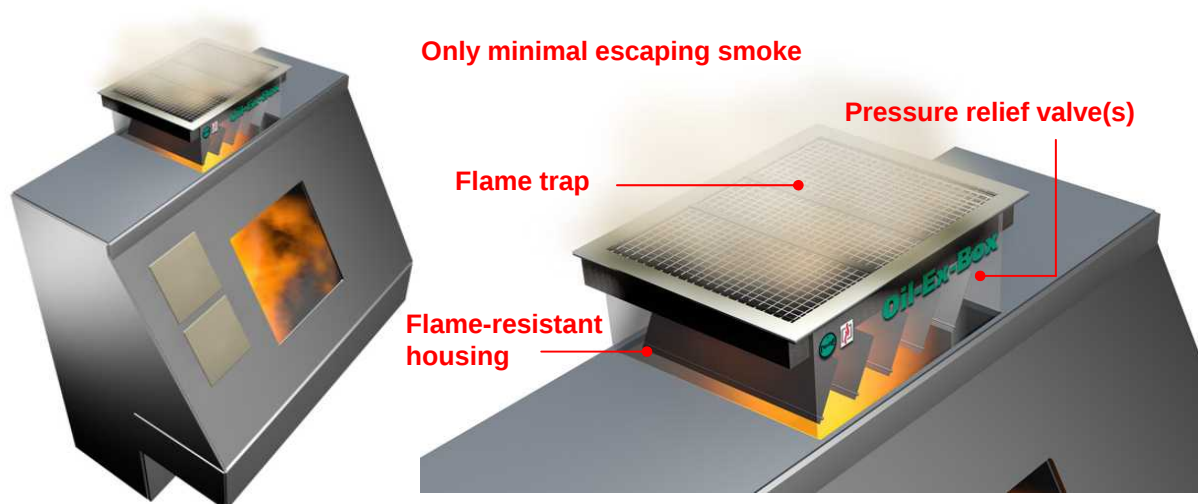


Flameless pressure relief with the Oil-Ex-Box for machine tools

is a cooperative development of the companies KRAFT & BAUER and REMBE®

Certified with confirmation of suitability no. 20612641 **DMT**



In machine tools with an enclosed working space (lathes, grinding machines, drilling machines, milling machines, etc.), fires and explosions (detonations) may occur when water-immiscible cooling lubricants are used that are nebulised by the process, e.g. by tool breakage, collision or mechanically generated sparks.

The resulting overpressures and escaping flames can represent a major threat for both people and the machine. BGI 719 "Fire and Explosion Protection on Machine Tools" therefore recommends the use of pressure relief devices that safely dissipate dangerous overpressures. A pressure relief cross section of 0.1 m² should be present on the machine per cubic metre of machine working space volume.

The function of the Oil-Ex-Box is based on a patented process for flameless explosion pressure relief. The overpressure and flame front of an oil-mist explosion are channeled through single- or multiple-valved pressure relief valves into the housing of the Oil-Ex-Box. There the special REMBE® flame filter absorbs the energy. Unlike conventional pressure relief valves, the Oil-Ex-Box thus safely prevents flames from escaping the pressure relief area of the machine tool. The Oil-Ex-Box thus allows the machine tool to be set up in areas with low ceilings and below the cable trays or similar system components that are essential for operation.

The Oil-Ex-Box protects inexpensive low-strength machines, is available in all desired sizes and is therefore also suitable for retrofitting on old machines. Timely resumption of operation is possible after a fire or explosion event.

Since pressure relief devices are generally not autonomous protective systems as defined by the Explosion Protection Directive 94/9/EC (ATEX 114), it is not necessary to perform an EC type examination.

Nevertheless, the performance of the Oil-Ex-Box under highly demanding field conditions has been certified by experts of the DMT Centre for Fire and Explosion Protection, who found that the flames occurring during a fire or explosion event were effectively contained and no influence on the effectiveness of the pressure relief valves was observed.

Flameless pressure relief valve
with the Oil-Ex-Box

