

SHELVING 45 - TYRE HOLDER

installation, use and maintenance instructions



The depth of 500 mm is suitable for the storage of tyres. Entirely made of first grade steel sheet certified and profiled with fully automatic machines and equipment.

All components are cold-profiled with galvanized steel according to the SENDZIMIR process except for the safety offsets (protected with zinc electroplating).

The design and construction were carried out according to UNI standards and have passed the tests at the highest level.

The reference standards of the theoretical calculation are: C.N.R.10011/97 - C.N.R.10022/84.

The reference standards for materials are:

UNI EN 10025 - UNI EN 10326.

Side panels, battens and accessories: **galvanized**.

RISKS ASSOCIATED WITH THE INSTALLATION OF THE SYSTEM

BEFORE ASSEMBLING the system check the floors and floor slabs, they must be in good condition, without holes and accentuated unevenness and must have an appropriate consistency for the capacity of the shelves. In the case of installation to be carried out on a mezzanine floor or asphalted square it is essential to consult a specialist in order to assess the resistance and the capacity of the floor.

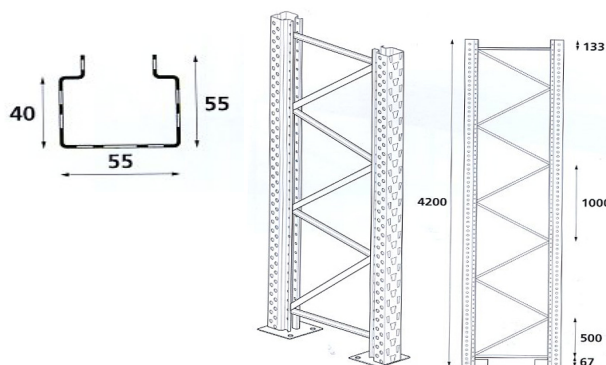
UNLOADING AND STORAGE OF MATERIALS. Must be carried out at a predefined location, away from the risks arising from any everyday work and contemporary installation of other systems (electricity, water, air conditioning, etc.). The staff must be informed about the interim storage program, the approach of the material to the area of installation and realization of the system itself.

ASSEMBLY AND INSTALLATION OF THE SYSTEM. The staff responsible for this processing must be equipped with **helmet, protective gloves, shoes with imperforable sole** and, in the case of use of electric screwdrivers, **ear plugs or headphones**. During the operation of anchoring the dowels to the floor, staff will be equipped with **face masks with filter**. The personnel managers must coordinate all phases of movement and installation and ensure that all applicable standards regarding the health and safety of workers are applied. The internal means of transport and lifting must be suitable for the movement of specific material and equipped with safety accessories for positioning, at height, the persons engaged in the assembly. *posizionamento in quota delle persone addette al montaggio.*

BEFORE BEGINNING THE ASSEMBLY READ CAREFULLY THE CHAPTER "USE AND MAINTENANCE STANDARDS"

MOUNTING SEQUENCE

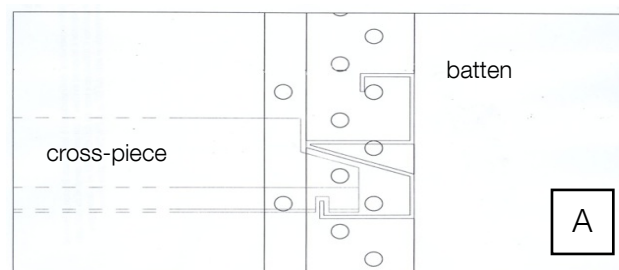
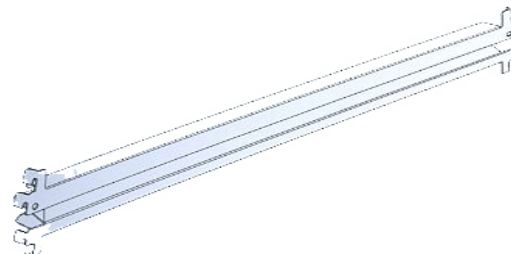
- ASSEMBLY OF SIDES.** Position the two uprights with the open side to the inside, insert the 1st cross bar in the second hole from the bottom, fixing it from one part with the spacer and from the other with the diagonal (the open sides must be facing one another). Continue with the other diagonals until the penultimate hole at the top, insert the second cross bar, fixing it from one part to the last diagonal and to the spacer from the other. Insert the bases diagonally and use force, rotating, to facilitate the introduction into the uprights, then fix them in the first hole at the bottom. For all fastenings, the screws 6x40 with nut are used.



2 GROUND TRACKING of the dimensions of the system on the pavement. To determine the minimum width of the passages it is necessary to calculate the spaces allocated for pedestrians, forklifts and emergency routes.

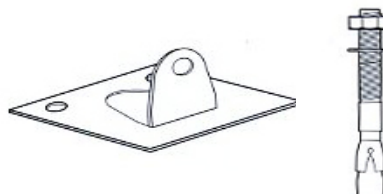
3 BATTENS. Verticalize the 1st and the 2nd side and start the mounting of the battens, starting from the bottom. Lock them to the uprights by joining the plates, using a hard rubber mallet

- Lock each batten with 2 screws TE 5 x 20 with nuts and washers.
- Mount the central longitudinal cross-piece at the bottom of the 2 battens (as per drawing "A").

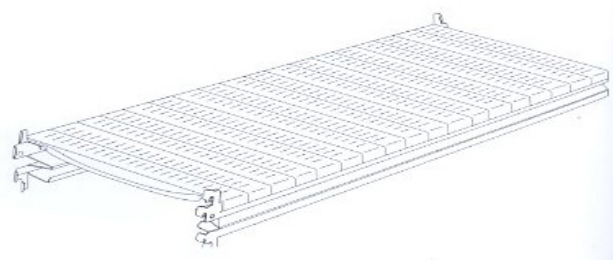
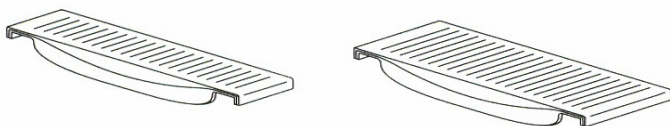


4 ALIGN the structure in length, depth and height, shimming the sides if necessary. Consider a maximum tolerance of +/- 5 mm. in height and +/- 15 mm per row of shelves.

5 FLOOR MOUNTING THE SIDES. It is essential to floor mount the side panels with anchors (mounted diagonally) as indicated in the section "SIDES CAPACITY VARIATION"

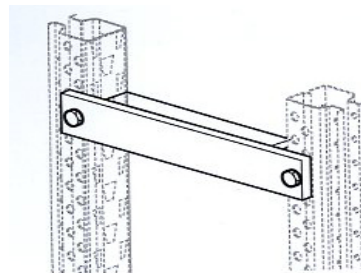


6 FITTING THE SHELVES. They are placed directly on the battens.



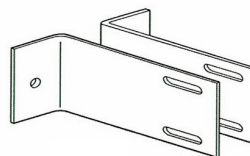
7 SPACERS FOR DOUBLE-SIDED SHELVES.

It takes two for each side, positioned 1200 mm from the ground and 300 mm from the top. They are each fastened with 2 screws TE 6x20 with nuts and washers.



8 BRACKETS FOR WALL MOUNT.

Composed of 2 elements with holes of diam. 13 mm, they are attached in the side holes of the uprights with 4 screws TE 10x25 with nuts and washers.



9 PLAQUES. For each row of shelves, a plaque indicating the maximum capacity of the sides and the shelves must be placed in a visible position.



SIDE PANELS CAPACITY VARIATION

The table shows the capacity of the sides as a function of the distance from the ground to the top edge of the first shelf or higher spacing if greater than the 1st shelf. The indicated capacities are for shelves with a **minimum of 3 consecutive spans and 2 equidistant levels** with the same evenly distributed load.

DISTANCE BETWEEN SHELVES (mm)	CAPACITY (kg)
600	4600
900	4200
1200	3700
1500	3200
1800	2900

PAIR OF TYRE HOLDER BATTENS		
ART.	DIMENSIONS (mm)	PAIR CAP. (kg)
S4310	1500 x 500 X 65	385
S4312	1800 x 500 X 65	300
S4314	2000 x 500 X 65	240
S4316	2400 x 500 X 65	160

ART.	DIMENSIONS (mm)	ANCHORS
S4300	2200 X 500	4
S4302	2700 X 500	4
S4304	3200 X 500	4
S4306	3700 X 500	4
S4308	4200 X 500	4

PIANI COMPLETI		
ART.	DIMENSIONS (mm)	CAPACITY (kg)
S4320	1500 x 500	770
S4322	1800 x 500	600
S4324	2000 x 500	480
S4326	2400 x 500	320

SHELF DIMENSIONS

Add the nominal length of the battens increased by 55 mm each span. Add 90 mm to the total obtained to get the final dimensions including bases.

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- **Compositions of spans.** For each span it is necessary to use **at least 2 shelves in height with minimum 3 spans**. It is also necessary to provide for the stiffening of the structure with wall-bound constraints or with adequate means to minimize the risk of sliding or collapse of the shelf.
- **Safety.** It is essential to **floor mount the side panels** with the number of anchors indicated in the paragraph "**SIDE PANELS CAPACITY VARIATION**". **The screws with nuts** and washers must always be inserted in the battens. In declared seismic zones any kind of wall mounting is forbidden.
The structures are intended for operations carried out manually, not with forklifts or pallet trucks.
- **Capacities.** For each row of shelves, a plaque indicating the maximum capacities of the sides and the shelves must be placed in a visible position. The capacities indicated are always for **uniformly distributed loads** on the installation, installed according to our instructions and used correctly.
Avoid dimensioning the structures at the limits of capacities.
- In case of **damage to the structures** you must immediately unload the system and replace the parts that are damaged or deformed. Carefully check that the geometry of the shelf has not been changed. In case of frequent accidents it is necessary to have adequate safety measures.
- **The warehouse manager and operators must be provided with all the information** about the technical specifications of the system and the rules for its correct use
- **The user, as required by Law, must verify the suitability and efficiency of the structures**, planning a series of tests and inspections and preparing the dedicated report.
- **Every 3 years it is necessary to inspect the bolts** on 10% of the spans. If more than 5% of the bolts measured are not adequately tightened, proceed by checking 50% of the spans. Where more than 10% of the bolts have the same problem you must have the entire system checked. In subsequent checks, check the parts not previously examined.
- **Every 6 months check that the battens fit perfectly to the uprights.** If the batten is even partially offset from the upright, proceed with due caution to removing the material and the arrangement or replacement of the defective batten.
- **Every 12 months check the tightness of the anchors and the fixing systems.**
- **Every 2 years check the verticality of the structures** longitudinally and transversally. In case of deviations, provide with shims to restore the geometry of the shelf.
- **The galvanization of all components must be checked** every year for environments subject to corrosion (close to the sea, chemical fumes, etc.) and every 5 years for indoor environments. If any items are damaged by corrosion they must be replaced.
- **It is forbidden to modify** the components of the structures by performing welding or preparing equipment of any kind.

Failure to follow the "installation, use and maintenance instructions" releases the supplier from any liability and damages to persons or property.