PREMIER MILL®
AN SPX BRAND

Model 2500HV Lab Disperser

High-Performance, High-Speed

Premier Model 2500HV Lab Disperser is widely used for the processing of small batches in the laboratory or pilot plant. This variable speed, explosion-proof unit can satisfy a wide range of applications where mixing problems exist. It circulates and shears dispersions and emulsions with ease, blending materials faster than other laboratory dispersers. The 2500HV speeds up chemical reactions involving insoluble materials, breaks up agglomerates, reduces particle size and overcomes surface forces. Mixing efficiency is increased with Premier's line of interchangeable mixing heads.

Available for a wide range of processing industries, including: Paint, Ink and Coatings, Chemical, Electronics, Ceramics, Pharmaceuticals and Biotechnology, Personal Care, Food and Flavorings.

Standard Features:

- 1.5 HP or 2 HP, explosion proof motor.
- Heavy-duty variable speed drive for powerful dispersing action ranging from 1100 to 8000 RPM.
- 2 1/2" hi-vis disperser blade included.
- Splash guards to protect pneumatic controls.
- Safety guard enclosing all moving parts.
- Heavy-duty base plate which can be bolted in place for added rigidity.
- Tachometer.
- Explosion proof on/off selector switch.

Available Options:

- Container holding brackets.
- Various mixing heads.
- Limit switch.
- Ammeter.
- Pushbutton station.
- Grinding shaft with twin discs and one liter, stainless steel, grinding chamber.

Lifting Mechanism:

- Pneumatic cylinder with 13" stroke capable of clearing a 5 gal. container with max. of 2 1/2" clearance.
- Filter, lubricator, regulator system supplied.
- Three-way valve (raise-lower-hold).
- Stop to limit head travel are factory set to avoid bottoming out of pneumatic cylinder.
- Air line with quick-disconnect to be supplied by customer.

Approximate Dimensions and Weight:

- **Width: 18"**
- **Length: 27"**
- **Height (Lowered): 30"**
- **Height (Raised): 43"**
- **Weight: 150 lbs.**

SPX®

Principles of Operation

Simplex and Duplex Heads: Both are carefully balanced precision slotted cylindrical heads with internal baffles and both rotate at high speed. Performing much like a submerged centrifugal pump, fluids are pulled into the head and centrifugal force whirls the material radially out through the precision slots. Double shearing: First, hydraulically sheared as it passes through the narrow, vertical slots and second, by radially exiting "blades" of material knifing into the lower velocity liquid mass. Double shearing and at high pumping rates. The result: high intensity action, faster and more thorough mixing, dispersing and emulsifying.

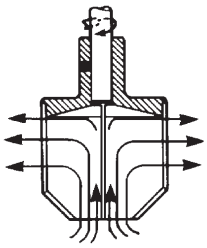
Hi-Vis Head: This head has a rotating flat disc with carefully angled teeth along the periphery. When thick liquids and high percent solids suspensions are being dispersed, the high inertial drag (between the numerous material layers, the spinning disc and the immediately adjacent layer) a shearing action is created. Additional shearing action occurs as the teeth "cut" the radially moving layers. Particularly designed and engineered teeth (both shaped and angled) move the product rapidly around the tank. The product being mixed comes in contact totally with the high speed disc and is effectively and efficiently sheared. The result: very high shearing action is quicker and more complete dispersions.

Rotor/Stator Head: The Rotor/Stator flow pattern is bottom suction with horizontal discharge. The rotor draws liquid from the bottom of the mixing vessel into the center of the stator housing. The liquid/solids mixture is accelerated by the rotor and discharged through the stator slot openings by centrifugal pumping force. Suspended solid particles are exposed to mechanical shearing forces when impacted by the high speed rotor, or crushed between the rotor and stator housing. The result: a powerful combination of mechanical and hydraulic shear.

Choosing the Right Mixing Head

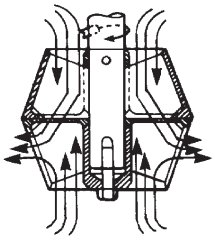
Simplex Head:

- Disperses material heavier than the suspending liquid. Excellent for low viscosity emulsifying and liquifying.

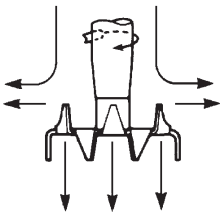
Duplex Head:

- Disperses material that float and sink. Excellent for mixing low viscosity materials with solids that tend to settle.

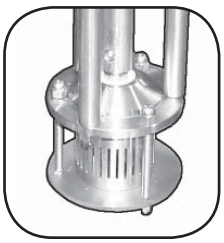
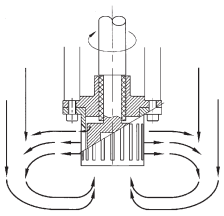
Hi-Vis Head:

- When maximum shear is needed, for medium viscosity liquids from 1,000 to 50,000 cps.

Rotor/Stator Head:

- Disperses, emulsifies and reduces particle size in low viscosity products which require a higher level of shear.

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Issued: 10/2009 PM-2500HV

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