

1-100

1----

-

Metal Rack Storage Solutions





SUPER-ZERO uprights and

frames are allowed with the

use of SUPER-ZERO beams

mm only, with a max.

load capacity of 200 daN

per shelf, for uniformly

and shelves, only. Bay lengths 900/1050/1200

distributed loads.

n° of spacer bars



n° of spacer bars



Two tier structure with suspended walkways

Platform with continuous floor

TWO TIER STRUCTURES PLATFORMS

In case of two tier structures with suspended walkways the frames are to be assembled as shown in case "A" at left (i.e. the standard frame assembly diagram). In case of platforms with continuous floor decking, the frames have to be assembled with pairs of diagonal spacer bars only, at centre distances of 264 mm, up to the level of the platform (see case "B" at left).

In both cases the frames must be securely bolted to the floor slab using the heavy duty base plates (art. n° 67006.95) and the locking frame spacer bars.

Staircases made from standard components and integrated into the twotier-structure have to be reinforced in an appropriate way, using the reinforced SUPER 3-upright (art. n° 99230.95) either side of the staircase. METAL RACK strongly recommends to comply with all safety standards mentioned in this brochure.

The maximum load bearing capacity of walkways/decking within two-tier structures or platforms is 300 kg/m² and the maximum width of the walkways is 1200 mm. The maximum shelf bay length is 1500 mm.









THE PRODUCT

The fully adjustable SUPER 1/2/3 systems have been designed to meet the needs of light to medium duty storage. They are also highly suitable for the construction of two tier structures (with the SUPER 3 system). The design of the various components is the result of rigorous technical testing and the highly specialised knowledge developed over years of experience in the field of metal processing.

This experience has enabled METAL-SISTEM to offer innovative products of the highest quality, highly competitively priced, and to produce a highly technical solution to the most important



shelving problems, such as rapid assembly, stability, low cost and load bearing capacity. The design allows for high load bearing

The design allows for high load bearing from light gauge materials. The use of high quality zinc coated steel ensures a high level of durability. The structural components of the

The structural components of the SUPER 1/2/3 systems are made from high tensile steel, certified according to EN 102043.1.























-

Thanks to its attractive high-tech design, SUPER 1-2-3 shelving is trendy and pleasing to the eye. It can provide unique and cost effective solutions for shopfitting and applications in domestic environments as well. See examples at left.

11



bar anti-release tongues should be closed (Ref. 2).



Beams

阿町町

可可可

Take the frames, assembled with bracing and base plates: keep them as perpendicularly as possible and fit the beam by tapping it down onto the tongues, close to the upright, with a plastic-faced hammer to avoid damage to the beam (Ref. 3).



The beams, once assembled, should be

For the storage of tyres or round materials which are placed directly onto the beams, plastic strips are available to avoid damage to the products stored; these strips are fitted into the recess of the beams (see page 21, Ref. 21).







RollerShelves

Roller shelf units consist of one or more inclined runways equipped with specially designed roller tracks. Merchandise is loaded in the rear of each runway and moves toward the picking station. As an item is removed from the front, the item directly behind it slides forward in place of the previous and rolls to the front, thus allowing merchandise to remain better organized and easier to find/pick.

METAL RACK's carton flow is an economic, modular and functional solution based on standard components alone, allowing flow track beds to be created up to depths of 4 metres. The flow track profiles are made from certified, galvanised, high tensile steel and are manufactured in lengths ranging from 359 to 4022 mm at a cut pitch of 33 mm. Yellow rollers made from polypropylene are inserted into the tracks at varying pitches of either 33, 49.566, 82.5 or 99 mm, according to the application requirements. The track profiles are inserted into sceenstrips that are fastened with clamps/ screws (art. 69829.95/00056.20) at centre distances of approx. 1000 mm.

The support for the roller shelves is provided by frames placed at fixed intervals set by oval tubes, (the same standard components used for walkway parapet elements) thus ensuring that the beams will be aligned at a constant inclination of approximately 8% from the rear to the front side of the system. However, the most suitable degree of inclination depends on the type of packaging and weight of the load unit and the overall length of the roller track. A "T"section support bar placed at the picking side of the run provides both support for the flow tracks and an end stop for the cartons. For more information please refer to page 44 of this brochure.

Chipboard shelves

Chipboard shelves of thickness 12 or 18 mm can be fitted using the clips shown below (Ref. 8).



Shelves H12 and H25

Shelves of profile 12 mm, 450-600-900 mm wide, are produced in depths varying from 320 to 700 mm. Shelves of profile 25 mm and 300 mm wide are supplied in depths varying from 400 to 800 mm (Ref. 5-6).



Perforated Plastic Shelf Panels

The standard range of perforated plastic shelf panels in 150-200-300 mm width is made from high quality polypropylene, suitable for use within the food sector, perforated at >50% of the shelf surface area. Available in four different colours: white, yellow, light blue and blue, for frame depths 320-400-500 mm (Ref. 60).



Specific FROST panels in light green colour are available for use within cooling rooms. ECO shelf panels in black colour, made from recycled polypropylene, feature utmost cost efficiency. ECO shelf panels are not compatible with the food sector.

For correct ordering and load bearing capacities, please refer to page 41 of this brochure.

Perforated Steel Shelf Panels

Perforated steel shelves of profile 25 mm in 300 mm width, perforated at 50%. For installations equipped with sprinkler systems. Hole diameter 6.5 mm. For correct ordering and load bearing capacities, please refer to page 43 of this brochure.











To assemble the containers correctly, the rear beam should be fitted two pitches higher than the front one (Ref. 10). Fit the dividers into the special slotted seats, pushing down to locate (Ref. 9).



The capacity of the containers can be increased by fitting bin front and rear panels 200 or 300 mm high.







DIVIDERS

A large range of dividers is available.

Vertical sliding dividers

These have been designed to separate loose items (Ref. 11). The concept of these dividers is based on the following components: a couple of clips (version at right/at left), and vertical dividers, available for all frame depths and in two different heights (H=100mm / H=200 mm), as well as in the profiled version (H=200/100 mm).

Shelf trays

These comprise a bin front and rear panel 100 mm high placed on a normal shelf with adjustable dividers from 320 to 600 mm in depth (Ref. 13).

Chest of drawers

The modular drawers are fully integrated with the SUPER 1-2-3 series and are located directly on the frames.



A cost effective solution for the storage of small items.

Bin front panels 100 mm high and rear panels 200 mm high are fitted with profiled dividers (Ref. 14/15).













Plastic Bins

Open fronted plastic bins are also available for the storage of loose items. More information on page 51.



Fixed height dividers

Available in three different heights: 244-344-444 mm

They can be inserted in any position on the shelf by means of spring clips located on the beams H47 (Ref. 16).

08

Ref. 16









Telescopic Tube Dividers

Used for the separation of cylindrical components or materials difficult to store (windscreens and panels, etc.). They comprise 2 tubes of 18 mm diameter sliding one inside the other. They are fixed to the upper shelf by means of a clamp/screw connection (8mm). A minimum of two tubes should be used for each division (Ref. 17).



Dividers for exhaust pipes

Spigots designed for the separation of tubes, exhausts and conduits, etc. They are used both vertically and horizontally and are fitted on to the beams anywhere in the length. Not suited for hanging loads (Ref. 18).

Label Holder

It can be located in any position on both H47 and H80 beams. Dimensions 100x40 mm (Ref. 23).

ACCESSORIES

PVC top caps

PVC top caps are to be fitted onto the top of the upright, in all applications (Ref. 20).

Oval shaped tubes and beams

The oval shaped beams and tubes are compatible with most types of hanger and provide a cost effective solution to garment storage and for hanging loads (Ref. 19 / 20). The garment hanging shelving can be designed on a single or double entry basis and equipped with shelves. The oval tubes fitted onto the spacer bars alone will not stabilise the structure in the horizontal plane and have to be combined with beams above and below.



Tyre Storage

The oval shaped beams can also be used for the storage of tyres (see page 10). In this case, please refer to the technical handbook to identity correct use and appropriate load capacities. In the case that the tyres will be stored on H-47-mm beams, it is obligatory to use the SUPER-3 version only and exclusively, both for the beams and the frames. Maximum allowed bay length: 1200 mm. Maximum allowed frame depth: 400 mm, to ensure safe storage and to prevent torsional deflection of the beams.

Plastic strip for glass shelves

It can be fitted on the beams in order to protect glass shelves or delicate materials (Ref. 21).

Security pins

In order to prevent accidental lifting of the beams and shelves, the security pins should be used in all applications (Ref. 22). Assembly instructions as per the sketch at right.







Frame back-to-back clips

They are used to fix the frames together when building back-to-back bays to improve stability. They are located at mid height (Ref. 24).

Security pins for beams in back-to-back bays

They are used to prevent accidental lifting of the beams when building back-to-back bays (Ref. 25).



CLADDING END PANELS H25

End panels are manufactured in two standard sizes (200/300 mm wide x 25 mm) and in standard heights of 1485-1940-2480 mm (Ref. 26). End and middle joints are also available to build multiple cladding heights and/or to finish off the panels at their upper end (Ref. 31).



In case of the panels being lower then the respective frame, "H"-section profiles maybe used at the bottom of the panels, to achieve equal height (Ref. 31).





Punched hole panels H25 are also available, according to European Standards (i.e. hole diameter of 5 mm, at 25 mm centre distance). Special clips are used to fasten the cladding panels. For end panels it is the clip art. code n° 68107.95 (Ref. 28), for back panels H29 mm it is the clip art. code n° 68108.95 and for back panels H12 mm the clip 67010.95 (Ref. 27).













Side cladding

Side Cladding This type of cladding may be used to enclose individual bays within shelving runs. Available for frame depths up to 600 mm. Side cladding panels are fitted between the diagonal spacer bars of the frames. When ordering side frame claddings, the respective frames are to be built with diagonal spacer bars only, i.e. the horizontal spacer bars have to be replaced with diagonals (Ref. 30).



MODULAR SLIDING GATE

The modular METAL RACK sliding gates are supplied preassembled, in kit form. Two different models are available: with guide rail assembled on the ground or with external, suspended guide rails, made from a USP-upright profile supplied in standard lengths of 4500 mm which has to be cut to size on site according to individual needs. For available dimensions and ordering, please refer to page 48 of this brochure.

CLADDINGBACKPANELSH12mm for back-to-back bays

Back panels H12 are manufactured in 450-600-900 mm standard width and in standard heights of 1485-1940-2480-2980 mm (Ref. 29). When using H12mm-back panels within back-to-back bays, the single modules are superposed at the center of the bay (see sketch below). The cladding modules are kept in position by the beams of the back-toback bays. For multiple cladding heights, a couple of beams has to be located at junction points (Ref. 31).

The sketches shown below and beside explain the design and assembly of the various cladding components.

BACK CLADDING H12 MM

18 mm

FRAME DEPTH: 320 / 400 / 500 / 600 / 700 / 800 197 / 297-25 SPACER BAR FASTENING CLIP FOR END PANEL H25 Article Code Nº 68107.95 BEAM **CLADDING END PANEL H25 MM** 450/600/900 mm nominal width 450/600/900mm nominal width

H-12-MM CLADDING PANELS FOR BACK TO BACK BAYS

FASTENING CLIP FOR BACK PANEL H12 Article Code N° 67010.95



JL

BEAM

SUPER 3 Two-tier-structures with suspended walkways

(max. load bearing capacity = 300 daN/m²)

Two tier structures, even varied and complex have been designed by METAL-SISTEM combining light weight with high strength in the METAL RACK tradition, avoiding any type of bolting or welding.





When designing two tier structures, consider the dimensions and details of the sketch shown above. Always refer and adhere to the calculation and safety code summarized on pages 4 and 5.

Max. shelf bay length: 1500 mm Max. width of walkway: 1200 mm

ASSEMBLY OF SPACER BARS WHEN LOCATING H 53"T" - SECTION WALKWAY SUPPORT BARS INSIDE THE FRAMES

L900:NOSPACERBAR

L1200: ONE SPACER BAR AT THE CENTRE

L1500: ONE SPACER BAR AT THE CENTRE

NOTE: • The spacer bars connecting the "T"-walkway support bars must be ordered in a special length (10mm narrower than those used to assemble the standard frame).

 When building staircases, customers should fit one spacer bar under each stairtread.



Steel planks

stability (Ref. 34).

58

96

These can be supplied with three different surfaces: ribbed, open and smooth, together with compensation panels and fastening components. The steel planks are inserted into the "T" section supports by levering between the panel and the support (Ref. 32). There are two types of steel planks: one for walk-through bays and one for walkways. When ordering, always refer to the length of the respective spacer bar used for building the walkway or the frames (see page 48).





There are two types of "T"-section walkway supports for the construction of two-tier-structures: one is fitted on the outside of the upright by means of support brackets to support walkways between shelf runs, and the other is fitted inside and onto the upright to support walk-through bays, providing continuity of the steel walkway decking (Ref. 38)

The nibs on the "T"-section walkway support beams H58 allow these beams to be connected between them by means of spacer bars being 10 mm narrower than those used to assemble the respective frame (Ref. 35). To reduce noise, a PVC strip is fitted between the steelplanks and the "T"-section support bars (Ref. 37). To achieve a correct assembly of the "T"-section support beams within walkways (Art. 67015.95) these spacer bars must be located under the walkway support beams, at centre distances of 800 mm approximately (Ref. 35/36).

In order to avoid sharp edges, the "T"-section supports should be assembled with an overhang of about 2 cm and finished off with plastic top caps (Ref. 42).

For fixing back-to-back frames together, use the two-tier support bracket, bending the tongues behind the second upright, as shown on Ref.37.

Ref. 35

Ref. 36





Kickboards

Three different types of kickboards are available: for use in the direction of the beams, at the end of a run within uprights, or for walkway ends. Kickboards are made from two oval

shaped tubes (the same items used to build the handrails) fixed to the uprights and finished oft with a metal sheet element located onto the oval shaped tubes by self tapping screws. For correct ordering of these items and dimensions, please see instructions on page 48 of this brochure. The use of beam retaining clips is mandatory.



In the direction of the beams, shelf boards are available in two different heights, 200 or 300 mm (article n° 64016.95 - 64040.95).

These items have flanged ends with slots to be located onto the uprights (Ref. 39).

Upright reinforcement

Uprights that are used as newel posts for handrail should always be fitted with the reinforcing brackets shown (Ref. 50).



Staircase handrails

The handrail tube is a square profile in $\not\bowtie$ 32x32 mm section, available in both stainless steel and zinc coated version. The fastening of the handrail onto the uprights is made by nylon components and brackets, as shown in the picture below (Ref. 45).

The necessary components have been included into a macro code, for easy ordering. Please refer to page 50 of this brochure.



Hand rails

Hand rails and knee rails are made from oval shaped beams (Ref. 49). For correct ordering of these items, please see instructions on page 48 of this brochure.

The use of beam retaining clips and upright tops caps is mandatory. Handrails on two-tier structures may also be built with "U"-section profiles assembled in conjunction with special P.V.C. supports (Ref. 47-48).

These supports can also be used to finish off the handrails at their ends.





Staircases can be built using standard components and integrated into SUPER-3 two-tier structures. Ref. 44 The stair treads are fixed with four clamps/screws each (Article Code inclination 42° n° 69829.95/00056.20). Under each stair tread, one spacer bar has to be assembled into the "T"-section support bar H58, to improve overall stability of the construction. 2 Staircases have to be adequately reinforced. It is mandatory to use 3 H 2170 reinforced uprights (Art. Code (12) n° 99230.95: SUPER-3 upright 1 TUBO inclination 38° 10 -300-6 198 (165) 5 7 198 (165) H 1972 (11) 190 (157) (9) 1200 1200 300 198 (165) 198 (165) 190 (157) 1200 1200 STAIR TREAD ANTI SLIP STEEL SOL 1 REINFORCED 7 UPRIGHT 300 PLANK H58 - 15/10 1 58 198 (165) TUBULAR 2 8 BEAM H47 198 (165) BEAM E 190 (157) Constant of 1200 HEAVY DUTY 3 9 SHELF BOARD STEEL BASE PLATE section with welded U-section profile "U"-SECTION T-SECTION WALKWAY on its front face) on either side of the 4 10 HANDRAIL SUPPORT BAR staircase, i.e. on all those uprights that are not connected by frame bracing elements. When ordering, customers LOCKING 5 11 BRACKET/CLIP have to indicate the height of the FRAME SPACER BAR TE reinforcement profile (see page 50). I It is recommended to continue with the SPACER BAR TO BE LOCATED UNDER EACH STAIR TREAD REINFORCING 6 12 6 regular frame bracing pattern within BRACKET FOR UPRIGHTS these frames, as soon as possible.

STAIRCASES



























SUPER 1-2-3 shelving system integrated with EUROSCACCO shelf panels

The SUPER 1-2-3 shelving series can be integrated with EUROSCACCO shelf panels. This combination provides specific advantages for shopfitting applications, such as an enhanced choice among various display solutions.

EUROSCACCO shelf panels can be equipped and customised with a huge array of accessory items, such as wire dividers and front risers. This system is available for frames of the SUPER-1 series with a maximum height of 2500 mm.

EUROSCACCO shelves are available in smooth and perforated version, in 1000-1250-1333 mm length, to suit frame depths ranging from 300 to 700 mm, providing a load bearing capacity of 70 daN per shelf, for uniformly distributed loads. SUPER 1 frames, when integrated with EUROSCACCO shelf panels, require vertical bracing - please refer to page 39.

Shopfitting accessories

A wide range of hooks, wire rods, and bars with pegs are available for supply. These items fit onto the oval beams in 10/10 and 18/10 mm gauge (article code n° 36051.95-36810.95 - see pages 38 and 48 of this brochure).

Trendy Shopfitting and Display Solutions

Achieved with the modular SUPER 1-2-3 shelving series. See pictures at left.

Sliding Doors

Sliding Doors are ideal for areas with limited corridor width and can be used to create closed spaces or cupboards. Sliding doors are supplied preassembled and are available in the standard METAL RACK colour range. A lock is supplied as a standard accessory with every door. Sliding doors are available for 900-1200-1500 mm bay lengths, in two different heights: 2000 and 2500 mm.

The sliding rails are made to match the height of the shelving beams on top and at the bottom of the shelving bay. In case of MOBIBASIC mobile shelving installations, the rails are fixed directly to the MOBIBASIC chassis and to the shelving beam on top of the bay, to ensure a dust proof connection. For more information and ordering, please refer to page42.

Mobile Shelving

Thanks to its attractive high-tech design, SUPER 1-2-3 is also a highly suitable and cost effective system to achieve mobile shelving applications. For the design and ordering of mobile shelving installations, please refer to the MOBIBASIC Technical Manual <Doc: MT16>.



Modular Steel Cabinets

Made from our shelving series and cladded with EUROSCACCO steel panels, these cabinets are equipped with lockable sliding doors and are highly performing in terms of load bearing capacity. Available in zinc coated or powder coated version (Ref. 62). The standard configuration has been conceived with four modular, adjustable steel shelves made from SUPER-1-beams and H-12shelf panels; other configurations can be easily achieved thanks to the modular design. Customers may use shelving components from their stock to build the framework and just order the cladding set to build the cabinet. Compared to similar products available on the market, METAL RACK steel cabinets distinguish themselves by higher load capacities, utmost cost efficiency and solidity. Available as well in a width of 1500 mm: a feature that is not common for this product category. For ordering, see page 42.

Mobile Ladders

Mobile ladders are available in 2000-2500-3000 mm height (in 5-7-9-step version) and can be supplied with guide rail and curves to adapt them to any



environment (Ref. 56). For ordering please refer to page 47.





SIMPLY SUPER - DO-IT-YOURSELF - PATENTED BOLTLESS SHELVING KITS



"SIMPLY SUPER" are DO-IT-YOURSELF shelving kits, conceived for easy use within the domestic environment. SIMPLY SUPER is available in two different heights - 1840 and 1576 mm - with 5 or 4 shelf levels in height, respectively. Two shelf options are available: plastic panels or steel shelf panels. Starter bays can be easily integrated with add-on-bays. All of them in 900 mm width and 400 mm depth. Shelves can be regulated in height at a 33-mm-pitch. SIMPLY SUPER is made from prime quality high tensile steel, certified according to EN 102043.1.

component	shelving kit to build a:	nominal bay dimensions L x D x H - mm	shelf panels made from:	_	component	description	box height mm
75000.98 75000C.98	starter unit add-on-unit	1000 x 400 x 1576	steel		75105/E.98 see Ref. A above:	Packaging set composed of cardboard b	1580 box + sticker + flyer
75001.98 75001C.98	starter unit add-on-unit	1000 x 400 x 1840	steel		75107/E.98 see Ref. A above:	Packaging set composed of cardboard b	1840 box + sticker + flyer
75002.98 75002C.98	starter unit add-on-unit	1000 x 400 x 1576	plastic, yellow		751011.98 see Ref. B above	Screen Print Box	1840
75003.98 75003C.98	starter unit add-on-unit	1000 x 400 x 1576	plastic, light blue	_			

PLASTIC LINE (Page 19)

Open fronted bins with very strong structure. Easily to be placed one upon another. Large front label holder. Made from high density polyethylene. Fracture and breakage proof. Resistant to acids, oils, solvents and detergents. Ergonomic line with comfortable handles for lifting. Base completely flat and anti-skid. Full length return to clip to louvred panels. Brilliant colours and agreeable design.



See more on the we