

03/05

BT1 SYSTEM ABACUS OF ELEMENTS



BERGAMI
CLADDING SOLUTION SYSTEMS

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Dear Customer,

The choice of façade cladding is an essential aspect that will allow you not only to make the building more aesthetically pleasing, but above all to protect it over time, to increase the value of the property, energy performance and indoor comfort and, above all, to zero the impact of routine maintenance that over time affects classic plaster-clad buildings. Offering great creative freedom, our company's systems allow designers to create any type of ventilated façade, as well as cladding even for false ceilings, transforming buildings into real architectural jewels.

Andrea Bergami





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THE BERGAMI COMPANY

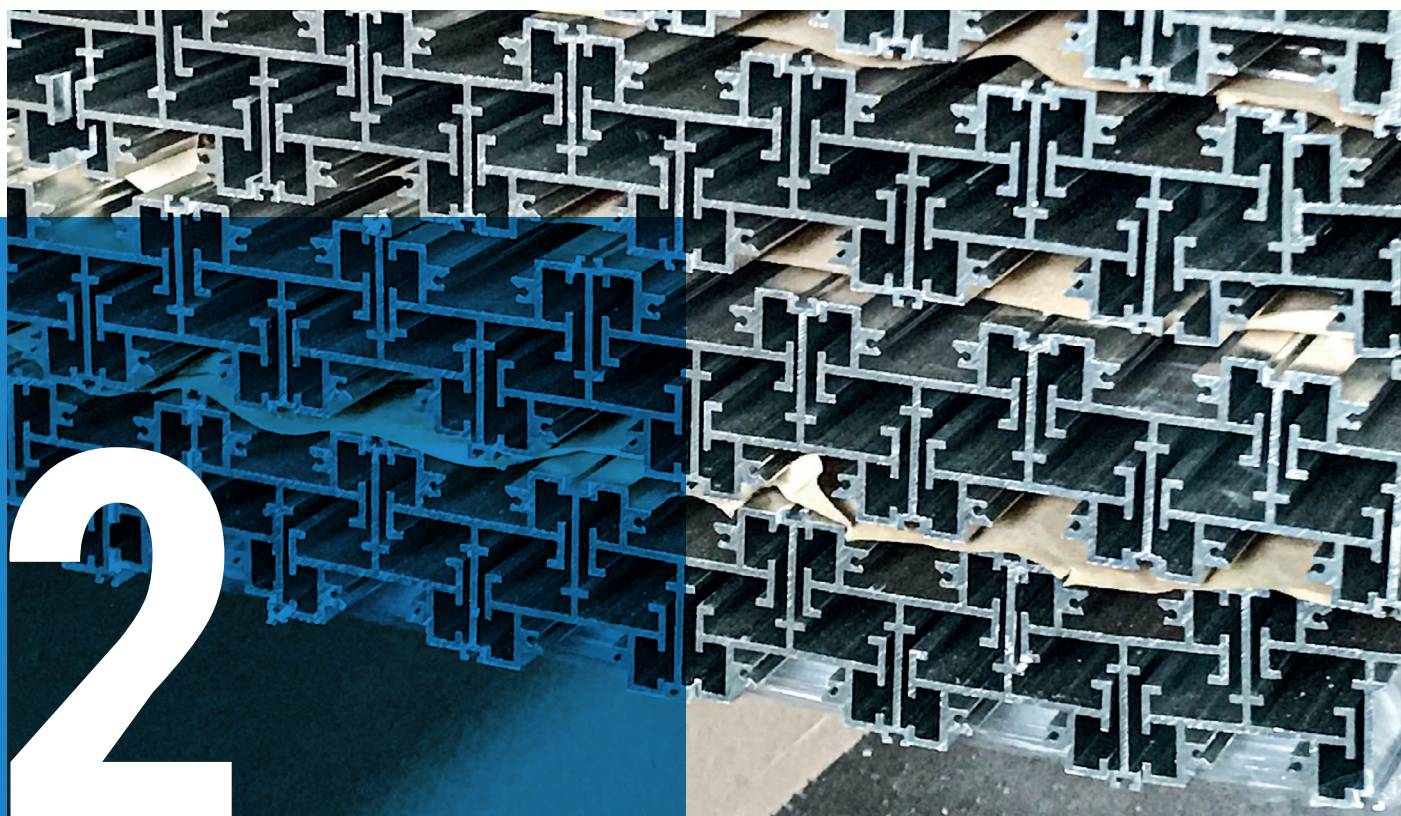
Bergami is a company operating for almost 40 years in the field of ventilated façades and, more generally, of façade coverings that can be defined as "hi-tec."

Through the experience gained first as a direct operator on the end customer and, later, as a service provider for companies in the sector, **we have come to develop, patent, use and refine our substructure systems, completely different from the conventional form adopted by the market and the technical evolution concerning them.**

Our philosophy is based on the aesthetic result and practicality of use.

Offering Bergami systems today, means

differentiating yourself from all others and standing out for uniqueness and fine finishes from the standard market offerings.

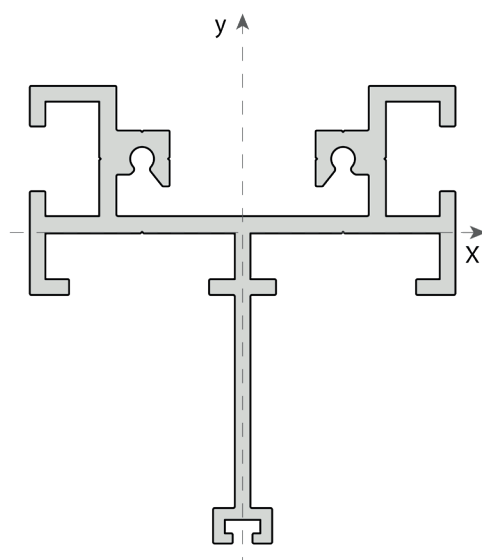


ABACUS OF CONSTRUCTION ELEMENTS

■ The characteristics of the materials

This technical section of the abacus explains the main components that make up the Bergami BT1 system. For each element, the most significant characteristics are described, which are useful for the specific design phase of each case study.

■ M-BT1 profile



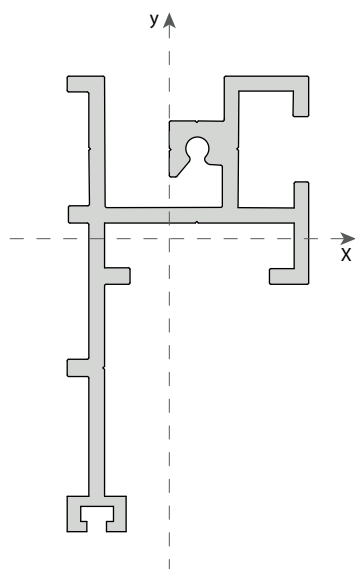
Extruded aluminum profile, standard vertical warping post, with central gasket holder and two housings peg holders for anchoring panels on the two front sides. Profile with two sliding slots for housing of the adjustment bolt head vertical and clamping frame to the wall bracket. Two thread housing slots 3.5-mm self-tapping screws to facilitate construction of differentiated overhang warps and swales around eaves areas. Profile calenderable (with limitations).

Profile features	
material	aluminum alloy AW 6060
tempering type	T4 - T5 - T6
possible finish	rough - ox black
bar length	6,5ml standard
weight	1,250kg/ml

Resistance module [mm ³]	
y: 4564,3	x: 2334,6

Moment of inertia [mm ⁴]	
I _{yy} : 123236,3	I _{xx} : 91518,2

■ MT-BT1 profile



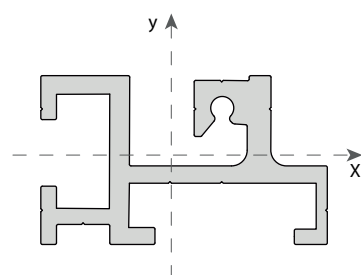
Extruded aluminum profile, side end frame, with holder central gasket. One holder seat panel anchor pegs on one front face, a sliding seat on the side face (housing the bolt head), a thread housing seat 3.5-mm self-tapping screws to facilitate the construction of differentiated overhang warps and swales around eaves areas. Calenderable profile (with limitations).

Profile features	
material	aluminum alloy AW 6060
tempering type	T4 - T5 - T6
possible finish	rough - ox black
bar length	6,5ml standard
weight	0,892kg/ml

Resistance module [mm ³]	
y: 1906,7	x: 2189,2

Moment of inertia [mm ⁴]	
lyy: 33558,2	lxx: 81875,0

■ MC-BT1 profile



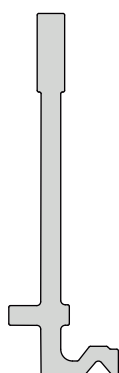
Extruded aluminum profile, center frame for concealed attachment and/or zero-gap façade with façade package thickness reduced to 51mm and without a peg holder. One peg holder seat for front panel anchorage; one sliding seat on the side face (housing the bolt head adjustment); a thread housing seat 3.5-mm self-tapping screws to facilitate the construction of differentiated overhang warps and swales around eaves areas. Calenderable profile (with limitations).

Profile features	
material	aluminum alloy AW 6060
tempering type	T4 - T5 - T6
possible finish	rough - ox black
bar length	6,5ml standard
weight	0,685kg/ml

Resistance module [mm ³]	
y: 1489,2	x: 940,0

Moment of inertia [mm ⁴]	
lyy: 29559,6	lxx: 10621,9

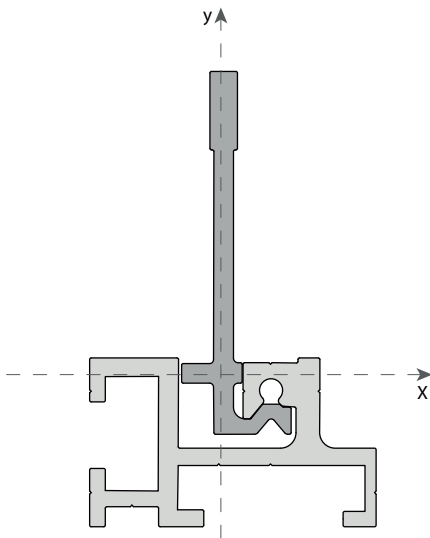
■ R-BT1 profile



Reinforcement profile used exclusively in conjunction with the MC-BT1 profile as a core reinforcement. It can be matched by slip coupling from the header. Locking between the two coupled profiles take place by means of the peg clamping screws, once secured. Profile calenderable (with limitations).

Profile features	
material	aluminum alloy AW 6060
tempering type	T4 - T5 - T6
possible finish	rough - ox black
bar length	6,5ml standard
weight	0,420kg/ml

■ MC-BT1 and R-BT1 profile



Composition of central frame profile (MC-BT1) combined with its reinforcement (R-BT1). The combination of the two profiles offers a solution that leads to a strength and stiffness almost equivalent to the M-BT1 frame of standard warping, in order to create a unique grid of frames. The two profiles together are calenderable (with limitations).

Profile features	
material	aluminum alloy AW 6060
tempering type	T4 - T5 - T6
possible finish	rough - ox black
bar length	6,5ml standard
weight	1,106kg/ml

Resistance module [mm ³]	
y: 1568,9	x: 2249,1

Moment of inertia [mm ⁴]	
Iyy: 30279,0	Ixx: 87265,8

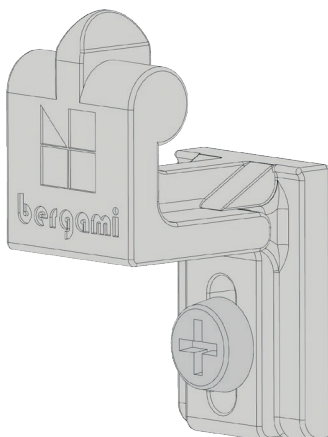
■ G-BT1/2 gasket



Sealing gasket of the vertical joint between the panels, made in the form of a "balloon" supported by a rigid base plate; produced according to specifications from window frames and suitable for use in exteriors.

Gasket features	
material	Coextruded set of compound polymer based on polypropylene, plus an elastomer thermoplastic.
possible finish	black
packaging	250m rolls
operating temperatures	-30 C° +100 C°

■ Self-extinguishing nylon peg PN-BT1



Nylon peg made from molded hot injection molding, suitable for standard applications (not recommended with MC-BT1).

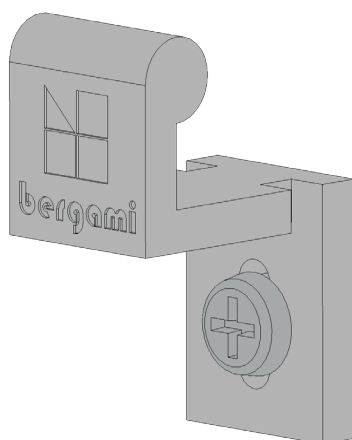
Notes:

Tabulated flow rate values were calculated by linear and nonlinear solver. Simulated operating temperatures: -20 °C +80 °C. Simulated conditions: Dry and Conditioned (according to ISO 291). Thrust pressure on the façade subject to the load of the wind (capacity per single peg): the conformation of the peg discharges the force axially on the frame (the thrust on the frame is managed with the number and distribution of the brackets anchoring the frame to the wall support). The load parameters were derived by conservatively applying to the panels a pressure of 1200Pa, corresponding to a wind of approximately 150km/h. From the load on the panels, the forces on the pegs were derived. The pressure loads assigned in the calculation solvers, were studied as a function of a minimum number of pegs and brackets to be used for each panel, with a limit of 30 kg per panel (applying 4 pegs).

Peg features	
material	Mixture of nylon and additive self-extinguishing, loaded with percentage of glass fiber. Compound validated to grade V0, according to the UL94.
possible finish	black
packaging	100 pcs with screw
weight	± 8g each

Vertical force (due to weights) on single peg [N]	
75 [+ 7,6 kg]	
Normal force (due to wind) on single peg [N]	
675 [+ 68,5 kg]	

■ Aluminum peg PA-BT1



Machined aluminum peg, suitable for special applications and/or in the presence of aggressive agents. To be coupled with the use of the MC-BT1 mast.

Notes:

The tabulated flow rate values were calculated by means of linear and nonlinear solver. Operating temperatures simulated: -20 °C +80 °C. Simulated conditions: Dry and Conditioned (according to ISO 291). Thrust pressure on the façade subjected to wind load (capacity per single peg): the conformation of the rung discharges the force axially on the frame (the thrust on the frame is managed with the number and distribution of the brackets anchoring the frame to the masonry support). The load parameters were derived by conservatively applying to the panels a pressure of 1200Pa, corresponding to a wind of about 150km/h. From the load on the panels, the forces on the pegs were derived. The pressure loads assigned in the computational solvers, were designed according to a minimum number of pegs and brackets to be used for each panel, with a limit of 30 kg per panel (applying 4 pegs).

Peg features	
material	aluminum alloy AW 6060
tempering type	T6
possible finish	rough ox black
packaging	100 pcs with screw
weight	± 25g each.

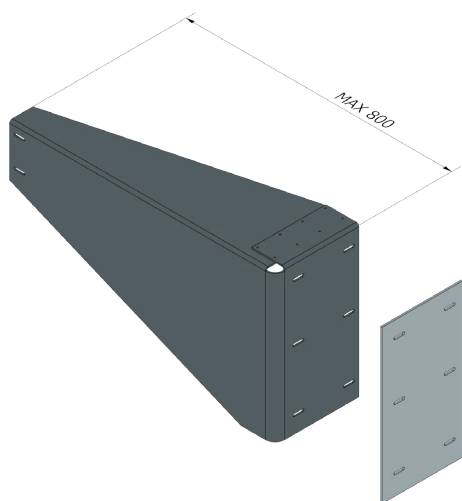
Vertical force (due to weights) on single peg [N]

75 [+ - 7,6 kg]

Normal force (due to wind) on single peg [N]

675 [+ - 68,5 kg]

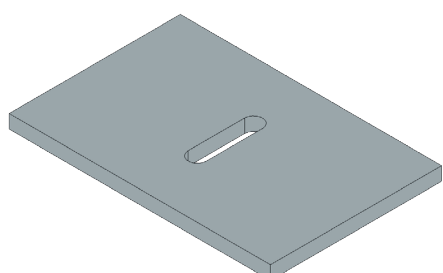
■ Customized bracket



Custom-made single bracket for special uses and solutions, to be made with different materials, thicknesses and ribs, in order to obtain the composition of the "finished façade package" of maximum clearance from the wall equal to 800 mm and provided with slots of 30 x 8/10 mm as needed. The bracket is made complete with its ISO-PLATE 5 insulating plate, including slots and completed by the bracket/mast bolt kits consisting of: bolts, nuts and washers in M8 galvanized steel.

Bracket features	
material	composite of aluminum 4mm - aluminum sheet. 20/10 - aluminum sheet 25/10 - alum. sheet metal 30/10 - iron zinc sheet. 15/10 - iron zinc sheet 20/10.
possible finish	rough (aluminum sheet) - painted (composite of aluminum and sheet aluminum), galvanized (sheet of iron)
packaging	quantity on request

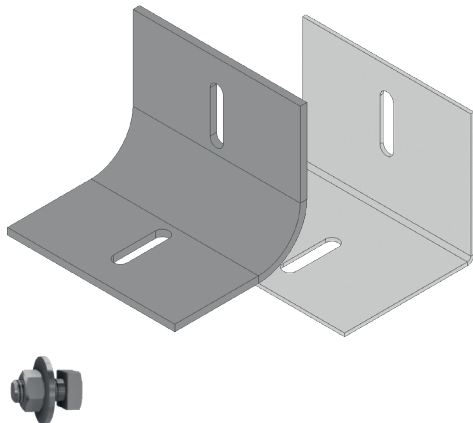
■ Insulation element under bracket ISO-PLATE 5



Insulation plate of 5mm thickness. To be applied between the masonry support and the bracket. Equipped with 30x8mm slots.

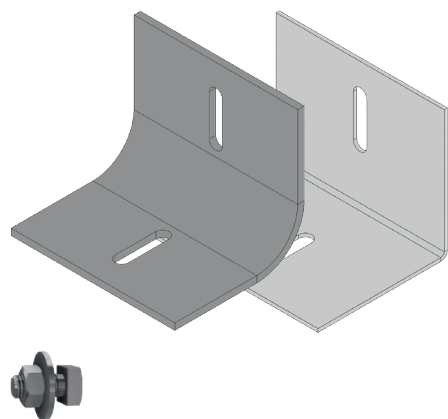
Insulator features	
material	Polypropylene or other layer plastic with insulating properties.
Packaging	n/a

■ STD 75



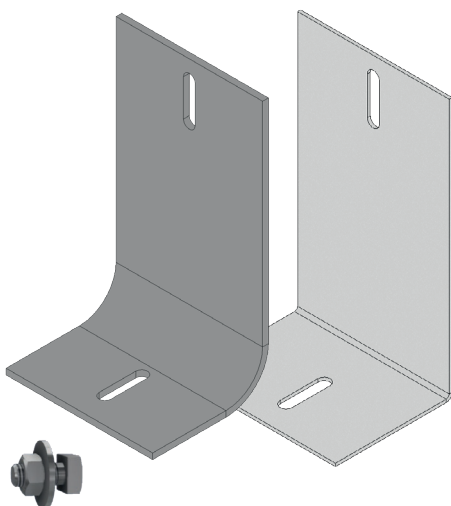
Single bracket suitable for the composition of the "finished façade package", clearance from the wall of 75mm with a slot adjustment of about 60-90mm (ideal for balcony areas insulated with coat high-density 20mm), made in various types and provided with 30 x 8 mm slots on both edges of the press-folded bracket, in order to be able to adjust the frame in/out and right/left. Bracket/frame bolt kit consisting of: steel bolt, nut and washer galvanized M8.

■ STD 100



Single bracket suitable for the composition of the "finished façade package," of clearance from the wall of 100mm with a slot adjustment of about 85-115mm (ideal for balcony areas insulated with 20mm high-density coat and for cladding without the need of insulation), made in various types and provided with slots of 30 x 8 mm on both edges of the press-folded bracket, in order to be able to adjust the frame in/out and right/left. Bracket bolt kit/frame consisting of: bolt, nut and washer in galvanized steel from M8.

■ STD 200/230



Single bracket suitable for the composition of the "finished façade package," of clearance from the wall of 200/230 mm with an adjustment slots of about 185-245 mm, (ideal for areas insulated with a coat of 100/120 mm), made in various types and provided with slots of 30 x 8 mm on both edges of the press-folded bracket, in order to be able to adjust the frame in/out and right/left. Bracket/frame bolt kit consisting of: bolt, nut and washer in M8 galvanized steel.

Characteristics of STD brackets 75/100/200/230

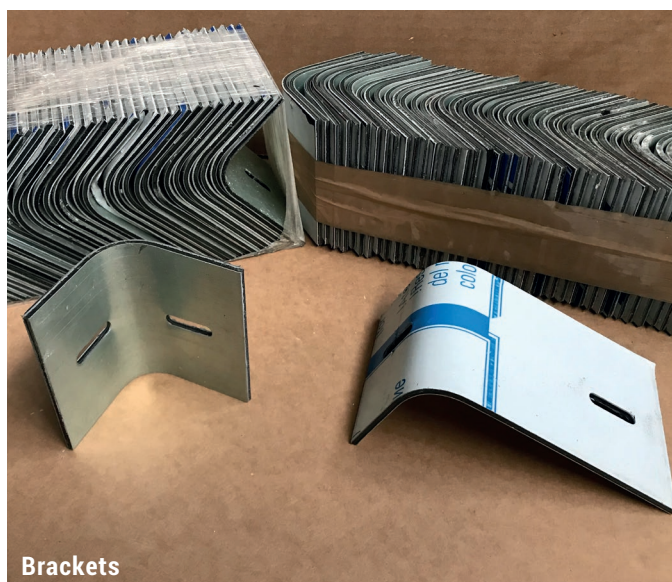
material	composite of aluminum 4mm - aluminium sheet 12/10 - Aluminum sheet 20/10 - alum. sheet 25/10 - alum. sheet 30/10 - iron zinc sheet 10/10 - iron zinc sheet 15/10 - iron zinc sheet. 20/10.
possible finish	rough (aluminum sheet) - painted (composite of aluminum and sheet aluminum), galvanized (sheet of iron)
packaging	n/a



Self-extinguishing nylon pegs PN-BT1



PA-BT1 Aluminum Pegs



Brackets



Gasket roll

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Stay tuned to our channels to be constantly updated on new products and technical specifications.

[illegible]

[illegible]

VENTILATED FACADES AND CLADDING

The only system with closed-gap
vertical gasket and staggered panels



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