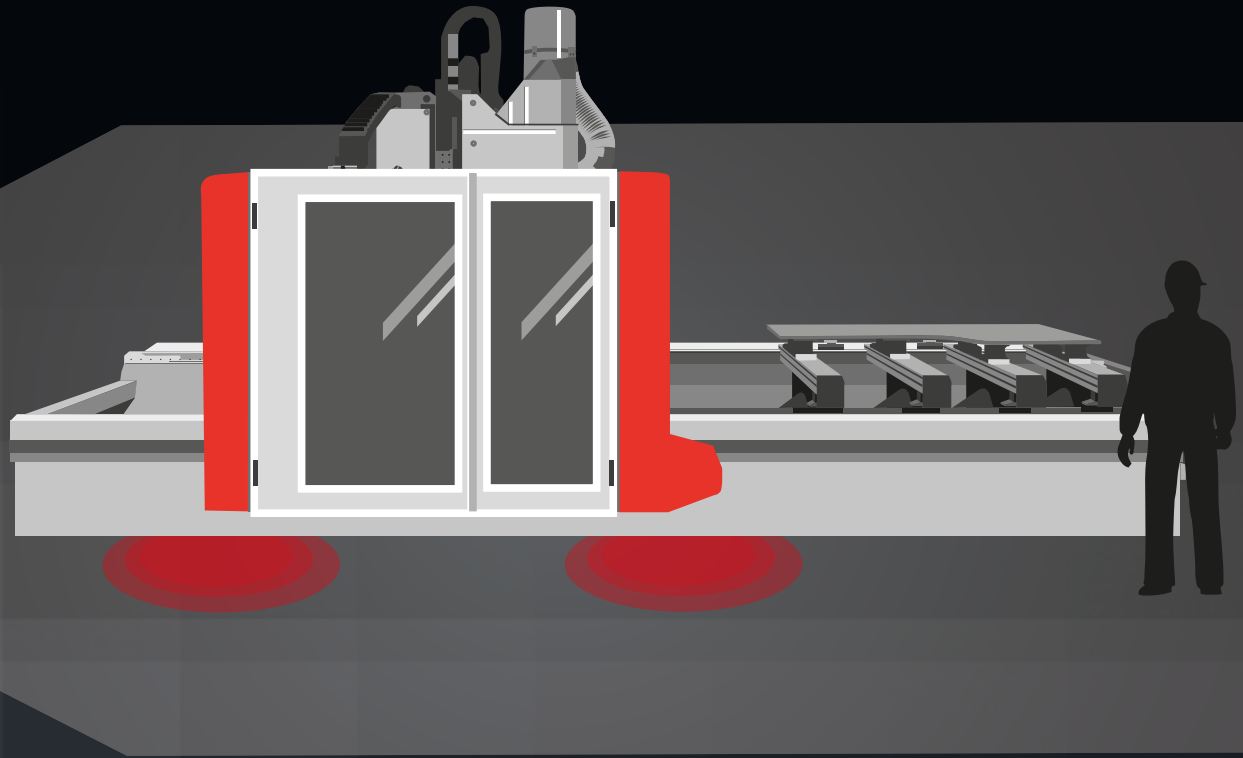


Safety for CNC Machines



Information for Manufacturers
and End-users of Machining Centers

ASO Safety
Solutions

CNC Machines with Gantry Mills

We understand that maximum speed means increased efficiency. The **SENTIR bumper** contact buffers provide 100% operation protection and continued machine processing at reduced speed when the defined safety zone is entered. An immediate stop signal is triggered when direct contact is made in the acute hazard area. The over travel distance of the gantry and the allowed forces are also taken into account.

Multi-zone workspaces with hazardous areas will benefit from **SENTIR mat** contact mats. Skilled operators of milling, pressing, turning or welding machines can pick up finished parts at full speed. When the safety zone is entered the contact mats will reduce the speed of the gantry and if the danger zone is triggered the mats will trigger an immediate stop.

Utilise your surface area to the maximum with the use of **SENTIR** sensors. No additional protective enclosures are required and the sensors aren't triggered by machine fall-out, vibrations or other ambient influences. Just like the **ELMON** series of additional evaluation units, the **SENTIR** sensors reliably switch off during actuation.

Whether standard or individual product design, almost everything can be implemented and adapted to customer requirements. This can be illustrated by the example of the large-area **SENTIR bumper** for the HOMAG Group.



Take a look at how the HOMAG Group is counting on ASO in the area of CNC machining:

www.asosafety.co.uk/references



SENTIR®
bumper

Contact buffers

ADVANTAGES

SENTIR bumper

- Robust design due to flexible and durable artificial leather
- Individual mounting and connection possibilities
- Insensitive to vibrations
- Resistant to many chemicals and substances



SENTIR®
edge

Contact edges

ADVANTAGES

SENTIR edge

- Large variety of existing contact edges
- Patented double chamber system for high durability
- Short activation distance for lower installation heights
- Rating up to IP 68

Closed CNC Machines

Fast opening and closing automatically operated doors save time, however if they aren't fitted with safety edges they could cause entrapment. **SENTIR edge** contact edges have a patented double chamber system that protects the internal switching chamber from external mechanical influences. When activated, the trigger immediately stops or reverses the doors. Radii and bend angles enable precise integration into the door and machine designs with the **SENTIR edge**. In addition to the broad portfolio of dimensions available, customised profiles to meet the individual needs are also available e.g.: translucent material that can be illuminated by LED strips.

SENTIR mat contact mats from ASO protect against hazardous situations caused by moving parts, either in front of or inside the machine. The presence of an operator is detected in a variety of settings by the contact mat.

ELMON safety relays offer a reliable link between safety sensors and PLC. They can be customized to suite the individual customer requirements.



ADVANTAGES SENTIR mat

- Maintenance-free system, easy to clean from dust and dirt
- High moisture resistance (IP 65)
- More than 6 million switching cycles
- Standard dimensions and individual shaping possible

SENTIR[®]
mat

Contact mats



ELMON[®]

Safety relays

ADVANTAGES ELMON

- Reliable link between safety sensor and PLC
- Various housings and functions
- Universal use due to various adjustment possibilities
- Sensor-BUS evaluation possible - up to 32 signal transmitters

ASO Safety Solutions – At the Cutting Edge

ASO Safety Solutions has been established for over 30 years and is today the world market leader for tactile sensor technology.

Regular exchanges and feedback from customers has enabled the company to align production and sales with real customer requirements. Investment in research and development has allowed ASO to meet growing requirements in industry and society. ASO Safety Solutions pride themselves on innovative thinking and dynamic development processes that make them an industry success.

ASO addresses the major challenges of globalisation by concentrating on core competences, by carefully adapting its operating structures and systematically expanding its international presence. Today, there are 200 employees worldwide, who manufacture safety contactors, controls and customer-specific sensor solutions. In addition to the company headquarters in Germany and the USA, sales offices all over Europe and a worldwide dealer network are responsible for worldwide sales.



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