

F-DRIVE SCREW COMPRESSOR







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

F-DRIVE

Vertical efficiency for the smallest footprint

Energy- and space-saving at the same time, that doesn't have to be a contradiction in terms. Quite the opposite. We at ALMiG have been proving for more than ten years that the concept of a vertical arrangement of motor and compressor unit is the key to success, both in terms of energy efficiency and installation space.

Energy-saving speed control by means of an oil-cooled permanent magnet motor, a highly efficient compressor stage combined with the most intelligent control technology and the lowest possible noise level are our response to the increasingly demanding requirements of the future.

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

The oil-cooled permanent magnet motor has decisive advantages over standard motors:

- the energy efficiency is comparable to IE4 or better,
- the motor cooling is independent of the speed,
- drive motor's heat dissipation can be recovered via heat recovery.

As an option (from F-Drive 18), integrated plate heat exchangers are used in so-called heat or energy recovery to recover the heat energy generated by compression. This can then be used to heat e. g. service or process water. Existing oil or gas heating systems can be supported or even partially replaced. For the F-Drive, this means that previously unattainable values can now be achieved in energy recovery!

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

- Speed control
- constant mains pressure, infinitely variable from 5 to 13 bar
- extremely good system efficiency
- no start-up changeover power peaks
- no expensive downtimes

Application

Industry

Power output

5.5 - 75 kW

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

0.33 - 14.38 m³/min

Operating pressure

5 - 13 bar

Cooling

Air-cooled

Drive

Direct and speed-controlled

Motor

Permanent magnet motor



- + Motor efficiency corresponds to IE4 or better
- + Heat recovery optionally available incl. use of engine waste heat!
- + Air Control P as standard compressor control system
- + Smallest footprint
- + Easy access and maintenance

SCD frequency converter
for the exact adjustment of
the delivery quantity

Direct drive
for loss-free power
transmission

Air Control P
Smart controller that monitors, visualises
and documents

Oil check valve
prevents recirculated oil from getting
into the filtered compressed air when
switching off, incl. sight glass

**Easily accessible
coolers**



Space-saving design
for a small footprint

Vibration damper
for decoupling the
motor/airend unit

**Additional internal
system pressure
display**

**High efficient permanent magnet
motor**
Optimally cooled at any speed by oil cooling

**Sight glass for easy
filling quantity control**

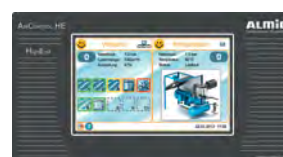
Suitable controllers:

AIR CONTROL P



Standard

AIR CONTROL HE



Optional

F-DRIVE



F-Drive

| 50 Hz | | | | | | | |
|---------|------------------------|---|--------|-------------------|--------|-------|--------|
| F-Drive | Operating overpressure | Volume flow acc. to ISO 1217 (Annex C-2009)* | | Rated motor power | Length | Width | Height |
| | | min. | max. | | | | |
| Model | bar | m³/min | m³/min | kW | mm | mm | mm |
| 6 | 5 - 13 | 0.33 | 0.94 | 5.5 | 660 | 690 | 1586 |
| 8 | 5 - 13 | 0.23 | 1.21 | 7.5 | 660 | 690 | 1586 |
| 11 | 5 - 13 | 0.23 | 1.84 | 11 | 660 | 690 | 1586 |
| 15 | 5 - 13 | 0.23 | 2.38 | 15 | 660 | 690 | 1586 |
| 18 | 5 - 13 | 0.42 | 3.52 | 18.5 | 790 | 800 | 1757 |
| 22 | 5 - 13 | 0.42 | 4.11 | 22 | 790 | 800 | 1757 |
| 30 | 5 - 13 | 0.93 | 6.00 | 30 | 940 | 850 | 1805 |
| 37 | 5 - 13 | 0.93 | 6.98 | 37 | 940 | 850 | 1805 |
| 45 | 5 - 13 | 0.90 | 8.31 | 45 | 1305 | 1105 | 1890 |
| 55 | 5 - 13 | 1.83 | 10.54 | 55 | 1395 | 1155 | 2000 |
| 75 | 5 - 13 | 1.88 | 14.38 | 75 | 1395 | 1155 | 2000 |

* related to operating overpressure 7 bar at 50 Hz; status 07/2020; subject to alterations and errors.

F-Drive: Efficient and well thought-out in every detail

Intelligent control systems

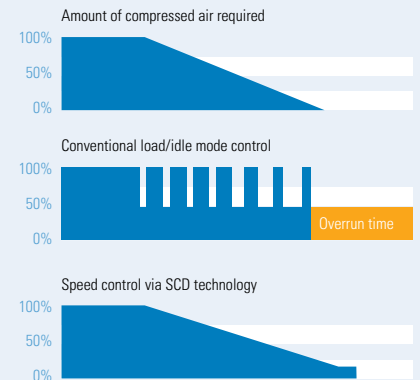
- Optimal control, management and monitoring of your entire compressed air supply.
- Maximum reliability in the supply of compressed air and maintenance planning ahead of time.
- Optimum operating convenience and outstanding cost-effectiveness.



Speed control

Saving costs through:

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



Heat recovery

ALMiG compressor
with integrated or
retrofitted heat recovery



up to **96%**
usable thermal energy

- > 76% from the oil cooler 4% unusable thermal energy
- > 14% from the aftercooler ---> 2% in compressed air
- > 6% from the electric motor ---> 2% radiated heat

Electrical energy
is converted almost
entirely to heat

Via exhaust air
ducting systems
up to 96%
usable thermal
energy with
ALMiG F-Drive

Warm air for space heating

Possible temperature level:
20 – 25°C above the ambient
temperature

Warm water for heating purposes

Possible water temperature
up to 70°C

Heat for industrial process water

Possible water temperature
up to 70°C

Via heat exchangers
up to 82%*
usable thermal
energy with
ALMiG F-Drive

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



High energy cost savings per compressor possible!

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