

HD Series Multi-Directional Motion Mixer



The Three-dimensional mixer consists of machine base, transmission system, electrical control system, multi-directional motion mechanism, mixing cylinder and other components. It is a mechanical device that uses mechanical force and gravity to uniformly mix two or more materials, suitable for high uniformity mixing of powdery and granular materials in the pharmaceutical, chemical, food and other industries. Driven by the driving shaft, the mixing cylinder performs compound motions such as translation, rotation and tumbling, so as to promote the three-dimensional complex movement of the material along the cylinder, so as to realize the mutual flow, diffusion, accumulation and doping of various materials, so as to achieve the purpose of uniform mixing. At the same time, it avoids the material gravity segregation and accumulation caused by the centrifugal force of the general mixer, and there is no dead angle in the mixing, which can effectively ensure the quality of the mixed material.

Working Principle

It has such characteristics as cross and mutually vertical state in space, and mixing drum controlled by Y-type universally-jointer drive and passive shaft. If the drive shaft turns around, the mixing drum will set in rotation, meanwhile setting in multi-directional oscillation at 4 times auto rotation speed. Under the actions of diffusion, flow and shearing due to frequent and rapid rotation, material are mixed together. Besides, the material are mixed under the rotation of the mixing drum without centrifugal force, which brings slow-down in gravity segregation and gives guarantee that mixture can fully meet the requirements on the condition of mixing them for a short time.

Performance & Feature

1. The material has no centrifugal force, no specific gravity segregation, stratification and accumulation.
2. All parts of the cylinder are arc transitions, which are precisely polished.

3. The cantilevered double helical shaft has no bottom bearing, which avoids the failure caused by the powder infiltration of the bottom bearing.
4. The cantilever shaft adopt monoblock cast, which avoids the phenomenon of broken shaft.
5. Adopt cone design in end for discharge has no dead angle, no residue, easy to clean, and meets the requirements of GMP.
6. The mixer can start at low speed, run smoothly at the rated speed, and stop at a fixed speed at a reduced speed. The automatic stop position is the best position for feeding and discharging materials.
7. It can option long-range control

Technical parameters

Model	HD-10	HD-25	HD-50	HD-100
Barrel Volume (L)	10	25	50	100
Max Loading Volume (L)	7	17	35	70
Spindle Speed (r/min)	0-20	0-15	0-15	0-15
Motor Power (kw)	0.55	0.75	1.5	2.2
Overall Dimension(L×W×H)mm	640*620*550	900*900*75	970*950*120	1200*1600*1500
Weight (kg)	120	150	300	500

Model	HD-200	HD-400	HD-600	HD-800
Barrel Volume (L)	200	400	600	800
Max Loading Volume (L)	140	280	420	560
Spindle Speed (r/min)	0-15	0-12	0-11	0-10
Motor Power (kw)	3	4	5.5	7.5
Overall Dimension(L×W×H)mm	1400*1800*1600	1700*2100*1850	2100*2400*2250	2200*2500*2300
Weight (kg)	800	1200	1200	2000

Model	HD-1000	HD-1200	HD-1500
Barrel Volume (L)	1000	1200	1500
Max Loading Volume (L)	700	840	1050
Spindle Speed (r/min)	0-10	0-10	0-10
Motor Power (kw)	7.5	11	15
Overall Dimension(L×W×H)mm	2400*2800*2550	2500*3100*2600	2800*3600*3200
Weight (kg)	2500	2800	3000