PRISM FILTER BANKS

CENTRALIZED FUME EXTRACTION FOR EDUCATION, INDUSTRIAL, CUTTING & ROBOTIC APPLICATIONS



Efficient. Compact. Scalable.

Prism® Filter Banks offer a powerful, centralized solution for fume extraction in industrial and educational environments. Designed to work with ductwork and fume capture devices, such as hoods and arms, these vertically oriented filter banks help extract welding and cutting fumes while recirculating filtered air back into the facility. With configurations ranging from 2 to 48+ filters, Prism Filter Banks are tailored to fit your specific air filtration needs —supporting everything from small shops to large manufacturing operations. When you choose a fume extraction solution from Lincoln Electric, you're choosing a system designed, manufactured, and supported by the welding experts—helping to make fume management easy, every step of the way.

Key Features

· Heavy-duty industrial grade filtration unit with a compact footprint

· Vertically positioned filters enhance the effectiveness of the filter cleaning cycle, helping to increase filter life

· Exhaust fan silencer supports quiet operation

· Designed for easy installation, operation and maintenance

Note: The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.

Processes »
Stick, TIG, MIG, Flux-Cored, Plasma Cutting, Arc Gouging, Grinding[1]

Input[2] »
3 PHASE 50/60 Hz

Applications »
General Welding, Cutting & Grinding Fabrication, Heavy Welding & Cutting Fabrication, Robotic Welding & Cutting Applications

[1] Not suitable when grinding aluminum, magnesium, titanium or other materials which may produce explosive dust.

[2] L Series requires Single Phase, 115V

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LINCOLN ELECTRIC

FEATURES:

» **Automatic Filter Cleaning**
- System will automatically start cleaning process once pre-set pressure differential is reached
- Vertical filter orientation allows for more efficient cleaning
- Compressed air pulses the filters causing particulate to collect in the dustbin below*

» **Quiet and Efficient Operation**
- Silencer on exhaust fan drastically reduces airflow noise
- Variable speed drive regulates fan speed based on filter loading to maximize efficiency

» **Easy to Install and Use**
- Smaller systems ship nearly fully assembled.
- Smart Connect technology allows for quick system electrical wiring.
- Modular design of larger Prism L series Filter Banks allows for easy assembly.

» **Easy-to-Use HMI Screen (only available on L-Series)**
- Large easy-to-read dials provide real-time status of vital functions
- Track fan speed, filter bank pressure and duct pressure to monitor filter life for filter replacement
- Graphical HMI control panel is standard on L-Series Prism filter banks

» **Optional Thermal Suppression System**
- Helps mitigate risk of thermal events
- Available on the Prism 4, 6, 8, 12, 16, and 4 Compact

*Compressed air not included
**Preinstalled fans only included with AD series Prism models.

SMALL FOOTPRINT

Prism Filter Banks are designed not only to be efficient, but to reduce the amount of space that fume extraction systems tend to take up. Your space is valuable, and the Prism Filter Bank allows the ability to have fume extraction close to your application without taking up too much space.



Shown: Prism 4 Connected to Fab-Pak® FHS B2B



Shown: Prism 4 Filter Bank

For best welding results with Lincoln Electric equipment, always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.

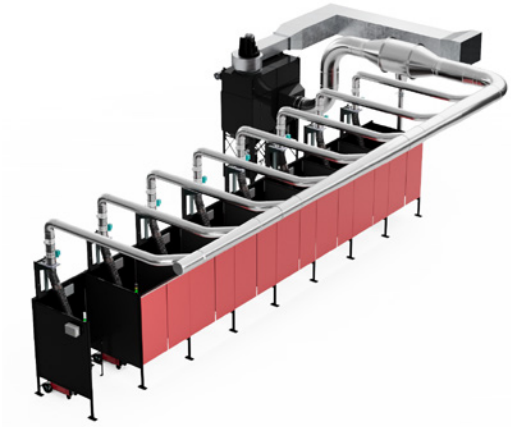
Manufactured at a facility with certified ISO Quality and Environmental Management Systems.

WHICH MODEL IS RIGHT FOR YOU?

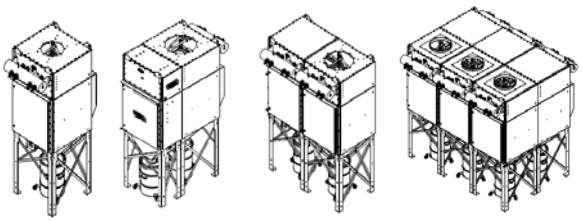
	Prism AD Filter Banks	Prism L Filter Banks
Models	Prism 2 Filter Bank Prism 4 Filter Bank Prism 4 Compact	Prism 4 - 72 Filter Banks
Location	Indoor installation only	Indoor or outdoor installation
Features	· Small footprint · Designed for quick and easy assembly and installation · Includes fan and all integrated controls · Integrated spark pre-filters · Optional Firetrace thermal suppression for Prism 4 and Prism Compact	· Highly configurable format - up to 72 filter banks · Remote or top mount fans · HMI controls can be installed remotely from the filter bank · Optional spark trap · Optional Firetrace thermal suppression



Shown: Prism 4 Compact Connected to an Engineered Lincoln Electric Robotic System



Shown: Prism 8 Connected to an engineered 8 booth solution

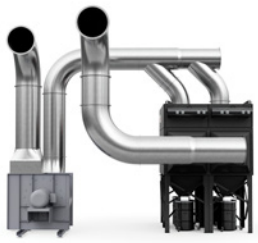


Prism 4 *Prism 6* *Prism 8* *Prism 24*

Shown: Standard filter bank configurations, available up to 72 filters



Shown: Prism 4 connected to Torchmate® 5100 table



Shown: Prism 16 with Floor Mounted Fan

FILTER EFFICIENCY

Prism Filter Bank filters are designed for efficiency with vertical alignment and automatic filter cleaning – together, leading to longer filter life and easier maintenance.

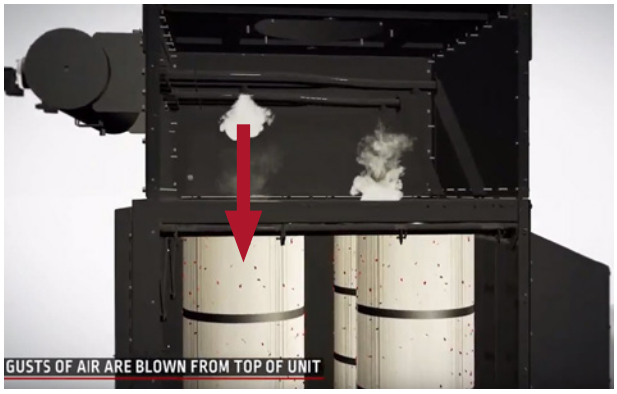
Vertical Filter Alignment

Vertical filters allow for more even dispersal of particulate, compared to horizontally-aligned filters, where some particulate remains on top of the filters.

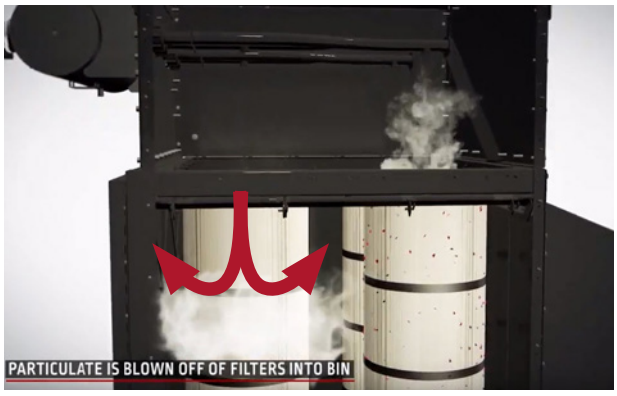
Automatic Filter Cleaning

An automatic filter cleaning system is engaged when the integrated air pressure sensor reaches a certain setpoint. Bursts of air pulse the filters knocking particulate outwards and downwards into the extraction bin where particulate can later be disposed of. Manual filter cleaning is also possible.





Systematic pulses of air are released from the air compressor above the filters.



The pulses remove particulate from the filters, which falls into the dustbins below.

NOTE: Filter cleaning can also be done manually by turning off the fan and engaging the air compressor using the control panel.

QUICK AND SIMPLE MAINTENANCE



Prism Filter Banks are equipped with automatic filter cleaning, but over time filters will become saturated with particulate and will need to be replaced. These systems are designed for quick and easy filter maintenance:

- No additional tools needed
- Filter clasps unlock with minimal effort to disengage the filters from the unit
- Guide rails allow the filters to slide in and out with ease

FILTER OPTIONS

Filter replacement is crucial to the performance and longevity of your Prism Filter Bank. The correct filter can be identified by the strap color on the existing filter and matched with the part number listed below. Replacement filters can be purchased at www.weldfumefilters.com.

KP4519-1
(Black Strap)



MERV 11
Use with Guardian Limestone Feeders

KP4519-2
(White Strap)



MERV 16 NANO
Standard filter for typical welding applications

KP4519-3
(Red Strap)



MERV 16 PTFE
Best for heavier particulate applications

KP4519-4
(Gray Strap)



MERV 11
Oil resistant filter with pre-coat

KP4519-5
(Orange Strap)



MERV 16
Oil resistant filter with pre-coat

KP5555-1 or
KP5729-1*



HEPA H13
High efficiency filtration

*HEPA filtration requires an additional kit installed at the factory. Refer to manual for appropriate filter part number.

OPTIONAL HEPA FILTRATION

For customers interested in HEPA filtration for their welding and cutting areas, HEPA filters can be added prior to shipment at the factory, enabling HEPA H13 filter efficiency.



Features:

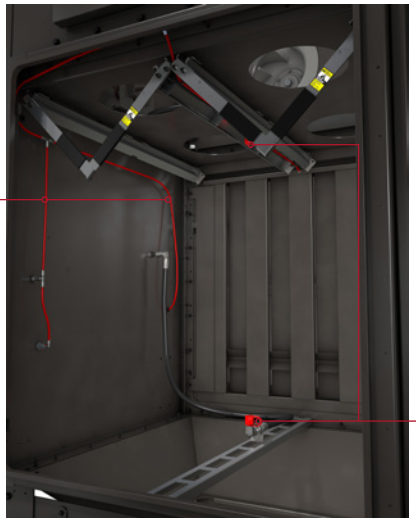
- HEPA H13 certified filtration (99.97% efficient @ 0.3µm)
- Monitor HEPA filter pressure on easy-to-use HMI
- Zero added footprint with the top mounted kit and filter
- Easy access and filter changing with quick unlock mechanism and front access door
- Ships pre-assembled from the factory on top of the PRISM filter bank, no additional assembly required

If you are interested in getting HEPA filtration as part of your Prism Filter Bank design, reach out to your Lincoln Electric Environmental Sales Specialist or contact us at lincolnelectric.com/fumecontrol

OPTIONAL THERMAL SUPPRESSION

The Prism Thermal Suppression system mitigates risk of thermal events caused by welding and cutting particulate entering the fume extraction unit. This fully integrated fire suppression system is UL-listed, FM-approved and a recommended option by Lincoln Electric.

- Factory installed – available on the Prism 4, 6, 8, 12, 16, and 4 Compact
- Simple to use – ties into existing PLC
- Refillable at certified Distributor locations



* 4-bank units have upper and lower nozzles; larger banks have 1 or 2 upper nozzles.



WHAT'S INCLUDED

- Filtration unit
- Dust collection bin
- Exhaust fan
- Stand
- Control package
- Exhaust silencer

PRODUCT SPECIFICATIONS

Product Name	Input Power Voltage/Phase/ Hertz	Fan Motor Horsepower	Max Rec-comended Airflow (CFM)[1]	Number of Filters	Number of Dustbins	Number of Inlets (dia.) / Position	Sound Level[2]	Clearance Needed	Filter Cleaning Control
PRISM 2	380-480/3/50-60	5.8 HP	2000	2	1	1 (12 in.) | Side	75 dBA at 5 ft.	3.5 ft. (min.) in front to change filters / 3 ft. (min.) on side for control panel access	Pressure-based
Prism Compact		5, 10 HP	4000	4	1	1 (16 in.) | Back			
PRISM 4	380-480/3/60, with 200-240V and 525-600V Options	5, 10, 15 HP	4800	4	1	1 (16 in.) | Back			
PRISM 6		10-20 HP	7200	6	2	1 (20 in.) | Back			
PRISM 8		15-40 HP	9600	8	2	1 (20 in.) | Back			
PRISM 12		20-40 HP	14400	12	3	2 (20 in.) | Back			
PRISM 16		30-60 HP	19200	16	4	2 (20 in.) | Back			
PRISM 20+	We can configure systems to meet your space's needs. We have systems with up to 72 filters								

Contact your local Lincoln Electric Sales or Environmental Specialist for System Design or request a quote at

www.lincolnelectric.com/fume

NOTE: Input Current, Dimensions and Weight are dependent on the configuration and can be provided upon request.

(1) Applications with high fume generation rates or oily fume will reduce the maximum airflow.

(2) with silencer @ side of silencer under "free field" conditions. This value represents noise generated by the moving air and does not take into consideration other factors which may contribute to the overall sound level. For example; noise from the motor, casing, duct and other equipment.

(3) HMI Control Panel: 4.2 amps @ 115/1/60 | 2.2 amps @ 208-230/1/60

The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, maintenance of the equipment and the specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits.

Lincoln Electric Product Claim - Weld fume control products manufactured by The Lincoln Electric Company are designed to be utilized as an engineering safety control to aide in achieving adequate ventilation while conducting welding or it's allied processes. The operation of welding fume control equipment is affected by various factors including proper use and positioning of the equipment, and the specific welding procedure and application involved. When the equipment is used as designed - and when properly installed, operated and maintained - it can be a valuable and effective tool to help employers maintain adequate ventilation in the workplace. Lincoln Electric defines adequate ventilation as that which is required to maintain occupational exposure levels below the applicable exposure limits when sound work practices are utilized. Worker exposure level should be checked upon installation and periodically thereafter to be certain it is within applicable OSHA PEL and ACGIH TLV limits. Welding operations may produce hazardous gases such as carbon monoxide, oxides of nitrogen, and ozone. This equipment is designed to remove welding fume particulate, not gases. Ensure that adequate make-up air ventilation is provided to the workspace to prevent potential overexposure to these gases (see AWS Fact Sheet No. 36).

Lincoln Electric weld fume control products are highly effective at decreasing the occurrence level of thermal events, however, thermal events can still happen even if the system is operating as designed.

CUSTOMER ASSISTANCE POLICY

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, cutting equipment and EV charging systems. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment, or to provide engineering advice in relation to a specific situation or application. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the definition of specifications, and the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

Call 1-888-935-3878 Option 4 for more information

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