

# Miniflex

## Portable Welding Fume Extractor

Lincoln Electric's Miniflex is a portable, high vacuum, low volume system specifically designed for the removal and filtration of welding fumes. For light duty welding applications, the Miniflex excels in performance, design and ease of handling. It can be completely disassembled in a matter of minutes for cleaning and maintenance. With an automatic start/stop function, the unit automatically turns on and off during welding. And with its standard set of wheels and optional wall-mounting bracket, it can be easily moved around or positioned off the work floor, out of the welder's working space.

### Processes

Stick, TIG, MIG, Flux-Cored

### Advantage Lincoln

- Excellent quality product at an affordable price.
- Well thought-out, user-friendly design.
- Five-stage filtration system for higher efficiency.
- LongLife-H™ filter technique separates and retains small particles for maximum efficiency.
- Main filter with spark arrestor surface area: 130 ft<sup>2</sup> (12 m<sup>2</sup>).
- Activated carbon filter (Optional) for improved filtration of odors.
- Final filter: HEPA H12 Class.
- Two powerful motors: 1.2 hp each.
- Multiple extraction capacity settings:
  - Low: 94 CFM.
  - High: 135 CFM.

- Cable sensor allows automatic start/stop capability.
- Low noise level: 70dB(A) with nozzle extraction installed.
- Unlike competitive models, standard wheels and handle make it easy to roll the Miniflex around the shop.
- Weight: 36 lbs. (16 kg).
- One-year warranty on Miniflex unit, 30 day warranty on all consumables, such as filters, hoses, hose adapters.

### Base Unit Includes

- 9 ft. (3 m) cord (AWG 14) with 15 amp plug (NEMA 5-15).
- 8 ft. (2.5 m) length x 1-3/4 in. (45 mm) O.D. extraction hose.
- LongLife-H main filter.
- HEPA filter.
- 2 spare sets of carbon brushes and seals for motors.



### Extraction Capacity

LO: 94 CFM  
HI: 135 CFM

### Input

1  
PHASE

50/60  
Hz

### TECHNICAL SPECIFICATIONS

| Product Name | Product Number | Input Power  | Input Current | Dimensions H x W in (mm)       | Net Weight lbs (kg) |
|--------------|----------------|--------------|---------------|--------------------------------|---------------------|
| Miniflex     | K2376-1        | 115V/1/50/60 | 15A           | 28-3/4 x 16-1/2<br>(730 x 420) | 36<br>(16)          |

## A CLOSER LOOK

### Weight and Design

Constructed out of synthetic components, the Miniflex is lightweight, at only 36 lbs. (16 kg), and impact resistant with a user-friendly design. With wheels and handle standard, the Miniflex can be easily rolled or carried around, unlike competitive models.

### Five-Stage Filtration Process

The Miniflex has a five-stage filtration process. In stage one, as the air enters the system through an intake connection, it passes through a removable and washable metal pre-filter in which heavier particles and foreign material are captured. In stage two, the air passes through a second metal pre-separator to further reduce any large particle matter from reaching the LongLife-H main filter. In stage three, the air passes through the LongLife-H main filter where the welding fume particles are captured and deposited. In an optional stage four, after flowing through the LongLife-H filter, the air passes through the optional activated carbon filter to help prevent or neutralize the release of odors back into the environment. In the final stage (stage five), the air passes through a HEPA filter (also known as High Efficiency Particle Air).

### LongLife-H filter

The unique design of the Miniflex's LongLife-H main filter has resulted in a very large filter surface area equaling 130 ft<sup>2</sup> (12 m<sup>2</sup>). With such a large surface area, the filter has an extended life. The LongLife-H filter is designed to dispose of extracted welding fume deposits at the time of filter disposal, preventing deposits from being released during welding.

### Cable Sensor

At the top of the Miniflex unit is an automatic start/stop button and a manual button. When the Miniflex is being operated in automatic mode, the unit automatically switches on as welder begins to weld, and automatically switches off approximately 15 seconds after welder stops welding. The result is less energy consumption and non-continuous noise. For the automatic start/stop function to work, the welder's work cable or power cable must be laid across the top of the Miniflex unit in the slotted groove with an integrated sensor.

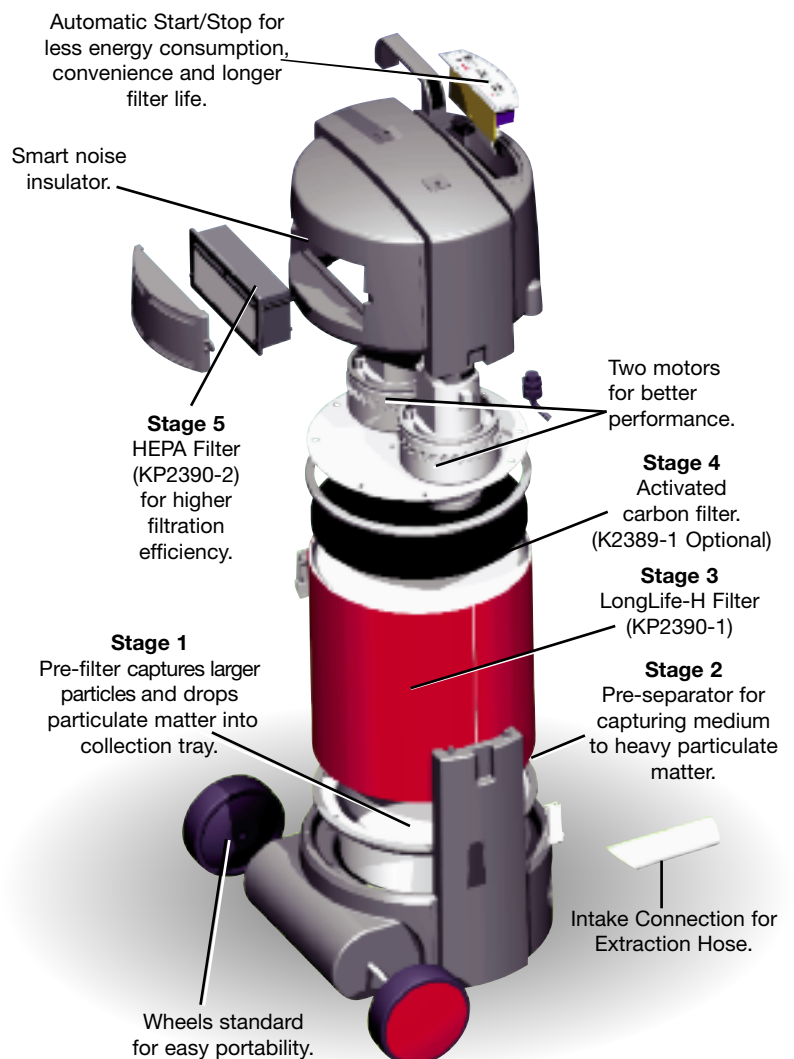
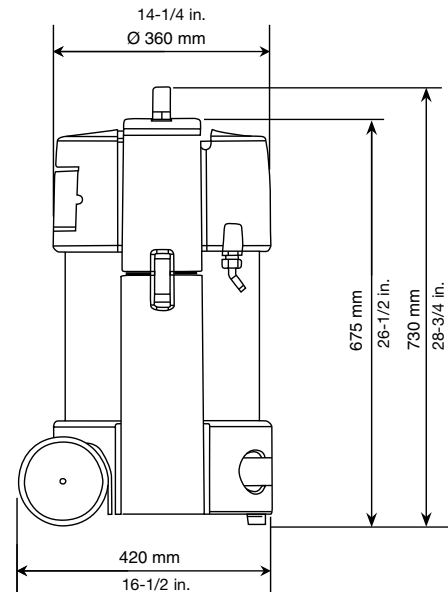
When the Miniflex is being operated in manual mode, the unit is continuously running.

### Reduced Noise

Smart noise insulation around the air exhaust significantly reduces noise without overheating the motors. 70dB(A) with nozzle extraction installed.

### Two Parallel Motors

The Miniflex is powered by two 1.2 hp motors allowing for sufficient extraction capacity under all conditions. At the top of the Miniflex unit is a high/low button. In high mode, both motors are working at 100% capacity, extracting 135 CFM of air. In low mode, both motors are working at 50% capacity, extracting 94 CFM of air. With both motors increasing and decreasing speed, the result is a continuously balanced system with reduced maintenance. The motors parallel positioning design reduces noise.



**GENERAL OPTIONS**



**EN 20 Extraction Nozzle**  
The EN 20 nozzle is designed for a wide array of welding applications. With its funnel extraction opening and magnetic mounting stand, it gives the welder a greater amount of versatility.  
**Order K2389-5**



**EN 40 Extraction Nozzle**  
The EN 40 nozzle is designed for stick electrode applications. With its L-shaped tube and an elongated slotted opening, the EN 40 nozzle is designed to coincide with the time it takes the welder to use one stick electrode. This design alleviates the welder from having to continuously reposition the nozzle. Magnetic mounting stand included.  
**Order K2389-6**



**SHFA Flat Suction Nozzle**  
150 mm (6 in.) Aluminum suction nozzle with 20 in. (500 mm) flexible steel hose and magnetic mounting. Includes S20591-7 adapter for 1-3/4 in. (45 mm) hose. Best capture distance: < 4 in. (100 mm).  
**Order K639-5**



**Aluminum Suction Nozzle with Magnetic Mounting.** Includes S20591-7 adapter for 1 3/4 in. (45 mm) hose. Best capture distance:~ 1-1/2 in. (38 mm).  
SHM-300 Nozzle-300 mm (12 in.) Nozzle  
**Order K639-1**  
SHM-400 Nozzle-400 mm (16 in.) Nozzle  
**Order K639-2**  
SHM-500 Nozzle-500 mm (20 in.) Nozzle  
**Order K639-3**



**SHMS-400 Nozzle**  
Low noise Nozzle-400 mm (16 in.) Aluminum suction nozzle with magnetic mounting. Includes S20591-7 adapter for 1-3/4 in. (45 mm) hose. Best capture distance: 1-1/2 in. (38 mm).  
**Order K639-4**

**GENERAL OPTIONS, CONT.**



**UNM Suction Nozzle for Heavy Smoke**  
200 mm (8 in.) Aluminum suction nozzle with magnetic mounting. Includes S20591-7 adapter for 1-3/4 in. (45 mm) hose. Best capture distance: < 4 in. (100 mm)  
**Order K639-6**



**SHMT Round Suction Nozzle**  
90 mm (3.6 in.) Suction nozzle with 13 in. (330 mm) flexible steel hose and magnetic mounting. Includes S20591-8 adapter for 1-3/4 in. (45 mm) hose. Best capture distance: < 4 in. (125 mm).  
**Order K639-14**



**Extraction Hoses**  
For longer hose applications, flexible high temperature hoses with spring steel reinforcement are optional. The optional extraction hoses can be used to connect to or replace the already included hose with Miniflex base unit. Maximum hose length of 45 ft. (15 m) be used with the Miniflex.  
**Order K2389-8**  
for 16 ft. (5 m) x 1-3/4 in. (45 mm) hose  
**Order K2389-9**  
for 8 ft. (2.5 m) x 1-3/4 in. (45 mm) hose

NKT  
K2389-3



NKC  
K2389-4



**Nozzle Kits**  
The NKT and NKC nozzle kits provide extraction capacity to standard welding torches. The NKT kit is for mounting the extraction hose on top of gun. The NKC kit is for circular extraction. Note: guns not included.  
**Order K2389-3 for NKT**  
**Order K2389-4 for NKC**



**Fume Guns**  
To extract welding fumes, Lincoln Electric's Xtractor 250FG, 340FG, and 500FG fume guns, and the 250A, 350A, and 500A FCAW-SS fume guns can be connected to the Miniflex and its extraction hose.  
**For Xtractor 250FG, 340FG, 500FG, call Lincoln sales office.**  
**For 250A, 350A, 500A FCAW-SS guns, see publication E12.110.**

## RECOMMENDED OPTIONS

### GENERAL OPTIONS, CONT.



**Hose-to-Hose Adapter**  
To connect hoses together, a 2 in. (50 mm) hose-to-hose adapter screws over hose ends, providing a tight connection and seal.  
**Order K2389-10**



**Hose Connection Outlet**  
The hose connection outlet (HCH 45) can be used to exhaust or dispose of welding fume particles.  
**Order K2389-2**

### GENERAL OPTIONS, CONT.



**Activated Carbon Filter**  
To neutralize or prevent the recirculation of odors or smells into the environment, the optional FAC HV, activated carbon filter can be placed on top of the Miniflex's LongLife-H main filter.  
**Order K2389-1**



**Wall Mounting Bracket**  
The MBH wall-mounting bracket allows for the Miniflex to be placed off the work floor and on the wall, out of the welder's workspace.  
**Order K2389-7**

## MINIFLEX ORDER FORM

| PRODUCT DESCRIPTION                             | ORDER NUMBER            | QUANTITY | PRICE |
|---|-------------------------|----------|-------|
| <b>MINIFLEX PORTABLE WELDING FUME EXTRACTOR</b> | <b>K2376-1</b>          |          |       |
| <b>EXTRA SET OF FILTERS</b>                     |                         |          |       |
| LongLife-H Filter                               | KP2390-1                |          |       |
| HEPA Filter                                     | KP2390-2                |          |       |
| Miniflex Prefilter                              | KP2390-3                |          |       |
| Activated Carbon Filter                         | K2389-1                 |          |       |
| <b>RECOMMENDED GENERAL OPTIONS</b>              |                         |          |       |
| EN 20 Extraction Nozzle                         | K2389-5                 |          |       |
| EN 40 Extraction Nozzle                         | K2389-6                 |          |       |
| SHFA Flat Suction Nozzle                        | K639-5                  |          |       |
| Aluminum Suction Nozzle                         |                         |          |       |
| SHM-300 Nozzle-300 mm (12 in.)                  | K639-1                  |          |       |
| SHM-400 Nozzle-400 mm (16 in.)                  | K639-2                  |          |       |
| SHM-500 Nozzle-500 mm (20 in.)                  | K639-3                  |          |       |
| SHMS-400 Nozzle                                 | K639-4                  |          |       |
| UNM Suction Nozzle for Heavy Smoke              | K639-6                  |          |       |
| SHMT Round Suction Nozzle                       | K639-14                 |          |       |
| 16 ft. (5 m) Extraction Hose                    | K2389-8                 |          |       |
| 8 ft. (2.5 m) Extraction Hose                   | K2389-9                 |          |       |
| NKT Nozzle Kit                                  | K2389-3                 |          |       |
| NKC Nozzle Kit                                  | K2389-4                 |          |       |
| 350A, 500A, 250A FCAW-SS Guns                   | see publication E12.110 |          |       |
| Hose-to-Hose Adapter                            | K2389-10                |          |       |
| Hose Connection Outlet                          | K2389-2                 |          |       |
| MBH Wall Mounting Bracket                       | K2389-7                 |          |       |
|   | <b>TOTAL:</b>           |          |       |

### CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company® is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information 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. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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