

1.2. PROJECT SUMMARY – YOUR SOLUTION

All the solutions at Dexion are bespoke to the operational requirements of each business. It is our aim to assess all the necessary information to formulate a solution that achieves your current business requirements, allows for incremental growth, has the flexibility to adapt to any market changes or purchasing strategies and reduces overall 'lifetime' costs.

The solution provided in this proposal follows the above criteria and is in accordance with project timescales discussed. Dexion has a proven track record in supplying storage solutions that are delivered and installed on time and on budget, with no hidden charges.

In compiling our proposal, we have sourced equipment at competitive prices from our Group factories, sub-contractors and alliance partners ensuring you receive quality equipment and services at commercially competitive prices.

2.0 PROPOSED SOLUTION

2.1. DEXION P90 PALLET RACKING

Your solution includes our P90 pallet racking system, which is manufactured in-house under the strict quality measures of ISO 9001 together with the QAS 2000 certificate, which relates specifically to storage equipment.

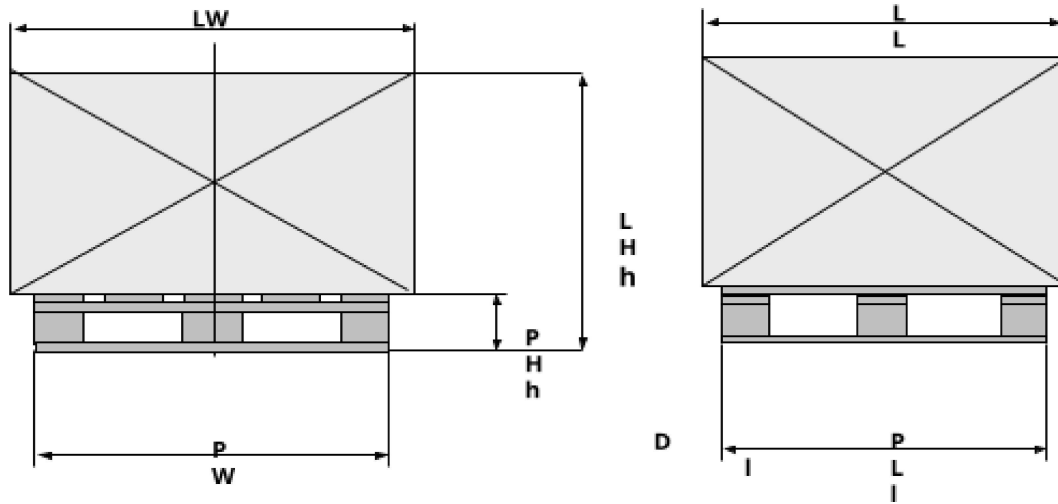
Dexion P90 is the newest pallet racking system available in the marketplace. Specifically designed to comply with the latest European Standards FEM (EN 15512) P90 is the 'Next Generation' of pallet racking. Incorporating new manufacturing techniques, the P90 system is unrivalled in forward thinking design, whilst retaining all operational benefits of the preceding 'market leading' system – Dexion Speedlock Mk3.

The Dexion P90 system can be offered in various finishes, ranging from our fully pre-galvanized finish to compliment the warehouse surroundings and reduce lighting costs due to its reflective qualities, through to a fully painted finish. A mixture of the two can also be specified, such as pre-galvanized uprights and painted beams, to provide a colour contrast to your operators. This allows our customers to specify a truly bespoke racking system that reduces operational costs, offers complete flexibility and blends seamlessly into any environment.

Dexion P90 has been designed with a comprehensive range of accessories that can assist your operation and offer reduced 'lifetime' costs. If you would like to discuss these or if you require additional information, please let us know.



2.1.1. Pallet Details



Pallet : Area 1	Dimension (mm)
Pallet Entry (PW)	1016
Pallet Depth (PL)	1219
Load Entry (LW)	1016
Load Depth (LL)	1219
Overall Height Incl. Pallet (LH)	1800
Max. Pallet Weight (kg)	1000
2 / 4 Way Pallet	2 way
Quantity Stored	7700 pallets

Pallet: Area 2	Dimension (mm)
Pallet Entry (PW)	1016
Pallet Depth (PL)	1219
Load Entry (LW)	1016
Load Depth (LL)	1219
Overall Height Incl. Pallet (LH)	1800
Max. Pallet Weight (kg)	1000
2 / 4 Way Pallet	2 way
Quantity Stored	4160 pallets

2.1.2. Rack Layout

The installation comprises Dexion Speedlock P90 Adjustable Pallet Racking in the following configuration(s). All dimensions to be considered nominal.

Bay Type: Area 1

Frame height	=	8500#mm
Frame width	=	1100#mm
Beam clear entry	=	2400#mm
Frame spacer length	=	250#mm
Beam levels	=	4 + GF
Maximum load per pair beams	=	2300#kg
Maximum bay load	=	9200#kg

Bay Type: Area 2

Frame height	=	8500#mm
Frame width	=	1100#mm
Beam clear entry	=	2400#mm
Frame spacer length	=	250#mm
Beam levels	=	4 + GF
Maximum load per pair beams	=	2300#kg
Maximum bay load	=	9200#kg

Beam levels on Dexion P90 racking systems may be adjusted in height on a 50mm pitch to maximize storage height available, subject to Dexion design check.

We recommend that you obtain independent verification that your floor is of suitable construction and capable of carrying the above upright load.

2.1.3. Rack Configuration- Area 1

Number of single-entry racks	=	4#
Number of bays per single entry run	=	23,26,28#
Number of double entry racks	=	13#
Number of bays per double entry run	=	21, 23, 26, 28#

2.1.4. Rack Configuration- Area 2

Number of single-entry racks	=	4#
Number of bays per single entry run	=	23,16#
Number of double entry racks	=	7#
Number of bays per double entry run	=	23, 25#

TOTAL = # PALLET LOCATIONS PROVIDED

Phase 2: 7700 pallet positions

Phase 3: 4160 pallet positions

Wire Mesh Decks included for top two beam levels

2.1.5. Finish

Component	Finish
Uprights	Pre-galvanized
Uprights (optional)	Teardrop Painted
Bracing	Pre-galvanized
Baseplates	Pre-galvanized
Row Spacers	Pre-galvanized
Beams	Orange RAL 2004

2.2. DEXION HI280 SHELVING

Your solution includes our HI280 shelving system, which is manufactured in-house under the strict quality measures of ISO 9001 together with the QAS 2000 certificate, which relates specifically to storage equipment.

Dexion HI280 is the newest shelving system available in the marketplace. Specifically designed to offer a full complement of shelving solutions, from single bays to High Bay solutions, through to multi-tier supported structures; this flexible system has no limits. Incorporating an unrivalled number of upright grades and shelf widths to satisfy short or medium span requirements, HI280 can accommodate any picking operations product groups.

The HI280 shelving system is provided in a pre-galvanized finish. This hard wearing and light reflective finish will reduce lighting costs and improve any picking environment. As this finish does not deteriorate over time like a painted solution, you can be confident your solution will look like new throughout its use.

Dexion HI280 has been designed with a comprehensive range of accessories that can assist your operation and storage requirements. If you would like to discuss these or if you require additional information, please let us know.



2.2.1. Shelving Layout

The installation comprises Dexion HI280 Shelving in the following configuration(s). All dimensions to be considered nominal.

Bay Type: Standard Shelving

Upright height	=	1800#mm (2100mm stock material)
Shelf width	=	1300#mm
Shelf depth	=	500#mm (600mm stock material)
Shelf levels	=	8
Shelf material	=	Metal
Maximum load per shelf	=	60#kg
Maximum bay load	=	1200#kg

Bay Type: POD Shelving

Upright height	=	1800#mm
Shelf width	=	2000#mm
Shelf depth	=	500#mm
Shelf levels	=	4
Shelf material	=	Panels/Mesh
Maximum load per shelf	=	120#kg
Maximum bay load	=	1200#kg

Bay Type: Order Consolidation Shelving

Upright height	=	2100#mm
Shelf width	=	1300#mm
Shelf depth	=	500#mm (600mm stock material)
Shelf levels	=	10
Shelf dividers	=	5
Maximum load per shelf	=	80#kg
Maximum bay load	=	800#kg
Shelf material	=	Metal

Bay Type: Storage Shelving

Upright height	=	1850#mm (2100mm stock material)
Shelf width	=	1300#mm
Shelf depth	=	650#mm (600mm stock material)
Shelf levels	=	4
Shelf material	=	Metal
Maximum load per shelf	=	120#kg
Maximum bay load	=	1200#kg

Bay Type: Fabric Roll Shelving

Upright height	=	4000#mm
Shelf width	=	3500#mm
Shelf depth	=	1600mm
Shelf levels	=	4
Shelf material	=	Mesh
Maximum load per shelf	=	500#kg
Maximum bay load	=	2500#kg

Beam levels on Dexion HI280 shelving systems may be adjusted in height on a 25mm pitch to maximize storage height available, subject to Dexion design check.

We recommend that you obtain independent verification that your floor is of suitable construction and capable of carrying the above upright load.

Shelving Configuration- Standard

Number of single entry runs	=	2#
Number of bays per single entry run	=	10#
Number of back-to-back runs	=	56#
Number of bays per back-to-back run	=	10#
Total bays	=	580

Shelving Configuration- POD Shelving

Number of single entry runs	=	2#
Number of bays per single entry run	=	6#
Number of back-to-back runs	=	14#
Number of bays per back-to-back run	=	6#
Total bays	=	180

Shelving Configuration- Order Cons.

Number of single entry runs	=	8#
Number of bays per single entry run	=	5#
Number of back-to-back runs	=	48#
Number of rows	=	96#
Number of bays per back-to-back run	=	5#
Total bays	=	520

Shelving Configuration- Storage Shelving

Number of bays	=	55#
Number of shelves per bay	=	4#

Shelving Configuration- Fabric Roll

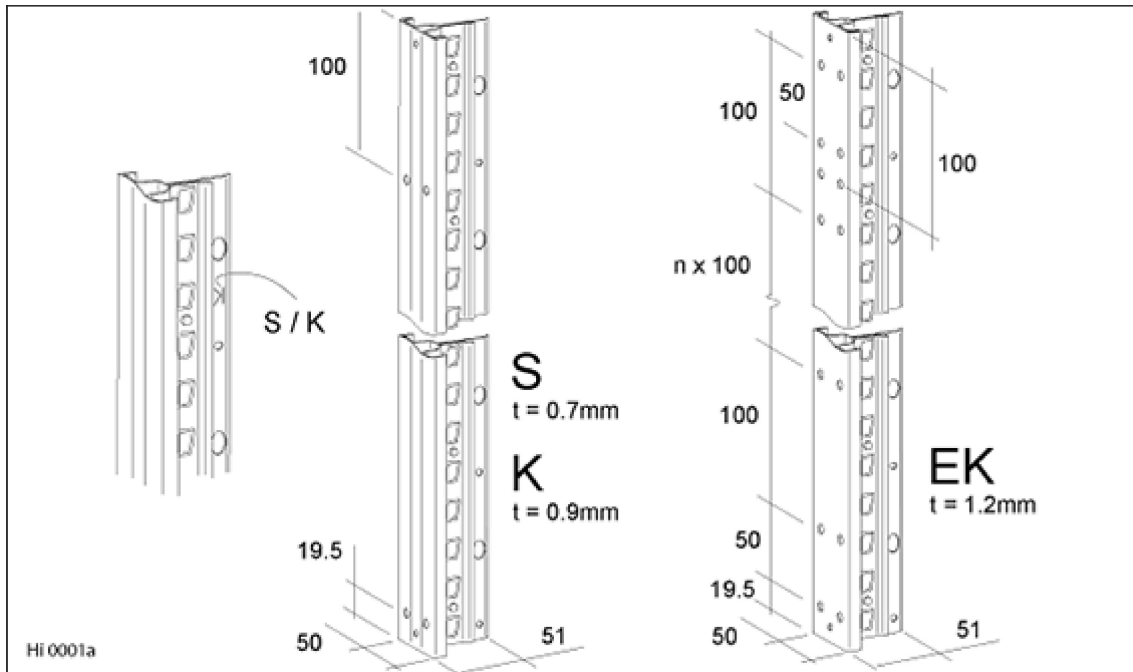
Number of single entry runs	=	1#
Number of bays per single entry run	=	4,3#
Number of back-to-back runs	=	
Number of bays per back-to-back run	=	

2.2.4. Finish

Component	Finish
Uprights	Pre-galvanized
Cladding (please refer to Specification if included)	Pre-galvanized
Baseplates	Pre-galvanized
Steel Shelves	Pre-galvanized

2.3. DEXION HI280 SHELVING

2.3.1. Frames



Web Holes: The upright web is provided with a series of holes / hooks. The shelf beams located in these hooks and they are set in 25mm increments.

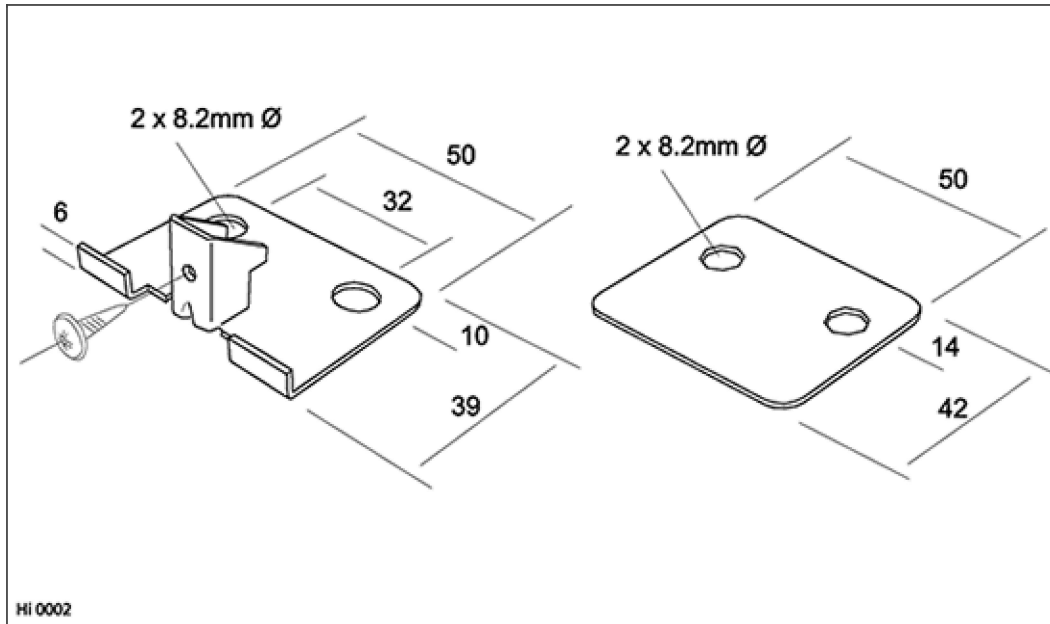
Length: Standard upright lengths of:
1000, 1600, 2100, 2300, 2500, 3000 and 4600mm
Non-standard lengths can be produced up to 8000mm.

Material: 0.7, 0.9 and 1.2mm thick pre-galvanized steel

Finish: The standard finish is pre-galvanized.

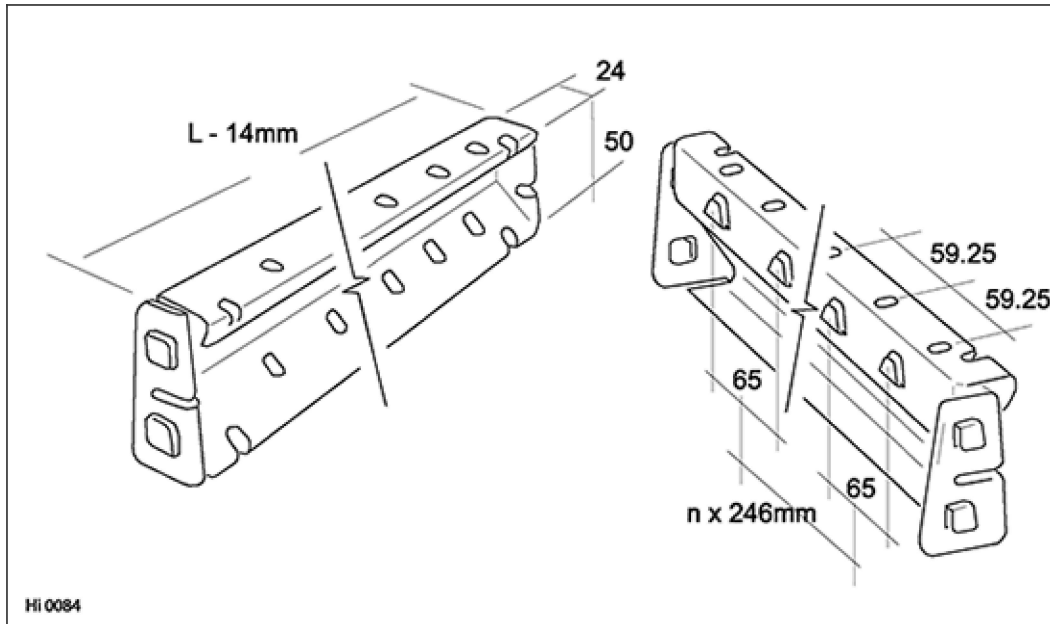
We propose using our 'S' duty upright for your application, as this achieves all weight loadings required for your operation.

2.3.2. Footplates



Baseplate:	50mm wide x 39mm front to back x 1.2mm thick. The baseplate extends approximately 2mm beyond the front face of the upright. The U profile upstand of the baseplate pushes into the rectangular hollow section in the web of the upright, and the tangs on the baseplate U profile clip into specific slot openings in the upright.
Maximum Load	Maximum load per baseplate is 1500kg, (i.e., 3000kg per frame). Assumes a floor of minimum grade C16/20 concrete (Eurocode 2).
Baseplate Fixing	When the design requires, the following fixings should be used: <ul style="list-style-type: none"> ▪ Baseplate to upright: a single 4.2 dia. x 15mm long screw per baseplate. ▪ Baseplate to floor: a single hammer screw or a single expander bolt.
Levelling Plate	1.2mm thick, but slightly larger than the baseplates at 50mm wide x 42mm front to back. Levelling plates should not be stacked higher than 20mm.
Material + Finish	1.2mm thick pre-galvanized steel.

2.3.3. Beams



The shelf beam is located between the rear uprights, the hooks on the ends of the beam corresponding with those on the web of the upright.

At either end the beam is provided with recesses enabling it to fit around the return flanges on the upright. This connection provides good stability along the length of the rack.

The beam web is provided with hooks that support the rear edge of the shelf. Oval holes in the top of the beam are to accommodate shelf dividers.

The same beam is used for both the 'standard' and 'heavy' duty shelves.

Length: To suit the three standard bay lengths of 900, 1000, and **1290mm**.

Structural: The shelf beam is a structural component.

Material: 0.8mm thick pre-galvanized steel.

Finish: Pre-galvanized.

Having given careful consideration, we believe this system to be the optimum system for your operation, addressing the following key criteria.

2.3.4. Flexibility & Adjustability.

The HI280 Shelving System is easy to install, easy to adjust & comes with a vast array of accessories to suit any application. The system is designed on a minimum number of basic components, with the added benefit of no nuts and bolts for single-tier installations meaning that no specialist tools are required.

Shelves are located upon integrated hooks located in 25mm intervals running the length of the upright meaning that no shelf clips are required, therefore allowing speedy relocation & positioning of levels should media size alter, or a different requirement is needed to be met at a later date.

Shelves neither share nor protrude into adjacent storage locations, which permits asymmetric positioning of shelves in adjacent bays if ever required. Frames can be either opened, closed (steel panels) or meshed depending upon the application.

Frame depths vary from 300mm to 1000mm with heights up to 8000mm achievable. There are also a wide range of shelf lengths & types that range from 900mm to 2500mm & solid to mesh or perforated. Shelf loading is also not an issue with levels capable of storing a 380kg uniformly distributed load (shelf length & width dependent) & bay capacities up to 4.2 tonnes.

2.3.5. Accessories

HI280 Shelving has a massive range of accessories which will address specific issues from storing bicycle wheels through to braking components.

Various accessory parts make individual adaptation for stored goods or for different physical spaces easy. These are only a few examples.

2.3.5.1. Plastic Trays and Bins

Ideal for storing smaller items, available in a number of sizes. Made from strong polypropylene, our straight sided storage trays are superior space savers for handling small parts, and excellent for shelves and paternoster systems.

Bins are stable when stacked, slotted together, or clipped onto louvered panels, bench units and trolleys.

Fitted with optional dividers these trays can easily be adapted to any shelf and storage system.

Label holders can be supplied for easy identification.



2.3.5.2. Shelf Drawers and Drawer Nests

For storing small parts. Shelf drawers positioned directly on the HI280 shelf without the need to connect runners to the framework.



2.3.5.3. Bin Front

Fitted to the front and/or back of a shelf to prevent items falling from the shelf.



2.3.5.4. Pull Out Tray and Drawers

Suitable for storage of smaller goods. Supported on a pair of expansion slides. The drawers can be sub-divided front to back.



2.3.5.5. Shelf Divider Part Height

Used to sub-divide the shelf into smaller compartments. Independent of shelf pitch. Secured to the shelf below. Available in 90mm and 140mm heights.

2.3.5.6. Shelf Divider Full Height

Used to separate stored items and create shelf locations. Secured with 4 pins between the upper and lower shelf.

2.3.5.7. Base Plinth

The front of the standard shelf when positioned at its lowest location (50mm from ground) acts as a natural barrier preventing goods (& dust) accumulating under the first shelf position. A base plinth can be provided when the shelf level is raised to act in the same manner.

2.3.5.8. Bay Divider

Used to segregate long goods when stored vertically. Allows fast and direct access.

2.3.5.9. Tube rail

Used as a garment rail. Hooks are also available for hanging items from the tubular rail.

2.3.5.10. Vertical Storage Hooks & Supports

Awkward elongated items can be stored vertically.

2.3.5.11. Tire Bracket

Allows the tire to rest on a larger surface to avoid point loads and flat spots.



2.3.5.12. Bay Divider Heavy Duty

Used to segregate, awkward bulky loads. Often used to store automotive panels.

2.3.5.13. Lockable Doors

Full and part height lockable doors, with double locking points to top and bottom.

2.3.5.14. U-support

A 'U' shaped wire support for subdividing bays into suitable compartments.

2.3.5.15. Sign Holder

Clipping to the upright they provide a good base for labels ensuring accurate and rapid identification.

2.3.5.16. Shelf Labels / Label Holder

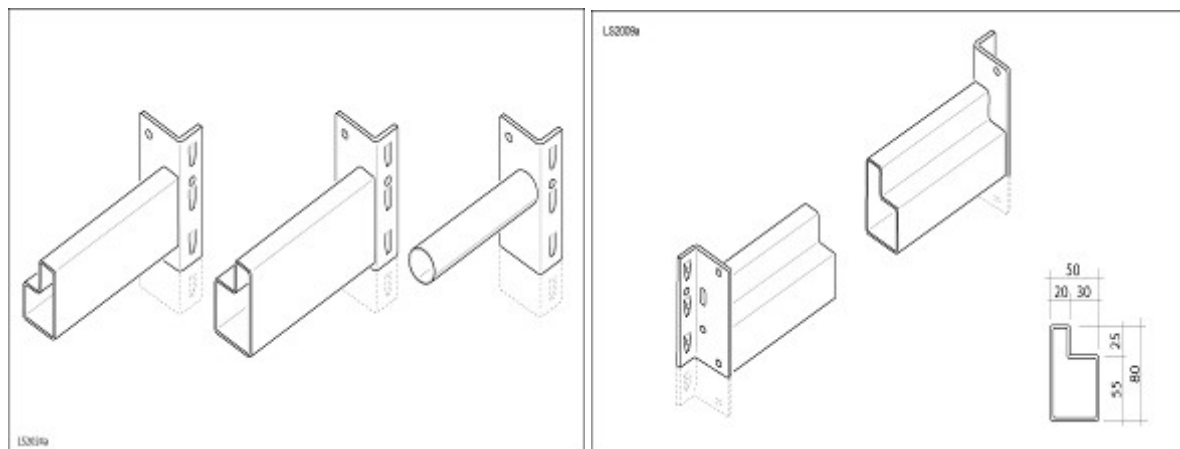
The short span shelf comes with as standard a small channel in the face which allows the location of a label.

2.3.5.17. Steel In-fill Panel

For medium span beams, the In-fill panel is used front to back creating a strong steel storage level.



2.3.6. Beams



Duty:	There are two duties of beam: 60x40mm stepped beam section 80x50mm stepped beam section
Length:	Beam length is specified by <i>CLEAR ENTRY</i> , which is the distance between the upright side faces when the beam is fitted.
Connectors	Either 3 or 4 hook formed connectors from 2.5mm thick material, the choice of connector depends on beam section and length.
Bay Pitch	Individual bay pitch equals the <i>clear entry</i> dimension plus the width of the upright which for Long span 2 is 55mm.
Beam Safety Lock	Safety locks are supplied loose for fitting once the beams have been installed. Fitted at both ends of the beam they are designed to prevent accidental dislodgement of the beam when in use.
Beam Heights	The lowest a beam can be positioned on the upright is 101mm for 3 hook beams, and 151mm for 4 hook beams.
Adjustment	Beams are adjustable in height on a 50mm increment.

2.3.7. HI280 Shelving

1. Mesh deck option

The mesh decks proposed for the HI280 shelving option is 100mm x 50mm mesh providing a shelf 1240mm x 300mm or 500mm deep. The decks will have a 20mm waterfall at the front and back and take a maximum load of 75kgs.

2. Solid steel shelf option

We have also provided a cost for the solid steel shelf option. This is the standard solution on our HI280 system and offers some clear benefits, including: -

- Predrilled holes for all accessories
- Being solid it can accommodate any size of item.
- Always kept in stock, so very quick lead time