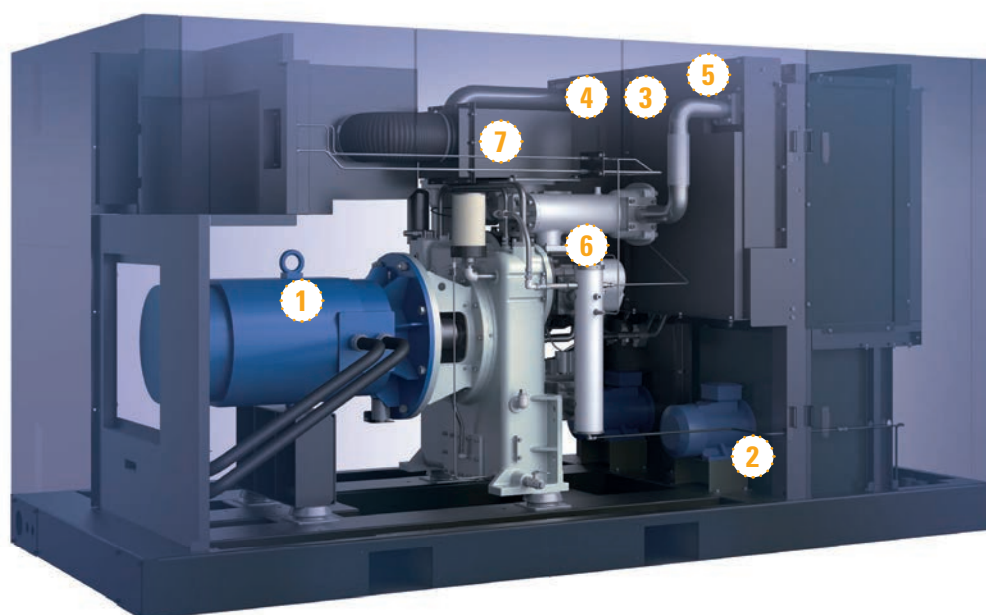
PRODUCT VARIATIONS

Water-cooled model



- ① Control
- ② Intake filter
- ③ Oil filter
- ④ Oil cooler
- ⑤ Intercooler
- ⑥ Aftercooler
- ⑦ Intake regulator
- ⑧ Exhaust silencer
- ⑨ Intake silencer

Air-cooled model



- ① Main engine
- ② Fan
- ③ Oil cooler
- ④ Intercooler
- ⑤ Aftercooler
- ⑥ Exhaust silencer
- ⑦ Intake silencer

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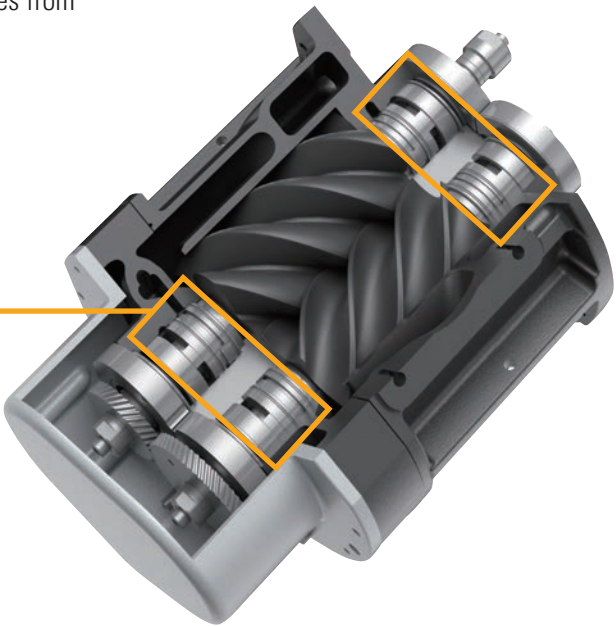
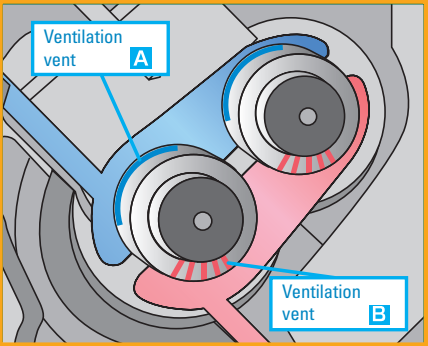
RELIABILITY

Highly efficient rotors

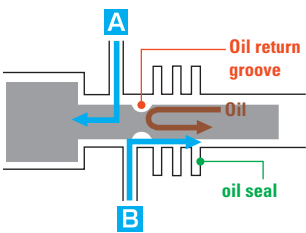
Thanks to rotors designed for optimum performance, the SIMPLEXX series from ALMiG achieves class-leading specific energy consumption.

Tried-and-tested dual vent holes

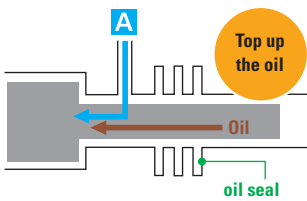
The tried-and-tested dual vent holes prevent oil from entering the compression chamber.



SIMPLEXX
Two atmospheric ventilation openings



COMPETITORS
Individual vent holes



3 steps to a reliable shaft seal assembly (during unloading)

1. A highly reliable oil seal prevents oil from entering.
2. The oil return groove pushes the oil back, even if it breaks through the oil seal.
3. The oil is drained from vent B, even if it breaks through the oil return groove. As the pressure between vents A and B is equal, no oil enters the compressor chambers.

Excellent corrosion resistance

The proven Teflon coating and the stainless steel rotors in the second stage ensure high resistance to deposits and prevent any loss of performance.

Results of the corrosion protection test



Carbon steel + coating



Stainless steel + coating

Longer service life

Thanks to durable bearings, long service lives are achieved.

Level 1 9 years

Level 2 6 years

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USER-FRIENDLINESS

Exceptionally quiet operation

Various noise-reduction measures have drastically reduced the noise level. This ensures a more pleasant working environment.

Noise-reduction package design

The intake points have been consolidated into a single location to reduce noise sources.

Housing design

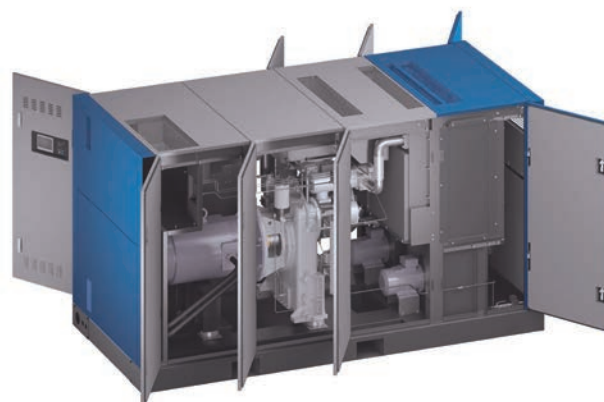
Sound-absorbing material and high sealing performance against abrasive noise reduce noise emission.

Silencers

Newly designed intake and exhaust silencers reduce the noise level.

Easy maintenance

Easy access to key components for maintenance work thanks to large access panels and reduced internal piping.



User-friendly AirControl HE controller

With the controllers from the ALMiG AirControl family, you can optimally control, manage and monitor your entire compressed air supply system.

The intelligent, integrated compressor controllers offer you maximum ease of use and outstanding cost-effectiveness. They ensure maximum reliability in the compressed air supply and plan maintenance work in advance.

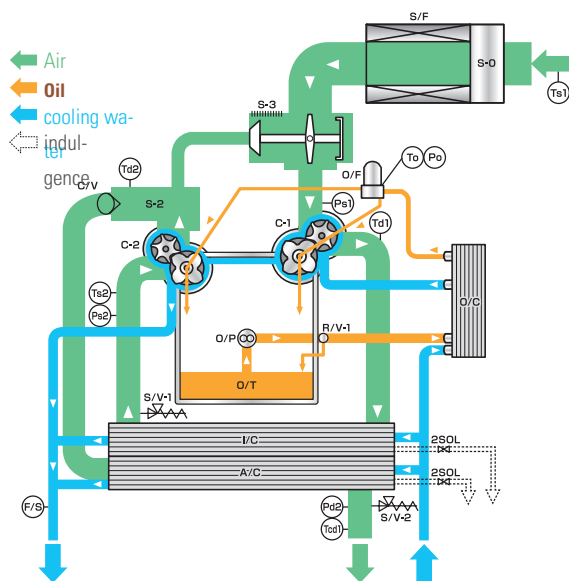
State-of-the-art microprocessor and communication technology is used, guaranteeing seamless integration of all compressor models and the entire range of accessories. And all this comes as standard via the RS-485 data bus. The optional connection to a web server allows you to monitor your compressor station from anywhere in the world.



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VERSION

R&I diagram (water-cooled model)



*This diagrammatic example applies to the , 132–160 kW.

Gas cooler with low pressure drop and high efficiency

Finned plate cooler

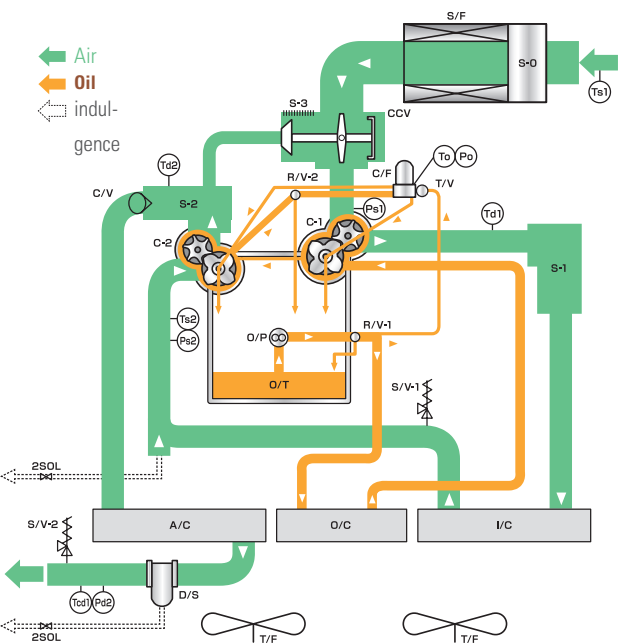


Compared to the tube-and-shell type, the pressure drop was reduced by 80%. As the exhaust air temperature was lowered by optimising the cooler size, other components could also be made smaller. Energy consumption was reduced both inside and outside the cooler. The tubes are made of stainless steel to prevent corrosion.

Construction of the compressor stage in water-cooled systems

The cooling water inside the jackets improves the cooling performance of water-cooled models.

R&I diagram (air-cooled model)



Cool box with a long service life and a 3-box structure

Single-stage air cooler & radial fan



The angled radiator and single-stage design prevent corrosion caused by waterlogging and thermal stress cracking.

3-BOX structure

The 3-BOX structure, which is divided into a cooling box, a drive box and a suction box, ensures effective cooling and low noise levels.

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KEY COMPONENTS

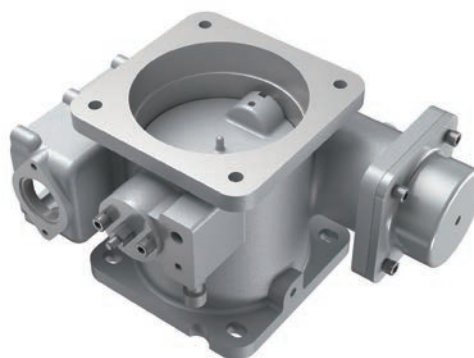
Oil pump

The oil pump mounted on the gearbox is driven by a highly efficient main motor. The risk of oil leaks is reduced by the design, which does not include any pipework.



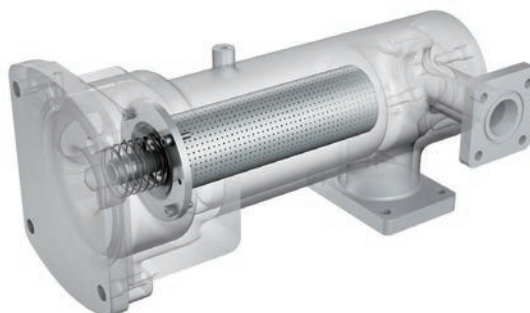
Intake regulator

Tried-and-tested pneumatic flow control valve with fast response time and long service life. Thanks to the integrated exhaust silencer, the number of maintenance parts has been reduced.



Exhaust silencer

Expansion silencers reduce the noise level across a wide frequency range.



Radial fan

This powerful turbo fan is suitable for high-capacity applications and ensures effective cooling.



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KEY FIGURES

50 Hz – air-cooled							
SIMPLEXX	Operating pressure	Air flow rate in accordance with ISO 1217 (Annex C-2009)	Motor rated power	Length	Width	Height	Weight
		max. 7 bar					
Model	There is	m³/min	kW	mm	mm	mm	kg
132	4 - 10.4	20.9	132	3880	1700	1995	4700
145	4 - 10.4	23.8	145	3880	1700	1995	4700
160	4 - 10.4	25.8	160	3880	1700	1995	4700
200	4 - 10.4	33.0	200	4300	1900	2180	6200
250	4 - 10.4	40.5	250	4300	1900	2180	6200
275	4 - 10.4	44.1	275	4300	1900	2180	6250
50 Hz - water-cooled							
132	4 - 10.4	22.0	132	2855	1545	1845	4100
145	4 - 10.4	24.7	145	2855	1545	1845	4200
160	4 - 10.4	26.6	160	2855	1545	1845	4200
200	4 - 10.4	33.6	200	3150	1600	2180	5950
250	4 - 10.4	41.3	250	3150	1600	2180	5950
275	4 - 10.4	45.0	275	3150	1600	2180	6000

50 Hz - drehzahlgeregelt - luftgekühlt								
SIMPLEXX	Operating pressure	Air flow rate in accordance with ISO 1217 (Annex C-2009)		Motor rated power	Length	Width	Height	Weight
		min.	max.					
Modell	bar	m³/min	m³/min	kW	mm	mm	mm	kg
SC 132	4 - 8.6	12.5	23.7	132	3880	1700	1995	4760
SC 160	4 - 8.6	15.0	28,0	160	3880	1700	1995	4760
SC 250	4 - 8.6	22.3	44.2	250	4300	1900	2180	6320
50 Hz - drehzahlgeregelt - wassergekühlt								
SC 132	4 - 10.4	11.8	24.9	132	2855	1545	1845	4160
SC 160	4 - 10.4	12.9	29.0	160	2855	1545	1845	4260
SC 250	4 - 10.4	19.9	45.1	250	3150	1600	2180	6070



ALMiG AirCare WARRANTY

The ALMiG AirCare package allows you to claim for the rectification of faults even after the statutory warranty period has expired. Keep a clear overview of your service costs and avoid any unpleasant surprises.

What makes ALMiG AirCare is that this extension covers not only the newly purchased ALMiG compressors, but also associated components such as

- External heat recovery modules
- Refrigeration dryers
- Adsorption dryers
- Oil-water separation systems
- Condensate drains

In addition to the supply of spare parts under warranty, AirCare also covers the following:

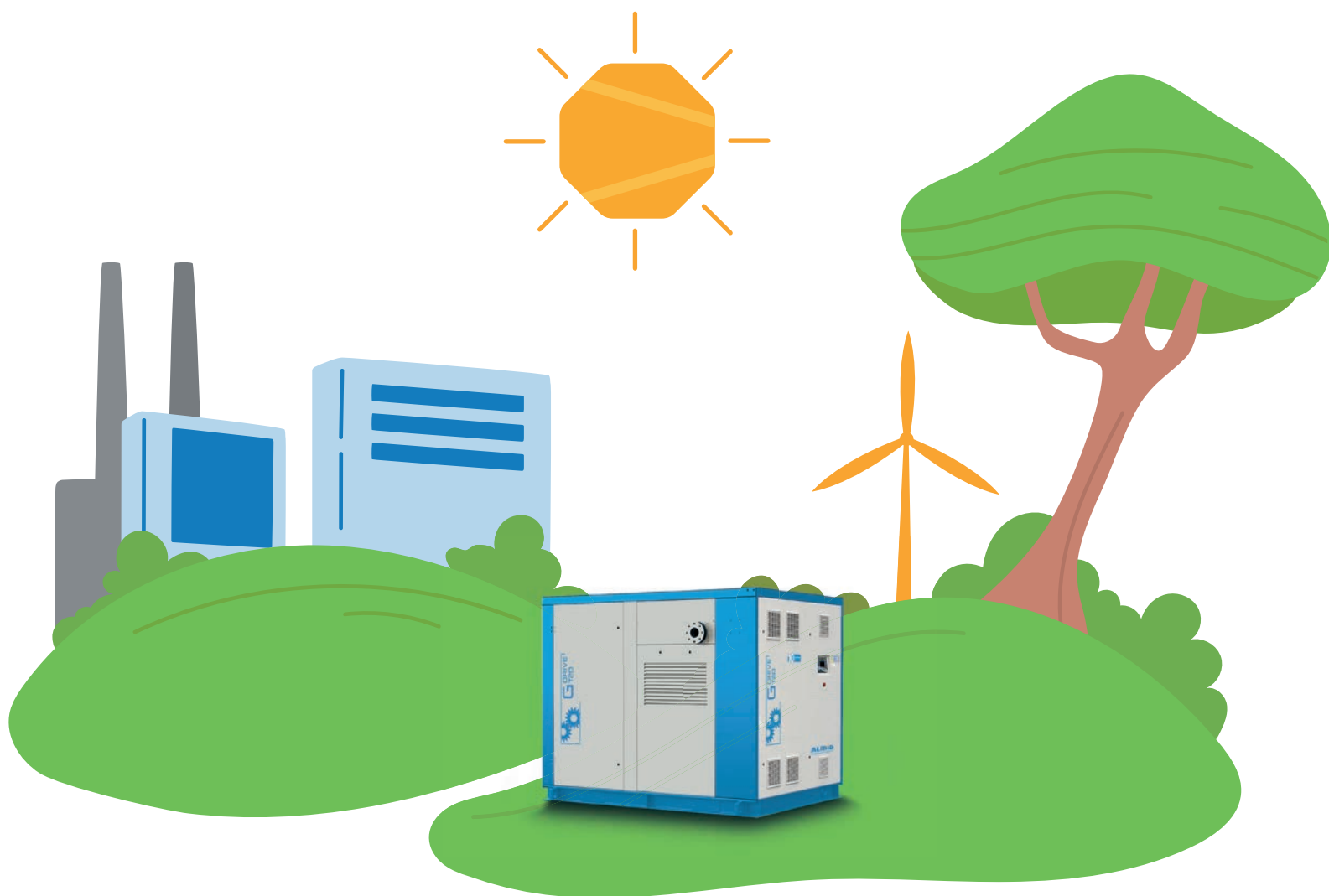
- Immediate repairs
- Necessary spare parts deliveries under warranty, free of charge
- Labour costs for diagnosis and repair of the compressor
- Travel costs (a distance of up to 100 km and a journey time of up to 2 hours (one way) are included in AirCare)

Please do not hesitate to ask your ALMiG contact for the exact terms and conditions.

Further information can be found in our AirCare warranty terms and conditions.

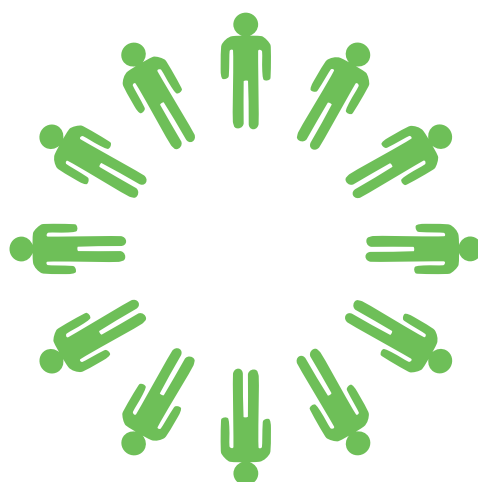


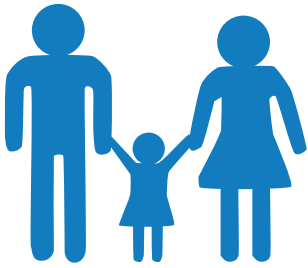
SUSTAINABILITY IN COMPRESSED AIR TECHNOLOGY



Social commitment

As a leading manufacturer of compressed air systems, we combine economic success with environmental responsibility. With innovative technologies and sustainable initiatives, the company sets new standards in the industry while consistently pursuing its environmental goals and strengthening its position as an innovation leader.



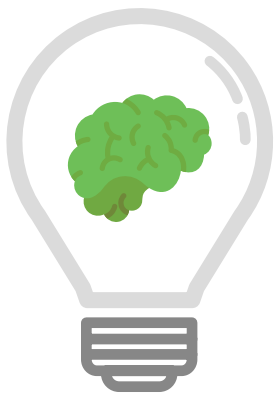
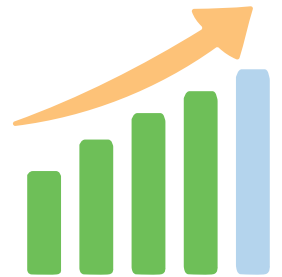


Social responsibility

We support our employees with training and health initiatives and place great importance on work-life balance as well as a positive work environment.

Future through Innovation

Innovation drives ALMiG's sustainable future. Through continuous investment in R&D, we develop energy-efficient, environmentally friendly technologies.



Efficiency and Environmental Awareness

Our products combine top performance with energy efficiency. Through innovative compressed air solutions, frequency-controlled compressors, and intelligent control systems, we minimize the energy consumption and CO₂ emissions of our customers.

ISO 14001:2015 Certification

Our certification according to DIN EN ISO 14001:2015 confirms our commitment to environmental management and sustainability. It ensures that we systematically pursue and continuously improve our environmental goals.

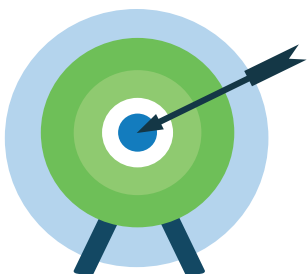


Water Resources Management

Water is one of our most valuable resources. At ALMiG, we place great importance on minimizing water consumption in our production processes.

Sustainability in Production

We rely on sustainable production processes and reduce the consumption of water and energy. Our manufacturing is continuously optimized to minimize waste and emissions.



People and Society in Focus

ALMiG is committed to fair working conditions, employee health, and social projects in the region to jointly promote sustainable change.

Sustainable Partnerships

ALMiG collaborates with partners to promote sustainable solutions and take ecological responsibility along the entire value chain.



Would you like to learn more about us?

**Then visit our website at
www.almig.com
or simply scan this QR code.**

