

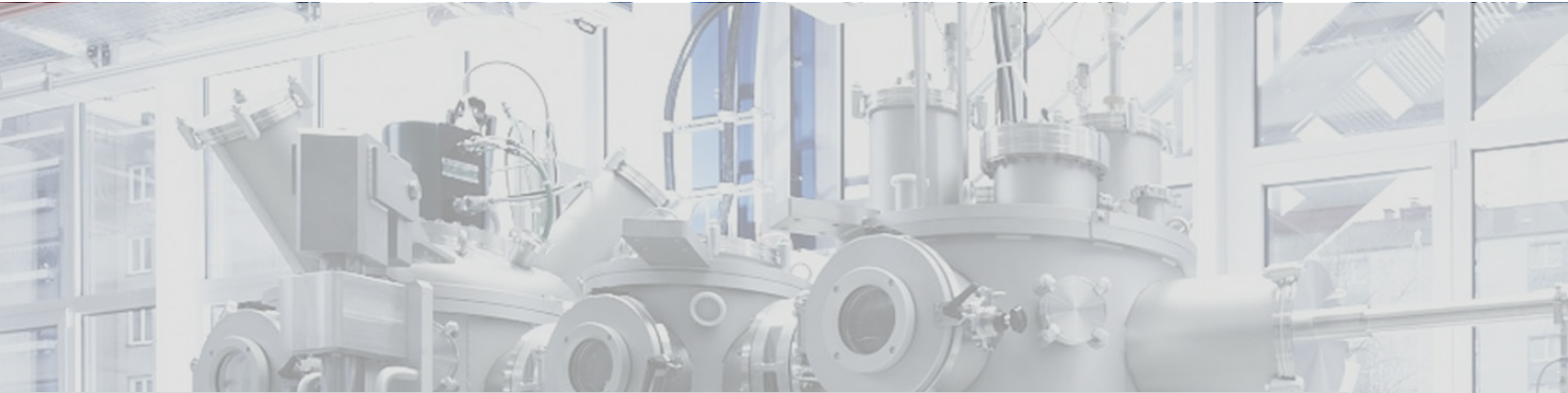
**Dedicated vacuum
technology specialists**

A faded, grayscale background image of a modern building facade. The building has large glass windows and a sign that reads 'PROVAC Ltd. VACUUM TECHNOLOGY'. The sign is repeated on multiple windows, and the company's logo is visible in the glass panes.

PROVAC Ltd.
VACUUM TECHNOLOGY

www.provac.ie

Introduction



ProVac was established in Ireland 1997, and in 2021 joined the Leybold family, a member of the Atlas Copco Group. We are recognised and respected throughout the industry, and we are differentiated in the market by our capability to design and specify customised vacuum solutions.

For almost a quarter of a century ProVac has delivered vacuum technology solutions to meet the most complex applications, while maintaining its focus on quality, response, flexibility and engineer expertise. The ProVac name is synonymous with vacuum technology throughout Ireland and the company has forged a reputation for excellence throughout the specialist vacuum community in Europe and further afield.

At ProVac we are:

- Dedicated to vacuum technology. Our expertise is unsurpassed.
- Reliable and flexible, providing effective vacuum solutions to pharmaceutical, medical device, aircraft and semiconductor industries as well as the third level research community.
- Fully trained and certified in vacuum pump maintenance Helium leak detection and vacuum gauge calibration at our in-house facility in Wexford
- Specialists in custom vacuum solutions to meet customer needs.
- Accredited to Quality Management System ISO9001:2015

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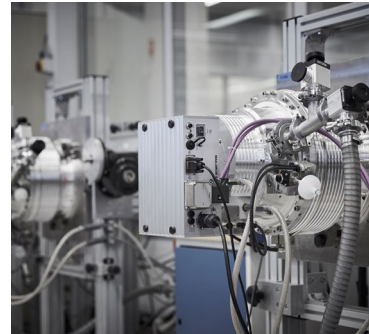


Vacuum Applications

At ProVac we understand our customers challenges and provide the vacuum technologies that have become indispensable across many applications.

Analytical

Measurement and analysis technology, Electron Microscopes, Spectrometers, Leak detectors.



Charging

Evacuation, Filling and testing of Lamps, RAC cooling circuits, Brake-liquids lines, cooling circuits, gas-bottles, heat-pipes etc.

Semi & Solar

Production of wafers and solar modules. Photovoltaic and semiconductor coating, lamination of solar modules, si-crystal pulling.



Coating

Large area coating (architectural glass), Display (LCD-OLED), Wear protection, Optical coating, Reflector coating.



Pioneering products. Passionately applied.

Since its founding in 1850, Leybold has written its chapter in industrial history for 170 years.

Chemical & Pharma

Chemical/ pharmaceutical industry, machine manufacturing for a.m. industries incl. Pharma freeze dryers.



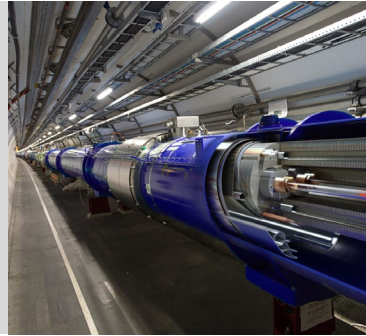
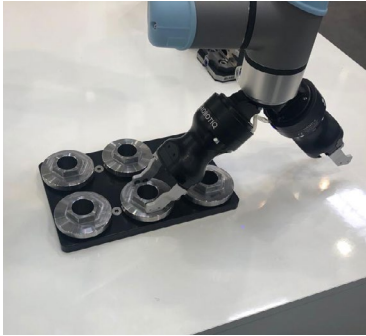
Plastic & Composite Processing

Processing of polymers, plastics, rubber or composite materials. Production of related machines.



Utility Vacuum

Pick & Place machinery, CNC routers, sewage or water degassing, bottle forming, stone or tile production, vacuum cleaning, etc.



Research & Development

Universities and institutes, R&D equipment manufactures, Big research centers, Space simulation.

Energy & Electro

Energy Production, Electronic components, Transformer Drying UF6 enrichment, Fly Wheel, Energy Storage (e.g. Lithium Battery).



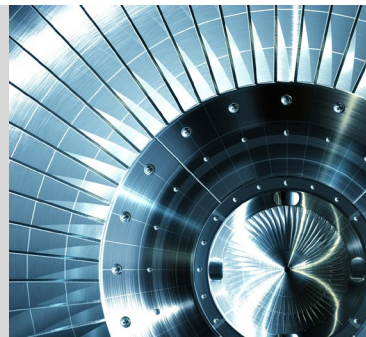
Food Processing and Packaging

Equipment for processing or packaging of food or similar products, Food Producers, Botanical processing.



Furnace & Metallurgy

Steel or special metal production, Heat processing of metals in furnaces, Metal welding (E-Beam, Plasma).



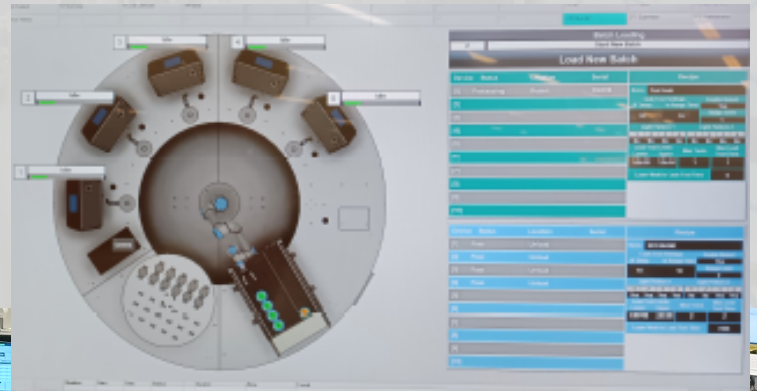
General Industry

Machines and parts e.g. for Industrial Cleaning, Sterilization, Plasma Applications, Leak testing, Drying, Laser, Vehicle construction (automotive).

Future-proofing the future

In the altered world of COVID19, protective measures have become a priority for many industries. In this new context, Robotic design and development has accelerated. ProVac have designed a robotic system to feed medical devices into multiple chambers for process or Helium leak checking, thus reducing or in some cases replacing, human contact on assembly lines. This system can also be incorporated into many other applications.

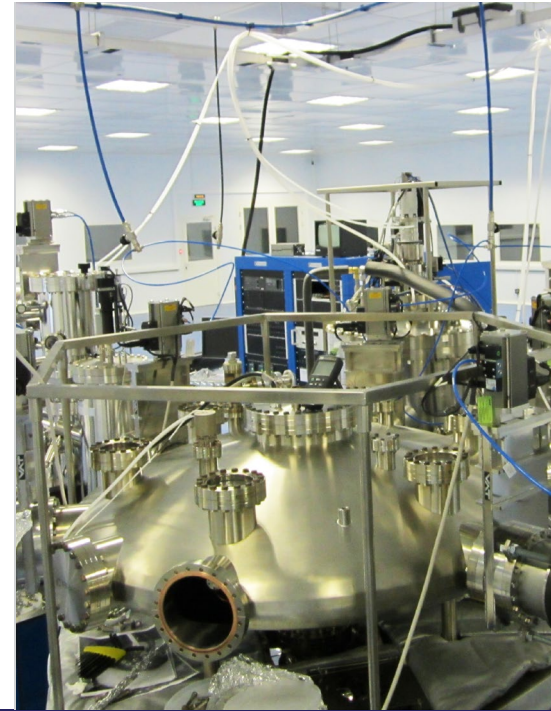
In addition, the European Space Agency promotes co-operation among European States in space research, technology and applications and space simulation projects have seen advancement in all member states.



ProVac System Design

From concept to design, manufacture and installation, ProVac provides customised systems to meet customers requirements. Stainless steel vacuum chambers finished to HV or UHV standards are designed in-house to satisfy the most complex applications. Turn-key solutions incorporating vacuum chamber, vacuum pumps, vacuum gauges, valves and HMI touch-screen control systems are developed and delivered to the highest of standards including CE marking on request.

ProVac can convert your ideas into actual designs and provide solutions to satisfy all your vacuum process needs, from simple component assembly to complex hardware and software integration. Our experts work with you to provide the complete solution.



ProVac UHV Cluster Tool 4" Wafer Sample Transfer

At the inception of Nanotechnology, ProVac developed and manufactured a UHV Cluster Tool with 4" Wafer Sample Transfer. This is an idea tool for research institutes and pilot production. The unique features of our 'Wafermove Pro' system :

- Ultimate vacuum : $\leq 1 \times 10^{-10}$ mbar
- No vibration at ultimate vacuum
- Eight process/analytical ports available
- ProVac can provide any UHV process or analytical device coupled to this system
- Analytical Examples: ESCA, XPS, SPM – can be couple to any available port
- Process Examples: MBE, PLD, CVD
- Sample holder size from <10mm up to 4" wafers

Vacuum Fittings

ProVac provide a wide range of KF, ISO and CF stainless steel fittings and feedthroughs. Our fittings are manufactured from high quality materials and are reliable and widely used. Bespoke fittings can also be custom made to any specification.

Our complete range of vacuum fittings at competitive prices, can be purchased easily using our online shopping facility www.provac.ie

KF: The KF range of flanges and fittings are compatible with those of all other leading manufacturers and are made from high quality 304 / 316L stainless steel.

ISO-K: The ISO range of flanges and fittings is manufactured from high quality 304 / 316L stainless steel.

CF: all CF flanges are manufactured from specially selected, high quality stainless steel 304L or the higher specification 316L, these materials being the accepted standards throughout the UHV vacuum industry.



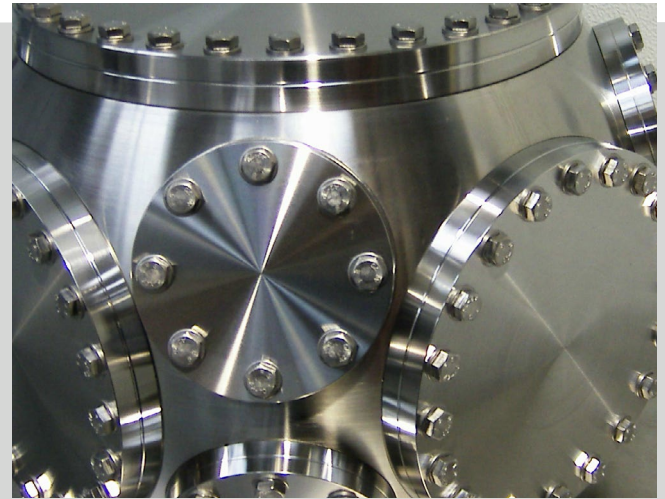
Vacuum Chambers

ProVac provide customised stainless steel vacuum chambers designed to the specific requirements of our customers. Chambers are manufactured to the highest UHV specification achieving vacuum in <10 mbar and equipped with KF, ISO or CF flanges.

ProVac are experts in the supply of bespoke chambers direct from your drawings, data or verbal instruction.

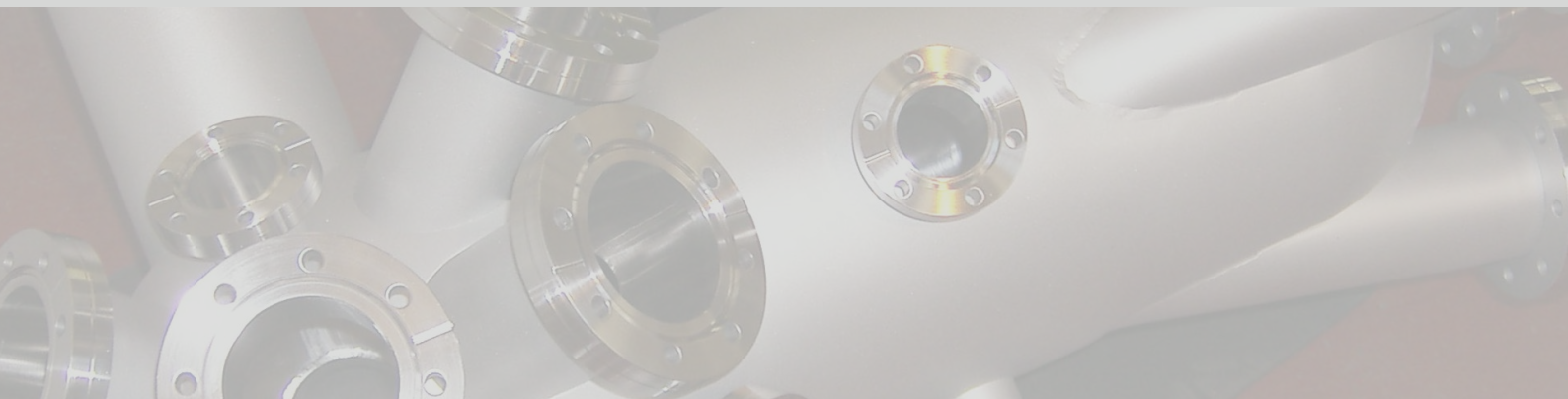
DRAWINGS:

Our highly experienced drawing office will produce 3D drawings of your proposed custom products based on your requirements and specification. Or we can work from supplied drawings. An experienced vacuum specialist will visit your site to discuss your needs on request.



PROCESS, TESTING AND CLEANING:

All chambers undergo Helium leak testing during and after manufacture and are 100% independently inspected. We produce plotted inspection reports on request. Cleaned and polished to HV or UHV standards.



Vacuum Pump Service

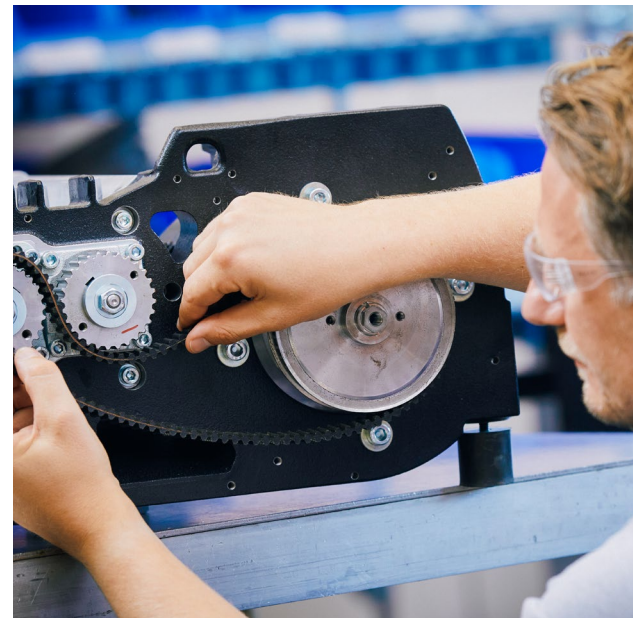
ProVac engineers repair, service and remanufacture almost all makes and models of vacuum pumps, valves and gauges, either at our dedicated Service Centre in Wexford, or on-site at your location. Our accredited service centre in Wexford offers quick service to minimise expensive downtime.

At ProVac, we can support your vacuum equipment over its entire life cycle, with an innovative and comprehensive range of services. We can retrofit your systems with more up-to-date products including automation.

Our skilled service team provide an emergency call-out service to the 32 counties, as well as an exchange and backup pool to keep downtime to a minimum.

ProVac's factory-trained service engineers are qualified to handle the maintenance and repair of virtually any brand and model of vacuum pump. Our service technicians participate in regular, comprehensive vacuum service training courses, ensuring an excellent service experience with ProVac.

Our professional vacuum management program will help to prevent machine downtime. ProVac's Annual Preventive Maintenance Contract can be tailor-made to your individual requirements.



Leak Detector Repair & Service

Our technicians provide a comprehensive leak detector repair and calibration service at our dedicated service centre. We are specialists in Leybold models, but almost all makes and models are catered for. We carry a wide range of spares on stock and an optimum turnaround time is assured.

ProVac provides the complete range of Leybold Helium leak detectors for testing of small or large components and for series batch production testing.



Helium Leak Checking Service

ProVac recommends Helium Leak-Checking as an important part of your preventative maintenance schedule. Leaks can be a cause of expensive equipment downtime and contamination of your product e.g. medical devices. In the event of an unexpected production failure, ProVac provide onsite Helium leak detection service to troubleshoot your systems. Helium leak detectors are capable of detecting the most minute leaks on vacuum systems.

Helium leak detection is extremely accurate, quantitative, and repeatable.



Vacuum Gauge Calibration

At ProVac, we recommend regular calibration of vacuum gauges to ensure optimal performance of your vacuum equipment. We are fully equipped to calibrate all types of vacuum gauges, traceable to international standards.

- Factory calibration of all vacuum gauges and issue of Factory Calibration Certificate (with readings).
- Calibration of all vacuum gauges and issue of Quality Inspection Certificate (without readings)
- Factory Calibration of Helium reference Test Leaks employed in mass spectrometer Helium Leak Detection
- DAkks calibration carried out in Leybold Germany



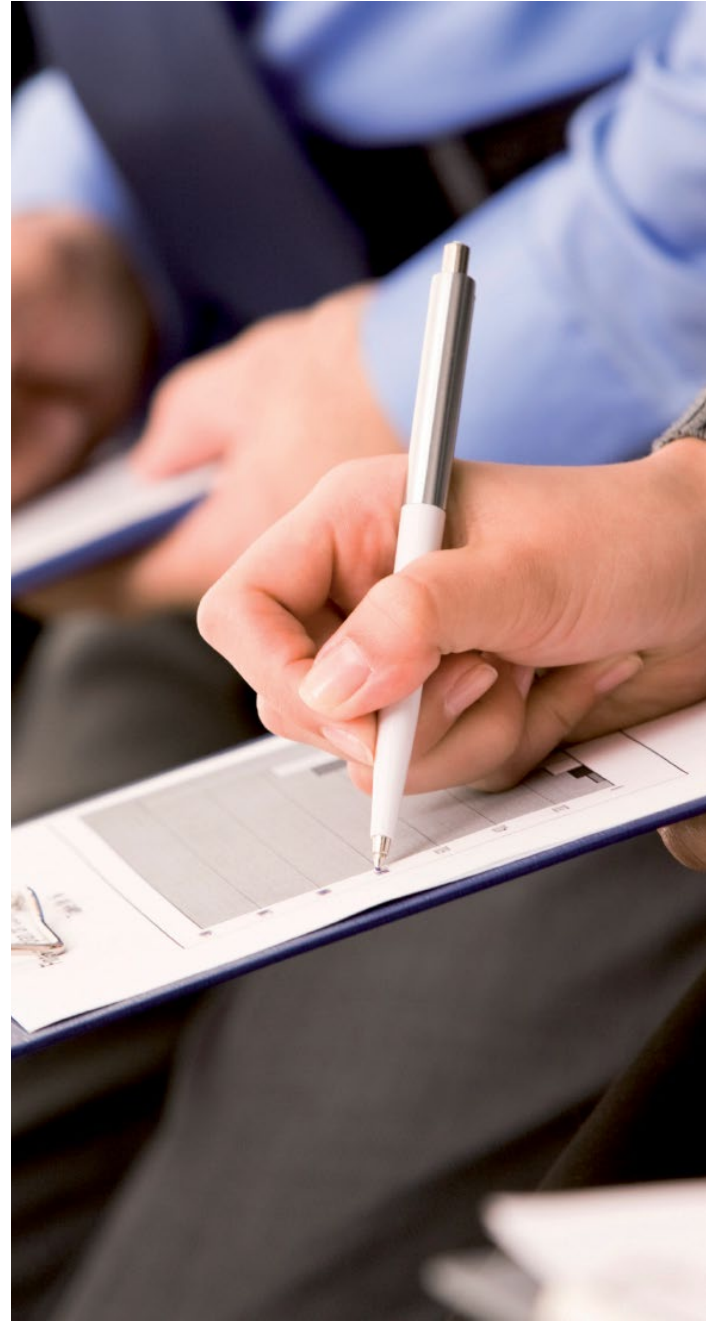
Vacuum Training Courses

ProVac offer training courses in all aspects of vacuum technology & equipment, Helium leak detection and testing, tailor-made to meet your specific training requirements. Our vacuum specialists provide both theoretical and practical training courses which can be conducted at the ProVac Service Centre in Wexford or on site at your location.

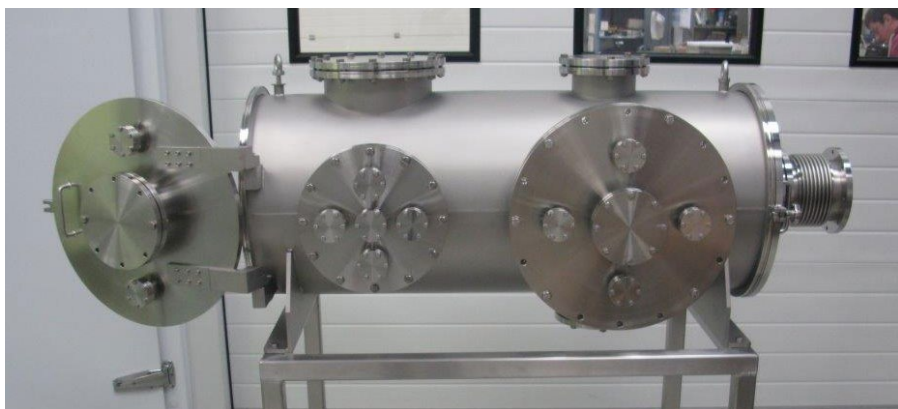
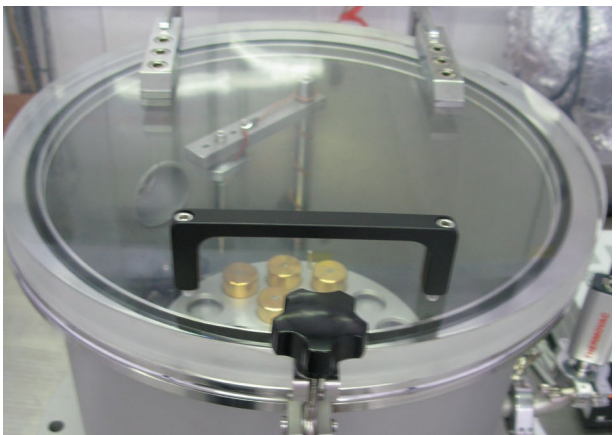
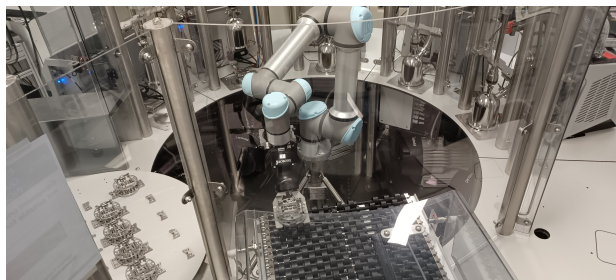
The contents of a ProVac vacuum training course or instruction session will be tailored to your applications and the equipment on hand at your company.

Topics typically covered by our training courses are:

- Basic principles and application of vacuum pumps
- Fundamentals of vacuum technology
- Principles of operation of vacuum gauges
- Operating the proper equipment for the job and the correct job method
- Introduction to Helium leak detection



Gallery



Online Shop/Chat

Our complete range of vacuum fittings can be purchased easily using our online shopping facility www.provac.ie

We also provide a selection of second-hand vacuum pumps, all makes and models, refurbished to a high standard.

We are always available for a fast response on our 'Live Chat', no matter what your question, whether technical or mechanical or maybe you want to check if we have an item in stock for quick delivery.

Check out our online shop for our complete range of stainless steel fittings and feedthroughs, or download our complete catalogue www.provac.ie



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ACHIEVING THE ULTIMATE





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