Rerucha™

technology for
machine tools

re-defining the maintenance of machine tools

FASS-3®

A Flexible Suction point with 3 intersections

FASS-3®

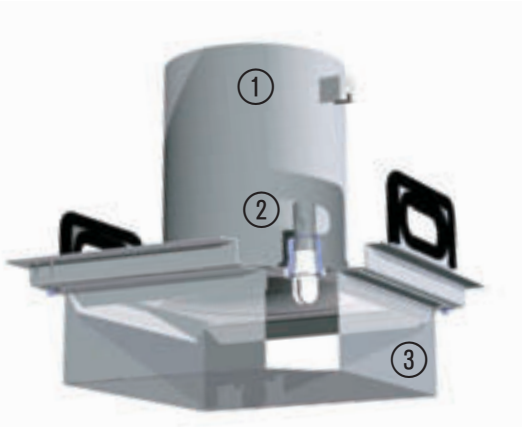
A common condition in chip and air suction exhaust systems is that the chips form chip-nests in the suction pipe or are deposited directly in the suction system (filter system).

This results in the following typical consequences:

- increased maintenance
- fire potential (with cooling lubricant oil)
- the inability to reclaim cooling lubricant
- additional air-flow resistance
- operating downtime

In order to avoid these undesirable consequences we have developed the ChipStop designed for preventing the extraction of chips into the duct system. During the machining of different materials, such as magnesium or aluminium, the outer screen of the ChipStop contains the chips and can be easily cleaned during a periodic cleaning cycle to ensure minimal clogging.

In machines/transfer lines with large overall heights or narrow working rooms the suction points are hardly or not at all reachable from the inside. This issue is a common point of maintence and downtime for the plant. At some point, the enclosure or room is not being exhausted sufficiently, or not at all. The ChipStop is designed to solve this condition.



3 intersections:

① fastening of a flexible tube inside of the connecting suction piece

② ChipFlush

③ ChipStop

In a machine tool operated with cooling lubricant oil insufficient exhaust may lead to the formation of an inflammable mixture which in case of ignition forms a considerably higher over-pressure (higher gas concentration) than in case of a well-functioning exhaust.

FASS-3®

A flexible connected suction piece

- the installation is made horizontally from the outside into the roof of the machine.
- easy fastening by sliding terminal strip without tools
- the possibility of dismounting from the outside allows an easy cleaning of the ChipStop in which chips can get caught or stuck.
- reduction of maintenance costs and of shut-off times of the machine
- the conception allows a change or an optimisation (e.g. adjustment to the exhausted air quantity) of the suction positions and the diameter of the suction pipe.

The continuous cleaning of the ChipStop is carried out by the CHIPFLUSH, which is operated by using the same stream of clean cooling lubricant. Degree of purity ≤ 100µm, 2 bar.

- the cleaning process takes approx. 5-8 sec (frequency depending on requirement) and can be automated by a magnetic valve being activated by the machine control (magnetic valve open = cooling lubricant flows = ChipFlush cleans; magnetic valve closed = cooling lubricant off = ChipFlush stands still).
- machines with a minimum-quantity lubrication are equipped with a ChipFlush with compressed air.
- higher and consistent effectiveness of the suction systems.

Fastening of the flexible suction tube inside of the suction connection

- no formation of cooling lubricant-puddles on the machine roof
- quick dis- and remounting
- reduction of the maintenance costs
- planning safety in building services engineering
- cost reduction due to lower planning effort or intersection between machine and building services engineering (suction pipe system)
- flexible design and adaptation possibilities between the interfaces

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