

Innovative
Storage Solutions

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Pallet racking



**BITO-Lagertechnik
Bittmann GmbH**
Obertor 29
D-55590 Meisenheim

Telephone: +49 (0) 67 53 – 122-0
Fax: +49 (0) 67 53 – 122-399
Email: info@bito.de
www.bito.com

304/15.0/0108

Perfection is our passion!

PRO



BITO pallet racking PRO

Benefit from the most advanced racking technology available on the market

- BITO product
- in close cooperation with your project coordinator, our competent in-house sales staff works out the optimum solution for your requirements
- innovative beam profiling methods guarantee an optimum material thickness/load capacity ratio
- galvanised and epoxy-coated components provide high corrosion resistance
- broad range of accessories and safety equipment
- frames to be assembled on site = lower transport costs
- all racking components comply with the latest accident prevention regulations
- all static calculations are made according to the latest German and European safety regulations (RAL RG 614)

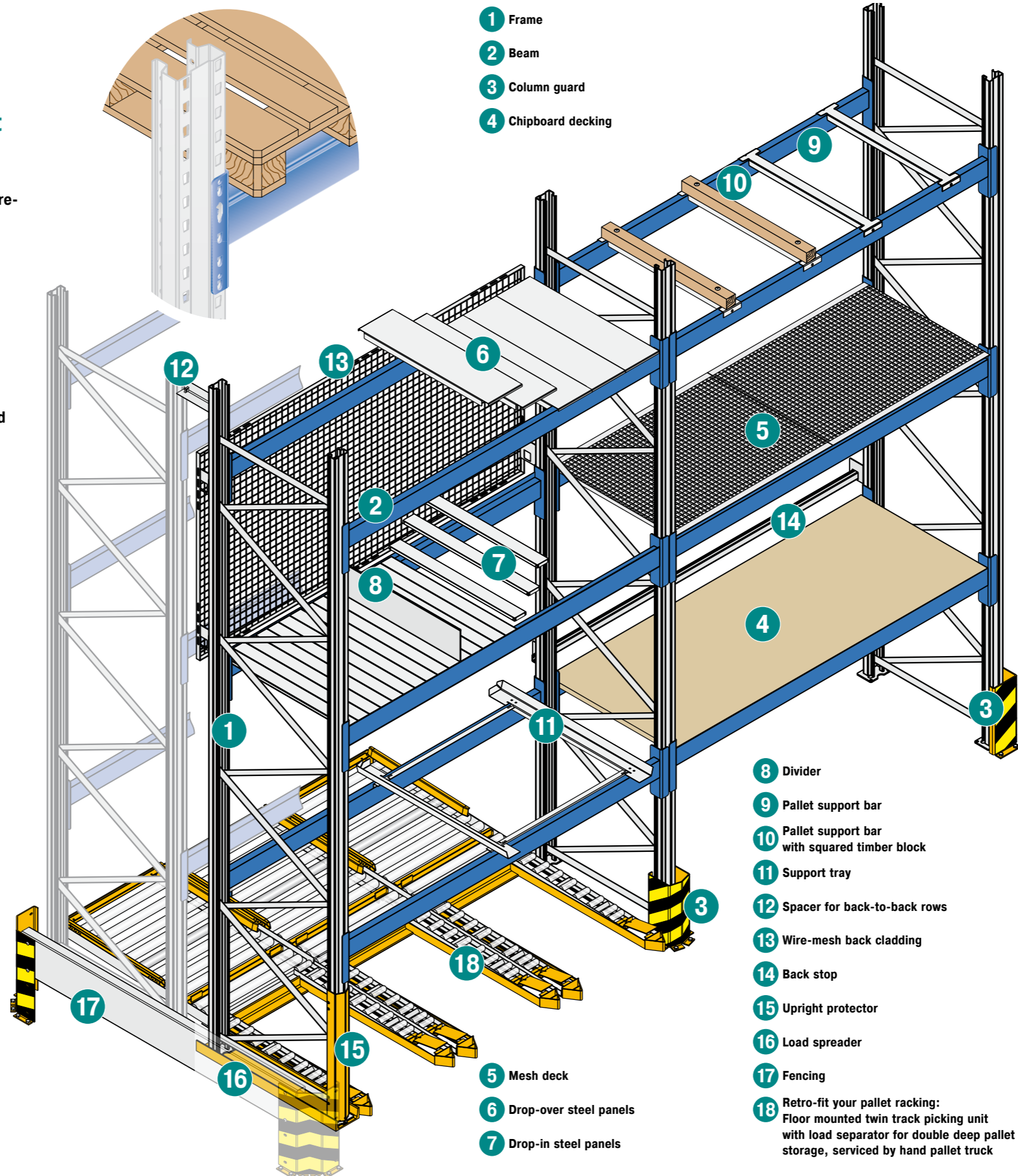
Production:

BITO's new **PRO pallet racking system** is produced in compliance with the latest health and safety regulations and with state-of-the-art machinery. This guarantees true-to-size profiling of all components. A fully automated welding facility ensures that very narrow dimensional tolerances are observed in the beam manufacturing process.

Surface finish:

Our frames are made from top quality strip steel with a yield strength up to 1.5 times higher than usual in the market.

The beams are finished with highly scratch resistant epoxy coating which is applied in a modern facility and with environmentally friendly methods.



Info hotline

+49/(0) 67 53 / 1 22 - 789

Certificates

Quality mark RAL-RG 614/2



BITO Pallet racking was assigned the quality mark RAL-RG 614 which guarantees highest levels of product quality.

Certified safety



DIN EN ISO 9001



The production process as well as the entire organisational structure at BITO comply with DIN EN ISO 9001.



Racking configuration

A safe working environment prevents accidents and, as a consequence, avoids high costs!

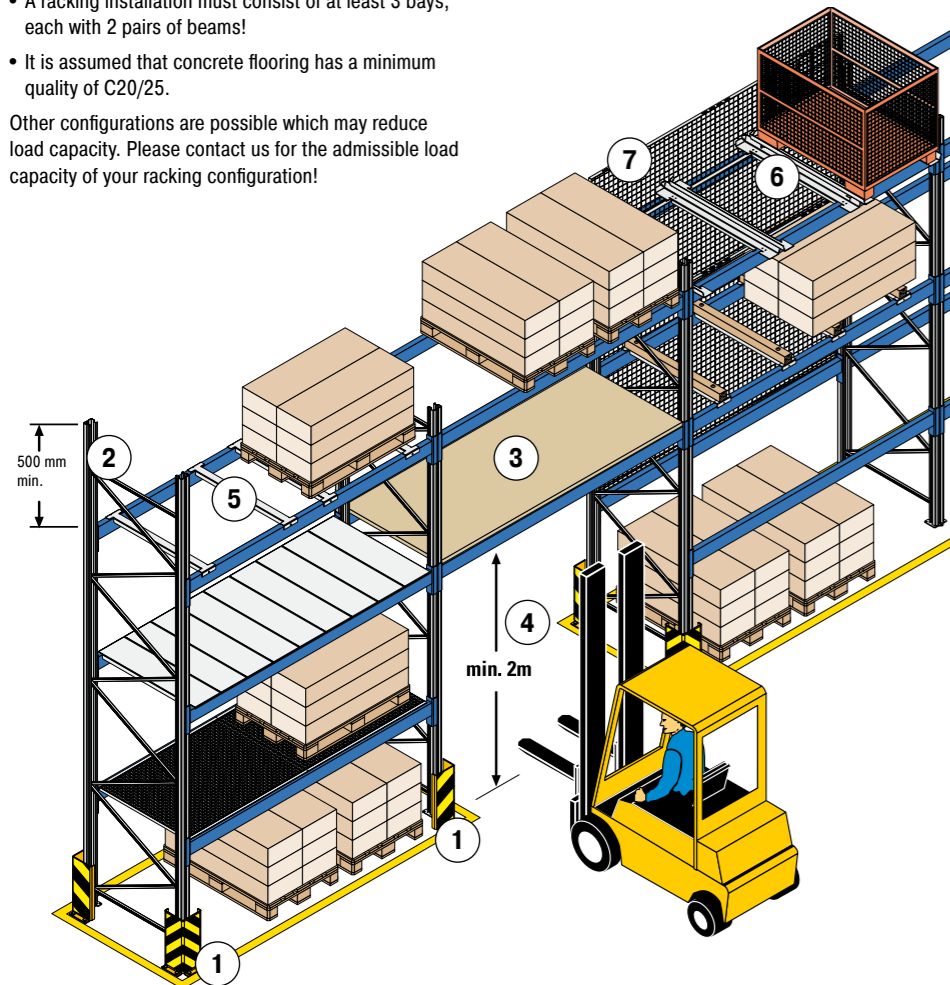
A racking unit is composed of the following components:

- frames
- beams including safety pins
- floor anchors

Please note:

- Truck serviced racking installations must be floor anchored!
- A racking installation must consist of at least 3 bays, each with 2 pairs of beams!
- It is assumed that concrete flooring has a minimum quality of C20/25.

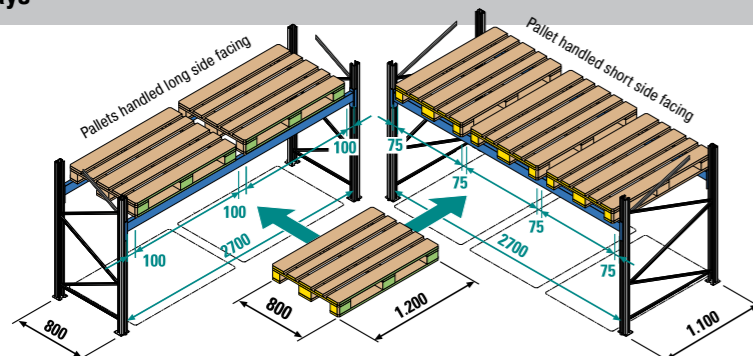
Other configurations are possible which may reduce load capacity. Please contact us for the admissible load capacity of your racking configuration!



Multiple lane bays

Please note:

Pallets handled long side facing must be supported in depth direction!



In compliance with the latest health and safety regulations, pallet racking installations have to meet the following requirements:

(Please check your regional/national building regulations for prevailing stipulations.)

- 1** Corner areas and passageways must be protected by column guards or upright protectors.
- 2** Frames at either end of a racking row must be at least 500 mm higher than the uppermost storage level.
- 3** Storage levels on top of passageways as well as cantilever constructions must be secured against falling objects, f. ex. with chipboard or mesh decking.
- 4** Passageways (tunnels) must have a clear height of at least 2 m or must be at least 20 cm higher than the service trucks used.
- 5** Pallets which are handled long side facing and which are not supported in storage depth direction must be secured by a pallet support bar or by chipboard, mesh or steel panel decking.
- 6** It is recommended to use support trays for safe in-feeding and storage of wire-mesh box pallets.
- 7** Passageways behind free standing racking rows, which are used by operators and trucks, must be protected against falling objects from the upper levels, f. ex. with wire-mesh back cladding.

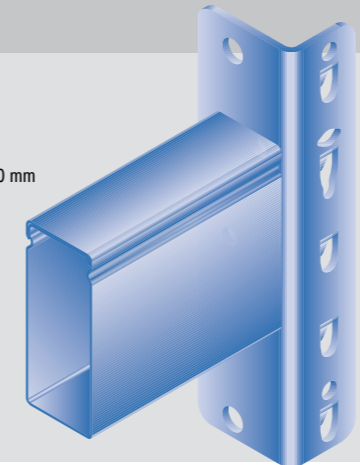
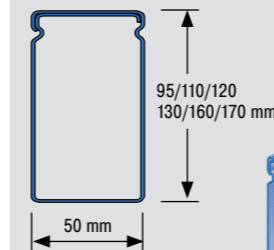
Double-sided racking rows must provide for a safety distance of at least 100 mm between storage units facing each other on the same level. Otherwise, back stops must be mounted to separate the storage units.

Beams made from TwinTop® profiles

High load capacities and excellent racking rigidity

- manufactured from TwinTop® profiles providing an optimum material thickness to load capacity ratio
- 5 hooks per connector provide reliable form and force locking for any load, whether lightweight or heavyweight
- excellent lengthwise rigidity of the racking construction
- fully automated welding facility ensures that very narrow tolerances are observed
- beams can be adjusted in height on a 50 mm pitch thus allowing optimum adaptation to loading heights

Beam type PT



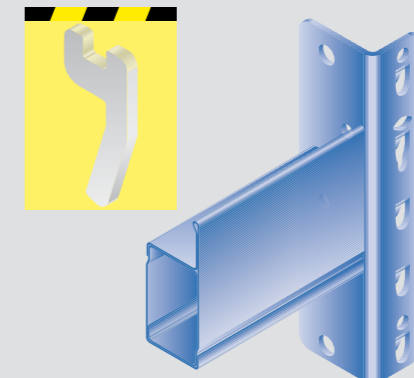
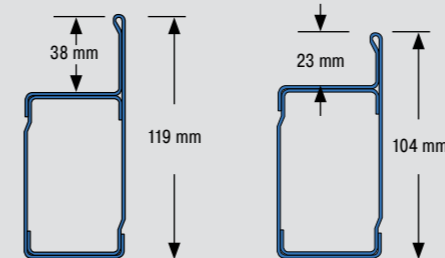
Safety pin



- easy fitting
- insert horizontally and secure against loss with a 90° turn

Beams from TwinTop® profiles	PT 95L	PT 110L	PT 120M	PT 130M	PT 160M	PT 170S
Profile height	95 mm	110 mm	120 mm	130 mm	160 mm	170 mm
Profile width	50 mm	50 mm	50 mm	50 mm	50 mm	50 mm
Material thickness	1.5 mm	1.5 mm	1.75 mm	1.75 mm	1.75 mm	2 mm
Profile weight per m	3.95 kg	4.3 kg	5.3 kg	5.58 kg	6.4 kg	7.65 kg
Yield strength	280 N/mm²	280 N/mm²	280 N/mm²	280 N/mm²	280 N/mm²	280 N/mm²
Bay load for a profile length of 1800 mm	2500 kg	-	-	-	-	-
Bay load for a profile length of 2700 mm	1800 kg	2400 kg	3000 kg	-	4300 kg	-
Bay load for a profile length of 3600 mm	-	-	-	2400 kg	3250 kg	4000 kg

Stepped beam type PS



Epoxy powder coating



Scratch resistant epoxy powder coating applied in a modern coating facility and with environmentally friendly methods

Beams in RAL 5010 (blue). Other RAL colours upon request.

Levels complete with beams from TwinTop® profiles

...can be equipped with:

- mesh decking
- chipboard panels complete with positioning angles
- chipboard panels fitted onto support bars
- drop-over steel panels

Pallets or wire-mesh box pallets handled long side facing must be supported in depth direction. Options:

- pallet support bar
- pallet support bar with squared timber block
- support tray

Levels complete with beams type PS

- The robust step of the beam sits flush with the top surface of drop-in panels and chipboard panels, thus protecting the panel edges from potential damage during in- and outfeeding.

Step height 38 mm
• 38 mm chipboard panel

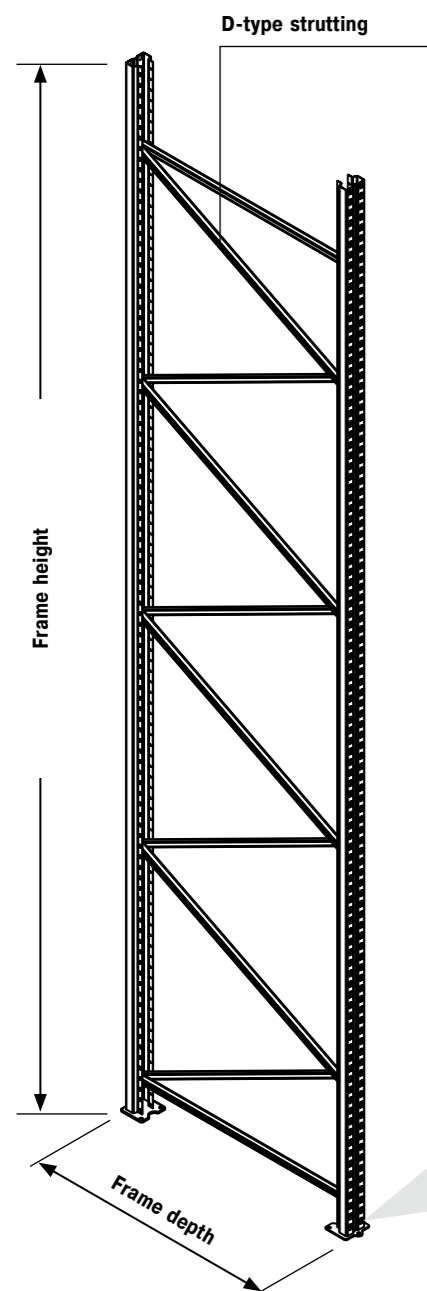
Step height 23 mm
• suits steel panel segments



Frames

Broad range of types to suit any storage solution

- 9 different frame types for any load capacity requirement
- bay load capacities of up to 40 tonnes
- heights of up to 20 metres
- frames come unassembled to save transport costs
- high quality galvanised finish
- high quality materials



Flooring

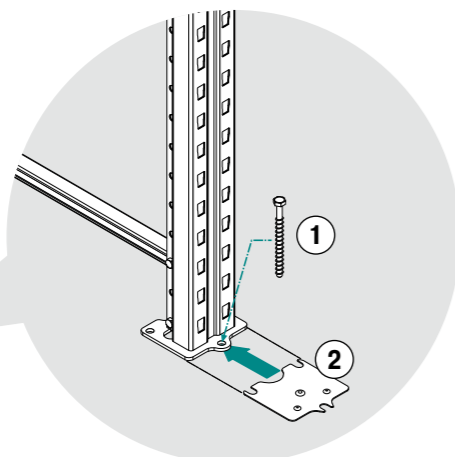
In order to ensure that your racking installation is safely floor anchored, concrete floors must have a minimum quality of C20/25. In the case of a lower floor quality, the required load capacities can be achieved with load spreaders. Floors containing magnesite or flooring causing chemical reactions with racking materials must be underlaid with special shims.

Floor anchoring

Frame depth	Frame height	Floor anchors per foot plate
≥ 1100 mm	≤ 8750 mm	1x
< 1100 mm	all heights	2x
≥ 1100 mm	> 8750 mm	2x

Shims

Material thickness options 1.5 mm and 4 mm.



Frame depths

Type P1: 600 / 800 / 1100 mm
Type P2 - P9: 800 / 1100 mm

Other height and depth options upon request!

Bay load capacities



40 tonnes maximum

Standard components have a maximum load capacity of up to 30 tonnes (see table). According to project requirement, reinforced components are used carrying up to 40 tonnes.

Epoxy powder coating

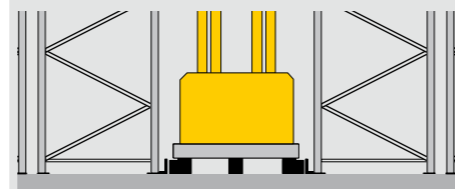
Against a supplement, frames up to a height of 7550 mm can be epoxy-coated.

The scratch resistant epoxy powder finish is applied in a modern coating facility in an eco-friendly process. RAL colour to your choice.

Epoxy-coated struts upon request.

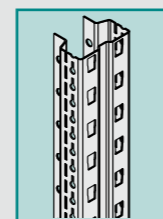
Narrow aisle installations

If rail-guided service trucks are to be used in highbay installations, foot plates can be supplied without projecting front edge. In this case, the frames must be secured with 4 floor anchors.



Flow shelves for carton live storage

If your installation is to be equipped with flow shelves for carton live storage, the upright types P1 to P8 can be supplied with side slotting to accept flow shelves.



P1 to P3	Technical data	Foot plate
P1 	Upright width: 80 mm Material thickness: 1.75 mm Yield strength: 270 N/mm ² Standard height: 2 - 6 m Bay load capacity: max. 6000 kg	 Type L 120 x 105 x 5 mm galvanised
P2 	Upright width: 90 mm Material thickness: 1.75 mm Yield strength: 350 N/mm ² Standard height: 2.5 - 7 m Bay load capacity: max. 9350 kg	
P3 	Upright width: 100 mm Material thickness: 2.0 mm Yield strength: 380 N/mm ² Standard height: 3.5 - 8 m Bay load capacity: max. 12700 kg	

P4 to P6	Technical data	Foot plate
P4 	Upright width: 120 mm Material thickness: 2.0 mm Yield strength: 380 N/mm ² Standard height: 4.5 - 10 m Bay load capacity: max. 16100 kg	 Type M 150 x 105 x 6 mm galvanised
P5 	Upright width: 120 mm Material thickness: 2.25 mm Yield strength: 420 N/mm ² Standard height: 5 - 12 m Bay load capacity: max. 19500 kg	
P6 	Upright width: 120 mm Material thickness: 2.5 mm Yield strength: 420 N/mm ² Standard height: 5 - 12 m Bay load capacity: max. 21900 kg	

P7 to P9	Technical data	Foot plate
P7 	Upright width: 120 mm Material thickness: 2.5 mm Yield strength: 420 N/mm ² Standard height: 5 - 12 m Bay load capacity: max. 24800 kg	 Type S 180 x 125 x 6 mm hot-dip galvanised
P8 	Upright width: 140 mm Material thickness: 2.5 mm Yield strength: 420 N/mm ² Standard height: 5 - 12 m Bay load capacity: max. 27700 kg	
P9 	Upright width: 140 mm Material thickness: 2.75 mm Yield strength: 420 N/mm ² Standard height: 5 - 12 m Bay load capacity: max. 30000 kg	