

PRODUCT BULLETIN

Thermoset Composite Springs For Vibratory Conveyor Equipment

Bringing you one of the most comprehensive spring portfolios in the industry.

Traditional steel coil and elastomeric springs have a few shortcomings. Heavy steel springs can corrode and lose performance after multiple fatigue cycles. Elastomers can't handle the highest loads and tend to wear out rapidly.

Make the switch to Avient's thermoset composite springs, engineered with our proprietary resin/fiber reinforcement technologies, to achieve long lasting, consistent performance in a variety of vibratory conveyor applications:

- High strength-to-weight ratio—less than half the weight of steel
- Long-term corrosion resistance
- Exceptional fatigue resistance to withstand billions of cycles
- Deep deflection
- Excellent interlaminar shear strength
- Creep resistance
- Minimal work hardening
- Static electricity control
- Anti-microbial finishes for sanitary environments

With extensive experience in composite spring technology, a wide range of rectangular sizes, and rapid, customized product development capabilities, we can help you optimize your industrial equipment for reliable, repeatable, efficient performance.

Composite springs from Avient are ideal for sorting and conveying systems used in a wide range of industries, including food, pharmaceuticals, mining, forestry, agriculture and recycling.

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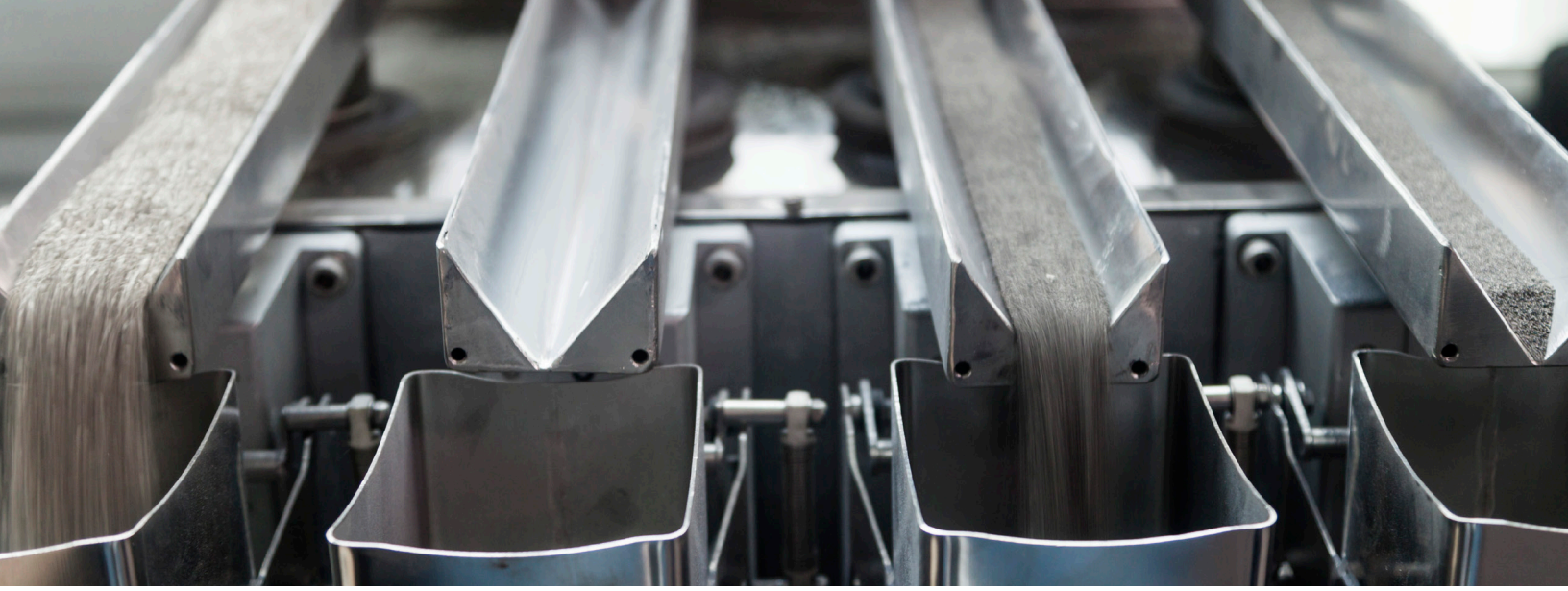

Avient's composite springs are manufactured using a continuous pultrusion process. Resin impregnated, continuous glass fibers are drawn through a curing die of a specific cross section, yielding consistent quality, dimensions and mechanical properties to provide more consistent spring rates than alternate materials. Reinforcement fiber configurations are designed to provide high flexural strength and modulus in the axial direction plus fastener bearing strength in the transverse direction.

THICKNESS (in)*	RESIN	FLEXURAL STRENGTH (x10^3 psi)	FLEXURAL MODULUS (x10^6 psi)	STRAIN (%)	FIBER CONTENT (wt%)
MIN	Vinyl Ester	115	4.0	3.3	68
AVG	Vinyl Ester	124	4.6	3.2	71
MIN	Epoxy	138	5.1	2.3	65
AVG	Epoxy	153	5.5	2.3	67

* Flexural properties are dependent on thickness. Avient offers various standard thicknesses as well as custom sizes to meet your design goals.

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