COMPRESSOR SYSTEMS
MADE IN GERMANY

ALMiG
Compressor Systems

G-DRIVE & V-DRIVE SCREW COMPRESSORS

Made in Germany

QUALITY AND INNOVATIONS MADE IN GERMANY.

Decades of experience and excellent performance

ALMiG is one of the leading compressed air technology system providers and has decades of experience delivering premium products in the compressed air sector. Companies all around the world trust in our customer focused solutions, our quality, innovation and flexibility. Our advanced compressor technologies combine excellence with the quietest possible running performance, optimal energy efficiency and particularly careful conservation of resources.

Ongoing development and comprehensive industry knowledge

Constant research and development form the essential foundation for the efficiency of every system manufactured by ALMiG. Only these constant enhancements and improvements enable us to react quickly and flexibly to individual customer wishes. This attitude is complemented by a comprehensive understanding of the sector: we understand the challenges that our customers are faced with and the requirements that arise as a consequence. ALMiG offers effective solutions for a wide range of applications – from small craft workshops to medium-sized companies to big industry.

Complete service and maximum availability

The highest quality technological solutions deserve an equally high level of service. The ALMiG service provisions offer our customers a complete service programme: from providing comprehensive advice to ensuring availability, improving cost-effectiveness and developing energy-saving potential. As an expert partner, ALMiG offers its customers advice and support on all issues. Our goal is to contribute to your economic success with our service offerings.

ALMiG:
Compressor Systems
Made in Germany

Piston compressors
Screw compressors
Turbo compressors
Scroll compressors
Special installations
Controllers
Compressed air treatment
Services

G-DRIVE

Compressor output with high endurance

The G-DRIVE series offer consistently high performance as well as numerous features for particularly reliable, energy-efficient operation and convenient maintenance. There are various useful extensions available for the latest generation of ALMiG screw compressors: an efficient heat recovery system with a constant temperature, an integrated refrigeration dryer which is precisely designed for the delivery volume of the system, as well as the latest controllers to network your entire compressed air station. The system extensions do not affect the footprint of the compressor at all.

Optional integrated refrigeration dryer

In this version, the refrigeration dryer is integrated in the system to save space. The compressor is used to supply the dryer with power, control it and protect it against freezing if operated at "underload". The parameters of the refrigeration dryer are exactly tailored to the respective kW class and the dryer cannot be "bypassed".

Heat recovery system

All our systems are designed so that an integrated heat recovery system can be fitted into them – either directly at the factory or as a subsequent retrofit. With this system, the energy consumed for the generation of compressed air can be converted almost entirely to usable heat; for example, as hot water for feeding into heating systems or for heating process water or industrial water. The constant temperature of the heat recovery system ensures reliability.

Reduced service costs

The G-DRIVE screw compressors are very easy to maintain: all components are easily accessible from one side and the large sound-insulating doors are easy to remove. This reduces the maintenance and downtimes to a minimum, and ensures that the service costs are completely manageable.

Application
Industry

Power output
30 kW - 75 kW

Volume flow acc. to ISO 1217 (Annex C-2009)
3.92 - 13.54 m^3/min

Operating pressure
5 - 13 bar; stepless settable

Cooling
Air-cooled (standard)
Water-cooled (option)

Drive
Gearbox

Motor
Energy efficiency class IE 3; IP 55 protection, protection class F

+ The latest controllers are used to network the entire compressed air station
+ Modular system concept developed for maximum energy efficiency
+ An efficient heat recovery system with a constant temperature
+ An integrated refrigeration dryer which is precisely designed for the delivery volume of the system

Maintenance-friendly design

Air Control
Smart controller that monitors, visualises and documents

Optional heat recovery system

Highly efficient motor-compressor unit
Energy efficiency class IE 3

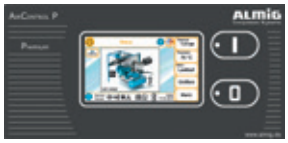
Base frame
Torsion-resistant

Suitable controllers:

AIR CONTROL B

Standard on Models 30 & 37

AIR CONTROL P



Standard on Models ≥ 38

AIR CONTROL HE

Optional

G-DRIVE

G-DRIVE 30/37

50 Hz

G-DRIVE	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg
30	5.46	4.86	3.92	30	1681	959	1635	860
37	6.54	5.72	5.04	37	1681	959	1635	885

G-DRIVE 38-75

50 Hz

G-DRIVE	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg
38	6.76	5.89	4.94	37	1900	1100	1725	1100
45	7.90	6.98	5.91	45	1900	1100	1725	1250
56	9.79	8.95	7.75	55	2300	1380	1950	2120
75	13.54	11.95	10.51	75	2300	1380	1950	2241

V-DRIVE

Compressor output with high endurance

The V-DRIVE series offer consistently high performance as well as numerous features for particularly reliable, energy-efficient operation and convenient maintenance. There are various useful extensions available for the latest generation of ALMiG screw compressors: an efficient heat recovery system with a constant temperature, an integrated refrigeration dryer which is precisely designed for the delivery volume of the system, as well as the latest controllers to network your entire compressed air station. The system extensions do not affect the footprint of the compressor at all.

Optional integrated refrigeration dryer

In this version, the refrigeration dryer is integrated in the system to save space. The compressor is used to supply the dryer with power, control it and protect it against freezing if operated at "underload". The parameters of the refrigeration dryer are exactly tailored to the respective kW class and the dryer cannot be "bypassed".

Energy-saving speed control

All variants are also optionally available with energy-saving speed control.

This is where the highly efficient direct drive comes into play: the high-frequency drive motor operates with outstanding efficiency over the entire speed range.

The operating pressure can be adjusted steplessly from 5 to 13 bar. The high-quality frequency inverter is easy to access in the control cubicle – an optimised cooling air guide provides optimum ventilation. Inverters and cables are electro-magnetically shielded.

Heat recovery system

All our systems are designed so that an integrated heat recovery system can be fitted into them – either directly at the factory or as a subsequent retrofit. With this system, the energy consumed for the generation of compressed air can be converted almost entirely to usable heat; for example, as hot water for feeding into heating systems or for heating process water or industrial water. The constant temperature of the heat recovery system ensures reliability.

Reduced service costs

The V-DRIVE screw compressors are very easy to maintain: all components are easily accessible from one side and the large sound-insulating doors are easy to remove. This reduces the maintenance and downtimes to a minimum, and ensures that the service costs are completely manageable.

Application
Industry

Power output
30 kW - 75 kW

Volume flow acc. to ISO 1217 (Annex C-2009)
1.77 - 13.00 m^3/min

Operating pressure
5 - 13 bar; stepless settable

Cooling
Air-cooled (standard)
Water-cooled (option)

Drive
Direct and speed-controlled

Motor
Energy efficiency class IE 3; IP 55 protection, protection class F

+ The latest controllers are used to network the entire compressed air station
+ Modular system concept developed for maximum energy efficiency
+ An efficient heat recovery system with a constant temperature
+ An integrated refrigeration dryer which is precisely designed for the delivery volume of the system

Maintenance-friendly design

Air Control
Smart controller that monitors, visualises and documents

Optional heat recovery system

Highly efficient motor-compressor unit
Energy efficiency class IE 3

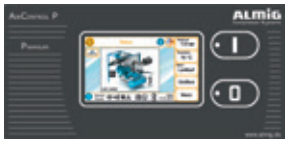
Base frame
Torsion-resistant

Suitable controllers:

AIR CONTROL B

Standard on Models 30 & 37

AIR CONTROL P



Standard on Models ≥ 38

AIR CONTROL HE

Optional

V-DRIVE

V-DRIVE 30/37

50 Hz

V-DRIVE	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg
30	1.84 - 5.16	1.81 - 4.62	1.77 - 3.88	30	1702	959	1635	720
37	1.84 - 6.21	1.81 - 5.58	1.77 - 4.74	37	1702	959	1635	740

V-DRIVE 38-75

50 Hz

V-DRIVE	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg
38	2.42 - 6.76	2.37 - 5.89	2.30 - 4.94	37	1900	1100	1725	1050
45	2.43 - 7.90	2.39 - 6.98	2.32 - 5.91	45	1900	1100	1725	1200
56	3.99 - 10.02	3.91 - 8.95	3.80 - 7.75	55	2300	1380	1950	1941
75	3.96 - 13.00	3.89 - 11.58	3.77 - 9.62	75	2300	1380	1950	2041

CONTROLLERS

Smart monitoring,
reliable documentation

ALMiG
Compressor Systems
Netzdruck
7,6 bar
Temperatur
76 °C
Status
Lastlauf
Grafiken
Menü
10:42
17.01.2013
Last-/ Leerlauf
Remote
Restart
www.almig.de

AIR CONTROL

Monitored. Visualised. Documented.

Air Control Mini

Air Control B

Using the ALMiG AIR CONTROL family of controllers you can control, manage and monitor your entire compressed air supply system in the best possible way.
The smart, integrated compressor controllers offer you optimum operating convenience and outstanding cost-effectiveness. They deliver maximum reliability in the supply of compressed air and plan maintenance ahead of time.

The very latest microprocessor and communications technology is used, guaranteeing you seamless integration of all compressor models as well as the entire range of accessories. And all that as standard via the RS-485 data bus. The optional connectivity to a web server enables monitoring of your compressor station from anywhere in the world.

Further functionality and benefits:

- Huge potential savings by reducing idling levels and lowering pressure levels
- Transparency when it comes to the compressors and accessories, at all times
- Reductions in maintenance time and downtimes

AIR CONTROL MINI

- Icon display for the most important operating states, such as compression temperature, dew point and operating pressure
- Programmable automatic restart
- On-site operation – Remote on/off
- Fault memory (no. of positions)
- Refrigeration dryer activation

AIR CONTROL B

- Microprocessor controller
- Illuminated colour LCD display
- Navigation using number keys
- Icon display for all the important operating states, such as mains pressure, final oil and compression temperature
- Maintenance interval indicator
- Fault memory
- Link to superordinate control systems
- Refrigeration dryer activation

Air Control P

Air Control HE

AIR CONTROL P

- Microprocessor controller with colour touch screen and illuminated graphic display menu
- Supported user guidance
- Simple connection to all accessory components
- Can be integrated into the customer's own management systems
- Timer programming for optimum adaptation to operational requirements
- "System pass" – the compressor's identity card
- Various language variants available
- Various graphical depictions can be accessed, e.g. volume flow produced as daily and weekly profile
- Basic load cycle switching: another 4 additional compressors (slaves) can be added as master control device
- Fault memory
- Programmable automatic restart
- Extensive statistics with data logging
- System parameters can be saved to a data medium to reduce programming effort

AIR CONTROL HE

Version: Compressor and global control system

- Can be used as a consumption-dependent global control system for up to 10 compressors
- Excellent optical display and simplest possible operation using a 7" TFT colour touch screen
- Flexible installation into the compressor or into a separate control cabinet possible
- Extremely user-friendly thanks to simple configuration and start-up wizard
- Parameter settings can be saved to a data medium
- Comprehensive statistics can be accessed using the data-logging functionality

Version: Global control system

- Quick access to information about the operating state of the connected compressors
- Graphical display of power and consumption profiles
- Split screen: compressor data and information about the network can be displayed in parallel
- Leaks can be identified and displayed
- Priorities can be allocated
- Energy-saving – all the compressors operate in one pressure tolerance range
- Speed-controlled compressors can be integrated seamlessly into the system
- Can be connected to higher-level control systems or a web server

SPEED CONTROL

Needs-based adaptation of delivery volumes

Made in Germany
ALMiG
Compressor Systems

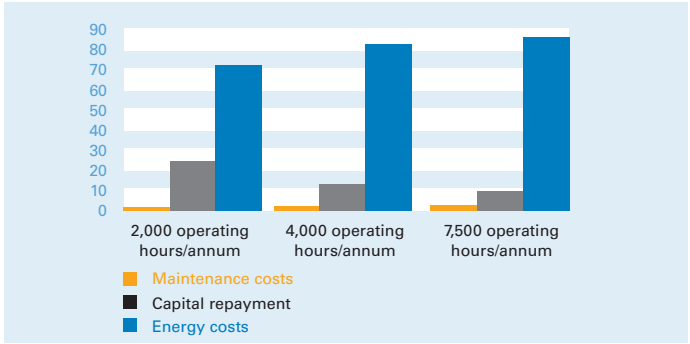
INTELLIGENT SYSTEMS YOU CAN RELY ON

Speed-controlled screw compressors

Cost-effective and sustainable: Kind to your wallet and the environment.

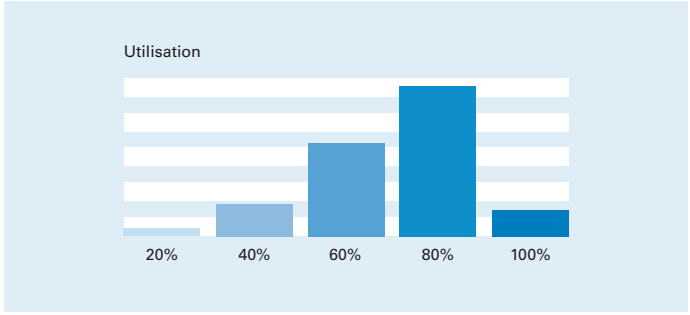
According to a study, approx. 80 billion kWh of electricity is used in compressed air systems in the EU each year, more than 10% of the electricity required in industry. So the cost-effectiveness of a compressed air system isn't about how much it costs to buy, but how much it costs to run on a day-to-day basis. And this is where speed-controlled screw compressors from ALMiG really come into their own:

- Precise adaptation of delivery volumes
- Fewer idle times
- Less load shedding
- Constant line pressure
- Direct drive
- Fewer leakages



Capacity utilisation of the compressor: Flexible tolerance for greater cost-effectiveness.

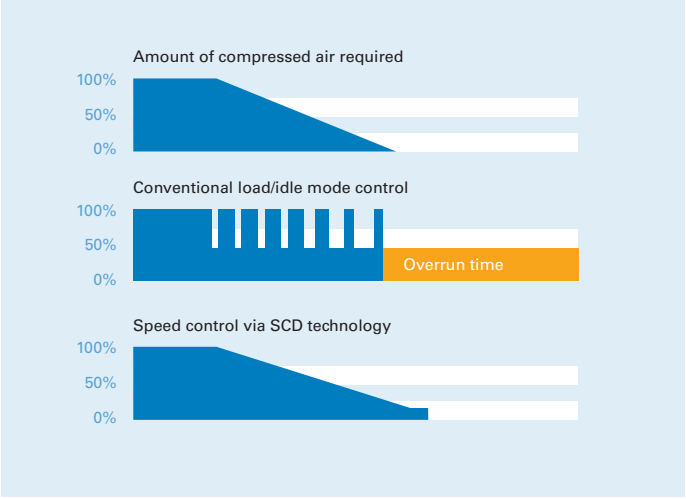
From experience, we know that most compressors are only used at between 50 and 70% of capacity. The maximum delivery volume is in most cases only used during peak times.



Speed control: The key component of your compressed air system.

By varying the system's motor speed, you automatically and sensitively adapt its delivery volume to its variable air consumption.

- If you require more compressed air, you need simply increase the motor speed and therefore the compressor speed. The delivery volume increases.
- If you require less compressed air, you need simply decrease the motor speed and therefore the compressor speed. The delivery volume decreases.



Precise adaptation of delivery volumes: No more annoying switching times.

If you're exploiting your system at 100% capacity, all compressors work at full load. If, however, you require less compressed air, the conventional compressor changes to loaded/idle mode, causing the drive motor to switch. In this situation, you have to take into account the pre-set over-run time. This has a negative impact on your energy bill.

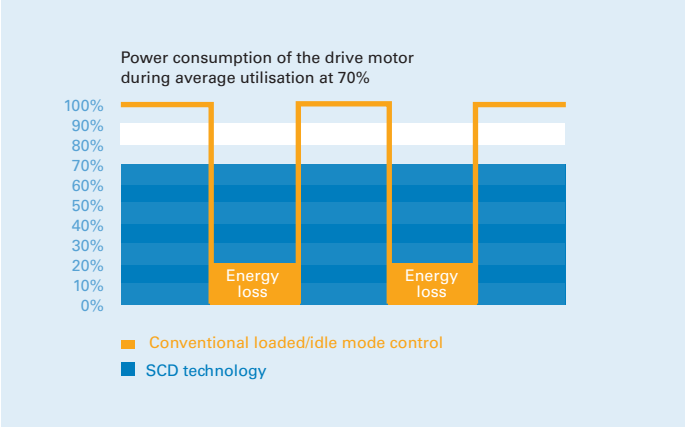
The Variable and V-Drive series vary their power by gently and continually changing speeds, not by abruptly switching on and off.

Delivery volumes are continually adapted to your present requirements, so the process is kind to both your components and your wallet:

- No expensive idle mode, which consumes at least 25 – 30% of the energy consumed at full load.
- No more switching times which place a heavy mechanical load on the components.

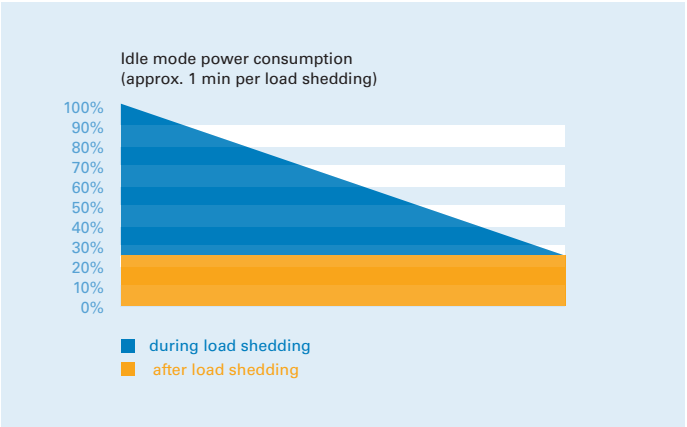
Productivity without idle mode: the ALMiG efficiency programme

In idle mode, a compressor consumes around 25 to 30% of the energy consumed at full load. Variable compressors adjust the speed of the compression element automatically and exactly to the value needed for the volume flow required. SCD (Speed Control Direct drive) technology also ensures that only the power that corresponds to the speed is used. So compressors can considerably cut energy costs even when loaded at 70% of capacity.



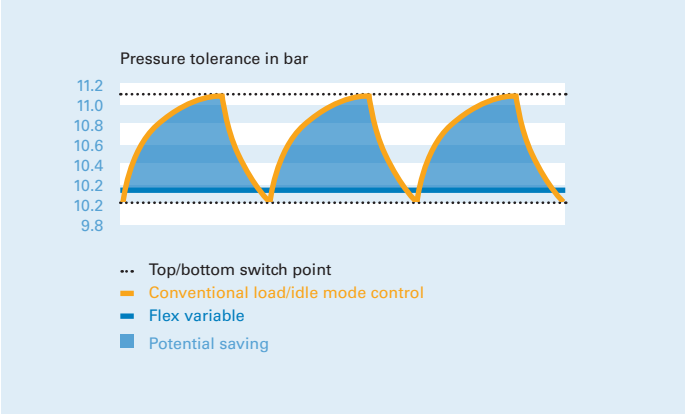
Less load shedding in fluctuating networks

Fluctuating networks cause the compressor to constantly change from loaded to idle mode (and back again). Each time the compressor changes mode, it sheds its load for around one minute.



A constant line pressure allows you to save a huge amount of energy

Speed-controlled compressors run at a constant operating pressure (p ~ 0.1 bar). Because high pressure always involves consuming greater amounts of energy, speed-controlled compressors allow you to make huge energy savings (1 bar higher pressure = 6 – 8% greater energy consumption).



ALMiG direct drive: The frictional connection

The compressor block is directly driven by the drive motor – and without any transmission loss.

This brings major benefits with it:

- Maximum power transfer
- Constant high efficiency of up to 99.9% over its entire working life
- Less noise and less maintenance effort than with V-belt and gear drives
- Excellent reliability.

Direct drive vs V-belt drive savings:

- V-belt drive (up to 96 – 97%)
- Direct drive (up to 99.9%) 4,000 h/year, 60 kW motor, 2.4 kW x 4,000 = 9,600 kWh

Fewer leakages thanks to reduced pressure: Speed control provides the answer

Almost all compressed air lines have leakages. The amount they leak depends on the pressure in the piping, among other things. The average leakage rate of a compressed air station is around 20 – 30%. By decreasing the pressure by just 1 bar (e.g. by controlling the speed), these leakages drop by approx. 10%.

In addition, speed-controlled compressors with direct drive are very energy-efficient (no current peaks) and are also much quieter than comparable models with a V-belt drive.

COMPRESSOR SYSTEMS
MADE IN GERMANY

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Air & Power

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