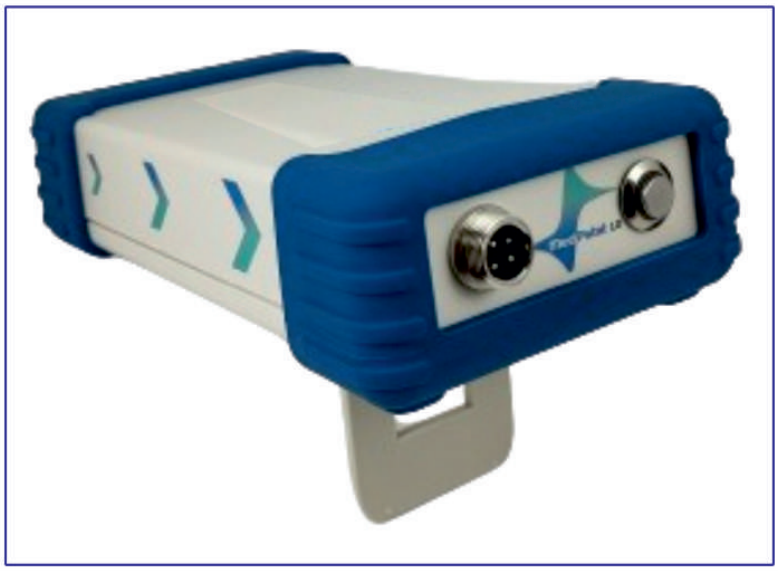
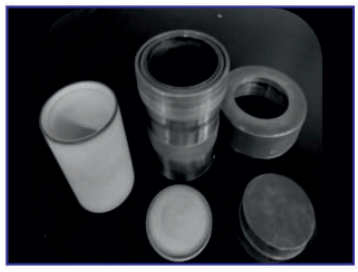
TechRVL
HELPING RESEARCH, DISCOVERY & PROCESSING

RVL Scientific & Engineering Pvt. Ltd.





Our products :

- Potentiostat-Galvanostat-EIS
- Planetary Ball Mill
- Evaporation Materials
- Magnetic Stirrer
- Homogenizer
- Lab Reactor
- Photochemical Reactor
- Glove Box
- Coin Cell Equipments and Consumables
- Conductive Ink Printer
- Centrifuge
- Overhead Stirrer
- Solvent Purification System
- Microscope
- Gas Purification System
- Sputtering Targets
- Liquid Handling Equipments
- Shakers
- Dewar Flask
- Encapsulation Machine

www.rvltech.com

JACOMEX pure safety
sonoplot
Admiral Instruments
LASC
LAMY RHEOLOGY INSTRUMENTS
Thomas Scientific
MTX Medetronix Labs Pvt. Ltd.
DTech Solutions

CERTIFIED ISO 9001:2008 COMPANY

OUR VALUABLE CUSTOMER LIST

TechRVL
HELPING RESEARCH, DISCOVERY & PROCESSING

MAKE IN INDIA

RVL Scientific & Engineering Private Limited
An ISO 9001:2008 Manufacturing Company.
B - 1289, Indira Nagar, Lucknow - 226016.
Tel : +91 522 2340473
Cell : +91 9935506873, 9335908173
E-mail : info@rvltech.com
Web : www.rvltech.com

Authorised Dealer

HAND-HELD WIRELESS POTENTIOSTAT

MedPstat 1.0

ELECTROCHEMICAL METHODS:

- Cyclic voltammetry (CV)
- Amperometry (IT)
- Open circuit potentiometry (OCP)
- Differential pulse voltametry (DPV)
- Square wave voltammetry (SWV)
- Linear sweep voltammetry (LSV)

RANGE:

- Applied Voltage Range: -2.4 to +2.4V
- Applied Voltage Resolution: 501 µm
- Max Applied Current: 70mA
- Current resolution:0.05% of curent range
- Maximum wireless distance:20m
- Electrode configuration: 2,3 & 4 electrode
- Operating system: Window & Mac
- Communication: USB-C and Bluetooth
- Power: DC 12V

STANDARD DUMMY CELL CIRCUIT

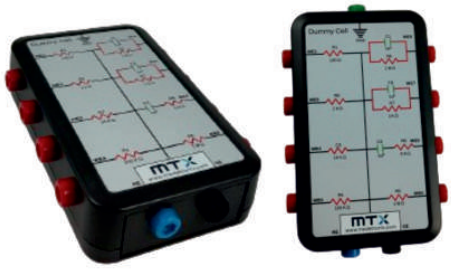
MedCell

SPECIFICATION :

- Premium Handheld Dummy Cell
- EMI Shielded Cabinet
- Grounding Available
- Electrode terminal type: 2mm Banana Pin
- Component Tolerance: 0.1%

ELECTRODES AVAILABLE:

- Working Electrode (8 terminals)
- Reference Electrode (1 terminal)
- Counter Electrode (1 terminal)
- Ground (1 terminal)



HAND HELD POTENTIOSTAT

ECWP100 (Single Channel)

ELECTROCHEMICAL METHODS:

- Cyclic voltammetry(CV)
- Amperometry(IT)
- Open circuit potentiometry(OCP)
- Differential pulse voltammetry(DPV)
- Square wave voltammetry(SWV)
- Linear sweep voltammetry(LSV)

THE WIRELESS
Smallest Potentiostat

RANGE

- Voltage range scan :+2~-2(v) OCP
- Voltage range:+1800mV~-1800mV
- Current range:1x10-3 ~1x10 -9 (A)
- Current resolution:0.5% of current range
- Maximum wireless distance:20m

OPERATION SYSTEM

- Window 7 and / or above

COMMUNICATION

- USB1.1 and 2.4G RF

POWER

- Remoter input: DC 5V,2A
- Connector input:DC 5V,0.5A
- Battery life:1~6 Hr

ECWP100Plus (Multi-Channel)
8 CHANNEL WIRELESS SIGNAL RECEIVER

ELECTROCHEMICAL WORKSTATION (POTENTIOSTAT / GALVANOSTAT)

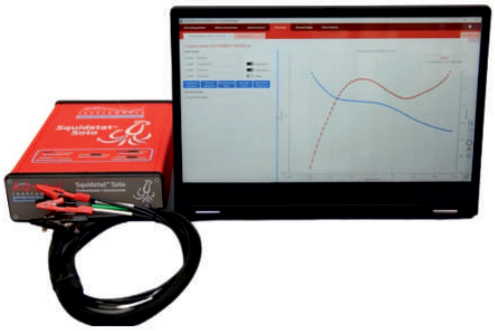
- Channels Per Unit : 1
- Operating Modes : Pot / Gal / ZRA
- Cell Connections : 2, 3, 4, or 5 electrode
- Input Impedance>10 Tera-ohm (typical)
- Input Bias Current<10 pA (typical)
- Scan Rate: 1 uV/s to 10000 V/s

- Applied Potential Range (Controlled Voltage) : ±10 V
- Applied Potential Accuracy : 0.1% of setpoint, - 2 mV max
- Applied Potential Resolution: 300 µV
- Measured Potential Accuracy : 0.1% of setpoint, 1 mV max
- Measured Potential Resolution : 300 µV
- Compliance Voltage : ±12 V per channel

- Maximum Current : ±100 mA
- Current ranges : 8 ranges (10 nA to 100 mA)
- Applied Current Accuracy : 0.2% of range, 1 nA max
- Applied Current Resolution : 0.003% of range, 300 fA
- Measured Current Accuracy : 0.1% of range, 1 nA max
- Measured Current Resolution : 0.003% of range, 300 fA

- Physical Dimensions : 24 cm x 17 cm x 6 cm
- Channel Cable Length : 90 cm
- Computer Interface : 1 USB per unit
- Power Supply Requirements : 100 – 240 VAC, 50 – 60 Hz

SQUIDSTAT SOLO
(MAKE: ADMIRAL INSTRUMENTS, USA)



THE MOST COST-EFFECTIVE
ELECTROCHEMICAL ANALYZER IN INDIA

ELECTROCHEMICAL WORKSTATION (POTENTIOSTAT / GALVANOSTAT / IMPEDANCE ANALYZER)

- Channels Per Unit : 1
- Operating Modes : Pot / Gal / ZRA / FRA
- Cell Connections : 2, 3, 4, or 5 electrode
- Input Impedance > 10 Tera-ohm
- Input Bias Current< 1 pA
- Scan Rate: 1 uV/s to 10000 V/s

- Applied Voltage Range : 1 range, ±10 V
- Applied Potential Accuracy : 0.1% of setpoint, 2 mV max accuracy
- Applied Potential Resolution : 300 µV
- Measured Potential Accuracy : 0.1% of setpoint, 1 mV max accuracy
- Measured Potential Resolution : 300 µV
- Compliance Voltage : ±12 V per channel

- Maximum Current : ±1 A per channel
- Current Ranges : 8 ranges (100 nA to 1 A)
- Applied Current Accuracy : 0.2% of range, 1 nA max
- Applied Current Resolution : 0.003% of range, 3 pA max
- Measured Current Accuracy : 0.1% of range, 100 pA max
- Measured Current Resolution : 0.003% of range, 3 pA max

- AC Frequency Range for EIS10 µHz to 2 MHz
- AC Frequency Accuracy : 0.005% or better
- AC Frequency Resolution : 0.0004%, 3 µHz max
- Potentiostatic Amplitude ≤ 10% of range, 1 V max
- Pot. Amplitude Resolution : 240 µV, 12 bit resolution
- Galvanostatic Amplitude ≤ 10% of range, 100 mA max
- Gal. Amplitude Resolution : 0.002% of range, 2.4 pA max

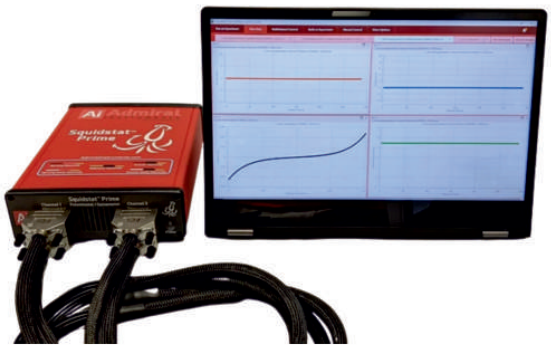
- Physical Dimensions : 24 cm x 17 cm x 6 cm
- Channel Cable Length : 90 cm
- Computer Interface : 1 USB per unit
- Power Supply Requirements : 100 – 240 VAC, 50 – 60 Hz

SQUIDSTAT PLUS
(MAKE: ADMIRAL INSTRUMENTS, USA)

"THE MOST COST-EFFECTIVE ELECTROCHEMICAL ANALYZER IN INDIA"

MULTICHANNEL ELECTROCHEMICAL WORKSTATION (POTENTIOSTAT / GALVANOSTAT)

- Channels Per Unit : 4
- Operating Modes : Pot / Gal / ZRA
- Cell Connections : 2, 3, 4, or 5 electrode
- Input Impedance : 10 Tera-ohm (typical)
- Input Bias Current : 10 pA (typical)
- Scan Rate : 1 uV/s to 10000 V/s



"THE MOST COST-EFFECTIVE ELECTROCHEMICAL ANALYZER IN INDIA"

- Applied Potential Range (Controlled Voltage) ±10 V
- Applied Potential Accuracy : 0.1% of setpoint, 2 mV max
- Applied Potential Resolution : 300 µV
- Measured Potential Accuracy : 0.1% of setpoint, 2 mV max
- Measured Potential Resolution : 300 µV

- Maximum Current : ±250 mA per channel
- Current ranges : 8 ranges (25 nA to 250 mA)
- Applied Current Accuracy : 0.1% of range, 1 nA max
- Applied Current Resolution : 0.003% of range, 750 fA max
- Measured Current Accuracy : 0.1% of range, 1 nA max
- Measured Current Resolution : 0.003% of range, 750 fA max

- Physical Dimensions : 24 cm x 17 cm x 6 cm
- Channel Cable Length : 90 cm
- Computer Interface : 1 USB per unit
- Power Supply Requirements : 100 – 240 VAC, 50 – 60 Hz

SQUIDSTAT PRIME
(MAKE: ADMIRAL INSTRUMENTS, USA)

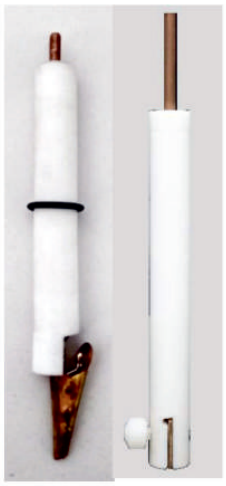
ACCESSORIES FOR POTENTIOSTAT/GALVANOSTAT/EIS

Pt Electrode:

- Platinum Mesh/Tip/Foil/Coil
- High mesh surface area
- Long term stability
- Robust design
- Banana pin connector
- Holder for griping
- 99.95% Pure Pt
- Customization Available

Working Electrode Holder:

- Available with Screw Type & Crocodile Type
- Copper Rod for Connection
- Teflon body holder



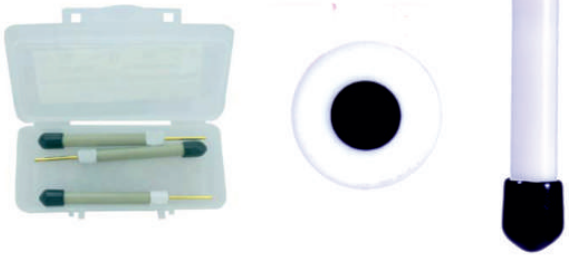
Reference Electrode (Ag/AgCl, SCE, Hg/HgO, Hg/Hg2SO4, Cu/CuSO4, Non Aq Ag/Ag^{+}):

- Dual Compartment
- Porous Glass Frit
- Long term stability
- Working temperature range 0℃ to 70℃
- Thermally stable

- **Standard Solution:**
  Ag/AgCl (Saturated KCl)
  SCE (Saturated KCl)
  Hg/HgO (1M NaOH)
  Hg/Hg2SO4 (1M H2SO4)
  Cu/CuSO4 (1M CuSO4)
  Non Aq Ag/Ag+ (10mM AgNO3, 0.1M TDAB in Acetonitrile)

Disc Type Electrode:

- Glassy Carbon / Gold / Platinum
- Available with 2mm, 3mm, 5mm Dia
- Cylindrical Casing
- Teflon Casing Material
- Mirror Finish Surface

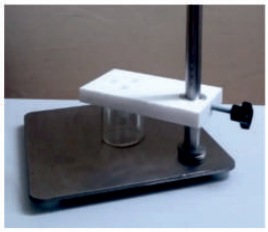


Press Fit Inert Cell:

- Available with 20 & 50 ml
- Screw tight fit
- Perfect to work in inert atmosphere
- Borosil & teflon material
- Hole Size on lid: 5mm & 6mm
- Room temperature functioning

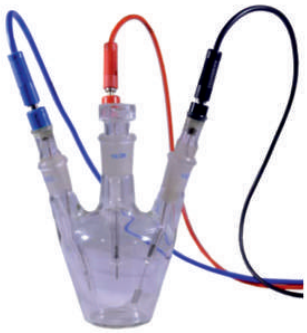
Mini gas tight Cell:

- Available with 10 ml & 20 ml
- Borosil & Teflon material
- Hole Size on lid: 5mm
- Max Temperature: 100^{o}C
- Available with & without Stand



Gas tight cell:

- Available volumes 100ml & 50ml
- Cell Type: Conical
- Neck Type: 4 Neck (3 of B14 & 1 of B19)
- Material: Borosil Glass
- Max Temperature: 100^{o}C



Gas tight thermal jacket cell:

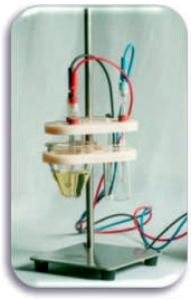
- Cell Type: Conical
- Neck Type: 4 Neck (3 of B14 & 1 of B19)
- Material: Borosil Glass
- Volume: 100 ml
- Max Temperature: 150^{o}C

Round bottom cell setup:

- Cell Type: Round Bottom
- Neck Type: 4 Neck (3 of B14 & 1 of B19)
- Material: Borosil Glass
- Volume: 100 ml
- Max Temperature: 200^{o}C

Electrochemical Cell Set-up:

- Combined with salt bridge compartment
- Cell Volume upto 100 ml
- Available with specific salt bridge
- Easy to handle
- Removable / Adjustable holders
- Working electrode connector
- Applicable at moderate temperature range (0 to 100℃)
- Customization Available



Flat Corrosion Cell:

- Available Volume: 50ml & 250 ml
- Counter Electrode : 10 mm x 10 mm Pt mesh
- 10 mm x 10 mm Working Electrode Slot
- Reference Electrode
- With & without luggin capillary for reference electrode
- Max Temperature (80°C)

Banana Connector Cables:

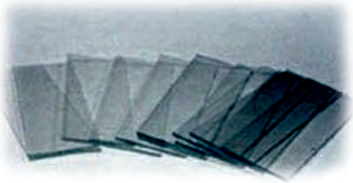
- Highly Flexible & Less Noise
- Current Rating: 5A
- Length 1 meter
- Connector type (3.5mm Banana Pin)
- Available Color: Red, Blue & Black

High Quality Alligator Clip:

- Corrosion Resistive
- Banana Female Connector
- Available Colors: Red & Black
- Optimum for Holding Samples
- Current rating: 15 Amp

ITO Plate:

- Base Material: Glass Slab
- Coated Material: ITO
- Conductivity: 8-12 Ω
- Dimension: 2cm x 1cm
- Max Temperature: 100^{o}C



PHOTOELECTROCHEMICAL CELL:

- Available Volume: 100 ml
- Quartz optical window size: Dia 12mm
- Detachable optical window
- Teflon lid for holding electrodes
- Working electrode holder included

H CELL:

- Two compartment cell
- Each cell volume (50 ml)
- Separator available
- Porous Glass frit separation (Optional)
- Membrane Separation (Optional)
- Teflon lid available for both compartments

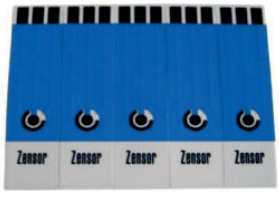
OTHER AVAILABLE ACCESSORIES:

Polishing Kit:

- Contains 1 bottle of 1.0 micron Alpha alumina powder,
- 1 bottle of 0.3-micron Alpha alumina powder,
- 1 big bottle of 0.05-micron Gamma alumina powder,
- 2 plastic plates for polishing pads,
- 5 pieces of 73 mm diameter 1200 grit disks (grey in color), 5 pieces of Carbimet diameter Nylon polishing pads 73 mm (white in color), and 10 pieces of 73 mm diameter Microcloth polishing pads (brown in color)

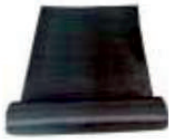
Screen Printed Electrodes:

- Dimensions: 50 x 13 mm (h x w)
- Working electrode: 3 mm diameter disk
- Materials: graphitic carbon powder (working and auxiliary electrodes), Ag/AgCl pellet (reference)



Conducting Carbon Cloth:

- 320um thickness and 320*160mm (L*W)



D520 Nafion Dispersion:

- Alcohol based 1000 EW at 5 wt%

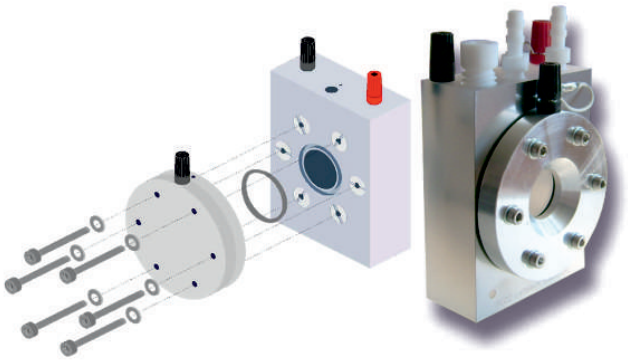
Faraday Cage:

- Frame Material: Aluminum
- Panels: 3.12mm thick Acrylic
- Visibility: 95%
- Side panel fixing method: Tightened by rubber beading inside frame slots
- Number of cable ports with end caps: 2Numbers
- Front door: Hinged or Sliding
- Finish (Frame): Black powder coated

WATER ELECTROLYSIS & GREEN HYDROGEN PRODUCTION ACCESSORIES

PECC Photo-Echem Cell:

- Physical dimensions (W x D x H): 60 x 25 x 80 mm
- Optical window diameter: 20 mm
- Optical window material: BK7 or Quartz
- Sample diameter: max. 20 mm (1)
- Electrolyte volume: 7.9 cm^3 (1)
- Light path length in electrolyte: 18 mm (1)
- Solid material: Teflon (PTFE)
- Reference electrode: Ag/AgCl
- Counter electrode: Pt coil
- Working electrode: Solid



Alkaline Electrolyzer (1 Cell - 20 Cell)

- Size: 100 x 100 x 27 mm
- Material: FRP, Engineering plastic
- Number of Cells: 1
- Membrane: Proprietary porous polymer
- Electrolyzer Current Range: 6 - 10A
- Operating Temperature Range: 15 - 70°C
- Electrolyte: Alkali Solution (KOH, 30wt%)
- Active Area per Cell: 12 cm^2
- H2 Flow Rate: 70 mL/min
- O2 Flow Rate: 35 mL/min
- Applied Voltage Range: 1.6 - 2V
- Power Capacity Range: 2.5 - 20W

PEM electrolyzer

- Permissible Voltage: up to 2VDC
- Permissible Current : up to 1.5A
- Hydrogen Production: up to 10mL/min
- Oxygen Production : up to 5mL/min
- Electrode Area: 2.9 cm^2
- Requires Commercial distilled (deionised) water with a conductivity of < 2 µS/cm
- Dimensions (H x W x D): 2.0" x 2.0" x 1.6" (51 x 51 x 41 mm)
- Weight: ~2oz (58 g)

Double-Cell PEM electrolyzer stack

- Hydrogen Production Rate: 65 cm3/min
- Oxygen Production Rate: 32.5 cm3/min
- Hydrogen Storage Volume: 80 cm3/min
- Oxygen Storage Volume: 40 cm3/min
- Power Consumption: 16 Watts at 4.0 VDC
- Permissible Operating Voltage: 0 - 4 VDC
- Permissible Operating Current: 0 - 4.4 A
- Permissible Operating Pressure: 0 - 5 mbar
- Electrode Area: 2 cells at 16cm2 each
- Operating Medium: Distilled Water
- Dimensions (H x W x D): (250 x 250 x 120 mm)
- Weight: 2.1 pounds (950 g)

COIN CELL RESEARCH PROCESS, EQUIPMENTS & CONSUMABLES


LifePO4


LiCoO2


Limn2O4


SBR

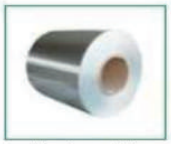

Acetylene Black

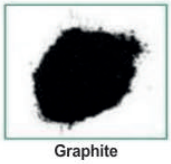

LiMnCoO2


Polyvinylidene Fluoride (PVDF)


NMP


SBR


Aluminum Foil


Graphite


Li4Ti5o12


Carboxymethyle Cellulose (CMC)

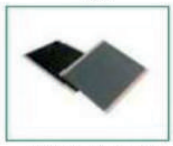

Aluminum Laminated Film


Battery Separator

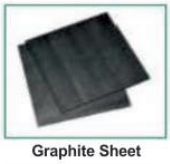

Hot Melt Adhesive


Strapping Tape

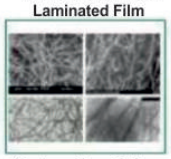

Formed Aluminum Laminated Film

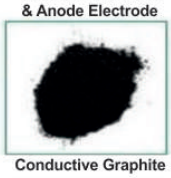

Cathode Electrode & Anode Electrode


Carbon Coil

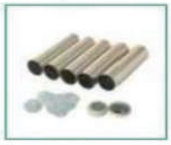

Graphite Sheet

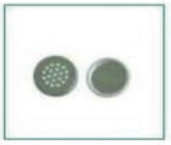

Nickel Aluminum Strip

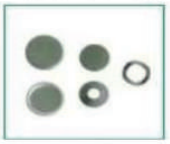

Carbon Nano Tubes


Conductive Graphite


Graphene

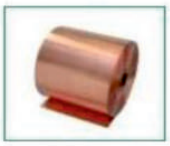

1B650 Battery Case


Air Can Cell Case


CR2032 Coin Cell Case


Lithium Metal Foil


Lithium Chips


Copper Foil


Nickel Aluminum Tube


Aluminum & Copper


Copper Foam


Aluminum Bottles

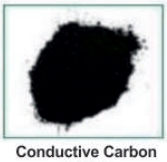

Activated Carbon


Carbon Coated Aluminum & Copper Foil


Nickel & Iron Nickel Foam


High Temperature Kapton Tape


Teflon Tape

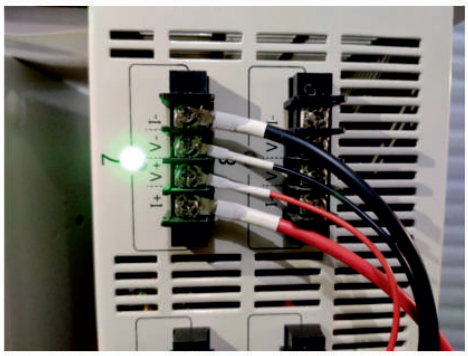

Conductive Carbon Black

BATTERY EQUIPMENT & ACCESSORIES

Multichannel Battery Tester:

Coin Cell Testing

- BTS 4000 5V 10mA
- BTS 4000 5V 20mA
- BTS 4000 5V 50mA

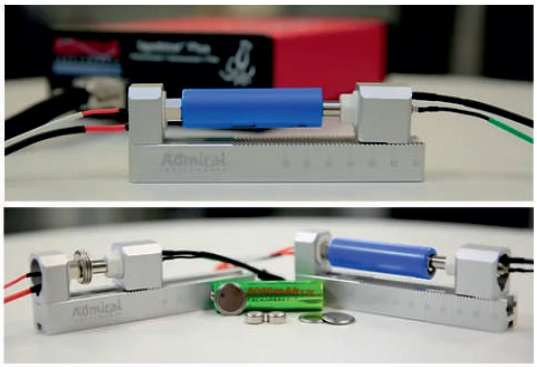


Pouch Cell & Cylindrical Cell Testing

- BTS 4000 5V 6A
- BTS 4000 5V 12A
- BTS 4000 10V 3A
- BTS 4000 10V 6A
- BTS 4000 20V 6A

Battery Pack Testing

- BTS 4000 5V 20A
- CE-6002n-100V50A (2CH)
- CE-6004n-100V50A (4CH)
- CE-6008n-100V50A (8CH)
- CE-7002-100V 100A

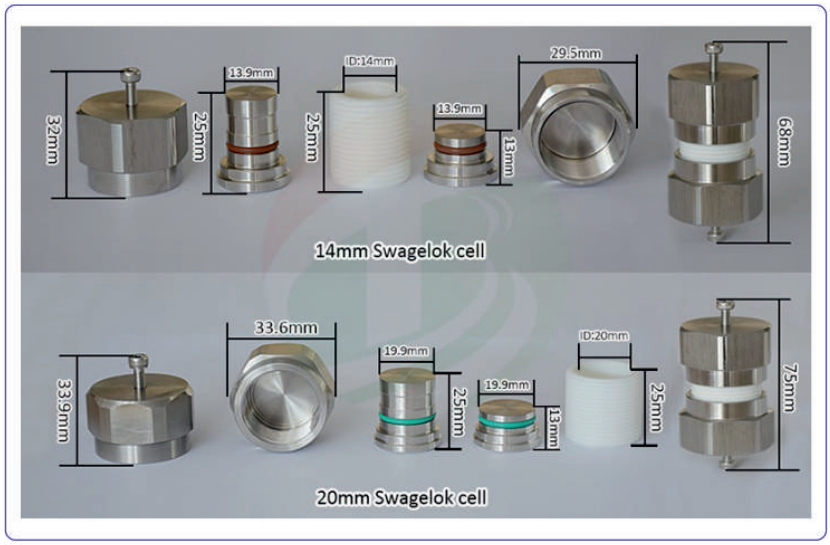


Battery Fixtures

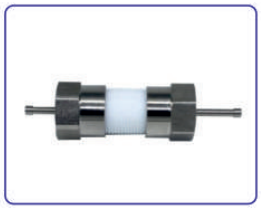
- Multipurpose battery test fixture is designed to connect a wide variety of battery form factors with a potentiostat.
- Suitable for any cylindrical or coin cell geometry is compatible.
- Sense terminal and current terminals are Isolated for lower noise during measurements.
- Suitable for four-point Kelvin connections as well.
- Specially designed for Squidstat potentiostat cables.
- Max recommended operating temperature: 85 degC.

BATTERY SPLIT TEST CELL

Model	TOB-EQ-STC	TOB-3 ESTC15
Structure	Full stainless steel	Full stainless steel
Electrode thickness	Max.6mm	Accept various thicknesses
Optional	10,12,15,19,20, and 24mm diameter customized	



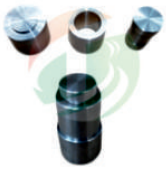
SWAGELOK CELL



Material SS 316 &
Teflon ID 13mm
OD 25.4mm

DOCTOR APPLICATOR

Model	TOB-KTQ-100	TOB-KTQ-180S	TOB-KTQ-150WA	TOB-KTQ-150D	TOB-KTQ-150DA
Feature	General type	With slurry guiding plate	Width adjustable	Double blades	Adjustable digital display
Material	Blade:304 stainless steel; frame: aluminum alloy				
Accuracy	10microns				
Thickness	0-3500um				
Width	50mm, 100mm, 150mm, 200mm, 250mm				

 Manual disc cutter for electrode	 Pneumatic Coin Cell Crimper	 Hydraulic Coin Cell Crimper	 Split Test Cell
 Pneumatic Button Coin Cell Crimping Machine	 Electric Coin Cell Crimping Machine	 Manual Punching Cutt	 Powder Compacting Hydraulic Press Machine
 Manual Powder Press Machine	 Powder Press Machine Mould/Die For Round Shape	 Three-Electrode Split Test Cell with Pressure Gauge	 Three-Electrode Split Test Cell
 Split Test Cell for R&D Coin Cell Battery	 Split Test Cell for Lithium Air Battery Research	 Hydraulic Sealing Machine For Cylinder Cell and Coin Cell	 Electric Coin Cell Crimper and Disassembling Tool
 Coin Cell Disassembling Tool	 Automatic Coin Cell Crimper For Coin Cell	 Coin Cell Disc Punching Machine	 Hydraulic Press Machine For Coin Cell Electrode
 Coin Cell Electrode Disc Cutter	 Manual Crimping Sealing Machine For Coin Cell Battery	 Hydraulic Coin Cell Crimping Machine	 Coin Cell Crimper

MATERIAL, SOURCES, SUBSTRATE ETC.

Sputtering Targets :

Sputtering targets are made from high-purity elemental metals Arc-casting in inert (argon) means 100% density and minimal O2. Sputter targets may also be hot-pressed, cold pressed, vacuum induction melted, hot or cold rolled or cut from sintered plate. The targets are then machined to within the tolerances of the customers's sputtering system in house. Our full machine shop with lathes, mills, grinders, EDM and experienced staff mean that we are able to make intricate shapes with difficult material. Finally, our targets are vacuum-sealed and shipped to the customer, usually as soon as they are finished. We offer quick turn-around times because we specialize in the research and development market.

Evaporation Materials :

Vast assortment of evaporation materials for use in thermal evaporation and deposition processes. All of our sources, pellets, and wire are made from the highest purity elemental metals. We are able to complete custom alloy orders. We utilize almost any combination of elements to create evaporate pieces. Our top selling materials include.
Barium and calcium, Chromium and chromium alloys, Osmium Magnesium and silver magnesium, Rhenium, Ruthenium Titanium and titanium alloys, Tungsten and Ti-tungsten.

Evaporation Pellets, Pieces & Wires :

We offer assortment of high purity materials, evaporation sources, and crucible liners for use in both thermal and E-beam evaporation as well as sputter deposition processes. We offer pure elements, compounds, alloys, ceramics, intermetallics, and mixtures in a variety of shapes, sizes, and purities for both R&D and Production.

Rare Earth Alloys :

We provide high purity rare earth metals and alloys. All lanthanide metals and alloys are arc -cast in a pure argon atmosphere into cold copper crucibles. We will supply you custom make almost any material at whatever size and stoichiometry you request. (Note : We dont work with promethium, which is radioactive.)

CONDUCTIVE INK, FLEX-E PRINTER

MicroPlotter Pro : Compact, precise picoliter printing

The SonoPlot Microplotter® II is a precision picoliter fluid dispensing system for the microarray and polymer electronics markets with significant advantages overexisting products in deposited feature size and type, regularity of volumesdispensed, and flexibility for the user. The core of the Microplotter® technology is a dispenser that uses controlled ultrasonics to deposit fluid in a non-contac manner. This patented technology can produce picoliter droplets that form features on a surface as small as5 µm wide. When combined with automatic surface height calibration, coefficients of variability for deposited feature diameters as small as 10% can be achieved. A wide range of fluids can be used, including aqueous solutions and many organic-solvent-based mixtures. Fluids that other dispensers struggle with, such as graphene or carbon nanotube suspensions, or fluids with viscosities up to 450 cP, can be deposited with ease. The ultrasonic pumping action is also an efficient cleaning mechanism for quickly depositing many solutions sequentially. In addition to spots, the Microplotter II can draw true continuous features, such as lines and arcs. These are uniform elements, not made from overlapping droplets like other technologies, and are particularly well-suited to the printed electronics field.

Key Features:

- Noncontact deposition • Features as small as 5µm
- Viscosities up to 450 cP • True contiguous lines and arcs
- Consistent spot size and shape with coefficients of variability as low as 10%
- 3-axis positioning with 5 µm resolution • Integrated digital video capture
- Automated surface calibration • SonoDraw™ software as a CAD layout tool
- Interchangeable holding platen for a variety of substrate sizes
- SonoGuide™ software for full automation and control

Applications:

- Rapid prototyping
- Graphene / carbon nanotube printing
- Additive repair
- Polymer microstructure fabrication
- pOLED printing
- High-density protein microarrays
- Patterning of live cells

Technical Specifications:

Feature size 5 µm - 200 µm
Feature types Droplets and contiguous lines and arcs
Deposition volume ≥ 0.6 pL
Deposition variability As low as 10%
Viscosity ≤ 450 cP
Positioning 35 x 30 x 7 cm (X, Y, Z axes) 5 µm resolution
Calibration Automatic surface height calibration
Camera Digital video capture & recording
Computer Included iMac **Weight** 91 kg (200 lbs)
Software SonoGuide control & SonoDraw CAD tools included
Dimensions 86.4 x 71.1 x 48.3 cm (34 x 28 x 19 in.)
Power 3.0 A for 100-120 V or 1.5 A for 220-240 V

Micro Plotter Proto : Benchtop picoliter printing

The SonoPlot Microplotter® Proto is a benchtop picoliter fluid dispensing system forthe microarray and printed electronics markets with significant advantages over existing products in deposited feature size and type, regularity ofvolumes dispensed, and flexibility for the user. The core of the Microplotter® technology is a dispenser that uses controlled ultrasonics to deposit fluid in a non-contact manner. This patented technology can produce picoliter droplets that form features on a surface as small as 20 µm wide. When combined with automatic surface height calibration, coefficients of variabilityfor deposited feature diameters as small as 10% can be achieved. A wide range of luids can be used, including aqueous solutions and many organic-solvent-based mixtures. Fluids that other dispensers struggle with, such as graphene or carbon nanotube suspensions, or fluids with viscosities up to 450 cP, can be deposited with ease. The ultrasonic pumping action is also an efficient cleaning mechanism for quickly depositing many solutions sequentially. In addition to spots, the Microplotter® Proto can draw true continuous lines. These are uniform elements, not made from overlapping droplets like other technologies, and are particularly well-suited to the printed electronics field.

Key Features:

- Noncontact deposition
- Features as small as 20 µm
- Viscosities up to 450 cP
- True contiguous lines
- Consistent spot size & shape with coefficients of variability of 10%
- 3-axis positioning with 10 µm resolution
- Integrated digital video capture
- Automated surface calibration
- Interchangeable holding platen for a variety of substrate sizes
- SonoGuide™ software for full automation and control
- SonoDraw™ software as a CAD layout tool

Applications:

- Rapid prototyping
- Macroelectronic printing
- MEMS printing
- Protein microarrays
- MALDI-ToF spotting
- Patterning of live cells

Technical Specifications:

Feature size 20 µm - 200 µm
Feature types Droplets and contiguous lines
Deposition volume ≥ 1 pL
Deposition variability As low as 10%
Viscosity ≤ 450 cP
Positioning 31 x 31 x 7 cm (X, Y, Z axes) 10 µm resolution
Calibration Automatic surface height calibration
Camera Digital video capture & recording
Computer Included iMac
Software SonoGuide control & SonoDraw CAD tools included
Dimensions 58.4 x 59.7 x 61 cm (23 x 23.5 x 24 in.)
Weight 30 kg (66 lbs)
Power 3.0 A for 100-120 V or 1.5 A for 220-240 V

PURE MOD

MODULAR GLOVE BOX
WITH STAND-ALONE PURIFICATION UNIT
< 1PPM H_2O & O_2

PURIFICATION UNIT-CORE-10

- Single-line H_2O - O_2 stand-alone purification unit
- Closed loop circulation - Adjustable flow rate 0-120m³/h
- Regeneration N_2 or Ar + 3-10% H_2
- Leak rate <10E-5mbar l/s
- Automatic regeneration
- Purification capacity Core-10
  - **45 L** **O_2**
  - **1250 g** **H_2O**

FLEXIBILITY AND MODULARITY

Workstation: single-sided - double-sided Numerous options for all processes in R&D and production

- Mini vacuum chamber Ø 150
- Mini heating vacuum chamber Ø 150
- T-shaped vacuum chamber
- Solvent trap
- Freezer (range down to -40°C)
- Anti-static solutions
- Filters
- Microscopes
- Feedthroughs

PURE EVO

PREMIUM CUSTOM GLOVE BOX
WITH STAND-ALONE PURIFICATION UNIT
< 1PPM H2O & O2

PURIFICATION UNIT-CORE-12

- Single-line H_2O - O_2 stand-alone purification unit
- Leak rate <10E-5mbar l/s
- Closed-loop circulation - Adjustable flow rate 0-120m³/h
- Automatic regeneration
- Regeneration N_2or Ar + 3-10% H_2
- Purification capacity
  - 55 L O_2
  - 1500 g H_2O
- Options : double-line H_2O - O_2 stand-alone purification units

LIMITLESS CUSTOMIZATION

Design and operating adapted to any specific or complex processes

- Interconnectable glove boxes modules
- Customized dimensions and shapes
- 100% compatible with all options and equipment.
- Flexible and scalable design.
- Designed for the integration of simple and sophisticated machinery and instrumentation
- Standard configuration and options
  - **Design:** 100% removable - rounded corners
  - **Surface finish:** satin - electropolished
  - **Stainless steel quality:** AISI 304L - AISI 316L (1.4306) (1.4404)

PURE SMART

STANDARD GLOVE BOX
WITH STAND-ALONE PURIFICATION UNIT
< 1 PPM H_2O & O_2

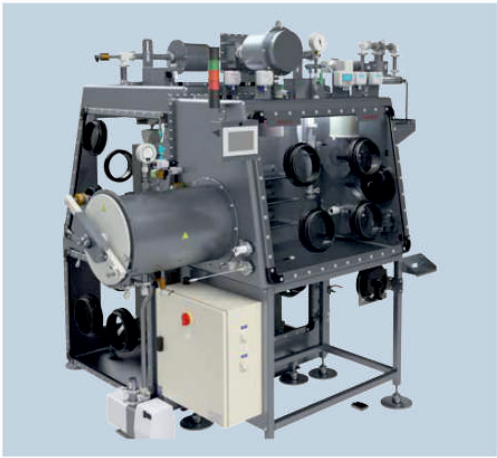
PURIFICATION UNIT-CORE-8

- Single-line H_2O - O_2 stand-alone purification unit
- Leak rate <10E-5mbar l/s
- Regeneration N_2or Ar + 3-10% H_2
- Closed-loop circulation, 90m³/h flow
- Automatic regeneration
- Purification capacity Core-8
  - 36 L O_2
  - 1000 g H_2O_2

MODULAR EQUIPMENT

Wide range of common equipment and options for all traditional glove boxes applications

- Mini vacuum chamber Ø 150
- Solvent trapping
- Freezer (range down to -40°C)
- Antistatic solutions
- Filters
- Microscopes
- Feedthroughs



G BOX

MODULAR GLOVE BOX
UNDER REGULATED ATMOSPHERE

REGULATED GLOVE BOX

- For scientific and industrial applications
- Regulated and climatic custom glove boxes
- Glove boxes under pure insert gas (%) operating in negative pressure

ADVANTAGES

- Flexible and easily upgradable design
- Standard and custom models
- Possible connection with other range of glove boxes
- Ideal for controlled atmospheres with automatic regulation of moisture (0-70%RH) and/or oxygen (<1%0_2)
- Wide range of transfer systems
- 3D design drawings

POSSIBLE APPLICATIONS...

- Configurable climatic chambers:
  - Moisture (% RH): drying and/or humidification
  - Temperature: heating and/or air-conditioning
- Development of Perovskite photovoltaic cells (PSC)
- Low-oxygen reducing atmospheres against flammability or explosiveness (chemical substances, powders...)

G MEGA

LARGE-VOLUME MODULAR GLOVE BOX

MODULAR GLOVE BOXES

- Under purified controlled atmosphere for industrial application and production

ADVANTAGES

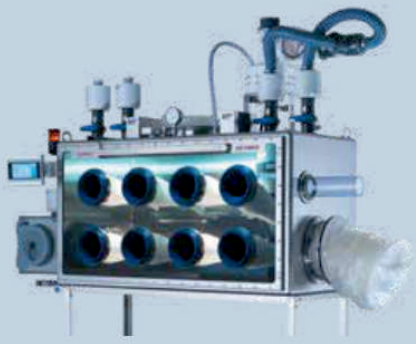
- Based on Meccano® system, robust, dedicated to industrial manufacturing
- Combinable elements: can yield endless custom solutions based on standard components
- Easy-removable mechanical design for:
  - fast and easy maintenance of internal production machines and tools
  - installations relocation
  - components recycling in case of reconfiguration or extension

POSSIBLE APPLICATIONS...

- Additive Manufacturing
- Aeronautics
- Integration of industrial robots
- Machines and processes securing under reducing atmosphere
- Cowling of installations or assembly-lines under anti-oxidizing and/or low-hygrometry atmosphere

HIGH SECURITY GLOVE BOXES

FOR A RELIABLE OPERATOR AND ENVIRONMENT PROTECTION



Nuclear glove box on analysis line [Safeguards Analytical Labs - IAEA]

Nuclear glove box with safety valve and biological lead glass protection

Glove box for Industry: maintenance and secured recycling of asbestos waste [aeronautics]

ADVANTAGES

- Flexible and easily upgradable according to use

  Customized project follow-up:
- Technical support, 3D drawings simulation, technical and ergonomic setup approval. Versatility
- Level of security adaptable according to products dangerousness and manipulated substances
- Optimal protection of the operator and environment thanks to JACOMEX valves
- The wide range of equipment and options allow to answer all your requirements

G ISO

HIGH SECURITY ISOLATOR UNDER FILTERED INERT GAS

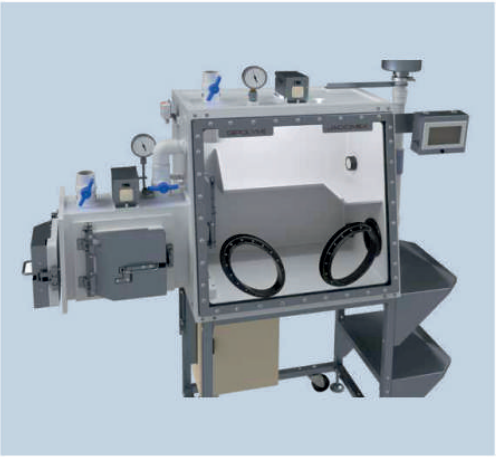
ISOLATOR

- Technicity, performance and enhanced finishing for demanding processes
- **Available options:**
  - Laminar flow
  - Bio-decontamination H_2O_2
  - O_2 Purification (anaerobia 1ppm)
- **Normative framework:**
  - Compliance with ISO 14644-1, ISO 10648-2.
  - Engineering (GEP) and manufacturing (GMP) compliance
  - Compliance with FDA 21CFR part.11 and computerised systems GAMP5

ADVANTAGES

- Custom design
- Operators-products-environment protection
- **Customized project follow-up:**

  Technical support, 3D drawings simulation, technical and ergonomic configuration approval
- **Equipment fully adjustable according to the application:**
  - Filters: HEPA H13-H14 or ULPA
  - Transfer systems: airlock – bag-in-bag-out – RTP
  - Controlled atmosphere: moisture (0-70%RH) and/or oxygen control
  - Operator security: JACOMEX pressure regulation and security valve
  - Particule cleanliness according to ISO 14644-1 (class ISO5 when not operating)



G POLYM

GLOVE BOXES MADE OF POLYMER MATERIALS

VERSATILE GLOVE BOXES

- A specific use for each type of plastic :
  Acids, solvents, radiations resistant, mechanical resistance, optical, thermal, hygienic properties, weights...

ADVANTAGES

- Choice of material: Corian, PMMA, PVC, PE
- Flexibility: options and equipment fitted to you application
- Dimensions: standard and custom

RVL SOLVENT PURIFICATION SYSTEM

FREE STANDING SPS SYSTEM:

We offer free standing SPS system and this open frame concept allows for the following:

- Customized configurations to meet demanding space requirements.
- Expandable frame design for future additions of Solvents.
- Stainless Steel Piping for Solvent and Argon lines.
- Large volume vacuum & argon manifolds.
- Unlimited Solvent population.
- Glove Box Integration.

COMPACT SPS SYSTEM

We offer compact system for those requiring only one or two Dry Solvents in the lab. Space saving and cost effective design.

- Single or dual column options.
- Easy self-install.
- Standard Solvent Purification Columns.
- Standard Solvent Take-off plate and Flask connection.
- Multiple Solvent options.
- All systems offer easy reasonable columns. Easy refilling or replacement of columns.
- We also undertake hood installed SPS system for your lab.
- Contact our expert engineer for designing suitable SPS system for your existing hood complete with gas station system.

GAS CONTROL BOX

Features : Gas Control Box is used when there is more than one Gas Chromatogragh. It helps to control the flow and pressure of different gases for different GC's. From a Gas Purification System, purified gases can be supplied to a number of Gas Chromatographs through Gas Control Boxes when each instrument requires different delivery pressure & flow. Gas Control Box is generally installed between Gas Purification system and Gas Chromatograph. It consist of pressure gauge, pressure regulator and toggle valves. This also isolates system.

Our range of Gas Control Box is manufactured using quality raw material and is catering to the requirements of aroma chemicals, edible oil refinery and petro-chemical industries. Our range of Gas Control Box can be installed on a Wall or Instrument Table and can be supplied as per the clients' specific requirements.

ANTI-VIBRATIONTABLE WITH AUTO LEVELLING PNEUMATIC VIBRATION MOUNTS

Anti Vibration Table has natural frequency in the range of 1.0-1.2 Hz along with self leveling feature. Available self-levelling accuracy is +/- 0.1 mm with minimum setting time, depending upon the application requirement. Membrane air springs are used which damps most of the incoming vibrations above 10 Hz. Bottom leveling feet DLM provide leveling and vibration reduction. Level difference on top of the Hone comb Table Top due to any load change and the equipment is compensated within milliseconds.

S. NO.	MODEL	LOAD(Kg)	LENGTH (mm)	WIDTH (mm)	HEIGHT at mean Position (mm)	HONEY COMBTABLE TOP THICKNESS (mm)
1	DITAM-SS-HC-01-757590	upto700	750	750	900	100
2	DITAM-SS-HC-02-906090	upto800	900	600	900	100
3	DITAM-SS-HC-03-909090	upto1000	900	900	900	150
4	DITAM-SS-HC-04-12010090	upto1200	1200	1000	900	150
5	DITAM-SS-HC-05-12012090	upto1200	1200	1200	900	150
6	DITAM-SS-HC-06-15010090	upto1500	1500	1000	900	200
7	DITAM-SS-HC-07-18012090	upto1500	1800	1200	900	200
8	DITAM-SS-HC-08-24015070	upto3600	2400	1500	700	240

*Customized dimensions and specifications are possible as per requirement

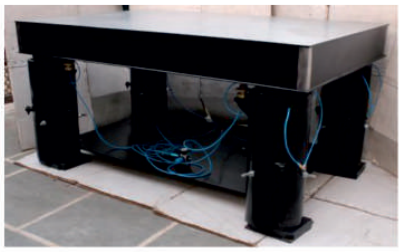
HONEYCOMB TABLETOP TECHNICAL SPECIFICATIONS:

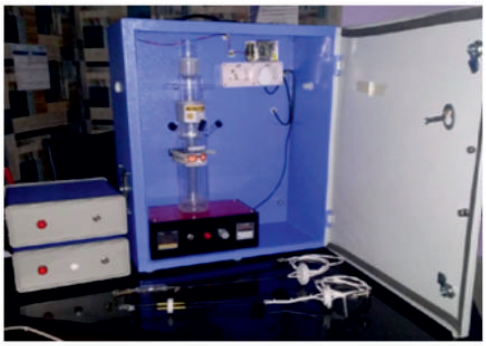
- Top skin : 5mm thickness (SS-304)
- Surface Flatness +/- 0.1 mm over 500 mm sq.
- Core: trussed honeycomb core structure with 0.25mmsteel sheet material, vertically bonded closed cell construction.
- Mounting holes - M6, mounting hole pattern- 25mmgrid.
- Deflection under load :<1.5x 10^-3 mm, relative motion <3.0 x 10^-7mm, Dynamic deflectioncoefficient<1x 10^-3.
- Horizontal isolation : 5 Hz>=85% ; 10 Hz>=95%; Horizontal isolation resonance<=1.0Hz
- Horizontal and Vertical amplification atresonance:10 dB.
- Vertical resonant frequency :1.25Hz
- Horizontal resonant frequency :1.0 Hz
- Vertical trans miscibility at resonance : 10dB
- Horizontal trans missibility at resonance :12dB
- Vertical transmissibility at 5Hz : -20dB (90%)
- Horizontaltransmissibilityat5Hz : -24 dB(94%)
- Vertical transmissibility at 10Hz : -32.5dB (97.5%)
- Horizontal transmissibility at 10Hz : -30dB (97%)

LABORATORY SET UP SOLUTIONS.

We Provide complete laboratory set up by installing laboratory furniture and various essential equipment like:

- Fume Hoods
- Island Table
- Inflammable Solvents Storage System
- Acid and corrosive materials storage systems
- Bio safety cabinets
- Hot air Oven
- Heating and refrigerated incubators
- Vacuum Oven
- Autoclaves
- Wet Benches etc.
- Photochemical Reactor





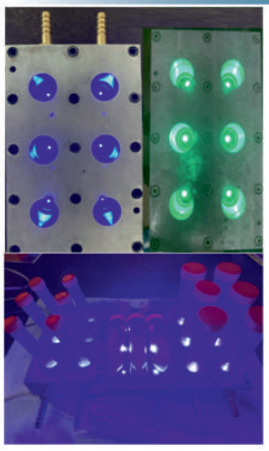
HYDROTHERMAL AUTOCLAVE REACTOR

The Photo catalytic Reactor components includes supply schedule: Lamp source UV, Lamp source VIS, Power supply UV, Power supply VIS, UV Protection Cabinet, Circulation connection, Magnetic Stirrer.

TECHNICAL SPECIFICATION

- Reactor: Photo catalytic Reactor with triple jacketed with 3 port to insert : (i) catalyst (ii) Sample draw (iii) for additional use like temperature sensor etc.
- Protection Cabinet: UV Protection Cabinet
- Material of Construction: MS Powder Coated
- Reactor MOC: Inner Jacket made of Quartz, Outer jacketed made of borosilicate. Extra cooling jacket for water circulator with two port inlet and outlet Inner jacketed quartz immersion well
- Source lamps: UV and UV-Vis
- Connection: Grounded
- Voltage/Current/Frequency: 230V/16A/50Hz
- Power: 500W (standard) depending on choice of lamp.
- Magnetic Stirrer: Digital magnetic Stirrer with timer
- Stirrer RPM: 100-1500 rpm
- Environmental: Operating Temperature: 15 °C – 50 °C
- Max. Relative Humidity: 80 %
- Chiller Circulator: (Optional) Minimum temperature 5 °C, Flow Rate 6 LPM

LED PHOTOCHEMICAL BLOCK REACTOR



THERMAL LIGHT BLOCK REACTION SET UP

- Efficiency across the spectrum of high power colour and white LEDs
- LEDs specifically selected for the highest performance at given frequency and power.
- Light output and efficiency evaluated at elevated drive current and temperature.
- Specific wavelengths targeted within par range for optimized reactions, e.g. plant growth.
- Create multiple spectral configurations quickly and easily
- We customize product as per demand in design and electronics under special terms and conditions of sales and delivery.
- Illumination lights: Blue, Green, Red, White, UV, Purple etc.
- Power: 3 W each LED
- Operating Voltage: 230V/5A/50Hz
- Jacketed for cold water circulation up to 3 lpm

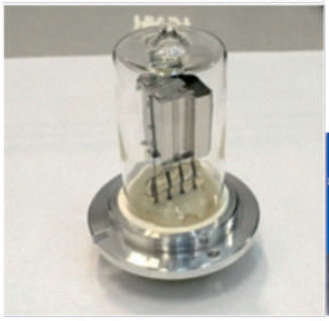
- Applications: Effect of light study on chemical processes, molecular biology, photosynthesis, drug discovery, drug synthesis etc.

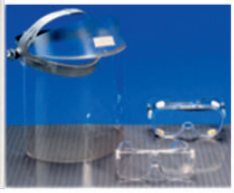
HIGH POWER LIGHT REACTOR

HIGH POWER PHOTOCHEMICAL LED REACTOR :

- Suitable effect of high power lights of selected wavelength, power on chemical synthesis, plant growth, drug discovery etc.
- Copper core Heat sink better cooling effect.
- External fan cooling.
- Fit for the 20W-100W High Power Led
- The fan Voltage: 12V DC,Electric current:0.2A
- Package Include: heatsink with fan, + 1 removable 44mm Glass Lens, 50mm Reflector cup, fixed bracket
- Lens: Diameter x Height x Angle: 44 x 11mm/120º
- Focal Length: 52mm
- Material: high quality glasses
- Fan Dimension: 79*79*29mm (L*W*H)
- AluminumHeatsink Dimension: 80*67(L*W)

SCIENTIFIC LIGHT SOURCES



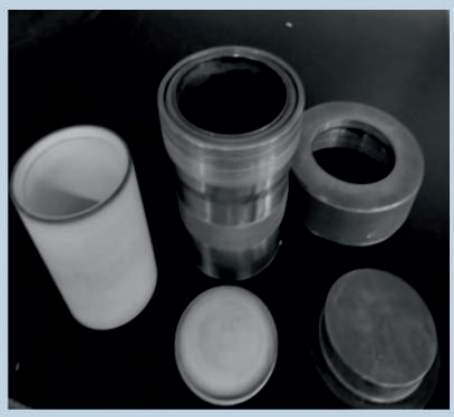


- Deuterium Lamps
- Mercury Short Arc lamps
- Xenon High Pressure lamps
- Xenon Short Arc lamps
- Xenon Flash lamps
- Mercury Xenon Short Arc lamps
- UV-LED spot light source, Lightningcure emits high intensity UV beams but uses only half the power of UV-LED light sources made by other companies. These energy savings drastically cut your costs. This light source also emits little heat, so less power is needed for air conditioning during production.
- Safety Eye wears: UV Blocking spectacles, UV Blocking face shield, UV Blocking goggles.

We offer science lighting products from leading po[ular brands like: AnalytikJena, AnalytikJena (UVP), Dymax, Eiko, Excelitas, First Light Technologies, GE Lighting, Hamamatsu
Heraeus, Hi-Tech Lamps, Osram, Philips, Sankyo-Denki, Techniquip, Ushio, Veolia, Voltarc

HYDROTHERMAL AUTOCLAVE REACTOR

RVL SCIENTIFIC AND ENGINEERING PRIVATE LIMITED



We have developed and supply hydrothermal reactor with capacity 10ml, 25ml, 50ml, 100ml, 150ml, 200ml, 250ml, 300ml, 400ml, and 500ml. We employed double coated Teflon vessel for better performance. The autoclave has been designed to use for external heating where the reactor can be heated in the oven, furnace or self-heating. The Teflon-lined hydrothermal synthesis autoclave is corrosive resistant. It is also acidic and alkaline resistant hence used for highly alkaline and acidic solutions. Hydrothermal synthesis reactor is widely used for the synthesis of materials, energy engineering and other fields of scientific research and experiments. The reaction is performed inside the Teflon chamber within stainless steel. After the completion of the reaction i.e when synthesis reactor is cool, reaction system can only open for the facilitate the safety and reactor life.
Custom modifications are accepted adding needle valve, pressure gauge, rupture disk, QUARTZ window, electrodes etc. The hydrothermal synthesis reactor is fabricated using high-quality stainless steel 316.

Application Areas:
- Environmental science
- Energy
- Advance material science
- Material Engineering
- Nanotechnology
- Polymer industry
- Catalysis
- Petrochemical Industry
- Composite

Features:
- Easy to handle
- Threads are very smooth to lock and unlock
- Can be customized as per requirement
- Primary screw type cap for basic tightening
- Best price and cost effective
- Two cap has been provided at the top of the reactor for extra tightening to avoid leakage

Applications:
- Chemical synthesis (e.g ceramics, semiconductor)
- Synthesizing of nanoparticles (e.g nanoparticle , nanorod)
- Polymerization reaction
- Hydrothermal decomposition
- Catalyst synthesis
- Hydrothermal oxidation
- Hydrothermal precipitation
- Material Digester / digestion
- Crystallization process

Technical Specifications of Hydrothermal Autoclave Reactors:
- Maximum operating temperature: ≤180°C
- Working Pressure: ≤3MPa or 30 Bar
- Safe temperature: 180°C
- Material: Shell made of high-quality nonmagnetic 316 stainless steel

LIQUID HANDLING EQUIPMENTS

BOTTLE TOP DISPENSER

ACCUMAX VA

ACCUMAX PIPPETTE CONTROLLER

iStir HP550/ iStir HP350
Hot Plate Magnetic Stirrer

iStir OH Elite – Overhead Stirrer

iFuge M08/M09VT
Smart Personal Micro Centrifuge with Microprocessor

iStir HP5M/10M/15M – 5/10/15 Station Heated Magnetic Stirrer with Microprocessor & Brushless Motor

iFuge D06 – Doctor Centrifuge with Microprocessor & Brushless Motor

iFuge C4000 – Clinical Centrifuge with Microprocessor & Brushless Motor

DEWAR FLASKS CYLINDRICAL

Technical Data

Type	Capacity (ml)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Holding Time LN2 (Hours)	Evaporation Rate LN2 (L/Day)
Cylindrical	500	57	70	81	210	260	30	0.35
Cylindrical	750	57	70	81	310	370	59	0.3
Cylindrical	1250	57	70	81	500	550	118	0.25
Cylindrical	2100	77	95	105	500	550	130	0.4
Cylindrical	3200	90	115	124	600	665	193	0.45

DISH-SHAPED DEWAR FLASKS

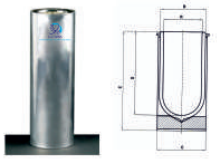
Technical Data

Type	Capacity (ml)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Round Bottom Dia. Φ (mm)	Usable Capacity max. (ml)
Dish-Shaped	260	100	120	130	65	110	85	250
Dish-Shaped	680	138	160	170	80	125	105	500
Dish-Shaped	1600	170	205	215	110	145	131/166	1000/2000

DEWAR FLASKS CYLINDRICAL STAINLESS STEEL

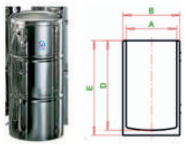
Technical Data

Type	Capacity (ml)	A (mm)	B (mm)	D (mm)	E (mm)	Holding Time LN2 (Hours)	Evaporation Rate LN2 (L/Day)
Cylindrical SS	500	65	87	180	203	12	1.0
Cylindrical SS	1000	85	107	206	231	21	0.9
Cylindrical SS	2000	100	122	285	312	42	1.1
Cylindrical SS	3000	185	200	160	190	22	3.1



DEWAR FLASKS CYLINDRICAL

DISH-SHAPED DEWAR FLASKS

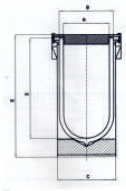


DEWAR FLASKS CYLINDRICAL STAINLESS STEEL

LIQUID NITROGEN CARRYING DEWAR

Technical Data

Type	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Holding Time LN2 (Hours)	Evaporation Rate LN2 (L/Day)
Carrying Dewar	1	100	120	132	150	215	17	1.2
Carrying Dewar	2	138	160	170	170	245	23	1.9
Carrying Dewar	3	138	160	170	230	305	40	1.6
Carrying Dewar	4	138	160	170	310	385	71	1.4



COLD TRAPS

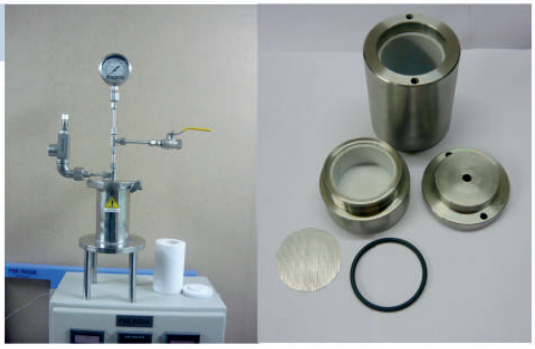
TWO COLD TRAP WITH VACUUM PUMP SETUP

GLOVES FOR THE GLOVE BOXES

Discription :

- 100% made in India
- Supplied with suitable glove tightening O ring.
- Supplied with material test report and leak test report.
- Hand specific and ambidextrous available for comfortable fit
- Synthetic (Butyl) Rubber full hand gloves for covering finger to shoulder.
- Rubber quality suitable up 110℃ temperature direct touch.
- Moisture, abrasion and oil resistance.
- Suitable for protection against acid fumes, chemical fumes, solvents resistant and glass particles.
- Available for glove port diameters : 154mm, 186mm and 220mm
- Length sizes, available : 800mm and 850mm.

PRESSURE FILTER REACTOR



- These filters are designed for filtration, pressurizing the vessel with up to 6bar pressure. The filter vessel is jacketed and can be temperature controlled by a circulator. Process connections are standard Tri clamp configuration.
- Capacity: max 100 to 5, 10, 20 liter
- Max pressure: 10bar (peak) 8bar (operation)
- Safety pressure: 10bar
- Temperature: - 50°C to +250°C Filter: sintered 8 - 115 micron
- Material: stainless steel, Hastelloy C22
- Build material: SS316 metal parts with PTFE coated tubing.
- Safety features: pressure release diaphragm or other similar safety feature, trap bottle for backwards flow prevention.
- Parts: All parts PTFE which does not release particles.

GEL DOC SYSTEM

Coming Soon

Features

- High resolution 5.0 megapixel monochrome camera (UVCI-1100).
- PC integration with real time image.
- Capture/Analysis software included
- Pull out UV Transilluminator for easy gel cutting
- Pre-focused lens allow one touch image capture
- Variety of optional accessories available
- Easy installation, ready to use right out of the box
- UV safety cut-off switch when door is open

UV LAMPS

- Portable, light weight, provides UV radiation with wavelength of 365 nm or 254 nm or a combination of both.

UV CABINET

- UV chamber with dual UV light arrangement
- Long wave (UV-A, 365nm)
- Short wave (UV-C, 254nm)

LAB REACTORS

The Laboratory reactor manufactured by RVL is based on vast expertise of over 20 years. The laboratory reactor is suitable for carrying out chemical reactions, pharmaceutical formulations and cosmetic products development. Unique double jacket design of reactor allows heating and cooling depending on applications.

Laboratory Reactor system consisting of :

- Motorized lifting Stand system
- Laboratory stirring unit from choice of various models depending on viscosity and control applications.
- Anchor stirrer with flow
- Reactor cover with blanks ports for attaching other instruments like temperature monitor, homogenizer, dosing unit, vacuum pump etc.
- Bottom discharge system.

Technical Data

Specifications	**Reactor – 2** 	**Reactor – 5** 
Usable Volume min.	500ml	1000ml
Usable Volume max.	2000ml	5000ml
Working temperature min. Working temperature max. Attainable Vacuum	Room temp. °C 250 °C 2 mbar	Room temp. °C 250 °C 2 mbar
Viscosity max.	See Choice of Motors	See Choice of Motors
Speed range	As per choice of Motor	As per choice of Motor
Stand Type	Motorized lifting Stand with push button	Motorized lifting Stand with push button
Material in contact with medium	FFPM, PTFE, SS316	FFPM, PTFE, SS316
Weight	35 Kg	55 Kg
Permissible Ambient Temp. RS 232 interface Voltage/Frequency	5 - 47 °C On Choice of Motor 230 / 50 Hz	5 - 47 °C On Choice of Motor 230 / 50 Hz
Power input	On Choice of Motor	On Choice of Motor

Motors Specifications

Specifications	**Motor 1**	**Motor 2**	**Motor 3**
Stirring quantity max	25 L (H2O)	40 L (H2O)	100 L (H2O)
Motor rating input	120 W	190 W	130 W
Motor rating output	72 W	130W	84W
Motor principle	Brushless DC	Brushless DC	Brushless DC
Speed display	LCD Display	LCD	7 Segment LED
Speed range	50 - 2000 rpm	50 - 2000 rpm	30 - 2000 rpm
Viscosity max.	25000 mPas	50000 mPas	100000 mPas
Maximum Torque	40 Ncm	80 Ncm	40 Ncm
Voltage/Frequency	230V/50 Hz	230V/50 Hz	230V/50 Hz

LABORATORY AUTOCLAVE / HIGH PRESSURE REACTOR

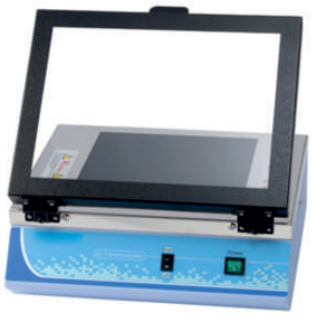
We design & manufacture Autoclaves / High Pressure Reactor upto 350 Bar & Temperature upto 600°c in arious material of constructions like SS 316, SS 316L, Hastelloy B, Hastelloy C, Nickel, Monel, Inconel, Titanium, Tantalum, Zirconium etc. for R & D to Pilot plant scale for various industries.

It is mainly used for reaction like hydrogenation, dehydrogenation, alkylation, amination, bromination, carboxylation, catalytic reduction, chlorination, esterification, ethoxylation, halogenation, methylation, nitration, oxidation, ozonisation, polymerization, acid digestion at high pressure, high temperature & vacuum.

TECHNICAL SPECIFICATION

AUTOCLAVE CAPACITY	MINIMUM STEERABLE VOLUME	MOTOR RATING	STD. DESIGN PRESSURE	STD. DESIGN TEMPERATURE	OPTIONAL DESIGN PRESSURE	OPTIONAL DESIGN TEMPERATURE
50 ml	20 ml	1/4 HP	100 Bar	250°c		
100 ml	20 ml	1/4 HP	100 Bar	250°c		
250 ml	50 ml	1/4 HP	100 Bar	250°c		
450 ml	60 ml	1/4 HP	100 Bar	250°c		
750 ml	60 ml	1/4 HP	100 Bar	250°c		
1 Liter	130 ml	1/4 HP	100 Bar	250°c	Available	Available
2 Liter	130 ml	1/4 HP	100 Bar	250°c		
5 Liter	360 ml	1/4 HP	100 Bar	250°c	upto	upto
10 Liter	1 Liter	1/2 HP	100 Bar	250°c		
20 Liter	2.5 Liter	1/2 HP	100 Bar	250°c	350 Bar	600 °c
25 Liter	2.5 Liter	1/2 HP	100 Bar	250°c		
50 Liter	6 Liter	1 HP	50 Bar	250°c		
75 Liter	8 Liter	1 HP	50 Bar	250°c		
100 Liter	12 Liter	1.5 HP	50 Bar	250°c		

UV TRANSILLUMINATOR



Features

- High intensity / low intensity switch for single wavelength wavelength modes UV protection cover • Long life time filter.
- Wavelength Range : 254nm or 312nm or 365nm or 254/365nm or 254/312nm models available • Visible dimension: 26 x 21 cm or 21x 21 cm

Specification

- Wavelength: 254 / 312 / 365nm Filter Size: 26 x 21cm Light Source: 8W x 6 tubes
- Filter: Long life filter, High effiency reflector.
- Intensity Switch: High (100%)/Low (70%) intensity switch for single wavelength mode.
- Fast Start Up: New high quality starter to simultaneously illuminate tubes when switched on.
- UV Resistant Plastic Cover(W x D): 330 x 250mm • Unit Dimension (W x D x H): 340 x 295 x 100mm
- Rated Voltages: 220V

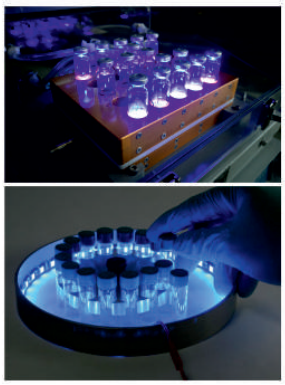
ENCAPSULATION MACHINE FOR R&D PURPOSES

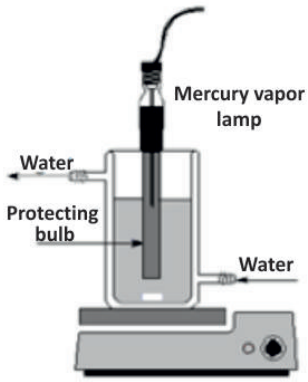
Features :

- Customised systems for R & D Purposes.
- Fully Automatic / Semi Automatic /Manual Systems.
- Servo based / Pneumatic based systems.
- Jigs for different sizes of glass substrates.
- Clean room complaint with no external grease or oil used for lubrication.
- Complete system can be integrated with in glove box.
- Different sizes of substrates 15x15mm to 150x150 mm using additional jigs possible.
- Reproducible positioning with self centering of size of substrates using jig within 2% deviation from true centre in direction of movement.
- Pneumatic based controlled movements with pressure adjustments from 0.1 bar to 2 bar.
- Push buttons for various operations in manual mode LCD Screen for monitoring ca 1"x4" or better.

PHOTOCHEMICAL REACTOR

- Micro Photochemical Reactor, blue, green, white or UV LED lights depending on your requirement. Capacity: 16 vials, 8 Tubes, 4 flasks. Please contact for any special set up.
- Photochemical reaction assembly to carry out chemical reaction caused by absorption of ultraviolet (wavelength from 100 to 400nm),visible light (400 – 750nm) or infrared radiation (750 – 2500nm)
- Aluminium block photo reactor with provision for hot and cold water circulation. White, blue, green or UV light arranged.
- All light sources are LED lights.
- Contact for special customized photochemical reactor based on your design and requirement.





WET BENCH | WET STATION - WET BENCHES / FUME HOODS FOR WET CHEMICAL PROCESSING OF SEMICONDUCTORS AND OTHER APPLICATIONS

A wet bench , wet station or wet processing station is an equipment used in various industries, particularly in manufacturing and scientific research, where wet processes are performed on materials or samples. The term “wet processing” generally refers to procedures or techniques that involve the use of liquid-based solutions, such as chemical baths, rinses, or coatings, to treat or modify the materials.

What makes a wet bench different from an ordinary lab bench? The difference is in the “wet”: A wet bench includes tanks for wet chemical processing. And since many wet chemical processes generate hazardous fumes, wet benches often incorporate ventilation for worker safety.

Wet benches are ideal for multi-tank systems that require several wet chemical process steps. Common applications that use wet benches for wet chemical processing include passivation and electropolishing.

Some wet chemical processes generate so much hazardous gas that the wet bench must be enclosed in a well-ventilated fume hood. Enclosed wet benches with fume hoods are often used in printed circuit board and silicon semiconductor manufacturing.
Our Wet benches or wet processing stations are designed to provide a controlled environment for carrying out these wet processes efficiently and safely.

Our wet bench consists of a work surface or table with integrated sinks, optional chemical baths, and various controls and infrastructure required for handling liquids. Wet benches are equipped with safety features such as fume hoods, exhaust systems, and splash shields to protect users from hazardous chemicals and fumes.

Model	Overall Size W x D x H	Inside Dimensions W x D x H	Features and Benefits
4 Ft Wet Bench	50" x38"x 80"	48" x 32" x 40"	Optimal for small volume production Ready for up to 8" wafers. Easy to operate
5 Ft Wet Bench	65" x 38"x 80"	60" x 32" x 40"	**Configuration** Standard 1 - 4 bath system
6 Ft Wet Bench	75" x 38"x 80"	72" x 32" x 40"	**Optionals** Autofill for chemicals PLC controlled LCD display for HMI Special baths for multiple processes

SOME COMMON EXAMPLES OF WET PROCESSING STATIONS INCLUDE:

Semiconductor Industry : In semiconductor manufacturing, wet processing stations, often referred to as wet benches, are used for cleaning, etching, and rinsing silicon wafers during the fabrication of integrated circuits.

Chemical Laboratories : Wet processing stations are frequently found in chemical laboratories, where researchers perform experiments, analyses, or synthesis involving liquid-based reactions.

Biological and Biotechnological Research : Wet processing stations are also utilized in biological and biotechnological research settings. A wet bench, also known as a wet station or wet processing bench, is a specialized piece of equipment commonly used in industries such as semiconductor manufacturing, electronics assembly, and materials research. It is designed to facilitate wet chemical processes performed on substrates or samples, typically silicon wafers or other flat materials.

Common Applications for Wet Benches and Fume Hoods :

- Medical device stent polishing / deburring of stainless steel and cobalt chrome
- Industrial, aerospace and medical device stainless steel passivation per ASTM A967 with:
- Nitric acid passivation type 1, 2, 3, 4 with sodium dichromate
- Citric acid passivation type 1, 2, 3, 4, & 5 ASTM A967 using citric acid passivation solution
- Printed circuit board and silicon semiconductor photoresist stripping using chemistry like ACT® 970 etch residue remover and others.

For expert help with your wet chemical process systems, look to RVLTECH. Our applications engineers are available to answer your questions and get you the wet bench or fume hood that fits your production needs. Contact us for more infoarmation and a free proposal. Customization: A customized design and manufacturing of the Wet benches is always possible with our company.

WE REPRESENT

KNF Neuberger GmbH Germany

- Rotary Evaporators.
- Diaphragm Vacuum Pumps.
- Vacuum Pump Systems.
- Vacuum Controller Chillers.
- Diaphragm Liquid Transfer Pumps.
- Diaphragm Liquid Dosing Pumps.
- Accessories (Filter, Pressure control valve, Pulsation damper, SIMDOS Accessories).

POL-EKO-APARATURA Poland

- Laboratory refrigerators.
- Cooled incubators.
- BOD Incubators.
- Laboratory incubators.
- Climatic chambers.
- Drying ovens.
- Ultra-Low Freezers.
- Fume Hoods.
- Compact Lab furnitures.

LAMY RHEOLOGY France

- Viscometers.
- Rheometers.
- Texture Analyzer.
- Temperature Control.

Thomas Scientific USA

- Electrophoresis.
- Vacuum Ovens.
- Furnaces.
- Refractometers.
- Balances.
- Glove Boxes.
- Gel Doc System.
- Ph Meters.
- Tissue Culture Systems.
- Conductivity Meters.
- Titrators.
- Hot Plates.
- Multiparameters.
- Polarimeters.
- Magnetic Stirrers.
- Melting Point Apparatus.
- Centrifuges.
- Heating Magnetic Stirrers.
- Spectrophotometers.
- Probe Sonicato.

ECOSAFE Switzerland

- Flammable Cabinets.
- EN 14470-1 EN 14470 - 2 Flammable Cabinets
- Corrosive Cabinets.
- Toxic Cabinets.
- Pesticide Range.
- Fume Hoods.
- Ventilation Cabinets.
- Retention and.
- CansAnti-Fire equipments and Files Cabinets.
- Showers and First Aid Equipments.