

河北固得

环保设备有限公司

**Hebei GuDe Enviromental
Protection Equipment Co., LTD.**

FRP TANK

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FRP PIPE

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FRP TOWER

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FRP PROFILES

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FRP GRATING

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FRP Products for Sewage treatment Flue and
Gas Treatment Equipment





Enviromental Equipment FRP Products 主要产品



FRP containers and towers

FRP open tanks, on-site tanks

FRP high, medium and low pressure series pipes and fittings

FRP square troughs and water tanks

PVC, CPVC, PP, PVDF, PTFE and FRP composite containers

FRP exhaust gas treatment gas hoods, flue gas desulfurization pipelines, flues and other supporting equipment

FRP gratings

Integrated sewage treatment equipment

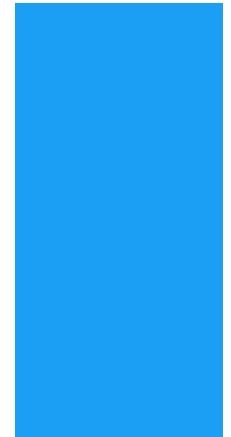
FRP pultruded profiles (square tubes, round tubes, round bars, channel steel, I-beams, etc.)

Fans

FRP anti-corrosion engineering



Vertical FRP storage tank with open top 玻璃钢立式敞口罐



L \ D	400	600	800	1000	1200	1400	1500	1600	1800	2000	2000
M³											
0.1	850	430									
0.2	1650	780	490								
0.5		1840	1090	740							
1			2080	1380							
2				2650	1890	1440					
3					2780	2090	1850				
4					3660	2740	2410	1850			
5						3390	2980	2410			
6							3550	3410			
7								3640	2930		
8								4140	3320		
9								4630	3710	3060	
10								5130	4100	3370	
11								5630	4500	3690	3100
12									4890	4010	3370
15									6070	4970	4150
18									7250	5920	4940
20									8030	6560	5470
25										8150	6790
30											8100

L \ D	2400	2500	2600	2800	3000	3200	3400	3500	3600	3800	4000
M³											
30	6860	6340	5890	5130	4530	4030	3620				
35	7960	7360	6830	5940	5240	4630	4170	3960	3770		
40	9070	8380	7780	6750	5940	5240	4710	4480	4260	3880	
45		9400	8720	7570	6650	5900	5270	5000	4760	4320	
50			9660	8380	7360	6520	5830	5520	5250	4760	4350
55				9180	8070	7140	6380	6040	5740	5200	4750
60				9600	8770	7760	6930	6560	6230	5640	5140
65					9480	8380	7480	7080	6720	6080	5540
70						9010	8030	7600	7210	6520	5940
75						9630	8580	8120	7700	6960	6340
80						1025	9130	8640	8190	7410	6730
85						2	9680	9160	8690	7850	7130
90							10230	9680	9180	8090	7530
95								10200	9670	8730	7930
100									10161	9170	8330
110										10050	9120
120											9920
130											10710
140											11510
150											12310





FRP Vertical Flat Bottom Container 玻璃钢立式平底储罐

FRP Vertical
storage tank



Application areas

Chemical industry, Environmental protection engineering, Water treatment: storage of pure water and ultrapure water, Food and pharmaceutical, Power electronics



FRP Vertical Flat Bottom Container 玻璃钢立式平底储罐



Different specifications from 1m³ to 100m³, which can be customized according to customer needs:

Multiple resin system options (o-phthalate, isophthalate, vinyl, etc.), Different operating temperature ranges (-40°C to 120°C), Multiple reinforced structural designs, Personalized interface configuration.

Vertical flat bottom FRP containers are becoming the preferred solution for liquid storage in more and more industrial fields due to their economy, durability and adaptability. Customers from all industries are welcome to consult and customize, and we will provide you with professional storage solutions.

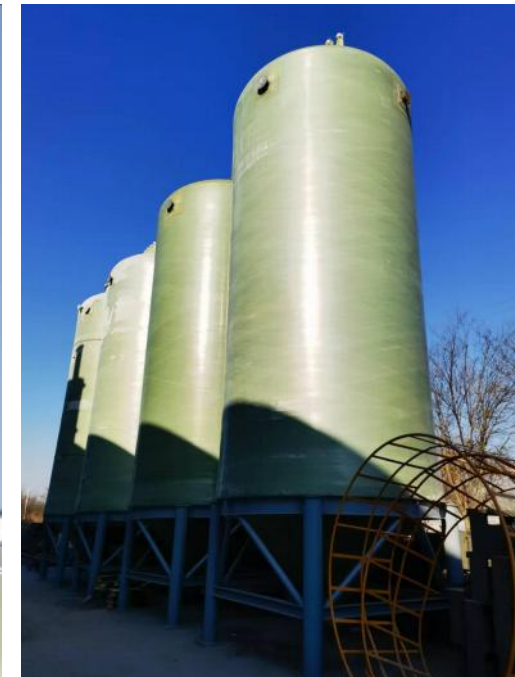
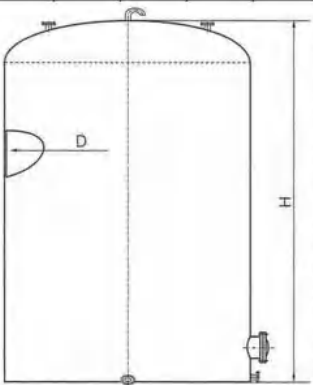
As a professional manufacturer, we provide one-stop service from design, production to installation to ensure that each container meets industry standards and usage requirements. Our products have passed ISO9001 quality management system certification and obtained relevant health permits.





FRP Vertical Tanks Specification Table:

D	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3500	3600	3800	4000	4500
V	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
0.5	1090																		
1	2080	1380	1010																
2	4070	2650	1890	1440															
3	6060	3930	2780	2090	1650														
4	8050	5200	3660	2740	2150	1750													
5		6470	4550	3390	2650	2140	1780												
6		7750	5430	4040	3140	2530	2100	1790											
7			6310	4690	3640	2930	2420	2050											
8			7200	5340	4140	3320	2740	2310											
9				5990	4630	3710	3060	2580	2210										
10				6640	5130	4100	3370	2840	2440	2130									
11					5630	4500	3690	3100	2660	2310	2040								
12					6130	4890	4010	3370	2880	2500	2210	1970							
14					7120	5680	4650	3890	3320	2880	2530	2260	2030						
15					7620	6070	4970	4150	3540	3070	2690	2400	2160						
16						6460	5280	4420	3760	3260	2860	2540	2280	2070					
18						7250	5920	4940	4200	3630	3180	2820	2530	2290					
20						8030	6560	5470	4650	4010	3510	3100	2780	2510	2400				
25							8150	6790	5750	4950	4320	3810	3400	3060	2920	2780			
30							9740	8100	6860	5890	5130	4520	4020	3610	3430	3270	2990		
35								9420	7960	6830	5940	5230	4640	4160	3950	3760	3430		
40								9070	7780	6750	5930	5270	4710	4470	4250	3870	3550		
45									8720	7570	6640	5890	5260	4990	4750	4310	3950		
50									9660	8380	7350	6510	5820	5510	5240	4750	4350		
55										9190	8060	7130	6370	6030	5730	5190	4750		
60										10000	8760	7750	6820	6550	6220	5630	5140		
65											9470	8370	7470	7070	6710	6070	5510		
70											10180	9000	8020	7590	7200	6510	5940		
75												9620	8570	8110	7690	6950	6340		
80												10240	9120	8630	8180	7400	6730		
85													9670	9150	8680	7840	7130		
90													10220	9670	9170	8280	7530		
95														10190	9660	8720	7930		
100															10150	9160	8330		
110																10040	9120		
120																	9920		
130																		10710	
140																			11510
150																			12310
200																			12600





FRP Vertical Cone Bottom Container 玻璃钢立式锥底储罐



Vertical Cone Bottom Container, Pickling Circulation Tank:

Pickling process in metal surface treatment industry, Pickling process in electroplating plant pre-treatment, Photovoltaic silicon wafer cleaning process, Corrosive media storage in chemical industry, Wastewater treatment system in environmental protection engineering, Steel mill pickling line and acid regeneration section etc.



FRP Vertical Tanks Specification Table:

立式圆(锥)底容器规格参数

D	800		1000		1200		1400		1600		1800		2000		2200		2400		2600		2800		3000					
V	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N				
0.5	1150	3																										
1	2150	3	1460	3	1110	3																						
2	4140	3	2740	3	1990	3	1560	3																				
3			4010	3	2880	3	2210	4	1780	4																		
4			5280	4	3760	3	2860	4	2280	4	1990	4																
5					4650	3	3510	4	2780	4	2290	4	1950	4														
6							4160	4	3280	4	2680	4	2270	4	1970	4												
7							4810	4	3770	4	3080	4	2590	4	2230	4												
8							5460	4	4270	4	3470	4	2900	4	2500	4	2190	4										
9							6100	4	4770	4	3860	4	3220	4	2760	4	2410	4										
10							6750	4	5270	4	4250	4	3540	4	3020	4	2640	4	2340	4								
11								5760	4	4650	4	3860	4	3290	4	2860	4	2530	4									
12								6260	4	5040	4	4180	4	3550	4	3080	4	2720	4	2450	4							
14								7250	4	5830	4	4810	4	4070	4	3520	4	3100	4	2770	4							
15								7750	4	6220	4	5130	4	4340	4	3740	4	3280	4	2930	4	2660	4					
16										6610	4	5450	4	4600	4	3960	4	3470	4	3100	4	2800	4					
18										7400	4	6090	4	5130	4	4400	4	3850	4	3420	4	3080	4					
20										8180	4	6720	4	5650	4	4850	4	4230	4	3740	4	3360	4					
25												8320	4	6970	4	5950	4	5170	4	4560	4	4070	4					
30												9910	4	8280	4	7060	4	6110	4	5370	4	4780	4					
35													9600	4	8160	4	7050	4	6180	4	5490	4						
40																9270	4	7990	4	6990	4	6190	4					
45																		8930	4	7800	4	6900	4					
50																				9880	4	9620	4	7610	4			





FRP Horizontal Tanks 玻璃钢卧式储罐



This type of tank can provide fully customized solutions according to customer needs, including production according to customer drawings or specific size requirements, to meet the special storage needs of various industrial fields.



Production by Drawing: Engineering drawings and technical requirements provided by the customer

Size Customization: Non-standard sizes according to the space restrictions on the customer's site.

Interface Configuration: Customizable inlets and outlets, manholes, observation holes, etc. of various calibers, positions and quantities.



Customized Service

Internal Structure: Special structures such as wave-breaking plates, heating coils, stirring devices, etc. can be added

Color Selection: A variety of color options are available, and production can also be carried out according to customer-specified colors



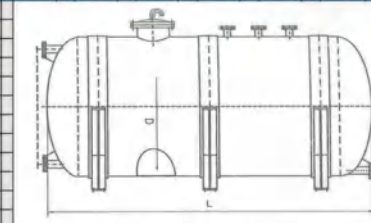
FRP Horizontal Tanks Specification Table 玻璃钢卧式储罐



D	800		1000		1200		1400		1600		1800		2000		2200		2400		2600		2800		3000		3200		3400		3500		3600		3800		4000		
V	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	
0.5	1150	2																																			
1	2150	3	1460	2	1110	2																															
2	4140	5	2740	3	1990	2	1560	2																													
3			4010	4	2880	3	2210	2	1780	2																											
4			5280	5	3760	3	2860	2	2280	2	1900	2																									
5					4650	4	3510	3	2780	2	2290	2																									
6							4160	3	3280	2	2680	2	2270	2																							
7							4810	4	3770	3	3080	2	2590	2	2230	2																					
8							5460	4	4270	3	3470	2	2900	2	2500	2																					
9							6100	4	4770	3	3860	2	3220	2	2760	2																					
10							6750	5	5270	3	4250	3	3540	2	3020	2	2640	2																			
11							5760	4	4650	3	3860	2	3290	2	2860	2																					
12							6260	4	5040	3	4180	2	3550	2	3080	2	2720	2																			
14							7250	4	5830	3	4810	3	4070	2	3520	2	3100	2																			
15							7750	5	6220	4	5130	3	4340	3	3740	2	3280	2	2930	2																	
16									6610	4	5450	3	4600	3	3960	2	3470	2	3090	2																	
18									7400	4	6090	3	5130	3	4400	2	3850	2	3420	2	3080	2															
20									8180	4	6720	3	5650	3	4850	2	4230	2	3740	2	3360	2	3060	2													
25											8320	4	6970	3	5950	3	5170	2	4550	2	4070	2	3680	2													
30											9910	5	8280	4	7060	3	6110	3	5360	2	4780	2	4300	2	3910	2											
35													9600	4	8160	3	7050	3	6180	3	5490	2	4920	2	4460	2											
40													10910	5	9270	4	7990	3	6990	3	6190	2	5540	2	5010	2	4790	2									
45															10370	4	8930	4	7800	3	6900	3	6160	2	5560	2	5310	2									
50															11480	5	9880	4	8610	3	7610	3	6790	2	6110	2	5830	2	5560	2	5090	2					
55																	10820	4	9420	3	8320	3	7410	3	6660	2	6350	2	6000	2	5530	2			5100		
60																	11760	4	10240	4	9020	3	8030	3	7210	2	6860	2	6540	2	5970	2			5500		
65																			9730	3	8650	3	7760	3	7380	2	7030	2	6410	2			5890				
70																			10440	4	9270	3	8310	3	7900	3	7520	2	6850	2			6290				
75																			11150	4	9890	3	8860	3	8420	3	8010	3	7290	2			6690				
80																				11850	4	10520	3	9410	3	8940	3	8500	3	7730	2			7090			
85																										9460	3	9000	3	8170	2			7490			
90																											9980	3	9490	3	8610	3			7880		
95																																				8280	
100																																				8680	
110																																				9480	
120																																				10270	

Technical drawing of a horizontal cylindrical tank. The drawing shows the tank from a side perspective, highlighting its cylindrical body and various ports. Key features include:

- A central horizontal line representing the tank's axis.
- Two vertical lines on the left side, likely representing support legs or mounting brackets.
- A central vertical line on the right side, possibly indicating a central port or a structural reinforcement.
- Dimensions labeled: 'L' for the total length of the tank, and 'D' for the diameter.
- Various ports and valves are indicated by small symbols along the top and bottom edges of the tank.





FRP Large Diameter On-Site Vessel 玻璃钢大型现场容器



H M ³ D	150	200	300	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000	2200	2400	2500
4500	9050	12060																
5000	7670	10220																
5500	6350	8450	12650															
6000		7100	10640	14180														
6500		6050	9070	12080														
7000			7830	10420	13020													
7500			6820	9080	11350													
8000			5990	7980	11960													
8500				7080	8840	10600	12370	14130										
9000				6310	7880	9460	11030	12600										
9500					7080	8490	9900	11310	12720									
10000							8940	12220	11490	12760	15310	14760						
11000									9500	10550	12650	12410						
12000											10670	10570	14180	15950				
13000											9070	9120	12080	13590	15090			
14000													10420	11720	13020	14320		
15000													9080	10220	11350	12480	13610	14180



FRP Process Pipe 玻璃钢工艺管道



Excellent performance:

Zero maintenance cost: no anti-corrosion coating required, anti-ultraviolet aging (protective layer can be added).

Quick installation: modular design, flexible connection method, construction efficiency increased by 50%.

Environmental protection and safety: no heavy metal precipitation, in line with FDA and ISO 14692 standards.

Good insulation: resistivity $> 10^{12} \Omega \cdot \text{cm}$, eliminating electrochemical corrosion.

Anti-frost heave: elastic modulus adapts to temperature deformation, no brittle cracking at -30°C .

Economic benefits: the full life cycle cost is 30%-60% lower than that of metal pipes.

Corrosive medium transportation: chemical park, electroplating plant, pharmaceutical company.

High-pressure pipeline system: oilfield water injection pipe, natural gas gathering and transportation pipe.

Municipal environmental protection: urban integrated pipeline corridor, sewage treatment plant.

Special environment: high-cold areas, coastal salt spray areas, underground humid environment.





FRP Process Pipe 玻璃钢工艺管道

Why Choose our FRP Pipeline?

Strict control of raw materials: using OCV glass fiber, Huntsman resin and other international brand substrates.

Process guarantee: fully automated winding production line, 100% water pressure/ultrasonic testing.

Service support: provide value-added services such as fluid compatibility analysis, stress calculation, installation guidance, etc.



DN	0.6MPa		1.0MPa		1.6MPa		2.5MPa		L (m)
	t(mm)	w(kg/m)	t(mm)	w(kg/m)	t(mm)	w(kg/m)	t(mm)	w(kg/m)	
25	4.5	0.8	4.5	0.8	4.5	0.8	4.5	0.8	1
32	4.5	1	4.5	1	4.5	1	4.5	1	1
40	4.5	1.2	4.5	1.2	4.5	1.2	4.5	1.2	1
50	4.5	1.5	4.5	1.5	4.5	1.5	4.5	1.5	3
65	4.5	1.9	4.5	1.9	4.5	1.9	5.5	2.3	3
80	4.5	2.3	4.5	2.3	4.5	2.3	5.5	2.8	6
100	4.5	2.8	4.5	2.8	5.5	3.5	5.5	3.5	8
125	5	3.9	5	3.9	5.6	4.4	6.5	5.1	8
150	5	4.6	5.5	5.1	6	5.6	7.5	7	10
200	5.5	6.7	6	7.4	6.5	8	8	9.9	12
250	6	9.2	6.5	9.9	6.5	9.9	9.5	14.7	12
300	6.5	11.9	7	12.8	7	12.8	10.5	19.5	12
350	6.5	13.8	7	14.9	7.5	16	11.5	24.8	12
400	7	17	7.5	18.2	8	19.5	14	34.6	12
450	7	19.1	7.5	20.5	8	21.9	15	41.6	12
500	7.5	22.7	8	24.2	9	27.3	16	49.3	12
600	8.5	30.9	9	32.7	12	43.8	19	70.2	12
700	9	38.1	11	46.7	14	59.6	22	94.8	12
800	9.5	45.9	12.5	60.6	16	77.9	23.5	115.5	12
900	10.5	57	14	76.3	17.5	95.8	25	138	12
1000	12	72.5	15	90.8	19	115.5	27	165.4	12
1200	13	94.1							12
1400	16	135.2							12
1500	17	153.9							12
1600	18	173.8							12
1800	20	217.2							12
2000	23	277.6							12
2200	24	318.4							12
2500	27.5	414.7							12
2600	28.6	448.5							12
2800	30.2	509.9							12
3000	32.5	588							12
3400	35.9	735.9							12
3600	37.6	816							12
4000	39.8	959.2							12



FRP Mortar Pipe 玻璃钢夹砂管道



Main uses :

Municipal engineering: water supply and drainage, rainwater collection, and sewage treatment pipelines.

Industrial field: transportation of corrosive media in chemical, electric power, papermaking, and pharmaceutical factories.

Agricultural irrigation: water-saving irrigation system, water supply network.

Marine engineering: desalination, dock sewage discharge, and offshore platform pipelines.

Other fields: ventilation ducts, cable protection casings, mine tailings transportation, etc.

Application areas

Urban underground pipelines: replace concrete pipes to solve corrosion and leakage problems.

Power plant desulfurization system: acid and alkali resistant, suitable for wet desulfurization slurry transportation.

Oilfield gathering and transportation pipelines: corrosion resistance, reducing the erosion of crude oil and sewage on pipelines.

Highway drainage: light weight, high strength, high construction efficiency.





FRP Process Pipe 玻璃钢喷淋管道



Advantages and Features

Super corrosion resistance: completely solve the problems of metal pipe rust and electrochemical corrosion, suitable for high-corrosion scenarios such as desulfurization and electroplating.

Lightweight and easy to install: the length of a single pipe can reach 12 meters, reducing the number of connection points and reducing the lifting cost by 30%.

Maintenance-free design: no anti-corrosion coating is required, no scaling problem, and the cost of the entire life cycle is reduced.

Environmental protection and energy saving: the production energy consumption is only 1/3 of that of steel pipes, and 100% can be recycled.

Customized service: supports customization of diameters from DN50 to DN3000mm, and provides a variety of connection methods such as flanges and sockets.

Application areas

Environmental protection engineering: Flue gas desulfurization (FGD) spray tower circulation pipeline, wastewater treatment plant.

Chemical industry: Pickling production line, electrolyte transportation, chemical plant circulation cooling system.

Energy and power: Power plant cooling water system, nuclear power plant auxiliary pipeline.

Marine engineering: Seawater desalination, ship ballast water treatment.

Other fields: Process spray systems in papermaking, pharmaceutical, food processing and other industries.



FRP ipe Fitting 玻璃钢管件

The accessories of FRP pipes include elbows, tees, flanges, Y-joints, T-joints, reducers, etc.

1. Socket & Spigot Adhesive Joint
2. Flanged Joint
3. O-Ring Socket Joint
4. Butt & Wrap Joint
5. Clamp Coupling





FRP Composite Equipment 玻璃钢复合设备



****PVC/FRP**:** Resistant to acid, alkali, salt solution and some organic solvents, suitable for chemical, electroplating and other industries.

****PP/FRP**:** Resistant to strong corrosive media such as hydrofluoric acid and phosphoric acid, widely used in acid regeneration and metallurgical industries.

****PVDF/FRP**:** Resistant to strong oxidizing acids (such as concentrated sulfuric acid and nitric acid), organic solvents and high temperature corrosion environments.



FRP tower 玻璃钢塔器



Application

I. Application in the field of environmental protection

1. Desulfurization tower
2. Waste gas treatment tower
3. Deodorization tower
4. Spray tower

II. Application in chemical process field

1. Absorption tower
2. Scrubber
3. Neutralization tower
4. Drying tower
5. Process tower
6. Reaction tower

III. Application in other fields

1. Cooling tower
2. Filter tower
3. Distillation tower



Advantages of FRP tower:

Excellent corrosion resistance: can withstand corrosion from acids, alkalis, salts and a variety of organic solvents

Lightweight and high strength: weighs only 1/4 of steel, but its strength is comparable to alloy steel

Long service life: can reach more than 20 years under normal use conditions

Low maintenance cost: not easy to scale, no need for anti-corrosion treatment

Flexible design: various sizes and structures can be customized according to process requirements

Easy installation: can be hoisted as a whole or assembled in sections, with a short construction period



FRP Chimney

玻璃钢烟囱



FRP chimney widely used in waste gas emission scenarios that require corrosion resistance and high temperature resistance, including:

Chemical industry: acid mist, alkali mist, organic waste gas emission

Power industry: flue gas treatment of coal-fired power plants and waste incineration plants

Metallurgical industry: waste gas emission of blast furnaces and coking plants

Environmental protection engineering: desulfurization and denitrification (FGD) system, waste gas treatment of sewage treatment plants

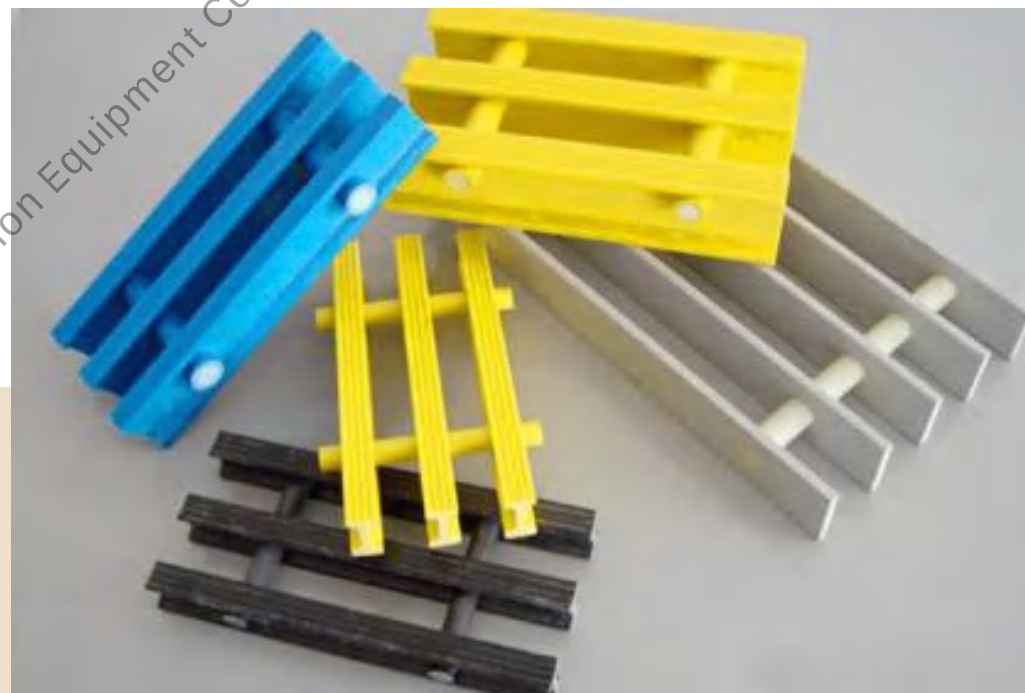
Other fields: ventilation and smoke exhaust in pharmaceutical, papermaking, food processing and other industries





FRP Profiles

玻璃钢型材



Standard profile types

Rods: diameter $\Phi 5$ -100mm

Pipes: $\Phi 20$ -500mm (wall thickness 2-15mm)

I-beam/channel steel: height 30-300mm, wing width 50-200mm

Square tube: 20×20mm to 400×400mm

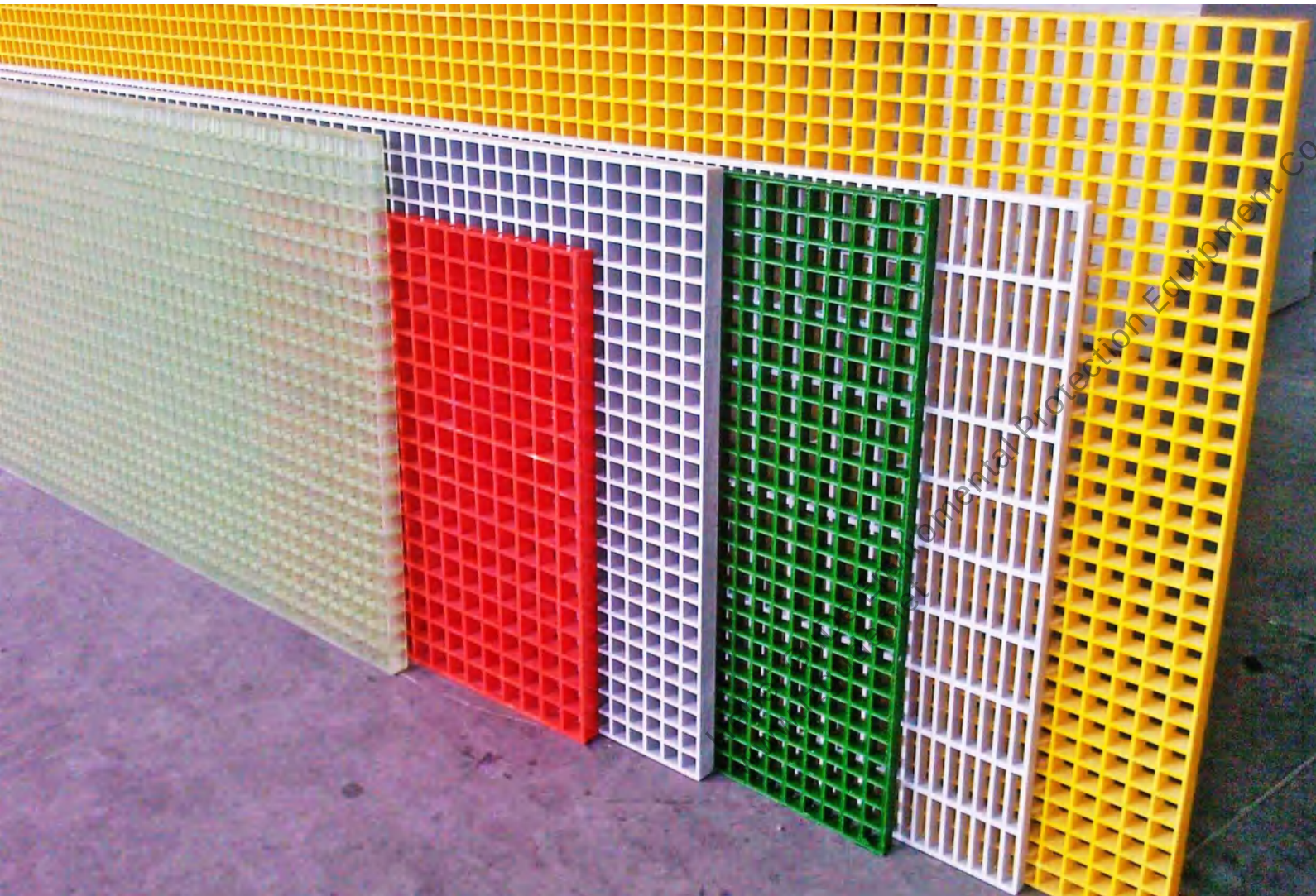
Customization capabilities

Support non-standard cross-section design (such as special-shaped structures, hollow multi-cavity).

The length is usually 6m/branch, which can be extended to 12m.



FRP Grating 玻璃钢格栅



FRP grating has become an ideal substitute for traditional metal gratings due to its excellent corrosion resistance, high strength, light weight and long life. As a professional FRP grating manufacturer, we provide a variety of specifications and customized services, suitable for chemical, electric power, shipbuilding, construction and other fields. If you need to know more about the price, model and installation method of FRP grating, please consult!

Choose thickness according to load-bearing requirements: light load (25mm), medium load (38mm), heavy load (50mm).

Consider the corrosive environment: choose a resin type that is resistant to acid, alkali and salt spray.

Anti-slip requirements: choose a sand surface or patterned surface treatment.

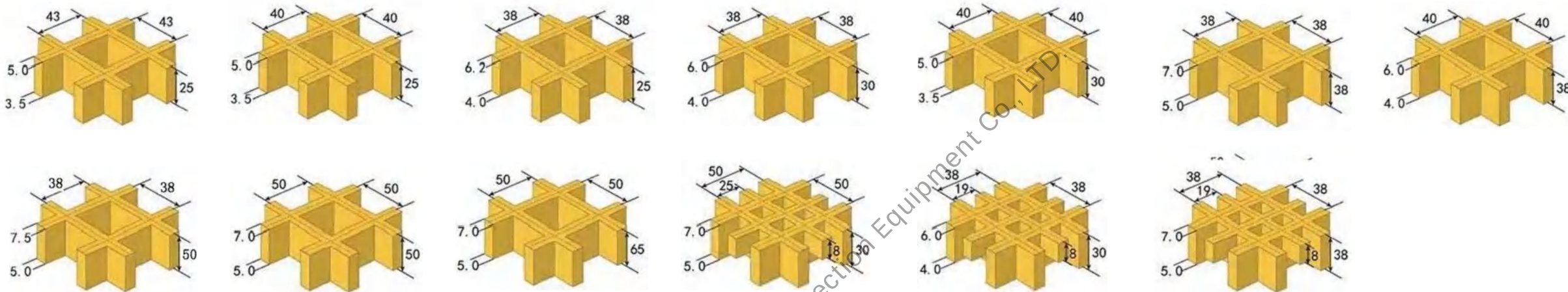
Color and aesthetics: choose the right color according to the use environment.

Hebei GuDe Enviromental Protection Equipment Co., LTD.
www.jzgude.net



Product Size and Parameters of FRP Grating

玻璃钢产品尺寸及参数



Product specifications and services of FRP grating

1. Common specifications

Grate size: common 1220×3660mm, 1000×4000mm, etc., can be customized.

Grate thickness: 25mm, 30mm, 38mm, 50mm, etc., optional for different load-bearing requirements.

Grid size: 19×19mm, 38×38mm, 50×50mm, etc., affecting drainage and anti-slip performance.

Color selection: yellow, green, gray, red, etc., corporate colors can be customized.

2. Customized service

Provide special-shaped cutting, punching, edging and other processing services.

Support special resin formulas (such as high temperature resistance, flame retardant, UV resistance, etc.).

Provide installation guidance and after-sales maintenance support.

Thickness (mm)	Single Grid Size (mm*mm)	Length*Width (mm*mm)
25	43*43	1001*4036
25	40*40	1007*3007
25	38*38	1220*3660
30	38*38	1220*3660
30	40*40	1220*4025
38	38*38	1220*3660
38	40*40	1007*3007
50	38*38	1220*4000
50	50*50	1220*3660



Whole board concentrated load uniform load data table 整板集中负载均布负载数据表

Grid Size 40*40*40mm Plate Size 1007*3007mm

Support distance(mm)	Center load KGS width 90cm	Deformation(mm)	Uniform load KG/SQM
1000	558	6	860
900	690	6	1172
600	2137	8	5830

Grid Size 40*40*25mm Plate Size 1007*3007mm

Support distance(mm)	Load under 1% deformation of the whole plate center load (KGS)	Uniformly distributed load at two points with 1% deformation (KGS/SQM)
250		
500	830	5200
750	460	1270
1000	305	492

Grid Size 38*38*38mm Plate Size 1220*3660mm

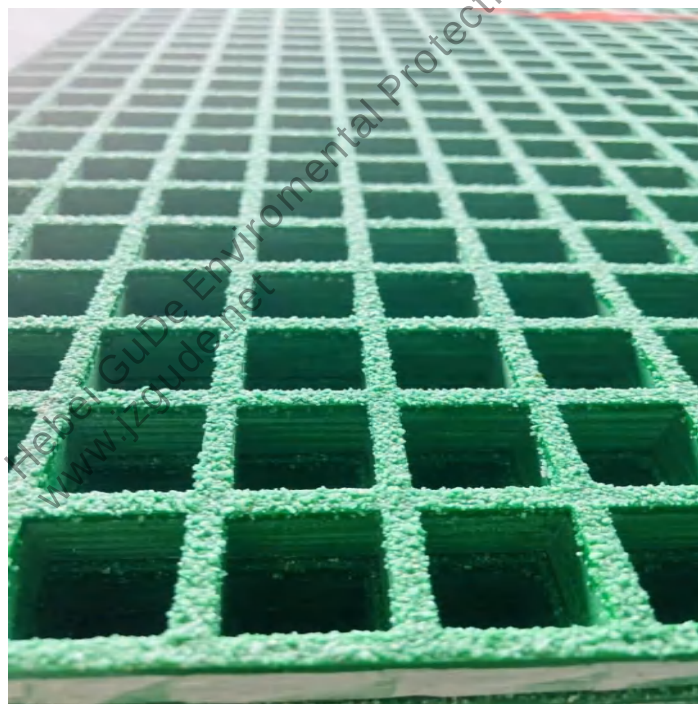
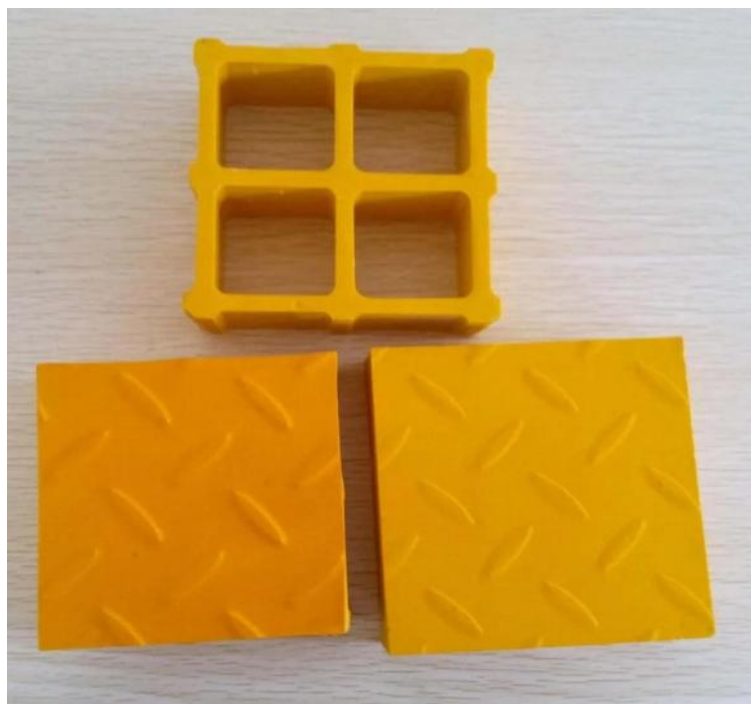
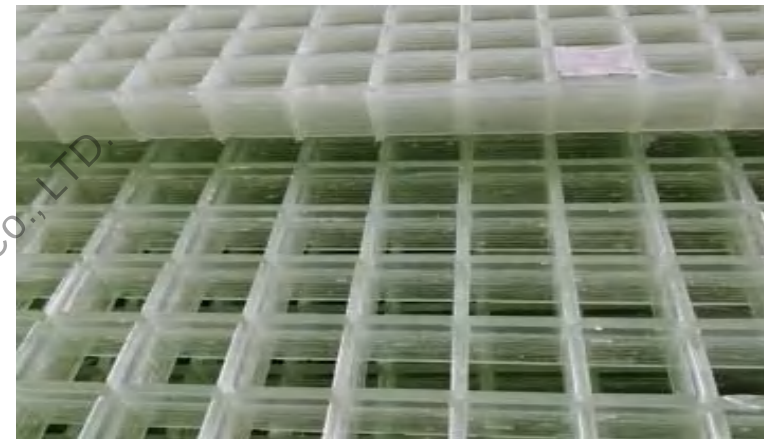
Support distance(mm)	Load under 1% deformation of the whole plate center load (KGS)	Uniformly distributed load at two points with 1% deformation (KGS/SQM)
457		8503
610	900	3592
762	660	1710
914	570	1075
1067	418	685
1219	318	464

Grid Size 50*50*50mm Plate Size 1220*3660mm

Support distance(mm)	Load under 1% deformation of the whole plate center load (KGS)	Uniformly distributed load at two points with 1% deformation (KGS/SQM)
610	1558	6328
762	1000	3226
914	704	1881
1067	581	1173
1219	504	782



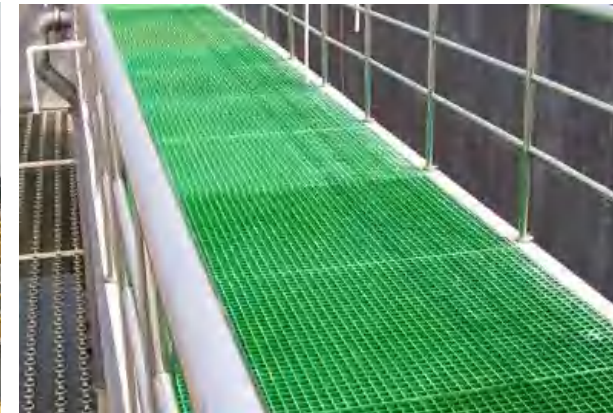
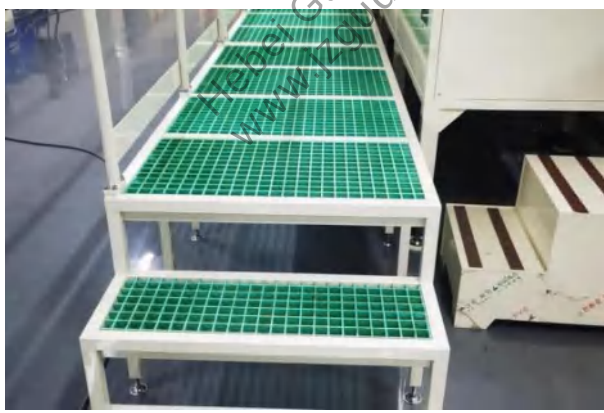
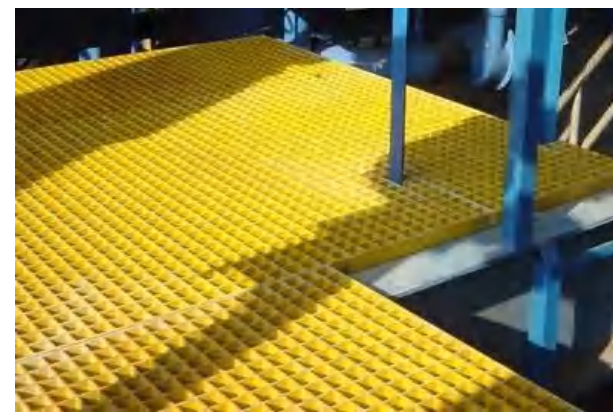
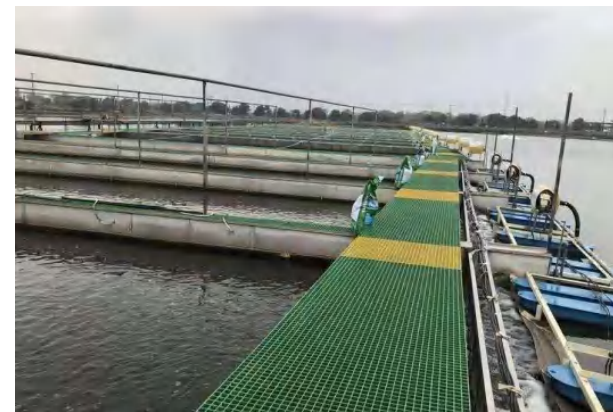
Different Type of FRP GRATING 玻璃钢格栅的种类





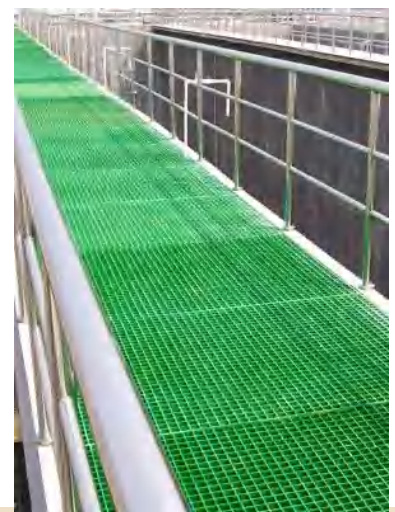
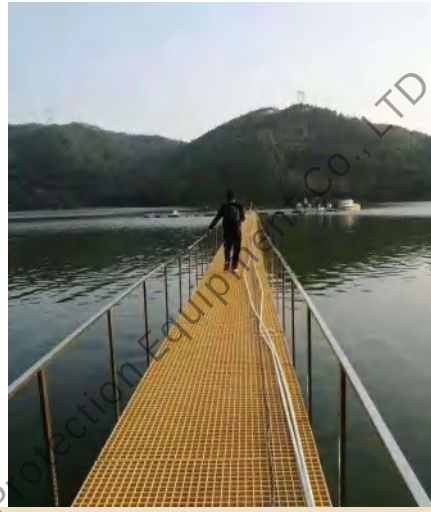
Application of FRP GRATING

玻璃钢格栅的应用





Application of FRP GRATING 玻璃钢格栅的应用



FRP gratings are used in chemical, petroleum, smelting, electricity, electroplating, batteries, machinery, pharmaceuticals, printing and dyeing, mining, sewage treatment, house decoration, municipal engineering, car washes and other fields;

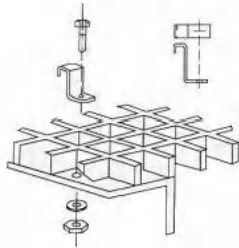
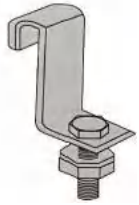
Specific applications: operating platforms, ditch covers, ditch gratings, photovoltaic aisle panels, cable trench covers, ship deck drainage gratings, greening tree grates, breeding platforms, car wash drainage gratings, underground garage drainage ditch gratings, and drainage ditch gratings.

Application Field	Accidental Walkway	Maintenance access	Frequent walkway	Non-motorized vehicle walkway	Light motor vehicle walkway
Center load KGS	115	135	180	360	680
Recommended deformation (mm)	6-9.5	6-9.5	6-9.5	6-9.5	6-9.5

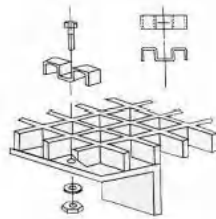
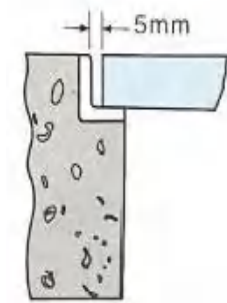




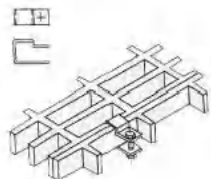
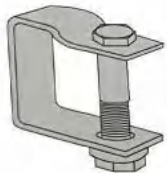
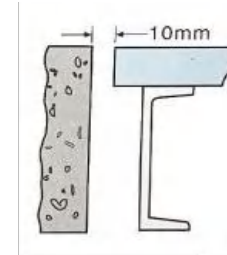
Installation and accessories 安装及配件



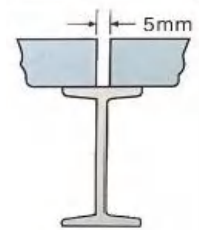
"L" type clamps are used for special positioning and connection between the grille and the bracket material.



"M" type clamps are used for positioning and connection between the grille and the bracket material.



"C" type clamps are used for the continuity of the edges of two grilles to give the platform good overall performance





FRP Grating for ETP /STP Plants 污水处理厂用玻璃钢格栅

Fiber Reinforced Plastic (FRP) grating is a highly durable, lightweight, and corrosion-resistant material widely used in Effluent Treatment Plants (ETP) and Sewage Treatment Plants (STP). Due to its exceptional resistance to chemicals, moisture, and harsh environments, FRP grating for wastewater treatment has become a preferred alternative to traditional steel and aluminum gratings.

In this comprehensive guide, we will explore the benefits, applications, types, and installation methods of FRP grating in ETP/STP plants, along with key factors to consider when selecting the best grating for your project.





Why Choose FRP Grating for ETP & STP Plants?

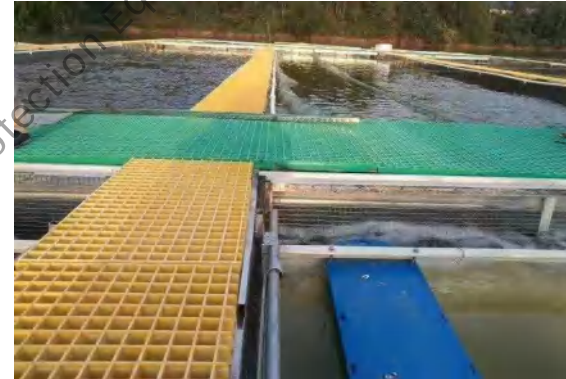
ETP and STP plants operate in highly corrosive environments due to exposure to chemicals, sewage, acids, alkalis, and moisture.

1. Superior Corrosion Resistance
2. High Strength-to-Weight Ratio
3. Slip-Resistant & Safety Compliant
4. Low Maintenance & Long Lifespan
5. Electrically Non-Conductive & Fire Retardant



Applications of FRP Grating in ETP & STP Plants:

1. Walkways & Platforms
 - Provides safe access for maintenance personnel
 - Resistant to chemical spills and moisture
2. Drain Covers & Trench Grating
3. Stair Treads & Catwalks
4. Biogas & Chemical Storage Areas
5. Clarifiers & Aeration Tanks

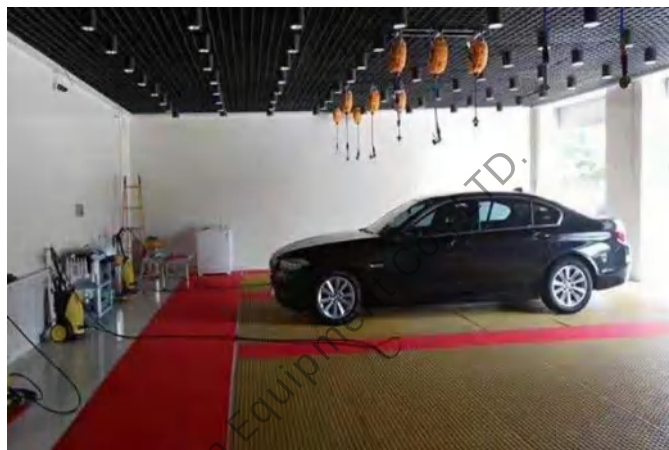


As a leading FRP grating manufacturer, we provide:

- ✓ High-quality, ISI-certified FRP grating
- ✓ Custom sizes and thicknesses for any application
- ✓ Competitive pricing & fast delivery
- ✓ Expert technical support for installation guidance



FRP Grating for car wash shop 洗车房用玻璃钢格栅



The car beauty industry has grown and developed, and composite fiberglass grating has become one of the preferred decoration materials for car washes. Fiberglass grating station size for car washes:

Standard parking space: 6*3 meters; small parking space: 2.44*4.88

Medium parking space: 3.66*4.88 meters; large parking space: 3.66*6.1 meters.

Green and red, green fiberglass grating as the main color, giving people a sense of security, red as the side color, making the color matching feel elegant.

Gray and green: Gray as the main color, after washing the car, under the light, the car will become very bright, green as the color change, giving people a comfortable feeling.





FRP Mini Mesh Grating for breeding 养殖专用玻璃钢格栅



How to choose FRP microporous mesh panels' hole size?

Small-hole mesh (usually 12 or 19mm) can effectively prevent the feet of young animals from sinking, and is particularly suitable for breeding scenes of young animals such as poultry and piglets.

Large-hole mesh (aperture 38-40mm) is more suitable for adult livestock farms. The larger through-hole rate significantly improves the sewage discharge efficiency and can increase the removal speed of liquid feces by 2-3 times. This type of board is particularly suitable for hoofed animal breeding.

How to choose FRP microporous mesh panels' thickness?

Generally speaking, for conventional livestock and poultry breeding sheds, such as chicken houses and pig houses, the recommended FRP mesh panel thickness should be between 25mm and 38mm. This thickness of mesh panels can effectively carry the weight of livestock and poultry and items such as feed, while maintaining good trampling resistance, and are not easy to deform or break after long-term use. At the same time, a moderate thickness can also ensure that the mesh panel has sufficient rigidity, reduce the noise caused by livestock and poultry trampling, and create a quieter and more comfortable growth environment for livestock and poultry.





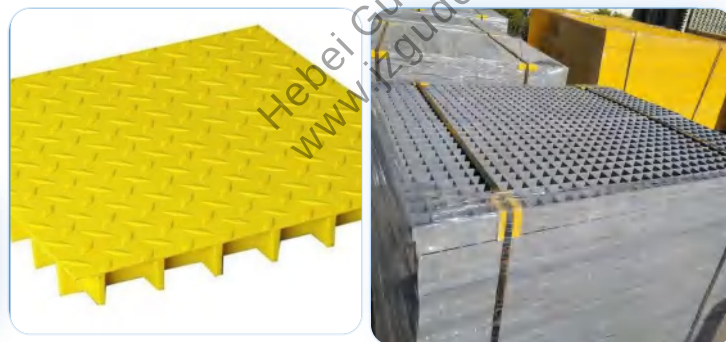
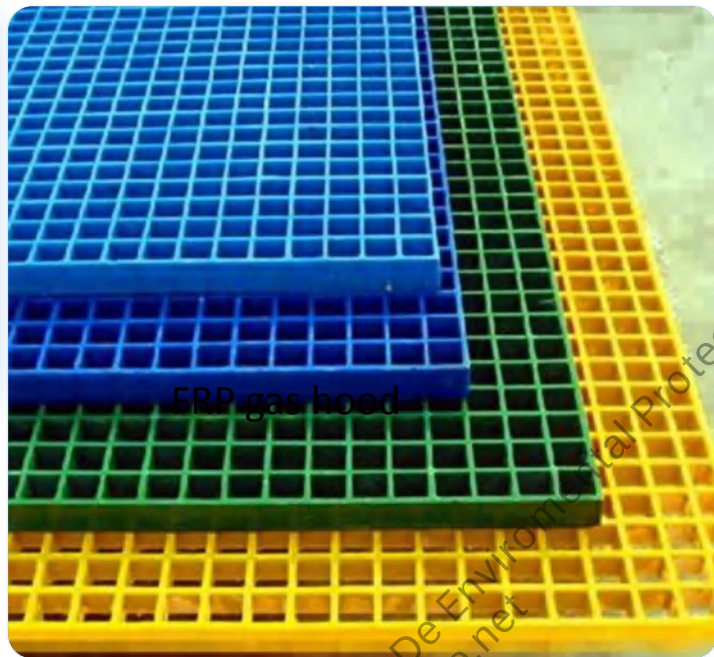
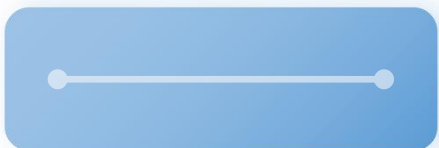
FRP Process Pipe 玻璃钢工艺管道





FRP Grating

玻璃钢格栅



● Application fields

Industry Application scenarios

Petrochemical: Platform, walkway, tank fence, sewage treatment pool cover

Electric power: communication Cable trench cover, substation walkway, insulated pedal

Marine and marine: Deck, gangway, dock anti-slip walkway

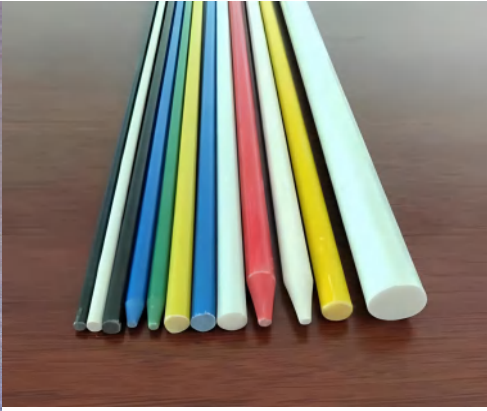
Food and pharmaceutical: Workshop floor, cleaning platform, anti-corrosion workbench

Municipal construction: Greening tree pool cover, pedestrian bridge, drainage ditch cover

Environmental protection industry: Waste gas treatment tower platform, desulfurization tower grille



FRP Profiles 玻璃钢型材



Fiberglass Reinforced Plastic (FRP) Profiles are composite material profiles made from fiberglass as the reinforcing material and unsaturated polyester resin (or epoxy resin, etc.) as the matrix, manufactured through processes such as pultrusion or molding.

Features:

Lightweight & High Strength

Corrosion Resistance

Excellent Insulation

Design Flexibility

Long Service Life

Types:

Angle Profiles, Round Bar, Solid Bar

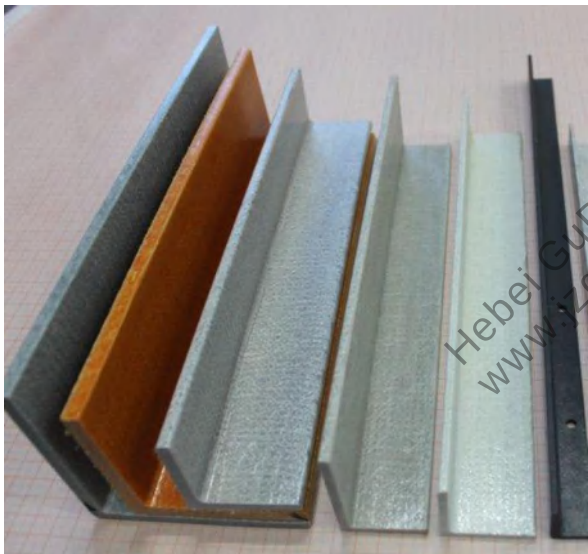
U-Channel, C-Channel, H-beam

FRP fence, FRP Ladder

Round Tube, Square Tube



Angle Profiles 角钢



FRP Angle	Equal Angle	Unequal Angle
Material	E-glass/Vinyl Ester	E-glass/Vinyl Ester
Leg Length	20×20mm - 200×200mm	30×20mm - 150×100mm
Thickness	3mm-20mm	4mm-15mm
Length	1m-12m	1m-12m
Fiber Content	50-70%	50-70%
Application	Automotive,Chemical Processing,Construction,Conduit Rods ,Fishing Rods,Oil & Gas,Power Generation	
All above products support customization		



Round Bar圓棒



FRP Round Bar	
Material	E-glass
Diameter	Φ2mm -Φ300mm
Length	1m-12m
Tolerance	±0.1mm-±0.5mm
Fiber Content	60%-70%
Application	Chemical Processing Equipment, Mechanical Drive Components, High-Voltage Insulation Assemblies, Renewable Energy Systems,
All above products support customization	



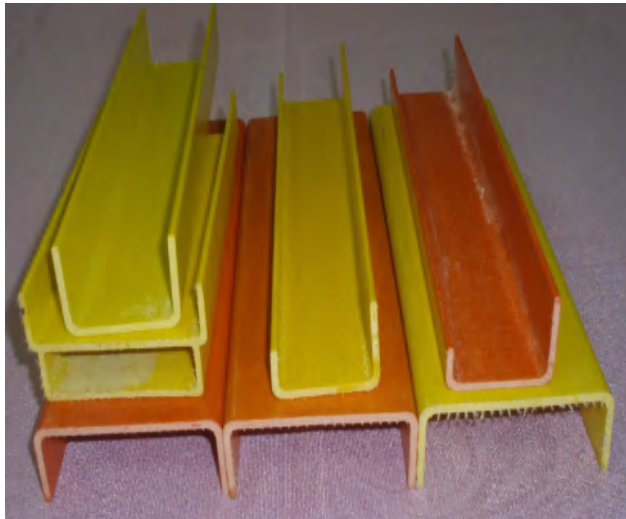
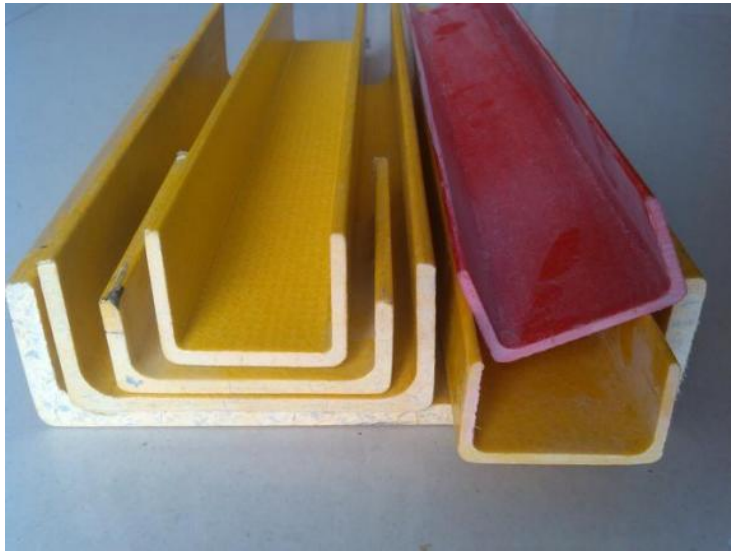
Solid Bar 实心棒



FRP Solid Bar	
Material	E-glass
Diameter	Φ2mm -Φ300mm
Length	1m-12m
Tolerance	±0.1mm-±0.5mm
Fiber Content	60%-70%
application	Industrial equipment, energy and power supply, communication and trasportation, building and public utilities
All above products support customization	



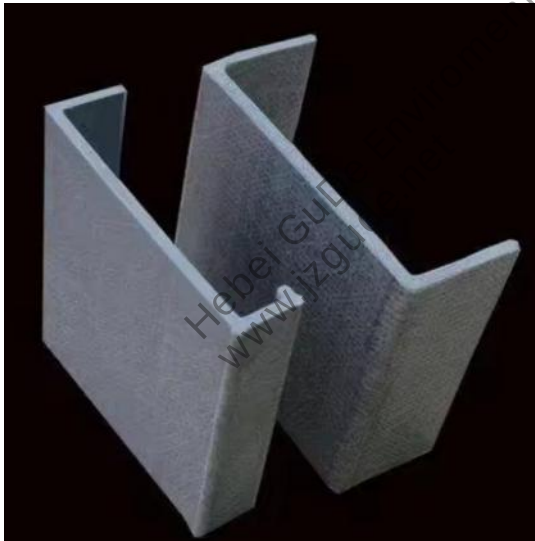
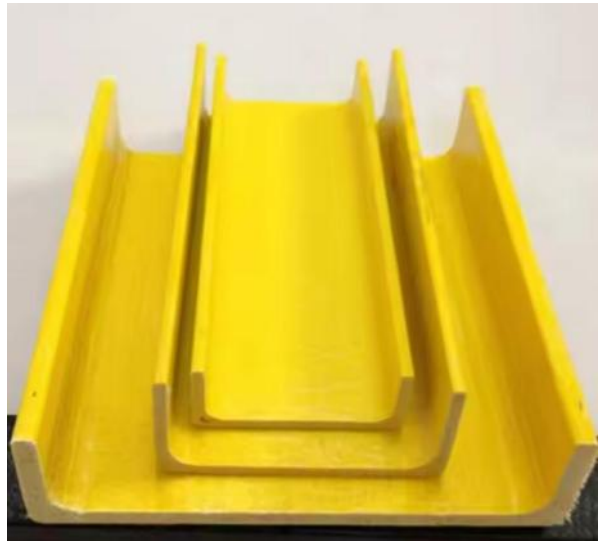
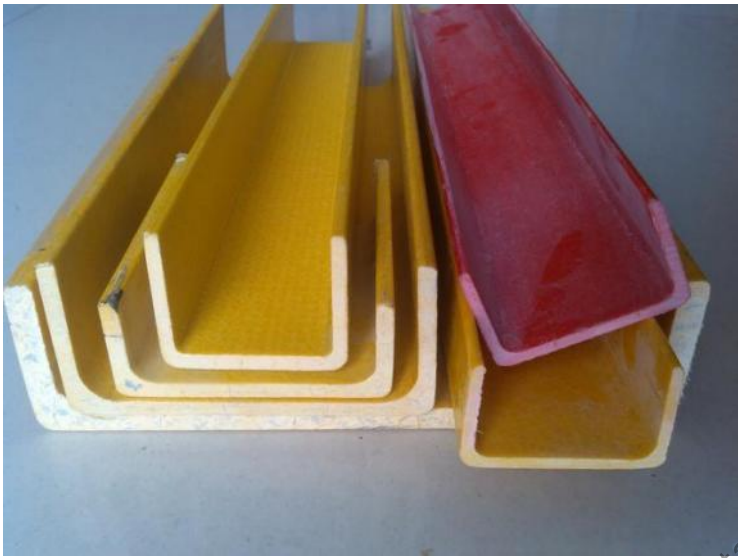
U-Channel U型槽钢



U-Channel	small-scale	small and medium sized	medium-sized	medium to large	large-scale	extra-large
Material	glass fiber					
width(mm)	50	100	200	300	500	1000
depth(mm)	30	50	100	200	300	600
wall thickness(mm)	2	3	4	5	6	8
length(mm)	2000	3000	4000	6000	6000	6000
application	balcony drainage,pet feeding,kitchen drainage,cable tray,outdoor road drainage,green belt,parking lot drainage,industrail workshop,municipal engineering,highway drainage,large-scale hydraulic projects,airport runways					
All above products support customization						



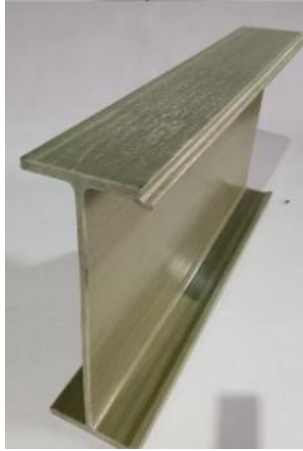
C-Channel C型槽钢



C-Channel		
height(mm)	50	100
Flange Width(mm)	37	48
Thickness(mm)	2.5	5
Application	chemical and anticorrosion works, power and electric facilities, communication and transportation, transportation,ocean and ship,nuclear power plant, food product factory	
All above products support customization		



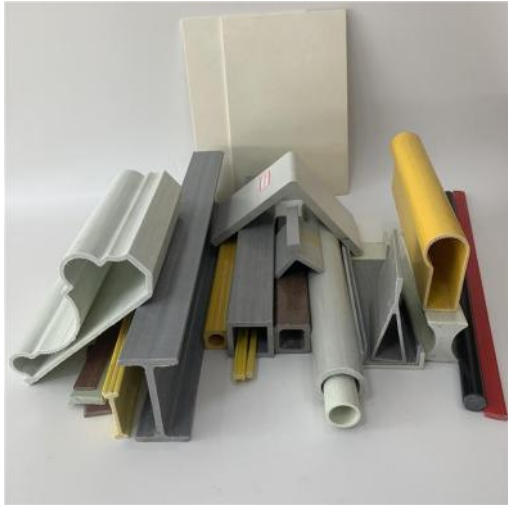
H-beam工字钢



H-beam			
height (mm)	100	150	200
width (mm)	50	100	100
Thickness(m m)	8	10	10
application	chemical and anticorrosion engineering,electricity and new energy resources,building and public facilities,off shore oil platform walkway,guardrail support,food and medicine,electrical workshop		
All above products support customization			



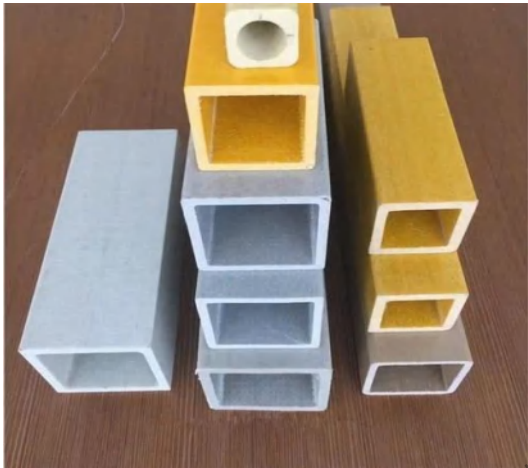
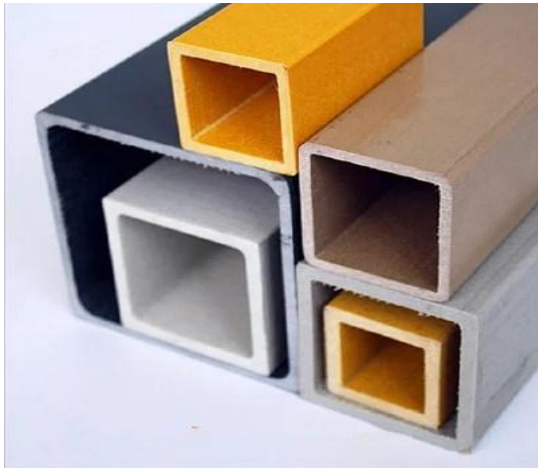
Round tube 圆管



Round tube	
Diameter(mm)	20×20~ 400×400
Wall Thickness(mm)	2~15
Length(mm)	1-12m
Flexural Strength(MPa)	≥150MPa
Compressive Strength(MPa)	≥100MPa
Fiber Content	≥50%
Application	Roof support,Scaffold / Pergola,Railing,Drainage pipeline,Stair handrail,Chemical industry pipeline,Exhaust gas treatment,Sewage treatment,Cable protection pipe,Irrigation pipeline,Golf club,Fishing rod
All above products support customization	



Square Tube 方管



Square tube	
Width × Height(mm)	DN50~DN2000
Wall Thickness(mm)	2~30
Length(mm)	6-18m
Ring Stiffness(N/m²)	SN5000 SN10000
Pressure Rating(MPa)	0.6/1.0/1.6
application	Structural support,Balcony railing,Veranda column frame,Building drainage pipeline,Ventilation duct,Cable protection casing,Ship deck guardrail,Greenhouse skeleton,Machine tool protective cover
All above products support customization	



FRP fence 玻璃钢围栏



FRP fence	height(mm)	column size (mm)	number of horizontal bars(mm)	spacing(mm)
courtyard fence	1200	square 60×60×3	3 pieces/ square 30×30×2	Column spacing 2000
industrail fence	1800	rectangle 80×100×5	4 pieces/ circular Φ50	Column spacing 2500
stair handrail	1050	circular Φ80×4	2 pieces / circular Φ40	Crossbar spacing 450
All above products support customization				



FRP Ladder 玻璃钢梯子

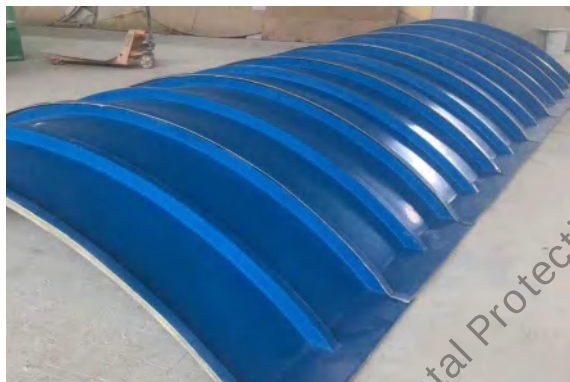


FRP Ladder	Straight Elevator Series		man-made ladder series
height	1m-12m (0.5m interval)	Developed Height	1.5m-5m
Step Rod Spacing	280±10mm	Tread Width	≥300mm
Step Rod Diameter	Φ32mm/ Φ38mm	Self-Standing Angle	65°-75°
Section Size	60×40mm Square Tube/50×30mm Rectangular Tube	Safety Support Bar	Adjustable
All above products support customization			



FRP Gas hood

玻璃钢集气罩



Application fields

Environmental protection engineering: waste gas collection in aeration tanks and sedimentation tanks of sewage treatment plants.

Chemical industry: volatile gas sealing above pickling tanks and reactors.

Food processing: odor control in fermentation workshops.

Energy and power: flue gas hood of desulfurization tower.





FRP Tank Production 玻璃钢罐生产现场



The production process of FRP tank body mainly includes
lining process and winding process,
which are the core manufacturing processes.



FRP Pipe Production 玻璃钢管道生产现场

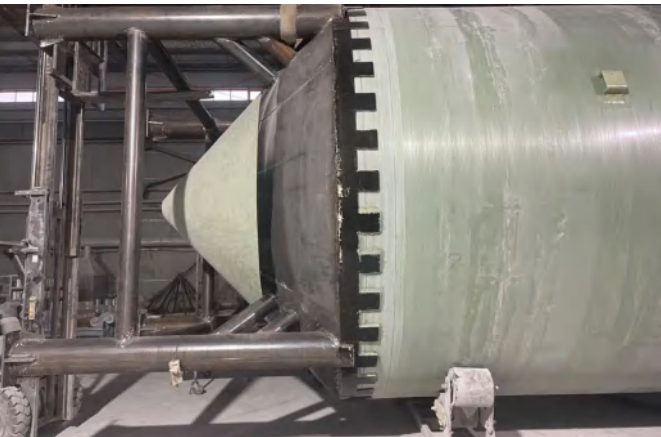


Lining production , Winding molding, Curing demoulding and trimming

Features: High degree of automation, suitable for mass production, strength can be designed in a directional manner.



FRP Parts Assembly 玻璃钢部件组装





Welcome your inquiry about the FRP products

including cable tray, Cover Plate for Sewage treatment, FRP Fans, FRP SMC Panel water tank, etc.

We will quote you the best possible price as per your requirement.





Why US



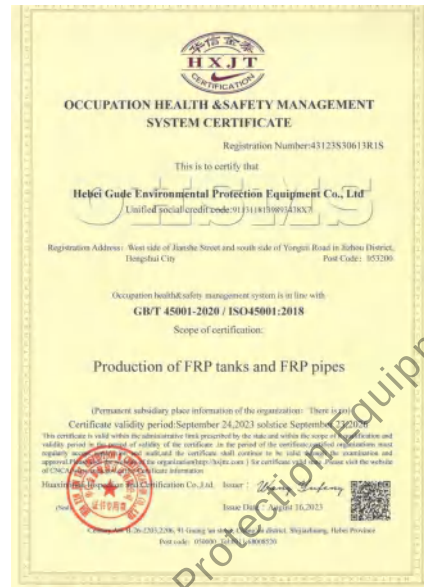
Strict quality control: ISO 9001 certification, full-process testing to ensure product consistency.

Professional design support: Provide media compatibility analysis, structural strength simulation and other services.

Fast delivery: mature production lines support large-volume orders.

If you need further technical parameters or case materials, please feel free to contact us!





谢谢观看

Thanks for watching

FRP has become an important material in modern industry, municipal construction and other fields due to its excellent corrosion resistance, high strength, lightweight and safety and anti-slip advantages. As a professional FRP manufacturer, we can provide customized solutions according to customer needs to ensure product performance and service life. If you need more technical parameters or purchase consultation, please feel free to contact us!

—— Hebei GuDe, a professional fiberglass grille manufacturer



Hebei GuDe Environmental Protection Equipment Co., LTD.

Contact Person: Selina Zhang

E-Mail: info@jzgude.net

Wechat/WhatsApp/Cell: +86-15075823759

Welcome Your Inquiry!