

COBRA

Screw Vacuum Pumps
BC 0100/0200 F



- › **Advanced Screw Design:**
bell shaped construction,
patented self-balancing screws
- › **Efficient:**
low operating costs, energy-efficient,
minimal maintenance, high uptime
- › **Reliable:**
operationally reliable
- › **Flexible:**
application-oriented
- › **Quiet:**
sound level < 60 dB(A)
- › **Compact Design**

The COBRA BC 0100/0200 F are dry screw vacuum pumps in the proven COBRA BC series. State-of-the-art screw vacuum pump technology featuring a specially developed screw profile sets new standards of efficiency, making these vacuum pumps the ideal solution for tasks in load lock and transfer chambers, as well as in processes such as metrology, lithography, physical vapor deposition (PVD) and rapid thermal annealing (RTA).

Due to the sophisticated bell shaped cantilever construction, the twin rotor with variable pitch screws is mounted only on the motor side, while the unique "flying bearing" design makes inlet bearings unnecessary. As a result, the pumped medium does not come in contact with the bearings. This ensures clean vacuum generation and allows the full recovery of pumped gases. The direct gas path between inlet and outlet prevents dead spaces and ensures there are no process deposits inside the compression chamber.

The patented self-balancing screw design and screw rotor mounted precisely at the centre of gravity ensure excellent running qualities and guarantee high uptime. A directly mounted canned motor makes the dimensions of the COBRA BC series very compact.

Equipped with high-efficiency motors and idle mode capabilities, the COBRA BC 0100/0200 F offer excellent energy efficiency. With low maintenance requirements, low operating costs, a very high uptime and a long life cycle, the total cost of ownership is very low.

Retrofitting these screw vacuum pumps to existing systems can be performed quickly and easily due to a fit-in-place design.

The fully open communication protocol (Modbus TCP-IP) allows control of all functionalities, including idle modes and variable speed drive. It can easily be adapted to a specific network protocol using standard interface components.

**COBRA BC – the next level of light
to medium duty vacuum pumps.**



COBRA

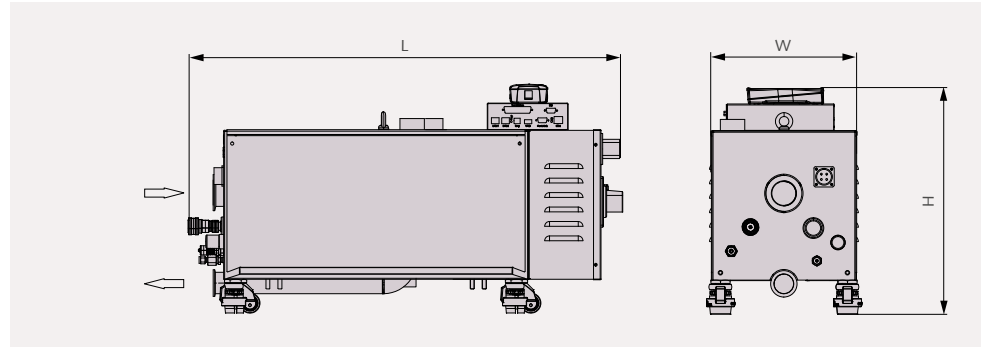
Screw Vacuum Pumps BC 0100/0200 F



Technical specifications

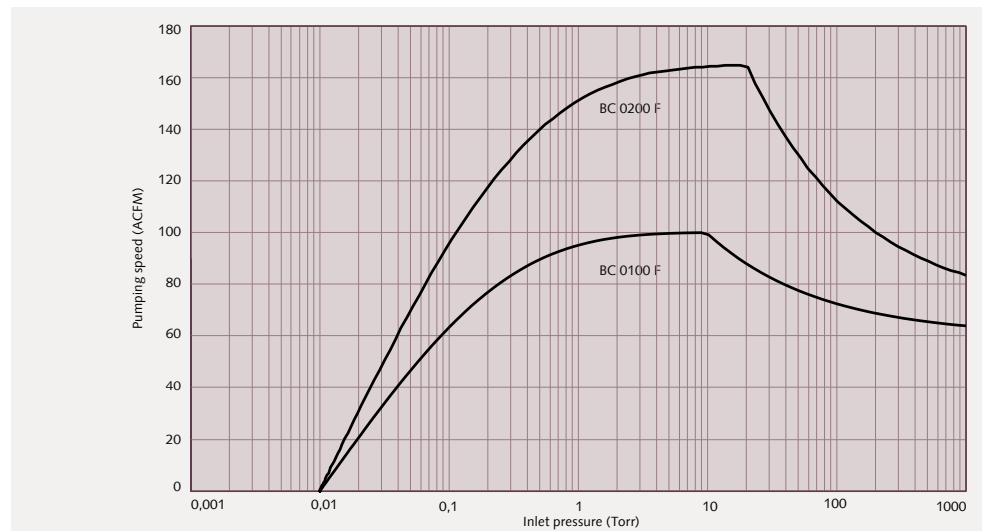
Two screw rotors inside the cylinder of the COBRA BC 0100/0200 F rotate in opposite directions. The pumped medium is trapped between the cylinder and screw chambers, compressed, and transported to the gas outlet. During the compression process the screw rotors do not come in contact with each other or the cylinder. Thus, no lubricants or operating fluids are required in the compression chamber. The advanced screw design results in lower electrical energy consumption and a lower compressed gas heat load compared to standard screw designs. COBRA BC series vacuum pumps use efficient direct water cooling resulting in an even temperature distribution throughout the pump body, and guaranteeing thermal stability throughout the process.

COBRA BC 0100/0200 F



Pumping speed

Air at 70 °F. Tolerance: ± 10%



Technical data		BC 0100 F	BC 0200 F
Max. pumping speed	m ³ /h	100	165
Ultimate pressure	hPa (mbar)	0.01	0.01
Nominal motor rating	kW	1.8	2.9
Power consumption at ultimate pressure / Idle mode	kW	1.3	1.6
Nominal motor speed	min ⁻¹	3600	4570
Sound level (ISO 2151)	dB(A)	58	60
Water consumption	l/min	1.0	2.0
Nitrogen consumption	l/min	0–50	0–50
Approximate weight	kg	120	130
Dimensions (L x W x H)	mm	829 x 304 x 362	806 x 304 x 392
Gas inlet / outlet		DN 50 KF / DN 40 KF	DN 50 KF / DN 40 KF

All performance data is based on ambient conditions of 14.7 PSIA and 70 °F, and has a tolerance of ± 10%.

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Technical data is subject to change. Created in Germany. MG PL COBRABC01000200F USen01/2018 8Aa