

WE OFFER
PERFECT
MIXING
TECHNOLOGIES



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PTU 3D MIXER

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The PerMix PTU series 3D Mixer or Multi Direction Powder Mixer is used for homogeneous mixing of powdery substances with different specific weights and particle sizes. Producing dry-to-wet and wet-to-wet mixtures is also possible. The production process is hygienic and dust-free because the product is mixed in independent containers of variable sizes.

During the mixing process the powder moves in a random direction from center to the end of the trough and at the same time from top to the bottom. In such a multi-dimensional way, the PerMix PTU series 3D Mixer needs only short mixing time and relatively low power consumption.

The mixer's "Gentle" mixing action is good for final products that are sensitive to high shear of the mixer and tend to break or to reduce their particles size, or are highly abrasives.

HOW IT WORKS

PerMix 3D Mixer consists of a mixing drum which is rotated by two arms, and one arm (the drive arm) is driven by a motor with belt connection. The slave arm is driven to not only rotate, but also move horizontally. During the mixing operation, the product inside the drum moves in random directions from center to the end of the trough and at the same time from top to the bottom, creating a 3D way.



ADVANTAGES & OPTIONS

PerMix PTU series 3D Mixer has the following advantages over conventional solutions:

- Free of cross contamination due to the independent drums for different batches when highly hygienic processing is required (for size PTU-50 and smaller)
- Interchangeable drums (for size PTU-50 and smaller)
- Complete discharge and easy cleaning
- Excellent homogeneity of mixing with no dead points
- Sizes from 5 to 300 lit. total volume
- Safety cage to prevent human injury.
- Time-saving, fast exchange of the container, due to simple and fast mounting of the container.
- Drums can be built in SS304, SS316/316L, Titanium, Duplex stainless steel, Hastelloy, etc. Standard of internal and external finish can be adapted to the customer's needs.

DESIGN WITH INTERCHANGEABLE DRUMS



For the machine size of PTU-5, PTU-15, and PTU-50, PerMix offers the option for the 3D mixer to work with interchangeable drums. A drum holder is designed to hold the drum with fast assembly. When the mixer rotates, the drum and drum holder are rotated together by the two arms.

Moreover, drums of different sizes can be fit into the same drum holder with necessary adaptor; for example, PTU-5 can work with drum sizes of 1L, 2L up to 5L.



APPLICATIONS

Foods

Breakfast Cereals, Enzymes, Flavours, Herbs, Minerals, Nutra-ceuticals, Seasonings, Spices, Tea Mixes, Tobacco, Vitamin Mixes

Chemicals

Agrochemicals, Ceramic Powders, Detergents, Drugs, Dyestuffs, Leather Auxiliaries, Metal Powders, Pigments, Plastic Granules, Plastic Pellets, Plastic Powders, Textile Assistants

Pharmaceuticals

Active Agents, Biological Solids, Carcinogenic Substances, Concentrated Active Ingredients, Generics, Intermediate Products, Sterile Products, Toxic Substances



SPECIFICATIONS



Model	Total volume (liter)	Operation Volume, Liter	Power, (kW)	Speed of Mixing Can, rpm	Length, mm	Width, mm	Height, mm	Weight, kg
PTU-5	5	4	0.25	28	600	1000	900	150
PTU-15	15	12	0.37	20	700	1000	1000	200
PTU-50	50	40	1.5	15	1120	1330	1220	500
PTU-100	100	80	2.2	12	1370	1550	1430	700
PTU-300	300	240	4	8	2000	2400	2100	1600

- All specifications are as accurate as is reasonably possible, but they are not binding.
- Bigger sizes up to 1,000L are available against request.
- PerMix reserves the right to modify the design without notice.

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