



Making Food Manufacturing Safe

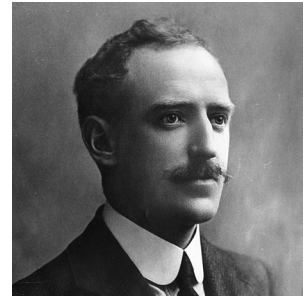


Industry Guide

www.castell.com

Why choose Castell for the food industry?

- Expertise in ensuring safety in the food industry for well over 40 years
- 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 of rugged and reliable trapped key interlock products globally
- The ability to produce customised solutions to meet the demands of your specific application

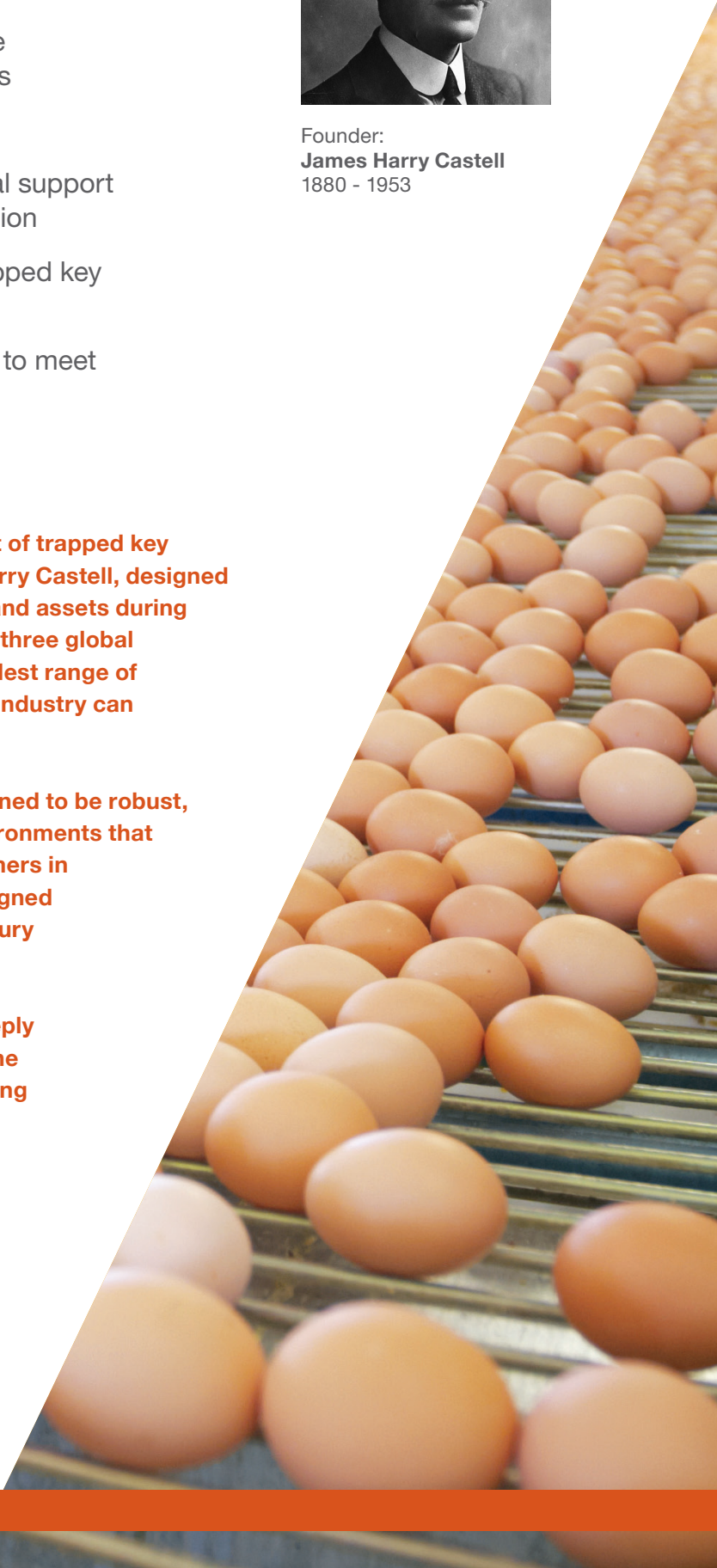


Founder:
James Harry Castell
1880 - 1953

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 its three 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 proven in all types of operating environments that meet the demands of the harsh locations our customers in the food industry operate in. Above all, they are designed to protect personnel and assets where the risk of injury and damage are high.

Castell's approach to working with customers is deeply rooted in understanding the safety issues found in the modern food manufacturing environment. Recognising how safety impacts operations is an important step to designing systems that deliver fast safe access ensuring that efficiency is maintained and output rates are secured.



Ensuring Safety during; Operation, Cleaning, Maintenance and Change-overs

The drivers in today's food industry

Today's food industry is typified by being highly demand driven with an ever-increasing legislative framework as food safety and security continues to be a high profile issue. Customers demand higher levels of choice, availability and quality at lower cost. The expectation of today's customer is that what ever is desired is instantly available at what ever time and place the consumer demands.

The manufacturing environment

The impact of these demands from both the consumer and from government bodies in terms of legislation results in a very different manufacturing environment. Long production runs that are geared to supply warehouses and deliver a standard one size fits all product are gone. Factories that are highly flexible, that ship to order, huge combinations of product variations, pack sizes and formulations at a moments notice sit in their place. These facilities are geared to meet demand that is impacted by weather, season and occasion.



Trapped Key Interlocking

- **Durable, long-lasting stainless steel**
Withstands harsh operating environments common in the food processing industry.
- **Prevents shortcuts & enforces procedure**
Trapped Key Interlocks force workers to follow a strict process which prevents them from deliberately skipping or inadvertently missing steps.
- **Can be washed down**
High grade stainless steel and robust design capable of surviving high pressure wash-down, acidic and caustic cleaning chemicals and time-pressured maintenance.



Iso-Lok Lock Out Tag Out

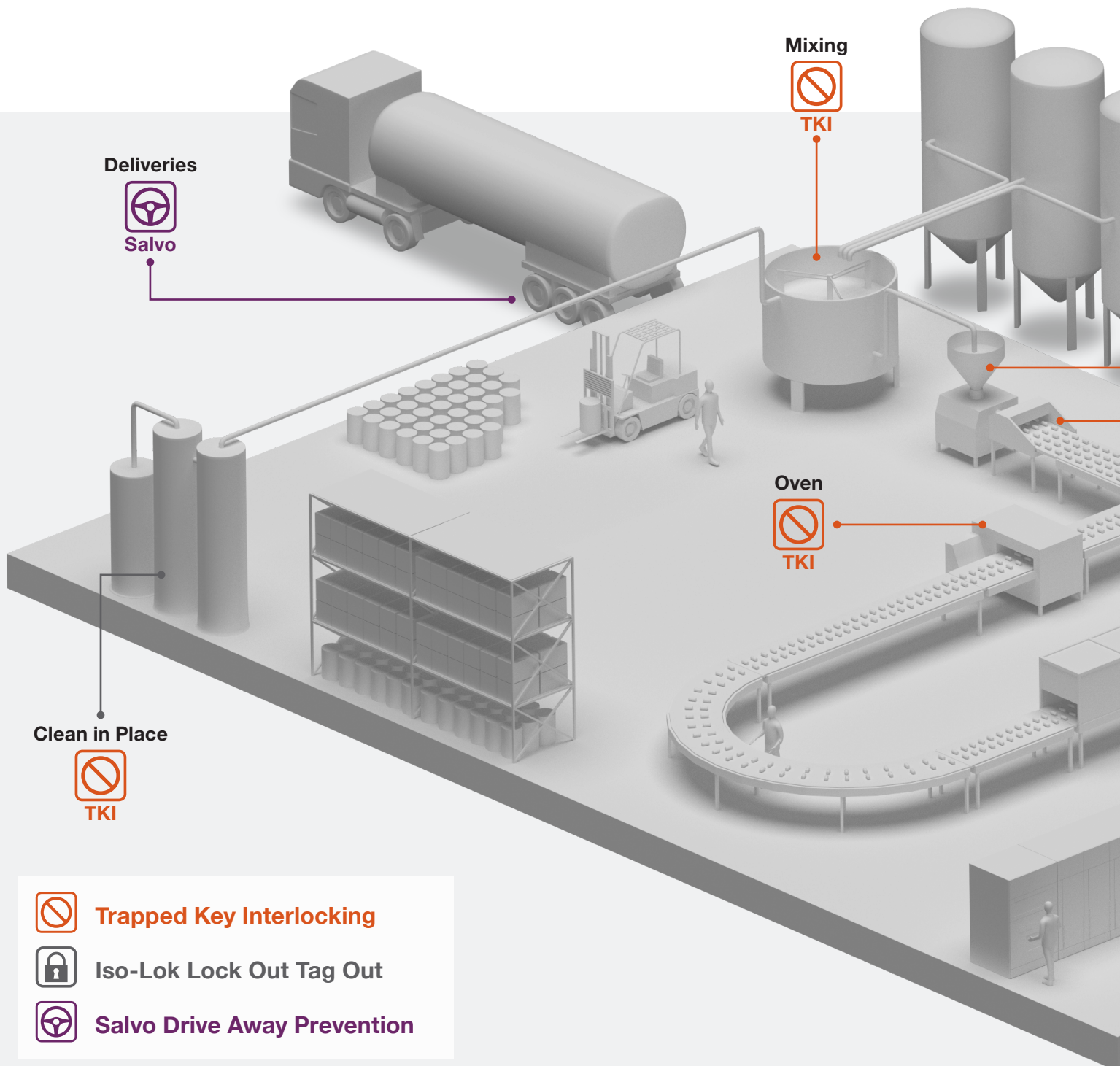
- Full stainless steel versions available
- Comprehensive range of sizes and clasps
- Tracked key differ codes
- Isolation of machinery
- Customization, engraving and painting

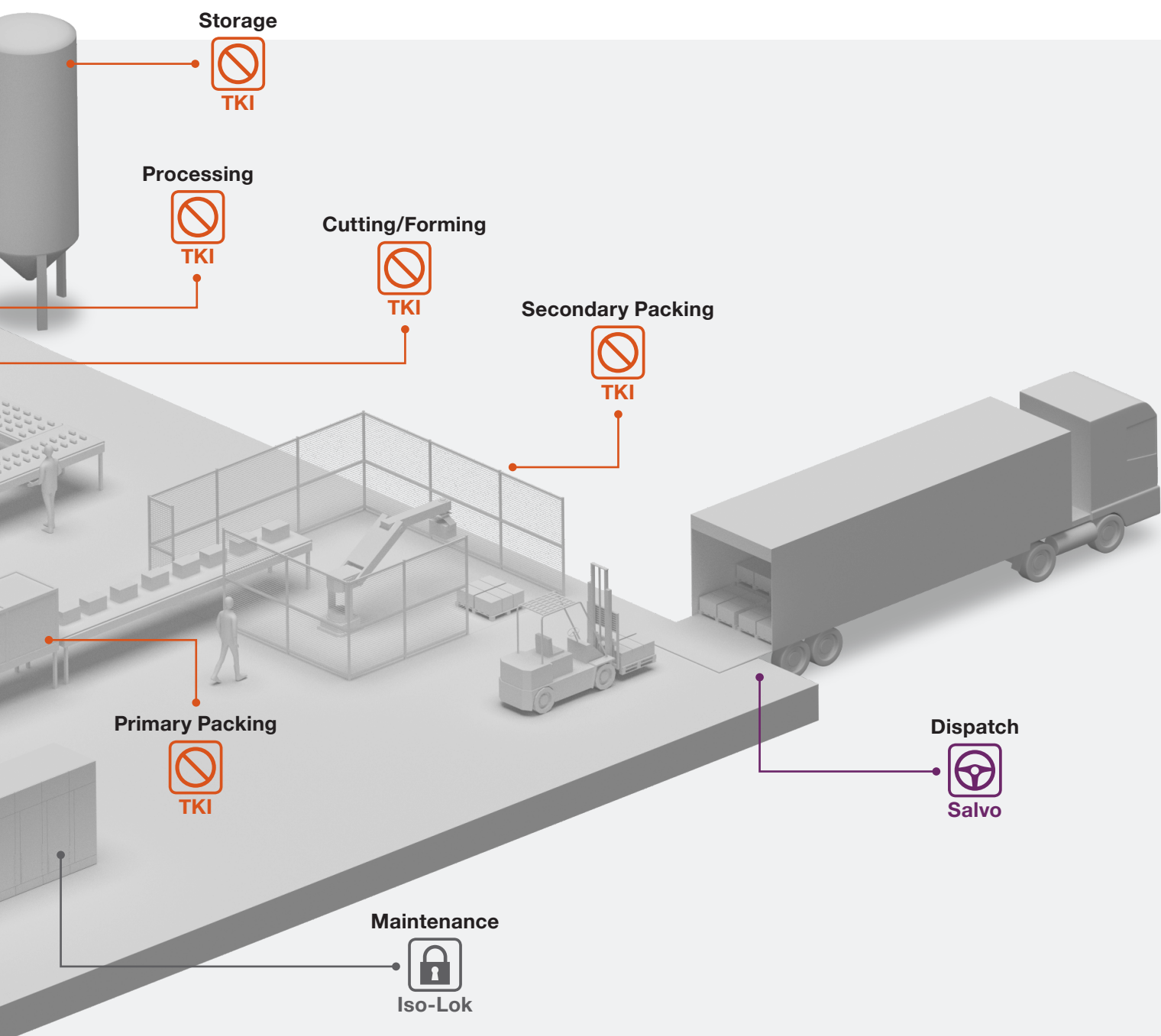


Salvo Drive Away Prevention

- **Prevents accidental driveaways**
Accident rates in loading and unloading vehicles can reach rates as high as 25% of all work place accidents.
- **Interlocks with loading bay doors to ensure safe loading**
Enforced loading and unloading procedure means that loading operations can only proceed when trucks are in a safe state.
- **Improves efficiency when used with Castell Dockmonitor software**
Manage dock usage to drive and improve operational efficiencies.
- **Removes need for traditional verbal communication**
Traditional communications often used in procedural based systems which can be misheard or misinterpreted and can take more time are no longer essential.
- **Minimal installation time**
The simplicity and flexibility of the Salvo system ensures that it can easily be incorporated into existing working practices.
- **Multiple safety systems for differing valve types**
UK and European valve types available.

Delivering safety across a food factory





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 hazards?
- 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 can not 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 can not 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

BEMF



K



Salus20



DAE



MSI



KSS



KSE



TDI



MBV



KS20



KSSE



TDR



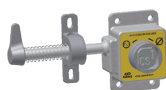
Exchange

X



Access

AI



AIES



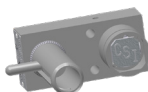
AIS/Hercules



AIE



KE



Olympus



D



Salvo Drive Away Prevention

Salvo Coupling



SGL Lock



Salvo Chock



SCP+ Control Box



Storage Box



Beacon



Door Sensor



Iso-Lok Lock Out Tag Out

Padlocks



*Clasps



*Key/Padlock Cabinets



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



The Future of Safety is Here



SPS China
2F, Building 63
No 421 Hongcao Road, Xuhui District
Shanghai PRC, 200233
China

t: +86 (0)21 6040 7398
f: +86 (0)21 5453 0630

chinasales@castell.com
www.castell.com



Castell Safety International
Tower 185
60185 Frankfurt am Main
Germany

t: +49 (0)69 50 50 47 310
f: +49 (0)69 50 50 47 450

vertrieb@castell.com
www.castell.com



Castell Safety International
The Castell Building
217 Kingsbury Road
London, NW9 9PQ
UK

t: +44 (0)20 8200 1200
f: +44 (0)20 8205 0055

sales@castell.com
www.castell.com



Kirk Key Interlock
9048 Meridian Circle NW
North Canton, OH 47720
USA

t: +1 800 438 2442
f: +1 330 497 4400

sales@kirkkey.com
www.kirkkey.com

A HALMA COMPANY



Q 10297



Corporate Member