

# Screw Vacuum Pumps for the Flat Panel Display Production



## 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 m<sup>3</sup>/h
- 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
- Low electric power consumption

## Capacities Range

- 600 m<sup>3</sup>/h – 16 000 m<sup>3</sup>/h
- 10 000 l/min – 260 000 l/min
- 350 cfm – 9 400 cfm

## High reliability

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

The COBRA DS range are the perfect vacuum pumps for all areas of applications within the flat panel display production.

Our experts are looking forward to working together with you on your individual vacuum concept.



*Cobra*  
DS series

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## 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

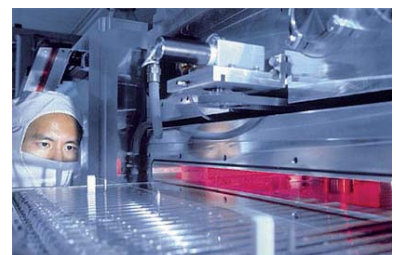
The screw mechanism minimizes sliding areas inside the pump and thus has optimum restart capabilities. The new screw design results in lower electric results in lower electric energy consumption compared to standard screw designs and in lower heat load of the compressed gas.

Using the indirect cooling principle the whole pump body is working at an uniform temperature level. There are no cold spots, and thus condensation is reduced to a minimum.

## COBRA series

Our COBRA 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.

Combinations of Busch dry screw pumps and Busch Roots blowers are well proven technologies within the Busch series of vacuum pumps.



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DS series