



Hengbao

ZENWAY

振威工程有限公司

# 防火玻璃安裝指引

*Installation Guidelines*



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## 1 產品注意事項 Product Precautions

### a. 不可切割 No Cutting :

本產品出廠後不可再作現場切割，否則視為破壞系統之完整性，將會使本產品不能符合設定之性能；

This product must not be cut on-site after leaving the factory. Doing so will compromise the integrity of the system and may prevent the product from meeting its specified performance.

### b. 放置要求 Placement Requirements :

Logo 在下方為正確的安裝或置放方位，如非正確存放可能會發生漏液等問題，人為損毀不承擔質量風險；

The correct installation or storage orientation is with the logo facing downward. Incorrect storage may lead to issues such as liquid leakage. Damage caused by improper handling is not covered under quality assurance.

c. 玻璃和鋼框的原廠保護紙，使用時間為貼上後三個月內，建議安裝好後超過 3 個月需要更換保護紙。

The original protective film on the glass and stainless steel frame is designed for use within three months after application. If the product remains installed for more than three months, it is recommended to replace the protective film.

d. 防火玻璃為防火、隔熱、防熱輻射玻璃，其工作原理是當玻璃遇到火焰或高溫時，玻璃與內層的防火膠會產生反應，建議玻璃不應安裝在溫度長期超過 45°C 的場所。

Fire-resistance glass is designed to provide fire protection, heat insulation, and thermal radiation shielding. Its working principle involves a reaction between the glass and the inner fire-resistant gel when exposed to fire or high heat. It is recommended that the glass not be installed in locations where temperatures consistently exceed 45°C.

e. 門框塞縫灌入水泥砂漿後應及時清理框架飾面表面殘留之水泥砂漿以防腐蝕表面。

After filling the gaps around the door frame with cement mortar, promptly clean any residual cement mortar from the stainless steel surface to prevent corrosion.



## 2 預留孔洞安裝 Pre-formed Opening Installation

預留孔洞的尺寸與產品尺寸的關係

Relationship Between Pre-formed Opening Dimensions and Product Dimensions

門：上左右三邊預留位置，以 50mm 為最標準的預留方式；

Door: Clearance should be reserved on the top, left, and right sides, with 50mm being the standard clearance width.

間牆：上下左右四邊預留位置，以 50mm 為標註的預留方式；

Partition Wall: Clearance should be reserved on all four sides (top, bottom, left, and right), with 50mm as the standard clearance width.

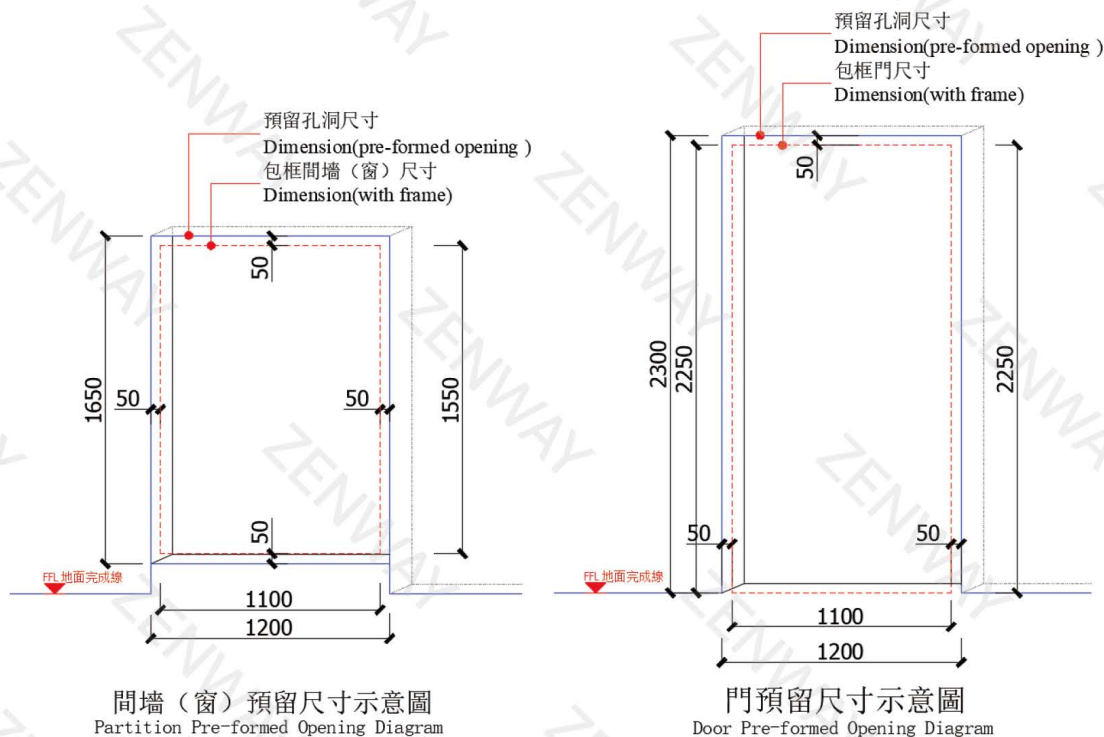
Ex：

產品寬度+100mm=預留孔洞的寬度

Product Width + 100mm = Pre-formed Opening Width

產品高度+100mm=預留孔洞的高度

Product Height + 100mm = Pre-formed Opening Height



註：如未能滿足，最少都需要預留總寬/總高最少 50mm，例如需要做 1000x1000mm 的間牆，能安裝的孔洞淨寬淨高為 1050mm\*1050mm，牆身需垂直平整。

Remark: If the above cannot be met, a minimum total clearance of 50mm in width and height is required. For example, to install a 1000 \* 1000mm partition wall, the clear opening dimensions of the installation hole must be at least 1050mm\*1050mm, and the wall must be plumb.

### 3 安裝需提前自備工具 Tools Required for Installation

工具表 Tool Category						
機械類 Mechanical Tools	電磁螺絲批 Electric screwdriver	衝擊鑽 (配套鑽嘴) Impact drill (with drill bits)	平水儀 Spirit level	焊機 Welding machine	角磨機 Angle grinder	水電鑽 Electric drill
小五金類 Hardware	1.2mm 厚拉片 1.2mm thick fixing plate	M8*70 膨脹螺栓 expansion bolts  M8*100 膨脹螺栓 expansion bolts	拉尺 Tape measure	木塞 Wood plugs	鏟刀 Scraper	
修口工具 Sealing Tools	防火密封膠（膠槍） Fireproof sealant (with caulking gun)					
保護工具 Protective Tools	紙皮 Cardboard	膠紙 Adhesive tape	覆膜 Protective film			
運輸工具 Transportation Tools	叉車 Forklift truck	六輪平板車 Six-wheel flatbed trolley	地面保護紙 Floor protection paper			

## 4 安裝步驟 Installation Steps

- 4.1 檢查及調整平水位置，用平水儀測試安裝位置孔洞牆身是否平整；

Check and adjust the level position; use a level to ensure the wall surface is flat.

- 4.2 複核需安裝的玻璃尺寸，確認是否合理；檢查玻璃和框架外觀，沒有起泡的玻璃和平整的飾面為正常情況；

Verify the dimensions of the glass to be installed to confirm if they are reasonable; confirm glass dimensions and inspect for defects (e.g., bubbles, uneven surfaces)

- 4.3 準備工作確認完畢，可以進行安裝；用平水儀復尺安裝平水高度，確定無誤再定門框/間牆中位，復實一次兩邊縫隙是否夠位置走動。

Once preparation is complete, proceed with installation. Recheck the height with a level, mark the center of the frame/partition, and verify sufficient clearance on both sides.

- 4.4 在兩側牆身打膨脹螺絲作固定點，安放門框/間牆，復核門框是否垂直、平水高度是否一致，確定後燒焊固定門框/間牆框架，（焊接時請注意保護玻璃）。

Install expansion bolts on both side walls as fixing points. Position the door frame/partition wall and verify that it is vertical and level. Once confirmed, weld the door frame/partition wall framework in place (ensure glass is protected during welding).

- 4.5 門框完成安裝後，套上門扇及安裝小五金（間牆沒有五金件安裝），防火密封膠修口

After installing the door frame, attach the door leaf and install the hardware (hardware installation does not apply to partition walls). Seal the edges with fireproof sealant.

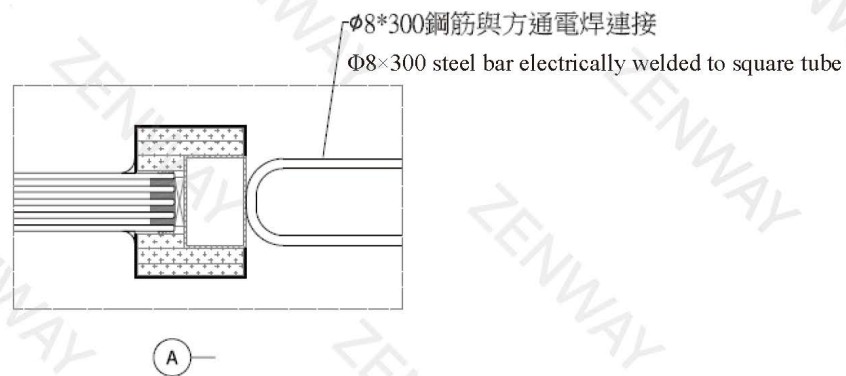
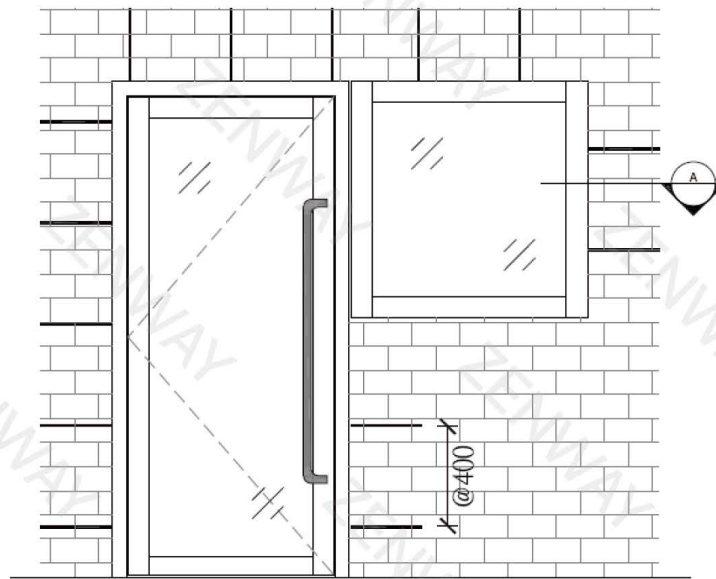


## 5 鏈接方式 Connection Methods

### 5.1 與建築牆體同步安裝 Synchronous Installation:

與建築牆體同步進行，安裝方式參考不鏽鋼門窗之安裝規範，示意圖如下：

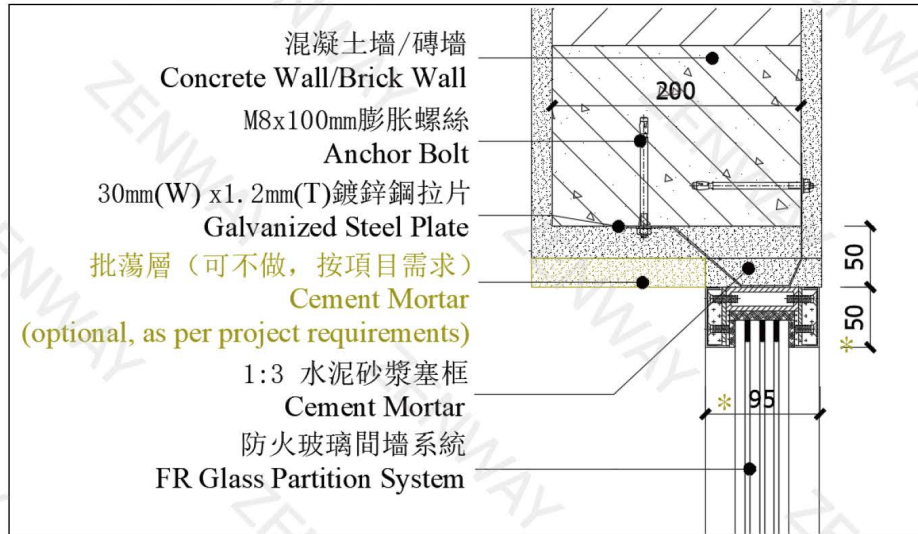
This involves installing the product concurrently with the building wall structure. The installation method should refer to the specifications for installing stainless steel doors and windows. The schematic diagram is as follows:



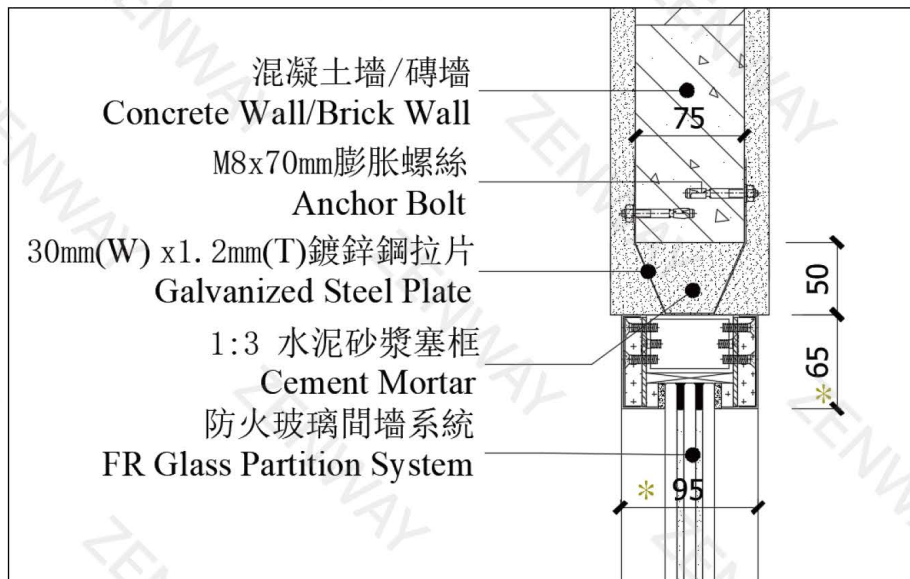
## 5.2 與混凝土牆/磚牆的連接 Connection to Concrete Structure/ Brick Wall

示意圖如下：

The schematic diagram is as follows:



牆厚 > 門框 Thick Wall Condition



牆厚 < 門框 Flush Wall Condition

### Remarks:

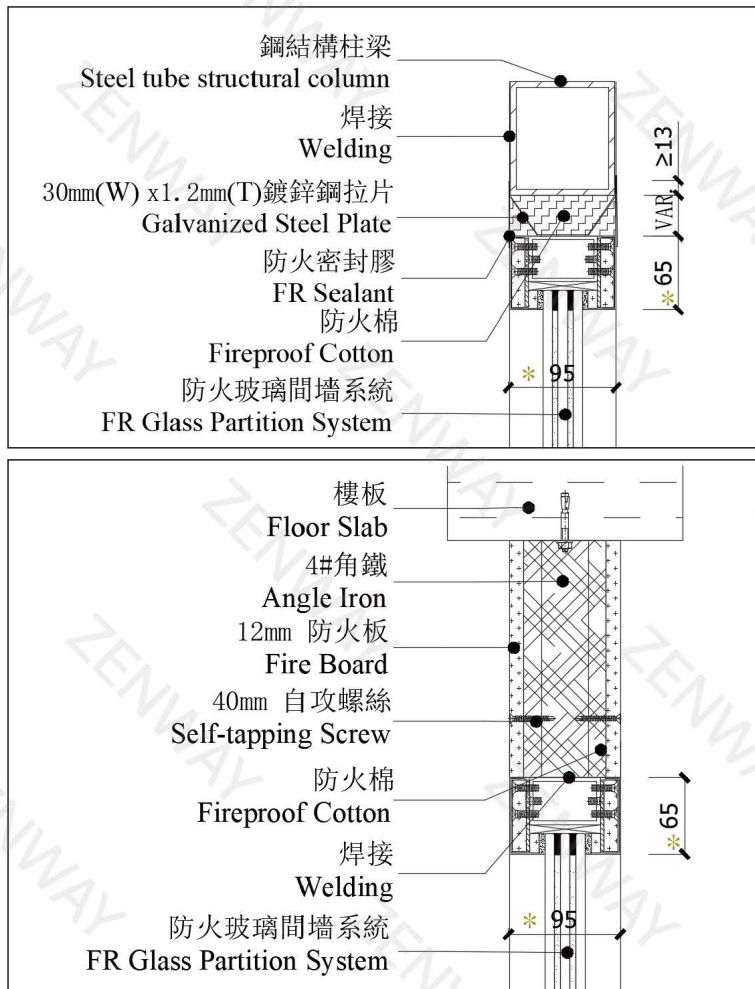
- 鍍鋅鋼拉片按離邊 160mm，間距不超過 400mm 分佈;  
Galvanized steel plate (160mm from the edge, spacing not exceeding 400mm);
- \*\*標示尺寸按實際證書尺寸。  
\*\*The indicated size is based on the actual certificate size.



## 5.3 與鋼結構的連接 Connection to Steel Structure

示意圖如下：

The schematic diagram is as follows:



## 5.4 填充預留安裝縫隙的物料 Materials for Filling the Pre-formed Installation Gap

① 1:3 水泥砂漿 (室外牆身應使用不收縮水泥砂漿)

Cement Mortar (Non-shrink Cement Mortar should be used for exterior walls)

② 陶瓷隔火棉 Ceramic Fireproof Cotton

5.5 安裝縫必須填充密實,若使用陶瓷防火棉需在防火棉表面刮一層中性硅酮密封膠以封閉其纖維。

The gap must be filled densely and solidly. If ceramic fireproof wool is used, a layer of neutral silicone sealant must be applied over its surface to seal the fibers.

## 6 搬運、吊裝與運輸 Handling, Hoisting, and Transportation

### 6.1 產品的標準單位重量參考如下 Standard Unit Weight Reference :

CRF30 : 33kg/m <sup>2</sup>	CRF60 : 52.5kg/m <sup>2</sup>	CRF120 : 92.5kg/m <sup>2</sup>
EI30 : 52.5kg/m <sup>2</sup>	EI60 : 55kg/m <sup>2</sup>	EI120 : 92.5kg/m <sup>2</sup>
ASTM120mins: 92.5kg/m <sup>2</sup> /130 92.5kg/m <sup>2</sup>		

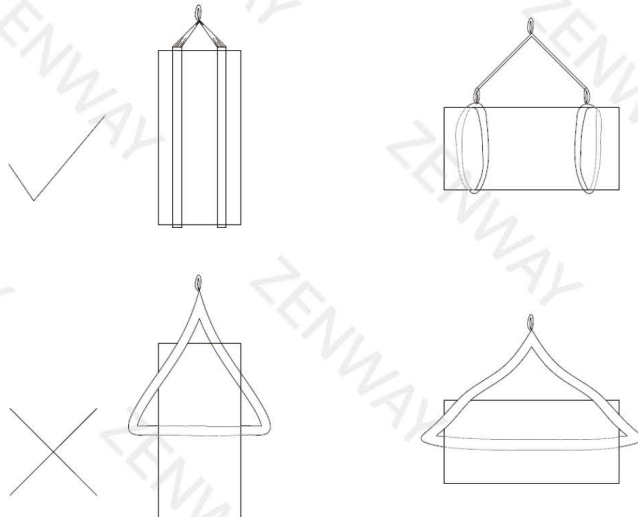
6.2 搬運需預留足夠人員進行，準備叉車/6 輪平板車等工具進行；可安排吊車/尾板車運輸卸貨，需提前溝通運輸方式。

Ensure sufficient personnel are reserved for handling. Prepare tools such as a Forklift truck/6-wheel flatbed trolley. Cranes or tail lift trucks can be arranged for transportation and unloading. The transportation method must be communicated in advance.

### 6.3 吊裝的正確方式 Correct Hoisting Method

示意圖如下：

The schematic diagram is as follows:



### 6.4 搬運或吊裝注意事項 Precautions for Handling or Hoisting :

請注意保護邊角和飾面，不要直接與硬物碰撞，宜小心輕放，並放置在有緩衝的承重物料（如木板、橡膠板等）之上；

Please protect the edges and decorative surfaces during handling or hoisting. Avoid direct collision with hard objects. Handle with care and place on load-bearing materials with cushioning (such as wooden planks, rubber mats, etc.).

## 7 清潔與保養 Cleaning and Maintenance

表面類型 Surface Type	推薦產品 Recommended Product	產品圖片 Product Picture	關鍵用途 Key Usage
不鏽鋼飾面 Stainless Steel Finish	3M 不鏽鋼潔亮劑 Recommended: 3M Stainless Steel Cleaner & Polish		去除指紋、油污，恢復光澤 Removes fingerprints and grease; restores shine
油漆飾面 Painted Finish	3M 家具護理噴蠟 3M Furniture Care Spray Wax		清潔並形成保護層，防塵 Cleans and forms a protective layer; prevents dust accumulation
玻璃清潔 Glass Cleaning	萬潔靈玻璃清潔劑 Magiclean Glass Cleaner		清除污漬、水痕，不留殘跡 Cleans stains and water marks without leaving residue
殘膠去除 Adhesive Residue Removal	除蠟劑 Wax & Adhesive Remover		清除保護紙、膠帶殘留 Removes protective paper and tape residue



## 8 裝飾與性能 Decoration and Performance

8.1 在完整的系統結構之上加裝任何非易燃產品，不影響本產品的防火結構

Adding any non-combustible decorative materials onto the complete system structure does not affect the fire-resistant integrity of this product.

8.2 另外增加之飾面宜採用黏貼方式，不宜採用鑽孔等破壞本產品結構之方式；

Additional finishes should preferably be applied by adhesion. Avoid methods that damage the product structure, such as drilling.

8.3 客戶可根據需要採用填縫膠，玻璃膠等處理飾面與本產品之間的縫隙；

Customers may use sealants, silicone, etc., to fill gaps between finishes and this product as needed.

## 9 性能與質量 Performance and Quality

9.1 請嚴格隔離超過 250°C 的熱源

Strictly isolate heat sources exceeding 250°C.

9.2 當玻璃裡面出現發白變成不透明狀，代表玻璃受高溫影響，建議更換；

If the glass turns milky or opaque, it indicates exposure to high temperatures, and replacement is recommended.

9.3 當玻璃出現假小氣泡屬正常現象，若一周內不消失，請聯絡當地供應商進行更換；

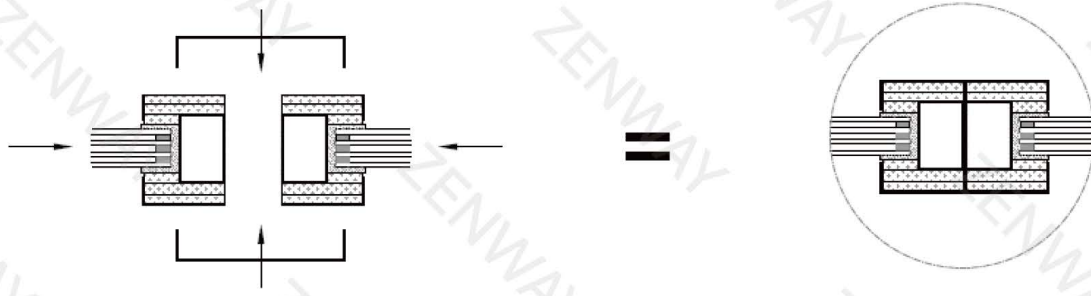
The appearance of small temporary bubbles in the glass is normal. If they do not disappear within one week, please contact your local supplier for replacement.

## 10 靈活的無縫拼接 Flexible Seamless Splicing

### 10.1 並列拼接 Side-by-Side Splicing

示意圖如下

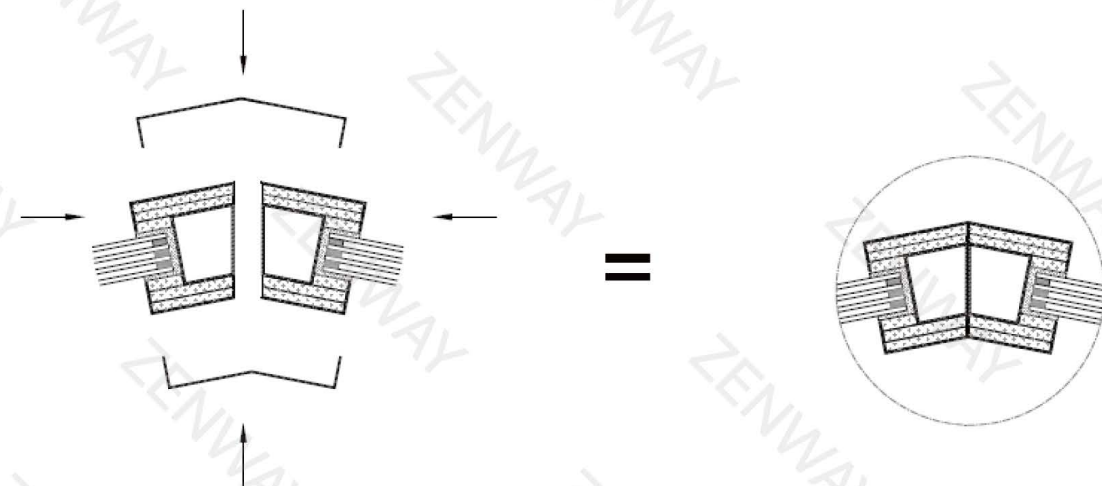
The schematic diagram is as follows:



### 10.2 任意角度拼接 Splicing at Any Angle

示意圖如下

The schematic diagram is as follows:



#### Remarks :

拼接需基於不破壞結構的基礎下進行，詳細方案請與供應商了解。

Splicing should be based on the premise of not damaging the structure. For detailed solutions, please consult with the supplier.

## 11 聯繫方式 Contact Information

### 澳門市場獨家代理 Macau Market Exclusive Distributor 振威工程有限公司 ZENWAY Engineering Co., Ltd

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### 廠家資料 Manufacturer Information

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