

GHL-50

Rapid Mixer Granulator Machine



**EQUIPMENT
TECHNICAL PARAMETER**

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GHL-50 Rapid Mixing Granulating Machine



MACHINE INTRODUCTION

GHL series rapid mixing granulator adopts horizontal cylinder structure with reasonable structure. Fluidized granulation, the granulation is approximately spherical and has good fluidity. Each batch is dry mixed for 2 minutes, granulated for 1-4 minutes, and the efficacy is 4-5 times higher than that of traditional processes. Yield > 99%, finished particle humidity < 5%. Compared with the traditional process, the binder is reduced and the drying time is shortened. The entire

operation has strict security protection measures.

GHL series high-efficiency wet mixing granulator is suitable for mixing and granulating powdery materials injected with binder in pharmaceutical, food, chemical, light industry and other industries, and also suitable for dry powder mixing.

MACHINE FEATURES

1. This machine consists of a main machine, a reducer, a discharge mechanism, a mixing blade, a control cabinet, a chopping blade and a balance support part. Reasonable structure, convenient operation, no dead angle, easy to clean;
2. It adopts horizontal drum structure and advanced design.
3. The drive shaft is inflated and sealed, and can be switched to water when cleaning.
4. Fluidized granulation, the granules produced have high true sphericity and good fluidity, so that the compressed tablets have better smoothness, disintegration and release.
5. Complete dry mixing-wet mixing-granulation in the same closed container, so as to reduce the process and save time. Comply with GMP regulations.
6. With safety protection measures, magnet interlock switch. Prevent the material pot cover from being opened when the motor is running.
7. The machine has a time delay circuit. When the last motor is turned off for 10-15 seconds, the material pot cover can be opened, and there is a signal light to indicate. When the main switch is turned off, the material pot cover is locked.
8. There is a travel switch on the discharge mechanism. When the knob of the material port door is loosened, the motor will be powered off and cannot be started.
9. The cylinder of the discharge piston of GHL series high-efficiency wet mixing granulator can move forward and backward flexibly and can be adjusted to make the running speed moderate.

WORKING PRINCIPLE

1. It mixes the powder material and binder in a cylindrical or conical container, fully mixes it into a wet soft material by the bottom mixing paddle, and then cuts it into Uniform wet granulation.
 2. When the machine is working, several formulations of materials are added to the working container at one time, and the adhesive is injected after mixing, or one formulation of materials and adhesives are added to the working container at one time. After the soft material is mixed by the stirring paddle, the cutting reamer grinds the soft material into granules.
 3. When the reamer is driven by a two-speed motor, so the granules of different sizes can be obtained by controlling the solubility of the adhesive, the reamer speed, and the crushing time, ensuring that the production of medicines in From batch to batch, the quality of particle size distribution, density, fluidity, etc. reaches a high level of repetition. GHL series high-efficiency wet mixing granulators are automatically produced according to the same procedure to ensure the granulation quality of the product.
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MANUFACTURING REQUIREMENTS

1. The particle size range of granulated products is 16-80 mesh (according to process requirements).
2. All welding must use the argon arc welding process, and the welding parts must be polished and passivated, and the surface should be smooth and flat.
3. The material discharged from the discharge port must be cleared at one time, and no material accumulation is allowed.
4. Surface finish: the material contact surface and equipment surface roughness $Ra < 0.6\mu m$, the outer surface roughness $Ra < 0.8\mu m$, and the straightness on the outer diagonal line $\leq 5/1000$.
5. A control switch is installed on the discharge port and the pot cover, and has a safety interlock function. Only when the discharge valve and the pot cover are closed, the stirring motor and the granulating motor can be turned on. The opening of the door should be free

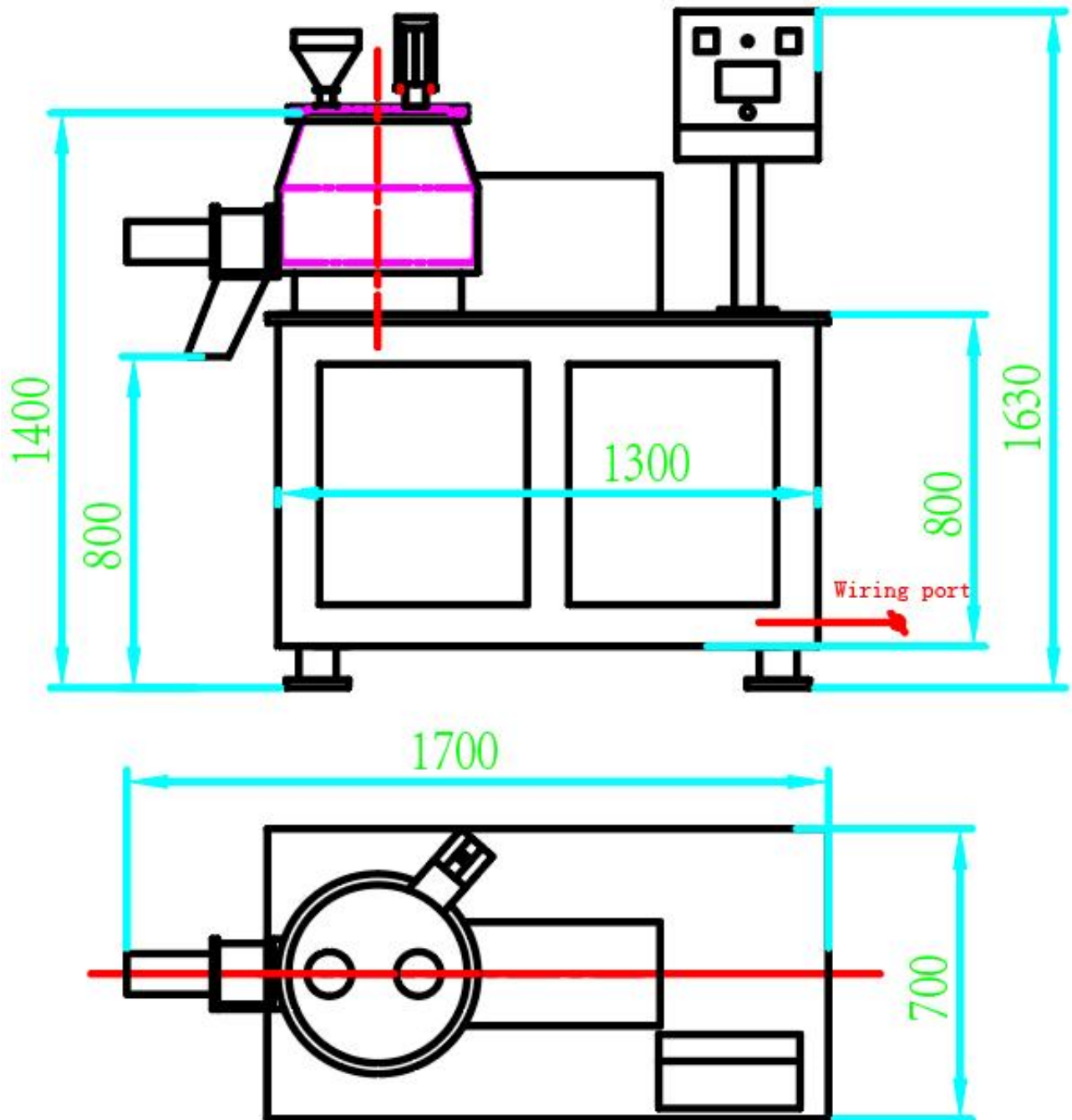
and flexible, the motor should run smoothly without noise and vibration, and the working noise should be less than or equal to 75db.

6. The distance between the bottom of the pot and the bottom of the stirring paddle should be $\leq 1\text{mm}$ to solve the problem of aggregates at the bottom of the pot. At the same time, the shredding knife adopts a side-mounted type, the blade is easy to replace, and the whole shredding knife assembly has no dead angle for cleaning. Among them, the seal between the stirring drive shaft and the cylinder is preferably air-sealed, which can be air-sealed and water-washed. The seal between the stirring drive shaft and the cylinder and the seal between the granulation knife shaft and the cylinder should be reliably sealed to prevent dust from entering and avoid cross-infection.
7. The AC three-phase five-wire system is used for power supply to ensure reliable grounding of the system. There is an emergency stop and effective button on the obvious and easy-to-operate position of the machine.
8. Others are implemented according to industry standards.

TECHNICAL PARAMETER

MODEL	GHL-50
Volume (L)	50
Yield (kg/batch)	15
Mixing Speed (rpm)	250
Mixed Power (kW)	5.5
Cutting Speed (rpm)	3000
Cutting Power (kw)	2.2
Compressed Air Consumption (m ³ / Min)	0.6
Equipment Weight (kg)	150
Size(mm)	1700×700×1630

DETAILED DRAWINGS



ELECTRONIC PART LIST

NAME	MODEL	QTY	BRAND	REMARK
HYBRID MACHINE	Y180M-6/2P	1	WANNAN	5.5KW
CUTTING MOTOR	YD132S 4/2P	1	WANNAN	2.2KW
REDUCER	KL97-9.8-AD5-V3	1	GUOMAO	
BEARING	6210 (210)	2	BARBIN	
BEARING	30214(7214E)	2	HARBIN	
DISCHARGE CYLINDER	QGB63*260	1	SMC	
OPEN CYLINER	QGB80*300MP4	1	SMC	
PNEUMATIC SOLENOID VALVE	AC220V	5	SMC	Two pieces of two-position five-way, three pieces of two-position two-way
OIL SEAL	PD70*90*12	1	NAK	
OIL SEAL	PD60*90*12	1	NAK	
OIL SEAL	SG70*95*12	1	NAK	
OIL SEAL	PD45*70*12	1	NAK	
Y-RING	90*120*15	1	RICHENG	HG4-335-66
OIL SEAL	70*90*12	1	RICHENG	
DUST RING	60	1	RICHENG	
O-RING	φ240*5.3	3	RICHENG	
O-RING	φ270*5.3		RICHENG	
O-RING	φ63*3.1		RICHENG	
QUICK RELEASE CLAMP	φ200	1	HANYOO	
PNEUMATIC TRIPLE	AFR2000	1	SMC	
PRESSURE REDUCING VALVE	Match	2	SMC	
PLC	224XP	1	SIEMENS	
HMI	SMART	1	SIEMENS	
OTHER ELECTRONIC APPLIANCE	Match	1	SCHNEIDER	

A dark blue horizontal banner featuring various medical and pharmaceutical icons in a lighter blue color. The icons include a blister pack of pills, a medicine bottle with a cross, two crossed capsules, a single capsule, two round tablets, a small vial, and another blister pack.

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