KAIZEN AIRTECH SOLUTIONS

LAMINAR AIR FLOW CABINET Brochure

Laminar Flow Clean Benches, Horizontal and Vertical

Kaizen Airtech Deal in Control Environment solutions. We work for maintain Air Quality, Temperature, Humidity, positive Pressure, Light, sound Control and Comfort Condition Turnkey Project. We are leading manufacturers of a quality range of Clean Room Equipment and System such as Bio Safety Cabinets, Laminar Flow Benches, Pass boxes, Air Showers etc.

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KAIZEN'S LAMINAR AIR FLOW

Kaizen Airtech Horizontal Laminar Flow Clean Bench blends in latest laminar flow technology and innovation to provide proven protection for your samples and processes. The new generation Horizontal Laminar Flow Clean Benches offers a wide range of options for our customers; with glass side wall, sizes from 2 to 6 feet, behind the many options that the customer can select, the full range of the new Kaizen Airtech laminar flow clean benches is powered by the latest generation ultra-high efficiency motor. It now also offers ISO Class 3 (Class 100 air quality) work zone with a 10x efficiency of its HEPA filters. With more choices for the customers, Kaizen Airtech laminar flow clean benches still offer the same level of product protection for your samples and processes where operator protection is not required.

Key Benefits:

Class 100 Air quality maintains.

Energy Efficient

Superior airflow uniformity

Ergonomic design

Features:

Microprocessor Controller displays all safety information on one screen with a touch pad.

Stainless steel work surface ensures optimal clean less, chemical resistance and containment of accidental liquid spills.

Ergonomic design encourages proper posture reducing fatigue.

Washable, reusable pre filter which trap dust and large particle.

10x filtration efficiency of HEPA filter creates Class 100 air quality work zone instead of industry-standard ISO Class 5.

The removable protective screen located in front of the HEPA filter and easily removed for service and cleaning.

Each clean bench is individually factory tested for safety and performance in accordance with international standards.

All components are cleanroom compatible.

Kaizen Airtech Laminar Flow Clean Benches have been tested for cross-contamination and product protection using microbiological test method.

Built in recessed illuminator provide diffused lighting without interfering with the laminar flow.

Face velocity is adjustable from less than 90 FPM (0.45 m/s) to higher than 130 FPM (0.66 m/s)

Pressure drop from 0.35 to 0.795 inches W.G at 90 FPM (0.45 m/s)

INTRODUCTION

The LF Horizontal Laminar Flow Clean Bench is a completely self-contained, multipurpose, vibration-free clean bench
That supplies a laminar flow pattern of HEPA filtered air. The clean bench provides a Class 100 (M 3.5) environment.

The unique design concept of the LF Horizontal Laminar Flow Clean Bench consists of separate plenum and table
Modules that virtually isolates all vibration transmission from the filter/blower console to the work surface.

Air enters the LF Horizontal Laminar Flow Clean Bench through a pre filter which removes most of the large particles. The air is then evenly distributed across the High Efficiency Particulate Air (HEPA) filter by blower. The HEPA filter removes 99.99% of all particles 0.3 micros and larger in size and imparts a unidirectional or laminar flow pattern to the air. The air moves through the work area at a uniform velocity of 90 feet per minute (+/-20%), carrying away all airborne contamination generated by activities within the work area. All samples or equipment within the work area are continually bathed in the ultra-clean air.

TYPE

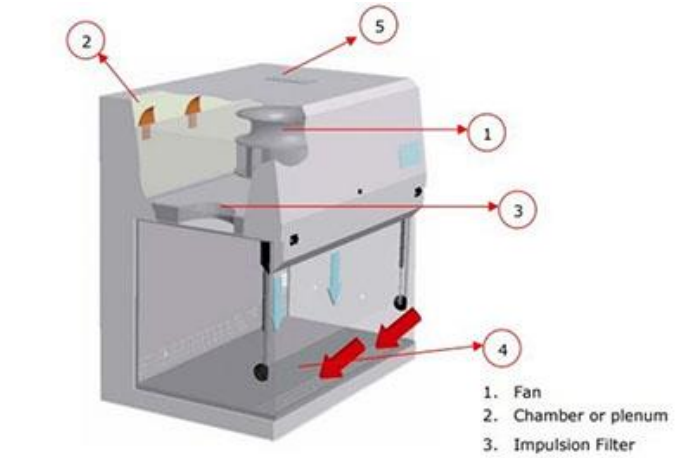
1. **Vertical Laminar Air flow**
2. **Horizontal Laminar Air flow**

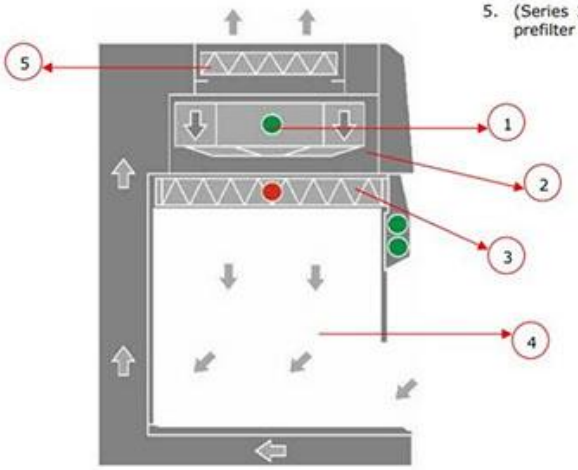
Horizontal Laminar Air flow

Vertical Laminar Air flow

1. Vertical Laminar Air flow-

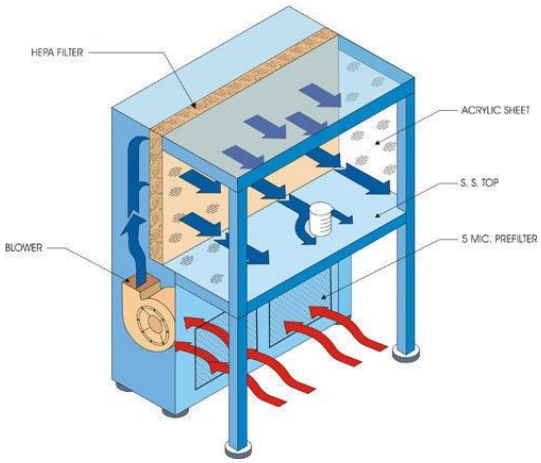
Vertical Laminar Flow Cabinets function equally well as horizontal Laminar Flow Cabinets with the laminar air directed vertically downwards onto the working area.
The air can leave the working area via holes in the base. Vertical flow cabinets can provide greater operator protection.





2. Horizontal Laminar Air flow-

Horizontal Laminar Flow Cabinets receive their name due to the direction of air flow which comes from above but then changes direction and is processed across the work in a horizontal direction. The constant flow of filtered air provides material and product protection.



Sub type-

A. -Standard laminar air flow
B. -Modified laminar air flow
C. -Smart laminar air flow

A. -Standard laminar air flow-

Standard laminar air flow provides

- filtration,
- light fixture,
- worktable,
- Differential pressure gauge,
- caster wheels,
- 16A switch,
- UV light,
- Fluorescent light etc.

B. -Modified laminar air flow-

Modified laminar air flow provides

- filtration,
- light fixture,
- worktable,
- Differential pressure gauge,
- caster wheels,
- 16A switch,

- UV light,
- Fluorescent light
- Front door
- Operating control panel.

C. -Smart laminar air flow-

Smart laminar air flow provides

- filtration,
- light fixture,
- worktable,
- Differential pressure gauge,
- caster wheels,
- 16A switch,
- UV light,
- Fluorescent light
- Front door
- Operating touch panel
- HMI
- Flexible speed variation
- LED light etc.

SPECIFICATIONS

Model	KA-VLAF6			
External L x D x H Dimension (mm)	1950 x 770 x 1961			
Work Bench Dimension (mm)	1884 x 712 x 695			
Material of Construction	MS Powder Coated		1.2mm Thick	
Light Box	Internal cover of light box is SS304 mat finished			
Grill Mini plate HEPA	Capsule Type holes			
Wheels and Lugs	Hour meter shows life of UV light			
Stage of filters	Pre-filter = 10micron with an efficiency 90% washable HDPE Media in FRP PU coated Frame for GI model for S.S304 Model the frame will be in S.S 304 Mini plate HEPA filter in cased in aluminium frame, filter have anti-fungal joint. 0.3 micron with an efficiency of 99.997% (anti –microbial treated media) size 1220 X610 X75 Qty-1 nos.			
HEPA Filter	Size (mm)	610 x 915 x 75	Qty (Nos)	
Motor Blower Assembly	''Crompton'' make variable speed motor mounted on PU coated. FRP Blower with aluminium power coated impeller.			
Motor Blower Assembly Mounting	Unique spring suspension with bellow system to take care of Vibration & noise.			
Velocity	100 FRM At 6'' from face of the filter (0.45)			
Noise Level	<65Db at 01 meter from face of the equipment			
Pressure Gauge	Dyer make Mangnahelic differential pressure gauge 0 to 40 mm wg,02 No's			
Levelling Bolt	04 Nos.			
Power Supply Cable	1.5 Sq. mm x 3 Core x 03 metres, flexible with 3 pin top			
Side Glass	6mm Float Glass encased Stainless still channel			
Font Door	Frameless gas spring loaded swiping Type Polycarbonate 06mm Thickness .Max. Opening in front position 1' 6" and closing other time up to S.S table with dead weight operation assemble.			
Design and Classification	Top backside loading pre- filter, complete work area will be of Ms powder coated including HEPA Grill. Light canopy internal surface for GI model and S.S model Angled front slop of 10 Degrees to reduces Operator fatigues while working.			
Electrical Panel	Switches and speed control microprocessor control feature touch switch panel.			
	FLUORESCENT LIGHTING: 4' X 40-Watt tube light on Patti fitting			
	illumination Of Light MCB: 800 LUX ON WORKING TABLE.			
	230V Power sockets 15A Qty: 1			
	Cock for Light Qty: 05			
	Ultra violet Light: 03 feet length 30 watts			

KAIZEN'S LAMINAR AIR FLOW MODELS

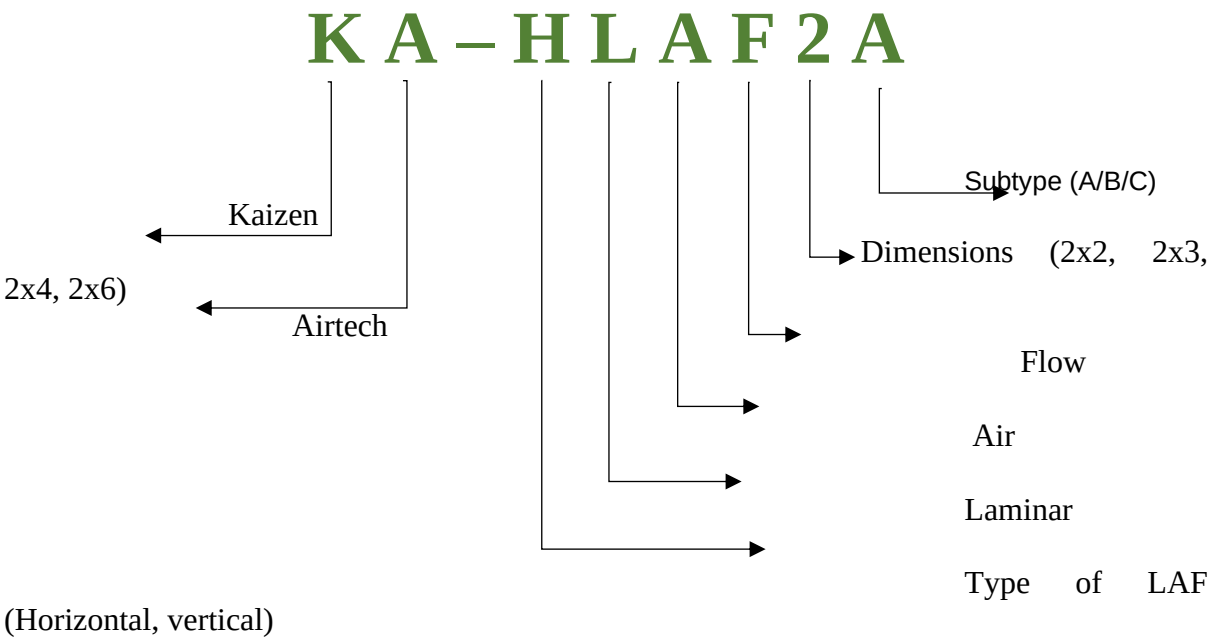
Model no	Description	Internal (work Bench)	External
	Horizontal LAF		
KA-HLAF2	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*2	610 x 610 x 610	710 x 870 x 1440
KA-HLAF3	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*3	915 x 610 x 610	1020 x 870 x 1440
KA-HLAF4	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*4	1220 x 610 x 610	1315 x 870 x 1440
KA-HLAF6	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*6	1830 x 610 x 610	1930 x 870 x 1440
	Vertical LAF		
KA-VLAF2	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*2	660 x 700 x 695	730 x 770 x 1961
KA-VLAF3	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*3	965 x 712 x 695	1035 x 770 x 1961
KA-VLAF4	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*4	1270 x 712 x 695	1340 x 770 x 1961
KA-VLAF6	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*6	1884 x 712 x 695	1950 x 770 x 1961

Model no	Description	Internal (work Bench)	External	Sub-type
	Horizontal LAF			
KA-HLAF2A	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*2	610 x 610 x 610	710 x 870 x 1440	STANDARD
KA-HLAF3A	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*3	915 x 610 x 610	1020 x 870 x 1440	STANDARD
KA-HLAF4A	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*4	1220 x 610 x 610	1315 x 870 x 1440	STANDARD
KA-HLAF6A	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*6	1830 x 610 x 610	1930 x 870 x 1440	STANDARD
	Vertical LAF			
KA-VLAF2A	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*2	660 x 700 x 695	730 x 770 x 1961	STANDARD
KA-VLAF3A	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*3	965 x 712 x 695	1035 x 770 x 1961	STANDARD
KA-VLAF4A	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*4	1270 x 712 x 695	1340 x 770 x 1961	STANDARD
KA-VLAF6A	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*6	1884 x 712 x 695	1950 x 770 x 1961	STANDARD

Model no	Description	Internal (work Bench)	External	Sub-type
	Horizontal LAF			
KA-HLAF2B	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*2	610 x 610 x 610	710 x 870 x 1440	MODIFIED
KA-HLAF3B	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*3	915 x 610 x 610	1020 x 870 x 1440	MODIFIED
KA-HLAF4B	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*4	1220 x 610 x 610	1315 x 870 x 1440	MODIFIED
KA-HLAF6B	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*6	1830 x 610 x 610	1930 x 870 x 1440	MODIFIED
	Vertical LAF			
KA-VLAF2B	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*2	660 x 700 x 695	730 x 770 x 1961	MODIFIED
KA-VLAF3B	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*3	965 x 712 x 695	1035 x 770 x 1961	MODIFIED
KA-VLAF4B	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*4	1270 x 712 x 695	1340 x 770 x 1961	MODIFIED
KA-VLAF6B	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*6	1884 x 712 x 695	1950 x 770 x 1961	MODIFIED

Model no	Description	Internal (work Bench)	External	Sub-type
	Horizontal LAF			
KA-HLAF2C	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*2	610 x 610 x 610	710 x 870 x 1440	SMART
KA-HLAF3C	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*3	915 x 610 x 610	1020 x 870 x 1440	SMART
KA-HLAF4C	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*4	1220 x 610 x 610	1315 x 870 x 1440	SMART
KA-HLAF6C	KAIZEN AIRTECH HORIZONTAL LAMINAR AIR FLOW 2*6	1830 x 610 x 610	1930 x 870 x 1440	SMART
	Vertical LAF			
KA-VLAF2C	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*2	660 x 700 x 695	730 x 770 x 1961	SMART
KA-VLAF3C	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*3	965 x 712 x 695	1035 x 770 x 1961	SMART
KA-VLAF4C	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*4	1270 x 712 x 695	1340 x 770 x 1961	SMART
KA-VLAF6C	KAIZEN AIRTECH VERTICAL LAMINAR AIR FLOW 2*6	1884 x 712 x 695	1950 x 770 x 1961	SMART

Laminar air flow model number explanation



APPLICATIONS

The high-performance, two-piece LF Clean Bench has successfully demonstrated its versatility in a wide variety of applications and industries.

- Optical Assembly
- Microscopy Analysis
- Critical Sample Preparation
- Pharmaceutical Preparation
- Tissue Culture
- Microelectronic Fabrication and Assembly
- Electronics instrument Assembly
- Actuator Assembly
- PCB Manufacturing
- Tissue Culture
- Biotechnology
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