L_300 – The monoblock pumps with maximum suction capacity

Liquid ring vacuum pumps and compressors

The monoblock pumps in the L_300 family (2BV5/6) are characterized by a very high suction capacity of up to 600 m³/h (360 cfm) and are primarily used in applications involving high volumes of liquid. When suctioning condensable vapors, L_300 machines also act as condensers, thus doubling their suction capacity.

Space-saving installation
Compared to conventional machines, the single-stage compact design of the L_300 pumps means they require only half the space for installation. They can easily be installed in extruder and chemical plants, even in under-table installations.

Wear-free and reliable
We focused on durability and dependability in developing these liquid-ring pumps. The L_300 can provide up to 20,000 maintenance-free hours of continuous duty under even the harshest conditions. Reinforced stainless-steel shafts, continuously lubricated bearings and a coated pump casing prevent wear, even when conveying solid matter, and ensure constant performance data even after long use.

Quiet and precision-balanced
Optimized flow technology, careful manufacturing and precision-balancing result in low operating noise and high running smoothness. With a sound level of less than 73 dB(A), the L_300 complies with the strictest noise standards, and eliminates the need for any additional sound-reducing measures.

Advantages at a glance
- Compact
- Robust design for reliable operation and long service life
- Quiet and precision-balanced
- Energy-efficient
- Worldwide use due to 50/60 Hz voltage range motors
- For worldwide use, available ex stock, UL/CSA-certified
- Low installation costs
- Easy to service
- Standards-compliant mechanical seal
- Reinforced stainless-steel shaft in the pump body
- Design conforms to ATEX 94/9 EC

Main applications
- Plastics industry
- Chemical industry
- Medical technology
- Food and beverage industry
- General mechanical engineering
The principle is simple and robust: the impeller is the only moving part and rotates without making contact – that means without contact with the casing or the port plate, which borders an end face of the impeller.

The impeller 1 is installed in the casing 2 in an eccentric arrangement. As the impeller rotates around, the operating liquid 6 in the casing forms a circulating ring which falls away from the impeller hub 3. In the vacuum created, the gas being handled is drawn through the suction port 4. At the discharge side, the liquid ring moves back towards the hub and discharges the compressed gas through the flexible discharge ports 5.

High-quality materials
Especially when chemical processes are involved, materials used in the conveyance of aggressive gases must fulfill the very highest standards. That’s why our L_300 machines come in various materials such as cast-iron, stainless steel and bronze. All individual components of the pumps were selected for suitability under the harshest production conditions.

Easy to install
The L_300 machines are mounted on level feet. This means the pumps can be bolted directly onto a steel frame or foundation, with no baseplate required. Nor do the pump and motor need to be aligned to one another. Simply connect the machine to the vacuum or delivery pipe.

ATEX-certified up to the highest category
As of July 1st, 2003, explosion-proof machines must comply to ATEX 94/9 EC have been prescribed by law. ATEX also applies to non-electrical devices that constitute a potential ignition source.

The L_300 family meets the highest safety requirements in chemical process engineering, and our machines are certified to categories 1 and 2. Our L_300 pumps are so flexible that they can be equipped with a standardized flange motor and then meet European and international standards such as NEMA. In this case, the entire unit comprising pump and motor is certified (ATEX/NEMA). Instead of the flange-mounted standard motor, the monoblock pump is also available with a compact, integrated motor (ATEX-certified).

We also design and develop solutions tailored to your individual needs. Let us know.