ROBUSCH®

# LIQUID RING VACUUM PUMPS AND COMPRESSORS

## MONOBLOCK SERIES


Evolving Technologies

ROBUSCH®

# ROBUSCHI'S NEW RANGE OF LIQUID RING PUMPS AND COMPRESSORS

Robuschi has introduced a new series of liquid ring pumps and compressors in a monoblock design, tailored to deliver exceptional performance and efficiency. These new models cover a wide range of applications, providing reliable solutions for industries requiring robust and efficient fluid handling.

## KEY SPECIFICATIONS

- **Volume Flow**: Capable of handling up to 600 $m^3/h$ of maximum flow
- **Vacuum**: Achieving vacuum as low as 33 mbar(a), ideal for applications requiring strong vacuum capabilities.

## Key Features and Benefits

1. Robust Monoblock Design
2. Superior Corrosion Resistance
3. Deposit-Free Operation
4. No Metal-to-Metal Contact
5. Enhanced Water Carryover Capacity

# DIVING INTO THE DETAILS

## DEPENDABLE AND COST-EFFECTIVE

The  new RVS monoblock series liquid ring vacuum pumps and compressors are designed for durability and reliability, outlasting modular pumps and significantly lowering your operating expenses.

## LIMESCALE-FREE OPERATION

The RVS monoblock series pump housings feature a unique ceramic internal coating that prevents calcification from fluid deposits. This innovative coating, developed in collaboration with industry experts, ensures years of optimal performance with minimal maintenance.

## SECURE AND DURABLE

With stainless steel shafts, our pumps provide outstanding corrosion resistance. They deliver safe and dependable performance even under the harshest conditions, such as in humid environments.

## GLOBAL COMPATIBILITY

The RVS monoblock pumps come with wide voltage range motors compatible with both 50 and 60 Hz frequencies, classified under protection class IP55 (insulation class F). All pumps are UL/CSA approved.

## APPLICATIONS OF LIQUID RING PUMPS ACROSS VARIOUS INDUSTRIES

RVS monoblock liquid ring pumps are versatile and robust, making them suitable for a wide range of applications across different industries.

### Ceramic and brick industry
- Degassing

### Drying systems

### Environmental engineering
- Filter technology – mobile processing of hydraulic oil
- Recovery of solvents
- Sanitation technology
- Vacuum tankers

### Food and beverage industries
- Central vacuum systems
- Dairy industry
- Filling plants
- Filtering systems
- Food preservation
- Salt water desalination
- Sugar production
- Tobacco humidification
- Water degassing of beverages

### Lifting and handling
- Medical industry
- Central vacuum systems
- Steam sterilization (autoclaves)

### Packaging industry
- Blister pack machines
- Filling and sealing machines
- Filling PET bottles with beer
- Rolling machines

### Plastics industry
- Adhesion of plastic parts
- Calibrating
- Degassing rubber parts
- EPS foaming
- Extruder degassing
- Granulate conveying
- Removal and compression of vinyl chloride gas

# COMPREHENSIVE PRODUCT RANGE

Robuschi offers a versatile and robust selection of liquid ring pumps and compressors designed to cater to a wide array of industrial applications. This range is engineered for high efficiency, durability, and reliable performance, ensuring that all your operational requirements are met.

## MULTI-PURPOSE LIQUID RING PUMPS: **RVS L2BV7** AND **RVS L2BV2**

Our RVS LBV7 and RVS LBV2 liquid ring pumps are versatile, high-performance machines designed to save space and significantly reduce operating liquid consumption by up to 50%. These pumps are built with a variety of materials to suit different operational needs, ensuring durability and resistance to erosion and corrosion.

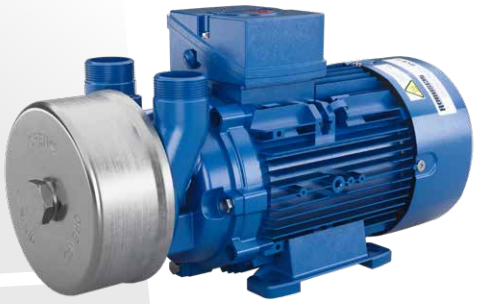
## MATERIAL OPTIONS

1. **Stainless Steel**: Ideal for environments requiring high resistance to corrosion.
2. **Bronze**: Suitable for applications where non-sparking materials are needed.
3. **Ceramic**: Provides excellent resistance to wear and chemical attack.
4. **Cast Iron with Ceramic Coating**: Offers a balance of strength and corrosion resistance.

These liquid ring pumps are engineered to deliver high efficiency and reliability across a wide range of industrial applications. The choice of materials and construction ensures that they meet specific operational demands while providing long-term, maintenance-free service.

## Key Features and Benefits

1. **Water Efficiency**: The pumps use up to 50% less water compared to conventional models, making them highly efficient in water usage.
2. **Material Versatility**: Available in various materials including stainless steel, bronze, ceramic, and cast iron with ceramic coating, allowing customization for specific applications.
3. **Corrosion and Erosion Resistance**: The tailored material combinations provide long-term resistance to erosion and corrosion, enhancing the pumps' durability.
4. **Quiet Operation**: The design ensures extremely quiet operation, free from cavitation issues.
5. **Durability**: Long-lasting performance is achieved through the use of ceramic coatings and reinforced stainless steel shafts.
6. **Quality Construction**: Top-quality roller bearings are used, ensuring reliable and smooth operation.



**RVS L2BV7**

**RVS L2BV2**

# E TO MEET YOUR NEEDS

RANGE LIQUID RING PUMPS AND COMPRESSORS

## RVS L2BV7 | RVS L2BV2 | RVS L2BV5 | RVS L2BV54

## HIGH-VOLUME MONOBLOCK PUMPS: **RVS L2BV5** SERIES

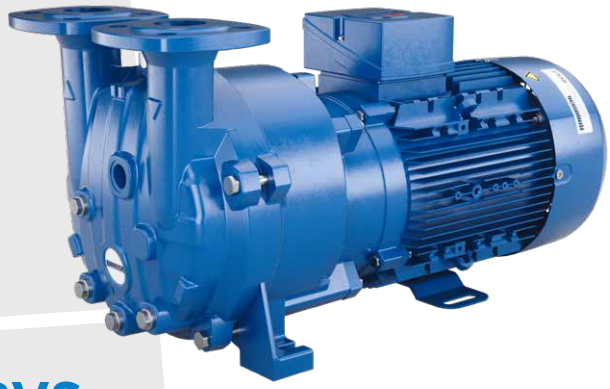
The RVS LBV5 series monoblock pumps are engineered to deliver exceptional volume flow, handling up to 600 $m^3/h$ with suction pressures as low as 33 mbar (absolute). These pumps are particularly effective in applications requiring the movement of large quantities of liquids and can simultaneously act as condensers, doubling the suction volume when dealing with condensable vapor.

## CONSTRUCTION AND MATERIAL DETAILS

1. **Reinforced Stainless Steel Shafts**: Provide robustness and resistance to deformation under heavy loads.
2. **Top-Quality Roller Bearings**: Ensure smooth and reliable operation over extended periods.
3. **Coated Pump Housing**: Adds an additional layer of protection against corrosive and abrasive materials, enhancing durability.

## Key Features and Benefits

1. **High Suction Volume**: Capable of achieving suction volumes up to 600 $m^3/h$, making them ideal for large-scale liquid handling applications.
2. **Dual Functionality**: Operates as both a pump and a condenser, significantly increasing suction volume when managing condensable vapors.
3. **Durability**: Reinforced stainless steel shafts and coated pump housing provide resistance to wear and tear from solids, ensuring long-lasting performance.
4. **Continuous Lubrication**: Bearings are continuously lubricated, reducing maintenance needs and extending the lifespan of the pump.
5. **Noise and Vibration Reduction**: Designed to operate with low noise and minimal vibration, enhancing workplace safety and comfort.
6. **Energy Efficiency**: Optimized for energy saving, reducing operational costs.
7. **High-Quality Seals**: Equipped with standard guide ring seals to prevent leaks and maintain efficiency.
8. **Robust Construction**: Top-quality roller bearings and ceramic coatings contribute to the pump's longevity and reliable performance.



**RVS L2BV5**

# COMPREHENSIVE PRODUCT RANGE TO MEET YOUR NEEDS

## RVS LBV54 LIQUID RING VACUUM PUMP: HIGH WATER CARRYOVER

The RVS LBV54 liquid ring vacuum pump is designed for applications involving high water carryover, capable of handling up to 6 $m^3/h$ of liquid. This innovative pump reduces or even eliminates the need for pre-separation of liquids, making it highly efficient for processes involving damp gases. It delivers a high volume flow of up to 340 $m^3/h$ and achieves intake pressures as low as 100 mbar (absolute).

## ADVANTAGES IN DETAIL

1. **Operational Efficiency**: By managing high water carryover, the RVS LBV54 reduces the need for additional equipment and pre-separation steps, making the process more straightforward and less labor-intensive.
2. **Energy Savings**: The low power requirement translates to reduced energy consumption, which helps lower operational costs over time.
3. **Quiet Operation**: The pump's low noise level ensures a quieter working environment, which is beneficial for both operators and the surrounding area.
4. **Simple installation and Maintenance**: The simplified system design leads to easier and more cost-effective installation and maintenance, reducing the total cost of ownership.

## Key Features and Benefits

1. **High Water Carryover**: Efficiently manages large quantities of liquid carryover, up to 6 $m^3/h$, streamlining operations.
2. **Elimination of Pre-separation**: Reduces or completely removes the need for pre-separation of liquids, simplifying the system and reducing complexity.
3. **High Volume Flow**: Delivers an impressive volume flow of up to 340 $m^3/h$, suitable for demanding applications.
4. **Low Power Requirement**: Designed to be energy-efficient, minimizing operational costs.
5. **Cost Reduction**: Significant savings in installation, operation, and service costs due to the elimination of additional water pumps and simplified process integration.

**RVS L2BV54**

# OPT FOR RVS MONOBLOCK SERIES LIQUID RING VACUUM PUMPS FOR DEPENDABLE, EFFICIENT, AND OUTSTANDING PERFORMANCE ACROSS VARIOUS APPLICATIONS.

## INNOVATIVE PUMP OPERATION EXPLAINED

Our pumps operate with a revolutionary design that maximizes efficiency and reliability:

### Dynamic Components

- **Impeller** 4: This is the sole moving part inside the pump, rotating smoothly without any contact within the pump casing 2.
- **Liquid Ring** 1: A rotating liquid ring seals the impellor from the front and ensures the blades are tightly sealed against each other.

### Gas Handling Process

- Gas Inlet: Gas enters through the inlet slot 6 and flows into the blade cells.
- Stabilizing the Liquid Ring: To maintain stability, liquid is continuously drawn into the compression chamber and expelled 3 along with the conveyed gas.

### Innovative Compression System

- Variable Compression Chambers: The eccentric placement of the impellor within the casing creates varying compression chambers 5 during rotation. This unique design compresses the conveyed gas over a complete revolution.

### Versatile Functionality

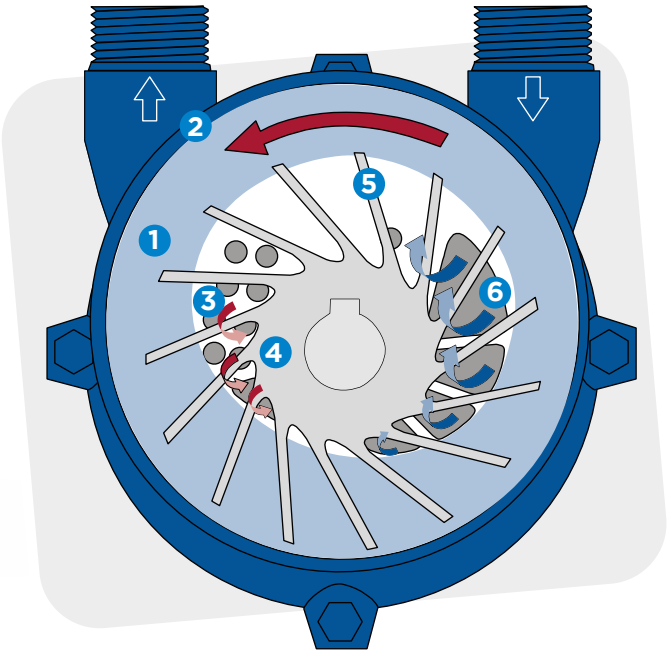
- Dual Role as Compressors: Our pumps naturally generate a pressure difference during operation, making them suitable for compressing gas from the surrounding atmosphere as well.

### Continuous Liquid Management

- Liquid Requirement: For consistent operation, our pumps require a continuous supply of liquid, which exits with the conveyed gas on the discharge side. To streamline this process, we've developed standardized circuit units that recycle escaped operating liquid back into the pump. This innovation enables the pump to function with minimal or even without a permanent liquid supply.

### Enhanced Efficiency through Condensation

- Condensation Benefits: Any steam components within the conveyed gas can condense and separate. This condensation leads to a volume reduction, significantly boosting the pump's overall performance by a condensation factor greater than 1.



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**GARDNER DENVER S.r.l.**
**Divisione ROBUSCHI**
**Manufacturing facilities**

Via S. Leonardo, 71/A
43122 Parma - Italy

**GARDNER DENVER**
**NEDERLAND B.V.**

Barwoutswaarder 3
3449 Woerden
Netherlands

**GARDNER DENVER Ltd.**
**United Kingdom**

Claybrook Drive,
Washford Industrial Estate
Redditch, B98 0DS
UK

**INGERSOLL RAND**
**Schweiz AG**

Langfeldstrasse 90
CH - 8500 Frauenfeld
Switzerland

**GARDNER DENVER**
**Schopfheim GmbH**

Johann-Sutter-Straße 6+8
79650 -Schopfheim
Germany

**GARDNER DENVER S.A.S.**
**Division produits industriels**

70 avenue Albert Einstein
Zone du Château d'Eau
B.P. 50061 - F–77551
Moissy Cramayel Cedex
France


www.robuschi.com

CONTACT **US**

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