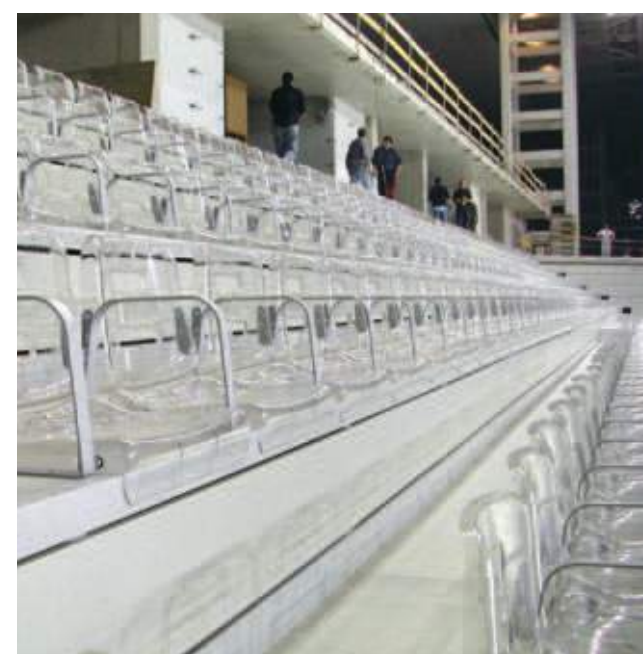


Telescopic Stands: stands that restore space

Livorno, Multipurpose Indoor stadium "Palalivorno".



Torino, Pala Hockey.



Functional and structural features

CETA's telescopic stands are designed with cutting-edge technology and offer the best answer to the ever more frequent need for interior space.

These structures run on wheels and are easily extracted in a matter of minutes to provide a large number of spectator seats.

After the event, it's equally simple and fast to return the stand to a compact,

perfectly aligned unit taking up the minimum of space. In this way, gyms, indoor stadiums, congress halls and many other interiors can be organised in a truly flexible manner and with significant reductions in running costs. Different activities can thus be held in the same interior: sports events, teaching sessions, competitions, shows and many other kinds of events.



The stands that furnish

Solutions designed to suit the specific needs of the customer; the constant search for top quality materials; bearing structures and seats perfectly integrated to suit the context: all these factors help make telescopic stands the perfect solution for all interiors, enhancing both its architectural and functional aspects.



The stand opens and closes smoothly thanks to trolleys that support the terraces; simply pulling out the first terrace, the others connected to this follow in turn.

When closed, the terraces are stacked one on top of the other to create a very compact "cabinet". The stand can also be partially opened to make more space for other purposes.

Castors for all surfaces

Castors allow the trolleys to move over the floor and guide the opening/closing procedure: there are two of them at the rear of each trolley to bear the weight of this and one at the front for stability.

The castors have ball bearings and are coated with polyamide and polyurethane to suit the intended use and type of surface. In fact, some floors in gym, indoor stadiums and other buildings may be particularly delicate, meaning that a castor with the right type of coating is essential to avoid the risk of scratching or marking the surface.



Wheels and rollers for perfect movement

The wheels ensure the trolleys move smoothly, while the rollers eliminate friction between one tread board and the next.

The sectors are kept 100% parallel when opening/closing, for a fast operation requiring the minimum of manual effort.

Self-locking devices to guarantee max stability

These are found at the base of each riser and prevent the trolleys from moving once fully opened.

They thus make the stand 100% stable and safe.

These devices are automatically released only while the stand is being closed by authorised personnel.



Functional and structural features

Total quality with max safety

CETA's telescopic stands are designed in full compliance with current legal standards, even for buildings in seismic areas. They are built using hot-galvanised S235 JR steel tubes and profiles with continuous welding by automated systems to guarantee the perfect finish of each element (welding process qualified by the Italian Welding Institute). Special attention is paid to the coating of the stand, which is a strong multi-layer one. In line with its policy of total reliability, CETA carries out accurate tests and quality controls at all stages of the production process to guarantee compliance with the standards and absolute safety and peace of mind for the spectator.



Fixed or removable anchoring

The stands are anchored to the ground at the last trolley by means of screw anchors. If the structure is particularly high, it can be also fixed to the wall with brackets. The solution is particularly useful when one wants to protect special flooring and floors.

On request, mobile anchor systems can be used to fix the stand to the floor or wall.

For example, this system is used for moveable stands where the single sectors can be separated and moved away from their original position.

Long-lasting paint

To guarantee long life for the paint, all metal parts are specially treated. First, all traces of impurity and welding burrs are removed mechanically, followed by degreasing and pickling. Then the metal is coated with ferrous salt phosphate at 60° C to guarantee its resistance to corrosion. Finally the metal is oven painted via electrostatic application of coloured and catalysed epoxy powder followed by polymerisation baking at 190° C for 20 minutes.

The standard colour is semi-gloss black; other colours are available on request.

Steel load-bearing structure



The load-bearing structure of the mobile element (the terrace) in telescopic stands consists of two trolleys and the frame bearing the tread board. Each trolley comprises a closed-profile riser and lower "C" transom with the castor wheels.

The frame for the tread board is made from square and rectangular tubes and consists of a string rear beam and a front cross brace linked by small transoms that also act as a support for the plywood cover. Two diagonal braces and a lower cross brace made from square tubes provide extra reinforcement and prevent possible wobbling due to the dynamic force of the crowd.

The ends of the profiles are closed with plastic plugs to improve the look and to assure safety for people.



Side rails for max protection

The stand has side rails and can also be fitted with front and rear parapets if necessary. The side rails are made from steel and comply with the relevant safety standards (UNI 9217 and the Italian Ministerial Decree dated 14th January 2008).

The rails are always at least 1 metre high.

The side rails are arranged one per row and are linked together by simple bayonet couplings. These rails also provide further straightening for the structure.

Where applicable, telescopic side rails can be supplied to avoid the need to remove them when closing the stand.

Finishes and optionals

The tread boards, benches, front risers and steps are all made from waterproof plywood (15 and 18 mm thick) with phenol film coating on both sides making them waterproof and more wear resistant.

The layers (15. mm each) are glued together with phenol adhesive, for resistance to both boiling water and harsh weather conditions.

The timber used has Class 1 fire certification (tests C.S.E. - RF 2/75 - A and C.S.E. - RF 3/77 - Ministerial Decree 26.06.1984).

The visible surfaces of the tread boards and steps can be fitted with special guiding lights and are gently embossed for non-slip passage-ways.

The benches, having rounded edges and the front risers are smooth and elegant.

All these features make CETA's telescopic stands extremely safe and comfortable, guaranteeing added value that will surely be appreciated by the end user too.

Optional finishes: a wide choice

If specifically requested, the tread boards and the steps can be covered with carpet or rubber, with Class 1 fire resistance.

The benches can be made by extruded aluminium with high pressure layered and coloured lamination (2.5 mm thick), particularly shockproof and waterproof, with good resistance to steam and chemicals, always with Class 1 fire resistance.

The stands can also be fitted with side and rear buffer strips made from PVC or wood (Class 1 fire resistance) to cover the metal structure and improve the look of the stand.

Corridors and access stairs on request

On request, the stands (both at ground level or raised) can be fitted with tip-up front corridors and rails.

These disappear completely once the structure is closed.

Intermediate and rear corridors can also be fitted, as well as access stairs with mobile or telescopic landings, plus suitable areas and access ramps for the disabled.



Finishes and optionals

CETA stand technology for all applications

The many different areas of application for telescopic stands have led to the need to study structures that better meet each customer's specific space requirements and intended use.

Thanks to the high standard of CETA technology, telescopic stand systems have been developed and built to allow for even more flexible use of the stands and full exploitation of the available space, while making the user's work easier. The types of telescopic stand described below can all be made on request.



Motorised stand



Instead of manually opening and closing the stands, this is done electrically thanks to the application, to the first terrace, of draft trolleys driven by gear motors.

One or more sectors of the stand can be moved and stopped using a mobile pushbutton panel connected to a control box. A warning light and buzzer indicate that the stand is moving. Motorised stands have the CE mark and are supplied with the necessary instructions for use and servicing.



Under-floor stands

The stand can be closed until it disappears completely under the reinforced concrete floor of the building, thus recovering even more space. Under-floor stands are the ideal solution when you need continuity between the telescopic stand and the above section, access from above and the application of the last seat directly on the floor itself.

Moveable stands

Each section of the stand, if pre-fitted and without fixed anchoring, can be moved in all directions. The stand is moved by means of lifting transpallets and two trolleys fitted with pivoting wheels and ball bearings, covered with polyurethane for fast and easy movement. This lets you make the most of the available space, use sections of the stand in different areas or store them.

The stands can also be driven, controlled by industrial computers. This solution is recommended for large structures.

Our staff at your disposal to meet your every need

CETA's technical staff is happy to develop special stands to meet the customer's specific needs. CETA also guarantees qualified service and assistance to find the best solution to all problems connected with the use of the structure.

The choice of seat

Telescopic stands can be fitted not just with simple benches, but also with other types of seats. Here is a large look at the types of seats CETA offers. For further details, please ask for our specific "CETA seats" catalogue.



Drop-Game moulded seats

The Drop (without back) and Game (26 cm back) seats are made from high density copolymer polypropylene, paste-coloured and enriched with UV-proof substances and fire-retardants (Class 1 fire resistance).

Self-supporting, the seats have ribbings for extra strength and small channels with holes to drain off any water quickly.



CETA seats are placed directly on the tread of each terrace and remain inserted even when the stand is closed. Bright and shiny, the seats come in red (RAL 3020), green (RAL 6032), yellow (RAL 1003) and blue (RAL 5010). Also available in other colours with minimum orders of 1000 seats.

The seats can also be numbered (optional) with Plexiglas plates fixed to these with a permanent holding device, the number being silk-screen printed and so indelible.



The choice of seat

Blown seats: All Stars

These chairs are blow-moulded using high density copolymer polypropylene, paste-coloured and enriched with UV-proof and antistatic substances and fire-retardants (Class 1 fire resistance). Self-supporting and fitted with ribbing for extra strength, the chairs consist of separate seats and back with an embossed-effect surface thanks to photo-engraving during moulding.



the underside of the seat or to the front or rear of the back, the number being silk-screen printed making it indelible. Plates identifying the row or sector are also possible.



Thanks to their modern ergonomic shape and thickness, these chairs are especially comfortable and can even be fitted with armrests on request.

The tip-up seats make it easier for people to pass and involve or an automatic spring device, or they close thanks to gravity in the case of tip-up chairs with armrests. In fact, the armrests have springs that always tip up automatically together with the seat. "All Stars" chairs are normally fitted in groups of 2, 3 or 4 on tip-up beams fitted to the rear of the tread board.

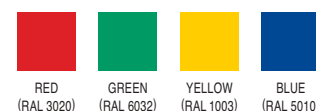
These chairs can also be used with low terraces and disappear from view when the telescopic stand is closed.

When fitted on the front of the tread board, the chairs still remain inside the structure when closed after lowering the backs forward.

The chairs can also be numbered (optional) with Plexiglas plates fixed to either

Standard colours are red (RAL 3020), green (RAL 6032), yellow (RAL 1003) and blue (RAL 5010).

Also available in other colours with minimum orders of 500 seats.



Optional

Automatic tip-up system of a group of seats fitted on beam.



Upholstered chairs: First Class, Top Class

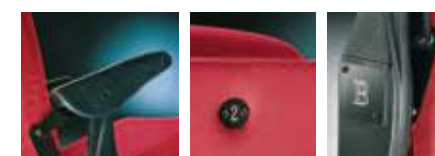
First Class (without armrests) and Top Class (with armrests) chairs have separate seats and backs and are Class 1 IM fire retardant.



Extremely elegant and comfortable, the chairs are made from a strong steel core and upholstered with expanded foam and fabric in a variety of shades.

The fabric is 100 % non-tear, hyper-allergenic and non-stain.

The tip-up seats make it easier for people to pass and involve an automatic spring device, or spring and gravity in the case of Top Class tip-up chairs with armrests.

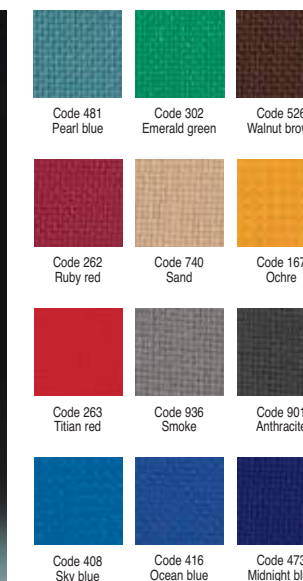


The armrests are made from steel with an integral self-extinguishing polyurethane cover and have springs so that they always tip-up automatically together with the seat. Thanks to the tip-up beams to which the chairs are normally fitted in groups of 2, 3 or 4, these chairs can also be used with low terraces and disappear from view when the telescopic stand is closed.

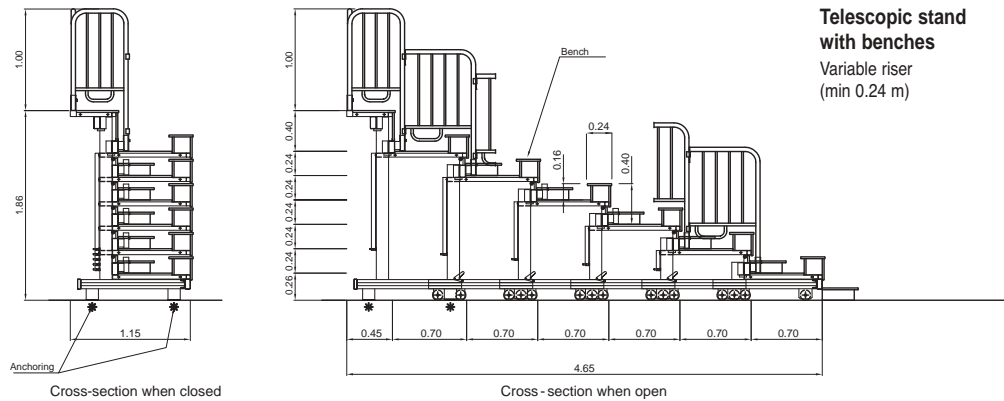
The chairs can be numbered (optional) with engraved PVC plates fixed to the underside of the seat. Plates identifying the row or sector are also possible.

Optional

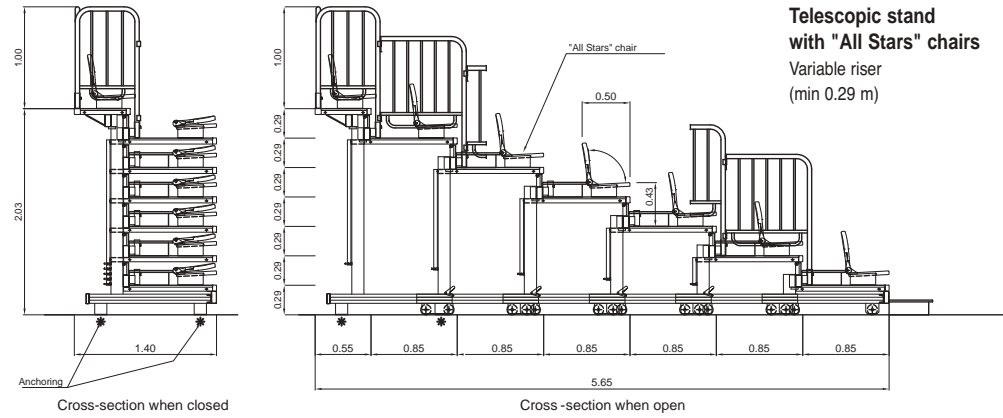
Automatic tip-up system of a group of seats fitted on beam.



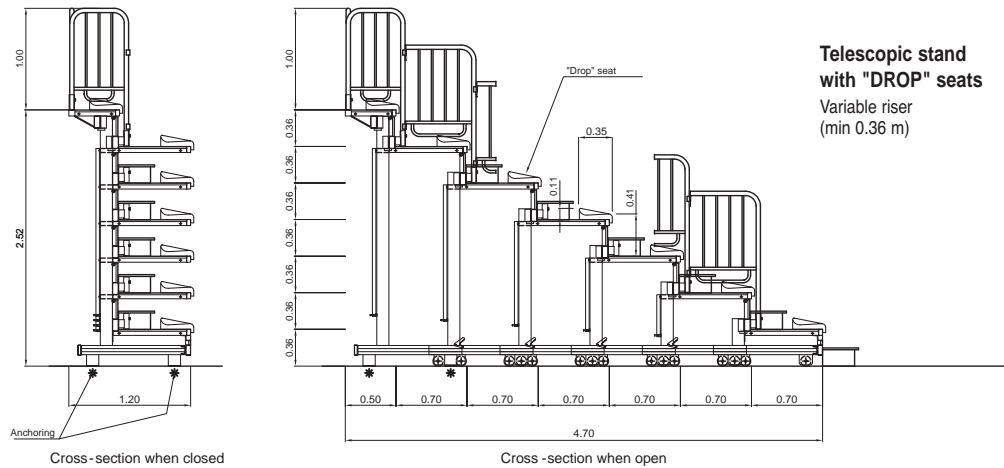
Dimensions. Drawings of some solutions



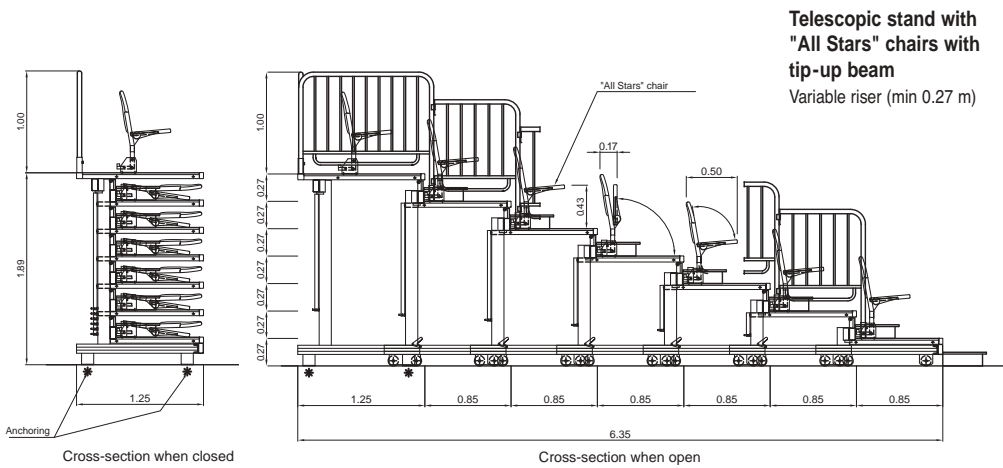
Type	N° of rows	Dimensions when closed	Dimensions when open	Height of last bench
TM 3	3	1,15	1,85	0,90
TM 4	4	1,15	2,55	1,14
TM 5	5	1,15	3,25	1,38
TM 6	6	1,15	3,95	1,62
TM 7	7	1,15	4,65	1,86
TM 8	8	1,15	5,35	2,10
TM 9	9	1,15	6,05	2,34
TM 10	10	1,15	6,75	2,58
TM 11	11	1,15	7,45	2,82
TM 12	12	1,15	8,15	3,06
TM 13	13	1,15	8,85	3,30
TM 14	14	1,15	9,55	3,54
TM 15	15	1,15	10,25	3,78
		Riser 0,24 Tread 0,70		



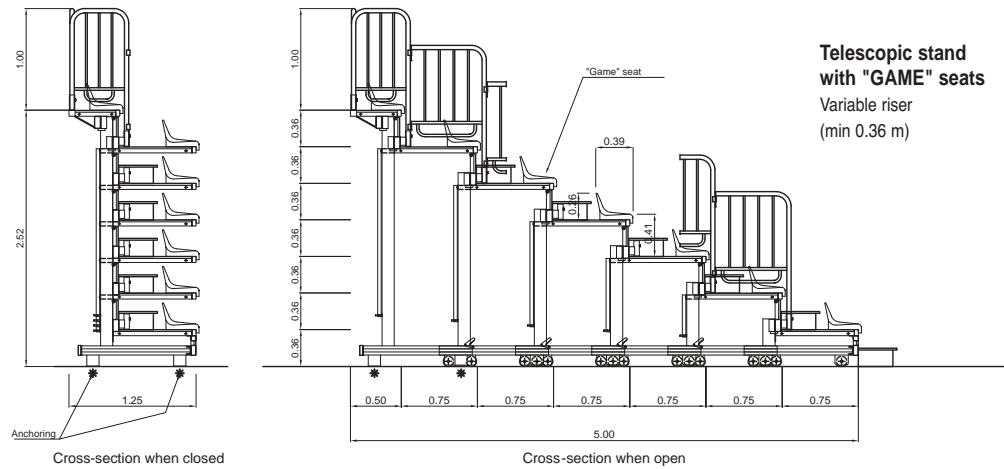
Type	N° of rows	Dimensions when closed	Dimensions when open	Height of last bench
TM 3	3	1,40	2,25	0,87
TM 4	4	1,40	3,10	1,16
TM 5	5	1,40	3,95	1,45
TM 6	6	1,40	4,80	1,74
TM 7	7	1,40	5,65	2,03
TM 8	8	1,40	6,50	2,32
TM 9	9	1,40	7,35	2,61
TM 10	10	1,40	8,20	2,90
TM 11	11	1,40	9,05	3,19
TM 12	12	1,40	9,90	3,48
TM 13	13	1,40	10,75	3,77
TM 14	14	1,40	11,60	4,06
TM 15	15	1,40	12,45	4,35
		Riser 0,29 Tread 0,85		



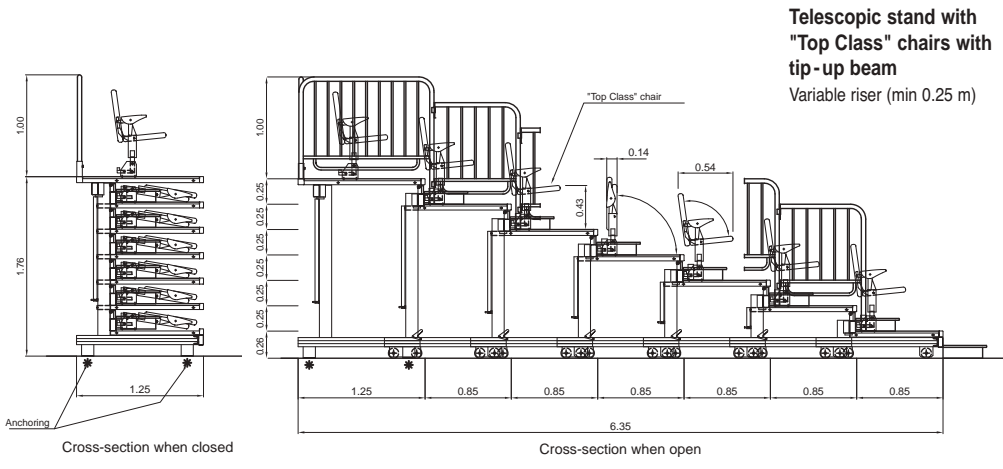
Type	N° of rows	Dimensions when closed	Dimensions when open	Height of last bench
TM 3	3	1,20	1,90	1,08
TM 4	4	1,20	2,60	1,44
TM 5	5	1,20	3,30	1,80
TM 6	6	1,20	4,00	2,16
TM 7	7	1,20	4,70	2,52
TM 8	8	1,20	5,40	2,88
TM 9	9	1,20	6,10	3,24
TM 10	10	1,20	6,80	3,60
TM 11	11	1,20	7,50	3,96
TM 12	12	1,20	8,20	4,32
TM 13	13	1,20	8,90	4,68
TM 14	14	1,20	9,60	5,04
TM 15	15	1,20	10,30	5,40
		Riser 0,36 Tread 0,70		



Type	N° of rows	Dimensions when closed	Dimensions when open	Height of last bench
TM 3	3	1,25	2,95	0,81
TM 4	4	1,25	3,80	1,08
TM 5	5	1,25	4,65	1,35
TM 6	6	1,25	5,50	1,62
TM 7	7	1,25	6,35	1,89
TM 8	8	1,25	7,20	2,16
TM 9	9	1,25	8,05	2,43
TM 10	10	1,25	8,90	2,70
TM 11	11	1,25	9,75	2,97
TM 12	12	1,25	10,60	3,24
TM 13	13	1,25	11,45	3,51
TM 14	14	1,25	12,30	3,78
TM 15	15	1,25	13,15	4,05
		Riser 0,27 Tread 0,85		

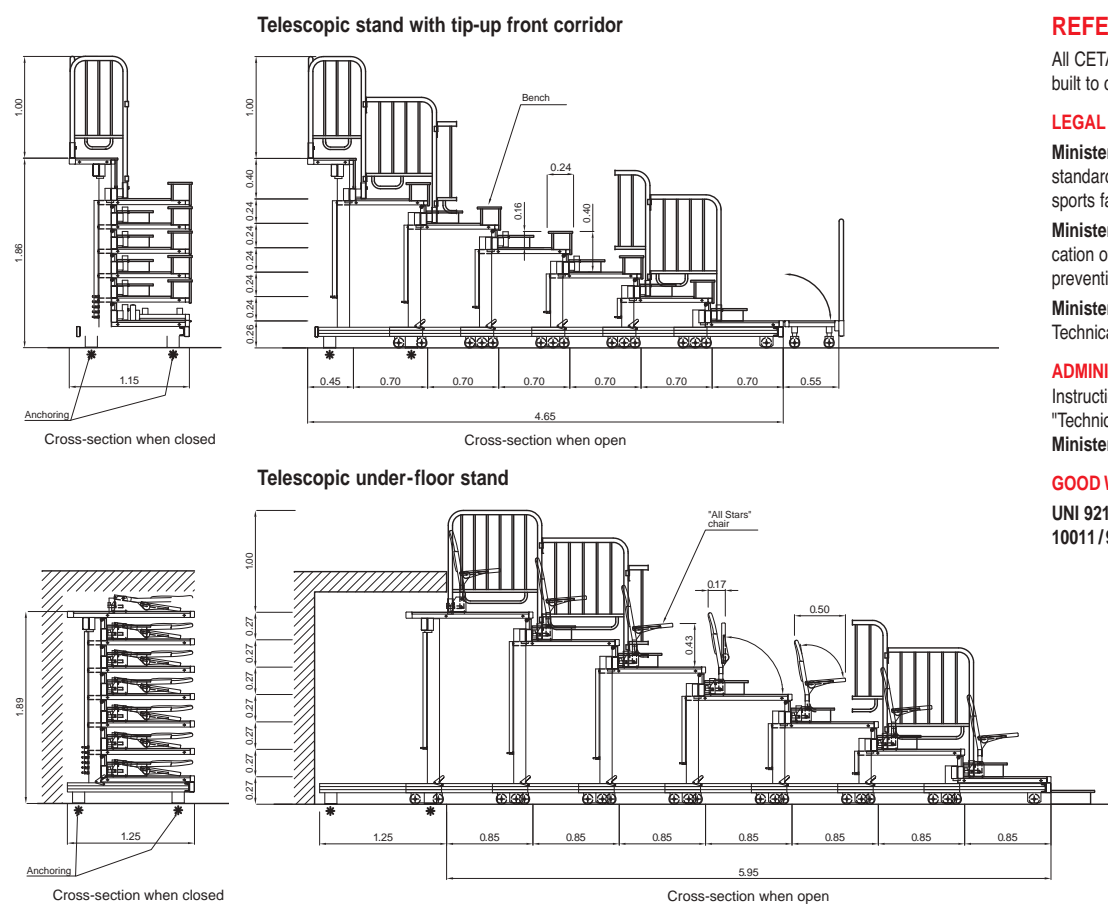


Type	N° of rows	Dimensions when closed	Dimensions when open	Height of last bench
TM 3	3	1,25	2,00	1,08
TM 4	4	1,25	2,75	1,44
TM 5	5	1,25	3,50	1,80
TM 6	6	1,25	4,25	2,16
TM 7	7	1,25	5,00	2,52
TM 8	8	1,25	5,75	2,88
TM 9	9	1,25	6,50	3,24
TM 10	10	1,25	7,25	3,60
TM 11	11	1,25	8,00	3,96
TM 12	12	1,25	8,75	4,32
TM 13	13	1,25	9,50	4,68
TM 14	14	1,25	10,25	5,04
TM 15	15	1,25	11,00	5,40
		Riser 0,36 Tread 0,75		

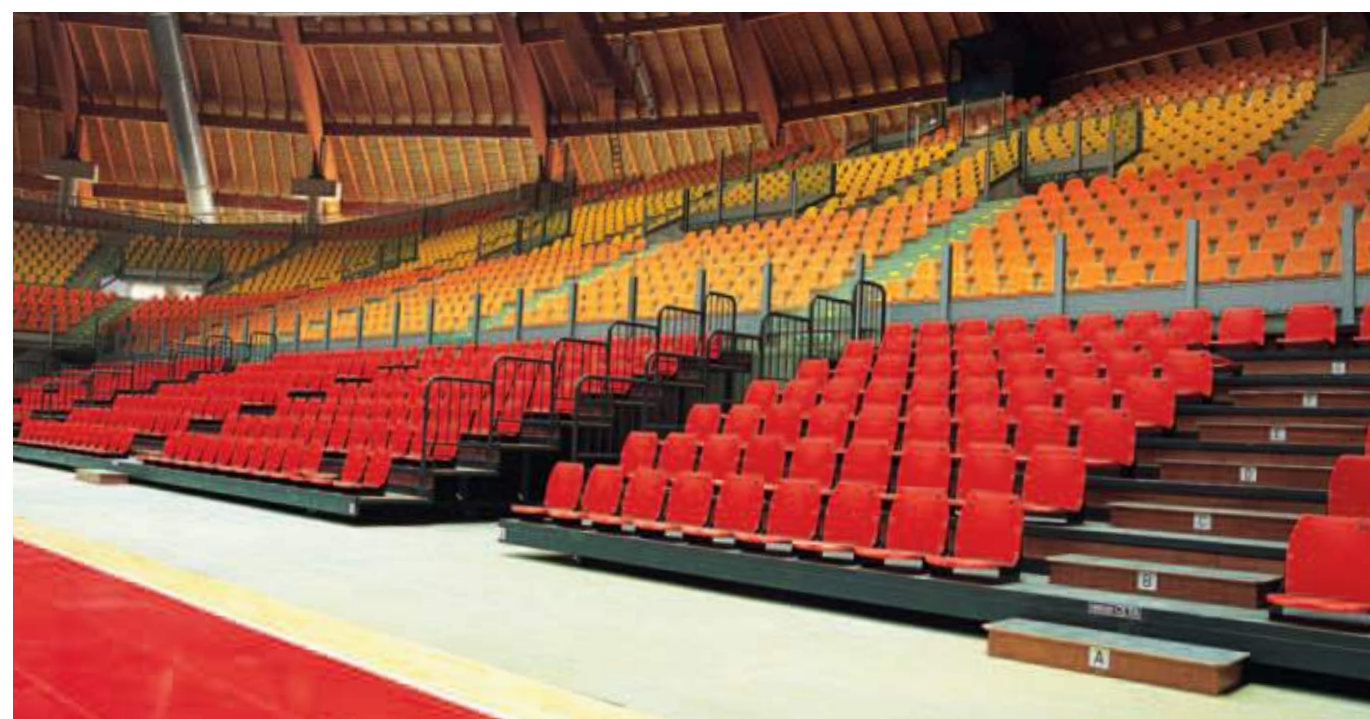


Type	N° of rows	Dimensions when closed	Dimensions when open	Height of last bench
TM 3	3	1,25	2,95	0,76
TM 4	4	1,25	3,80	1,01
TM 5	5	1,25	4,65	1,26
TM 6	6	1,25	5,50	1,51
TM 7	7	1,25	6,35	1,76
TM 8	8	1,25	7,20	2,01
TM 9	9	1,25	8,05	2,26
TM 10	10	1,25	8,90	2,51
TM 11	11	1,25	9,75	2,76
TM 12	12	1,25	10,60	3,01
TM 13	13	1,25	11,45	3,26
TM 14	14	1,25	12,30	3,51
TM 15	15	1,25	13,15	3,76
		Riser 0,25 Tread 0,85		

Dimensions. Drawings of some solutions



CETA SPA reserves the right to make changes, at any time and without notice, for the technical characteristics of the elements illustrated in this catalogue.



A few references for Telescopic Stands

Těrlícko theatre (Czech Republic).



Trento (Loc. Ghiaie): Indoor Stadium.



Rimini: Indoor Stadium.

Siviglia: Indoor Stadium.



Milan: Armani theatre.



Livorno, Multipurpose Indoor stadium "Palalivorno".



A few references for Telescopic Stands

