The Farrel Shaw INTERMIX® is globally recognized as the premier intermeshing technology available. The INTERMIX® is the standard for processing both dispersion critical and thermally sensitive technical rubber goods. Recently, the inherent capabilities of the Intermix® have become recognized as being highly favorable for the tire industry, especially for the efficient and effective processing of silica-filled compounds.

Heat Transfer Capabilities
The INTERMIX® is characterized by a high surface-to-volume ratio ensuring enhanced and even distribution of the compound. The INTERMIX® is equipped with highly efficient zoned water cooling to all parts of the internal surfaces contacting the material during the compounding process. Because of the nature of the intermeshing rotor technology and the effective cooling system, the INTERMIX® delivers a high level of energy input to the compound while maintaining temperature limits allowing for the conversion of most two-pass compounds to a single-pass process.

Single Pass Operational Advantages & Benefits
- Increased productivity from total cycle time reduction
- Decreased material handling time and expense
- Reduced energy costs from fewer mixing passes
- Lower operating costs due to less lubrication and process oils needed
- Enhanced mixer life, less wear due to fewer batches processed, reduction in mixer maintenance

Saving in specific energy input & less material handling expense have significant impact for manufacturers.

Hydraulic Hopper
The Hydraulic Hopper assembly is standard on the Farrel Shaw INTERMIX® and provides the following benefits:
- Eliminate compressed air requirements reducing operating costs and providing energy savings
- Maintain a constant pressure to the ram; eliminates variations in ram pressure, providing uniform and consistent process conditions. This bolsters product uniformity and repeatability, resulting in higher product quality
- The smooth motion of the ram is enhanced and the speed can be controlled with the hydraulic power regulating the ingestion of materials. The result is shorter mixing cycles, higher productivity and improved batch-to-batch consistency
- Water cooled ram provides additional cooling surface area within the chamber, which is critical when processing heat sensitive compounds
- The hydraulic ram reduces the noise level within the vicinity of the mixer improving the work environment

RPI System
The Ram Position Indicator (RPI) System, supplied as standard with the Farrel Hydraulic Hopper Assembly is an LDT device (Linear Displacement Transducer). It senses the position of the ram and provides a suitable output for documenting the motion over the entire mixing cycle. This provides critical information during the mixing cycle confirming the ram achieved the desired seat position. The ram motion during the mixing cycle can be documented to provide a permanent record for either SPC or SQC methods.
The RPI will document variations in the following:
• Batch Size
• Mixing action within the chamber
• Variations in raw materials both in physical properties and proportioned amounts
• Product Quality
• INTERMIX® operating conditions such as rotor speed, metal temperature, ram pressure, etc.

NR5™ Rotors
The NR5™ rotors were developed and engineered to meet the broadest range of compound applications and are ideal for the processing of technologically advanced heat-sensitive elastomeric compounds.

The NR5™ rotor design allows maximum dispersion of ingredients and fillers within the batch. The intermeshing rotor design maximizes both the thermal efficiency of the mixer and increases the batch capacity through an improved chamber fill factor.

The benefits of the NR5™ Rotor include:
• High efficiency heat transfer, critical to the processing of thermally sensitive compounds
• Reduced mixing time (or the number of mixing stages) while enhancing the mix quality
• All compound contacting areas of the NR5™ rotors are hard surfaced for maximum resistance to abrasive wear providing maximum life
• Optimized fill factor, resulting in maximum productivity
• Allows a wide range of compounds to be processed on a single pass basis

To learn more about the INTERMIX®, or other Farrel products, please visit Farrel.com.

Labyrinth Cooling

The NR5™ Rotor

Intermix® Capacities

<table>
<thead>
<tr>
<th>Machine Size</th>
<th>K0</th>
<th>K1</th>
<th>K2</th>
<th>K2A</th>
<th>K4</th>
<th>K5</th>
<th>K6</th>
<th>K6A</th>
<th>K7</th>
<th>K8</th>
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<tbody>
<tr>
<td>Mixing Chamber Net Volume (in Liters)</td>
<td>1.8</td>
<td>5.5</td>
<td>20</td>
<td>49</td>
<td>91</td>
<td>143</td>
<td>206</td>
<td>257</td>
<td>310</td>
<td>498</td>
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<tr>
<td>Batch Sizes @ 70% Fill Factor and 1.0 SG (in Kg.)*</td>
<td>1.26</td>
<td>3.9</td>
<td>14</td>
<td>34</td>
<td>64</td>
<td>100</td>
<td>144</td>
<td>180</td>
<td>217</td>
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* All production rates should be factory verified.