



# **FILTER CARTRIDGES: FOR AN EFFECTIVE CLEANING PROCESS DURING WELDING**

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**Filter cartridges have always been used in filter systems during the welding process. But today, their quality is being determined by various factors. Among other things, they can function more effectively thanks to the filter material used and their structure.**

Filter cartridges are a cleanable and therefore recyclable solution for filtering welding fume. After the extraction, the particles settle on the surface of the cartridge elements. Thanks to this surface filtration, the filter cartridges provide optimal conditions for cleaning compared to depth filtration. The deposition of ultrafine dust particles up to 100 nm is possible, this mainly depends on the material of the filter. Compared to conventional PTFE filter membranes, ePTFE filters are more finely structured and hold even the smallest parts.

This innovative material used for new filter cartridges is therefore particularly suitable for welding and polishing. Studies performed by the [American Welding Society](#) (AWS) show that 98.9 percent of the resulting dust particles are smaller than 400 nanometers.

Through the recycling possibilities, metal processing companies also save on the long term costs for upgrades. On the one hand, the mobile filter pleats in the cartridges support the cleaning process. On the other hand, rotating nozzles achieve a uniform flow and optimal cleaning of the filter. Through a blast of air from integrated air tanks, the nozzles are put into rotation.

Metal processing companies should make sure from the outset that in the system, the filter cartridges are mounted vertically. Thus, dust residue on the filter elements can be avoided. This in turn has a positive effect on the service life of the filter as a whole. With filter pleats that have a bigger distance between one another, cartridge filters also tend to stick together less.

