



# WELD FUME CONTROLS

- Reduces Welding Fume and Dust in The Workplace
- Portable, Wall-Mounted or Shop-Wide Systems

**Lincoln Electric offers a complete line of portable, stationary and engineered solutions for welding fume control – mobile, stationary, downdraft and engineered systems.**



## Mobile

Mobile welding fume extractors with filtration are lightweight and rugged and are designed for light to medium duty welding fume extraction. The portable, lightweight solution is for the removal and filtration of welding fumes. This solution is ideal for facilities that require welding fume extraction in multiple locations.

## Stationary

Wall mounted, low vacuum systems are designed for extraction and filtration of welding fume. When used in conjunction with the LFA series of arms they provide welders with optimal motion and reach for their specific welding position(s) and work area. Ideal for a variety of facilities including maintenance departments, general fabrication and welding job shops, weld schools and industrial welding environments.



## Downdraft

Lincoln Electric's DownFlex® table are dual purpose work bench and extraction units, designed specifically for the removal of welding fume at the source. It can also be used to remove particulate and dust from metal grinding applications and light duty plasma arc cutting.



## Mobile / Portable Units

Lightweight, rugged design, low vacuum/high volume filtration system designed for extraction and filtration of welding fume. Ideal for facilities that require welding fume extraction in multiple locations, including maintenance departments, general fabrication and job shops and industrial welding environments. Perfect choice for small shops or companies with few welding stations, yet lightweight and small enough to be easily carried to the welding area.

### Portable Units

The Miniflex® is ideally used for:

- Contractors
- Maintenance Workers
- Small To Medium Fabrication Shops
- Home Hobbyists



## Miniflex®

### Portable Welding Fume Extractors

Miniflex® is a high vacuum system designed for the removal and filtration of welding fumes from light duty welding applications. The Miniflex® excels in performance and ease of handling. It can be completely disassembled in a matter of minutes for cleaning and maintenance. The convenient automatic start/stop function can extend the life of the motor brushes and reduces energy consumption, supplied as standard with:

- LongLife-H filter, filter surface 12 m<sup>2</sup>
- HEPA filter
- Aluminium prefilter
- Automatic start / stop
- Set of wheels
- Extraction hose 2.5 m
- 2 sets carbon brushes
- Capacity: 2 x 1000W



## Mobile Units

The Mobiflex® is ideally used for:

- Small Manufacturing Facilities
- Schools / Training
- Fabrication
- Plant Maintenance & repair

## Mobiflex®

### Portable Welding Fume Extractors

The Mobiflex® 200-M, 300-E and 400-MS are low vacuum systems for welding fume extraction and filtration. Their size and mobility make them ideal for smaller manufacturing facilities that require light to medium duty welding fume extraction in variable locations.



### Mobiflex® 100-NF Portable fan

Portable extraction fan with a free-blowing capacity of 2400 m³/h. Including 6 m mains cable and motor protection switch.

#### Technical Specifications

- Power Consumption – 0.75kW
- Capacity – Max. Approx. 1300 m³/h at the nozzle (with 5 m hose)
- Free-blowing Capacity – Max. 2400 m³/h
- Maximum Length of Configuration – up to 20 m
- Hose Diameter – Ø 160 mm

#### Applications

All welding processes in enclosed areas such as pipes, containers, tank trucks and ship hulls.



### Mobiflex® 200-M

Mobile unit with 50 m² LongLife filter with filter pollution indicator, supplied with 5 m mains cable.

#### Technical Specifications

- Power Consumption – 0.75 kW
- Capacity – Max. Approx. 1250 m³/h at the hood
- Arm – Ø 203 mm with rotatable hood and throttle valve

#### Hose – Ø 203 mm

- Filter efficiency – up to 99%

#### Applications

- MIG/MAG solid wire < 700 kg/year
- MIG/MAG flux cored wire < 500 kg/year
- Rutile Electrodes < 500 kg/year
- Basic Electrodes < 500 kg/year
- Not suitable for oil treated metals

### Mobiflex® 300-E

Mobile unit with 14.2 m² electrostatic filter (consisting of an ionizing cell and industrial collector) and metallic preimposed filter, supplied with 5 m mains cable.

#### Technical Specifications

- Power Consumption – 0.75 kW
- Capacity – Max. Approx. 1300 m³/h at the hood
- Arm – Ø 203 mm with rotatable hood and throttle valve

#### Hose – Ø 203 mm

- Filter efficiency – up to 99%

#### Applications

- Oil Treated Metals

### Mobiflex® 400-MS

Mobile unit with 30 m² mechanical self-cleaning RotaPulse filter with ExtraCoat treatment. Automatic filter cleaning by compressed air shot. Supplied with 5 m mains cable.

#### Technical Specifications

- Power Consumption – 0.75kW
- Capacity – Max. Approx. 1250m³/h at the hood
- Arm – Ø 203 mm with rotatable hood and throttle valve

#### Hose – Ø 203 mm

- Filter efficiency – up to 99%

#### Applications

- MIG/MAG solid wire > 700 kg/year
- MIG/MAG flux cored wire > 500 kg/year
- Rutile Electrodes > 500 kg/year
- Basic Electrodes > 500 kg/year
- Not suitable for oil treated metals.
- Dry, oil-free compressed air 4-5 bar connection required



# Stationary Units

Wall mounted, low vacuum systems are designed for extraction and filtration of welding fume. When used in conjunction with the LFA series of arms they provide welders with optimal motion and reach for their specific welding position(s) and work area. Ideal for a variety of facilities including maintenance departments, general fabrication and welding job shops, weld schools and industrial welding environments.

**The Statiflex® is ideally used for:**

- General fabrication
- Job shops
- Welding schools
- Maintenance departments



## Statiflex® 400-MS

The Statiflex 400-MS stationary, wall-mounted low vacuum system is intended for light to medium duty extraction and filtration of welding fume. The Statiflex is designed for facilities with fixed work stations and little available floor space. A self-cleaning filter is standard on the Statiflex 400-MS.

### Applications

- MIG/MAG solid wire > 700 kg/year
- MIG/MAG flux cored wire > 500 kg/year
- Rutile Electrodes > 500 kg/year
- Basic Electrodes > 500 kg/year
- Not suitable for oil treated metals.
- Dry, oil-free compressed air 4-5 bar connection required.

Statiflex 400-MS is to be connected to a CB control box.

## Statiflex®

### Wall-Mounted Welding Fume Extractors

The Statiflex® base units are stationary, wall-mounted low vacuum systems designed for light to medium duty extraction and filtration of welding fume.

### Statiflex® 200-M

Stationary welding fume filter with disposable LongLife filter cartridge.

Filter surface area 50 m<sup>2</sup> with ExtraCoat treatment. Including filter pollution indicator. No voltage required.

### Applications

- MIG/MAG solid wire < 700 kg/year
- MIG/MAG flux cored wire < 500 kg/year
- Rutile Electrodes < 500 kg/year
- Basic Electrodes < 500 kg/year
- Not suitable for oil treated metals

### Statiflex® 300-E

Industrial air cleaner with electrostatic filter. To be installed in ductwork or to be connected to extraction arm(s) with fan. Including oil collector. Possibility to install an oil drainer. Filters included: FIS and FCS; pre and final filters to be ordered separately. No fan included. Max. filter capacity: 2500 m<sup>3</sup>/h. Filter surface area: 14.2 m<sup>2</sup>.

### Applications

- Oil Treated Metals



# Downdraft Tables

Lincoln Electric's DownFlex® table are dual purpose work bench and extraction units, designed specifically for the removal of welding fume at the source. It can also be used to remove particulate and dust from metal grinding applications and light duty plasma arc cutting.

**The DownFlex® downdraft table is ideally used for:**

- Welding
- Plasma Cutting
- Grinding <sup>(1)</sup>

<sup>(1)</sup> Not suitable for grinding Aluminium, Magnesium, or other explosive materials

## DownFlex®

### Dual Purpose Workbench & Extraction Tables

The DownFlex® table is a compact table that can be placed in multiple locations around a welding shop. They combine a workbench and extraction unit designed specifically for the removal of welding fume. The DownFlex® tables can be used to remove particulate and dust from metal grinding applications, as well as fume and particulate from light duty plasma arc cutting.



### DownFlex® 100-NF

- Workbench, to be connected to an external extraction/filter system.
- Including backdraft kit and side panels. Extraction facility to be connected to air outlet on top of the backdraft panel.
- Contains no filters, but can be equipped with optional spark arresters to be mounted in the backdraft panel.
- Prepared for two optional dust containers

### DownFlex® 200-M

- Workbench with integrated extraction fan, 3-stage spark arrester and disposable filter cartridges.
- A Magnehelic gauge on the control panel indicates when the filter cartridges require replacement.
- For welding and grinding applications the downdraft table should be fitted with a backdraft kit for optimum division of the extraction capacity.
- Suitable for light to medium duty applications.

### DownFlex® 400-MS

- Workbench with integrated extraction fan, 3-stage spark arrester and self-cleaning filter cartridges.
- The Magnehelic (pressure) gauge on the control panel indicates when the automatic filter cleaning systems needs to be switched on.
- The filter cartridges are cleaned from the inside by compressed airshots.
- For welding and grinding applications the downdraft table should be fitted with a backdraft kit for optimum division of the extraction capacity.
- Suitable for medium to heavy duty applications.



### DownFlex® 400-MS/A

- Workbench with integrated extraction fan, 3-stage spark arrester and self-cleaning filter cartridges. The filter cartridges are cleaned automatically from the inside by compressed airshots. The filter cartridges are individually cleaned from the inside by compressed airshots.
- An integrated buzzer indicates when the filter cartridges need to be replaced.
- For welding and grinding applications the downdraft table should be fitted with a backdraft kit for optimum division of the extraction capacity.
- Suitable for heavy duty applications.



# Modular Extraction Hood

An Innovative and Flexible Solution to Efficient Weld Fume Control

COMBINING INNOVATION AND SIMPLICITY, THE LINCOLN ELECTRIC MODULAR EXTRACTION HOOD PROVIDES A FLEXIBLE AND EFFICIENT OPTION FOR WELD FUME EXTRACTION IN A WORK ZONE WITH AUTOMATED EQUIPMENT.

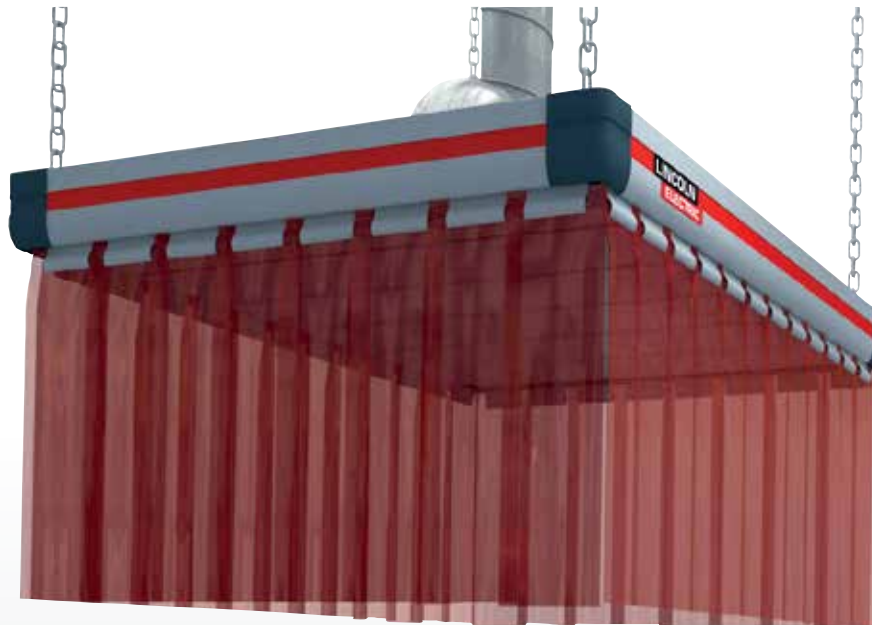
The Modular Extraction Hood is an easy to install, customizable enclosure that helps provide a cleaner work environment for a variety of industrial processes. Designed and built to Lincoln's rugged and dependable standards, these units are ideal for robotic and hard automation applications.

The Modular Extraction Hood is a reliable and practical solution to contain and extract welding, cutting, arc gouging and grinding fume from the work environment.

## PROCESSES

The Modular Extraction Hood is appropriate for use with the following industrial welding and cutting processes: Stick, TIG, MIG, Flux-Cored, Plasma Cutting, Arc Gouging, Grinding<sup>(1)</sup>.

For applications in which a worker is inside the work zone, exhaust at the arc or a respirator may be necessary.



# The Diluter™ System

## Free standing general filtration system

The Diluter™ is a free-standing general filtration system that reduces the overall concentration of welding fume through continuous filtration and airflow.

The product has been designed exclusively for extracting and filtering welding fume which is released during the most common welding fabrication processes. The system supplements the natural ventilation (draft) and/or forced ventilation (roof / wall fans) which may be present to reduce the overall concentration of welding fume in the workshop.



### THE FOUR MAIN COMPONENTS:

1. **Diluter™ Unit:** Lincoln Electric's unique Diluter™ air disperser head re-circulates the cleaned air into the workspace by means of precisely controlled outlet nozzles.
2. **Filter Unit:** A stationary filter unit incorporating automatic pneumatic filter cleaning. Air is captured and cleaned in a 3-stage 150 m<sup>2</sup> filter system with an efficiency of 99.9%. The filter unit has an external compressed air connection and particulate is collected in a waste container that can be emptied easily.
3. **Fan:** Lincoln Electric utilizes a high-efficiency 10 Hp IE3 motor in combination with 50 Hz fan technology offering the same airflow as a traditional 60 Hz fan, but with less noise, less energy consumption and less required Hp.
4. **Green-Drive™ Control System:** Lincoln Electric's Green-Drive Systems are on the cutting edge of fume technology control. Integrated controls continuously monitor system operation with a state-of-the-art pressure sensor and increase or decrease airflow to maintain the required performance levels. This results in energy savings of up to 50% and increased filter life of up to 30% over traditional on/off systems.

### Benefits

- **Cleaner work environment –**  
Reduce dust and dirt in operator and surrounding work areas.
- **Low cost installation –**  
No ductwork required.
- **Custom engineered to meet facility and application requirements.**
- **Easy installation –**  
Position the unit on the floor, a platform or a mezzanine.
- **Low noise level –**  
Will not contribute to increased noise levels.

### THE DILUTER TECHNICAL DATA

- **Airflow:** 6000 cfm
- **Input Power:** 380-480/3/50-60 Hz
- **Maximum Fan Power Consumption:** 10 HP (7.5 kW)
- **Dimensions:** H x W x D: 5245 x 1200 x 2438 mm
- **Weight:** 800 kg
- **Maximum Noise Level:** 68 dB(A) according to ISO 3746
- **Throw of the air flow is adjustable from 15-50 m**
- **Operating Temperatures:** Minimum: 5°C, Maximum: 45°C
- **Drum Capacity:** 100 liters
- **Certification:** System Controls-UL 508A, Fan Motor-UR, Frequency Inverter-UL



# Push-Pull System

## The solution for indoor air pollution in the industry

Extraction at source is impossible when welding large pieces of metalwork or when the welder needs to change his welding location frequently. In such cases, aerial extraction is the only way to tackle the layer of welding fumes. Lincoln developed the extremely effective push/pull-system especially for this purpose.

### Lincoln's push/pull-system consists of 4 components:

1. **Extraction (Pull):** To move and extract the layer of particulate in a controlled direction, an extraction duct is designed according to your specific operation and facility layout. The extraction duct is provided with airflow grids.
2. **Filtration:** The extraction duct is connected to a self-cleaning filtration unit. As the particulate moves through the extraction duct, it is collected on the filter media which is periodically cleaned by an automated, pneumatic cleaning system.
3. **Fan:** The continuous extraction (pulling), filtration and re-circulation (pushing) process is generated by a fan unit specifically sized for the system and positioned downstream from the filtration unit. To significantly reduce the system's noise level, the fan is mounted in a sound absorbing enclosure and powered and controlled by intelligent controls.
4. **Re-circulation (Push):** Once the particulates have been filtered, the filtered air can be re-circulated. By re-circulating the air, energy cost savings, specifically in climate controlled environments, can be recognized.

### Benefits

- **Cleaner work environment –**  
Reduce dust and dirt in operator and surrounding work areas.
- **Custom engineered to meet facility and application requirements.**
- **Easy installation –**  
Position the filter and fan unit on the floor, a platform or a mezzanine.
- **Low noise level –**  
Will not contribute to increased noise levels.



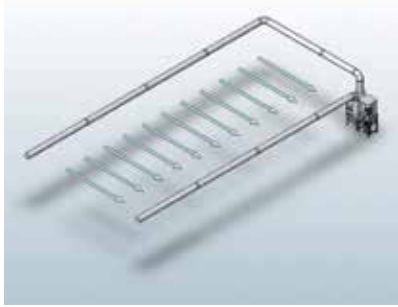
### PUSH/PULL SYSTEM SPECIFICATIONS:

- **Airflow:** 6000 cfm
- **Input Power:** 380-480/3/50-60 Hz
- **Maximum Fan Power Consumption:** 10 HP (7.5 kW)
- **Dimensions: H x W x D:** 2865 x 1200 x 2438 mm
- **Ducting Height:** 4-6 m
- **Weight:** 620 kg, does not include ducting or in/outlet grids
- **Maximum Noise Level:** 68 dB(A) according to ISO 3746
- **Throw of the air flow** is adjustable from 5-23 m
- **Operating Temperatures:** Minimum: 20°C, Maximum: 45°C
- **Drum Capacity:** 100 liters
- **Certification:** System Controls-UL 508A, Fan Motor-UR, Frequency Inverter-UL
- **Cover Area:**
  - Minimum Length: 10 m
  - Maximum Length: 50 m
  - Minimum Width: 5 m
  - Maximum Width: 23 m



## Suitable solutions for all circumstances

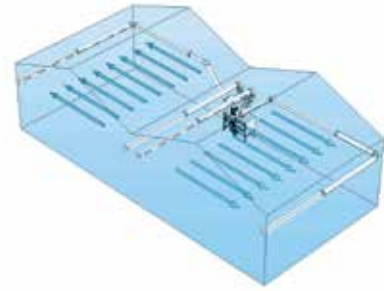
Some examples of push/pull-systems incorporating Lincoln's SCS filter units and the FAN 120 fans are given below:



U-shaped push/pull-system with 1 filter unit and 1 fan.



Double-parallel push/pull-system with 2 filter units and fans.



Composite system.

## WELDER PROTECTION

ARC WELDING IS A SAFE OCCUPATION WHEN SUFFICIENT MEASURES ARE TAKEN TO PROTECT THE WELDER FROM POTENTIAL HAZARDS. LINCOLN ELECTRIC OFFERS A COMPLETE LINE OF WELDER PROTECTION SOLUTIONS.

**RED LINE**  
WELDING APPAREL™

