

AR PAL

SELECTIVE PALLET RACKING



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AR PAL Selective pallet racking (also known as APR - adjustable pallet racking) for palletized loading is a storage system designed to store pallets directly and mechanically using forklift trucks. It is an effective and durable system for heavy loads.

The pallets are accessed directly along structured aisles whose dimensions vary according to

the forklifts. The height of the racking and the distance between the different levels will depend on storage needs, the handling equipment and available space.

The function of the handling equipment varies according to:

– The APR system for Class 400 or Selective Racking.

– The APR system for Class 300 or the VNA (Very Narrow Aisle) System for forklifts for very narrow aisles.

Pallet racking or selective racking systems are determined in accordance with the recommendations of the MHI (Material Handling Industry) and RMI (Rack Manufacturers Institute), of which AR Racking is a member.



**GALVANIZED
PRODUCT**



**PIONEERING
TRACEABILITY SYSTEM**



**WIDE RANGE
OF ACCESSORIES**



**DIRECT AND IMMEDIATE
ACCESS**



**RESISTANCE
TO ADVERSE CONDITIONS**



**100% AUTOMATED
MANUFACTURE**



Advantages

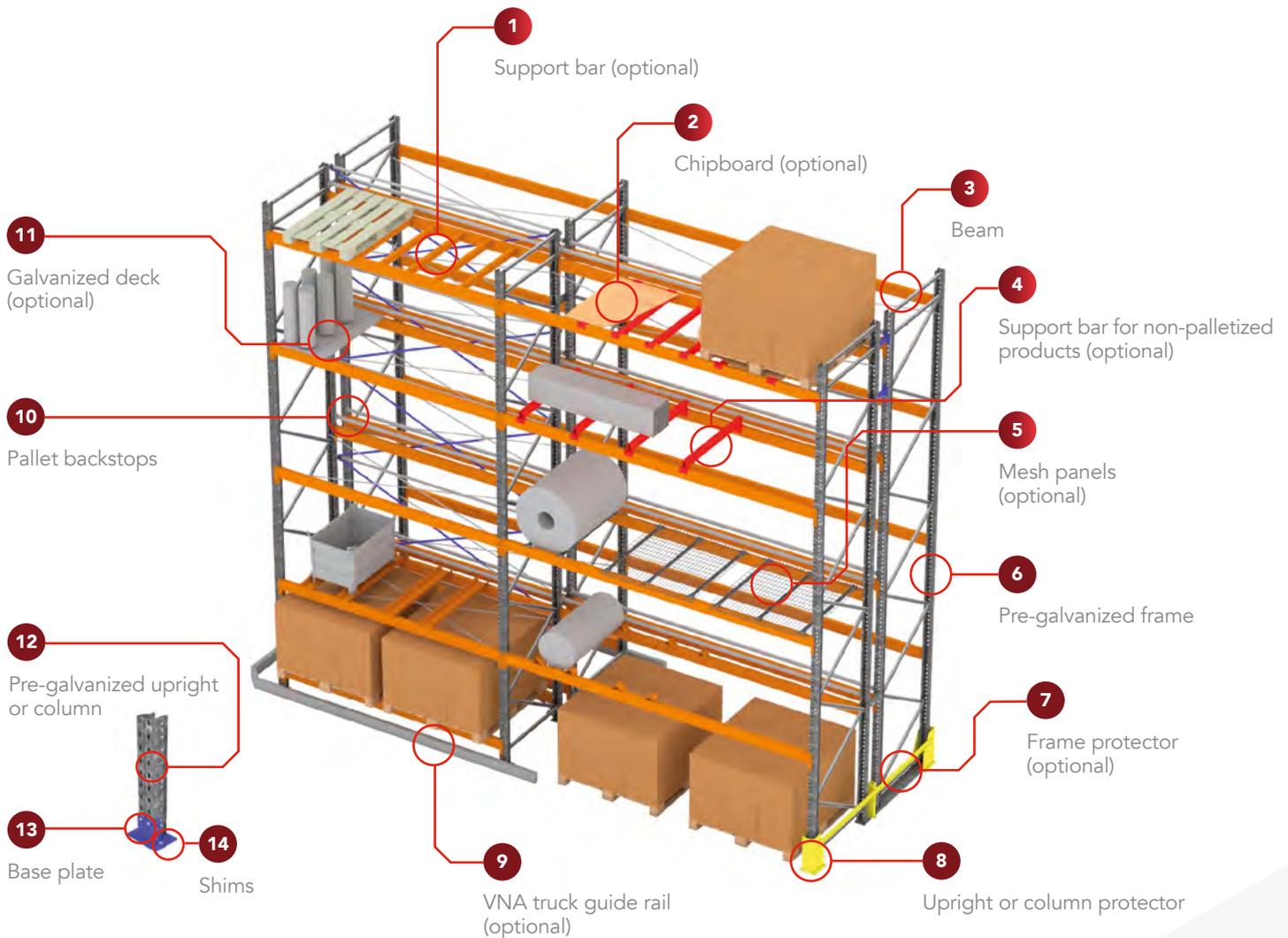
- Allows you to locate each pallet quickly with **direct and immediate access**.
- Rigorous **control** over stored references, as each space corresponds to its unit load.
- **Saves time and effort** in the handling of goods, generating fast stock rotation.
- **Ability to adapt** to changing needs and possibility of storage at great height.
- The **variety of accessories and configurations** available allows you to adapt the racking to any type of load, both in terms of weight and volume.
- Allows **maximum utilization** of space, due to the ease and speed in adjusting the load levels to specific volumes.
- **Modular structure for easy assembly**. The design of the assembly with the different structural elements facilitates its rapid disassembly and removal, and its re-configuration or extension according to new storage needs.
- **Pioneering traceability system** in the sector with the marking of beams and uprights produced in the AR Racking production centre.
- The AR Racking range of uprights / columns and frames is **pre-galvanised**.

Components and accessories

AR PAL systems have a simple structure, consisting of frames, beams and accessories. This system for pallets has a wide range of accessories and components for

the storage of any type of products, such as support crossbeams, support for containers, support for drums, impact protectors, etc., making this type of racking highly versatile.

Discover how our AR PAL system works in this video:



Standard components

- Frames
- Beams

Accessories and other components

- Racks and panels
- Support bars and container supports
- Pallet backstops and protection meshes
- Protections
- Drum and cylinder supports
- Coil supports
- Signs

Standard components

FRAMES

Frames are some of the standard components of AR PAL selective racking systems. These frames consist of 2 columns, their corresponding diagonal braces, upright bases and fixing elements (bolts, nuts...).

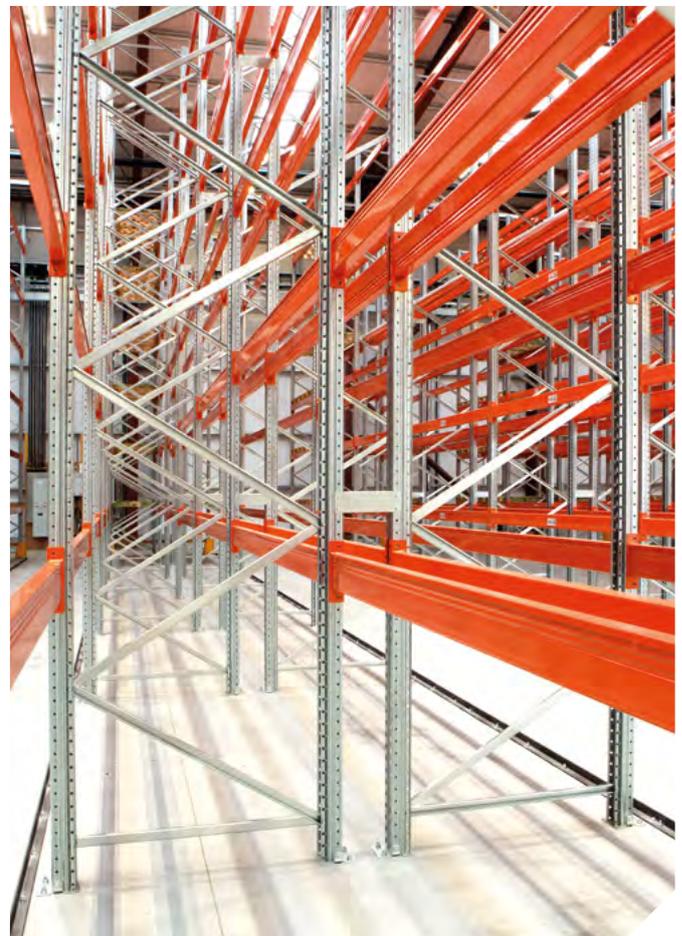
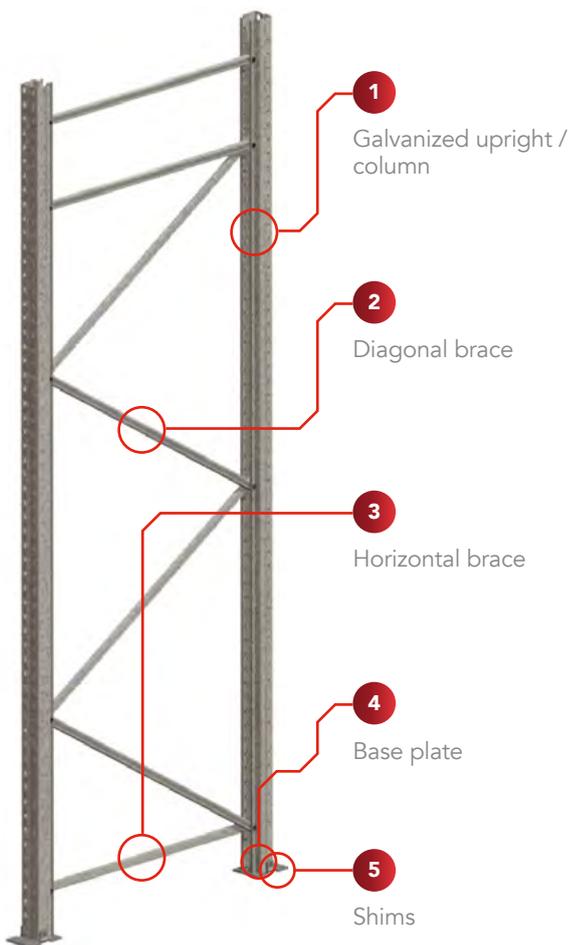
AR Racking has a broad range of frames with a galvanized finish,

which means greater durability and resistance to adverse conditions with respect to the painted finish.

In addition, AR Racking has a system for the identification of its uprights and beams which enables immediate recognition of their design, composition and all the

elements identifying the origin of the component. Hence the traceability of the product is fully guaranteed.

The AR Racking traceability system is a step forward in the company's automation process and in its development towards the industry 4.0 concept.



Galvanized upright

The upright or column, is the main element of the frame and is galvanized. The customer has a wide range of upright sections and lengths available.



Base plate

The base plate is a structural element joined to each column which distributes the load over the floor and allows you to secure the base to it.



Welded base plate

The welded base plate is a component especially designed for frames of greater load and height.



Shim

Element situated under the base plate to level the storage system. This option is used on uneven floors.

Standard components

BEAMS

The beams are horizontal elements that support the load and join the contiguous frames, parallel to the work aisle. They have connectors which fit into the holes of the column.

These connectors designed by AR Racking provide an extremely

firm and safe joint system formed between the beam and upright, increasing load capacities and making the storage system durable.

The extensive range of AR Racking beams covers many types, lengths and load capacities to suit each customer's specific needs.

AR Racking beams have a traceability system that allows full control of their production process, thus enhancing their reliability, safety and efficiency.

Beam for pallets

Orange 2C Beam

The AR Racking orange 2C beam consists of two "C" shaped profiles welded together.

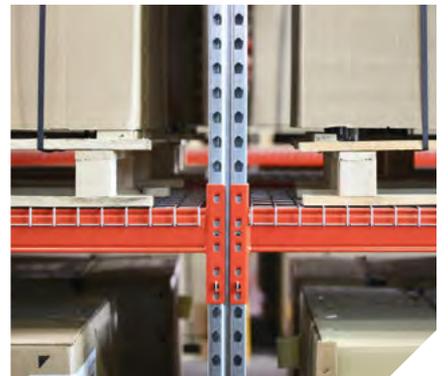
It has a wide range of lengths, widths and resistances to suit each load capacity.



Orange Light Beam

Orange light beams are for light load storage cases.

Its design versatility allows you to use these beams for any type of palletized loads or for picking levels.

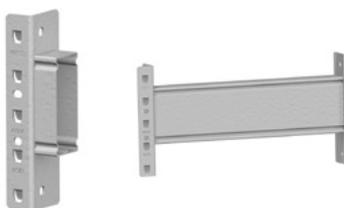


Hot Dip Galvanized Beam

Hot dip galvanized beams have a zinc bath that improves their corrosion resistance.

They are therefore suitable for very aggressive environments, as is the case in warehouses for chemicals or in very saline environments.

As with the light beams, there is a broad range to suit each customer's needs.



Red locking pin.



Standard components

BEAMS

Beam for picking solutions

Orange Z Beam

These types of beams are formed with a "Z" shaped profile.

This special shape allows you to create levels for manual picking systems based on a selective pallet racking solution, incorporating metal, wood or mesh racks.



Safety locking pin

Pre-galvanized standard pin

The locking pin is an individual element that is placed on the connector that joins the beam to the upright and prevents accidental displacement of the beam.

It is an approved component that enhances the safety of the structure.

It is a reliable and simple safety system that enables correct and rapid use with the naked eye.

This pin is compatible with all beams in the AR Racking range. The hot dip galvanized beams use a red locking pin to enable their control from the ground.



Accessories and other components

RACKS AND PANELS

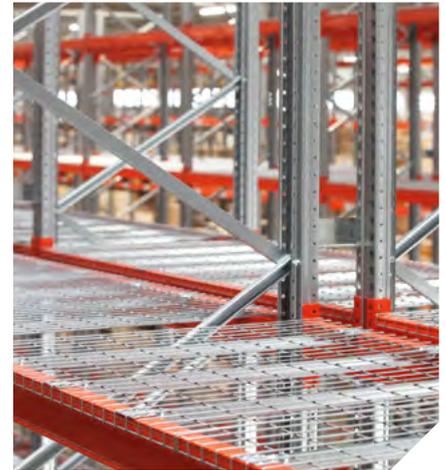
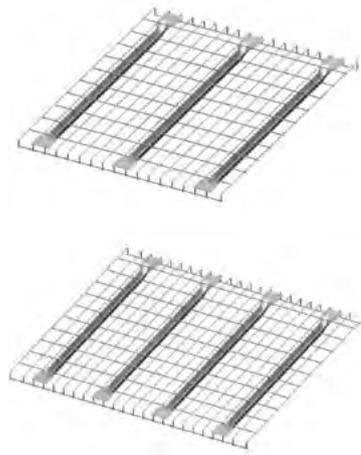
Mesh panel (protection and fall-arrest)

Metal mesh panels are an element used as a load level to support the goods of the pallets and their different loads.

The rectangular mesh is attached to the crossbeams which gives the structure rigidity.

The unit is placed on the AT beams without the need for extra fixings.

Mesher can also be installed for picking, adapting the solution to the measurements and weights of the products required by each customer.



Galvanised deck

AR Racking's galvanized metal decks fit directly onto the beams without the need for extra fixings.

It is an AR PAL accessory used in combination with picking orange Z beams.

The decks can have a smooth or grooved surface.



Chipboard panel

The chipboard panels (also called boards) can be used in various ways in AR PAL racking.

They can be placed directly on the beams with the aid of retainers at the ends for better fixing.

Also, depending on the load, crossbeams must be placed to support the unit load.



Accessories and other components

SUPPORT BARS AND CONTAINER SUPPORT

Chipboard support TM55

Chipboard support TM55 are especially designed to place 22 mm thick wooden boards or chipboards on their upper part, with the wood flush with the height of the beam.

The dimensions and thickness of the crossbeam vary according to project needs.



Support bar T451

The T451 support bars are structural elements fixed perpendicularly to the beams and which enable the placement of pallets on them.

They provide an extra level of safety to prevent the falling of pallets in certain situations.



Non-palletised TNP84 support bar

The TNP84 "Top hat" raised support bars enable the entry of forklifts under the unit load.

They are used in cases in which loads without pallets or bottom runners are stored.

They are the perfect solution for easy loading and unloading.



Container support

Container supports are used when the unit loads to be stored are containers with legs at their ends.

They consist of a set of 2 supports fixed perpendicularly to the beams.



Accessories and other components

PALLET BACKSTOPS AND PROTECTION MESHES

Single and double pallet backstop

Single and double pallet backstops are preventive safety backstops. Their main function is to prevent the pallet from falling in case of an inappropriate manoeuvre. They consist of a metal profile set on top of 2 arms bolted to the sides of the uprights. The single backstop is used for single alignments and the double backstop for double alignments.



Single pallet backstop



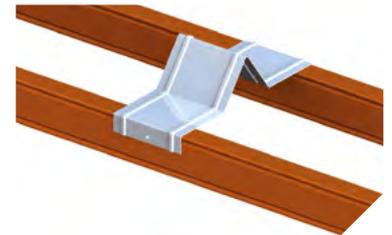
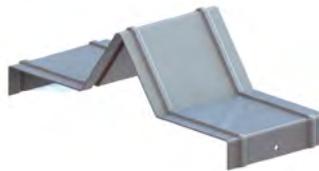
Double pallet backstop



Kibi pallet backstop

This is a structural element that is placed perpendicularly to the beams on double alignments.

Its function is to also warn and prevent the pallet from falling in case of an inappropriate manoeuvre with the unit load.



Floor pallet backstop

The floor pallet backstops are different to the other backstops.

They are fixed to the floor to serve as a warning and to retain unit loads placed on the floor. They can be either single or double.



Single floor backstop



Double floor backstop

Protection meshes

Protection meshes are mesh panels used as a protection element on both the base and on the sides of the racking.

They are a safety element that prevent unwanted displacement or falling of the unit loads.

They can be either nylon or metal. The flexibility of the nylon type mesh enables it to fully recover its original state after any incident.



Nylon mesh



Metal mesh

Accessories and other components

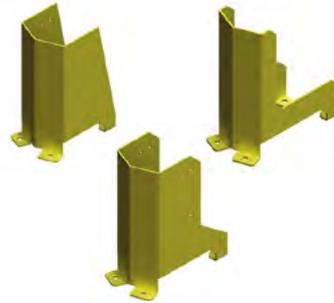
PROTECTORS

Upright protector

They are installed on each of the external columns of the installation.

Their function is to protect the installation from any damages caused by impacts from the forklift.

There are several models to suit each upright.



Corner upright protector

Corner protectors are an alternative option when it is not possible to install column protectors.

They protect the external uprights, are fixed to the floor and are made of sheet metal.

Their design can either be smooth or grooved, according to needs.



Upright reinforcement protector

Upright reinforcement protectors are used in installations in which the upright must be protected at a height that is higher than that reached by the upright protector.

They can be either sheet metal or plastic, and both are fixed to the upright itself.



Side frame protector

The side or frame protectors protect the storage system in its lower side area.

These "C" shaped protections are placed on the outer frames, where impacts are more common. They are normally coupled to the column protectors for greater effectiveness.

There are also side wood protectors, which serve the same purpose.



Accessories and other components

SPECIFIC SOLUTIONS

Drum and cylinder supports

The AR Racking supports for drums or cylinders fit directly on the beams themselves.

Their function naturally is to facilitate the storage of special cylindrical loads, mainly drums.

They consist of a set of 2 elements that are fitted into the beams to support the front and rear of the drum.

Two "L" shaped elements welded to each of the units immobilise the cylindrical load on the rack.

This adapted support allows you to handle the loads while stored in complete safety.



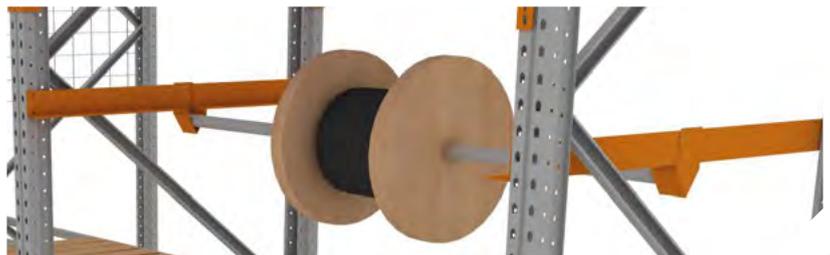
Coil supports

The coil supports enable the simple storage of any material wound on the spools (cable, rope, cloth, etc.).

These side supports require a central metal axle on which the spools can rotate.

The side coil support is fixed to the sides of the frame. Two parts placed in parallel are needed for their operation.

The coil storage racking make the AR PAL system versatile and usable with other storage systems.



Accessories and other components

SIGNS

Markers

The markers are rectangular metal plates that are placed on the external parts of the racking to indicate with letters and numbers the different aisles of the installation.

The plate is fixed to the upright in different ways as required.



Load warning notice

The load warning notice is a component fixed in visible places of the structure to provide personnel with information for the safe use of the storage system.

It is normally fixed to the outer frames of the installation.

The following appears on the warning notice: safety warnings, reference to the storage system, load capacities and manufacturer and distributor contact information.

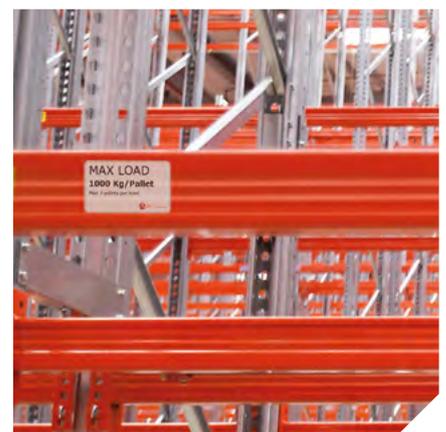


Vinyl beam load sticker

The vinyl beam load sticker is an identifier indicating the load capacity of each beam.

This helps ensure safe use of the storage system, reducing risks and any confusion when loading and unloading.

The vinyl beam load sticker is an adhesive that is placed directly on the beam.



AR PAL PROJECTS



WHY CHOOSE AR RACKING?

At AR Racking we are committed to offering high-quality assured storage solutions to our customers, providing a comprehensive service throughout the whole process with the main objective of achieving the full satisfaction of our customers by solving their storage needs.

All this is possible thanks to our automated and state-of-the-art facilities, and highly qualified personnel with extensive experience in the sector.



Quality

- 100% Automated production centre
- Corrosion-resistant galvanized product
- Traceability system



Guarantee

- 5 Year guarantee in AR Racking storage systems
- Quality assurance guaranteed by European standards
- Grupo Arania, with more than 80 years of experience



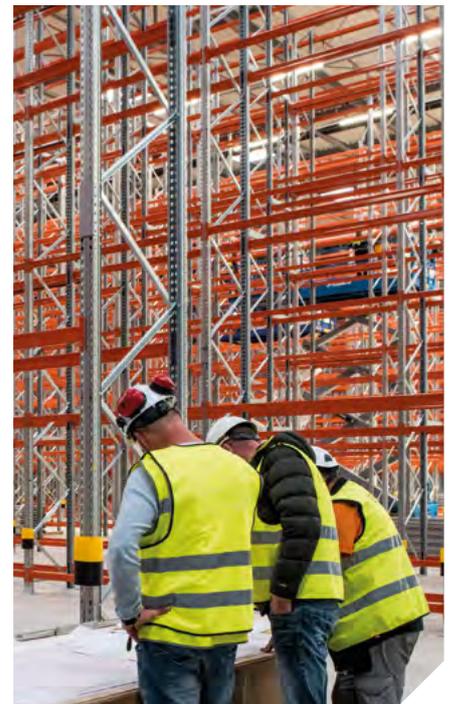
Comprehensive service

- Planning, design, manufacturing and installation
- Specialized international customer service
- Efficient delivery dates



Customer satisfaction

- Customers from more than 60 countries
- More than 100 satisfied international distributors
- Control of and improved customer satisfaction



INNOVATION AS A MATTER OF PRINCIPLE

AR Racking designs and manufactures high-performance racking, complying with the most rigorous international standards. Continuous improvement and adaptation to changes are a vital part of the company's philosophy, identifying market needs and incorporating them into the different products from the start.

AR Racking's industrial experience has broadened through continuous development plans implemented in every link of its production chain: from product design and production through to final installation and maintenance.

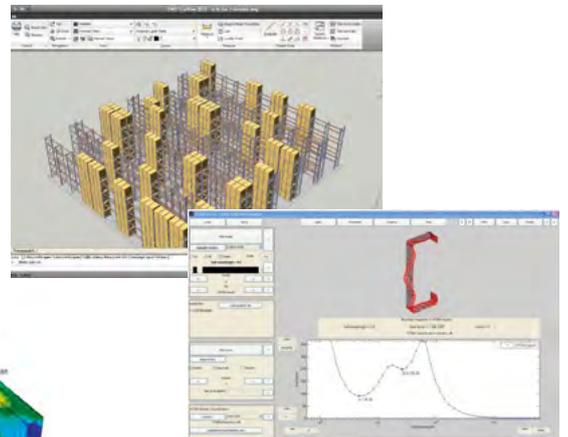
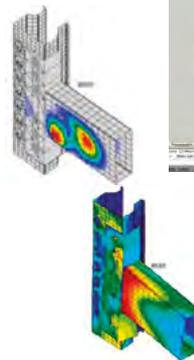
Our approach is simple: we always propose a unique, outstanding and innovative offer, and incorporate all the details needed to offer the best project and specific advice for any requirement.



R&D&i DEPARTMENT

AR Racking has a technology center dedicated exclusively to R&D&i activities, as well as an advanced engineering projects development area, which allows us to respond appropriately to more demanding logistical requirements.

The AR Racking technical area continuously tests and analyses products and materials to improve their performance; it simulates, calculates and researches (with specialised software) the effectiveness of the geometries, and makes full structural calculations on the behaviour of systems already installed in different situations.



STATE-OF-THE-ART PRODUCTION CENTER

We have a 376,736 ft² production centre in Tudela, Navarra (Spain), equipped with the most advanced technology. The production process is fully automated: it incorporates latest generation profiling machines with continuous cutting process and laser measurement control, welding centres, painting and packaging processes, all fully automated, guaranteeing the highest quality parameters.





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