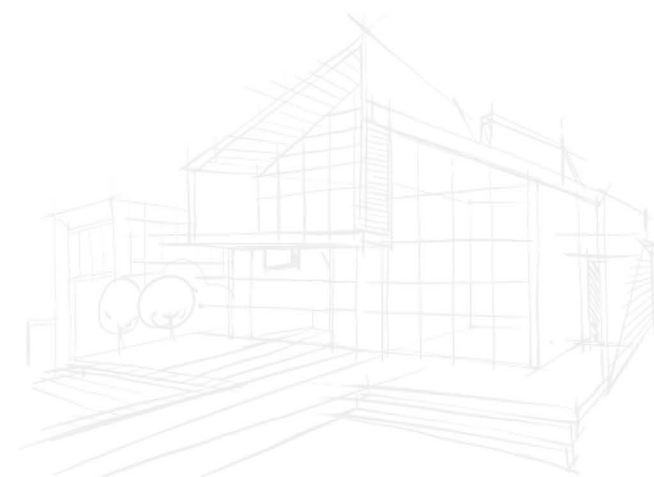


! 注意事项: Precautions:  
※ 由于印刷关系, 可能与实际的产品颜色有所差异, 型号、规格如有所改变将不另行通知, 选购时请以实际样板标注的信息为准!  
※ Asin printing the colors products may differ slightly with the real ones, so the true product colors shall be followed in application.

14DUM 海大集团设计策劃 TEL: 0757-83373429 13326726248

2020

FRAMEMAC



## 冷弯薄壁轻钢结构房屋及住宅加工设备

LIGHT GAUGE STEEL FRAME HOUSING EQUIPMENT



佛山市孚瑞美科技有限公司  
FOSHAN FRAMEMAC TECHNOLOGY CO., LTD.

地址 (Add): 佛山市南海区狮山镇罗洞邹边工业区 4 号  
No. 4, Zoubian Industrial Zone, Shishan Town, Nanhai District,  
Foshan City, CHINA.

电话 (Tel): 0757-81230272、86682775  
传真 (Fax): 0757-81230272  
邮编 (P.C): 528225  
邮箱 (E-mail): sales@framemac.com  
网址 (Web): www.framemac.com



官方网站  
Official website



微信公众号  
WeChat public account

www.framemac.com 孚瑞美 为改变而来

# About Us

## 孚瑞美简介

佛山市孚瑞美科技有限公司位于中国重要的制造业基地、粤港澳大湾区重要节点城市佛山市南海区。是一家集研发、生产、销售的轻钢结构建筑智能制造设备的专业公司，提供软硬件一体化的全自动轻钢建筑框架生产解决方案。

公司自创立起注重团队建设及人才的培养，经多年共同努力现已拥有一批经验丰富、善于开拓创新的技术团队，并一直与国内外多家技术服务公司、大学（如：瑞典 SEQ、北方工大等）保持良好的技术合作关系，为我们在发展历程中提供更优良的技术支持。依托丰富的冷弯设备精工制造经验与成熟的软件开发能力，我们将持续为您提供更多更好的产品，亦可根据您的需要制定特别方案，以应对市场不断创新和发展需求，为您获得更大成功提供最有效的保证。

孚瑞美一直坚持“质量第一、信誉第一、客户至上”为宗旨，结合先进的管理理念、持续的技术创新、不断吸收国外同行顶尖的设计理念及品质控制程序及超前的服务意识，坚持为客户提供不仅仅是机器设备，而是提供更大的产业价值。

孚瑞美愿和各界朋友广泛合作，成为您最可靠、最值得信赖的合作伙伴，共同开拓轻钢结构房屋市场的广阔空间，共同发展。

We, Foshan FrameMac Technology Co., Ltd., are located in Nanhai District, Foshan City, the important manufacturing base of China. We are machine manufacturer with professional functions of R&D, manufacturing and sales for light steel structure housing production equipment and solutions.

Since establishment, our company has focused on team building and talent cultivation. After years of joint efforts, now we have a group of experienced and innovative technical teams. We have built a good technical cooperation relationship with many domestic and foreign technical service companies, universities (such as Sweden SEQ, North University of Technology, etc.), for better technical support and development. Relying on the rich experience of manufacturing cold roll forming equipment and mature software development ability, we will continue to provide you with more and better products, as well as professional solutions as per our customers' requirement to meet the market's constant innovation and development needs.

We have always adhered to the tenet of "Quality First, Reputation First, Customer First", combined with advanced management concepts, continuous technological innovation, continuous absorption of foreign counterparts of top design concepts and quality control procedures and advanced service consciousness, and insisted on providing customers with not only machinery and equipment, but also with greater industrial value.

We are willing to become your most reliable and trustworthy partner to jointly develop the light steel structure housing market for a "win-win" future.



## Service Philosophy

### 服务理念

#### 一站式技术服务

包括全套建筑设计、结构设计施工图、加工图在内一站式技术服务；既可提供丰富的建筑产品库直接生产建造，也可以进行个性化的定制设计。

One-Stop Technical Design Service  
One-stop technical service is including full architectural design, structural design, construction drawings, and processing drawings; we can provide either direct production from our extensive building product library or customized design.

#### 专业技术培训

从深度的轻钢体系设计软件培训到施工法和现场施工管理的全套专业技术培训。

Professional and Technical Training  
We provide in-depth training in the design software of the light steel system and full technical expertise in construction methods and site construction management.

#### 专利技术支持

自主研发的创新轻钢结构体系专利支持，实现轻钢结构建筑的升级。

Patent Technology Support  
We provide independent research and development of innovative light steel structure system patent support, to achieve the upgrade of light steel structure building.



产品通过欧盟 CE 安全认证





## Our Workshop 生产车间

生产自动化能最大程度提高工作效率，减少手工带来的误差，从而提升产品质量及降低生产成本。因此我们不断引进国内外先进的生产技术和生产设备，同时不断借鉴国内外完善的生产管理体系，使我们的生产力得到大力的发展与不断的提高，同时保证产品质量的长期稳定与不断的提升。

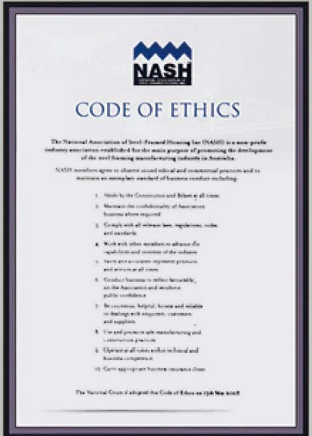
Production automation can maximize work efficiency, reduce manual errors, thus improving product quality and reducing production costs. Therefore, we continue to introduce advanced production technology and production equipment from home and abroad, and learn from the perfect production management system at home and abroad, so that our productivity has been vigorously developed and constantly improved, while ensuring long-term stability and continuous improvement of product quality.



## Certifications & Honors 资质荣誉

FrameMac 立业至今，不忘初心，始终弘扬工匠精神，以“快、准、稳”为服务宗旨，坚持做行业标准的制定者和领导者，打造百年品质，见证城市变迁，为行业的发展做出了重大贡献。

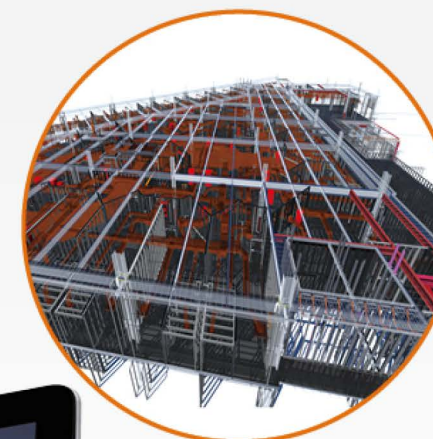
We have made great contributions to the development of the industry by always promoting the spirit of craftsmanship, taking "fast, accurate and stable" as our service tenet, insisting on being the maker and leader of the industry standard, creating a century of quality, witnessing the changes in the city and making great contributions to the development of the industry.



### BD Vertex BD 设计软件 Vertex BD Design Software

FrameMac 与国际上多家世界顶级冷弯薄壁轻钢结构建筑设计软件公司保存良好的合作关系，如澳大利亚威达斯公司的 Vertex BD 设计软件，它是一款直接针对钢结构住宅建筑，商业建筑和工业建筑的设计而开发的软件。利用 BIM 技术，Vertex BD 仅需要一个建筑模型，就可以生成您需要的所有建筑图纸，结构图纸，加工图纸，材料清单，生产数据，以及建筑效果图。

FrameMac maintains good cooperative relationships with many of the world's top cold-roll-formed light gauge steel building design software companies, such as Vertex BD Design Software from Australia, which is developed directly for the design of steel-framed residential, commercial and industrial buildings. Using BIM technology, Vertex BD generates all the architectural drawings, structural drawings, fabrication drawings, bills of materials, production data, and architectural renderings you need from just one building model.



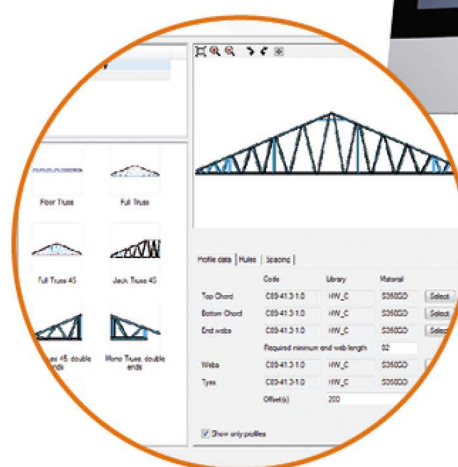
### Arktec Arktec 设计软件 Arktec design software

- 是一款集设计、计算、平面、制造于一体的轻钢设计软件，在西班牙语地区有明显的区域优势。设计垂直面板、水平面板（楼层）、屋顶桁架、楼板梁和楼梯设计。

- 软件的结构设计力学分析遵从 UNE-EN 1090-2:2019（西班牙认证），从而确保设计结构严格符合其规范。

- Arktec is a light gauge steel design software that combines design, calculation, planning and fabrication, with a clear regional advantage in Spanish-speaking areas. Designs vertical panels, horizontal panels (floors), roof trusses, floor beams and stair designs.

- The mechanical analysis of the structural design of the software complies with UNE-EN 1090-2:2019 (Spanish certification), thus ensuring that the designed structure strictly complies with its specifications.



### MWF MWF 设计软件 MWF Design Software

MWF 是在欧美地区开发的一款基于 Revit 平台的建筑设计软件，其利用 Revit 内置功能，在几乎所有建筑项目中自动的创建轻钢框架，使用户可以轻松的对整个项目进行框架设计，同时创建时间表，以及生产清单，框架立面图以及完整的 2D 图纸。

建模，从单户住宅到大型商业结构，几乎所有项目都可以进行构架。

MWF is a Revit-based architectural design software developed in Europe and the United States that automatically creates light gauge steel frames for almost any building project with the built-in functionality of Revit, allowing users to easily frame the entire project, as well as create schedules, as well as production checklists, frame elevations, and complete 2D drawings. Modeling, from single-family homes to large commercial structures, is available for almost any project.

### QSS QuikSeries 软件 QuikSeries Design Software

QuikSeries 软件是一款基于 IntelliCAD 软件平台开发的、专门服务于冷弯薄壁轻钢结构设计与细化的软件套装。它是轻钢墙体板块、屋架、楼板以及民用和商业建筑的理想的计算与细化设计软件。

QuikSeries 软件是具备计算机辅助工程计算的软件，目前具备八种主要冷弯薄壁轻钢设计标准的计算，以给客户有充分的自信，他们的设计将会符合本地的设计标准要求。该软件还组合了报告体系，包括各种附带的部件、连接件和螺丝钉等完整的材料清单。

QuikSeries software is a software suite developed on the IntelliCAD software platform for the design and detailing of cold-formed thin-walled lightweight steel structures. It is ideal for the calculation and detailing of lightweight steel wall panels, roofing and floor slabs, as well as residential and commercial buildings. QuikSeries is a computer-aided engineering calculation software package that currently features calculations for eight major cold-roll-formed LGS design standards to give customers full confidence that their designs will meet local design standards. The software also incorporates a reporting system that includes a complete bill of materials for incidental parts, connections and screws.

快

Fast

准

Accurate

稳

Stable



### Fast Design 设计快

依托国际先进的设计软件，FrameMac 设备可实现 30 分钟内快速出图进入生产。

Relying on internationally advanced design software, FrameMac devices can be ready for production drawings in less than 30 minutes.



### Fast Production 生产快

FrameMac 设备拥有领先行业的生产速度，最高速度可达每秒 1000mm 轻钢构件。

FrameMac machines have industry-leading production speeds, up to 1000mm per second for light steel profiles.



### 尺寸准 Accuracy

FrameMac 设备生产的轻钢构件在长度、位置、尺寸上拥有领先行业的精准性。  
The light steel profiles produced by FrameMac equipment have industry-leading accuracy in length, position and size.



### 成型准 Shape & Precision

FrameMac 设备能保障多样化的轻钢构件在成型的截面尺寸方面拥有领先行业的精准性。

The FrameMac equipment can guarantee the precision of the industry-leading forming of diverse light steel structures.



### Running Stability 运行稳定

行业内公认运行最稳定的轻钢龙骨设备，得益于合理的成型工艺与冲压模具设计，生产稳定、故障率极低。

It is recognized in the industry as the most stable light gauge steel frame structure production equipment, for its reasonable forming process and stamping die design, stable production and very low failure rate.



### 系统稳定 Control System Stability

基于 LINUX 系统自主开发的生产控制软件，免疫 windows 病毒，配合先进的现场总线控制平台，系统响应快速、准确、不死机。

Based on LINUX, the production control software is immune to Windows viruses, and with the advanced fieldbus control platform, the system responds quickly, accurately and without crashing.

冷弯成型 (Cold Roll Forming) 是通过一定顺序安装多组 (上下) 辊状成型模具，把相应的金属卷带、以连续的方式通过特定轮廓辊式模具，以轧制成与设计形状一致的一种柔性加工工艺。冷弯成型又叫滚压成型、滚轧成型、辊弯成型、辊压成型等，台湾则叫滚轮成型机。是一种最环保节能、安全高效的一种钣金加工工艺。

Cold Roll Forming is a flexible processing technology to roll the metal coil through a sequence of (up and down) rollers, to form into a shape same as the design. Cold roll forming is also called roll forming, roll bending or roll-in forming, while in Taiwan called as roll forming machine. It is one of the most environmentally friendly and energy saving, safe and efficient sheet metal processing process.

孚瑞美冷弯薄壁型钢成型机组包括：材料自动开卷放料机、成型主机、自动冲孔、切断、收料台及控制柜组成。根据轻钢别墅建造的具体要求，配有：酒窝螺钉孔、倒角、腹板贯穿孔、小边剪切、管线孔、腹板缩口、剪切等冲压模具及喷码装置。采用计算机 CNC 自动控制，具有使用范围广、产品精度高、自动化程度高、节料省本等优点。针对目前市场上装配式建筑不断创新、结构形式多样化等特点，我公司还可根据客户要求设计制造特殊要求的专用设备。

FrameMac Light Gauge Steel Frame Housing machine is including: motor Decoiler, Leveler, Roll Forming Unit, automatic Hole Puncher, Shearing Unit, Run-Out Table and Control System. All necessary punching, notching and shearing tools are well equipped according to the LGS manufacturing requirements, for dimple, chamfer, webnotch, lip cut, service hole, swage, shearing and inkjet system available as well. Machine with CNC control has the features of high accuracy, high automaticity and high cost efficiency. Since current continuous innovation and diversified development in prefabricated construction, FrameMac provides customized and professional machine solution to our customers.

Machine Features

产品特点

- ◎主要针对国内外不同厂家材料特性不同的特点，对材料进行高精度的整平，消除材料内应力，使产品在加工过程更为稳定高效
  - ◎料架为液压自动扩张涨紧，装卸材料方便快捷安全，减少安全事故发生
  - ◎料架无动力，带有可调刹车装置，不易对材料表面造成损伤
  - ◎操作、保养维护简单，电子自动感应开卷放料
- ◎ Mainly according to the different material characteristics of different manufacturers at home and abroad, high-precision leveling of the material, eliminating the internal stress of the material, making the product more stable and efficient in the processing process.
- ◎ Decoiler is by hydraulic automatic expansion and tightening. Loading and unloading materials is convenient and safe, reducing the occurrence of safety accidents.
- ◎ Decoiler is powerless, with adjustable brakes, to avoid scratches on material surface.
- ◎ Simple operation, easy maintenance, motor decoiling.



- 

安全生产  
Safety
- 

数字化  
Digitizing
- 

云工厂  
Cloud factory
- 

性能优越  
performance
- 

工业设计  
Automatic unwinding

Parameters

设备基本参数

截面类型 Profile Type	C 型 Type C	C 型 Type C	C 型 Type C
尺寸 Profile size	75mm	89mm	140 ( 150 ) mm
厚度 Material Thickness	0.7~1.2mm	0.7~1.2mm	0.8~1.6mm
操作系统 Operation System	17 寸带 Linux 系统的触摸屏 17" touch screen with Linux system		
生产控制软件 Production Control System	自主知识产权的 FrameMac LGS 控制软件 Self developed FrameMac LGS machine controlling software		
设计软件 design software	可选配国内外知名品牌建筑设计软件 Optional architectural design software of well-known domestic and foreign brands		
标准生产速度 Standard Production Speed	300~900m/h		
最大生产速度 Maximum Production Speed	1000mm/s		
主机功率 Main Unit Power	5.5kw	7.5kw	10kw
电源要求 Power Voltage	3 相 380V 50Hz 可按需求配置 3 Phase 380V 50Hz (can be configured as required)		
液压功率 Hydraulic Power	5.5kw	5.5kw	7.5kw
总功率 Equipment Total Power	15kw	16.5kw	21.5kw
液压油箱容量 Hydraulic Cylinder Volume	120L		
冷却 Hydraulic Cooling	自冷 ( 高强度作业时可选配强制冷却装置: 风冷、空调制冷 ) Self cooling (Optional refrigeration device for high strength production; air cooling, AC cooling)		
温度控制 Constant Temperature Device	高寒地区可选配恒温装置 Constant temperature device is optional in alpine area		
冲压模具 Punching Die	酒窝螺钉孔、倒角、腹板贯穿孔、小边剪切、管线孔、地脚孔、腹板缩口、剪切 Dimple hole, Chamfer cut, Web notch, Lip cut, Service hole, Bolt hole, Shearing		
产品精度 Production Accuracy	0.5mm		
喷码机 Inkjet printer	标配 Standard		
机器尺寸 Machine size	4750*1020*1500mm	4750*1020*1500mm	4750*1020*1500mm
机器重量 Machine weight	4300kg	4600kg	5500kg
开卷机 DeCoiler	2000kg 自动开卷 Auto decoiling	2000kg 自动开卷 Auto decoiling	3000kg 自动开卷 Auto decoiling

Our Equipment  
设备简介

F1360 系列是孚瑞美推出的一款紧凑型可靠的设备，是依据国际主流设计理念制造，可拓展为 C&U 组合设备及移动工厂，特别适合部分刚接触轻钢别墅住宅行业的公司及个人。

孚瑞美冷弯薄壁型钢成型机组包括：材料自动开卷放料机、成型主机、自动冲孔、切断、收料台及控制柜组成。根据轻钢别墅建造的具体要求，配有：酒窝螺钉孔、倒角、腹板贯穿孔、小边剪切、管线孔、腹板缩口、剪切等冲压模具及喷码装置。采用计算机 CNC 自动控制，具有使用范围广、产品精度高、自动化程度高、节料省本等优点。针对目前市场上装配式建筑不断创新、结构形式多样化等特点，我公司还可根据客户要求设计制造特殊要求的专用设备。

FrameMac F1-360 SERIES, is a kind of versatile equipment for Light Gauge Steel (LGS) profiles manufacturing. Combined with advanced design ideas and increasingly mature manufacturing technology, F1-360 machine is reliable, functional, and especially user-friendly for the LGS new comers. This series could be developed into C&U profiles combined equipment and mobile factory.

FrameMac Light Gauge Steel roll forming machine is including: motor Decoiler, Roll Forming Unit, automatic Hole Puncher, Shearing Unit, Run-Out Table and Control System. All necessary punching, notching and shearing tools are well equipped according to the LGS manufacturing requirements, for dimple, chamfer, webnotch, lip cut, service hole, swage, shearing and inkjet system available as well. Machine with CNC control has the features of high accuracy, high automaticity and high cost efficiency. As for current continuous innovation and diversified development in prefabricated construction, FrameMac provides customized and professional machine solution to our customers.

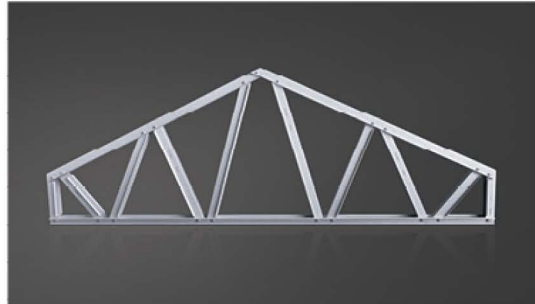
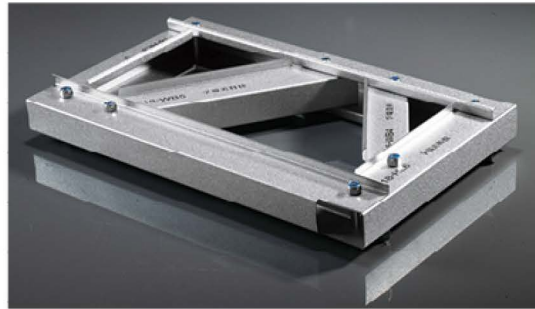


F1360 Parameters  
F1360 设备基本参数

截面类型 Profile Type	C 型 (可选 C&U) C profile ( Optional C&U )	C 型 (可选 C&U) C profile ( Optional C&U )	C 型 (可选 C&U) C profile ( Optional C&U )
尺寸 Profile size	75mm	89mm	140 ( 150 ) mm
厚度 Material Thickness	0.7-1.2mm	0.7-1.2mm	0.8-1.2mm
操作系统 Operation System	17 寸带 Linux 系统的触摸屏 17"touch screen with Linux system		
生产控制软件 Production Control System	自主知识产权的 FrameMac LGS 控制软件 Self developed FrameMac LGS machine controlling software		
标准生产速度 Standard Production Speed	300-900m/h		
最大生产速度 Maximum production speed	600mm/s		
主机功率 Main Unit Power	4.4kw	4.4kw	5.5kw
电源要求 Power Voltage	3 相 380V 50Hz 可按需求配置 3 Phase 380V 50Hz (can be configured as required)		
液压功率 Hydraulic Power	4.0kw	4.0kw	5.5kw
总功率 Equipment Total Power	11.5kw	11.5kw	14.5kw
液压油箱容量 Hydraulic Cylinder Volume	120L		
冷却 Hydraulic Cooling	自冷 ( 高强度作业时可选配强制冷却装置: 风冷、空调制冷 ) Self cooling (Optional refrigeration device for high strength production; air cooling, AC cooling)		
温度控制 Constant Temperature Device	高寒地区可选配恒温装置 Constant temperature device is optional in alpine area		
冲压模具 Punching Die	酒窝螺钉孔、倒角、腹板贯穿孔、小边剪切、管线孔、地脚孔、腹板缩口、剪切 Dimple hole, Chamfer cut, Web notch, Lip cut, Service hole, Bolt hole, Shearing		
产品精度 Production Accuracy	0.5mm		
喷码机 Inkjet Printer	标配 Standard		
机器尺寸 Machine size	4100*750*1500mm	4100*750*1500mm	4100*850*1500mm
机器重量 Machine Weight	3800kg	4000kg	4200kg
开卷 DeCoiler	2000kg 自动开卷 Auto decoiling	2000kg 自动开卷 Auto decoiling	3000kg 自动开卷 Auto decoiling

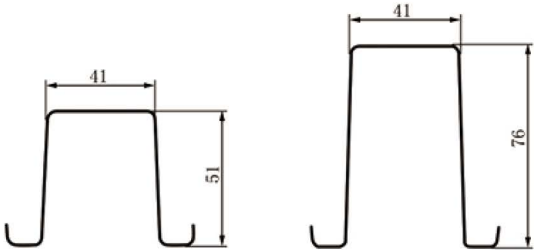
Our Equipment  
设备简介

大跨度 "几字型钢" 设备是孚瑞美推出的一款专业版冷弯薄壁型钢生产设备，设备按标准冷弯成型要求设计，坚固耐用，适合大批量高强度作业要求。  
Top-Hat Machine is a professional version of light gauge steel framing equipment launched by FrameMac. The equipment is designed according to standard cold-roll forming requirements. It is stable, durable and suitable for high-intensity and high-volume operations.



“几字型钢”，型材截面的形状如同中文“几”字，该型材能将薄壁轻钢的结构性能发挥到极致，对比于C型钢，同等长度的几型钢承载力更大，结构性更强，净跨度更大，更节约材料。该型材主要应用于屋架和楼板托梁系统。

"Top Hat" section profile can maximize the structural performance of thin-walled light steel. Compared with C-shaped steel, "Top Hat" shaped profiles of same length have higher bearing capacity and more structural performance, stronger, larger net span and more material saving. This profile is mainly used in roof truss and floor joist systems.



材料截面图 Material cross section

Top-Hat Parameters  
“几字型钢” 设备基本参数

截面类型 Profile Type	几型 Top Hat	几型 Top Hat
尺寸 Profile size	51mm	76mm
厚度 Material Thickness	0.7-1.2mm	1.0-16mm
操作系统 operating system	17 寸带 Linux 系统的触摸屏 17 inch touch screen with Linux system	
生产控制软件 Production Control System	自主知识产权的 FrameMac LGS 控制软件 Self developed FrameMac LGS machine controlling software	
设计软件 design software	可选配国内外知名品牌建筑设计软件 Optional architectural design software of well-known domestic and foreign brands	
标准生产速度 Standard production speed	300-900m/h	
最大生产速度 Maximum production speed	600m/S	
主机功率 Main Unit Power	7.5kw	10.5kw
电源要求 Power Voltage	3 相 380V 50Hz 可按需求配置 3-phase 380V 50Hz can be configured as required	
液压功率 Hydraulic power	5.5kw	5.5kw
总功率 Equipment Total Power	17kw	19.5kw
液压油箱容量 Hydraulic Cylinder Volume	120L	
冷却 Hydraulic Cooling	自冷（高强度作业时可选配强制冷却装置：风冷、空调制冷） Self cooling (Optional refrigeration device for high strength production; air cooling, AC cooling)	
冲压模具 Punching Die	连接螺钉孔、腹板贯穿孔、小边剪切、剪切 Connecting screw holes, web through holes, small side cutting, cutting	
产品精度 Production Accuracy	0.5mm	
喷码机 Inkjet printer	标配 Standard	
机器尺寸 Machine size	4500*1000*1500mm	5200*1000*1500mm
机器重量 Machine Weight	4000kg	4900kg
开卷 DeCoiler	2000kg 自动开卷 Auto decoiling	2000kg 自动开卷 Auto decoiling



● 质量 - 持续改善

FrameMac的产品符合 ISO 质量标准, 更通过欧盟 CE 安全认证, 结合全球供应链及创新技术, 我们将不断提供更可靠、更稳定、更智能的产品与解决方案

● 支持 - 业务培训

提供支持不再是一项额外的优势, 而是我们业务模式的核心所在, 不管您如何定义成功, 我们的使命都是为您的成功保驾护航 .....

● Quality -- Continuous Improvement

FrameMac products meet ISO quality standards and are CE certified. Combined with our global supply chain and innovative technology, we will continue to provide more reliable, stable and intelligent products and solutions.

● Support - Business Training

Providing support is no longer an added advantage, it's at the heart of our business model and our mission is to escort you to success, however you define success.

## Why choose us? 为什么选择我们?

● 产品 - 设计创新

FrameMac一直构建最佳的解决方案, 在我们的标准范围产品之外, 可为客户开发定制解决方案

● 服务 - 客户至上

FrameMac 高度专业的服务团队提供世界级的售前售后服务, 可提供专业的、本地化的技术支持与服务

● Product-Design Innovation

FrameMac has always built best-in-class solutions as well as customization out of our standard range.

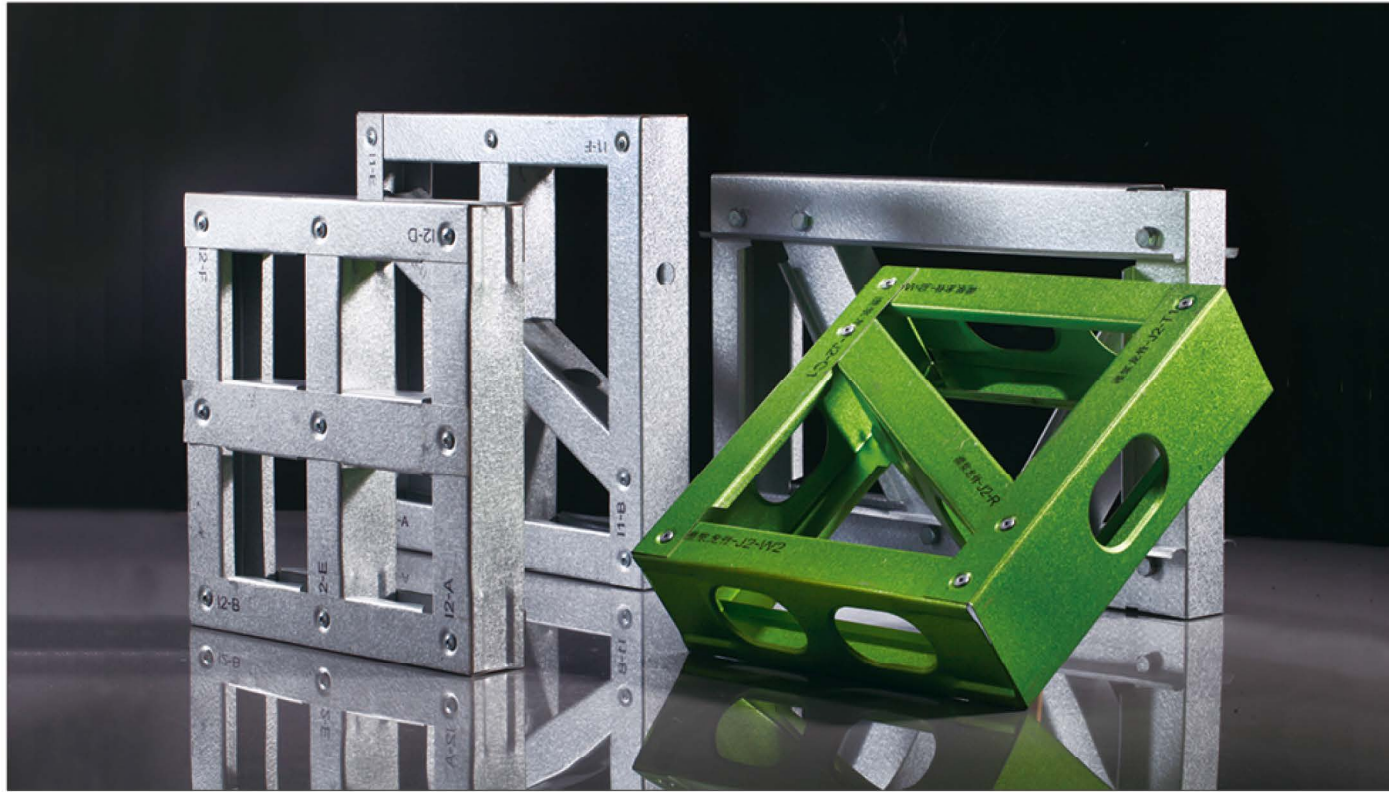
● Service -- Customer Focus

FrameMac's highly professional service team provides world-class pre-sales and post-sales service, providing professional and localized technical support and service.



## Light Gauge Steel Profiles 材料展示

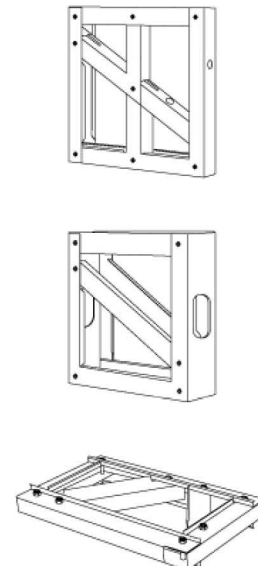
孚瑞美 为改变而来  
FrameMac Coming for change



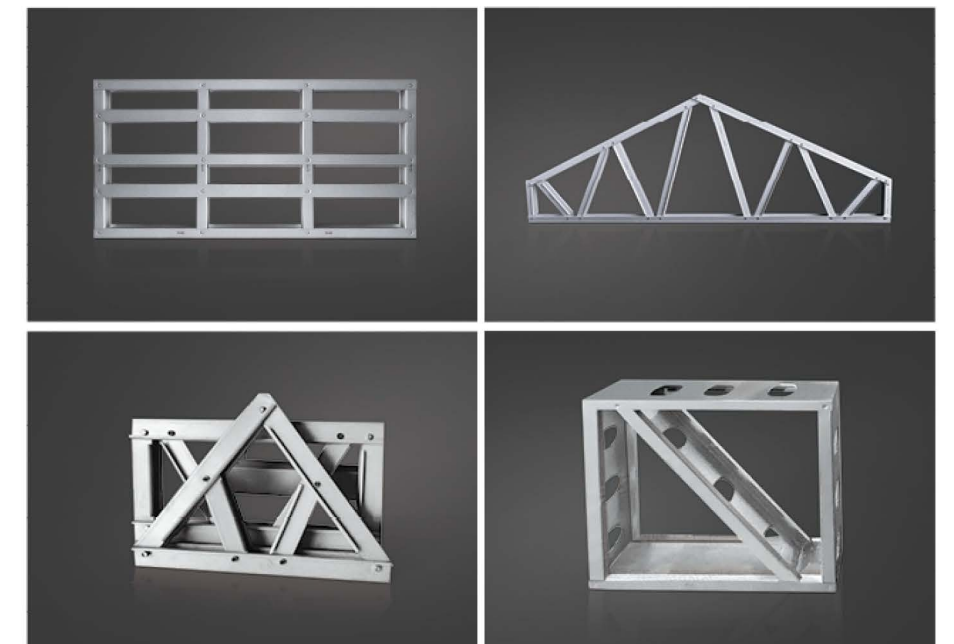
轻钢结构是一种年轻而极具生命力的钢结构体系，已广泛应用于一般工农业、商业、服务性建筑，如办公楼、别墅、仓库、体育场馆、娱乐、旅游建筑和低、多层住宅建筑等领域。

Light steel structure is a young and extremely vital steel structure system, has been widely used in general industrial and agricultural, commercial and service buildings.

Such as office buildings, villas, warehouses, sports stadiums, entertainment, tourism buildings and low and multi-storey residential buildings and other areas.



# FrameMac®





FrameMac 坚持以伙伴身份与客户合作，积极提供有效的解决方案。保证产品性能可靠、技术先进性并且操作方便、促进用户在激烈的市场竞争中立于更高的地位。同时 FrameMac 基于高精度高效、低运行及维护成本的设计理念、使用户可获得更丰厚的经济效益，保证设备能够长期稳定的使用并能够获得全面的技术支持与专业的培训。

FrameMac is committed to working with its customers as a partner to provide effective solutions. This ensures reliable product performance, advanced technology and easy operation, and enables users to achieve a higher position in the fierce market competition. At the same time, FrameMac's design concept is based on high precision, high efficiency and low operating and maintenance costs, which allows users to obtain more economic benefits, ensure long-term and stable use of equipment, and receive comprehensive technical support and professional training.





## Light Gauge Steel Frame Housing System Features 冷弯薄壁型钢建筑住宅体系的特点

### ● 结构整体预制化程度高，像造汽车一样造房子

冷弯薄壁型钢建筑住宅体系已经有一套成熟的技术体系，包括生产配套用的设计软件和独立的加工设备、全面稳定的配套材料供应链。所有结构材料已经可以实现完全工厂预制化，甚至可以实现工厂预拼装；现场安装就是简单的装配过程真正实现住宅结构设计、生产完全成品化、产业化。

### ● 节能环保，居住舒适，造型丰富

冷弯薄壁型钢建筑住宅体系所采用材料均为绿色建材，其中钢结构材料可 100% 回收，其他配套材料也可大部分回收，满足生态环境要求，有利于健康。尤其采用干作业施工方式，可以减少废弃物对农村土地、河流等大自然环境造成的污染，符合当前环保意识；

由于住宅体系采用的高效节能墙体，其保温隔热材料以玻纤棉为主，具有良好的保温隔热效果。外墙保温板和墙体内置玻纤棉的组合采用，有效的避免墙体的“冷桥”现象，达到了更好的保温效果；由冷弯薄壁型钢龙骨、保温材料及石膏板等组成的节能墙体，还具有呼吸功能，可调节室内空气干湿度；其隔音效果可高达 60 分贝；而且它的墙体厚度比传统建筑小得多，大大提高了房屋的使用面积（约为增加使用面积 5-9%）。屋顶具有通风功能，可以使屋内部上空形成流动的空气间，保证屋顶内部的通风及散热需求。由于使用了优良的保温节能结构和材料，冷弯薄壁型钢建筑住宅体系已经很轻松达到住建部提出的建筑节能标准，比传统砖混结构能耗减少 65%，使得室内的居住舒适程度大大提高，是真正的低能耗建筑。

### ● The overall structure is highly prefabricated, houses building just like cars.

LGS building housing system has a set of mature technology features, including design software and independent processing equipment, a comprehensive and stable supply chain of supporting materials. All structural materials can be completely prefabricated and even preassembled in factories; on-site installation is a simple assembly process, which truly realizes the design and production of residential structures.

### ● Energy saving and environmental protection, comfortable to live in, rich in shapes

The materials used in the cold-roll-formed LGS building housing system are green building materials, of which 100% of the steel structure materials can be recycled, most of the other supporting materials can also be recycled, to meet the requirements of the ecological environment, conducive to health. In particular, the use of dry work construction methods can reduce waste pollution of rural land, rivers and other natural environment, in line with the current environmental awareness. Due to the high-efficiency energy-saving wall used in the residential system, the thermal insulation material is mainly glass fiber wool, which has good thermal insulation effect. The combination of external thermal insulation board and built-in glass fiber wool in the wall can effectively avoid the phenomenon of "cold bridge" of the wall and achieve a better thermal insulation effect; the energy-saving wall composed of cold-formed thin-wall keel, thermal insulation materials and gypsum board, etc., also has a breathing function and can regulate the indoor air dry humidity; its sound insulation effect can be as high as 60 decibels; and it has the effect of "cold bridge". The wall thickness of the roof is much less than that of traditional buildings, greatly increasing the usable area of the house (approximately 5-9% increase in usable area). The roof has a ventilation function that creates a flowing air space over the interior of the house, ensuring the ventilation and heat dissipation needs of the interior of the roof. Due to the use of excellent thermal insulation and energy-saving structures and materials, the cold-formed thin-walled steel building housing system has easily met the building energy efficiency standards proposed by the Ministry of Housing and Construction, reducing energy consumption by 65% compared to traditional brick and concrete structures, making the indoor living comfort greatly improved, which is a truly low-energy building.

### ● 运输成本低，施工快捷

所有住宅构件，工厂都可以按部件统一标号打包发送到施工现场。由于钢结构本身自重轻，非常适合山地和运输比较困难的地区，转运全过程不需要大型机械，可大大减少运输成本；型钢建筑住宅体系属于全部干作业现场装配式施工，工期短且受环境季节影响小。一栋 300 平方米左右的建筑，完成从地基到装修的全过程，达到入住标准只需 8 个工人 50 个工作日就可以。

### ● 安全耐用，维护成本低

冷弯薄壁型钢建筑住宅体系的墙体及屋架结构与外墙板三者之间组成坚固的“板肋结构”，同时所有结构材料均使用高强度钢材，抗水平荷载和垂直荷载的能力大大提高，故抗震，抗风性能好且受损轻，更适宜在地震多发区、山区等环境恶劣条件下使用。经过试验证明可抵御 9 度地震（9 度时满足不倒塌的要求）和 60m/s 的飓风，使居住者生命财产能得到有效的保护。

由于结构构件全部采用冷弯薄壁钢构件体系组成，钢骨采用高强冷轧镀锌板制造，有效避免钢板在施工和使用过程中的锈蚀的影响，增加了轻钢构件的使用寿命，装配采用高强度自攻螺丝（或不锈钢拉铆钉）无需焊接，抗腐蚀性极佳，所有结构密闭在复合墙体内部，不易腐蚀，霉变，不怕虫蛀，建筑结构使用寿命长，建筑高度 3 层以下，主要承重构件设计使用年限为 70 年（国内规范为 50 年），理想状态下型钢建筑住宅体系的结构寿命可达 100 年。

### ● 用材省，自重轻，基础造价低

低层冷弯薄壁型钢建筑住宅体系屋顶及墙体结构，材料强度高，厚度薄，用钢量比普通钢结构建筑更少，基本用钢量 30 kg/m<sup>2</sup> 左右；一些临时性的单层建筑则更少。

### ● Low Transportation Cost, Fast Construction

All the residential components can be packed and sent to the construction site by the factory with a uniform label. The light weight of the steel structure makes it ideal for mountainous terrain and areas where transportation is difficult, and no large machinery is required for the entire transfer process, which greatly reduces transportation costs. It takes only 8 workers and 50 working days to complete the whole process from foundation to decoration of a 300 square meter building to reach the occupancy standard.

### ● Safe and Durable, Low Maintenance Cost

The Light Gauge Steel Frame Housing system of the wall and roof structure and exterior wall panels form a solid "rib structure" between the three, while all structural materials are made of high-strength steel, the ability to resist horizontal and vertical loads greatly improved, so seismic and wind resistance is good and light damage, more suitable for seismic areas, mountainous areas and other harsh environments. Use under conditions. It has been tested and proven to be able to withstand earthquakes of 9 degrees (9 degrees to meet the requirements of not collapsing) and hurricanes of 60m/s, so that the lives and property of the occupants can be effectively protected. All the structural profiles are made of cold-roll-formed light gauge steels, high-strength, which effectively avoids the influence of corrosion of steel plate in the process of construction and use, and increases the service life of light steel components; the assembly adopts high-strength self-tapping screws (or stainless steel pull rivet) without welding, with excellent corrosion resistance; all the structures are sealed inside the composite wall, which is not easy to corrode, mildew, and is not afraid of insects. Long service life of the building structure, the building height is less than 3 stories, the design service life of the main load-bearing components is 70 years (50 years in China), and under ideal conditions, the structural life of a steel building system can reach 100 years.

### ● Materials Saving, Light Weight, Low Construction Cost

LGS housing system's roof and wall structure use thin but high strength materials. The amount of steel spent is less than that for ordinary steel structure buildings. Its basic consumption is about 30 kg/m<sup>2</sup>; while some temporary single-story building is even less.

## Customer Cases 客户案例



FrameMac®



可用于旧房增层、改造、加固和建材缺乏地区、运输不便地区、工期紧、活动式可拆迁建筑等，倍受业主青睐..

It can be used for adding layers to old houses, remodeling, reinforcement, areas where there is a shortage of building materials, areas where transportation is inconvenient, tight deadlines, movable and demolishable buildings, etc., and is favored by owners.

## Training Center 培训中心



### ● 课程介绍

软件培训，我司定期组织关于轻钢结构软件的专人培训课程，请相关行业的行家，让客户和机械人员了解使用设计软件的基本使用方法，为期一周内，食宿自理。

### ● Regular Training Courses

Software training, our company regularly organizes a training courses on light steel structure software. Experts in related industries are invited to let customers and mechanical personnel understand the basic use of design software. Within a week, take care of their own board and lodging.

### ● 课程展示

FrameMac Quikseries 软件培训会，由佛山市孚瑞美科技有限公司与战略合作伙伴 - 国际知名轻钢结构设计软件 QuikSeries 软件在佛山南海雅乐轩酒店联合举办了为期 5 天的“FRAMEMAC QUIKSERIES 软件 2017 年培训会”，来自全国数十位孚瑞美的客户参加了培训。本次不惜重金邀请软件厂商为自己客户提供设备操控软件培训的孚瑞美，是国内顶级的轻钢房屋设备制造商。依托着先进的 QuikSeries 软件和设计合理，质量可靠的设备，孚瑞美有着业界公认的良好口碑。本次培训会便是对孚瑞美科技始终用心服务客户和致力于向客户提供卓越产品理念的再一次精彩诠释。

### ● Training Conference

The FrameMac Quikseries software training conference was jointly organized by FrameMac Technology Co., Ltd. and its strategic partner-QuikSeries software, an internationally renowned light steel structure design software, at the ALOFT Hotel in Nanhai, Foshan. Meeting", dozens of FrameMac customers from across the country participated in the training. This time, FrameMac, who has spared no expense in inviting software manufacturers to provide equipment control software training for its customers, is the top light steel housing equipment manufacturer in China. Relying on the advanced QuikSeries software and equipment with reasonable design and reliable quality, FrameMac has a good reputation in the industry. This training meeting is another wonderful interpretation of the philosophy of FrameMac Technology has always been dedicated to serving customers and committed to providing customers with excellent products.

