

Vacuum Equipment CATALOGUE



PRODUCT GUIDE



EZZI VISION

Vacuum and Thin Film Technology

www.ezzivision.com.au

Welcome

Ezzi Vision's core business is the supply of vacuum, glove box and thin film coating equipment to universities, research & scientific institutes and industrial & manufacturing companies.

" Ezzi Vision is proud to be an Australian family owned business with over 30 years of combined vacuum, thin film and glovebox technology experience, We can provide you with products, service, training, and customer support like no other supplier. "

Housing over more than 18 different dealerships and 1600 varied products under one roof, Ezzi Vision Pty Ltd is truly a one stop shop for complete vacuum and thin film technology solutions.

Understanding the technical requirements of our clients clubbed with in time delivery are the aspects that has been the key to successfully serving our customers. We have a competent team of professionals who often put in that extra hour to ensure customer satisfaction, work with passion and strive to keep themselves in stride with new development in the industry. We can offer our customers service contracts covering both normal and preventative maintenance. The philosophy of Ezzi Vision is to run an organization which provides professional, effective engineering and equipment to users of vacuum equipment in the Australian & New Zealand market.

Sincerely,



Dr Adil Adamjee, MEng. MBA PhD (Sheffield, UK)
Managing Director

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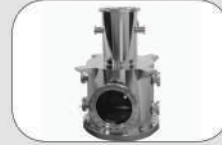
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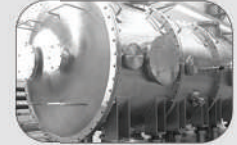
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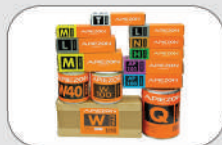
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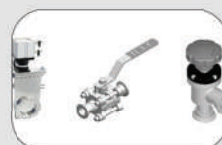
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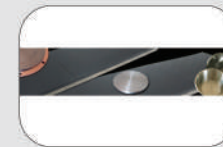
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CS Series Digital Mass Flow Controller



D07 Series Analog Mass Flow Controller

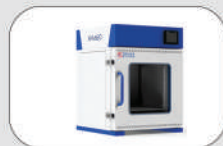
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On-Site Hydrogen Product Range



PSA Nitrogen Twin-Tower Generators



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Vacuum Pumps



■ KNF Diaphragm Vacuum Pumps

- Diaphragm vacuum pumps are dry-running devices used in a wide range of laboratory applications such as vacuum distillation, multiflask, filtration and gel drying. The flow rate at atmospheric pressure (l/min) is up to 32 with vacuum down to 2 and pressure up to 2.5 (bar g).
- Contact Ezzi Vision for more info on Pump Ranges



■ Edwards D-Lab Diaphragm Pumps

- The Edwards range of diaphragm pumps offer clean pumping in a lightweight and compact design making them ideal for clean laboratory applications. Pumps can operate independently or as part of a modular system and require minimal maintenance. These are available with pumping speeds up to 2m³/hr.
- Contact Ezzi Vision for more info on Pump Ranges



■ Ulvac Kiko Diaphragm Pumps

- Diaphragm type pump creates vacuum by reciprocate movement of rubber diaphragms. Pump structure makes an oil-free environment and maintenance easy. Various pumping speed and two/single stages are selectable depends on your required pressure and pumping volume.
- Contact Ezzi Vision for more info on Pump Ranges



■ nXDS Scroll Pumps

- nXDS Scroll Pumps improves on legacy XDS pumps by offering increased pumping speeds, combined with lower ultimate pressures, lower power consumption and lower noise - up to 20 times quieter than other pumps. nXDS pumps also feature the latest in tip seal technology giving significantly longer life between tip seal changes. Integrated inverter drive with auto sensing voltage input delivers optimised pumping performance globally. nXDS pumps are designed to be completely field serviceable. Its intelligent control functions and up to five year service interval offer low cost of ownership, making it the small dry pump of choice for today's most advanced technologies.



Pump Ranges

- nXDS6i • nXDS10i • nXDS15i • nXDS20i • nXDS35i • nXDS-C

■ Rotary Vane Pumps

- The Edwards RV series of oil sealed rotary vane pumps are unique in their capability to offer both high vacuum and high throughput performance, which combined with ultra-low noise levels and excellent gas ballast facility, makes them ideal for a wide range of applications and environments. These are available with speeds ranging from 3 to 12 m³/hr.

Pump Ranges

- RV3 • RV5 • RV8 • RV12



■ Turbo Molecular Pumps

- Edwards, a world leader in vacuum technology, is proud to recommend the nEXT range of turbomolecular pumps as the ideal partner for analytical, high energy physics, R&D and UHV applications. nEXT has been designed to combine all the latest technological advances in turbomolecular pumps providing end-user serviceability and delivering a truly class leading product. Pump sizes available offering true 240, 300 and 400 litres per second pumping speed performance (N2).



Pump Ranges

- nEXT240D • nEXT300D • nEXT400D

Vacuum Pumps



Turbo Pumping Stations

- Edwards range of nEXT turbomolecular pumping stations has been developed to provide a comprehensive vacuum solution with the latest technological advances for easy installation and operation. All Edwards turbomolecular pumping stations come with a TIC turbo and instrument controller, enabling system start/stop from the control panel and easy integration of Edwards Active Gauges.

Pump Ranges

- nEXT85 (Turbo Pump)
- nEXT240 (Turbo Pump)
- nEXT300 (Turbo Pump)
- nEXT400 (Turbo Pump)
- E2M1.5 (Backing Pump)
- nXDS6i (Backing Pump)
- nXDS10i (Backing Pump)
- nXDS15i (Backing Pump)
- nXDS20i (Backing Pump)
- RV5 (Backing Pump)



Cryopumps

- SHI offers a wide range of Cryopump products. Marathon® CP Series Cryopumps are offered with standard and low profile enclosures, all industry-standard flanges and both manual and automatic features. They can be serviced via "hot swap" without breaking vacuum, which allows for greater system up-time.

Pump Ranges

- CP-8
- CP-8LP
- CP-250LP
- CP-12
- CP-16
- CP-20



ION PUMPS

- Ion pumps, also known as sputter ion pumps or ion getter pumps, are capture pumps that ionize gases using an anode/cathode array. Ion pumps can operate from 10^{-5} to 10^{-12} mbar and range in size from 0.2 to 1,200 l/s of nitrogen.
- Contact Ezzi Vision for more info on Pump Ranges



GXS Dry Pumps

- GXS dry pumps take vacuum performance to the next level with unique screw technology and world leading high efficiency drives, enabling advanced temperature control and long service intervals. Reduced Pump Down Times with Ultimate Vacuum of 5×10^{-4} mbar.

Pump Ranges

- GXS160
- GXS160/1750
- GXS250
- GXS250/2600
- GXS450
- GXS450/2600
- GXS450/4200
- GXS750
- GXS750/2600
- GXS750/4200



CXS Chemical Dry Pumps

- CXS offers high reliability and effluent-free pumping even in the most difficult of harsh chemical and pharmaceutical processing applications. Featuring corrosion-free operation and robust liquid and solids handling, the CXS is capable of continuously pumping up to one litre of liquid per minute continuously or up to 25 litre-slugs without stopping, and provides an ultimate vacuum down to 10-2 mbar. CXS is available in two sizes, with capacities of 160 m^3h^{-1} and 250 m^3h^{-1} .

Pump Ranges

- CXS160
- CXS250



Vacuum Pumps



Central Vacuum Systems

- Central Vacuum Systems can offer vacuum source for medical gas stations in varied large or middle size hospitals. It is widely applied in chemical industry, canning system of light industry, pressure molding of polymer processing components in automobile industry, extruding machine degassing, as well as electric and food industry. Besides, it plays an irreplaceable role in V-EPC casting technology, mainly for casting process, which has been adopted in mine and coal exploitation. Speed ranges from (10 m³/h) to (900 m³/h) with Pressure(MPA) 0~-0.1



Industrial Vacuum Systems

- Edwards offers a variety of integrated project management solutions for industrial plant, semiconductor, flat panel and solar fab projects supporting every step of the process.

The following can be offered

- System Value Impact Assessments
- System Integration Design & Turnkey Packages
- Layout Recommendations
- Detailed System Drawings
- Selection & Coordination of Specialist Installation Contractors



Diffusion Pumps

- The Edwards Diffstak vapour diffusion pumps are compact, water-cooled pumps with integral cooled baffles which provide exceptionally clean pumping. The proven design ensures very low backstreaming, reduced outgassing and minimized sealing requirements. These pumps are offered with integral manual or pneumatic high vacuum valves.
- Contact Ezzi Vision for more info on Pump Ranges



EH Mechanical Booster Pumps

- The Edwards EH mechanical booster pumps feature a unique hydrokinetic drive which provides efficient power transmission with benefits in economy, performance and compactness. These booster pumps are suitable for use with high differential pressures which allow the booster pump to be started at the same time as the backing pump, reducing total pump down times. For ATEX versions, please contact Ezzi Vision.



Pump Ranges

- EH250 • EH500 • EH1200 • EH2600 • EH4200

Kashiyama NeoDry Series Vacuum Pumps



- This handy & air cooled dry pump has a maintenance cycle of once in 3 years (Approx. when Air/N₂ is used) No tip-seal replacement, no performance deterioration, no particles & Oil smoke and no chamber contamination. Hassle free to replace rotary/scroll pumps. Condensation-prone gas, like water vapor or solvent are available. By virtue of inverter, frequency does not affect the performance. Low noise and vibration to go with all of the above features makes this the right choice of vacuum pump.



Vacuum Gauges



TIC Instrument Controllers

- Bench mounted controllers having a large clear graphical display
- Supports up to six gauges from the Edwards range.



Passive Gauges and Controllers

- These passive gauges measure a wide range of applications, from UHV systems to process industries or wherever the use of an active gauge is not possible.



ADC Active Digital Controllers

- Single gauge controller and display
- Automatically recognizes compatible Edwards gauges, loads the appropriate look-up table and displays the pressure in commonly used vacuum units.



APGX-H Active Linear Convection Gauges

- Wide measuring range from 1333 to 3×10^{-4} mbar (1000 to 2.3×10^{-4} Torr).
- Convection technology ensures, accuracy and sensitivity are maintained to the top of the range.
- For reduced cost of ownership, the gauge is provided with a replaceable tube, in which calibration data is stored.



ASG Active Strain Gauge

- Rugged, corrosion resistant diaphragm gauge which provides accurate, gas independent measurement from 2000 mbar to 1 mbar
- Can be connected to the Edwards Active Gauge Controller and many other sensor types



Edwards P3 gauge

- Essential measuring system for on-site service calls and on the spot flexible checking
- Pressure measurement in the range of 1200 to 5×10^{-4} mbar can be displayed.



Profibus Communications Module

- Din rail mountable module allows communications with the TIC Turbo and Instrument Controllers.
- Allows manufacturers, laboratories and research establishments to take advantage of reduced cabling and network equipment



APG100 Active Pirani Vacuum Gauge

- Edwards APG100 Active Pirani Vacuum Gauges are available in either standard or corrosion resistant versions offering measurement from atmosphere to $10 \text{ m}^3/\text{h}$ to $900 \text{ m}^3/\text{h}$ or $10 \text{ m}^3/\text{h}$ to $900 \text{ m}^3/\text{h}$ respectively. They are compatible with all Edwards TIC Instrument controllers and are fully RoHS compliant.



ATC Active Thermocouple Gauge

- The Edwards Active Thermocouple (ATC-E) gauges mount directly on the thermocouple tube to form a compact, stand-alone transducer.
- Cost effective measuring solution for higher pressures



AIM Active Inverted Magnetron Gauge

- The Edwards Active Inverted Magnetron Gauges (AIM) combine the gauge-head and control electronics in one compact active unit. These gauges have proved to be rugged and reliable in a wide range of applications ranging from scientific instruments to industrial processes.



Vacuum Gauges



■ WRG Wide Range Gauge

- The Wide Range Gauge (WRG) family offers the capability of single port pressure measurement in the range atmosphere to 10^{-9} mbar, with a linear output.



■ AIGX Active Ion Gauge

- The Edwards Active Ion Gauge (AIGX) is a compact active ion gauge with dual yttria coated iridium filaments, a wide measuring range from 5×10^{-2} to 5×10^{-10} Torr (6.6×10^{-2} to 6.6×10^{-10} mbar) and a 1 Volt/decade linear output.



■ CG16K Capsule Dial Gauge

- Edwards CG 16K capsule dial gauges are barometrically compensated dial gauges which cover the pressure ranges from atmosphere down to 1 mbar absolute. These robust gauges provide accurate, repeatable performance even at low pressures making them equally suited for non-corrosive process plant or for laboratory applications.



■ IS16K Vacuum Interlock Switch

- The IS16K vacuum interlock switch is designed to safeguard the operator by ensuring that electrical circuits in the vacuum chamber do not remain energized when the system is let up to atmosphere.



■ VS16K Adjustable Vacuum Switch

- The Edwards VS16K Adjustable Vacuum Switch is a general purpose vacuum switch with adjustable set points and small switching differential. This diaphragm operated vacuum switch is high vacuum compatible and corrosion resistant with all wetted parts made from stainless steel.



■ Gascheck Leak Detectors

- The new GasCheck range provides automatic and direct display of gas leak rates. At the heart of these instruments is a sensor which can detect any gas that has a different thermal conductivity to that of air, resulting in a highly sensitive instrument which is both reliable and compact.



Vacuum Gauges



■ VD8 Digital Compact Vacuum Meters

- The versatile VD digital vacuum meters measure absolute pressure in the rough and fine vacuum range. It is equipped with USB interface and can be used as data logger. The VD81 can be operated with battery or external power supply making it ideal for either portable or stationary applications.

■ VD8 Gauge Ranges

- VD81 Compact Vacuum Meter | Piezo | 1600 to 1 mbar
- VD83 Compact Vacuum Meter | Pirani | 100 to $5e-4$ mbar
- VD84 Compact Vacuum Meter | External Pirani | 100 to $1e-3$ mbar
- VD85 Compact Vacuum Meter | Piezo/Pirani | 1200 to $5e-4$ mbar



Vacuum Gauges

Smartline Digital Vacuum Transducers

- VSP Vacuum Transducer | Pirani | 1000 to 1e-4 mbar**
 The combination of piezo and Pirani sensor in the digital VSR vacuum transducer offers high precision and excellent resolution in the rough and fine vacuum range. The processor controlled VSP Pirani vacuum transducer with robust helix filament is ideal for precise measurements in the fine vacuum range.
- VSI Vacuum Transducer | Cold Cathode | 2e-3 to 5e-9 mbar**
 The digital cold cathode transducer VSI measures absolute pressure in the high vacuum range.
- VSM Vacuum Transducer | Pirani/Cold Cathode | 1000 to 5e-9 mbar**
 The digital combination transducer VSM (Pirani/cold cathode) measures absolute pressure from atmospheric pressure to ultrahigh vacuum.



Analog Vacuum Transducers

- VSC 43 Piezo Vacuum Transducer 1400 to 1 mbar**
 The compact VSC43 piezo vacuum transducer is used for measuring absolute pressure in the rough vacuum range. Due to its durable ceramic sensor it is nearly insensitive to dirt and contamination.
- VCC200 Vacuum Transducer Capacitance | 200 to 0.1 mbar**
 The VCC200 capacitance vacuum transducer is used for measuring absolute pressure with high accuracy and independent of gas type even below 20 mbar.
- VSP63 Vacuum Transducer Pirani, 1000 to 1e-4 mbar**
 The VSP63 is based on a new, patented measurement principle providing a larger measuring range with higher resolution. Using an optimized temperature compensation. Accuracy and stability have been further improved.
- VCP63 Vacuum Transducer Pirani, for corrosive media 1000 to 1e-4 mbar**
 The Pirani sensor in the VCP63 vacuum transducer with platinum / rhodium filament is suitable for corrosive applications in the fine vacuum range.
- VSP841/842 Vacuum Sensor Pirani, Passive 100 to 1e-3 mbar**
 The VSP841 Pirani measures absolute pressure in the fine vacuum range. It is suitable for controlled and passive bridge circuits and as sensor for monitoring of vacuum isolations, readout of measurements with VD84.



Vacuum Display And Control Unit

- TVD10 Vacuum Display And Control Unit | 4 Channels**
 VD10 vacuum display and control unit is suitable for up to four Smartline transmitters. It is used as intelligent control unit for applications in apparatus and plant engineering or special equipment construction.
- VD12 Vacuum Display And Control Unit | 2 Channels**
 VD12 is an intelligent control unit for applications in apparatus and plant engineering or special equipment construction. 19 inch cassette 14 HP x 3 RE.
- VD6 Vacuum Display and Control Units**
 The Thyracont VD6 universal vacuum indicator and controller is designed for panel mounting. A relay monitor on the front panel allows continuous operation control of the two switch points.



Vacuum Gauges

THYRACONT
Vacuum Instruments

Electronic Vacuum Switch

- VRC Electronic Vacuum Switch | Piezo | 1200 to 5 mbar
- VRP Electronic Vacuum Switch | Pirani | 20 to 1e-3 mbar

The VRC and VRP electronic vacuum switch can be used for directly switching a pump or valve in the rough & fine vacuum range respectively. An additional recorder output allows a continuous monitoring of the process pressure.



Smartline™ – New Pirani (VCP) With Platinum Rhodium Filament

This vacuum gauge is for particularly demanding application conditions in a vacuum. Thyracont Vacuum Instruments complements the well-proven Smartline product family with a new Pirani sensor VCP for the measurement of absolute pressure in the range of 1000 to 5×10^{-4} mbar. The new Smartline transducer VCP has been developed especially for corrosive media. The sensor with its platinum rhodium filament shows a high chemical resistance, which has been proven by field tests in particularly demanding applications.



Accessories

- SLZUB - Accessory set for smartline vacuum transducers
- VD8ZUB - Accessory set for VD8 compact vacuum meters
- VGR VacuGraph Windows Software
- WVADJCERT - Works calibration with service contract
- Exchangeable sensors
- Other spares and parts



Vacuum Chambers

eZZI VISION
Vacuum and Thin Film Technology

Spherical Vacuum Chambers

- Spherical vacuum chambers are usually installed in a wide range of surface analysis instrumentation. Techniques available include : X-ray Photoelectron Spectroscopy (XPS) , Auger Electron Spectroscopy (AES), Contact Angle and Atomic Force Microscopy (AFM) etc.

With highly precise machining and welding abilities, we can provide various sizes of spherical vacuum chambers from 8-inches to 20-inches and even larger. All the dimensions and tolerances of the vacuum chambers are consistent with Ultra High Vacuum(UHV) requirement and customer needs.



Vacuum Chambers



D shape Vacuum Chambers

- Ezzi Vision offer custom made D shape vacuum chambers from leading manufacturers of High Vacuum(HV) and Ultra High Vacuum(UHV) D shape vacuum chambers. D-shape chamber makes it appropriate for high vacuum applications including substrate rotation during deposition, the cylindrical rear section of the D creates no serious dimensional restrictions.

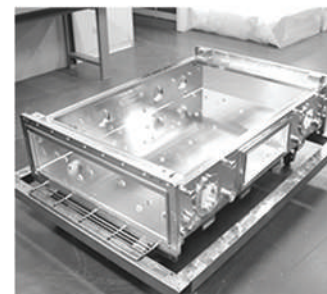
This is valid for all custom sizes for design drawing.

- Chamber Body Manufactured from 304 Stainless Steel Plate
- Customizable Port Configuration (Change/Move/Add/Subtract Ports)
- Capable of Reaching High Vacuum (HV) Levels



Box Vacuum Chambers

- Ezzi Vision supply large box chambers over 2 meters long for various applications. Ezzi Vision are able to produce High Vacuum(HV) and Ultra high vacuum(UHV) chambers to meet all your requirements. Box vacuum chambers are used for medium vacuum right up to ultra-high vacuum environment.



Bell Jar Vacuum Chambers

- These Bell Jar Chambers are similar in shape to a bell, and can be manufactured from a variety of materials ranging from glass to different types of metals. Bell jars are generally used for classroom demonstrations or by hobbyists, when only a relatively low-quality vacuum is required. Cutting-edge research that needs an ultra high vacuum requires a more sophisticated form of vacuum chamber. However, several tests may be completed in a chamber with an effective pump and low leak rate. These Bell Jar chambers are designed to be used with flat Baseplates, Base Wells and Feedthrough Collars, all the above pieces are made of stainless steel. The number and size of ports, type of flanges, view port, O-ring material and surface finish option are available upon request.



Cylindrical Vacuum Chambers

- Cylindrical vacuum chambers can be fabricated from standard vacuum fittings tube and pipe, or custom diameter vacuum components. Vacuum tube and vacuum fitting pipe wall thickness will be according to the diameter and schedule selected. We also supply a wide range of vacuum components and vacuum accessory hardware to complement our cylindrical vacuum chamber products offering. Vacuum flanges and vacuum fittings, vacuum bellows as well as sapphire vacuum viewports are available and used in Cylindrical Vacuum Chambers.



Vacuum Module & Systems

- Ezzi Vision complies with the customer's requirements to proceed the design of the customized modules. The module will be assembled and tested by us. The customized modules usually integrate the vacuum chamber, frame, vacuum pump, vacuum piping, and control system. The function of modules could be vacuum exhaust, substrate degassing, or products inspection in vacuum environment. We can supply a module tailored to customer's specifications.



Ezzi Vision also makes custom vacuum chambers according to the users needs.

Vacuum Components



Vacuum Fittings

Ezzi Vision offers a variety of quality vacuum fittings which includes the KF Series, ISO Series, CF Series, Adaptor Series and more. We pride ourselves on our quality of service and equipment. Ezzi Vision also supplies customised fittings according to the users needs.



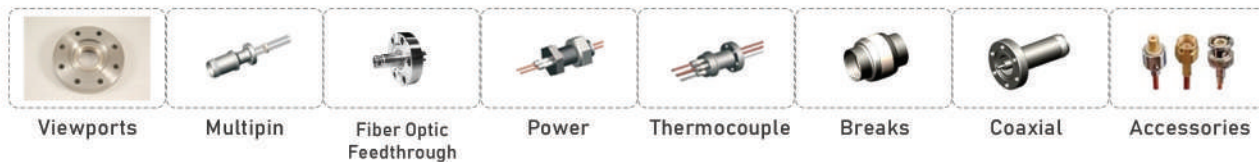
Download EZZI VISION fittings catalogue from www.ezzivision.com.au for more information.

COSMOTEC

Vacuum Feedthroughs

MPF

Electrical components for critical-harsh environment applications that require ceramic-to-metal sealing technology we employ an active-alloy sealing process as well as a traditional thick film metallized ceramic (Mo-Mn) combined with advanced vacuum brazing techniques to bond ceramics to metals. EZZI VISION also supplies customised feed-through along with the standard ones as mentioned.



Oils, Greases and Components

Greases APIEZON

Apiezon is a range of high vacuum greases, vacuum sealants and lubricants that are favoured around the world because of their quality, consistency and excellent performance in vacuum applications. Waxes, etch resist and AP201 vapour booster pump fluid have also been developed as part of the Apiezon range.



Oils EDWARDS

Edwards offers a range of new oils, ULTRAGRADE™ Performance 15, 19, 20 and 70, which result from a new process. Most manufacturers use a solvent refining process, whereas these oils are produced by a unique hydrotreating process. This process eliminates nitrogen, sulphur and oxygen and the aromatic hydrocarbons, leaving a clear base stock essentially free of impurities.



Mist Filter Contents EDWARDS

The EMF10 mist filter is suitable for use with RV3, RV5 and RV8 pumps. They are very efficient at 99.999% DOP test and are also azide proof. The white bottom half of the body is semi-transparent, allowing the oil level to be monitored. The EMF filters have a unique odor element which neutralizes the smell of oil mist. Supplied with NW25 clamp, centering ring and 'O' ring, NW25 to 3/4 inch BSP adaptor.

Mist filters capture oil mist from the outlet of pumps, which would otherwise be ejected into the atmosphere. This may happen when you use gas ballast or when you pump high gas throughputs. You can also return oil trapped in the mist filter back to the pump, although you must ensure that the process gases will not contaminate the pump or pump oil.



Vacuum Valves

Vacuum gate valves are divided into manual and pneumatical, with bellows and without bellows. And the vacuum gate valves are available with KF, ISO, ANSI, JIS, and CF flange. Ezzi Vision Supplies all valves suited for vacuum applications with venting processes, high vacuum applications in pumping systems, semiconductor technology and research systems.

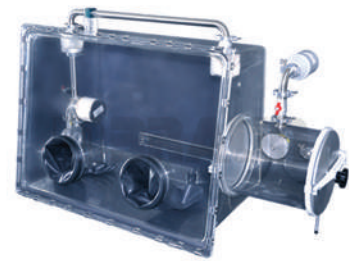


MBRAUN Glovebox Systems



■ Acrylic Glove Box Workstation

The MBRAUN Acrylic glovebox workstation offers a cost-effective solution for inert atmosphere applications. A thick, clear, and durable acrylic shell allows optimum visibility and remains impermeable to ambient air. Standard Neoprene gloves provide excellent resistance to abrasion and chemicals. The glove box can be configured to meet your project specifications and/or can simply be chosen from a variety of standard pre-defined configurations.



■ LABstar Glove Box Workstation

The LABstar glovebox workstation is a ready to operate high quality glovebox system that meets your specific application requirements. The system has been designed for customers needing an economic research and development tool to do vital experiments under clean atmospheres. Standard features of this system include a stand, large main antechamber, a rotary vane vacuum pump and a PLC-M. Braun controller. The standard LABstar package comprises of a single column inert gas purification system that is fully automatic and regenerable. The glovebox maintains atmosphere levels of less than 1 ppm oxygen and moisture.



■ UNIlab Plus Glove Box Workstation

The MBRAUN UNIlab Plus glovebox workstation has been designed to meet the specification of various applications. Compared to the LABstar workstation the UNIlab Plus provides you and your research team with added features including the UNIlab gas purification system with SP/DP configuration. A PLC-M. Braun controller* is also provided as a standard feature. Other built-in features of the UNIlab Plus Workstation include stand, integrated high vacuum feedthroughs, and a stainless steel encapsulated blower.



■ UNIlab Pro Glove Box Workstation

The MBRAUN UNIlab Pro modular glovebox workstation has been designed to meet the specification of various applications and is considered to be the industry's most universal glovebox platform. Compared to the LABstar and the UNIlab Plus workstations the UNIlab Pro provides you and your research team with added features including the UNIlab SP/DP gas purification system with an PLC-M. Braun controller* with touch screen monitor as a standard feature. Other built-in features of the UNIlab Pro Workstation include modular box top design, stand, and integrated high vacuum feedthroughs with a stainless steel encapsulated blower.



■ LABmaster Pro Glove Box Workstation

As the flagship model, the LABmaster Pro can be easily configured with our entire line of specially designed process tools and can be fully integrated with other third party equipment. The LABmaster Pro has proven to be a superior glove box system in numerous research and manufacturing environments and is often utilized in emerging markets such as OLED/PLED/OPV. With upgraded features and added benefits the LABmaster Pro platform is your best choice to meet your growing application



MBRAUN Glovebox Systems



■ MB-TIG-1010

The MB-TIG-1010 bench top glove box platform is designed as a complete welding enclosure workstation with the capability to add gas purification systems and purge style antechambers. Operation enables you to easily load welding material into the box with the ability to purge with working gas. Flow rate monitors, built in eye shields, and electrical connection board offers both safety and easy working power inside the box for all your welding tools. The MB-TIG-1010 is MBRAUN's recommended choice in small material welding under clean environments.



■ MB-200B Modular Glove Box Workstation

The MB-200B modular platform is designed with the capability to add further box tops onto existing workstations. The MB-200B can also connect directly to your choice of any standard MBRAUN gas purification system. Like pieces of a puzzle the MB-200B glovebox system can be "pieced together" to form the solution for countless applications and system configurations. Systems incorporating MB-200B modules typically feature additional equipment ranging from laboratory instruments and deposition systems to fully automated processing lines.



■ ISO Pro nano

The ISO Pro nano glovebox with integrated blower is designed for operator protection while working with nanoparticles. It is operated in relative negative pressure to the environment (-200 Pa). The operator safety is guaranteed by the high leak tightness of < 1 vol%/h and the automatic (under) pressure control. In case of a leak (e.g. the breakdown of a glove) the blower generates a permanent inward gas flow with a velocity > 0.5 m/s to prevent the diffusion of box atmosphere into the surroundings. As an alternative, the glovebox can be built with a leak rate of 0.05 vol%/h according ISO 10648-2, and coupled to a gas purifier unit to work under inert atmosphere (O_2 and $H_2O < 1$ ppm)



■ Easy Lab

EASY LAB the best value for money from MBRAUN. This glovebox has a compact design with integrated purifier unit with stainless steel enclosure and safety glass window. Removal of oxygen and moisture < 1 ppm. Comes with an antechamber and sliding tray. Has a closed loop recirculation with a negative and/or positive pressure operation. Includes a foot pedal switch for temporary pressure adjustment. ECO Mode operation feature is available for this glovebox with an optional control and safety feature as well.



MBRAUN Coating Equipment



■ MB-EcoVap

The MB-EcoVap tool is a high quality economic research solution when the available laboratory space is restricted. Even though compact in design all essential features for high-quality functional coatings are incorporated in its standard configuration, making it the perfect entry model for many research groups who have decided to take the first steps in exploring vacuum coating technology.



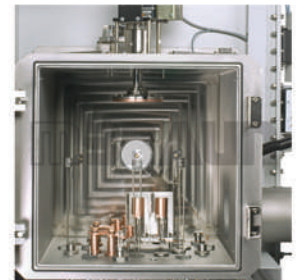
■ MB-ProVap-3

The MB-ProVap-3 is a research and development tool for thin film deposition under vacuum conditions. The rectangular shaped chamber offers additional space for more sources and optional upgrades such as substrate heating and advanced masking solutions.



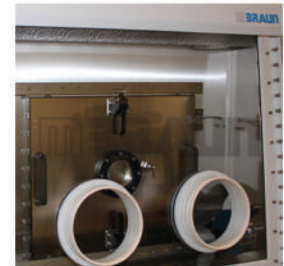
■ MB-ProVap-5

The MB-ProVap-5 is a versatile research and development tool for thin film deposition under vacuum conditions. The medium size chamber offers additional space for more sources and optional deposition tools such as substrate heating and masking.



■ MB-ProVap-7

The MB-ProVap-7 is our large chamber research and development tool for thin film deposition under vacuum conditions. The large size chamber offers additional space for more sources and optional deposition tools such as substrate heating and masking.



■ MB-OptiVap

The MB-OptiVap series is the current high-end solution in MBRAUN's deposition tool series. Designed for the requirements of specialized research up to pilot scale production, these tools find frequent use in industrial laboratories and state-of-the-art Universities throughout the world.



■ MB-Sources

Thin film deposition systems by MBRAUN include a variety of ways of depositing layers of material onto substrates. Our systems can be custom configured to include different coating techniques to meet the customer's exact specification.



MBRAUN Coating Equipment



■ The CREAPHYS QUANTIpure® Purification System

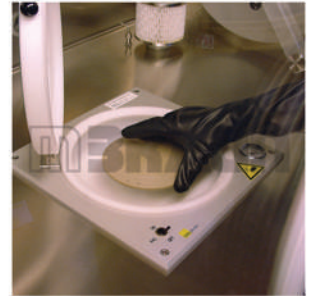


The QUANTIpure® technology is an innovative and highly efficient purification technology. Based on more than 15 years of experience in vacuum sublimation, CreaPhys designed and engineered this new family of purification systems. In contrast to classical sublimation tools, the systems are not based on a glass tube. With our novel QUANTIpure® technology we break the trade-off between quality and purification yield. Combined with precise process control, these systems bring superior purification.



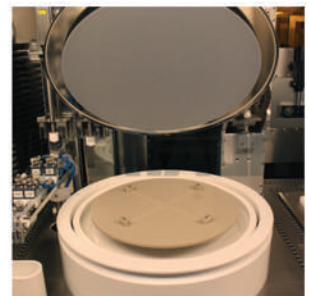
■ MB-SC-210

Usually deployed in R&D and pilot scale systems spin coating is a common technique used to apply uniform thin films to flat substrates. An excess amount of a solution is dispensed onto the substrate, which is then rotated at high speeds in order to spread the fluid uniformly by centrifugal force.



■ MB-SC-ADV

Usually deployed in R&D and pilot scale systems spin coating is a common technique used to apply uniform thin films to flat substrates. Usually an excess amount of a solution is dispensed onto the substrate, which is then rotated at high speeds in order to spread the fluid uniformly by centrifugal force.



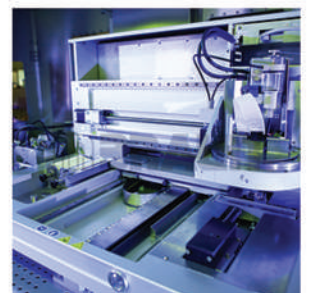
■ Slot Die Coating

In a co-joint effort, MBRAUN and its partners combined their specific expertise in inert gas technology and slot die coating in order to develop a tool which addresses the process requirements in newly emerging markets such as OLED, OPV, and thin film batteries.



■ Ink Jet

Inkjetting is considered being one of the most versatile techniques in modern coating applications as it provides the opportunity to deposit all kind of structures starting at the μm -level up to large area coatings.



MBRAUN Coating Equipment



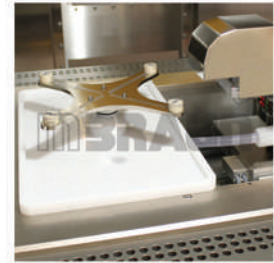
■ Atomic Layer Deposition (ALD)

Atomic Layer Deposition (ALD) is used to fabricate ultra-thin structures for many semiconductor and thin film device applications. Atomic Layer Deposition uses sequential self-limiting surface reactions to achieve control of film growth in the monolayer or sub-monolayer thickness regime.



■ MB-EBR

The MBRAUN Edge Bead Remover (MB-EBR) system is specifically designed to solve the common problem of removing the boundaries of fully coated substrates. Cleaning the edges from organic layers is the prerequisite for an optimized subsequent encapsulation of the organic device.



■ Roll-2-Roll (R2R)

MBRAUN has developed a Roll-2-Roll (R2R) processing platform that is specifically dedicated for applications which require extremely thin coatings to be deposited onto a flexible matrix under high vacuum conditions.



Gas Purification Systems



The purpose of the MBRAUN gas purification system, together with a glovebox is for the enabling and maintaining of a pure inert gas atmosphere inside a hermetically sealed enclosure. Materials that are sensitive to moisture and/or oxygen are handled by using the attached gloves or by means of specially designed handling systems.

Similar to our glovebox model offerings MBRAUN offers gas purification systems in a variety of configurations that meet the different demands of the marketplace. Gas purifier systems include our standard gas purifier systems (G-series), Inert gas management systems (IGMS series), high pressure gas purifier systems (HP series), particle absorber clean jet systems (Clean Jet Series) and our tritium retention systems. Configurations range from single column and double column purifier units with standard features to fully automated, multi-column custom purification systems used in industrial production scale applications.

Contact Ezzi Vision for more info on the GAS PURIFICATION SYSTEM ranges MBRAUN provides.



Solvent Purification Systems



■ Solvent Purification

MBRAUN Solvent Purification Systems (MB-SPS) offer users an easy, safe, and fast way to dry and dispense solvents. These systems operate by pushing the solvents through a series of drying columns resulting in moisture levels down to the ppm range. Dried solvents can then be either dispensed into a collection vessel directly at the system and/or into an integrated glovebox system.

■ MB-SPS-COMPACT

The MB-SPS-Compact is our single solvent purification system specifically designed for customers who demand a compact more economical solution in their solvent purification needs.



■ MB-SPS-800

The MB-SPS-800 can be configured up to 7 solvents and is designed specifically for laboratories that need a safe, fast and easy method for dispensing ultra dry solvents.



■ MB-SPS-800-AUTO

The MB-SPS-800-AUTO is the automatic solvent dispensing system designed specifically for industrial laboratories that need a safe, fast, and easy method for dispensing ultra pure solvents with a touch of a button.



■ MB-A1-SPS ACTIVATION-STATION

The MB-A1-SPS Activation Station is designed specifically to activate MBRAUN Solvent Purification System (SPS) drying columns.



Thin Film Systems and Nano Fabrication Materials



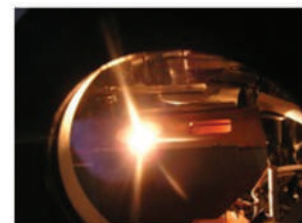
■ New bench-top deposition tools for SEM and TEM sample prep, plus R&D applications

- The new HHV BT150 and BT300 are compact and economical bench top coating systems designed to suit the needs of electron microscopists and researchers.
- Both systems are designed for ease of use and feature a full-colour, menu-driven, touch-screen control system for fully-automatic control. The control system can store up to 30 different process recipes for easy recall and can output process data to a separate device for storage.
- In addition to EM applications, BT-series can also be configured for metals sputtering and metals evaporation for researchers.
- BT-series systems can sputter non-noble metals such as aluminium where the turbo pump option is fitted.



■ Evaporation

The thermal evaporation of materials in vacuum is a versatile and popular method to provide a thin film coating on a substrate. Electron beam sources use a dedicated power supply to provide a high-power electron beam to heat the source material, and are capable of evaporating higher melting point or reactive materials. Further specialized sources with closed-loop temperature control are available for applications such as the evaporation of organic materials for OLED displays.



■ Sputtering

Magnetron sputtering is a highly versatile technology for thin film deposition. Running at typical pressures in the 5×10^{-3} mbar range and using Ar gas, it employs a glow discharge or plasma generated by a purpose-made high negative-voltage power supply to generate gas ions which bombard the surface of a 'target' of the coating material. Material is then 'sputtered' from the target due to the impact of the Ar ions. HHV offers a full range of circular and linear magnetron sputter sources which are engineered to meet specific and stringent R&D and production requirements. It uses well proven designs providing ease of use, with excellent target utilization, deposited film uniformity and reliability.



■ AUTO 306 - Versatility for the researcher and the electron microscopist

The HHV Auto306 is a versatile and compact coating system which has been developed to meet the demands of the researcher and electron microscopist. With its full range of vacuum systems, chamber and modular process accessories, the Auto306 offers a range of techniques to complement the modern laboratory. Auto306 is available with glass bell jar and glass cylinder chamber options.



■ AUTO 500 - The multi-purpose deposition system for Research & Development

Auto500 is a versatile front-loading coating system with box chamber for research & development or pre-production applications. The chamber accommodates large diameter substrates and allows a range of resistance evaporation, electron beam and sputter processes to be performed without breaking vacuum.



Thin Film Systems and Nano Fabrication Materials



Film Thickness Monitoring and Process Control

A film thickness monitor using a quartz crystal microbalance is fitted where the customer wishes to see the deposition rate and total thickness of a thin film during deposition. We offer these with single or dual monitor heads and manual or automated source shutters. These controllers are ideal for multi-layer films and for production applications.

We offer quartz crystal film thickness monitors and controllers with a range of features to suit different customer applications and budgets. Where systems have PC control, the PC can drive the monitor or controller as required to achieve complete source selection and deposition control.



Ion Beam Deposition

Ion beam sources convert a process gas into a stream of gas ions using an external high voltage power supply and an internal cathode. The output ion beam is typically parallel or divergent, with parallel beams being used to sputter a material target with high-energy ions, and divergent beams being used to bombard a large-area work holder with lower energy ions to compact or modify the growing film during a deposition process. Ion sources are available in a wide range of sizes and with a range of options for cathode design, neutraliser construction and RF or DC operation.

Ion sources require the use of high-throughput vacuum systems. HHV applies ion beam technology to customer requirements on systems from TF600 and above, plus our larger special-purpose systems.



Forensic Coating Systems

Forensic coating systems

The original metal deposition systems for fingerprint development. Now built by HHV, the ID500 and ID750 forensic coaters are used for the detection of fingerprints using the Vacuum Metal Deposition (VMD) technique. ID750 is a full-size system designed for national or regional forensic labs. The high-throughput vacuum system with water vapour cryo pump provides short cycle time and allows rapid processing of evidence. ID500 is a smaller unit designed for local agencies or where budget constraints apply.

HHV Thin Film Deposition System Ranges

- Evaporation
- Sputtering
- Ion Beam Deposition
- Plasma CVD
- RIE and Plasma Cleaning
- Substrate Rotation, Heating, Cooling, RF and DC Biasing

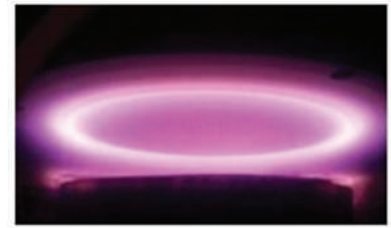


Thin Film Systems and Nano Fabrication Materials



■ RIE and Plasma Cleaning

Reactive Ion Etching (RIE) is a sophisticated technique used for etching semiconductor materials with high resolution. RIE is a key enabling technology allowing semiconductor features to continue to approach the range of a few nanometres. This technology is also widely used as a machining process for nano and micro scale devices, which enable the development of MEMS and NEMS based sensor and device fabrication. Reactive ion etching process use glow discharge plasma, which etch the substrate surface primarily by chemical reactions. The chemical process can be supported by additional physical etching process to facilitate anisotropic etch. HHV Reactive Ion Etch tool offers a wide range of cost effective material processes to R&D in the electronic, industrial and medical sectors. It uses a well proven design-providing ease of use, with excellent process management enabling to prepare superior quality devices.



■ Plasma CVD

Plasma Enhanced Chemical Vapour Deposition (PECVD) is a state of the art thin film deposition technique and is widely used in semiconductor processing worldwide. In PECVD the process material is delivered in the form of a special precursor gas which is broken down in a glow discharge (plasma), which transforms the gas mixture into reactive radicals, ions and other highly excited species. These species interact with a substrate and, depending on the nature of these interactions, either etching or deposition processes occur at the substrate. Since the formation of the reactive and energetic species occurs by collision in the gas phase, the substrate can be maintained at a low temperature. Some of the desirable properties of PECVD films are good adhesion, low pinhole density, good step coverage, and uniformity. HHVs Plasma Enhanced Chemical Vapour Deposition systems offer a wide range of cost effective material processes to R&D in the electronic, industrial and medical sectors. It uses a well proven design providing ease of use, with excellent process management enabling the preparation of superior quality films.



■ Custom Systems - Excellence in Special Systems Engineering,

HHV Ltd offers a wide range of special-purpose and customised thin film deposition systems for research, scientific and industrial applications. These include systems for electronics, optical films, electro-optic devices, medical, aerospace and materials technology



■ Consumable items and original spare parts for your deposition system

Ezzi Vision offers a range of process consumables, spare parts and accessories for your coating system.

Filaments and boats for resistance evaporation sources

Specially selected for use with resistance sources on the Auto306 and Auto500 systems, these sources are also suitable for use with the older E306 and E306A coating systems.



■ Sputtering Targets and Evaporation Materials.

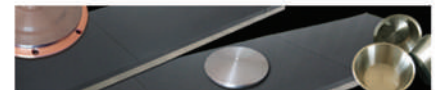
Sputtering Targets

Ezzi Vision can offer a full line of sputtering targets with various components from industrial grade to super high purity. Most targets are manufactured by programs. We can supply sputtering targets that consists of less frequently used compositions. we can also offer some additional server including substrate, bonding, and backing plate.

Customised sputtering targets can also be supplied.

Many raw material compounds lines, such as semiconductor line, chemical compounds line, metallurgy line, powder milling line. etc. are supplied. Metal, Alloy, Ceramic, Special targets, to name a few are supplied by us.

Contact Ezzi Vision if you want more information to choose the right target for your application.



Evaporation Materials

Evaporation material are widely used for fields of optical, electric, photoelectric, decorate and so on. Users usually make cold light mirror, high reflective coating, anti-reflective coating and laser coating etc. Contact Ezzi Vision if you want more information to choose the right target for your application.



Leak Detectors

ULVAC

■ Heliot 900 Helium Leak Detector

The HELIOT 900 is a fast, versatile vacuum leak detector capable of the fastest helium pumping speeds on the market. Built in a small, portable form factor with a wireless tablet controller for ease of use the HELIOT is designed to be used as a standalone unit in vacuum and sniffer modes, or connected to your PLC system and used as part of an integrated leak test system. It's industry leading speed is backed by a variety of pump options.



■ ELD500 Precision Leak Detector

- Edwards new ELD500 fully automated leak detector has arrived. It's designed for fast and accurate leak detection in a wide range of applications and is fully mobile with an easy to use control interface.
- Low cost of ownership
- Ready to go mobile solution
- Customisable for any application
- High stability and accuracy



■ Gascheck Leak Detectors

The new Gascheck range provides automatic and direct display of gas leak rates. At the heart of these instruments is a sensor which can detect any gas that has a different thermal conductivity to that of air, resulting in a highly sensitive instrument which is both reliable and compact.



■ Leak Detection Services

Ezzi Vision can assist in detecting leaks. We provide leak testing services in shop or on-site for a wide range of customer needs. We can quickly locate even the smallest leaks in any pressure and vacuum system.

Mass Flow Controllers

A mass flow controller (MFC) is a device used to measure and control the flow of gases. It is designed and calibrated to control a specific type of gas at a particular range of flow rates. The flow rate is specified as a percentage of its calibrated full scale flow and is supplied to the MFC as a voltage signal. Readout Box and totalizer are used to control the MFC. All our product are made for digital or analog utilisation by the interface of a computer or directly from the screen integrate to the box.

CS Series Digital Mass Flow Controller

■ Controller Ranges

- CS320D Digital Mass Flow Controller
- CS310D Digital Mass Flow Controller
- CS320C Digital Mass Flow Controller
- CS310C Digital Mass Flow Controller
- CS230A Digital Mass Flow Controller
- CS200D Digital Mass Flow Controller
- CS200C Digital Mass Flow Controller
- CS200A Digital Mass Flow Controller



D07 Series Analog Mass Flow Controller

■ Controller Ranges

- D07-19B
- D07-19F
- D07-11C
- D07-23F
- D07-23A
- D07-19C



Vacuum Ovens and Muffle Furnaces



■ France Etuves Vacuum Ovens

■ Low vacuum Oven XFL Series

Our vacuum ovens are suitable for drying sensitive products, degassing, thermal treatment of oxidizing materials, fast drying of powders and granules, both in laboratories and in the pharmaceutical, cosmetic and plastic industries, electronic, chemical or agro-food.

Maximum temperature: 200 °C / 300 °C * (optional)

Vacuum measurement range: 0 to -1000 mbar (Relative pressure)

*300 °C peak temperature for a few minutes, 250 °C maximum continuous.

6 volumes: 20, 51, 110, 220, 316 and 512 litres.



Vacuum Ovens and Muffle Furnaces



■ Medium vacuum Oven XFM Series

The XFM Series also has a similar application as that of the XFL series but varies in Maximum temperature and Vacuum measurement range.

Maximum temperature: 200 ° C / 250 ° C (optional)
 Vacuum measurement range (absolute pressure) : up to 10⁻²
 6 volumes: 20, 51, 110, 220, 316 and 512 litres.



■ Drying Oven XU Series

Universal ovens are suitable for all applications of drying, heating, hot keeping, sterilization, component aging, hardening, or any other thermal test in laboratories and in all sectors of the industry. Ovens for many applications.

Maximum temperature: 300 ° C
 8 volumes: 32, 58, 112, 225, 343, 490, 686 and 980 litres



■ Industrial Drying Oven XL Series

Industrial ventilated ovens XL are suitable for all drying applications but also for: baking, varnish baking, decontamination, degassing, debinding, dehumidification, dehydration, desiccation, stress relieving, debugging, deburring, hardening, thermal tests, liquefaction, temperature maintenance, malleableization, polymerization, post-cure, post-vulcanization, preheating, reheating, annealing, tempering, cross-linking, stabilization, sterilization, hot storage, thermoforming, aging.

Temperature: 200 ° C maximum (300 ° C optional)
 8 volumes: 112, 343, 490, 686, 980, 1000, 1400, 1800 litres.



Contact Ezzi Vision if you want a customised Vacuum Oven.

■ Muffle Furnace - 1700°C High Temperature with 64L Chamber Capacity Features

- LCD touch screen with PID Programmable control
- CE certified, quality and warranty
- High quality alumina fiber with good heat preservation effect
- 30 steps Programmable and SCR accuracy temperature control
- Clear heating element with no color greening change
- Low power energy conservation and environmental protection



Chillers



Thermo-Chiller, Basic Type, 230V AC Cool Down Your Costs

- Cooling capacity 1.0, 1.4, 1.9 kW
- Max. ambient temperature 40 °C
- Set temperature range 10 to 30 °C
- Temperature stability ± 2.0 °C
- Maintenance free Magnet pump
- Low-noise design 57 dB (A)
- Power supply 230 VA C 50 / 60 Hz



Large Capacity Compact Chiller, 400 V Triple Savings At The Right Temperature

- Circulating Fluid Temperature Controller. Water or air-cooled.
- Cooling capacity: 9 kW.
- Temperature stability: ± 0.5 °C.
- Temperature range: 5-35 °C.
- With heating function and self-diagnosis.
- Serial communication.
- Compact (970 x 377 x 1090 mm) and lightweight (136 kg).



Thermo-Chiller Compact Type

- Compact and lightweight.
- Temperature stability ± 0.1 °C.
- Improved maintenance performance.
- Heating function available even with no heater.



Thermo-Chiller, Standard Type, Air-Cooled, 400 V Improve The Performance & Reliability Of Your Machine

- Air-cooled refrigeration standard type Thermo-chiller.
- Maximum cooling/heating capacity: 10.0/1.7 kW (HRS100), 15.0/2.5 kW (HRS150).
- Temperature stability: ± 1.0 °C.
- Temperature range: 5 to 35 °C.
- Outdoor installation: IPX4.
- Applicable fluid: clear water, Ethylene glycol aqueous solution, deionised water.



Thermo-Chiller, Standard Type, Water-Cooled, 400 V

- Water-cooled refrigeration standard type Thermo-chiller.
- Maximum cooling/heating capacity: 10.0/1.7 kW, 15.0/2.5 kW.
- Temperature stability: ± 1.0 °C.
- Temperature range: 5 to 35 °C.
- Outdoor installation: IPX4.
- Applicable fluid: clear water, Ethylene glycol aqueous solution, deionised water



Freeze Dryers



Laboratory Freeze Dryer

Zirbus supplies 3 Laboratory freeze dryer models (Vaco Series) with various options. It is a Modular system where the main component is the condenser. The Vaco series has 3 models – the vaco 2 – 5.7 litres, vaco 5 – 16 litres and vaco 10 – 50 litres. Temperature of condenser is either -50°C Or -80°C depending on the options chosen. For more information on the cooling system & ice capacity and to choose the suitable option for your application, contact Ezzi Vision.



Pilot and Technical Units

Zirbus Supplies 3 Pilot/Laboratory Freeze Drying Unit with a two chamber system. The following are the 3 models with various options.

- Pilot/Laboratory Freeze Drying Unit Sublimator 5
- Freeze Drying Plant Sublimator 15
- Freeze Drying Plant Sublimator 25

Additional options can be added to these units depending on the requirements. To know more about these units and to choose the suitable option for your application, please contact Ezzi Vision.



Production Units

Application in Production, Pharmaceutical and Food Industry

- Round and rectangular drying chambers up to 5 m³
- Two- chamber systems with separation valve
- Hinged and sliding doors
- Flexible size of shelves and distances up to 90m²
- Materials made of stainless steel 316TI, 316L
- Compressor and / or N₂-liquid cooling up to -150°C
- Condenser for ice up to 800kg/24h, condenser for solvents

To know more about these units and to choose the suitable option for your application please, contact Ezzi Vision.



Vacuum Dryer

For Laboratory Or Production Use

- Round and rectangular drying chambers up to 5m³
- Two- chamber system with separate valve
- Hinged and sliding doors
- Flexible sizes of shelves and distance up to 90m²
- Materials made of stainless steel 316TI, 316L

To know more about these vacuum dryers and to choose the suitable option for your application, please contact Ezzi Vision.



Rotary Dryer

Rotary chamber up to 5m³ volume

- Directly flanged to condenser up to -150°C
- Two chamber system with separate valve
- Steam sterilizable SIP, cleaning CIP
- Materials made of stainless steel 316TI, 316L

To know more about these Rotary dryers and to choose the suitable option for your application, please contact Ezzi Vision.



Centrifugal Dryer

- Model series ZT6, ZT12
- Directly flanged to condenser up to -150°C
- Solvent-resistant DMSO, acetonitrile, ethanol, methanol
- HPLC applications
- Materials made of stainless steel 316TI, 316L
- Condensers for solvents
- Infra-red heating system

To know more about these Centrifugal dryers and to choose the suitable option for your application, please contact Ezzi Vision.



Gas Analysis

ULVAC

■ Quadrupole Mass Spectrometer

- Provides gas analysis with an optional differential pumping unit
- Utilizes standard vacuum unit model YTP-50M
- One-click function for easy operation, no complex procedures
Selectable maximum measurable pressures 500Pa, 100Pa, 10Pa, and 1Pa (3.75Torr, 0.75Torr, 7.5×10^{-2} Torr, and 7.5×10^{-3} Torr / 5mbar, 1mbar, 0.1mbar, and 1.0×10^{-2})
- Provides visual data without need for a PC
- Select from the mass numbers 1 to 100 (BGM-101/102), 1 to 200 (BGM-201/202), 1 to 300 (HGM-302)
- Complete Leak Test Function (Helium leak test, air leak test, leak up test)
- Software included (Windows XP/7)



■ Quadrupole Mass Spectrometer

- Ideal for process monitoring of various sputtering system
- No differential pumping system required (at 1Pa (7.5×10^{-3} Torr / 1×10^{-2} mbar) lower)
- Integrated Display: No need for PC
- Simple Operation: "One Click" function
- Max 120°C (248°F) high temperature bake (250°C (482°F) when sensors are removed)
- Electron bombard degas
- Ion source and secondary electron multiplier protection maintenance help function
- Traceability of analysis tube (patent pending)
- Various Leak Tests are Available (Helium leak test, air leak test, built-up test)
- Capable of total pressure measurement (ionization gauge)
- Qulee QCS is Included: This software is included and compatible with (Windows XP/7)
- QIP (Quick Install Package system) is Included: Auto measuring package (refer to options catalog for details)
- Conforms with CE



Residual Gas Analysers



Compact Process Gas Monitor

Plasma and Surface Modification

SAMCO
PARTNERS IN PROGRESS

■ Deposition Systems and Plasma Cleaners

PECVD Systems

Utilized in compound semiconductor and silicon device fabrication, Plasma Enhanced Chemical Vapor Deposition (PECVD) systems are designed for the deposition of insulation and passivation films. Samco PECVD systems can deposit high-quality silicon-based thin films (SiO_2 , Si_3N_4 , SiO_xNy , a-Si:H). Samco offers anode PECVD systems for high-quality thin film deposition and cathode PECVD systems for high-rate deposition depending on customer's process goals.

SiC CVD Systems

Samco provides SiC CVD Systems of Epiluvac, a Swedish company. Combining with Samco's SiC etching solutions, the systems offer turn-key process solutions for next-generation power device fabrication.

Atomic Layer Deposition (ALD) System

Samco ALD system is suitable for atomic-scale processing of various devices including next-generation power devices and nano-electronics. The system is capable of various material deposition with highly reproducible thickness control with a high aspect ratio.



Anode PECVD Systems



(ALD) System

Plasma and Surface Modification

samco
PARTNERS IN PROGRESS

■ Plasma Cleaners

Plasma cleaning systems are designed for the cleaning of plastic microelectronic packages and lead frames as well as LCD circuit boards and other products. Samco's solutions include compact systems for R&D and pilot production, as well as large-chamber plasma cleaning systems. To know more about these Plasma Cleaners and to choose the suitable option for your application, please contact Ezzi Vision.



■ Remote Source Plasma Cleaners

Samco-ucp remote source plasma cleaners meet various types of process needs in device production. Typical applications include cleaning of metal leadframes, plastic microelectronic packages, MEMS or micro-optic packages, hybrid or multi-chip modules as well as wafers. surface treatment used e.g. before die attach, wire bonding or molding for improvement of gluing, adhesion or encapsulation. Optimum surface activation and soft chemical removal e.g. of oxides and organics by process gases and mixtures of Ar, N₂ and H₂



■ Etching Systems

Plasma Etcher (RIE, ICP-RIE & Si DRIE) & XeF₂ Etcher

Samco has developed a wealth of dry etching expertise. Today our product line includes, open-load, load-lock, and cassette type systems for both R&D and production customers. Choose from the Tabletop, Openload and Load-lock Etching systems from Samco. To know more about these Etching Systems and to choose the suitable option for your application, please contact Ezzi Vision.



■ Basic Plasma Research Kit

The BP-1 is a basic plasma research system that is intended to be used for experiments of various thin films using plasma chemical reactions, and is the ideal system to teach students the fundamental basics of plasma physics. We highly recommend that prospective purchasers also consider more advanced systems for etching or deposition.



Vacuum Concentrators

■ Vacuum Concentrators

These vacuum concentrator centrifuges come with exquisite design, LCD touch screen monitor with micro-computer controlled system and direct operation interface. It uses centrifugal force to carry out the concentration of samples and vacuum conditions for evaporating solvents from the sample. It comes with 1350 rpm and temperature range of room temperature to 55 for different applications.



Rotary Evaporators



■ KNF Rotary Evaporator

A long time global leader in manufacturing laboratory pumps and systems, KNF has combined its long-standing strengths of engineering and product manufacturing with the practical requirements that lab technicians need. The result? KNF rotary evaporators are designed to impress thanks to their distinct handling advantages, clever functional details, and well thought out safety features

Rotary Evaporator Ranges

- RC 600 Rotary Evaporator
- RC 900 Rotary Evaporator

Contact Ezzi Vision for more information on these Rotary Evaporators.



■ Strike 300 Rotary Evaporators

Ezzi Vision introduces the compact safety rotary evaporator STRIKE 300, designed with the dual purpose of obtaining a completely safe instrument and performance optimization. The exclusive sealing system allows perfect vacuum-tight, self-lubrication and anti-corrosion seal. The microprocessor equipped with an LCD interface and touch screen can be multi-programmed so that all the parameters can be checked and modified. STRIKE 300 is provided with GLP system. Models are available with slanting or space-saving vertical, standard or plastic-coated glassware.



Oxymat – Oxygen/Nitrogen Generators



Oxymat Nitrogen Generators With 3500 installations worldwide serve a variety of applications: food & beverages, marine, mining, electronics & laser cutting, oil & gas and many more.

Advantages of Oxygen/Nitrogen Generators

- Oxygen/nitrogen at any time and at any place
- Cost-effective through low operating costs
- Sophisticated and reliable technology
- Exact purity for every application
- No rental commitments as with bottles/bundles and tank systems
- No CO2 pollution for the environment
- No hazardous goods
- No risk of explosion
- In-house placement and production

Generator Ranges

- Modular PSA Nitrogen Generators
- Dexo System – Opas
- PSA Nitrogen Standard Generators
- OXYMAT X-series Frame Built Solutions
- OXYMAT Custom Engineered Projects

PSA Oxygen Generators

OXYMAT can offer you 4 different solutions for your on-site oxygen gas generation requirements:

Oxymat PSA Oxygen Modular Generators

As a result of extensive development efforts, the new series of OXYMAT generators has reached the lowest power consumption level in the market. For our oxygen generators, the reduction of power consumption is more than 40%.

Oxymat PSA Oxygen Twin-Tower Generators

Our OXYMAT PSA Oxygen Generators covers 16 standard models with capacity in the range from 0.69 to 173.36 m³/hour.

Oxymat X-Series Frame Built Solutions

OXYMAT X-versions PSA Oxygen models 2 to 5 are supplied as frame built solutions, which includes: buffer vessels, filters, advanced control, dew point, pressure, temperature, flow, purity and remote monitoring.

Oxymat Custom Engineered Projects

Oxymat is world leading in designing and manufacturing of turn-key, custom engineered PSA systems and oxygen generating systems either on a single skid or inside a portable container. Special oxygen gas generating systems for high pressure oxygen cylinder filling. Each project is custom-built designed to meet your exact requirements to ensure that you receive the optimal system.



PSA Nitrogen Generators

Oxymat can offer you 5 different solutions for your on-site nitrogen generation requirements:

Oxymat PSA Oxygen Modular Generators

As a result of extensive development efforts, the new series of OXYMAT generators has reached the lowest power consumption level in the market. For our nitrogen generators, the reduction of power consumption is more than 10%.

Oxymat PSA Nitrogen Twin-Tower Generators

Our OXYMAT PSA Nitrogen Generators covers 18 standard models with capacity in the range from 0.27 to 2223.28 m³/hour. Flow measured in Nm³/h. Purity up to 99.9999%.

Oxymat X-Series Frame Built Solutions

OXYMAT X-versions PSA Nitrogen models 3 to 5 are supplied as frame built solutions, which includes: buffer vessels, filters, advanced control, dew point, pressure, temperature, flow, purity and remote monitoring.



Oxymat – Oxygen/Nitrogen Generators



Oxymat Deoxo System – OPAS

Oxymat Purifier Action System (OPAS) is the add-on technology, making the most of any nitrogen generator. OPAS is the true add-on technology for nitrogen application requiring 1-100 ppm. OPAS can easily be integrated with already existing nitrogen generation systems resulting in high purity nitrogen at minimum costs.



Oxymat Custom Engineered Projects

Oxymat is world leading in designing and manufacturing of turn-key, custom engineered PSA systems and nitrogen generating systems either on a single skid or inside a portable container. Special nitrogen gas generating systems for high pressure nitrogen cylinder filling. Each project is custom-built designed to meet your exact requirements to ensure that you receive the optimal system.



■ Marine PSA Nitrogen Generators

Oxymat manufactures nitrogen generators for marine applications. We deliver the most energy efficient nitrogen generators on the market. Our references show an impressive 140 large marine projects.

No matter your need or application we can provide state-of-the-art design to meet your requirement. OXYMAT can offer you 3 different solutions for your on-site marine nitrogen generation requirements:



PSA Oxymat Nitrogen Modular Generators

As a result of extensive development efforts, the new series of OXYMAT generators has reached the lowest power consumption level in the market. For our marine nitrogen generators, the reduction of power consumption is more than 10%.



Oxymat Marine X-series

Our X-series nitrogen generator systems are available in 15 models with cover flow rates from 4.8 to 10.000 Sm³/h. For lower capacities or for ships with high peak consumption (e.g. LNG ferries) we can design a smaller system with high pressure cylinders.



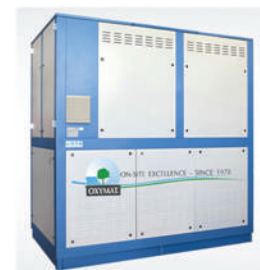
Oxymat Marine Custom Engineered Projects

Oxymat is world leading in designing and manufacturing of turn-key, custom engineered PSA systems and nitrogen generating systems either on a single skid or inside a portable container. Special nitrogen gas generating systems for high pressure nitrogen cylinder filling. Each project is custom-built designed to meet your exact requirements to ensure that you receive the optimal system.

■ Hydrogen Generators

■ Oxymat On-Site Hydrogen Product Range

Oxymat offer a wide range of on-site hydrogen generators of world class quality. Hydrogen is used in many applications such as food production and electronics, to name a few, and recently has been used as fuel in transport and in environmentally friendly heating. Oxymat has 23 models in its on-site hydrogen product range.



Ezzi Vision Service



Service Overview

Our service and rebuilding division can completely refurbish any make of vacuum pumps.

We service: Vacuum Pumps Of All Brands

- Edwards Vacuum Pumps
- Oerlikon Leybold Vacuum Pumps
- Alcatel - Adixen Vacuum Pumps
- Javac Vacuum Pumps
- Welch Vacuum Pumps
- Thomas Diaphragm Pumps
- KNF Neuberger Diaphragm Pumps
- Pfeiffer Vacuum Pumps
- Varian Vacuum Pumps
- Cryogenics Pumps
- Rietschle Vacuum Pumps

We also perform Turbomolecular Pump repair, Dry Pump repair, Vacuum Pump repair, and vacuum system of Mass Spectrometer. We also service Thin film coating systems, Glove Box systems, Freeze dryers, Helium Leak Detectors and Abatement systems maintenance to the highest quality located at our Melbourne and Sydney workshop facility. Our qualified factory trained engineers also offer on-site service contracts for all sizes of customers.

We can offer our customers Service Contracts covering both normal and preventative maintenance. We can also have a service quotation estimate ready for you within the hour



Even the best equipment needs maintenance and occasional repairs. Our Range of Services includes:

- Breakdown Repairs
- Equipment Health Checks
- Vacuum Gauge Calibrations
- Performance Certificates and Service Warranty
- Customer Service Training
- Warranty Extensions
- Equipment Care Plans
- Equipment Backup and Rental
- Equipment Trade-in
- Ezzi Vision One-On-One Training

We service all products that we sell.

Equipment Rental

Ezzi Vision maintains an extensive fleet of rental and backup equipment at attractive prices. We offer operator training but can also send engineers for complex tasks such as leak detection.

Genuine customized MBRAUN Purge box available for rent on a weekly basis

Edwards Vacuum Pumps available for loan and rent.

Contact Ezzi Vision for availability and prices. Reference of other labs and institutes that have used this purge box for their various applications in Australia available.

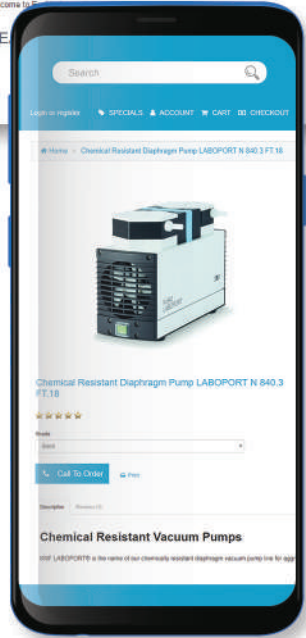
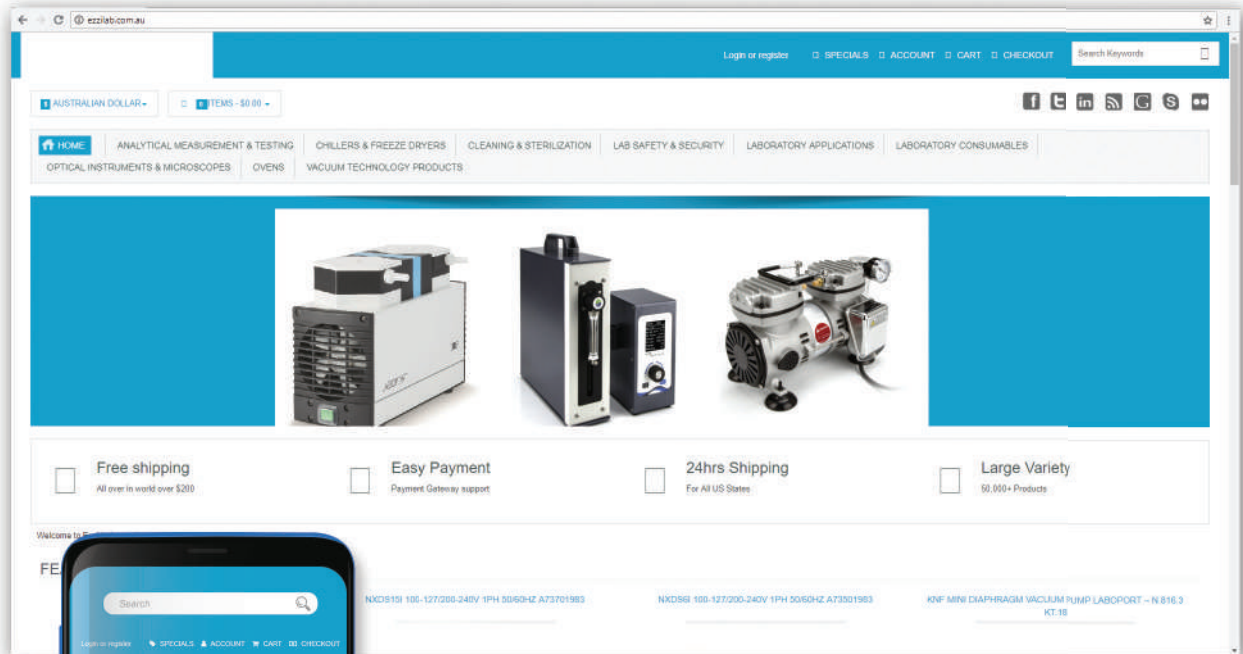


Glovebox



Vacuum Pump

The New Ezzi Lab Webshop



All Items Available Online Now.
Head to www.ezzilab.com.au

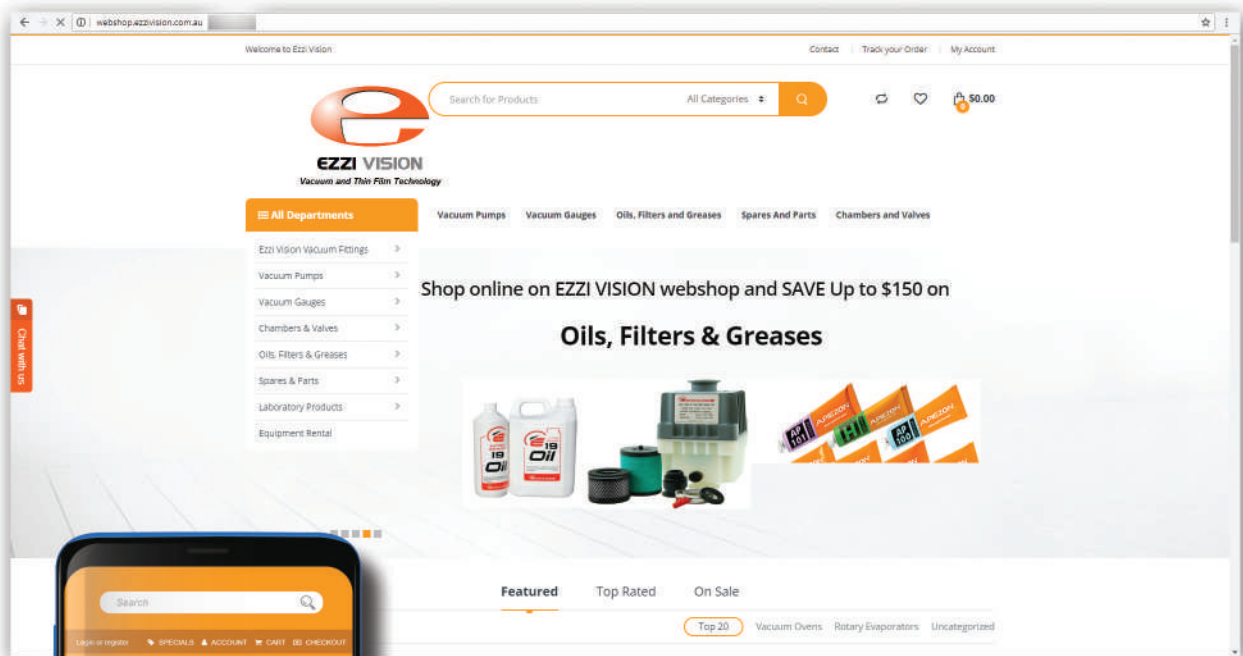
Call us on 1800 463 994

For any further queries email info@ezzilab.com.au



www.ezzilab.com.au

Ezzi Vision Webshop



All Items Available Online Now.

Head to www.ezzivision.com.au

Call us on 1800 463 994

For any further queries email sales@ezzivision.com.au



webshop.ezzivision.com.au

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