

X-TRACTOR® 3A, 5A, 8A

HIGH VACUUM, LOW VOLUME FUME EXTRACTION SYSTEMS



Welding Fume Extractors

The self-contained X-Tractor® weld fume extraction units are specifically designed for the removal and filtration of welding fume. These high vacuum, low volume systems are engineered to provide suction for multiple nozzles and fume guns and feature an integrated automatic self-cleaning filter system. They are ideally suited for continuous use in heavy duty welding applications.

- » Compact Design – For easy installation in narrow spaces.
- » Filter Cleaning System – Integrated automatic filter cleaning.
- » Rugged Design – For industrial use and impact resistance.

Processes »

Stick, TIG, MIG, Flux-Cored

Input »



Product Numbers »

X-Tractor® 3A: K3965-1 230V
K3965-2 460V

X-Tractor® 5A: K3966-1 230V
K3966-2 460V

X-Tractor® 8A: K3967-1 230V
K3967-2 460V



KEY BENEFITS

- » **Clean work environment:** Removes welding fumes at the source.
- » **Low maintenance:** Quick disassembly for cleaning and maintenance.
- » **Automatic Filter Cleaning System:** Extends filter life and reduces maintenance (compressed air required)
- » **1-Year Warranty**

A Closer Look

High vacuum welding fume extraction systems utilize high pressure of 70-90 Water Column (inch) and low volume of 50-100 Cubic Feet per Minute with an air speed of 4000-5000 ft/min. The air handling configuration of high vacuum equipment allows the use of small diameter rigid duct and small diameter flexhose to easily reach extraction points. It is perfect for applications such as short welds when using fume suction nozzles or larger fixture welding using integrated fume extracting guns. This process is designed for close proximity source extraction from 2-4 in. to the welding source.

Since the hoses and suction nozzles are smaller than those of low vacuum systems, it is much easier to carry the fume gun, extraction nozzle and/or flex hose into confined spaces depending on the type of welding, base material, consumable used and arc time. The mobility of the suction devices allows the main filter unit to be kept at a central location. Due to the low air volume (CFM) extracted, make-up air and negative room air pressures are kept to a minimum when exhausting outside the facility.

Automatic Filter Cleaning

The cleaning timer system can be adjusted based on the welding application and usage amounts.

The system consists of a holding tank for compressed air, an air solenoid valve and a timer. The tank is filled with compressed air, the solenoid valve opens at intervals set by the timer, and air is blown into the filter. Particulate stuck on the outside of the filter drops into a dustbin.

Off-Line Filter Cleaning

In addition to the automatic cleaning function, there is also a built in off-line function that can be programmed for additional cleaning cycles after work hours.

Automatic Operation

The extraction unit can be configured to operate in an automatic mode, where the extraction system will function based on the welding machine status. This provides extraction demand only when welding is taking place. [Contact Lincoln Electric for connection information].

Duct System

The metal duct system and related accessories are simple to install, leak-proof, and can be configured for up to eight connection points.

The duct system is designed specifically for the layout of the welding facility and takes into account the number of welding stations, welding processes, physical obstacles and overall duct lengths to maintain specific airflow characteristics and provide an efficient and effective solution.

EXTRACTION CAPACITY

| Welding Fume Extractor | Suction Nozzle Capacity | Fume Gun Capacity |
|------------------------|-------------------------|-------------------------------------------------------|
| X-Tractor 3A | 1 | Depends on airflow requirements of specific gun model |
| X-Tractor 5A | 3 | |
| X-Tractor 8A | 5 | |

Note: Number of extraction nozzles/fume guns that can be connected to each system is directly related to the overall lengths of duct and flex hose used for connection.

HOSES

| HOSE | | Product Number | Included Adapters | HOSE TO HOSE CONNECTOR | | |
|---------------------|-----------------|----------------|-------------------|------------------------|----------------|------------|
| Dia. (ID), in. (mm) | Length, ft. (m) | | | 1 in. Dia. | 1-3/4 in. Dia. | 3 in. Dia. |
| 1 [25] | 8 [2.5] | K4111-8 | — | — | K4115-3 | — |
| 1 [25] | 25 [7.6] | K4111-25 | — | — | K4115-3 | — |
| 1-3/4 [45] | 8 [2.5] | K4113-8 | — | K4115-3 | K2389-10 | — |
| 1-3/4 [45] | 8 [2.5] | K2389-9 | K3492-3 | K4115-3 | K2389-10 | — |
| 1-3/4 [45] | 16 [5] | K2389-8 | K3492-3 | K4115-3 | K2389-10 | — |
| 1-3/4 [45] | 25 [7.6] | K4113-25 | — | K4115-3 | K2389-10 | — |
| 3 [76] | 8 [2.5] | K4114-8 | — | — | — | K4115-10 |
| 3 [76] | 25 [7.6] | K4114-25 | — | — | — | K4115-10 |

HOW TO CONNECT A 1-3/4 IN. DIAMETER HOSE TO HIGH VACUUM EQUIPMENT

| Connect K4113-8 and K4113-25 to: | Tube Size, in. (mm) | USE THIS ADAPTER TO CONNECT A 1-3/4 IN. DIAMETER HOSE | |
|---------------------------------------------------|---------------------|-------------------------------------------------------|-----------------------|
| | | Product Number | Former Product Number |
| Inlet of Miniflex® | 1-3/4 [45] | K3492-3 | S20591-17 |
| Inlet of X-Tractor 1GC | 2 [50] | K3492-4 | S20591-8 |
| Inlet of X-Tractor 3A / End Inlet of VV-50 Valve | 3 [76] | S20591-13 ^(b) | — |
| Side Inlets of VV-50 Valve ^(b) | 2 [50] | K3492-4 | S20591-8 |
| K639-1, -4, -5, -6 Suction Nozzles ^(a) | 1-1/2 [38] | K3492-2 | S20591-7 |
| EN-20 and EN-40 Nozzles ^(a) | 1-3/4 [45] | K3492-3 | S20591-17 |
| Magnum® PRO Fume Extraction Guns | 2 [50] | K3492-4 | S20591-8 |
| Magnum® 250XA, 400XA Fume Extraction Guns | 2 [50] | K3492-4 | S20591-8 |
| K206, K289 FCAW-SS Fume Extraction Guns | 1-1/4 [32] | S20591-6 ^(b) | — |

^(a) Adapters Included with K3968-1 and K3969-1 Connection Kits.

^(b) Adapter included with Nozzle

^(b) Order using 9S prefix

RECOMMENDED ACCESSORIES

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, the EN 20 gives the welder a greater amount of versatility.

Order K2389-5

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

SHM Aluminum Suction Nozzle

Includes S20591-7 adapter for 1 3/4 in. (45 mm) hose. Best capture distance:~ 1-1/2 in. (38 mm). SHM-300 Nozzle - 12 in. (300 mm)

Order K639-1



SHMS-400 Low Noise Nozzle

16 in. (400 mm) 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



UNM Suction Nozzle for Heavy Smoke

8 in. (200 mm) 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



NKT Nozzle Kit for MIG Guns

The NKT Nozzle Kit provides extraction capacity to a standard MIG welding gun. Nickel plated brass nozzle slips over the gun's gas nozzle and secures with screw. Kit includes:

- 1 – Nozzle
- 1 – Adapter, Hose to Tube, 1 to 1 in.
- 1 – Hose, 1 in. (ID), 8 ft.
- 1 – Connector, Hose-to-Hose, 1 to 1-3/4 in.

Order K2389-3

NOTE: Gun not included, sold separately



Extraction Hoses, 1 in. Diameter

Flexible high temperature hoses with spring steel reinforcement.

Order K4111-8 for 8 ft. (2.5m) Length x 1 in. (25 mm) Diameter (ID)

Order K4111-25 for 25 ft. (7.6 m) Length x 1 in. (25 mm) Diameter (ID)



Extraction Hoses, 1-3/4 in. Diameter

Flexible high temperature hoses with spring steel reinforcement. Standard hose to connect the various extraction devices to the X-Tractor base units.

Order K4113-8 for 8 ft. (2.5 m) Length x 1-3/4 in. (45 mm) Diameter (ID)

Order K4113-25 for 25 ft. (7.6 m) Length x 1-3/4 in. (45 mm) Diameter (ID)



Extraction Hoses, 3 in. Diameter

Flexible high temperature hoses with spring steel reinforcement.

Order K4114-8 for 8 ft. (2.5 m) Length x 3 in. (76 mm) Diameter (ID)

Order K4114-25 for 25 ft. (7.6 m) Length x 3 in. (76 mm) Diameter (ID)

RECOMMENDED ACCESSORIES, CON'T.

CONNECTION KITS

Connection Kit, X-Tractor 3A

Use to attach extraction nozzles and/or fume guns to the X-Tractor 3A.

Kit includes:

- 1 - VV-50 Valve
- 1 - 3 in. Sleeve
- 2 - Adapter, Hose to Tube, 1-3/4 in. to 2 in.

Order K3968-1

Connection Kit, X-Tractor 5A, 8A

Use to attach extraction nozzles and/or fume guns to the X-Tractor 5A and 8A.

Kit includes:

- 2 - VV-50 Valve
- 2 - 3 in. Sleeve
- 1 - 4 in. Sleeve
- 1 - Reducer 4 in. to 3 in.
- 4 - Adapter, Hose to Tube, 1-3/4 in. to 2 in.

Order K3969-1

HOSE TO TUBE ADAPTERS

Adapter, Hose to Tube, 1 to 1 in.

Use to connect a 1 in. diameter hose to a 1 in. diameter tube. The gun-mounted nozzle in the NKT Nozzle Kit (K2389-3) has this tube size.

Order K3492-1

Adapter, Hose to Tube, 1-3/4 to 1-1/2 in.

Use to connect a 1-3/4 in. diameter hose to a 1-1/2 in. diameter tube. The various suction nozzles have this tube size and include this adapter.

Order K3492-2

Adapter, Hose to Tube, 1-3/4 to 1-3/4 in.

Use to connect a 1-3/4 in. diameter hose to a 1-3/4 in. diameter tube. The EN 20 Nozzle (K2389-5) has this tube size and includes this adapter. The inlet tube of the Miniflex® is also this size.

Order K3492-3

Adapter, Hose to Tube, 1-3/4 to 2 in.

Use to connect a 1-3/4 in. diameter hose to a 2 in. diameter tube. The X-Tractor® 1GC and the side inlets of the VV-50 valve have this tube size.

Order K3492-4

Adapter, Hose to Tube, 3 to 3 in.

Use to connect a 3 in. diameter hose to a 3 in. diameter tube. The X-Tractor® 3A and the end inlet of the VV-50 valve have this tube size.

Order K3492-5

HOSE TO HOSE CONNECTORS

Connector, Hose to Hose, 1 to 1-3/4 in

Use to connect a 1 in. diameter hose to a 1-3/4 in. diameter hose. This connector is included in the NKT Nozzle Kit (K2389-3).

Order K4115-3

Connector, Hose to Hose, 1-3/4 to 1-3/4 in.

Use to connect a 1-3/4 in. diameter hose to another 1-3/4 in. diameter hose.

Order K2389-10

Connector, Hose to Hose, 3 to 3 in.

Use to connect a 3 in. diameter hose to another 3 in. diameter hose.

Order K4115-10

REPLACEMENT FILTERS

Filter, X-Tractor 1GC & 3A

Order KP2069-1

Filter, X-Tractor 5A

Order KP2061-1

Filter, X-Tractor 8A

Order KP3984-1

PRODUCT SPECIFICATIONS

| Product Name | Product Number | Airflow (CFM) | Input Power Voltage / Phase / Hertz | Input Current | H x W x D inches (mm) | Net Weight lbs. (kg) |
|--------------|----------------|---------------|-------------------------------------|---------------|-------------------------------------------|----------------------|
| X-Tractor 3A | K3965-1 | 165 | 230/3/60 | 14A | 29.1 x 16.9 x 43.3 (740 x 430 x 1100) | 192 (87) |
| | K3965-2 | | 460/3/60 | 6.5A | | |
| X-Tractor 5A | K3966-1 | 285 | 230/3/60 | 20A | 33.1 x 28.0 x 55.1 (840 x 710 x 1400) | 242 (110) |
| | K3966-2 | | 460/3/60 | 10A | | |
| X-Tractor 8A | K3967-1 | 475 | 230/3/60 | 40A | 43.3 x 28.0 x 55.1 (1100 x 710 x 1400) | 375 (170) |
| | K3967-2 | | 460/3/60 | 21A | | |

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.

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.

Lincoln Electric is a responsive manufacturer, but 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.

The Lincoln Electric Company
22801 St. Clair Avenue · Cleveland, OH · 44117-1199 · U.S.A.

www.lincolnelectric.com