

Stationary High Pressure Compressor

Types:

V450 | V540 | V680

Production status: F01



General	
Medium	Air
Intake pressure	atmospheric
Filling pressure	PN200 / PN300
Pressure setting, final pressure SIV	225 bar / 330 bar / 365 bar
Pressure setting, pressure sensor	220 bar / 320 bar / 350 bar
Permissible ambient temperature range	+5...+45°C
Permissible altitude ¹	0...1000 m AMSL
Max. permissible tilt	5°
System design	Open / Super Silent
Standard operating voltage	400 V; 50 Hz
Other operating voltage	On request
Compressor oil, standard	Synthetic
Oil change interval	Every 2 years / 2,000 h
Finish	RAL 7024, RAL 9006, CYAN (front) / RAL 9006 (sides)

¹ Operating compressors in altitudes > 1000 m AMSL on request

Compressor system	V450	V540	V680
Charging rate ¹	450 l/min	540 l/min	680 l/min
Purification system	P61/350	P61/350	P61/350
Power draw	10.6 kW	10.3 kW	13.6 kW
Cooling air flow, min.	3300 m ³ /h	3300 m ³ /h	4100 m ³ /h
Sound pressure level ² (Super Silent version)	70 dB[A]	73 dB[A]	73 dB[A]
Weight (open model) ³	402 kg	402 kg	416 kg
Weight (Super Silent) ³	466 kg	466 kg	480 kg
Dimensions (LxWxH) open model ³	1195 x 802 x 1525 mm		
Dimensions (LxWxH) Super Silent ³	1543 x 802 x 1525 mm		

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

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, halogen-free). Control box located on the left side of the compressor unit. Ergonomic access by folding out.

Drive system: e-motor	V450	V540	V680
Motor	Three-phase		
Power	11 kW	11 kW	15 kW
Operating voltage / frequency ¹	400 V, 50 Hz		
Speed approx.	2,850 1/min	2,850 1/min	2,850 1/min
Protection class	IP55 (TEFC)		

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

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

The B-CONTROL MICRO is a modern, easy-to-operate compressor control unit with colour display that intelligently controls and all basic compressor functions and monitors their safety. User-friendly navigation and clear display of all main compressor parameters.



B-CONTROL MICRO Display

Compressor control unit	B-CONTROL MICRO
Ambient temperature (Display + CPU):	-10°C to + 60°C (5-90% humidity; non-condensing)
Standard operating voltage (internal)	24 V DC
Protection class, control cabinet:	IP 55
Protection class, display:	IP 65
Type, display	3.5" colour display with clear text

FEATURES

- Displays current operating pressure, operating hours and operation type
- Semiautomatic and fully automatic operation options
- User-friendly navigation and display (user interface)
- Displays service and maintenance intervals and maintenance information
- Password protection for various menu levels
- Log stores incident history
- Simple software update uses SD card
- Cycle counter and operating hours counter
 - Safety: Information when pressure vessels require replacement
- Numerous language options (German, English, French, Chinese, Czech, Danish, Dutch, Finnish, Italian, Japanese, Norwegian, Polish, Portuguese, Russian, Swedish, Spanish, and more)

MONITOR / CONTROL FUNCTIONS

- Oil pressure monitoring
 - Protection from incorrect rotation direction
- Temperature monitoring of the cooling air and gas temperature in the final oil and water separator
 - Safety: Compressor shutdown if temperatures are too high
- B-SECURUS monitoring (via CAN bus)
 - Safety: Shuts down compressor when filter cartridge is fully saturated
- Motor overcurrent (indirect by PTC)

INTERFACES

- CAN bus for internal use
- Remote Start/Stop (dry contact)
- External emergency off switch
- Centralised alarm (dry contact)
- External connection options for: B-SECURUS, SECCANT, B-KOOL , external display, external operating field, gas measurement systems, 40 litre condensate collector
- Ethernet connection (for connection with local LAN/WLAN or B-LINK – for communication with B-APP and B-CLOUD)

➤ Automatic condensate drain system B-DRAIN

The automatic condensate drain automatically removes the condensate that forms during compression (water/oil mixture) from the intermediate separators and the final separator and collects it in a condensate vessel, which is integrated in the compressor. The newly developed and patented B-DRAIN automatic condensate drain uses individually controlled solenoid valves to ensure reliable, automatic condensate removal from the compressor separators.



B-DRAIN

Automatic condensate drain system	
Control voltage	24 V DC
Solenoid valve	normally open (NO)
Condensate collector capacity	approx. 14 l

OPTIONS

› SUPER SILENT housing

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.

- Closed design features targeted cooling air intake.
- Housing parts are easy to remove, ensuring fast access for maintenance.
- An exhaust air duct is easy to fit.
- Reduces acoustic pressure to:
- Colour finish: Basic frame RAL 9006, housing RAL 9006 and RAL7024, CYAN
- The Super Silent housing can be retrofitted.



› 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.

The B-CONTROL unit displays the following warnings:

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



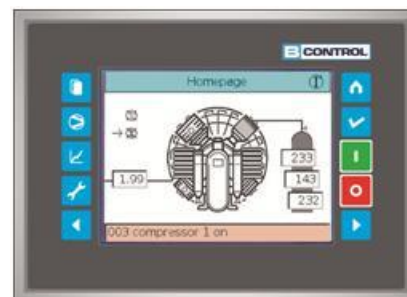
B-SECURUS Filter Cartridge Monitoring System

Filter cartridge monitoring unit	B-SECURUS
Supply voltage	24 V DC
Protection class	IP 65

➤ **B-CONTROL II Compressor Control Unit**

B-CONTROL II is the advanced version of the B-CONTROL MICRO basic compressor control unit. It features a touch screen display:

- Fully automatic operation in line with customer-specific parameters
- Monitors all relevant operating data
- Shuts down the system in the case of deviation from defined operating parameters
- Displays operating data, maintenance information, fault messages and trends
- Master control unit for interconnected operation



B-CONTROL II display

Compressor control unit	B-CONTROL II
Motor drive	Star delta starter
Control voltage	24 V DC
Type	Semi-automatic or fully automatic
Operating elements	5.7" TFT colour display 240 x 320 pixels; touch screen plus 10 function buttons, clear text display
<ul style="list-style-type: none"> ▪ Standard features 	<ul style="list-style-type: none"> ▪ Fully automatic monitoring of relevant parameters, compressor switch-off when values are outside the permissible range ▪ Language selection (English, German, French, Italian, Dutch, Polish, Spanish, Czech, Portuguese, Chinese, Japanese, Russian and more) ▪ Oil pressure monitoring to protect against incorrect direction of rotation, for example ▪ Maintenance management: Maintenance information on the display ▪ Logbook to record event history ▪ Password protection for different menu levels ▪ Basic load cycle and interconnected operation for up to 4 compressors ▪ Integrated data logger ▪ Cycle counter to record the load cycles of the final separator ▪ Interface: USB 2.0, Ethernet 10/100, CAN bus layer 2, Modbus RTU RS485, Profibus DP slave (optional) ▪ Remote on/off (dry contact) ▪ Collective fault message (dry contact) ▪ Straightforward software update via CF card ▪ External options for the connection of: B-SECURUS, SECCANT, B-KOOL, B-DETECTION, external display, external instrument panel, fill level gas balloon, gas measuring systems

› B-KOOL refrigeration dryer

The B-KOOL Refrigeration Dryer cools the compressed air and thus extends the service life of filter cartridges many times over.

The B-KOOL cools the hot saturated air in the compressor to approx. +3 °C, enabling the final separator to extract significantly higher volumes of condensate and thus extending the service life of the downstream filter cartridges. Depending on the ambient temperature, the life of the filter cartridges can be significantly extended. The higher the ambient temperature, the longer the lifespan of the filter cartridges when the B-KOOL is used.



TYPES

- B-KOOL II 680i, integrated (mounted on a VERTICUS with Super Silent housing)
- B-KOOL 680s standalone positioned next to the compressor

Model	B-KOOL 680i and B-KOOL 680s
Medium	Pressurised air
Ambient temperature	+5 °C to +45°C
Refrigerant	R 134 a
Intake temperature of pressurised air	max. 60°C
Max. operating pressure, pressurised air	350 bar / 500 bar
Min. operating pressure, pressurised air	100 bar
Permissible compressor charging rate	200 – 700 l/min 200 – 650 l/min
Power supply	100 – 127 VAC 50 Hz or 200 – 240 VAC 50/60 Hz
Power consumption	max. 550 W at 50 Hz, 610 W at 60 Hz

DIMENSIONS, WEIGHT AND CONNECTIONS

Model	B-KOOL II 680i	B-KOOL 680s
Dimensions (L xW x H)	550 x 792 x 390 mm	386 x 695 x 565 mm
Weight approx.	57 kg	48 kg

ASSEMBLY KITS

Suitable for Purification systems P41 and P61. **The assembly kit for mounting on a compressor must be ordered separately and is essential.**