



**Cross Ripe**<sup>®</sup>  
Fruit Ripening Technology



ADVANCED TEMPERATURE CONTROL



# World Class Innovation World Wide Installation

**Cross Group is a dynamic company with specialist divisions delivering large-scale projects to a wide spectrum of sectors, including: Commercial and Industrial Refrigeration, Commercial Air Conditioning, Fruit Ripening and Industrial Temperature Control.**

**Today we operate worldwide and provide unparalleled maintenance and service support throughout the UK and Ireland.**

While our origins lie in commercial and industrial refrigeration and air conditioning, the Cross Group has effectively diversified into complementary sectors. Today, our expanded conglomerate boasts an impressive combined annual turnover exceeding £85 million. We remain committed to our core expertise in refrigeration and air conditioning, which forms the cornerstone of our business operations.

Part of the **Cross Group** of companies

**Cross Group** is a global leader and innovator in energy efficient temperature control technologies for commercial and industrial applications.

- + Industrial Temperature Control**
- + Commercial Refrigeration**
- + Food Retail Refrigeration**
- + Fruit Ripening Technology**



**Cross Ripe®**

# The Perfect Ripening Solution

## INNOVATIVE ENERGY SAVING RIPENING SOLUTIONS

- + High efficiency fan motors
- + Reversible air-flow solutions with temperature control to  $\pm 0.1$  degree C.
- + Environmentally friendly refrigeration system, including chilled water - no need for leak detection in ripening rooms
- + Guaranteed consistency of colour and texture with no inspection required
- + Intuitive load adjusting control valves with inverter driven pumps
- + Random access rooms for ripening exotic fruits

## WORLD CLASS INNOVATION & TECHNOLOGY

- + Full service including design, delivery and project management
- + Massively reduced energy and running costs, (up to 50%)
- + High quality manufacturing to deliver a longer system life-span
- + Independently proven energy savings

## EXPERIENCE YOU CAN COUNT ON

- + Over 35 years experience of refining and improving design and technology in banana and fruit ripening
- + Global experience with project delivery across four continents
- + Client credentials with world-leading producers and retailers
- + Existing installations with up to a 25 year life span
- + Specialist, experienced Service Engineers





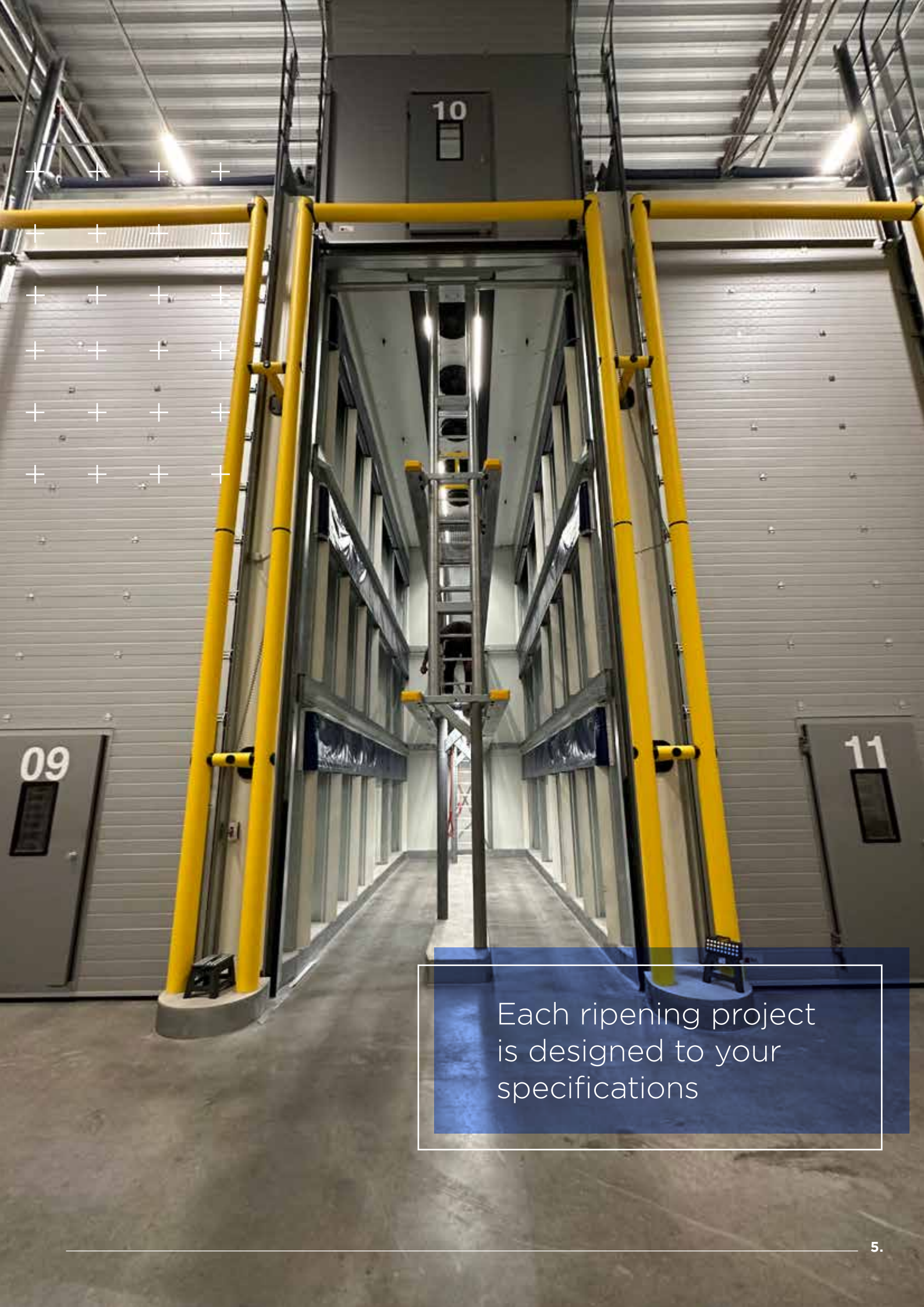
# Controlled Atmosphere Fruit Ripening Rooms

The cooling coils are centrally mounted and run the full length of the ripening chamber. The ripening room coolers operate within a small temperature differential to minimise product weight loss.



Air flowing through the evaporator is circulated into the space between the pallets and the room walls. In conjunction with our sealing system, we can ensure equal ripening throughout the room. Optionally, your system can be fitted with a reversible air circulation system for guaranteed results.

We specify only the most energy efficient motors to minimise power consumption, whilst each solution is designed with ease of maintenance in mind.



Each ripening project  
is designed to your  
specifications





# Advanced Climate Atmoshpere Control



Our ripening system is mounted to the left and right hand side walls giving full access to the full length of the room. Evaporators operate with only a small temperature differential in order to maximise fruit quality. Air flows through the evaporator and is ejected into the space between the pallets and the wall of the room. Special closing curtains stop the air from flowing over the pallet.

Each room has its own independent humidification controller, operating a high pressure, self-cleaning misting system.

Combined with the sealing system of your choice, this ensures equal ripening throughout the entire room. Ripening rooms can be fitted with a two-way air circulation system for even better results. Low energy consumption, thanks to the use of special motors, plus easy maintenance are other key features of our design.

The absence of moving parts translates into low maintenance and operation costs.

Speak to our sales team to discuss your next project.

Call **+44 (0) 28 3752 6090**







# Automated Ripening Facilities



In 2019 Cross Group delivered the world's first fully automated banana ripening facility at a site near London.

It has revolutionised the way we ripen fruit. Requiring 80% less labour, 60% less energy consumption and increasing storage capacity on-site by 40%, the term game-changer, doesn't even come close.

A fleet of intelligently programmed robot pallet taxis and automatic lifts ensures the product is moved efficiently between the intake area and the designated ripening rooms.

Working autonomously from intake to dispatch the solution leverages all of our experience to precisely manage the ripening conditions from start to finish. Perfectly ripened product is synced with your carriers collection schedule, ensuring no product becomes spoiled.

LEARN MORE



Scan to watch the **Cross Ripe®** Automated Ripening Facility solution in action.





Our unique smart robot pallet taxis do all of the hard lifting, removing the need for forklifts and pallet trucks in the storage area and reducing the need for human interaction by up to 80%.

Smart lifts allow the storage area to be extended over multiple levels and allow the fleet of pallet taxis to navigate the most efficient route between ripening rooms and the inbound/outbound area.

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# World Class Innovation & Technology

## Gas Tight Sectional Doors

- + These gas tight sectional doors are suitable for storage rooms and fruit ripening chambers, (including tropical fruit and bananas).
- + Tracks are self-supporting and (depending on the rail system), the door leaf is guided horizontally, vertically, or following the roof pitch.
- + The insulating core consists of CFC-free solid polyurethane foam. The interior and exterior sheet consists of 0.5 mm thick galvanized coated steel sheet.
- + The sophisticated panel connections with special sealing, in combination with the 3 flap gaskets around the door perimeter, ensure optimum gas tightness.
- + Supplied standard with a kick out window that doubles as an emergency exit.



## Adjustable Air Curtains

Each curtain can be operated manually or electrically to the customer's requirements allowing part or full load pallets and further reducing energy costs, while maintaining even air-flow through the fruit produce.

## Side Curtain System

Patented side curtains allows dual direction airflow, ensuring an even distribution of airflow and temperature throughout the room, ensuring even ripening across all product. There are adjustable height curtains for different pallet heights. The absence of moving parts results in low maintenance and operating costs.





Multi-level ripening  
rooms maximise  
available space.



## Packing, Intake & Dispatch Areas

The health, safety and wellbeing of staff cannot be understated in the working environment and we take it very seriously. In addition to taking care of your fruit product, at Cross Group, we care just as much for your people. We provide a comprehensive range of ventilation and climate control functionality for manual process areas and safety barriers to protect workers from machinery and product in transit.

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Push-back racking  
for ease of loading/  
unloading





## Pulsion Airflow Management System

**Cross Ripe®** exclusively offer this unique, patented technology as part of our fruit ripening solution.

Our Pulser system sets the entire air volume in motion, ensuring homogenous temperatures to  $\pm 1^{\circ}\text{C}$  within the ripening space.

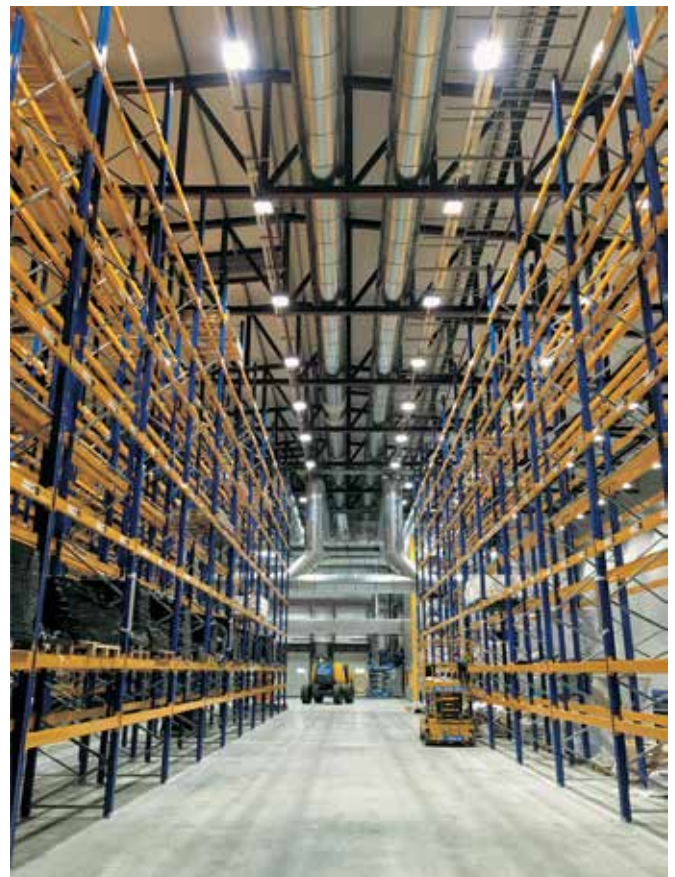
### LEARN MORE



Scan to watch the **Cross Ripe®** Pulsion Airflow Management System in action.

- + Improved air distribution
- + Uniform ripening throughout the chamber
- + Gentle air movement for a more natural ripening process
- + Improved energy efficiency
- + Longer shelf life

In Partnership With



## Electronic Control System

Our bespoke Electronic Control System uses the latest world-leading fruit ripening technology.

- + Developed in conjunction with our in-house team
- + Complete Facility Management
- + Maximises energy efficiency
- + Full remote access & plant interrogation
- + Speeds up maintenance repair
- + Intelligent automated algorithms for lower fan energy consumption



# Energy Efficient







## Easy Maintenance

**Cross Ripe®** requires minimal maintenance and all critical parts are easily accessible for cleaning and maintenance. Our system, with hinged fan plates, allows safe and easy access to all components. The Cross Group has a dedicated, experienced service and maintenance team, which, paired with our Smart Logistics, ensures optimum running of your ripening operation.



## Centralised Refrigeration Packaged Units

The natural choice - we believe in environmental sustainability so our systems have been developed to use natural refrigerant technologies, utilising CO<sub>2</sub>, Water, Glycol, Ammonia and HFC Refrigerants.









# Making Ripening Profitable

**Cross Ripe®** greatly reduces manual handling, forced interventions, energy consumption and wastage from rejects.

Unlike conventional methods, each room can be configured for all types of tropical fruit, providing a more dynamic solution for your business.

With **Cross Ripe®**, you benefit from premium fruit quality, a longer shelf-life, minimal product losses and low operational costs.

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Email **[info@cross-group.org](mailto:info@cross-group.org)**





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Part of the **Cross Group** of companies

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