

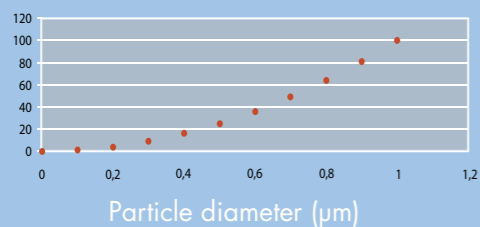
An oil-mist separator with a high purification rate, great flexibility and minimum maintenance

3nine oil-mist eliminators provide the highest possible purification rate and great flexibility with very little maintenance so you can focus on your production.

An intelligent and revolutionary technology

The unique patented technology separates the oil mist up to 99.9%* by using centrifugal forces, which provides a process that requires a minimum of maintenance. A rotating disc stack separates the oil mist much more effectively than traditional centrifugal separation technologies such as cyclones and rotating filters. The rotor also functions as a fan that sucks up the oil mist and makes external fans superfluous.

Relative separation at maximum flow rate (%)



The diagram shows our machines performance as a function of particle diameter, at a maximum flow rate.

The oil mist is separated directly and oil droplets from the oil emulsion are brought back to the machine tool's cutting fluid tank. The evaporation of oil fumes into the workshop is therefore minimal. Continuous flow of particles and oil out of the separator eliminates the risk of a pressure drop and thus of diminished air flow caused by clogging. This will guarantee the operator an optimal working environment.

Compact design and only a minimum of piping

3nine's oil mist separators are compact and can easily be installed directly on top of the machine tool. This saves both pipe works and floor space and provides unbeatable flexibility.



The lack of pipe work provides a flexible solution, where you can move around your machine tools freely.

Advantages compared to other technologies

3nine's technology can handle great amounts of particles and difficult particle types with a minimum of maintenance. Filters have problems handling great amounts of particles and sticky particles, and get clogged when dealing with solid particles. Electrostatic filters also have problems in handling great amounts of particle and sticky particles, and cyclones have a low purification rate.

Technology also for tough applications

3nine can handle difficult applications where other technologies have problems, fail or have high maintenance costs. A patented solution to handle tough applications is the Cleaning-in-Place™. It is a special cleaning system that effectively and automatically cleans the machine of sticky and solid particles.



For more complicated processes such as grinding and working in quench oils, 3nine has developed a special machine, Petra™ a further development of the existing technology.

A healthy investment that pays off quickly

An investment in 3nine's technology is a healthy investment in a better working environment, where you will be able to reduce your costs, and will benefit from:

- a minimum of maintenance
- a healthy working environment with a healthy staff
- complete recycling of the cutting fluid thanks to the high degree of separation and minimal evaporation.
- a technology insensitive to the amount of pollution, resulting in reliable performance, even in tough environments.
- compact and flexible installations.

*According to independent tests by VTT (an official testing body in Finland)

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The 3nine product family can handle all flow rates

3nine

separation technology



Lina™

The oil-mist separator for small machines

Lina™ is the smallest oil-mist separator in the 3nine product family. With a flow rate of 500m³/h, it was specially designed for small, enclosed machine tools where the need for extraction vacuum is limited.

Technical Data

Type designation.....	LI500	
Application	Cleaning oil mist (cutting fluid/coolant)	
Mounting	Directly on the machine, on a wall or on a pillar stand	
	EU-standard	NA-standard
Capacity	0-500 m ³ /h	0-300 cfm
Negative/positive pressure	< 900 Pa	<3.6" wg
Operating condition	50° C	<122 °F
Electric power supply	16 A/400 V/3/50Hz	30/15 A, 230/460/3/60Hz
Motor rating	0.66 kW	0.66 kW
Rated Current	1,4 A	2,6 A (230V), 1,7 A (460V)
Speed	2 790 rpm	3 400 rpm
Weight	30 kg	66 lbs
Height	500 mm	19.7"
Diameter	480 mm	18.9"
Lower flange Ø	520 mm	20.5"
Inlet pipe	125 mm	5"
Sound level	< 65 db (A)	< 65 db (A)



Clara™

The oil-mist separator that suits most users

Clara™ is 3nine's midrange unit, with a flow rate of 1 000 m³/h, it is suitable for most machine tools. Clara has been fitted to practically every type of machine tool for numerous customers in Sweden and elsewhere in Europe.

Technical Data

Type designation.....	CLR1000	
Application	Cleaning oil mist (cutting fluid/coolant)	
Mounting	Directly on the machine, on a wall or on a pillar stand	
	EU-standard	NA-standard
Capacity	0-1 000m ³ /h	0-700 cfm
Negative/positive pressure	<1000 Pa	< 4.5" wg
Operating condition	50° C	<122 °F
Electric power supply	16 A/400 V/3/50Hz	30/15 A, 230/460/3/60Hz
Motor rating	1,5 kW	1,5 kW
Rated Current	3,2 A	5,6 A (230V), 3,6 A (460V)
Speed	2 835 rpm	3 400 rpm
Weight	70 kg	143 lbs
Height	775 mm	30.5"
Diameter	640 mm	25.2"
Inlet pipe	160 mm	6"
Sound level	< 65 db (A)	< 65 db (A)



Emma™

The oil-mist separator for higher flow rates

Emma™ is the big sister in the 3nine product family. With a flow rate of 3000m³/h Emma was specially designed for applications where a high air flow is essential, for example on very large or open machine tools.

Technical Data

Type designation.....	EM2500	
Application	Cleaning oil mist (cutting fluid/coolant)	
Mounting	Directly on the machine, on a wall or on a pillar stand	
	EU-standard	NA-standard
Capacity	0-3 000m ³ /h	0-1 800 cfm
Negative/positive pressure	<1 500 Pa	6" wg
Operating condition	50° C	<113 °F
Electric power supply	16 A/400 V/3/50Hz	30/15 A, 230/460/3/60Hz
Motor rating	5.5 kW	5.5 kW
Rated Current	11,3A	11,7A
Speed	2600 rpm (With VFD)	2600 rpm (With VFD)
Weight	105 kg	231.5 lbs
Height	800 mm	31.5"
Diameter	670 mm	26.4"
Lower flange Ø	700 mm	27.5"
Inlet pipe	315 mm	12"
Sound level	< 70 db (A)	< 70 db (A)



Petra™

The oil-mist separator for tough applications

Petra™ is specially designed to handle applications with a high degree of solid particles, such as grinding and polishing applications, machining of cast iron and heat treatment (quench oil) applications.

Technical data

Type designation	Petra	
Application	Cleaning oil-mist (cutting fluid/coolant)	
Mounting	Directly on the machine, on a wall or on a pillar stand	
	EU-standard	NA-standard
Capacity	0-1 000m ³ /h	0-700 cfm
Negative/positive pressure	<1 500 Pa	6" wg
Operating condition	50° C	<122°F
Electric power supply	16 A/400 V/3/50Hz	30/15 A, 230/460/3/60Hz
Motor rating	2,2 kW	2,2 kW
Rated Current	3,2 A	8 A (230V), 5,2 A (460V)
Speed	3440	3440
Weight	70 kg	166 lbs
Height	1 000 mm	39.4"
Diameter	500 mm	19.7"
Lower flange Ø	520 mm	20.5"
Inlet pipe	160 mm	6"
Sound level	<70 dB(A)	<70 db (A)



Technology

