



Selective Pallet Racking
Working Load
Operation & Maintenance



Storage Technology

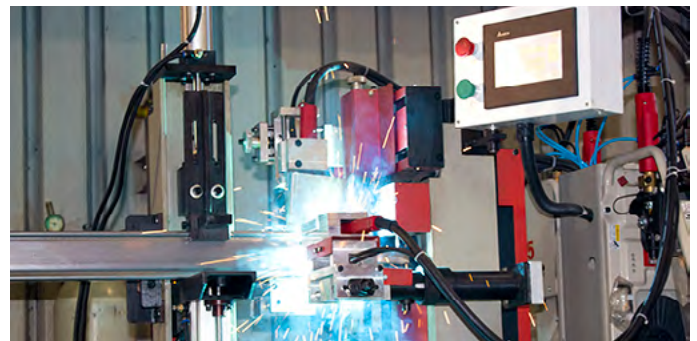
APC Storage Technology Warehouse Solutions Catalogue

apcgroup.com.au

WHO WE ARE

APC is a proudly Australian company established in 1972 to provide building, construction, warehouse and office solutions to a variety of industries. Today we have our head office and main manufacturing hub in Perth along with offices and warehouses in Melbourne, Sydney, Brisbane and Auckland. Our projects are delivered across the Australian and New Zealand regions, as well as further afield such as The Middle East, Africa, Europe and the Asia Pacific Region.

APC is an engineering company and an Australian Storage Equipment Manufacturer for the Supply Chain, Logistics, Defence, Government and Commercial Industries.



WHAT WE OFFER

APC offers our clients a complete Design and Engineering Service, ensuring we provide the best 'fit for purpose', flexible, cost-effective and safe designs. Our engineering team is comprised of rack industry experts that have many years of design and engineering experience. We utilise the latest structural analysis software on each racking system we design with all components being validated through physical testing and further structural analysis to industry standards.

- ▶ Our purpose is to create competitive advantages for our customers by engineering efficient, reliable and cost-effective solutions that can grow and change with their businesses.
- ▶ We have specialised in delivering these high-quality systems for over 50 years, facilitated by our national sales & support network and Perth manufacturing hub.
- ▶ Our comprehensive product solutions & project realization processes are backed by our high levels of ISO accreditation.
- ▶ Our Model is not as a "commodity supplier" but to value-add by identifying the correct storage medium & layout to the stock profiles; whether it be manual, semi-automated or fully automated racking structures. This is a key feature as a design & engineering manufacturer whereby we co-design with our customers.



Who Makes up Our Team

- ✓ Dedicated Project and Sale Consultants
- ✓ Technical Design and Engineering Experts
- ✓ Experienced Project Managers
- ✓ Qualified Installation Teams
- ✓ Certified Rack Inspectors
- ✓ ISO Accredited Project Delivery

AUSTRALIAN MADE



Licensee ID number: 11494

The famous Australian Made, Australian Grown (AMAG) logo is the true mark of Aussie authenticity. This is Australia's most trusted, recognised and widely used country of origin symbol which is underpinned by a third-party accreditation system. This ensures products that carry the logo are certified as 'genuinely Australian'.

APC is proud to be certified with AMAG for our Pallet Racking and Shelving solutions.

APC Storage Technology is a wholly-owned and operated Australian business that offers a complete Design and Engineering service to our clients looking for Pallet Racking or Shelving Solutions for their businesses.

APC pallet racking and shelving solutions are designed, engineered and manufactured locally here in Australia, by Australians and with Australian steel. This ensures we provide our customers with the most 'fit for purpose', flexible, cost-effective and Australian compliant designs.

APC's racking and shelving solutions are manufactured from high tensile, high yield strength Australian Bluescope Steel.

UPRIGHT FRAME MATERIAL

A critical aspect of good rack design is the strength and durability of the upright frame. For this reason APC utilises this high strength and high performance material from BlueScope.

With a minimum guaranteed yield strength of 450 MPa and a Zinc coating thickness of 350 grams per square metre, this material is perfectly suited to our uprights posts and braces.



BEAM MATERIAL

Specifically designed for structural sections, this high strength material has a minimum guaranteed yield strength of 450MPa and is ideal for APC's double crimped box beams.

End connectors are multi-stage processed from BlueScope extra formable steel with a guaranteed yield strength of 400Mpa. These are then robotically welded to the box beam sections to provide a finished product with superior strength and impact resistance.

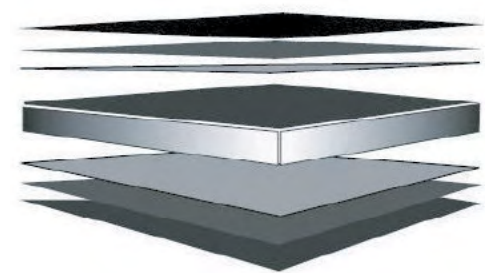


SHELVING MATERIAL

COLORBOND® IFS pre-painted steel is specifically designed by BlueScope Steel Limited for use in steel shelving products.

This uses a base substrate of high strength zincalume coated steel with a minimum guaranteed yield strength of 300MPa. An in-line process provides the high quality Colorbond® coating which is the same process used for the high performance products used externally for the building industry.

Specially designed and fully automated processing equipment allows APC to manufacture their Unishelf® components from this highly durable material.



RACKING SOLUTIONS

SELECTIVE PALLET RACKING

Selective Pallet Racking provides direct access to every pallet. Ideal for storage of stock with a large variation in product lines.

- ▶ An optimal solution for palletised products with a wide variety of SKU's
- ▶ 100% pallet accessibility
- ▶ Various racking configurations can be engineered
- ▶ Accommodates variable pallet heights and sizes
- ▶ Compatible with most material handling equipment
- ▶ Constructed from Australian roll-formed steel
- ▶ Ensures good stock rotation
- ▶ Wide range of accessories available
- ▶ Engineered outdoor applications are also designed by APC



DOUBLE DEEP PALLET RACKING

A higher density racking that reduces the number of aisles required and maintains 50 percent pallet accessibility.

- ▶ Guide rails assist pallet operation
- ▶ Ability to store multiple pallets quantities of each product line
- ▶ Suitable for FMCG stock management
- ▶ Adjustable beams to cater for varying pallet heights
- ▶ Various racking configurations can be engineered
- ▶ Requires specific material handling equipment



RADIOSHUTTLE™ RACKING

RadioShuttle™ Racking is a storage system that combines extremely high storage density with improved pallet and pick face access. Operated by a remote controlled satellite.

- ▶ Various racking configurations can be engineered - depths of 42 pallets have been achieved
- ▶ Can store up to 100% more pallets in the same space
- ▶ Solutions available for full or semi-automated warehouses
- ▶ High-density storage
- ▶ Controlled through remote satellite
- ▶ Suitable for FIFO and FILO stock management
- ▶ Enhances operator productivity
- ▶ Suitable to operate in temperatures from -30 to 40 degrees Celsius
- ▶ Eliminates need for operator to enter rack



DRIVE-IN RACKING

Drive-In Racking is a manual high-density warehouse storage solution.

- ▶ Various racking configurations can be engineered
- ▶ Forklift access inside the racking
- ▶ Pallets are placed on structural rails
- ▶ Suitable to operate in temperatures from -30 to 40 degrees Celsius
- ▶ Suitable for FILO stock management
- ▶ Flare entry rails assist in operator access into racking
- ▶ Up to 70 per cent more storage within the same floor space



RACKING SOLUTIONS

CARTON LIVE STORAGE

Gravity-fed picking storage system for hand-loaded cartons that increases picking speeds and accuracy while reducing floor space consumed.

- ▶ Gravity-fed castor wheel racking system
- ▶ Increases order picking performance
- ▶ Operates on a FIFO system
- ▶ Reduced congestion as pickers and re-stockers work on separate aisles
- ▶ Various load capacities are configurable
- ▶ Can be integrated into pick to light systems
- ▶ Entry and full-length guides available to separate SKU's
- ▶ Can be integrated into automated solutions



PALLET LIVE STORAGE

A gravity-fed, high-density storage system that uses specialised wheels or rollers to convey and accumulate pallets within a storage module.

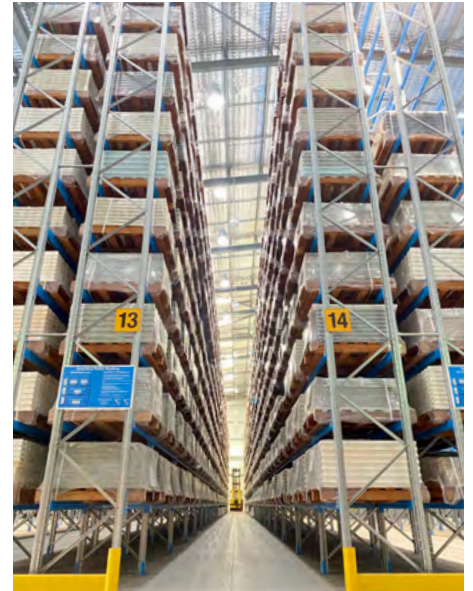
- ▶ Gravity-fed applications usually for higher volume products
- ▶ Predominantly used in manufacturing environments with large volumes of the same SKU.
- ▶ Operates on a FIFO system
- ▶ Reduced congestion as pickers and re-stockers work on separate aisles
- ▶ Various load capacities are configurable
- ▶ Can be used to stage orders for shipment
- ▶ Next pallet automatically presents itself to the pick face



NARROW AISLE RACKING

Effective racking system for increasing storage by reducing aisle widths, optimising floor space and warehouse height, while still providing direct access to stored products.

- ▶ Increased storage density due to floor and warehouse height optimisation
- ▶ 100% pallet accessibility
- ▶ Specialised equipment is required
- ▶ Higher tolerance floor load may be required
- ▶ Various racking configurations can be engineered
- ▶ A perfect system if space is limited
- ▶ Can be configured for pallet storage, carton picking and bulky goods
- ▶ Wire-guided and rail-guided options
- ▶ Adjustable beam height for varying stock heights



CANTILEVER RACKING

Cantilever Racking is designed for the storage of long or irregular loads.

- ▶ Ideal for long, irregular loads such as steel, timber and piping
- ▶ End-stop pins keep loads secure
- ▶ Adjustable arms allow for varying clearance requirements
- ▶ Powder-coated and hot-dipped galvanised finishes available
- ▶ Various racking configurations can be engineered
- ▶ Commonly used in narrow-aisle configurations

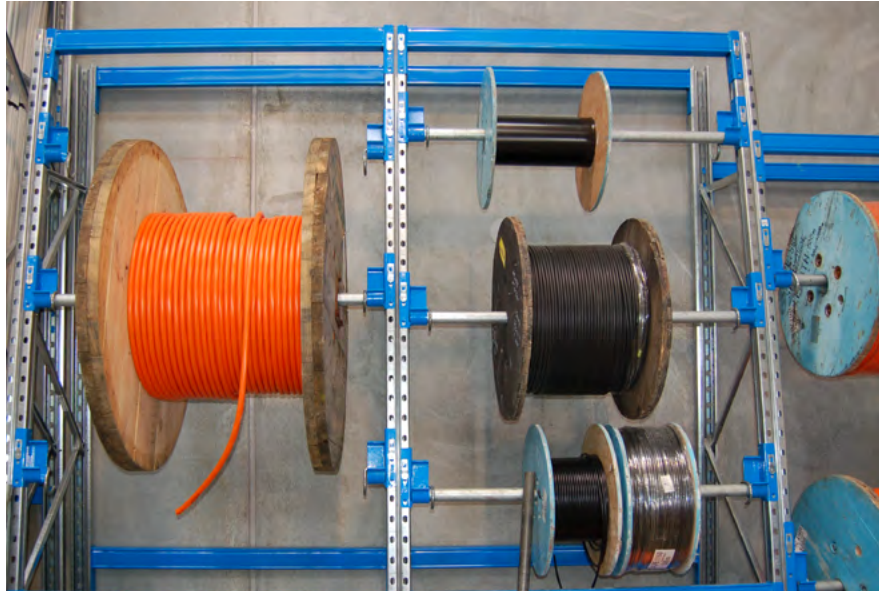


RACKING SOLUTIONS

CABLE RACKING

Purpose-built to store cable drums allowing for quick and simple access to the product. It is an easy to use system that caters to different sized drums.

- ▶ Unique safety hook that locks the cable drum in position and prevents accidental dislodgement
- ▶ Various load capacities available
- ▶ Adjustable storage levels
- ▶ 100% coil accessibility
- ▶ Engineered for manual and mechanical de-coiling operations



CONDUIT RACKING

Conduit Racking is designed for the vertical storage of products such as piping and timber.

- ▶ Easy visual stock control and access to product
- ▶ Stops smaller sections of the product being lost at the back of the unit
- ▶ Typically involves a SKU location divider
- ▶ Fully engineered to accommodate the real horizontal loads



UNI-SHELF® - STEEL SHELVING

APC Uni-Shelf® is a simple yet versatile storage system that can be easily added to or reconfigured, making it ideal for any growing business.

- ▶ Ideal for small parts picking
- ▶ Shelves can be adjusted in 25mm increments for varying product heights
- ▶ Various shelf load capacities available
- ▶ Can be integrated into multi-tiered structures and zone picking systems
- ▶ Range of accessories to increase storage efficiency and functionality
- ▶ Made from Australian Colorbond® BlueScope Steel
- ▶ Can be converted into mobile shelving (APC AisleSaver®)
- ▶ Compliant with the ASI Industry Guide for Hand Loaded Steel Shelving, Design & Installation and relevant Australian Standards



UNI-SPAN® - LONGSPAN SHELVING

APC Uni-Span® is a strong and durable storage solution, suited to the storage of large, moderate weight, hand-loaded applications.

- ▶ Ideal for general storage applications
- ▶ Clear display and access to stored items
- ▶ Can be integrated into multi-tiered structures and zone picking systems
- ▶ Shelves can be adjusted in 50mm increments for varying product heights
- ▶ Various shelf load capacities available
- ▶ Shelf inserts are available in particle board, melamine, mesh and galvanised sheet steel
- ▶ Compliant with the ASI Industry Guide for Hand Loaded Steel Shelving, Design & Installation and relevant Australian Standards



RACKING SUPPORTED MEZZANINE

The ultimate system in utilising vertical space, creating multi-tiered-levels.

- ▶ Increases usable floor space and storage volume
- ▶ Engineered to meet your exact needs, supported by APC Selective Pallet Racking
- ▶ A free-standing system, so the system can be relocated if needed
- ▶ Compatible with Uni-Shelf® and Uni-Span® Shelving
- ▶ Flooring offered in steel grating or structural timber
- ▶ Fully engineered by APC to meet Australian Standards and Building Code of Australia requirements



STRUCTURAL MEZZANINE

Fabricated with hot & cold rolled steel sections, these heavy-duty multi-tiered structures are designed and engineered for static and dynamic loads.

- ▶ Optimises building height by creating multi-tiered levels
- ▶ Offers wider spans compared to Racking Supported structures
- ▶ Can be used for additional office space or to increase shelving and rack storage
- ▶ Easily integrated with a range of products such as chutes, conveyors and automated systems
- ▶ Suits various applications including designs required in seismic environments
- ▶ Fully designed and engineered by APC to meet Australian Standards and Building Code of Australia requirements
- ▶ Utilises vertical space above fixed machinery



APC AUTOMATION SOLUTIONS

APC is a leading designer, engineer and supplier in the warehouse automation industry. To ensure we provide our customers with the most scalable, safe and compliant automation solutions, precision engineering is used throughout the design and engineering process to meet the required tolerances.

APC has engineered and delivered a wide range of automated solutions, including:

- ▶ ASRS
- ▶ Mini-Load
- ▶ RadioShuttle™ Racking
- ▶ Conveyor Systems



APC RACKING PROTECTION

Keep your warehouse safe with the correct rack protection. See below for a small selection of what is available.



BodyGuard®

Design that absorb impacts through the guard rather than the upright.



Angle Guard

Designed to deflect frontal impact whilst minimising loading obstruction.



Corner Guard

A compact design that protects the upright corners.



End Frame Barrier

A welded barrier designed to protect aisle ends.



Armco Railing

A system of traffic management to protect pedestrians, goods and buildings.



Floor Channels

Elevates racking posts off the warehouse floor to reduce damage from MHE and assist pallet placement.

APC RACK INSPECTION SERVICES

APC'S Rack Inspection Service has been designed in accordance with the recommended safety guidelines from the Australian standard for Steel Storage Racking (AS4084:2023). The inspection covers all types of static warehouse storage including pallet racking, shelving, cantilever racking and mezzanines.

Benefits of an APC Rack Inspection:

- ▶ Comprehensive professional inspection
- ▶ Certified and experienced inspectors
- ▶ Inspection and remedial work programmed to suit operations
- ▶ Detailed inspection report
- ▶ Prevention of damage to people or goods
- ▶ Extends the life span of your storage equipment
- ▶ Early risk discovery minimizes future repair costs
- ▶ Reduces risk of injury to warehouse staff



WAREHOUSE ACCESSORIES

APC offers a wide range of accessory products to enhance convenience, safety and product performance of your storage solution. See below for a small selection of what is available, for more details get in contact with our sales team.



High-Density Cabinet

Adaptable high-density storage, ideal for storing tools and small parts.



Work Benches

A versatile, heavy-duty system that can be customised with either particle board or steel benchtops.



Pallet Cages

With various designs available, APC's cages offer a space-saving and cost efficient warehouse storage system.



Parts Trays

A simple solution to organise small parts and accessories, designed with a rear lip to allow for clear visual stock control.



Rack Labelling

Labelling systems that allow the tracking and identification of each pallet location within a warehouse.



Traffic Management

A range of traffic management solutions to promote safety through traffic and pedestrian segregation.



Gates

APC's range of gates provides efficient yet safe access to all users especially during loading and unloading of goods.



Personal Lockers

APC's Personal Lockers offer a compact and secure personal storage solution.



Office Storage Solutions

APC offers a large range of office storage solutions, including storage cabinets, under desk pedestals, filing cabinets and much more.

CERTIFICATIONS

ISO Certification

At APC, we hold ourselves to extremely high standards in regard to OH&S, quality and environment. To ensure our systems are operating at the highest levels, we have attained the following certifications:

AS/NZS 4801:2001 & ISO 45001:2018 – OHS Management System

APC has adopted national and international best practices in our systematic approach to health and safety management, by focusing on a “proactive” approach rather than “reactive” controls. Our commitment to obtaining certification to both relevant health and safety standards ensures we meet and understand our obligations to our staff and customers alike.

ISO 9001:2015 – Quality Management System

APC’s QMS focuses on continuous improvement in customer service to our clients, along with the delivery of quality products and services that are benchmarked to the highest industry standards. By following our QMS and lean manufacturing principles and processes, we are able to control quality from design through to project completion.

ISO 14001:2015 – Environmental Management System

APC’s EMS not only ensures we meet legislative requirements and compliance, but gives us the ability to identify cost savings with greater emphasis on “resource, waste and energy management” minimising our environmental footprint. Customers can be confident that our EMS gives us the structured framework to quantify, monitor and control the impact of our operations on the environment, now and in the future.

We are committed to engaging with our employees and customers alike to continuously improve our certified management systems throughout our business.





PROJECT DETAILS

Application: Mining, oil and gas

Locations: Australia, Africa (Ghana, Senegal, Côte d'Ivoire)

BRIEF

APC Storage Technology is an industry leader in the engineering, manufacture and supply of pallet racking and shelving systems for mining and industrial settings. We offer a complete storage solution from consultation, design, manufacturing and engineering, through to project management and installation.

With over 50 years in the industry, our wealth of experience ensures you receive the best solution for your project that is on time and on budget.

The quality of our processes and products are what ensure our customers receive high quality products every time APC works on a project.

To ensure that our quality truly is as high as we say, we are constantly testing in-house and externally through third parties. All APC storage solutions are designed, engineered and manufactured to all relevant Australian OHS Standards.

SOLUTION

APC proudly uses Australian Steel for its racking. Our clients benefit with stronger design & manufacturing lead-times as well as solutions that are designed to strictly conform to Australian Standards and the Building Code of Australia.

APC Project Management is another strong feature of the turn-key service we offer and this is underpinned by our ISO accreditations where we manage & execute the multiple disciplines of design, engineering, fabrication and on-site construction. Our accreditation to AS/NZS 4801:2001 and ISO 45001:2018 Occupational Health & Safety Management Systems also ensures we implement the strongest levels of OHS on all sites that we operate on.



Storage Cabinets Incorporated into Racking



Multi-Tiered Structures



Cyclone Rated Outdoor Racking

PROJECT DETAILS

Application: Warehouse, logistics, factories, commercial.

BRIEF

APC projects are carefully coordinated with our clients through our engineering, designing, modeling and installation teams, to ensure there is minimum disruption to new builds and their trades, as well as for existing businesses which are required to continue operating for the duration of the project. APC will continue these communications with all the affected stakeholders throughout the full duration to ensure the projects are managed effectively and are well orchestrated.

APC utilises its Product Realisation and Planning process (a part of APC's ISO 9001:2015 accredited quality management system) to map out the project sequence of complex systems. including a shelving pick module enclosed in a structural mezzanine which incorporated a powered conveyor system, carton live storage and bulk storage (Narrow Aisle Pallet Racking).

SOLUTION

Our overall solutions are designed to meet the building code of Australia and relevant Australian Standards complete with APC's engineering certificates of compliance.

By going through an extensive consultation phase, APC can provide a Combination System Solution that use our clients operational data such as: SKU profiles, invoices per month, lines picked per bay, inbound container activity and cartons dispatched per month (amongst many others). This allows us to create systems that are tailored to existing needs whilst also having a provision to accommodate future growth.

- Uni-Shelf®
- Custom Stair Railing
- Pivot Gate
- Carton Live Storage
- Narrow Aisle Selective Pallet Racking
- Conveyor System
- Open Storage Floor
- Floor Grating



PROJECT DETAILS

BRIEF

Our client is the third-largest Food & Beverage company globally. The production facility feeds directly into their warehouse for storage before distribution. Half of their existing warehouse was taken up by Selective Pallet Racking, with the other half being used as block stacks of pallets 2-3 high.

They were eager to explore options to use the best practice and the latest technology to maximise their storage capacity of the existing warehouse. This would remove their need for off site storage, increase warehouse efficiency and reduce the risk of damage to the product from double and triple stacking on the floor.

In investigating their options the APC Storage Technology RadioShuttle™ was highlighted as having been an effective solution for their NZ facilities and as a great option for the Brisbane warehouse.



SOLUTION

With a target to maximize the pallet storage capacity in the available footprint, APC set to work with our local team on the ground and the design and engineering team to optimise the layout by carefully measuring the existing site and locating the finished layout in the optimum location of the warehouse. The team also analysed the data on product lines and forklift travel times through the process from leaving production to dispatch to ensure that the storage volumes and pick faces were maximised.

The solution proposed by APC was for 12 sections of 7 lanes by 32 pallets deep and 6 pallets high of RadioShuttle Racking with a total capacity of just over 16,000 pallet locations using 8 RadioShuttles. The rack was designed to a depth of 32 Pallets to provide maximum density for best use of the footprint and taking into account the goods inwards from production and outbound to dispatch and 6 pallets high to best utilise the available height in the warehouse. Installation of the racking system required a large amount of coordination. As this was an existing warehouse, the install needed to be completed in a prompt timeline with a progressive hand over so there would be minimum disruption to normal operations which were further complicated by the COVID-19 global pandemic.

APC was able to work closely with the clients team to set up an efficient and safe installation while keeping all staff on site protected.

Temporary fencing was used as a physical barricade to isolate the work area. We were able to hand over 1,344 pallet locations per week to the client by moving the fencing away from the recently completed racking and onto the next stage, making for a smooth transition for their use.

Standards

A combination of Australian and Global standards and specifications are used by our engineers to design and test our components, connections and systems. These include but are not limited to the following;

AS/NZS 4600-2018 Cold Formed Steel Structures
AS 4100-2020 Steel Structures
AS 4084.1. -2023 & AS 4084.2. -2023 Steel Storage Racking
AS/NZS 1170.0-2002 Structural Design Actions
FEM 10.2.09 Design of Cantilever Racking - 2017
SEMA (Storage Equipment Manufacturers Association) Code of Practice for the Design and Use of Cantilever Racking Systems
ANSI MH16.3-2016: Specification For the Design, Testing and Utilisation of Industrial Steel Cantilevered Storage Racks.
FEM 10.2.07 Design of Drive-In and Drive Through Racking: Design Code - 2012
SEMA (Storage Equipment Manufacturers Association) Code of Practice for the Design and Adjustable Pallet Racking
ANSI MH16.1-2012: Specification For the Design, Testing and Utilisation of Industrial Steel Storage Racks.
ASI Industry Guide 2014 - Hand Loaded Shelving
SEMA – Code of Practice for the Design of Low Rise Static Steel Shelving
SEMA – Shelving Users Guide
FEM 10.2.06 Design of Static Steel Shelving - 2014





Storage Technology

**Do you need help planning
a project?
Contact us today!**

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