

# WELDING FUMES GO AWAY

REVIEW BY MARTYN LOTOWSKI

Welding fumes can be dangerous to your health. Whatever process you use, fumes are emitted.

Effects can range from respiratory irritation, to pulmonary edema (a build-up of fluid in the lungs), chronic nervous system disorder and even being exposed to carcinogenic fumes that can lead to cancer. (See *Metalcraft* Vol.1 #3 Summer 2005, pg. 32 for a more detailed article on fumes and welding.)

Most fume extractors are designed for industrial application but now this technology has filtered (pardon the pun) down to the consumer level.

We had a chance to test two fume extractors made by Lincoln Electric. They both will eliminate most of the

fumes created when welding, but they work a bit differently.

The Miniflex Portable Welding Fume Extractor is the size of a large shop vac. In fact it could be easily mistaken for one. It comes with a set of wheels to easily position this 36 pound (16 kilogram) machine anywhere in your shop. You can buy a special wall mounting kit for it as well. The unit comes with an eight foot (2.5 meter) extraction hose standard. The unit I tested had the EN-40 Extraction nozzle as well.

Like a shop vac, there is not much to setting up the machine. Plug it in to a standard 115-volt electrical outlet, place the nozzle on your workbench, the nozzle is mounted on a big round magnet that is really solid, and turn the machine on. You have a choice of two settings, Low, which extracts fumes at 94 cubic feet per minute (CFM) and High — 135 CFM. The noise of the motor is not loud but if even this noise irritates you you can switch the start button to auto.

There is one important step you must take when putting the Miniflex into auto mode. You place your welder's lead into a groove that is located on top of the machine. As soon as you start welding, the machine senses the current flowing through the welding lead and turns



The Extractor Nozzle mounts to any metal surface by way of its large round magnetic base.

the Miniflex on. For those welding with gases, this fume extractor runs for several seconds after you stop welding to suck up any residual fumes. In auto mode the Miniflex runs at the High setting.

### At a glance

**MiniFlex**  
Model K2376-1  
Lincoln Electric  
MSRP: \$1,390.00 (USD)

**Benchtop Extractor**  
Model CK0905-220  
Lincoln Electric  
MSRP: \$990.00 (CAD)

For more information:  
[www.licolnelectric.com](http://www.licolnelectric.com)



The Miniflex with the welder's lead mounted for automatic operation.

The Benchtop Extractor is a much simpler machine that works very well. Basically a box measuring 14 1/2 by 15 1/4 by 11 1/4-inches, it is a dead simple device to set up and to use. There is a on/off button on the side and that's it for the controls. A big round filter area draws the air in and extracts it from the top.

To use it you place it on your workbench in the vicinity of your welding area. My first concern was that it would take up an

inordinate amount of space on my limited work bench. After a bit of use, I realized that this is not a problem.

Both fume extractors feature state of the art HEPA filters designed for industrial applications as well as activated charcoal filtration.

If you weld at home and are concerned about staying healthy either of these fume extractors should be on your "to-buy" list.



The Benchtop Extractor is effective and looks good on the work bench.



## CANADIAN BRASS AND COPPER CO.

**Distributor of Architectural and Industrial Metals**

Copper, Bronze, Brass, Muntz, Aluminum, Stainless Steel, VM ZINC®, various profiles, Handrails

Sheet, Plate, Coil, Bar, Tube and Pipe

**Roofing and Cladding Materials**  
**Exclusive Distributors and Representatives for VM ZINC®**

VM ZINC® QUARTZ® Preweathered Grey

VM ZINC® ANTHRA® Charcoal Black

VM ZINC® PIGMENTO® Various Colours

Technical Assistance for Architects and Designers

[www.vmpzinc-us.com](http://www.vmpzinc-us.com)

Copper, Lead Coated Copper, Freedom Gray Copper™ (Zinc-Tin), Nordic Brown Copper™ (pre-Oxydized), Nordic Green Copper™ (pre-patinated), Evergreen Copper™ (pre-patinated), Titanium, Terne Coated Stainless Steel II® (Zinc-Tin), Titanium Coated Coloured Stainless Steels, Stainless Steel Polished Sheet, Bar, and Tube

225 Doney Crescent, Concord, Ontario, L4K 1P6  
Tel.: 416-736-0797, 1-800-845-1134 Fax: 416-736-7510  
web: [www.canadianbrass.ca](http://www.canadianbrass.ca) email: [canadianbrass@on.aibn.com](mailto:canadianbrass@on.aibn.com)