

Air:

a priceless wealth

CLEANMIST® S.R.L.

Presentation



The reason that mankind runs the risk of facing certain demise is because atmospheric pollution has now reached an almost irreversible stage. The emissions produced from industrial processes, which unrelentingly pollute the atmosphere, day in and day out, without any checks whatsoever are far too high. Believing that these emissions will be diluted in the atmosphere is also a fallacy.

The error of believing that atmospheric pollution has now become part of our daily life could mean that we, quite unwittingly, will one day find ourselves with a distinct lack of oxygen to breathe.

In fact, during the day, the human being has to inhale a specific quantity of oxygen – he can survive for three weeks without food, one week without water but only three minutes without air.

- ◆ A human requires 3,600 litres of air per day;
- ◆ A human breathes 23,000 times every 24 hours;

- ◆ A human inhales 5,000,000 particles of dust per minute;
- ◆ Air pollution is one of the greatest problems of our time;
- ◆ 90% of human life takes place within an enclosed environment;
- ◆ the number of people suffering from CNSLD (Chronic non-specific lung disease) is increasing;
- ◆ the flora and fauna suffer considerably from air pollution.

This is why any system enabling “clean respiration” is very important to humans.

CLEANMIST is one of these systems – a “weapon” ready to effectively combat the oil mists generated by mechanical and industrial processes in general.

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CleanMist – growth and development

In 2003, CleanMist – a young company of a number of years standing and established on the basis of the experience gained by the inventor of the CleanMist unit, which filters and extracts the oil mist and fumes produced by machining operations (see DECO Magazine 4/2003), – achieved its first important targets.



The company's initial and most significant success was its ability to penetrate an international market where the competition is extensive and cut-throat. The "successful weapon" of CleanMist resides, above all, in the technological innovations made to the suction and filtration units designed and patented by the company. These consist in the production of a mobile crown with a specific hole conformation which, by way of a VENTURI effect, brings about a compression of the radial speed whilst considerably increasing mist separation efficiency. In addition, the special "pyramid" confor-

mation of the panels located inside the mobile crown, increase the contact area of the equipment with the oil mist undergoing treatment.

Added to this is the commercial research conducted over the past year, which led CleanMist to expand its own distribution network at national and international level and see its own product being marketed in many countries.

Spain and France were amongst the first countries of the Economic Community to market the CleanMist filter. These countries showed full confidence in the product and believed that the new suction and filtration system would soon be highly praised by major clients, including market leaders in the car sector. The same also applied to important machine manufacturers, which recommended that their customers should also install the CleanMist system as an indispensable means of purifying and re-introducing purified air into the working environment. This was testimony to the quality of the product.

Switzerland: thanks to TORNOS and its considerable contribution in promoting the CleanMist centrifugal filters, these latter have now been included as part of its own range of "recommended accessories". This means that other companies are now getting to hear about the CleanMist filtration unit and are installing the CleanMist centrifugal systems. The European CleanMist market speaks highly of the new distribution network, as do Norway, Portugal, Germany and



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Austria. Important contacts are also underway with those countries, which have recently joined the EU.

In Italy, the sales and distribution network has already extended over the entire country, where major companies are already making use of these new filtration systems.

However, the most important aim, without which the above results would never have been achieved, is to offer a highly innovative product from a technological aspect, at a highly competitive price. Besides which, it should not be forgotten that the CleanMist filter, which was designed to improve the impact on the working environment of machine tools, is very easy to install and requires only very basic maintenance.

The stage of expansion has, of course, only just begun and very important markets (like the USA and Far East) also form part of our targets, which we hope to achieve by the end of 2004. Major Far Eastern companies, with subsidiaries throughout the world, have already requested deliveries of a few CleanMist units, which they want to put to test.

This, coupled with other important steps taken in the past year, will help CleanMist consolidate its objectives reached and put in place new strategies, in order to expand its own international customer base exponentially.



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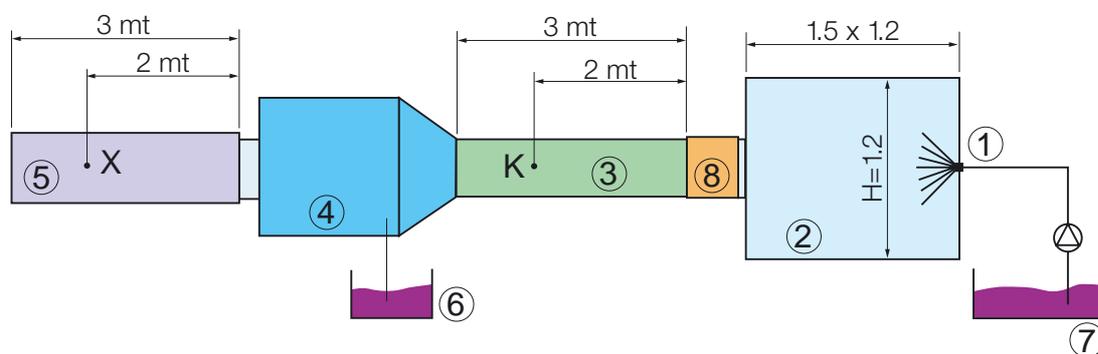


TESTING THE CLEANMIST CENTRIFUGAL FILTER

The test is carried out to determine the efficiency of the CleanMist filter.

The purpose of the CleanMist filter is to suck in the air and oil mist (water/oil and internal oil) that is produced during machining.

The impact of the cooling liquid on the part being cooled and the heat generated by machining, produce oil mists, which are normally made up of particles in the range of between 0.3-0.5 and 10 microns.



1. Vaporisation pipe
2. Suction chamber
3. Inlet pipe
4. CLEANMIST
5. Outlet pipe
6. Separated oil collector
7. Cooling liquid trough

*K = inlet sampling point
X = outlet sampling point*



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Tests carried out previously on machine tools, using the CleanMist unit alone, produced efficiencies of 98% on emissions and when the final electrostatic filter was also used, these values exceeded 99%.

In all instances, the emissions were less than 5 mg/mc required by current standards. The purified air can also be re-introduced to the working environment.