

Laboratory Work Stations



Fume Hoods

# Call Aakar at pre-planning stage



## Aakar at a glance



Aakar Scientific Pvt. Ltd., an ISO 9001 company and certified member of SEFA is engaged in manufacturing, outsourcing, supplying and installing lab work station and fume hood system since 1992 in Customized Lab Solutions.

Aakar is one of the leading manufacturers of India that offers complete lab solutions.

Its team of experts transforms your lab room in to a pleasing work environment.

Aakar has its own comprehensive manufacturing facility spread over 30,000 sqfts area and 80,000 sqfts under expansion.

Aakar has furnished laboratories in various disciplines such as Pharmaceutical, Healthcare, Industrial Research, Chemical, Petrochemicals, Bio-technology, Forensic Science, Engineering, Food, Schools & Colleges in Private and Government sectors.

Aakar understands the importance of user-friendliness and safety through lab systems & fume hoods ensuring smooth functioning of your lab conforming GLP Schedule-L.

Aakar has earned goodwill by providing prompt After Sales Service for years.

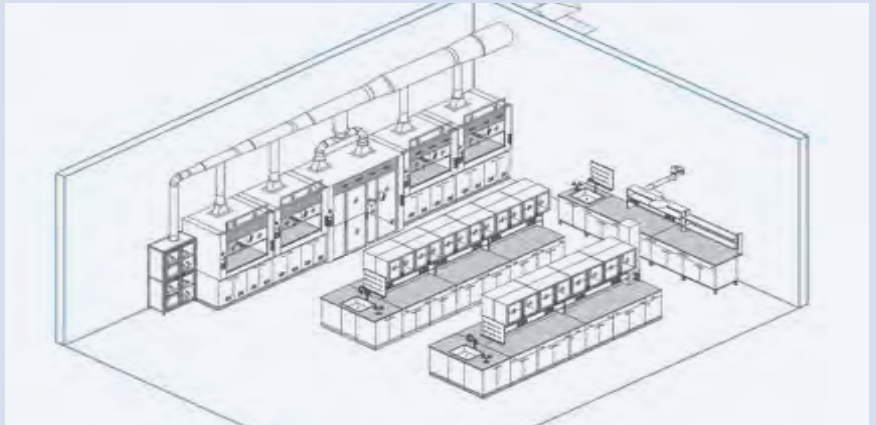
*An illustrious list of clients, both in India and abroad, is the testament to our design, process, quality, timely commissioning and service.*

Aakar Unit -1 at Vadodara



Aakar Unit -2 at Savli ( nearby Vadodara )

Aakar assists customer in Planning, Designing, Budgeting from concept to completion.





## Aakar manufacturing process

*Sophisticated manufacturing facility*



*CNC Turret Punch ensures accuracy*



*Utmost care is taken for making each component special*



*Pretreatment Process*



*Transferring to spray booth*



*Deep penetrated powder coating*



*Powder Coating Plant*

# Laboratory Work Station

Laboratory Work Station is a support system for working in defined laboratory environment. It is an exclusive space for placing variety of instruments and equipment required in various laboratories.

**Safety is a Presence of mind.**  
**Accidents are an Absence of mind.**

**HOW TO USE LABORATORY WORK STATION:**

- Always keep work station clean and dry.
- In case of spillage of chemicals, wipe off the work surface immediately, delay may damage the affected work surface.
- Turn off all heating apparatus, gas valves, and water faucets when not in use.
- Do not block the sink drains with debris.
- Place chemicals in chemical storage only, preferably with acid resistant lining connected to exhaust.
- Solvents should be stored in flame proof cabinets only.
- Ensure that drawers are not over loaded. Drawer and door alignment will enhance cabinet's life.
- Deep scratch on powder coated component invites rust on exposed portion, immediate touch-up will ensure long life of the component.
- Always wear appropriate eye protection, long-sleeved laboratory coat and shoes that cover the whole foot.
- Do not use laboratory work bench as a stool.
- Do not use work bench as a dining table.



Every Laboratory Work Station is unique in its own.



CRCA / GI



Wood



Stainless Steel

# Wide choice of work surface

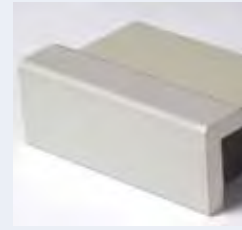
## Choice of worktops



• Granite tops



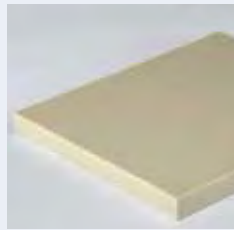
• Ceramic tops



• Moulded tops



• Trespa tops



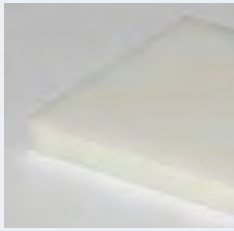
• PVC tops



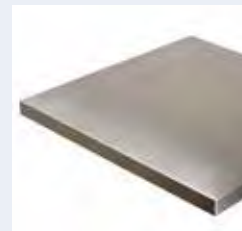
• Wooden tops



• Epoxy tops



• PP tops



• SS tops

## Spectrum of choice for colour combinations of casework

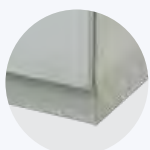


Aakar maintains batch record of scratch & impact tests on powder coated panels

## Pedestal assembly



## Skirting assembly



Skirting type pedestal

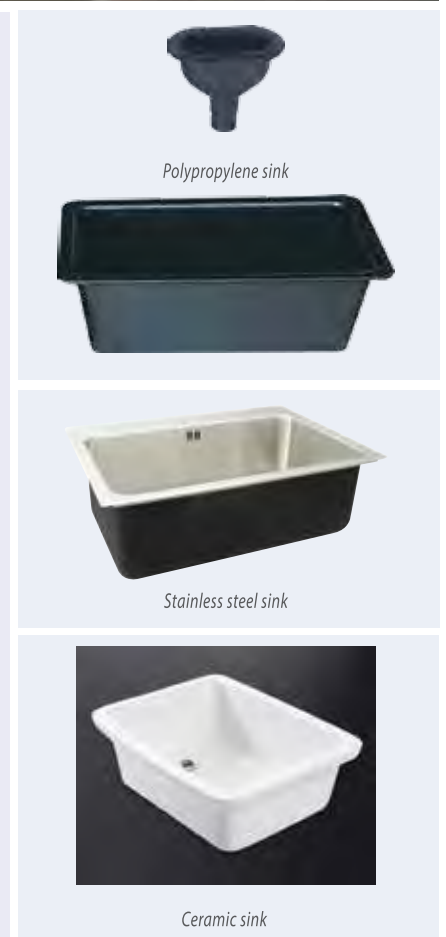
## C-frame assembly



## Casework on wheels



PU Wheels :  
Noise & scatch free, smooth movements



Metallic / PVC raceway & choice of electrical sockets :



• PVC shockproof raceway



• Metal clad socket



• Universal socket



• Fire retardant Industrial socket



• 6/16 Amp sockets with MCB



• Flame proof fittings



• Socket for data transfer / Telephone



• Flame proof fittings





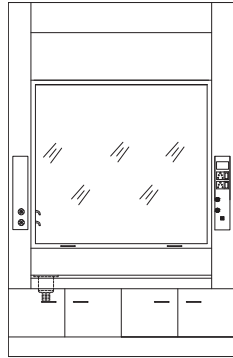


## • How to use Fume Hood :

- Please place your equipment and other materials at least six inches behind the sash; preferably in the middle of the fume hood.  
This will reduce the exposure of personnel to hazardous chemical vapors that may escape inside the lab due to air turbulence.
- When the hood is not in use, pull the sash all the way down. While personnel are working at the hood, pull down the sash as far as is practically possible.
- The sash is generally made of safety / toughened glass which protects users against fire, splashes, and explosions.
- Please keep fume hood sash open at or below 18 inches; preferably it should be below the nose level of the user.
- Do not keep loose papers or tissues inside the hood. This kind of material can be drawn into the blower and adversely affect the performance of the hood.
- Do not use a fume hood or its base as a storage cabinet for chemicals.
- Excessive storage of chemicals or other items will disrupt the designed airflow inside the fume hood. Particularly, avoid storing chemicals against the baffle at the back of the hood because this will interfere with the laminar airflow across the hood.
- In case, large equipment is must to be kept inside fume hood, please raise it at least 2 inches off the work surface to allow air to flow underneath. This reduces the turbulence within the hood and helps to increase its performance.
- Please do not block the front of a fume hood (e.g. refrigerators or lab coats hanging on the manual controls) as this can disrupt the airflow and draw contaminants out of the hood.
- It is to be understood that modifications made to a fume hood system can be a reason to make the entire system ineffective. Modifications should be done with the help of the experts.
- Avoid foot traffic in front of fume hood that causes turbulence and can draw contaminants out of the hood and into the room.

'Using wrong fume hood correctly' OR  
'Right fume hood wrongly' gives no result

## • Types of Fume Hood :

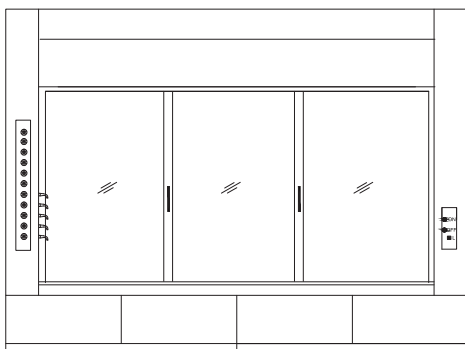
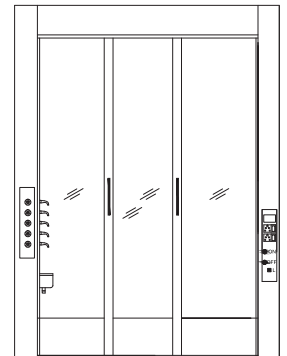
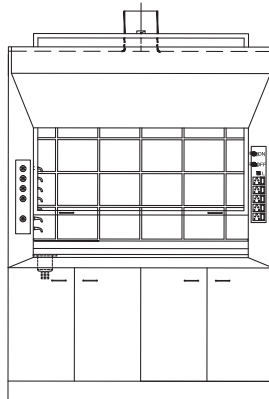


• Low bench

• Walk-in type

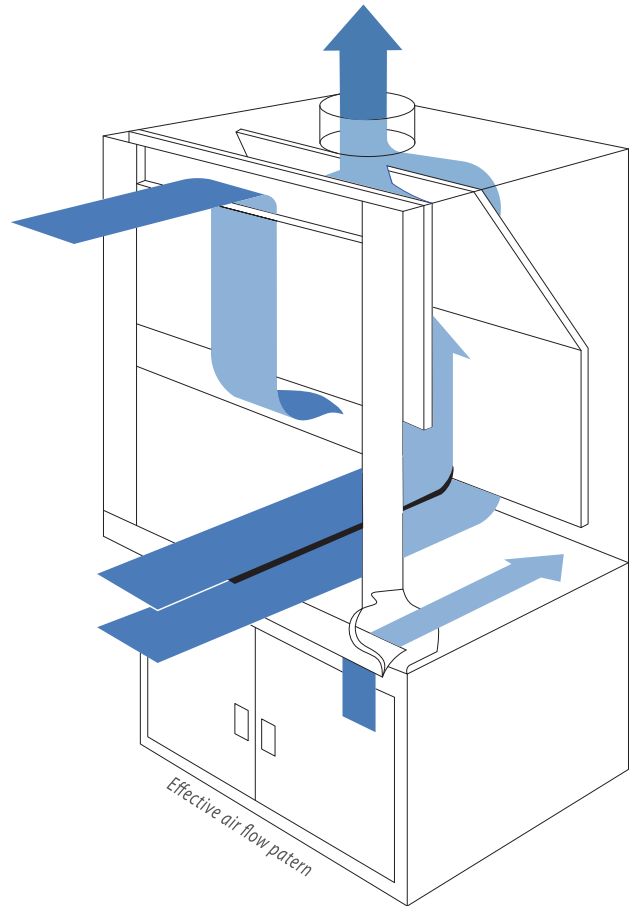


• Bench mounted



• Custom size

# Complying to testing standards



Organizations	Citation	Face Velocity
ACGIH	Industrial Ventilation 19th edition p.5.24	60-100 fpm
ASHRAE	1999 ASHRAE Handbook 13.5	60-175 fpm
ANSI/AIHA	ANSI/AIHA Z9.5, Sect 5.7	80-120 fpm
CALOSHA	CCR Title VIII Subchapter 7.5454.1	min 100 fpm
NRC	Prudent Practices P.187	80-100 fpm
NFPA	NFPA 45 6-4.5 & A6-4.5	80-120 fpm
NIOSH	Recommended Industrial Ventilation Guidelines p.166	100-150 fpm
NRC	NRC Guide 6.3	100 fpm
OSHA	29 CFR 1910 Appendix A Sec. A.C.4.g	60-100 fpm
SEFA	SEFA 1.2 : 5.2	75-100 fpm

## Fume hood performance



Ideal Noise level < 70 dB



Required average face velocity 0.5 m/s



Airflow monitor

## Fume hood assembly details



Fume hood valve



Epoxy grid



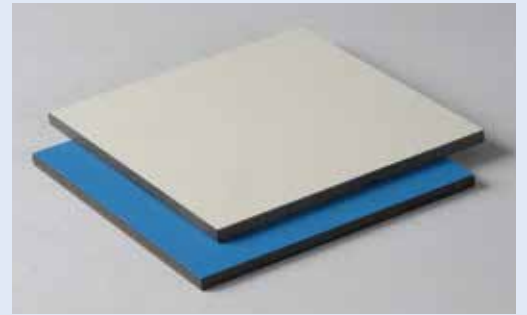
Acid resistant lining



Brass nozzle & PU tubing with presto fittings

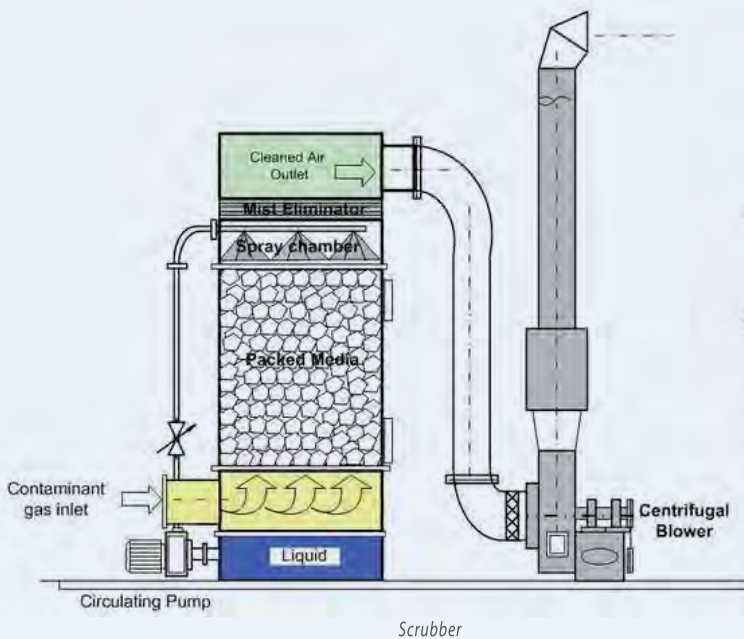


Nylon pulley and SS rope for counter balance system



Trespa lining ( optional )

## Fume exhaust system



Scrubber



Damper



Centrifugal blowers







Slotted angle rack



Cupboard with view panel  
(compatible to connect with exhaust duct)



Lockers



Cupboard  
(compatible to connect with exhaust duct)



Vertical drawer cabinet

Stand Alone Units



Anti Vibration Table



SS Trolley



Filing cabinet



Cushioned Stool



Low back Stool



SS Stool



Chair



# An illustrious list of our clients

## Govt. Sector



## Pharmaceuticals



## Refinery & Petrochemicals



## Chemical Industries



## Food Industries



## Auto / Tyre Sector



## Research & Biotechnology



## Metal Industries



## Others

