

## **Rotary Blowers** **OMEGA Series Milking Technology**

With the world-renowned OMEGA PROFILE

Milking capacity 500 – 6500 l/min



### What do you expect from rotary blowers and vacuum pumps?

Maximum efficiency plays a key role in all rotary blower or vacuum pump applications and is achieved through using a blower block that is perfectly suited to the specific application and which produces the required vacuum or pressure.

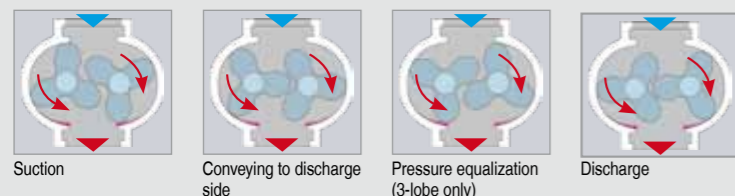
KAESER's comprehensive range of three-lobe blower blocks ensures that there's a highly efficient Omega blower to meet every customer's needs.

It is also especially important for vacuum pump systems in particular to operate over as wide a control range as possible and deliver optimum energy efficiency. By using a frequency converter, vacuum pump power can be variably controlled to match actual demand.

### Three-lobe block

The negligible pulsation characteristics of three-lobed blower blocks make them the perfect choice for applications where thin-wall piping or ducting is used, for example, and where minimal discharge noise and resonance are essential. Not only do the precision machined OMEGA PROFILE rotors ensure outstanding energy efficiency, but also eliminate the need for lubrication in the flow chamber, as the rotors in all blower block models operate without touching one another.

### How a KAESER rotary blower works



As the rotors turn, air in the inlet is trapped between the rotor lobes and the casing and is carried round to the outlet without being compressed. The casing bore near the outlet opening is machined slightly off-centre, so that as a rotor lobe approaches the outlet, the gap between it and the casing begins to widen. This allows gradual equalisation of pressure between the air in the discharge port and that in the chamber behind the advancing lobe. This is the main reason why three-lobe blocks generate significantly less pulsation than two-lobe blocks. The air is then finally pushed out against the external atmospheric pressure.

## Milking with oil-free compressor technology

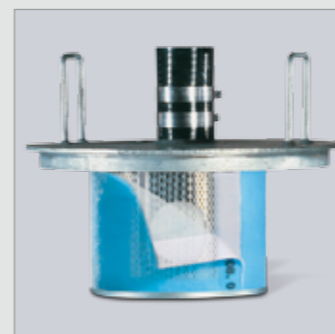
With optional frequency converter for maximum energy savings

### Innovative design brings user advantages:

- The separator tank installed upstream from the vacuum pump protects it from contamination and eliminates the need for separate vacuum pump flushing.
- Selection of a vacuum pump with a frequency converter option can reduce energy costs by more than 50 %, as power can be variably controlled to match actual suction demand.
- The vacuum pump operates with an oil-free flow chamber, which means that no oil enters the atmosphere, the environment is safeguarded and that cleaning costs are greatly reduced.



KAESER rotary blowers – Made in Germany: All blocks and rotors are manufactured by KAESER in accordance with the most stringent standards and the use of highly advanced measurement technology ensures consistently high product quality.



### Separator tank

Specifically developed for use with milking technology vacuum pumps, the separator tank has outstanding cleansing power due to its centrifugal separation action and combination of fluid and particle filters. A manual drain and automatic protection features, fitted as standard, are available should the fluid level become too high.



### Three-lobe OMEGA block

The low energy consumption of the OMEGA block results from minimal clearance between the rotors and the casing. This is made possible by the high rigidity of the precision machined rotors in combination with non-axial loading spur-ground gears and durable cylindrical roller bearings.



### Exhaust silencers

Exhaust silencers specifically developed for vacuum pumps use multiple internal airflow deflection to keep sound levels to an absolute minimum.



### Soundproof and compact

A sound-proofing enclosure attached with quick-lock fasteners is available as a two-piece optional extra and reduces unit sound levels by 10 dB(A).



### Speed and pressure control

The KAESER control unit coordinates the frequency converter and the blower package, enabling system speed and pressure to be variably controlled. Further signal inputs and outputs for use with master control systems add increased versatility.

## Uniquely efficient The right block for every application

### Variety ensures optimum performance

Renowned throughout the world for their efficiency and durability, KAESER's OMEGA blower blocks are the result of decades of experience in blower manufacture and design. They are characterised by their exceptional efficiency and durability.

All blocks are suitable for pressures from -500 mbar<sub>(a)</sub> to 1000 mbar<sub>(g)</sub>.

The smallest suitable block should be chosen for any particular application, as small higher speed blocks are more energy efficient. This is not just an advantage in terms of purchase price but also in operating costs.

The faster airflow of smaller blocks also provides more effective cooling, further extending service life.

Experience shows that blowers equipped with a frequency converter can cut energy consumption by more than 50%.

The oil-free exhaust air from the units can also be used for heat recovery purposes.

## Technical specifications

| Model           | Milking capacity at -40 kPa      | Milking capacity at -50 kPa | Rated motor power | Connection diameter | Dimensions (with enclosure)              | Weight (with enclosure) |
|-----------------|----------------------------------|-----------------------------|-------------------|---------------------|------------------------------------------|-------------------------|
|                 | l/min (FAD)                      | l/min (FAD)                 | kW                | DN                  | mm                                       | kg                      |
| BB 53 PLUS      | 1620<br>2361                     | –<br>1889                   | 4<br>5.5          | 50                  | 760 x 450 x 860<br>(800 x 680 x 860)     | 105<br>(155)            |
| BB 53 PLUS, FU  | 472-1910<br>472-2693<br>523-2705 | –<br>1277-1846<br>1256-2167 | 4<br>5.5<br>7.5   |                     |                                          |                         |
| BB 68 PLUS      | 2930                             | 2329                        | 7.5               |                     |                                          |                         |
| BB 68 PLUS, FU  | 644-3424                         | 1674-2630                   | 7.5               | 65                  | 760 x 450 x 860<br>(800 x 680 x 860)     | 120<br>(170)            |
| BB 88 PLUS      | 3500                             | 2769                        | 7.5               | 65                  | 760 x 450 x 860<br>(800 x 680 x 860)     | 135<br>(185)            |
| BB 88 PLUS, FU  | 741-4358                         | 2050-3499                   | 11                |                     |                                          |                         |
| DB 130 PLUS     | 5250                             | 4229                        | 11                | 80                  | 900 x 550 x 1080<br>(1150 x 1000 x 1080) | 210<br>(290)            |
| DB 130 PLUS, FU | 1320-6482                        | 2275-5259                   | 15                |                     |                                          |                         |