

## CASE STUDY

# PROTECTING OPERATORS BY SAVING ENERGY IS POSSIBLE!

## NEU-JKF INSTALLATION AT DOM NEDERLAND



## CAPTURE FINE METAL DUST PARTICLES:

NEU-JKF has just set up a dust collection system in the Netherlands, within **DOM Nederland**, which is both exacting and cost effective. The facility protects operators from fine metal dust particles in a workshop that manufactures special, custom-made keys, thanks to a high-performance filtration system. This ensures air quality without introducing fresh air and so without additional heating costs.

We interviewed **Jeroen Ratté**, Production Manager at DOM Nederland and **Bart Fikkers**, sales engineer at NEU-JKF, about this facility

**« There can be no doubt that this system offers operators real protection but is also very economical. »**

- Jeroen Ratté

## INTERVIEW:

What was the reason for doing this?

**Jeroen Ratté**, production manager at **DOM Nederland**: **DOM Security** specialises in designing and making customised solutions for mechanical, electronic and industrial locking devices. They supply all of Europe by establishing subsidiaries in several European cities. Among them, **DOM Security** has a subsidiary in The Hague, Netherlands.

**DOM Nederland** wanted to improve air quality inside its production unit. In addition to its offices and an impressive showroom, the company has a workshop where operators manufacture special keys. Producing these keys locally is a convenient, tailor-made service available to customers. In addition to industrial manufacturing, it is adding a range of locking systems produced in the group's factories.



## Was there a specific need? What was the requirement?

**JR:** This manufacturing generates fine metal dust that must be extracted cleanly from the workstation and from the workshop in order to protect operators.

But the company wanted to both strengthen its dust collection system with a high-quality filtration and extraction facility and reintroduce the extracted air into the workplace via a network of pipes and diffusers. The latter in fact creates an “air curtain” that prevents metal dust from spreading in the rest of the workshop. At the same time the system reduces energy consumption since the recovered air is already at room temperature.

## Are you happy with the facility?

**JR:** There can be no doubt that this system offers operators real protection but is also very economical. At DOM we believe that everyone of value deserves to be kept secure without compromise. That's why we want our employees to work in a safe and healthy environment. With their solution and full support, NEU-JKF gave us complete satisfaction.



**« The system is easy to install and maintain. »** - Bart Fikkers

## What are the special features of the NEU-JKF facility?

**Bart Fikkers, sales engineer at NEU-JKF :** There are ten manufacturing machines in operation in the workshop, 6 of which required a collection study to optimise airflows - two manual scrubbers and four automated engravers. NEU-JKF, selected for its expertise in air treatment, set up a FILTRACLEAN ECO facility, which is a filtration unit designed for complete dust collection, which allows the air extracted during the dust collection operation to be reintroduced into the work environment.

The filtration unit incorporates 3 purification steps. The polluted air enters sideways and crosses three different filtering elements from the outside inwards.

- First phase: an M6 filter;
- Second phase: an F8 filter;
- Third phase: an E11 filter for absolute filtration.

The different dust removal points are connected to the filtration unit via a fixed pipe network.

Once the air is purified by the filter unit, it is sent back to the workshop via an air duct equipped with diffusers. It is therefore not necessary to introduce fresh air from the outside, which would result in additional heating costs. On the other hand, it is important to achieve good distribution of the air that has been reintroduced and an air speed that provides comfortable ventilation. NEU-JKF managed to address this need by using a spiral duct equipped with several diffusers.

In addition, the facility is completed by a high-performance, energy-efficient exhaust fan. And we have added a frequency driver that controls flow as needed.

**Great protection, energy-saving: is there anything else you'd like to mention?**

**BF:** Yes. The system is easy to install and maintain.

FILTRACLEAN ECO is a horizontal structure which can easily be placed on top of any other element. No addition space is needed, either in the production workshop or storage areas.

At DOM Nederland, it was installed without interrupting work in the workshop and installing it took no more than a week. Moreover, a soundproof box has been added around the fan so that improving air quality in the workshop does not result in any additional noise.

FILTRACLEAN ECO is also easy to maintain. Changing the filters is quick and simple to do.