



**SAFETY IMPROVEMENT SYSTEMS**



**COLLISION  
AVOIDANCE SYSTEMS  
FOR INDUSTRIAL  
VEHICLES**



# MAKE SAFETY YOUR PRIORITY

## Each year in Europe:

**3 million**  
workplace  
injuries

**540,000**  
injuries involving  
employees and vehicles  
  
of which **1,308**  
are related to **serious**  
accidents and deaths

a fatal injury carries  
an average cost  
of about  
**€ 900,000**

\* Eurostat data

Injuries at work involve millions of people worldwide each year. The most exposed sectors include **logistics, warehousing and handling of goods**. Recent studies have shown that **forklifts are the most dangerous vehicles on workplaces**: 57% of injuries caused by this type of vehicles, in fact, determine serious and fatal injuries to people operating in the surrounding area, not to mention significant damages to goods and infrastructure.

### Most common causes of lift truck accidents:

- ✓ human error
- ✓ inadequate training of lift truck drivers
- ✓ lack of safety systems, either active or passive ones.

### SIS solutions for active and passive safety

**SIS systems are designed to prevent accidents in areas where industrial vehicles operate** thus avoiding damage to people, structures, goods and machinery. Poor visibility, distraction while driving and maneuvering, workers and vehicles presence, hazardous layout seriously affect the surroundings where lift trucks operate. Our systems warn lift truck operators of the imminent risk of collision by offering them a chance to automatically slow down and prevent the movement of the lift truck.

SIS product range offers comprehensive safety solutions:

#### ACTIVE SYSTEMS

for obstacles detection, automatic slowing down and blocking in the event of an imminent collision

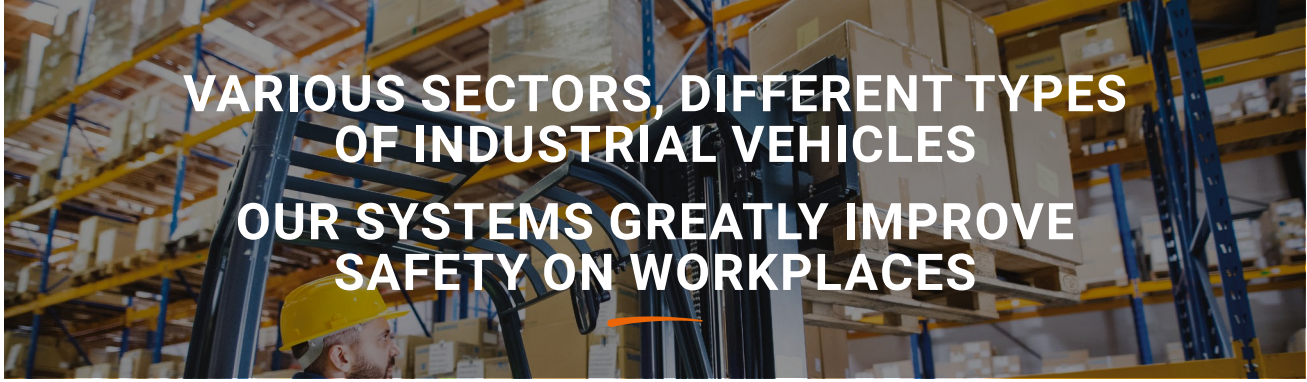
#### PASSIVE SYSTEMS

for obstacle detection by means of acoustic and visual warning signals

#### OTHER SYSTEMS

for monitoring and aid to safety.





# VARIOUS SECTORS, DIFFERENT TYPES OF INDUSTRIAL VEHICLES OUR SYSTEMS GREATLY IMPROVE SAFETY ON WORKPLACES

SIS systems may be used in any industrial sector where logistic operations are carried out as well as where handling of goods is an issue. Our collision avoidance systems provide an effective aid to any company adding value to reach higher safety standards by preventing the risk of accidents and damages to people, good, structure.

## Application fields



Pharmaceutical sector



Metallurgical sector



Textile



Food & Beverage



Logistics



Printing



Soft Drink



Handling and warehousing



Packaging



Chemicals



Plastic and rubber sector



Automotive

## Type of vehicles



Counterbalanced forklift trucks



Special applications on industrial vehicles

SIS systems are specifically designed for **installation on forklift trucks** with the aim of preventing the risk of accidents in any situation and environment. Thanks to their sturdiness and versatility, SIS safety systems may be installed and effectively perform on other vehicles as special application.

**SIS systems have been successfully installed on major forklift trucks brands** such as: OM-STILL, Jungheinrich, Linde, Toyota, Caterpillar - CAT, Manitou, Nissan, Mitsubishi, Yale, Hyster, Cesab, Baoli, Carer, Clark, Daewoo, Doosan, Mariotti, etc.



# ACTIVE SYSTEMS

FOR FORKLIFT TRUCKS AND SPECIAL APPLICATIONS

Warning, slowing down, blocking: at your side in the event of danger



Whenever safety is an issue, nothing can be left to chance or entirely relied on man. Our advanced technology gives appropriate aid and assistance to the operator in hazardous situations thus ensuring a promptness of intervention that can prevent accidents and save human lives. **Active SIS systems** are designed to take action when the human response is not sufficient thus preventing the risk of collisions.

## Safe&Stop

Each time **Safe&Stop**, through the ultrasonic sensor installed on the rear part of the vehicle, detects an obstacle in the maneuvering area, the operator gets alerted by acoustic and visual signals, automatic slowing down and blocking are activated, thus avoiding risk of collision.

- ✓ **ULTRASONIC SENSOR**
- ✓ **OBJECTS DETECTION UP TO 4 METERS DISTANCE (UP TO 3 METERS AT SIDES)**
- ✓ **MINIMIND ADVANCED DISPLAY**
- ✓ **STURDY COMPACT DESIGN**
- ✓ **PARAMETERS CAN BE ADJUSTED ACCORDING TO OPERATOR'S REQUIREMENTS**



*The kit consists of:* CySens ultrasonic sensor, Minimind advanced display, brackets kit, cable, connectors kit.

## Safe&Stop+

In case of vehicles exceeding 1.5 meter width, **Safe&Stop+** is provided: active anti-collision system consisting of two synchronized ultrasonic sensors designed to monitor a broader area. The system warns the operator and, in case of imminent collision, it automatically slows down and blocks the vehicle.

- ✓ **TWO ULTRASONIC SENSORS**
- ✓ **OBJECTS DETECTION UP TO 4 METERS DISTANCE (UP TO 4 METERS AT SIDES)**
- ✓ **MINIMIND ADVANCED DISPLAY**
- ✓ **STURDY COMPACT DESIGN**
- ✓ **PARAMETERS CAN BE ADJUSTED ACCORDING TO OPERATOR'S REQUIREMENTS**



*The kit consists of:* two CySens ultrasonic sensors, Minimind advanced display, brackets kit, cable, connectors kit.

# PASSIVE SYSTEMS

FOR FORKLIFT TRUCKS AND SPECIAL APPLICATIONS

Your maneuvering assistant



Maneuvering is a particularly difficult task: hidden obstacles, approaching pedestrians as well as in coming vehicles are major risk factors. **Passive SIS systems** are designed to prevent collisions by monitoring the maneuvering area and warning the driver.

## Safe&Alert

Passive reverse maneuvering assistance system, **Safe&Alert** detects any obstacles in the operational area through an ultrasonic sensor, thus immediately warning the driver with increasing acoustic and visual signals as it approaches the obstacle.

- ✓ DETECTING PEOPLE, GOODS AND STRUCTURES
- ✓ THREE PRE-CONFIGURED SETUPS
- ✓ OBJECTS DETECTION UP TO 3.5 METERS (3 METERS AT SIDES)
- ✓ EASY TO INSTALL



*The kit consists of:* CySens ultrasonic sensor, Minimind advanced display, brackets kit, cable, connectors kit.

## Safe&Alert+

**Safe&Alert+** specifically designed for application on medium-sized industrial vehicles which require a broader detection. In case of imminent collision due to the presence of people or objects during reverse maneuvering, the operator is promptly alerted by acoustic and visual signals as he approaches the obstacle.

- ✓ DETECTING PEOPLE, GOODS AND STRUCTURES
- ✓ SIX PRE-CONFIGURED SETUPS
- ✓ OBJECTS DETECTION UP TO 3.5 METERS
- ✓ DETECTION AREA WIDTH UP TO 4 METERS
- ✓ EASY TO INSTALL



*The kit consists of:* CySens ultrasonic sensor, Minimind advanced display, brackets kit, cable, connectors kit.

# OTHER SYSTEMS

FOR ANY KIND OF VEHICLES

SIS comprehensive safety range

## SafeView



Professional double channel monitor/camera kit for monitoring of blind spots. It offers high resolution panoramic view of the whole area behind the vehicle while maneuvering.

*The Kit consists of:* monitor 5", IR ball camera, splitter with built-in DC/CD converter (48VDC), cable set and connectors.



✓ HIGH QUALITY AND SHARPNESS OF IMAGES

✓ IDEAL FOR A WIDE RANGE OF INDUSTRIAL VEHICLES

✓ WATERPROOF COMPACT CAMERA

## SafeTraffic



Workplace monitoring system: a microwave sensor installed next to an intersection or crossing detects any moving vehicles and warns employees as well as other forklift trucks' drivers crossing the area by means of acoustic signals (sound alarm) and visual signals (flashing light).

*Kit consists of:* microwave sensor, acoustic-visual signals device (64 continuous tones available, adjustable up to 105 dB), central control unit that can be integrated with up to 4 sensors.



✓ NO INSTALLATION ON VEHICLE REQUIRED

✓ EASILY ADAPTABLE TO ANY LAYOUT

✓ TRAFFIC LIGHT AND AUTOMATIC DOORS INTEGRATED

## SafeLed



LED technology optical warning device helping pedestrians to avoid collision. A focused beam of light on the ground warns pedestrians of an approaching vehicle, any pedestrian is alerted in advance of a potential danger.

*The kit consists of:* high intensity LED light with connection to light source (2 wires), mounting kit.



✓ IDEAL FOR NOISY WORKPLACES

✓ WIDE VOLTAGE RANGE (9-110 V)

✓ CAN ALSO BE USED OUTDOOR

## SafeLight



High intensity light beaming a light band along the sides of the vehicle, in order to define the operating area of the vehicle and to signal pedestrians minimum safety distance.



✓ WIDE VOLTAGE RANGE (9-110V)

✓ LED TECHNOLOGY

✓ EASY INSTALLATION

# RELIABLE SAFETY DEVICES ARE THE ONES BASED ON MOST ADVANCED TECHNOLOGY

SIS systems are recognized by leading companies as effective and reliable tools to prevent accidents and to create a safer workplace. The reason of our success is above all of the **cutting-edge technology** with which they are conceived and designed. SIS collision avoidance systems are developed by our company on the grounds of a technology extremely effective in detecting any obstacles: the **ultrasonic sensor** we patented is reliable and performing.

## Patent on SIS products

The **ultrasonic proximity sensor**, conceived and designed within our Research & Development Unit, is protected by a registered patent and represents the highest point reached by the company in terms of innovation. The sensor makes possible obstacles detection within predetermined distances and guarantees the highest reliability and efficiency standards.



Patent **EP2678711B1**

Classification **G08G1/16 collision avoidance systems**

Registered on **25.02.2011**

## Our certifications



IQNet Management  
System certification



ISO9001 SQS Management  
System certification



CEE Products  
Conformity certification

## Our company

SIS safety systems are designed and manufactured by **Cy.Pag. S.r.l.**, a leading company in the automation sector. SIS products offer advanced technology, innovation, a highly qualified skilled team support, a particular attention to quality which have made **Cy.Pag. S.r.l.** a reliable partner for industrial companies in Italy and abroad.



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