

Examples of Installation Method

ALPOLIC/fr is widely used for external claddings and some interior surfaces, while ALPOLIC is used mainly for signage. Both materials are also used for civil works and other miscellaneous applications. In order to install Aluminum Composite Materials (ACMs) in these applications, many advanced methods have been proposed and improved on for years. We will introduce some of the most common methods suitable for ALPOLIC/fr and ALPOLIC below.

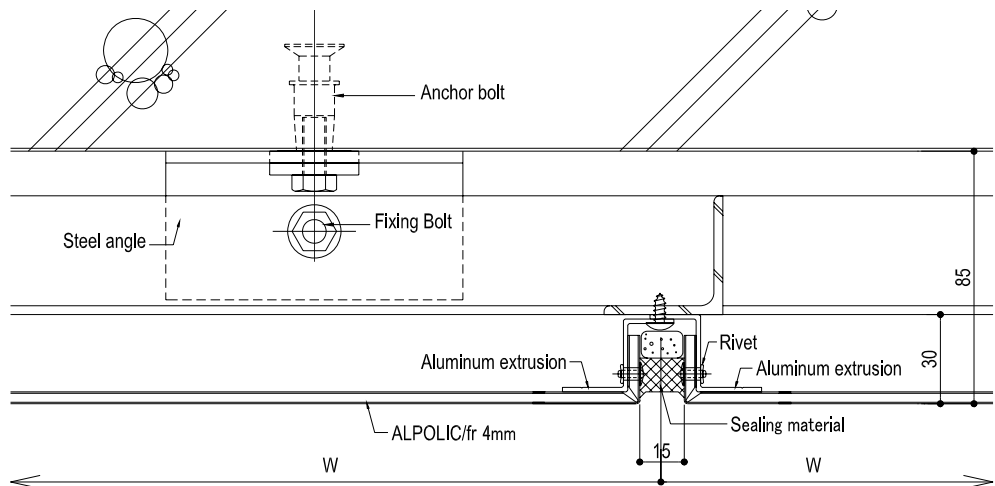
Examples of installation method:

Category	Application	Name of installation method	No.
Exterior	External wall cladding (1)	External wall cladding-wet sealant joint	1
	External wall cladding (2)	External wall cladding-hanging method	2
	External wall cladding (3)	External wall cladding-dry gasket joint	3
	External wall cladding (4)	External wall cladding-narrow open joint	4
	Roof covering	Roof covering	5
	Spandrel	Spandrel back panel of glass curtain wall	6
	Sunshade or cornice	Sunshade or cornice	7
Interior	Internal wall cladding	Internal wall cladding-hanging method	8
	Interior column cover	Interior column cover with Z-flange system	9
	Interior partition	Interior partition panel in factory	10
	Ceiling	Ceiling panel with non-penetrating rivet	11
Others	Roof panel	Roof of pedestrian passage	12
	Parapet	Parapet and soffit for renovation	13
	Signboard	Corporate shop front signboard	14

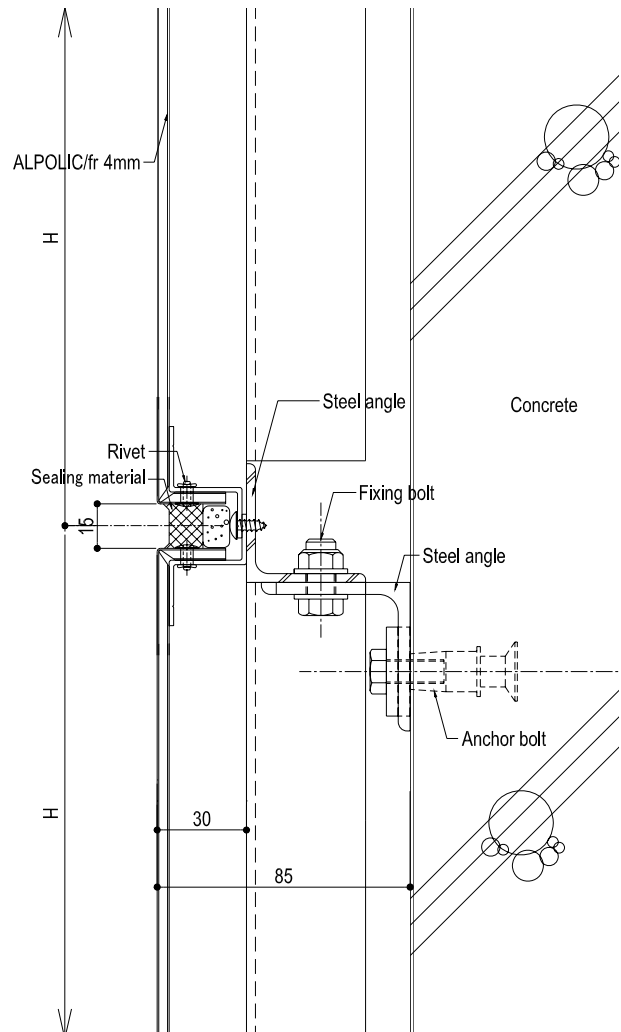
1. External wall cladding - wet sealant joint

This installation system, with tray type (rout and return) panels and sealing joints, is one of the most common methods and it is available for a wide range of new buildings and renovation projects. After fixing ALPOLIC/fr panels on the substructure, we apply a suitable sealing material to the joints in order to ensure water-tightness.

Horizontal section



Vertical section



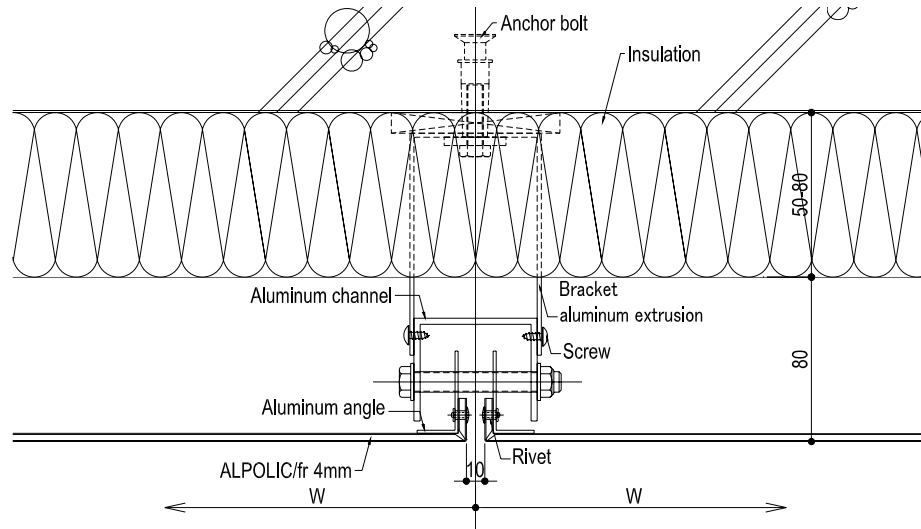
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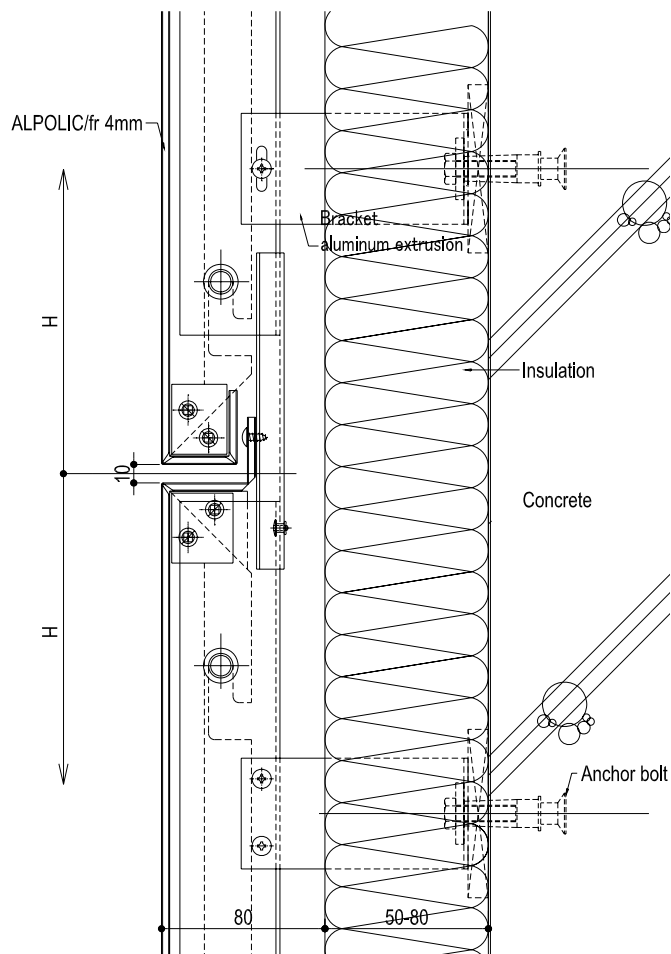
2. External wall cladding - hanging method

The hanging system is also one of the most common fixing methods. It simplifies the installation work at the construction site and hence we can shorten the installation period. It is easy to loosen the movement due to thermal expansion/contraction with this method, because panels are not tightly fastened to the sub-frame but are simply suspended.

Horizontal section



Vertical section



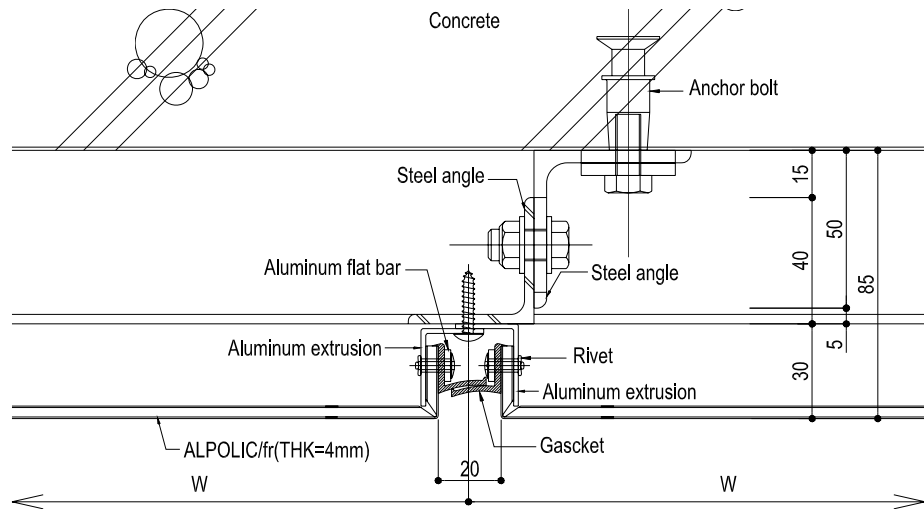
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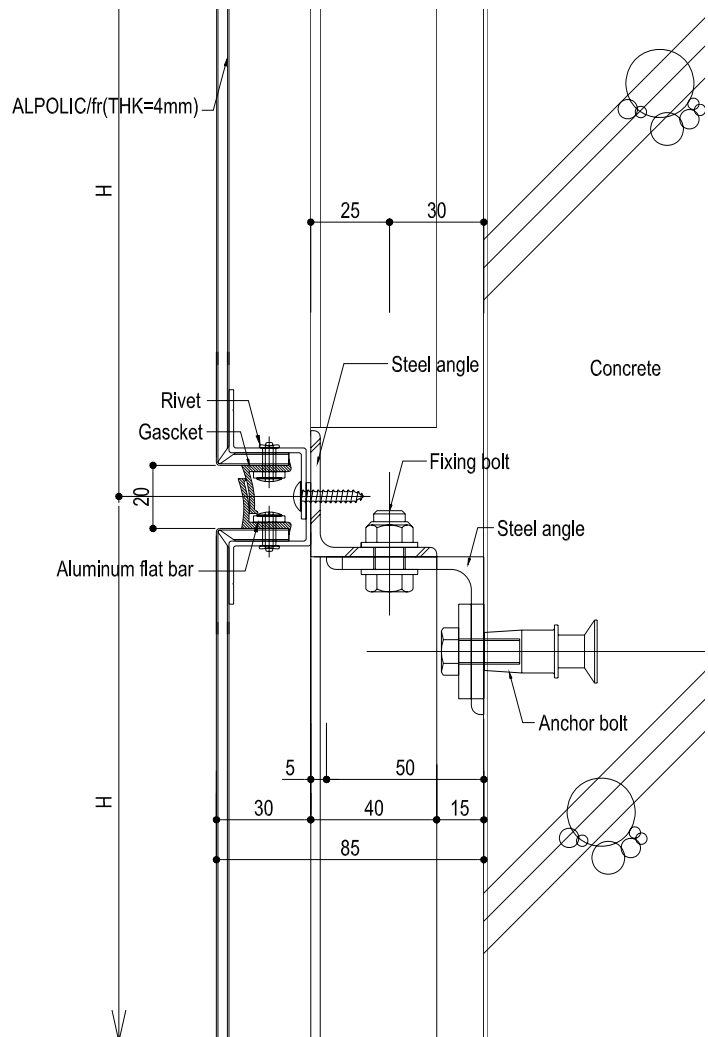
3. External wall cladding - dry gasket joint

In this method, we use gaskets in the joints instead of sealants. The durability of EPDM gaskets is comparable to that of the sealant, in addition, the gasket joint reduces the amount of dirt or stain on the ALPOLIC/fr surface.

Horizontal section



Vertical section



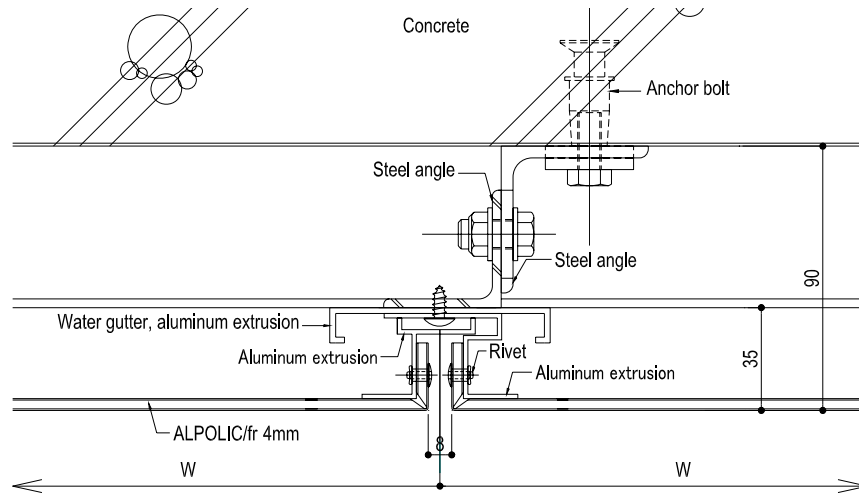
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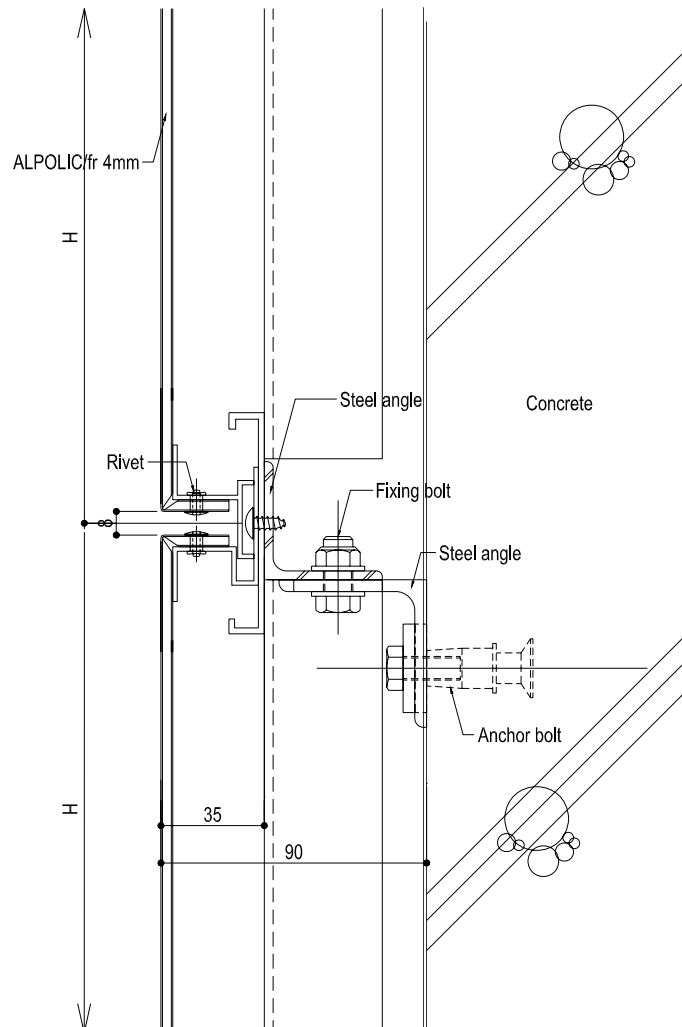
4. External wall cladding – narrow open joint

Generally, this kind of method is suitable for Stone and Timber-patterned ALPOLIC/fr panels in which narrow joints between the panels are aesthetically effective. According to need, we apply a sealing material or EPDM gasket to the joints.

Horizontal section



Vertical section



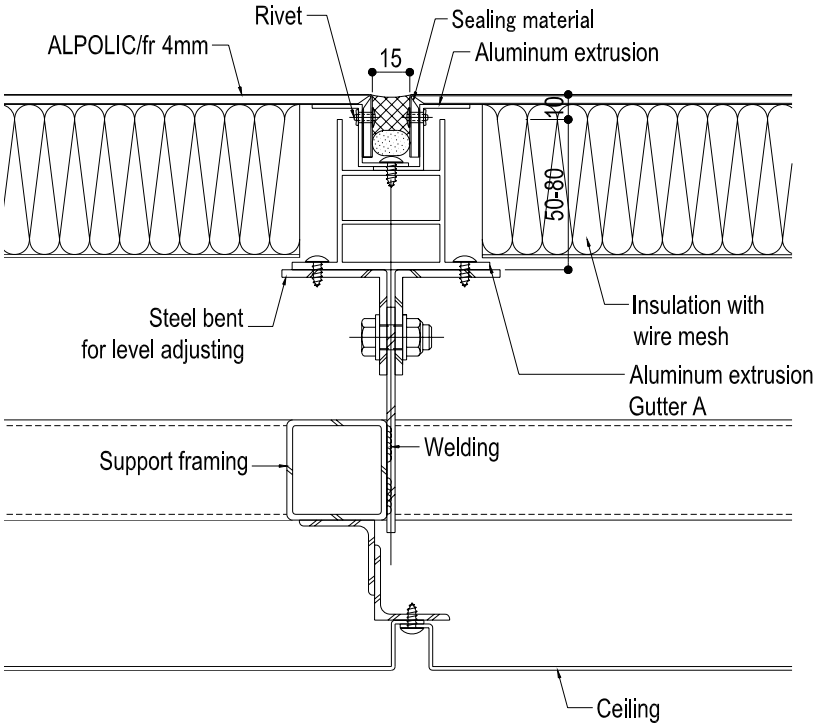
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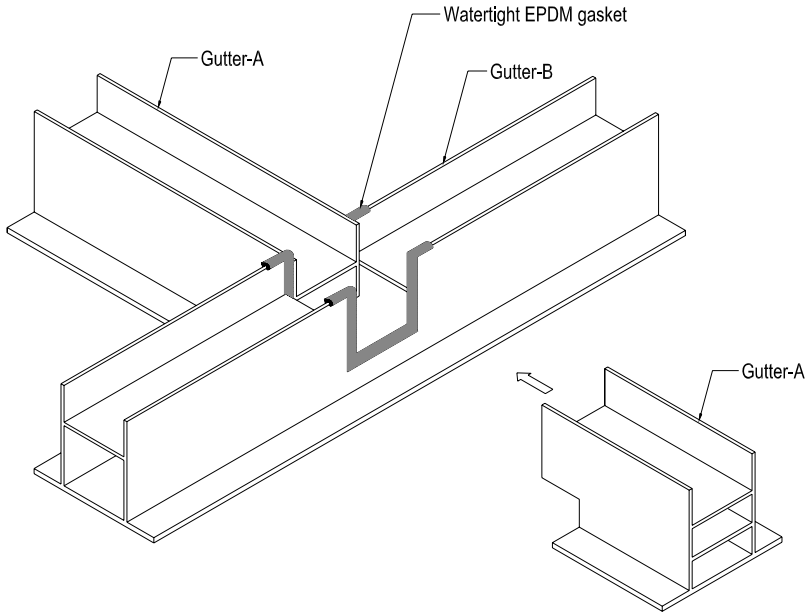
5. Roof covering

ALPOLIC/fr has been used for roof covering in prestigious projects such as airports and stadiums. In roof applications, we install a water gutter or waterproof sheets behind the ALPOLIC/fr panels so that leaked water can drain outside.

Typical section



Gutter system



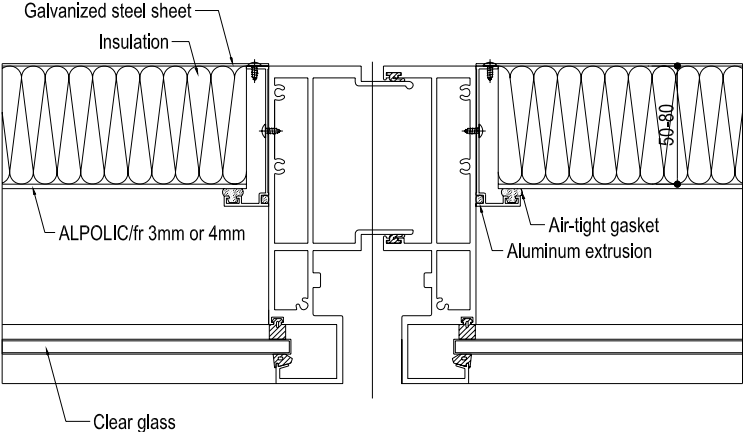
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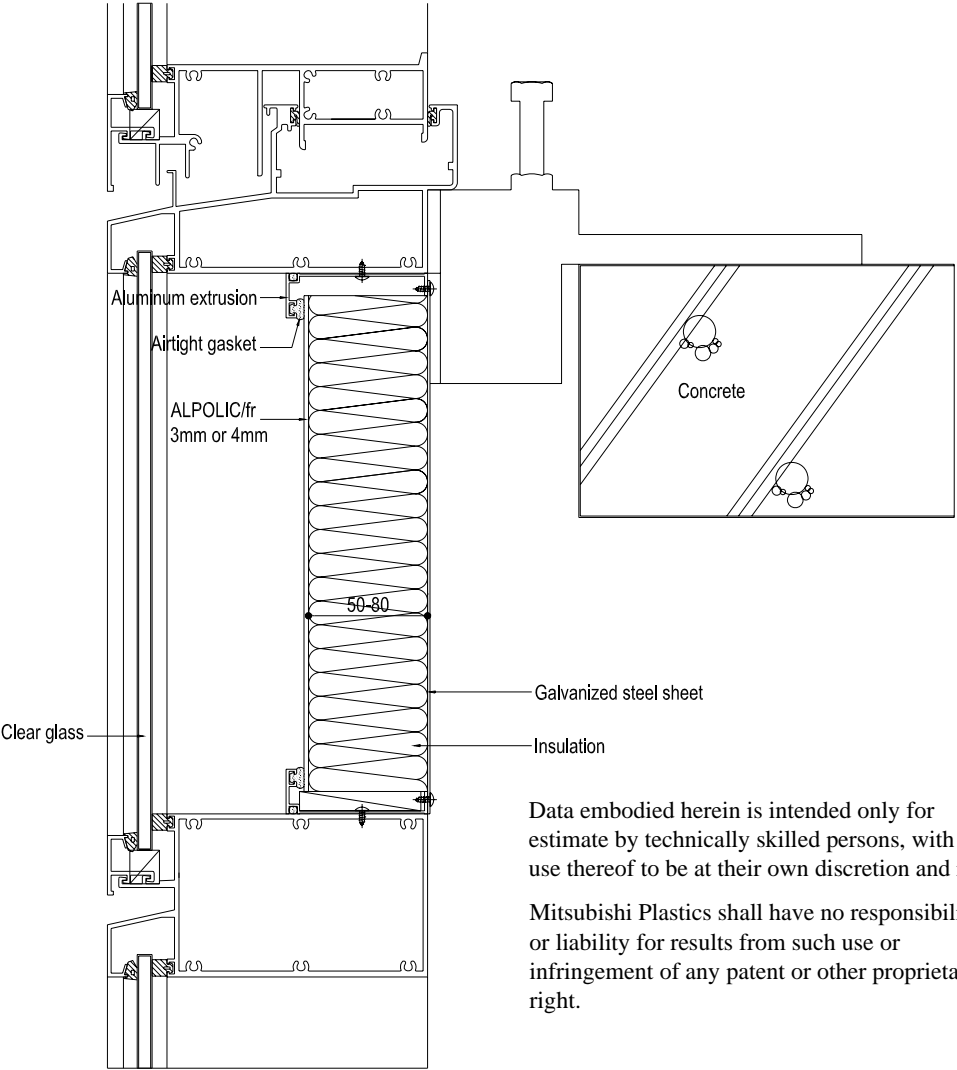
6. Spandrel back panel of glass curtain wall

Glass curtain walls sometimes need an opaque spandrel panel (back panel) behind glass for aesthetic and energy-saving purpose. The spandrel back panels behind the glass must be very durable especially to UV exposure, because it is hard to replace them after the building is completed. ALPOLIC/fr is the perfect material for such applications.

Horizontal section



Vertical section

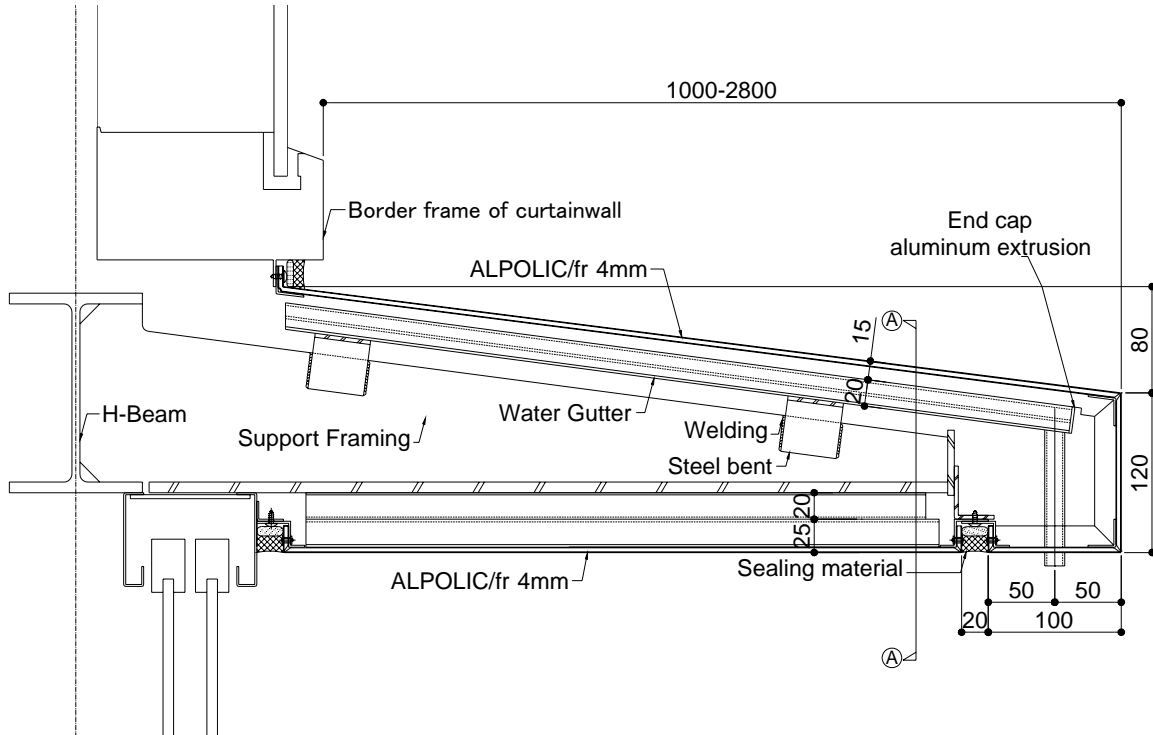


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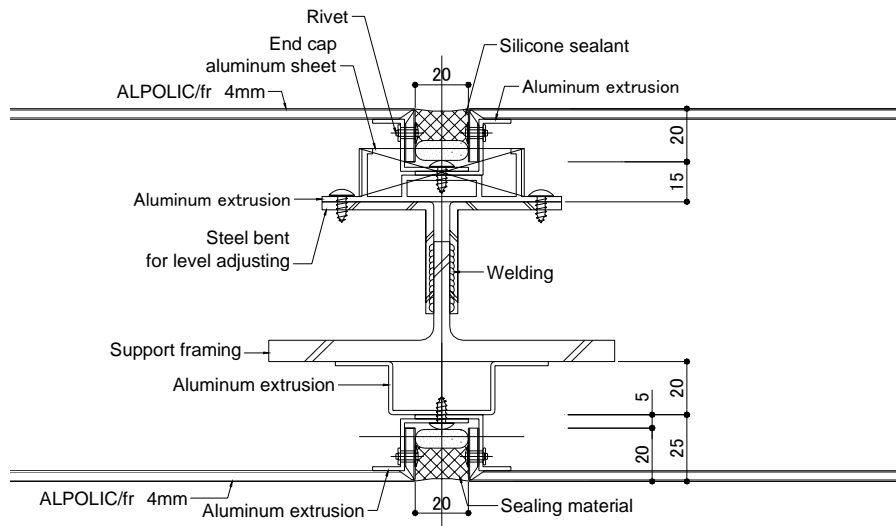
7. Sunshade or cornice

ALPOLIC/fr is sometimes used for the sunshade or the cornice of a building wall. In this type of application, normally steel or aluminum frames are used as reinforcement behind ALPOLIC/fr.

Typical section



A-A section



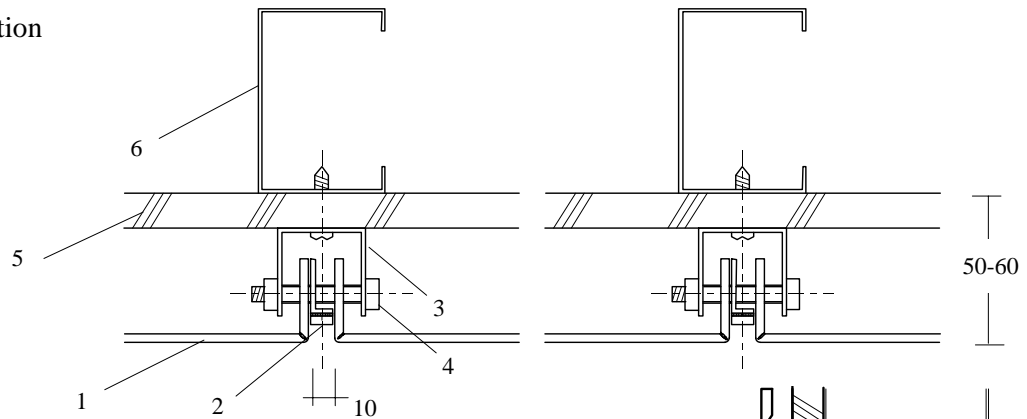
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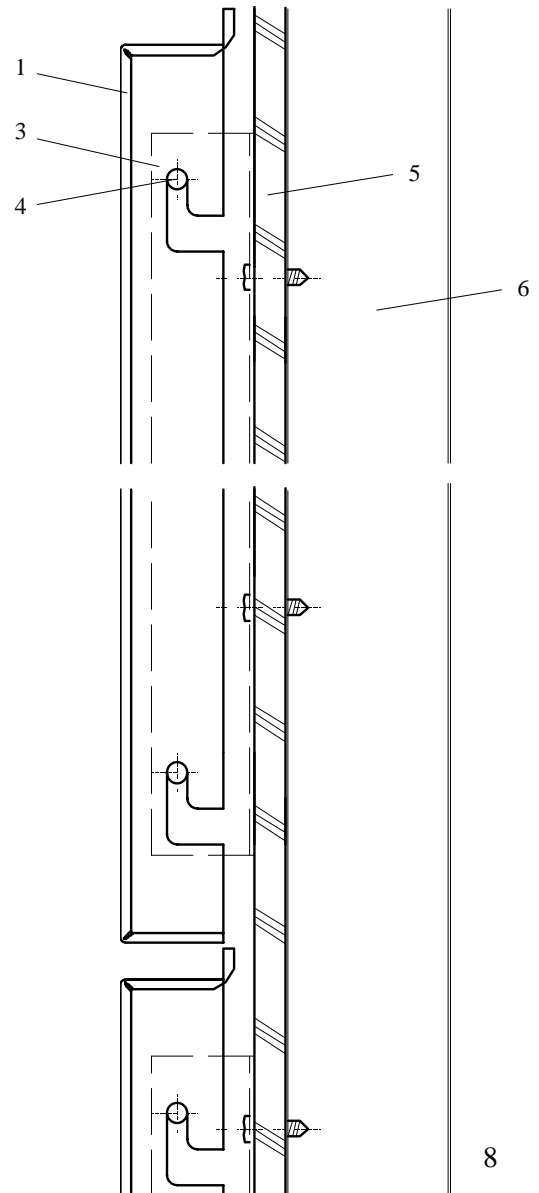
8. Internal wall cladding-hanging method

ALPOLIC/fr LT is installed on interior gypsum board with hanging method. Conceal the vertical joint with a joint cover of the same material. In renovation projects, “Stud Detector” will help you to find out the position of studding concealed behind gypsum board. Stud Detector is a small tool working with an electromagnetic sensor. Not only solid and metallic colors but also Stone and Timber-patterned panels are suitable for this method.

Horizontal section



Vertical section



- 1. ALPOLIC/fr LT 3mm
- 2. Joint cover, ALPOLIC/fr LT strip adhered on aluminum L-9×20 with VHB tape
- 3. Holder, aluminum C-30×30
- 4. Hanging bolt, M5, covered with rubber tube
- 5. Gypsum board
- 6. Stud

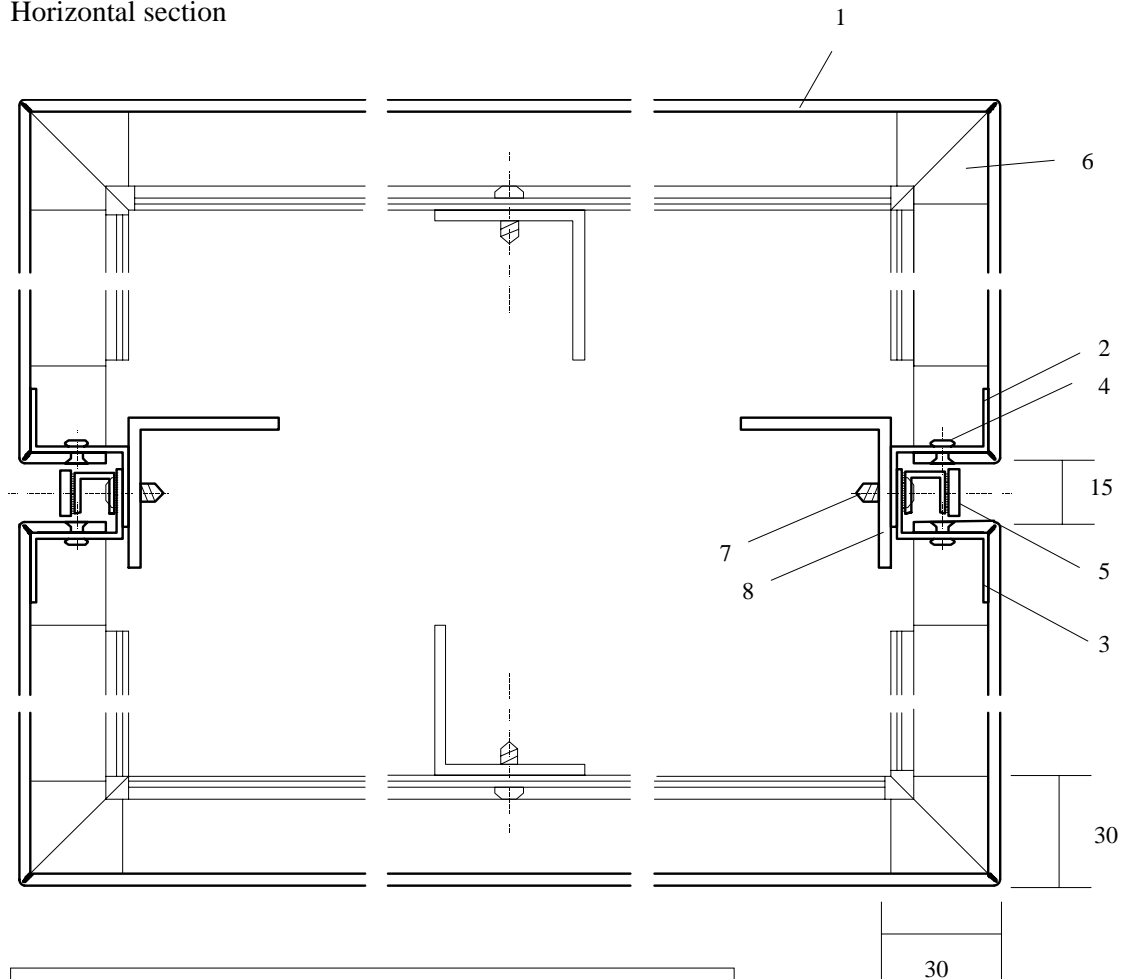
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9. Interior column cover with Z- flange system

This is an example of rectangular column cover. Two Z-shaped flanges are overlapped and fixed to the sub-frame. Conceal the joint with joint cover slip of the same panel. Use countersunk rivet for assembling the panel.

Horizontal section



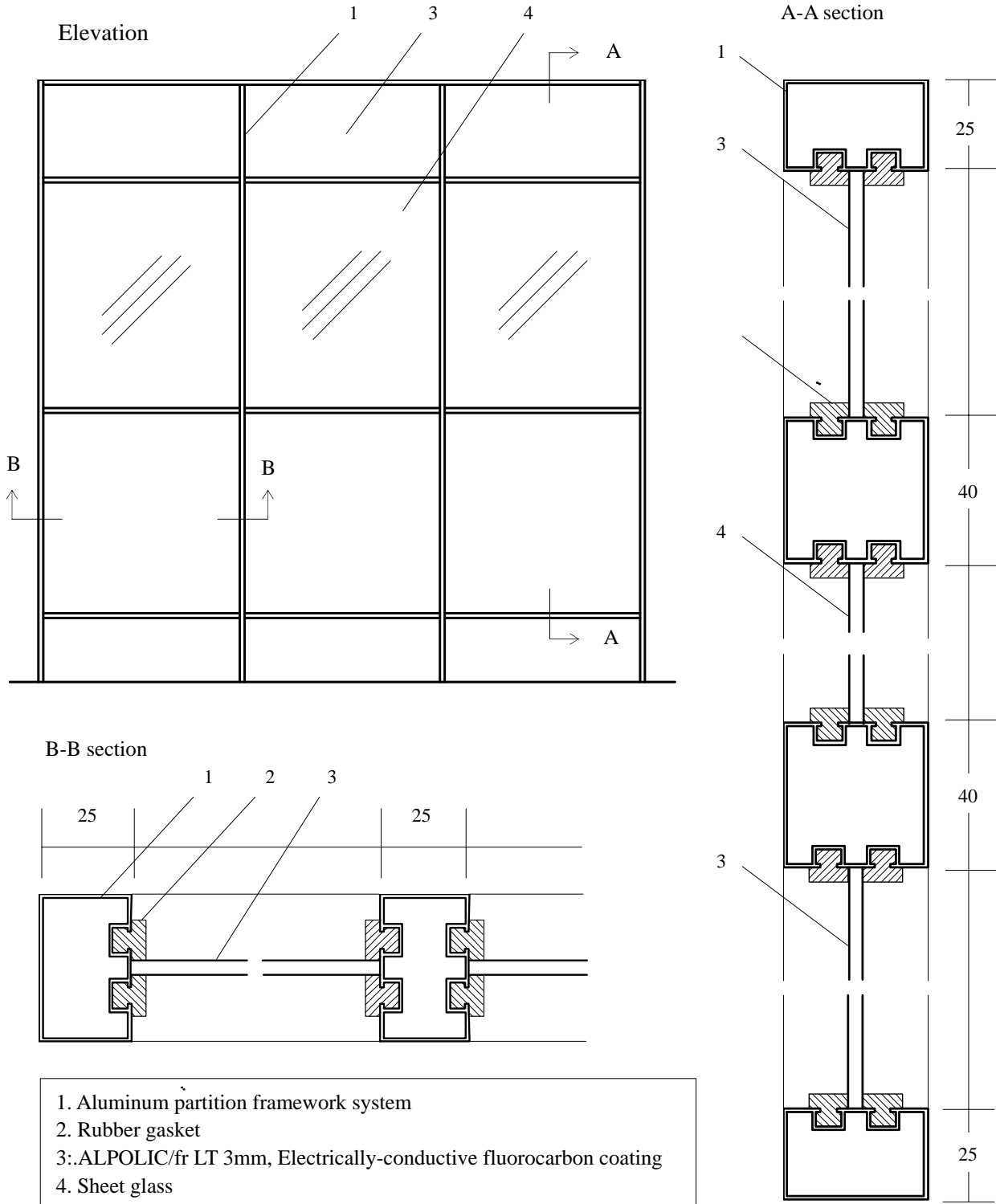
1. ALPOLIC/fr LT 3mm
2. Z-shaped flange (Large)
3. Z-shaped flange (Small)
4. Aluminum rivet, countersunk, 3mm diameter
5. Joint cover adhered to aluminum C-10×10 with VHB tape
6. Corner support plate, aluminum sheet
7. Tapping screw, M4
8. Sub-frame, aluminum L-30×30mm

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10. Interior partition in factory

In this example, electrically-conductive fluorocarbon-coated ALPOLIC/fr LT is used for interior partition panels in a factory.

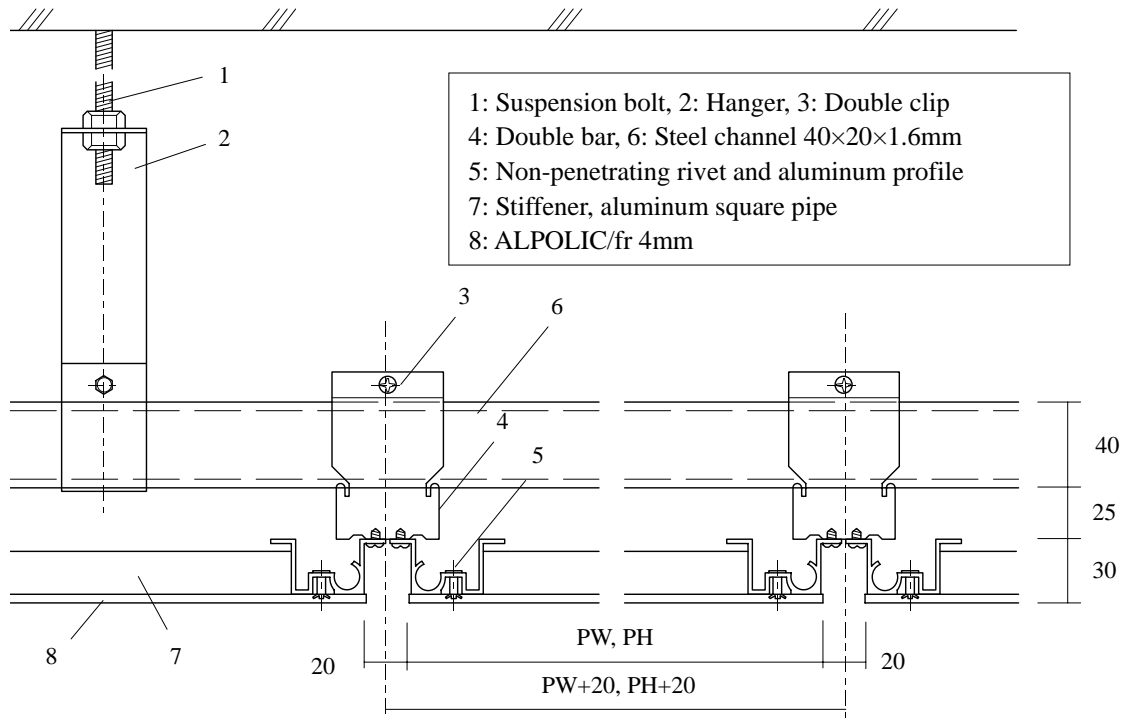


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11. Ceiling panel with non-penetrating rivet

When we use ALPOLIC/fr for indoor ceilings or soffits, non-penetrating rivets simplify the panel details. Non-penetrating rivets are usable **only on low-gloss finishes (30% or less)**. If we use these rivets on medium to high gloss products, the trail of the concealed rivet is visible from front. In this method, we install fabricated ALPOLIC panels on a lightweight suspension bar ceiling system.



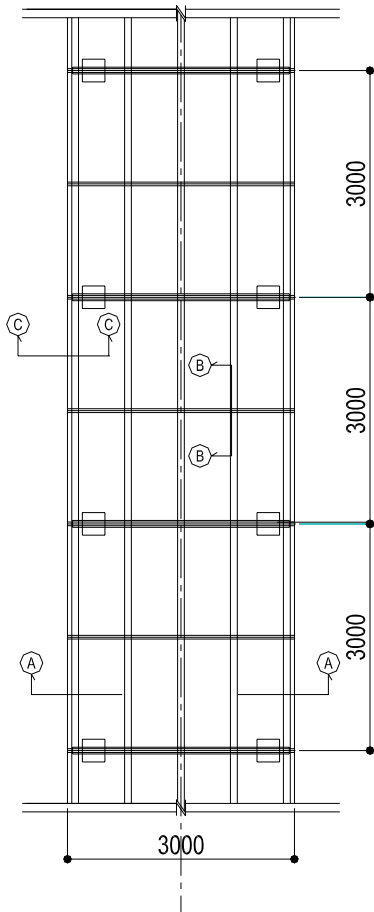
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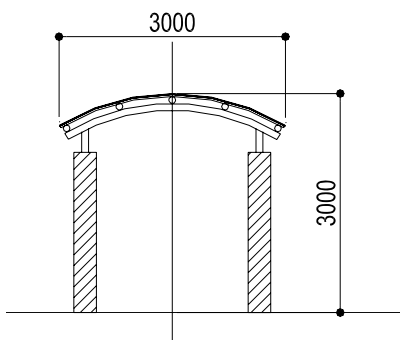
12. Roof of pedestrian passage

ALPOLIC/fr has been used as roof panels of public pathways and bus stations. Refer to application photographs. ALPOLIC panels are just clamped between sub-frames and aluminum extrusions. In most projects, the curving panels can be naturally curved without a mechanical bending.

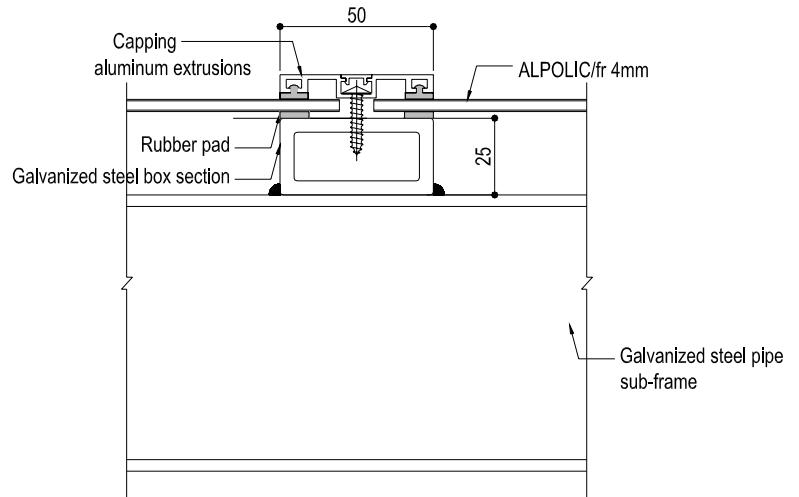
Plan



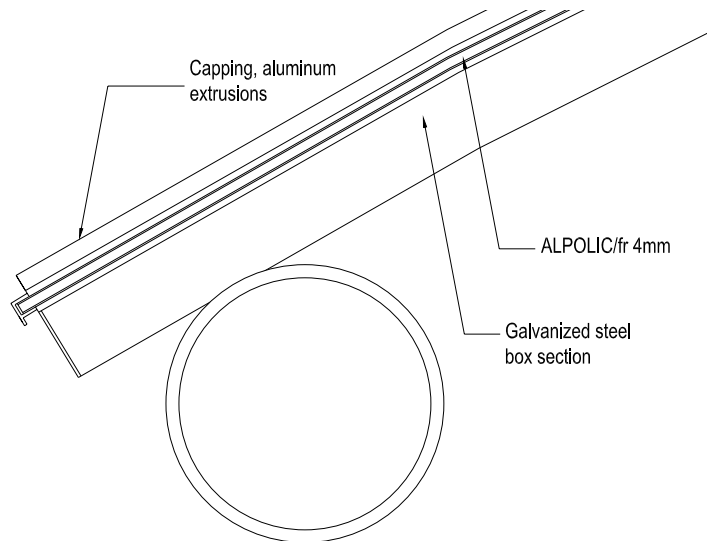
A-A section



B-B section



C-C section

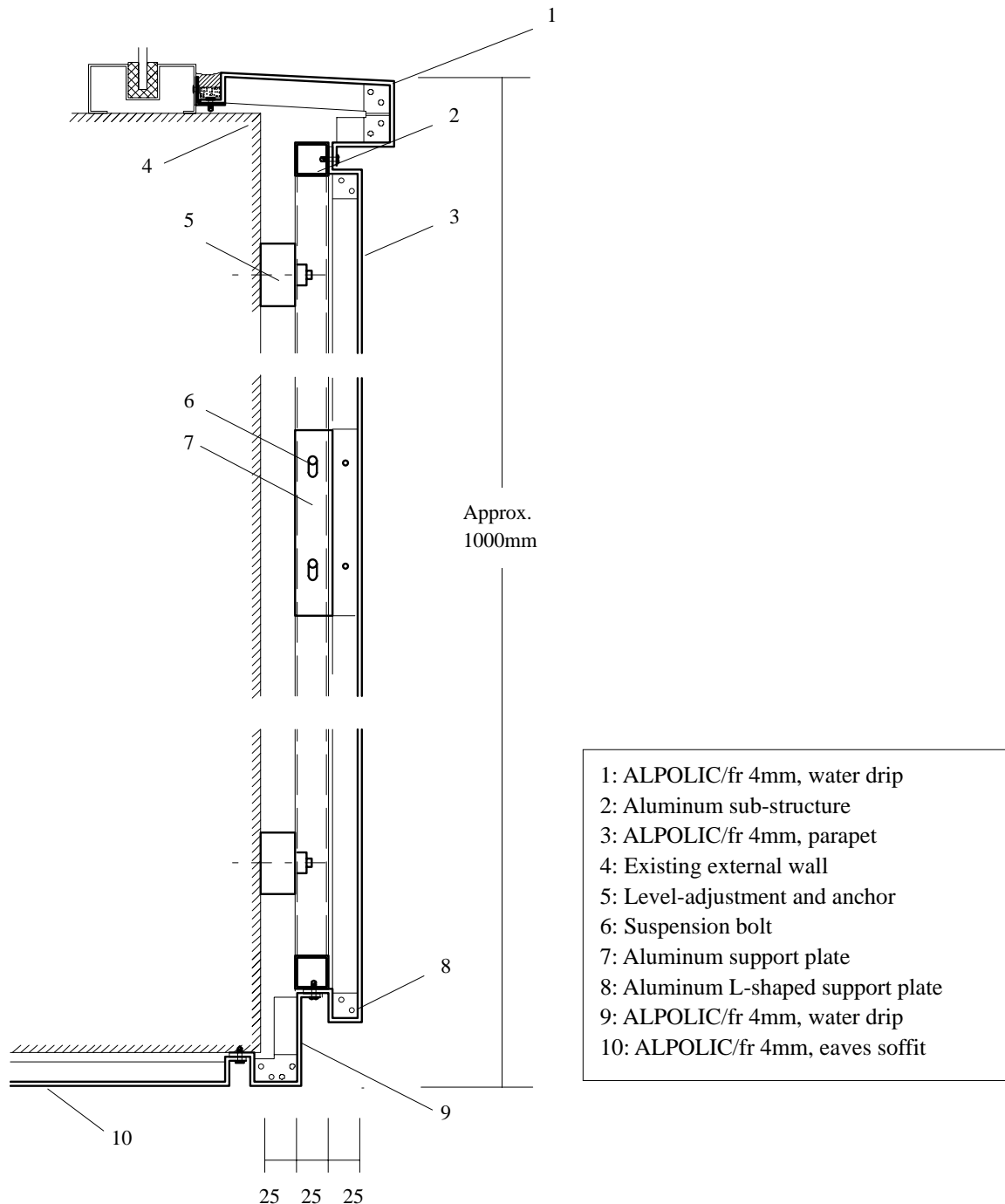


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13. Parapet and soffit, renovation

ALPOLIC/fr has been widely used for parapets and soffits in building renovation. ALPOLIC/fr is used for the water drip, parapet and soffit in the following detail.



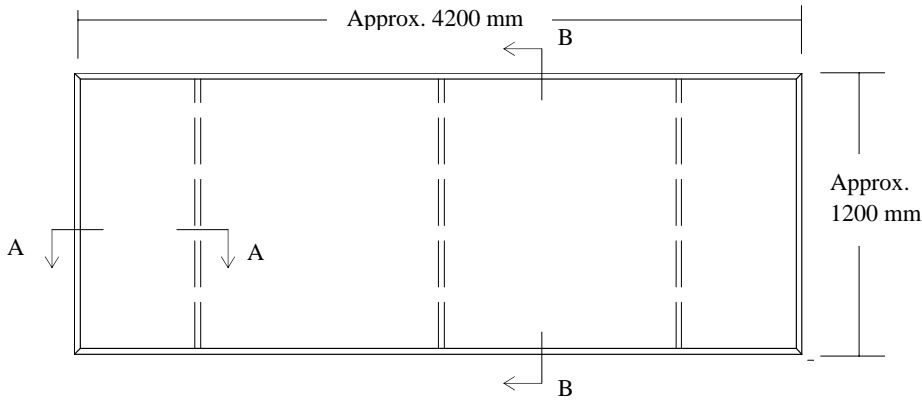
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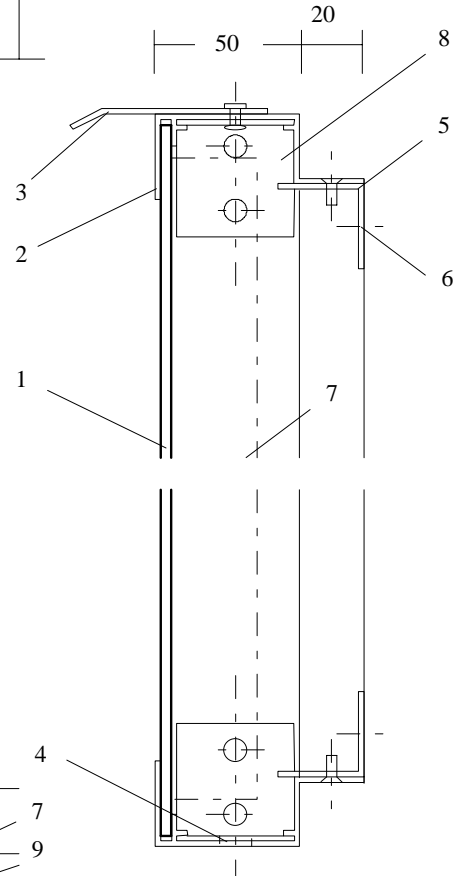
14. Corporate shop front signboard

This corporate signboard is a shop front sign of a countrywide newspaper company in Japan. The signboard has signs by 3M's Scotchcal film. The aluminum flanges are coated with the same color as ALPOLIC.

Elevation

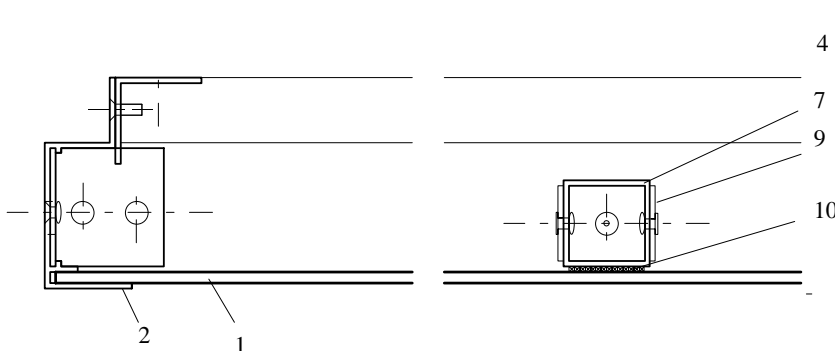


B-B section



1. ALPOLIC 4mm having signs (logotype, letterings) by Scotchcal film
2. Aluminum flange coated with the same color of ALPOLIC
3. Water drip
4. Drain hole
5. Steel sub-structure, L-30×30, coated
6. Anchor
7. Stiffener, aluminum square pipe, 30×30×2
8. Corner support plate, aluminum L-40×40
9. Aluminum channel (top & bottom only)
10. VHB tape

A-A section



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