

Photo:
OUPC 500

Photo:
OUPC 510
with fan

Kompakt multi-stage filter for cooling lubricants for mounting directly on processing machines. For filtration of oil mist, emulsion mist, minimal quantity lubrication and oil smoke.

Air volume OUPC 500 / 510: Up to 500m³/h
Air volume OUPC 1000 / 1010: Up to 1,000m³/h

Description

- The polluted air is led in at the separator end to pre-separation chamber for air distribution and densification. The accumulated particles are led on to the washable pore filter PPI35 that separates dust and accumulated liquid with up to 50% higher efficiency than alu-grease filter.
- Then the air is fine filtered in filter cartridge type G104A with micro-glas filter material, where the fibers allow the fluid to drain away from the filter. Filtration degree > 99% of particles above 0.1µm
- Below the first two filter stages a fluid reservoir with ½"-drain cock is located that can be connected for return flow to processing machine by siphon.
- Last filter stage is a HEPA-filter, filter class H13 that ensures the removal of >99.95% smoke particles down to 0,1µm, before the air is recirculated by large-meshed grid. For use in DK the OUPC is available with outlet (equipment).
- HEPA-filter is placed after fan module and works as an efficient silencer.

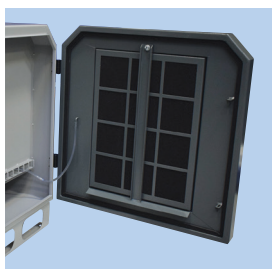
All-round unit with low operating costs

The 4-stage separator principle in OUPC ensures the optimale filtration solution, regardless the type of cooling lubricants, since every filter stage represents the optimale filter principle for each of the primary types of mists: oil mist, emulsion mist, minimal quantity lubrication and oil smoke.

The large surface of the washable pre-filter and self-draining filter cartridge ensure long service life and low pressure loss, which minimize costs for energy and filter replacements. The high separation degree of the third filter stage ensures very long life.

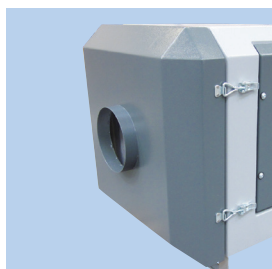
Compact and space-saving solution

The horisontal construction of OUPC 500 – 1010 provides an especially compact and space-saving filter solution for mounting directly on machining center due to height restrictions as a result of e.g. crane use over the machine. With integrated fan the piping on the clean air side is also saved (where recirculation is permitted).



Inlet module with pre-filter

Placement of pre-separator and pore filter in hinged inlet module ensures quick and convenient service.



Outlet by connection
OUPC 500 - 1000 are equipped with connection for inlet and outlet for use with external fan.



Cleaned air is led to surrounding by outlet grid in the end (recirculation)
In outlet end of OUPC 510 - 1010 the filtered air is led diffuse back to the room by easily accessible HEPA-filter.



Easy to check differential pressure above filters
Each of the primary filter stages are equipped with differential pressure manometer for monitoring of the individual pressure losses for filter service optimization.

Advantages by removing oil mist directly at the machine

- The hazardous effects on breathing and skin are reduced
- You minimize the risk of slippery floors (drip from piping) and consequential accidents
- Fire risk as well as the risk of oil mist aerosols damaging electronics in the machines are minimized
- Cleaning and maintenance costs are reduced, since oil deposits in piping and on surfaces are avoided
- Energy consumption is reduced (reduced air speed in ventilation channels, when there are no heavy oil particles that must be kept airborne, no oil mist deposits on light sources)

Filter monitoring: Continuous monitoring must be kept with pressure drop above filters for timely replacement of these. For this Minihelic-differential pressure manometer is mounted on front side of OUPC.

Filter material:

Standard	Material	Filtration efficiency
Pre-separation in grease filter	Pore filter 35 open-celled polyurethane foam (washable)	Separated normally up to 30% of particles
Fine filtration in self-draining cartridge filter	Cartridge filter ø325mm, length 330/660mm, G104A polyester/glassfibre	Separated more than 99% of particles over 0.1µm
Fine filtration through HEPA-absolute filter	HS-Mikro SFV High Efficiency Particular Air filter, microfilter (glassfibre) mounted in metal frame	> 99,95% equal to filter class H13 according to DS EN1822

Pressure lost over the individual filter stages:

Filter stage	Filter type	ΔP start [Pa]	ΔP end [Pa]
1	Pore filter PPI35	90 - 140	300
2	Filter cartridge G104A	400	1300
4	HEPA-filter H13	200 - 250	500



Pore filter PPI35
Washable (max. 110°C)

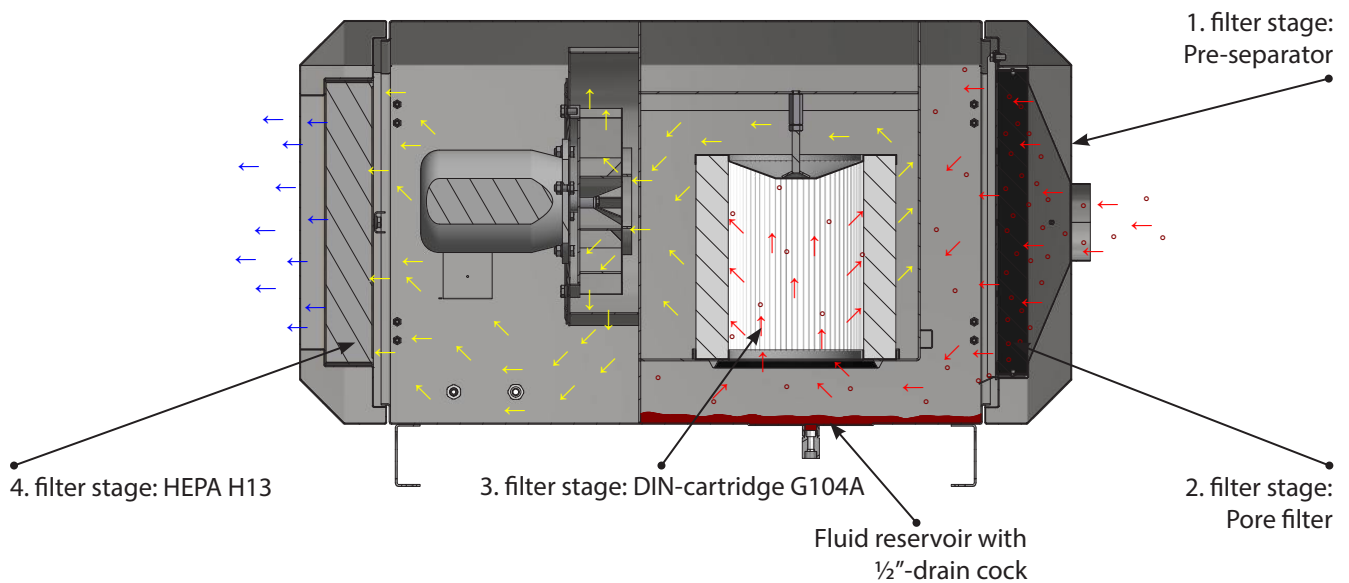


Cartridge filter
Fine filtration through self-draining filter cartridges increases the interval between required filter replacements. (Normal life 2000-6000 hours.)



HEPA-filter
Standard H13 is used. According to request higher filter class is available.

Principle sketch for flow through oil mist separator type OUPC 510:



Construction/surface:

Oil mist filter type OUPC is constructed according to:

- Machine Directive 2006/42/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- Harmonized standards: EN 13854, EN 4414, EN 12100, EN 60204-1, EN ISO 13857
- Further standards: ISO 3746

Filter cabinet is made in 2mm black steel plate

Surface powder enamelled RAL 7042/7011 structure

Further available:

- Siphon for drain cock
- Outlet connection horizontal at the end instead of outlet grid without connection (only OUPC 510 and 1010)
- Integrated magnet-operated motor protection for connection of remote-controlled start/stop



Photo:
OUPC 510
with outlet connection

Oil mist filter type OUPC is available in the sizes as stated in the form below.

Please, contact us for assistance in selecting the optimal unit taking into consideration air volume, type and volume of cooling lubricant, operation times etc.

Oil mist separator type OUPC 500 / 1000:

Type	Order no.	Filter area [m²]	Max. capacity [m³/h]	Number pre-filter ¹⁾	Number cartridge filter	Number Minihelic-differential pressure manometer ⁴⁾	Number absolute filter (HEPA / H13)	Weight [Kg]	Noise [dB(A)]
OUPC 500	04 350 250	4	500	1	1 ²⁾	3	1 ⁵⁾	105	-
OUPC 1000	04 351 250	8	1000	1	1 ³⁾	3	1 ⁶⁾	155	-

¹⁾ Pore filter PPI35, 1x2m (08 179 800)

²⁾ DIN-cartridge ø325x330mm, G104A (08 139 500)

³⁾ DIN-cartridge ø325x660mm, G104A (08 139 510)

⁴⁾ 1 pc. Minihelic-differential pressure manometer 0-3kPa (09 500 000) and 2 pcs. Minihelic-differential pressure manometer 0-0.5kPa (09 500 100)

⁵⁾ Absolute filter in MDF-frame, HEPA/H13, 457x457x78mm (08 176 050)

⁶⁾ Absolute filter in MDF-frame, HEPA/H13, 457x457x292mm (08 176 075)

Oil mist separator type OUPC 510 / 1010 with built-in fan:

Description fan

- Unit is in top equipped with a fan type VL, 3x400 VAC, 50Hz, 2-pole. The fan type is equipped with closed fan wheel and backward-curved straight self-cleaning blades, static/dynamic balanced according to ISO 14694 (BV3 G 6,3).

Type	With fan type	Order no.	Filter area [m ²]	Max. capacity [m ³ /h]	Number pre-filter ¹⁾	Number cartridge filter	Number Minihelic-differential pressure manometer ⁴⁾	Number absolute filter (HEPA / H13)	Weight [Kg]	Noise [dB(A)]
OUPC 510	VL 750	04 350 000	4	500	1	1 ²⁾	3	1 ⁵⁾	145	76
OUPC 1010	VL 1100	04 351 000	8	1000	1	1 ³⁾	3	1 ⁶⁾	200	75

¹⁾ Pore filter PPI35, 1x2m (08 179 800)

²⁾ DIN-cartridge ø325x330mm, G104A (08 139 500)

³⁾ DIN-cartridge ø325x660mm, G104A (08 139 510)

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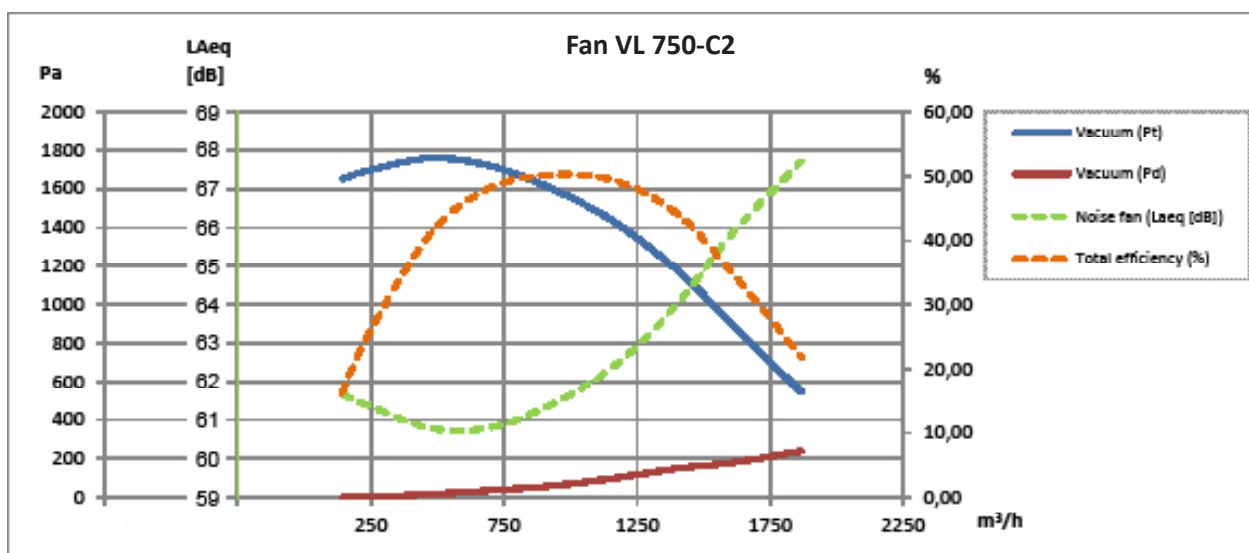
Consumption data for oil mist filter type OUPC with built-in fan:

Type	With fan type	Volt [V]	[rpm.]	[kW]	Rated current (Amp)	Start current [I _L /I _N]
OUPC 510	VL 750-OUPC-C2	3x400	2-pole	0.75	■	■
OUPC 1010	VL 1100-OUPC-C2	3x400	2-pole	1.10	■	■

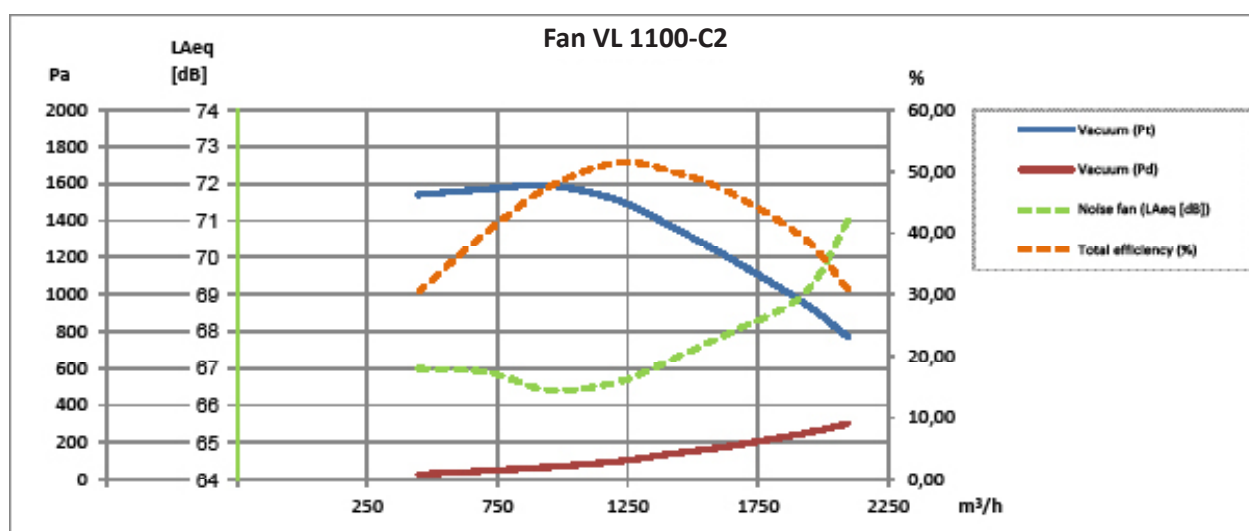
Motor data ≥ 0.75kW, 3x400V, according to IE3-motors.

- See section "General information" conc. electro motors

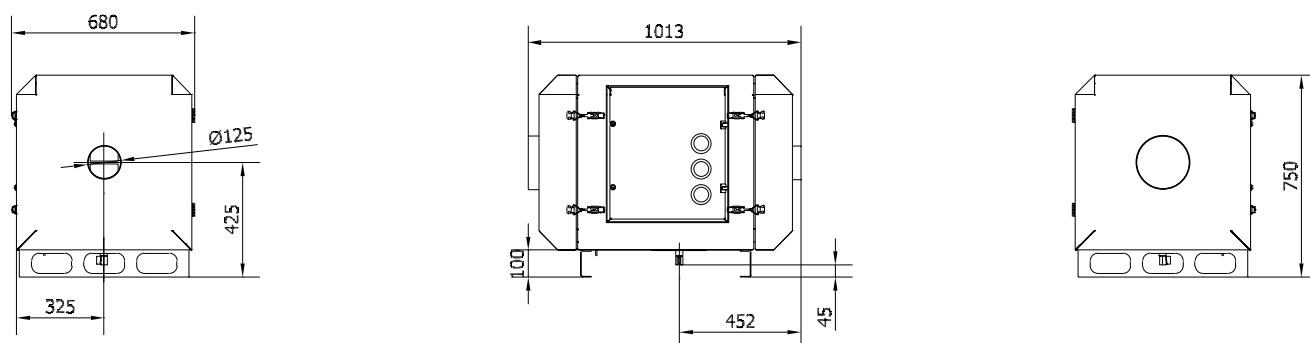
2-pole:



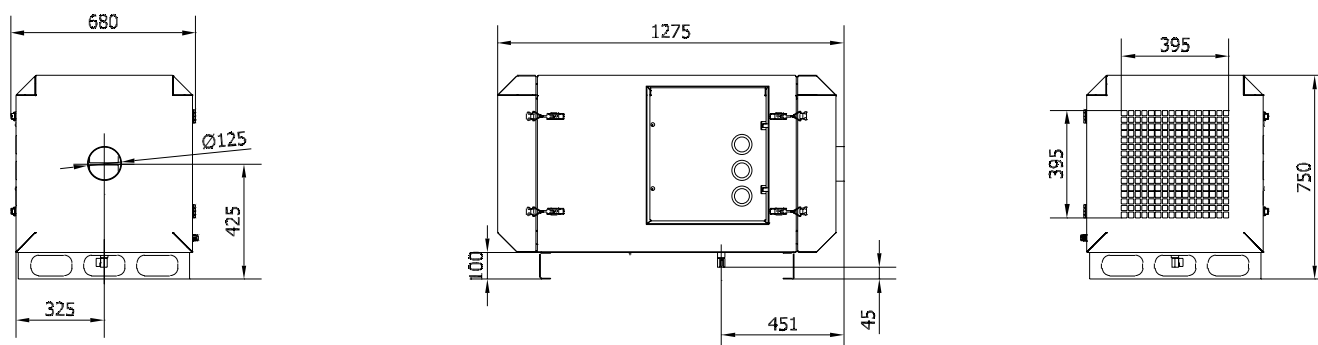
2-pole:



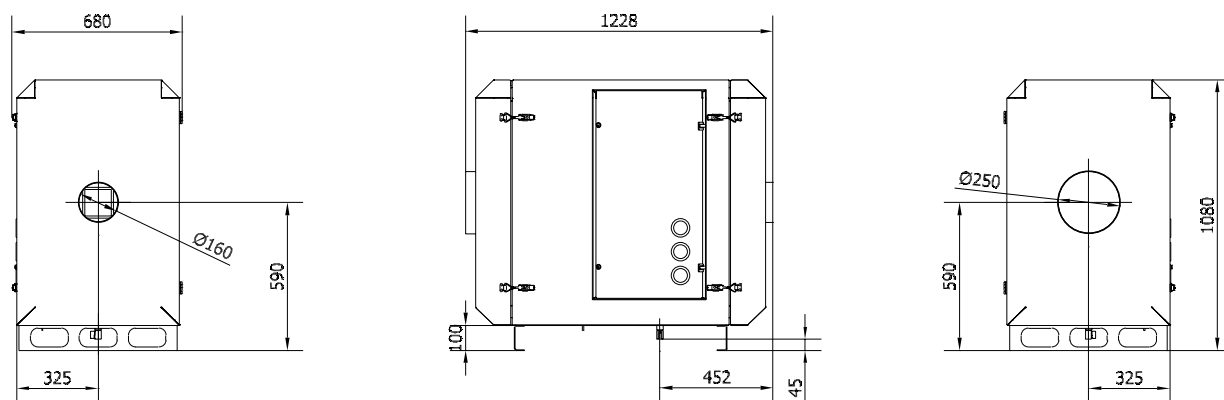
Oil mist separator type OUPC 500:



Oil mist separator type OUPC 510:



Oil mist separator type OUPC 1000:



Oil mist separator type OUPC 1010:

