



## General

Tongyi Power has over 15 years of experience in manufacturing FRP Rod (fiberglass reinforced polymer rod) and has been exporting them to many clients worldwide.

FRP Rods produced by our company has applied the **pultrusion process technology**, of which high-quality raw materials of reinforced glass fibers and epoxy resin are used.

Our FRP Rods are designed and manufactured mainly for applications of electrical and power industries with a variety of cross section diameters ranging from 6mm to 110mm at any length at option.

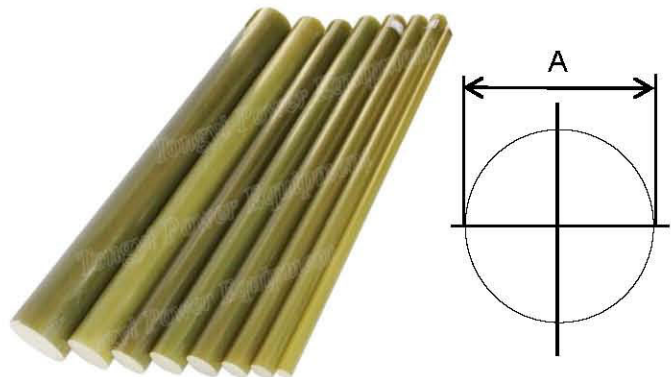
## Applications

Mainly for **power and electrical** industries, such as composite/polymer insulators, cable tray, insulation rod, arrestor, power transformer and resistor, switchgear; tap changers, Cryogenic insulation, underwater conditions, electrical equipments and so on.

Besides, our pultruded FRP rod could also be used in other various industries where insulation, resistance to stress, weathering and corrosive atmospheres are important.

## Properties

- Superior mechanical strength and high
- Good Corrosion resistance
- Light weight and low maintenance
- Long life cycle
- Arc and track resistant
- Electromagnetic transparency
- Non-magnetic and flame resistant
- Excellent electrical insulation
- Non-conductive thermally and electrically



## Product Specification

Diameter-mm (A)	Kg/Mtr	Diameter-mm (A)	Kg/Mtr	Diameter-mm (A)	Kg/Mtr
6	0.060	22	0.805	40	2.660
8	0.116	24	0.960	45	3.370
10	0.176	25	1.040	48	3.830
12	0.240	28	1.305	50	4.160
16	0.430	30	1.500	53	4.670
17	0.481	32	1.728	60	5.990
17.48	0.508	34	1.920	63	6.605
18	0.540	35	2.040	70	8.150
19	0.600	36	2.160	80	10.650
20	0.670	38	2.400	90	13.480

Note: Custom diameter and length according to the drawing are available upon request.





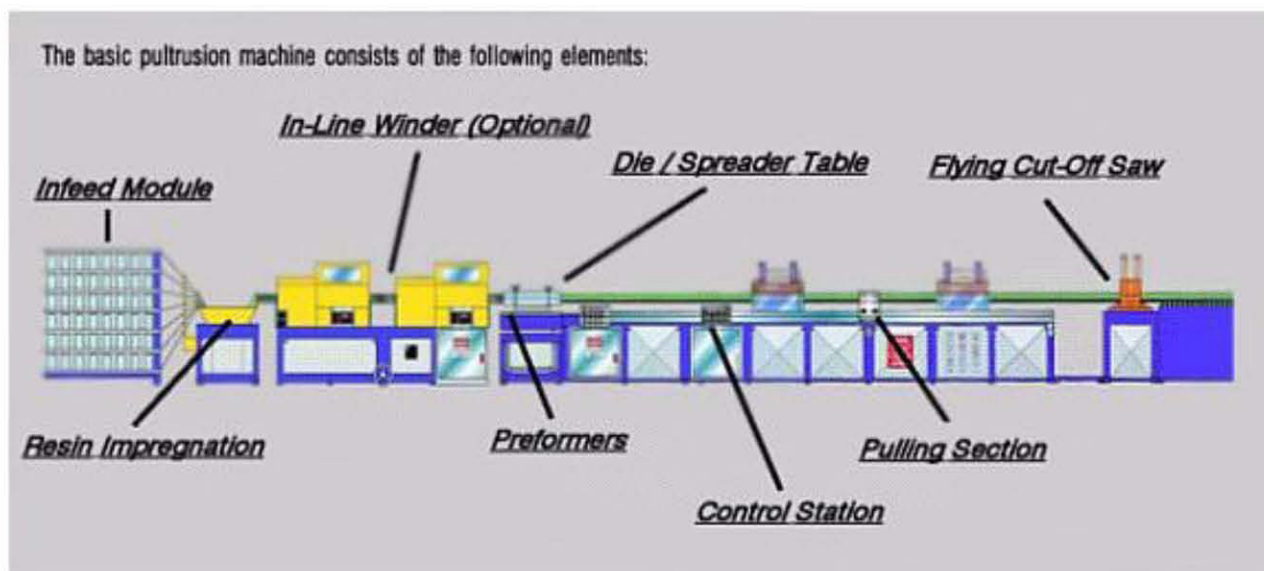
## Technical Data

No.	Item	Unit	Values	Standard	Evaluation
1	Density (20±2℃)	g/cm <sup>3</sup>	≥2.1	ASTM D 792	Pass
2	Water Absorption Rate	%	≤0.05	ASTM D 570	Pass
3	Tensile Strength	Mpa	1420	ASTM D 638	Pass
4	Bending Strength	Mpa	900	ASTM D 790	Pass
5	Torsional strength	N/mm <sup>2</sup>	≥90	ASTM D4923	Pass
6	Thermal Bending Strength	Mpa	≥300	ASTM D 790	Pass
7	Dye Penetration Test	min	≥15	ASTM D5117	Pass
8	Volume Resistivity (140°C,96h)	Ω·m	≥10 <sup>10</sup>	ASTM D 257	Pass
9	Water Diffusion Test (0.1% NaCl,100h,12kv,1min)	mA	<0.03	IEC 1109	Pass
10	Lightning Impulse Withstand Voltage (100kv)	times	≥5	ASTM D 149	Pass
11	D.C. Breakdown Voltage	kv	≥50	ASTM D 149	Pass
12	Heat deflection temperature	℃	≥135	ASTM D 648	Pass
13	Glass Fiber Content	%	70-80	ASTM D2584	Pass

Above results are tested from diameter 18mm sample rods.

Standards: in strict accordance with relevant ASTM, IEC, GB/T and Enterprise Standards

## Pultrusion Process



For more knowledge of pultrusion process, please read our online articles accordingly.

**FRP Rod | ECR Rod | FRP Tube | FRP Rebar | FRP Thread | FRP Profile**

