PVR - Vertical Ribbon Mixer

Introduction:

The PerMix PVR series Vertical Ribbon Mixer has a similar appearance with the PRB series Ribbon Blender, but stands vertically same as our PNA series Conical Screw Mixer. PVR is an efficient and versatile blending machine for batch mixing of free-flowing powders.

PVR series Vertical Ribbon Mixers are able to give perfect result of mixing due to the innovative design of an outer spiral type mixing element with an inner screw, rotating together in a conical shape trough allowing a complete discharge of all the mixed material without any residue.

Advantages:

- High level of accuracy with minor component ratio to be 1:100,000
- Gentle mixing for sensitive materials without generation of heat
- No minimal quantity is required
- Full discharge with minimal residue
- Easy to clean in either dry or wet way
- High heat transfer rate, ideal for heating or cooling process of the powders
- Chopper can be installed for intensive mixing and lump breaking
How It Works:

The construction of PerMix PVR series Vertical Ribbon Mixer is very compact: it consists of a cone vessel with the drive unit on the top and discharge valve at the bottom. In the cone vessel, there are a central tapered ribbon with very small clearance between its edge and the wall, and additionally a screw mounted on the central shaft.

The ribbon and the screw move the materials upward from the bottom to the top, where the materials then drop by gravity into the center. During this continuous operation, material particles and heat are exchanged quickly which leads to a homogeneous product.

Besides, the material particles are mixed with minimal mechanical and thermal stress, which makes this type of mixer a good solution for fragile and heat sensitive product.

Options:

- Ribbon
  We offer several types of spiral ribbon for different sizes and applications.

- Construction Material and Finish
  Our mixers can be built in Carbon steel, SS304, SS316L, Titanium, Hastelloy, etc. Finish of stainless steel can be mirror polished or bead blasted.

- Feeding & Discharging
  A variety of feeding & discharging methods can be selected by the customers.

- Drive system
  Drive system by geared motor, cycloidal reducer, worm reducer, belt or chain transmission, etc.

- Heating/Cooling jacket
Jacketed trough for heating/cooling operation

- Vacuum drying & deaerating
  The PVR mixer can be designed for vacuum drying & deaerating or for inner pressure working for special applications.

- Spray nozzle
  Liquid can be added into the powder by spray nozzles on the top.

Specifications:

<table>
<thead>
<tr>
<th>Model</th>
<th>Total capacity (liter)</th>
<th>Working capacity (liter)</th>
<th>Power (*) (kW)</th>
<th>Diameter (mm)</th>
<th>H, total height (**) (mm)</th>
<th>Inlet (***) (mm)</th>
<th>Outlet (****) (mm)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PVR-100</td>
<td>100</td>
<td>70</td>
<td>1.5-2.2</td>
<td>708</td>
<td>1420</td>
<td>140</td>
<td>150</td>
<td>180</td>
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<tr>
<td>PVR-300</td>
<td>300</td>
<td>210</td>
<td>2.2-5.5</td>
<td>990</td>
<td>1998</td>
<td>180</td>
<td>230</td>
<td>460</td>
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<tr>
<td>PVR-500</td>
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<td>350</td>
<td>4-7.5</td>
<td>1156</td>
<td>2268</td>
<td>200</td>
<td>230</td>
<td>510</td>
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<td>PVR-1000</td>
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<td>700</td>
<td>5.5-11</td>
<td>1600</td>
<td>2742</td>
<td>300</td>
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<tr>
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<td>1050</td>
<td>7.5-15</td>
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<td>300</td>
<td>1100</td>
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<td>1400</td>
<td>11-18.5</td>
<td>1948</td>
<td>2825</td>
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<td>350</td>
<td>400</td>
<td>1530</td>
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<td>2100</td>
<td>18.5-22</td>
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<td>3200</td>
<td>350</td>
<td>400</td>
<td>1780</td>
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</table>

1. (*) (** ) (***) (****): Changes are available according to the customer's request.
2. All specifications and illustrations are as accurate as is reasonably possible, but they are not binding.
3. PerMix reserves the right to modify the design without notice.
Gallery:

- **Mixer with Dome Cover for Vacuum Execution**
- **PVR Mixer with Heating Jacket**
- **PVR Mixer Built in All Stainless Steel**
- **SS Ribbon of PVR Mixer**

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