

产品手册 Product Catalog

1、公司简介 COMPANY PROFILE

水生木（天津）国际贸易有限公司是专业从事玻璃钢（FRP，纤维增强塑料）产品的生产与贸易企业。工厂拥有 16 年行业经验，主营模塑格栅、拉挤格栅、微孔格栅、防滑盖板，并可根据工程需求提供玻璃钢定制化解决方案。

产品优势

我司玻璃钢产品具备优异的耐腐蚀性能、防滑表面、高强度、防水性以及长效耐用特性，广泛适用于污水处理、走道平台、水产养殖平台、洗车场及海上码头等场景。相较于金属与木质材料，玻璃钢产品维护量极低，即便在恶劣工况环境下也能保持结构稳定。

东南亚市场专业能力

公司深耕东南亚市场，可稳定供货至越南、印度尼西亚、菲律宾、泰国及周边地区。我方团队熟悉当地高温、高湿、盐雾腐蚀环境特点，通晓海运线路、清关流程与项目标准，保障从下单到安装全流程顺畅合规落地。

海外采购商核心价值

- ✓ **适配当地环境的产品**：专为东南亚严苛气候打造，抗腐蚀、耐紫外线老化，大幅降低后期维护成本
- ✓ **极具竞争力的工厂直供价**：透明出厂价，无中间商加价，提升您的利润空间
- ✓ **灵活订单产能**：常备现货库存，同时承接工程项目定制单，满足快速采购与紧急投标需求
- ✓ **一站式服务**：免费技术咨询、产品选型、图纸确认，支持完整 OEM&ODM 定制。尺寸、厚度、颜色、表面处理均可按需定制；所有产品经过严格检测，资质文件齐全
- ✓ **可靠物流与售后**：成熟的东南亚物流渠道，全程跟进交付进度，配套稳定售后保障，保障供货稳定

选择 SSM 国际贸易，享工厂直供价格、东南亚本地化服务，依托 16 年制造实力为品质保驾护航。

SSM Global Trading (Tianjin) Co., Ltd. is a professional manufacturer and trader specializing in FRP (Fiber Reinforced Plastic) products. With 16 years of factory experience, we supply molded grating, pultruded grating, micro mesh grating, anti-slip covers, and customized FRP solutions for engineering needs.

Product Advantages Our FRP products deliver superior corrosion resistance, anti-slip surfaces, high strength, waterproofing, and long-term durability-ideal for sewage treatment, walkways, aquaculture platforms, car washing areas, and marine docks. Unlike metal or wood, they need minimal maintenance and retain structural integrity in aggressive environments.

Southeast Asia Expertise We focus on Southeast Asia with stable supply across Vietnam, Indonesia, the Philippines, Thailand, and nearby regions. Our team understands local high-temperature, high-humidity, and salt-spray conditions, plus shipping routes, customs procedures, and project standards-ensuring smooth, compliant execution from order to installation.

Core Value for Overseas Buyers

Environmentally Adapted Products - Built for Southeast Asia's harsh climate, resisting corrosion and UV aging to cut maintenance costs.

Competitive Factory-Direct Pricing - Transparent ex-factory prices with no middleman margins, boosting your profitability.

Flexible Order Capacity - Both bulk stock and custom project orders for rapid procurement and time-sensitive bidding.

One-Stop Service Free technical consultation, product selection, drawing confirmation, and full OEM & ODM customization. Size, thickness, color, and surface treatment all tailorable. Every product passes strict inspection with complete certification.

Reliable Logistics & After-Sales Mature Southeast Asia logistics channels, proactive delivery management, and dependable after-sales support for stable supply.

Partner with SSM Global Trading-factory-direct pricing, Southeast Asia expertise, and quality backed by 16 years of manufacturing excellence.



2、原材料 Raw materials

树脂 Resin

树脂类型 Resin type	阻燃性能 Flame retardant performance	标准颜色 Standard color	推荐使用场合 Recommended occasions for use
酚醛型 Phenolic	氧指数可达 80 左右 The oxygen index can reach around 80	咖啡色 Coffee	低毒高阻燃，用于防火安全极为重要的场合 Low toxicity and high flame retardancy, used in situations where fire safety is extremely important
乙烯基型 Vinyl ester	氧指数 35 或以上 Oxygen index of 35 or above	深灰、黑色 Dark gray, black	阻燃要合求较高又要求耐酸、碱优良的情况 In situations where high flame retardancy and excellent acid and alkali resistance are required
乙烯基型 Vinyl ester	氧指数 28 或以上 Oxygen index of 28 or above	草绿、黄色、灰色、橙色 Grass green, yellow, gray, orange	酸、碱溶剂等腐蚀严厉的环境下 In environments with severe corrosion such as acid and alkali solvents
间苯型 Isophthalic polyester	氧指数 10 或以下 Oxygen index of 10 or below	可定制 Customizable	工业级、耐腐蚀、阻燃性能好 Industrial grade, corrosion-resistant, and flame retardant with good performance
间苯型 Isophthalic polyester	氧指数 28 或以上 Oxygen index of 28 or above	草绿、黄色、灰色 Grass green, yellow, gray	较 VEFr 型经济、且耐酸优良、适度耐碱及溶剂 More economical than VEFr type, with excellent acid resistance, moderate alkali resistance, and solvent resistance

邻苯型 Orthopht halic polyester	氧指数 28 或 以上 Oxygen index of 28 or above	草绿、黄色、灰 色 Grass green, yellow, gray	一般的耐酸、碱环境 General acid and alkali resistant environment
间苯食品 级 Isophthalic polyester food grade	氧指数 26 Oxygen index 26	黄色 Yellow	主要用于肉制品及食品加工厂 Mainly used in meat products and food processing plants
邻苯型 Orthopht halic polyester	氧指数 28 或 以下 Oxygen index of 28 or below	绿色、黄色、灰 色 Green, yellow, gray	较 OFR-25 经济，无阻燃要求 More economical than OFR-25, without flame retardant requirements

玻璃纤维 Fiberglass

成分 Ingredient	规格 Type	性能 Property	应用 Application
无碱粗纱 None-alkali	2400 TEX	优良的浸透性能与树脂基体能 牢固结合，使制品 具有优良的力学性能及耐腐蚀 性能。 Excellent soaking ability ensures solid combination with resin, providing perfect physical property and anti- corrosion property and electrical properties.	强度要求高且腐蚀性强环境 Environments requiring high strength and corrosion resistance
中碱粗纱 Medium- alkali	2400 TEX	具有优良的浸透性，能与树脂 基体牢固结合，耐酸性较好。 Excellent soaking ability ensures solid combination	酸性腐蚀的环境 Environments requiring acid- corrosion resistance

功能性填料 Functional Filler

填充类型 Filler type	性能 Property	适用场所 Application
氢氧化铝 Aluminum trihydroxide	阻燃；高硬度和氧指数 Fire retardant high hardness and oxygen index	阻燃、抑烟环境 Fire and smoke retradancy required
碳酸钙 Calcium carbonate	高硬度，降低成本 High hardness,cost saving	无阻燃要求 No fire retardancy required
无填料/纯树脂 No filler/Pure resin	透明性好 Translucent performance	无阻燃要求，高耐腐 No fire retardancy, transparent effect required, high corrosion- resistance required



3、产品介绍 Product presentation

玻璃钢模塑格栅 FRP Moulded Grating

玻璃钢格栅，是一种以玻璃纤维为增强材料，不饱和聚酯树脂为基体，通过特殊的拉挤工艺或模压工艺制成的带有规则空格的板状复合材料。它不仅继承了传统金属格栅的承载能力，还具备许多金属材料无法比拟的优异性能，如轻质、高强、耐腐蚀、绝缘、阻燃等，因此在现代工业中得到了广泛应用。

与传统金属格栅相比，玻璃钢格栅的最大优势在于其卓越的耐腐蚀性能。它能够抵抗酸、碱、盐、有机溶剂等多种化学物质的侵蚀，特别适合在化工、石油、污水处理等

腐蚀性环境中使用。此外，玻璃钢格栅还具有重量轻、安装方便、绝缘性能好、阻燃性能优异等特点，使其在电子、电力、纸业、印染、电镀、海洋勘探、设备平台、钻井平台、走道等行业中也得到了广泛应用。

玻璃钢格栅的表面还可以设计有防滑花纹，这不仅增加了使用时的安全性，还提高了格栅的耐磨性。同时，玻璃钢格栅的颜色多样，常见的有黄色、绿色、灰色、红色等，用户可以根据实际需求选择不同的颜色，以满足美观或功能性的要求。

玻璃钢格栅是一种集高性能、多功能、长寿命于一体的新型复合材料，它不仅能够满足现代工业对材料性能的苛刻要求，还能为用户提供经济、环保、安全的解决方案。

FRP (Fiberglass reinforced polymer/plastic) grating, also known as GRP grating, is a composite material made of glass fibers as the reinforcing material and unsaturated polyester resin as the matrix. It is manufactured through a special pultrusion or compression molding process, resulting in a plate-like composite material with regular grid patterns. It not only inherits the load-bearing capacity of traditional metal gratings but also possesses many superior properties that metal materials cannot match, such as being lightweight, high strength, corrosion-resistant, insulating, flame-retardant, etc., making it widely used in modern industries.

Compared to traditional metal gratings, the most significant advantage of fiberglass grating lies in its outstanding corrosion resistance. It can resist erosion from acids, alkalis, salts, organic solvents, and other chemicals, making it especially suitable for use in corrosive environments such as chemical engineering, petroleum, sewage treatment, etc. Moreover, fiberglass grating is lightweight, easy to install, has good insulation performance, and excellent flame retardancy, which makes it widely used in industries like electronics, power, papermaking, printing and dyeing, electroplating, marine exploration, equipment platforms, drilling platforms, walkways, etc.

The surface of the fiberglass grating can also be designed with anti-slip patterns, which not only increase safety during use but also enhance the wear resistance of the grating. Additionally, fiberglass gratings come in various colors, commonly including yellow, green, gray, red, etc., allowing users to choose different colors based on their actual needs to meet aesthetic or functional requirements.

In conclusion, fiberglass grating is a new type of composite material that integrates high performance, multi- functionality, and longevity. It not only meets the stringent requirements of modern industry for material performance but also provides users with economical, environmentally friendly.



玻璃钢格栅的性能 Performance of FRP grating

玻璃钢格栅因其独特的材料组成和制造工艺，具备多种优异的性能，使其在工业、建筑、化工等领域中成为传统金属格栅的理想替代品。以下是玻璃钢格栅的主要性能特点：

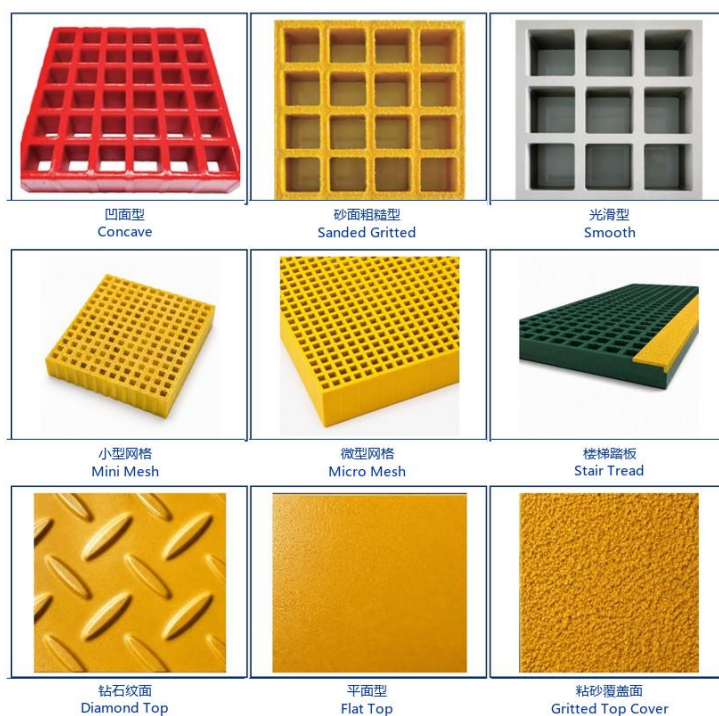
The FRP grating has excellent corrosion resistance to acid, alkali, organic solvents and salts and many other gas and liquid media. It has incomparable advantages in the field of corrosion resistance than the molded grid. According to the actual use of the site requirements, can economically choose to use ortho, ISO, VE as the matrix material.

1. 轻质高强轻质：玻璃钢格栅的密度约为 1.8-2.0g/cm³，仅为钢材的 1/4，铝材的 2/3，重量轻，便于运输和安装。高强：虽然重量轻，但其机械强度接近钢材，承载能力优异，能够承受较大的荷载而不易变形。
2. 优异的耐腐蚀性：玻璃钢格栅对酸、碱、盐、有机溶剂等化学物质具有极强的抗腐蚀能力，能够在强腐蚀性环境中长期使用。与金属材料不同，它不会生锈或腐蚀，特别适合化工、石油、污水处理等腐蚀性环境。
3. 良好的绝缘性：玻璃钢格栅不导电，具有良好的电绝缘性能，适用于电力、通信等需要绝缘材料的场合。在变电站、电缆沟等场景中，能够有效避免触电风险。
4. 阻燃性：玻璃钢格栅的氧指数高，具有良好的阻燃性能，能够满足防火要求。在易燃易爆环境中使用时，能够有效降低火灾风险。
5. 防滑耐磨：表面通常设计有防滑花纹或砂面处理，增加了摩擦力，防止人员滑倒，特别适合潮湿、油污等易滑环境。耐磨性能优异，能够承受长期使用而不易磨损。
6. 耐老化性能：玻璃钢格栅具有良好的抗紫外线性能，能够在户外长期使用而不易老化。使用寿命长，通常可达 20 年以上，维护成本低。
7. 良好的抗疲劳性：玻璃钢格栅具有较高的弹性模量，能够承受反复荷载而不易疲劳断裂。在需要频繁踩踏或承载动态荷载的场合中表现优异。
8. 易加工和安装：玻璃钢格栅可以根据需要切割、钻孔、拼接，安装灵活方便。采用螺栓或卡扣固定，安装速度快，施工效率高。
9. 环保性能：玻璃钢格栅材料可回收利用，符合环保要求。生产过程中不产生有害物质，对环境无污染。
10. 美观性：玻璃钢格栅颜色多样（如黄色、绿色、灰色、红色等），可根据使用环境选择，兼具功能性和美观性。表面光滑，易于清洁，维护简单。
1. Light weight and high strength light weight: the density of FRP grille is about 1.8-2.0g/cm³, only 1/4 of steel, 2/3 of aluminum, light weight, easy to transport and install. High strength: Although its weight is light, its mechanical strength is close to

that of steel, its carrying capacity is excellent, and it can withstand large loads without deformation.

2. Excellent corrosion resistance: FRP grille has strong corrosion resistance to acid, alkali, salt, organic solvents and other chemicals, and can be used in a strong corrosive environment for a long time. Unlike metal materials, it will not rust or corrosion, especially suitable for chemical, petroleum, sewage treatment and other corrosive environment.
3. Good insulation: Fiberglass grille is not conductive, has good electrical insulation performance, suitable for power, communication and other occasions that need insulation materials. In the substation, cable trench and other scenes, can effectively avoid the risk of electric shock.
4. Flame retardant: The oxygen index of FRP grille is high, and it has good flame retardant performance and can meet the requirements of fire prevention. When used in flammable and explosive environments, it can effectively reduce the risk of fire.
5. Anti-slip and wear resistance: The surface is usually designed with anti-slip pattern or sand surface treatment, which increases the friction and prevents personnel from slipping, especially suitable for wet, oil and other easy slippery environment. Excellent wear resistance, can withstand long-term use and is not easy to wear.
6. Aging resistance: FRP grille has good UV resistance and can be used outdoors for a long time without aging. Long service life, usually up to more than 20 years, low maintenance costs.
7. Good fatigue resistance: FRP grille has a high elastic modulus, which can withstand repeated loads and is not easy to fatigue fracture. Excellent performance in situations where frequent trampling or dynamic loading is required.
8. Easy processing and installation: FRP grille can be cut, drilled and spliced according to needs, and the installation is flexible and convenient. It is fixed by bolts or fasteners, with fast installation speed and high construction efficiency.
9. Environmental performance: FRP grille material can be recycled, in line with environmental requirements. The production process does not produce harmful substances, no pollution to the environment.
10. Aesthetic: FRP grille color variety (such as yellow, green, gray, red, etc.), can be selected according to the use of the environment, both functional and aesthetic. Smooth surface, easy to clean, easy to maintain.

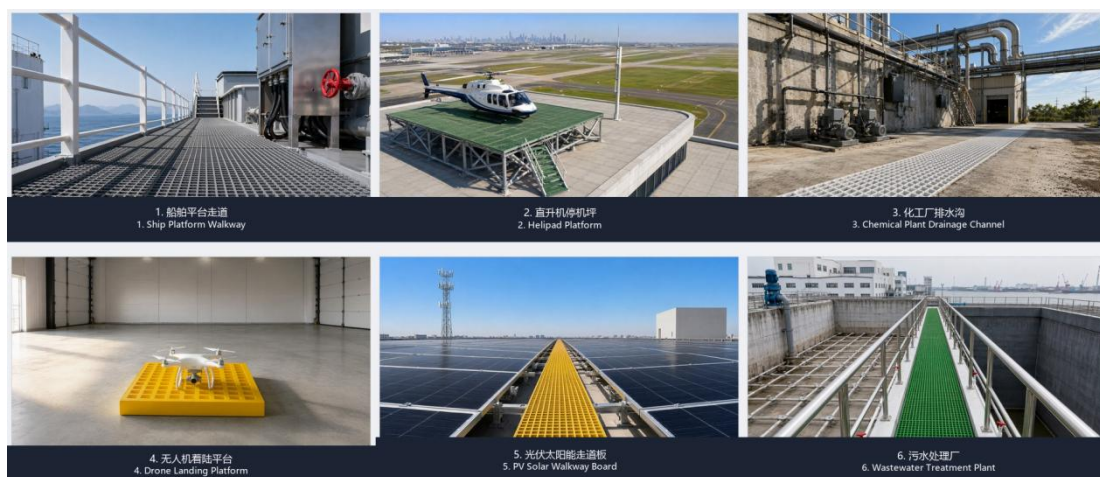
表面类型 Surface types



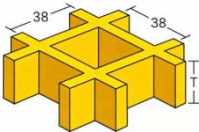
玻璃钢格栅的应用场景 Application of FRP Moulded Gratings

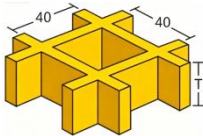
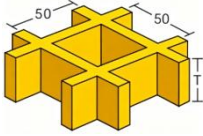
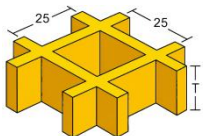
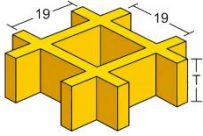
化工行业、造纸业、发电厂、污水处理厂、海上钻井平台，食品加工厂、冶炼厂、矿山、盐场、核电站、蓄电池厂等等。可用作为：人行走道，桥板、工业地坪、操作平台、地沟盖板、托盘、护栏、围栏、货架、隔离带、绿地走道、楼板踏步。

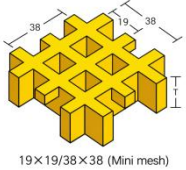
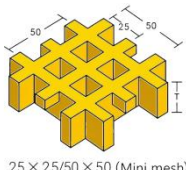
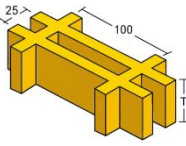
Chemical industry, paper industry, power plants, sewage treatment plants, offshore drilling platforms, food processing plants, smelters, mines, salt fields, nuclear power plants, battery plants, etc. Can be used as pedestrian walkways, bridge decks, industrial floors, operating platforms, trench covers, pallets, guardrails, fences, shelves, isolation belts, green walkways, floor treads.



模塑格栅尺寸规格 Dimensions and specifications of molded gratings

图例 Picture	格栅厚度 Grating Thickness (mm)	上/下栅条宽度 Top/Bottom Bar Width(m m)	网眼尺寸 Mesh Size(m m)	整版尺寸 Page Size (mm)	重量 Weight (kg/m2)	开孔率 Open Area (%)
	25	7.0/5.0	38×38	1220×3660, 1000×4000	12.5	68
	30	7.0/5.0	38×38	1220×3660, 1000×4000	16	68
	38	7.0/5.0	38×38	1220×3660, 1000×4000	20	68
	50	7.0/5.0	38×38	1220×3660, 1000×4000	27	62
	65	7.0/5.0	38×38	1220×3660	32	62

图例 Picture	格栅厚度 Grating Thickness (mm)	上/下栅条 宽度 Top/Bottom Bar Width(m m)	网眼尺寸 Mesh Size(m m)	整版尺寸 Page Size (mm)	重量 Weight (kg/m ²)	开孔率 Open Area (%)
	25	4.5/3	40×40	1220×3660, 1220×4000	8	67
	30	5.2/3.7	40×40	1220×3660, 1220×4000	14.6	67
	38	6.2/4.3	40×40	1220×3660, 1220×4000	19.2	67
	50	7.0/5.0	50×50	1220×3660, 1220×4000	21.5	75
	65	7.0/5.0	50×50	1220×3660,	30	75
	20	6.5/4.5	25×25	1000×4000	12	55
	45	7/5	19×19	1220×3660, 1000×4000	38	40

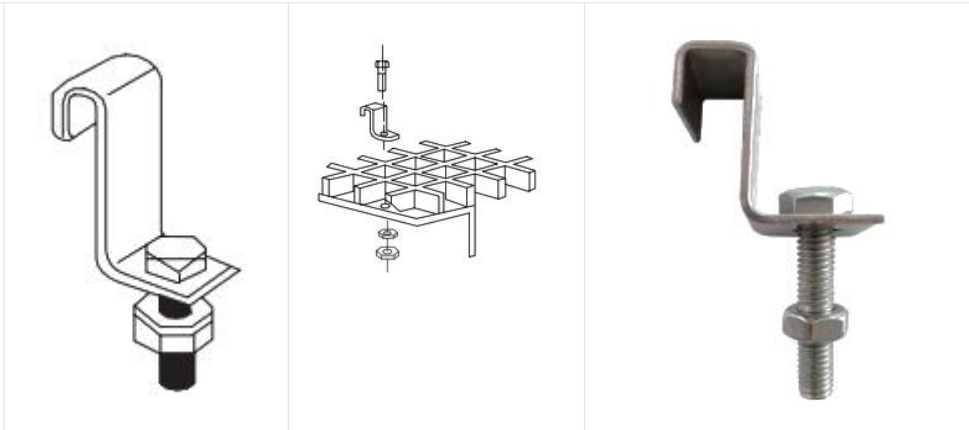
图例 Picture	格栅厚度 Grating Thickness (mm)	上/下栅条 宽度 Top/Bottom Bar Width(mm)	网眼尺寸 Mesh Size(mm)	整版尺寸 Page Size (mm)	重量 Weight (kg/m ²)	开孔率 Open Area (%)
 19×19/38×38 (Mini mesh)	25	6.5/5.0	19×19 38×38	1220×3 660	16	40
	30	6.5/5.0	19×19 38×38	1220×3 660	18	40
	38	6.5/5.0	19×19 38×38	1220×3 660	23	40
 25×25/50×50 (Mini mesh)	50	6.5/5.0	25×25 50×50	1220×3 660	24	55
	25	6.5/5.0 7/5	100×25	1220×3 660, 1000×4 000	13	67

图例 Picture	型号 Model	高度 (mm) Height (mm)	上缘宽度 (mm) Width(mm))	承载条 中心距 (mm) Center distance (mm)	承载条净 空(mm) Bearing barcleara nce(mm)	开孔率(%) OpenRate (%)	重量 (kg/m) Weight (kg/m)
	I-6010	25	15	38	22.5	60	12.2
	I-6015	38	15	38	22.5	60	14.65

安装卡扣 Installation Clips

L 型

L Type

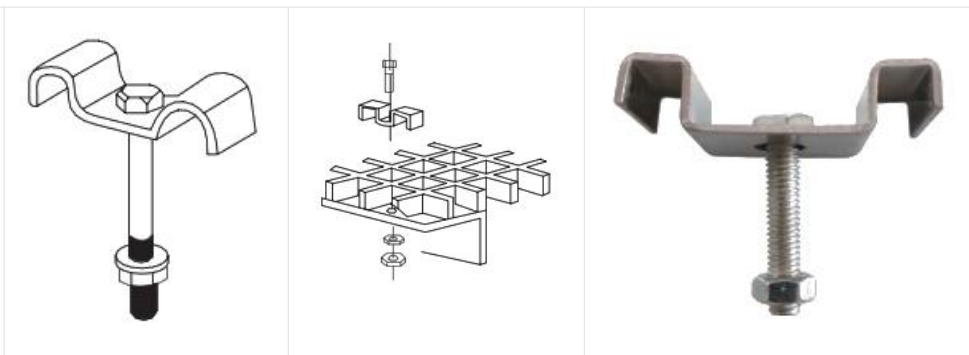


用于格栅与支架材料的特殊定位连接

Special positioning connection for grating and bracket materials

M 型

M Type

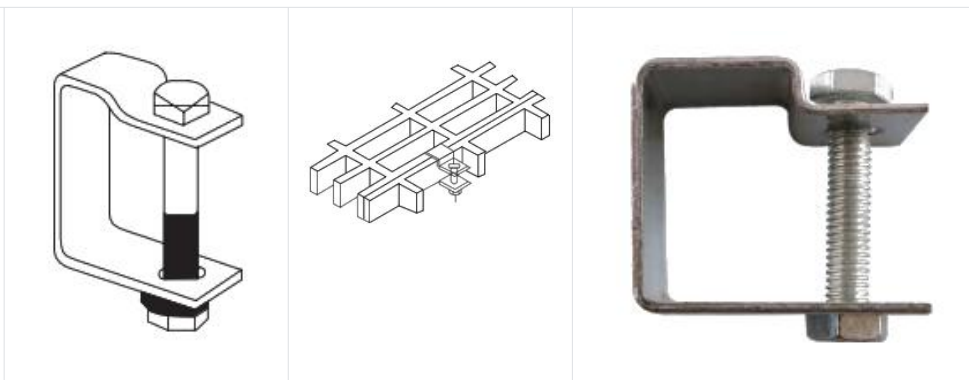


用于格栅与支架材料的定位连接

Used for positioning connection of grating and bracket materials

C 型

C Type



用于两片格栅间边与边连接使平台具有良好的整体性能

Used for connecting the edges between two grating to give the platform good overall performance



4、模具、生产设备 Mould & Machine

玻璃钢格栅模具 FRP grating moulding machine

玻璃钢格栅模具主要包括格栅模具、加热系统和配套设备三部分。

第 1 部分：模具模具通常用于制造玻璃钢格栅。不同的格栅设计有其模具形状和尺寸，但总体结构是相同的。每个模具包括：模具模块、顶针、加热系统和底座。

第 2 部分：加热冷却系统

1. 加热：该系统用于为模具提供热量，由加热器、温控器、流体更换、泵和阀门组成。
2. 冷却系统：由水槽、泵、水阀和阀门组成。

第 3 部分：附属设备转输入管、玻璃钢刀、树脂压机等。

FRP grating moulding machine mainly includes grille mold, heating system and supporting equipment three parts.

Part 1: Molds Molds are commonly used to make fiberglass grates. Different grille designs have their mold

shapes and sizes, but the overall structure is the same. Each mold includes: mold module, thimble, heating system and base.

Part 2: Heating and cooling systems

1. Heating: The system is used to provide heat to the mold and consists of a heater, thermostat, fluid change, pump and valve.
2. Cooling system: composed of sinks, pumps, water traps and valves.

Part 3: Auxiliary equipment transfer tube, fiberglass knife, resin presser, etc.



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