

Technical Specification

MV150 | MV200 | MV250 | MV320

Stationary high pressure compressor for breathing air



MINI-VERTICUS in Silent Version with filling devices

Made by



GENERAL

Medium	Air
Intake pressure	Atmospheric
Filling pressure	PN200 / PN300
Pressure setting, final pressure SIV	225 bar / 330 bar / 350 bar
Pressure setting, pressure sensor	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
Standard operating voltage	400 V; 50 Hz
Other operating voltage	On request
Compressor oil, standard	Synthetic
Oil change interval	Synthetic: every 2 years / 2,000 h Mineral: annually / 1,000 h
Finish	RAL 7024, RAL 9006, CYAN (front) / RAL 9006 (sides)

COMPRESSOR SYSTEM

	MV150	MV200	MV250	MV320
Charging rate ¹	150 l/min	200 l/min	250 l/min	320 l/min
Purification system	P 41/350	P 41/350	P41/350	P41/350
Sound pressure level ² (Super Silent Version)	66 dB(A)	66 dB(A)	67dB(A)	70 dB(A)
Weight (open model) ³	324 kg	324 kg	333 kg	350 kg
Weight (Super Silent) ³	374 kg	374 kg	383 kg	400 kg
Dimensions (LxWxH) open ³	1195 x 802 x 1375 mm			
Dimensions (LxWxH) Super Silent ³	1352 x 802 x 1375			

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

² According to ISO 3744.

³ Standard model. Weight and dimensions may vary depending on accessories.

The compressor frame, housing and load-bearing parts are metal (primer and painted finish); the front housing and control unit cover are of solid plastic (painted finish). Control box located on the left side of the compressor unit. Ergonomic access by folding out.

DRIVE: E-MOTOR

	MV150 / MV200	MV250	MV320
Motor	Three-phase	Three-phase	Three-phase
Power	4.0 kW	5.5 kW	7.5 kW
Voltage / frequency ¹	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz
Speed	2.850 1/min	2.850 1/min	2.850 1/min
Protection class	IP55	IP55	IP55

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

STANDARD SCOPE OF SUPPLY

- **Compressor block**

- Oil pump for forced-feed lubrication
- Micronic intake filter: 10 µm
- Intermediate coolers, air cooled, stainless steel
- Aftercooler, air cooled, outlet temperature approx. 10-15 °C above cooling air temperature
- Intermediate separators after the second stage
- Final separator for oil/water separation after final stage
- Sealed safety valves after each stage
- TÜV approved final pressure safety valve
- Pressure maintaining and check valve after the final stage

Compressor block	IK100	IK120	IK12.14
Charging rate ¹	150 l/min	200 l/min & 250 l/min	320 l/min
Speed	1,340 U/min	1,270 U/min bzw. 1,470 U/min	1,450 U/min
Number of stages	3	3	4
Number of cylinder	3	3	3
Cylinder bore 1st stage	70 mm	88 mm	105 mm
Cylinder bore 2nd stage	36 mm	36 mm	88 mm
Cylinder bore 3rd stage	14 mm	14 mm	28 mm
Cylinder bore 4rd stage	-	-	12 mm
Stroke	40 mm	40 mm	40 mm
Direction of rotation (from flywheel side)	Left	Left	Left
Drive type	V-belt	V-belt	V-belt
Intermediate pressure 1st stage	4.6 – 5,9 bar	8 bar	3.4 – 4.2 bar
Intermediate pressure 2nd stage	26 – 43 bar	50 bar	14-18 bar
Intermediate pressure 3rd stage	-	-	53-82 bar
Amount of oil	2.8 l	2.8 l	2.8 l
Oil pressure	4.5 bar ± 1.5 bar	4.5 bar ± 1.5 bar	4.5 bar ± 1.5 bar
Intake pressure	1.0 bar _a	1.0 bar _a	1.0 bar _a

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

STANDARD SCOPE OF SUPPLY

- **P41/350 Purification System - Filter with separate oil and water separator**



P41/350 purification system
(picture similar)

Purification System	P41/350
Operating pressure (Standard)	PN200/PN300
Operating pressure max (PS)	350 bar
Pressure dew point	< -20 °C, equivalent to 3 mg/m ³ at 300 bar
Piping connections	G 3/8" (condensate drain G 1/4 ")
Filter housing volume	2.1 l
DGRL 2014/68/EU	Vessel category II
Air purification capacity (at ambient temperature 20°C and 300 bar) ¹	1,595 m ³

¹ When using a BAUER P41/350 filter cartridge without hopcalite. When using a cartridge with CO-removal, the air purification capacity is reduced by approx. 15 %. Different values for SECURUS cartridges.

- **B-CONTROL MICRO electronic control unit**



B-CONTROL MICRO Display

Compressor control unit	B-CONTROL-MICRO
Ambient temperature	-10°C to + 60°C (5-90% humidity; non-condensing)
Supply voltage	24 V DC
Protection class cabinet	IP 55
Protection class display	IP 65
Type, display	3.5" Colour display showing plaintext

MONITOR / CONTROL FUNCTIONS

- Oil pressure monitoring
 - Protection from incorrect rotation direction
- Condensate level monitoring
 - compressor shutdown when reaching the maximum level
- B-SECURUS monitoring (via CAN bus) as option
 - Safety: Shuts down compressor when filter cartridge is fully saturated
- Temperature monitoring
 - Safety: Monitors temperature (final stage)
- Motor overcurrent (indirect by PTC)
- Oil level monitoring (optional)

STANDARD SCOPE OF SUPPLY

- **Automatic condensate drain system B-DRAIN**



B-DRAIN

Automatic condensate drain system

Control voltage	24 V DC
Solenoid valve	normally open (NO)
Condensate collecting sytem	Approx. 14 l

OPTIONS

- **Super Silent housing**



MINI-VERTICUS with SUPER SILENT housing

The MINI-VERTICUS Super Silent compressor housing is fully noise-insulated with optimised cooling air intake. The Super Silent soundproofed housing is recommended for applications where reduced noise is a priority, e.g. work environments.

- **B-SECURUS filter cartridge monitoring system**



B-SECURUS Filter Cartridge Monitoring System

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

OPTIONS

- **P61/350 Purification System - Filter with separate final oil and water separator**



P61/350 purification system (picture similar)

Purification system	P61
Operating pressure (Standard)	PN200/PN300
Operating pressure max (PS)	350 bar
Pressure dew point	< -20 °C, equivalent to 3 mg/m ³ at 300 bar
Pipe connection	G 3/8" (condensate drain G 1/4")
Filter housing volume	2.85 l
DGRL2014/68/EU	Vessel category II
Air purification capacity (at ambient temperature 20°C and 300 bar) ¹	2,475 m ³

¹ When using a BAUER P61 filter cartridge without hopcalite. When using a cartridge with CO-, the air purification capacity is reduced by approx. 10 %. Different values for SECURUS cartridges.

- **B-APP**



Controlling the MINI-VERTICUS with the B- APP

B-APP allows users to remotely control and monitor compressors with the new B-CONTROL MICRO. B-APP also offers additional features such as product-specific news, videos, an integrated dealer search function and calculation tools. Available in the AppStore (iOS) and on GooglePlay (Android).

As a requirement for the B-APP remote function, the B-CONTROL MICRO compressor control unit must have a valid IP address and be connected to the same local area network (LAN/WLAN) as the mobile device.

The integration of the B-CONTROL MICRO into the local network (home router, DSL router, company network) is implemented either via network cable or with optional LAN-WLAN gateway via wireless LAN.

Alternatively, if there is no local network for integration of the compressor control, an optional LAN-WLAN gateway can also be used to create a separate local WLAN network of the B-CONTROL MICRO. The smartphone can be logged into this network to permit use of the remote function in the B-APP.

- **B-CONTROL II compressor control unit**



B-CONTROL II Display

OPTIONS

Compressor control unit	B-CONTROL II
Motor drive	Star delta starter
Output	7.5 kW
Control voltage	24 V DC
Type	Semi-automatic
Operating elements	5.7" TFT colour display 240 x 320 pixels; touch screen plus 10 function buttons, clear text display
Standard features	<ul style="list-style-type: none">- 5.7" TFT colour touch screen display with clear text- Fully automatic monitoring of relevant parameters; compressor shutdown if values exceed permissible ranges- Choice of languages- Oil pressure monitoring protects against incorrect rotation direction- Maintenance information shown in display- Log stores incident history- Password protection for various menu levels- Base load cycle and interconnected operation for up to 4 connected compressors- Integrated data logger- Cycle counter records load cycles of final separator stage- Interface: USB 2.0, Ethernet 10/100, CAN bus Layer 2, Modbus RTU RS485, Profibus DP slave (optional)- Remote On/Off (galvanically isolated)- Centralised alarm (galvanically isolated)- Simple software update via CF card or USB- External connections for: B-SECURUS, SECCANT, B-KOOL, external display, external operating panel, fill level, gas balloon, gas measurement systems

CORPORATE HEADQUARTERS

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Manufacturer

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