

Stationary high-pressure compressor for compressing air and breathing air

Anlagentypen:

PE250-MVE | PE300-MVE

Fertigungsstand: F01



PE350-MVE with filter system P41/350, switching device and SECURUS filter cartridge monitoring (optional equipment)

General	
Medium	Air
Ansaugdruck	atmospheric
Fülldruck	PN200 / PN300
Einstelldruck, Enddruck-SIV	225 bar / 330 bar / 350 bar
Setting pressure, pressure sensor	220 bar / 320 bar / 340 bar
Ab. Ambient temperature	+5...+45°C
Ab. Altitude ¹	0-1000 m ü. NN
max. zul. Slope	5°
Execution	Silent
Operating voltage standard	400 V; 50 Hz
Other operating voltage	on request
Kompressoröl Standard	Synthetic
Ölwechselintervalle	Synthetic: every 2 years / 2,000 h Mineral: 1 jährlich/ 1.000 h
Lacquering	RAL 1028 (front) / RAL 9006 (page)

¹ Operation of compressors at altitudes > 1000 m above sea level: On request

Kompressoranlage	ON250-MVE	PE300-MVE
Delivery quantity ¹	250 l/min	300 l/min
Filtration	P31/350	P31/350
Power consumption	4.7 kW	6.5 kW
Kühlluftstrom, min.	1.650 m ³ /h	2.250 m ³ /h
Noise level	74 dB(A)	78 dB(A)
Weight in kg ²	Approx. 250 kg	Approx. 260 kg
Dimensions (LxWxH) ²	1041 x 755 x 1320 mm	1041 x 755 x 1320 mm

1 Measured at bottle filling of 0-200 bar tolerance +/- 5% at +20°C ambient temperature.

2 Standard version. Depending on the accessories, dimensions and weight may vary.

Drive: electric motor (three-phase current)	PE250-MVE	PE300-MVE
Achievement	5.5 kW	7.5 kW
Model	A 112M	A 132S
Execution	B3	B3
Type	Squirrel cage motor 400 V, 50/60 Hz ¹	
Speed approx.	2,890 U/min	2,890 U/min
Class	IP55	IP55

1 Other operating voltage/frequency on request.

SCOPE OF DELIVERY BASIC EQUIPMENT

Compressor block with the following equipment:

- Oil pump for pressure oil lubrication
- Micronic Ansaugfilter: 10 m μ
- Intercooler air-cooled made of stainless steel
- Aftercooler, air-cooled, outlet temperature approx. 10-15 °C above cooling air temperature
- Intermediate separator after each compressor stage (except 1st stage)
- Sealed safety valves after each stage
- Final pressure safety valve type-tested according to TÜV
- Pressure retaining and check valve after last compressor stage

Kompressorblock	IK120
Deliveryquantity ¹	250 or 300 l/min
Speed approx.	1.450 U/min (PE250-MVE) bzw. 1.800 U/min (PE300-MVE)
Number of levels	3
Number of cylinders	3
Cylinder bore 1st stage	88 mm
Cylinder bore 2nd stage	36 mm
Cylinder bore 3rd stage	14 mm
Kolbenhub	40 mm
Direction of rotation (seen on flywheel)	links
Type of drive	Fan belt
Zwischendruck 1.Stufe	6,0 – 7,8 bar
Zwischendruck 2.Stufe	39,5 – 51,4 bar
Comp. block oil quantity	2.8 l
Oil	4,5 bar 1,5 bar \pm
Ansaugdruck / Eingangsdruck	1,0 – 1,3 bar _a

¹ Measured at bottle filling of 0-200 bar tolerance +/- 5% at +20°C ambienttemperature.

Filtersystem P31/350 – Filter with integrated oil and water separator

SCOPE OF DELIVERY:

- Filter housing with long-term filter cartridge
- Mechanical separation of oil/water condensate
- Final pressure - safety valve, installed in filter housing
- Pressure retaining /check valve, installed in filter housing



P31/350 Filter System

Air quality according to DIN/EN 12021:2014

Contamination with	Maximum salary according to DIN EN 12021:2014	Air quality from BAUER
H ₂ O	25 mg/m ³	≤ 10 mg/m ³
CO	5 ppm(v)	Depends on filter cartridge ¹
CO ₂	500 ppm(v)	Depending on the intake air ²
Oil	0,5 mg/m ³	≤ 0,1 mg/m ³

1 Only with BAUER special cartridge **with** Hopcalite and **up to a** maximum **concentration** of 25 ppm CO in the sucked-in air. It is then in the compressed clean breathing air no more than 5 ppm CO.

2 The CO₂ content in the intake air must not exceed the maximum value permitted by DIN EN 12021:2014!

Filtration	P31/350
Operating pressure (Standard)	PN200 / PN300
Operating pressure max. (PS)	330 bar
Drucktaupunkt	< -20 °C, equivalent to 3 mg/m ³ at 300 bar
Rohranschlüsse	G 3/8" (Kondensatablass G 1/4")
Filterinhalt	1.3 l
DGRL 2014/68/EU	Behälterkategorie II
Reprocessable air volume (based on 20°C and 300 bar) ¹	615 m ³

1 When using a BAUER P31/350 filter system without Hopcalite. When a cartridge with CO removal is used, the amount of air that can be treated is reduced by approximately 26%.

› **Silent Fairing**

In its standard configuration, the PE-MVE has a completely noise-insulated cladding and optimized cooling air supply. A Super Silent sound insulation cladding is recommended when there are requirements for a reduced sound pressure level, e.B. in working environments.

- The closed version allows a targeted cooling air flow.
- Easily removable parts of the fairing allow convenient access for maintenance purposes.
- Colour version: Base frame RAL 7024, cladding RAL 9006 and RAL 1028
- Schalldruckpegel: PE250-MVE: 74 dB(A) ± 2 %; PE300-MVE: 77 dB(A) ± 2 %

› **Kompressorsteuerung**

Electrical control, including automatic condensate and final pressure



Kompressorsteuerung

cut-off.

SCOPE OF DELIVERY:

- On/off switch with motor protection chalter and indicator light for rotary field monitoring
- **Optional:** Fully automatic control (hysteresis not adjustable!)
- Star Triangle Sagittarius
- Steuertransformator
- Pressure switch for automatic shutdown of the compressor when the final pressure is reached
- condensate - collection tank 10 liters with silencer; approx. 5 litres filling volume for environmentally friendly disposal of condensate

› **Kondensatautomatik B-DRAIN**

Thanks to the automatic condensation system, the condensate (water-oil mixture) produced during compression is automatically drained from the intermediate and final separators and collected in a condensate tank integrated in the compressor. The newly developed and patented B-DRAIN automatic condensate system ensures reliable, automatic condensate dissipation at the compressor separators by means of individually controlled solenoid valves. Including condensate - collection tank 10 liters with silencer; approx. 5 liters filling volume for environmentally friendly disposal of condensate



B-DRAIN

Kondensatautomatik B-DRAIN	
Control voltage	24 V DC
Solenoid valve	currentless open (NO)
Kondensatbehälter	ca. 10 l

› **Filling hoses 2 x PN200 or 2 x PN300**

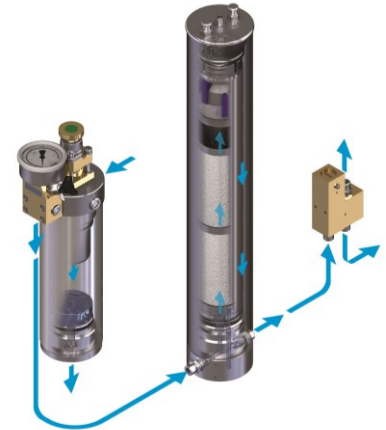
Fülleinrichtungen	
Nennndruck (PN)	2 x 200 bar or 2 x 300 bar
Ventilausführung	2 filling valves with integrated vent, with German bottle connection G 5/8" according to DIN 477 and DIN EN 144-2
Manometer	2 pressure gauges
Füllschlauch	2 Unimam high-pressure filling hoses, 1 m length
International bottle connection	At 200 bar: 2 international bottle connections (not approved in Germany!)

OPTIONS:

➤ **Filter system P41/350 - Filter with separate oil and water separators**

SCOPE OF DELIVERY:

- 1x filter housing with long-term filter cartridge
- Separator with final pressure safety valve
- Check valve between separator and fine cleaner
- Feinnachreiniger
- Vent valve with pressure gauge
- Pressure retaining/check valve
- Filter key for cartridge change



Filter system P41/350 (similar figure)

Air quality according to DIN/EN 12021:2014

(see table at Filterssystem of the standard scope of delivery)

Filtration	P41/350
Operating pressure (standard)	PN200/PN300
Operating pressure max. (PS)	330 bar
Drucktaupunkt	< -20 °C, equivalent to 3 mg/m ³ at 300 bar
Rohranschlüsse	G 3/8" (Kondensatablass G 1/4")
Filterinhalt	2.1 l
DGRL 2014/68/EU	Behälterkategorie II
Reprocessable air volume (based on 20°C and 300 bar) ¹	1.595 m ³

¹ When using the BAUER P41/350 filter cartridge without Hopcalite. When using the cartridge with CO removal, the amount of air that can be treated is reduced by about 8%. Different values also for SECURUS cartridges.

➤ **B-TIMER**

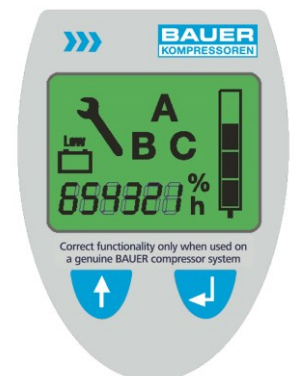
With the B-TIMER – a minicomputer – filter cartridge changes and compressor maintenance are safer and more convenient than ever!

The minicomputer counts the operating hours and reliably displays the cartridge saturation.

On the four-part segment display, the saturation progress of the filter cartridge can be tracked at any time. The B-TIMER signals a due cartridge change by flashing conspicuously. At the same time, the order number of the matching cartridge is displayed.

Due maintenance is displayed by a tool key icon. The appropriate maintenance kit is indicated by letters.

The robust housing defies sand, salt, seawater, high humidity and strong UV radiation. Automatic start/stop and sleep mode ensure for convenient operation and long battery life.



B-TIMER Display

Only available with filter system P31/350 and not in conjunction with the SECURUS filter monitoring!
SECURUS Filterpatronenüberwachung

The SECURUS system continuously monitors the filter cartridge saturation by measuring the humidity in the molecular sieve and shows you in good time directly on the display of the signalling device when you should change the filter cartridge. At 100% saturation of the dryer cartridge, the SECURUS automatically switches off the system. Only in combination with P41/350!



Filter system with SECURUS alarm device

The following messages are signalled on the signalling device:

- Green lamp on: Filter cartridge ok
- Yellow lamp flashing: Cartridge just before saturation
- Red light flashes: Cartridge saturated or cable or cable

Contact error present. Compressor will be switched off.

➤ **Filling hoses 1 x PN200 and 1 x PN300 with switching device**

In systems with a switching device, bottles with a filling pressure of 200 bar can be filled by a system with PN 300. By opening the changeover valve, the safety valve 225 bar and the filling device PN 200 bar are switched on and the connected bottles can be filled safely.



Fülleinrichtungen	
Nenndruck (PN)	1 x 200 bar and 1 x 300 bar
Ventilausführung	2 filling valves with integrated vent, with German bottle connection G 5/8" according to DIN 477 and DIN EN 144-2
Manometer	2 pressure gauges
Füllschlauch	2 Unimam high-pressure filling hoses, 1 m length
International bottle connection	1 international bottle connection for 200 bar (not approved in Germany!)

› **High-pressure storage systems**

Modularly expandable high-pressure storage system for storing air or gases. The storage tanks can either be placed separately or attached to it when ordering an extended base frame. On the extended base frame, the compressor and up to 2 storage bottles with a geometric volume of 50 and 80 liters each are assembled into a turnkey system.



B100 / 365 bar

SCOPE OF DELIVERY

- **B80-S / B160-S - Standardmodul**
Storage bottle(s) standing, mounted on console, connection below, with safety valve & pressure gauge, shut-off valve and condensate drain/vent valve.
- **B80-A / B160-A - Anbaumodul**
to extend the above-mentioned standard modules in any size for higher volumes.
Scope of delivery according to standard module, but without safety valve & pressure gauge;
To attach multiple storage bottles, a connecting cable is required for each additional attachment module.
- **B80-B, without console**
storage bottle, with cylinder valve; without condensate drain valve
Option: clamp for wall mounting, safety valve (loose delivery)
To attach multiple storage bottles, a connecting line is required for each additional storage bottle.
- **B50-S / B100-S - Standardmodul**
Storage bottle(s) standing, mounted on console, connection below, with safety valve & pressure gauge, shut-off valve and condensate drain/vent valve.
- **B50-A / B100-A - Anbaumodul**
to extend the above-mentioned standard modules in any size for higher volumes.
Scope of delivery according to standard module, but without pressure gauge & safety valve.
To attach multiple storage bottles, a connecting cable is required for each additional attachment module.

COLOUR:

Console RAL 7024 (grey) Storage tank RAL9010 (white for B80/160) or RAL 7024 (grey for B50/100)

	Up to 330 bar		Up to 420 bar	
	B 80	B 160	B 50	B 100
Number of storage containers:	1	2	1	2
Recording medium:	Air, nitrogen, noble gases			
Geom. Content per storage container:	80 liters		50 liters	
Geom. Gesamtinhalt Speicher:	80 liters	160 liters	50 liters	100 liters
Once. Safety valve max.:	330 bar		420 bar	
Speicherdruck max.:	320 bar		400 bar	
Weight:	145 kg		125 kg	250 kg
Design accordingly:	DGLR 97/23-EC and AD2000 ¹			

¹ Other certificates / approvals on request

➤ Zuschaltautomatik

The automatic switch-on enables the fast, simultaneous filling of compressed air cylinders (cylinders) in parallel from a storage system (intermediate storage) and through the compressor.



ZUSCHALTAUTOMATIKLIEFERUMFANG

- Lacquered steel base plate for wall mounting
- Druckhalteventil
- Check valve
- Pressure switch or pressure sensor, depending on the connected compressor controller
- Pressure gauge filling pressure
- Pressure gauge pressure

Zuschaltautomatik	
Medium	Compressed air
Ambient temperature	+5 °C to +45°C
Working pressure	350 or 420 bar (depending on version)
Air inlet/outlet	10 mm (Rohraußendurchmesser)

➤ **AERO-GUARD CO₂ Absorber**

Efficient purification of the breathing air of CO₂: The air sucked in by the compressor is passed through the AERO-GUARD via a sophisticated bypass system. Only about two-thirds of the air flows through the filter cartridge, which absorbs the CO₂ contained in the air. In this way, the CO₂ content is reduced to one third of the value of the intake air.



AERO-GUARDLIEFERUMFANG:

- Intake pipe (suitable connecting hoses are to be ordered separately)
- Water barrel, 60 l (for version AERO-GUARD DUO – 2 × water barrel, 60 l)
- filter cartridge; Filling: 9 kg special carbon dioxide absorber

EXECUTIONS

Designation / Size	suitable for delivery quantities ¹	Dimensions (W x D x H)	Betriebsgewicht ²
	l/min	Cm	
Aero-Guard-S	100 – 150	50 x 46 x 72	26 kg
Aero-Guard-M	160 – 230		
Aero-Guard-L	240 – 320		
Aero-Guard-XL	330 – 450		
Aero-Guard-XXL	460 – 700		
Aero-Guard Duo 1000	650 – 1000	85 x 62,5 x 87	54 kg

¹ Delivery quantity of the connected compressor measured with bottle filling from 0 – 200 bar ± 5%

² Including filter cartridge and 10 l water filling

TECHNICAL OPERATING DATA

Model	AERO-GUARD S-XXL	AERO-GUARD DUO 1000
Medium	Compressed air	
Ambient temperature	+5 to +45°C	
Temperature of the intake air	+5 to +45 °C	
Rel. Humidity of the intake air	10 to 100%	
CO ₂ -Eingangskonzentration	max. 1000 ppm _v CO ₂	
CO ₂ -Ausgangskonzentration	1/3 of the input concentration = max. 330 ppm _v CO ₂ at 1,000 ppm _v input concentration CO ₂	
Luftdurchfluss	100 – 700 l/min	650 – 1,000 l/min
Life	At least 43 operating hours (at 700 l/min delivery quantity and an input concentration of 1000 ppm CO ₂). After one year at the latest, the cartridge must be changed, even if the service life has not been reached.	At least 60 operating hours (at 1000 l/min delivery quantity and an input concentration of 1000 ppm CO ₂). After one year at the latest, the cartridge must be changed, even if the service life has not been reached.
Maximum daily runtime:	5 a.m.	
Patronenfüllung:	approx. 9 kg special carbon dioxide absorber per cartridge	
Pressure	approx. 20 mbar	
Maximum permissible inclination	15°	
Permissible altitude ¹	0 -1,000 m ü. NN	
Colour scheme	Container blue, lid black-silver, PVC cables grey RAL7011	

¹ farm at altitudes > 1000 m above sea level: On request

Relevant EU directives (where applicable)

- › EC Machinery Directive (2006/42/EC)
- › EU-Druckgeräterichtlinie (2014/68/EU)
- › EU-Niederspannungsrichtlinie 2014/35/EU
- › EU-Electromagnetic Compatibility (EMC) 2014/30/EU

National standards and technical specifications applied, in particular

- › Industrial Safety Ordinance (BetrSichV) of 1 June 2015
- › AD 2000
- › Accident prevention regulation BGR 500
- › All BAUER filter housings are designed, manufactured and tested in accordance with the UVV and the regulations according to AD-2000 regulations and PED2014/68/EU.

Documentation: 1x user manual and parts list with exploded view on DVD

Design: corresponds to the latest state of the art according to DIN, VDE, TÜV and UV regulations

Test: according to Bauer Standard according to DIN EN 10204 - 3.1

In all other **respects**, the General Terms and Conditions of BAUER KOMPRESSOREN (GTC) shall apply in the version valid at the time of conclusion of the contract. These can be viewed and downloaded on the website www.bauer-kompressoren.de under the link "GTC". Incidentally, BAUER is also happy to send them.

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