

# COBRA

## Screw Vacuum Pumps – Vapor Recovery NC 0630–2000 B/C VR



### › Explosion-Proof:

ATEX-certified,  
gas temperatures < 100°C

### › Robust:

high vapor and particle tolerance,  
anti-corrosion coating on internal  
components

### › High Performance:

high pumping speed  
at all inlet pressures

### › Efficient:

low energy consumption,  
minimal maintenance,  
minimized operating costs

Busch COBRA VR dry screw vacuum pumps have been specifically designed for the stage I recovery of petrol and other hydrocarbon vapors in the petrochemicals industry. The design of the COBRA VR series is based on the long experience and close involvement of Busch in this sector.

The COBRA VR series is a range of high-performance dry screw vacuum pumps for use with corrosive chemicals and in harsh industrial environments. Safety and reliability are the most important features of these vacuum pumps. Their robust design ensures a life cycle of more than 20 years with minimal maintenance requirements. Today, they are in operation throughout the world in a wide range of climate conditions, particularly in the petrochemicals industry.

COBRA VR vacuum pumps are available in three different sizes, with pumping speeds from 580 to 2100 m<sup>3</sup>/h at 50 Hz and from 680 to 2600 m<sup>3</sup>/h at 60 Hz. The range of sizes allows these vacuum pumps to be matched precisely to the process, resulting in effective and efficient hydrocarbon vapor recovery whilst maintaining the highest standards of

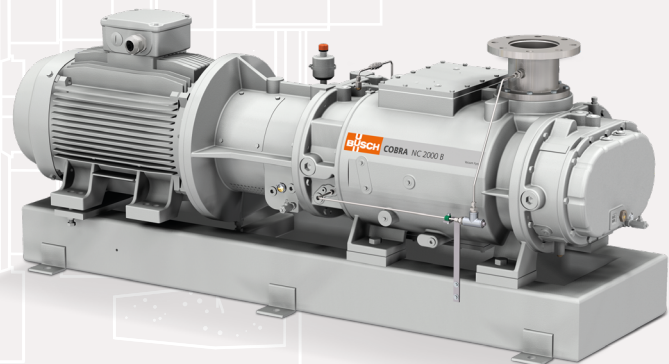
environmental compatibility and cost-effectiveness.

COBRA VR dry screw vacuum pumps feature dry compression, a specially developed screw profile, and unimpeded gas discharge. The result is a high degree of vapor and particle tolerance. Their design guarantees an even heat distribution over the whole pump stage, reducing thermal stress and increasing service life.

The screws are manufactured from a single-piece casting avoiding any gaps, making the ingress of process fluids or particles impossible, and thereby preventing corrosion. The mechanical seals are highly resistant to chemicals, further increasing the reliability of COBRA VR dry screw vacuum pumps.

Optimized rotor design and pump configuration ensure low gas temperatures within the compression chamber in line with ATEX standards. In addition, COBRA VR screw vacuum pumps are equipped with a cooling system designed specifically for the extraction of petrol vapor to compensate for any induced external or internal temperature fluctuation.

**COBRA VR – a safe  
solution for hydrocarbon  
vapor applications stage I.**



COBRA NC 2000 B VR with special outdoor color coating as standard

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COBRA dry screw vacuum pumps can be used for vapor recovery in:

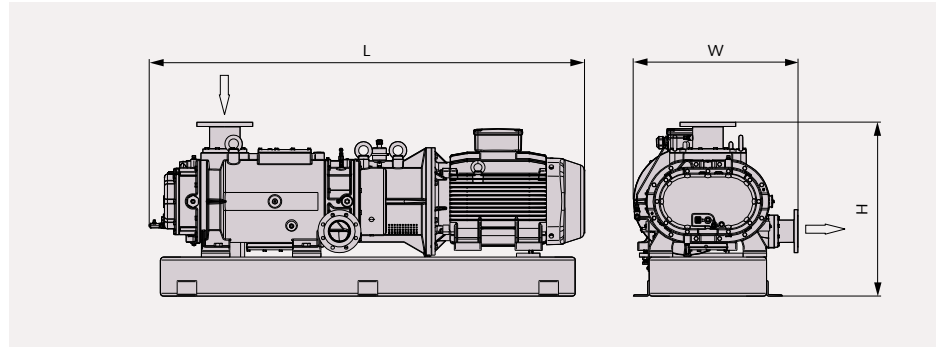
> **Stage I systems:**

- Storage tank systems
- Rail tanker filling systems
- Road tanker filling systems
- Loading and unloading stations for tanker ships
- Extraction during production processes

**Technical specifications**

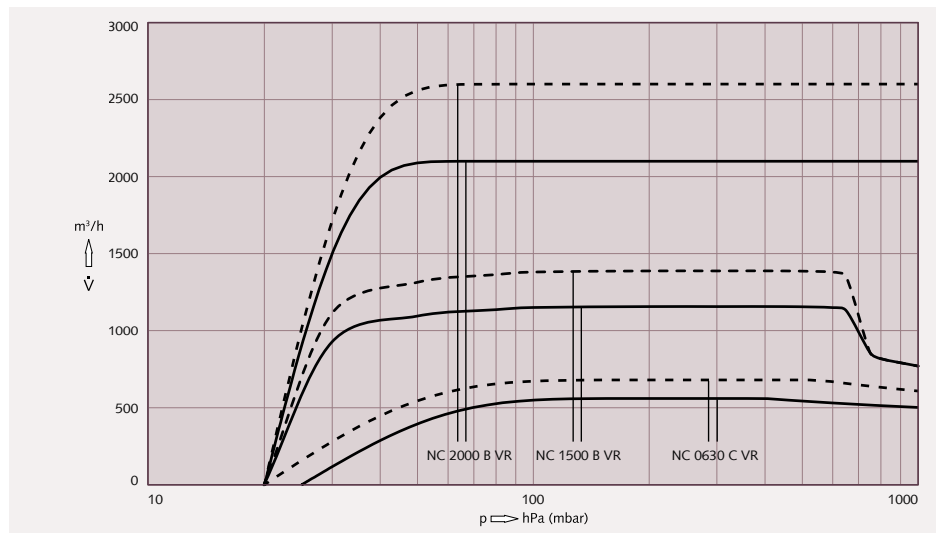
Two screw rotors inside the cylinder of the COBRA VR rotate in opposite directions. The pumped medium is trapped between the cylinder and screw chambers, compressed, and transported to the gas outlet. During the compression process the screw rotors do not come in contact with each other or the cylinder. 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 VR series vacuum pumps use efficient, indirect water cooling resulting in an even temperature distribution throughout the pump body, and guaranteeing thermal stability throughout the process.

COBRA NC 0630–2000 B/C VR



**Pumping speed**

Air at 20 °C. Tolerance: ± 10% — 50 Hz - - - - 60 Hz



Technical data			NC 0630 C VR	NC 1500 B VR	NC 2000 B VR
Pumping speed	50 Hz / 60 Hz	m³/h	580 / 680	1160 / 1400	2100 / 2600
Ultimate pressure	50 Hz / 60 Hz	hPa (mbar)	< 25 / < 20	< 20	< 20
Nominal motor rating	50 Hz / 60 Hz	kW	22	30 / 36	55 / 63
Nominal motor speed	50 Hz / 60 Hz	min <sup>-1</sup>	3000 / 3600	3000 / 3600	3000 / 3600
Noise level (ISO 2151)	50 Hz / 60 Hz	dB(A)	73 / 78	79 / 81	79 / 84
Weight approx.		kg	880	1250	2000
Dimensions (L x W x H)		mm	1683 x 720 x 861	1960 x 738 x 855	2226 x 880 x 898
Gas inlet			DN 100 PN 16 / ANSI 4" B16.5	DN 100 PN 16 / ANSI 4" B16.5	DN 150 PN 16 / ANSI 6" B16.5
Gas outlet			DN 80 PN 16 / ANSI 3" B16.5	DN 80 PN 16 / ANSI 3" B16.5	DN 100 PN 16 / ANSI 4" B16.5

www.buschvacuum.com

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Technical data is subject to change. Created in Germany. MG PL COBRAN06302000BCFVR Len 01/2019 9Aa