

Medium-Duty Hybrid Composite Spring Assemblies

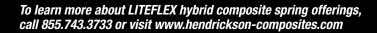


# Save Up to 190 pounds with Hendrickson's LITEFLEX<sup>®</sup> Medium-Duty Hybrid Composite Springs





LITEFLEX<sup>®</sup> medium-duty hybrid composite spring assemblies are up to 50-75 percent lighter than traditional steel spring assemblies and help improve range and payload capacity. They are corrosion and sag-resistant, maintain ride height and provide improved vibration and harshness feedback. This hybrid composite spring configuration saves up to 190 lbs. compared to traditional steel spring assemblies with a 23,000 lb. rated capacity.





### **Weight Savings**

- Exceptional strength-to-weight ratio
- Significant weight savings over traditional steel multi-leaf spring assemblies
- Can be offered by vehicle manufacturers as a lightweight hybrid spring assembly
- Can help improve range and payload capacity

## **Benefits of Filament Winding**

#### **Materials**

- Epoxy / E-Glass @ 68-74% Fiber Weight Fraction
- Spring rates may be tuned (±5%) based on number of filaments

#### **Proven Technology**

- · Millions of springs produced with nearly zero ppm
- · Excellent chemical, humidity and creep resistance
- Operating range between -40°C to +70°C (-40°F to +160°F)

#### **Minimized Stress Risers**

· Glass filaments are continuous, running from end to end of the leaf, providing enhanced strength

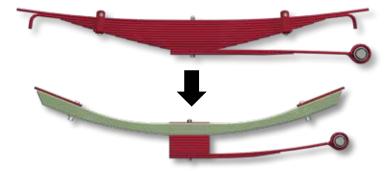
# **Filament Winding Process**

- 1. Process epoxy raw material
- 2. Wind glass / epoxy around mold
- 3. Cure material using heat and pressure

- 4. Cut and de-mold spring from mold
- 5. Clean mold and apply mold release
- 6. Restart cycle

# **Medium-Duty Hybrid Composite Spring Assemblies**

- Design can be adapted to match vehicle manufacturers' current steel spring assembly
  - Packages
  - Radius Leaf Sizes
  - Clamp Group Configurations
- Spring Rates
- Weight savings
  - Up to 95 lbs. per hybrid composite spring pack
    Up to 190 lbs. per system



Actual product performance may vary depending upon vehicle configuration, operation, service and other factors. All applications must comply with applicable Hendrickson specifications and must be approved by the respective vehicle manufacturer with the vehicle in its original, as-built configuration Contact Hendrickson for additional details regarding specifications, applications, capacities, operation, service and maintenance instructions.

### Call Hendrickson at 630.910.2800 or 855.RIDERED (743.3733) for additional information.



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## **Corrosion Resistant**

- · Paint is optional
- · Excellent high-temperature and environmental performance

## **Excellent Fatigue Performance**

• Composite springs typically meet or exceed the performance of equivalent steel leaf springs