ATMOS

Screw compressors **ALBERT**

6–13 bar | 0,5–3,3 m³/min | 4–20 kW

enough air for everyone

EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise and Innovations for Competitiveness

ATMOS ALBERT series compressors

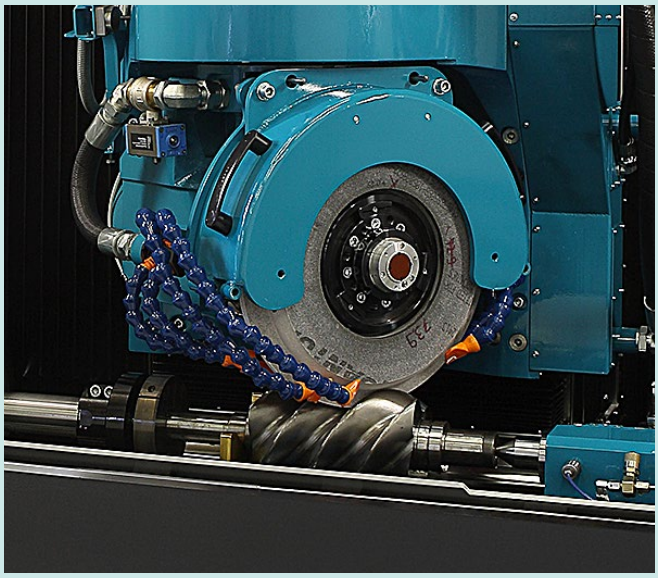
Robust machines for long-term continuous operation.

Since 1992, we have been producing and continuously optimizing our ALBERT compressors to meet the demanding market of industrial customers, where high reliability, efficiency and long life expectancy are taken for granted.

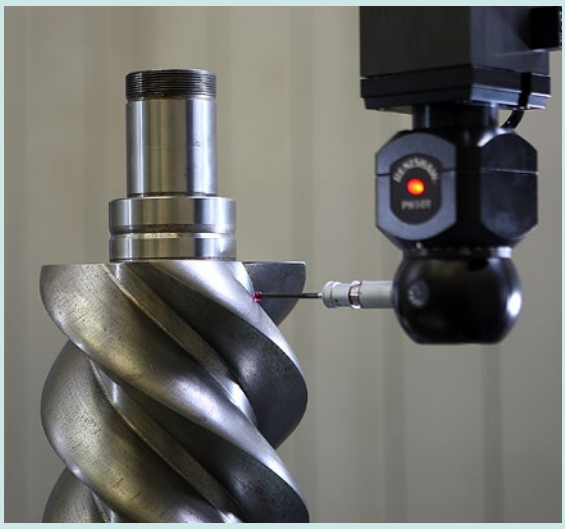
Our ALBERT compressors fully meet the most demanding requirements of our clients. Thousands of satisfied customers around the world serve as evidence.

The core of the compressor

The screw block is the key element of every compressor. In ALBERT compressors we use the screw blocks B100 and B100L, which we manufacture in our own production plant. For their production we use the latest technology which permits accuracy of a few thousands of a millimetre.

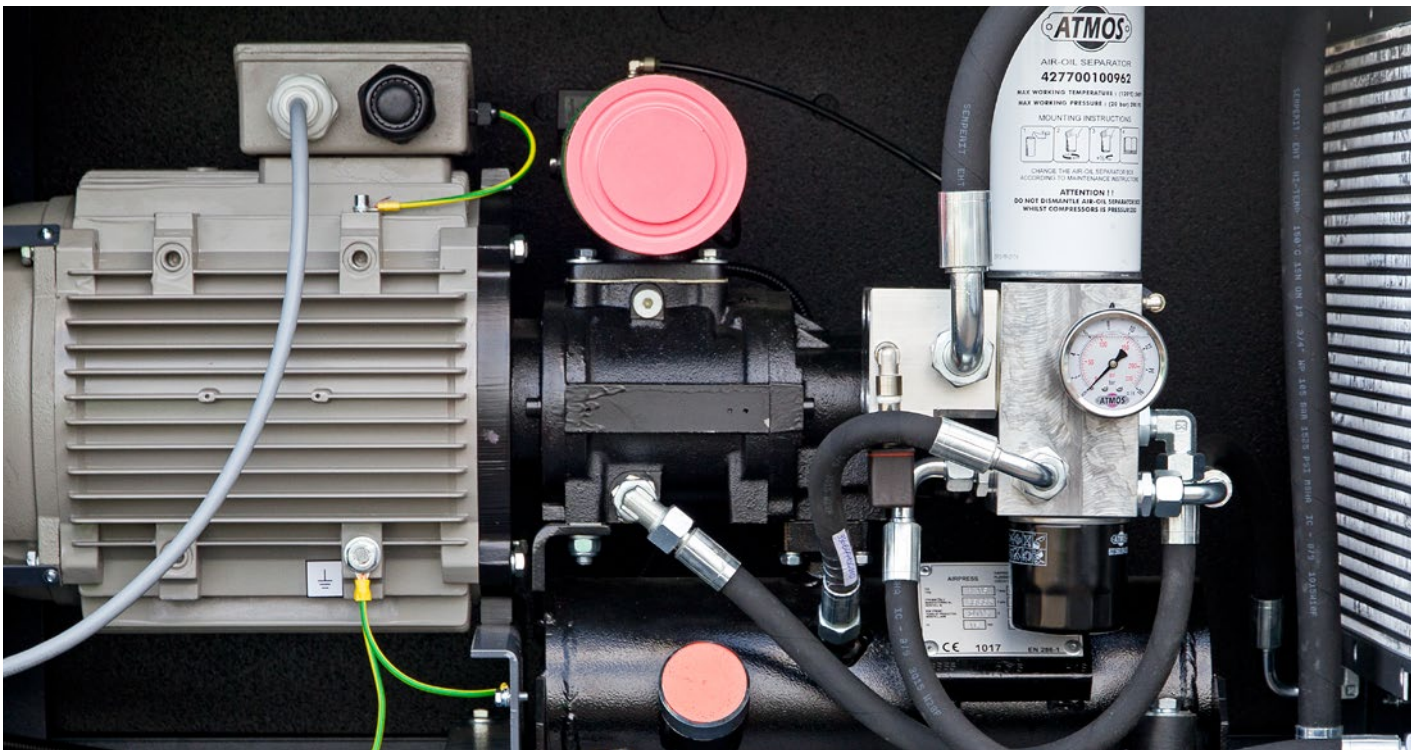


Production with micrometer accuracy



3D measurement of every machined component

Compressor design



ATMOS ALBERT compressors use a unique design of the connection between the screw block and the drive motor. Screw block B100, drive motor and cooling fan are directly connected and placed on a single axis *. This design excels in its exceptional reliability, almost loss - free transmission of the drive motor power to the block and reaches maximum compression efficiency.

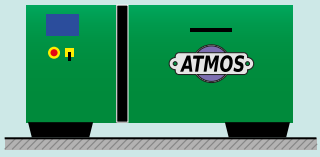
*does not apply to ALBERT E.140 and Albert E.170, which are belt driven.

Configuration – Options

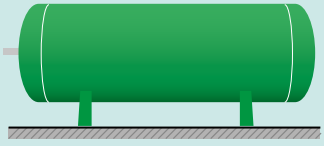
ALBERT compressors can be configured in many different ways. The following machines are available:

- stand-alone or mounted on air receiver
- economical open version or super-silenced canopy version
- with or without integrated refrigerant dryer
- standard fixed speed machines or frequency controlled for higher energy efficiency

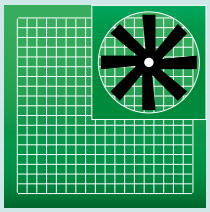
Nowadays, a great deal of emphasis is placed on energy efficiency, therefore we also offer heat recovery for our compressors as an option.



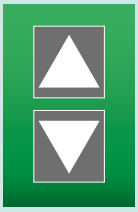
Screw compressor



Air receiver



Refrigerant dryer



Frequency control

Open machines without canopy

The B100 screw block is of robust construction and it is designed with a power reserve. Thanks to this, the machines work at very low speeds and are therefore very quiet. These machines can be operated without canopy. The open version offers excellent service access.

* machines E.50 and E.65 can alternatively be offered in the canopy.

Closed machines with canopy

Machines from 11 kW are delivered with a steel canopy. It acts as sound muffler and also directs the flow of cooling air that removes heat from the compressor. The compressor is thus protected against overheating. The canopy can be easily connected to the air ducting and allows unrestricted service access.

Compressor station

For applications where space is a problem, we offer an „all in one" solution. These are compressors with integrated refrigerant dryer. These machines allow easy installation and fully automatic delivery of dried compressed air.

Compressor control

The controller has a major impact on the compressor's reliability, the compressed air production's efficiency and the comfort of the compressor's operation. ALBERT compressors can be offered with:

- LOGIK S 26 control unit (E.95 and above)
- Frequency inverter (E.80 Vario, E.100 Vario, E.120 Vario, E.150 Vario and E.220 Vario)
- Proportional inlet valve (option for machines without inverter).
- Delayed intermittent control (optional for machines up to 7.5 kW and standard equipment for machines from 11 kW).

Logik S 26

User-friendly control module for automatic compressor operation. The main menu is structured into 15 submenus, which are used to edit both user settings and service or factory settings. The main features of the controller include:

- Monitoring of compressor operating conditions
- Inverter control
- Maintenance and fault protocol
- Up to three daily schedules for each day of the week
- Master / Slave mode for 2 compressors
- Data transmission via RS 485 – Modbus

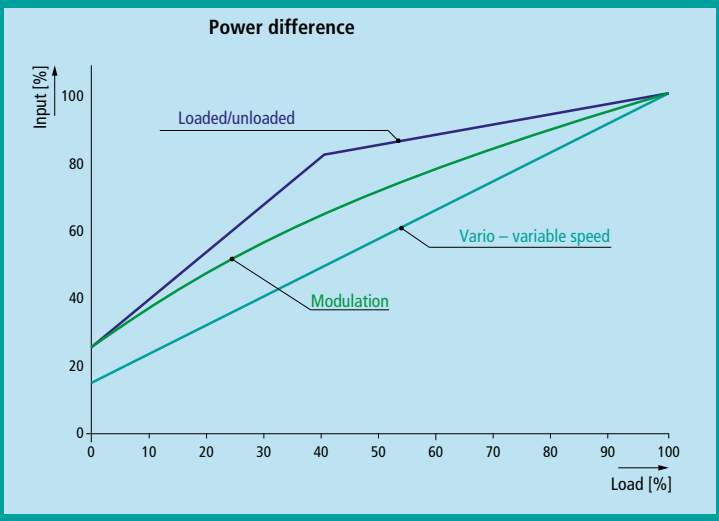
and more

Inverter, proportional inlet valve, delayed intermittent operation

There are three ways to control compressors.

- **Delayed intermittent operation** – compressor goes through two main working modes, operating mode and idle mode. This is the simplest and most proven way to control the compressor. The compressor does not immediately stop after reaching the unload pressure, but it goes into idle mode, waiting to be switched on again.

- **Proportional inlet valve** – represents the proportional control of the compressor, where the proportional inlet valve modifies the suction opening according to actual discharge pressure and regulates the future discharge pressure. This way of control enables flow regulation in the range of approx. 25 %. It keeps the pressure almost constant and significantly reduces the dynamic stress of the machines.



- **Frequency Inverter** – is the most energy efficient way to control the compressor because it can adapt electrical consumption to actual required free air delivery. The regulation is performed by changing the electric motor's rpm's and allows to react smoothly to the consumption of the compressed air. This type of control reduces power consumption by up to 30 %, reduces start-up current peaks, reduces distribution network pressure and keeps it in the range of tenths of a bar.

Atmos Care

Fine separators that have been in use for a longer time become clogged and have a higher ΔP. This increases the machine's energy demand significantly and may also result in damage or complete destruction of the compressor or downstream equipment. To help prevent this, our compressors are equipped with the Atmos Care electronic system, which monitors the service intervals for you and warns you in advance of the need for service.

Atmos Care:

- Guarantees savings in operating costs (energy saving, oil saving)
- Protects the compressor and accessories from damage.
- Ensures timely and professional service and thus long service life of compressors

Technical data

Design / Type		E.40	E.50	E.50–10	E.65	E.80 Vario	E.100 Vario	E.95	E.95–10	E.110	E.120 Vario	E.130	E.130 Vario	E.140	E.150 Vario	E.170	E.220 Vario
Drive	[kW]	Direct Drive	Direct Drive	Direct Drive	Direct Drive	Vario	Vario	Direct Drive	Direct Drive	Direct Drive	Vario	Direct Drive	Direct Drive	Belt Driven	Vario	Belt Driven	Vario
Max. pressure	[bar]	9	9	10	10/12	6–9	6–10	9	10	10	6–9	10/13	8/10/13	8/10/13	6–10	8/10/13	6–10
Rated air delivery	[m³/min]	0,50	0,87	0,85	1,00/0,80	1,5–1,1	1,85–1,13	1,6	1,55	1,6	2,25–1,8	1,8/1,6	2,4/2/1,6	2,7/2,3/2,0	2,36–1,55	2,9/2,7/2,4	3,3–1,84
Engine power	[kW]	4	5,5	5,5	7,5	7,5	11	11	11	11	13	15	15	15	15	18,5	20
Rated speed	[min⁻¹]	950	1455	1455	1455	950–2328	1019–2997	2940	2940	2940	1540–3645	2940	1540–3645	4087/3644/3110	2050-3850	4815/4088/3644	1540–5115
Noise	[dB (A)]	62	*64/69	*64/69	69	64–70	64–78	67	67	94	63–70	94	94	71	63–72	74	63–75
Outlet valves		G 1/2" I	G 1/2" I	G 1/2" I	G 1/2" I	G 1/2" I	G 1/2" I	G 3/4" I	G 3/4" I	G 3/4" I	G 3/4" I	G 3/4" I	G 3/4" I	G 3/4" I	G 3/4" I	G 3/4" I	G 3/4" I
Air tank volume	[l]	270	270	270	270	270	270 (500)	500	500	500	500 (270)	500	500	500 (900)	500 (270)	500 (900)	500 (270)
Construction**		B	B/K	B/K	B/K	B	B	K	K	B	K	B	B	K	K	K	K

* version in metal canopy / without canopy
** K – metal body, B – no canopy

Dimensions

Design / Type		E.40	E.50	E.50–10	E.65	E.80 Vario	E.100 Vario	E.95	E.95–10	E.110	E.120 Vario	E.130	E.130 Vario	E.140	E.150 Vario	E.170	E.220 Vario
Without canopy	[mm]	–	1203×450×635	1203×450×635	1203×450×635	1203×450×635	1203×450×635	–	–	1330×621×625	–	1330×621×625	1330×621×625	–	–	–	–
Without canopy (V)	[mm]	1480×450×1380	1480×450×1380	1480×450×1380	1480×450×1380	1480×450×1380	1480×450×1380	–	–	1990×621×1305	–	1990×621×1305	1990×621×1305	–	–	–	–
Metal canopy	[mm]	–	1200×500×600	1200×500×600	1200×500×600	–	–	1600×764×771	1600×764×771	–	1600×764×771	–	–	1600×764×771	1600×764×771	1600×764×771	1821×754×841
Metal canopy (V)	[mm]	–	1480×560×1380	1480×560×1380	1480×560×1380	–	–	1955×764×1451	1955×764×1451	–	1955×764×1451	–	–	1955×764×1451	1955×764×1451	1955×764×1451	1955×764×1521
Without canopy (S)	[mm]	1530×560×650	1530×560×650	1530×560×650	1530×560×650	1530×560×650	1750×560×650	–	–	1887×621×928	–	1887×621×928	1887×621×928	–	–	–	–
Without canopy (VS)	[mm]	1710×560×1380	1710×560×1380	1710×560×1380	1710×560×1380	1710×560×1380	1750×560×1380	–	–	2184×621×1607	–	2184×621×1607	2185×621×1607	–	–	–	–
Canopy (S)	[mm]	–	1530×560×1380	1530×560×1380	1530×560×1380	–	–	1920×764×771	1920×764×771	–	1920×764×771	–	–	1920×764×771	1920×764×771	1920×764×771	1920×754×841
Canopy (VS)	[mm]	–	1710×560×1380	1710×560×1380	1710×560×1380	–	–	2060×764×1451	2060×764×1451	–	2060×764×1451	–	–	2060×764×1451	2060×764×1451	2060×764×1451	2060×764×1521

Weights

Provedení / Typ		E.40	E.50	E.50–10	E.65	E.80 Vario	E.100 Vario	E.95	E.95–10	E.110	E.120 Vario	E.130	E.130 Vario	E.140	E.150 Vario	E.170	E.220 Vario
Without canopy	[kg]	130	130	130	135	140	150	–	–	200	–	205	210	–	–	–	–
Without canopy (V)	[kg]	200	200	200	205	210	220	–	–	295	–	300	305	–	–	–	–
Metal canopy	[kg]	–	180	180	180	–	–	270	275	–	290	–	–	310	340	340	360
Metal canopy (V)	[kg]	–	250	250	250	–	–	360	365	–	380	–	–	400	430	430	450
Without canopy (S)	[kg]	165	165	165	170	175	180/183*	–	–	235	–	245	250	–	–	–	–
Without canopy (VS)	[kg]	235	235	235	240	245	250/253*	–	–	330	–	340	345	–	–	–	–
Canopy (S)	[kg]	–	215	215	–	–	–	298	303	–	322	–	–	342	372	379	392
Canopy (VS)	[kg]	–	285	285	285	–	–	388	393	–	412	–	–	432	462	469	482

* V – air reciever, S – dryer, VS – both

ATMOS CHRÁST s.r.o, Plzeňská 149, 330 03 Chrást, Czech Republic
Phone: +420 377 860 165 | E-mail: info@atmos-chrast.cz | www.atmos-chrast.cz