

oerlikon
leybold vacuum

Turbomolecular Pumps

Proven Technology
for your Needs.

Technical Information 175.44.02



Oerlikon Leybold Vacuum has a 150 year history in developing and manufacturing vacuum pumps.

We consistently utilized the experience gained during this time in our products, so as to develop the fitting vacuum engineering solution for many industrial and research related tasks.

Today we offer a full range of products including forevacuum pumps, turbo-molecular pumps and cryogenic pumps.

These products are designed to meet the needs of the semiconductor and coating industry either for the analytical and research market.

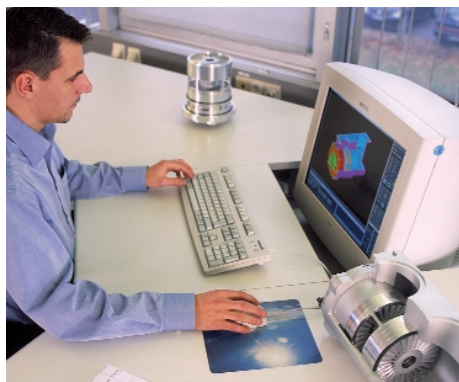


We have an installed base of more than 300,000 units in the field.

More than 30 years experience in this industry and close collaboration with major OEMs has positioned Oerlikon Leybold Vacuum as leader for vacuum solutions.

Turbomolecular Pumps

Today's turbomolecular pumps are tailored to the different needs by processes and tools. The rotor and stator design is key for optimized vacuum performance. Oerlikon Leybold Vacuum has a highly qualified team of scientists and engineers for the development of new products. We use complex calculation and simulation programs in conjunction with state-of-the-art methods like FMEA/FEM. This enables us to provide innovative solutions to the semiconductor, instrumentation and coating industry.



We are the Experts in High Vacuum Technology

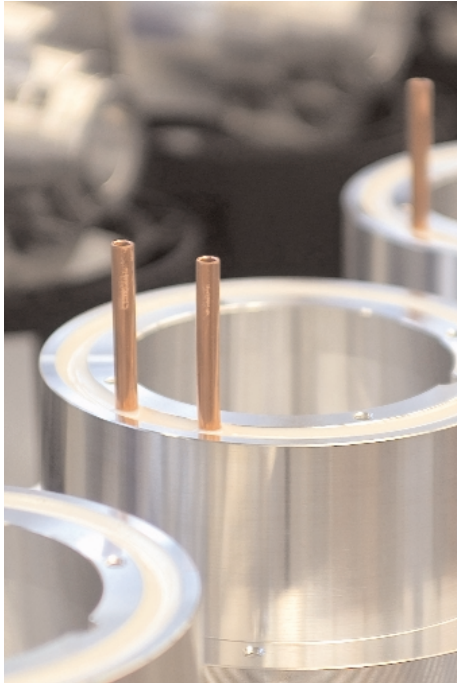
- First grease-lubricated mechanical turbomolecular pump with independent installation orientation in 1974
- First launch of the MAGLEV pump in 1975
- First turbomolecular pump with integrated temperature management system (TMS) in 1989
- Patented KEPLA coating for corrosion protection in etch processes
- First single axis permanent controlled turbomolecular pump without battery and no tuning in 1990
- First controller with integrated overspeed protection developed together with TÜV Rhineland
- More than 150 patents

Product Features

All our turbomolecular pumps are designed for today's requirements in industry and research

- Corrosion protection with patented KEPLA coating
- Integrated Temperature Management System (TMS)
- Integrated purge/vent valve
- Interface options, i.e. RS485, RS232, Profibus, DeviceNet
- Selectable operation parameters, e.g. operational speed
- Data monitoring and data storage in EPROM
- Shock vent proof
- Modular design

We are the Experts in High Vacuum Technology.



Reliability

Reliability of components used in the semiconductor production has a major impact on production cost. Due to the high value of today's 300 mm wafer any unscheduled down-time causes high production loss.

Oerlikon Leybold Vacuum has addressed these needs in their development process. All products must pass an extended qualification program with strict toll gates before they are released into the market. For all serial products we have a continuous improvement program in place.

We work with external labs and organizations like TÜV for product qualification, using highly sophisticated equipment such as climate chambers, shakers, and IR-thermography.

Oerlikon Leybold Vacuum products are designed to meet the highest safety standards.

Material qualification programs, collaboration with material scientists and institutes, and extended safety tests are integrated into Oerlikon Leybold Vacuum's product development process.

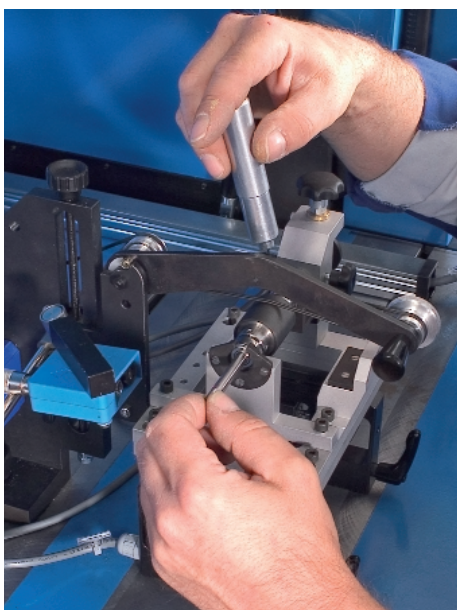


Manufacturing

- Oerlikon Leybold Vacuum is one of the world's largest manufacturers of turbomolecular pumps
- Capacity for more than 20,000 pumps/year
- Highest flexibility due to DFT and KANBAN with our suppliers
- Just-in-Time delivery

Sales and Service

- Worldwide service net
- On-site support by our field service team
- 24 hours/7 days a week
- Exchange program with back-up pool management



Range of Products.

Technical Features	MAG 300/600	MAG Digital Line
Integrated Temperature Management System and purge		■
KEPLA-coating for corrosion protection		■
No matched system; pump and controller can be exchanged independently	■	■
No batteries required	■	■
Digital 5 axis controlled MAG bearing; one controller fits all models	■	■
Modern compound rotor options for optimized process performance	■	■
Programmable operation parameters	■	■
Data collection in EPROM	■	■
Optimized for maximum throughput	■	■
CF version	■	■



Technical Features	TW 70	TW 300	TW 701	T 1600	Multiple Inlet
Modular concept	■	■	■	■	■
Highest pumping speed and throughput in this flange class	■	■	■	■	■
High forevacuum tolerance, allowing the use of down-sized backing pumps	■	■	■	■	■
Long lifetime bearing technology	■	■	■	■	■
Operation in any orientation	■	■	■	■	■
Easy maintenance and service due to modular design	■	■	■	■	■
Modern compound rotor options for optimized process performance	■	■	■	■	■
Oil-free pump for generating clean high and ultra-high vacuum conditions	■	■	■	■	■



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