

Reliance Mixers Announces High-Performance Cooling Mixers with Horizontal and Vertical Jacket Systems

Reliance Rebuilt Mixers in Texas Delivers Jacketed Cooling Solutions Engineered for Temperature-Sensitive Plastic Materials in Rotational Molding and Compounding Operations

Missouri City, Texas Apr 17, 2026 ([IssueWire.com](https://www.issuewire.com)) - Reliance Mixers, a U.S.-based industrial mixing equipment manufacturer operating since 1982, is highlighting the critical role of high-performance cooling mixers in plastics processing operations that require precise temperature management after intensive mixing. The company's horizontal and vertical jacketed cooling systems, designed, manufactured, and rebuilt at its Texas facility, address the specific thermal control requirements of rotational molding manufacturers and plastic compounders who depend on consistent material properties for downstream production quality.

In high-speed mixing and compounding operations, plastic resins and additive blends absorb significant heat. Without controlled, uniform post-mix cooling, materials can develop internal stress, inconsistent particle size distribution, and degraded flow characteristics, each of which directly affects part quality and production consistency in rotational molding applications. [Reliance Rebuilt Mixers in Texas](#) provides engineered cooling solutions that replace uncontrolled heat dissipation with precise, repeatable thermal management, helping manufacturers maintain material integrity across every batch.

Temperature Management as a Production-Critical Process

For rotational molding manufacturers, uniform material preparation is directly connected to part performance. Consistent wall thickness, surface finish quality, and structural integrity in the moulded part all depend on the powder's physical characteristics at the point of mould loading, including particle size distribution, flow properties, and additive distribution. These characteristics are preserved or compromised during the post-mix cooling stage.

High-performance cooling mixers from Reliance are engineered to extract heat rapidly and uniformly from plastic materials after intensive mixing, maintaining the particle size distribution, flow characteristics, and additive properties that rotomolding applications demand. The company's proven design delivers sub-6-minute cooling batches consistently, supporting faster production cycles without compromising material quality.

Horizontal and Vertical Jacket of Cooling Mixer — Verified Design Specifications

The thermal performance of Reliance cooling systems is determined by the design of their jacketed vessels. The horizontal and vertical jacket of cooling mixer configurations each address specific production environments through distinct engineering approaches, both based on the principle of high-pressure turbulent water flow that maximises heat transfer efficiency.

[Horizontal jacketed cooling mixers](#) are jacketed around the entirety of the cylinder and lid, with optional jacketing around the end plates for applications requiring additional cooling surface area. Internal flow bars are designed and positioned to ensure turbulent water flow throughout the jacket, creating a highly efficient heat transfer environment. Horizontal mixer tools consist of paddles bolted onto arms that cover the full length of the cooler vessel, continuously throwing material against the jacketed vessel wall to maximise cooling contact. Discharge options include slide gate valves or flapper assemblies, with limit switches providing feedback on valve position for process control purposes.

Vertical jacketed cooling mixers are jacketed around both the top cylinder and the bottom plate of the vessel, providing cooling surface contact across a greater proportion of the material volume than cylinder-only designs. Optional cooling cones are available to further increase the cooling surface area of the unit. Vertical cooler tools ride along the bottom of the cooler bowl, continuously moving material along the vessel jacket to ensure rapid, uniform cooling. Discharge is handled by a pneumatically operated discharge plug for controlled, efficient vessel emptying.

Both horizontal and vertical mixer tools can be mirror finished or coated to extend tool life, particularly in abrasive material applications.

Reliance Rebuilt Mixers Restoring Performance in Existing Equipment

For plastic manufacturers operating cooling mixer equipment that no longer meets current thermal performance or throughput requirements, Reliance Rebuilt Mixers in Texas provides a technically sound alternative to full equipment replacement. Reliance rebuilds and enhances cooling mixers from major manufacturers, including Henschel, Prodex, Plasmec, and Littleford, restoring jacket integrity, replacing worn tools and paddles, upgrading discharge systems, and often improving cycle times significantly while extending operational life.

This rebuild capability addresses a practical challenge faced by many plastics processing facilities: mixing equipment that was suitable for earlier production volumes or material specifications but can no longer support current quality or throughput requirements. A rebuilt system from Reliance delivers restored performance with application-specific engineering support, with domestically sourced replacement parts available directly from the Texas facility, eliminating the extended lead times associated with imported equipment.

Production Advantages for Rotational Molding Manufacturers

Plastics processors integrating Reliance's high-performance cooling mixers into their production lines gain measurable advantages across key operational metrics:

- Sub-6-minute cooling batches deliver faster production turnaround without heat-related material compromise
- Maintained particle size distribution and preserved powder flow characteristics support consistent mould loading and wall thickness uniformity
- Protected additive properties ensure UV stabilizers, pigments, and specialty additives perform as formulated in the finished part
- Large discharge openings shorten cycle times and reduce downtime between batches
- Thick walls and reinforced components extend mixer service life in continuous production environments
- Easy-access arms, paddles, and lid openings support efficient cleaning and maintenance

Leadership Insight

"Cooling is not a secondary step in plastics processing; it is where material properties are either preserved or compromised before the product ever reaches the mould," **said a senior application engineer at Reliance Mixers.** *"Our horizontal and vertical jacketed cooling systems are engineered to give rotomolding manufacturers the thermal consistency they need for predictable, repeatable results. And for facilities running older equipment that is no longer performing to standard, our rebuild capability offers a practical path to restoring that performance without full equipment replacement."*

About Reliance Mixers

Reliance Mixers is a U.S.-based manufacturer specializing in industrial mixing and cooling for processing industries. With decades of experience, the company designs equipment focused on performance, durability, and consistent batch results for plastic processing applications.

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