



Laser Heating System



Advanced bonding technology for additive manufacturing of composite parts.

At Trelleborg Sealing Solutions, we're experts in innovating and producing high-performance composite parts. Our solutions bring additive manufacturing technology to advanced composites, creating customized parts for critical applications in demanding environments around the world.

Our patented Automated Fiber Placement (AFP) technology is a robotic, fabrication method for thermoset and thermoplastic composites that creates high-quality, consistent and repeatable parts. AFP relies on a heating system to bond composite layers to one another.

Trelleborg Sealing Solutions developed a proprietary laser heating system to increase processing speed, reliability and energy efficiency, as well as improve performance of the finished part. The laser creates a bond strength comparable to traditional methods with decreased production times, and offers precise control of heating and placement for full command of the manufacturing process.

Faster Processing:

- Three to ten times faster than hot gas torch heating
- Can reach processing speeds up to 2.5 meters / 8.2 feet per second
- In-situ consolidation removes post-processing steps such as autoclave curing

Improved Efficiency:

- Reduced energy usage; increased energy efficiency
- Precise application of energy only heats the area that is needed, reducing the chance of damaging a part

More Control:

- Quick and responsive heating: laser's output can be changed between zero and 100% in milliseconds
- Real-time temperature logging

Trelleborg is a world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments. Its innovative solutions accelerate performance for customers in a sustainable way.

Trelleborg Sealing Solutions is a leading developer, manufacturer and supplier of precision seals, bearings and custom-molded polymer components. It focuses on meeting the most demanding needs of aerospace, automotive and general industrial customers with innovative solutions.

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