BRUAG
Innovation for Architecture

Garden Design Elements

CELLON® design, classic

Technical data sheet for planning,
construction and execution

A.7

Version 3.0

Table of Contents

General Information 01.

Material

Our **CELLON® panel** is a high-pressure laminate panel (HPL Compact or solid core panel) consisting of 70% cellulose webs and 30% phenolic resin. The extremely weather and frost-resistant material is ideal for outdoor applications.

Application area:	mounted vertically in outdoor areas (e.g. facades, balcony railings)
Panel thickness (weight):	8mm (approx. 12kg/m²), 10mm (approx. 15kg/m²)
Reaction to fire class:	RF2, B1 (DIN 4102-1), B-s1-d0 (EN 13501-1)

The raw panels are project-specifically cut to the desired dimensions using laser technology (including drill holes). You choose the **width (x)** and the **length (y)** of the panels individually. Do you want round cuts or additional cut-outs? Simply draw them in your DXF plan and they will be **manufactured to size**.

Panel Formats

Please consider the following raw panel formats for waste optimisation:

perforated panels

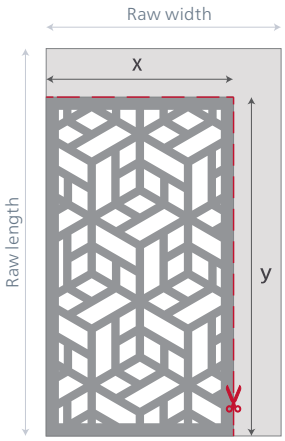
CELLON® design

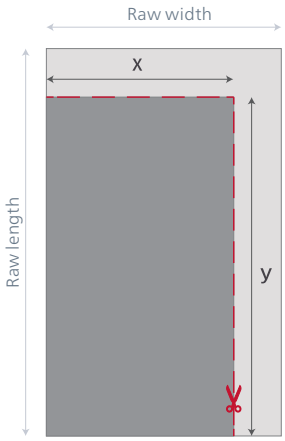
Raw width	Raw length
1200 mm	2400 mm
1280 mm	3000 mm *
1500 mm	3600 mm
1800 mm	3600 mm

plain panels

CELLON® classic

Raw width	Raw length
1200 mm	2400 mm
1280 mm	3000 mm *
900 mm	3600 mm





Note

Whenever possible, the raw material sizes should be considered when planning the panel layout so that panel waste can be minimised. We support you with this.

*Only this format is also available with a decor surface in stone or wood look.

General Information 01.

Data Transmission for Orders

Please note the following when placing an order:

Data Format

- DWG / DXF Data
- Cadwork 2D or 3D Data
- Parts lists in Excel (if only as Excel without CAD file is sent, it might result in additional work in our work preparation)

Data Content and Structure

- Panels are drawn on a separate layer
- Drawing in 1:1 ratio
- Measurement of at least one long and short side to be able to verify the scale
- Boreholes (drawn as a closed circle), cut-outs, etc. are marked accordingly
- Special requests for grouping and/or palletisation must be explicitly specified. Normally there is room on one pallet for 120 square metres of panels. Within the pallet there is no sorting by panel numbers etc.

Own Design (the following specifications must be observed for own designs)

- Design must be created as CAD drawing (DWG or DXF file)
- Contours must be neatly closed and drawn as a line (not several lines on top of each other)
- Size ratio must be clearly visible

In the event of post-processing by Bruag Design Factory AG, the resulting additional work will be invoiced.

Storage and Cleaning Instructions

CELLON® panels must never be stored unprotected horizontally outdoors. If water remains on the horizontally lying panels, damage to the paint may occur! Please always place the dry PU foam foils supplied as a separating layer between the individual boards.

The boards can be cleaned with water and a cloth or magic sponge. Careful use of a high-pressure cleaner is also possible with sufficient distance and little pressure. Do not use any chemical cleaning agents.

Cutting and Drilling Guidelines

Basically, cutting to size on site should be avoided and the panels should already be ordered to the project-specific size whenever possible. However, in exceptional cases it is possible to process the panels on site, with the note that the panels are coated and the cut edge will therefore not have the same colour after cutting as the surface. Tools with carbide cutting edges or diamond cutting edges are advantageous as cutting items. The visible side should be at the top when cutting and, if possible, a guide rail should be used.

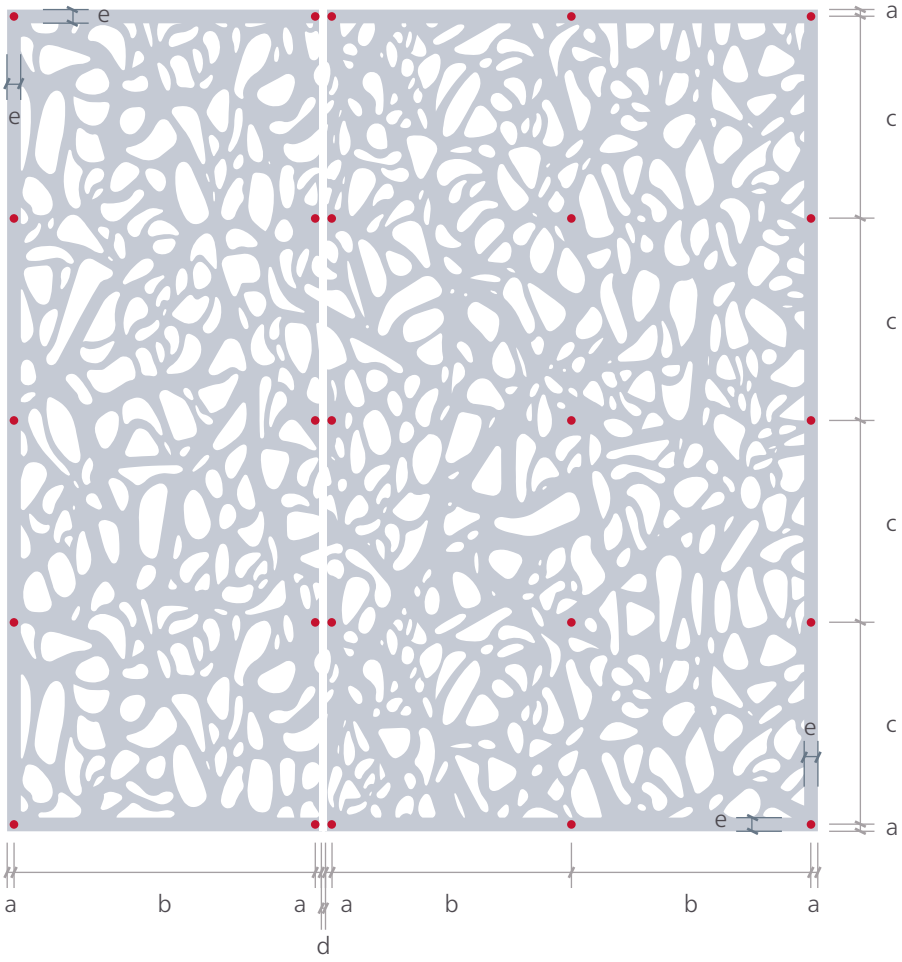
Spiral or dowel drills made of solid carbide are ideally used for drilling.

The material does not require post-treatment from the point of view of weather protection. However, if necessary, the edge can be coated with the supplied reserve paint.

Fastenings 02.

Fastening Distances for Perforated Panels

Single-span Two-span



• **borehole**

Ø 8 mm can be drawn directly in DXF/DWG file

Maximum distance according to wind load qek (wind pressure or suction)

Position in mm	Description	CELLON® 8mm				CELLON® 10mm			
		0.5 kN/m²	1.0 kN/m²	1.5 kN/m²	2.0 kN/m²	0.5 kN/m²	1.0 kN/m²	1.5 kN/m²	2.0 kN/m²
a	Distance borehole to edge	20				20			
b	Horizontal borehole distance	970	815	735	685	1300	1200	1030	890
c	Vertical borehole distance	645	465	350	235	290	170	130	115
d	Joint	6				6			
e	Frame without perforation	50				50			

Reciprocal conversion:
c (adjusted) = **b** (max) / **b** (effectiv) x **c** (max)
b (adjusted) = **c** (max) / **c** (effectiv) x **b** (max)

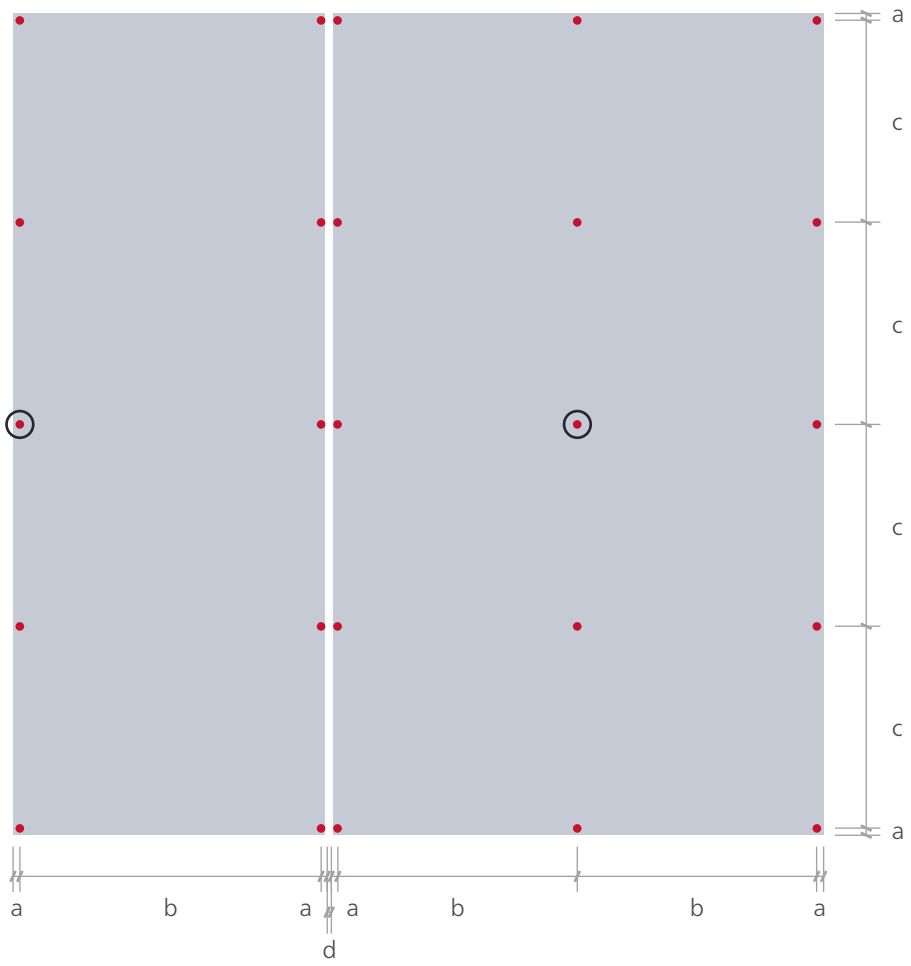
The values given are guidelines and do not release you from having an object-related inspection carried out by a qualified engineer. Test results for the tests according to EN 789, EN1048, EN 14358, EN 383, EN 1383, EN 310 and EN 13879 can be found in a separate test report.

Fastenings

02.

Fastening Distances for Plain Panels

Single-span Two-span



• **borehole**

Ø 8 mm can be drawn directly in DXF/DWG file

⊙ **fixed point**

Fixed point 5.5 mm can be drawn directly in the DXF/DWG (only necessary for metal substructure).

Maximum distance according to wind load qek (wind pressure or suction)

Position in mm	Description	CELLON® 8mm				CELLON® 10mm			
		0.5 kN/m²	1.0 kN/m²	1.5 kN/m²	2.0 kN/m²	0.5 kN/m²	1.0 kN/m²	1.5 kN/m²	2.0 kN/m²
a	Distance borehole to edge	20				20			
b	Horizontal borehole distance	970	815	735	685	1300	1200	1030	890
c	Vertical borehole distance	645	465	350	235	290	170	130	115
d	Joint	6				6			

Reciprocal conversion:
c (adjusted) = **b** (max) / **b** (effectiv) x **c** (max)
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The values given are guidelines and do not release you from having an object-related inspection carried out by a qualified engineer. Test results for the tests according to EN 789, EN1048, EN 14358, EN 383, EN 1383, EN 310 and EN 13879 can be found in a separate test report.

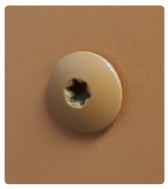
Fastenings 02.

Fasteners

Wooden Substrucure

Truss-head Screw

Material:	Stainless steel A2
Length:	38 mm
Nominal diameter:	4.8 mm
Head diameter:	12 mm
Drives:	TX20
Borehole diameter:	8 mm



Metal Substructure

Hexagon-head screw (self-drilling with sealing washer)

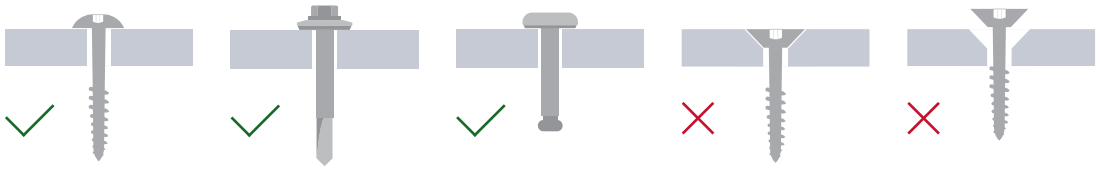
Material:	Stainless steel A2 (with drill point and shaped thread made of hardened steel)
Length:	32 mm
Nominal diameter:	5.5 mm
Head diameter:	16 mm
Drives:	SW8, hexagon head
Borehole diameter:	8 mm

Blind Rivet

Material:	Aluminium/Stainless steel A2
Length:	8-13 mm
Nominal diameter:	5.0 mm
Head diameter:	14 mm
Drives:	Blind rivet tool
Borehole diameter:	8 mm

Note

Screws and rivets are to be placed concentrically in the drilled holes.
NO COUNTERSUNK SCREWS MUST BE USED!



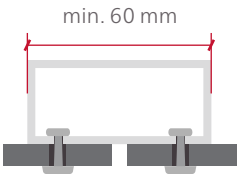
Substructure 03.

Panel Fixed on Primary Post Construction

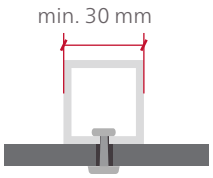
If the panels are attached directly to the post construction, the post spacing is based on the maximum horizontal hole spacing according to the table on page 3. This usually results in more posts per linear meter of construction. Material and load-bearing capacity must meet the applicable Standards. Static and structural guidelines compliance is the responsibility of the installer.

Profile Width

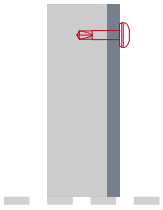
in Joint Area



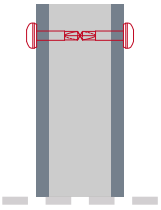
at Intermediate Profile



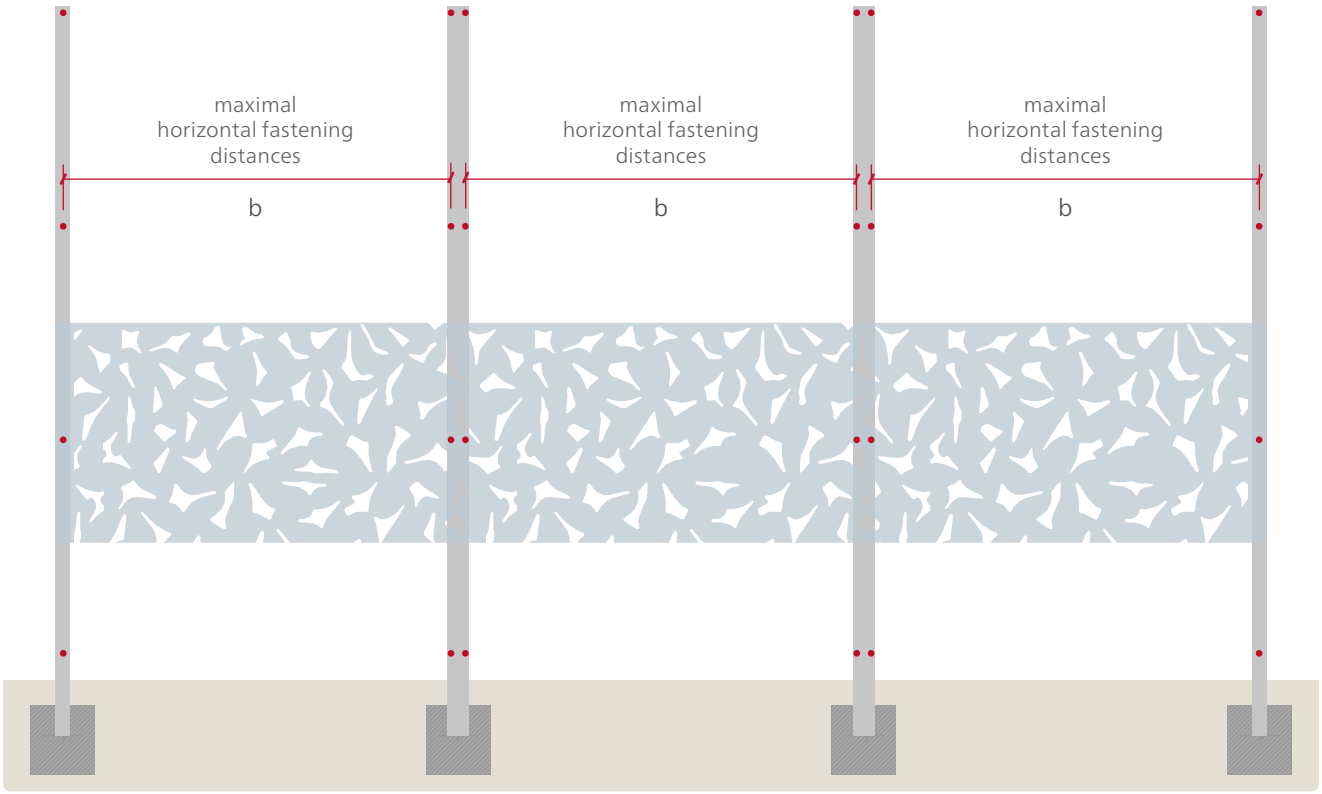
one side cladding



two-sided cladding



Elevation Plan



In this case, the posts should be located under each vertical fixing line. (fastening distances are mentioned on page 3).

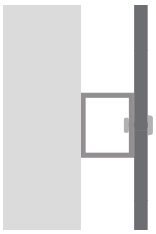
Substructure 03.

Panel Fixed on Secondary Profile

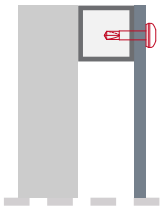
The division of the secondary profiles is based on the maximum fastening distances from the table on page 3 (here, the larger of the two fastening distances can be used if the smaller one is taken into account in the horizontal one). In this case, the post spacing is independent, can be maximized and therefore the number of posts is usually less. Material and load-bearing capacity must meet the applicable Standards. Static and structural guidelines compliance is the responsibility of the installer.

Floor Plan

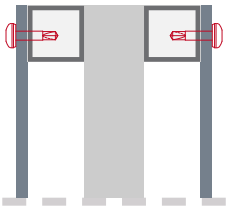
Elevation Plan



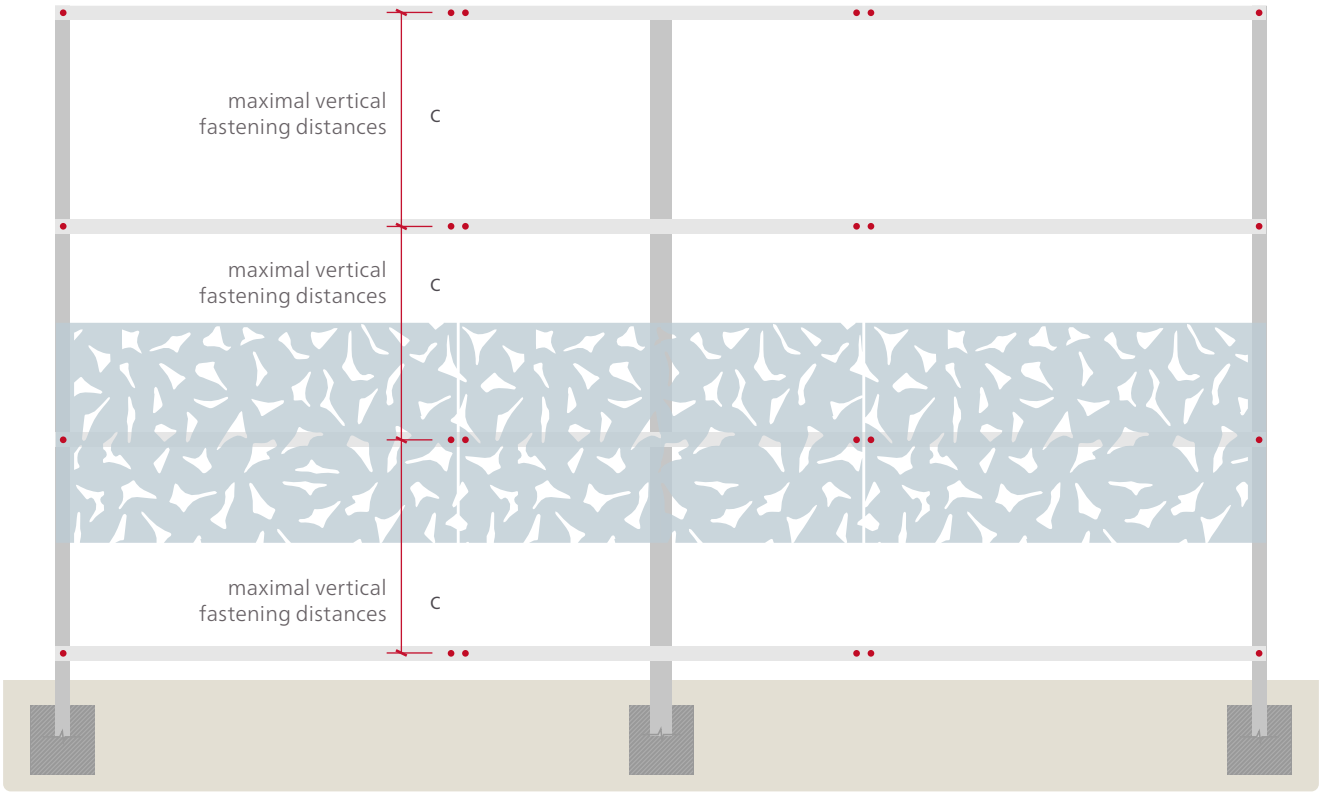
one side cladding



two-sided cladding



Elevation Plan



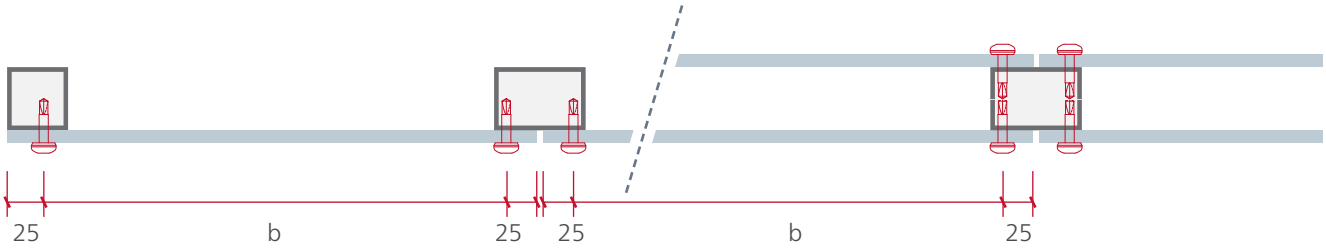
Construction Solutions 04.

Screwed without Perforation

Floor Plan

one side cladding

two-sided cladding



Visualization

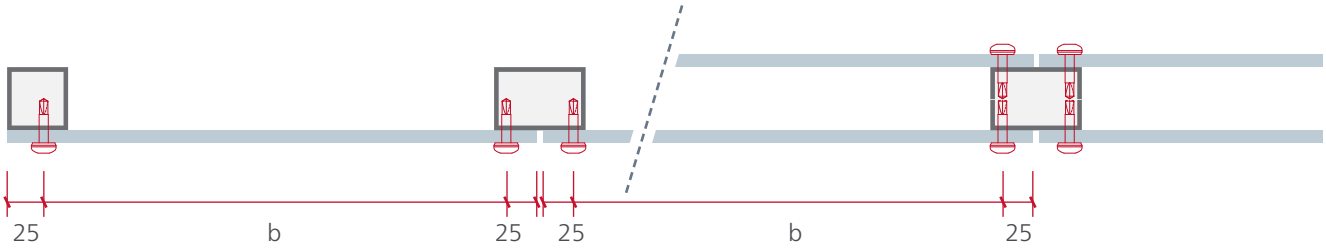
Construction Solutions 04.

Screwed with Perforation

Floor Plan

one side cladding

two-sided cladding



Visualization

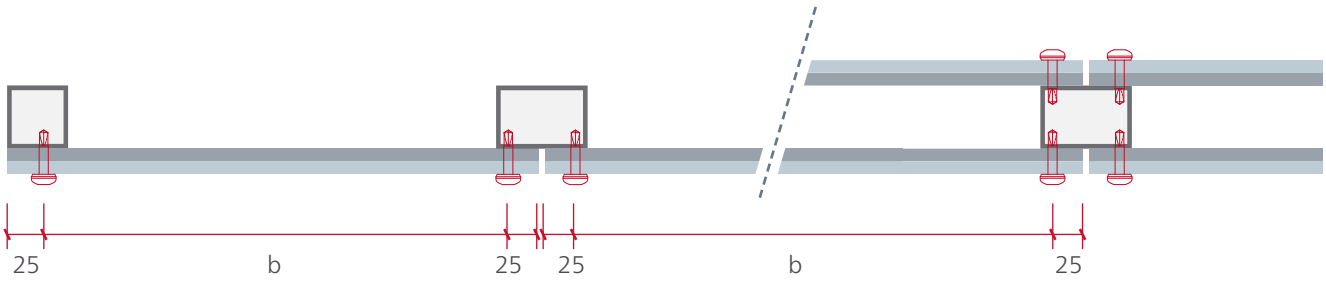
Construction Solutions 04.

Screwed Two-layer with Perforation

Floor Plan

one side cladding

two-sided cladding

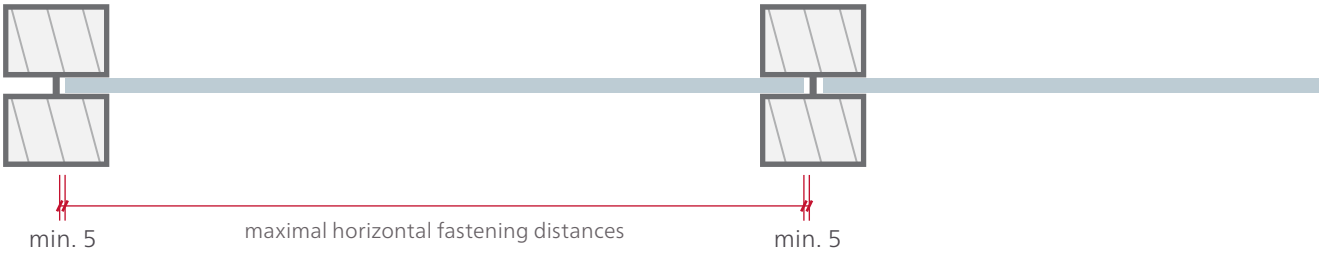


Visualization

Construction Solutions 04.

Clamped Between Post Systems

Floor Plan



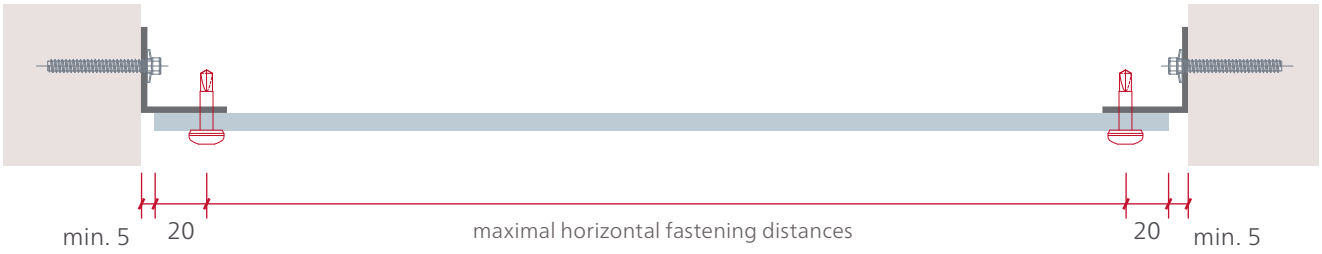
CELLON® panels with a thickness of 10 mm are suitable for existing post systems with a corresponding mounting width. Thus, panels can be installed without the need for any additional fasteners.

Visualization

Construction Solutions 04.

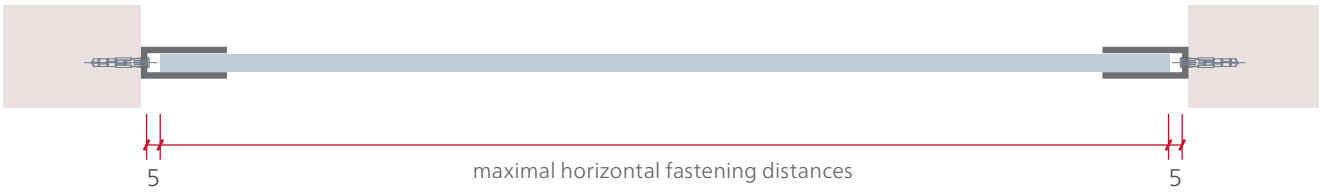
Fixed to Stone Walls & Baskets with L-profile

Floor Plan



Fixed to Stone Walls & Baskets with U-profile

Floor Plan



Visualization

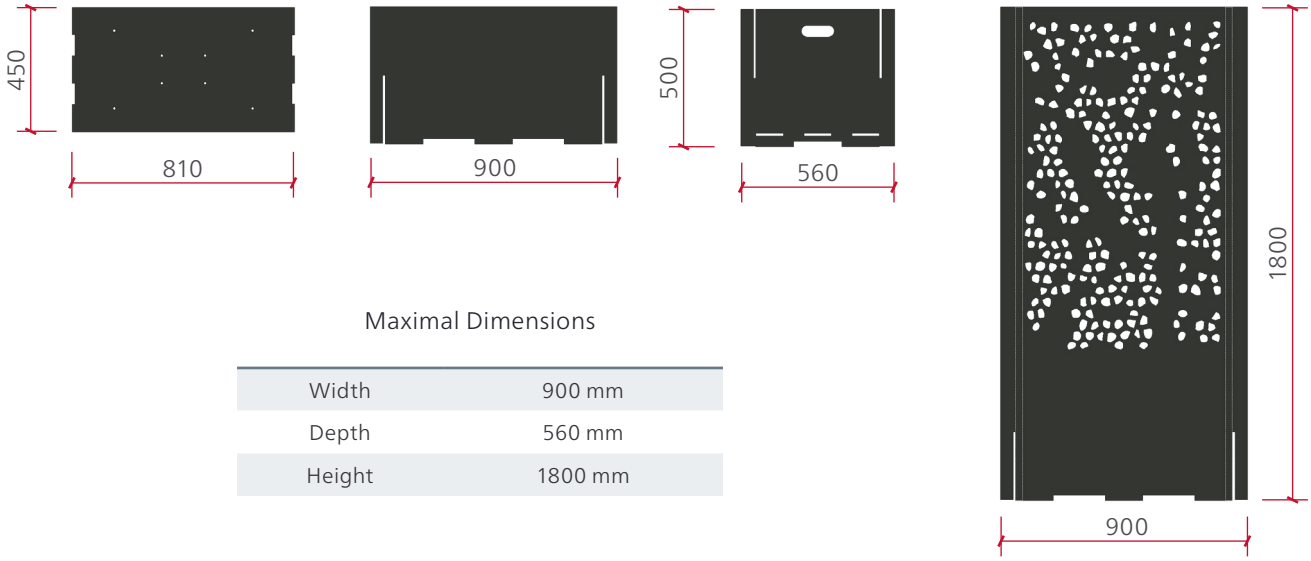
Plant Boxes

05.

Plant boxes made of CELLON® are very suitable for a non-fixed privacy screen. Back panels can be adapted and customized to suit your needs.

Other design and decorative elements are also within the range of possibility.

Plant Box with Integrated Privacy Screen



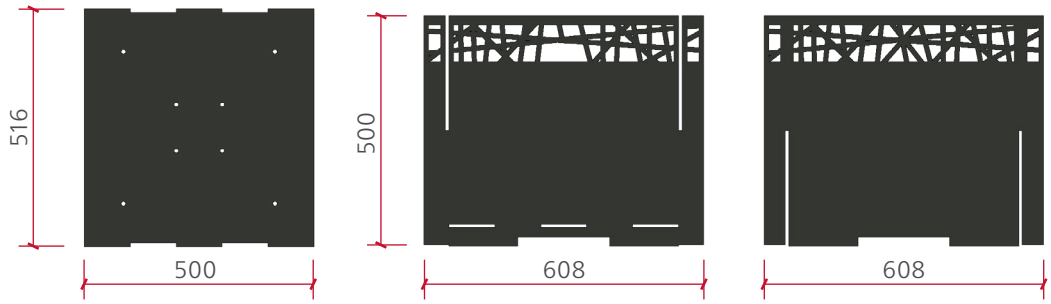
Maximal Dimensions

Width	900 mm
Depth	560 mm
Height	1800 mm

Plant Boxes

05.

Plant Box

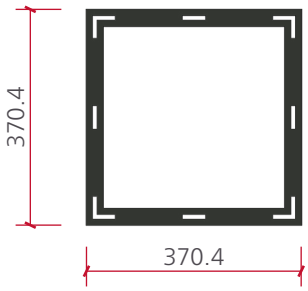


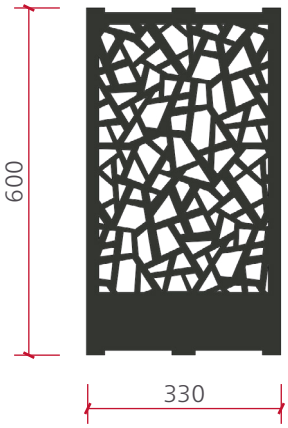
Maximal Dimensions

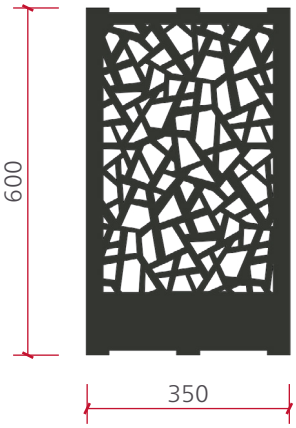
Width	608 mm
Depth	608 mm
Height	500 mm

Plant Boxes 05.

Light Box



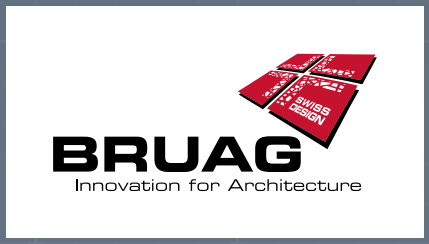




Design

06.

You can find the entire **perforation collection** in our catalogue.



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