

## SINGLE-SIDE WALL FRAMEWORK

单侧支撑模板



## COMPANY PROFILE 公司介绍

GETO Group is mainly engaged in Green new building formwork and scaffolding (aluminium formwork, steel formwork, steel-framed timber formwork, climbing systems, fair-faced concrete formwork, and infrastructure formwork and scaffolding products), Prefabricated buildings (steel structures and PC), Modular housing (steel structures and PC), and Construction & decoration materials (tiles, doors & windows, lighting, custom furniture, etc.)

GETO also provides New energy including the investment, EPC construction, and operation of commercial and industrial "Photovoltaics, Storage, and Charging" projects, while providing the "Green Energy Future Living" one-stop residential energy solution.

In 2021, GETO completed its IPO and was listed on the ChiNext board of the Shenzhen Stock Exchange in China (Stock Code: SZ 300986). We have established 12 production bases globally and registered the "GETO®" international trademarks in 32 countries and regions, with products and services reaching worldwide markets.

志特集团主营绿色新型建筑模架(铝模、钢模、钢框木模、爬升式模架、清水混凝土模架及公基建专用模架)、装配式建筑(钢结构与 PC)、模块化房屋(钢结构与 PC),以及各类结构和装修建筑材料(瓷砖、门窗、灯饰、定制家具等)。

志特还提供相关新能源,包括工商业"光、储、充"项目投资、 EPC 建设、运维,"绿能未来居"一站式家庭能源解决方案。

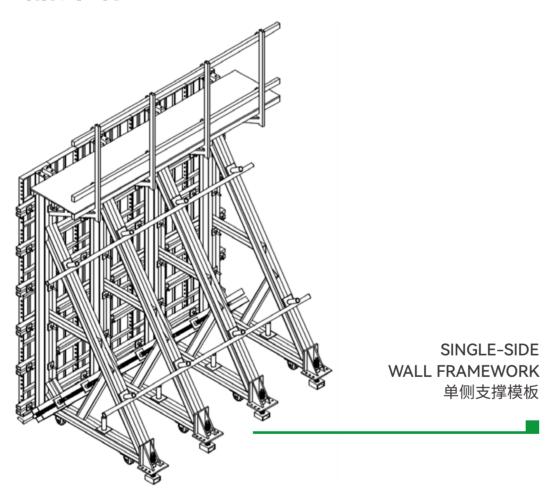


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## PRODUCT INTRODUCTION 产品介绍



Single-Side Framework is catered for casting building structures that have strict waterproofing demand and unable to be strengthened by using tie-rod system, such as railway stations and external wall of basements. Due to certain unique characteristics, these structures need to be casted by single sides.

单侧支撑模板是针对地铁车站、地下室外墙等防水要求高,无法使用螺杆对拉加固,必须采取单侧支设模板,浇筑混凝土时一侧支模为施工方法的模板系统。

The conventional triangular truss type single-side wall framework can be moved and turned over by using tower crane, mobile crane, manpower push, truck moving or other methods, based on machinery and site applicability.

传统的三角桁架式单侧支撑模板,可根据机械及场地适用情况可采用塔吊、汽车吊、人力推行、轨道行进等方式进行架体移动与周转。



Tower crane 塔吊



Mobile crane 汽车吊



Manpower push 人力推行



Truck moving 轨道行进

In the process of launching single-side framework, GETO fully consider relevant integrative factors include cost, product turnover rate, operational convenience and applicability to different situation. After conducting a thorough market trend analysis and customer purchase intention research, GETO successfully developed a lightweight single-side wall framework that is more adhere to realistic construction requirements and green building development trend – Aluminium beam type single-side framework.

志特通过分析市场动态和调研客户意向,同时充分考虑综合成本、产品高周转率、施工便利性、不同应用场景等因素,成功研发更符合实际施工要求和绿色建筑发展趋势的轻量化单面模支架体系——铝梁式单侧支撑模板。



Integrated cost 低综合成本



High turnover rate 高周转率



Easy-to-operate 施工便利



Multiple applicability 多应用场景

This type of single-side framework is applicable to building structures with casting height that is less or equivalent to 7.5m.

以上单侧支撑模板系统适用于浇筑高度≤7.5米的结构类型。

## PRODUCT CATEGORY 产品分类

Aluminium beam type single-side wall framework 铝梁式单侧支撑模板



Triangular truss type single-side wall framework 三角桁架式单侧支撑模板



## COMPETITIVE ADVANTAGES 优势对比

	Aluminium beam type Single-side wall framework 铝梁式单侧支撑模板	Triangular truss type single-side wall framework 三角桁架式单侧模板
Framework pattern 架体样式		
Applicable single-side wall height 适用单面墙高度	3.0m and below 3.0m 及以下	3.0m - 7.5m
Layout spacing 布置间距	600mm	800mm
Weight of aluminium components 铝件重量	16.92kg	-
Weight of steel components 铁件重量	106.15kg	208.37kg
Waler in need 是否需要背楞	No 否	Yes 是
Total weight of the framework 架体总重量	125.35kg	208.37kg
Advantages 优点	① . The framework has lighter weight. Its weight is only 60% of the weight of the triangular truss single-side framework, which can be manually moved or lifted; ② . High reuse rate of material, with part of the product materials can be turned over to other construction sites for use; ③ . Lower material cost; ④ . Aluminium components has higher scrap values; ⑤ . Less labor works and safer operation; ⑥ . Compliant with environmental-friendly building requirements.  ① . 单侧模板架体较轻,仅为三角桁架式单侧模板重量的 60%,可以实现人工移动或搬运; ② . 材料重复利用率高,部分材料可周转到其他施工场景; ③ . 材料成本相对更低; ④ . 铝合金残值率高; ⑤ . 人工操作少,施工更安全; ⑥ . 符合环境友好型建筑要求。	① . 架体整体性强(大部分架体化)内焊接);

## FRAMEWORK CONSTRUCTION FLOW 施工流程

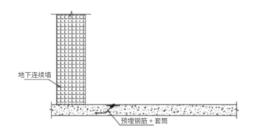
ALUMINIUM BEAM TYPE SINGLE-SIDE WALL FRAMEWORK INSTALLATION AND OPERATIONAL METHOD 铝梁式单侧支撑模板 - 安装施工方法

## INSTALLATION FLOW 安装流程

#### Step 1

Cast the base plate and embed the anchor bolts at corresponding positions

浇筑基础底板,在对应位置预埋好锚固螺栓;

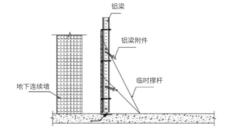


#### Step 2

Install wall panel and aluminium beam.

(Apply mold release agent prior to wall panel installation. Temporarily use steel pipe to fix the framework during the setup.)

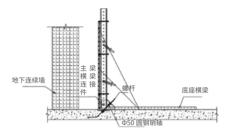
安装墙板及铝梁、铝梁(安装墙板前涂刷脱模 剂,支设模板时应边临时采用钢管固定);



#### Step 3

Install connecting components between main beam and horizontal beam, as well as base horizontal beam.

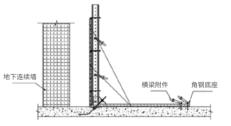
安装主梁横梁连接件和底座横梁;



#### Step 4

Install horizontal beam, and corner steel base of the base horizontal beam.

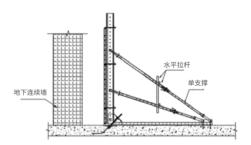
安装底座横梁的角钢底座及横梁;



#### Step 5

Install single props and horizontal rods.

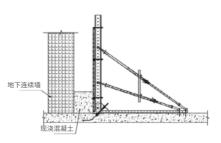
安装单支撑及水平拉杆;



#### Step 6

Adjust the straightness of the framework. Cast concrete after the embedded components are fully-tightened.

调校垂直度,检查预埋件紧固后浇筑混凝土。



角钥底座(L90x140x10) 底座横梁(80x80x5.0方管)

膨胀螺丝打入地面固定横梁

#### **DISMANTLEMENT FLOW**

#### 拆除流程

Tools to be prepared: Hammer, Hook, Crowbar, Spanner, Construction drawings 工具准备: 锤子、钩子、撬棍、扳手、图纸

#### Step 1

After concrete cast for external wall is completed by 24 hours (Concrete strength has reached over 50%), dismantle the horizontal rods, loosen the single props, corner steel base plate of horizontal beam, and loosen the embedded parts.

外墙混凝土浇筑完 24 小时后(混凝土强度达到 50% 以上),先拆除水平拉杆,再松动单支撑、横梁的角钢底座,后松动埋件部分;

#### Step 2

Dismantle the connecting bolts and pins of every component, and keep them according to their respective classification code;

拆除各个部件的连接螺栓和销轴,并分类码放;

#### Step 3

Dismantle the wall panels, and transfer the materials by specific solution plans;

拆除墙板,根据具体的方案进行材料转运;

#### Step 4

After the framework is dismantled, maintenance of the concrete is carried on with the curing agent applied in time. For the construction during winter times, the concrete wall should be kept warm to avoid water leakage resulted from wall cracks.

拆模后进行混凝土的养护工作,及时涂刷养护剂,冬季施工时墙体注意保温,防止墙体产生裂缝导致渗水。

## 

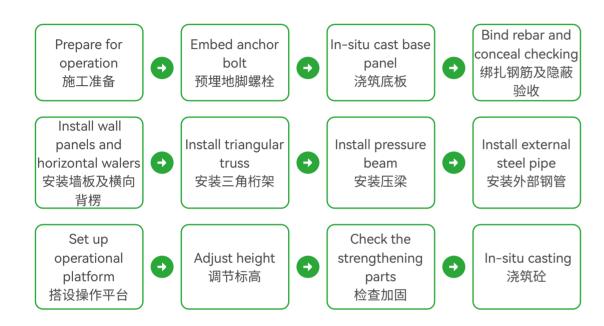
φ50圆钢主轴

主梁横梁连接件

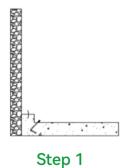
预埋U型螺杆(双排φ16)

## TRIANGULAR TRUSS TYPE SINGLE-SIDE WALL FRAMEWORK INSTALLATION AND OPERATIONAL METHOD

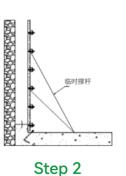
三角桁架式单侧支撑模板 - 安装施工方法



## INSTALLATION FLOW 安装流程

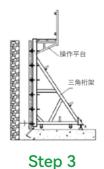


Cast in base plate 浇筑基础底板



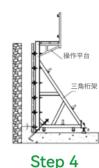
Fix waler at the designed height by using L-type mobile tie-rod 使用 L 型活动螺杆将背楞

固定在设计高度上

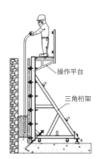


Hoist the triangular truss, and connect it with horizontal waler with a connecting rod 吊装三角桁架,使用卡玛拉

杆将三角架与横向背楞连接



Install the base pressure beam of triangular truss, and then install external horizontal steel pipe 安装三角桁架底部压梁,安装压梁后 安装外部水平钢管



Step 5
Adjust the verticality
调校垂直度

#### DISMANTLEMENT FLOW 拆除流程

Tools to be prepared: Hammer, Hook, Crowbar, Spanner, Construction drawings 工具准备: 锤子、钩子、撬棍、扳手、图纸

On-Site Equipment: Tower crane or mobile crane

现场设备: 塔吊或吊车

#### Step 1

After 24 hours upon completion of external wall casting (concrete strength reach over 50%), loosen the bracket and rear support before loosening the embedded part.

外墙混凝土浇筑完 24 小时后(混凝土强度达到 50% 以上),先松动支架后支座,后松动埋件部分

#### Step 2

Dismantle the embedded part totally and arrange them by categories

彻底拆除埋件部分,并分类码放

#### Step 3

Dismantle complete framework by pieces, and the material is transferred based on specific solution plans. The framework is usually hoisted by a crane to the next construction section.

分片整体退模,根据具体的方案进行材料转运,通常采用吊车将模板吊运至下一节施工段

#### Step 4

After the framework is dismantled, maintenance of the concrete is carried on with the curing agent applied in time. For the construction during winter times, the concrete wall should be kept warm to avoid water leakage resulted from wall cracks.

拆模后进行混凝土的养护工作,及时涂刷养护剂,冬季施工时墙体注意保温,防止墙体产生裂 缝导致渗水



## PRECAUTIONS FOR SINGLE-SIDE WALL FRAMEWORK CASTING 单侧支撑模板浇筑注意事项

- O1 Control the speed of casting to prevent bulging. 控制浇筑速度,避免涨模
- **O2** Suggest to cast by sections with leveraging, as to fix the position of the framework and increase the casting quality of the concrete outcome. 建议分段浇筑和对称浇筑,有利于控制模板走位,提高混凝土成型质量
- Suggest to cast by levels, as to assist the elimination of gas in concrete and reduce the occurrence of honeycomb phenomena on the concrete surface. 建议分层浇筑,有利于混凝土中气体排出,减少出现混凝土表面的蜂窝麻面的情况

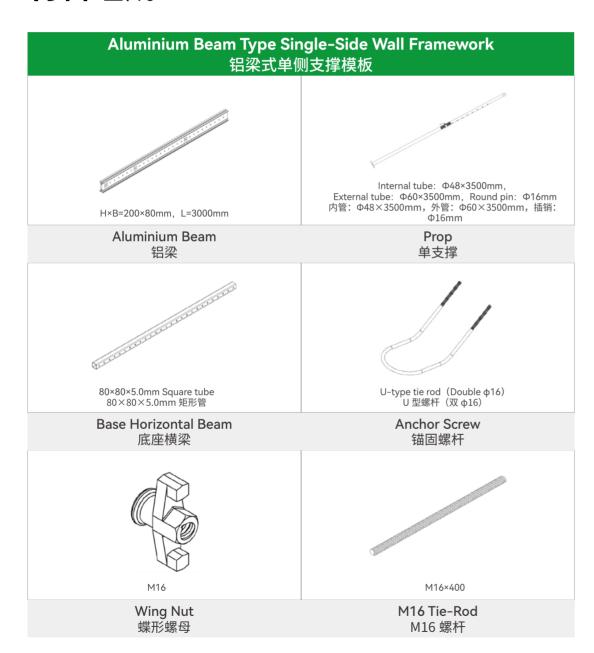


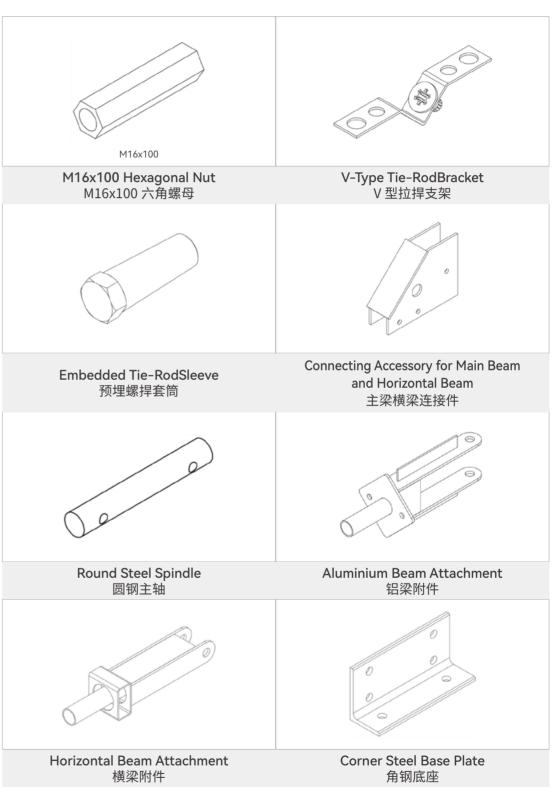
Installation 安装中

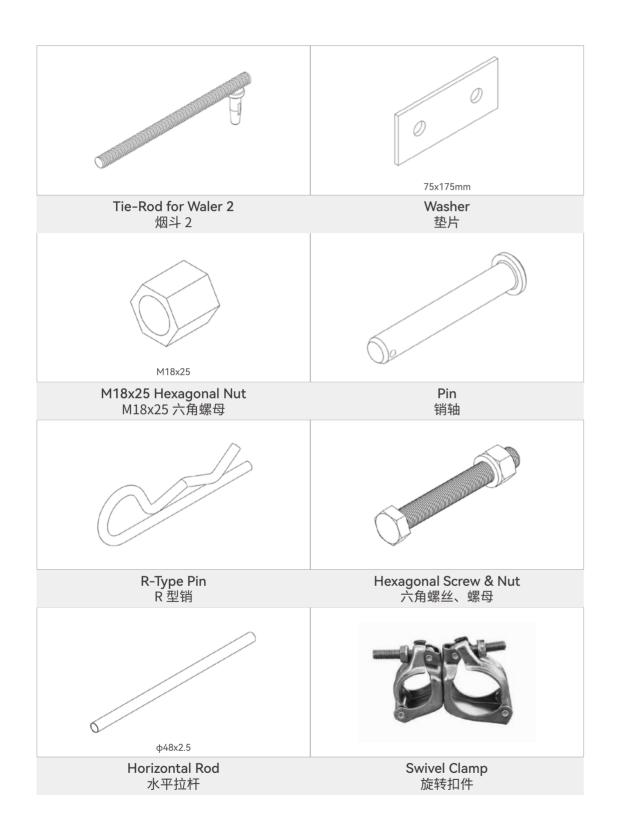


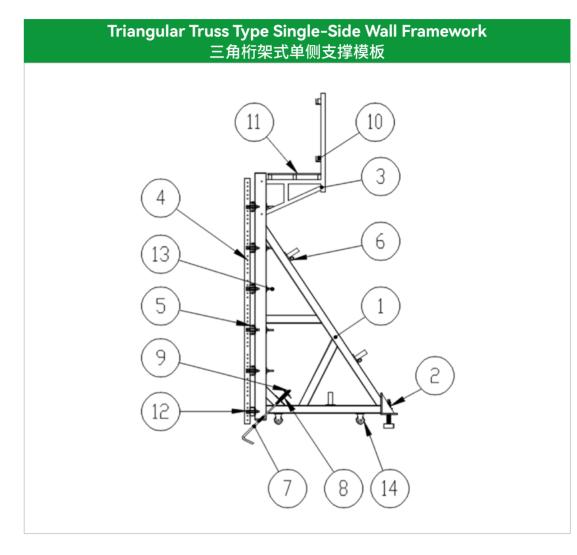
Casting effect 浇筑效果

# MATERIAL COMPOSITION 材料组成









- 1 Single-Side Support 单侧支架
- 2 Adjustment Nut 调节螺母
- Platform Support 平台支架
  - 4 Aluminium Formwork 铝模板
    - Horizontal Waler 横向背楞

- 6 Horizontal Rod 水平拉杆
- 7 Anchor Bolt 地脚螺栓
- Pressure Beam 压梁
- 9 Nut & Gasket use Square Wood 螺母、垫片 Railing 方木栏杆

- Plywood Panel 木胶板
- L-Type Mobile Bolt L型活动螺栓
- 13 Connecting Rod 卡玛拉杆
  - Universal Wheel 万向轮

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## PROJECT CASES 工程案例

#### MRT Station Structure Project, East Asia 东亚地铁主体结构项目





## Shenzhen Yinying Building Project, China中国深圳银盈大厦项目







#### **GETO Group**

#### **Headquarters:**

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#### Southern China Production Base 1:

Cuishan Lake Science and Technology Park, Kaiping, Jiangmen City, Guangdong Province

#### Southern China Production Base II:

Huizhou Industrial Transfer Industrial Park, Huizhou City, Guangdong Province

#### Eastern China Production Base 1:

Guangchang Industrial Park, Fuzhou City, Jiangxi Province

#### **Central China Production Base:**

Hi-tech Industry Development Zone, Xianning City, Hubei Province

#### **Northern China Production Base:**

China Aluminium Industrial Park, Linqu, Weifang City, Shandong Province

#### **Southwest China Production Base:**

Modern Manufacturing Industrial Park, Tongnan High-Tech District, Chongqing City

#### **Northwest China Production Base:**

The Circular Economy Park, Anding District, Dingxi City, Gansu Province

#### **Hainan Production Base:**

Gold Medal Port Industrial Park, Lingao County, Hainan Province

#### **ASEAN Production Base:**

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West Region, Singapore

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