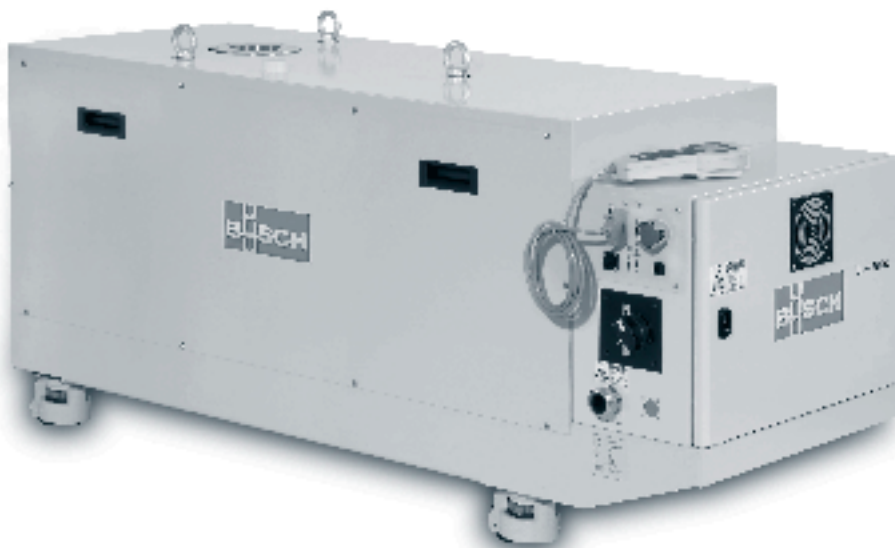


Screw vacuum pumps for the semiconductor industry



COBRA DS 0600/3000 B



DS 0600 B

High reliability

Due to the well proven twin screw design and the intelligent temperature management the COBRA DS series of dry screw pumps are highly reliable even in the harshest applications in semiconductor processes and related applications. The restart capability is unsurpassed. This finally results in a high life expectancy.

Low cost of ownership

Long MTBF and preventive maintenance free operation are the main reasons for a low cost of ownership. Low utility consumption and the high reliability are responsible for lower production cost in the semiconductor industry.

Improved serviceability

A smaller number of parts with rotors made from one piece and the modular design in general, results in lower costs for overhauls.

Principle of operation

In our COBRA DS 0600/3000 B dry screw pump the well proven twin screw vacuum pump design is used. The screw mechanism minimizes sliding areas inside the pump and thus has optimum restart capabilities. The new screw design results in lower electric results in lower electric energy consumption compared to standard screw designs and in lower heat load of the compressed gas. Using the indirect cooling principle the whole pump body is working at a uniform temperature level. There are no cold spots, and thus condensation is reduced to a minimum.

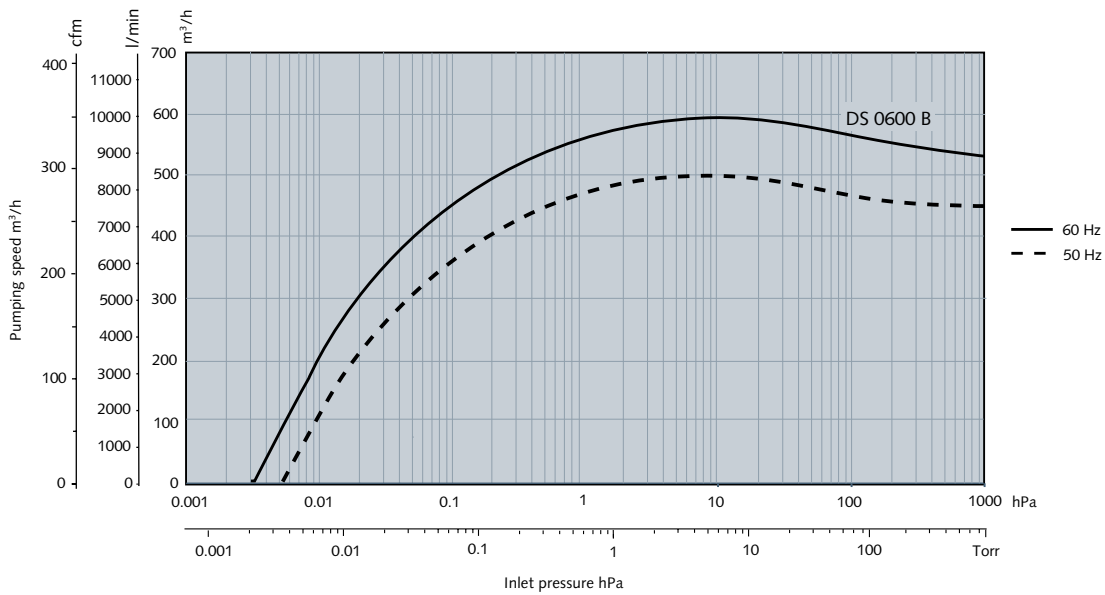
COBRA DS series

Our COBRA DS series of dry screw pumps are well prepared for advanced monitoring, containing all features of a modern semiconductor vacuum pump. Electric and electronic components and the controls are state of the art. The DS 3000 B incorporates a Roots blower. Combinations of Busch dry screw pumps and Busch Roots blowers are well proven technologies within the Busch DS series of vacuum pumps.

Screw vacuum pumps for the Semiconductor Industry

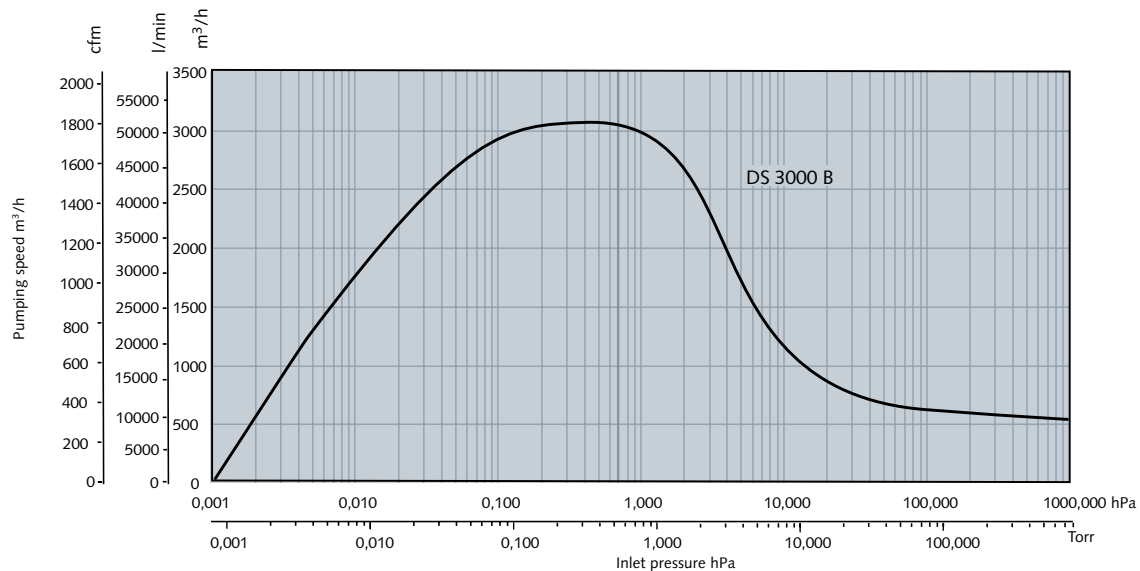
COMBI BA 450

Technical data



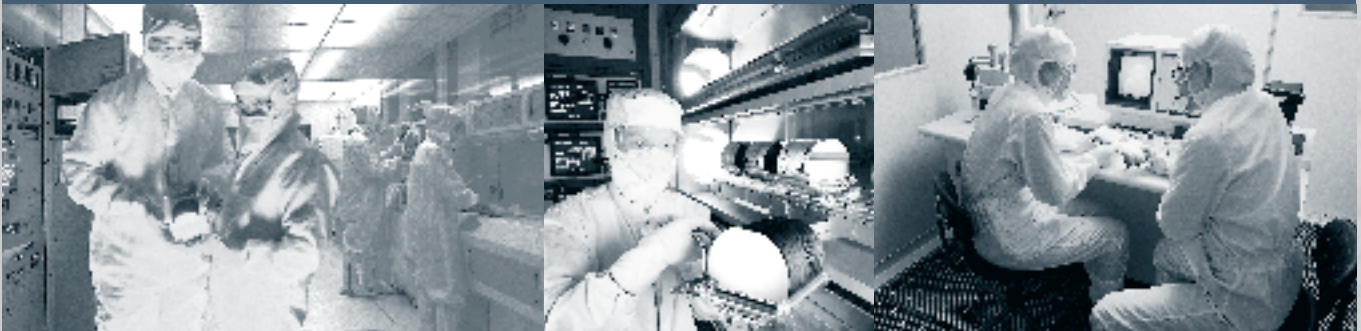
Technical data			DS 0600 B	DS 3000 B
Pumping speed 60 Hz (50 Hz)	m ³ /h cfm		600 (500) 335 (294)	3010 1776
Base pressure	Torr mbar		7.5×10^{-3} 1×10^{-2}	7.5×10^{-4}
Rotation speed	Booster COBRA	min ⁻¹	– 4320 (3600)	5400 4320 (3600)
Inlet connection			DN 160 ISO-F	DN 160 ISO-K
Outlet connection			DN 63 ISO-K	DN 63 ISO-K
Weight	kg		550	1200
Noise level	dB(A)		68	68
Electrical				
Power supply	V		208/50-60 Hz 3Ph 400/50-60 Hz 3Ph	208/50-60 Hz 3Ph 400/50-60 Hz 3Ph
COBRA motor 60 Hz (50 Hz)	kW		15 (11)	15 (11)
Booster motor 60 Hz (50 Hz)			–	7.5 (90 Hz)
Lubrication				
Oil capacity	l		1,3	4,0
Oil type			PFPE	PFPE
Cooling water				
Connection, quick coupler			3/8" NPT	3/8" NPT
Pressure (max)	bar		5	5
Pressure dif. (min.)	bar		2	2
Flow (min.)	l/min		8	8
Water temperature	°C		10-20	10-20
Nitrogen				
Overpressure seal flow	bar		1.5	1.5
Dilution flow (process dependent)	slm		0-200	0-200

Technical data



Applications

COBRA DS 0600/3000 B



Typical applications:

- Fast load locks
- Cryo cleaning
- Flat panel display production
- Epitaxy
- Solar cell production
- Tungsten-Nitride PNL

Advantages:

- Short process times in batch operation – high effective speed throughout the rough and medium vacuum range
- Cost savings – no Roots blowers needed in many applications for pumping speeds up to 600 m³/h
- Simplification of pump sets with Roots blowers – up to 6.000 m³/h with one Roots blower only
- In WN-PNL processes the DS 3000 B is combined with a special trap for high MTBF
- High pumping speed with dry pump only in epitaxial applications
- Low noise and vibration levels – rotor design avoids generation of noise and vibrations; covers reduce emission of noise
- Prepared for advanced monitoring at the vacuum pump directly or by central monitoring system (CMS)
- Low electric power consumption

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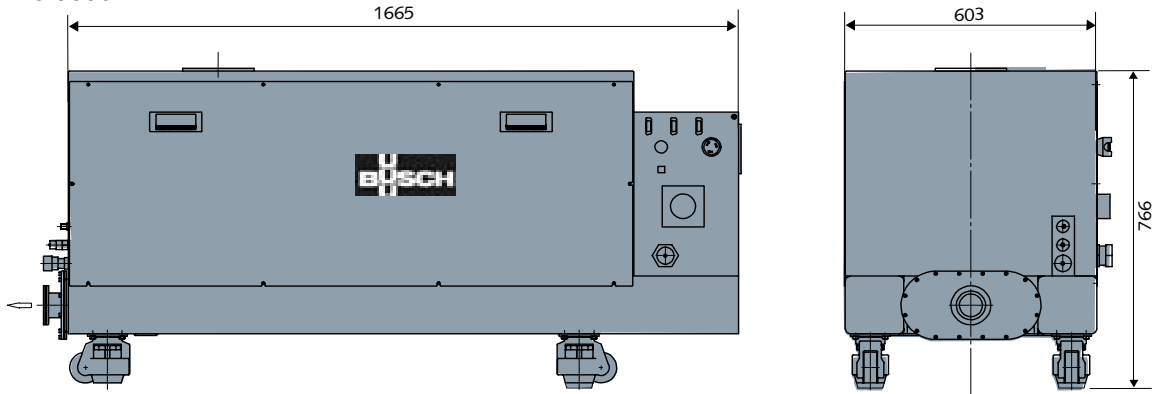
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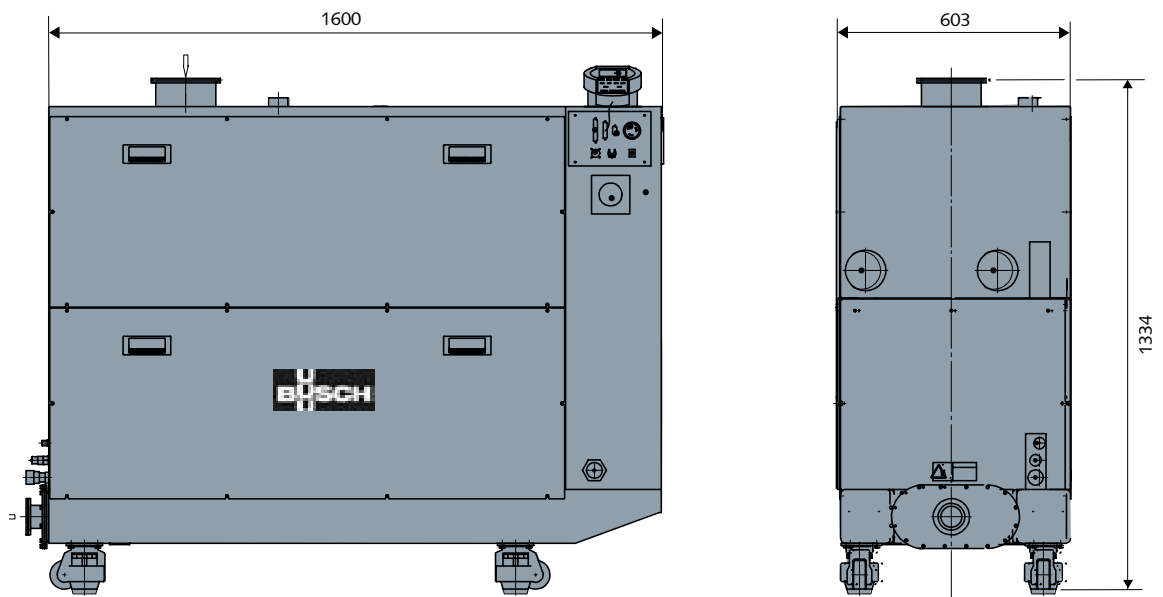
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Dimensions

DS 0600



DS 3000



Busch – all over the world in Industry
Busch – au coeur de l'industrie dans le monde entier
Busch – weltweit im Kreislauf der Industrie

