Limited Liability Company **COMPOSITE GROUP CHELYABINSK** Registered/ Actual Address: 454047, ul. 2-ya Paveletskaya , 36/1, office 303, Chelyabinsk, Russia Federation

COMPOSITE GROUP CHELYABINSK

SERVING TO PRODUCE PERFECTION

PRODUCTION LINE FOR MANUFACTURING OF FIBER REINFORCED POLYMER BENT ELEMENTS Bent CG-1500

FRP bent elements are used for band foundations, foundation slabs, floor slabs, piles, pillars and other structures requiring increased strength, load distribution or reducing the total weight of the product.

Welding of composite reinforcement is not possible due to the dielectric properties of the material, so the formation of angles during reinforcement should be performed using ready-made bent elements. The use of bent elements allows better distribution of tensile and strain loads, making the frame solid, and therefore more durable, which positively affects the strength of the reinforced concrete product.

Composite bent elements are available in the form of L-shaped, U-shaped and sinusoid elements of standard sizes.

Technological line **Bent CG-1500** (max distance between the vertices of the sinusoid 1500 mm) is designed for the production of bent elements from glass and basalt roving.

Advantages of our Bent CG-1500 processing line:

- The line designed to produce FRP L-shaped and U-shaped elements with max width 1500 mm, depth 1000 mm, max turning radius of 100 mm and a sinusoid shape with a maximum distance between peaks of the sine wave 1500 mm, the depth from the top to the extreme lowest point is 1000 mm.
- The ability to form bars with a diameter of 2 to 24 mm, to produce bent elements in three dimensions.
- Production and cutting of bars occurs both in manual and automatic mode.
- Capacity up to 2000 meters per shift depending on the bar diameter.
- The working staff is 1-2 people.

Parameters of the line:

Length: 14 m.
Width: 1.5 m.
Height: 1.5 m.
Installed capacity: from 15 kW/h.
Water consumption: 15 l/day
Air consumption: 90 - l/h.

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Features of the line:

- Four-channel microwave polymerization and usage of high quality thermoregulators allow step-by-step heating. The presence of proportional-integral-differentiating regulation allows the furnace to operate in the most optimal mode. The operating temperature of the furnaces is up to 400°C. Heating elements are made of stainless steel, which significantly increases the service life and reduces energy consumption. The furnace is insulated with thermal insulation materials, which allows eliminating the deformation of the furnace structure. The surface of the oven is heated to 50°C.
- The heating system of the epoxy-polymer binder in the impregnation bath increases the life of the finished mixture. The roving thread pre-tensioner is equipped with a system for automatically alerting and disabling the pulling mechanism when the roving thread nodes are encounter.
- The line is equipped with a roving preheating system.
- The rollers and guides that are in direct contact with the reinforcing bar during production are made of St 45 steel.
- Ability to adjust the step of the periodic profile.
- The volume of each epoxy resin bath is 8 liters
- Possibility of quick replacement of the bath for the epoxy-polymer binder.
- Adjustable product drawing speed on the operator panel
- High-precision pulse counter for calculating the meter of finished products

Delivery set

N	Name of equipment	Quantity	Unit of measure
1	Control panel	1	Pc
2	Roving rack	1	Pc
3	Impregnating bath with tensioning device	1	Pc
4	Automatic spiral winding unit	1	Pc
5	FRP rebar layout unit	1	Pc
6	Polymerization chamber	1	Pc
7	Haul-off unit - conveyor	1	Pc
8	Cutting unit	1	Pc

9	Receiving table	1	Pc
10	Roving winder	1	Pc
11	Guidance	1	Pc
12	Specification sheet	1	Pc

The cost of the line

For actual cost, please, refer to our sales office:

Email: armatura@composit-group.ru, bd@composit-group.ru

Phone: +7 351 216 33 00

Note: The cost of the line includes installation, technology, commissioning and staff training. The price does not include the cost of travel and accommodation for 2 installers to the place installation and back.

Materials employed in production

- Glass Roving
- Epoxy resin
- MTHPA resin
- Nano composite KG
- Lavsan thread
- Quartz sand

Warranty period - 12 month