SPACE-R™: The Next Generation of Concrete Reinforcement

A smarter, stronger, and rust-proof alternative to traditional steel stirrups

What is SPACE-R?



SPACE-R is an innovative **concrete column stirrup** made from continuously wound glass fiber instead of traditional steel. Normally, steel or glass-fiber stirrups are bent into shape, which causes them to lose a significant amount of their strength at the corners. Because SPACE-R is continuously wound around a core rather than bent, it keeps 100% of its original strength. It completely encloses the vertical rebar, offering a stronger, smarter way to build concrete columns.

The Advantages

- **Maximum Strength, No Weak Points:** Traditional bent stirrups lose up to 80% of their strength where they are bent. Our unique winding process keeps the glass fibers perfectly straight and tensioned, delivering full strength and 500% more restraint than open-ended stirrups.
- **Zero Rust, Longer Lifespan:** Made of Glass Fiber Reinforced Polymer (GFRP), SPACE-R is immune to rust, moisture, and chemicals. Structures last 3 to 4 times longer than those built with steel, with virtually no maintenance.
- **Exact Concrete Coverage:** Built-in spacers automatically guarantee the exact 1.5 inches of concrete cover over the vertical rebar as required by code.
- **Fast Installation:** Integrated zip-ties let workers quickly snap the vertical steel into place—no measuring, no extra plastic chairs, and no slow wire-tying required.
- **Exact location of Vertical Bars:** Integrated zip-ties guarantee the exact location of the vertical bars around the circumference.
- **75% Lighter Than Steel:** SPACE-R is drastically lighter, making it much safer and easier for crews to transport and handle on the jobsite. This speeds up construction schedules and noticeably lowers labor costs.
- **Eco-Friendly:** Manufacturing our glass fiber stirrups uses far less energy and emits up to 75% less CO_2 than producing traditional steel.

Intellectual property

- **World patent:** pending
- **US trademark:** applied for

The Opportunity: Market Size

Concrete is used in every country around the world. Here is Grok's estimate of world demand by diameter of the column:

Inch	*Metric*	*Diam. share*	*Columns / yr*	*# Space-R*	*Space-R/yr*	*$ Space-R*	*TAM*
8	200 mm	18%	137,000	5	685,000	$ 6.00	$ 4,110,000
10	250 mm	16%	122,000	6	732,000	$ 7.50	$ 5,490,000
12	300 mm	20%	152,000	8	1,216,000	$ 9.00	$ 10,944,000
14	350 mm	14%	106,000	9	954,000	$ 10.50	$ 10,017,000
16	400 mm	12%	91,000	10	910,000	$ 12.00	$ 10,920,000
18	450 mm	9%	68,000	10	680,000	$ 13.50	$ 9,180,000
20	500 mm	6%	46,000	11	506,000	$ 15.00	$ 7,590,000
24	600 mm	5%	38,000	12	456,000	$ 18.00	$ 8,208,000
		100%	**760,000**		**6,139,000**		**$66,459,000**

The demand for square and rectangular column stirrups is approximately four times that of circular columns. However, there are many possible dimensions. It is Fab-Form's intention to manufacture square and rectangular stirrups in the future.

