

# HANDTE EM EXPERT

coolant mist separator

The coolant mist collector for extremely efficient separation of ultra-fine mists and fumes.



## MISSION STATEMENT

### WHAT WE DO:

We will clean dust, mist and fumes from factories, making them safe and more productive.

### HOW WE DO IT:

We will ship collectors fast while still giving the customer what they want.

We will be the most customer and sales rep friendly company in the dust and mist collection industry.

We will make the best dust and mist collectors in the business from an end user operation and maintenance viewpoint.



## CLEANING UP THE WORKPLACE, FOR TODAY... AND TOMORROW

Saving energy and increasing production efficiency while controlling indoor air quality is a challenging aspect of plant management. Dust and mist collectors - whether used for pollution control or product recovery - can impact all these areas. Camfil Air Pollution Control (APC) can help solve your dust and fume problems.



## THE PREMIUM SEPARATOR FOR COLLECTION USING COOLANT.

Attributable to the increasing productivity in modern manufacturing, the energy input is growing constantly, in particular with machining processes where cooling lubricants are used. As a logical consequence, much higher requirements are made in the separation of ultra-fine mists and fumes. To meet these, the Handte EM Expert series provides for optimum results even under the most challenging conditions.

## A SYSTEM THAT IS NOT ONLY RELIABLE AND EFFICIENT BUT ALSO HIGHLY FLEXIBLE.

### THE NEW HANDTE EM EXPERT

With its extremely clear-cut design and convincing results, the separation system leaves nothing to be desired. The Handte EM Expert features premium collection efficiency under the most challenging conditions. Other key benefits of the product series include:

#### PROGRESSIVE FILTRATION DESIGN FOR HIGHEST SEPARATION EFFICIENCY

The progressive design boasting ascending filter classes with coarse separator mesh for high contamination, the standard Camfil APC CoaPack diffusion filter stages provided as a preliminary filter, fine filter and the optional downstream final stage make it possible to configure the separator for simple applications or for highly complex requirements such as clean air recirculation, and ultra-fine mists and fumes generated in the course of high-performance machining.

#### MODULAR DESIGN FOR FLEXIBLE CONFIGURATION

The compact modular design provides for easy, efficient adaptation of the Handte EM Expert to the customer's individual requirements and installation situation. It is available in seven standardized basic modules with different air flows which can be combined in a large central system.

#### INNOVATIVE NEW FILTER MEDIA FOR LONG FILTER LIFE

The particular structure of the standard Camfil APC CoaPack filter material combines premium separation performance with self-cleaning features via optimum drainage of the separated cooling lubricant. Excellent collection performance ensures extremely long filter life of the optional HEPA final filter.

#### EASY FILTER CHANGE FOR SIMPLE, CLEAN MAINTENANCE

The operation of the Handte EM Expert is practically maintenance free. Filter changes are clean, easy and require no tools. The closed filter cassettes can be removed without being exposed to the oil soiled filter materials.

### THE HANDTE EM EXPERT OFFERS:

- Economically efficient separation of ultra-fine cooling lubricant mists and fumes
- Collection efficiencies at 95.0% on 0.3 micron and higher particle size with the optional HEPA final filter.
- Optional clean air recirculation
- Long-life filter stages
- More efficient than conventional systems
- Suitable for continuous three-shift operation
- Air flow can be adjusted without affecting the collection efficiency
- Operator-friendly thanks to practically maintenance-free unit design
- Service-friendly thanks to tool-free filter changes with quick-acting clamp
- Plug-and-play delivery

THE HANDTE EM EXPERT  
IS SUITABLE FOR USE WITH  
turning, drilling, milling, roughing, and  
grinding in connection with cooling  
lubricants (CLs) or separation agents.

# CUSTOMIZED SYSTEM DESIGN & INNOVATIVE FILTER MEDIA

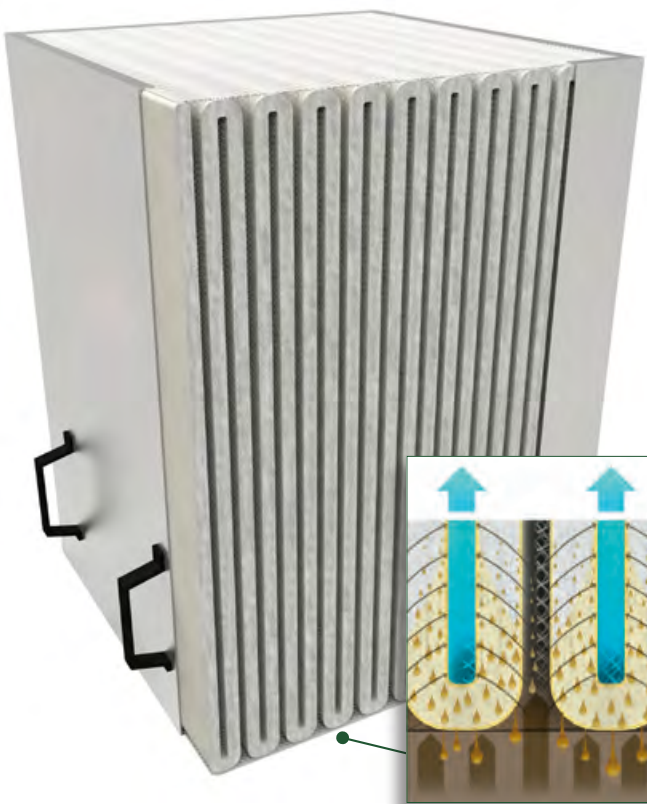
**CASCADE DESIGN OF THE COLLECTOR** WITH ASCENDING  
FILTER CLASSES FOR INDIVIDUAL COMBINATION MATCHING THE  
MACHINING PROCESS

**OPTIONAL HEPA FINAL FILTER**  
Collection efficiencies at 95.0%  
on .3 micron and higher particle size

**COAPACK**  
Camfil APC's standard CoaPack pre- and fine filter stages are the heart of the Handte EM Expert. Configured to meet the individual requirements, the multi-layer filter elements achieve highest collection efficiency at a very small differential pressure thanks to the maximum filter area possible in this compact design. Developed for optimized drainage, the Camfil APC CoaPack filter elements are self-regenerating. The cascade design of the filter stages provides for an additional self-cleaning effect.

**COARSE FILTER STAGE**  
The coarse filter stage is intended for high dirty air loads and contamination and ensures a long service life of the downstream filter stages.

**FLUID COLLECTOR**  
Due to the self-regeneration of the filter elements, the separated cooling lubricant is discharged from the filter media downwards into the integrated fluid collector. Via circulation pump station or a siphon and discharged by gravity, the cooling lubricant can be fed to a facility for treatment, re-use or disposal.

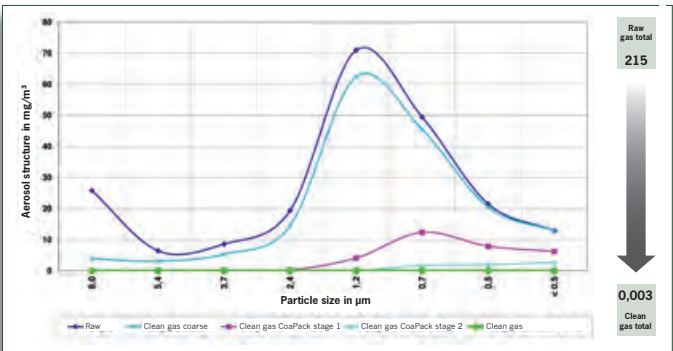


## FILTER CASSETTE WITH MEDIA SEPARATORS FOR MAXIMUM FILTER AREA

The Camfil APC CoaPack filter element provides for a maximum filter area with compact design. This construction ensures a homogeneous flow and optimum utilization of diffusion and coalescence, which is a relevant separation mechanism for ultra-fine mists. The small load acting on the filter surface reduces the energy consumption and significantly increases the service life of the filter element.

## IDEAL DRAINAGE PERFORMANCE FOR OPTIMUM FILTER REGENERATION

The high efficiency filtration of the Handte EM Expert series is attributable to the maximum possible balance between separation performance and regeneration of the separated cooling lubricants from the filter media. This goal is achieved by using drainage-friendly materials in connection with special drainage support mats, protective screens, and spacers. The flow direction of the filter media further supports the draining of the dirty air to the dirty gas side.



Example: Fraction separation degree of the Handte EM Expert

## HIGHEST SEPARATION PERFORMANCE AND ULTRA-LONG LIFETIME

In practice, the degree of separation of the cooling lubricant aerosols primarily depends on the distribution of particle size and their mass ratio in the supplied process exhaust air flow. The Handte EM Expert is characterized in particular by its excellent separation efficiency with high dirty air loads and ultra-fine mists fractions while offering very long filter life and energy-efficient operation.

## CLEAN MAINTENANCE, EASY FILTER CHANGE

Thanks to its functional design, the Handte EM Expert is practically maintenance-free. Quick-acting clamps ensure that all scheduled changes of the filter cartridges are easy and require no tools, thus ensuring minimum down time. For easy, simple changing, the filter cartridges are accessed from the outside. The Camfil APC transport carriage, available as an accessory, provides for drip-free removal of the filter cartridges – a perfect complement for the well-thought-out service concept.



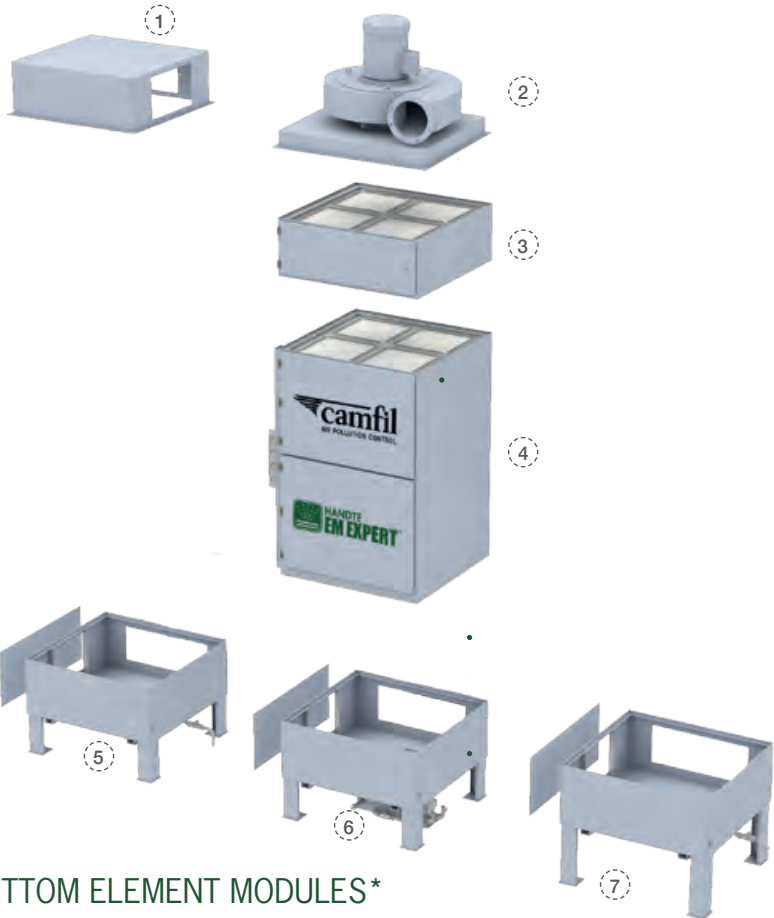
Practical fast-acting clamps



Camfil APC transport carriage



# BASIC MODULES IN FLEXIBLE COMBINATIONS



## TOP ELEMENT MODULES

**1** Connecting box  
For use with external fan. For optimum flexibility, duct work to external fan can be connected to either side to minimize duct

**2** Top mount fan  
For use in connection with a downstream silencer.

## HEPA FINAL FILTER

**3** Final filter stage  
Available as an option for particulates less than 1 micron, such as smoke, and to recirculate the air.

## MAIN FILTER STAGE MODULE

**4** Main filter stage  
For Camfil APC CoaPack diffusion filter cartridges and optional use of the coarse filter stage for high contamination or clean air recirculation.

## BOTTOM ELEMENT MODULES\*

**5** Fluid collector for installation on platforms  
Downward cooling lubricant discharge via siphon or by gravity.

**6** Fluid collector with recirculation pump station  
If discharge by gravity is impossible, or for feeding into the cooling lubricant recirculation supply of the machine tools. Integrated pumps available in two sizes.

**7** Fluid collector for floor installation  
Discharge of the cooling lubricant via siphon and by gravity.

\*With all bottom elements, the intake line can be connected from both sides for optimum flexibility and short connection paths.

## HANDTE EM EXPERT IS AVAILABLE IN BASIC MODULES WITH DIFFERENT AIR FLOWS



EM Expert One 1.5   EM Expert One 3.0   EM Expert 4.5   EM Expert 6.0   EM Expert 9.0   EM Expert 13.5   EM Expert 20.0

# EFFICIENT APPLICATIONS IN LINE WITH INDIVIDUAL REQUIREMENTS

## FLEXIBLE CONFIGURATION

By freely combining different basic modules, it is possible to design economically efficient central extraction systems for each individual requirement, catering for air volumes of 41,000 cfm or more. The modular concept of the Handte EM Expert series furthermore provides for smooth, cost-efficient production conversions or extensions during ongoing operation.

## MAJOR BENEFITS OF THE MODULAR DESIGN:

- Standardized design for quick delivery times
- Optimized basic modules for highest utilization of capacity
- Easy transport and installation
- Easy to increase capacity for increased changes in production



## OPTIONAL EXPANSIONS TO MEET EVERY AIR FLOW

### HANDTE EM EXPERT AVAILABLE MODULES:

Model:	Footprint:	Air volume:	Min./max. height:	Coolant
Handte EM Expert One 1.5	30.9" x 29.3"	to 1,050 cfm	97.7"	
Handte EM Expert One 3.0	30.9" x 55.1"	to 2,100 cfm	103.9"	
Handte EM Expert 4.5	30.31" x 48.82"	to 2,600 cfm	111.42" x 136.80"	
Handte EM Expert 6.0	30.31" x 67.91"	to 3,500 cfm	112.20" x 143.70"	
Handte EM Expert 9.0	48.48" x 46.50"	to 5,300 cfm	115.35" x 141.70"	
Handte EM Expert 13.5	48.43" x 67.91"	to 8,000 cfm	120.08" x 142.30"	
Handte EM Expert 20.0	68.50" x 67.91"	to 11,800 cfm	126.78" x 156.40"	

Min. height: With recirculation pump stations, without post-filter, connection box. Max. height: With siphon recirculation, with post-filter, integrated fan. Subject to technical changes.

\*Standard models 4.5 and larger exclude a fan.

