

Advanced Abdominal Exerciser Relies on Innovative Composite Resistance Spring



Glasforms has developed more than a dozen standard and custom composite spring sizes for a variety of flat leaf spring applications, supplying OEM manufacturers of vibratory conveyors, shakers and other specialty applications since 1984. Our extensive history with composite springs, wide range of rectangular sizes and rapid product development capability were critical to the success of bringing the abdominal exerciser to market in the quickly changing exercise equipment market.

The abdominal exerciser resistance spring provides adjustable intensity to increase tone and definition quickly. The unique flexible spring and adjustable equipment design easily adapts to fit individual workout styles. The adjustable resistance system is designed with a variable spring rate of 4.8 to 9.7 lb/in to yield individual spring loads of 12 to 24 lbs. The exerciser is designed to limit an applied stress level of 37,000 psi on the composite spring providing an infinite fatigue life.

Our spring composites are manufactured using continuous molding pultrusion. 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 architecture is designed to provide high flexural strength and modulus in the axial orientation plus fastener bearing strength in the transverse direction. Our proprietary vinyl ester resin/fiber reinforcement offers excellent inter-laminar shear strength, creep and corrosion resistance, plus long term fatigue performance.

Process: Pultrusion

Materials: Unidirectional E-Glass Fiber Core with Bi-Axial (0°, 90°) Glass Fiber, Reinforced Surface in a Proprietary Vinyl Ester Resin

Properties: 4 Msi Flexural Modulus, >100 ksi Flexural Strength High Fatigue Life, Low Weight

Sizes: .140" x 1.50" Rectangle

For additional information write or call:

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