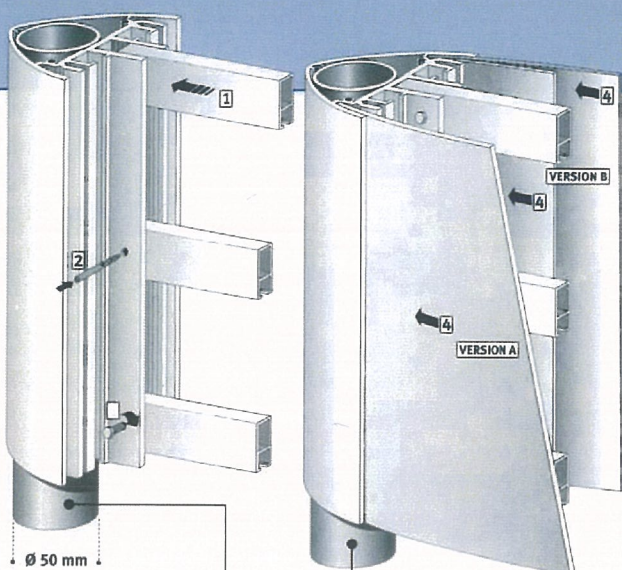


TOTEM Pylon 80 mm consists of a basic section (TOT1080) into which a cover (TOTCLOSE1080) can be clicked, to finalise the TOTEM Pylon construction (on legs). Easy to assemble with double sided sign support 46 mm (AO01046). By connecting the basic sections (TOT1080) with the 16,5 mm thick tubing it is possible to create a frame in which curved plates between 2 and 4,5 mm thickness can be mounted. The TOTEM Pylon 80 mm can simply be mounted on aluminium (or steel), round foundation tubes $\varnothing 50 \times 4$ mm. With the TOTEM Pylon 80 it is possible to make different end products = single or double sided, horizontal/vertical, entrance boards, information boards or signposts and all of them with flat or curved plates. The cover section (TOTCLOSE1080) covers the posts when used as an information or entrance board on legs.

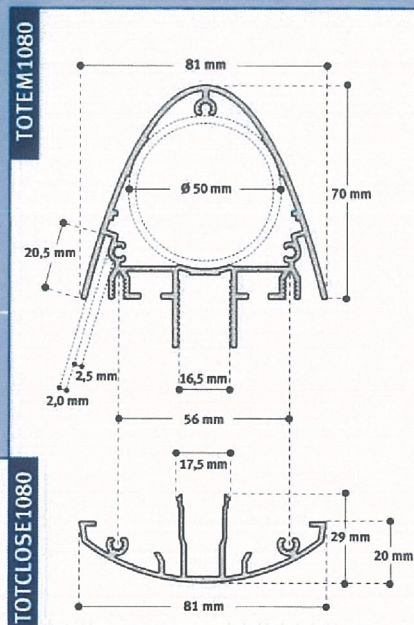
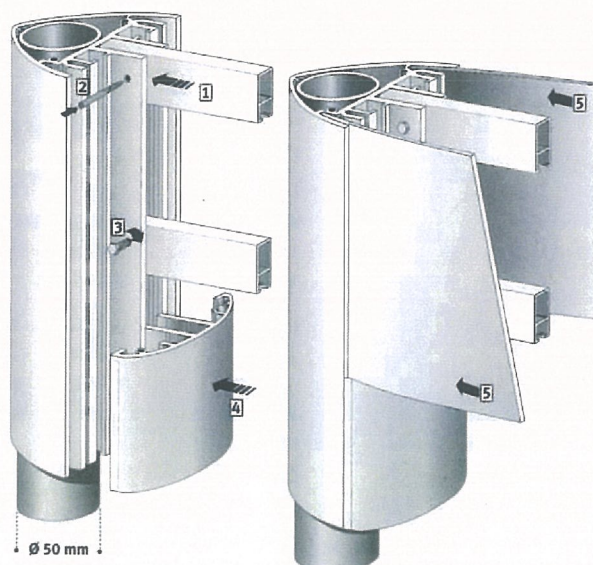


TOTEM 1080/A

Round tube 50 x 4 mm
Tube rond 50 x 4 mm

Aluminium (or steel)
foundation tube $\varnothing 50$ mm
Tube alu (ou acier)
pour fondation $\varnothing 50$ mm

TOTEM 1080/B



Le poteau TOTEM 80 mm est composé d'une section basique (TOT1080) sur laquelle on peut cliquer un profil de finition (TOTCLOSE1080) pour réaliser la construction d'un TOTEM (sur pieds). Assemblage facile à l'aide de caissons 46 mm (AO01046). En assemblant les sections basiques (TOT1080) avec les caissons alu ou profils cadres d'une épaisseur de 16,5 mm, vous créez rapidement un TOTEM en insérant des plaques courbées entre 2 et 4,5 mm d'épaisseur. Le TOTEM 80 mm est simplement monté sur un tube de fondation rond $\varnothing 50 \times 4$ mm en alu (ou acier). Le poteau TOTEM permet de faire des constructions différents, en simple ou double face (illuminé et non illuminé) horizontal/vertical, sur pied, en drapeau ainsi que comme poteau directionnel. Le profil de finition (TOTCLOSE1080) est utilisé comme finition du profil basique (TOT1080).

TOTEM 1080	Pylon 80 mm	Mill finish	6m/l
TOTEM 2080	Pylon 80 mm	Silver Ano	6m/l
TOTEM 3080	Pylon 80 mm	RAL Colour	6m/l

TECHNICAL GUIDELINES

Assembly & Installing TOTEM PYLONS

(maximum height: 4000mm - maximum width: 1500mm)

1. Foundation

To calculate the minimum required dimensions of the concrete foundation we take into consideration some generally accepted guidelines (rules of thumb) and a maximum wind speed of 117 km/h (= Beaufort force 11 = +/- 600N/m²):

General guidelines					
Surface of totem pylon	6m ²	5m ²	4m ²	3m ²	2m ²
Concrete required per m ² : rule of thumb: 100 kg/m ² safety margin: 50 kg/m ²	150kg	150kg	150kg	150kg	150kg
Total kg of concrete required	900kg	750kg	600kg	450kg	300kg
Volume of concrete required (2500 kg = 1m ³)	0,36m ³	0,30m ³	0,24m ³	0,18m ³	0,12m ³

The concrete should have at least 350 kg of cement per cubic meter.

Cosign guidelines regarding concrete foundation dimensions (length x width x depth) in Belgium for all terrain categories, except for sea and coastal areas, and for locations with good (stable) soil conditions:

- **Length** = width of totem + 250mm on each side
- **Width** = width of the feet + 100mm on each side = +/- 600mm
- **Depth** = min. 800mm

Eg: For a totem with a height of 4000mm and a width of 1500mm Cosign would recommend a concrete foundation of 2000mm x 600mm x 800mm = 0,96 m³.

Cosigns guidelines will always be more stringent than the general accepted guidelines (which are purely indicative), mainly because Cosign recommends solid block foundations (via a single hole) with a minimum depth of 800mm. In this way the bottom surface of the foundation lies below the extreme frost depth. If a larger frost depth is expected (for northern regions of Europe), the same plan dimensions can be adopted, with an increase depth.

Since Cosign has no information regarding the specific location of the totem, the conditions of the soil and the composition of the concrete foundation, Cosign shall not be liable for any direct, indirect, incidental or consequential damages, arising out of or in any way connected with the use or misuse of the information stated above.

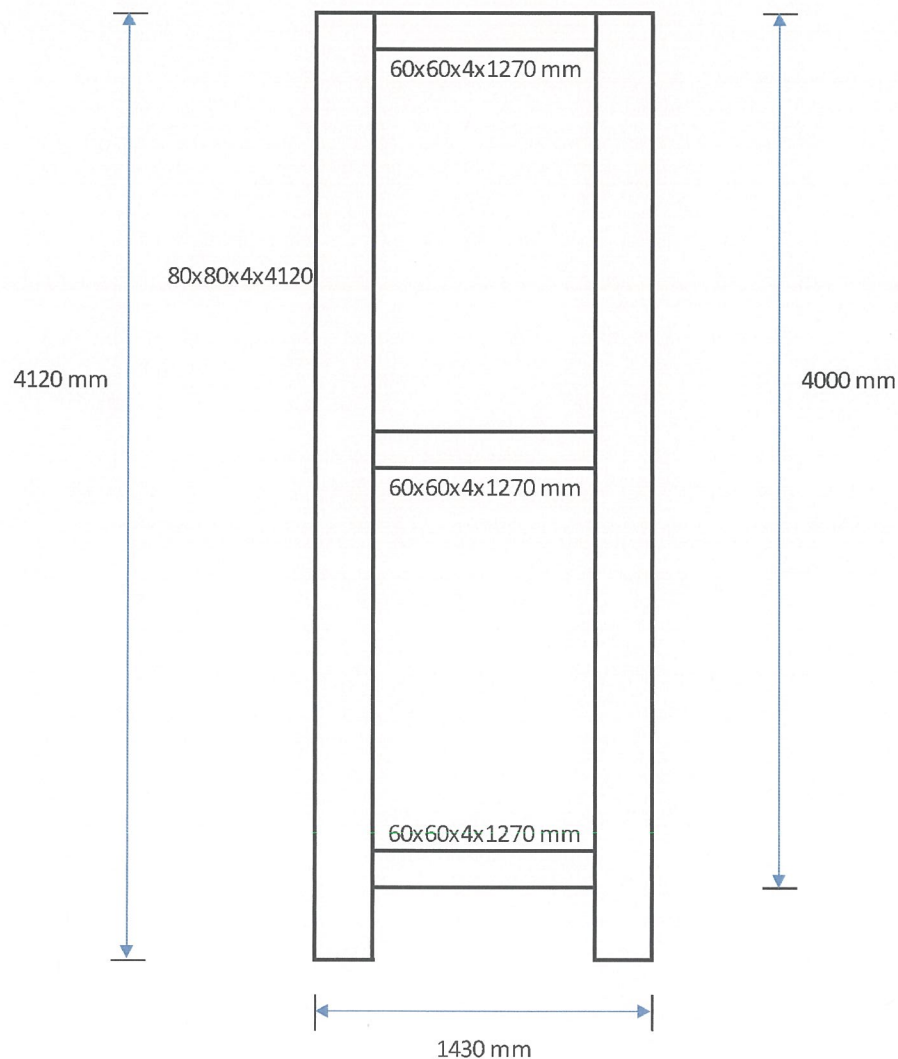
2. Inner structure

Since the maximum height of the totems considered in these technical guidelines is 4000m, both aluminum and steel tubes can be used. For totem pylons higher than 4000mm the inner structure should always be made out of steel.

The structure depends on the type of totem profile being used (ellips 80mm, ellips 137mm or H-profile). A drawing of these structures is available upon request.

As an example we show a drawing of the inner structure of an elliptical totem pylon 137mm with a height of 4000mm and a width of 1500mm.

TOT1137 1500 x 4000 (with welded feet)



There are 2 options to install the totem:

- 1) By welding aluminum or steel feet under the inner structure and fasten the totem pylon onto the foundation with the help of anchor bolts which are put into the concrete foundation before it has hardened.
- 2) With a prolonged inner structure (vertical profiles of 4820mm instead of 4120mm = 700mm longer compared to the structure with welded feet) which will be put directly into the foundation.

Assembly tips:

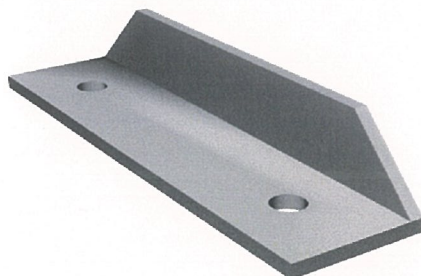
1. For making a strong and esthetical totem it is very important to obtain the right dimensions when cutting and welding the aluminum and steel tubes. A difference of a few millimeters might have a substantial impact.
2. When manufacturing the inner structure frame, it is critical that the frame has a perfect rectangular shape with the sides plumb and the top and bottom level. The frame should therefore be properly clamped before welding the horizontal tubes to the vertical sides.
3. The welds are to be made continuously around the perimeter of the horizontal tubes when welding these horizontal tubes to the vertical side tubes.

Installation tips 1 and 2 are important to obtain the perfect elliptical shape for the inserted panels, to maximize the panel size inserted in the totem pylons and to assure a better fit for both the top and bottom cap. All these elements provide more strength to the totem and will prevent the panels from being blown out.

3. Welded feet

When opting for an aluminum inner structure with welded feet, these feet should of course be in aluminum as well (same for steel frames).

For totems up to 3mtrs we use an L-profile with dimensions 370mm x 100mm x 64mm x 10mm. The vertical side tubes should be welded on top of this L-profile with **continuous welds (with sufficient weld throat thickness!) around all touching sides (6 sides)**.



For totems > 3 mtrs Cosign recommends to weld an extra reinforcement (triangular shaped) between the vertical tubes and the L-profile.

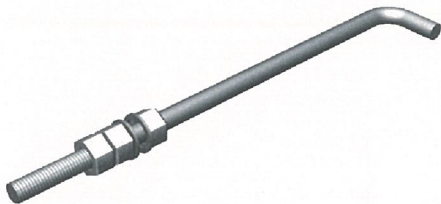
The 2 holes in the L-profile have a diameter of 24mm and the distance between the center points of these holes is 25cm.

Assembly tips:

- 1. The holes in the L-profiles should be a little bigger than the diameter of the anchor bolts which are being used in order to make the installation of the totem easier.**
- 2. Provide an anti-corrosion coating on the bottom part of the inner structure (120mm) + both feet.**

4. Anchor bolts/nuts/washers

Cosign recommends L-shaped anchor bolts with diameter 20mm and a length of 500mm.

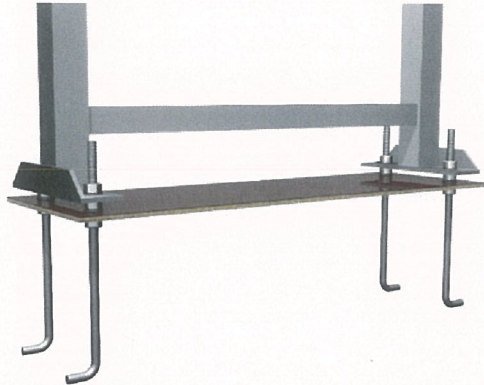


Per anchor bolt 2 x M20 nuts + 2 x M20 washers (thickness of 3mm and outer diameter of 40mm) should be used: one set below and one set on top of the foot. With these nuts the positioning/alignment of the totem can be slightly adjusted.

In case an anchor cage is used an extra set of nut + washer should be used (to put below the plywood sheet).

5. Anchor cage

Together with its ready-made totems Cosign supplies an anchor cage which facilitates the installation of the totem pylons.



The anchor cage consists out of a 12mm thick rectangular plywood sheet which follows the contours of the feet: 370mm x (width of the inner structure + 20mm).

In this way people preparing the foundation get a perfect idea about the exact location of the totem pylon.

The anchor cage should be put on top of the concrete foundation before it hardens. Because of this the anchor cage (and thus the totem pylon) will always be level.

The holes in the plywood sheet should match the holes in the feet.

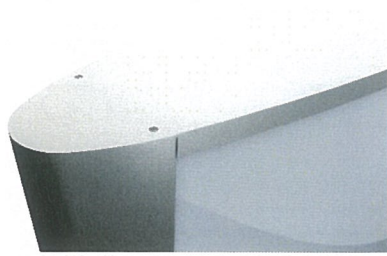
6. Mounting profiles on inner structure



Assembly tips:

1. Use clamps to fix the first totem profile onto the inner structure in order to get a perfect fitting connection.
2. Before fixing the second profile, first mount the top and bottom caps. After fixing the second profile, the top and bottom caps should be removed again, so the assembly of totem pylon can be finished. In this way you will get a perfect match between the top and bottom caps and the totem pylon.

7. Top and bottom caps



Assembly tips:

1. Use a 2mm thick aluminum sheet for all endcaps, which provides extra strength and the possibility of using sunk screws.
2. Especially for illuminated totems, where you don't have the possibility to use an internal reinforcement, we advise to construct a top and bottom cap using a 2mm aluminum sheet and an edge profile which will keep the front and back panels better in place.

When constructing the top and bottom caps for an elliptical totem pylon 137mm the length of the edge profile should be 40mm less than the width of the panels (with a max. thickness of 3mm). When using panels > 3mm the length of the edge profile should be 20mm less.

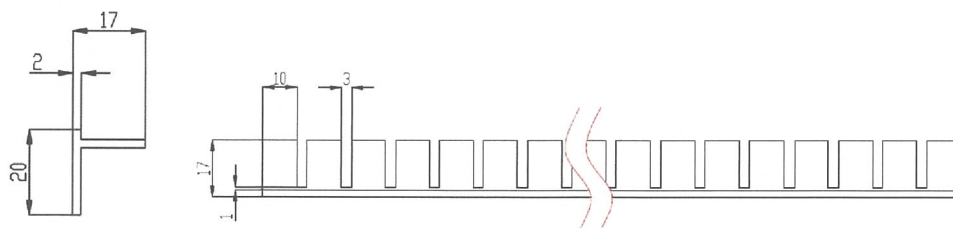
We recommend to use a template where you can put in the aluminum sheet, glue the edge profile on top of this sheet, and then use rivets to fix them together.

Cosign uses a 2mm thick aluminum sheet for all endcaps, which provides extra strength and the possibility of using sunk screws.

Cosign recommends to construct a top and bottom cap using an aluminum sheet and an edge profile (see drawing above) which keeps the front and back panels better in place.

When constructing the top and bottom caps for an elliptical totem pylon 137mm the length of the edge profile should be 40mm less than the width of the panels (with a max. thickness of 3mm). When using panels with a thickness > 3mm the length of the edge profile should be 20mm less.

Edge profile



Dxf-files of the aluminum top and bottom plates are available upon request.

8. Panel size

Elliptical totem pylon 80mm

<u>External width</u>	<u>Panel width</u>
800mm	710mm
1000mm	918mm

Elliptical totem pylon 137mm

<u>External width</u>	<u>Panel width (max. thickness panel = 3mm)</u>
1000mm	860mm
1250mm	1115mm
1500mm	1375mm

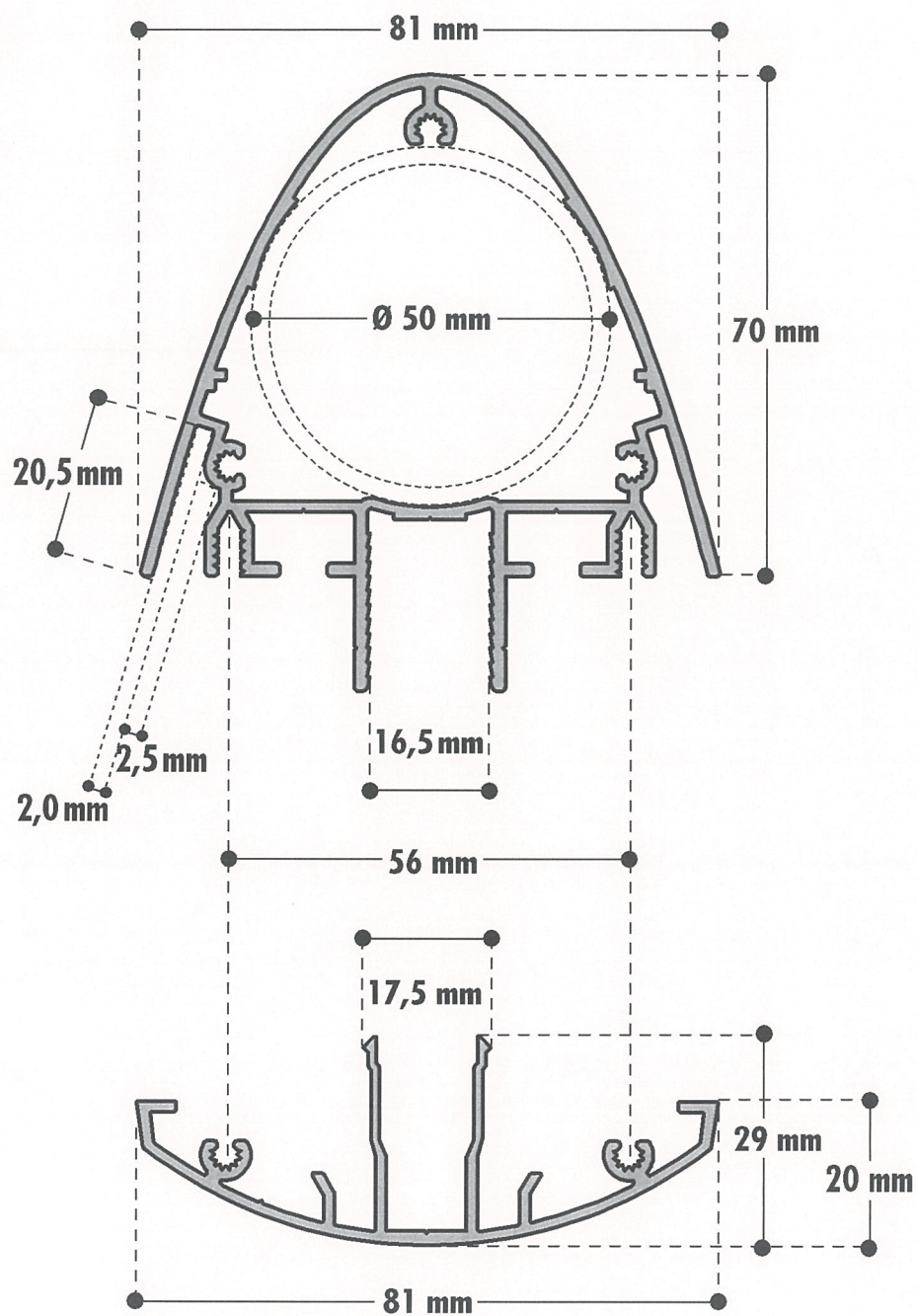
H-profile

<u>External width</u>	<u>Panel width (max. thickness panel = 3mm)</u>
990mm	1000mm
1240mm	1250mm
1480mm	1500mm

Assembly tips:

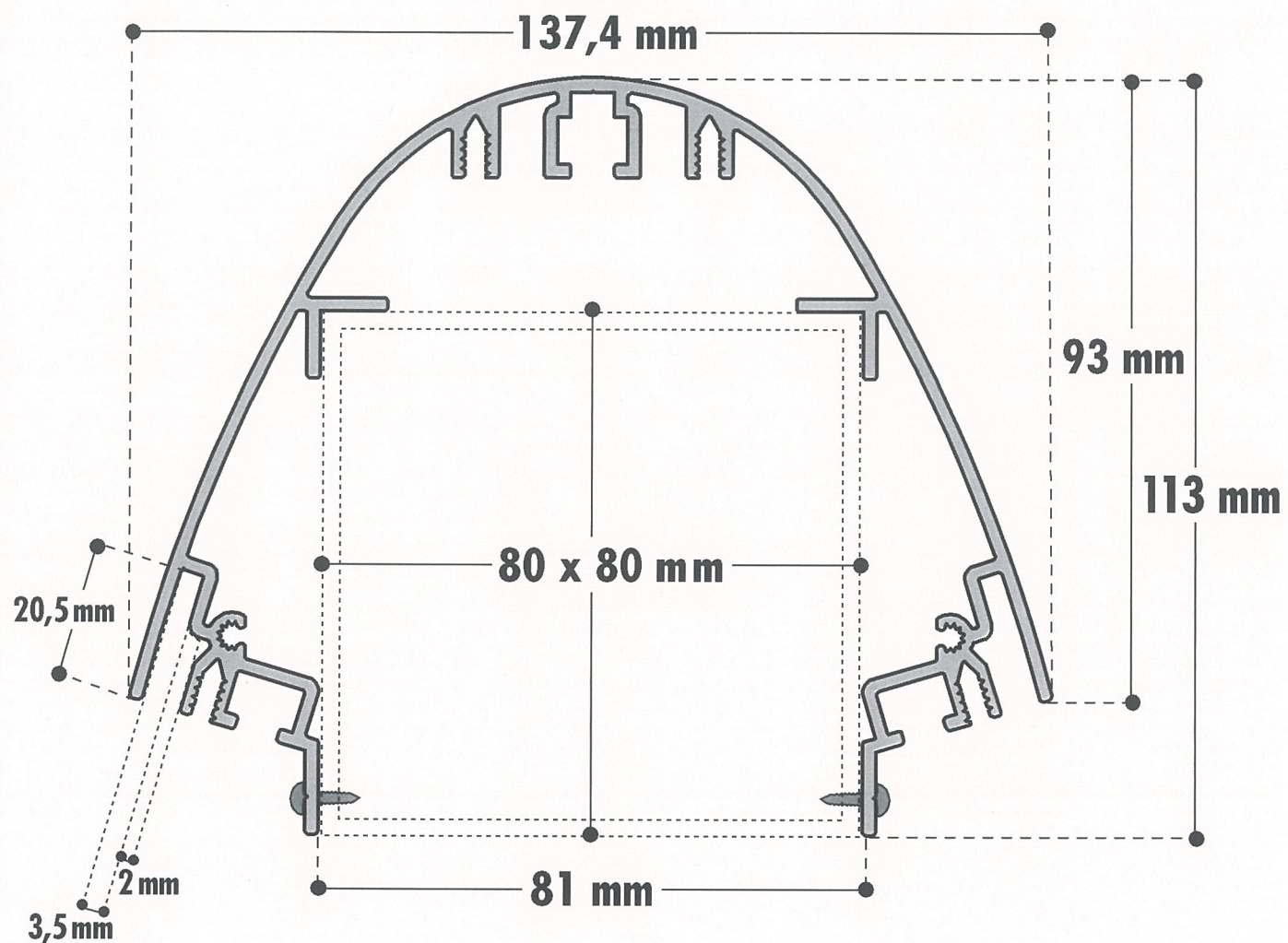
1. For illuminated totems we recommend to use 3mm thick PMMA (acrylic) XT, opal (33%) panels.
2. For non-illuminated totems Cosign uses 1,5-2mm thick aluminum sheets. To reinforce these totems from the inside and prevent the panels from being blown/sucked out, we use 10mm thick PVC sheets with more or less the same shape as the top and bottom caps which are mounted onto the horizontal tubes of the inner structure.
3. Same as with the inner structure it is critical that the acrylic or aluminum sheets have a perfect rectangular shape in the sizes mentioned above with the sides plumb and the top and bottom level to achieve the best esthetic result as well as the strongest totem pylons.

TOTEM PYLON 80 mm



TOTCLOSE 1080

TOTEM PYLON 137 mm - standard



TOTEM PYLON 137 mm - standard

