

# Safety for Aviation Technology



Information for Manufacturers and  
End Users of Aviation Technology

**ASO** **Safety**  
Solutions

## Ground Support Equipment

Pressure sensitive safety devices for Aviation Ground Support Equipment detect any impacts as a vehicle approaches an aircraft and immediately a signal can be triggered by the vehicle control. The safety device also absorbs the momentum of the vehicle itself.

The latest IATA requirements specify the fitting of active pressure sensitive safety devices on the leading edge of the approaching vehicle and using the signal from these devices to prevent damage to the aircraft from unintended contact.

**ASO SENTIR *bumpers*** are used to protect an aircraft due to their soft foam core and rapid switching characteristics.



**SENTIR®**  
*bumper*

Safety bumpers

### ADVANTAGES SENTIR *bumper*

- Robust design due to flexible and durable synthetic leather
- Insensitive to vibrations
- Resistant to oils, avgas, many chemicals and other substances
- Customizable in shape, size, color and cover material
- Custom mounting and connection options





**SENTIR<sup>®</sup>**  
*edge*

Safety edges

### ADVANTAGES SENTIR *edge*

- Large variety of existing active safety edges
- Patented double chamber system for high durability
- Minimal activation distance
- Rating up to IP 68
- Extensive customization options due to in-house production





# Maintenance Technology

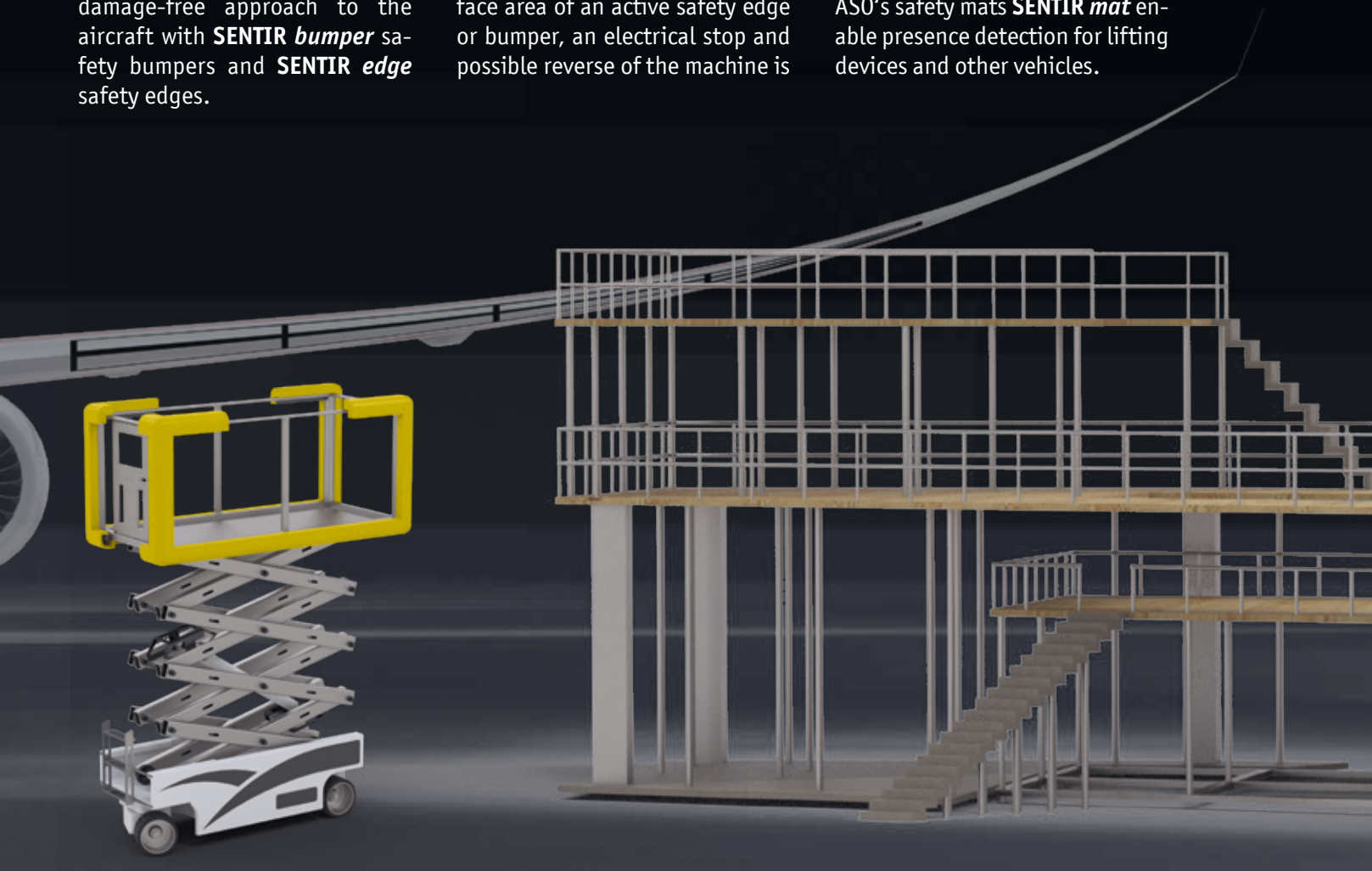
Automated moving maintenance docking platforms, stands and scissor lifts need to be equipped with safety devices as well, just like the Ground Support Equipment. This ensures a safe and damage-free approach to the aircraft with **SENTIR bumper** safety bumpers and **SENTIR edge** safety edges.

ASO's pressure sensitive safety devices are ideally suited to protect and shield an aircraft from damage.

After an impact to the soft surface area of an active safety edge or bumper, an electrical stop and possible reverse of the machine is

triggered. The resulting overtravel distance of the **SENTIR** safety edge or bumper cushions the momentum of the machine and thus prevents damage to the aircraft.

ASO's safety mats **SENTIR mat** enable presence detection for lifting devices and other vehicles.



## ADVANTAGES SENTIR mat

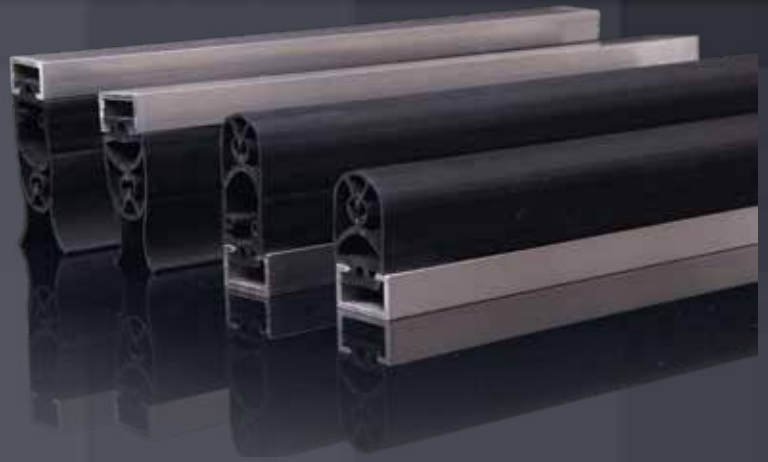
- Maintenance-free system, easy to clean from dust and dirt
- High moisture resistance (IP 65)
- More than 6 million switching cycles
- Standard dimensions, custom shapes and colors available



# ASO - Safety, Sensors & Controls

## SENTIR *edge* - Safety Edges

Crushing and shearing points on automated equipment and vehicles have a high risk potential for people and material. The **SENTIR *edge*** safety contact edges provide reliable protection. The pressure-sensitive sensors act as closing edge safety devices and guarantee optimum overtravel and fast switching characteristics.



## SENTIR *bumper* - Safety Bumpers

The **SENTIR *bumper*** safety contact bumpers offer adaptability, reliability, and versatility. They are valued as safety guarantees on AGV's and forklift trucks, high-bay storage systems, machine lines, free-floating systems, and wherever flexibility is required from a safety device.



## SENTIR *mat* - Safety Mats

Equipped with a structural surface and laminated section sensors, the **SENTIR *mat*** safety contact mat protects and detects. Easily integrated into any environment to protect from danger or injury.



## ELMON - Safety Relays

**ELMON** relays from ASO provide permanent monitoring of contact edges, mats, and bumpers. It acts as a link between tactile sensors and the system vehicle control.

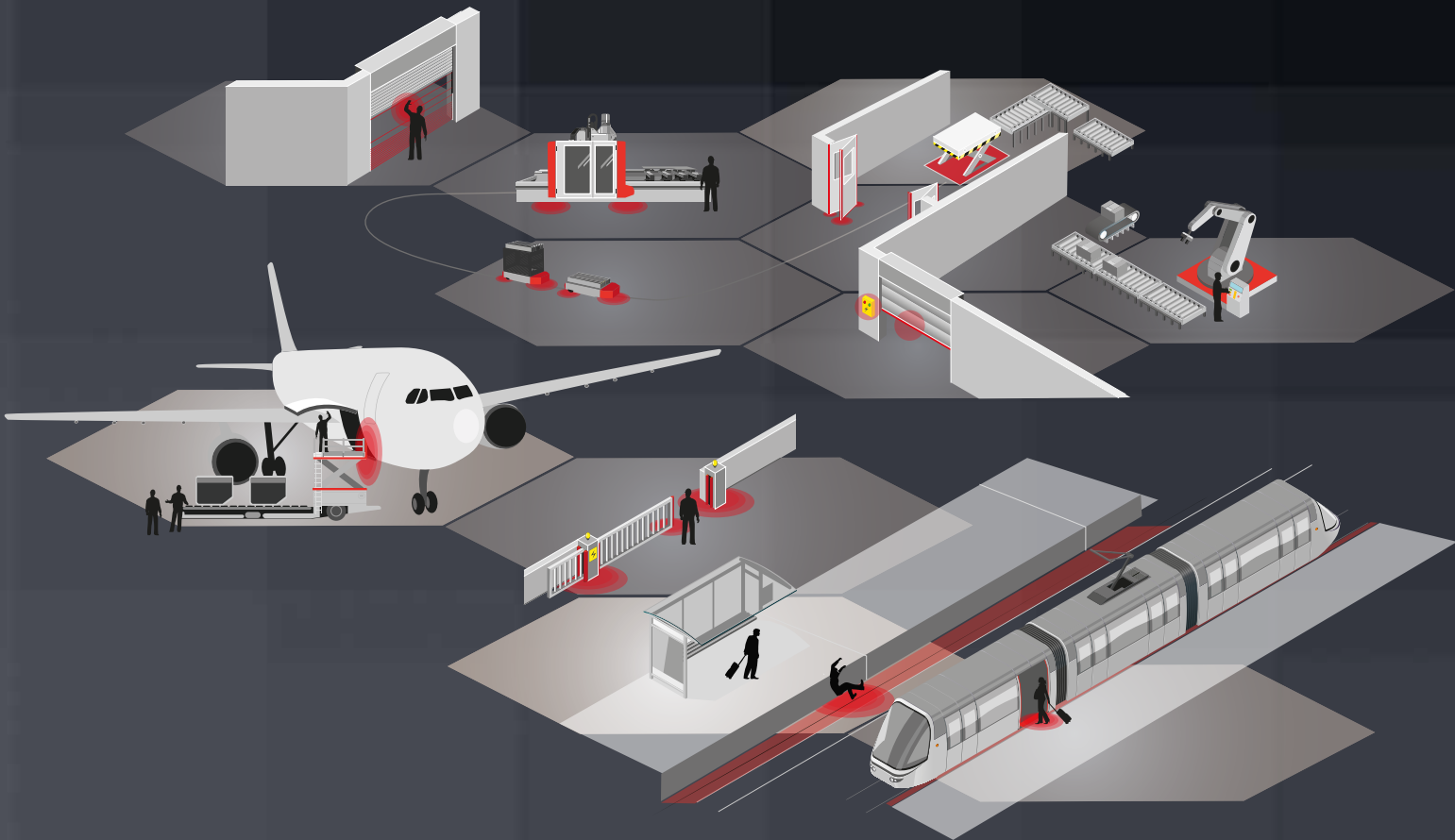


## ASO Safety Solutions – At the Cutting Edge

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 globalization 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.



### Headquarters Europe

ASO GmbH  
Hansastraße 52  
59557 Lippstadt  
GERMANY

**Phone** +49 2941 9793-0  
**Fax** +49 2941 9793-299  
[www.asosafety.de](http://www.asosafety.de)  
[sales-eu@asosafety.com](mailto:sales-eu@asosafety.com)

### Headquarters USA

ASO Safety Solutions Inc.  
300 Roundhill Drive, Unit 6  
Rockaway, NJ 07866  
USA

**Phone** +1 973 586 9600  
**Fax** +1 973 784 4994  
[www.asosafety.com](http://www.asosafety.com)  
[sales-us@asosafety.com](mailto:sales-us@asosafety.com)

### Headquarters Asia Pacific

ASO Safety Solutions Nanjing Co. Ltd.  
Jinma Lu 3 Maqun Scientific Park  
210049 Nanjing  
CHINA

**Phone** +86 25 856 73990  
[www.asosafety.cn](http://www.asosafety.cn)  
[sales-cn@asosafety.com](mailto:sales-cn@asosafety.com)