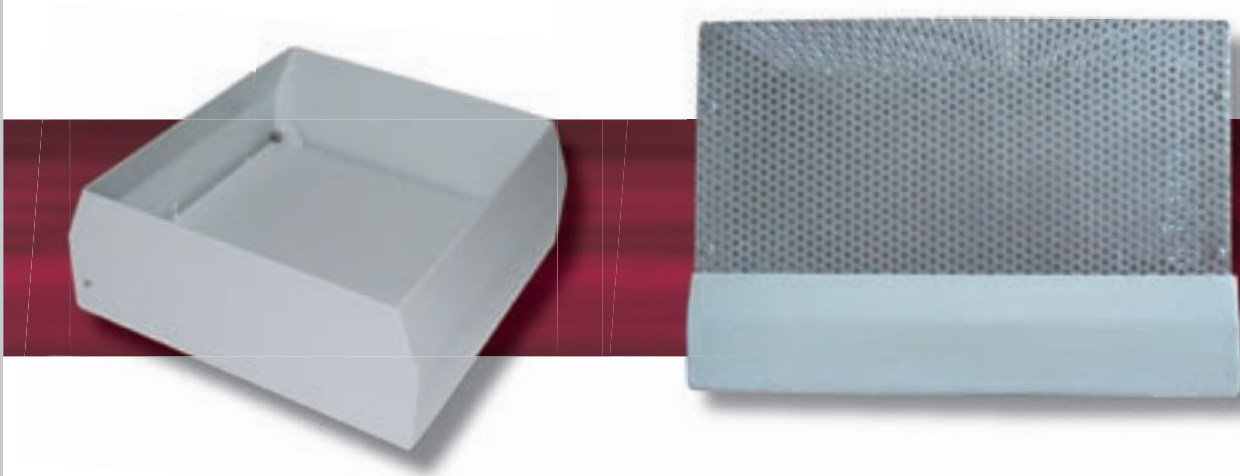


Pressure Relief Flap

In tool machines with enclosed work space, e. g. cutting tool machines, and on use of a coolant not water soluble, which is atomized during operation, fires and explosions (deflagration) may occur under certain circumstances.

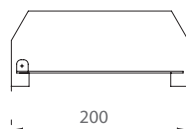
The pressure relief flap installed on the machine lets the enormous pressure of a deflagration escape. If required, a flame arrester can be integrated, which prevents the flames from escaping to the environment of the machine.

Per m³ machine room volume, a pressure relief opening of 0.1 m² should be on the machine.



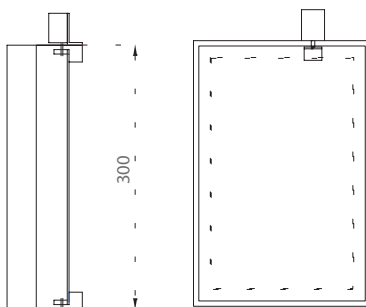
**Pressure relief flap
without flame arrester**

Cut A



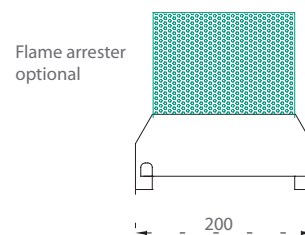
Cut B

Security switch



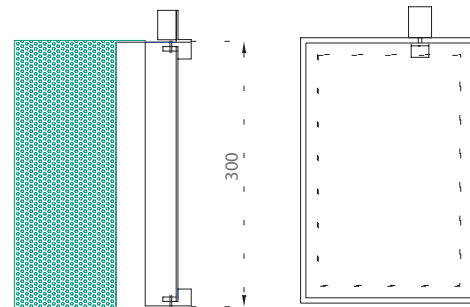
**Pressure relief flap
with flame arrester**

Cut A



Cut B

Security switch
optional



- Optionally, an end switch for turning off the machine can also be installed.
- Any size or design can be produced according to specification or given conditions.

Maintenance Notes

The functionality of the pressure relief flaps must be checked at least once a year.

1. It is to be observed that there are no objects on the pressure relief installation or on the flame arrester respectively.
2. The mobility must be checked manually. This check must, as far as possible, be performed from the interior of the tool machine.

Guarantee and Product Liability

Mounting Regulations for the Pressure Relief Flaps

A guarantee for the pressure relief flaps delivered by us is given under consideration of the following criteria.

1. For security reasons, mounting may only be executed on the upper side of tool machines and machining centres. The pressure relief flap must be installed above head height of the operating personnel.
2. On a deflagration or explosion, the highest energy emerges shortly in front of the suction interface. Therefore the pressure relief flap must be installed directly in front of the suction point (never behind the suction point) between point of operation and suction.
3. A vertical installation, e. g. on the side wall of the machine, is allowed only over an upward duct, so that the escape of the pressure wave is executed upward.
4. Through the deflagration or explosion, a darting flame can emerge, which can escape outward. In low halls or rooms, or resistances of other kinds, a reflexion of the darting flame may occur. Thus a peril to persons is possible.

Our pressure relief flaps optionally contain a flame arrester to restrict this peril.

Should this option not be installed, the pressure relief flap and our guarantee is limited to the pressure relief only.

Above the flame arrester, a free space with a height of at least 2 metres, without flame arrester, at least 5 metres above the pressure relief flap is necessary. In this space, there may be no inflammable objects or leads or cables

Security Note

Concerning the Model with Flame Arrester

Due to polluted hall air, sediments (condensate) of the coolant may occur on the flame cage. On escape of a darting flame from the work space of the tool machine, an ignition of the coolant particles on the flame arrester may occur.

Up to now, there are no cases of damage known to us which would be due to this cause. Nevertheless, it is necessary to check the flame arrester for pollution in corresponding intervals of time. Those are to be removed (cleaned) according to intensity.

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