

RUVAC WA(U)/WS(U)



Roots pumps
improved vacuum



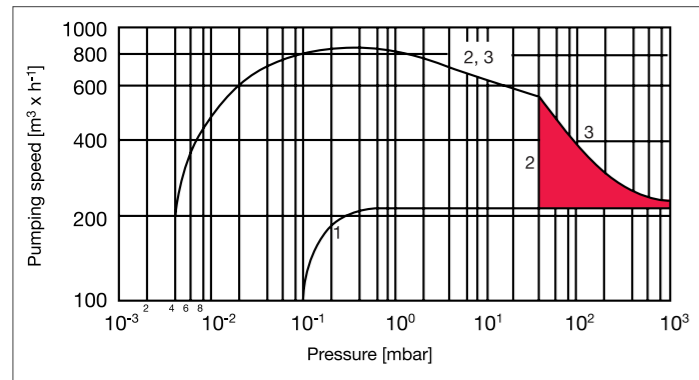
Roots pumps – reliable, safe, rugged

Proven Technology Fully Optimized

Leybold has been manufacturing **RUVAC** Roots pumps for several decades. Its dry compressor Roots technology is well-proven for many applications within the vacuum industry. Combined with dry or oil-sealed fore-vacuum pumps, **RUVAC** Roots pumps are extremely effective at increasing pumping speeds at low pressures, thus extending the operating pressure ranges of fore-vacuum pumps.

RUVAC Roots pumps are available in three series with various motor drives. The **RUVAC WA** series uses an air-cooled, flange-mounted standard three phase motor. The **RUVAC WS** series are equipped with canned (rotor) motors in air-cooled or water-cooled versions.

Each series consists of various sizes to continuously provide optimized pumping speeds for each application. All three series are available with or without integrated bypass valves (also known as pressure compensation valves).



- ✓ **RUVAC** Roots pumps can be used in either a vertical or horizontal position, thus ensuring flexibility in achieving a compact design within various systems. The position selected may be changed later if required.
- ✓ **RUVAC** Roots pumps have rugged bearings which, in combination with highly-efficient lubrication systems, enhance quiet operation.
- ✓ The rotor and stator coils in the drive motors of the **RUVAC WS** and **RUVAC WSU** are separated by a vacuum-sealed can.

Since there is no drive shaft lead-through, requirements for reliability combined with a fail-proof seal are perfectly met. Canned (rotor) motors, combined with the highly-efficient lubrication system of the **RUVAC WS** series, allow for running speeds up to 6,000 RPM (with frequency converter).

This means increased pumping speeds through the same sized pump. The entire **WA(U)** range complies with the energy efficiency class IE3.

Pumping speeds for fore-vacuum pumps combined with RUVAC Roots pumps, with and without integrated pressure bypass valves (example: WA/WAU 1001 with SOGEVAC SV300 B):

1. Fore-vacuum pumping speed
2. RUVAC pumping speed without pressure bypass valve
3. RUVAC pumping speed with integrated bypass valve



Range of RUVAC pumps: WAU 501, WA 1001, WS 501, WSU 1001

Proven Technology for Your Applications

The Intelligent Series

RUVAC Roots pumps are used in virtually all areas of vacuum technology. They're the gold-star standard in combination with the well-established oil-sealed **TRIVAC** and **SOGEVAC** families. However, they're also considered the standard as a standalone dry combination, along with the **DRYVAC** and **SCREWLINE** families.

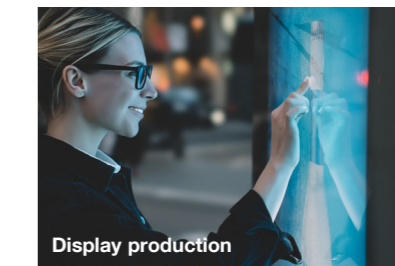
ATEX (214/34/EU) Compliant **RUVAC** Roots Pumps ATEX Cat. 3 Certified Roots Pumps are available for the **RUVAC WA/WAU 251/501/1001/2001** lines.

Leybold has taken its well-proven Roots technology further by applying it to the **RUVAC** series in order to meet the most stringent requirements of today's vacuum-based production processes:

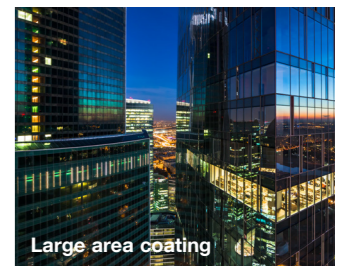
- ✓ **RUVAC** Roots pumps are most frequently used as a booster stage for smaller fore-vacuum pumps to enable the compression of large volumes of gases or vapors in the fine vacuum range. Typical applications include heat treatment, furnaces, metallurgy and large area coating.
- ✓ **RUVAC** Roots pumps are standard equipment in the architectural glass coating industry. Combined with well-proven oil-sealed **SOGEVAC** pumps, they feature the shortest pumpdown times at the loadlock chambers. Combined with dry-compressing **DRYVAC** and **SCREWLINE** pumps, they guarantee a reliable, dry and trouble-free vacuum at the process chambers.
- ✓ **RUVAC** Roots pumps are used in many applications to achieve the shortest possible cycle times wherever quick evacuations are important, for example in supporting load-lock chambers or for high-speed food packaging.
- ✓ **RUVAC** Roots pumps quickly reach pressures of less than 10^{-3} mbar when evacuating lamps and insulating surfaces prior to vapor deposition processes.
- ✓ **RUVAC** pumps are also used in mono-crystal pulling equipment in the manufacture of silicon mono-crystal, the basic material for manufacturing semiconductors and solar cells.



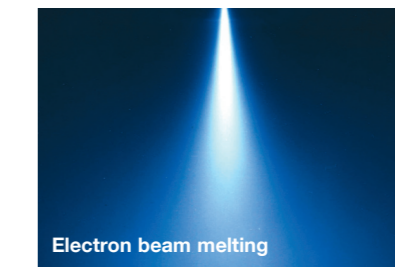
We would be pleased to offer you our extensive product and application expertise and support. Our vacuum technology experts are available to provide accurate, comprehensive and timely responses to all your vacuum related needs.



Display production



Large area coating



Electron beam melting



Decorative coatings



Automotive industry

RUVAC WA/WAU / WS/WSU		251	501	1001	2001
Nominal pumping speed (50 Hz)	m ³ · h ⁻¹	253	505	1000	2050
Rotational speed (50/60 Hz)	min ⁻¹	3000/3600	3000/3600	3000/3600	3000/3600
Motor power	kW	≤ 1.1	≤ 2.2	≤ 4.0	7.5
Max. permissible pressure difference ¹⁾	mbar	80	80	80	50
Connection flanges		DN 63 PN6	DN 63 PN6	DN 100 PN6	DN 160 PN6

¹⁾ Integrated bypass valve adjusts for any intake pressure

Ordering information

RUVAC WA/WAU / WS/WSU	251	501	1001	2001
Model	Cat. No.	Cat. No.	Cat. No.	Cat. No.
WA/WAU, LVO 130	11720 / 11721	11730 / 11731	11740 / 11741	11750 / 11751
WA/WAU without motor, LVO 130	11724 / 155011V	11734 / 155008	11744 / 11217	11254 / 11322
WAU..H with ACE damper, LVO 130	–	11831	11841	11851
WS/WSU, LVO 130	11722 / 11723	11732 / 11733	11742 / 11743	11752 / 11753
WS/WSU, LVO 400	11727 / 11728	11737 / 11738	11747 / –	15095 / –
WS/WSU, LVO 210	–	–	–	167007 / 15096
WSU..H with ACE damper, LVO 130	–	11833	11843	11853
WSU..H with ACE damper, LVO 400	–	11375	15047	167129V
WSU...H with ACE damper, LVO 210	–	–	167097	167044

Accessories

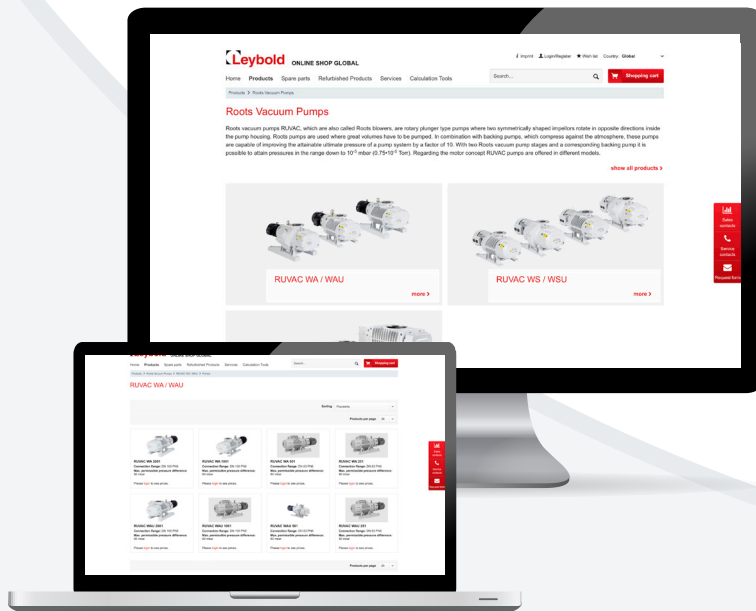
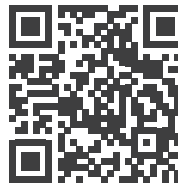
Frequency converter LEYTRONIC	–	–	14111000A001DGN/ 14111000A002DGN	14111000A004DGN/ 14111000A003DGN
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Oil fillings: LEYBONOL LVO 130 mineral oil, LEYBONOL LVO 210 synthetic oil or LEYBONOL LVO 400 PFPE

For detailed information on our full line of RUVAC pumps, please refer to our general catalog.

Please contact us for more technical details on the entire RUVAC WA/WAU, WS/WSU series.

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leyboldproducts.com



Leybold

Pioneering products. Passionately applied.