



Technical Bulletin

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Specifying Tumble Blender Shapes

What is the big difference in the three common shapes?

The main purpose of the vessel shape is to create a mixing pattern without the use of baffles and augers. The three most common shapes are the Slant Cone[®], Double Cone[®] and V Shape. These account for more than 95% of the shapes sold. Each shape is recognized by the FDA SUPAC guidelines as an accepted diffusion blender. The Double Cone and V Shape achieve a standard deviation of less than 2% and the Slant Cone weighs in at only 1/3 %. So, if they all blend, how do I decide which is right for me. Production size blenders must be interfaced into your work area and your procedures. Look at how your blender gets used and you can pick the most efficient shape. Loading, room space and cleaning have the most to do with what shape is best for you.

SLANT CONE[®]

The Slant Cone[®] has the following characteristics

- No sensitivity to loading sequence
- Lower head room clearance required
- Faster mixing
- Dual automatic loading/discharging port options
- Largest mixing zone
- Greatest range of batch sizes



The mixing action here allows for more flexibility because it moves powder more efficiently. Operators don't have to adhere to strict procedures to make this blender work, the shape makes up for operator differences in procedures.

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DOUBLE CONE®

The Double Cone® has the following characteristics

- Lower head room clearance required
- Dual automatic loading/discharging port options
- Most compact use of floor space
- 2nd largest mixing zone
- Very good range of batch sizes
- Easy to clean

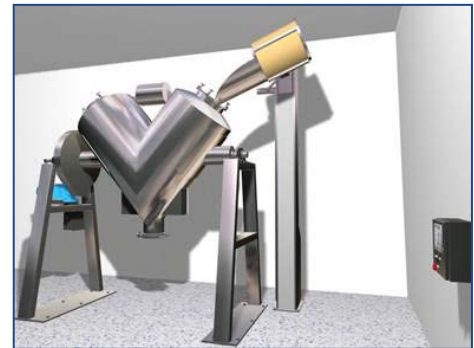


This shape is versatile and you can fit bigger batch sizes into the same square footage with this shape than any other. Automatic loading and discharging ports are in-line, which saves more plant floor space. Cleaning and maintenance are still simple.

V SHAPE

The V Shape has the following characteristics

- High head room required
- More floor space required
- Recommended loading/discharge is through valve only
- Smallest mixing zone
- More difficult to clean
- Very small range of batch sizes



This is a very good general purpose blender for batch sizes that will not change. Often used in the pharmaceutical market where it was originally specified in the NDA for a product.