

# COBRA

Screw Vacuum Pumps  
DS 0700–2000 G



- › **Advanced Screw Design**
- › **Efficient:**  
cost-effective, minimal maintenance, high uptime
- › **Flexible:**  
application-oriented
- › **Short Process Times:**  
due to high pumping speeds
- › **Robust:**  
anti-corrosion coating on internal components
- › **Compact Design**

COBRA DS 0700–2000 G are dry screw vacuum pumps in the proven COBRA DS series. Their high pumping speeds, even under conditions in which a high hydrogen throughput is required, make COBRA DS screw vacuum pumps ideal for all demanding processes in the production of photo-voltaic cells, flat screens and semiconductors. State-of-the-art COBRA DS screw vacuum pump technology allows powder- and particle-laden media to be evacuated.

COBRA DS dry screw vacuum pumps feature dry compression, a specially developed screw profile, and unimpeded gas discharge. The result is a high degree of vapour and particle tolerance. 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 COBRA DS 0700–2000 G feature an integrated vacuum booster as standard, providing higher pumping speeds and ultimate pressures. The backing pump and vacuum booster are combined on a compact base frame.

Equipped with high-efficiency motors, the COBRA DS 0700–2000 G 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, setting the standard in this performance class.

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

#### Applications

- High-density plasma CVD (HDP-CVD)
- Rapid thermal processing (RTP)
- Sub-atmospheric CVD (SACVD)
- Metal-organic CVD (MOCVD)
- Plasma-enhanced CVD (PECVD)
- Low-pressure CVD (LPCVD)
- Atomic layer deposition (ALD)

**COBRA – the new generation  
of dry vacuum pumps  
for demanding processes.**



COBRA DS 2000 G

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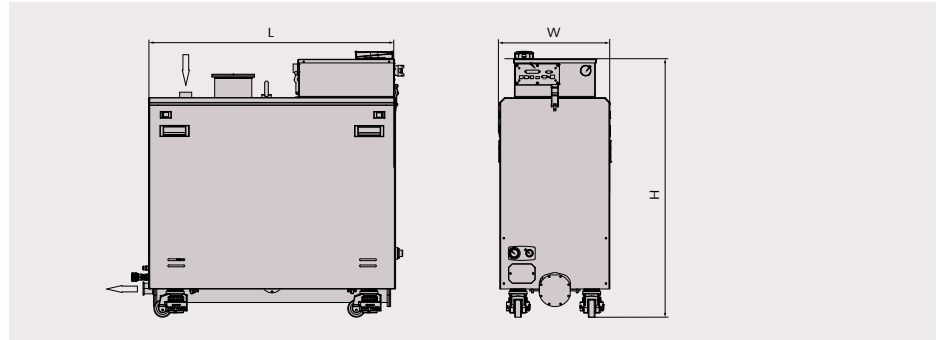
## Screw Vacuum Pumps DS 0700–2000 G



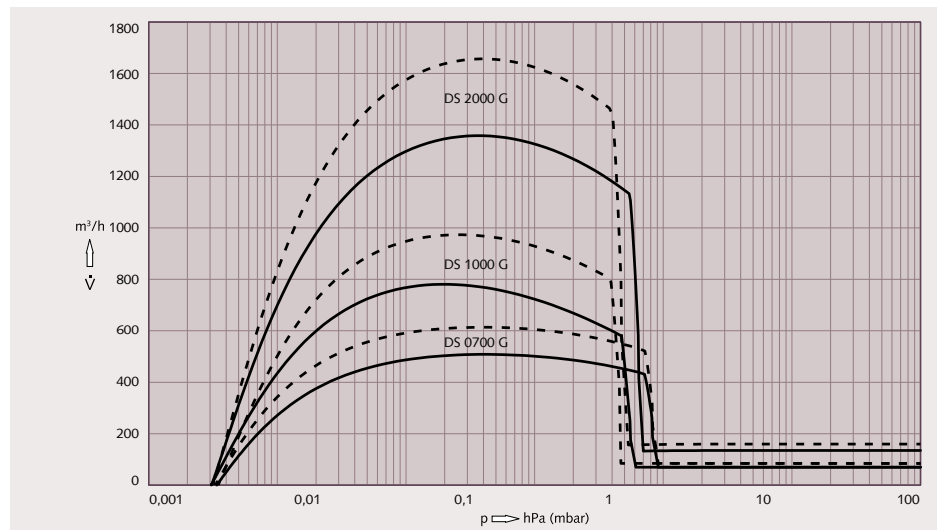
### Technical specifications

COBRA DS 0700–2000 G are screw vacuum pumps combined with one booster pump. Two screw rotors inside the cylinder of the screw vacuum pump 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 into contact with each other or the cylinder. Thus, no lubricants or operating fluids are required in the compression chamber. COBRA DS series vacuum pumps use efficient, indirect water cooling resulting in a controllable temperature distribution throughout the pump body, and allowing to respond to process variations. The advanced screw design allows an extremely high pumping speed for the discharge of hydrogen. The COBRA DS 0700–2000 G use high-performance vacuum boosters to optimize the system performance.

### COBRA DS 0700–2000 G



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



Technical data			COBRA DS 0700 G	COBRA DS 1000 G	COBRA DS 2000 G
Nominal pumping speed	50 Hz / 60 Hz	m³/h	500 / 610	775 / 960	1365 / 1640
Ultimate pressure	50 Hz / 60 Hz	hPa (mbar)	0.003 (3·10 <sup>-3</sup> )	0.003 (3·10 <sup>-3</sup> )	0.003 (3·10 <sup>-3</sup> )
Nominal motor rating backing pump	50 Hz / 60 Hz	kW	4.0 / 4.4	4.0 / 4.4	5.5 / 6.6
Nominal motor rating vacuum booster	50 Hz / 60 Hz	kW	4.0 / 4.4	4.0 / 4.4	5.5 / 6.6
Power consumption at ultimate pressure / Idle mode	50 Hz / 60 Hz	kW	3.0 / 3.6	3.3 / 4.0	5.6 / 6.8
Nominal motor speed backing pump	50 Hz / 60 Hz	min <sup>-1</sup>	3000 / 3600	3000 / 3600	3000 / 3600
Nominal motor speed vacuum booster	50 Hz / 60 Hz	min <sup>-1</sup>	3000 / 3600	3000 / 3600	3000 / 3600
Noise level (ISO 2151)	50 Hz / 60 Hz	dB(A)	< 62	< 62	< 68
Water consumption		l/min	5.0	5.0	5.0
Nitrogen consumption		l/min	0–75	0–75	0–75
Weight approx.		kg	445	576	668
Dimensions (L x W x H)		mm	865 x 385 x 917	1034 x 425 x 1017	1063 x 465 x 1069
Gas inlet / outlet			DN 63 / DN 40	DN 100 / DN 40	DN 160 / DN 40

[www.buschvacuum.com](http://www.buschvacuum.com)

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Technical data is subject to change. Created in Germany. MG COBRADS07002000G Len 09/2016 6.0