



## Product Brochure

# Products Offered By Us

- ◇ Fume Hood in Wood/MS & SS
- ◇ Lab Furnitures Like Center Table
- ◇ Solvent Cabinet
- ◇ Gas Purification & Control System for GC,AAS,ICP
- ◇ Gas Distribution Panel & Selector box For GC,AAS,ICP
- ◇ Gas Manifold System
- ◇ Rotameter For H<sub>2</sub>, N<sub>2</sub>, Air, He, CH<sub>4</sub>, etc
- ◇ Inline Micron Filter in SS-304/316 & Hastelloy C-22/276
- ◇ Gas Sampling Bomb/Bottle in SS-304/316 & Hastelloy C-22/276
- ◇ Air Heater in SS-304/316 & Hastelloy C-22/276
- ◇ Automatic Mechanical Gas Change Over
- ◇ Tubing/Casing Capping SS-304/316 Hastelloy C-22/276
- ◇ Cylinder Trolley MS Class C and SS-304/316
- ◇ Gas Cylinder Regulator in SS-304 & SS-316
- ◇ Gas Detection System
- ◇ HCL Gas Regulator in SS-316, Hastelloy C-22/276 & Monel
- ◇ Laser Cutting Gas Regulator For N<sub>2</sub> and O<sub>2</sub>
- ◇ Toggle Valves in Brass and SS
- ◇ High Pressure Hose Pipe in Rubber & SS
- ◇ SS Braided High Pressure Pigtail
- ◇ Non Return Valve (NRV) in SS-304/316 & Hastelloy C-22/276
- ◇ Back Pressure Regulator (BPRV) in SS-304/316 & Hastelloy C-22/276
- ◇ Water / Oil Bath
- ◇ Laboratory Glass Wares
- ◇ Digital Temperature Indicator
- ◇ Trolley
- ◇ Accessories - Lab Jack, Sensor Stand Base

# Who We Are

SAI LAB INSTRUMENT is a registered company specializing in the manufacturing of Fume Hoods and Services providers to Laboratories . We are the single point solution for all your laboratories needs.

## Our Capabilities

### Fume Hood Manufacturing

- We design 3D custom made systems as per customer available footprints
- We design the system using updated softwares like Autocad, Solid Works etc
- We offer the benchtop, Distillation & Floor Mounted Fume hoods in MS/SS and Wood.

### Manufacturing facility

- We have more than 2000 sq. ft integrated manufacturing, fabrication and testing facility at Virar, Maharashtra
- We manufacture and fabricate the majority of the fittings in house.
- We also provide fittings. Apart from SS and MS, we can also fabricate fittings in hastelloy C-276, Inconel, Duplex Steel and titanium
- We have Argon (TIG) welding station with plasma profile cutting facility
- We have in house heavy duty lathes, drilling machine and dedicated testing facility unit

# Esteemed Clients



# Fume Hood

A fume hood (sometimes called a fume cupboard or fume closet) is a type of local ventilation device that is designed to limit exposure to hazardous or toxic fumes, vapors or dusts.

## Features

- Durable and chemical resistant
- We provide benchtop, Distillation & Floor Mounted Fume hoods
- Opt for MOC in either SS, MS or Wood
- Designed as per ASHRAE 110



# Lab Furniture

SLI Adaptable systems are designed to meet the needs of the modern laboratory, where flexibility and adjustability are essential

## Features

- Based upon available footprints, the furniture can be customized at the concept stage itself.
- Opt for MOC in either MS, Wood or WBC.
- Designed as per SEFA guidelines



# Solvent Cabinet

A solvent cabinet must incorporate a number of safety features. It should be adequately ventilated, preventing the release of excessive fumes (being either sealed or vented). It should be equipped to contain fires and isolate the contents from sources of ignition, be grounded (to prevent sparks and static discharge).

## Features

- Opt for MOC in either MS or PP
- Adjustable trays to meet your solvent container size
- Easy to access and proper ventilation



# Gas Purification & Control System

The Gas Purification and Controller system is designed to remove oxygen, moisture, hydrocarbons, oil and other foreign materials from gas streams. The system eliminates noise and unaccepted signals of gases in order to obtain peak resolution and peak tailing in the analysis.



## Features

- Improves reproducibility of analysis
- Reduce baseline noise, drift problems, etc.
- Increase column life preferably for polar & capillary columns
- Deliver better than UHP grade gases
- Increase detector life & reduces flame problem
- Save costly gases through toggle valves & gas distribution panel

# Gas Distribution Panel & Selector Box

Gas distribution panel is used when there is more than one Gas Chromatograph. It helps to control the flow & pressure of different gases for different GC's.



## Features

- Capable of handling fouling liquids.
- Steam economy is improved by using Multiple effect arrangement thus saving the product cost
- Trace quantities of suspended particles in feed are tolerated.

# Gas Manifold System

High pressure Mechanical- Automatic Gas Manifold is used for a two cylinder system where automatically switching over is required from one cylinder to other, when the pressure in the one cylinder is below the set pressure. It can be used for multiple cylinders banks



## Features

- Adjustable single stage line regulator 0 - 125 and 0 – 200 psig.
- Flexible stainless braided pigtails (except Oxygen service – rigid copper pigtails provided per NFPA 99)
- CGA gas specific pigtail connections.
- Complete system cleaned for use with Oxygen..

# Rotameter

A rotameter is a device that measures the volumetric flow rate of fluid in a closed tube. It belongs to a class of meters called variable-area flowmeters, which measure flow rate by allowing the cross-sectional area the fluid travels through to vary, causing a measurable effect.

## Features

- Rangeability is better.
- It is easily equipped with alarms and switches or any transmitting devices.
- It also measures the flow rate of corrosive fluids.
- There is an availability of viscosity-immune floats.

# Inline Micron Filter

Inline Micron Filters are used to remove dust particles from respective gases. Micron filter (SS body) consists of SS disc (Mesh) of  $5\mu$  -  $10\mu$ . Gas purification panel removes impurities which are in vapours (gases) form.

## Features

- Available in material SS316.
- Material Traceable to certified material test report.
- Remove system particulate contaminants.
- Inline Filters are for use where space is limited.
- Replaceable filter elements.
- Variety of end configuration includes.
- SEALEXCEL Well-Lok Tube Fittings, Male / Female NPT, BSPT, BSPP pipe connections





# Gas Sampling Bomb/Bottle

Gas Sampling Bomb that are specially designed to collect and store high pressure gas samples from the field & transport the same to laboratories.

## Features

- Used to store oil/gas samples
- Ensure maximum integrity
- Effective corrosion resistance
- Athena Gas/Oil Sampling Bottles are manufactured in S.S. 316/304 construction.
- Each bottle is tested to hydraulic test pressure of 250 bar.
- Suitable for working pressure of 150 bar.



# Air Header

Air Headers is a substitute for multiple valve assemblies, which normally operates from one originating point. The Air Manifolds are configured for accommodating various outlet valves. The inlet-connection can have a variety of end connections.



## Features

- Lockable handles as standard prevent accidental manual actuation of outlet valves.
- Durable & Reliable
- Reduction in assembly time.
- Lightweight ball valve design.
- Robust.

# Automatic Mechanical Gas Change Over

High pressure Mechanical- Automatic Gas Manifold is used for a two cylinder system where automatically switching over is required from one cylinder to other, when the pressure in the one cylinder is below the set pressure. Setting of pressure of two cylinder can be set as per user requirement



## Features

- Inlet Pressure Gauge : 2 nos.0-210kg/cm<sup>2</sup>Gauge
- Outlet Pressure Gauge : 1 no.0-14kg/cm<sup>2</sup>Gauge/as per Requirement.
- Flow : 300 LPH (MAX).
- Gas services : Air, N<sub>2</sub>, H<sub>2</sub>, He, Ace, Arg, N<sub>2</sub>, P10 and other gas & also for flammable / nonflammable & corrosive gases.
- Outlet Connection : ¼" OD ferrule fitting with ball valve.
- Inlet Connection :¼" BSP male to suit pigtail coming from cylinder

## Tubing/ Casing Capping

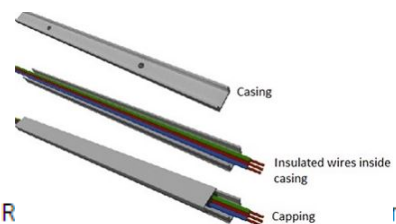


Tubing are available in different sizes like 1/2", 1/4", 1/8", 1/16". Tubing available in different MOC like copper, S.S., teflon, nylon. Casing capping is used to cover the above tubing & to maintain the esthetic look. Three types of casing capping

available, M.S. powder coated, aluminium powder coated & PVC casing capping.

## Features

- Steady Performance



- High Crack Resistant
- Long Life
- Easy to Use

# Cylinder Trolley

## Features

- Cylinder trolley in MS powder coated 4 wheels for smooth safe operation.
- Cylinder trolley available for single two cylinders.
- Cylinder mounting brackets are used to mount the cylinder on a wall to avoid down fall of a cylinder.



# Gas Cylinder Regulator

There are two basic types of gas pressure regulators: single-stage and two-stage. Single-stage pressure regulators reduce the cylinder pressure to the delivery or outlet pressure in one step. Two-stage pressure regulators reduce the cylinder pressure to a working level in two steps.



## Features

- Two types of Cylinder Regulators are available: Brass chrome plated body with SS Diaphragm and SS body with SS Diaphragm.
- Regulator Consist of inlet & outlet pressure gauges. Inlet pressure gauge shows the total pressure of cylinder and outlet pressure gauge shows regulated pressure and Pre- Heater.
- It is used for special gases Nitrous Oxide & CO<sub>2</sub>.
- Inlet pressure range : 0-240 Kg / cm<sup>2</sup>
- Outlet pressure range : 0-14 kg /cm<sup>2</sup> in diaphragm type.

# Gas Detection System

## Overview

Gas detectors can be used to detect combustible, flammable and toxic gases, and oxygen depletion. Common sensors include combustible gas sensors, photoionization detectors, infrared point sensors, ultrasonic sensors, electrochemical gas sensors, and metal-oxide-semiconductor sensors (MOS sensors).

## Features

- Dual display of gas concentration & set point/ unit of the gas
- Plug in smart field proven sensor
- Programmable linear 4-20mA/ 20-4mA O/P with respect to gas concentration
- Easy one man calibration at site
- Optional RS-485 with modbus RTU protocol
- Suitable in hazardous areas ATEX, CCOE, CMRI & IP-65 approved.

## HCL Gas Regulator



## Features

- Single-stage pressure reducer
- Maternal and diaphragm use hard seal form
- Body NPT inlet and outlet interface 1/4"NPT(F)
- The internal structure easy to purge
- Can set filters
- Can use a panel installation
- Inlet form Needle valve, membrane valve

# Laser Cutting Gas Regulator

The regulator is specifically designed to meet the high flow, high pressure assist gas requirements of the laser cutter. It has fast on-off-on response, high flow capacity, and delivers the pressures required for the job. Whether your source gas is cryogenic or high pressure, this regulator can handle the job. The regulator is actually two regulators in one body – a dome-loaded piston regulator with a sensitive diaphragm actuated dome loader built in.

## Features

- Rapid on-off-on response even at high flow rates.
- 1/2" NPT female inlet and outlet connections.
- High flow capacity Cv = 0.55.
- Minimal delivery pressure decay (0.3 psi/100 psi).
- Built-in dome loader regulator.
- Bonnet threaded to accept panel nut.
- Encapsulated seats with 10 micron filter.



# Toggle Valve

Toggle valves are pieces of equipment that allow the user to control the flow of fluid via a directional toggle switch. They are typically used in conditions with moderate temperatures and pressure applications. When you have three or four-way toggle valves give you multiple options for flow rates. These pieces tend to come with a wide range of materials, sizes and connection types.

## Features



- Quick opening and closing
- Straight and angle patterns available
- Stainless steel or brass construction
- Standard Black Bylon handle or optional stainless steel handle

- Tube Fitting, female NPT, and Male NPT end connection
- Orifice Range – from 0.080 to 0.250 in (2.0 to 6.4mm)



## High Pressure Hose Pipe

In chemistry and medicine, hoses (usually called tubes) are used to move liquid chemicals or gases around. A fuel hose carries fuel. In the oil industry high pressure hoses are used to move liquids under high pressures. Typical uses are for kill and choke lines, cement lines and Kelly hose.

## SS Braided High Pressure Pigtail

A hose is a flexible hollow tube designed to carry fluids from one location to another. Hoses are Common factors are size, pressure rating, weight, length, straight hose or coilhose, and chemical compatibility. Applications mostly use nylon, Other hose materials include PTFE (Teflon), stainless steel, and other metals.

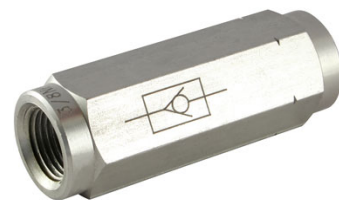


## Non Return Valve

A non-return valve allows a medium to flow in only one direction and is fitted to ensure that the medium flows through a pipe in the right direction, where pressure conditions may otherwise cause reversed flow.

### Features

- Low maintenance
- Accurate dimension
- Durable



# Back Pressure Regulator

A Back Pressure Regulator (BPR) is a device that maintains a defined pressure upstream of itself, at its own inlet. When fluid pressure at the inlet exceeds the setpoint, the valve opens to relieve the excess pressure. The lower pressure at the outlet attempts to hold the diaphragm in a leak-tight seal with the orifice.

A back pressure regulator can be used to control pressure of any fluid – gas, liquid or a mixture in a system. Most pumping applications require back pressure to be maintained on the outlet of a pump.



## Water /Oil Bath

A water bath is laboratory equipment made from a container filled with heated water. For all water baths, it can be used up to 99.9 °C. When temperature is above 100 °C, alternative methods such as oil bath, silicone bath or sand bath may be used.

# Digital Temperature Indicator

With the help of well-trained professionals, we are engaged in offering Digital Temperature Indicator to our clients. The offered indicators are made available in various sizes to cater to the varied customer needs. Extensively used in interfacing with specified RTD sensor and T/C, these indicators are highly admired in the market. Customers can avail these indicators at market leading prices.



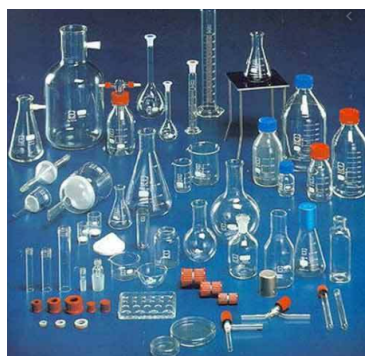
# Cylinder Holding Bracket

Riding on unfathomable volumes of industrial expertise, we are offering a commendable assortment of Single Cylinder Holding Bracket & Chain. The offered cylinders are provided in several specifications as per the needs of customers. These cylinders are manufactured by our team of professionals utilizing high grade materials and leading technology. Provided in various stipulations, we offer these cylinders are availed in market leading rates.



## Laboratory GlassWare

We also deal in glasses and provide all the accessories associated with it. All the Industrial glass wares are available with us. We can also customize the unit based upon customer requirement. We can also offer rotavapor flasks of variable volumes and skid mounted 50,100 & 200 Liter Distillation Units.





## Trolley



## Lab Jack



## Accessories

- 1) 3 Finger Clamp
- 2) Stand Base : Normal Duty  
: Medium Duty  
: Heavy Duty

