



## The façade frame:

The framework shall be made up of 52 mm module mullions and transoms (steel tube sections and reinforcements defined according to static size regulations for the façade).

Mounting onto the shell shall be carried out using specially designed hooks which allows three-dimensional adjustment.

The mullion/transom intersection shall be square cut.

Sealing of the intersection shall be obtained using an injection of sealing butyl putty in the connecting piece (in all cases, sealing may be carried out in the workshop or on site)

Sealing of infill (glazed partitions or panels) 6 to 32 mm thick, shall be carried out from the exterior with aluminium pressure plates equipped with EPDM\* gaskets and plugs, reinforced on the interior by EPDM\* gaskets. Run off of eventual water ingress shall be achieved using oblong slots on the pressure plates and the horizontal caps.

Thermal break between the interior and the exterior shall be created using a PVC horizontal and vertical dividing gasket placed between the structure and the exterior pressure plates.

The outer aspect shall be of the

- Visible grid type (traditional grid) using 52 mm caps clipped onto the aluminium pressure plates.

**or**

- Horizontal grid, provided by horizontal raised caps clipped onto the aluminium pressure plates. The linear effect shall be emphasized by a 22 mm trim gasket effacing the verticals. If necessary an anti-deflection pressure block in the middle of the span supports the volumes (use to be defined according to the nature of the glazing components and to region). The glazed partitions shall be of the CEKAL\* SSG\* certified type, with rounded edges, calculated as "2-sided" in accordance with unified technical document DTU 39.

**or**

- Vertical grid, provided by horizontal raised caps clipped onto the aluminium pressure plates. The linear effect shall be emphasized by a 22 mm trim gasket effacing the horizontals. If necessary an anti-deflection pressure block in the middle of the span supports the volumes (use to be defined according to the nature of the glazing components and to the region). The glazed partitions shall be of the CEKAL\* certified SSG\*, with rounded edges, calculated as "2-sided" in accordance with unified technical document DTU 39. Additional sealing with low mode neutral putty shall be implemented on the lower part of the glazed partitions.

## Façade openings:

The openings shall be incorporated without modifying the outer aspect of the grid façades (traditional horizontal grid and vertical grid):

The hidden frames shall come with 23 or 31 mm glazed partitions with the CEKAL, SSG\* type label in compliance with technical notice, with rounded edges on the 4 sides.

Volume fitting shall be obtained using bonding onto an aluminium strip (produced to CEBTP specifications) via a bonding putty (SNJF label or with technical notice). The principle shall be subject to CSTB technical advice (tilt/turn, inward opening, Hopper, emergency access: glazing with bordered frame, top hung open out: glazing with non-edged frame). Bonding shall be carried out by a qualified company in accordance with the directives and technical documents from the aluminium and putty suppliers.

Exterior sealing shall be obtained by a low module gasket on butt strip. The plain end of the opening frame glazing shall be flush with the fixed frames.

## Additions per type of opening frame

• Top hung open out opening frame:

-Hardware fitting using adjustable stainless steel parallelogram stays which shall be chosen according to the constraints of use.

-Centralized locking with multipoint lock.

-Sealing between fixed and opening frames provided by 2 indoor and outdoor EPDM\* rabbet gaskets.



- Tilt and turn opening frame:

- The opening sections shall have sloping frames and shall allow a space for handle operation making it easy to grip.
- Hardware fitting hidden in the rebate (invisible hinges).
- Stainless steel hardware with a half-turn handle, rods, a stay lock and anti-false move system.
- Sealing between fixed and opening frames using EPDM\* gaskets.

- \*Inward opening type frame:

- The opening sections shall have sloping frames and shall allow a space for handle operation making it easy to grip.
- Hardware fitting concealed in the rebate (invisible hinges).
- Quarter turn handle.
- Sealing: between frame and opening using EPDM\* gaskets – drainage of possible water ingress on the horizontal cap.

- Hopper window opening:

- 2 stay arm fittings concealed in the rebate, invisible hinges.
- Latch lock.
- Sealing between frame and opening using EPDM\* gaskets – drainage of possible water ingress on the horizontal cap.

- Emergency access:

- The glazing shall measure 31 mm and have a maximum weight of 100 kg.
- Hardware concealed in the rebate with square drive lock system.

### **Glazing:**

The mullion and transom sections of the 52 mm module system shall be assembled on a square cut providing continuous drainage.

The profile dimensions shall comply with existing calculation regulations.

Recovery and evacuation of possible water ingress shall be carried out in the profile groove.

Infills of 8 to 32 mm shall be supported by aluminium linear pressure plates on the mullions and, where needed, by pressure blocks on the transoms (distributed following the supplier's calculations). The glazing shall be of the SSG\* glazing type, in accordance with Unified Technical Document DTU.

Sealing shall be achieved on the inside by a linear EPDM\* gasket, and on the outside, by a butyl strip on the mullions and a silicone sealant on the butt strip for the transoms.

A straight cap shall be clipped onto

- The mullion pressure plates to create the vertical grid effect. The linear effect shall be achieved by intermittent round Ø 60 pressure blocks on the transoms.

**or**

- On the mullion and transom pressure plates to create a grid effect.

The roof casement shall allow an opening of up to 60° with 6 to 30 mm glazing and shall have:

- Manual operation

**or**

- Electronic control mounted on hooks.

*\*CEKAL: CEKAL ASSOCIATION delivers a certificate at the production site for insulating glazing following verification and rigorous testing in compliance with technical regulations. This label guarantees the quality of the insulating glazing for 10 years.*

*\*SSG: Structural Sealant Glazing*

*\*EPDM: Category of rubber*