



# Making the Distribution and Logistics Industry Safe

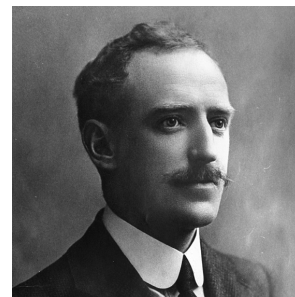


**Industry Guide**

[www.castell.com](http://www.castell.com)

# Why choose Castell for the distribution industry?

- Expertise in ensuring safety in the distribution and logistics industry
- 90 years of experience protecting people and assets in industry
- High quality stainless steel products that are designed for harsh wash down environments
- ISO 9001: 2008 accreditation
- Global team dedicated to providing technical support and assistance in selecting the correct solution
- The widest range globally of rugged and reliable trapped key interlock products
- Design of unique loading bay safety system – Salvo
- The ability to produce customised solutions to meet the demands of your specific application
- Specifically developed heavy duty access interlocks designed for repetitive use in demanding environments and harsh climates
- Comprehensive Lock Out Tag Out (LOTO) high quality, hand-built padlock safety systems



Founder:  
**James Harry Castell**  
1880–1953

**Castell Safety International has been at the forefront of trapped key interlocking since 1922 when our founder, James Harry Castell, designed the first interlocking systems to protect the people and assets during the electrification of London. Today, Castell, from our global locations, designs and manufactures the world's widest range of industrial safety interlocking systems ensuring that industry can operate safely around the world.**

**Our interlocking systems in stainless steel are designed to be robust, durable and are proved in the demanding environments faced by our customers in the warehouse and logistics industry. Above all, wherever the risk of injury and damage are high.**

**Castell's approach to working with customers is deeply rooted in understanding the safety issues faced in today's ever-advancing, technology-driven distribution and logistics industry.**

## Driving factors in the Warehouse and Logistics industry

The advancement of technology continues to enable the distribution and warehouse industry to deliver more products, in a shorter period, over a wider area every year.

The pressures on the ability to remain competitive means that there is clear focus on how to improve utilisation, cost per shipment, productivity, efficiency and ultimately profitability. In a fast-paced business, these demands need to be managed in harmony by controlling potential risks and ensuring that workers can perform their duties in a safe environment. These risks are compounded with the increasing levels of automated equipment that are being introduced into warehouses to drive efficiency.

## The warehouse environment

Work related accidents within the storage and warehousing industry remain a major issue, with many thousands of RIDDOR reportable incidents recorded each year. In 2009/10 the storage, warehousing and road haulage industries reported over 8,500 work related accidents to the Health and Safety Executive (HSE) and Local Authorities.

### The key areas to protect personnel and assets are:

- At the loading bay
- With automated equipment
- Packaging recycling machinery
- Switchgear and HVAC equipment
- Conveyors
- Robot cells and palletisers

Providing a safe working warehouse environment delivers improved productivity through using equipment correctly, reducing lost time to accidents and removing the risk of fines and compensation from injuries and accidents.



### Trapped Key Interlocks

- **Trapped key interlocks form a versatile safety system** that can be employed across the warehouse environment to ensure that equipment and machinery are operated in a safe manner, removing the opportunity to take short cuts and put people and assets at risk.
- **Prevents shortcuts and enforces procedures** Trapped key interlocks force workers to follow strict processes when operating machinery and these cannot be short cut or missed. This means that access to potentially dangerous areas is removed during operation, and whilst access is being gained machinery is prevented from being operated.
- **Design in or retrofitted** Trapped key interlocks can be used to improve safety on existing equipment or can be specified at the design stage to ensure new equipment can be operated safely.



### Salvo Drive-Away Prevention

- **Prevents accidental drive-aways** Accidents when loading and unloading vehicles can reach rates as high as 25% of all accidents in the workplace. Implementing Salvo can ensure that this risk is controlled and removed by ensuring that access to vehicles is only granted when it is safe to do so, and whilst access is granted vehicles remain immobilised.
- **Removes the need for verbal communication** Salvo removes the risk of mistakes and misunderstandings from verbal communication as the system ensures that the loading process remains safe. This is achieved through interlocking the warehouse door intuitively with signals for both loaders and drivers to show the current status of the system.
- **Improves efficiency** Salvo DockMonitor gives an overview of the warehouse bay doors from a single PC. This means that door utilisation, time to load, waiting time and vehicle status are all communicated in real time to allow the warehouse door operation and bay usage to be managed in the most effective manner possible. All the data is captured and trended to allow week to week, day to day and shift to shift efficiency comparisons.

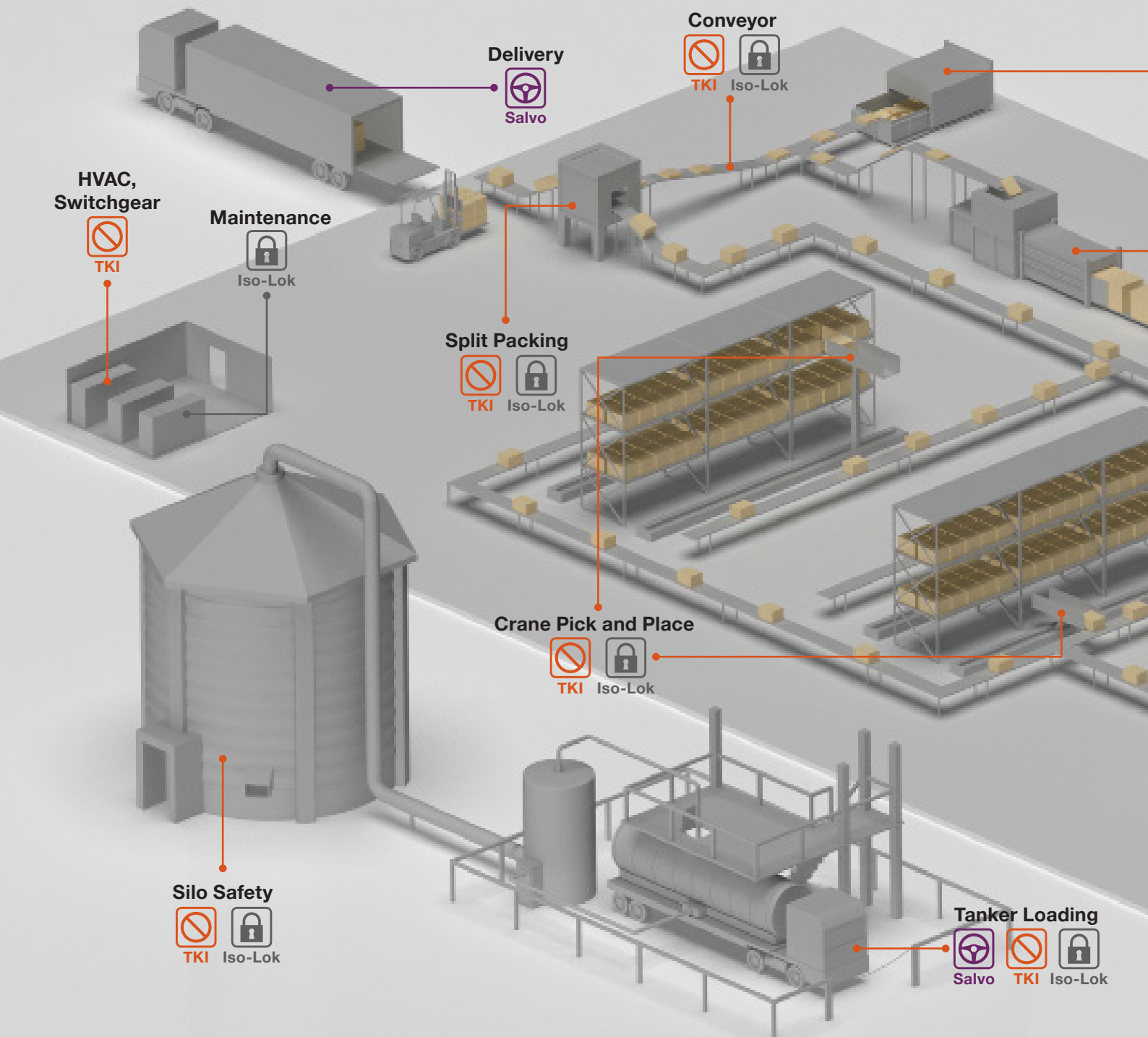


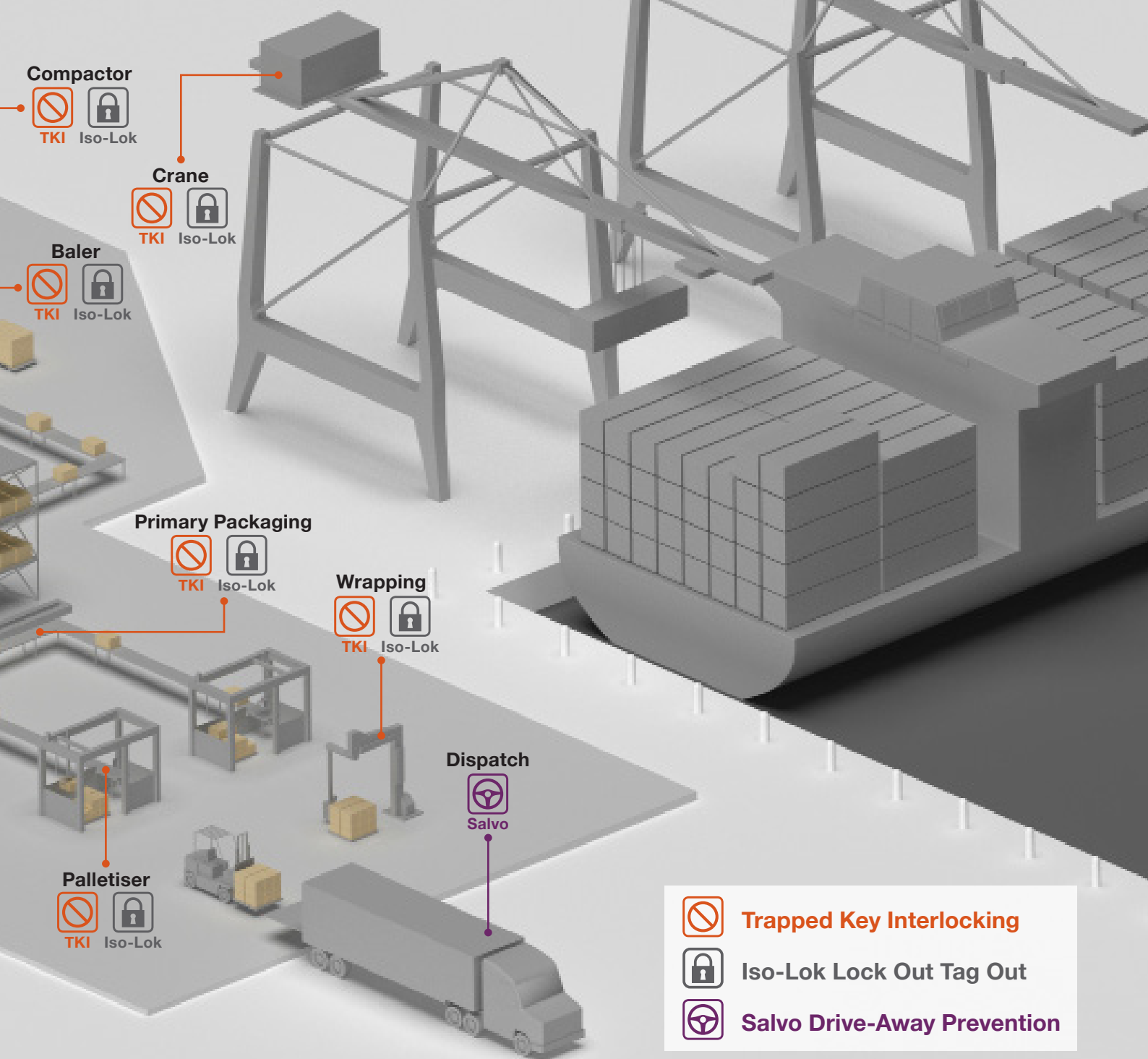
### IsoLok Lock Out Tag Out




- Comprehensive range of padlocks and clasp sizes
- Tracked key differ codes to ensure maximum system integrity and safety
- Isolation of switchgear and machinery
- Personalization and customization of padlocks
- Master and slave suites



# Delivering safety across the distribution industry





-  **Trapped Key Interlocking**
-  **Iso-Lok Lock Out Tag Out**
-  **Salvo Drive-Away Prevention**

# How to design a system

## 1 Isolation

## 2 Key Exchange

## 3 Access Control



**To design an interlock system there are a number of key questions that need to be addressed. These are:**

- What is the operational flow to start and stop equipment?
- What is being isolated?
- Is there more than one system that needs to be isolated to make access safe?
- Is there a time delay required for safe access?
- How many access points are there?
- What is the type of access? Full body or part body?
- Severity of the possible injuries?
- What is the possibility of avoiding the hazard?
- What is the nature of the hazard?
- What are the energy sources present?
- What is the operating environment?

### Part Body Access

A part body access lock has only one lock and the isolation key is used to open this. Whilst the access lock is open the key cannot be removed and therefore the process cannot be started. Only once the lock is closed can the isolation key be removed and the process restarted.

### Full Body Access

Full body access locks have two locking mechanisms; the first step in the process is to insert the isolation key. This will allow the personnel key to be removed and then access can be granted by opening the bolt. The isolation key can only be removed once the personnel key has been inserted. Therefore whilst the personnel key is removed and the lock is open the process cannot be started. Only once the lock is closed and the personnel key returned can the isolation key be removed and the process restarted.

### Coding a System

Please refer to our Interlock and padlock integrity policy.

 **Trapped Key Interlocking**

**Isolation**



**Exchange**



**Access**



 **Iso-Lok Lock Out Tag Out**



**\*Key/Padlock Cabinets**



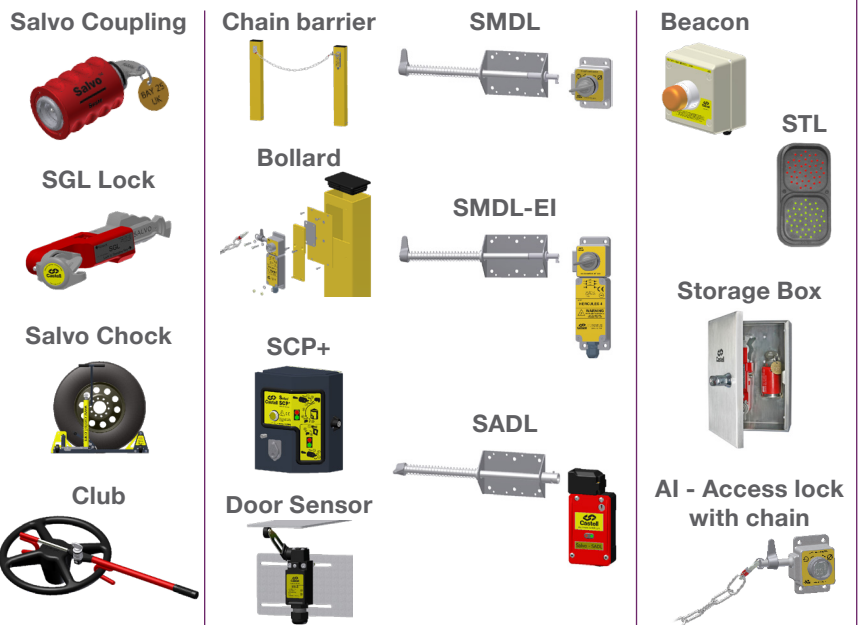
\*Available in stainless steel and a variety of sizes upon request.

 **Salvo Drive-Away Prevention**

**Isolation**

**Exchange**

**Access**





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## A HALMA COMPANY

