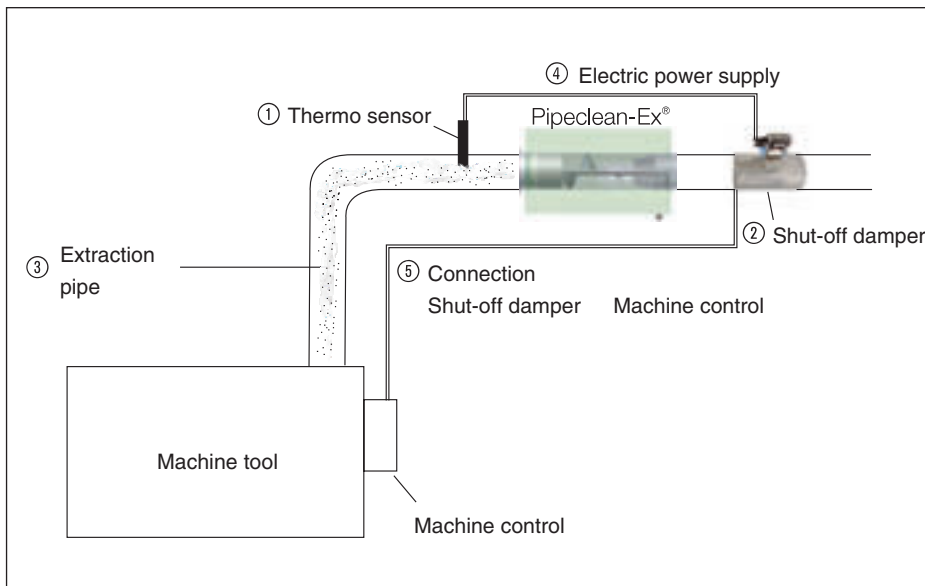


RESIKO®



Functional description see overleaf

Rerucha Safety Concept for machine tools that are operated with cooling lubricant oil or minimum quantity lubrication and without fire extinguishing systems.

The machine is cleared via a central extraction system.

The problem

In the event of a deflagration/explosion, there is a very high risk that the pressure wave, which transports the jet flame, can flash-over into the central extraction system.

This can result in total loss of the entire production.

The safety concept **RESIKO®** in connection with the thermo sensor of the Pipeclean®-Ex and a shut-off damper can avoid the risk of flash over effectively.

Components:

Thermo sensor:
(interrupts the electric circuit to the shut-off damper).

Pipeclean®-Ex:

When a pressure wave reaches the Pipeclean®-Ex, a plate is closed and effectively prevents the flash-over. As soon as the overpressure in the Pipeclean®-Ex has decreased, the spring loaded plate opens again. If there is still a fire in the machine tool, then there is a risk that the fire is sucked in by the still running extraction system. Therefore, a shut-off damper must be placed behind the Pipeclean®-Ex which is controlled and closed via a signal.



Pipelcean®-Ex

Shut-off damper:

The shut-off damper cannot prevent flashover, as the problem is highly complex (time, speed of the flash-over, different mixture formations, distances, etc.).

The shut-off damper can only prevent that the fire (or for machine tools with fire extinguishing systems the extinguishing gas) is suctioned off.

The machine that was subject to the deflagration/explosion is possibly lost. RESIKO is consequently a safety relevant interface that safely separates the endangered machine from other machines that are serviced by the same central extraction point and prevents therefore flashover.

Functional description:

(1) The thermo sensor is fitted into the extraction pipe (3) between the machine and the Pipelcean®-Ex .

A shut-off damper (2) is inserted between the Pipelcean®-Ex and the central extraction system.

The thermo sensor is looped via the shut-off damper into the electricity supply (4).

At a defined temperature, the glass bursts – or the monitoring unit interrupts the electric circuit.

This leaves the shut-off damper without electricity and therefore the spring loaded flap closes automatically.

The open/closed monitor of the shut-off damper sends a signal via (5) to the machine control that shuts down the machine immediately (orderly retreat).

Caution: These systems/problem solutions are legally protected!

... and also for the machine manufacturer!



Shut-off damper

"System guarantee of the Rerucha GmbH"

Rerucha™

Technology
for machine tools

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