

FOOTBOARD

ELEVATED MODULAR FLOORING FOR EXHIBITION

for updates visit our website
www.crossmetal.it



designed and produced in Italy by

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CROSSMETAL[®]
SYSTEM



CROSSMETAL® Modular Flooring has been studied to meet special requirements for exhibitions that traditional flooring cannot resolve. It has been created for being installed in an open space and it does not necessarily have to be contained by external walls. In fact it consists of a supporting structure in aluminium assembled by a joint and resting on small adjustable feet with panels of flooring simply placed on the top.

These features offer:

... **Easy and rapid assembly**, because the sustaining structure is very light and the flooring level can be adjusted by means of a simple wrench, even the ground surfaces have already been placed in position.

... **Minimum encumbrance**, because the structure can be completely dismantled therefore greatly reducing storage space.

... **Flexibility of use**, because the ground surfaces can be removed with a simple suction cup when maintenance has to be carried out on the electrical or hydraulic system; the ground surfaces can then be replaced even though the stand has been mounted.

... **Colour Option**, because the two sides of the ground surfaces only resting on the supporting structure the two sides can be done in different colours so that the ground surfaces can be turned over at any time.

... **Durability**, because the supporting structure is in aluminium and the ground surfaces are chipboard panels: they permit a prolonged use through time with relatively low costs of depreciation.

... **High Loading capacity**, as illustrated by technical calculations at the bottom of the prospectus.

... **Reaction to fire Class 1**, maximum safety offered.

STANDARD SYSTEM

It consists of drawn bars in natural workhardened aluminium UNI 6060 obtained by extrusion.

It consists of vertical rods and bars that, in addition to holding the supporting structure together, also sustain the ground surfaces.

The vertical rods and the bars are assembled by means of small bolts and through an internal joint.

The particular shape of the bars joint permits the correct positioning of the flooring.

Small adjustable feet are provided underneath the vertical rods enabling a 4 cm regulation.

In case of particular loads it is possible to enforce the structure by means of squares fitting in the uprights.

External plinth

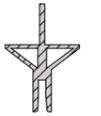
It has been realized in chipboards or in MDF and it is covered with the same material used to cover the ground surfaces.

Ground surfaces

They consist of chipboards with a thickness of 28/30 mm, covered on both sides with finishing material chosen by the customer : laminated plastic, aluminium in a raised almond shaped design, raised rubber, carpeting, linoleum, etc...

It is possible to create 8+8+8 mm crystal ground surfaces.

Central transom



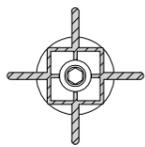
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External transom

with countersunk holes for the external plinths.

External foot

linked to the transoms with bolts.

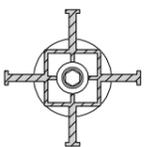


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Central foot

joint to the transom.

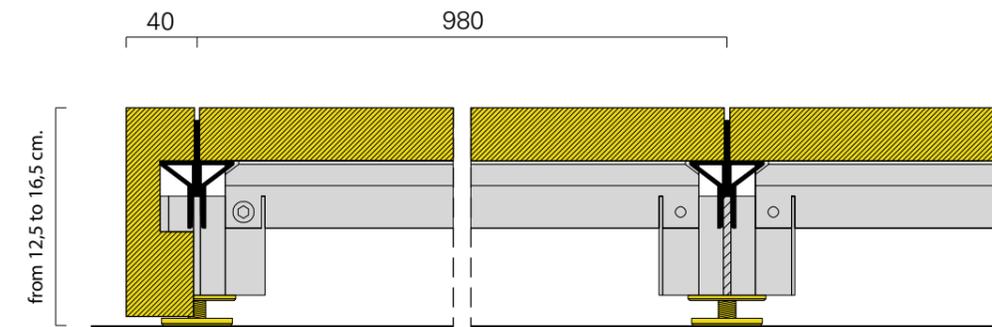
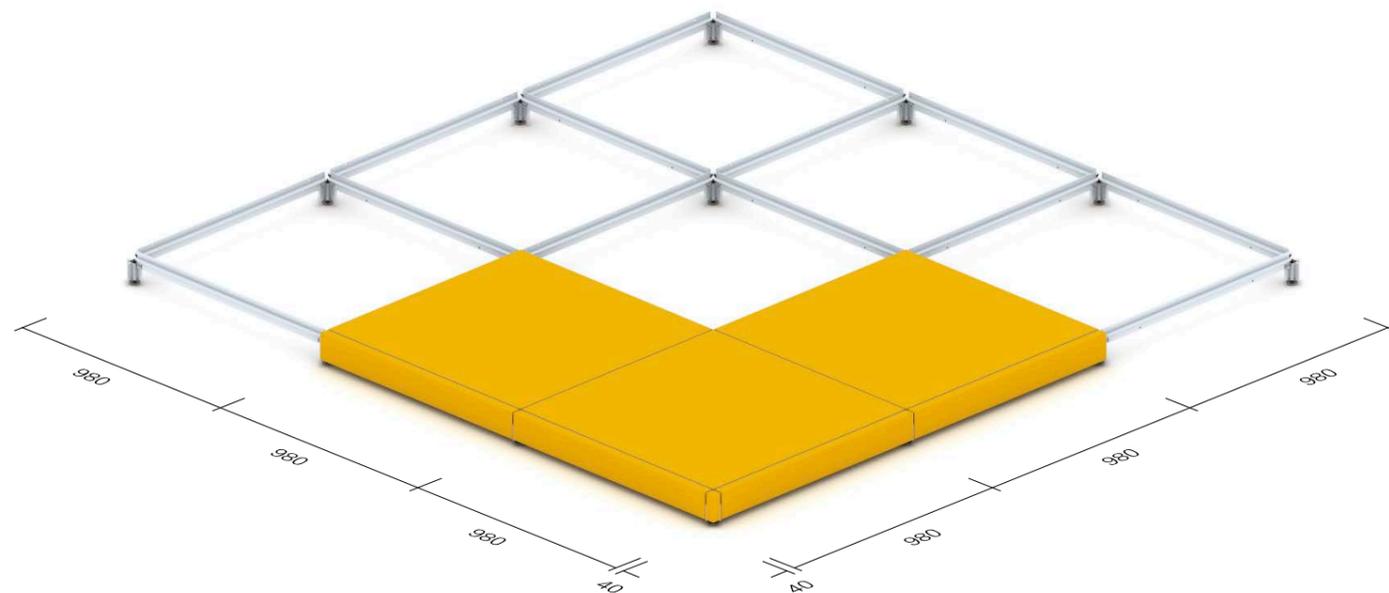


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Low square

It increases the capacity load of the structure from 300 kg/sm up to 1800 kg/sm.



SYSTEM FOR SCAFFOLDING

It consists of drawn bars in natural workhardened aluminium UNI 6060 obtained by extrusion.

It consists of vertical rods (studs), squares and transoms that, in addition to holding the supporting structure together, sustain the ground surfaces too.

The transoms, the brackets and the studs are assembled by means of small bolts.

The joint of studs, squares and transoms permits the correct positioning of the flooring.

Small adjustable feet are provided underneath the vertical rods enabling a 4 cm regulation.



Fair in Milan
Inauguration of
the new centre



External plinth

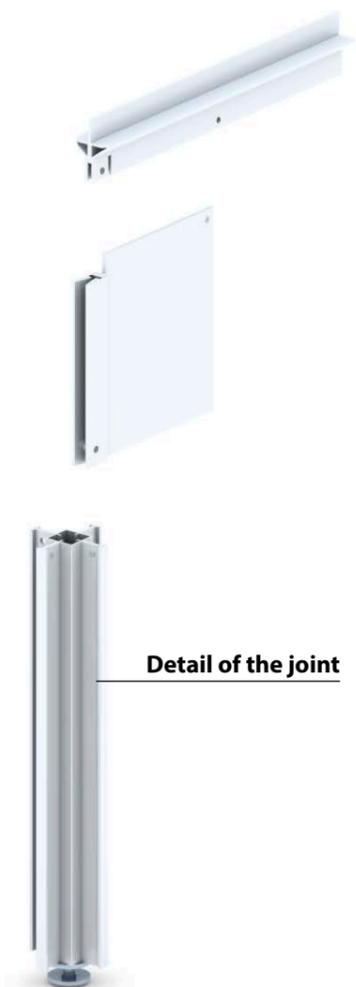
It has been realized in chipboards or in MDF and it is covered with the same material used to cover the ground surfaces.

High squares

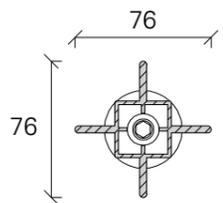
They consist of drawn bars in natural workhardened aluminium UNI 6060 obtained by extrusion.

Their function is to increase the capacity of the transoms and at the same time cause the struts effect, thereby making the whole structure completely bound and vertically in square.

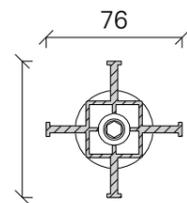
Detail of the joint



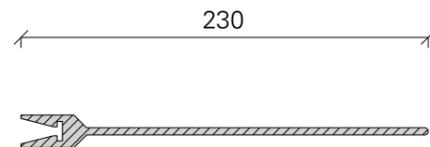
External foot



Central foot

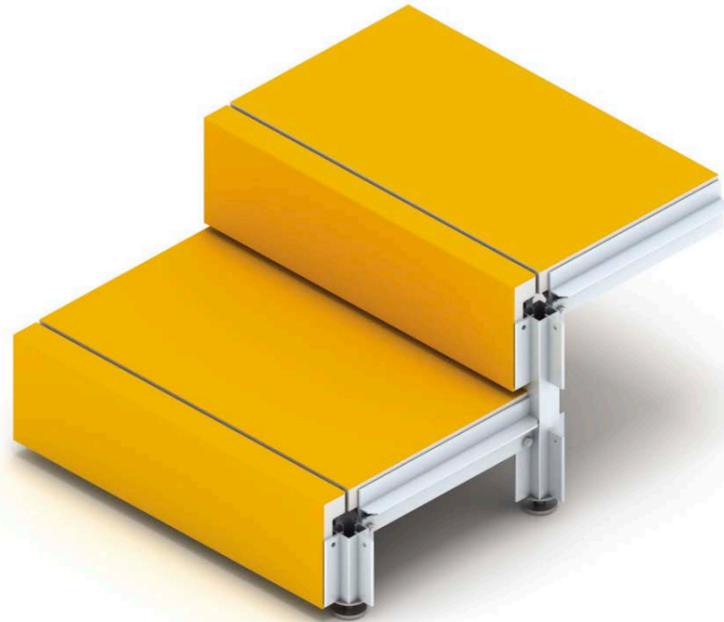


Square



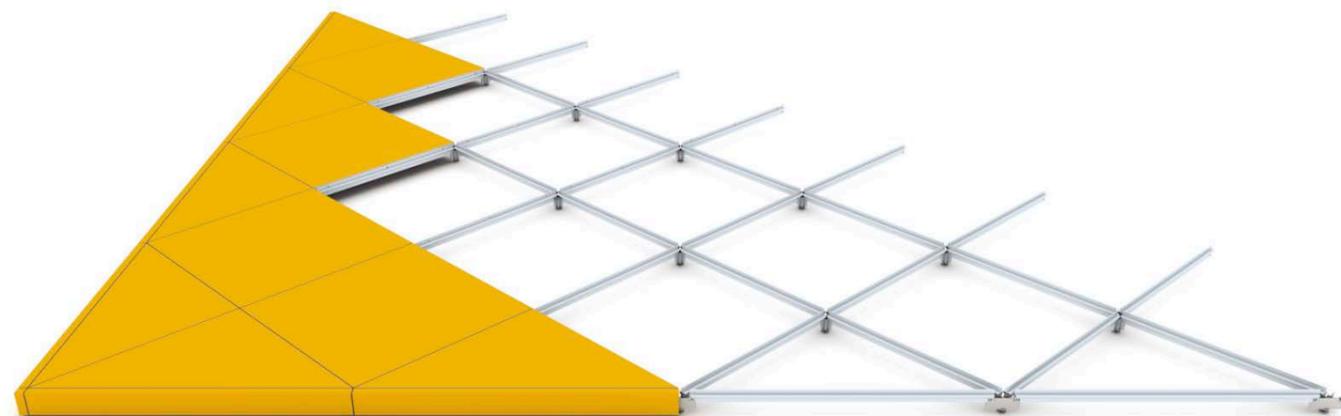
STAIRS AND DIFFERENT LEVELS

Using a special foot, different levels can be created to obtain stairs raised floors, platforms, etc...



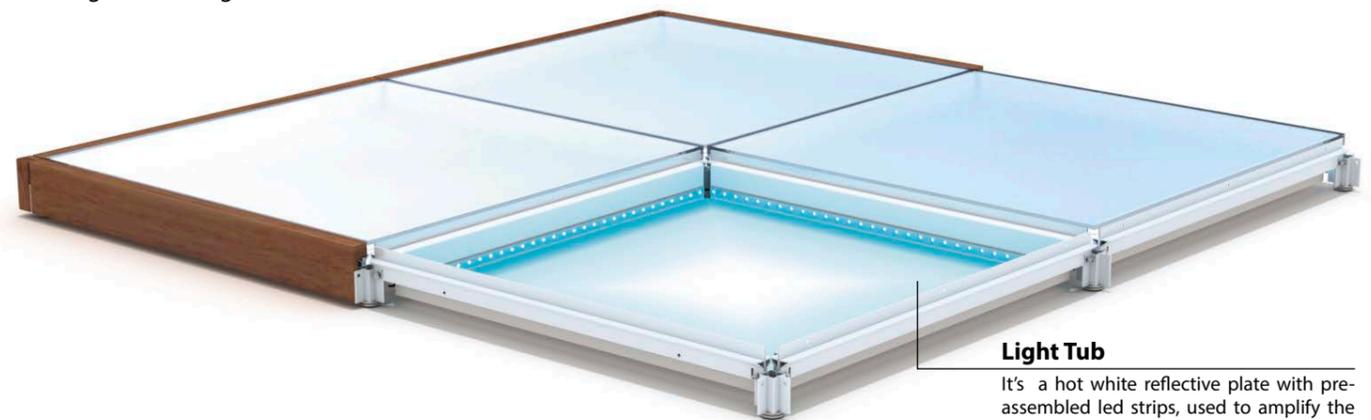
DIAGONAL FLOORS

Using a special iron foot, it is possible to obtain floors in a 45 degree diagonal.



LUMINOUS FLOORING

Using stratified glass with a thickness of 8+10+8 it's possible to realize a luminous flooring or a flooring showcase.



Light Tub

It's a hot white reflective plate with pre-assembled led strips, used to amplify the effect of light.



Risanamento S.p.a. - Evening party to present new Quartiere S.Giulia - Project: Cibic & Partners

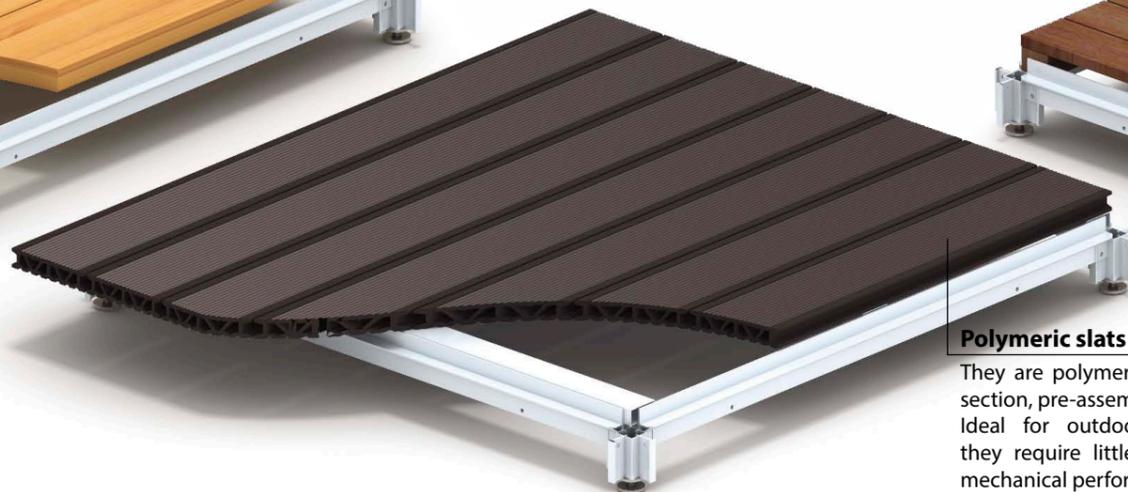
OUTDOOR

The system offers various solutions for the creation of outdoor platforms, temporary or permanent, without damaging the underlying existing surface. The slats are pre-assembled with a gap between them that allows the water to flow.



Large staves

They are made pre-assembling fir staves, 192x30mm section, up to 4m long. Painted with colored stains they are ideal to create large and spectacular flooring for temporary outdoor events.



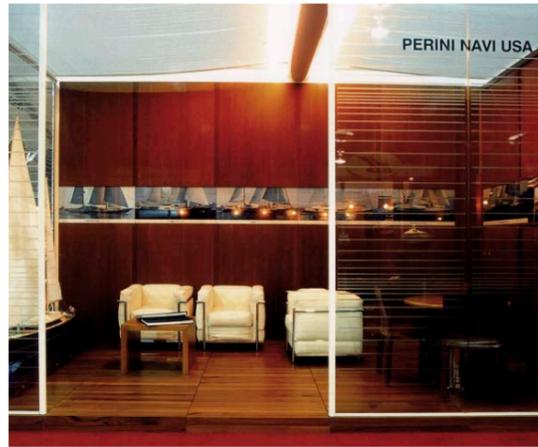
Polymeric slats

They are polymeric commercial profiles, 140x30mm section, pre-assembled up to 6m long. Ideal for outdoor terraces and swimming pool, they require little maintenance and offer excellent mechanical performance.



Decking

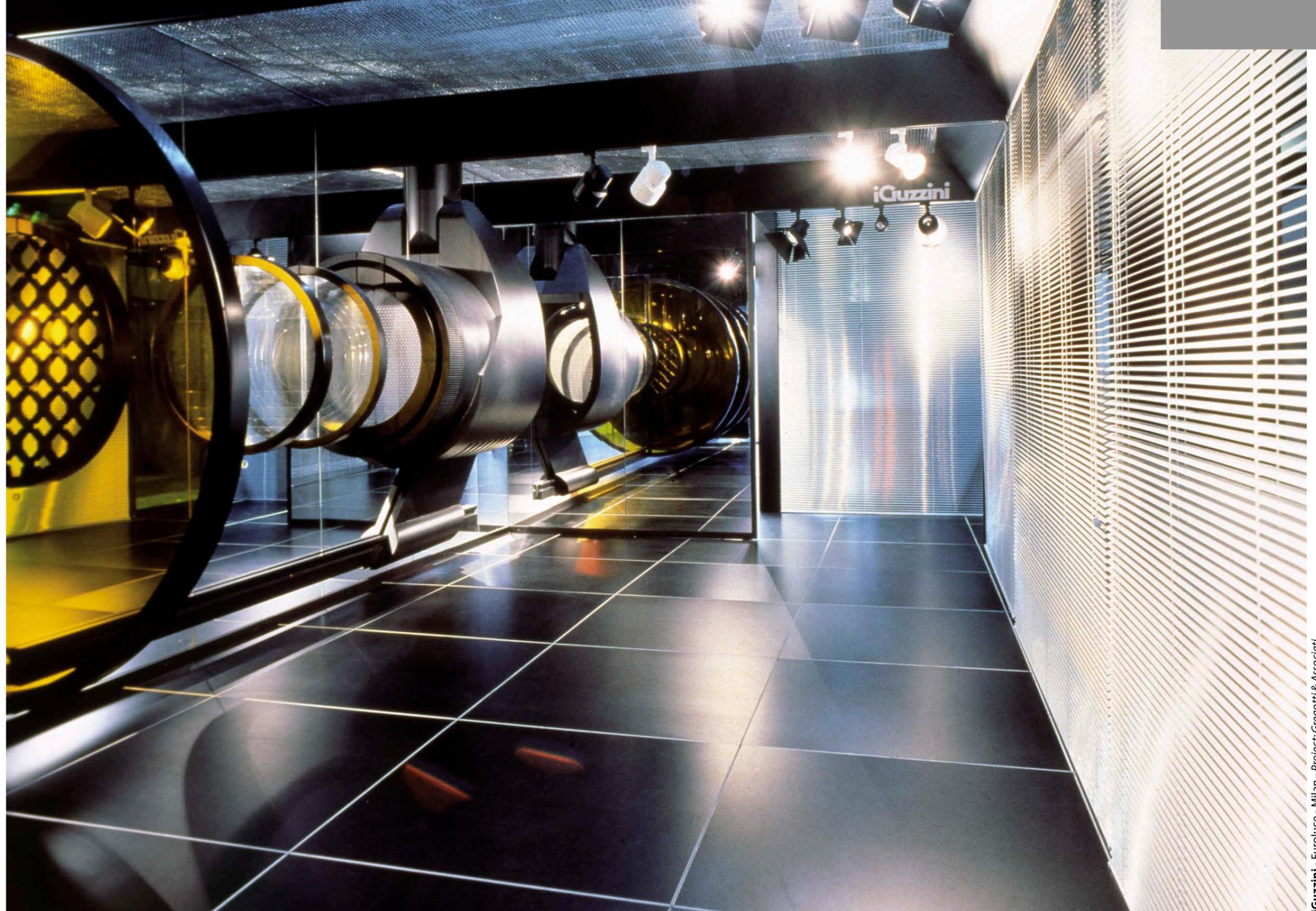
Ideal for permanent installations and fittings, it's formed by pre-assembled iroko footboards (or other hardwood) 85x18mm section, with toothed surface, up to 2m long.



Perini Navi - FLIBS show - Fort Lauderdale (USA)
 project: ai Granai



Auredia - Expo Italia Real Estate - Milan
 project: Bob Noorda



iGuzzini - Euroluce - Milan - Project: Gregotti & Associati



Faper Group
 TissueWorld - Nice
 project: ai Granai



Toschi
 TissueWorld - Nice
 project: AirBag



Hewlett-Packard - SMAU - Milan
project: *MCCGLC*



Faper Group - TissueWorld - Nice
project: *ai Granai*





Toscotec
TissueWorld - Miami
project: Airbag

BTicino
Roadshow - Barcelona
project: A.Castiglioni



Zanotta - Salone del Mobile - Milan - Project: A.Castiglioni



Digital Equipment - SMAU - Milan
project: F.Ponti



Asio - First Atlantic
Expo Italia Real Estate - Milan
project: Systematica



Aedes
CityScape - Dubai
project: Asti Architetti

FEATURES OF MATERIALS

Drawn bars in natural workhardened aluminium UNI 6060
 $E = 68.500 \text{ N/mm}^2$
 $\sigma_r \geq 125 \text{ N/mm}^2$
 $\sigma_r = 210 \div 270 \text{ N/mm}^2$
 $A_{11\%} = 12 \div 18$
 $\sigma_{amm} = \sigma_r / 2.3 = 90 \text{ N/mm}^2$

FEATURES OF ELEMENTS

transoms: $A = 412 \text{ mm}^2$
 $J_x = 86.983 \text{ mm}^4$
 $J_y = 20.180 \text{ mm}^4$
 $J_p = 9.432$
 studs: $A = 632 \text{ mm}^2$
 $J_x = J_y = 174.398 \text{ mm}^4$
 $J_p = 21.952 \text{ mm}^4$

LOAD SCHEME

for central elements: $Q = p \cdot l^2 / 2$
 for lateral elements: $Q = p \cdot l^2 / 4$
 $P = \text{dead weight} + \text{overload sq.m.}$
 $l = \text{wheelbase of studs.}$

ANALYSIS OF DEFORMATION

The hypothesis of deformation in the field of application has been analyzed as 1/250 light and 1/300 light and all possible overloads considering a dead weight for sq. m. of 0.40 Kg/sq. m. have been obtained.

ANALYSIS OF STRESS

The diagram indicates the maximum acceptable overloads with analysis at the allowable tensions together with the variations of the wheelbase of studs considering a dead weight of 0.40 Kg./sq.m.

Analysis in table A refers to the simple structure and in table B to the structure reinforced with special corner elements.

NOTE TO DIAGRAM

The works areas are those below the diagram line.
 The bearing surface of the structure (load point) must be verified in consideration of floor bearing.
 For a structural grid over m. 0.60 for side the flat flooring must be verified (punching test).

NOTE FOR REINFORCED STRUCTURE WITH BRACKETS

This structure permits remarkable wheelbase of studs with many aesthetic-functional possibilities.
 The bearing surface of studs and the flooring surface must however be verified.
 The total height of studs is acceptable up to m. 0.80.

25/02/1992

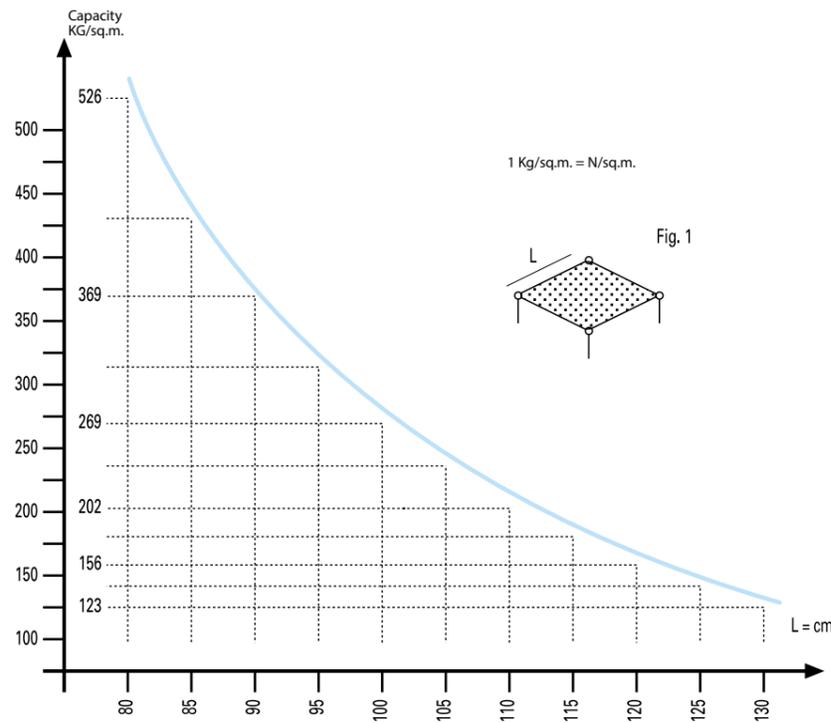
Dott. Ing. Pedrazzini Celestino



STANDARD STRUCTURE

H = cm 12/15 from the floor

TABLE A



STRUCTURE WITH BRACKETS

H = cm 80 from the floor

TABLE B

