

V-DRIVE T

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

How can the most enAlRgy-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)

6.58 - 62.0 m³/min

Operating pressure

5 - 13 bar

Cooling

Air-cooled

Drive

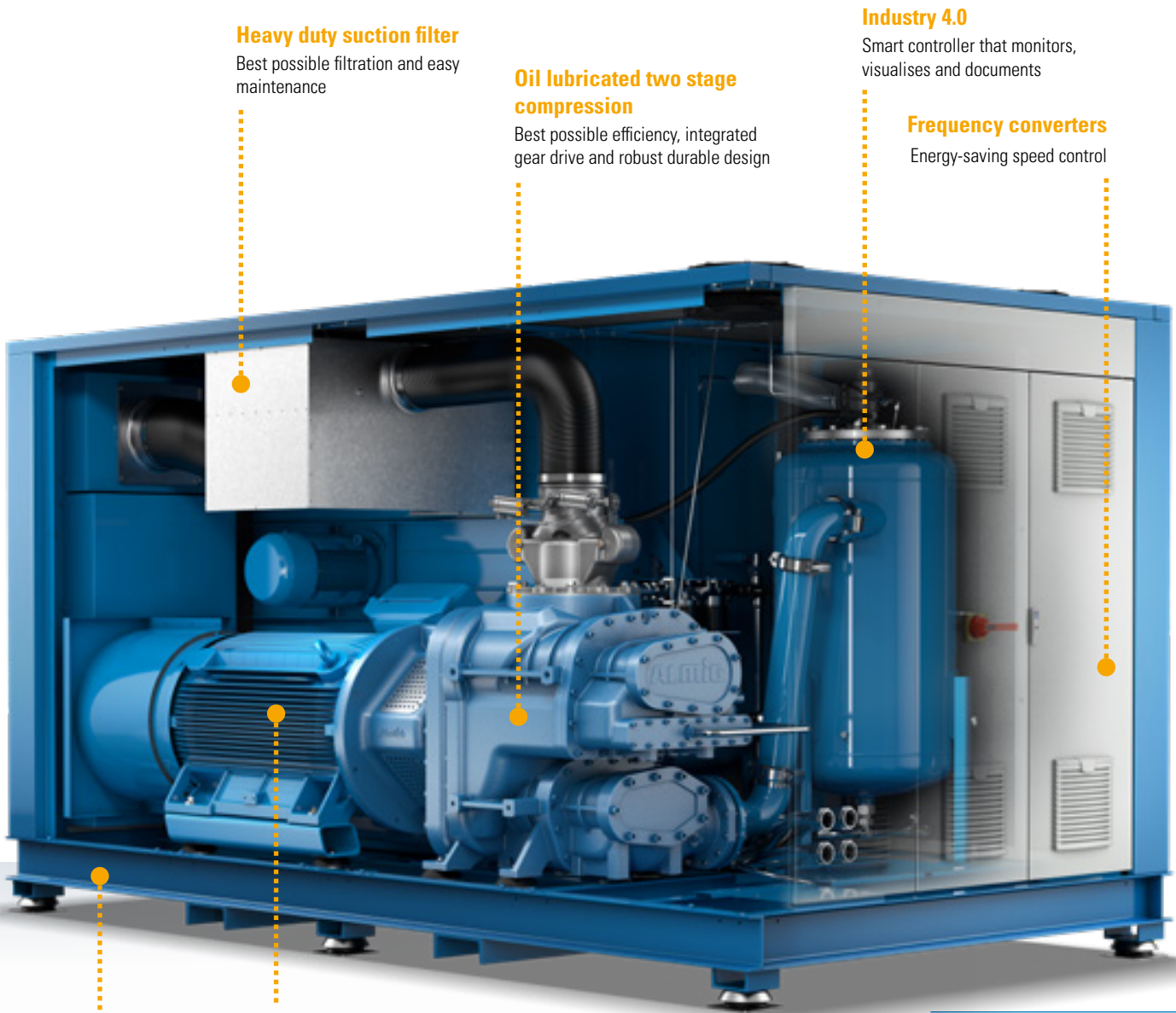
Gear with speed control

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. 46](#)

V-DRIVE T



V-DRIVE T

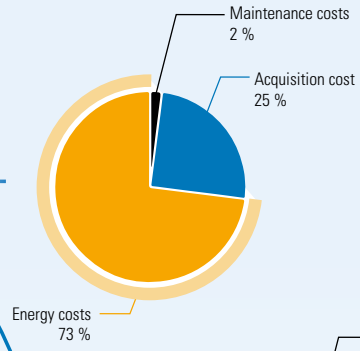
50 Hz								
V-DRIVE T	Operating overpressure	Volume flow acc. to ISO 1217 (Annex C-2009)		Rated motor power	Length	Width	Height	Weight
		min	max					
Model	bar	m ³ /min	m ³ /min	kW	mm	mm	mm	kg
20	5 - 10	6.58	18.92	90	3250	1800	1800	5650
24	5 - 12	6.52	22.82	110	3250	1800	1800	5850
28	5 - 13	8.56	27.09	132	3250	1800	1800	5900
34	5 - 13	12.5	34.6	160	3882	2250	2450	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

* V referred to operating overpressure 7 bar at 50 Hz

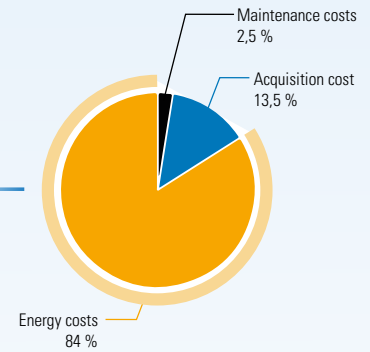
Average total cost of a compressed air station using three runtime models as an example



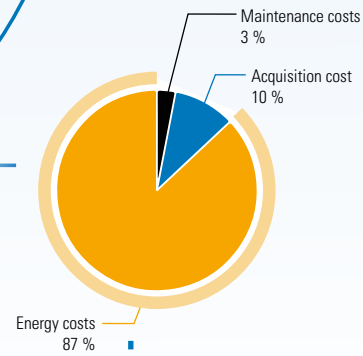
2.000 operating hours per year



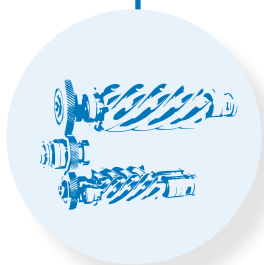
4.000 operating hours per year



8.000 operating hours per year



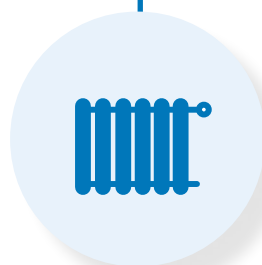
save energy



Two-stage compression



Speed control



Optional heat recovery system



Save energy costs



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.