TOTAL FILTRATION USA



ESPi 1700 OIL MIST COLLECTOR

Electrostatic oil mist and smoke filtration for CNC machine tools.

1,000 CFM max airflow

Up to 99% to 0.01 micron

Washable collector plates

PRODUCT BROCHURE | VERSION 1.0

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CLEAN AIR FOR US MACHINE SHOPS

Total Filtration USA LLC supplies industrial air filtration to manufacturers across the US. Our ESPi range captures oil mist, smoke and fumes at the machine. The units are built by a manufacturing partner that has made electrostatic precipitators since 1984, and our founding team brings over 40 years of manufacturing and engineering experience.

ONE PARTNER FOR THE LIFE OF THE SYSTEM

One US point of contact from the first conversation through installation, service parts and support. We only distribute proven products from specialist manufacturers.

WHAT YOU GET FROM TFUSA

US BASED
A US company with sales and technical support here in the US.

BUILT FOR MACHINE SHOPS
Units sized for CNC machine tools, from one machine to a full shop floor.

LOWER RUNNING COSTS
Washable plates instead of disposable main filters, so there is less to buy and throw away.

HELP WHEN YOU NEED IT
We help you choose, size and install the right unit, then supply the parts after.

Up to 99%
Filtration efficiency
Oil mist, smoke and fumes from most metalworking fluids.

0.01 micron
Smallest particle captured
Sub-micron smoke and fumes as well as larger mist droplets.

3 to 6 months
Typical plate cleaning
In normal CNC use. Plates wash with a standard degreaser.

Figures are the manufacturer's published data. Results vary by machine, fluid and process.

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HOW ESPi WORKS

Electrostatic precipitation gives fine oil mist and smoke an electrical charge, then pulls it out of the air onto collector plates. There are no main filters to load up and replace.

1

DRAW IN

Extraction pulls oil mist, smoke and fumes away from the machine.

2

CHARGE

A high-voltage ionizer gives each particle an electrical charge.

3

COLLECT

Charged particles stick to the grounded plates. Collected oil drains to a sump.

4

RETURN

Clean air goes back into the shop or is vented outside.

Up to 99%
Filtration efficiency

0.01 micron
Smallest particle captured

Washable plates
No main filters to replace

WHY ELECTROSTATIC

A media collector strains air through a filter that loads up and has to be replaced and disposed of. ESPi charges the mist and collects it on plates that you wash and refit, so long-term running costs are lower.

TYPICAL APPLICATIONS

CNC turning and milling
Swiss-type lathes
Grinding and fine finishing
Gun drilling
High-pressure coolant
Most metalworking fluids

SUPPORTS OSHA COMPLIANCE

ESPi systems support compliance with OSHA permissible exposure limits (PELs) for mineral oil mist and airborne particulates (29 CFR 1910.1000). They also help protect your people, your machines and your indoor air quality.

ESPi 1700

A multi-cell ESPi in 3-cell and 4-cell versions for higher air volumes. Best for higher-volume CNC operations, fine finishing and high-pressure machining.



WHERE IT FITS

- Higher-volume CNC operations
- Fine finishing and high-pressure machining, where the low-vibration design helps

KEY FEATURES

- Up to 99% efficiency down to 0.01 micron
- Multi-cell design in 3-cell or 4-cell versions, with an integrated fan system
- Washable collector plates, no main filters to replace
- Low vibration and variable airflow
- Optional HEPA after-filter for recirculating air to the shop

HEPA AFTER-FILTER

Optional, for venting clean air back into the shop.

SPECIFICATIONS

Max airflow	1,000 CFM
Filtration efficiency	Up to 99%, down to 0.01 micron
Dimensions, 3-cell	W 24.6 x H 30.3 x D 13.8 in
Dimensions, 4-cell	W 24.6 x H 35.0 x D 13.8 in
Weight	125 lb (3-cell) / 149 lb (4-cell)
Max power consumption	530 W (3-cell) / 550 W (4-cell)
Collector cells	3 or 4
HEPA after-filter	Optional
Removes	Oil mist, smoke and fumes
Mounting	Directly on the machine, on a stand or on a bracket

INSTALLATION AND SUPPORT

ESPi 1700 mounts on the machine, on a stand or on a bracket, and our US team helps from selection to service.



HOW IT'S INSTALLED

Choose the mounting that suits the machine and the floor space. We confirm the best option with you during sizing.

MOUNTING OPTIONS

Direct mount	On the machine tool
Stand mount	On a separate stand
Bracket mount	On a mounting bracket

SUPPORT AND SELECTION

We help you choose the right unit for the machine, the process and the space around it.

1. **ASSESS**
   We look at the machine, the fluid, the process and the space around it.
2. **SIZE**
   We match the airflow to the machine and confirm the right ESPi model and mounting.
3. **INSTALL**
   We provide install guidance and can recommend qualified install partners in most US regions.
4. **MAINTAIN**
   Wash the plates every 3 to 6 months in normal CNC use. We supply replacement plates, HEPA filters and parts.

US-BASED TECHNICAL SUPPORT | PARTS AND CONSUMABLES | SERVICE GUIDANCE



Industrial oil mist filtration for US manufacturers.

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