

STORAX

VERSATILE STORAGE SYSTEMS



RANGER
AUTOMATED SHUTTLES

The Ramada Storax Group



The Ramada Storax factory was founded in northern Portugal in 1935 by engineer Francisco Ramada. The company became a licenced manufacturer for Dexion Ltd – renowned UK founder of the storage and materials handling industry - in 1958. Their relationship endured for nearly 40 years.

Independent since the late 1990's, Ramada Storax acquired a UK-based company called Barpro in 2001. Having developed an innovative rail-mounted storage system in 1968, Barpro was the pioneer of the modern mobile racking industry and had continued to hone their invention, becoming world leaders over the ensuing 30 years.



When the Ramada Storax Group acquired Barpro in 2001, the company inherited the leading edge technology and know-how that became the springboard to further innovative research and development. Today Ramada Storax export their systems world-wide and are also involved in the creation of pan-European EN design standards.

In 2003 Ramada Storax backed the creation of a new trading division of Storax UK: Storax Racking Supplies. As a stock-holding source of supply-only racking and shelving for trade dealers in the industry, the business is now a well-established and respected supplier in the storage equipment marketplace.



Storax UK are Associate members of SEMA and full members of the Sema Distributor Group.

The Ramada Storax Group plays an active part in the creation of industry standards with the European Federation of Materials Handling (FEM).



RANGER

BY STORAX INNOVATION

Storax Ranger is an ultra-high-density pallet storage system. It carries the European CE mark, which confirms that it complies with all relevant EU legislation. Ranger is designed around the use of one or more intelligent shuttles that are controlled by RF (Radio Frequency) or WIFI communications that interface with programmable software and provide the shuttle with its instructions.



Conceptually similar to Drive-In, the major difference is that in a Ranger shuttle installation the fork lift truck never enters the storage lanes. Instead the truck operator places the shuttle at the front face of the required location and it travels into the lane to perform its required tasks - typically the storage, retrieval or marshalling of pallets.

The shuttle, which is battery-powered, runs on bespoke rails installed within the racking framework: as well as acting as the shuttle's running tracks these rails perform the dual role of supporting the stored palletised loads.

Once it has been deposited by fork truck in the required lane and programmed, the shuttle works autonomously without further human intervention until it has completed its assigned tasks. This leaves the truck and the driver free to carry out other duties or to deploy another shuttle (or shuttles) elsewhere in the installation. Shuttles perform tasks that would otherwise require a fork truck and driver in a conventional Drive-in scheme: this reduces the number of trucks needed while also delivering significant productivity improvements.



Unlike Drive-in or gravity-fed Dynamic racking there is no technical or functional restriction on the tunnel lengths in a Ranger system: the maximum operating length is limited only by the available physical space and/or the operation.





Storax Ranger shuttles can operate with a range of -28°C to + 40°C which means they can operate optimally under ambient, chill or frozen conditions.

As it is the shuttle rather than the fork lift that enters the racking lanes, Storax Ranger permits individual level in the installation and also eliminates the potential for fork truck impact damage, maintenance, down-time and costs.

Because all product handling is carried out on the face of the racking, the practical safe working height of a Ranger installation is typically only limited by the height capability of the fork lift truck. Its compact framework enables higher pallet loads and greater throughput to be achieved when compared with conventional racking.

Provision of a generous 35mm space between the underside of the stored pallets and the top of the shuttle is fitted with a unique, robust and reliable hydraulic lifting system using food-grade oil, and an electric motor underneath, lifts the pallet clear of the rails and performs the required task.



When racking is configured with a single lane and one combined on-load and off-load point, the Ranger provides First-in, Last-out (FILO) stock rotation. Alternatively, Ranger can provide First in, First out (FIFO) stock rotation by having dedicated on-load and off-load points at each end of the racking block.

The Ranger system is designed and manufactured 'in-house' by the Ramada-Storax Group, covering the racking structure, rails, shuttles and shuttles.

Whether it's stock-control, barcode scanning, radio frequency identification (RFID), handling of pallet or creating integrated Warehouse Management Systems, Storax Ranger can be configured as a custom-built, fully-integrated solution.

in a temperature
that they perform
operating conditions.

lift truck that enters
its access to every
so reduces the
thereby minimising

out from the external
working height of
limited by the lift-
in addition, its rigid
and system heights
conventional Drive-in



the shuttle significantly reduces any potential problems from using poor quality pallets. Each
d can handle loads weighing up to 2 tonnes. The shuttle detects the pallet, positions itself

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Several different models of shuttle are available, depending on the precise requirements of the storage scheme. Ramada-Storax offer shuttles that can recognise and identify 7 different pallet sizes, a shuttle that lifts 2 Euro pallets at a time and even one that can carefully handle barrels containing movement-sensitive liquids. There is a Ranger shuttle to suit virtually every application.

One RF remote device can control the activity of up to 6 individual shuttles while a Wi-Fi remote device can control an unlimited number. Each shuttle is fitted with photocells that monitor its movement within the scheme; object sensors on the front and rear of the shuttle detect obstructions or pallets in its way and brushes that sweep the rails during operation are supplied as standard.



The on-load face of each lane is fitted with guide angles to assist with the correct placement of the shuttle, while metal end-stops keep the shuttle captive in the rack during operation.



In general use, under ambient conditions, a shuttle can work continuously for 6 - 8 hours. This may reduce under cold-store conditions.

The batteries, which are a maintenance-free, gel-filled variety, are located under a hinged cover and are simple to remove when they need to be swapped over.

Depending on how many shuttles are in use the batteries can be charged up individually or the scheme can incorporate a battery charging station to provide a ready supply 'on tap'.

As well as maintenance-free batteries, the electro-mechanical elements are also designed to require minimal care to keep them in good operational order.



RANGER

BY STORAX INNOVATION

Recommended maintenance merely involves:

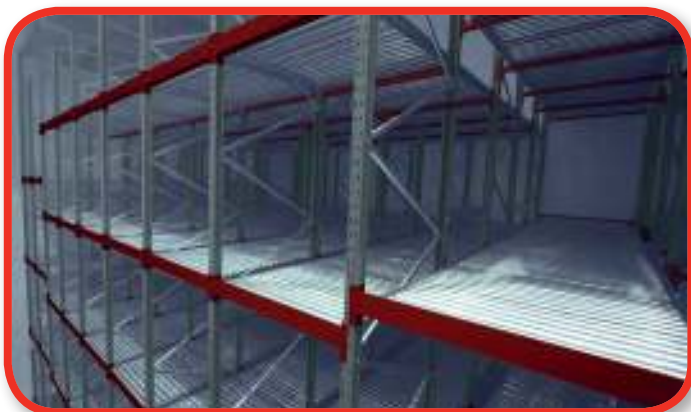
- Cleaning the sensors regularly
- Adjusting the brushes as and when necessary
- Lubricating and tightening the internal chain approximately every 4 months
- Changing the wheels approximately every 18 months
- Servicing the hydraulic system approximately every 5 years

These simple measures are all that is needed to ensure years of trouble-free, dependable service from Storax Ranger shuttles.

Requiring just one annual inspection, 90% of Storax Ranger sites are maintained using in-house resource.



In addition to Storax Ranger, other high-density storage products in the Storax range include Storax Powerack mobile racking (left), Storax Drive-In racking (below) and Storax gravity-fed Dynamic racking (below, left).



STORAX

Engineered
Storage
Solutions

