

SCREW COMPRESSORS



5
YEARS

AirCare
CERTIFIED WARRANTY
COVERED BY ALMiG
TERMS & CONDITIONS APPLY



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

SCREW COMPRESSORS

From 4 kW to 355 kW



- + Maximum reliability in continuous operation
- + Minimise your operating costs with energy-efficient compressors
- + ALMiG probably has the most comprehensive range of screw compressors on the market
- + The right drive concept for any application

Powerful and versatile

BELT series
4–37 kW
p. 10

Highest efficiency in class

G-Drive T series
90–315 kW
p. 26

Energy savings with SCD technology

VARIABLE series
16–355 kW
p. 34

Compressor output with endurance and speed control

V-Drive series
30–75 kW
p. 42

Oil-free compressed air of outstanding quality

LENTO series
15–130 kW
p. 50

Compact and cost-effective

COMBI series
5,5–22 kW
p. 6

Robust and reliable

BELT XP series
4–37 kW
p. 14

High compressor performance and operational reliability

GEAR XP series
22–200 kW
p. 18

Compressor output with endurance

G-Drive series
30–75 kW
p. 22

Compact, quiet and powerful

FLEX series
5.5–30 kW
p. 30

High efficiency with SCD speed control

VARIABLE XP series
22–200 kW
p. 38

Highest efficiency with speed control

V-Drive T series
90–315 kW
p. 46





COMBI

The cost-effective 4-in-1 compact system

Our COMBI screw compressors are a highly cost-effective 4-in-1 solution: The compressed air station combines

- a compressor,
- compressed air receiver (with manual shut-off, and also with an automatic condensate drain as an option),
- refrigeration dryer and
- pre- and after-filters

in one housing as standard. The series thus fulfils the high quality requirements for compressed air for pneumatic applications specified by DIN ISO 8573-1.

Requiring the smallest possible space and emitting very low noise levels, the machines of the COMBI series can be installed exactly where the compressed air is needed, saving your company major investments in expensive pressure lines. The belt-driven systems of the COMBI series are used in applications ranging from practical trades to heavy-duty industry.

In small-scale workshops, the compressors guarantee a reliable supply of compressed air while, in industry, the COMBI products serve as an individual decentralized compressed air solution.

Other benefits of these compact systems include their low weight and therefore the ease of transport. All it takes is a lifting truck or a fork-lift truck to install the ready-to-connect and ready-to-use compressed air station on site.

The product range

2 different system sizes:

- COMBI 6–15: 270 l standard / 500 l optional
- COMBI 16–22: 500 l standard

All the compressors in the series are available:

- with/without receiver
- with/without refrigeration dryer
- with/without compressed air filter
- with various controllers to suit your needs

Application
Trade, small-scale industry

Power output
5.5 - 22 kW

Volume flow acc. to ISO 1217
(Annex C-2009)
8 bar: 0.82 - 3.24 m³/min
10 bar: 0.72 - 2.75 m³/min
13 bar: 0.62 - 2.54 m³/min

Operating pressure
5 - 13 bar

Cooling
Air-cooled

Drive
V-belt

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

- + 4-in-1: compressor, compressed air receiver, refrigeration dryer, pre-/after-filter
- + Fulfils quality requirements for compressed air according to DIN ISO 8573-1
- + Small space requirements
- + Low noise level
- + Easy to transport due to low weight



Suitable controllers:

AIR CONTROL MINI



Standard

AIR CONTROL B



Optional

AIR CONTROL P



Optional

AIR CONTROL HE



Optional

Controllers starting on p.54

COMBI



COMBI 6 – 15



COMBI 16 – 22

50 Hz								
COMBI	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
6	0.82	0.72	0.62	5.5	1180	770	1128	305
8	1.09	1.02	0.85	7.5	1180	770	1128	310
11	1.61	1.43	1.22	11	1180	770	1128	315
15	1.96	1.86	1.61	15	1180	770	1128	325
16	2.35	2.02	1.88	15	1480	780	1375	454
18	2.75	2.44	2.25	18.5	1480	780	1375	473
22	3.24	2.75	2.54	22	1480	780	1375	519

60 Hz									
COMBI	Volume flow acc. to ISO 1217 (Annex C-2009)				Rated motor power	Length	Width	Height	Weight
	100 psig	125 psig	150 psig	190 psig					
Model	acfm	acfm	acfm	acfm	HP	inch	inch	inch	lbs
6 / 8	30	28	25	21	7.5	44.1	27.0	44.4	628
8 / 10	37	37	35	29	10	44.1	27.0	44.4	639
11 / 15	59	55	48	42	15	44.1	27.0	44.4	650
15 / 20	72	68	63	56	20	44.1	27.0	44.4	672
16 / 21	86	81	72	64	20	58.3	70.1	54.1	1001
18 / 25	104	98	90	83	25	58.3	70.1	54.1	1043
22 / 30	124	113	102	97	30	58.3	70.1	54.1	1144

50 Hz							
COMBI SC	Volume flow acc. to ISO 1217 (Annex C-2009) *		Rated motor power	Length	Width	Height	Weight
	min.	max.					
Model	m³/min	m³/min	kW	mm	mm	mm	kg
11	0,62	1,56	11	1120	685	1128	300
22	1,23	3,23	22	1480	780	1375	535

* V referred to operating overpressure 7 bar at 50 Hz / 100 psig at 60 Hz; heat recovery systems available

Compressor + dryer				
COMBI	Dimensions		Weight	
	Model	mm	inch	kg
8	1180 x 770 x 1128	44.1 x 27.0 x 44.4	345	717
11	1180 x 770 x 1128	44.1 x 27.0 x 44.4	350	728
15	1180 x 770 x 1128	44.1 x 27.0 x 44.4	360	750
16	1480 x 780 x 1375	58.3 x 70.1 x 54.1	494	1098
18	1480 x 780 x 1375	58.3 x 70.1 x 54.1	513	1131
22	1480 x 780 x 1375	58.3 x 70.1 x 54.1	559	1232

Compressor + receiver (270 litres / 71 gal)						
Model	mm	inch	without dryer		with dryer	
			kg	lbs	kg	lbs
6	1180 x 770 x 1680	44.1 x 27.0 x 66.1	420	882	455	959
8	1180 x 770 x 1680	44.1 x 27.0 x 66.1	425	893	460	970
11	1180 x 770 x 1680	44.1 x 27.0 x 66.1	430	904	465	981
15	1180 x 770 x 1680	44.1 x 27.0 x 66.1	440	926	475	1003

Compressor + receiver (500 litres / 132 gal)						
Model	mm	inch	kg	lbs	kg	lbs
6	1900 x 770 x 1680	74.8 x 27.0 x 66.1	485	1025	520	1102
8	1900 x 770 x 1680	74.8 x 27.0 x 66.1	490	1036	525	1113
11	1900 x 770 x 1680	74.8 x 27.0 x 66.1	495	1047	530	1124
15	1900 x 770 x 1680	74.8 x 27.0 x 66.1	505	1069	540	1146
16	1900 x 780 x 1950	74.8 x 30.7 x 76.8	639	1409	679	1497
18	1900 x 780 x 1950	74.8 x 30.7 x 76.8	658	1451	698	1539
22	1900 x 780 x 1950	74.8 x 30.7 x 76.8	704	1552	744	1640

BELT

Powerful for versatile applications

The unique design concept of the BELT series makes it cost-effective in every kW class and therefore highly suitable for versatile applications.

With its robust and proven components, the series ensures a high compressor output and reliability around the clock. The tenacious compressors are fitted with a low-maintenance V-belt drive, which transfers the 4 to 37 kW of power with virtually no losses.

The BELT series enables very cost-effective and reliable usage in a volume flow range of up to 5.78 m³/min. The fixed speed concept of the series also delivers long service lives and low maintenance costs, making the screw compressors especially well suited for use as base load compressors in continuous operation.

The product range

3 variants with various outputs and volume flows:

- BELT 4–37
- BELT 4–37 "PLUS"
- BELT 4–37 "O"

* "PLUS" variant with attached compressed air refrigeration dryer, can also be retrofitted.

** "O" variant with attached compressed air refrigeration dryer and filter system comprising 1x depth filter and 2x active carbon filter for generating technically oil-free compressed air.

Application

Industry

Power output

4 - 37 kW

Volume flow acc. to ISO 1217 (Annex C-2009):

8 bar: 0.65 - 5.78 m³/min

10 bar: 0.54 - 5.15 m³/min

13 bar: 0.43 - 4.42 m³/min

Operating pressure

5 - 13 bar

Cooling

Air-cooled (standard)

Water-cooled (option as of 11 kW)

Drive

V-belt

Motor

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

- + Versatile use thanks to numerous possible extension options
- + Proven V-belt drive
- + Low maintenance costs due to long service lives



Maintenance-friendly design

Efficient cooling air guide

Air Control

Smart controller that monitors, visualises and documents

Horizontal separating tank

With external fine separator cartridges

Coolant filter

Base frame

Torsion-resistant

Suitable controllers:

AIR CONTROL B



Standard

AIR CONTROL P



Optional

AIR CONTROL HE



Optional

Controllers starting on p.54

BELT



BELT 4-37



BELT 4-37 "PLUS"

50 Hz								
BELT	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m ³ /min	m ³ /min	m ³ /min	kW	mm	mm	mm	kg
4	0.65	0.54	0.43	4	1020	700	930	200
5	0.88	0.78	0.65	5.5	1020	700	930	200
7	1.20	1.07	0.87	7.5	1020	700	930	230
11	1.70	1.50	1.32	11	1270	890	1190	250
15	2.24	1.98	1.63	15	1270	890	1190	250
16	2.52	2.17	1.75	15	1270	890	1190	400
18	2.97	2.62	2.27	18.5	1270	890	1190	410
22	3.54	3.12	2.67	22	1270	890	1190	470
30	4.60	4.12	3.40	30	1270	890	1190	560
37	5.78	5.15	4.42	37	1270	890	1190	590

60 Hz									
BELT	Volume flow acc. to ISO 1217 (Annex C-2009)				Rated motor power	Length	Width	Height	Weight
	100 psig	125 psig	150 psig	190 psig					
Model	acfm	acfm	acfm	acfm	HP	inch	inch	inch	lbs
4 / 5	25	23	20	-	5.5	40.2	27.6	36.6	419
5 / 7	32	30	26	24	7.5	40.2	27.6	36.6	419
7 / 10	43	41	37	30	10	40.2	27.6	36.6	452
11 / 15	64	60	53	46	15	40.2	27.6	36.6	485
15 / 20	87	78	72	62	20	40.2	27.6	36.6	518
16 / 21	97	91	83	62	20	50	35	46.9	959
18 / 25	113	101	94	78	25	50	35	46.9	992
22 / 30	127	120	112	98	30	50	35	46.9	1069
30 / 40	174	156	148	122	40	50	35	46.9	1279
37 / 50	203	182	176	160	50	50	35	46.9	1312

BELT XP

Robust and reliable

Stable air pressure, consistent volume flow and quiet continuous operation are just a few of the advantages that benefit you with the ALMiG BELT XP series. These sophisticated, compact units, unlike conventional reciprocating compressors, offer reduced noise levels and improved compressed air quality through a much lower residual oil content.

With its robust and proven components, the BELT XP compact system reliably ensures high compressor performance and operational reliability around the clock. The long-lasting compressors are equipped with a low-maintenance V-belt drive, which transmits drive power from 4 to 37 kW virtually loss-free.

The BELT XP series enables particularly economical and reliable operation in the volume flow range up to 6.30 m³/min.

In addition, the concept of the fixed-speed series aims at long service life and low maintenance costs, making the screw compressors particularly suitable for use as base-load compressors in continuous operation.

The intuitive ALMiG controls make the BELT XP series easy to operate. Due to the maintenance-friendly design, the service costs remain completely manageable.

- Application
Industry
- Power output
4 - 37 kW
- Volume flow acc. to ISO 1217 (Annex C-2009):
0.48 - 5.84 m³/min
- Operating pressure
10 bar
- Cooling
Air-cooled
- Drive
V-belt
- Motor
Energy efficiency class IE 3; IP 55 protection, protection class F



- + Versatile use thanks to numerous possible extension options
- + Proven V-belt drive
- + Low maintenance costs due to long service intervals

Integral compressor stage

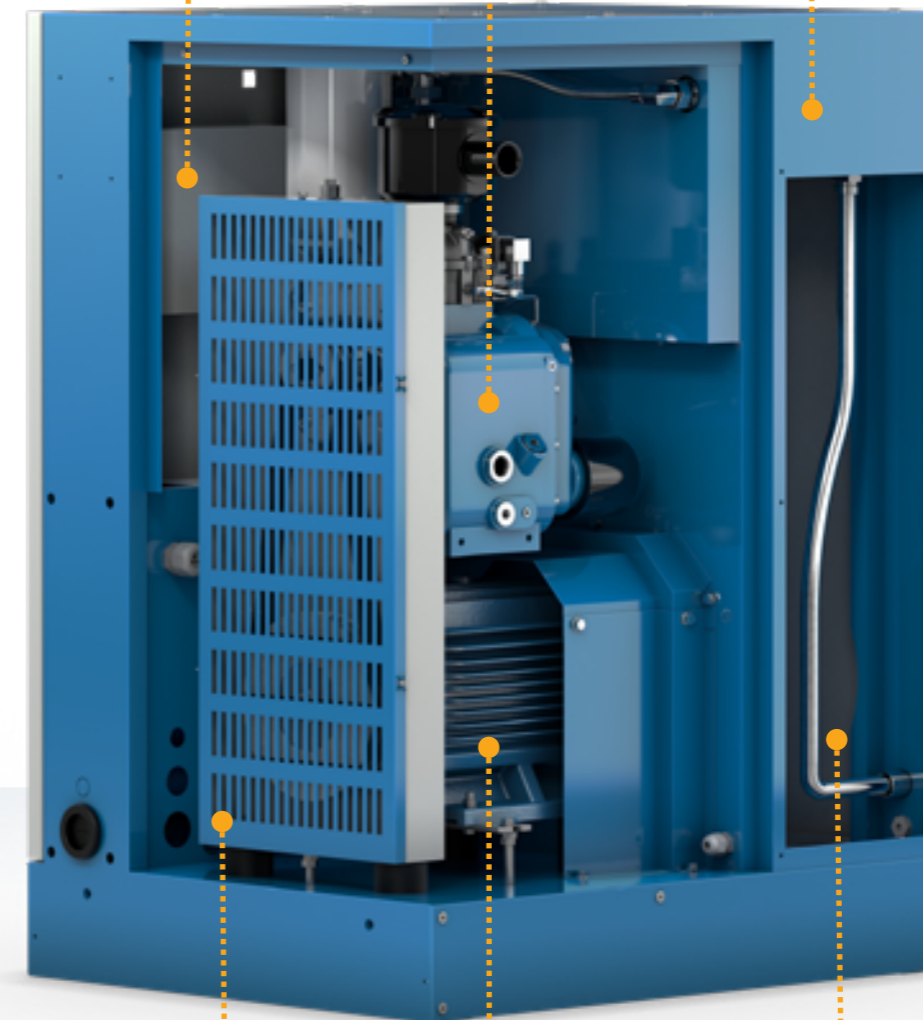
Combines compressor stage and receiver in one component to significantly reduce internal pressure losses

Air Control

Smart controller that monitors, visualises and documents

Side-mounted compressed air cooler

Enables suction of the coldest possible air



Service-friendly construction

High-efficient IE3-Motor

Efficient, noise-reducing cooling air flow

ALMiG XP Series:

The standard compressors for demanding applications:

- Xtra Performance
- Efficient cooling
- Proven reliability
- Robust and long-lasting components



Suitable controllers:

AIR CONTROL B



Standard

AIR CONTROL P



Optional

Controllers starting on p.54

BELT XP



BELT XP 4-6



BELT XP 8-15



BELT XP 16-22



BELT XP 30-37

50 Hz						
BELT XP	Volume flow acc. to ISO 1217 (Annex C-2009)	Rated motor power	Length	Width	Height	Weight
	10 bar					
Model	m ³ /min	kW	mm	mm	mm	kg
4	0,48	4	750	600	955	201
6	0,68	5,5	750	600	955	217
8	1,00	7,5	800	670	1100	275
11	1,49	11	800	670	1100	285
15	1,95	15	800	670	1100	370

50 Hz						
BELT XP	Volume flow acc. to ISO 1217 (Annex C-2009)	Rated motor power	Length	Width	Height	Weight
	10 bar					
Model	m ³ /min	kW	mm	mm	mm	kg
16	2,13	15	1250	880	1515	610
18	2,77	18,5	1250	880	1515	653
22	3,34	22	1250	880	1515	681
30	4,62	30	1350	940	1680	857
37	5,84	37	1350	940	1680	895

GEAR XP

High compressor performance and operational reliability

The GEAR XP range of screw compressors has been designed to deliver maximum reliability with low operating and service costs. They are especially suitable for constantly high compressed air requirements. The product range offers delivery quantities of 2.62 - 33.00 m³/min at maximum operating pressures of 5 - 13 bar.

The sophisticated system design and the careful selection of components optimize the flow rate. This improves energy efficiency, increases reliability and extends the life of the motor, electrical components, bearings, hoses and seals by up to 50%.

The new GEAR XP series is characterized by an encapsulated gearbox and the motor speed perfectly matching to the compressor stage.

In conjunction with comparatively low rotational speeds and excellent noise insulation, they achieve a very low noise level. Thus, the system can also be installed where the noise level is critical.

The maintenance and service-friendly system concept of the GEAR XP compressors includes a robust drive motor with strong power reserves, generously dimensioned heat exchangers and an intelligent cooling air duct.

All components have been designed with energy efficiency in mind. Starting with the engine, through the compressor stage to the almost lossless gearbox, each component has been optimized. You benefit as a customer and operator of the system over the entire product life cycle.

- Application
- Industry
- Power output
- 22 - 200 kW
- Volume flow acc. to ISO 1217 (Annex C-2009)
- 8 bar: 3.70 - 33.00 m³/min
- 10 bar: 3.20 - 30.20 m³/min
- 13 bar: 2.62 - 25.05 m³/min
- Operating pressure
- 5 - 13 bar
- Cooling
- Air-cooled (standard)
- Water-cooled (option)
- Drive
- Gearbox
- Motor
- Energy efficiency class IE 3; IP 55 protection, protection class F



- + Ideal for constantly high compressed air requirements under harsh conditions
- + Robust drive unit with strong power reserves
- + Maintenance and service-friendly drive concept

ALMiG XP Series:
The standard compressors for demanding applications:

- Xtra Performance
- Efficient cooling
- Proven reliability
- Robust and long-lasting components



High performance suction filter

Cooler Unit
Large-area radiators for lowest compressed air outlet temperatures

Air Control
Smart controller that monitors, visualises and documents

Compressor stage
Latest airend technology with integrated gear set

High-efficient IE3-Motor

Suitable controllers:

AIR CONTROL B



Standard

AIR CONTROL P



Optional

AIR CONTROL HE



Optional

Controllers starting on p.54

GEAR XP



GEAR XP 22

GEAR XP 30 - 37

GEAR XP 45 - 55

GEAR XP 75 - 90

GEAR XP 100 - 200

50 Hz								
GEAR XP	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m ³ /min	m ³ /min	m ³ /min	kW	mm	mm	mm	kg
22	3.70	3.20	2.62	22	1250	880	1515	670
30	5.20	4.50	3.86	30	1350	940	1680	820
37	6.30	5.60	4.70	37	1350	940	1680	860
45	7.70	7.02	5.92	45	2000	1250	1750	1555
55	9.60	8.40	7.19	55	2000	1250	1750	1640
75	12.80	11.80	10.20	75	2180	1330	1850	2025
90	15.30	13.80	11.80	90	2180	1330	1850	2120

50 Hz								
GEAR XP	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m ³ /min	m ³ /min	m ³ /min	kW	mm	mm	mm	kg
100	15.40	14.10	11.18	90	2940	1710	1825	2700
110	20.00	17.00	14.70	110	2940	1710	1825	3000
132	23.20	21.00	17.36	132	2940	1710	1825	3500
160	27.90	24.60	21.00	160	3300	1860	2145	3700
185	30.40	27.60	22.97	185	3300	1860	2145	3750
200	33.00	30.20	25.05	200	3300	1860	2145	3750

G-DRIVE

Compressor output with high endurance

The G-Drive series offers 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 m³/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



Optional heat recovery system

Maintenance-friendly design

Air Control
Smart controller that monitors, visualises and documents

Highly efficient motor-compressor unit
Energy efficiency class IE 3

Base frame
Torsion-resistant

Suitable controllers:

AIR CONTROL B



Standard

AIR CONTROL P



Optional

AIR CONTROL HE



Optional

Controllers starting on p.54

G-DRIVE



G-DRIVE 30/37



G-DRIVE 38-75

50 Hz								
G-DRIVE	Volume flow <small>acc. to ISO 1217 (Annex C-2009)</small>			Rated motor power	Length	Width	Height	Weight
	8 bar	10 bar	13 bar					
Model	m ³ /min	m ³ /min	m ³ /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
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

60 Hz										
G-DRIVE	Volume flow <small>acc. to ISO 1217 (Annex C-2009)</small>				Rated motor power	Length	Width	Height	Weight	
	100 psig	125 psig	150 psig	190 psig						
Model	acfm	acfm	acfm	acfm	hp	inch	inch	inch	lbs	
30	193.8	185.5	174.1	135.7	40	67	37.8	64.4	1896	
37	244.9	217.8	202.7	188.8	50	67	37.8	64.4	1952	
38	260.98	226.42	202.37	181.26	50	75	43	68	2425	
45	319.24	265.74	246.50	209.38	60	75	43	68	2755	
56	373.98	345.38	316.07	269.61	75	91	54	77	4672	
75	509.59	458.03	422.01	360.62	100	91	54	77	4939	

G-DRIVE T

Highest efficiency in class

With the two stage G-Drive T series ALMiG sets new standards in energy efficiency. By compressing air in two stages they achieve a specific performance which is at the highest level. Therefore, the G-Drive T compressor series offers a higher volume flow with a lower input power consumption, in comparison to an equivalent single stage compressor. Low rotational speeds and lower internal compression ratios within the compressor stages increase the efficiency, reliability and lifetime of the compressor elements. State of the art efficiency, coupled with a low sound level and low service costs, makes the two-stage technology very interesting for industrial compressed air users.

The G-Drive T offers all these benefits, plus a compact footprint due to its well-thought-out design. With a look to Industry 4.0, the controller of the compressor has all the required functionalities to communicate with common industrial company systems. Or simply use the web server to monitor the compressor from anywhere.

Advantages:

- Due to the high efficiency of the compressor maximum energy savings can be achieved and the life cycle costs of the machine can be reduced
- Up to 15% greater energy savings in comparison to a single stage compressor
- Durable and reliable
- Low differential pressures
- Reduced heat load
- Easy maintenance and service

The unique design of the airend integrates the first and second stage into one compressor element. The rotors of both air ends achieve the optimal speed due to the gear drive.

An efficient compression is achieved by using a cooling oil mist for interstage cooling. This controlled amount of oil enables at the same time to avoid condensate in the second stage. A complicated and expensive separate interstage cooling is not necessary and reliability increases.

Application

Industry

Power output

90 - 315 kW

Volume flow acc. to ISO 1217 (Annex C-2009)

14.9 - 62.7 m³/min

Operating pressure

5- 13 bar

Cooling

Air-cooled

Drive

Gear

Motor

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

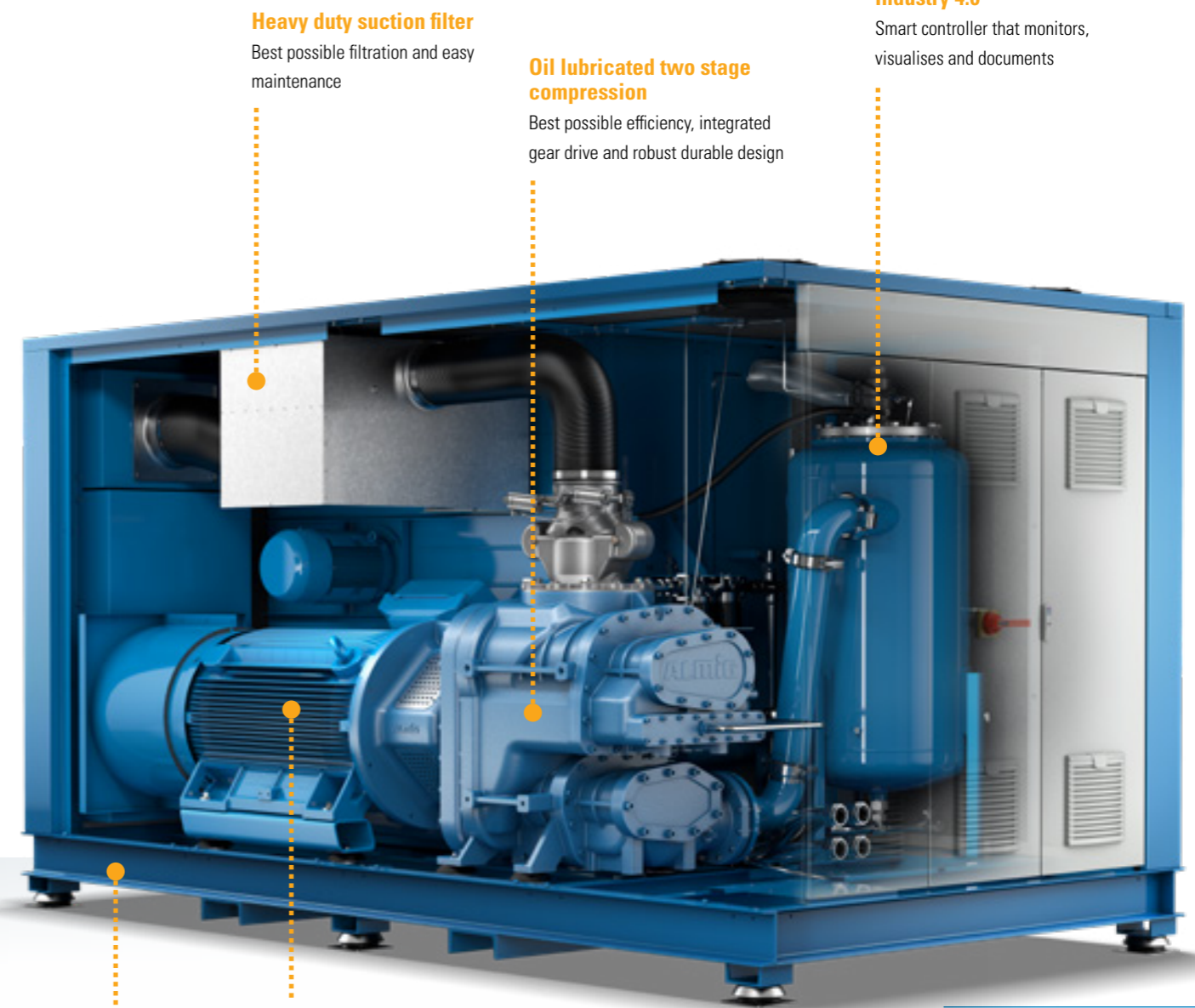


- + Efficient screw compressor technology
- + Low rotational speeds together with lower internal pressure ratios ensure a long durability
- + Efficiency and ease of maintenance made for lower life cycle costs



Industry 4.0

Smart controller that monitors, visualises and documents



Heavy duty suction filter

Best possible filtration and easy maintenance

Oil lubricated two stage compression

Best possible efficiency, integrated gear drive and robust durable design

Energy-efficient IE3 Motor

with long bearing life

Stable base frame

With vibration dampeners

AIR CONTROL HE



Standard

Controllers starting on p.54

G-DRIVE T

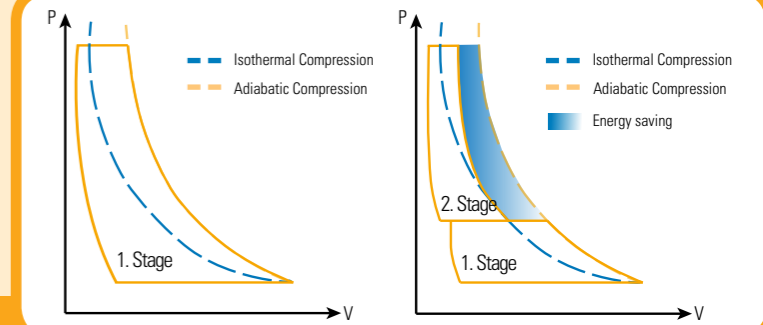
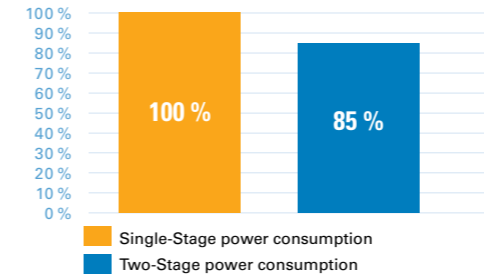


G-DRIVE T

50 Hz										
G-DRIVE T	Volume flow acc. to ISO 1217 (Annex C-2009)			Rated motor power	Length	Width	Height	Weight		
	8 bar	10 bar	13 bar							
Modell	m³/min	m³/min	m³/min	kW	mm	mm	mm	kg		
20	18.9	16.8	14.9	90	3881	2250	2438	5600		
24	22.7	19.9	16.8	110	3881	2250	2438	5600		
28	27.2	23.3	21.8	132	3881	2250	2438	5900		
34	33.0	29.3	26.3	160	3881	2250	2438	5950		
42	41.1	36.2	31.0	200	4531	2250	2438	8500		
52	51.5	45.5	40.2	250	4531	2250	2438	9300		
64	62.7	55.4	50.2	315	4531	2250	2438	9800		

Setting standards in enAIRgy efficiency

The two-stage compression is almost isothermal and requires up to 15% less power consumption than single-stage compression.



Single-Stage Compressor

FAD @8,0bar 46.50 m³/min
 Input Power 300 kW
 $P_{spec.}$ 6.45 kW/(m³/min)
 Air demand/Year* 22 320 000 m³
 „Load“ h/Year 8 000 h
 Energy costs 0.10 €
 „Load“ c/Year 240 000 €

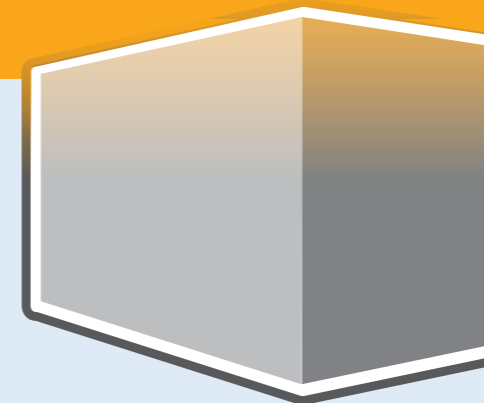
Ø Net Price 70 000 €



G-DRIVE T 52

FAD @8,0bar 51.50 m³/min
 Input Power 300.50 kW
 $P_{spec.}$ 5.83 kW/(m³/min)
 Air demand/Year* 22 320 000 m³
 „Load“ h/Year **7 223 h**
 Energy costs 0.10 €
 „Load“ c/Year 217 060 €
 „Load“ savings/Year **22 940 €**
 „Load“ savings/Month **1 912 €**
 „Load“ savings/Day **64 €**

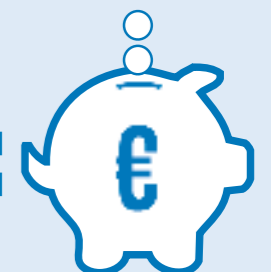
Ø Net Price 90 000 €
 Price Balance 20 000 €
Payback Time 0.87 years / 10 months



Two-stage compression



- High efficient IE3 Motor
- Smart controller 4.0
- Variable Speed cooling fan
- Low service and maintenance costs
- Optional heat recovery



*8000 operating hours per year, starting from the compressor with the lower delivery quantity.

FLEX

Compact, quiet and powerful

The speed-controlled, directly driven compressors of the FLEX series are used wherever compressed air is to be generated by a small, compact and extremely quiet system.

With the vertical alignment of the motor-compressor unit in the FLEX series, ALMiG has developed one of the most compact screw compressor systems on the market. The sound level of these small screw compressors is only around 60 dB(A). If required, they can be used directly at the workstation.

The FLEX series also provides you with a significant cost reduction: market analyses show that on average compressors only have a utilisation rate of around 50 – 70%. The maximum delivery volume is, however, only needed during peak times. The integrated ALMiG SCD technology, the benefits of which come to the fore in partial load applications, allows you to achieve an energy saving of up to 35%. The holistic SCD technology drive concept stands for **S**peed **C**ontrolled and **D**irect drive.

The speed-controlled version of the direct drive offers additional benefits. For example, a speed-controlled FLEX can instantly make an entire compressed air station more cost-effective in the smart ALMiG "master-slave network".

Achieve an energy saving of up to 35% through:

- Speed control
- Constant mains pressure, stepless from 5 to 13 bar
- Extremely good system efficiency
- No start-up changeover power peaks
- No expensive idle times

Application
Industry

Power output
5.5 - 30 kW

Volume flow acc. to ISO 1217 (Annex C-2009)
0.53 - 4.05 m³/min

Operating pressure
5 - 13 bar

Cooling
Air-cooled

Drive
Direct and speed-controlled

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



- + Volume flow can be adapted exactly to meet compressed air requirements
- + No switching cycles or expensive idle times
- + Energy-saving soft start without current peaks
- + Operating pressure can be freely selected between p_{min} – p_{max} in 0.1 bar/1.5 psig increments
- + The reduction in pressure can save money



Air Control

Smart controller that monitors, visualises and documents

SCD frequency converter

The integrated power pack; meets EMC guidelines

Maintenance-friendly design

Accessible from one side



Unit cooler

Efficient cooler for minimum coolant/compressed air outlet temperatures

Motor-compressor unit

Highly efficient, vertically aligned drive system

Suitable controllers:

AIR CONTROL B



Standard

AIR CONTROL P



Optional

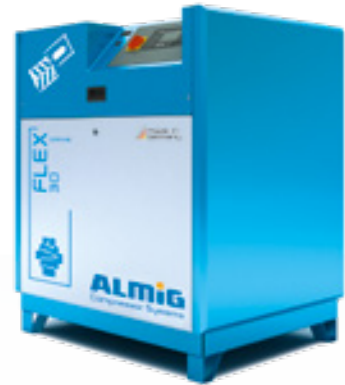
AIR CONTROL HE



Optional

Controllers starting on p.54

FLEX



FLEX
Standard variant



FLEX
Receiver variant



FLEX "PLUS"
Variant with sub-mounted refrigeration dryer



FLEX "0"
Variant with refrigeration dryer and filter system



FLEX "PLUS"
Variant with receiver



FLEX "0"
Variant with receiver

50 Hz								
FLEX	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height	Weight
		min.	max.					
	bar	m³/min	m³/min	kW	mm	mm	mm	kg
6	5-13	0.53	0.85	5.5	870	590	990	165
7	5-13	0.53	1.19	7.5	870	590	990	165
11	5-13	0.53	1.70	11	870	590	990	180
15	5-13	0.53	2.10	15	870	590	990	190
16	5-13	1.39	2.79	15	1140	890	1315	285
18	5-13	1.06	3.16	18.5	1140	890	1315	295
22	5-13	1.06	3.47	22	1140	890	1315	325
30	5-13	1.06	4.05	30	1140	890	1315	365

60 Hz								
FLEX	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height	Weight
		min.	max.					
	psig	acfm	acfm	HP	inch	inch	inch	lbs
6	75-190	17	30	7.5	34.3	23.2	39	364
7	75-190	22	42	10	34.3	23.2	39	364
11	75-190	17	61	15	34.3	23.2	39	397
15	75-190	26	76	20	34.3	23.2	39	419
16	75-190	49	100	20	44.9	35	51.8	628
18	75-190	37	113	25	44.9	35	51.8	650
22	75-190	37	126	30	44.9	35	51.8	717
30	75-190	37	143	40	44.9	35	51.8	805

* V relates to an operating overpressure of 7 bar at 50 Hz / 100 psig at 60 Hz; heat recovery systems available
 ** as "0" variant with sub-mounted refrigeration dryer and filter system for generating "oil-free" compressed air

VARIABLE

Compressors for maximum cost-effectiveness

The speed-controlled screw compressors of the VARIABLE series are the result of decades of experience in the field of energy-efficient solutions. They are designed for use under the toughest operating conditions and for applications with variable compressed air requirements. The system is therefore the right solution for high operational readiness and efficient compressed air supply.

Market analyses show that on average compressors only have a utilisation rate of around 50 – 70%. The maximum delivery volume is, however, only needed during peak times. The integrated ALMiG SCD technology, the benefits of which come to the fore in partial load applications, allows you to achieve an energy saving of up to 35%. The holistic SCD technology drive concept stands for **S**peed **C**ontrolled and **D**irect drive.

Achieve an energy saving of up to 35% through:

- Speed control
- Constant mains pressure, stepless from 5 to 13 bar
- Extremely good system efficiency
- No start-up changeover power peaks
- No expensive idle times

Application

Industry

Power output

16 - 355 kW

Volume flow acc. to ISO 1217 (Annex C-2009)

1.07 - 55.55 m³/min

Operating pressure

5 - 13 bar (stepless)

Cooling

Air-cooled (standard)
Water-cooled (option as of 35 kW, only water-cooled as of 355 kW)

Drive

Direct and speed-controlled

Motor

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



- + Efficient ALMiG SCD technology
- + Designed for use under the toughest operating conditions
- + Unbeatable energy efficiency in combination with the DIRECT series
- + Versatile use thanks to numerous possible extension options



Maintenance-friendly design

Air Control

Smart controller that monitors, visualises and documents

Base frame
Torsion-resistant

Horizontal separating tank
With external fine separator cartridges

Control cabinet
Large with integrated frequency converter

Suitable controllers:

AIR CONTROL B



Standard (16 – 28 kW)

AIR CONTROL P



Optional (16 – 28 kW)
Standard (35 – 355 kW)

AIR CONTROL HE



Optional

Controllers starting on p.54

VARIABLE



VARIABLE 16-28



VARIABLE 35-70



VARIABLE 90-210

50 Hz								
VARIABLE	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height	Weight
		min.	max.					
Model	bar	m³/min	m³/min	kW	mm	mm	mm	kg
16	5-13	1.17	2.68	16	1270	890	1190	387
20	5-13	1.17	3.22	20	1270	890	1190	387
24	5-13	1.17	3.62	24	1545	890	1190	405
28	5-13	1.17	4.14	28	1545	890	1190	405
35	5-13	1.07	6.02	40	2090	1080	1600	940
37	5-13	1.07	6.52	50	2090	1080	1600	980
55	5-13	2.22	9.98	60	2090	1080	1600	1160
65	5-13	2.23	10.73	80	2090	1080	1600	1240
70	5-13	2.81	12.84	85	2090	1080	1600	1270
90	5-13	4.30	16.85	100	2300	1400	1860	2050
115	5-13	4.30	18.28	115	2300	1400	1860	2200
130	5-13	4.30	20.00	130	2300	1400	1860	2200
150	5-13	9.40	27.25	150	2700	1686	1888	3500
210	5-13	9.40	30.14	210	2700	1686	1888	3600
260	5-13	15.70	41.80	260	3950	1650	2025	4300
315	5-13	15.70	53.00	315	3950	1650	2025	4450
355	5-10	15.70	55.55	355	3950	1650	2025	4900

60 Hz								
VARIABLE	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height	Weight
		min.	max.					
Model	psig	acfm	acfm	HP	inch	inch	inch	lbs
16	75-190	41	95	20	50	35	46.9	853
20	75-190	41	115	25	50	35	46.9	853
24	75-190	41	130	30	60.8	35	46.1	892
28	75-190	41	148	40	60.8	35	46.1	892
35	75-190	38	216	50	82.3	42.6	63	2072
37	75-190	38	234	55	82.3	42.6	63	2160
55	75-190	78	356	80	82.3	42.6	63	2557
65	75-190	79	385	90	82.3	42.6	63	2734
70	75-190	99	461	95	82.3	42.6	63	2799
90	75-190	152	602	125	90.6	55.1	73.2	4519
115	75-190	152	652	155	90.6	55.1	73.2	4850
130	75-190	152	713	175	90.6	55.1	73.2	4850
150	75-190	332	976	200	106.3	66.4	74.3	7716
210	75-190	332	1078	280	106.3	66.4	74.3	7937
260	75-190	554	1476	350	155.5	65	79.7	9480
315	75-190	554	1901	430	155.5	65	79.7	10580
355	75-145	554	1990	480	155.5	65	79.7	10802

* V relates to an operating overpressure of 7 bar at 50 Hz / 100 psig at 60 Hz; systems are air-cooled as standard / water-cooled as an option as of VARIABLE 35 model (VARIABLE 35 / 51), as of VARIABLE 315 model (VARIABLE 315 / 430) only water-cooled systems available; heat recovery systems available for all models; variants 16-28 are also available as "0" or "Plus" versions

VARIABLE XP

High efficiency with SCD speed control

The VARIABLE XP screw compressors are the optimal solution to provide the right amount of compressed air when the demand for compressed air fluctuates. With the integrated frequency converter, the specially designed motor only runs as fast as necessary to generate the required amount of compressed air. Expensive idle times and over-compression are now a thing of the past. Thus, the plant is the right solution for a highly efficient compressed air supply. The product range offers delivery quantities of 0.89 - 35 m³/min at maximum operating pressures of 5 - 13 bar.

In the development of the new VARIABLE XP series, the optimization of the cooling air flow has further improved the reliability and service life of the components. With the extra thick sound insulation, the system can also be installed where the noise level is critical.

ALMiG SCD-Technology

Market analyses show that on average compressors only have a utilisation rate of around 50 – 70%. The maximum delivery volume is, however, only needed during peak times. The integrated ALMiG SCD technology, the benefits of which come to the fore in partial load applications, allows you to achieve an energy saving of up to 35%. The holistic SCD technology drive concept stands for **Speed Controlled** and **Direct** drive.

Achieve an energy saving of up to 35% through:

- Speed control
- Constant mains pressure, stepless from 5 to 13 bar
- Extremely good system efficiency
- No start-up changeover power peaks
- No expensive idle times

Application

Industry

Power output

22 - 200 kW

Volume flow acc. to ISO 1217 (Annex C-2009):

0.89 - 35 m³/min

Operating pressure

5 - 13 bar (stepless)

Cooling

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

Drive

Direct and speed-controlled

Motor

Energy efficiency class IE 3; IP 55; insulation class F

- + Efficient ALMiG SCD technology
- + Designed for use under the toughest operating conditions
- + Versatile use thanks to numerous possible extension options



SCD frequency converter

The integrated power pack, according to EMC guidelines

ALMiG XP Series:

The standard compressors for demanding applications:

- Xtra Performance
- Efficient cooling
- Proven reliability
- Robust and long-lasting components



Suitable controllers:

AIR CONTROL B



Standard

AIR CONTROL P



Optional

AIR CONTROL HE



Optional

Controllers starting on p.54

VARIABLE XP



VARIABLE XP 22



VARIABLE XP 30 - 37



VARIABLE XP 45 - 55



VARIABLE XP 75 - 90



VARIABLE XP 100 - 200

50 Hz								
VARIABLE XP	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height	Weight
		min.	max.					
Model	bar	m ³ /min	m ³ /min	kW	mm	mm	mm	kg
22	5-13	0.89	3.90	22	1250	880	1515	560
30	5-13	1.54	5.50	30	1350	940	1680	830
37	5-13	1.54	6.60	37	1350	940	1680	855
45	5-13	3.18	8.30	45	2000	1250	1750	1555
55	5-13	3.18	10.30	55	2000	1250	1750	1640
75	5-13	3.93	14.00	75	2180	1330	1850	2025
90	5-13	3.93	16.40	90	2180	1330	1850	2120

50 Hz								
VARIABLE XP	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height	Weight
		min.	max.					
	bar	m ³ /min	m ³ /min	kW	mm	mm	mm	kg
100	5-13	6.50	16.40	90	2940	1710	1825	2700
110	5-13	6.50	21.00	110	2940	1710	1825	3000
132	5-13	9.92	25.20	132	2940	1710	1825	3500
160	5-13	9.92	29.20	160	3300	1860	2145	3700
200	5-13	9.92	35.00	200	3300	1860	2145	3750

* V relates to an operating overpressure of 7 bar at 50 Hz / 100 psig at 60 Hz, systems are air-cooled as standard / water-cooled as an option as of VARIABLE XP 30, heat recovery systems available for all models

V-DRIVE

Compressor output with high endurance

The V-Drive series offers 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 (up to 37 kW)

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 equipped 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 m³/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



Optional heat recovery system

Maintenance-friendly design

Frequency converters
Energy-saving speed control

Air Control
Smart controller that monitors, visualises and documents

Highly efficient motor-compressor unit
Energy efficiency class IE 3

Base frame
Torsion-resistant

Suitable controllers:

AIR CONTROL B



Standard

AIR CONTROL P



Optional

AIR CONTROL HE



Optional

Controllers starting on p.54

V-DRIVE



V-DRIVE 30/37



V-DRIVE 38-75

50 Hz									
V-DRIVE	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)		Rated motor power	Length	Width	Height	Weight	
		min	max						
Model	bar	m ³ /min	m ³ /min	kW	mm	mm	mm	kg	
30	5 - 13	1.86	5.53	30	1702	959	1635	720	
37	5 - 13	1.86	6.95	37	1702	959	1635	740	
38	5 - 13	2.45	7.39	37	1900	1100	1725	1050	
45	5 - 13	2.46	8.67	45	1900	1100	1725	1200	
56	5 - 13	4.04	10.95	55	2300	1380	1950	1941	
75	5 - 13	4.00	14.18	75	2300	1380	1950	2041	

60 Hz									
V-DRIVE	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)		Rated motor power	Length	Width	Height	Weight	
		min.	max.						
Model	psi	acfm	acfm	hp	inch	inch	inch	lbs	
38	75 - 190	86.43	260.98	50	75	43	68	2315	
45	75 - 190	88.08	319.24	60	75	43	68	2646	
56	75 - 190	140.59	373.98	75	91	54	77	4279	
75	75 - 190	146.86	509.59	100	91	54	77	4500	

V-Drive 30 & 37 in 60 Hz version on request



V-DRIVE T

Two-stage and speed-controlled - It couldn't be more efficient

How can the most enAIRgy-efficient screw compressor in the world be made even more efficient? By combining highly efficient two-stage compression with speed control. ALMiG combines exactly this in the new V-Drive T!

The unique stage design integrates the first and second stage in one compressor unit. The rotors of each compressor stage achieve optimum speed thanks to the gear drive.

An efficient compression is achieved by using a cooling oil mist for interstage cooling. This controlled amount of oil enables at the same time to avoid condensate in the second stage. A complicated and expensive separate interstage cooling is not necessary and reliability increases.

The speed control and variable motor speed automatically and sensitively adjust the delivery volume to the fluctuating air consumption. This reduces costly and energy-intensive idle times to a minimum. In addition to efficiency, low speeds and a lower internal pressure difference increase the service life and reliability of the compressor unit.

With regard to Industry 4.0, the control of the compressor has all the prerequisites to participate in internal company communication or to be monitored externally via a web server.

Advantages:

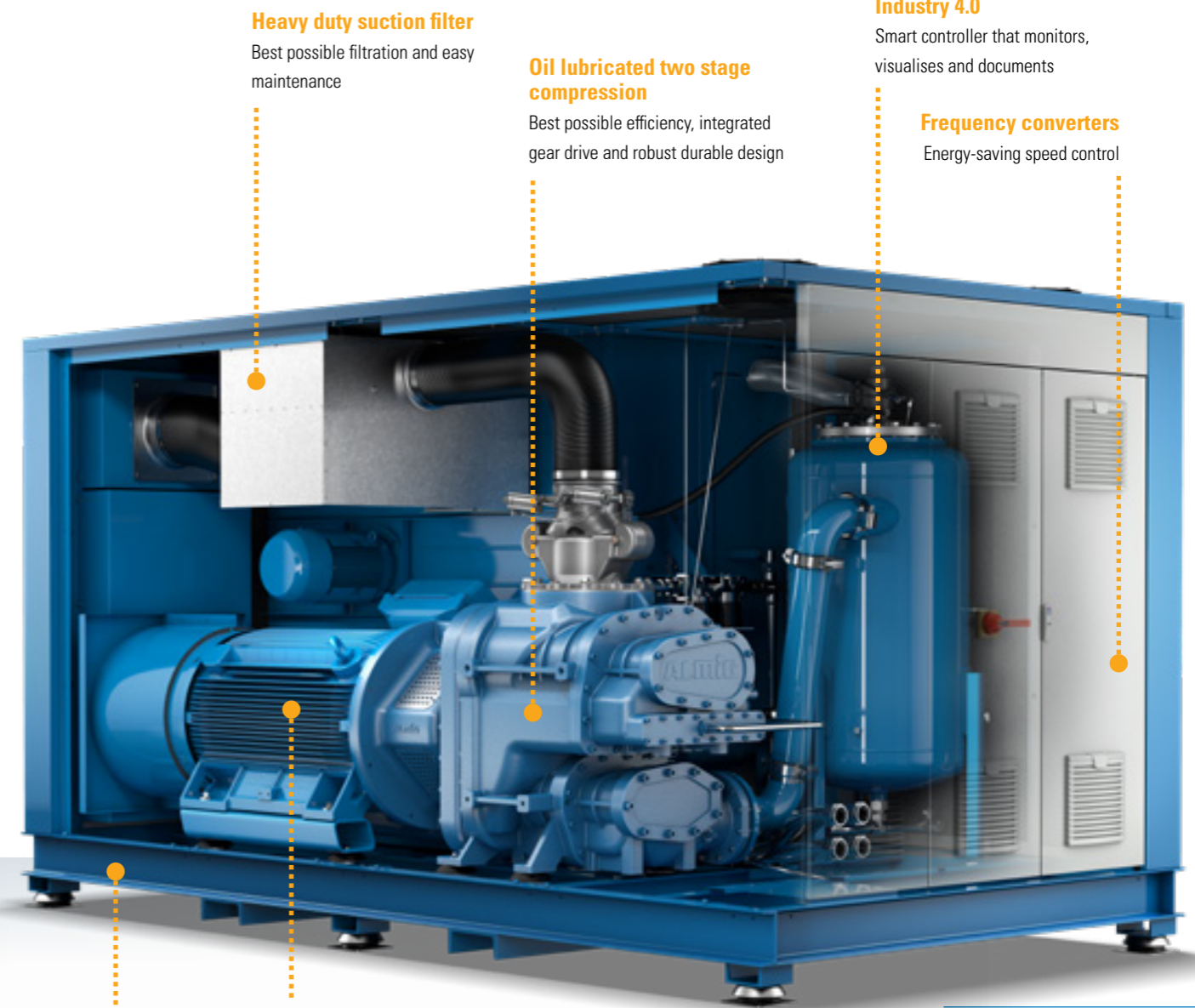
The high efficiency of the compressor allows high energy savings to be achieved and the life cycle costs of the plant to be reduced.

- Partly far more than 10 % energy savings compared to single-stage compression
- No expensive idle times due to speed control of the compressor
- Consistent and reliable
- Low differential pressures
- Low thermal load
- Easy maintenance and service

- Application
- Industry
- Power output
90 kW - 315 kW
- Volume flow acc. to ISO 1217 (Annex C-2009)
9.7 - 62.0 m³/min
- Operating pressure
5 - 13 bar
- Cooling
Air-cooled
- Drive
Gear with speed control
- Motor
Energy efficiency class IE 3; IP 55 protection, protection class F



- + Highest efficiency through two-stage compression and speed control
- + Low speeds in combination with low internal pressure differences ensure a long service life.
- + Efficiency and ease of maintenance ensure low life cycle costs



Heavy duty suction filter

Best possible filtration and easy maintenance

Oil lubricated two stage compression

Best possible efficiency, integrated gear drive and robust durable design

Industry 4.0

Smart controller that monitors, visualises and documents

Frequency converters

Energy-saving speed control

Energy-efficient IE3 Motor

with long bearing life

Stable base frame

With vibration dampeners

AIR CONTROL HE



Standard

Controllers starting on p.54

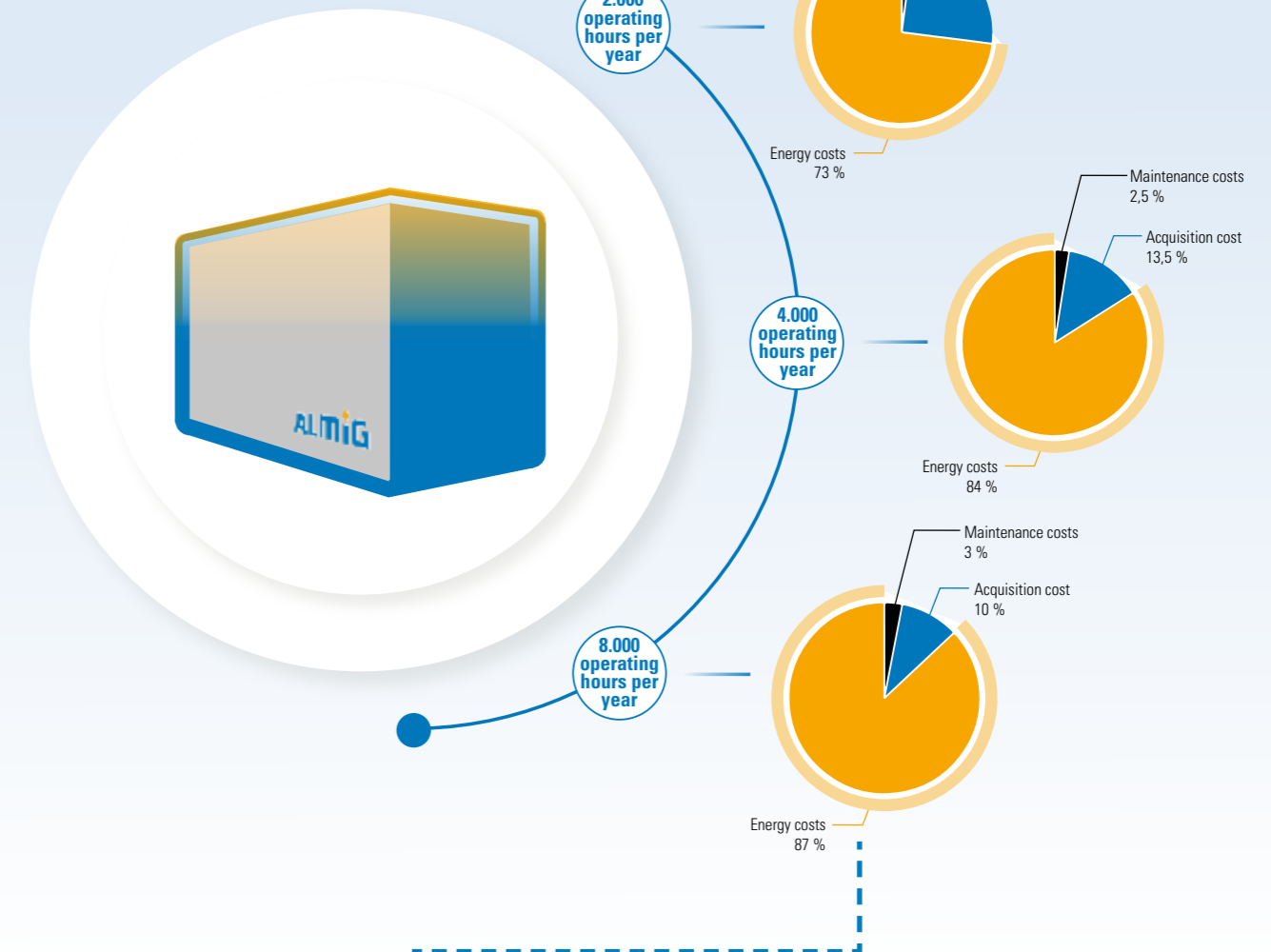
V-DRIVE T



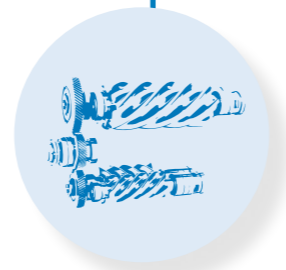
V-DRIVE T

50 Hz								
V-DRIVE T Model	Operating overpressure bar	Volume flow acc. to ISO 1217 (Annex C-2009) m³/min		Rated motor power kW	Length mm	Width mm	Height mm	Weight kg
		min	max					
20	5 - 10	9.7	19.5	90	3881	2250	2438	5650
24	5 - 12	9.7	23.5	110	3881	2250	2438	5900
28	5 - 13	9.7	27.7	132	3881	2250	2438	5950
34	5 - 13	12.5	34.6	160	3881	2250	2438	6200
42	5 - 13	13.1	42.1	200	4531	2250	2438	8500
52	5 - 13	14.4	53.1	250	4531	2250	2438	9300
64	5 - 13	12.5	62.0	315	4531	2250	2438	9800

Average total cost of a compressed air station using three runtime models as an example



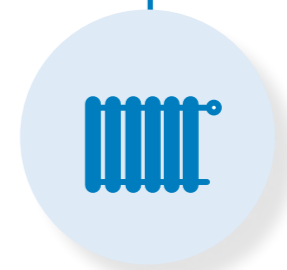
save energy



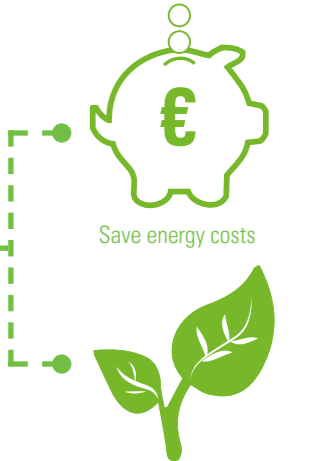
Two-stage compression



Speed control



Optional heat recovery system



Protecting the environment

Energy costs account for the largest share of a compressor's life-cycle costs. In order to keep energy costs as low as possible, ALMiG continuously develops its systems with regard to energy efficiency. Thanks to the two-stage compression in combination with the energy-saving speed control, the V-Drive T achieves a specific performance which is at the highest level. By using a heat recovery system, you can easily use the waste heat from the compressor for heating purposes and save even more energy costs.

* V referred to operating overpressure 7 bar at 50 Hz

LENTO

Oil-free compressed air of outstanding quality

Our LENTO series generates 100% oil-free compressed air for all applications, where products of the highest quality are produced. Given that only water, the most natural of all raw materials, is used in the compression process, LENTO delivers maximum compressed air quality for highly sensitive areas e. g. the pharmaceutical, foodstuffs, electrical engineering and medical industries.

The speed-controlled direct drive of the LENTO series delivers maximum cost-effectiveness by precisely matching the volume flow to the respective compressed air requirement. The integrated refrigeration dryer ensures a low pressure dew point. Therefore, under certain circumstances, the customer doesn't need a separate refrigeration dryer. This avoids costs for the fresh water supply and water processing and minimises service and maintenance costs compared with other oil-free compression systems.

Clean and ecological solution:

- Clean, environmentally friendly oil-free compressed air: ISO class 0, certified in accordance with DIN ISO 8573-1:2010
- Dust particles that are drawn in are washed out by the water
- Clean condensate – pure water – can be discharged directly into the sewer system
- Very low temperatures during compression thanks to excellent heat transfer via the water. Reduced amounts of energy are therefore used to generate the compressed air

Application

100% oil-free compressed air for industrial use (pharmaceutical, food, chemical, etc.)

Power output

15 - 110 kW

Volume flow acc. to ISO 1217 (Annex C-2009)

1.01 - 19.60 m³/min

Operating pressure

5 - 10 bar

Cooling

Water-cooled (standard)

Air-cooled (option)

Only water-cooled available as of LENTO 76

Drive

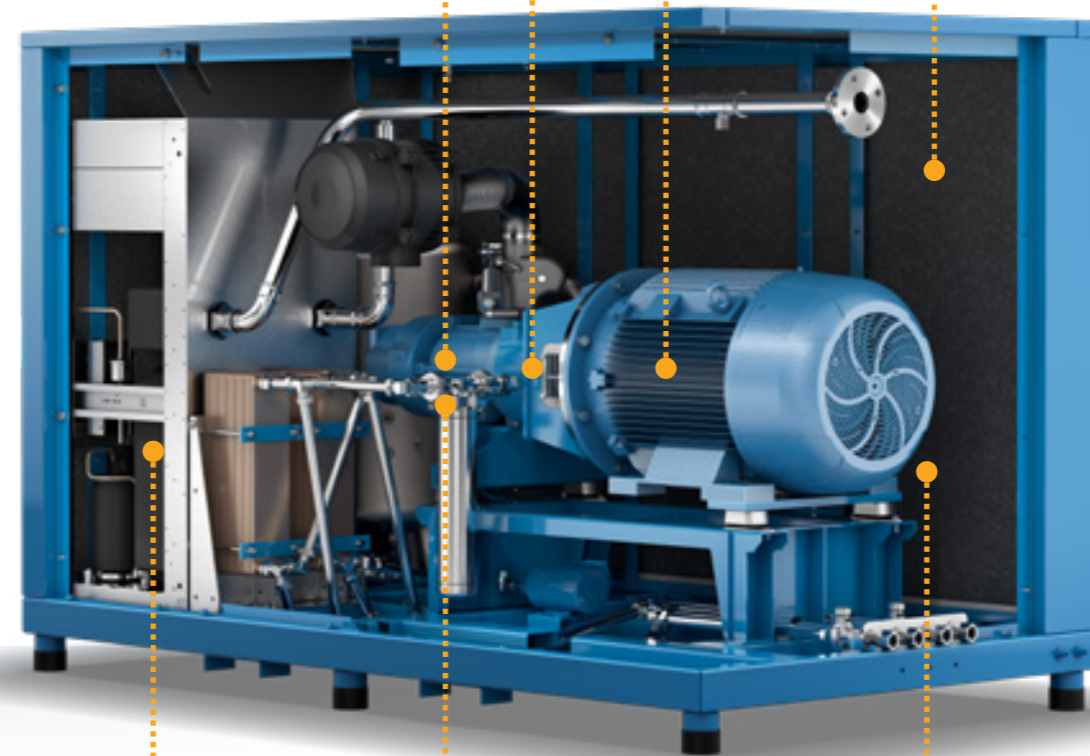
Direct and speed-controlled

Motor

Energy efficiency class IE 3;

IP 55 protection, protection class F

- + 100% oil-free compressed air generation
- + Volume flow can be adapted exactly to meet compressed air requirements
- + No switching cycles or expensive idle times
- + Energy-saving soft start without current peaks
- + Operating pressure can be freely selected between p_{min} – p_{max} in 0.1 bar/1.5 psig increments
- + The reduction in pressure can save money



SCD direct drive

Zero-loss power transfer

Compressor

Single-stage, water-injected; very low compression temperatures of -60°C, close to isothermic, economical compression

Air Control

Smart controller that monitors, visualises and documents

SCD motor

Highly efficient drive motor, IP 55 protection class ISO F; compact, powerful, reliable

Stainless steel piping

Integrated refrigeration dryer

Permanent generation and exchange of the required coolant, optimum biological and chemical water quality, for dry compressed air at the compressed air outlet

SCD frequency converter

The integrated power pack, according to EMC guidelines

Suitable controllers:

AIR CONTROL P



Standard

AIR CONTROL HE



Optional

Controllers starting on p.54

LENTO



LENTO 15- 55, air-cooled

50 Hz speed-controlled							
LENTO	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height
		min.	max.				
	bar	m ³ /min	m ³ /min	kW	mm	mm	mm
15	5-10	1.01	2.34	15	1880	850	1660
18	5-10	1.01	2.87	18.5	1880	850	1660
22	5-10	1.01	3.38	22	1880	850	1660
30	5-10	1.01	4.30	30	1880	850	1660
31	5-10	2.04	5.08	30	2300	1400	1560
37	5-10	2.04	6.14	37	2300	1400	1560
45	5-10	2.04	7.13	45	2300	1400	1560
55	5-10	2.04	8.19	55	2300	1400	1560
46	5-10	2.49	8.18	45	2674	1400	1769
56	5-10	2.49	9.86	55	2674	1400	1769
75	5-10	2.49	12.46	75	2674	1400	1769
76	5-10	4.06	13.82	75	3448	1500	1927
90	5-10	4.06	16.43	90	3448	1500	1927
110	5-10	4.06	19.60	110	3448	1500	1927



LENTO 46 - 110

60 Hz speed-controlled							
LENTO	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)*		Rated motor power	Length	Width	Height
		min.	max.				
	psig	acfm	acfm	HP	inch	inch	inch
15	75-145	36	83	20	74	33.5	65.4
18	75-145	36	103	25	74	33.5	65.4
22	75-145	36	121	30	74	33.5	65.4
30	75-145	36	153	40	74	33.5	65.4
31	75-145	72	182	40	90.6	55.1	61.4
37	75-145	72	220	50	90.6	55.1	61.4
45	75-145	72	255	60	90.6	55.1	61.4
55	75-145	72	292	75	90.6	55.1	61.4

LENTO 46 - 110 in 60 Hz Version on request

* V relates to an operating overpressure of 7 bar at 50 Hz / 100 psig at 60 Hz; LENTO 15-70 (15 / 20-70 / 95) water-cooled as standard, air-cooled as an option; LENTO 75 D (75 / 100 D) and LENTO 80-110 (LENTO 80 / 105-110 / 150) only available as water-cooled

CONTROLLERS

Smart monitoring,
reliable documentation



NETWORKING WITH AIR CONTROL

Internet-based remote monitoring

In the future it will be even easier to remotely monitor your compressed air generation thanks to visualisation via the ALMiG web server – regardless of where you happen to be at the time. The system ensures high reliability with convenient access to various parameters, prompt messages and comprehensive facts.

Up to ten compressors can be monitored in this way – regardless of the compressor type. The system works with both piston and screw or turbo compressors. The only prerequisite is that the web server is connected via an AIR CONTROL HE. State-of-the-art bus technology is used for the installation.

Accessible parameters:

- Energy and compressed air balance, also available to download
- Overview of the compressor station with the operating statuses of each individual compressor
- Loaded / idle mode statistics of compressors
- Data on delivery volumes, volume flows and motor starts
- Detailed information about utilisation, network pressure and specific performance data
- Data on energy efficiency and maintenance

The most important benefits:

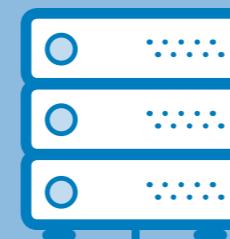
- Easy to operate via standard internet browser
- Can be accessed via company's own network or anywhere in the world via the Internet
- Dial-in protected by user ID
- Various parameters are depicted either in tables or graphs
- Continuous monitoring of all parameters of relevance to operation
- Active e-mail notification to up to 5 e-mail addresses in the event of warnings, maintenance work or faults
- Convenient transfer of all relevant data into Office programs such as MS Excel
- The parameters are displayed in a visually appealing way
- CSV files for further processing



Your web device



ALMiG web server



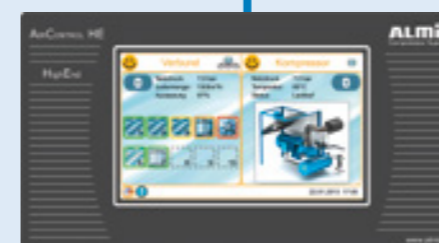
Network/Ethernet

Intranet

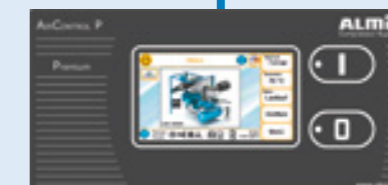


Connection
of systems & components does
not depend on the manufacturer
Module DE 200K/F

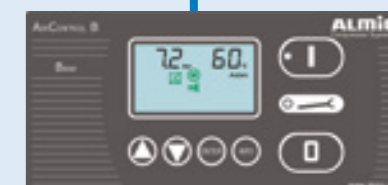
RS 485 connection



AIR CONTROL HE



AIR CONTROL P



AIR CONTROL B

AIR CONTROL

Monitored. Visualised. Documented.



Air Control Mini



Air Control B



Air Control P



Air Control HE

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

- 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

- Integrated web server
- 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

HEAT RECOVERY

Optimum energy use



HEAT RECOVERY: REDUCE COSTS

Save energy easily and enjoy financial benefits quickly

The energy consumed for the generation of compressed air is converted almost entirely to heat. This is a high potential for savings since one compressed air station with a power requirement of 75 kW during 4000 operating hours, for example, will need approximately 300,000 kWh of power every year. Use this energy in the form of:

- Warm air to supplement space heating
- Warm water to support central heating
- Warm water for industrial water

Heat energy at no additional cost to you!

The cost of fuel oil, gas, and other forms of energy continues to rise. As a result, the use of energy will increasingly influence the competitiveness of many companies. But the recovery of heat energy can boost overall energy efficiency and contribute to the company's profitability.

At the same time, the required investment is small: On average, related expenses pay for themselves in just a few months. This is an excellent opportunity to reclaim a portion of your operating costs!

Heat recovery: determine your individualised benefits

How can your company specifically benefit from heat recovery? Perform custom calculations for clarity on your investment and payback period. This will give you a solid foundation for making decisions and provide detailed information on why you should take advantage of this opportunity.

Saving money and protecting the environment can be easy

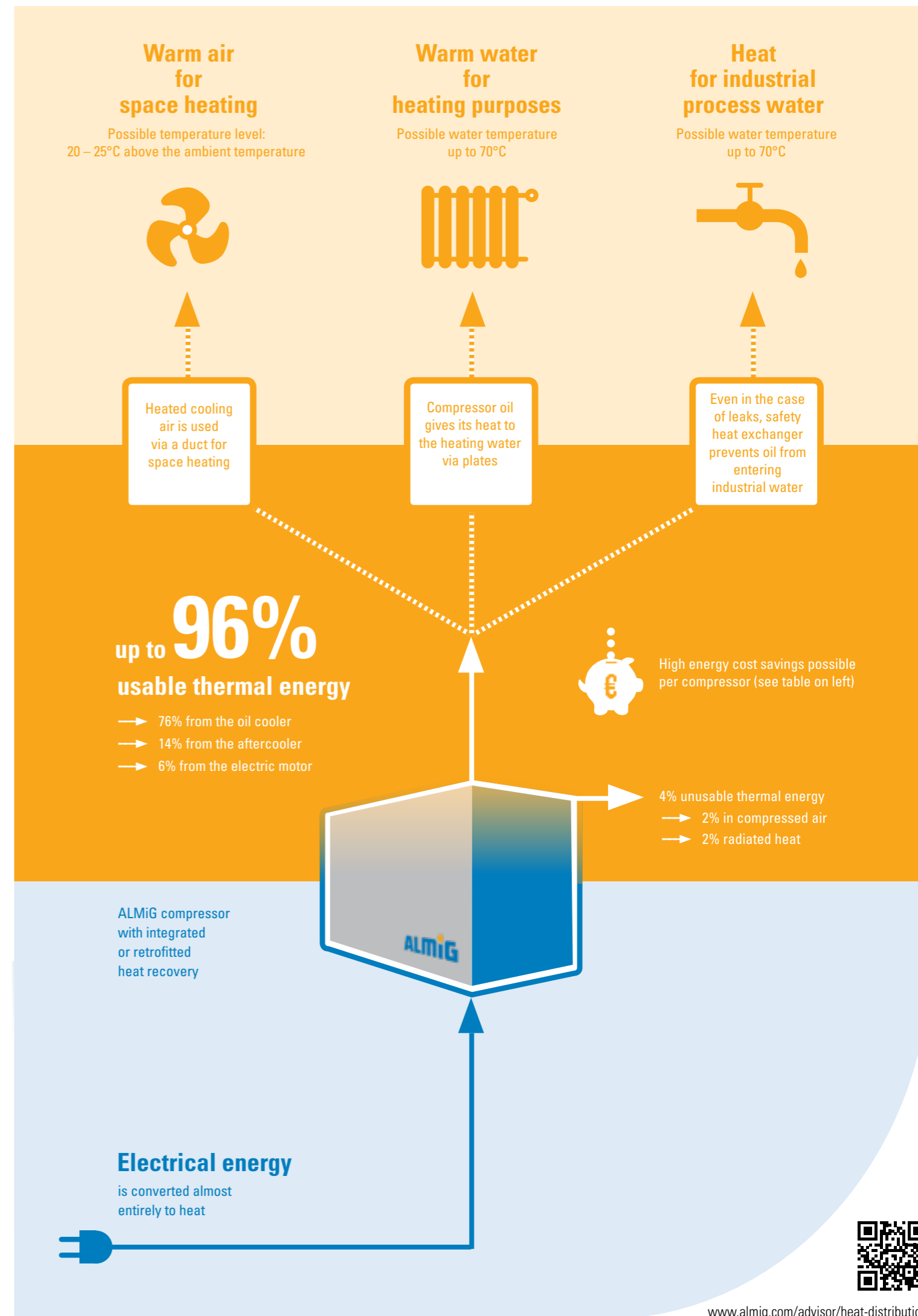
Every litre of fuel oil that you save reduces your CO2 emissions by approximately 2.8 kg. Heat recovery systems pay for themselves after one-half to one year on average, depending on capacity utilisation and the level of energy costs.

Examples of potential energy savings

Compressor rated output	Usable heat	Fuel oil savings/year ¹	Fuel oil cost savings/year ¹
From 6 kW	2.8 kW	700 l	€490.00
37 kW	27 kW	6,720 l	€4,704.00
45 kW	32 kW	8,170 l	€5,719.00
55 kW	40 kW	9,990 l	€6,993.00
75 kW	54 kW	13,620 l	€9,534.00
90 kW	65 kW	16,350 l	€11,445.00
110 kW	80 kW	19,980 l	€13,986.00
132 kW	95 kW	23,980 l	€16,786.00
160 kW	115 kW	29,060 l	€20,342.00
Up to 400 kW	288 kW	72,660 l	€50,870.00

¹ At 2,000 hours heat recovery/year

² At a fuel oil price of 0.70 €/litre and 2,000 hours heat recovery/year



SPEED CONTROL

Needs-based adaptation of delivery volumes



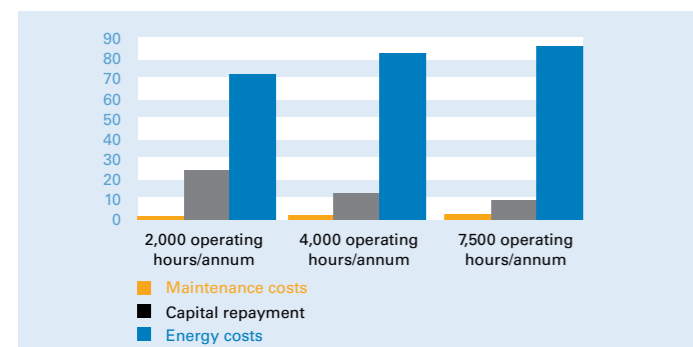
INTELLIGENT SYSTEMS YOU CAN RELY ON

Speed-controlled screw compressors

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

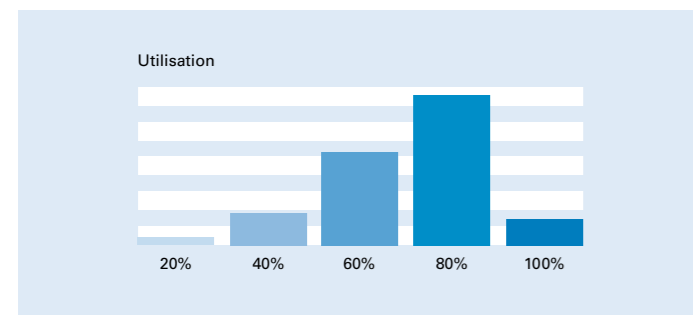
According to a study, approx. 80 billion kWh of electricity is used in compressed air systems in the EU each year, more than 10% of the electricity required in industry. So the cost-effectiveness of a compressed air system isn't about how much it costs to buy, but how much it costs to run on a day-to-day 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.

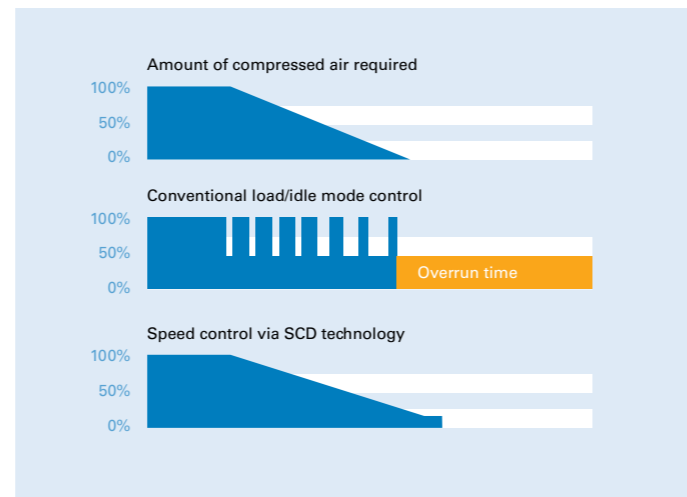
From experience, we know that most compressors are only used at between 50 and 70% of capacity. The maximum delivery volume is in most cases only used during peak times.



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

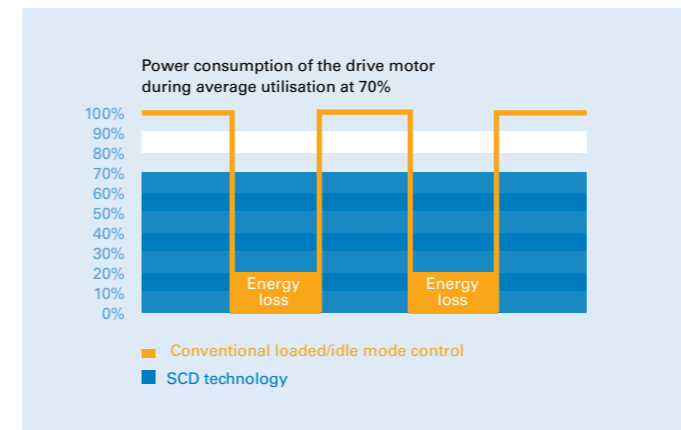
The VARIABLE and V-Drive series vary their power by gently and continually changing speeds, not by abruptly switching on and off.

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.

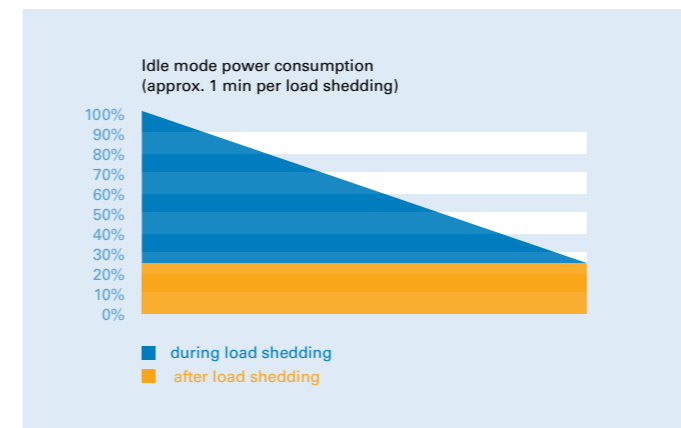
Productivity without idle mode: the ALMiG efficiency programme

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.



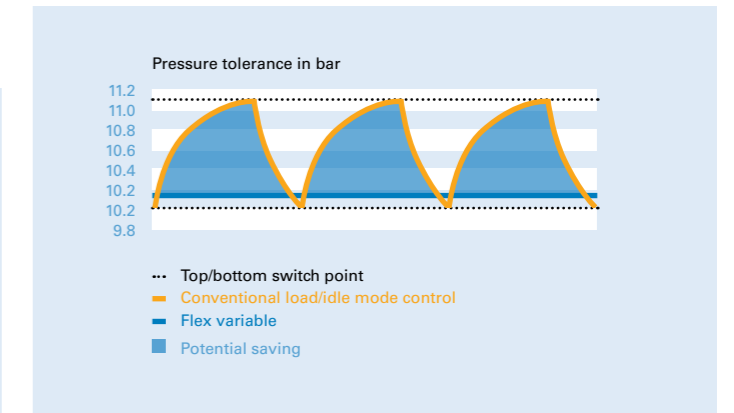
Less load shedding in fluctuating networks

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.

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Subject to errors and modifications

