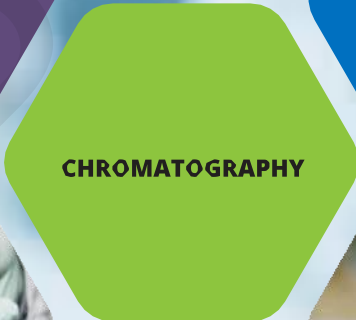




## Product Guide

Typical Applications





**Applications**  
KLABS Established in 2013 As Engineering Firm Start-Up , KLABS Now With New Innovations And Products. Had Its Genesis In The Lifelong Dream Of Mr. Ashish Chavan To Build His Own Inovative Laboratory Filtration And Analytical products,  
We Have Served 15 Years Successfully To Our Customers From Filtration, Cleanroom, Automobile, Pharmaceuticals, Microbiology, Etc.  
We Have Expanded Our Product Range And Never Compromised With Quality. We Always Look For New Ideas And We Believe That Our Company's Product Is Different.  
Our products and services find application scope with the following industry:

- Microbiology Industries
- Pharmaceutical industry
- Oil & Gas industry
- Petroleum industry
- Automobile Industries
- Pesticides / fine chemical Industries
- Research institutes
- Atomic energy department
- Public testing labs
- Method development lab

Government Research and Development organizations We serve the Analytical Instrumentation market globally working closely with all major OEMs and their partners in providing pre-site requirement / Speciality in Filtration Instruments & services, Sample Preparatory support systems, Accessories and Consumables for Liquid Chromatography, Mass spectrometry, FTIR and Analytical techniques.

Our state-of-the-art infrastructure forms the backbone of our company where in we have excellent production facility with latest technological development to assure the delivery of finished components in line with the market standards within stipulated time frame. The driving force of our organization is our team of diligent professionals who have earned enormous knowledge to provide excellent product support to our clients.

- KLABS is global network of ISO 9001: 2015, CE sefty certified manufacturing facilities, which are used to develop and produce pharmaceuticals through traditional filtration & analytical technologies.
- KLABS all instruments complies with ISO 8199 regulation and ideal for microbiological sample filtration. (\*ISO8199: Water quality – General guidance for microbiological examinations by culture)
- performing the manipulations common to each culture technique for the microbiological examination of water, particularly the preparation of samples, culture media, and general apparatus and glassware, unless otherwise required in the specific standard. It also describes the various techniques available for detection and enumeration by culture and the criteria for determining which technique is appropriate.



## Vacuum Filtration Unit



### Vacuum Filter Holder

A



#### Glass Filter Holder

- MOC : Borosilicate Glass
- Support screen : Sintered Glass
- Stopper : Silicone Rubber
- Clamp : Anodized Aluminum
- Filter Size : 25mm, 47mm, 90 mm
- Filtration area : 2.1 cm<sup>2</sup>, 9.6 cm<sup>2</sup>, 43 cm<sup>2</sup>
- Funnel Capacity: 300ml, 500ml, 1000ml.

Product Code	Description
GFH300	Glass Filter Holder 300ml
GFH500	Glass Filter Holder 500ml
GFH1000	Glass Filter Holder 1000ml



#### Stainless Steel Filter Holder

- MOC : SS316
- Support screen : SS316
- Stopper : Silicone Rubber
- Clamp : Inbuilt SS316
- Filter Size : 47mm,
- Filtration area : 13.6 cm<sup>2</sup>
- Funnel Capacity: 300ml, 500ml, 1000ml

Product Code	Description
SFH300	Stainless Steel Filter Holder 300ml
SFH500	Stainless Steel Filter Holder 500ml
SFH1000	Stainless Steel Filter Holder 1000ml



#### SS Filter Holder (Duck Clamp)

- MOC : SS316
- Support screen : SS316
- Stopper : Silicone Rubber
- Clamp : Duck Clamp Anodized Aluminum
- Filter Size : 25mm, 47mm, 90 mm
- Filtration area : 2.1 cm<sup>2</sup>, 9.6 cm<sup>2</sup>, 43 cm<sup>2</sup>
- Funnel Capacity: 300ml, 500ml.

Product Code	Description
FHDC300	SS 316 Filter Holder 300ml
FHDC500	SS 316 Filter Holder 500ml



#### Hydrofil Filter Holder

- MOC : SS316
- Support screen : SS316
- Stopper : Silicone Rubber
- Clamp : Spin Lock
- Filter Size : 47mm.
- Filtration area : 9.6 cm<sup>2</sup>
- Funnel Capacity: 300ml

Product Code	Description
HFH 300	Stainless Steel Filter Holder 300ml



#### Magnetic Filter Holder

- MOC : Polysulfide PPSU
- Support screen : PES
- Stopper : Silicone Rubber
- Clamp : Magnetic
- Filter Size : 47mm.
- Filtration area : 9.6 cm<sup>2</sup>
- Funnel Capacity: 300ml, 500ml.

Product Code	Description
MAG300	Magnetic Filter Holder 300ml
MAG500	Magnetic Filter Holder 500ml



#### PSU Filter Holder

- MOC : Polysulfide
- Support screen : PES
- Stopper : Silicone Rubber
- Clamp : Spin Lock
- Filter Size : 47mm
- Filtration area : 9.6 cm<sup>2</sup>.
- Funnel Capacity: 300ml.

Product Code	Description
PSU300	PSU Filter Holder 300ml



#### Micro Filtration Funnel

- MOC : Polypropylene
- Filter Size : 47mm
- Filtration area : 9.6 cm<sup>2</sup>
- Funnel Capacity: 250ml
- ETO Sterilization Packing
- 100 pieces per box

Product Code	Description
MFDF100	Micro Filtration Funnel 100ml
MFDF250	Micro Filtration Funnel 250ml



#### Disposable M-Funnel

- MOC : Polypropylene
- Filter Size : 47mm (GCN)
- Filtration area : 9.6 cm<sup>2</sup>
- Funnel Capacity: 100ml
- EO Sterilization Packing
- 200 pieces

Product Cde	Description
DFM100	Micro Filtration Funnel 100ml



## Sterile Filtration System

**B**



### Vacuum / Pressure Filtration Holders

- Seal membrane by hand tightening locking wing nuts
- Optimal holder design minimizes resistance and maximizes flow rate
- Each unit labeled with identifying serial numbers on the outside of both the inlet and outlet plates

### Applications

- Use in-line for filtering gases or liquids
- Use with pressure vessel for batch type operations

Specifications	Sterile Filtration System		
Materials:			
Body	SS316		
Support screen	Electroplated etched Stainless Steel		
O-ring	Silicone/ Viton		
Connections (included):			
Inlet/Outlet	8 mm to 11 mm (3/8") Hose Barb/ TC Clamp Optional		
Adapter	¼ x ¼		
Pressure			
Inlet	0.68 MPa (99 psi)		
Differential	0.29 MPa (42 psi)		
Membrane Filter Compatibility:			
Membrane filter size	90 mm	142mm	293 mm
Pre-filter Size	76 mm	124 mm	257 mm
Filtration area	45 cm <sup>2</sup>	113 cm <sup>2</sup>	530 cm <sup>2</sup>



## Vacuum Filtration Manifolds



### Vacuum Filtration Manifold

C



#### Vacuum Filtration Manifold.

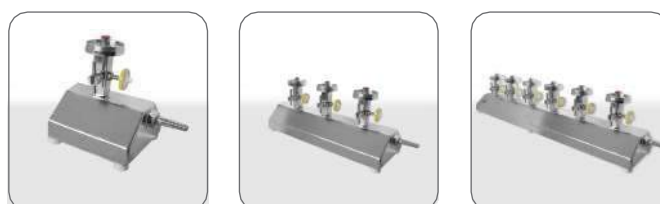
**Materials:**

- Body and branches : Type 316L stainless steel
- Valves : PTFE stopcock, Electroplated SS body.

**Connections:**

- Filter Head : 6 Stage, 3 Stage, Single Stage.
- Supported Funnel : Glass , PP And Stainless Steel.

Product Code	Description
VFM01	Vacuum Filtration Manifold 1 Stage
VFM03	Vacuum Filtration Manifold 3 Stage
VFM06	Vacuum Filtration Manifold 6 Stage



#### Vacuum Filtration Manifold GMP MODEL.

**Materials:**

- Body and branches : Type 316L stainless steel
- Valves : PTFE stopcock, Electroplated SS body.

**Connections:**

- Filter Head : 6 Stage, 3 Stage, Single Stage.
- Supported Funnel: Disposable Cups

Product Code	Description
GMP01	Vacuum Filtration Manifold 1 Stage
GMP03	Vacuum Filtration Manifold 3 Stage
GMP06	Vacuum Filtration Manifold 6 Stage



#### Microfilt 47

**Materials:**

- Body and branches : Type 316L stainless steel
- Valves : PTFE stopcock, Electroplated SS body.

**Connections:**

- De-attachable Filter Head
- Filter Head : 6 Stage, 3 Stage, 1 Stage
- Supported Funnel : Microfilt funnels.

Product Code	Description
MF47-01	Mircofilt 47 (1 Stage)
MF47-03	Mircofilt 47 (3 Stage)
MF47-06	Mircofilt 47 (6 Stage)



#### Microfilt 47 Complete Kit

**In the Kit:**

- 3/6 Stage Manifold
- Micro Filt Disposable filter Funnel
- Oil Free Vacuum Pump AE45s
- 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper
- Vacuum Trap with Silicon Tube
- Forceps

Product Code	Description
MF47C-01	Microfilt 47 Complete Kit (1 Stage)
MF47C-03	Microfilt 47 Complete Kit (3 Stage)
MF47C-06	Microfilt 47 Complete Kit (6 Stage)



## Vacuum Filtration Manifold System



### Vacuum Filtration Manifold Complete Kit **D**



**Vacuum Filtration Manifold Complete Kit**  
(Stainless steel Filter holder External Clamp)

In the Kit:

- 3/6 Stage Manifold
- Filter Funnel SS-316 Inbuilt SS Clamp
- Oil Free Vacuum Pump AS45s
- 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper
- Vacuum Trap with Silicon Tube
- Forceps

Part No	Description
SSCVFCIC-03	Filtration Kit (Inbuilt Clamp)
SSCVFCIC-06	Filtration Kit (Inbuilt Clamp)



**Vacuum Filtration Manifold Complete Kit**  
(Stainless steel Filter holder External Clamp)

In the Kit:

- 3/6 Stage Manifold
- Filter Funnel SS-316 Aluminum Duck Clamp
- Oil Free Vacuum Pump AS75s
- 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper
- Vacuum Trap with Silicon Tube
- Forceps

Part No	Description
SSDVFCIC-03	Filtration Kit (Duck Clamp)
SSDVFCIC-06	Filtration Kit (Duck Clamp)

### Vacuum Filtration Manifold **D**



**Vacuum Filtration Manifold Complete Kit**  
(Glass Funnel)

In the Kit:

- 3/6 Stage Manifold
- Filter Funnel SS-316 with External Duck Clamp
- Oil Free Vacuum Pump AS45s
- 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper
- Vacuum Trap with Silicon Tube
- Forceps

Part No	Description
GFVFCIC-03	Filtration Kit ((Duck Clamp)
GFVFCDC-06	Filtration Kit (Duck Clamp)



**Vacuum Filtration Manifold Complete Kit**  
(Microfilt 47)

In the Kit:

- 3 Stage Manifold
- 250 ml Mfdf250 Funnel With Compatible Adaptor
- Oil Free Vacuum Pump AS75s
- 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper
- Vacuum Trap with Silicon Tube
- Forceps

Part No	Description
MFVFCIC-03	Filtration Kit (MFDF250)
MFVFCDC-06	Filtration Kit (MFDF250)



## Vacuum Filtration Manifold System

### Vacuum Filtration Manifold

D



#### Polypropylene Vacuum Filtration Manifold Complete Kit

In the Kit:

- 3/6 Stage Manifold
- Polypropylene Body with Spin Lock
- Oil Free Vacuum Pump AS45s
- 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper
- Vacuum Trap with Silicon Tube
- Forceps



#### Magnetic Vacuum Filtration Manifold Complete Kit

In the Kit:

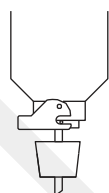
- 3/6 Stage Manifold
- Magnetic Filter Funnel with 8# Silicon cork
- Oil Free Vacuum Pump AS75s
- 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper
- Vacuum Trap with Silicon Tube
- Forceps

Part No	Description
PPVFCIC-03	Filtration Kit (Spin Lock)
PPVFCDC-06	Filtration Kit (Spin Lock)

Part No	Description
MAGVFCIC-03	Filtration Kit (Magnetic)
MAGVFCDC-06	Filtration Kit (Magnetic)

### Customized Assembly

#### How to order? You can select Combination

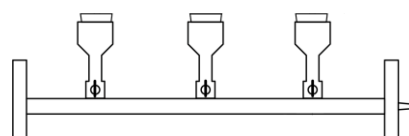


Select Filter Holder from

**Vacuum Filter Holder**

**A**

From Page 1



Select Manifold from

**Vacuum Filtration Manifold**

**C**

#### Other Accessories

Oil Free Vacuum Pump AS45s / AS75s • 47mm x 0.45um Cellulose Nitrate Membrane Filter Paper  
Vacuum Trap with Silicon Tube • Forceps



## Vacuum Filtration System Traditional To Modern



### Compact Vacuum Filtration

E



#### MICRO VACC

Max. vacuum : 313 Mbar / 70 kpa / 21 inch hg.  
 Max. liquid flow rate : 0.5L per min Motor :  
 12W Brushless DC Motor Hose barb : ¼  
 Inch (6 mm)  
 Material contact with filtrate : SS316L, Silicon Seal,  
 PP

Weight : 1 kg  
 Dimension (LxWxH) : 7 x 6 x 6 Inch  
 Number of branch : 1 / 3  
 Adaptor : 8. No Stopper, Disposable  
 Filter holder : MF47 Funnel , PSU Funnel



Part No	Description	Price
MV1-C1	Micro Vacc 1 Stage - C1	NIL
MV1-C2	Micro Vacc 1 Stage - C2	NIL
MV1-C3	Micro Vacc 1 Stage - C3	NIL
MV1C-4	Micro Vacc 1 Stage - C4	NIL

Part No	Description	Price
MV3-C1	Micro Vacc 3 Stage - C1	NIL
MV3-C2	Micro Vacc 3 Stage - C2	NIL
MV3-C3	Micro Vacc 3 Stage - C3	NIL
MV3-C4	Micro Vacc 3 Stage - C4	NIL

### Customized Assembly



Disposable Funnel



Rubber Stopper  
Filter Holder



Disposable Funnel



Silicone Tube



C1



C2



C3



C4



Micro Vacc - C1  
For Mirco Filt  
Disposable  
Funnel



Micro Vacc - C2  
For Rubber Stopper  
Filter Holder



Micro Vacc - C3  
For  
Disposable  
Funnel



Micro Vacc - C4  
For Vacuum Pump

### Compact Vacuum Filtration

F

#### MICROJET 1000

Microjet Pump is ideal for sample preparation in microbiological analysis achieving a trans membrane pressure of 400 mbar and a flow rate of 5,0 l/min. (10 litre water displacement by air in 1 minute)

#### Flow Rates

Constant flow rates and a defined maximum vacuum smooth and reliable filtration.



Flow rate	Minimum 5 L/min
Material in contact with the liquid filtered Please check the compatibility of your fluids	Silicon Polytetrafluoroethylene (PTFE) SS 316L (Connector) Body (Power Coated)
Dimensions (Cm)	(L X W H )18 x 18 x 12
Weight	8 kg
Tubing connection	8 mm Hose
Electrical norms compliance	CE
Protection type	IP64
Protection class	III

### Simple Setup Saves Time

The Microjet pump is simple to set up and therefore saves you precious time. Simply connect the pump to your manifold or filtration apparatus, place the discard tubing to drain, and you are ready to filter. There is no need to use additional containers to capture the waste liquid. This brings signify can't time savings versus traditional vacuum/pressure pumps or in-house vacuum, because the following steps are eliminated: disconnecting the waste containers, emptying liquid waste, cleaning/decontaminating and re-installing the waste containers.

Package Including Contains :

Sr. No.	Description	Qty.
1	Main Unit	01
2	Silicon Tubing 3 mtr	03
3	Power Adaptor 2.5 Amp 230 vac	01
4	Power Cord	01
5	User Manual	01



Applications :

- Waste water Filtration
- Mobile Phase and analytical Solvent
- Media Filtration
- General Filtration  
On



## Vacuum Filtration System Traditional To Modern



### BioStar 110 Portable Vacuum Aspiration System

#### Features :

A BioStar110 system for suction and filtration

The innovative dual-function design allows to suck washing solution from microplates, supernatants after centrifugation and to purify media from cell culture by disposable or reusable funnels in just one system.

#### Ideal for operation in laminar flow

BioStar110 compact size and built-in vacuum pump allow to work in laminar flow. Precisely Vacuum Indicator with Regulator available with this system

#### Autoclavable:

All supplied fittings are made of PP material available for autoclave.

#### Safety compliance:

CE certification

#### Applications ::

Cell culture aspiration  
Laboratory waste suction  
Vacuum Filtration

#### Specification :

- Max. vacuum : 650 mmHg
- Max. flow rate : 5 L/min
- Motor : DC brushless motor
- Transformer : AC 230 V
- Net weight : 1.5 kg
- Dimension (LxWxH) : 25 x 12 x25cm

#### Material :

- Case : ABS
- GI45 Universal Adaptor : PP (Autoclavable)
- Tubing Set : Silicon
- POM
- Air vent filter :PTFE



Ordering Information		
Description	QTY	Part No.
<b>BioStar110</b>		
Main Unit	1	1210-0001
GI45 universal Cap	1	1210-0002
Borosilicate Glass Bottle 1 ltr	1	1210-0003
Air vent Filter 50 mm PTFE 0.2um	1	1210-0004
Silicon Tube	1	1210-0005

## CE Vacuum Filtration System Traditional To Modern



### MicroVacc-1 Microbiology Pump

#### Features :

- **Compact design** – Small footprint frees valuable benchtop space and provides flexibility in arranging workspace for optimal efficiency and workflow.
- **Minimal height** – Allows convenient use in a hood fitted with a sash that can limit upward range of motion during routine analysis.
- **Disposable fluid path** – Simple to load and completely disposable to eliminate potential biofilm build-up.
- There is no need to clean, wrap, and autoclave a bulky Sigle place filtration system ,
- **No Need External Pumps**
- The potential for sporadic and unnecessary contamination is removed.
- **Diaphragm Based design** – Pulls sample through the filter and fluid path eliminating the need for a vacuum source. Also ensures the fluid flows in one direction without the potential for back-up and contamination of analysis.
- **Compliance with ISO 8199**  
Microvacc Pump complies with ISO 8199 regulation and ideal for microbiological sample filtration. (\*ISO8199: Water quality – General guidance for microbiological examinations by culture)



#### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199

#### Specification :

- MicroVacc Filtration system is ideal for sample preparation in microbiological analysis achieving a trans membrane pressure of 300 mbar and a flow rate of 100 ml @ 10 Second (Water Sample)
- Constant flow rates and a defined maximum vacuum smooth and reliable filtration .
- Inbuilt Non Return Valve for individual Valve

#### Application :

- Waste water Filtration
- Media Filtration
- General Filtration
- MF Technique for analyzing aqueous-based fluids
- for microbial contamination. (Works with M- Funnel filter funnels.)

#### Advantages :

- Benefits Direct transfer ensures no handling of liquid waste & no Require Glass or Plastic Trap
- Complies with ISO Standard for microbiological analysis
- High-performance flow rate
- Noise reduction design 35db
- Compact Battery Operated (Save Bench Space)
- Oil Free Diaphragm based pump
- Maintenance-free technology



## Vacuum Filtration System Traditional To Modern



### MicroVacc-3 Microbiology Pump

#### Features :

- **Compact design** – Small footprint frees valuable benchtop space and provides flexibility in arranging workspace for optimal efficiency and workflow.
- **Minimal height** – Allows convenient use in a hood fitted with a sash that can limit upward range of motion during routine analysis.
- **Disposable fluid path** – Simple to load and completely disposable to eliminate potential biofilm build-up.
- There is no need to clean, wrap, and autoclave a bulky Sigle place filtration system ,
- **No Need External Pumps**
- The potential for sporadic and unnecessary contamination is removed.
- **Diaphragm Based design** – Pulls sample through the filter and fluid path eliminating the need for a vacuum source. Also ensures the fluid flows in one direction without the potential for back-up and contamination of analysis.
- **Compliance with ISO 8199**  
Microvacc Pump complies with ISO 8199 regulation and ideal for microbiological sample filtration. (\*ISO8199: Water quality – General guidance for microbiological examinations by culture)



#### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199

#### Application :

- Waste water Filtration
- Media Filtration
- General Filtration
- MF Technique for analyzing aqueous-based fluids
- for microbial contamination. (Works with M- Funnel filter funnels.)

#### Specification :

- MicroVacc Filtration system is ideal for sample preparation in microbiological analysis achieving a trans membrane pressure of 300 mbar and a flow rate of 100 ml @ 10 Second (Water Sample)
- Constant flow rates and a defined maximum vacuum smooth and reliable filtration .
- Inbuilt Non Return Valve for individual Valve

#### Advantages :

- Benefits Direct transfer ensures no handling of liquid waste & no Require Glass or Plastic Trap
- Complies with ISO Standard for microbiological analysis
- High-performance flow rate
- Noise reduction design 35db
- Compact Battery Operated (Save Bench Space)
- Oil Free Diaphragm based pump
- Maintenance-free technology



## Vacuum Filtration System Traditional To Modern



### MicroVacc-6 Microbiology Pump

#### Features :

- **Compact design** – Small footprint frees valuable benchtop space and provides flexibility in arranging workspace for optimal efficiency and workflow.
- **Minimal height** – Allows convenient use in a hood fitted with a sash that can limit upward range of motion during routine analysis.
- **Disposable fluid path** – Simple to load and completely disposable to eliminate potential biofilm build-up.
- There is no need to clean, wrap, and autoclave a bulky Sigle place filtration system ,
- **No Need External Pumps**
- The potential for sporadic and unnecessary contamination is removed.
- **Diaphragm Based design** – Pulls sample through the filter and fluid path eliminating the need for a vacuum source. Also ensures the fluid flows in one direction without the potential for back-up and contamination of analysis.
- **Compliance with ISO 8199**  
Microvacc Pump complies with ISO 8199 regulation and ideal for microbiological sample filtration. (\*ISO8199: Water quality – General guidance for microbiological examinations by culture)

#### Specification :

- MicroVacc Filtration system is ideal for sample preparation in microbiological analysis achieving a trans membrane pressure of 300 mbar and a flow rate of 100 ml @ 10 Second (Water Sample )
- Constant flow rates and a defined maximum vacuum smooth and reliable filtration .
- Inbuilt Check Valve for individual Valve

#### Advantages :

- Benefits Direct transfer ensures no handling of liquid waste & no Require Glass or Plastic Trap
- Complies with ISO Standard for microbiological analysis
- High-performance flow rate
- Noise reduction design 35db
- Compact Battery Operated (Save Bench Space)
- Oil Free Diaphragm based pump
- Maintenance-free technology



#### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199

#### Application :

- Waste water Filtration
- Media Filtration
- General Filtration
- MF Technique for analyzing aqueous-based fluid:

#### Dimensions :

- Length: 91.4 cm (36 in.)
- Width: 10.6 cm (6.5 in.)
- Height: 10.5 cm (6 in.)
- Weight: 10KG

#### Power Supply :

- Input : 230 v AC 50-60 Hz
- Out Put : 12 v 5 Amp
- Voltage: 24.0 V
- Output Interface (Power Entry Plug): 2.5 mm barr jack



## Vacuum Filtration System Traditional To Modern



### MicroVacc 1-B Microbiology Pump

#### Features :

- Compact design – Small footprint frees valuable benchtop space and provides flexibility in arranging workspace for optimal efficiency and workflow.
- Minimal height – Allows convenient use in a hood fitted with a sash that can limit upward range of motion during routine analysis.
- Disposable fluid path – Simple to load and completely disposable to eliminate potential
- biofilm build-up. There is no need to clean, wrap, and autoclave a bulky multi-place manifold.
- The potential for sporadic and unnecessary contamination is removed.
- Diaphragm Based design – Pulls sample through the filter and fluid path eliminating the need for a vacuum source. Also ensures the fluid flows in one direction without the potential for back-up and contamination of analysis.

#### Specification :

- MicroVacc 1-B Filtration system is ideal for sample preparation in microbiological analysis achieving a trans membrane pressure of 300 mbar and a flow rate of 100 ml @ 10 Second (Water Sample)
- Constant flow rates and a defined maximum vacuum smooth and reliable filtration
- Benefits Direct transfer ensures no handling of liquid waste & no Require Glass or Plastic Trap
- High-performance flow rate
- Noise reduction design 35db
- Compact Battery Operated (Save Bench Space)
- Maintenance-free technology

#### Application :

- Waste water Filtration
- General Filtration
- MF Technique for analyzing aqueous-based fluids
- for microbial contamination. (Works with M- Funnel filter funnels.)

#### Material :

- Case : SS 316L
- Adaptor : SS316L
- Tubing Set : ETFE



#### Dimensions :

- Length: 10.5 cm (6 in.)
- Width: 10.6 cm (6.5 in.)
- Height: 10.5 cm (6 in.)
- Weight: 1050 g

#### Battery :

- Type : Lithium Ion (Reachable )
- 4 Hours Backup (Continues run)

#### Power Supply :

- Input : 230 v AC 50-60 Hz
- Out Put : 12 v 1.2 Amp
- Voltage: 24.0 V
- Output Interface (Power Entry Plug): 2.5 mm barrel jack

#### Certificate :

Designed and manufactured in application of:

- 2014/30/EU relating to electromagnetic compatibility
- 2014/35/EU relating to electrical equipment designed for use within certain voltage limits
- 2011/65/EU relating to the restrictions of the use of certain Hazardous Substances (RoHS) in electrical and electronic equipment



## Vacuum Filtration System Traditional To Modern



### MicroVacc 3-B Microbiology Pump

#### Features :

- Compact design – Small footprint frees valuable benchtop space and provides flexibility in arranging workspace for optimal efficiency and workflow.
- Minimal height – Allows convenient use in a hood fitted with a sash that can limit upward range of motion during routine analysis.
- Disposable fluid path – Simple to load and completely disposable to eliminate potential
- Large Touch screen Display with Flow monitoring facility
- The potential for sporadic and unnecessary contamination is removed.
- Diaphragm Based design – Pulls sample through the filter and fluid path eliminating the need for a vacuum source. Also ensures the fluid flows in one direction without the potential for back-up and contamination of analysis.



#### Specification :

- MicroVacc 3-B Filtration system is ideal for sample preparation in microbiological analysis achieving a trans membrane pressure of 300 mbar and a flow rate of 100 ml @ 10 Second / Branch (Water Sample )
- Constant flow rates and a defined maximum vacuum smooth and reliable filtration
- Benefits Direct transfer ensures no handling of liquid waste & no Require Glass or Plastic Trap
- High-performance flow rate
- Noise reduction design 35db
- Compact Battery Operated (Save Bench Space)
- Maintenance-free technology

#### Application :

- Waste water Filtration
- Media Filtration
- General Filtration
- MF Technique for analyzing aqueous-based fluids
- for microbial contamination. (Works with M- Funnel filter funnels.)

#### Material :

- Case : SS 316L
- Adaptor : SS316L
- Tubing Set : ETFE



## Vacuum Filtration Adaptors



Choose Adaptor

Ordering Information		
Description	QTY	Part No.
Material :SS 316 With Silicon		
Compatible With MFDF250 Funnel 	1	1210-00C1
Compatible With 8# Stopper Funnel 	1	1210-00C2
Compatible With M-Funnels 	1	1210-00C3
Compatible With 6mm Id Tube 	1	1210-00C4
Compatible With Merk Manifold 	1	1210-00C5



## Solvent Filtration Assembly For Mobile Phase(Stainless steel )

### Description :

Solvent purification is a critical topic in laboratory settings, encompassing various techniques and processes aimed at obtaining high-quality solvents for scientific research, synthesis, and analytical applications. This topic holds immense importance due to the significant role solvents play in various fields, including chemistry, biology, and materials science. Purifying solvents removes impurities such as water, oxygen, and contaminants, ensuring their suitability for sensitive experiments and reactions.

By discussing solvent purification, we gain insight into the methods, equipment, and advancements used to achieve high-purity solvents, enhancing experimental reproducibility, accuracy, and safety.

### Solvent filtration process :

Filtration is a solvent purification technique used to remove solid impurities from an organic solution by isolating the solids on membranes. The selection of membranes should consider sample characteristics, removal rate, and filtration time.

There are two common methods of solvent filtration: gravity filtration and vacuum filtration. Vacuum filtration utilizes pressure differences to accelerate the filtration process, making it generally much faster than gravity filtration.

### Specification :

Specification	Solvent Filtration Kit	
	300 ml	500 mL
Catalog number	SFA-SS300	SFA-SS500
SS 316 Filter Holder	300/ 500 ml capacity - 47 mm	
Filtration Area	13.6 cm <sup>2</sup>	
Cork	Silicon	
Receiver (Glass )	1000 ml , 2000 ml , 5000 ml	
Oil Free Vacuum Pump	AS 15/ AS25/ AS45/ AS75-S	
Membrane Filter Paper	Nylon 66- 47 mm-0.22/0.45um (Pkt/100)	
Silicon Tube	1 Mtr	



### Advantages :

- Oil-free & care-free
- AS15 pumps are driven by diaphragm that needs no lubricant, making them maintenance-free and oil-mist-free.
- Solvent resistant
- AS15 Pump are resistant in different degrees to wide range of chemicals and solvents.
- One-step filtration
- Filter and store directly in all GL45 bottles to prevent repetitive transfers and cross-contamination.

### Application :

- Waste water Filtration
- Media Filtration
- General Filtration
- MF Technique for analyzing aqueous-based fluids
- for microbial contamination
- Mobile phase purification for HPLC,
- LC/MS/MS analysis.
- for Acetonitrile, methanol, and tetrahydrofuran.

### Safety compliance:

- CE certification

## CE Mobile Phase Filtration Assembly (Magnetic Holder)



### Filtration Assembly For Water analysis with Magnetic filter Holder

#### Feature:

- Compatible with various kinds of bottle, vacuum flask with or without side arm to collect filtrate directly
- Easy to use: Strong magnetic seal allows one-handed operation, prevents possible twisting and tearing of the membrane.
- Membrane guide on the base helps position membrane easily
- Safety: PPSU (Polyether sulfone) construction, resistant to a wide range of chemicals and high temperature, sturdy and unbreakable
- Reusable: Withstands numerous autoclave cycles (121°C, 15 minutes), save money and energy consumption
- For vacuum filtration of liquids, especially for the analysis of aqueous samples for microbiological and particulate contamination using the Membrane Filter (MF) Technique.
- The Magnetic Filter Funnel is ideal for use with a filter funnel manifold or side-arm vacuum flask using a rubber stopper connection.
- Dual magnets ensure a tight, no-leak seal between the funnel cylinder and base, eliminating the need for cumbersome clamps. The design allows one-handed operation and prevents possible twisting and tearing of the filter membrane.
- A ridge on the base guides and holds membrane in position.
- Forcep access points provide easy retrieval of the filter. Durable, chemically resistant polyphenylsulfone plastic construction resists breaking.
- The cylinder is marked with external graduations for ease in measuring sample volume and to ensure a smooth inner surface for rinsing. Washable, autoclavable, and UV compatible.



#### Specification :

Specification	Solvent Filtration Kit (Magnetic Holder) 300 ml
Catalog number	MAGSFA-300-500
Magnetic Filter Holder	300/ 500 ml capacity - 47 mm
Filtration Area	13.6 cm <sup>2</sup>
Cork	Silicon
Receiver (Glass )	1000 ml , 2000 ml , 5000 ml
Oil Free Vacuum Pump	AS 15/ AS25/ AS45/ AS75-S/AE50
Membrane Filter Paper	Nylon 66- 47 mm-0.22/0.45um (Pkt/100)
Silicon Tube	1 Mtr

#### Advantages :

- Complies with ISO Standard for microbiological analysis
- Maintenance-free
- For vacuum filtration
- Dual magnets
- No-leak seal

#### Safety compliance:

- CE certification
- ISO 9000 & ISO

#### Application :

- Waste water Filtration
- Media Filtration
- General Filtration
- MF Technique for analyzing aqueous-based fluids
- for microbial contamination
- Sterility testing
- High temperature filtration

## CE Mobile Phase Filtration Assembly (Glass Holder)



### Solvent Filtration Assembly For Mobile Phase(Borosilicate Glass )

#### Description :

Solvent purification is a critical topic in laboratory settings, encompassing various techniques and processes aimed at obtaining high-quality solvents for scientific research, synthesis, and analytical applications. This topic holds immense importance due to the significant role solvents play in various fields, including chemistry, biology, and materials science. Purifying solvents removes impurities such as water, oxygen, and contaminants, ensuring their suitability for sensitive experiments and reactions.

Using 3.3 Expansion Borosilicate glass

By discussing solvent purification, we gain insight into the methods, equipment, and advancements used to achieve high-purity solvents, enhancing experimental reproducibility, accuracy, and safety.

#### Solvent filtration process :

Filtration is a solvent purification technique used to remove solid impurities from an organic solution by isolating the solids on membranes. The selection of membranes should consider sample characteristics, removal rate, and filtration time.

There are two common methods of solvent filtration: gravity filtration and vacuum filtration. Vacuum filtration utilizes pressure differences to accelerate the filtration process, making it generally much faster than



#### Specification :

Specification	Solvent Filtration Kit	
	300 ml	500 mL
Catalog number	GFA-SS300	GFA-SS500
Glass Holder	300/ 500 ml capacity - 47 mm	
Filtration Area	13.6 cm <sup>2</sup>	
Cork	Silicon	
Receiver (Glass )	1000 ml , 2000 ml , 5000 ml	
Oil Free Vacuum Pump	AS 15/ AS25/ AS45/ AS75-S	
Membrane Filter Paper	Nylon 66- 47 mm-0.22/0.45um (Pkt/100)	
Silicon Tube	1 Mtr	

#### Advantages :

- One Hand Operated Clamp
- Complies with ISO Standard for microbiological analysis
- Maintenance-free

#### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199

#### Application :

- Waste water Filtration
- Gravimetric filtration
- HPLC Mobile Phase Filtration
- MF Technique for analyzing aqueous-based fluids
- for microbial contamination



## Single Place Filtration Assemblies



### Solvent Filtration Assembly

G

### Standard Assembly



#### Solvent Filtration Assembly (SS Filter Holder)

**Funnel :** SS Filter Holder  
**Filtration Flask**  
**MOC :** Borosilicate Glass  
**Capacity :** 1000ml, 2000ml, 5000ml  
**Rubber Stopper :** (Depend on Flask Size)



#### Solvent Filtration Assembly (Glass Filter Holder B40)

**Funnel :** Glass Filter Holder  
**Filtration Flask**  
**MOC :** Borosilicate Glass  
**Capacity :** 1000ml, 2000ml, 5000ml  
**Rubber Stopper :** (Depend on Flask Size)



#### Solvent Filtration Assembly (PSU Filter Holder)

**Funnel :** PSU Filter Holder  
**Filtration Flask**  
**MOC :** Borosilicate Glass  
**Capacity :** 1000ml, 2000ml, 5000ml  
**Rubber Stopper :** (Depend on Flask Size)

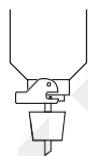


#### Solvent Filtration Assembly (Hydrofil Filter Holder)

**Funnel :** Hydrofil Filter Holder  
**Filtration Flask**  
**MOC :** Borosilicate Glass  
**Capacity :** 1000ml, 2000ml, 5000ml  
**Rubber Stopper :** (Depend on Flask Size)

### Customize Assembly

**How to order?**  
**You can select Combination**



Select Filter Holder from

A



Select Filter Flask Size

Part No	Description
FF10	Filtration Flask 1000ml
FF20	Filtration Flask 2000ml
FF50	Filtration Flask 5000ml



## Solvent Filtration Assemblies (Complete Kit)



### Solvent Filtration Complete Assembly

H

### Standard Assembly



#### Solvent Filtration Complete Assembly (SS Filter Holder)

**Specifications:**

- Stainless Steel Filter Holder.
- Oil Free Vacuum Pump 45s
- Membrane Filter Paper**
- 47mm x 0.45um Cellulose Nitrate



#### Solvent Filtration Complete Assembly (SS Duck Clamp)

- Vacuum Filter Holder Duck Clamp
- Oil Free Vacuum Pump 45s
- Membrane Filter Paper**
- 47mm x 0.45um Cellulose Nitrate



#### Solvent Filtration Complete Assembly (Glass Filter Holder)

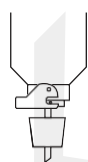
**Specifications:**

- Glass Filter Holder
- Oil Free Vacuum Pump 45s
- Membrane Filter Paper**
- 47mm x 0.45um Cellulose Nitrate

Product Code	Description
SFCA-IC	SS Filter Holder Assembly
SFCA-DC	Duck Clamp Assembly
SFCA-GF	Glass Filter Holder Assembly

### Customized Assembly

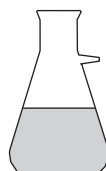
#### How to order? You can select Combination



Select Filter Holder from

**Vacuum Filter Holder**

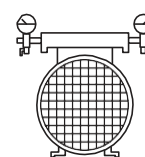
**A**



Select Filter Flask Size

**Solvent Filtration Assembly**

-



Select Vacuum Pump

**Oil Free Vacuum Pump**

From Page 11

**A**

#### Other Accessories :

Membrane Filter Paper 47mm , Forceps , Silicon Tube 1 Meter.



## Filtration Accessories & Consumables



### Laboratory Consumables :



**PP Vacuum Filtration Trap**

**Glass Vacuum Filtration Trap**

**SS Support Screen**

**Silicone Stopper**



**Silicone Tube**

**Duck Clamp**

**Petri Dish**

**Air Vent Filter**



**Media Dispensing Cap**

**Filtration Cap GL45**

**Petri Slide 47mm**

**Filter Forceps**



**Sterile Membrane Filter**

**Nylon Membrane Filter**

**Capsule Filter(PES, PVDF)**

**Cartridge Filter (Ny66, PES, PVDF, PP)**



## Pressure Filtration



### Capsule Filtration System

A



**CFS-5 & CFS-10**



**CFS Complete System** (Available reusable ss Filter Holders)

#### Pressure Filtration Holders

- Seal membrane by hand tightening locking wing nuts
- Optimal holder design minimizes resistance and maximizes flow rate
- Each unit labeled with identifying serial numbers on the outside of both the inlet and outlet plates

#### Applications

- Use in-line for filtering gases or liquids
- Use with pressure vessel for batch type operations

Specifications	CFS For Filtration
<b>Materials:</b>	
Body	SS316
Support screen	Electroplated etched Stainless Steel
O-ring	Silicone/ Viton
<b>Connections (included):</b>	
<b>Inlet/Outlet</b>	8 mm to 11 mm (3/8") Hose Barb/ TC Clamp Optional
Adapter	1/4 x 1/4
<b>Pressure</b>	
Inlet	0.68 MPa (99 psi)
Differential	0.29 MPa (42 psi)
<b>Membrane Filter Compatibility:</b>	
Membrane filter size	2.5"
Pre-filter Size	2.4"
Filtration area	400 cm <sup>2</sup>



## Pressure Vessels



### Dispensing Pressure Vessel B

#### Description :

Dispensing pressure vessels are designed for dispensing fluids under pressure for filtration through any pressure-type filter holder. The portable vessels are available in 5, 10, and 20-liter and 1-gallon capacities. These ASME-UM code-complying vessels are compatible with ASME code-complying vent/relief valves.



#### Features :

- Provided with pressure gauge, safety relief valve, flow shut-off valve, and hose barb connectors.
- Designed for processing small batches of liquids for sterilization or clarification.
- Broad chemical compatibility with corrosion-resistant Type 316L stainless steel construction

#### Technical Details :

##### Specifications Materials of Construction Housing:

- Electropolished type 316L stainless steel
- O-ring: Silicon
- Base: SS 316L
- Inlet/Outlet Connections Accepts 9.5 mm (3/8 in.) ID tubing
- Maximum Operating Temperature 38 °C (100 °F) at 10.7 bar (1070 kPa, 155 psi)\*
- Minimum Operating Temperature -29 °C (-20 °F) at 10.7 bar (1070 kPa, 155 psi)\*
- Sterilization Provided non-sterile. Because of pressure gauge, autoclaving is not recommended.

- Large-Volume Filtration,
- Reservoir for Buffer
- Solvent Dispensing

#### Safety compliance:

- CE certification
- PED & TPED
- ISO 9000 & ISO 8199



Ordering Information		
Description	QTY	Part No.
Dispensing Pressure Vessel		
Dispensing Pressure Vessel 3Ltr	1	1126-1811
Dispensing Pressure Vessel 5Ltr	1	1126-1812
Dispensing Pressure Vessel 10Ltr	1	1126-1813
Dispensing Pressure Vessel 20 Ltr	1	1126-1814
Gasket Set	1	1126-2230



## Vacuum Trap



### Laboratory Vacuum Desiccator with Diaphragm Vacuum Pump

#### Description :

Vacuum desiccators remove air and moisture with the use of an in-house laboratory vacuum or vacuum pump and can be brought back to vacuum easily after opening. Vacuum desiccators can also be used for degassing techniques.

Vacuum desiccators help stabilize and preserve samples so they can be analyzed. They remove moisture from all types of materials. We have a selection of vacuum desiccators in glass, polypropylene, or polycarbonate materials. Choose a vacuum desiccator based on its compatibility with the chemicals you will be using. Also look at the plate diameter, flange OD, inside diameter, total height, and clearance above the plate.



**Available Material :** Polycarbonate , Stainless Steel , Borosilicate Glass

#### **Technical Details :**

Specifications Materials of Construction Housing:

- Desiccator Size : 150 mm , 250 mm , 300 mm
- Type : Vacuum
- Body : Polycarbonate
- Seal : Silicon
- Inlet/Outlet Connections Accepts 9.5 mm (3/8 in.) ID tubing
- Maximum Operating Temperature 80 °C (176.0 °F) at 1 mbar (1070 kPa, 155 psi)\*

#### **Application :**

- Moisture Removing
- removal of air bubbles from the epoxy resin mixture,
- providing enhanced bonding
- embedding quality
- HPLC Solvent Degassing

#### **Safety compliance:**

- CE certification
- PED & TPED
- ISO 9000 & ISO 8199



## Vacuum Trap



### Lab PES Vacuum Bottle Features

- **Overflow protection**  
Waste bottle built in overflow protection to keep the filtrate from entering the pump.
- **Autoclavable**  
PES structure offers excellent smash and high temperature (121°C) resistance and autoclavable.
- **Microbiology USP 1211 Complied**



### Lab Vacuum Bottle Features

Specification	PES vacuum bottle, 2000 mL	PES vacuum bottle, 4000 mL
Catalog number	393000-11	3930100-12
Graduated increment	100 mL	100 mL
Overflow protection	Yes	Yes
Cap with suction fitting	Yes	Yes
Hose barb	ID8	ID4 ~ ID8
Autoclavable	Yes	Yes

### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199

### Applications :

- Cell culture aspiration
- Laboratory waste suction
- Vacuum Filtration



## Vacuum Trap



### Lab PP Vacuum Bottle Features

- **Chemical Resistance**  
Waste bottle built in overflow protection to keep the filtrate from entering the pump.
- **Autoclavable**  
PP structure offers excellent smash and high temperature (121°C) resistance and autoclavable.
- Hold full vacuum for up to 24 hours with Heavy-Duty PP Vacuum Bottles.
- Ideal for heavy-duty biotechnology lab use, these thick-walled bottles can

applications. Medical Grade confirming to USP Class VI.



### Lab Vacuum Bottle Features

Specification	PP vacuum bottle, 2000 mL	PP vacuum bottle, 4000 mL
Catalog number	393000-13	3930100-14
Graduated increment	No	No
Drain Valve	No	Yes (Optional)

### Applications :

- Cell culture aspiration
- Laboratory waste suction
- Vacuum Filtration



## Vacuum Trap



### Syringe Filter Holders

**B**



#### Stainless Steel Syringe Holders

- Can be sterilized by standard procedures including autoclaving
- Luer fittings fit typical syringes
- Can be tightened securely, wrench set included

	SF-13	SF-25
<b>Materials:</b>		
<b>Body and support screen</b>	SS316	
<b>Gasket</b>	PTFE	
<b>O-ring</b>	PTFE	
<b>Connections:</b>		
<b>Inlet</b>	Female Luer-lock	
<b>Outlet</b>	Male Luer slip	
<b>Dead volume</b>	0.2 mL	0.4 mL
<b>Pressure:</b>		
<b>Inlet</b>	0.68 MPa (99 psi)	
<b>Differential</b>	0.29 MPa (42 psi)	
<b>Membrane Filter Compatibility</b>		
<b>Filter size</b>	13mm	25mm
<b>Pre-filter size</b>	8mm	21mm
<b>Filtration area</b>	0.9 cm <sup>2</sup>	3.8 cm <sup>2</sup>

Part No	Description
SF- 13	SS Syringe Holder
SF- 25	SS Syringe Holder



#### Derlin Syringe Holders

- Can be sterilized by standard procedures including autoclaving
- Luer fittings fit typical syringes
- Can be tightened securely, wrench set included

	DS-13	DS-25
<b>Materials:</b>		
<b>Body and support screen</b>	Derlin	
<b>Gasket</b>	PTFE	
<b>O-ring</b>	PTFE	
<b>Connections:</b>		
<b>Inlet</b>	Female Luer-lock	
<b>Outlet</b>	Male Luer slip	
<b>Dead volume</b>	0.2 mL	0.4 mL
<b>Pressure:</b>		
<b>Inlet</b>	0.68 MPa (99 psi)	
<b>Differential</b>	0.29 MPa (42 psi)	
<b>Membrane Filter Compatibility</b>		
<b>Filter size</b>	13mm	25mm
<b>Pre-filter size</b>	8mm	21mm
<b>Filtration area</b>	0.9 cm <sup>2</sup>	3.8 cm <sup>2</sup>

Part No	Description
DS- 13	Derlin Syringe Holder
DS- 25	Derlin Syringe Holder



## Pressure Filtration



### Inline Stainless Steel Holders C

#### Inline Filter Holder

- Non breakable stainless steel unit may be flame sterilized to sanitize the holder.
- Set pins and a locking nut on the funnel to help prevent twisting and tearing of the membrane.
- Autoclavable with membrane in place.
- Sanitary inlet and outlet connections are non-threaded and can be completely disassembled for thorough cleaning.
- 47 mm holder features vent to allow air venting on upstream side of the membrane at any time during filtration.

#### Applications:

- Point of use filtration on sterile filling machines.
- Flow decay studies for scale up to larger filtration systems.
- Liquid or gas.



IFH-L47



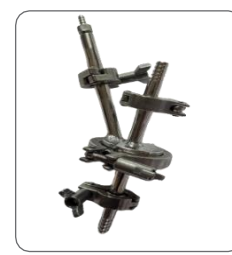
IFH-H47



IFH- H47 TC Fitting



IFHHP47



HPLCTS47

Model No :	IFH-L47	IFH-H47 With Vent	IFH-H47 TC Fitting	IFHHP47	HPLCTS47
<b>Body and support screen</b>	SS316	SS316	SS316	SS316	SS316
<b>Gasket</b>	Silicone Rubber	Silicone Rubber	Silicone Rubber	Silicone Rubber	Silicone Rubber
<b>Inlet/Outlet</b>	8 mm OD barb	8 mm OD barb	8 mm OD barb	8 mm OD barb	8 mm OD barb
<b>Inlet</b>	12 mm	12 mm	12 mm	12 mm	12 mm
<b>Differential pressure</b>	30 psi	42 psi	42 psi	2000 psi	42 psi
<b>Weight :</b>	0.45 kg	0.5 kg	0.5 kg	1 kg	0.5 kg (2 lb)
<b>Filter Size</b>	47 mm	47 mm	90 mm	47 mm	90 mm
<b>Pre Filter Size :</b>	18 mm (47mm if membrane and mesh separator)	39 mm (47mm if membrane and mesh separator)	76 mm (47mm if membrane and mesh separator)	39 mm (47mm if membrane and mesh separator)	76 mm (47mm if membrane and mesh separator)
<b>Filtration area</b>	40 cm <sup>2</sup>	40 cm <sup>2</sup>	40 cm <sup>2</sup>	40 cm <sup>2</sup>	40 cm <sup>2</sup>



## Pressure Filtration



### Membrane Filter Holder

**D**



**MFH-90**



**MFH-142**



**MFH-293**

The disc filter holders are durable and of convenient size for filtration of virtually all laboratory samples.

- Durable
- Convenient size
- Corrosion-resistant

These disc filter holders are made of corrosion-resistant type 316 stainless steel that provide broad chemical resistance. They feature sanitary connections that are easy to use and suitable for pharmaceutical applications. Recommended uses include filtration of cell culture media, ophthalmics, pharmaceuticals, vitamins, process water, antibiotics, photoresists, etc. Materials of Construction- Body: Electropolished type 316 stainless steel; Rings: Silicon ; Legs: Type 316 stainless steel with ss threads; Knob Assembly

They can be used with a variety of aggressive chemicals, solvents, reagents, and fluids.

#### Pressure Filtration Holders

Seal membrane by hand tightening locking wing nuts

Optimal holder design minimizes resistance and maximizes flow rate

Each unit labeled with identifying serial numbers on the outside of both the inlet and outlet plates

#### Applications

Use in-line for filtering gases or liquids

Use with pressure vessel for batch type operations

Specifications	MFH-90	MFH -142	MFH -293
<b>Materials:</b>			
Body	SS316		
Support screen	Electroplated etched Stainless Steel		
O-ring	Silicone / Viton		
<b>Connections (included):</b>			
<b>Inlet/Outlet</b>	3/4" PS to 11 mm (3/8") hose barb		3/4" PS to 16 mm hose barb (5/8") hose barb
Adapter	11 mm hose barb		16 mm hose barb
<b>Pressure</b>			
Inlet	0.68 MPa (99 psi)		
Differential	0.29 MPa (42 psi)		
<b>Membrane Filter Compatibility:</b>			
Membrane filter size	90 mm	142mm	293 mm
Pre-filter Size	76 mm	124 mm	257 mm
Filtration area	45 cm <sup>2</sup>	113 cm <sup>2</sup>	530 cm <sup>2</sup>



## Vacuum Pump



### Oil Free Vacuum Pump

**A**



AS15



AS25S



AS45



AS75 S



AS75 P



AS45s



AS50-V



AS50-P

	AS50-V	AS50-P
<b>MOC</b>	Aluminum Die Cast	Aluminum Die Cast
<b>Vacuum</b>	28"	28"
<b>Flow</b>	50 LPM	50 LPM
<b>Stage</b>	Double Stage	Double Stage
<b>Pressure</b>	110 Psig	110 Psig
<b>Connection</b>	8 mm Hose	8 mm Hose
<b>Weight</b>	10 Kg	10 Kg
<b>Motor</b>	1/4 hp	1/4 hp

	AS15	AS25S	AS45	AS75 S	AS75 P	AS45 S
<b>MOC</b>	Aluminum Die Cast	Aluminum Die Cast	Aluminum Die Cast	Aluminum Die Cast	Aluminum Die Cast	Aluminum Die Cast
<b>Vacuum</b>	22"	27"	22"	27"	22"Hg- 705mm Hg	23"Hg- 550mm Hg
<b>Flow</b>	15 LPM	25 LPM	45 LPM	45 LPM	75 LPM	45 LPM
<b>Stage</b>	Single Stage	Double Stage	Single Stage	Double Stage	Double Stage	Single Stage
<b>Pressure</b>	25 Psig	35 Psig	25 Psig	55 Psig	40 Psig	35 Psig
<b>Connection</b>	8 mm Hose	8 mm Hose	10 mm Hose	10 mm Hose	10 mm Hose	12 mm Hose
<b>Weight</b>	3 Kg	6 Kg	6.5 kg	10 Kg	10 Kg	6.5Kg
<b>Motor</b>	1/20 hp	1/16 hp	1/8 hp	1/4 hp	1/4 hp	1/8 hp
<b>Price</b>						

### Chemical Resist Application Pump

**B**



AE45 CRP



AE75 CRP

	AS 45 CRP	AS 75 CRP
<b>MOC</b>	Aluminum Die Cast	Aluminum Die Cast
<b>Vacuum</b>	22" Hg	28" Hg
<b>Flow</b>	30 LPM	50 LPM
<b>Stage</b>	Single Stage	Double Stage
<b>Pressure</b>	35 Psig	45 Psig
<b>Connection</b>	12 mm Hose	12 mm Hose
<b>Weight</b>	8Kg	10.5Kg
<b>Motor</b>	1/8 hp	1/4 hp



## Vacuum Pump

### Direct Driven Pump **C**



**ASDD1C**



**ASDD1B**



**ASDD-2B**

	ASDD-1C	ASDD-1B	ASDD-2B
<b>MOC</b>	Aluminum Die Cast	Aluminum Die Cast	Aluminum Die Cast
<b>Free Air Displacement</b>	1.5 CFM / 40 LPM	2.5FM / 70 LPM	4 CFM / 120 LPM
<b>Voltage</b>	220V-50HZ	220V-50HZ	220V-50HZ
<b>Vacuum</b>	150 Microns	50 Microns	50 Microns
<b>Power</b>	¼ HP	1/3 HP	1/3 HP
<b>Oil Capacity</b>	220 ml	250 ml	250 ml
<b>Connection</b>	1/4 " Flare	¼" Flare	¼ " & 3/8 Flair
<b>Stage</b>	1	2	2
<b>Weight</b>	7 Kg	9.6 kg	12.6 kg

### Rotary Vent Type Pump **D**



**ASRV-3B**



**ASRV-4B**



**ASRV-5B**

	ASRV-3B	ASRV-4B	ASRV-5B
<b>MOC</b>	Aluminum Die Cast	Aluminum Die Cast	Aluminum Die Cast
<b>Free Air Displacement</b>	1.5 CFM / 40 LPM	2.5FM / 70 LPM	4 CFM / 120 LPM
<b>Voltage</b>	220V-50HZ	220V-50HZ	220V-50HZ
<b>Vacuum</b>	150 Microns	50 Microns	50 Microns
<b>Power</b>	¼ HP	1/3 HP	1/3 HP
<b>Oil Capacity</b>	220 ml	250 ml	250 ml
<b>Connection</b>	1/4 " Flare	¼" Flare	¼ " & 3/8 Flair
<b>Stage</b>	1	2	2
<b>Weight</b>	7 Kg	9.6 kg	12.6 kg



## Silt Density Index



### Silt Density Index Test Kit

KLABS high performance manual silt density index (SDI) test kit has been specially developed for engineers, water treatment professionals; and building services and facilities management specialists with responsibility for the maintenance and management of reverse osmosis water purification systems. KLABS professional SDI test kit will allow reverse osmosis plant engineers and water treatment professionals to perform quick and accurate in-field testing and analysis procedures for a range of important RO system parameters.

Depleting supplies of fresh water, ground water contamination and the rising cost of water have compelled industries to increasingly turn to the desalination of brackish/sea water as well as water recovered from treated industrial effluent and secondary treated municipal sewage. All these recycled water systems use reverse osmosis (RO) system for removal of dissolved solids.



### Silt Density Index Test Kit

#### Silt Density Index Kit Contents

- Instruction Booklet
- 47mm Filter Holder with ss valve with pressure regulator
- 0.45um 47mm Filter Papers (100 Pcs)
- 500ml Graduated Cylinder
- Stop Watch
- Dull Tweezers
- SDI Assembly case



### Silt Density Index with Booster Pump

#### Booster Pump kit contents.

- SDI Booster Pump, 220 VAC 50/60Hz
- Connector- 8 mm PU Tube
- Pressure Gauge & Pressure Regulator
- With Case Box
- Manual



### Silt Density Test Filter Membrane

- Material : Cellulose Nitrate
- Pore Size : 0.45 um
- Filter Size : 47 mm
- Type : Sterile / Non Sterile
- Pkt/100 pic



## Solid Phase Extraction (SPE)

### Solid Phase Extraction Manifold



Solid phase extraction vacuum manifolds allow to simultaneously processing up to 12 or up to 24 SPE tubes. Precise flow control is provided through each SPE tube by rotating the independent, Push-type valves in the cover, this ensures the packing will not dry out in some tubes while others finish draining. Features

- Extent Flexibility
- Multiple Sample processing will lead to increased productivity thereby saving time and money.
- Outstanding Safety
- Collection rack can accommodate a variety of collection equipment's Also the rack can be customized depending on the customer requirement
- Increased Productivity
- Choice of polycarbonate or PP stop cocks
- Easy to use
- Zero Cross Contamination

Product Code	Description
SPE12	Solid Phase Extraction Vacuum Manifold 12 Port
SPE24	Solid Phase Extraction Vacuum Manifold 24 Port

### SPE Accessories



Stop Cock



Vacuum Gauge



Large Volume Samplers



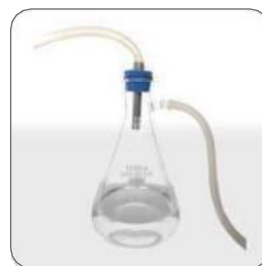
Bottle Caps



SPE Cartridge



SPE Cartridge



Vacuum Trap



Adapters for SPE Columns



## Solid Phase Extraction (SPE)



### Solid Phase Extraction Manifold 96 well plate

#### Description :

- Compact design – Small footprint frees valuable benchtop space and provides flexibility in arranging
- Designed for performance, versatility,

#### Features :

- ergonomics, and accuracy, this new product is suitable for everyday solid phase extraction (SPE), supported liquid extraction (SLE), protein precipitation (PPT), and filtration applications.
- The unit is compatible with 96-well plates from any manufacturer and has many features that make it superior to other models. The VM-96 has a heavy-duty, stainless steel and aluminum body so it stays in place better than lighter models and is precision manufactured so parts assemble quickly and easily.
- The built-in viewing window allows for easy observation of plate height and drip rate, and the durable O-ring and gaskets provide leak-free seals time after time. It also includes a precision height adaptor and five shims so users can customize plate height to their exact requirements.

#### Features :

- Efficient: purify DNA/RNA from 96 samples concurrently using 96 Well Plates and Kits
- Convenient: components for both filtration and binding
- Format: mm and inch Hg pressure gauge
- Design: compact, robust design ensures stability and reproducibility
- Flowthrough: binding plates/filter plates seal tightly to the gasket when vacuum pressure is applied to facilitate uniform flowthrough
- Manifold Storage: dry at room temperature (15-25°C)



#### Material :

- Body : Polypropylene
- Adaptor : Delrin
- Seal : Silicon

#### Application :

- Solid Phase Extraction
- DNA / RNA Extraction

Ordering Information		
Description	QTY	Part No.
<b>Vacuum Manifold 96</b>		
Bottom Plate	1	1125-0014
Top Plate	1	1125-0015
Waste Collection Tray	1	1125-0016
Silicon O-ring	1	1125-0017
Silicon Tube	1	1125-0018



## IR-FTIR ACCESSORIES



### Pellet Die Set

S

#### Laboratory Dry Press Die set (IR & FTIR )

##### Product description

The KLABS Evaluable Pallet Press is the preferred accessory for making pellets for FTIR analysis. Preparation of KBr pellets with a 13 mm die and a hydraulic press is the most popular method used for generation of samples for transmission measurements.

It is also required by a number of standardized procedures, including some USLP and ASTM methods. The advantages of this approach include the generation of high quality pellets, reproducibility, and the ability to deal with relatively difficult samples, thanks to a wide range of pressures available.

Evaluable Pellet Press comes complete with anvils and Vacuum Connector. Circular , Square & Rectangular Pallet Die Available as Per Customer Requirement



Die Size	5mm	10mm	13mm	20mm	25mm	32mm	40mm	50mm	60mm
<b>Total Height1</b>	2.75" 70mm	2.75" 70mm	2.83" 72mm	4.265" 108.3mm	4.75" 120.7mm	2.75" 70mm	2.85" 72mm	4.625" 108.3mm	4.75" 120.7mm
<b>Plunger Height</b>	1.37" 34.8mm	1.37" 34.8mm	1.37" 34.8mm	2.24" 57mm	2.24" 57mm	1.37" 34.8mm	1.33" 33.8mm	2.24" 57mm	2.24" 57mm
<b>Base Diameter</b>	1.97" 50m m	1.97" 50mm	2.0" 50.8m m	3.54" 90mm	3.54" 90mm	1.97" 50mm	1.97" 50mm	3.54" 90mm	3.54" 90mm
<b>Single Anvil Height</b>	0.25" 6.35mm	0.25" 6.35mm	0.25" 6.35m m	0.375" 9.5mm	0.375" 9.5mm	0.25" 6.35mm	0.27" 6.85mm	0.375" 9.5mm	0.375" 9.5mm

#### Application :

- for FTIR Analysis
- KBr Pellet Making & XRF Spectroscopy
- for Spectroscopy

#### We offer die sets for the following shapes:

- Circular - this is the most common shape and can be made using standard dies, vacuum dies, low profile dies, or custom dies.
- Square / Rectangular - we stock a few sizes of square and rectangular dies, but we can also make custom die sets.
- Ring Shapes - annual die sets are available for making pellets in ring shapes.
- Custom dies - we can create dies for almost any profile





## Laboratory Pellet Press For Solid Sampling



### Mini-Arbor Desk Top KBr Pellet Press

#### Product description

is the most economical, full-scale, KBr pellet press on the market, and it produces pellets that are as transparent as those made with a 12 ton hydraulic press. It uses a torque wrench to permit the user to apply the same amount of pressure from pellet to pellet thereby facilitating reproducibility of results. The square frame of the Port-A-Press™ can either be inserted in a bench mounted vise or in the channel shaped holder provided with the press (shown in photo) which can be mounted to a work bench.

The press can also be operated by laying the frame on the edge of a table and holding the frame with one hand while the torque wrench is tightened with the other hand. Pressure is applied to the die set as the threaded lead screw and toggle pad assembly is screwed through the threaded frame using the torque wrench.

The torque wrench easily generates 20 foot pounds of torque without the use of excessive strength, which is sufficient to produce 16,000 lbs/in<sup>2</sup> of pressure on the die set. This is the equivalent of 8 tons of pressure and forms a very clear pellet. The anvils of the 7mm die sets are hardened with optically polished faces and use the same aerospace grade of nickel based alloy as the Quick Press with which they are interchangeable. The dies are loaded in the same manner as the Quick Press die set.

- **2 mm TO 6 mm** pallet used for **IR/FTIR/XRF** Solid Sampling
- **3 ton** laboratory Hydraulic Pellet Press is a compact, elegant and robust machine, typically used by R&D & QC labs for various pelletizing applications for IR.
- The high pressure pumping unit supplies hydraulic fluid to the up-stoking ram of the cylinder.



### Laboratory Manual Hydraulic Pellet Press

#### Product description

A Complete Laboratory hydraulic press producing a force about 15 tones use to make high quality

- **13mm** pallet used for **IR/FTIR/XRF** Solid Sampling
- **15 ton** laboratory Hydraulic Pellet Press is a compact, elegant and robust machine, typically used by R&D & QC labs for various pelletizing applications for IR/XRF etc.
- The high pressure pumping unit supplies hydraulic fluid to the up-stoking ram of the cylinder.
- This causes the ram to rise steadily and positively in the upward direction. As a result pressure is applied on

The Manual Hydraulic Press is available up to 25 MPa load and used for a wide range of laboratory press applications. The press has a compact, small footprint design making it ideal for bench-top and glove box laboratory applications.

With a rigid steel construction, and protective safety shield as standard, this laboratory hydraulic press is particularly well-suited for FTIR KBr pellet press, XRF pellet press and thin film press applications.

The easy-to-read scale gauge is calibrated in MPa. Adjustable pressure control value allows reproducible load for repetitive applications. A range of conversion gauges are available for low pressure hydraulic press applications.

A laboratory press is used to create compressed pellets out of powdered material for use in applications as diverse as pharmaceutical development, spectroscopy, and bomb calorimetry. Powders are placed into a die (or mold) of the laboratory press and are pressed into shape by hydraulic action. A laboratory press can have a wide range of pressures, from 15 to 40 metric tons. One important consideration is the shape of the desired pellets, which can vary between different products. Some laboratory presses can accommodate a wide range of different-sized or customized dies. Though most laboratory presses are hydraulic, other laboratory presses can be of a screw press configuration.



#### Technical Data :

Model	HP 15T	HP 25T	HP 40T
Pressure Range	0-15T	0-25T	0-40T
Piston Diameter	50 mm	85mm	95mm
Maximum Piston Stroke	20mm	25 mm	30 mm
Table Diameter	95 mm	95 mm	120 mm
Workspace	90×90×150mm	120×00×150mm	150×150×230mm
Pressure Stability	≤1MPa/5min	≤1MPa/5min	≤1MPa/5min
Weight	40kg	60kg	86kg
Exterior Size	280×210×400mm	300×270×425mm	380×210×500mm

## CE Laboratory Pellet Press For Solid Sampling



### Laboratory Automatic Hydraulic Pellet Press

#### Product description

#### Motorized Laboratory Pellet Presses Used in IR / FTIR / XRF Sampling 20 Tons Semi-Automatic Press (Table Top) - Higher End Model

#### Features :

- Compact design and easy to operate electrical controls with Pressing and Ejection cycle
- Pressing Cycle has both Auto and Manual modes whereas Ejection cycle has only Manual (Inching) mode
- Steady pressure building and controlled release ensures better pellet quality.
- Ideal for accurate and repetitive pressing of sample pellets for XRF and other analytical techniques
- Desired Pressure is set on manual pressure switch & actual pressure indicated by made to order Glycerin filled pressure gauge (indicator)
- Settable parameters: - pressure, hold time & ram retracting time.
- Safety mechanisms to avoid over pressure and excessive ram stroke
- Transparent Polycarbonate safety guard has been provided in the area of operation.
- Emergency Stop Button to cut-off electrical supply (if required)
- Reputed MCB, overload relay & relay contactors are included in the Control-Panel for electrical safety
- Press is enclosed in a powder coated metallic cover, which is easily removable for maintenance purpose.



#### Technical Data:

- Max. Working Pressure: 223 Kg/sq.cm.
- Max. Daylight : 120 mm
- Electric Supply : 230 V AC Mains
- Auto mode & d-well hold Timmer facilities

#### Technical Data :

Model	ASHP 15T	ASHP 25T	ASHP40T
Pressure Range	0-15T	0-25T	0-40T
Piston Diameter	50 mm	85mm	95mm
Maximum Piston Stroke	20mm	25 mm	30 mm
Table Diameter	95 mm	95 mm	120 mm
Workspace	90×90×150mm	120×00×150mm	150×150×230mm
Pressure Stability	≤1MPa/5min	≤1MPa/5min	≤1MPa/5min
Weight	80kg	95 kg	110 kg
Exterior Size	280×210×400mm	300×270×425mm	380×210×500mm

**Note :** Programmable, user-friendly LCD touch-screen interface with RS-232 Port Model Available



## IR /FTIR Accessories



### IR Pellet Holder

#### Product description

Transmission sample holders are convenient tools to have in the lab. They position KBr pellets, films, mulls and smears at the correct beam height in the sample compartment for quick measurements. All holders are constructed of high-quality materials and feature a 2 x 3" standard slide mount compatible with all FTIR spectrometers.

- The Quick Holder was specifically designed to hold collars for 1mm, 3mm, 7mm, and 13mm pellets.
- 2"x3" backplate, which fits into the sample compartment of all standard FTIR spectrometers.
- The magnetic back plate holds the sample in place.
- Easy positioning of the collar on a removable mount with a half moon cut-out.
- Includes 2 interchangeable mounts of different width.
- An opening at the upper end of the holder is



Feature a spring-loaded mechanism which conveniently keeps in place films, salt plates, KBr pellets and other materials. The clear aperture of the holders is 20 and 10 mm. This universal holder offers great sample mounting flexibility.

#### Application :

- Sample Holders For Transmission FTIR Analysis

### KBr Powder, Spectroscopic Grade, 100 g - KBR-100

#### Product description

KBr powder is graded solely by purity standards that are relevant to infrared spectroscopy. Spectro Grade KBr powder is all made from crystal boules that are suitable for IR spectroscopy based upon ICL's testing standards. FTIR Grade SpectroGrade KBr powder is made from KBr crystal boules that are not quite beam splitter grade material and is defined as material that does not have any absorbance peaks in excess of 1.5%. FTIR Premium SpectroGrade is the equivalent of beam splitter grade material, and it is made from a blend of KBr crystal boules in which peaks range from 0.9% to 1.1% . XL Ultrapure Spectro Grade is a blend of material from rare boules that exhibit absorbance bands under 0.8% and the impurity range goes down to 0.2%. Molecular Weight: 119.00, Linear Formula: KBr.

KBr Powder, Spectroscopic Grade, 100





## IR /FTIR Accessories



### Demountable liquid-cell Holders

#### Product description

The Universal Demountable Cell Mount consists of a top and a back plate. Cell windows, spacers and other components are added to these plates, allowing you to construct a cell that is tailored to the requirements of the IR experiment.

For Semi-Demountable Cells, order the Universal Demountable Cell and your choice of semi-demountable windows and spacers..

The easy-to-read scale gauge is calibrated in MPa. Adjustable pressure control value allows reproducible load for repetitive applications. A range of conversion gauges are available for low pressure hydraulic press applications

#### Key Features

- Modular transmission cell system The cell is built up from window sets, spacers, and the cell body/backing plates. It is designed to be disassembled for cleaning and for customization of pathlength and window materials.
- Choice of permanently sealed or demountable window sets Demountable windows allow for flexibility of pathlength and may be disassembled to clean difficult samples. Sealed cells ensure pathlength stability and avoid leaks.
- Extensive selection of materials Our range of windows cover spectral ranges from the near-IR through to THz frequencies.

**Universal Liquid Cell Holder 38x19 x 4 mm**  
With PTFE Spacers 0.2 ,0.5 ,1mm



**Mull Cell Holder 25 mm**  
With PTFE Spacers 0.2 ,0.5 ,1mm



The following components of the Universal Demountable Cell are sold separately:

- Demountable (circular) cell windows, either 2 or 4 mm thick, are available in the following materials: NaCl, KBr, CaF<sub>2</sub> BaF<sub>2</sub>, KRS-5, AgBr, and ZnSe
- Semi-Demountable (rectangular) cell windows, either 2 or 4 mm thick, are available in the following materials: NaCl, KBr, CaF<sub>2</sub> BaF<sub>2</sub>, KRS-5, AgBr, and ZnSe
- Demountable (circular) Spacers, either lead or plastic, in a variety of thicknesses.
- Semi-Demountable (rectangular) Spacers, either lead or plastic

#### Application :

- For FTIR Analysis



## IR /FTIR Accessories



### Mortal and Pestle

#### Product description

Octagonal mortar and pestle sets feature highly polished grinding surface. Made of naturally hard agate stone/ SS 316 For use in laboratories demanding contamination-free results.

Agate pestle and mortar set, recommended for use with very hard samples. Agate is much harder than porcelain, thus reducing the level of impurities introduced into the sample during grinding.

Available Size- 2" , 4" , 6",

**Black Granite Mortar and Pestle**



**SS 316 Mortar and Pestle**



#### Application :

- For FTIR Analysis

### Sodium Chloride (NaCl) Windows

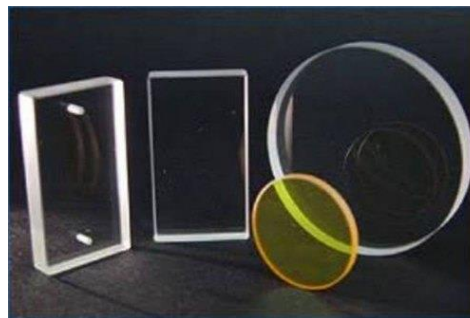


#### Product description

Undrilled /Drilled back window Pair Per Packet

- Excellent Transmission from 250nm - 16 $\mu$ m
- Low Cost
- Ideal for FTIR Spectroscopy
- Potassium Bromide (KBr) Windows Also Available

Available Size- 25 mm x4 mm & 38x18mm x4 mm





## IR /FTIR Accessories



### FTIR Dry Box

#### Product description

Dry Box electro-mechanical device designed for storage of accessories affected by moisture.

#### Features:

- Designed with excellence
- Smooth functioning
- Sturdy construction
- Specifications:
  - Usable Volume: 300 x 300 x 300 mm.
  - Temperature: Ambient to 45°C- 200°C
  - Power: 230 V, 50 Hz, 100 W

#### Models Are Available 3 Variants :-

#### Dry Box with Blind Controller (Thermostat Based)

Model : DB-01



#### Dry Box with Blind Controller & Digital Temperature Indicator

Model : DB-02



#### FTIR Spectrometer Enclosure Model : DB111

#### Product description

Our Mild Steel FTIR Spectrometer Enclosure offers personnel protection from applications using spectroscopy equipment and powder materials. The hinged top door and removable draft shield open large enough for Thermo Scientific™ Nicolet™ iS50 FTIR Spectrometer into the enclosure. Containment is tested and proven with ASHRAE 110 standards during our Factory Acceptance Testing (FAT).

This enclosure is constructed with mild steel sheet for the front and sides with a toughened glass door. The black lab-grade phenolic base is dished at the edges to contain spills. Side access doors allow access to various angles of the enclosure in case of equipment maintenance or cleaning between applications.

Additional features for this enclosure include an LED Light Tube, removable draft shelf, with heating Facility room temperature to Ambient to 45°C- 200°C





## Low Pressure Low Temperature (LPLT) Filter Press



### LPLT Filter Presses API U

#### Introduction

- Model AS-5B Low Pressure Filter Press is the most effective means of determining filtration properties of drilling fluids and cement slurries. All Low Pressure Filter Press assemblies consist of these items:
  - Mud reservoir mounted in a frame
  - Pressure assembly and regulator
  - Filter paper
  - 25 ml graduated cylinder
- Measuring filtration behavior and wall-cake building characteristics of a mud is essential to drilling fluid control and treatment. The characteristics of filtrate, such as oil, water, or emulsion content are also important. The types and quantities of solids in the fluid and their physical and chemical interactions affect these characteristics. Temperature and pressure affect the physical and chemical interactions. Performing tests at both low pressure/low temperature and high pressure/high temperature is necessary, and these testing conditions require different equipment and techniques.
- The basic filter press has a cell assembly constructed of stainless steel or aluminum material and includes the required screens and gaskets.
- Working pressure is 0.69MPa and the filtering area is 45.6cm<sup>2</sup>, as specified in API standard..
- Measuring filtration behavior and wall-cake building characteristics of a mud is essential to drilling fluid control and treatment. The characteristics of the filtrate, such as oil, water or emulsion content, are also fundamentally important. The types and quantities of solids in the fluid and their physical and chemical interactions affect these characteristics. Temperature and pressure in turn affect the physical and chemical interactions.
- It is therefore necessary to run tests at both low-pressure/low-temperature and high pressure/high-temperature. Each of these testing conditions requires different equipment and techniques.
- 100 % Made In India



#### Material :

- Body : SS 304
- Support : Mild Steel
- SS Pressure gauge regulator

#### Application :

- Mining & metallurgy,
- petroleum, chemical,
- medicine, textile,
- printing,
- paper making,
- food,
- alcohol,
- inorganic salt,
- coal washing,
- dyeing and sewage treatment industries.

#### Ordering Information

Description	QTY	Part No.
<b>LPLT Filter Presses API AS5B</b>		
Mud reservoir mounted in a frame	1	5B25-014
Pressure assembly and regulator	1	5B25-015
Filter paper	1	5B25-016
25 ml graduated cylinder	1	5B25-017
Pressure Hose 2 mtr	1	5B25-018



## Sample Concentrator (Nitrogen Evaporator)



### Nitrogen Evaporator EV-HMI-50

#### Description :

- KLABS is a nitrogen blow-down Semi automated evaporation system that provides automated evaporation of up to 144 samples in parallel with endpoint detection.
- This modern design features many new enhancements including a top glass in tank for much greater visibility removable/replaceable nozzles on the lid, on- the- fly nozzle adjustment, easily exchangeable manifolds to extend functionality, programmable evaporation flow gradients, easy access drain port and user friendly touch screen interface.
- This automated nitrogen evaporation system uses vortex airflow generated from stable angled nitrogen blow, to constantly disturb the sample surface and lower its vapor pressure in order to gain gently rapid evaporation under water bath heating.

Each sample position is equipped with optical align to precisely determine endpoint of concentration. User can have real-time monitoring to whole process through built-in touch screen, make it easier to access and observe.

- KLABS EV-HMI50 Automated evaporation system is designed for large-volume concentration for sample batches, typically used to evaporate extracts of soil and water samples from environment, azo dye from textiles, fat and acid value from fried foods, as well as residues of pesticides and veterinary drugs



#### Applications:

- Forensic Toxicology
- Lcms & Analytical research
- Lather Testing
- Fisheries Industries

#### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199

#### Features :

- Feather Touch Display
- Advanced Micro Controller based
- 480x272 pixels color TFT Display and LCD at each and every operation or any faults messages on the display
- Adjustable blow down angle: optimize the shear vortex action by adjust the angle of the needles pointing, to ensure efficient evaporation
- 100 % Made In India

Vortex shearing technology



Ordering Information		
Description	QTY	Part No.
Nitrogen Evaporator		
15 Sample System	1	1120-1415
30 Sample System	1	1120-1430
50 Sample System	1	1120-1450
100 Sample System	1	1120-1100
144 Sample System	1	1120-1144

Rack Specifications (SS 316L)	
Rack type (mm)	Working Volume
12 mm x 75	4 ml
12 mm x 100	5 ml
16 mm x 100 (Standard)	10 ml
15 mm x 125	11 ml
15 mm x 150	13 ml
17 mm x 125	15 ml
18 mm x 150	20 ml
20 mm x 150	30 ml



## Sample Concentrator (Nitrogen Evaporator)



### Nitrogen Evaporator N2 EV -50

#### Features:

Nitrogen evaporators are used to prepare samples for analysis. Used in many industries, such as food, biotechnology, analytical chemistry, petroleum, and environmental sciences, nitrogen evaporators dry and concentrate samples so that tests like mass spectrometry, gas chromatography, and high performance liquid chromatography (HPLC) can be performed on them. Samples are loaded into the nitrogen evaporator and then nitrogen blowdown is used, sometimes in conjunction with heat, to rid the sample of moisture. There are variations among nitrogen evaporators, including how many sample positions it contains, whether it uses wet or dry baths, if it needs hood space or not, and whether it provides heat as well as nitrogen blowdown to evaporate the samples.



#### Applications:

- Forensic Toxicology
- LCMS & Analytical research
- Lather Testing
- Fisheries Industries
- Food, water, soil and environmental solvent extraction
- Environmental samples
- Agrochemical samples
- Forensic and crime samples
- Drugs of abuse samples
- Food and beverage analysis



#### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199

#### Documentation:

- Operational Manual IQ/OQ/PQ & CE Certificate will be provided

#### Note :

before Placing Order Follow FAQ

- 1) Once Confirm Sample Capacity
- 2) Connection Size

#### parts List

Sr. No	Description	QTY
1	Nitrogen Evaporator	1
2	Rack (as per test table size)	1
3	8mm PU tubing	1
4	Exhaust hose (2mtr)	1
5	Nozzle Caps	1
6	Male Connector	1
7	Water Remover	1
8	Power Cord	1

Rack type (mm)	Working Volume
12 mm x 75	4 ml
12 mm x 100	5 ml
16 mm x 100	10 ml
15 mm x 125	11 ml
15 mm x 150	13 ml
17 mm x 125	15 ml
18 mm x 150	20 ml
20 mm x 150	30 ml

#### Ordering Information

Description	QTY	Part No.
Nitrogen Evaporator		
15 Sample System	1	1120-1415
30 Sample System	1	1120-1430
50 Sample System	1	1120-1450
100 Sample System	1	1120-1100
144 Sample System	1	1120-1144



## Sample Concentrator (Nitrogen Evaporator)



### Multi Tube Vortexer (Digital Display)

#### Description :

- The Multi-Tube Vortexer is designed for mechanical and chemical cell lysis, mixing suspensions, and general sample agitation. The Multi-Tube Vortex mixer is a tool to provide that extra degree of mixing, however it accommodates full racks of tubes or microwell plates, vials or cylinder as opposed to single tubes. Consequently, this unit is useful for higher throughput mixing of samples. The suction-cup feet dampen motion and prevent sliding on work surface. Equipped with a powerful, permanent magnet motor with sealed ball bearings.

- The variable speed microprocessor control provides consistent uniform mixing action

#### LCD Display:

- Touch pad controls with easy-to-read, independent LCD displays for speed and time allow operator to view both settings at once

#### Pulsing Mode :

- Programmable pulsing mode allows user to adjust the pulse-on and pulse-off times between 1 and 59 seconds in 1 second intervals.
- Supply: 220-240 Volts 50 Hz Single Phase.
- Maximum speed will vary depending on load

#### Application :

- Sample Mixing

#### Safety compliance:

- CE certification
- ISO 9000 & ISO 8199



Specifications	ASVM-100
Speed Range*	● 500 to 2500
Timer	● 1 sec to 999 Hrs.
Orbit	● 3.6 mm
Maximum Weight Capacity	● 24 x 15 ml
Duty Rating	● Continuous
Tray Dimensions (L x W) mm	● 313 x 180
Overall Dimensions (W x D x H)mm	● 400 x 325 x 430



## HPLC CONSUMABLES



**Disposable Syringe Filters (Disposable)**

Part No	Description
NSF1322	Nylon Syringe Filter 13mm, 0.22um
NSF1345	Nylon Syringe Filter 13mm, 0.45um
NSF2522	Nylon Syringe Filter 25mm, 0.22um
NSF2545	Nylon Syringe Filter 25mm, 0.45um
PTFE1322	PTFE Syringe Filter 13mm, 0.22um
PTFE1345	PTFE Syringe Filter 13mm, 0.45um
PTFE2522	PTFE Syringe Filter 25mm, 0.22um
PTFE2545	PTFE Syringe Filter 25mm, 0.45um
PVDF1322	PVDF Syringe Filter 13mm, 0.22um
PVDF1345	PVDF Syringe Filter 13mm, 0.45um
PVDF2522	PVDF Syringe Filter 25mm, 0.22um
PVDF2545	PVDF Syringe Filter 25mm, 0.45um

	PVDF	PES	NYLON	PTFE
<b>Membrane material and Pore size</b>	PVDF 0.45µm	PES 0.45µm	Nylon 0.45µm	PTFE 0.22µm
<b>Wettability</b>	Hydrophobic	Hydrophilic	Hydrophilic	Hydrophobic
<b>Housing Material</b>	Polypropylene	Polypropylene	Polypropylene	Polypropylene
<b>Inlet/Outlet</b>	Female luer lock/Male luersilp	Female luer lock/Male luersilp	Female luer lock/Male luersilp	Female luer lock/Male luersilp
<b>Maximum Operating Temp(°C)</b>	100	50	100	130
<b>Filtration area(cm2)</b>	2.89	2.89	2.89	0.92
<b>Holdup volume (µl)</b>	30	100	30	10
<b>Volume Throughput (ml)</b>	100	100	100	12
<b>Bubble point(psi)</b>	10	44.9	30	18



### Sample Filtration Kits

#### Gas Tight Glass Syringe

**Capacity :** 10 ml.

**Connection :** Lure Male.

#### Syringe Filter Holder

**MOC :** SS 316L.

**Filter Size :** 13 mm , 25 mm.

#### Membrane Filter Paper

**Pore Size :** 0.45um.

**Filter Dia.:** 47 Mm.

**Media Material :** Nylon 66 Pkt/ 100.

Needles Set



### ABS PLASTIC COLUMN STORAGE CABINET

**Capacity :** 120 HPLC columns (5 + 5 + 5 + 5 Drawers)

**Dimension (WxHxD) :** 280 x 1210 x 410mm

With Lock & key also Available

Part No	Description
CSC-6P	Capacity : 60 HPLC columns (6 drawers)
2P	Capacity : 120 HPLC columns (6 + 6 drawers)



### Peek Fittings & Accessories **W**



#### Peek Ferrule

High Pressure Fittings Offer Extra Durability. They Are More Robust To Higher Temperatures, Solvent Exposure And Over-Tightening Than Standard PEEK Fittings.

They Are Available In A Variety Of Dimensions, All With Built-In Ferrules. Size 1/16



#### Peek Union

HPLC PEEK union for 0.25mm I.D. tubing.

1. Easy connection of transfer/solvent lines
2. Low dead volume
3. Completely inert and biocompatible



#### Peek Tees & Crosses

The 100% PEEK flowpath PEEK tees and crosses usable with most common organic and inorganic HPLC solvents without risking corrosion, fitting details with smooth transition of the taper into the threaded part. Connections to these PEEK tees and crosses can be made with any 10-32 fitting that uses polymeric ferrules. Combine multiple fluid streams into one under high operating pressures



#### Peek Coupler

PEEK Column Coupler delivers a low swept-volume connection while maintaining column efficiency.

Our couplers are an excellent option for reducing overall flow path volume while coupling two devices together. It is manufactured from biocompatible PEEK giving is excellent chemical resistance to virtually all commonly used solvents. It has a swept volume of 3.6uL, a thru-hole of .010" and a male to male thread configuration of 10-32 Coned.



#### Peek Adaptor

Designed for secure liquid-tight connections Adaptors for semi-rigid tubing are color-coded by tubing size for easy identification. A two-piece nut and ferrule system provides a liquid-tight connection and withstands pressures up to 500 psi.



#### Manifold Assembly, PEEK, 7 Port, 1/16" OD Tubing; 1/EA

Securely join fluid pathway components Holds tight connection even through vibration

- Maximum pressure of 1000 psi (69 bar) & 0.040" thru-hole diameter
- Swept volume of 139 µL

### HPLC Fittings & Accessories X



#### Stainless Steel Union

1. Easy connection of transfer/solvent lines
2. Low dead volume
3. Completely inert and biocompatible



#### COLUMN END PLUGS

Column end plugs are used to prevent HPLC columns from drying out when not in use. Made of hard nylon, these end stoppers are available in packs of 10 and in different colors.

- 49027-01B End plugs for HPLC columns. Nylon 10-32 Thread. White. 100/Pack.
- 49027-06K End plugs for HPLC columns. Nylon 10-32 Thread. Green. 100/Pack.
- 49027-04W End plugs for HPLC columns. Nylon 10-32 Thread. Red 100/Pack.
- 49027-06K End plugs for HPLC columns. Nylon 10-32 Thread. Black. 100/Pack.
- 49027-04W End plugs for HPLC columns. Nylon 10-32 Thread. Blue . 100/Pack.



#### HPLC Safety Bottle Caps with filter

HPLC Bottle Cap As Per (ISO Standard Inc A-620) Port -1 ,2,3,4 Material :White Tefzel Insert ETFE 9 ( Ethylene tetrafluoroethylene ) Cap Size : GL45. Port Size : 1/8 with Vent.



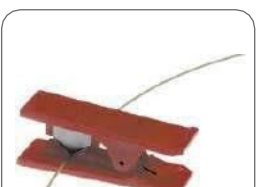
#### Port Cap Adapter 1/4"-28 UNF(M) flat bottom for 1/8" OD tubing

- polypropylene
- Fitting Material: Polypropylene
- Connection Type: Compression x UNF(M)
- Thread Size: 1/4"-28 UNF(M)
- Chemically stable: resistant to most organic solvents such as acids, alkalis, salts, alcohols, phenols, aldehydes and ketones
- Non-toxic and odourless, food-grade material with good surface stiffness and scratch resistance
- Thermal performance: sterilizable at 100°C



#### Peek Tubings

Zeus manufactures the highest-quality tubing to meet the strictest demands of our customers' markets including the Aerospace and Automotive industries. From our line of uniform extruded tubing with inner diameters ranging all the way down to an astonishing 0.001" and wall thickness of 0.002", Zeus can supply the ideal product for your application.



#### Peek Tube Cutter

Cuts PEEK, PTFE, ETFE, and other polymeric tubing

- No distortion to OD or ID
- Ideal for the most demanding LC applications
- handy tool makes it easy to get burr-free, perpendicular ends on polymeric tubing without distorting the outside diameter and/or closing the inside diameter of the tubing.
- Safety lock secures the blade Right angles and clean cuts are essential in LC to avoid leaks and dead volume.



## HPLC / GC CONSUMABLES



### Agilent Purge Valve with PTFE Frits

- purge valve, short, with ptfe frit, for 1120, 1220,
- G7110, G7111 pumps, 600 bar max - purge valves



### Bottle Head Assembly Long ( G7120-60007) Including Contains

- GL45 CAP with tube head 3 Port
- 1/8 HPLC tubing 2 mtr
- Peek Fittings 1/8" - Pkt/3
- Last Drop Filter 1/8x 10 um ss 316 Pkt /1
- Tube No. Pkt Pkt/10



### Aluminium G3188-27501

- Ferrule, flexi, inert
- 0.25mm
- Pkt/ 10/pk



### GC Capillary Column Nut 5181-8830

- Ss 316
- 0.25mm
- Capillary Column Nut (fits Agilent injectors
- non-MS detectors hexagonal wrench tight
- Pkt/ 2/pk



### D2 Deuterium Lamp

- D2-200 Deuterium Lamp for T70, T80 and T92 series



### GC Graphite Ferrules Nut 8010-0304

- Ss 316
- 0.8 mm
- Capillary Ferrule Nut (fits Agilent injectors)
- Pkt/ 10/pk



## Vial Crimper & De Crimping Tools



### Vial Crimper & De Crimper

#### Product description

KLABS Hand crimpers are designed and manufactured using quality materials, and finishing techniques to provide a consistent and dependable seal while maintaining their durability, and long life. The standard hand crimpers are provided with an adjustable stop, allowing the operator to repeatedly achieve a quality crimped seal. All parts that contact the crimp seal are stainless steel or plated.

The crimper jaws are hardened and polished to provide smooth, consistent operation. Laboratory Grade Hand Crimpers are available with or without cushioned grips which will withstand repeated exposure to cleaning and sterilizing solutions, as well as exposure to some autoclave processes. For convenience, Grips can be removed if necessary. Manufactured using a combination of stainless steel, and hard plated, steel components where both corrosion resistance and increased wear and lubricity are required for optimum function. Our Laboratory Grade Hand Crimpers also have a multi-step, micro surface finish and polishing process for components that require additional wear and lubricity characteristics, such as the crimper jaws. The enhanced surface finish provides smoother operation and allows the material during the crimping process to be more fluid, providing a consistently tight and uniformly crimped seal. ROHS compliant..



- Available : Full Stainless steel 304 & Mild steel Grade Material
- Compatible Aluminum Cap : 1) Normal Vials 2) Flip off type (Before Placing Order Once Confirm)

### Vial Decapper and Crimper Pliers Set

#### Product description

Perfect for Decamping 11mm and 20mm Vials and Bottles (Largely used 20mm Crimper)

- 11mm/20mm Twin Action Vial Decapper - Use it to easily remove aluminum crimp tops from vials and bottles
- 20mm Vial Crimper - Use it to easily place aluminum seals on vials and bottles
- Smooth and simple to operate
- Durable, high-quality construction offering consistent, dependable performance
- Receive both a crimper and decamping plier. Best value for your money.



#### Aluminum Flip off Vial Cap



#### Aluminum Tear off Vial Cap



SS Vial Crimper	
Product Code	Size
SSC-1001	11
SSC-1002	13
SSC-1003	20
SSC-1004	32
SSC-1005	33
SS Vial Crimper (Flip off)	
Product Code	Size
SSCFO-1001	11
SSCFO-1002	13
SSCFO-1003	20
SSCFO-1004	32
SSCFO-1005	33

MS Vial Crimper	
Product Code	Size
MSC-1001	11
MSC-1002	13
MSC-1003	20
MSC-1004	32
MSC-1005	33
MS Vial Crimper (Flip off)	
Product Code	Size
MSCFO-1001	11
MSCFO-1002	13
MSCFO-1003	20
MSCFO-1004	32
MSCFO-1005	33

SS plier Vial de-crimper	
Product Code	Size
SSPD-1001	20

SS Vial de-crimper	
Product Code	Size
SSDC-1011	11
SSDC-1012	13
SSDC-1013	20
SSDC-1014	32

MS Vial de-crimper	
Product Code	Size
MSDC-1011	11
MSDC-1012	13
MSDC-1013	20
MSDC-1014	32



## Gas Sampling Bombs/ Cylinders

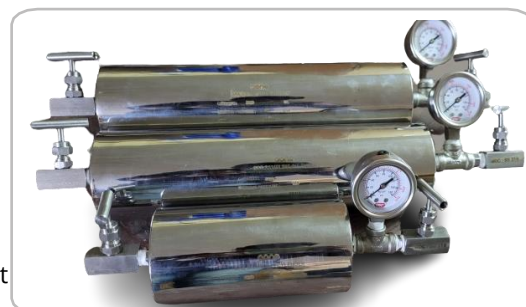


### Gas & Oil Sampling Y

#### Double End type

##### Features:

- KLABS Sampling Cylinder and Sample bombs are designed to provide safe containment for storage,
- examination and transportation of both liquids and gases.
- Available in Single ended , double ended and flat ended.
- Natural Gas Sampling bombs are perfect for sampling
- corrosive gas and pressurized gas. Double ended Sampling cylinders are most commonly used.
- We have ability to customize Sampling Cylinders to suit your exact needs.
- The range is designed for and used across the world in various industries, including petrochemical refineries and well sites, analytic laboratories , sensitive chemical , alternative fuel technologies, and manufacturing.
- KLABS is the most reputed manufacturer and exporter of these sample cylinders and Gas Sampling Bombs



ISO 9001:2015 , CE & TPED Certified



Technical Parameter For 3000 psi			
Product Code	Capacity in cc	Connection	Size In MM
212-1005	100	¼" NPT	ø 60x 120
212-2505	250	¼" NPT	ø 60x 230
212-5005	500	¼" NPT	ø 60x 320
212-10005	1000	¼" NPT	ø 88.9x 300
212-20005	2000	½" NPT	ø 102x 350
212-50005	5000	½" NPT	ø 150x 350

#### Low Pressure Reactor

#### High Pressure Reactor

#### Gas And Oil Sampling

#### Condensate Pot Type Cylinder



Single End

4 way

Double End

Triple End



## Laboratory Gas Sampling Bottles



### Gas Sampling Cylinder with Dip line tube

#### Features:

- A one Sampling Cylinder and Sample bombs are designed to provide safe containment for storage, examination and transportation of both liquids and gases.
- Available in Single ended , double ended and flat ended.
- Natural Gas Sampling bombs are perfect for sampling
- corrosive gas and pressurized gas. Double ended Sampling cylinders are most commonly used. We have ability to customize Sampling Cylinders to suit your exact needs.
- The range is designed for and used across the world in various industries, including petrochemical refineries and well sites, analytic laboratories , sensitive chemical , alternative fuel technologies, and manufacturing.
- A one is the most reputed manufacturer and exporter of these sample cylinders and Gas Sampling Bombs



#### Material availability for Sampling Cylinders:

- Sampling Cylinder are available in Stainless Steel 304 ( SS 304 ), Stainless Steel 316 Cylinder With Dip Line .
- Monel

#### Applications:

Sampling for research in refinery and petrochemical plants

Technical Parameter For 3000 psi			
Product Code	Capacity in cc	Connection	Size In MM
212-5005	500	¼" NPT	ø 60x 320
212-10005	1000	¼" NPT	ø 88.9x 300
212-20005	2000	½" NPT	ø 102x 350
212-50005	5000	½" NPT	ø 150x 350
212-50005	10000	½" NPT	ø 230x 350



## Transformer Oil Sampling Bottles



### Description :

Oil sampling bottle will be suitable for collecting oil samples from transformers and shunt reactors for dissolved gas analysis. Bottle will be of robust construction such that no damage occurs during frequent transportation of samples from site to laboratory.

Material of construction: Generally sampling bottles are made from Stainless steel 304 and 316 material, with all accessories fitted with the bottle like, filling and drain valves, hex nipple made from stainless steel 304 and 316 material.



It is possible to seal the bottle gas tight and is fitted with suitable cocks and valves both ends. Design of bottle is cylindrical type and loss of hydrogen will not exceed 5% per week.

An imponderable oil-proof, transparent plastic or rubber tube of about 5mm diameter, and of sufficient length shall also be provided with each bottle along with suitable connectors to fit the tube on to the oil sampling valve of the equipment and the oil collecting bottles respectively..

**Available Material :** Stainless Steel 304 / 316

### **Technical Details :**

Specifications Materials of Construction Housing:

- Size : 500 ml , 1000 ml , 2000 ml
- Type : Double End
- Valve Type : ¼" NPT Needle valve
- Inlet/Outlet Connections Accepts 9.5 mm (3/8 in.) ID tubing
- Maximum Operating Pressure 100 bar , Working 50 bar
- Maximum Operating Temperature 80 °C (176.0 °F) at 1 mbar (1070 kPa, 155 psi)\*

### **Application :**

- DGA Oil sampling
- Transformer oil sampling
- Gas handling or transportation

### **Safety compliance:**

- CE certification
- PED & TPED
- ISO 9000:2015



## Laboratory Hydrothermal Autoclave



### Hydrothermal Autoclave

The Hydrothermal Autoclave Reactor use to carry hydrothermal reaction at high pressure and high temperature. Hydrothermal synthesis reactor generally comes in a two variety; the first is Polytetrafluoroethylene (PTFE) or Teflon lined hydrothermal autoclave reactors and the second is PPL lined autoclave. Hydrothermal reactor mainly made up of two parts; outer high-quality stainless steel jacket and inner Teflon liner or Teflon chamber. In the Teflon-lined autoclave, the reaction is carried out at maximum 240-degree Celsius (428 Fahrenheit), while the safe temperature is 200-degree Celsius (392 Fahrenheit). PPL lined reactor use for the reaction operate at higher temperature, where the safe temperature will be 260-degree Celsius (500 Fahrenheit) and the maximum operating temperature is 280-degree Celsius (536 Fahrenheit). This product extensively used in the scientific laboratory, research and development labs, institutional organizations, quality analysis section in industries etc.

#### Features:

- operating temperature:  $\leq 220^{\circ}\text{C}$
- Safe temperature:  $- 200^{\circ}\text{C}$
- Working Pressure:  $\leq 3\text{MPa}$  or 30 Bar
- Heating and Cooling Rate:  $\leq 5^{\circ}\text{C}/\text{min}$
- Material: Shell made of high-quality nonmagnetic 316 stainless steel
- 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
- Secondary cap has been provided at the top of the reactor for extra tightening to avoid leakage
- Customized stainless steel jacket/autoclave of SS 316 can also be provided if needed, which is better for corrosive materials.



#### Outer Jacket Material availability:

- Stainless Steel 304
- Stainless Steel 316

#### Inner Material availability:

- Teflon Lined
- PPL Lined

#### Capacity :

- 10ml, 25ml, 50ml, 100ml, 150ml, 200ml, 250ml, 300ml, 400ml, and 500ml,
- while the flange type sealing will be in a 1000ml, 1500ml, and 2000ml autoclave.

#### Applications:

- Environmental science
- 
- nanotechnology
- Polymer industry
- Catalysis

#### Hydrothermal Autoclave

Product Code	Capacity in cc	Lined
HTA-10	10	Teflon / PPL
HTA-25	25	Teflon / PPL
HTA-50	50	Teflon / PPL
HTA-100	100	Teflon / PPL
HTA-150	150	Teflon / PPL
HTA-200	200	Teflon / PPL
HTA-300	300	Teflon / PPL
HTA-500	500	Teflon / PPL



## Cross-flow filtration



### Dead-end filtration system Stirred Cell

#### Introduction

The AHP47 Stirred Cell is a high-pressure, chemically resistant stirred cell that performs a wide variety of membrane separations. With a maximum pressure rating of 1000 psig (69 bar), the AHP47 is ideally suited to simulate the flow dynamics of reverse osmosis (RO) filtration, Nano filtration (NF), ultrafiltration (UF), and microfiltration (MF) systems. Stainless steel (316L) construction and chemically resistant components make it an ideal choice to filter aqueous and non-aqueous solutions.



Dead-end filtration separates particles from liquids flowing vertically into the filter. The filtered materials deposit into a cake on the filter's surface, clogging the membrane relatively quickly.

To overcome the resistance of the membrane, dead-end filtration systems require a booster or vacuum pump that can supply the force needed to create the appropriate flow rate. Unlike cross-flow filtration systems, dead-end filtration is intermittent since the membrane must be cleaned or replaced after set intervals to maintain optimal performance. Any 47 mm diameter membrane disk can be used with the stirred cell, which provides excellent versatility. This instruction manual describes the functions, features, configuration, start-up, and operation of the AHP47 Stirred Cell.

Dead-end filtration system 3932154	
Features and Technical Specifications Parameter	Description
<b>Membrane Size:</b>	47- mm diameter (1.5 inches)
<b>Active Membrane Area:</b>	14.6 cm <sup>2</sup> (2.26 in <sup>2</sup> )
<b>Processing Volume:</b>	300 mL
<b>Hold-Up Volume:</b>	1 mL
<b>Maximum Pressure:</b>	69 bar (1000 psig)
<b>Maximum Temperature:</b>	121 °C (250 °F) at 55 bar (800 psig)
<b>PH Range:</b>	Membrane dependent
<b>Connections:</b>	
<b>Permeate Outlet:</b>	1/8-inch diameter 316L SS tubing
<b>Pressure Inlet:</b>	¼ inch FNPT
<b>Wetted Materials of Construction</b>	
<b>Cell Body:</b>	316L Stainless Steel
<b>O-rings:</b>	Buna-N, others available as options
<b>Gaskets:</b>	Buna-N, others available as options
<b>Stir Bar:</b>	PTFE-coated magnet
<b>Dimensions:</b>	
<b>Cell Body Diameter:</b>	5.2 cm (2.0 inches)
<b>Cell Top Width (assembled w/clamp)</b>	10.3 cm (4.0 inches)
<b>Cell Bottom Width (assembled w/clamp)</b>	13.4 cm (5.25 inches)
<b>Cell Height:</b>	22.2 cm (9.5 inches)
<b>Assembled Weight</b>	(6 lb.)
<b>Autoclavable</b>	Yes

#### Material

All supplied fittings are made of SS 316 material. Its autoclave. Note : Contact For Chemical compatibility

#### Safety compliance:

CE certification

#### Applications :

- Flow Geometries
- Dead-end MF
- Cross-flow filtration
- Silt Density Test

Ordering Information		
Description	QTY	Part No.
<b>AHP47 Components 33932154</b>		
Stainless steel cell body	1	33932154-1
Cell top	1	33932154-2
Cell bottom	1	33932154-3
10 hex screw pkt/ 6	1	33932154-4
Hex Key	1	33932154-5
Bottom O-rings	2	33932154-6
Top Gasket	2	33932154-7
Permeate Tube 1 mtr	2	33932154-8
Stir bar assembly ss pre-filter	1	33932154-9
Stir bar retriever	1	33932154-10
User Manual	1	33932154-11



## Laboratory Sterile Filtration Vessel



### Low Hold-up Volume Vmax Vessel

#### Features:

- Vertical design minimizes hold-up volume and product loss
- Attach a IFH47 filter holder to outlet to filter effluent prior to use
- Autoclavable:

All supplied fittings are made of PP material available for autoclave.

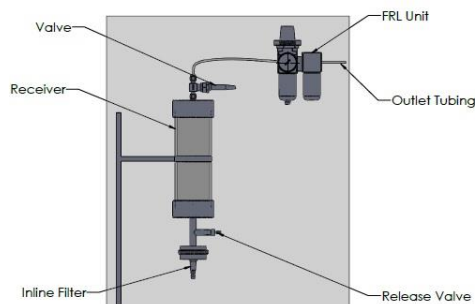
#### Safety compliance:

- CE certification

#### Applications:

Use for particle-free filling of vials with extemporaneous drugs  
allergenic extracts  
ophthalmic solutions  
Dispensing Small Volumes of Liquid

IFH47 Stainless filter holder:



Ordering Information		
Description	QTY	Part No.
<b>Vmax System</b>		
Main Unit	1	1110-0001
Ball Valve ¼"	1	1110-0002
PU Pressure Tube ¼" _1mtr	1	1110-0003
Silicon O ring Set	1	1110-0004
IFH47 Filter Holder	1	1110-0005

#### Specification :

- Max. Pressure : 6 bar
- Max. flow rate : 1 L/min
- Net weight : 1.5 kg
- Dimension : diameter, (in): 3.5; height,(in): 15.9

#### Material :

- Clear polycarbonate cylinder
- Black polypropylene end caps
- silicone O-rings
- polyethylene pressure tubing
- Delrin® ball valve
- Stainless steel Filter Holder 47 mm



### Safety Products & Accessories Z



#### Hand glows Dispenser

Made Of ss 304  
Light weight & Wallmounted  
Available small , Midium & Large Size (Customised Size Available)



#### Hairnet Dispenser

Made Of Clear Acrylic  
Light weight & Wall mounted  
Available small , Medium & Large Size (Customized Size Available)



#### Syringe Filter & HPLC Vial Dispenser

No. Of Housing: 2 , 3 , 4 Station For Store HPLC Vials & Syringe filter storage  
Easy front rotary Knobs to collect sample untouched  
Material: Acrylic Housing & Body SS 304



#### HPLC Vials hplc screw vials with insert cap and septum

Vial Volume: 1.5-2.0ml  
Vial Material: Borosilicate Glass/Glass Type 1  
Application: Lab consumables for analysis  
Certification: ISO9001, SGS, COA  
Vial Thread: Screw  
Cap: Plastic open/solid cap  
Septa: Non-slit, Pre-slit, PTFE/Silicone



#### HPLC Vial Rack

Wells:50 Holes  
Material: Made by polypropylene  
Design for 1.5ml/2ml HPLC autosampler vial, Aijiren can also supply other vial racks for 4ml, 8ml, 10ml, 20ml, 30ml, 40ml  
Easy handing and transportation of sample vial;  
vial rack can be stacked in the empty or filled with a set of vials  
Stable standing position because of solid construction;  
Alphanumeric and indexing are for easy tracking



#### HPLC Last Drop Filter

Last Drop Inlet Filters have a unique inlet design that allows your system to use almost every "drop" of mobile phase from the  
for 1/16th and 1/8th tubing we suggest flange free connectors.



## Closer Integrity test System



### Container Closure Integrity Testing (CCIT)

#### Features

Pharmaceutical and some food products are expected to be free from microbial contamination and safe to use right from production throughout their shelf-life, but different products and container types necessitate different testing methods according to their content, material of packaging, design and regulatory requirements.

Container Closure Integrity Testing (CCIT) (USP <1207>), commonly referred to as leak detection, is a non-destructive packaging inspection system to maintain an aseptic barrier against potential contaminants. Is a deterministic testing procedure, so it is less subject to error, is repeatable and gives quantitative and predictable results.

#### Why Container Closure Testing is important:

CCIT detects defects that demonstrate breach of the container and/or closure system.

Patient and consumer health and safety is the principal reason why testing methods are put into place. Product sterility and consumer safety begins at the product development phase by evaluating the suitability of primary packaging in its ability to offer a sterile barrier thanks to its container closure system which should not result in contamination or leaks of the drug or product.

The United States Pharmacopeia (USP) and Food and Drug Administration (FDA) impose strict requirements for Container Closure Integrity Testing (CCIT).

As per the 21 Code of Federal Regulations (CFR) part 211.94, container closure systems must provide adequate protection against anticipated external factors in storage and use, that can cause deterioration or contamination of the drug product. It also establishes the standards or specifications and methods of testing in the validation procedures.

The leak detection guidelines establish that container security testing methods should use analytical detection techniques appropriate to the method and compatible with the specific product being tested. Validation of methods should be specific to the product container and closure system or product type.

#### How the CCIT method works:

- Common CCIT methods:
- Vacuum Decay Method
- Pressure Decay Method
- Lid Deflection
- Force Decay
- Headspace Gas Analysis (HGA)

**Before placing Order Once confirm test tube size**





## Fluid Contamination Analysis test kit



### Professional Fluid Contamination Analysis Test Kit

Fluid contamination analysis kit consists of assorted filtration products suited for contamination measurement and control. Contamination Test kit is recommended for ensuring conformance to cleanliness standards popularly known as The kit includes the apparatus shown except standard equipment such as weighing scale , Drying Oven , Microscope , Petridis, Membrane etc , Available Two Version : Professional Kit & Basic model (Patch Kit)



### Vacuum / Pressure Pump (39302112)

This oil free pump is a portable AC powered source of vacuum to 550 mm/ 22" Hg or pressure to 4 bar/ 45psig for filtration of liquids or gases or other continuous or intermittent use Air flow rates at different vacuum and pressure settings are given behind (for vacuum operation, pump exit pressure is 1 atmosphere). The motor is permanently oil free, and is protected by a PTFE coated



### Membrane filter Paper 5um (39301201)

47 mm diameter, 5 um mixed cellulose esters (MCE) membrane, hydrophilic, white, 100 discs. ... Biologically inert mixtures of cellulose acetate and cellulose nitrate



### Filter Holder (39302113)

Vacuum filtering liquids for analysis of particulate or biological contamination analysis via vacuum filtration. Funnel, base and support screen are made of SS/Glass anodized locking, Metal TO Metal Seal, grounding set and silicon stopper



### Dispensing Pressure Vessel (39302215)

Dispensing Pressure Vessel holds liquid for filtration through pressure operated filter holders made of 316 SS, In-built NRV, Pressure Relief Valve Silicon O-ring and base is mounded with Styrene butadiene rubber.



### Vacuum Trap (39302117)

During the vacuum filtration of Liquids, to prevent liquids or mist entering the pump, use of vacuum trap Between vacuum pump and filter holder. This assembly consists of vacuum filtering Flask, silicone stopper, SS tube and Vacuum hose Filter



### Sprayer Dispenser (39302114)

Used to spray concentrated jet of ultra clean solvent or rinse solution on surfaces for cleaning. filter holder with support screen Pressure Up to 5 Bar, Wetted Part SS With 25 mm Gun Holder



### Forceps

Used to handle Membrane Filters Without damaged using highly polished SS forceps blades beveled , Blunted tips



### Petri Dish (39302121)

Holds filter securely in place. Transparent cover allows microscopic examination without removal. mounting on microscope stage. Recommended for storage



### Vacuum Filtering Flask (39302213)

Used for vacuum filtration with filter holders. Side arm connects to vacuum source with vacuum hose. Also used as water trap to prevent liquid/ entering the pump.



### Laboratory Hot Air Oven (39302121)Optional

Holds filter securely in place.. Rectangular base has rounded corners for mounting on microscope stage. Recommended for storage Size- 300 x300 x 300 mm Temperature - 50 to 300 °C with Digital Inbuilt PID Controller





## Consumables



Fluid contamination analysis kit consists of assorted filtration products suited for contamination measurement and control. Contamination Test kit is recommended for ensuring conformance to cleanliness standards popularly known as The kit includes the apparatus shown except standard equipment such as weighing scale , Drying Oven , Microscope , Petridis, Membrane etc , Available Two Version : Professional Kit & Basic model (Patch Kit)

### Desiccators (39302119) (Optional)

Desiccators are sealable enclosures containing desiccants used for preserving moisture-sensitive items such as cobalt chloride paper for another use. A common use for desiccators is to protect chemicals which are hygroscopic or which react with water from humidity

**MOC:** Borosilicate



### Membrane filter Paper 0.2 um (3930111)

47 mm diameter, 0.2 um Nylon66 (NY66) membrane, hydrophilic, white, 100 discs. ... Biologically inert mixtures of Nylon , Compatible with aggressive solvents (For solvent purify)



### Analytical balance (39302120) (Optional)

For Measuring Membrane Weight  
(Least Count: 1.0 mg / 0.1 mg/0.01mg)  
**Make:** , Danwar ,Citizen (ACZET)/ Shimadzu/ Sartorius



### Washing Solvent (39217457) (Optional)

N-PROPYLBROMIDE (5 ltr Bottle)  
**Make:** Fine Chemical/ Merck



### Face Mask (58745) (Optional)

Chemical Resistant Face Mask  
Size- Free  
**Make:** 3M



### Silica Gel (3345120) (Optional)

Silica gels packets are used to absorb moisture and keep things dry Wetted Membrane



### Hand Gloves (21354) (Optional)

Chemical Resistant Powder Free Hand Gloves  
**Size:** M/L



### Solvent Re- Filtration System

This versatile, single round, sanitary design filter housing is used in life science application for the clarification, sterilization or high-purity filtration of liquids. The housing offers high reliability and security by its special design that is conducive to a thorough cleaning, while still allowing complete drainage of the housing, filtering via Cartridge

**MOC:** SS316 **Size:** 5" , 10 "



### Safety Goggles (34125) (Optional)

**Size:** Free



### Inline Filter Cartridge (39302121)Optional

- **Media:** Nylon66
- **Media support:** PP
- **Cage, core and end caps:** PP
- **Sealing:** Thermally welded





## Oil Contamination Test Kit



### Contamination Patch test kit

A Patch test is a qualitative method for testing oil for both 'hard' and "soft contaminants". Hard contaminants mean wear particles or dust particles. Soft Contaminants means Sludge/Varnish. Sludge/Varnish is a product of oxidation of oil. Presence of sludge/varnish means the oil has been in use for long time and that it has to be replaced.

Sludge/Varnish settle on lubricating surfaces and interfere with lubrication (as well as heat transfer) and ultimately damage sliding surfaces leading to wear and tear of precision components.

Hard contaminants can be removed by hydraulic filters but soft contaminants cannot be removed by regular filters.

0.45micron or 0.8micron filter papers are required to check for varnish/sludge particles as they are very fine. 3micron filter paper is used for checking particles in oil.

Note that a patch test cannot tell particle size distribution (as reported in ISO4406 particle count test) for which you have to send it to a laboratory. But before you send a sample to the lab for a particle count you can screen the sample with a Patch test instead of paying for expensive lab test. A lab test however is must to arrive at the particle count necessary to evaluate oil cleanliness to protect your precision components.



### Testing for particulate matter (Dirt and Wear Particles)

Similarly, presence of "particulate matter" can be judged by using a filter patch of 3 micron pore size. (Minimum measure of particle size as specified in an ISO 4406 code is 4 microns and in NAS code is 5mic).

Note these are only visual indicative tests and cannot replace laboratory tests for particle count. You can obtain ISO 4406 particle count code or NAS code from a reputed Laboratory to determine the cleanliness level of the oil.

Different systems require different levels of cleanliness levels. Check with your equipment manuals which particle count or ISO code is applicable to your equipment.

Darker the color of the patch, higher is the concentration of particles in the oil.

Our Patch test kit is Vacuum type. The kit requires compressed air to generate vacuum (5/6bar standard shop air pressure available in any workshop) to prepare a patch quickly and conveniently without much hassle. It does not require a separate compressor and therefore is cheaper and does not require maintenance.

### Including Accessories :

Sr. No.	Description
1	Case Bag
2	Ss forceps
3	Measuring Beaker 500 ml
4	0.8 um x 47mm / 25 mm filter membrane (Make Sartorius)
5	Wash Bottle 500 ml
6	Filter flask 1000 ml
7	Assembly clamp
8	Oil free vacuum pump AE 15 with tubing
9	Filtration Assembly Funnel
10	Sample Bottle 300 ml
11	Filtration assembly Base Part 47 mm
12	User Manual



## Millipore Test Kit Microscope (Manual)



### Particle analyzer For Millipore test (Manual)

#### EYEPIECES

The standard KLABS Zoom is supplied with a pair of HWF 10x/22 mm eyepieces. The Zoom EVO is supplied with a pair of HWF 10x/23 mm eyepieces

#### HEAD

Binocular or trinocular heads with 45° inclined tubes. Both eyepieces with ± 5 diopter adjustments. Interpupillary distance adjustable between 54 mm and 75 mm. Trinocular head is supplied with a fixed light path beamsplitter (50:50)

#### OBJECTIVES

- The standard Zoom is supplied with a 1:6.7 zoom objective with 0.67x to 4.5x magnifications, a field of view from 33 mm to 4.9 mm. Working distance 110 mm.
  - The Zoom EVO is supplied with a 1:8.4 zoom objective with 0.65x to 5.5x magnifications, a field of view from 35.4 mm to 4.2 mm. Working distance 110 mm.
- Auxiliary lenses 0.3x, 0.5x, 0.75x, 1.5x and 2.0x are also available for the standard Zoom and for the

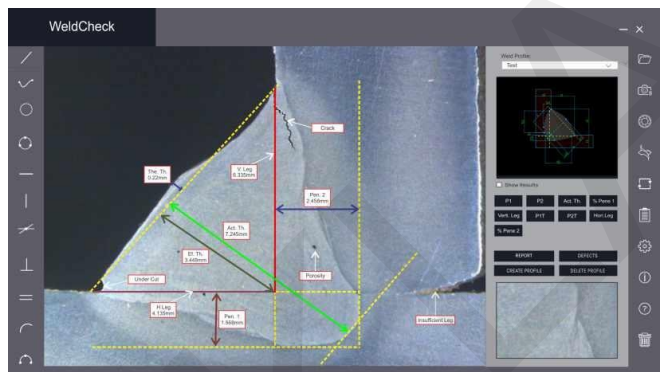


#### STAND

- Ergonomically designed pillar or rack & pinion stand with 3W incident and 3W transmitted LED illuminations
- Ergonomically designed pillar stand with two 3W goose-neck type incident
- LED illuminations on each side and a 3W transmitted LED illumination
- Ergonomically designed universal or boom stands, without illumination (-U, -B and BC stands)
- Articulated arm stand for table mounting or with heavy desktop stand, both without head holder, without illumination (-A and -AP stands)
- All pillar and rack & pinion stands are supplied with two object clamps. Alloy metal cast, hardened coating



### Testing for particulate matter (Dirt and Wear Particles)



Similarly, presence of "particulate matter" can be judged by using a filter patch of 3 micron pore size. (Minimum measure of particle size as specified in an ISO 4406 code is 4 microns and in NAS code is 5mic).

Note these are only visual indicative tests and cannot replace laboratory tests for particle count. You can obtain ISO 4406 particle count code or NAS code from a reputed Laboratory to determine the cleanliness level of the oil.

Different systems require different levels of cleanliness levels. Check with your equipment manuals which particle count or ISO code is applicable to your equipment.

Darker the color of the patch, higher is the concentration of particles in the oil. Our Patch test kit is Vacuum type. The kit requires compressed air to generate vacuum (5/6bar standard shop air pressure available in any workshop) to prepare a patch quickly and conveniently without much hassle. It does not require a separate compressor and therefore is cheaper and does not require maintenance.

#### Using Accessories :

Sr. No.	Description
1	Microscope Main unit
2	Eye piece
3	AUX Lense 0.5 x0.2 x
4	Focus Mount
5	Ergonomic rack & pinion stand with 3 W transmitted and incident LED illuminators
6	Supplied with power cord, dust cover, a spare fuse and user manual. Allpacked in a polystyrene box



## Millipore Test Kit Microscope (Automatic)



### Particle analyzer System For Millipore test (Fully automatic )

Microscope with motorized stage

KLABS can provide either the equipment for the determination of the technical cleanliness of your components in accordance with inspection standard ISO 16232

#### Key Features

- 50X to 1000X magnification with a combination of seven plan-achromatic objective lenses for metallurgical, biological, and darkfield applications.
- A versatile microscope with dual illumination for metals, plastics, and biological samples, with brightfield, darkfield, and reflected-light polarization
- Use a combination of brightfield and simple polarization to bring out complex details such as stress in metal and other materials
- The infinity-corrected optical system eliminates certain optical errors when using filters and other in-line components, ensuring highly-precise images.
- The trinocular head provides a dedicated photo port for adding a camera for recording photos and videos



#### STAND

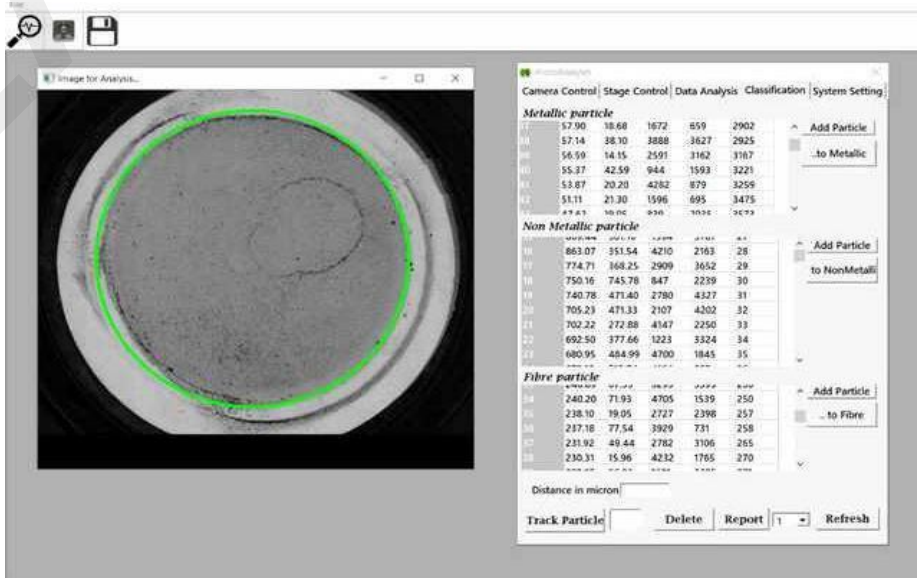
- Ergonomically designed pillar or rack & pinion stand with 3W incident and 3W transmitted LED illuminations
- Ergonomically designed pillar stand with two 3W goose-neck type incident
- LED illuminations on each side and a 3W transmitted LED illumination
- Ergonomically designed universal or boom stands, without illumination (-U, -B and BC stands)
- Articulated arm stand for table mounting or with heavy desktop stand, both without head holder, without illumination (-A and -AP stands)
- All pillar and rack & pinion stands are supplied with two object clamps. Alloy metal cast, hardened coating

#### Testing for particulate matter (Dirt and Wear Particles)

- highly versatile microscope for materials inspection using transmitted and reflected light. Primarily designed as an upright metallurgical microscope, the high-power 100W epi-illumination system can be used for brightfield, darkfield, and basic polarized-light.
- Wafer inspection and metallographic applications will greatly benefit from the illumination modes.
- The addition of transmitted lighting provides even more flexibility for biological specimens, or backlighting hollow or porous materials. This instrument will be indispensable in any biology, medical, or materials lab.

#### Including Accessories :

Sr. No.	Packing List:
1	One trinocular microscope head
2	One microscope body
3	One episcopic illuminator
4	Two light housings
5	Three brightfield metallurgical objective lenses: 5X, 50X, 100X
6	Two brightfield/darkfield metallurgical objective lenses: 10X, 20X
7	☒ One pair 10X eyepieces
8	☒ One set polarizer and analyzer
9	☒ Two lamp bulbs
10	☒ Two spare fuses





## Reporting

### SOFTWARE

Doc No:-  
Rev No:-02  
Rev Date :-29/12/2019

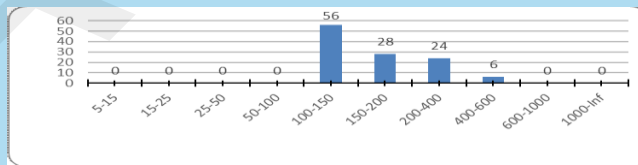
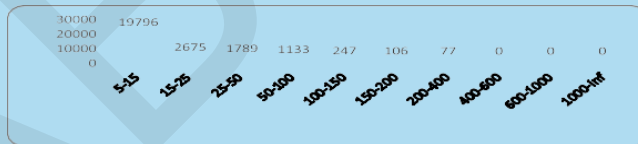
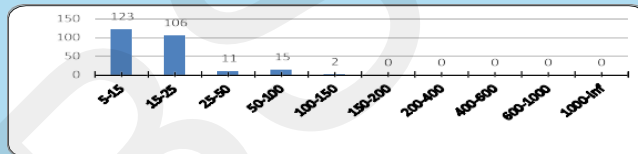
#### MILLIPORE / PARTICLE ANALYSIS TEST REPORT

<b>Customer Name:</b>		<b>Date:</b>	11/06/2020
<b>Part Name:</b>	Piston Brake	<b>Drp Rev No:</b>	
<b>Part No:</b>	10123003	<b>Drp Rev Date:</b>	
<b>Ref Insp. Std:</b>		<b>Prod.Batch ID:</b>	
<b>Test Method:</b>	ISO 16232 / ISO 4407	<b>Microscope ID:</b>	
<b>Paper Size :</b>	47 mm dia	<b>Magnification:</b>	50x
<b>Calibration Factor :</b>	2.4 micron / pixel	<b>No of Parts for Test:</b>	
<b>No of Fields :</b>	Complete Scan	<b>Digital Weighing ID:</b>	
<b>Measurement Unit:</b>	micron		

#### Size class for particle counting (ISO 16232-10)

Size X (µm)	Size Class	Metallic	Non-Metallic	Fibers	Total
5-15	B	123	19796	0	
15-25	C	106	2675	0	
25-50	D	11	1789	0	
50-100	E	15	1133	0	
100-150	F	2	247	56	
150-200	G	0	106	28	
200-400	H	0	77	24	
400-600	I	0	0	6	
600-1000	J	0	0	0	
1000-inf	K	0	0	0	
<b>Total Particle count</b>		<b>257</b>	<b>25823</b>	<b>114</b>	<b>26194</b>

Number of particles per 1000cm <sup>2</sup> or per 100 cm <sup>3</sup> more than	Up to and	Contamination level
0	0	00
0	1	0
1	2	1
2	4	2
4	8	3
8	16	4
16	32	5
32	64	6
64	130	7
130	250	8
250	500	9
500	1x10 <sup>3</sup>	10
1x10 <sup>3</sup>	2x10 <sup>3</sup>	11
2x10 <sup>3</sup>	4x10 <sup>3</sup>	12
4x10 <sup>3</sup>	8x10 <sup>3</sup>	13
8x10 <sup>3</sup>	16x10 <sup>3</sup>	14
16x10 <sup>3</sup>	32x10 <sup>3</sup>	15
32x10 <sup>3</sup>	64x10 <sup>3</sup>	16
64x10 <sup>3</sup>	130x10 <sup>3</sup>	17
130x10 <sup>3</sup>	250x10 <sup>3</sup>	18
250x10 <sup>3</sup>	500x10 <sup>3</sup>	19
500x10 <sup>3</sup>	1x10 <sup>6</sup>	20
1x10 <sup>6</sup>	2x10 <sup>6</sup>	21
2x10 <sup>6</sup>	4x10 <sup>6</sup>	22
4x10 <sup>6</sup>	8x10 <sup>6</sup>	23
8x10 <sup>6</sup>	16x10 <sup>6</sup>	24



<b>Contamination level</b>	<b>15</b>
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<b>Max Metallic</b> 113.07 (L) X 109.49 (B)	<b>Max Non Metallic</b> 399.30 (L) X 299.81 (B)	<b>Max Fibre</b> 511.87 (L) X 50.91 (B)
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<b>Analyzed area mm<sup>2</sup></b>		<b>1385</b>	<b>Particle Map</b>
<b>Total field area mm<sup>2</sup></b>		<b>1711</b>	
<b>ISO 16232-7 (n) code</b>	B123/C106/D11/E15/F2/G0/H0/I0/J0/K0 B19796/C2675/D1789/E1133/F247/G106/H77/I0/J0/K0		
<b>Result :</b>			

#### MILLIPORE TEST OBSERVATION

	Specification (mg)	Paper Weight (Before) (mg)	Paper Weight (After) (mg)	Milipore Value (mg)
<b>QA Remark:</b>				
<b>Inspected By:</b>			<b>Verified By:</b>	



**HEAD OFFICE**

## Perfect Enterprises

Sco 14, Vasant Vihar, Phase 3 Dhakoli,  
Zirakpur 14060.

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**E-mail:** perfectenterprises50@gmail.com

(An CE, ISO 9001:2015 Certified Company)