

## *HTD Series Blender*



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The machine is composed of machine base, rotation body, lifting system, braking system, and control system. After pushing the mixing bin into the mixing crotch, the bin is locked tightly by the locking handle. Through the automatic control function on the touch panel, the bin will be lifted to and stop at the mixing position. Then the mixing system will work. The mixing system will carry out mixing according to the set time, rotation speed and other data. After reaching the set parameters, the mixing bin will stop vertically and meanwhile the braking system starts. Then the lifting system will lower the bin to the ground. After the bin is lowered to its position and stops, the process data will be printed. The bin is ready to be pushed out and transferred to the next procedure.

The machine is a new machine researched and developed successfully by our company according to China's actual conditions after absorbing and digesting internationally advanced technology. After mixing is finished, the hopper can continue to rise to the required height to facilitate discharging. The machine has such features as reasonable structure, stable performance, convenient operation, no dead corners, and no exposed bolts. The gyrator (mixing hopper) forms an included angle of 30° with the rotation axis. The materials in the mixing hopper rotate along with

the gyrator and make tangential movement and achieving the best mixing effect. PLC automatic control is adopted. It is provided with the infrared safety device and the discharging butterfly valve with the disoperation preventer to ensure safe production. The material can go through different working producers in the same vessel without the need of frequent material transferring, material charging, etc. The machine effectively controls dust pollution and cross contamination, reduces loss of materials, controls material layering, optimizes production processes, and fully meets the requirement for medicine production in GMP.

## **1. Safety**

- 1) Safe Hydraulic Block
- 2) Falling Prevention when tubing bursts  
There is one-way safety valve in the hydraulic cylinder. When the tubing bursts, the one-way safety valve and discharging port of oil cylinder will close to prevent the trolley falling danger caused by the pressure relief of oil cylinder.
- 3) The upper and lower parts of the column are fixed, which improves the overturn-preventing capability and safety.
- 4) The main structure of the lifting column is made of forklift mast steel. The guide rail has thick material and high strength, which prolongs the life of the guide rail and satisfy the requirements of the lifting and loading.
- 5) There are upper and lower limit devices in the machine, to ensure the safety of lifting machine.
- 6) External safety lock. When the device is in high load for a long time, it is effective to prevent accidental fall after the safety lock is opened.
- 7) The lifting trolley in the lifting column is equipped with built-in anti-falling device. When the lifting chain is broken, the anti-falling device can effectively clamp the trolley to the column, and effectively prevent the secondary dangerous occurrence of the chain fracture.

## **2. Stability**

- 1) HTD Column Bin mixer adopts single column base design with upper and lower parts fixed, which saves space. The rotary force of the base is in good condition. The ground load is uniform. There is no special requirements for the base. The equipment runs smoothly.
- 2) The column is equipped with lifting power and rotary power devices, which have simple structures, large space and convenient maintenance. Lifting relies on the hydraulic system of oil cylinder, which is safe and reliable.
- 3) Lifting system adopts the oil cylinder hydraulic system and centralized hydraulic valve components, to ensure the reliable operation of valve group. It is easy to maintain, reduces the complex oil circuit and has small volume.
- 4) Mixing rotary adopts the design which integrates the motor, reducer and brake system. It has the advantages of few transmission parts, small volume, and simple maintenance.
- 5) This machine adopts the PLC control system. It is able to complete all the operations automatically based on the set process parameters and print all the results automatically. The original record is true and reliable. This machine can set different speed and mixing time according to different flow characteristics to obtain the best mixing effect. The speed setting range is 3-8rpm, and the mixing time setting range is 0-59min. The touch panel has a very friendly Chinese and English interface.
- 6) The machine has a perfect sensor control system, which can guarantee the automatic operations of mixing bin lifting, automatic deceleration and stopping alignment, and the process is stable and accurate.

## **3. Meeting the requirements of the pharmaceutical industry**

- 1) The machine has no dead angle, no convex and concave plane, and exposed screws, which is easy to clean.

2) The surface in contact with the drug is polished with high precision. The roughness can reach  $Ra \leq 0.2 \mu m$ . The outer surface is treated with matte finishing and the roughness can reach  $Ra \leq 0.4 \mu m$ , which is easy to be cleaned, and in full compliance with the GMP requirements of drug production.

3) Configuring the mixing bins with different volumes can meet the requirement of multi-variety and mass production. It is able to serve as multi-purpose and improves the production efficiency.

### Technical Parameter:

型号 Model	主要结构尺寸 Main structural dimensions									净负载 Net load		混合转速 Speed	总功率 Power	机器重量 Weight
	A	B	C	L	H1	H2	H3	H4	H5	L	kg	rpm	kw	T
HTD-100	600	1160	1300	2200	250	700	1100	1190	2000	80	50	3~20	2.2	0.8
HTD-200	600	1350	1550	2250	250	700	1230	1460	2100	160	100	3~20	2.6	0.9
HTD-300	600	1420	1650	2500	300	750	1560	1630	2200	240	150	3~20	3	1
HTD-400	600	1450	1850	2650	400	750	1690	1780	2300	320	200	3~20	4.4	1.2
HTD-500	800	1550	1950	2800	400	750	1800	1880	2400	400	250	3~15	4.4	1.4
HTD-600	800	1650	2080	2900	400	750	1870	2000	2400	480	300	3~15	5.2	1.7
HTD-800	800	1750	2300	3000	400	750	1970	2150	2500	640	400	3~15	5.2	2
HTD-1000	800	1850	2350	3150	400	750	2050	2250	2700	800	500	3~15	6.2	2.2