The DynaShear represents the latest technology for sanitary inline continuous processing, or batch processing with recirculation. The DynaShear will blend, dissolve, deagglomerate, disperse, and emulsify a wide range of fluids and semifluids, and is particularly effective for wetting out powders into a liquid. It features a first-in-class tandem head design combining the benefits of both an axial and a radial stage, creating excellent shear and flow characteristics. The result is droplet size reduction as low as 2-3 microns and a very narrow distribution, plus flow capacities that are substantially higher than existing inline mixers.

**Technology designed for 24/7 operation**

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**The DynaShear advantages – making your job easier and faster!**

- Total washdown and CIP capability conforming to 3-A Sanitary Standard #36-01*
- Low maintenance design for minimum downtime – no bushings, wear sleeves, shims or bearing supports to wear out
- Disassemble and reassemble for inspection and cleaning in less than five minutes
- Processes from to .3 – 175 gallons per minute model dependent
- Seal pressure ratings up to 450 PSI at 400° F, model dependent
- Balanced single and double-barrier mechanical seals designed for sanitary applications with CIP requirements. Lab model offered with single seal only.
- VFD standard on lab model for accurate scale up

*DS-215 certification pending

The DS-215 is designed for product development, simulation, and scale up. Predictable, repeatable results from lab to full production!
**DynaShear Inline Mixing Technology Improves Your Process**

The DynaShear is designed to provide maximum versatility to meet your processing needs, and is offered in several different configurations. Whether you are looking for a stand alone inline mixer, a mixer to augment your batch process agitator, or further product refinement, the DynaShear ensures consistent quality with precise reproducibility.

**DynaShear Sizing and Engineering Data**

<table>
<thead>
<tr>
<th>Model</th>
<th>Axial Diameter (inches)</th>
<th>Axial Tip Speed (FPM/FPS)</th>
<th>Radial Diameter (inches)</th>
<th>Radial Tip Speed (FPM/FPS)</th>
<th>Motor Size (HP)</th>
<th>Motor Speed (RPM)</th>
<th>Flow Rate (GPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS-215</td>
<td>1.25</td>
<td>2258 / 37</td>
<td>2.13</td>
<td>3832 / 64</td>
<td>2</td>
<td>6900</td>
<td>22</td>
</tr>
<tr>
<td>DS-425</td>
<td>2.25</td>
<td>2121 / 35</td>
<td>4.25</td>
<td>4006 / 67</td>
<td>5</td>
<td>3600</td>
<td>65</td>
</tr>
<tr>
<td>DS-575</td>
<td>3.66</td>
<td>3450 / 58</td>
<td>5.75</td>
<td>5419 / 90</td>
<td>20</td>
<td>3600</td>
<td>175</td>
</tr>
</tbody>
</table>

*Note:* Flow rates based on 1 centipoise. High viscosity liquids, solids concentrations, or discharge head conditions may require an auxiliary feed or stuffing pump.

**DynaShear Dimensional Data**

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions (inches)</th>
<th>Sanitary Fitting Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>DS-215</td>
<td>16.6</td>
<td>1.8</td>
</tr>
<tr>
<td>DS-425</td>
<td>25.0</td>
<td>2.6</td>
</tr>
<tr>
<td>DS-575</td>
<td>32.2</td>
<td>3.1</td>
</tr>
</tbody>
</table>

*Note:* Dimensions are approximate and subject to change. DS-215 comes standard on a mobile cart, bringing overall dimensions to: 28” length, 18” width, 39” height.

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**Advanced Dual Stage Design**

**The Primary Axial Stage**

The axial stage consists of an axial flow rotor feeding into a stator with multiple small ports, forcing material between their faces and out through the ports. This mechanical and hydraulic action causes tremendous shearing action and "pre-mixes" the materials prior to entering the secondary stage. Particle and droplet size reduction down to 5 - 7 microns is typical in this stage.

**The Secondary Radial Stage**

This stage provides a substantial momentum change in the flow, resulting in beneficial residence time for further refining of the mixture. Stable emulsions with droplet sizes of 2 - 3 microns or less are typical within this stage.

**The Benefits of Advanced Mechanical Design**

This combination provides greater efficiency and effectiveness over conventional inline mixers that offer either all axial or all radial technology only. A single pass through the DynaShear yields product quality typical of multiple passes using conventional mixers.