



Northern Co-Operative Meat Company (NCMC)

Cold Chain Management System

NCMC is recognised globally as an industry leader in red meat processing. NCMC provides customers with a unique opportunity to process livestock (including beef, veal and pork) using the customer's marketing image.

The cold chain is facing many of the same matters that challenge the entire supply chain—serving a global market, being more strategic, driving out costs, and tackling capacity and resource constraints, all while managing the needs of the product. NCMC produces a large range of product and volumes; this has in the past required a greater amount of product handling than is ideal.

-  Casino, New South Wales
-  Advisory services, design, engineering and construction

Project scope

The ASRS system was supplied by Dematic, for installation into the facility designed and delivered by Wiley. A challenge on this project was achieving complete cold chain compliance in relation to the load out. The challenge was combining the functionality of two distinct dock functions into one multi-use dock. The complying dock needed to service both semi-trailers and container trailers.

In a first for Australia, the loading dock system accommodates both shipping containers and Pantech refrigerated trucks in a fully sealed, refrigerated environment. Each loading dock has an 'igloo' that the truck reverses into and a seal encloses the access point to the back of the truck, and now containers, to maintain full cold chain compliance. There was technical difficulty with the type of dock leveler utilised by each vehicle and arrangement of the 'igloo' building structure around it. Usually, to operate a container leveler with a semi-trailer, it does not drop low enough to allow the trailer doors to swing over it and is too wide to avoid clashing with the doors during its operation. In this scenario, a semi-trailer is required to open its doors prior to docking which breaks the cold chain. The solution incorporated changes to the standard container leveler equipment and significantly redesigned of the igloo construction, so that all semi-trailers will maintain cold chain compliance on a container dock leveler.

Business value to client

This project allowed NCMC to manage cold chain requirements through best practice—from the boning room to the loadout. The cold chain management system is comprised of plate freezing capacity, blast chill tunnel, an automated storage and retrieval system (ASRS) and full 'cold chain compliant' loading dock facilities.

The ASRS allows NCMC to better manage product flow, by being able to place small order SKU's in the storage facility and fill the pallet when sufficient numbers are produced; significantly reducing the amount of double handling in palletising. This installation was the first ASRS in a frozen environment in Australia and only the second in the world. The system is capable of handling more than 10,000 cartons/day. Cartons are stored in a single aisle of racks and retrieved using a shuttle system, reducing the need for forklifts and manual handling. The system design allows for capacity expansion by the addition of further multi-shuttle racks. The ASRS, combined with the conveyors, increased efficiencies in chilling and storage, reduced manual handling to improve worker WHS and extended shelf life of products.

Partners and consultants

GB Stainless | Dematic | Milmeq | Retracom



Complex services



Live environment



Automation



ASRS

