

AS CLOSE TO THE POINT AS YOU CAN GET: 5 REASONS WHY WELDERS SHOULD RELY ON EXTRACTION TORCHES

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For a long time extraction torches were considered unwieldy. Welders felt more disturbed during their work by the additional extraction channel. For this reason, solutions previously available on the market were not very popular. But, in the welding industry, there is currently a trend towards pistol extraction. The demand for extraction units for extraction at the source is increasing. Why particularly now?

For a long time, the extraction torch had drifted out of the focus of welders and occupational safety experts. To this day, low vacuum extraction by means of an extraction arm and extraction hood is probably the most widely used method of source extraction for extracting welding fumes directly at the point of origin (how to position the extraction arm correctly is described [here](#)). A new development in the industry, however, shows that views in the metal processing industry are gradually changing again. Consequently, the demand from the market for such solutions also feeds the suspicion that the extraction solutions are once more in demand. The following five reasons show why it is worthwhile for welders today to address the subject of extraction torches.

1. Light extraction torches combat the persistent myth

Cumbersome to use, difficult to handle simply because of their weight: Even today, myths regarding the use of extraction torches persist in the minds of welders. After all, extraction torches have been on the market for quite some time but were never considered a true means of source extraction. However, the latest developments show that things are improving today. New extraction torches promise easier handling due to weight reduction alone. Together with welding wire, current, protective gas and cooling water, the extracted air is fed in one hose that is now much lighter and more flexible.

2. Extraction torches at the top of the extraction hierarchy

The closer the welding fume extractions are to the point of origin, the more effective is the capture of the hazardous substances. This prevents them from spreading into the breathing area around the welders or even into the hall air. Source extractions are therefore at the forefront of the hierarchy of protective welding equipment measures.

Within the group of source extractions, extraction torches come closest to the point of origin. While extraction nozzles or extraction hoods are positioned comparatively far from the point of origin – simply to avoid disturbing the welders' work – the extraction torch uses extraction openings arranged directly behind the protective gas nozzle. No other source extraction comes closer to the point of origin.



3. **Automatic repositioning provides automatic occupational safety**

Compared to other source extractions, extraction torches have one big advantage: Welders carry them along automatically. With source extractions by means of extraction arm or extraction nozzles, the extraction systems are not integrated in the welding torch units but are separate. Welders must therefore reposition the extraction unit manually. The integration of the extraction into the torch means the extraction opening of extraction torches is always at the source.

4. **Optimum co-ordination of extraction capacity to torch**

Extraction torches should have two different functions: On the one hand, the welding fumes should be extracted as completely as possible at the point of origin. On the other hand, the protective gas envelope required for an optimum weld seam result should not be affected. Against this backdrop, it is not enough to simply set an arbitrary extraction capacity. The optimum co-ordination of the extraction capacity to certain parameters, especially the distance of the extraction opening to the torch, is essential. But this is precisely where the difficulty lies – because every welding torch has different extraction requirements. For an effective interaction between the capture of the welding fumes and the preservation of the protective gas envelope, it is precisely these correlations that are crucial.

Digital added value through new extraction torch for welders

Extraction torches provide digital added value precisely for resolving these challenges. Currently there is one system on the market that incorporates all the important parameters of conventional welding torches and, on this basis, automatically adjusts the optimum extraction capacity. Welders simply select their welding torch in the system and the unit automatically adjusts to the correct extraction capacity.

In the next part you can read how a current standardization is helping to determine the development for extraction torches.

SERIES: torch extraction

Our short series "Torch extraction" deals with the current developments in torch-integrated extraction. Why this trend right now? What is regulated? Which efficient solutions are available? In three episodes we report on the following topics:

1. **Part: The trend towards torch extraction**
2. Part: How a current standardization regulates the burner exhaust
3. Part: VacuFil: the story behind the unique burner-integrated extraction system from KEMPER

