COMPRESSOR SYSTEMS
MADE IN GERMANY

ALMiG
Compressor Systems

SCREW COMPRESSORS

5 YEARS AirCare
CERTIFIED WARRANTY
COVERED BY ALMiG
TERMS & CONDITIONS APPLY

10 YEARS AirCare
CERTIFIED WARRANTY
COVERED BY ALMiG
TERMS & CONDITIONS APPLY

Made in Germany

QUALITY AND INNOVATION MADE IN GERMANY.

Decades of experience and outstanding performance

ALMiG is one of the leading system providers in compressed air technology and stands for decades of experience with top-quality products in the compressed air industry. Companies all over the world rely on our customer-focused solutions, our quality, innovation and flexibility. Our highlycompressor technologies combine excellent performance with maximum quietness, optimum energy efficiency and a particularly resource-friendly approach.

Continuous development and comprehensive industry knowledge

The key to the efficiency of every system manufactured by ALMiG is continuous researchand development. For it is only through constant development and improvement that we are able to respond quickly and flexibly to individual customer requirements. This approach is complemented by extensive industry know-how: we understand our customers' challenges and know what resulting requirements. ALMiG offers efficient solutions for a wide range of applications – from small craft businesses and medium-sized enterprises to large-scale industry.

Comprehensive service and maximum availability

High-quality technological solutions deserve a service to match. ALMiG's services offer our customers a comprehensive service programme: from in-depth consultancy and ensuring availability to boosting cost-effectiveness and identifying energy-saving potential. ALMiG stands by every customer as a competent partner for all their needs. Our aim is to contribute to your business success through our services.

ALMiG: Compressor Systems Made in Germany

piston compressors
screw compressors
turbo compressors
scroll compressors
special systems
control systems
compressed air treatment services

SCREW COMPRESSORS

From 4 kW to 275 kW

- ALMiG probably has the most comprehensive range of screw compressors on the market
- Maximum reliability and operational safety during continuous operation
- Minimise your operating costs with sophisticated compressor systems
- Always the right drive concept for every application

Best-in-class efficiency

G-Drive T Series
90 – 250 kW

p. 10

Compact and economical

COMBI XP series
4 – 22 kW

p. 6

Vertical efficiency for the smallest footprint

F-DrivE series
5.5 – 75 kW

p. 14

Maximum efficiency with speed and torque control

V-Drive T series
90 – 250 kW

p. 18

100% oil-free, efficient, proven and quiet

SIMPLEXX series
132 – 275 kW

p. 26

Top-quality oil-free compressed air

LENTO Series
15 – 110 kW

p. 22

No true-to-scale illustrations

COMBI XP

The cost-effective 4-in-1 compact system

Our new COMBI XP screw compressor series offers a cost-effective 4-in-1 solution. This compressed air station combines, as standard, a compressor, a compressed air receiver (in accordance with AD-2000 standard), a refrigerated dryer, and pre- and post-filters in a compact housing. It thus meets the high compressed air quality requirements for pneumatic applications in accordance with DIN ISO 8573-1.

- Compressor
- Air receiver (with manual condensate drain,
- , optionally also with automatic condensate drain)
- Refrigeration dryer

Pre-filter with 1.0 µm and 1.0 ppm;

Post-filter 0.01 µm and 0.01 ppm

The compact design of the COMBI XP allows for space-saving integration into a wide variety of premises, whilst its high efficiency minimises energy consumption.

Combined with extended inspection cycles of up to five years, you can not only significantly reduce your operating costs but also substantially improve your company's profitability.

Another advantage of compact systems is their low weight and the resulting ease of transport. A pallet truck or forklift is sufficient to move the ready-to-connect and ready-to-use compressed air station on site.

The product range

Three different system sizes:

- COMBI XP 4 – 6: 270 D or single unit*
- COMBI XP 8–15: 270 D or single unit*
- COMBI XP 18–22: 500 D or single unit*

* without tank, without refrigeration dryer

All compressors in the series are available:

- as a 4-in-1 compressor
- as a standalone unit: without receiver, without refrigeration dryer
- with various control systems to suit your requirements

Application
Crafts, trade, small-scale industry

Power
4–22 kW

Air flow in accordance with ISO 1217 (Annex C-2009)

8 bar:	0.17–3.94 m³/min
10 bar:	0.17–3.43 m³/min
13 bar:	0.17–2.63 m³/min

Operating pressure
5–13 bar

Cooling
Air-cooled

Drive
Direct drive

Motor
Energy efficiency class IE 4 or better; IP 55; protection class F

+ 4-in-1: Compressor, air receiver, refrigerated dryer, pre- and post-filter
+ Meets compressed air quality requirements
+ In accordance with DIN ISO 8573-1
+ Compact footprint
+ Low noise level
+ Easy to transport
+ Individual models eligible for BAFA funding

5 YEARS AirCare
CERTIFIED WARRANTY
COVERED BY ALMiG
TERMS & CONDITIONS APPLY

Easy-to-maintain design

Compressor stage
with low speeds

AirControl
Intelligent control system that monitors, visualises and documents

Processing

Drive motor
Energy efficiency class IE4 or higher

air receiver

Compatible control systems:

AirControl S

Standard

AirControl A

Advanced

COMBI XP

COMBI XP 4–6
270D

COMBI XP 8–15
270D

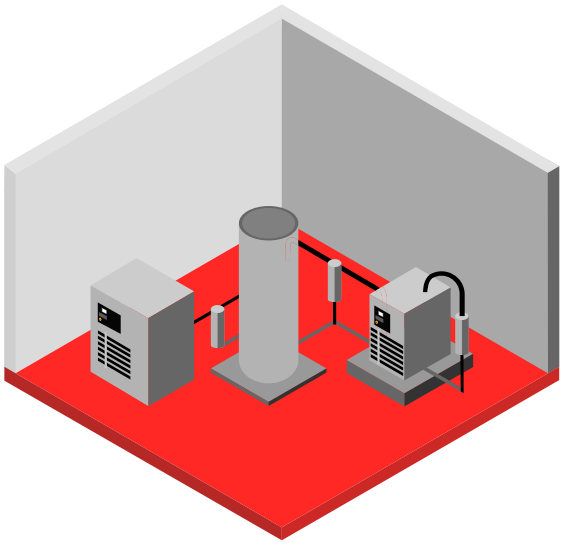
COMBI XP 18–22
500D

4-in-1: 50 Hz

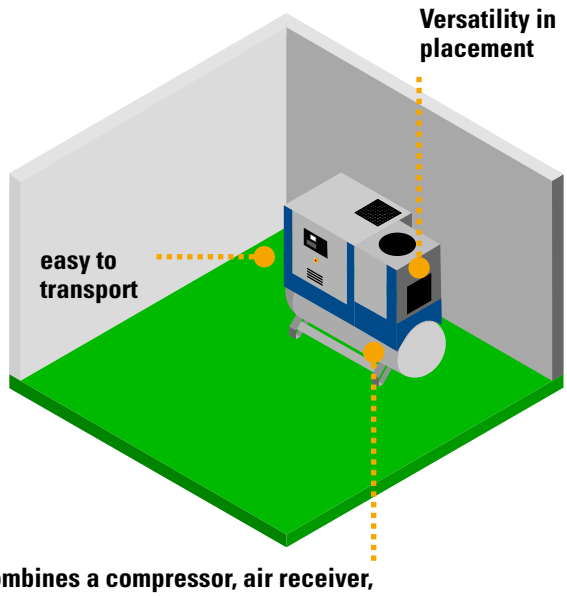
COMBI XP	Volume flow according to ISO 1217 (Annex C-2009)			Motor rated power	Length	Width	Height	Weight	
	8 bar	10 bar	13 bar						
Model	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg	
4	0,20 - 0,59	0,18 - 0,53	0,17 - 0,41	4	1530	640	1520	465	
6	0,18 - 0,78	0,18 - 0,69	0,17 - 0,59	5,5	1530	640	1520	470	
8	0,17 - 1,16	0,17 - 0,98	0,14 - 0,75	7,5	1530	700	1640	585	
11	0,29 - 1,67	0,29 - 1,46	0,27 - 1,17	11	1530	700	1640	590	
15	0,45 - 2,23	0,45 - 2,02	0,43 - 1,69	15	1530	700	1640	595	
18	0,58 - 3,25	0,57 - 2,73	0,54 - 1,95	18,5	1860	740	1980	800	*
22	0,72 - 3,94	0,70 - 3,43	0,69 - 2,63	22	1860	740	1980	810	*

*Specifications apply to the model with a 500-litre tank

Conventional layout, takes up a lot of space



Space-saving design and flexible installation



COMBI XP 4–6

COMBI XP 8–15

COMBI XP 18 - 22

Standalone		
COMBI XP	Dimensions	Weight
Model	mm	kg
4	643 x 790 x 961	240
6	643 x 790 x 961	250
8	691 x 1051 x 1088	350
11	691 x 1051 x 1088	380
15	691 x 1051 x 1088	410
18	740 x 1130 x 1344	500
22	740 x 1130 x 1344	520

Would you like to find out more about the COMBI XP?

Then visit us at: www.almig.com or simply scan this QR code

G-DRIVE T

NEXT GENERATION – Now featuring direct drive and two-stage compression

The G-DRIVE T is the **cost-effective alternative** to the V-DRIVE T – equipped with a powerful drive motor, **fixed speed operation** and integrated **two-stage compression**. Thanks to the direct drive without a coupling, the **compact design** and proven ALMiG technology, it offers maximum efficiency, robustness and ease of maintenance for many industrial applications.

NEW: Direct motor drive system

Advantages:

- Two-stage, integrated compression in asingle compressor unit
- Direct drive without a coupling – no wear parts, low maintenance requirements
- Service-friendly design with optimal access to all components
- Motor with energy efficiency class IE 4, protection class IP55, insulation class F
- Low thermal load and pressure differentials
- Durable design for continuous operation under industrial conditions
- Power range: 90–250 kW

Energy efficiency & cost-effectiveness

- Highly efficient two-stage compression reduces energy consumption
- Significantly lower energy consumption compared to single-stage machines
- Cost-effective thanks to lower purchase costs and simple technology
- Particularly suitable for applications with a constant demand for compressed air
- Durable and robust thanks to a simplified mechanical design
- Air flow (according to ISO 1217 Annex C-2009): 18.60 – 53.00 m³/min
- Operating pressure: 5 – 13 bar

Digitalisation & connectivity

- Modern control system with digital monitoring
- Basic system control functions integrated
- Optionally expandable with IoT device and COMPASS
- Can be retrofitted on request for remote monitoring and Industry 4.0
- IoT device and COMPASS included free of charge for 5 years

Application
Industry

Power
90–250 kW

Air flow rate in accordance with ISO 1217 (Annex C-2009)
18.60–53.00 m³/min

Operating pressure
5–13 bar

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

Drive
Gear drive

Motor
Energy efficiency class IE4; IP 55; Protection class F

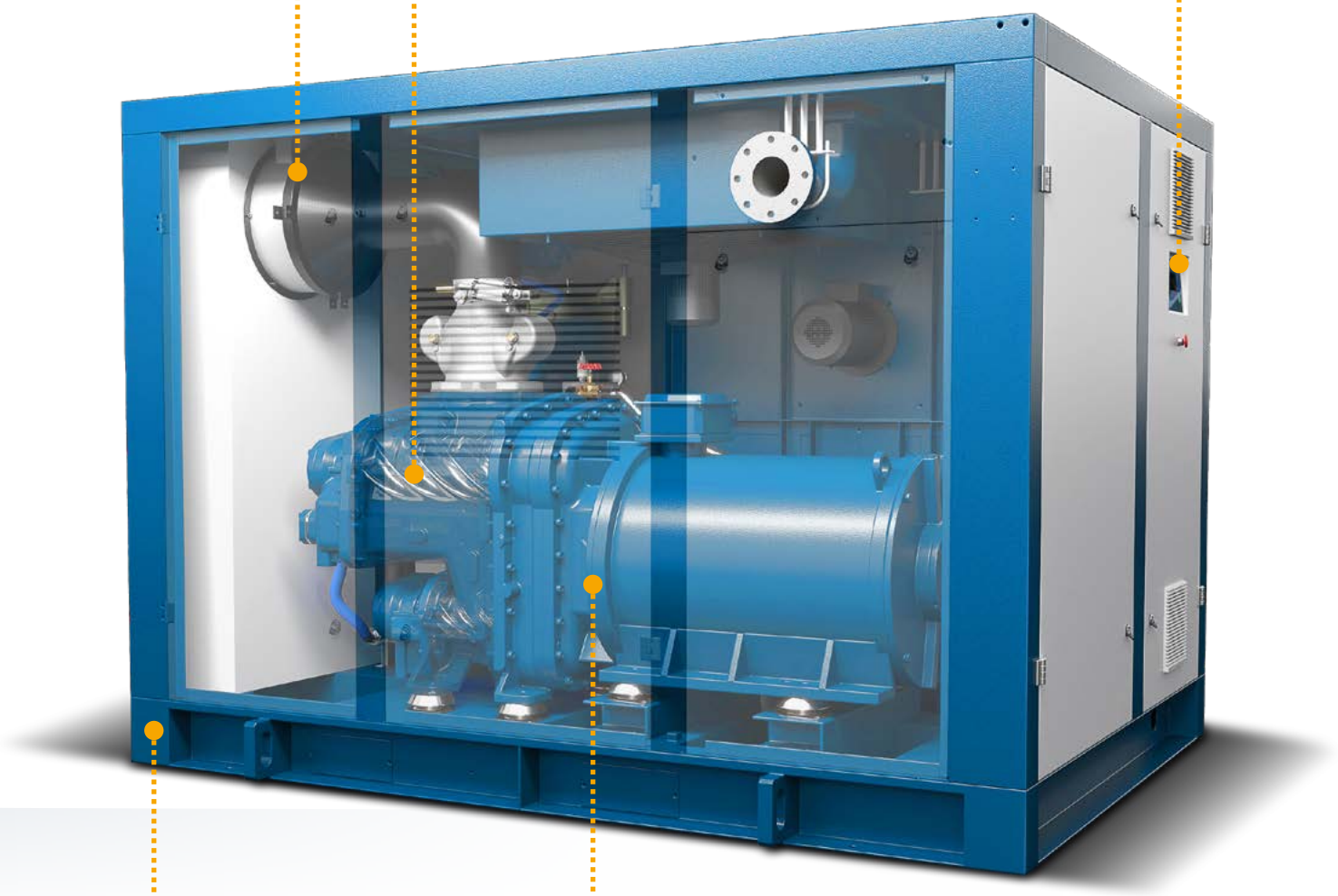
+ Efficient screw compressor technology
+ Low rotational speeds and minimal pressure differentials increase service life and operational reliability
+ High efficiency and a maintenance-friendly design reduce total operating costs

10 YEARS AirCare
CERTIFIED WARRANTY
COVERED BY ALMiG
TERMS & CONDITIONS APPLY

High-performance intake filter
BBest possible filtration and easy maintenance

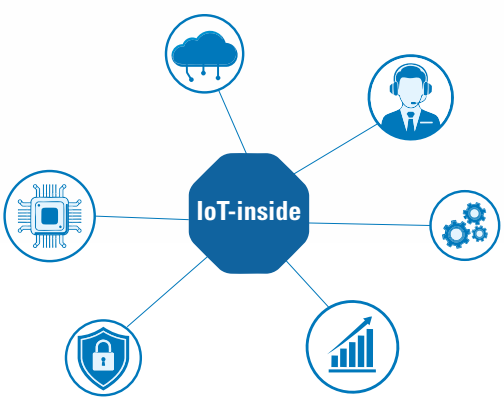
Oil-lubricated two-stage compression
Optimal efficiency, integrated gear-box and robust, durable design

Industry 4.0
Intelligent control that monitors, visualises and documents



Sturdy base frame
Torsion-resistant with vibration decou-pling

High-efficiency IE4 motor
High efficiency and long bearing service life



AirControl A

Advanced

Control systems from **p. 42**

G-DRIVE T

G-DRIVE T

Would you like to find out more about the G-Drive T?

50 Hz - Air cooled

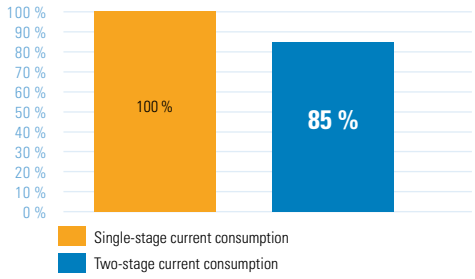
G-DRIVE T	Volume flow according to ISO 1217 (Annex C-2009)			Motor rated power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg
20	18,60	15,70	13,70	90	2400	1800	2000	3700
24	22,30	19,30	16,70	110	2400	1800	2000	3800
30	27,10	23,40	20,40	132	2800	2000	2000	4300
38	33,60	29,60	25,87	160	2800	2000	2000	4500
48	42,00	37,80	32,84	200	3200	2100	2100	6800
60	53,00	47,00	41,79	250	3200	2100	2100	7000

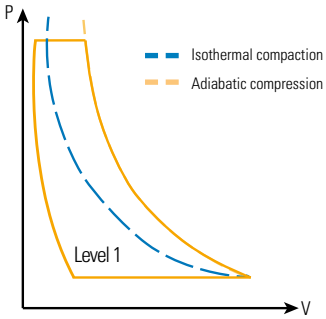
50 Hz - Water cooled

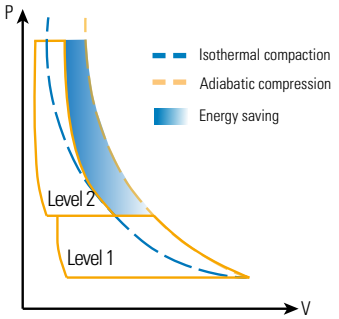
G-DRIVE T	Volume flow according to ISO 1217 (Annex C-2009)			Motor rated power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg
20	18,60	15,70	13,73	90	2400	1800	2000	3600
24	22,30	19,30	15,42	110	2400	1800	2000	3700
30	27,77	23,99	20,40	132	2800	2000	2000	4100
38	33,60	29,60	25,24	160	2800	2000	2000	4300
48	43,49	37,80	30,74	200	3200	2100	2100	6400
60	53,00	49,94	43,91	250	3200	2100	2100	6600

G-DRIVE T

EFFICIENCY THAT PAYS OFF

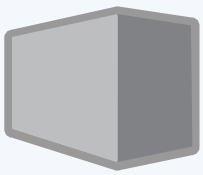






Single-stage compressor

standard technology



Air flow rate @8.0 bar	**33.00 m³/min**
Motor power	**200 kW**
Total power consumption	**228.59 kW**
Specific power	**6.93 kW (m³/min)**
Annual air consumption*	**15,840,000.00 m³**
Load hours/year	**8,000 h**
Energy costs	**0.30 €/kWh**
Annual load costs	**548,616.00 €**

VS

G-Drive T 48

ALMiG Innovation

Air flow rate @8.0 bar	**42.00 m³/min**
Motor power	**200 kW**
Total power consumption	**233.57 kW**
Specific power	**5.56 kW/(m³/min)**
Annual air consumption*	**15,840,000.00 m³**
Load hours/year	**6,286 h**
Energy costs	**0.30 €/kWh**
Annual load costs	**440,169.71 €**
Load cost savings/year	**108,169.71 €**
Load cost savings/day	**€300**

Two-stage compression

Highly efficient IE4 motor
Low service and maintenance costs
Optional heat recovery

=

300 €
Cost saving:
€ per day

* 8,000 operating hours per year, based on the compressor with the lower flow rate.

F-DRIVE

Vertical efficiency for the smallest footprint

Energy-efficient and space-saving at the same time – that doesn't have to be a contradiction. Quite the opposite, in fact. Here at

ALMiG, we have been proving for more than ten years that the concept of vertically arranging the motor and compressor unit is the key to success, both in terms of energy efficiency and floor space.

Energy-saving speed control via an oil-cooled permanent magnet motor, a highly efficient compressor stage combined with state-of-the-art control technology and minimal noise levels are our response to the increasingly demanding requirements of the future.

The speed-controlled, direct-drive compressors of the F-Drive series are used wherever compressed air needs to be generated by a small, compact and extremely quiet system.

The oil-cooled permanent magnet motor offers significant advantages over standard motors:

- Motor with energy efficiency class IE5, protection class IP66, insulation class F
- The motor cooling is independent of the speed
- the waste heat can be recovered via heat recovery

Optional (from F-Drive 18)in the so-called heat or energy recovery system, integrated plate heat exchangers to recover the thermal energy generated by the compression process. This can then be used to heat, for example, domestic or process water. Existing oil or gas heating systems can thus be supplemented or, in some cases, even replaced.

For the F-Drive, this means that previously unattainable levels of energy recovery can now be achieved!

With ALMiG SCD technology, you can achieve energy savings of up to 35% through:

- Speed control
- Constant system pressure, continuously adjustable from 5 to 13 bar
- Extremely high system efficiency
- No start-up switching power peaks
- No costly downtime

Application
Industry

Power
5.5–75 kW

Air flow rate in accordance with ISO 1217 (Annex C-2009)
0.33–14.17 m³/min

Operating pressure
5–13 bar

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

Drive
Direct drive with speed control

Motor
Permanent magnet motor

+ Heat recovery (optional) available, including utilisation of engine waste heat
+ Air Control P as standard Compressor control
+ Minimal footprint
+ Easy access and maintenance

AirControl A
Intelligent control system that monitors, visualises and documents

Oil non-return valve
Prevents returned oil from entering the filtered compressed air when the system is switched off, including sight glass

SCD frequency converter
for precise adjustment of the flow rate

Direct drive
for loss-free power transmission

Easily accessible radiators

Space-saving design
for a small footprint

Vibration damper
for decoupling the motor/compressor unit

Highly efficient permanent-magnet motor
Optimally cooled at all speeds thanks to oil cooling

Additional internal system pressure gauge

Sight glass for easy monitoring of fill levels

Compatible control systems:

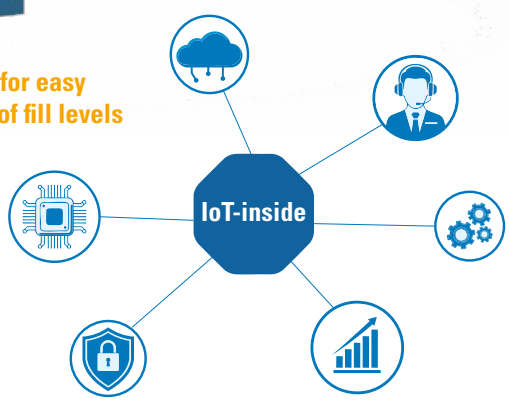
AirControl A

Advanced

AirControl HE

Optional

Control systems from **p. 42**



F-DRIVE

F-Drive 6-37

F-Drive 45–75

50 Hz

F-Drive	Operating pressure	Volume flow according to ISO 1217 (Annex C-2009)		Motor rated power	Length	Width	Height	Weight
		min.	max.					
Model	bar	m^3/min	m^3/min	kW	mm	mm	mm	kg
6	5 - 13	0,33	0,94	5,5	660	690	1586	270
8	5 - 13	0,23	1,21	7,5	660	690	1586	356
11	5 - 13	0,23	1,84	11	660	690	1586	356
15	5 - 13	0,23	2,38	15	660	690	1586	356
18	5 - 13	0,42	3,52	18,5	790	800	1757	535
22	5 - 13	0,42	4,11	22	790	800	1757	536
30	5 - 13	0,62	6,15	30	940	850	1805	675
37	5 - 13	0,62	7,47	37	940	850	1805	678
45	5 - 13	0,88	8,34	45	1305	1105	1890	1500
55	5 - 13	1,55	10,77	55	1395	1155	2000	1700
75	5 - 13	1,56	14,17	75	1395	1155	2000	1800

Would you like to find out more about the F-Drive?

Then visit us at: www.almig.com or simply scan this QR code

* Based on an operating pressure of 7 bar at 50 Hz; as at August 2020; subject to change and errors excepted.

F-Drive: Efficient and thoughtfully designed down to the last detail

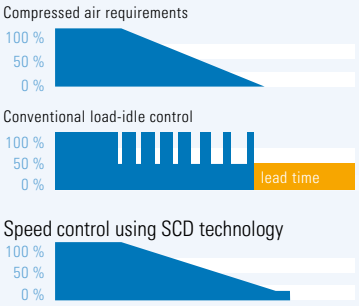
Intelligent control systems

- Optimal control, management and monitoring of your entire compressed air supply.
- Maximum operational reliability for your compressed air supply and proactive maintenance planning.
- High ease of use and maximum cost-effectiveness.

Speed control

Cost savings through:

- Precise adjustment of delivery quantities
- Reduced idle time
- Reduced frequency of pressure relief
- Constant network pressure
- Direct drive
- Reduced leakage



Heat recovery

ALMiG compressor with integrated or retrofitted heat recovery

up to 96%
usable thermal energy

- 76% of the oil cooler
- 14% of the aftercooler
- 6% of the electric motor

4% unusable thermal energy
- 2% in compressed air
- 2% radiation

Electricity
is converted almost entirely into heat

About exhaust air systems **up to 96%** usable heat energy with the F-Drive from ALMiG

Warm air for space heating
Estimated temperature range:
20–25°C above ambient temperature

Hot water for heating purposes
up to 70°C

Heat for domestic and process water
up to 70°C

About heat exchangers **up to 82%*** usable heat energy with the ALMiG F-Drive

*The ALMiG F-Drive not only utilises energy from the oil cooling circuit, but thanks to the electric motor's oil cooling system, this energy can also be recovered.

Significant energy cost savings are possible per compressor!

V-DRIVE T

NEXT GENERATION – EFFICIENCY REDEFINED

The V-DRIVE T features a **two-stage, integrated compression** in a single compressor unit. The combination of a new rotor profile with integrated intercooling and **speed control** ensures up to **15% energy savings** compared to single-stage systems.

Two **speed-controlled permanent magnet motors** of the highest **efficiency class IE5** ensure that flow rates are adjusted to demand and deliver maximum energy savings.

With these two innovative systems, we are **setting new standards** in terms of energy efficiency, performance and ease of maintenance, whilst significantly **reduced footprint**!

NEW: Dual-motor direct drive system

Advantages:

- Two-stage, integrated compression in a
- compressor unitDirect drive without coupling – no wear parts, low maintenance requirements
- Service-friendly design with optimum accessibility to all components
- Two motors with energy efficiency class IE5, protection class IP66, insulation class F
- Low thermal load and differential pressures
- Durable design for continuous operation under industrial conditions
- Power range: 90 - 250 kW

Energy efficiency & cost-effectiveness

- Highly efficient two-stage compression reduces
- Significantly lower energy consumption compared to single-stage machines
- Particularly suitable for applications with a constant demand for compressed air
- Durable and robust thanks to a simplified mechanical design
- Combination of a new rotor profile with integrated intercooling and speed control for maximum energy efficiency
- Airflow (according to ISO 1217 Annex C-2009): 7.27 – 56.19 m³/min
- Operating pressure: 5 – 13 bar
- Up to 10 years of AirCare

Digitalisation & connectivity

- Modern control system with IoT connectivity for Industry 4.0
- Access to the COMPASS digital service platform
- IoT device and COMPASS included free of charge during the AirCare period

Application

Industry

Power

90–250 kW

Air flow rate in accordance with ISO 1217 (Annex C-2009)

7.27–56.19 m³/min

Operating pressure

5–13 bar

Cooling

Air-cooled (standard)
Water-cooled (optional)

Drive

Gear drive and speed control

Motor

Energy efficiency class IE5; IP66; Protection class F

+ Maximum efficiency thanks to two-stage compression and speed control

+ Low speeds combined with low internal pressure differentials ensure a long service life

+ Efficiency and ease of maintenance ensure low lifecycle costs

10 YEARS AirCare
CERTIFIED WARRANTY
COVERED BY ALMiG
TERMS & CONDITIONS APPLY

High-performance intake filter
BBest possible filtration and easy maintenance

Oil-lubricated two-stage compression
Optimal efficiency, integrated gear-box and robust, durable design

Industry 4.0
Intelligent control that monitors, visualises and documents

Frequency converter
Energy-saving speed control

Two efficient IE5 Premium motors
High efficiency and long bearing life

Sturdy base frame
Torsion-resistant with vibration decou-pling

AirControl A

Advanced

Control systems from **p. 42**

V-DRIVE T

V-DRIVE T

Would you like to find out more about the V-Drive T?

50 Hz - Air cooled

V-Drive T	Operating pressure	Volume flow according to ISO 1217 (Annex C-2009)		Motor rated power	Length	Width	Height	Weight
		min.	max.					
Model	bar	m³/min	m³/min	kW	mm	mm	mm	kg
20	5 - 13	7,27	19,46	2 x 45	2400	1800	2000	3800
24	5 - 13	8,67	23,36	2 x 55	2400	1800	2000	3900
30	5 - 13	11,61	29,64	1 x 55 / 1 x 75	2800	2000	2000	4400
38	5 - 13	13,56	35,70	1 x 75 / 1 x 90	2800	2000	2000	4600
48	5 - 13	18,48	45,58	1 x 90 / 1 x 110	3200	2100	2100	7250
60	5 - 13	20,18	56,19	2 x 132	3200	2100	2100	7550

* V relative to an operating pressure of 8 bar at 50 Hz

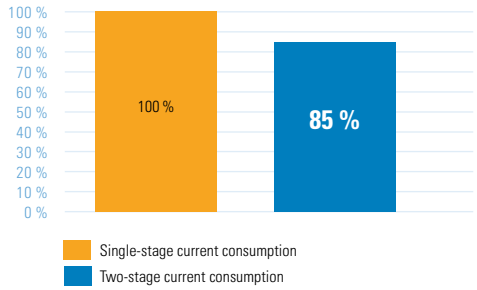
50 Hz - Water cooled

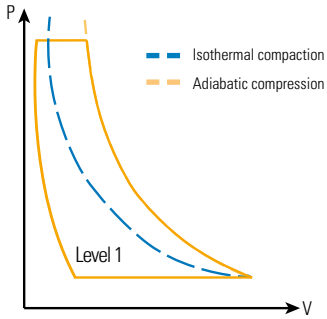
V-Drive T	Operating pressure	Volume flow according to ISO 1217 (Annex C-2009)		Motor rated power	Length	Width	Height	Weight
		min.	max.					
Model	bar	m³/min	m³/min	kW	mm	mm	mm	kg
20	5 - 13	7,27	19,46	2 x 45	2400	1800	2000	3700
24	5 - 13	8,67	23,36	2 x 55	2400	1800	2000	3800
30	5 - 13	11,61	29,64	1 x 55 / 1 x 75	2800	2000	2000	4200
38	5 - 13	13,56	35,70	1 x 75 / 1 x 90	2800	2000	2000	4400
48	5 - 13	18,48	45,58	1 x 90 / 1 x 110	3200	2100	2100	6850
60	5 - 13	20,18	56,19	2 x 132	3200	2100	2100	7150

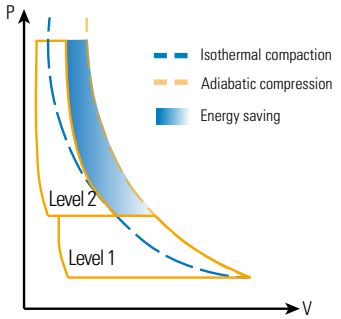
* V relative to an operating pressure of 8 bar at 50 Hz

V-DRIVE T

EFFICIENCY THAT PAYS OFF

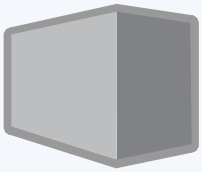






Single-stage compressor

standard technology



Air flow rate @8.0 bar	**33.00 m³/min**
Motor power	**200 kW**
Total power consumption	**231.14 kW**
Specific power	**7.00 kW (m³/min)**
Annual air consumption*	**15,840,000.00 m³**
Load hours/year	**8,000 h**
Energy costs	**0.30 €/kWh**
Annual load costs	**554,736.00 €**

VS.

V-Drive T 48

ALMiG Innovation

Air flow rate @8.0 bar	**44.35 m³/min**
Motor power	**200 kW**
Total power consumption	**252.6 kW**
Specific power	**5.70 kW/(m³/min)**
Annual air consumption*	**15,840,000.00 m³**
Load hours/year	**5,953 h**
Energy costs	**0.30 €/kWh**
Annual load costs	**451,091.77 €**
Load cost savings/year	**103,644.23 €**
Load cost savings/day	**€287**

Two-stage compression

Highly efficient IE5 motor

Low service and maintenance costs

Optional heat recovery

=

287 €

Cost saving: € per day

* 8,000 operating hours per year, based on the compressor with the lower flow rate.

LENTO

Top-quality oil-free compressed air

The demand for high-quality, 100% oil-free compressed air is not only in the pharmaceutical, food, electricaland medical sectors, but is used wherever products of the highest quality are manufactured. That is why ALMiG relies on the oil-free compressors of the LENTO series to deliver maximum compressed air quality for the most sensitive applications. Only water – the most natural of all raw materials – is used in the compression process.

The speed-controlled direct drive of the LENTO series offers maximum cost-effectiveness through the precise adjustmentof the air flow to the respective compressed air demand. The integrated refrigeration dryer ensures a low compressed air dew point. Under certain circumstances, this may eliminate the need for a separate refrigeration dryer on site. This avoids costs for fresh water and water treatment and reduces service and maintenancecompared to other oil-free compression systems.

A clean and environmentally friendly solution:

- Clean, environmentally friendly oil-free compressed air:
- ISO Class 0, certified to ISO 8573-1:2010
- Dust particles drawn in are washed out by the water
- Clean condensate – pure water – can be discharged directly into the mains drainage system
- Lowest temperatures during compression thanks to optimal heat dissipation via the water, resulting in minimal energy consumption for compressed air generation

Application

100% oil-free compressed air for industry (pharmaceuticals, food, chemicals, etc.)

Capacity

15–110 kW

Air flow rate in accordance with ISO 1217

(Annex C-20[09])

0.72–20.01 m³/min

Operating pressure

5–12 bar

Cooling

Water-cooled (standard)
Air-cooled (up to LENTO 75 mgl.)
From LENTO 76 onwards, only available with water cooling

Drive

Direct drive with speed control

Motor

Energy efficiency class IE 4;
IP 55; Protection class F

+ 100% oil-free compressed air generation
+ Precise adjustment of the air flow to the current compressed air demand
+ Elimination of cycling and costly idle time
+ Energy-efficient start-up without current peaks
+ Freely selectable operating pressure $_{be}$twee$_{n}$
+ $_{p}$min –pmax in 0.1 bar/1.5 psig increments
+ Cost savings possible through achieved pressure
+ reduction

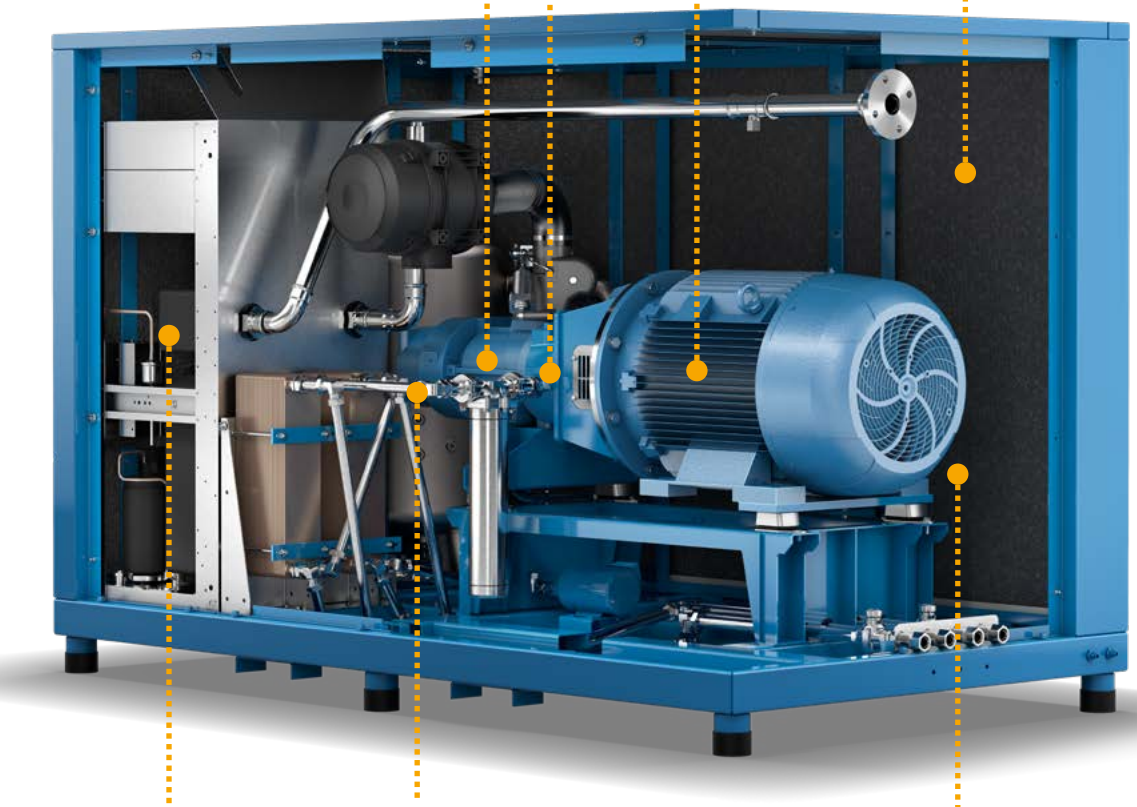
Made in Germany

SCD Direct Drive
Loss-free power transmission

Compactor
Single-stage, water-injected, lowest compression temperature <60°C, close to the economic isothermal compression

AirControl
Intelligent control system that monitors, visualises and documents

SCD Motor
Highly efficientDrive motor; compact, powerful, reliable



Stainless steel piping

Integrated refrigeration dryer
Continuous generation and of the required cooling water, optimal biological and chemical water quality, for dry compressed air upon entry into the compressed air network

SCD Frequency Converter
The integrated power package, compliant with EMC directives

Compatible control systems:

AirControl P

Standard

AirControl HE

Optional

Control systems from **p. 42**

LENTO

LENTO 46–110

50 Hz - Water cooled

LENTO	Operating pressure	Volume flow according to ISO 1217 (Annex C-2009)		Motor rated power	Length	Width	Height
		min.	max.				
Model	bar	m³/min	m³/min	kW	mm	mm	mm
15	5 - 12	0,73	2,42	15	1880	850	1660
18	5 - 12	0,73	2,99	18,5	1880	850	1660
22	5 - 12	0,73	3,51	22	1880	850	1660
30	5 - 12	0,73	4,23	30	1880	850	1660
31	5 - 12	2,04	5,08	30	2300	1400	1560
37	5 - 12	2,04	6,14	37	2300	1400	1560
45	5 - 12	2,04	7,13	45	2300	1400	1560
55	5 - 12	2,04	8,19	55	2300	1400	1560
46	5 - 10	2,49	7,36	45	2750	1400	1769
56	5 - 10	2,49	9,58	55	2750	1400	1769
75	5 - 10	2,49	12,46	75	2750	1400	1769
76	5 - 12	4,26	12,92	75	3580	1600	1930
90	5 - 12	4,26	15,79	90	3580	1600	1930
110	5 - 12	4,26	20,01	110	3580	1600	1930

* V based on an operating pressure of 7 bar at 50 Hz with water cooling; units are water-cooled as standard; the LENTO 15 and LENTO 75 are optionally available with air cooling.

LENTO 15–55

50 Hz - Air cooled

LENTO	Operating pressure	Volume flow according to ISO 1217 (Annex C-2009)		Motor rated power	Length	Width	Height
		min.	max.				
Model	bar	m³/min	m³/min	kW	mm	mm	mm
15	5 - 12	0,73	2,42	15	1880	850	1985
18	5 - 12	0,73	2,99	18,5	1880	850	1985
22	5 - 12	0,73	3,51	22	1880	850	1985
30	5 - 12	0,73	4,23	30	1880	850	1985
31	5 - 10	1,98	5,00	30	2300	1400	2265
37	5 - 10	1,98	6,00	37	2300	1400	2265
45	5 - 10	1,98	6,94	45	2300	1400	2265
55	5 - 10	1,98	7,88	55	2300	1400	2265
46	5 - 10	2,49	7,36	45	2750	1400	2328
56	5 - 10	2,49	9,58	55	2750	1400	2328
75	5 - 10	2,49	12,46	75	2750	1400	2328

Would you like to find out more about the LENTO?

Then visit us at: www.almig.com or simply scan this QR code

SIMPLEXX

100% oil-free compression process - efficient, proven and quiet

The SIMPLEXX series delivers 100% oil-free compressed air to meet the most demanding requirements. It can be adapted to a wide range of compressed air needs and features a design that ensures a very low noise level.

The series is available in both fixed-speed and variable-speed versions and covers a flow rate range of 24.8–48.6 m³/min.

The compressors are available with both air cooling and, optionally, water cooling.

Thanks to the machine's well-thought-out design and the use of high-quality materials, a noise level is achieved that is market-leading in the field of two-stage oil-free technology.

The SIMPLEXX series is also equipped with a control system that continuously monitors all key parameters, thereby ensuring efficient operation and offering customers additional options, such as the control of multiple compressors in a compressed air station.

The SIMPLEXX series supplies customers with 100% oil-free compressed air at low operating costs.

Advantages:

- Two-stage dry screw technology
- Guarantees 100% oil-free air
- Fixed speed & speed-controlled
- Extremely low noise level
- Air and water cooling possible
- Air Control HE control as standard

oil-free

Application

100% oil-free compressed air for industry (pharmaceuticals, food, chemicals, etc.)

Power

132–275 kW

Air flow rate in accordance with ISO 1217 (Annex C-2009)

24.8–48.6 m³/min

Operating pressure

4–10.4 bar

Cooling

Air-cooled (standard)
Water-cooled (optional)

Drive

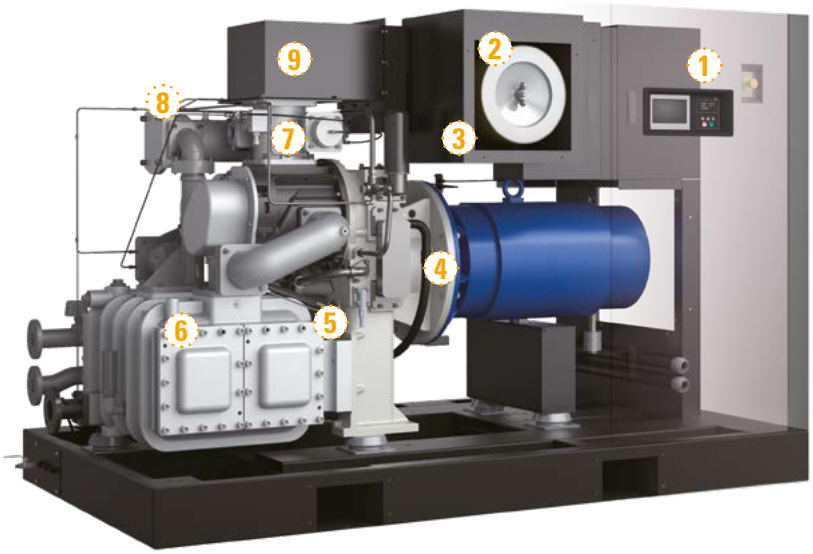
Fixed speed or speed-controlled

Motor

Energy efficiency class IE 3 (standard)
Energy efficiency class IE4 (optional)
IP 55; Protection class F

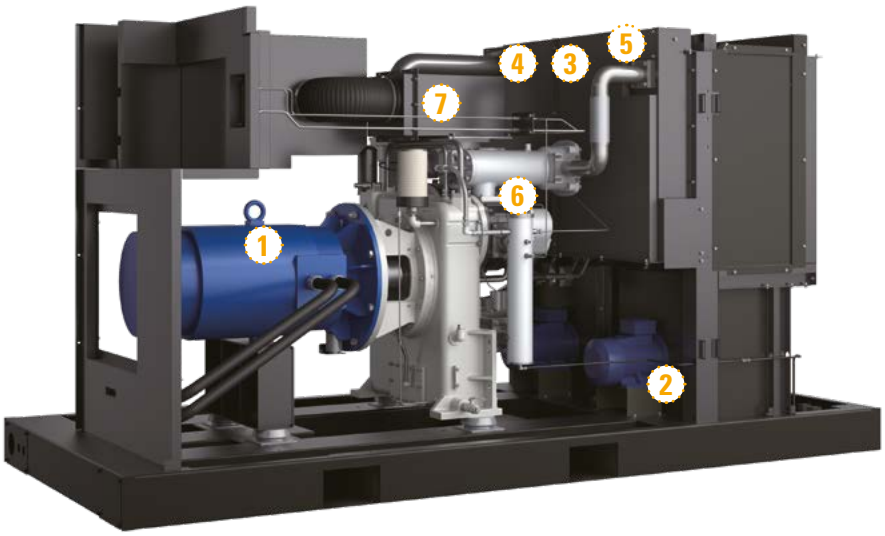
+ Guaranteed 100% oil-free air
+ Extremely low noise level
+ State-of-the-art control systems for networking the entire compressed air station

Water-cooled system



1. **Control**
2. **Intake filter**
3. **Oil filter**
4. **Oil cooling**
5. **Intercooler**
6. **After-cooler**
7. **Power control valve**
8. **Exhaust silencer**
9. **Intake silencer**

Air-cooled system



1. **main engine**
2. **Turbo fan**
3. **Oil cooling**
4. **Intercooler**
5. **After-cooler**
6. **Exhaust silencer**
7. **Intake silencer**

Exceptionally quiet

Various noise-reduction measures have drastically reduced the noise level, making the working environment more pleasant.

Noise-reduction package design

- The intake points have been consolidated in one location to minimise the noise source.

Panel design

- Sound-absorbing material and high resistance to abrasion noise reduce noise leakage.

Silencers

- Newly developed intake and exhaust silencers reduce the noise level.

AirControl HE

Standard

Control systems from **p. 42**

SIMPLEXX
HEAT RECOVERY

up to **90°C** Hot water

SIMPLEXX
integrated heat utilisation

Electrical energy
is almost entirely converted into heat

Energy Cost Savings

up to 96%
heat recovery

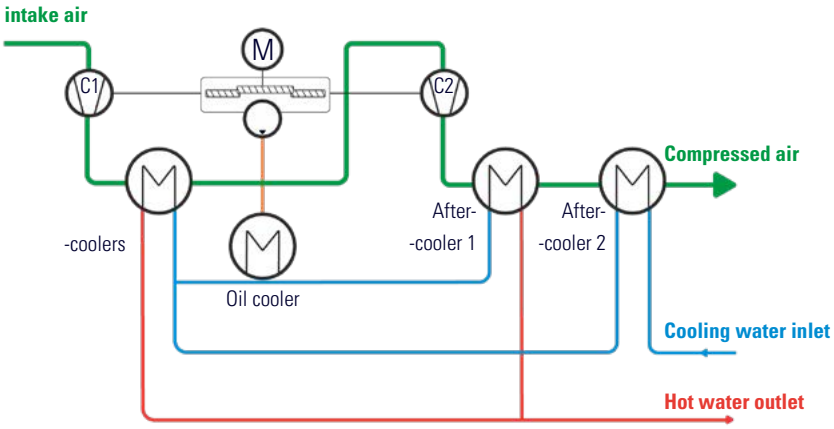
Warm air for space heating

Hot water for heating purposes

Heat for domestic and process water

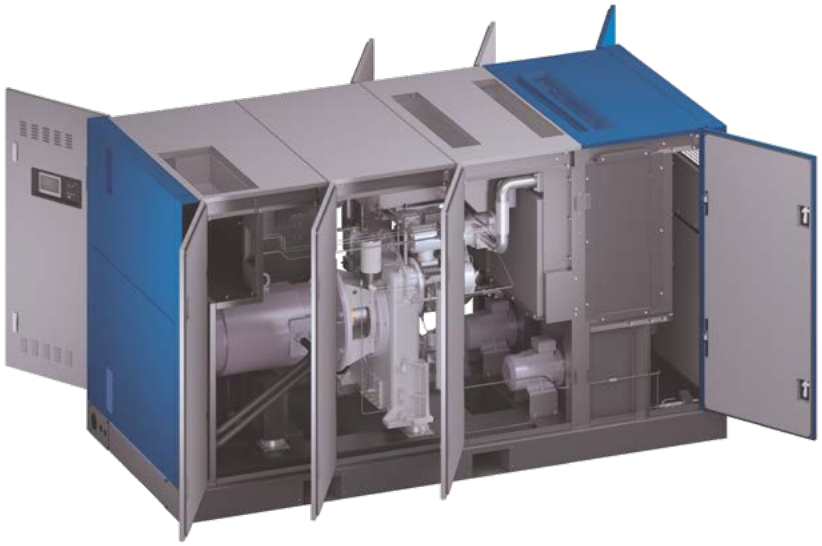
How heat recovery works

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 then 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.



Easy maintenance

Easy access to key components for maintenance thanks to the large panels and the reduction in internal pipework.



50 Hz - Air cooled							
SIMPLEXX	Operating pressure	Volume flow according to ISO 1217 (Annex C-2009)	Motor rated power	Length	Width	Height	Weight
		max. at 7 bar					
Model	bar	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 - speed-controlled - Air cooled								
SIMPLEXX	Operating pressure	Volume flow according to ISO 1217 (Annex C-2009)		Motor rated power	Length	Width	Height	Weight
		min.	max.					
Model	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 - speed-controlled - Water cooled								
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

CONTROL SYSTEMS

Smart monitoring, reliable documentation

ALMiG
Compressor Systems
Kompressor
0
Netzdruck: 7,0 bar
Temperatur: 80°C
Status: Lastlauf
22.01.2013 17:05
www.almig.de

NETWORKING WITH AirControl

Internet-based remote monitoring

In future, remote monitoring of your compressed air supply will be even easier: via the ALMiG web server – regardless of where you are. With easy access to various parameters, timely alerts and comprehensive data, the system ensures a high level of operational reliability.

Up to ten compressors can be monitored in this way – regardless of the type of compressor. The system works equally well with piston, screw and turbo compressors. The only requirement that the web server is connected via an AirControl HE . Installation is carried out using state-of-the-art bus technology.

Available parameters:

- Compressed air energy balancing also available as a download
- Overview of the compressor station showing the operating statuses
- of each individual compressor
- Load-idle statistics for the compressors
- Data on delivery volumes, flow rates and motor starts
- Detailed information on utilisation, system pressure and
- specific performance data
- Data on energy efficiency and maintenance

Key benefits:

- Easy operation via a standard web browser
- Access via the company's own network or worldwide via the internet
- Password-protected login
- Various parameters can be displayedeither as tables
- or graphs
- Continuous monitoring of all operational parameters
- Active notifications via email for warnings,
- maintenance or faults to up to 5 email addresses
- Convenient transfer of all relevant data
- to Office programmes such as MS Excel
- Visually appealing display of parameters
- CSV files for further processing

Your web device

ALMiG Web Server

Network/Ethernet

Intranet

Connection
of systems & components – manufacturer-independent
Module DE 200K/F

RS-485 connection

AirControl HighEnd 4.0 (HE)

AirControl Advanced (ACA)

AirControl Standard (ACS)

AirControl

Monitored. Visualised. Documented.

AirControl Standard (ACS)

AirControl Advanced (ACA)

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

The intelligent, integrated compressor controllers offer you a high level of user-friendliness and maximum cost-effectiveness. They ensure maximum operational reliability for your compressed air supply and enable you to plan maintenance proactively.

The use of state-of-the-art microprocessor and communication technology guarantees seamless integration of all compressor models and the entire range of accessories. And all this as standard via two RS-485 interfaces. The optional connection to a web server enables global monitoring of your compressor station.

Further functions and benefits:

- Realise potential savings – by reducing idle time and lowering pressure
- providing transparency regarding the status of compressors and accessories at all times
- reducing maintenance and downtime

AirControl S

- microprocessor control
- Illuminated colour LCD display User guidance via numeric keypad
- Symbolic display of all important operating states, such as supply pressure, oil temperature and final compression temperature
- Maintenance interval display
- Faults are recorded with a timestamp
- Connection to higher-level control systems
- Refrigeration dryer control
- Analogue output available for older varlable frequency drive systems

AirControl A

- Microprocessor control with 7" colour touchscreen
- and backlit graphical display menu
- Guided user interface
- USB port
- Access via VNC Viewer over network connection possible
- Easy connection of all accessory components
- Can be integrated into customer-specific control systems
- "System ID" – the compressor's calling card
- Various language versions available
- Various graphical displays available, e.g. produced
- air flow as daily and weekly profiles
- Integrated network control for regulating up to 6 compressors in master/ slave or base load switching mode using state-of-the-art BUS technology
- Fault memory
- Programmable automatic restart
- Comprehensive statistics with data logging
- System parameters can be saved to a data storage medium,
- to reduce programming effort

Air Control HE

AirControl HE

Version: Compressor and multi-unit control

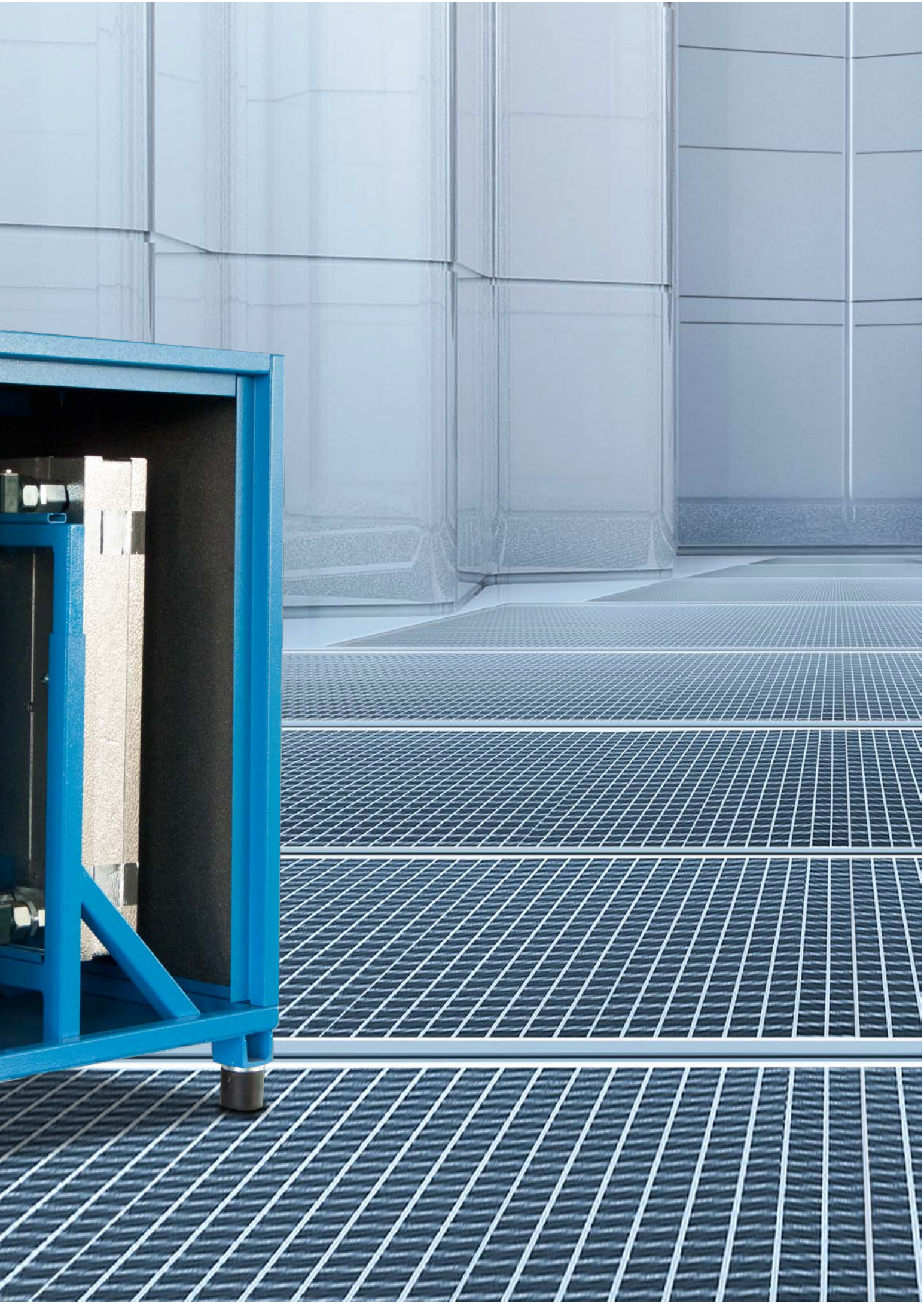
- Integrated web server
- Can be used as a consumption-based integrated control system for up to 10 compressors
- Visually outstanding display and extremely simple operation via 7" TFT colour touchscreen
- Flexible installationpossible either in the compressor or ina separate control cabinet
- High ease of use thanks to simple configuration and commissioning wizard
- Parameter settings can be saved to a data storage medium
- Comprehensive statistics available via data logging functionality

Version: Networked control with integrated web server

- Integrated web server
- Quick information on the operating status of the connected compressors
- Graphical display of energy and consumption profiles
- Split screen: parallel display of compressor data and information on the network
- Detection and display of leaks
- Assignment of priorities
- Energy-saving – all compressors operate within a single pressure band
- Seamless integration of speed-controlled compressors

HEAT RECOVERY

Optimal use of the energy consumed



HEAT RECOVERY: SAVE MONEY

Save energy easily and reap financial benefits quickly

Almost all the energy used to generate compressed air is converted into heat. This offers significant energy-saving potential – after all, a compressed air station with a power requirement of 75 kW, for example, consumes around 300,000 kWh of electricity per year over 4,000 operating hours. Make use of this energy – in the form of:

- Hot air to supplement room heating
- Hot water to supplement central heating
- Hot water for domestic use

Heat utilisation – energy at no cost!

Energy and fossil fuels such as heating oil and gas are becoming increasingly expensive, thereby having a growing impact on companies' energy balance and competitiveness. Heat recovery offers the prospect of increasing energy efficiency and thus contributes to company profits.

The investment required is minimal: on average, your costs will pay for themselves within a few months. So this is a thoroughly worthwhile opportunity for you to recoup part of your operating costs!

Heat recovery: identify the benefits for your business

What specific benefits does heat recovery offer your business? Use bespoke calculations to gain clarity on the investment amount and payback period. This will provide you with a solid basis for your decisions and explain in detail why you should seize this opportunity.

Saving money and protecting the environment made easy

Every litre of heating oil you save reduces your CO2 emissions by approx. 2.8 kg. Heat recovery systems pay for themselves, depending on utilisation and level of energy costs, on average within six months to a year.

Examples of Potential Savings

Compressor Rated Capacity	Useable Heat	Heating Oil Savings per Year[1]	Heating Oil Savings per Year[2]
from 6 kW	2,8 kW	700 l	1.050 €
37 kW	27 kW	6.720 l	10.080 €
45 kW	32 kW	8.170 l	12.255 €
55 kW	40 kW	9.990 l	14.985 €
75 kW	54 kW	13.620 l	20.430 €
90 kW	65 kW	16.350 l	24.525 €
110 kW	80 kW	19.980 l	29.970 €
132 kW	95 kW	23.980 l	35.970 €
160 kW	115 kW	29.060 l	43.590 €
up to 400 kW	288 kW	72.660 l	108.990 €

[1] Based on 2,000 hours of heat usage per year [2] Based on a heating oil price of €1.50 per litre and 2,000 hours of heat usage per year

: Warm air for space heating

Recommended temperature range:
20–25°C above ambient temperature

Hot water for heating purpo- ses ( )

: up to 70°C

Heat for domestic and process water

: up to 70°C

Heated cooling air is channelled through a duct system for room heating

compressor oil transfers its heat to the heating water via lates

Safety heat exchanger – prevents oil from entering the domestic water supply, even in the event of a leak

up to 96 %

usable thermal energy

- 76% of the oil cooler
- 14% of the aftercooler
- 6% of the electric motor

Significant energy cost savings per compressor are possible
(see table on the left)

4% unusable thermal energy
- 2% in compressed air
- 2% radiation

ALMiG compressor with integrated or retrofitted heat recovery

Electricity

is converted almost entirely into heat

https://www.almig.de/en/products/heat-recovery

SPEED CONTROL

Adjusting delivery quantities to meet demand

F DRIVE
ALMiG
Compressor Systems

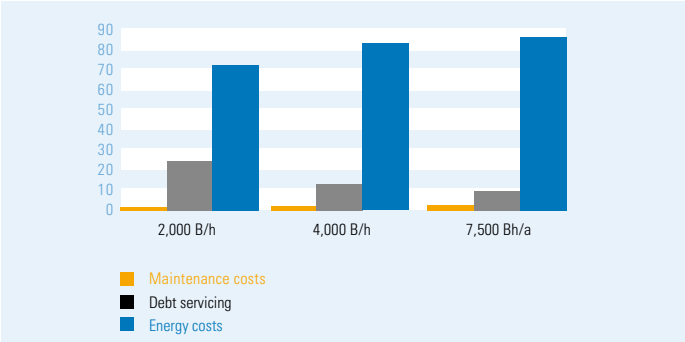
SYSTEMS THAT THINK FOR THEMSELVES

Speed-controlled screw compressors

Cost transparency and sustainability: relief for budgets and the environment.

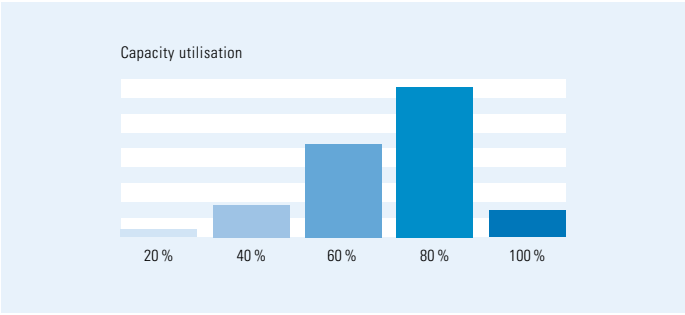
According to a study, approximately 80 billion kWh of electricity is consumed annually in compressed air systems across the EU. That is more than 10% of industrial electricity demand. The cost-effectiveness of a compressed air system is therefore determined not by the initial purchase cost, but by daily operation. This is where ALMiG's speed-controlled screw compressors can offer decisive advantages:

- Precise flow rate adjustment
- Fewer idle periods
- Reduced unloading frequency
- Constant system pressure
- Direct drive
- Leakage reduction



Compressor utilisation: Flexible scope for greater efficiency.

Experience shows that most compressors are only utilised at 50–70%. The maximum flow rate is usually only required during peak periods.



Speed control: The breathing of your compressed air system.

By varying the motor speed, the air delivery is automatically and finely adjusted to fluctuating air consumption.

- As compressed air demand rises, the motor speed and thus the compressor speed are increased. The flow rate rises.
- As compressed air demand falls, the motor speed and thus the compressor speed are reduced. The flow rate falls.

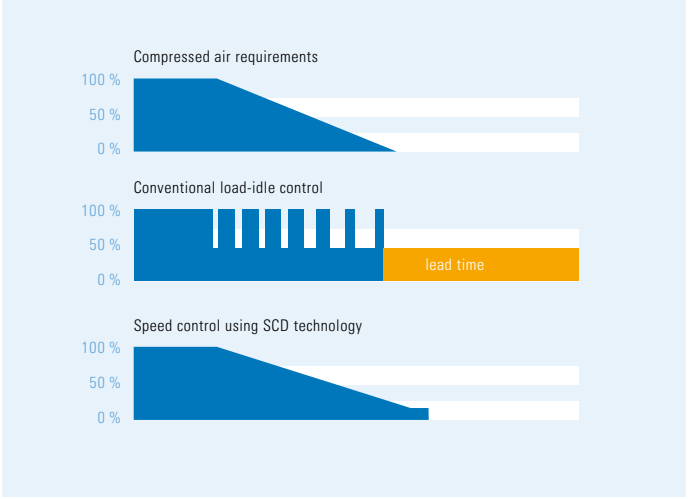
Precise flow rate adjustment: An end to disruptive switching cycles.

At 100% air demand, all compressors operate at full load. As demand falls, a conventional compressor switches to load/idle mode, resulting in switching cycles of the drive motor, whereby the preset run-on time must be taken into account. This places an additional burden on your energy bill.

The VARIABLE and V-Drive series do not vary their output via abrupt on/off cycles, but through a smooth and continuous change in speed.

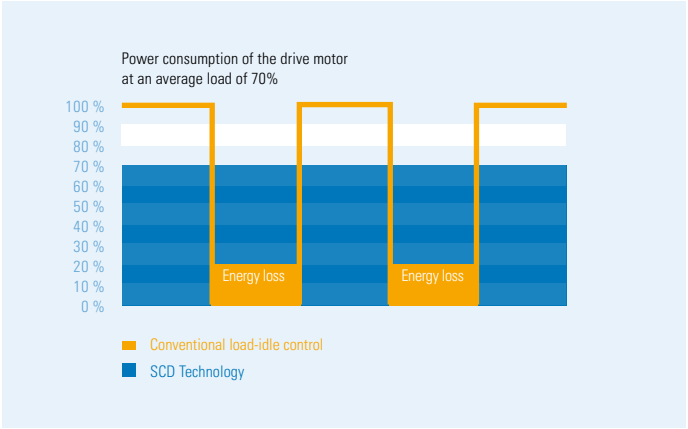
Delivery volumes are continuously adjusted to current demand, sparing components and your budget:

- No costly idling, which accounts for as much as 25–30% of full-load energy consumption
- No more switching cycles, which place particularly heavy mechanical stress on the components



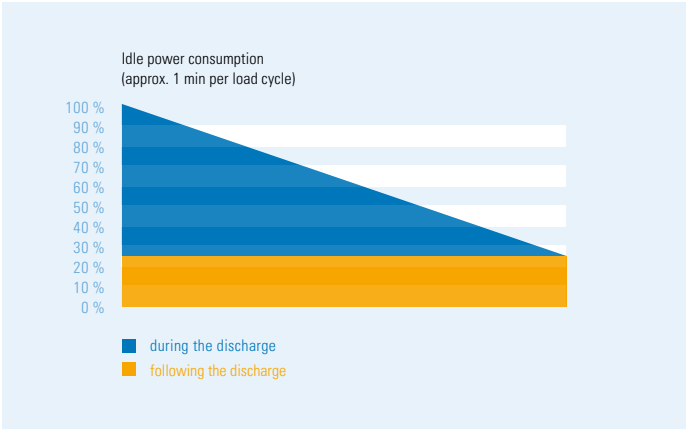
Productivity without idling: the ALMIG Efficiency Programme

When idling, a compressor consumes around 25 to 30% of the energy it requires for full-load operation. Variable-speed compressors automatically and precisely adjust the speed of the compression element to the value required for the necessary flow rate. At the same time, SCD technology (Speed Control Direct drive) ensures that only the power corresponding to the speed is consumed. This allows the compressor to significantly reduce energy costs even at 70% capacity utilisation.



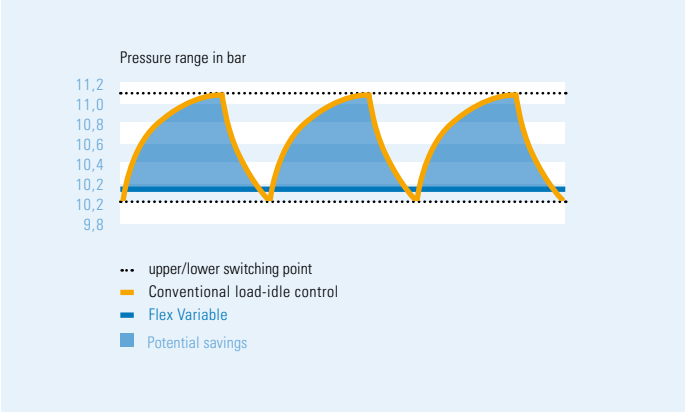
Lower unloading frequency on unstable grids

Unstable grids cause a constant switch between load and idle (and back). With every load/idle switch, the compressor is unloaded for about a minute.



Constant system pressure offers enormous energy-saving potential

Speed-controlled compressors operate at a constant operating pressure (p ~ 0.1 bar). As high pressure always equates to high energy consumption, enormous energy savings are possible here (1 bar higher pressure = 6–8% higher energy consumption).



ALMiG direct drive: The force-fit connection

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

This offers major advantages:

- Maximum power transmission Consistently high efficiency of up to 99.9% over the entire service life
- Less noise and lower maintenance requirements
- compared to V-belt and gear drives High operational reliability

Cost savings: Direct drive vs. V-belt drive:

- V-belt drive (up to 96–97%)
- Direct drive (up to 99.9%) 4000 operating hours/year, 60 kW motor, 2.4 kW x 4000 = 9600 kWh

Reducing leaks through pressure reduction: Speed control makes it possible

All compressed air lines have (to a greater or lesser extent) leaks, the volume of which depends, among other things, on the pressure within the pipes. The average leakage rate of a compressed air station is around 20–30%. With a pressure drop of just 1 bar (e.g. through speed control), these leaks are reduced by approx. 10%.

Speed-controlled compressors with direct drive also operate very(no power peaks) and are also significantly quieter than comparable models with V-belt drives.

COMPRESSOR SYSTEMS
MADE IN GERMANY

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