



Conical Screw Mixer

INTRODUCTION:

PerMix **PNA series Conical Screw Mixer** is a batch mixing equipment used widely in applications that require gentle mixing and minimal heat generation without any product distortion.

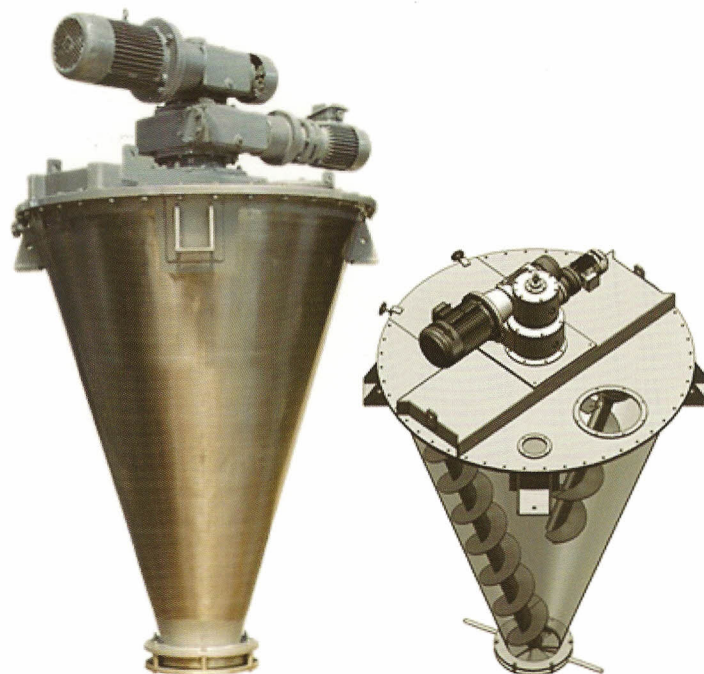
PNA Mixer is a highly efficient vertical powder mixer with low energy consumption for batch mixing of powder and granule with various particle sizes.

The PerMix **PNA series Conical Screw Mixer** is also called **Nauta Mixer**, named by its inventor Mr. J.E. Nauta. Because no seals or bearings are exposed in product zone, there is no risk of lubricant contamination.

HOW IT WORKS:



Inside view of Conical Screw Mixer



PerMix **PNA series Conical Screw Mixer** consists of drive unit, conical vessel, transmission assembly, screws, and discharge valve. A spiral screw (or two screws, three screws according to specified application) is located in parallel with the conical wall with fine gap, and screw length is almost the same as the cone side.

During the operation of the mixer, the screw (or screws), that is operated by two different driving units, rotates around the center of the cone. In addition, it rotates at a higher speed around its own axle, according to the planetary principle.

The self-rotation of the screw lifts the powder and granule upwards from the cone bottom to the top, and then the materials fall down by gravity; simultaneously, the revolution lets the screw reach every corner inside the cone without blind zone.

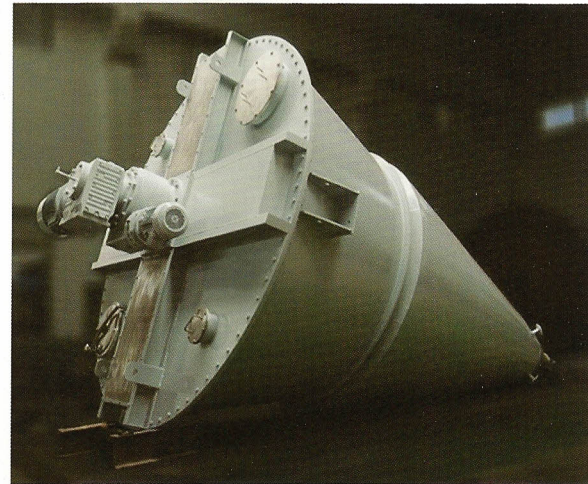
FEATURES & ADVANTAGES:

- High efficiency and excellent homogeneity with short mixing cycle time
- Most gentle mixing with low shear force, suitable for fragile and friction sensitive products
- Low heat generation, suitable for heat sensitive products
- No sealing or bearing is exposed to the product thus free of cross contamination by the lubricating liquids
- No minimum volume required for the Conical Screw Mixer
- End products can be discharged completely without any residual in the conical container.
- Much lower energy consumption compared with other types of powder mixers

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OPTIONS:

- Easy for cleaning with the cleanout door or spray system
- Double jacket is applicable for heating or cooling. With optional vacuum execution the Conical Screw Mixer can be used as a vacuum mixing dryer.
- Single, dual, or triple screw(s) are available depending on materials to be treated.
- A variety of discharge arrangements are available by manual, pneumatic or electrical operation.



SPECIFICATION TABLE:

Model	Total capacity (liter)	Working capacity (liter)	Power (*) (kW)	Diameter (mm)	H, total height (**) (mm)	Inlet (***) (mm)	Outlet (****) (mm)	Weight (kg)
PNA-200	200	120	2.2+0.37	888	1557	140	230	500
PNA-300	300	180	2.2+0.37	990	1722	180	230	550
PNA-500	500	300	3+0.55	1156	1991	200	230	600
PNA-800	800	480	4+0.55	1492	2256	250	300	950
PNA-1000	1000	600	4+0.55	1600	2432	300	300	1200
PNA-1500	1500	900	5.5+0.75	1780	2725	300	300	1350
PNA-2000	2000	1200	5.5+0.75	1948	3001	350	350	1500
PNA-2500	2500	1500	7.5+1.5	2062	3024	350	350	1800
PNA-3000	3000	1800	7.5+1.5	2175	3207	350	350	2100

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