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Vacuum Pumps and Systems

Busch Vacuum Pumps and Systems

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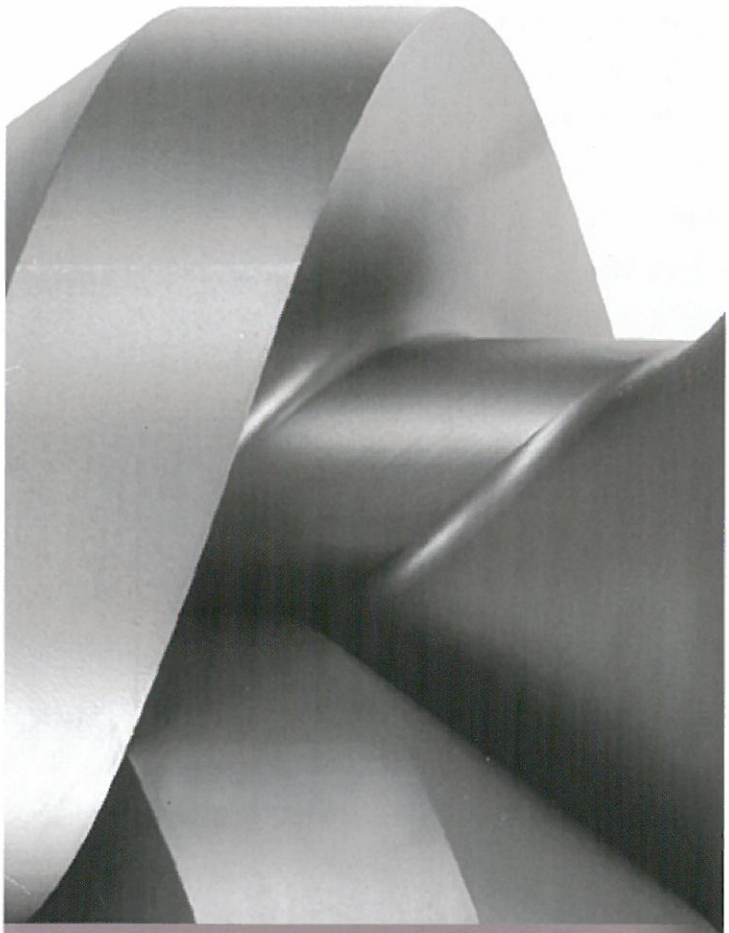
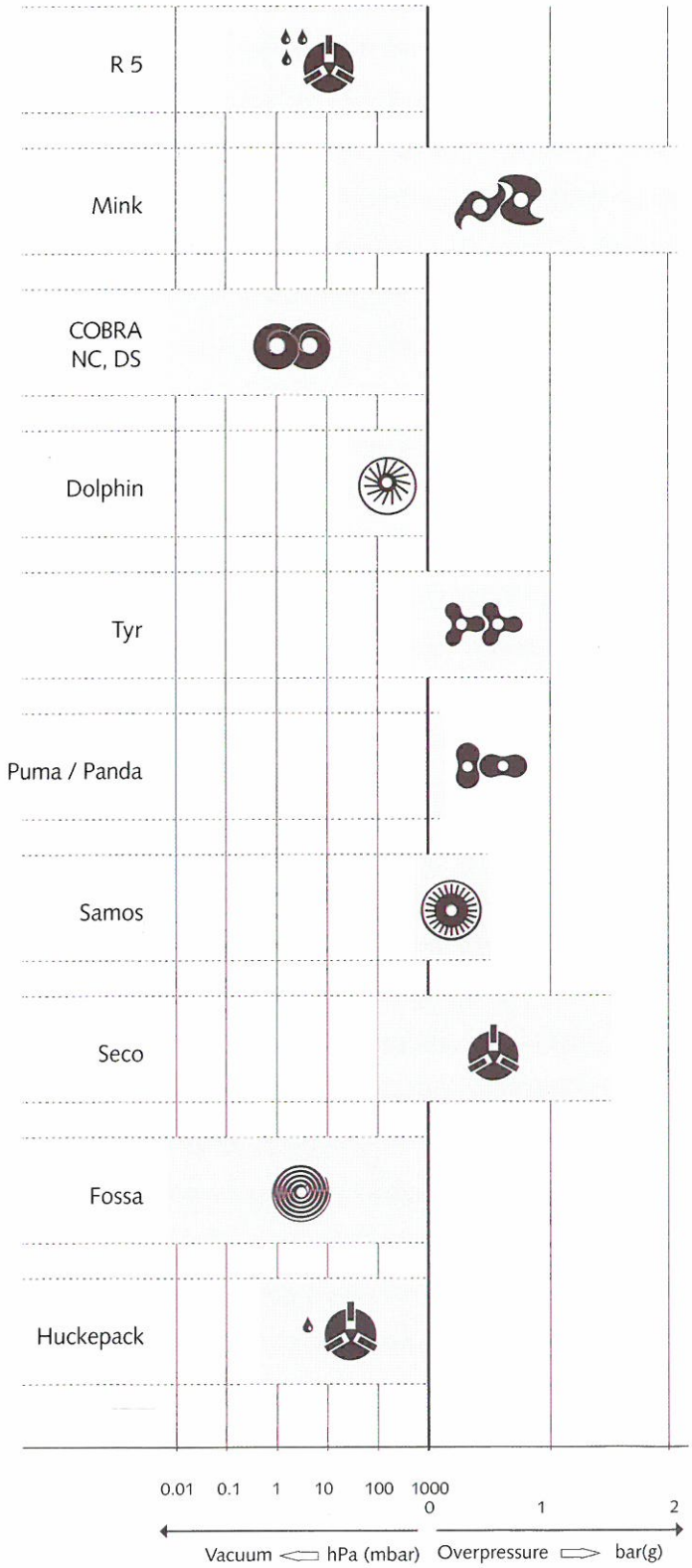


Busch Technology

Vacuum and Overpressure Solutions

Overview

Product Range Overview
Vacuum and Overpressure Solutions



Service

Optimise the Performance of Your Vacuum Pumps, Systems, Compressors and Blowers

› Professional. Fast. Reliable.

Vacuum pumps and systems as well as low pressure compressors and blowers are important components in many production processes. That's why availability, reliability and an efficient operation are so important.

Today, the design of modern vacuum pumps and low pressure compressors and blowers takes these requirements into account by introducing maintenance-free or low-maintenance components. Maintenance is thus reduced in terms of frequency and complexity, sometimes even reduced to simple work that can often be completed without external assistance. Even so, many production processes demand a degree of safety and availability that goes beyond the demand of single components.
Meeting the safety and availability requirements of whole systems can only be guaranteed by individually customising overhaul and maintenance procedures based on the specific production processes.

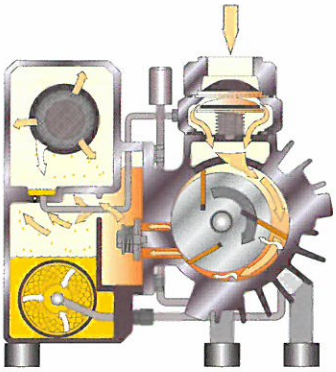
- **Field Service**
- **Active Service Contract**
- **Warranty Plus**
- **Service Exchange**
- **Rental Service**
- **Installation and Start-Up Service**
- **Vacuum Consultancy**
- **Remanufacture of Vacuum Pumps and Blowers**
- **Decontamination**
- **Training**
- **Genuine Spare Parts**

Index

R 5

› Rotary Vane Vacuum Pumps Oil-Lubricated

0.1 - 20 hPa (mbar)
4 - 1,600 m³/h (50 Hz)
4,8 - 1,920 m³/h (60 Hz)



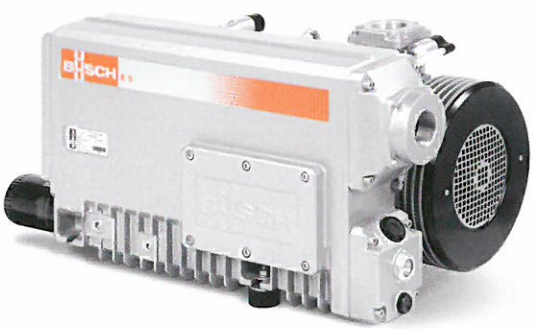
Oil-lubricated R 5 rotary vane vacuum pumps have long been the industry standard due to their robustness and operational reliability. Over 2,5 million of these vacuum pumps are used worldwide every day in tough industrial applications.

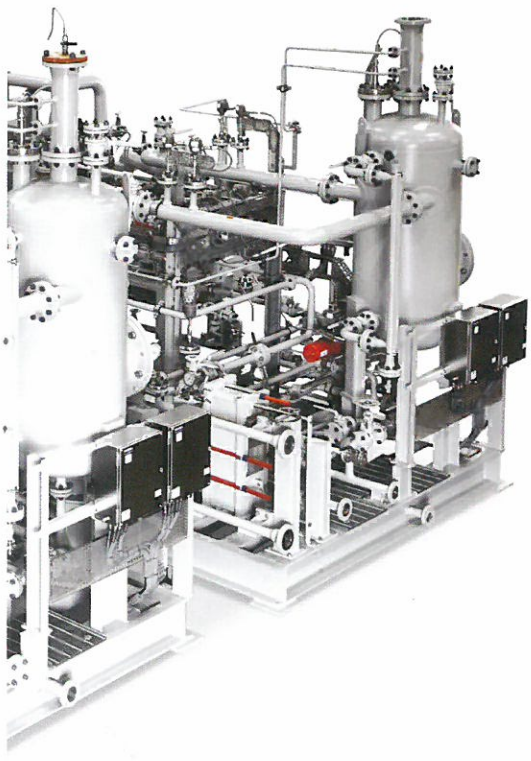
Safe and cost-effective
Rotary vane technology has been continuously developed and optimised by Busch over decades, with the emphasis on operational reliability and economic efficiency.
R 5 rotary vane vacuum pumps are known throughout the industry for their modern and energy-efficient vacuum generation – whether being used intermittently or around the clock, you can rely on the R 5.

Proven
These compact vacuum pumps owe their robustness to proven rotary vane technology with recirculating oil lubrication. This guarantees a constant high vacuum level which can cope with the toughest operating conditions. When fitted with a gas-ballast valve (optional), vapours can be pumped without condensing.

Planning and co-ordination
We have streamlined the structure of our systems build in teams in order to be able to design and implement every solution as quickly as possible. All concept development, planning, design, procurement of materials and manufacturing activities are performed specifically for each project and within the company, which makes everything easier for you whilst speeding up the overall process. You only have one contact to deal with!

R 5 – proven and reliable.
Over 2,5 million pumps in operation worldwide.





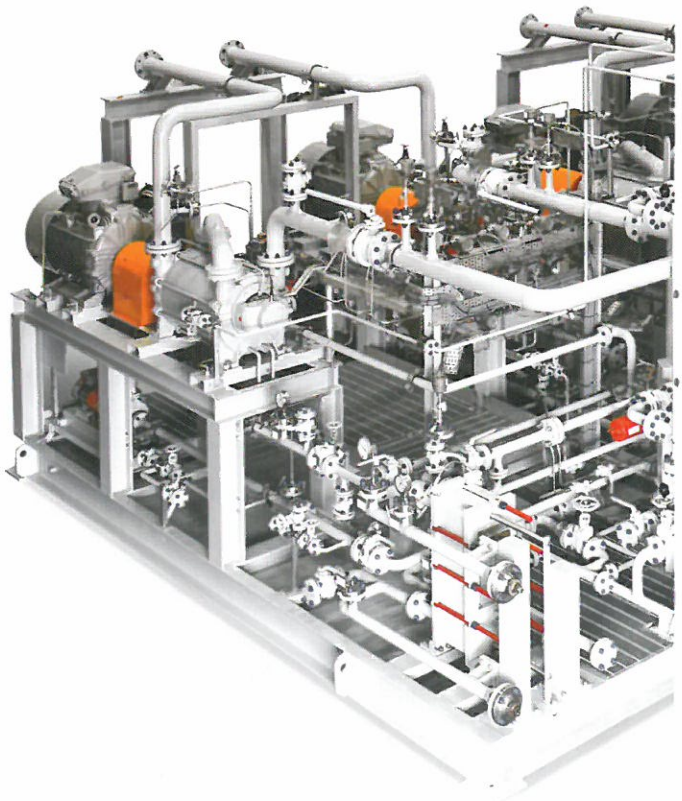
Vacuum Systems

Tailored to Your Needs

› Innovations for tomorrow.

We design vacuum systems to meet our customers' specific needs and requirements. 50 years' experience and the combined know-how from thousands of installations in various applications enable us to provide our customers with the best vacuum solution.

Close collaboration between the design teams throughout the global Busch network guarantees that your solution will be designed and built according to the latest technical standards. Take advantage of our skill and experience to significantly boost your performance.

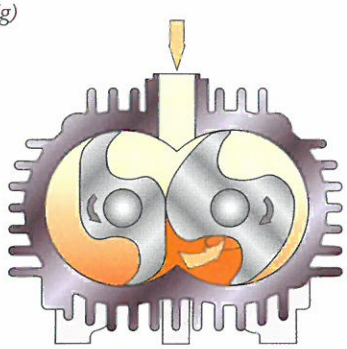


Customised vacuum system

Mink

› Claw Vacuum Pumps and Compressors Dry-Running, Non-Contact Design

20 - 250 hPa (mbar), 2 bar(g)
60 - 1,000 m³/h (50 Hz)
72 - 1,200 m³/h (60 Hz)



Oil and water free operation

Mink claw vacuum pumps have been developed especially for use in industrial applications where a constant vacuum, high suction capacity and totally oil-free compression are essential.
Mink claw vacuum pumps operate contact-free; neither oil nor water are required during the compression process.

Highly economical

The rotary claw operation principle of Mink claw vacuum pumps reduces their energy consumption considerably in comparison with conventional vacuum pumps so energy costs are reduced. Due to their near maintenance-free operation, a decrease in operating costs adds to the savings; no maintenance downtime occurs, no wearing parts or operating fluids need to be changed – only a gear box oil change is recommended after every 20,000 hours. When compared to conventional vacuum pump solutions, Mink claw vacuum pumps can save up to 60% on energy and operating costs.

The claw technology is also used for Mink compressors.
They provide oil-free overpressure up to 2 bar(g) and volume flows up to 300 m³/h.

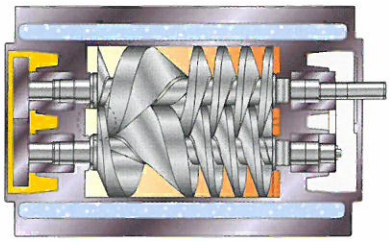
Mink – save up to 60% on energy and operating costs compared to dry rotary vane vacuum pumps.

Mink MM 1402 AV

COBRA NC

› Screw Vacuum Pumps
Dry Running, Non-Contact Design

0.01 - 0.05 hPa (mbar)
100 - 2,500 m³/h (50 Hz)
120 - 3,000 m³/h (60 Hz)



COBRA NC dry screw vacuum pumps are highly efficient for use in many industrial applications including process applications. These models embody many years of experience in dry vacuum technology and offer key design benefits:

Reliable and robust
The variable pitch and free gas outlet greatly improve the pump's ability to handle liquid and dust carry-over. The unique temperature distribution offers resistance to corrosion. The optimised efficiency reduces the thermal load, thus increasing pump service life.

Easy to service
A simple, robust design and the ability to handle the vast majority of process gases ensures long service intervals and minimum maintenance downtime.

Application-oriented
COBRA NC dry screw vacuum pumps can accommodate a number of applications due to the different versions available. The cooling water can be injected direct or radiator cooled. COBRA NC dry screw vacuum pumps are also available as ATEX versions.

COBRA – the reliable and robust solution for fine vacuum applications.

COBRA NC 630 B

Accessories and Spare Parts

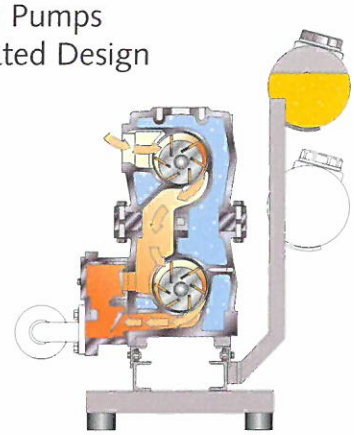
Busch worldwide genuine spare parts supply
Quality matters, especially in terms of spare parts. Only Busch original spare parts guarantee the optimum performance and operational security of your vacuum pumps, low pressure compressors and blowers.

Our well-organised spare parts depot provides you with Busch original spare parts as well as all other needed third party original spare parts, available for dispatch in a day. We also stock vacuum oils and other maintenance materials that are especially designed for our products. Busch Service guarantees a worldwide supply of spare parts, within 24 hours.

Huckepack

› Rotary Vane Vacuum Pumps
Once-Through-Lubricated Design

0.5 hPa (mbar)
160 - 630 m³/h (50 Hz)
192 - 756 m³/h (60 Hz)



Huckepack are powerful once-through oil lubricated rotary vane vacuum pumps with double-staged compression.
These pumps are perfectly suited to the handling of solvents and condensable gases due to their high water vapour tolerance. They are ideal for harsh applications.

Environmentally safe
No contact between cooling water and pumped gas, therefore no waste water contamination. Noise is kept to a minimum as is energy consumption.

Easy to service
Designed in modular form with motors to IEC standard.
The stages can be exchanged very quickly which minimalises downtime.

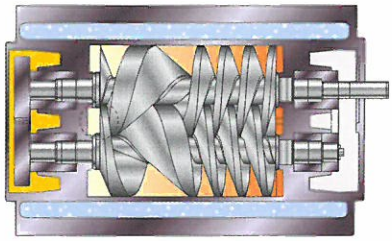
Huckepack –
very low cost of ownership.
Ideal for harsh applications.

Huckepack HO 0433 F

COBRA DS

› Screw Vacuum Pumps
Dry Running, Non-Contact Design

0.01 - 0.05 hPa (mbar)
100 - 3,500 m³/h (50 Hz)
120 - 4,200 m³/h (60 Hz)



COBRA DS dry screw vacuum pumps offer state-of-the-art harsh duty process and high capacity load lock solutions for the most demanding solar, flat panel, semiconductor or coating applications. These vacuum pumps have best-in-class pumping speed combined with superior hydrogen throughput and excellent powder handling capabilities resulting from their unique screw pump design.

Efficient
Equipped with high-efficiency motors and state-of-the-art idle mode capabilities, the COBRA DS series offers excellent energy savings potential.

Easy to service
The compact design, with its separate booster and screw pump frames, allows for easy installation and maintenance.

Optimal cost of ownership
Due to their optimised space-saving design and energy savings potential, overall cost-of-ownership for these COBRA DS series vacuum pumps is low.

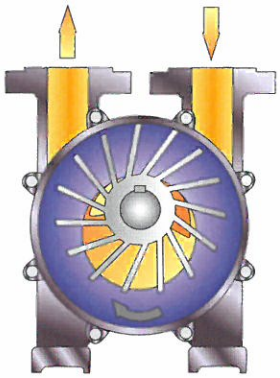
COBRA – the next level of high capacity harsh duty vacuum pumps.

COBRA DS 8161 D

Dolphin

› Liquid Ring Vacuum Pumps
Liquid-Sealed Design

33 - 150 hPa (mbar)
25 - 10,000 m³/h

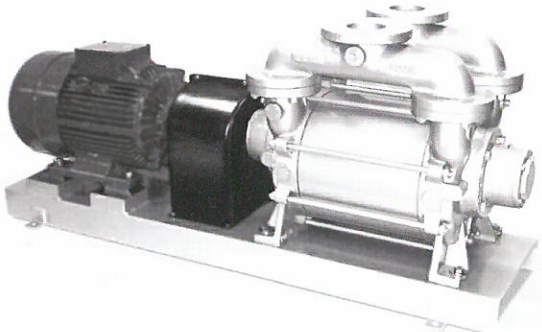


Dolphin liquid ring vacuum pumps are available as single or two-staged pumps in both a close coupled and a base plate version. The proven compression principle allows them to be used in all sectors of industry.
Critical applications such as evacuating saturated gases and vapours are easily carried out using our liquid ring vacuum pump.

Application-oriented
Dolphin liquid ring vacuum pumps are designed for continuous operation. The number of different designs, accessories and material options allow the pumps to be optimised for any process.

Reliable
Dolphin vacuum pumps have a robust design and are constructed using application-oriented materials. The modular design of the base plate version allows various assemblies to suit many different processes.

Dolphin – reliability for harsh processes and applications.

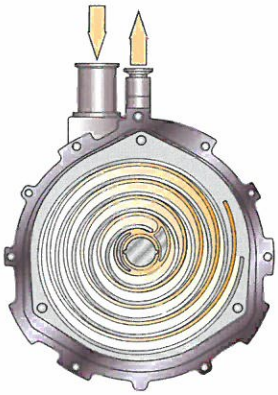


Dolphin LA 0906 A

Fossa

› Scroll Vacuum Pumps
Oil-free Design

0.01 - 0.075 hPa (mbar)
15 - 35 m³/h (50 Hz)
18 - 42 m³/h (60 Hz)



Hermetically sealed 100% oil-free and ideal for pumping air or conveying gases without leakage or ambient air contamination – the Fossa scroll vacuum pump.

Two standard sizes are available:
FO 0015 A and FO 0035 A. Featuring consistently high vacuum levels and very low noise and vibration levels, these pumps are ideal for today's analytical and scientific applications. Thanks to its compact design, the Fossa scroll vacuum pump requires no special mounting making the set-up quick and easy whilst providing a high degree of pump mobility.

The low noise and vibration levels make the new Fossa vacuum pumps suitable for use in areas such as laboratories. With no shaft seals and with lifetime-lubricated bearings, the Fossa scroll vacuum pump requires very little maintenance. Its high level of efficiency ensures maximum suction capacity with low energy consumption. The standard gas-ballast valve enables pumping of vapours.

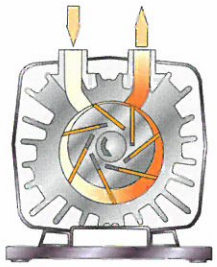
Fossa – hermetically sealed. Quiet and low vibration levels.

Fossa FO 0015 A

Seco

› Rotary Vane Vacuum Pumps and Compressors
Oil-free Design

100 - 150 hPa (mbar)
0.6 - 1.5 bar(g)
3 - 140 m³/h (50 Hz)
3,6 - 168 m³/h (60 Hz)



Seco SV rotary vane vacuum pumps operate oil-free with self-lubricating vanes made from special carbon. They are ideally suited for applications requiring an oil-free operation.
A compressor version of the pump, the Seco SD, is also available.

Economical and environmentally friendly
Seco rotary vane vacuum pumps stand out due to their low energy consumption. They are quiet and environmentally friendly as a result of oil-free compression.

Compact design
The motor is flange-mounted directly to the pump.

Low maintenance
Robust design, lifetime-lubricated bearings and a surface-cooled motor guarantee a long service life for the pump.

The rotary vane technology of Seco is also used for compressors. Seco SD compressors provide oil-free overpressure up to 1.5 bar(g).

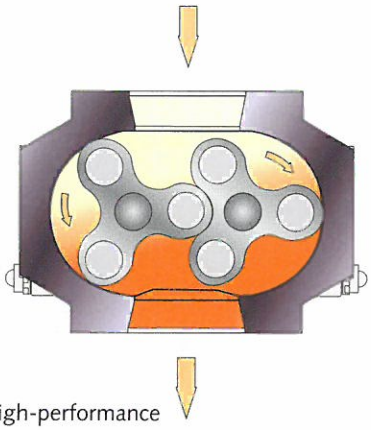
Seco – the dry solution.

Seco SV 1010 C

Tyr

› Rotary Lobe Blowers
Oil-free and Non-Contact Design

500 hPa (mbar)
1 bar(g)
150 - 4,380 m³/h



Tyr rotary lobe blowers are high-performance generators for vacuum and overpressure which set new benchmarks in terms of performance, compactness and noise minimisation.

Operational reliability
Tyr blowers are extremely reliable thanks to their robust design and high level of precision during manufacture. Piston ring seals ensure a long, fault-free service life with automatic belt tensioning. Tyr blowers are extremely energy-efficient due to three factors: the energy-saving motor, the option to choose motor size depending on requirements, and the highly efficient blower stage.

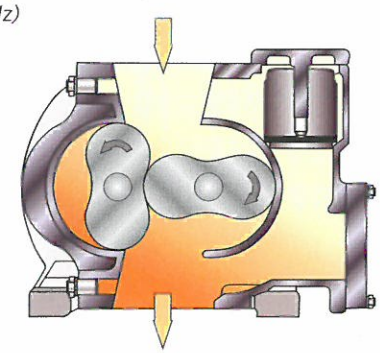
Tyr – silent operation.

Tyr WT 0390 AP

Panda / Puma

› Roots Pumps
Dry-Running, Non-Contact Design

250 - 10,000 m³/h (50 Hz)
300 - 12,000 m³/h (60 Hz)



Panda and Puma Roots pumps are dry-running vacuum pumps that are used together with backing pumps in all rough and fine vacuum applications where large suction volumes are required. Roots pumps operate completely contact-free and without sealing fluids such as oil or water in the working chamber.
Panda Roots pumps are equipped with a by-pass valve.

Economical
Thanks to the large number of available sizes, the suction capacity and ultimate pressure can be tailored exactly to the process conditions. The high volumetric efficiency ensures a further increase in the economy of operation.

Safe operation
Tried-and-tested engineering together with a sturdy design enables safe operation. The Panda series' integrated by-pass valve allows for operation at any pressure level.

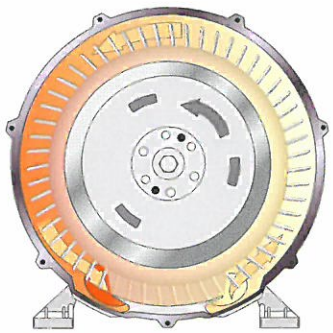
Panda / Puma – the efficient booster.

Panda WV 4000 A / Puma WP 2000 D

Samos

› Side Channel Blowers
Oil-free Design

70 - 500 hPa (mbar)
45 - 1,370 m³/h (50 Hz)
54 - 1,650 m³/h (60 Hz)



Samos SB side channel blowers, single and two-staged, are generally suitable for overpressure and vacuum duties, and are particularly suited to applications where a pulsation-free flow is required. Units can be installed in horizontal and vertical positions. Die cast aluminum makes this a very robustly constructed product.

Maintenance-free
Sealed-for-life bearings, a fan-cooled motor and non-contacting impeller all ensure maintenance-free operation principle.

Environmentally safe
Oil-free compression and an internal silencer allow the Samos side channel blower to run very quietly with low power consumption.

Samos – flexible and economic for overpressure and vacuum duties.

Samos SI 1150 E