

Series:

PE-HE

Stationary High Pressure Compressor Unit for Compressing Air and Breathing Air

Types:

PE250-HE | PE300-HE

Production status: F02



PE250-HE standard version

General	
Medium	Air
Intake pressure	Atmospheric
Filling pressure	PN200 / PN300
Nominal pressure	225 bar / 330 bar / 350 bar
Working pressure	220 bar / 320 bar / 340 bar
Permissible ambient temperature range	+5...+45°C
Permissible altitude	0...1500 m AMSL
Max. permissible tilt	15°
System design	Open
Operating voltage, standard	400 V; 50 Hz
Other operating voltage	On request
Compressor oil, standard	Synthetic
Oil change interval	Synthetic: every 2 years/ 2,000 h Mineral: 1x per year/ 1,000 h
Finish	RAL 1028 (front) / RAL 9006 (frame)

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Compressor system	PE250-HE	PE300-HE
Charging rate ¹	250 l/min	300 l/min
Purification system	P31/350	P31/350
Cooling air flow, min.	1,980 m ³ /h	2,700 m ³ /h
Weight ²	220 kg	230 kg
Dimensions (LxWxH) ²	1100 x 630 x 950 mm	1100 x 630 x 950 mm

¹ Measured during cylinder filling from 0-200 bar tolerance +/- 5% at + 20°C ambient temperature.

² Standard model. Weight and dimensions may vary depending on accessories.

Drive system (three-phase motor)	PE250-HE	PE300-HE
Power	5.5 kW	7.5 kW
Model	A 112M	A 132S
Type of construction	B3	B3
Type	Three-phase Squirrel-Cage-Motor	
Operating voltage / frequency ¹	400 V, 50 Hz	400 V, 50 Hz
Speed	2,890 1/min	2,890 1/min
Protection class	IP55	IP55

¹ Different voltage / different frequency available at extra charge on request.

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STANDARD SCOPE OF SUPPLY:

› **Compressor block with following features:**

- Oil pump for forced-feed lubrication
- Micronic intake filter: 10 µm
- Intermediate coolers, air cooled
- Aftercooler, air cooled, outlet temperature approx. 10-15 °C above cooling air temperature
- Intermediate separators after each stage (except 1st stage)
- Sealed safety valves after each stage
- TÜV approved final pressure safety valve
- Pressure maintaining and check valve after the final stage

Compressor block	IK120
Charging rate ¹	250 or 300 l/min
Speed	1,450 1/min (PE250-HE), 1,800 1/min (PE-300-HE)
Number of stages	3
Number of cylinder	3
Cylinder bore 1st stage	88 mm
Cylinder bore 2nd stage	36 mm
Cylinder bore 3rd stage	14 mm
Stroke	40 mm
Direction of rotation (from flywheel side)	Left
Drive type	V-belt
Intermediate pressure 1st stage	8 bar
Intermediate pressure 2nd stage	50 bar
Amount of oil	2.8 l
Oil pressure	4.5 bar ± 1.5 bar
Intake pressure	1.0 bar _a

¹ Measured during cylinder filling from 0-200 bar tolerance +/- 5% at + 20°C ambient temperature.

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➤ **Purification System P31/350 - Filter with integrated oil and water separator**

- Filter housing with long-life filter cartridge
- final mechanical separator for the removal of oil-/ water condensate
- Final safety valve, fitted to filter housing
- Pressure maintaining / non return valve, fitted to filter housing



Air quality as per DIN/EN 12021:2014

Purification System P31/350

Contamination	Maximum content as per DIN EN 12021:2014	Air quality of BAUER
H ₂ O	25 mg/m ³	≤ 10 mg/m ³
CO	5 ppm(v)	Depending on filter cartridge ¹
CO ₂	500 ppm(v)	Depending on intake air ²
Oil	0.5 mg/m ³	≤ 0.1 mg/m ³

1 Only with BAUER special filter cartridge with hopcalite and up to a maximum concentration of 25 ppm CO in intake air. The compressed clean breathing air then contains a maximum of 5 ppm CO.

2 The level of CO₂ in the intake air must not exceed the maximum level of CO₂ as per DIN EN 12021:2014!

Purification System	P31/350
Operating pressure (Standard)	max. 330 bar
Operating pressure max (PS)	min. 90 bar
Pressure dew point	< -20 °C, equivalent 3 mg/m ³ at 300 bar
Pipe connection	G 3/8" (condensate drain G 1/4")
Filter housing volume	1.3 l
DGRL 97/23/EG	Vessel category II
Air purification capacity (at ambient temperature 20°C and 300 bar) ¹	615 m ³

1 When using a BAUER P31/350 filter cartridge without Hopcalite. When using a cartridge with CO-, the air purification capacity is reduced by ca. 26 %.

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➤ **Compressor control incl. automatic condensate drain system**



Compressor control



Automatic condensate drain system

Compressor control including automatic condensate drain system and automatic switch off at final pressure.

SCOPE OF SUPPLY:

- ON/OFF Switch with protective motor switch and signal-lamp phase monitoring
- Star-Delta contactor
- Transformer
- Pressure switch stops the compressor unit at final pressure
- Drainage of all separators between the individual stages and also the final separator during compressor operation (standard draining interval every 15 minutes for a 6 second period)
- Timer for automatic condensate drain device
- Unloaded start integrated (automatically draining at every shut-down of the unit)
- Condensate collecting tank 10 litre, with silencer; about 5 litre capacity, for the environmentally friendly disposal of the condensate

Series:

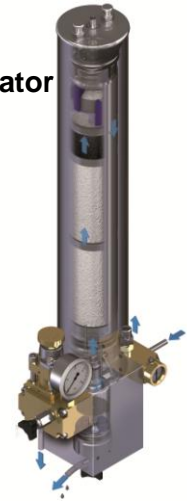
PE-HE

OPTIONS:

› P42/350 Purification System - Filter with integrated final oil and water separator

SCOPE OF DELIVERY:

- 1x filter housing with long-life filter cartridge
- Integrated separator in filter bottom
- Check valve between separator and micro filter
- Air bleeder valve with manometer
- Pressurizer / check valve



P42/350 purification system

Air quality as per DIN/EN 12021:2014

(see purification system in standard scope of delivery)

Purification System	P42/350
Operating pressure (Standard)	PN200 / PN300
Operating pressure max (PS)	350 bar
Pressure dew point	< -20 °C, equivalent 3 mg/m ³ at 300 bar
Pipe connection	G 3/8" (condensate drain G 1/4")
Filter housing volume	2.25 l
DGRL 97/23/EG	Vessel category II
Air purification capacity (at ambient temperature 20°C and 300 bar) ¹	1,595 m ³

¹ When using a BAUER P42/350 filter cartridge without Hopcalite. When using a cartridge with CO-removal the air purification capacity is reduced by ca. 8 %. Different values for SECURUS cartridges.

› B-TIMER

Cartridge change and maintenance becomes safe and comfortable like never before with the B-TIMER!

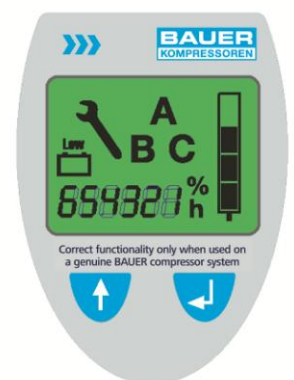
The mini-computer counts the operating hours and measures accurately the cartridge saturation.

On the four-part segment display the status of saturation of the cartridge can be followed up. If a cartridge change is required, the B-TIMER is flashing conspicuously and the order number of the cartridge is indicated.

The key symbol indicates that maintenance is due. The letters A to C inform about the necessary maintenance kit.

The robust housing resists sand, salt, sea water, high humidity and strong UV-radiation. Start/stop automatic and power save mode make operation comfortable and save the lithium cell.

Not available in combination with SECURUS filter monitoring.



B-TIMER Display

Series:
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➤ **SECURUS filter cartridge monitoring system**

The SECURUS System continuously monitors filter cartridge saturation levels by measuring the moisture in the molecular filter and showing a warning when it is time to change the cartridge. When the dryer cartridge is 100% saturated the SECURUS automatically shuts down the system.

- Green segment: Filter cartridge OK
- Yellow segment: Cartridge nearing saturation
- Red segment: Cartridge saturated or contact fault. Compressor is shut down



SECURUS Filter Cartridge Monitoring System

➤ **Filling device with hoses 2 x PN200 or 2 x PN300**

Filling panel with filling hoses	
Nominal pressure (NP)	2 x 200 bar or 2 x 300 bar
Terminal block	Aluminium terminal block
Valve version	2 filling valves with integrated ventilation, with German cylinder connector G 5/8" according to DIN EN 144-2 and DIN 477
Manometer	2 manometer
Filling hose	2 Unimam high pressure filling hose, 1 m length
International cylinder connector	At 200 bar: 2 international cylinder connectors (not permitted in Germany!)



PE-HE with filling hoses

➤ **Filling device with hoses 4 x PN200 or 4 x PN300**

Filling panel with filling hoses	
Nominal pressure	4 x 200 bar or 4 x 300 bar
Terminal block	Aluminium terminal block
Valve design	4 rocker lever - filling valves with integrated ventilation, with German cylinder connector G 5/8" according to DIN EN 144-2 and DIN 477
Manometer	1 manometer in integrated in the filling panel
Filling hose	4 Unimam high pressure filling hoses, length 1 m
International cylinder connector	At 200 bar: 4 international cylinder connectors (not permitted in Germany!)

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› Filling device with hoses 2 x PN200 and 2 x PN300

Filling panel with filling hoses	
Nominal pressure	2 x 200 bar and 2 x 300 bar
Terminal block	Aluminium terminal block
Valve version	4 rocker lever - filling valves with integrated ventilation, with German cylinder connector G 5/8" according to DIN EN 144-2 and DIN 477
Manometer	2 manometer in integrated in the filling panel
Filling hose	4 Unimam high pressure filling hoses, 1 m length
International cylinder connector	At 200 bar: 2 international cylinder connectors (not permitted in Germany!)
Other	1 pressure reducer, 1 additional safety valve



PE-HE mit Füllschläuchen 2x200 bar und 2x300 bar

› Filling device with direct filling connections 4 x PN200 or 4 x PN300

Filling panel with direct filling connections	
Nominal pressure	4 x 200 bar or 4 x 300 bar
Terminal block	Aluminium terminal block
Valve version	4 rocker lever - filling valves with integrated ventilation, with German cylinder connector G 5/8" according to DIN EN 144-2 and DIN 477
Manometer	1 manometer in integrated in the filling panel

› Filling device with direct filling connections 2 x PN200 and 2 x PN300

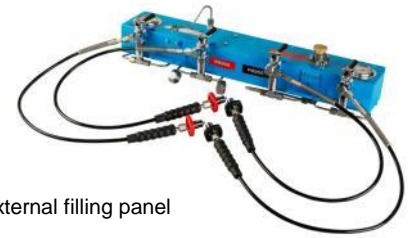
Filling panel with direct filling connections	
Nominal pressure	2 x 200 bar and 2 x 300 bar
Terminal block	Aluminium terminal block
Valve version	4 rocker lever - filling valves with integrated ventilation, with German cylinder connector G 5/8" according to DIN EN 144-2 and DIN 477
Manometer	2 manometer in integrated in the filling panel
Other	1 pressure reducer, 1 additional safety valve

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➤ External filling panels

These external filling panels can be wall-mounted as separate panels and are suitable for remote operation for installation in a separate room.



External filling panel

SCOPE OF DELIVERY:

- Direct filling connection or hose connection
- One or two pressure ranges PN200 and/or PN300 (second pressure range)
- Can be selected with a switching tap or permanently connected with a pressure reducer
- 4, 6 or 10 filling connections
- High-pressure check of all components
- Flushing valve prevents excessive CO₂ content in compressed breathing air
- CE Mark

Filling connections	Dimensions (L x W x H) mm	Weight kg
4 Filling connections	1140 x 138 x 183	Depending on features
6 Filling connections	1200 x 138 x 183	Depending on features
10 Filling connections	1120 x 352 x 370	Approx. 33 kg

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Relevant EC Directives (where applicable)

- › EC Machinery Directive (2006/42/EC)
- › EC Pressure Equipment Directive (97/23/EC)
- › EC Low Voltage Directive 2006/95/EC
- › EC Electromagnetic Compatibility (EMC) 2004/108/EC

Applied national standards and technical specifications, in particular

- › Betriebssicherheitsverordnung (German Industrial Safety Regulation) of 27 September 2002
- › AD 2000
- › Unfallverhütungsvorschrift (BGR; German Accident Prevention Regulations) BGR 500
- › All BAUER filter housings are designed, manufactured and tested in line with Accident Prevention Regulations and regulations under AD-2000 provisions and DGRL97/23EG.

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

Design: In line with the state of the art according to DIN, VDE, TÜV and Accident Prevention regulations

Testing: In line with Bauer Standard as per DIN EN 10204 - 3.1

Otherwise the **General Terms and Conditions of BAUER KOMPRESSOREN (AGB)** in the version valid at the time of contract conclusion apply. These Terms & Conditions can be viewed and downloaded at the website www.bauer-kompressoren.com, or sent by BAUER on request.

All information is given without assumption of liability and subject to technical changes.