

产品使用说明书

PRODUCT SPECIFICATION



设备名称：二维混合机

型号：PGH-V

PRODUCT NAME: 2D MIXING MACHINE

TYPE : PGH-V

使用前请详细阅读说明书

Please read the instructions before use



公司符合 ISO 9001:2008 认证标准。

证书号：M4316Q20210R0S

产品符合欧盟 CE 指令标准。

证书号：ECU-CZPE-LMX865-IJWUU-2



The company complies with the ISO 9001:2008 certification standards.
Products comply with the European Union CE directive standards.

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PGH-V/PGH-S 型混合机使用说明书

安全注意事项



警告：

若想降低起火、电击或产品损坏的危险，

- 请勿将本设备暴露于雨中、潮湿、滴水或溅水的工作环境中，并勿将盛满液体的物体（如花瓶）放在本设备上。
- 请勿卸下机身的前盖（或后盖）；机身内没有用户可维修的部件。需要维修时，请联系授权的维修人员。
- 切勿擅自装拆或改装设备电器线路，由于故障原因无法使用，请及时与供应商。
- 请严格按照使用说明书要求进行操作，由于违规操作或操作人员造成的机械故障或损失，制造商概不负责。
- 严禁未成年儿童擅自接触此机械，以免发生事故。



注意：

- 使用前应进行一次空运转试车，在试车前应先检查混合机全部连接件的坚固程度，减速器内的润滑油油量和电器设备的完整性，然后闭合总开关，通入电源，进行空运转试车。
- 本设备外壳必须有良好的接地。
- 安装：本机必须要安置在结实较平的地面上（不平度 $\leq 3/1000$ ），最好能固定安装。打开包装后详细阅读说明书，根据说明书要求将机械放置平稳，装好机脚，垫平，使机械能运转自如。

- 在混合机的最大工作区做标识, 以免工作时碰伤工作人员。使用前先将须加油处加好油, 然后进行空载运转, 检查各紧固件是否松动, 电气是否正常, 机械是否运转正常, 如有异常, 进行整修和调试。
- 将加料口转至上面, 打开加料盖进行加料, 加料量不可超过规定容积, 然后关紧加料盖, 开动机器进行运转, 途中如发现异常, 必须停机检查。
- 下班后或更换品种必须将料斗内、外冲洗干净。

请仅使用推荐的附件。

许可

- PULANDA®标志是商标
- PULANDA®标志是常州市普兰达干燥设备有限公司在中国的注册商标或商标
- 本说明书中提到的相关的产品通用名称, 是开发相应系统或产品的厂家的注册商标或商标
- 如果使用说明书中的相关产品的型号、元器件、电气配件设备等与采购的设备不相符, 有可能是根据采购方提出的特定要求或针对采购方所提出的使用材料的特性要求不同而进行改变, 合同签订前已经与采购方相关经办人员确认。

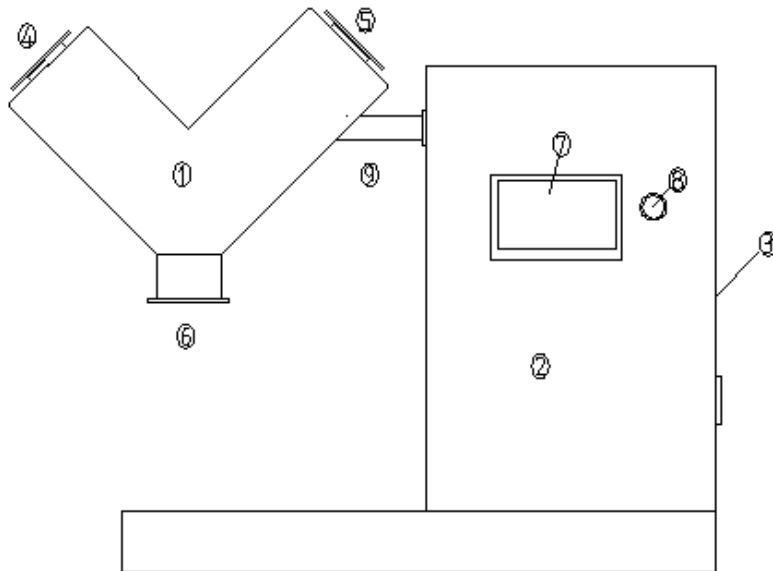
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技术参数

名称：混合机

产品型号： PGH-V/ PGH-S



①料筒②机身③机身后盖④进料口 1⑤进料口 2⑥出料口⑦操作屏⑧
启动按钮⑨转运轴

料筒总容积(L)：

8\15\50\100\200\400\600\1000\1500\2000

最大装料容量(L)：（*装料量为有效容积的50±10%）

4.8\13.5\45\90\180\360\540\900\135\1800

最大装料重量(KG)：（*具体根据物料比重确定）

5\10\30\60\120\240\360\600\900\1200

外形尺寸（mm）：

600*1120*870\800*1200*1000\1150*1400*1300\1250*1800*1150\14

50*2000*1550\1650*2200*1550\1850*2500*1750\2150*2800*2100\2

300×3200×2500\2500×3600×2800

筒体转速(r/min): 0-20

电机功率(Kw): 0.37\0.55\0.75\1.1\2.2\4\5.5\11\15\18.5

重量(Kg): 120\150\200\300\800\1200\1500\1800\2400



*注: 如物料比重超过 $0.6\text{Kg}/\text{cm}^3$, 订货时需提出, 以便按比重设计。

产品打印标设位于机身的侧面。

产品简介

本机适用于一切流动性较好的干性粉状及颗粒物料的混合。它广泛使用于制药, 化工, 食品, 塑料。化妆品, 陶瓷, 冶金等工业。

本设备吸取国际同类产品的优点进行设计, 因组成两圆柱筒的长度是不相等的, 故形成不对称。当混合机回转时, 物料从分解和组合势能不同, 就形成轴向逐层交替的扩散混合, 由于物料在筒体内壁所处平面的不同, 相互间也具有不同的势能产生横向对流混合。上述混合作用连续重复进行, 使物料非常均匀的随机混合状态。

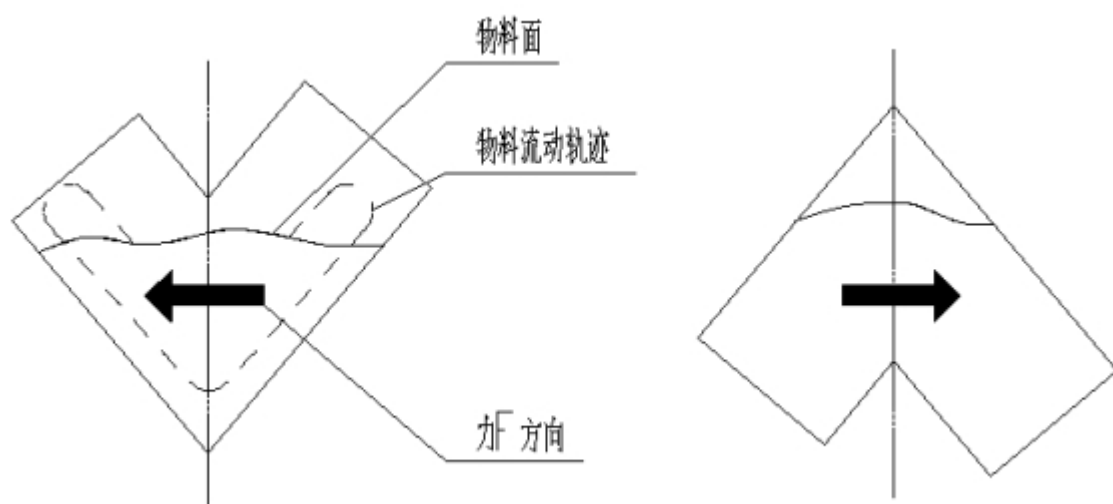
本机因采用重力混合, 故对物料压馈较小, 混合均匀度高并且采用不锈钢制造筒体, 内外壁抛光, 功耗省, 效率高。易清洗, 符合GMP 要求。

工作原理

本机主要由: 机架、减速装置、混料筒、PLC 操控系统, 四部分组成。固定在机架上的电机通过皮带轮, 三角带传动给减速器。然后, 再由减速器通过小链轮, 大链轮传动给混料筒, 达

到减速目的，从而使混料筒获得 0-20 转/分的匀速回转运动。

料桶是由两个不锈钢圆筒组成 V 型或圆柱体拼装焊接起来的容器组成，容器的形状相对于轴是非对称的。由于回转、翻滚运动，粉体粒在倾斜圆筒中，连续的反复交替、分割、合并；物料随机地从筒体内一区传递到另一区，同时粉粒体粒子间产生滑移，进行空间多次叠加，粒子为断分布在新产生的表面上，这样反复进行剪切、扩散运动，从而达到混合目的。



功能介绍

本混合机可用于流动性较好的干性粉状或颗粒状物料的均匀混和，适用于制药、化工、食品、轻工、饲料、化肥、电子、机械、矿冶、燃料、国防工业等行业及各科研单位的粉状、颗粒状物料的高均匀度地混合。

医药：胶囊颗粒，中药调味品，粉状或颗粒状中草药等的混合。

饲料：可对各种渔用饲料，家禽用饲料，野生动物类饲料，飞禽类饲料等各种饲料的混合。

食品：如调味品，添加剂，维生素，各种糖制品等。

燃料：各种鞭炮，烟火等原材料的混合。

矿石或金属粉末：可对各种粉状或颗粒状矿石或金属粉末等的混合。

操作、使用过程

- 检查机器：设备操作前的检查工作：①详细阅读说明书，熟悉操作面板和操作菜单、界面。②检查电源是否符合要求。③检查本机所有电器、仪表是否正常完好。④检查混料机内应无异物，料斗内壁应干燥，打开进料口盖和关闭出料口盖。⑤检查混料机周围应无障碍物，以免混料机运转时会碰撞到障碍物上，造成事故。⑥先空运转，检查主动轴转向是否与标识一致。⑦按规定装料量装料混合。⑧料筒和摇臂部分要实行三维空间运动，故用户必须在设备回转范围内设有防护栏杆或明显的警界线，以防发生人身事故。
- 备料：准备好需要混合的各种物料，切记物料必须是干燥的，若物料不是干燥，得不能用此类型混合机，可采用我厂的槽型混合机，或先用烘箱烘干再进行此项操作。
- 入料：把物料从加料口加入，一般只能加总容积的50%左右，这样才能混合均匀，然后旋紧加料口盖。
- 混合：开启电源开关，开始混合物料。
- 出料：打开出料口盖，用规定的容器在出料口进行装料，直至放尽料斗内物料。

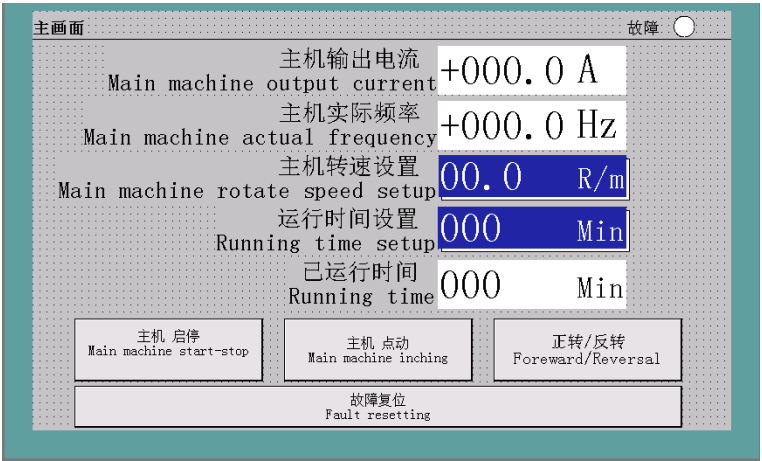
菜单界面和菜单设置：

菜单界面：

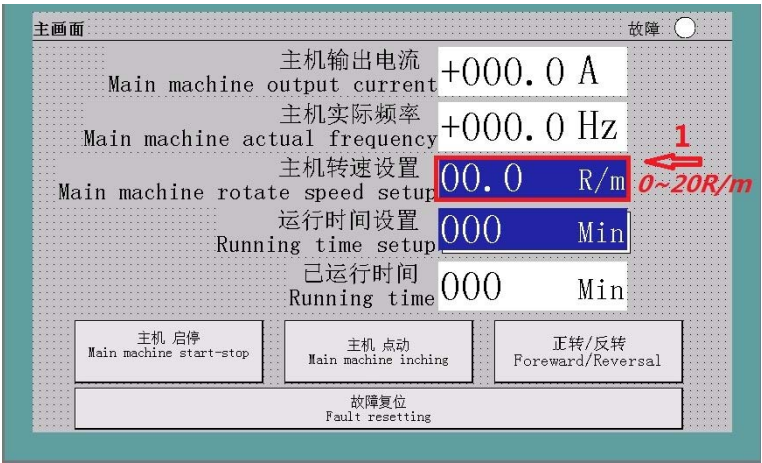
接通电源后，按启动按钮，操作屏进入程序启动，进入欢迎界面。



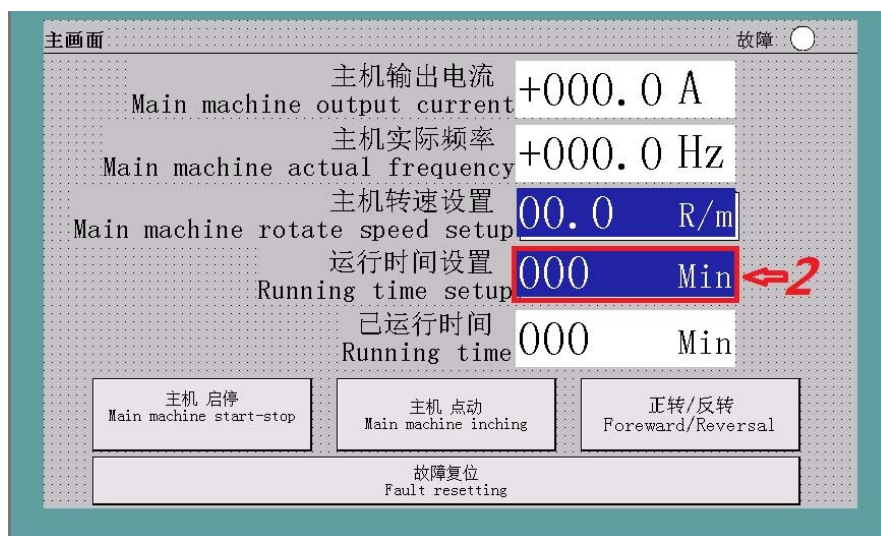
进入欢迎界面后，点击进入系统，进行菜单设置。



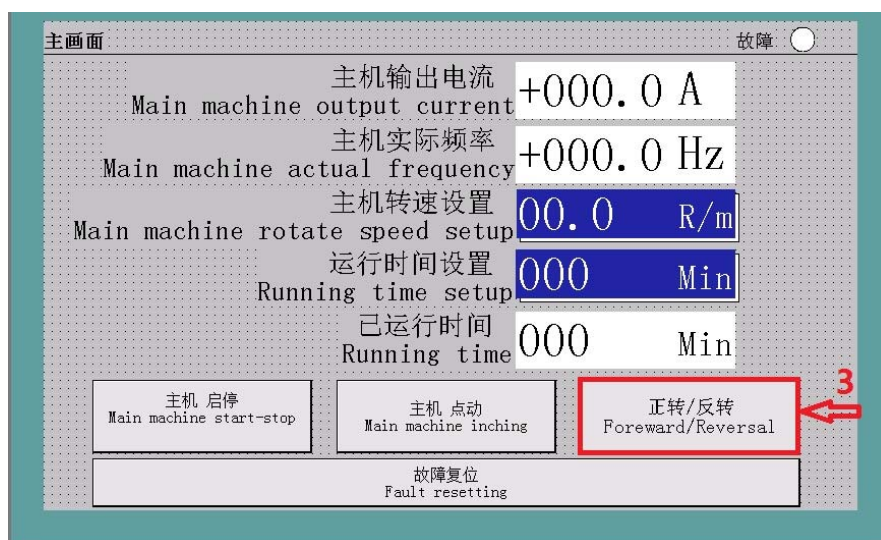
进行转速设置（0~20转/分钟）



进行时间设置



选择正\反转



设置完毕后，点击相关操作屏 Start-stop 按钮，即可进行操作。

使用环境

- 本机适用于环境温度为-5 °c-40 °c，相对湿度<90%，恒温最适宜，应放置通风、干燥、清洁的位置。
- 将加料口转至上面，打开加料盖进行加料，加料量不可超过规定容积，然后关紧加料盖，开动机器进行运转，途中如发现异常，必须停机检查。

- 一次使用完毕或停工时，应取出桶内的剩余物料，刷清机器各部分的残余粉子。如停用时间较长，必须将混合机全部擦干净，并用蓬布罩好。
- 下班后或更换品种必须将料斗内、外冲洗擦拭干净。

维修保养措施

- 维修或保养时，请确认是否已经关闭电源，并将插头从插座孔拔出。
- 打开机身后盖板，检查线路是否有破损、烧坏、击穿等状态。如发现有以上情况，不能再使用，请与供应商联系。
- 减速机和轴承处应定期注入润滑油和润滑脂。减速器的润滑如采用油浸式，其储油量必须保持在油标线上，油质必须保持清洁。如经常使用须每隔三个月换一次新油，更换时应将减速器拆洗清洁后，加上新油。
- 混合机电器控制零件，应保持清洁、灵敏，发现故障应及时修复。
- 料筒斗装拆时应轻拆、稳装、轻放，以免变形损坏。
- 定期检查机件，每月1-2次，检查项目为动力轴、传动、减速箱等各活动部分是否转动灵活以及磨损情况，发现缺陷应及时修复，以便混合机能正常使用。
- 仪器仪表的校验，每周进行一次仪器仪表的检查；每年进行一次仪器仪表的校验。
- 维护保养工作后填写相关记录，及时整理归档。

运输过程注意事项

- 尽量减少搬运次数；
- 在搬运物件前，应估计物件的重量和大小，太大太重不便于人力搬运时，最好采用其他方式搬运。尽量使用搬运工具；
- 设备要防潮、防水、防震、防腐蚀。
- 放置物件时，要小心轻放，防止碰撞，以防损坏物件。
- 防止划毛刮伤液晶板面。
- 搬运物件前，最好采取保护措施，如手套、口罩、工作服、安全帽等。
- 搬运物件时，应先检查物件是否有尖角、毛边以及各部件是否有松动现象、以免造成物体和人身损伤。
- 搬运时应用手掌紧握物件，不可以只用手指抓住物件，以免物件滑脱。
- 人力搬运时，须多人协作。搬运时脚步要稳，小心行走，以防滑倒或绊倒。
- 有标识方法的物件，要按标识方法放置，不能倒放，同时，要将物件的物料标签向外，便于读数和识别。

质量保证

- 质保期一年，电子原器件质保三个月。设备原器件的正常使用磨损，不在质保范围内。
- 一个月内，如有质量问题，供方无条件负责更换；一年内发生产品质量问题，供方负责免费维修。
- 由于使用方的责任造成的机械故障或损坏，不在质保范围内。

- 超过质保期或不属于质保范围内的维修或更换，费用由使用方承担。



紧急应对措施

- 在混合过程中，如发现机器有明显的抖动、噪音应该立即停车，查明原因后，排除故障，方能重新工作。
- 遇机械或电器故障，请立即关闭电源，并将插头从插座孔拔出。确保断电。
- 如电器发生起火，请用干粉灭火器扑灭。严禁用水扑灭，避免造成二次伤害。
- 如造成人员伤害，请及时到就近医院就医。
- 与供应商或生产厂家联系。

■关于试料材料的赔偿

制造商对于因本机、其附件故障或缺陷造成的任何损失概不负责。

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本产品说明书编制时间为 2016 年 10 月。

PGH-V/PGH-S TYPE MIXING MACHINE INSTRUCTIONS

SAFETY PRECAUTIONS



WARNING:

- If you want to reduce the risk of fire, electric shock or damage to the product.
- Do not use this equipment to expose in the rain, wet, dripping or splashing in the work environment, and it will be filled with the liquid objects (such as vases) placed on the device.
- Do not unloaded under fuselage front cover (or back); there are no user serviceable parts inside the fuselage. In need of repair, please contact an authorized maintenance personnel.
- Do not disassemble or modify the device without electrical lines, due to a fault can not be used, please contact with the supplier.
- Please operate strictly in accordance with the specification requirements, due to mechanical failure or loss of illegal operations or operator liability caused by the manufacturer is not responsible.
- Forbidden minor children unauthorized access to this machine, in order to avoid accident.



BE CAREFUL:

- There should be a cargo transfer test before use, should check all the mixer on a solid connection degree before commissioning, the integrity of the reducer in the lubrication oil amount and electrical equipment, and then close the switch, is connected to a power supply, commissioning of idling.
- The equipment shell must have a good grounding.
- Installation: the machine must be placed in a solid flat surface (not flatness less than 3/1000), the best fixed installation. After opening the package, read the instructions, according to the requirement of the mechanical machine installed stably, foot pad, that the engine can operate freely.
- Mark in the maximum work area of the mixer, in order to avoid bruising staff. Prior to use the first oil to be added oil, and then no-load operation, check the fasteners are loose, electrical is normal, the machine is functioning properly, if abnormal, for renovation and commissioning.
- The charging port to the above, open the feeding cover by charging, charging amount does not exceed the specified volume, and then close the feeding cover, start the machine running on the way, such as abnormal, to stop check.
- After work or replace varieties must take the hopper inside and outside clean.
- Please use only the recommended accessories.

PERMIT

- PULANDA logo is a trademark
- The PULANDA logo is Changzhou pulanda drying equipment Co. Ltd. in China

registered trademarks or trademarks.

- The generic name of the relevant product referred to in this specification is a registered trademark or trademark of the manufacturer of the corresponding system or product.
- If the equipment used in the specification of the product types, components, electrical accessories and equipment procurement is not consistent, there may be performance requirements according to the specific requirements of the purchaser or the purchaser for the proposed use of the different materials and change, before signing the contract with the purchaser has related personnel to confirm.

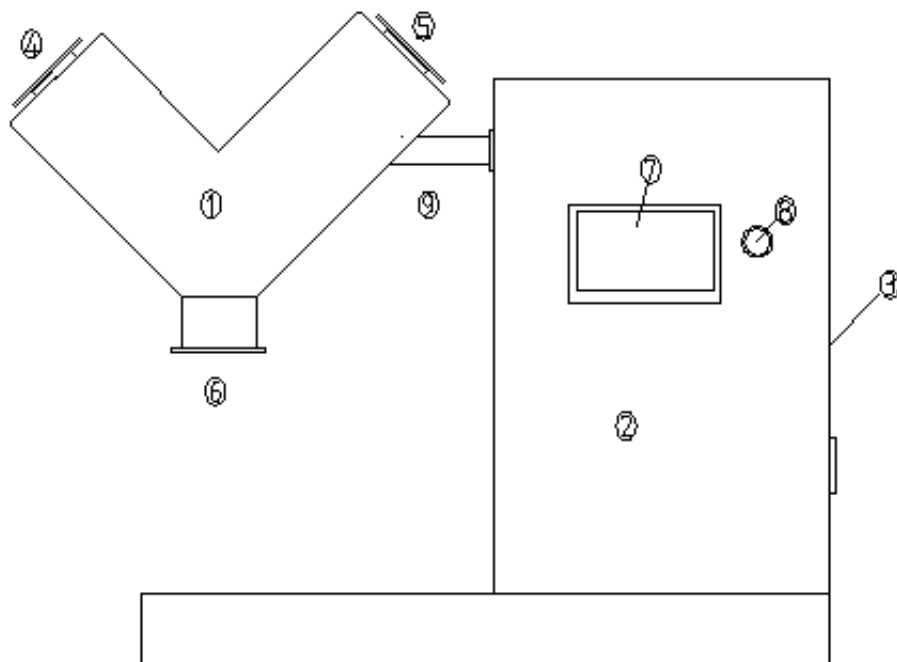
CATALOG

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TECHNICAL PARAMETER

Name: Mixing Machine

Product type: PGH-V/ PGH-S



① Barrel ②Fuselage ③Back cover ④Feed inlet 1⑤Feed inlet 2 ⑥Discharge port
⑦Operation screen ⑧Start button/switch ⑨Transit axis

Aggregate volume (L):

8\15\50\100\200\400\600\1000\1500\2000

Maximum loading capacity (L): (Determined according to the proportion of materials, charge for the effective volume of 50 + 10%)

4.8\13.5\45\90\180\360\540\900\135\1800

Maximum charge weight (KG): (Determined according to the proportion of materials)

5\10\30\60\120\240\360\600\900\1200

Outline dimension (mm):

600*1120*870\800*1200*1000\1150*1400*1300\1250*1800*11550\1450*2000*1550\1650*2200*1550\1850*2500*1750\2150*2800*2100\2300 x 3200 x 2500\2500 x 3600 x 2800

Cylinder speed (r/min:0-20)

Motor power (Kw):0.37\0.55\0.75\1.1\2.2\4\5.5\11\15\18.5

Weight of (Kg):120\150\200\300\800\1200\1500\1800\2400



* Note: if material proportion exceeds 0.6Kg/cm³, order should be put forward in order to design according to specific gravity.

■ The product label is located in the fuselage of the print side.

PRODUCT INTRODUCTION

This machine is suitable for the mixing of dry powder and granular material with good fluidity. It is widely used in pharmaceutical, chemical, food, plastic, cosmetics, ceramics, metallurgy and other industries.

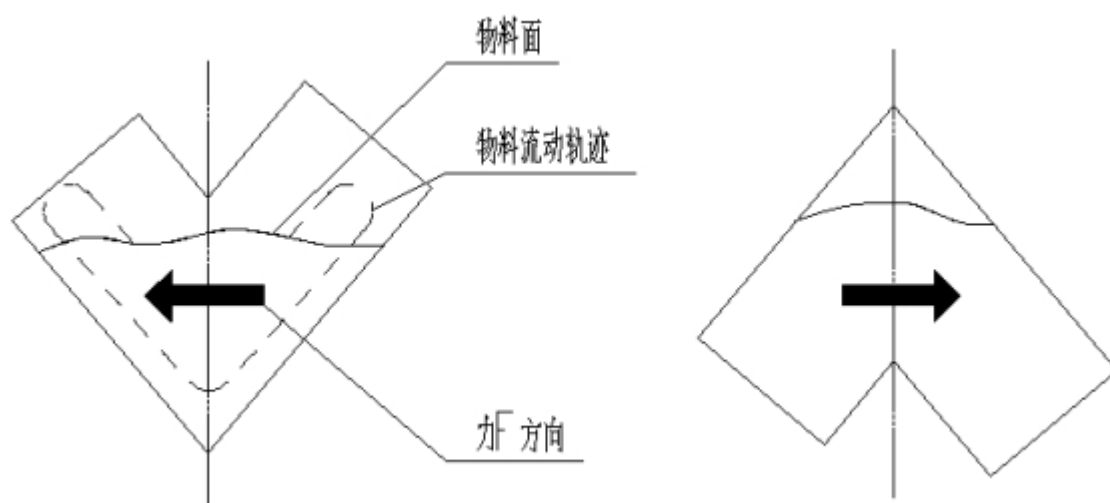
The equipment is designed to absorb the advantages of similar products in the world, because the length of the two cylinders is not equal, so the formation of asymmetric. When the mixer rotates, the material from the decomposition and combination of different potential, is formed by the axial diffusion mixed layer alternately, because the plane of different materials are located in the inner wall of the barrel body, each has a different potential lateral convective mixing. The mixing action is repeated continuously, so that the material is very uniform.

Due to the adoption of gravity mixing, the utility model has the advantages of small material feeding, high mixing uniformity, stainless steel cylinder body, inner and outer wall polishing, power consumption saving and high efficiency. Easy to clean, comply with GMP requirements.

WORKING PRINCIPLE

The machine is mainly composed of four parts: frame, speed reducer, mixing barrel, PLC control system. The motor fixed on the frame is transmitted to the speed reducer through a belt pulley. Then, the reducer is driven by a small chain wheel, and the big chain wheel is transmitted to the mixing cylinder, so as to achieve the purpose of slowing down, and thus, the mixing cylinder can obtain a uniform rotation motion of 0-20 revolutions per minute.

The utility model is composed of two stainless steel cylinders which are composed of a V type or a cylinder assembled and welded together. The rotary, tumbling, powder particle in tilted cylinder, continuous alternately, splitting and merging; random material transfer from the cylinder area to another area, at the same time, powder particle slippage, spatial superposition of several particles distributed on the surface, breaking new produce, so repeated for shearing and diffusion, so as to achieve the purpose of mixing.



FUNCTION INTRODUCTION

This machine can be used for mixing evenly mixing the good fluidity of dry powder or granular materials, applicable to the pharmaceutical, chemical, food, feed, fertilizer, light industry, electronics, machinery, metallurgy, fuel, defense industry and scientific research institutes of the powder and granular materials with high uniformity of mixing.

Medicine: capsule granules, traditional Chinese medicine seasoning, powder or granular Chinese herbal medicine, etc..

Feeds on a variety of fish feed, feed for poultry, wild animal feed, poultry feed and other mixed feed.

Food: such as condiments, additives, vitamins, various sugar products, etc..

Fuel: various firecrackers, fireworks and other raw materials mixed.

Ore or metal powder: can be mixed with various powder or granular ore or metal powder.

OPERATION AND USE PROCESS

- Inspection machine: equipment operation before the inspection work:
 1. detailed reading instructions, familiar with the operation panel and operation menu, interface.
 2. If the check power supply to meet the requirements.
 3. Check all electrical appliances and instruments are in good condition.
 4. Check the mixer shall be free of foreign matter, hopper wall should be dry, open and close the cap feed discharging cover.
 5. Check the mixer around the barrier, in order to avoid mixing machine operation when magnetic hit the barrier, causing the accident.
 6. The first air operation, check the active steering and consistent identification.
 7. And according to the provisions of charge charge mixture.
 8. The cylinder and rocker arm part to implement 2D or 3D motion, so the user must be provided with a protective railing or obvious warning line in the rotary range, to prevent the occurrence of accidents.
- Preparation: prepare various materials to mix, remember the material must be dry, if the material is not dry, can not use this type of mixer, the trough type mixing machine of our factory, and this operation or by oven drying.
- Material: the material from the feeding port to join, generally only with the total volume of about 50%, so as to be mixed evenly, and then tighten the cap feeding.
- Mix: turn on the power switch and start mixing the material.
- Material: open the mouth, with the provisions of the container loading in the outlet, until exhausted in the hopper.

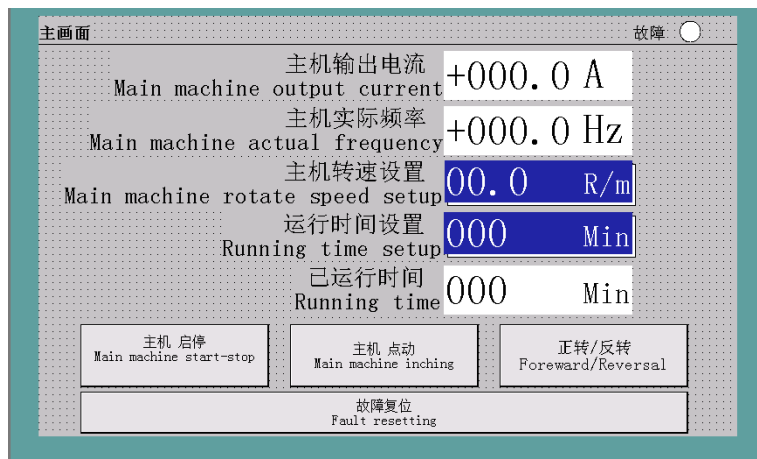
MENU INTERFACE AND MENU SETTINGS:

THE MENU INTERFACE:

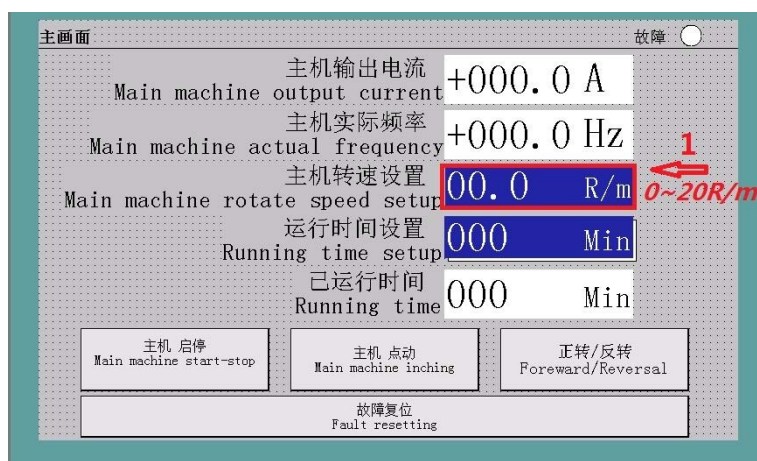
WHEN THE POWER IS TURNED ON, PRESS THE START BUTTON⑧, AND THE OPERATING SCREEN ENTERS THE PROGRAM TO ENTER THE WELCOME INTERFACE.



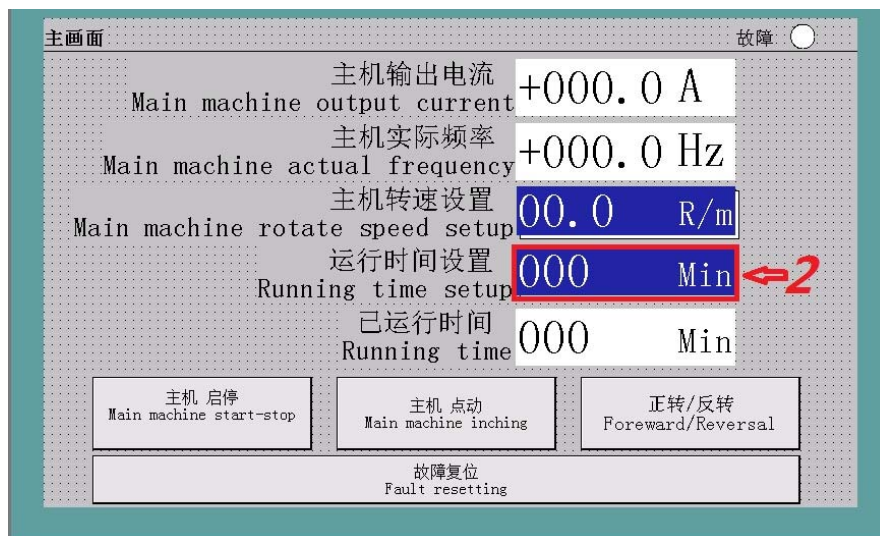
WELCOME TO THE INTERFACE, CLICK INTO THE SYSTEM, MENU SETTINGS.



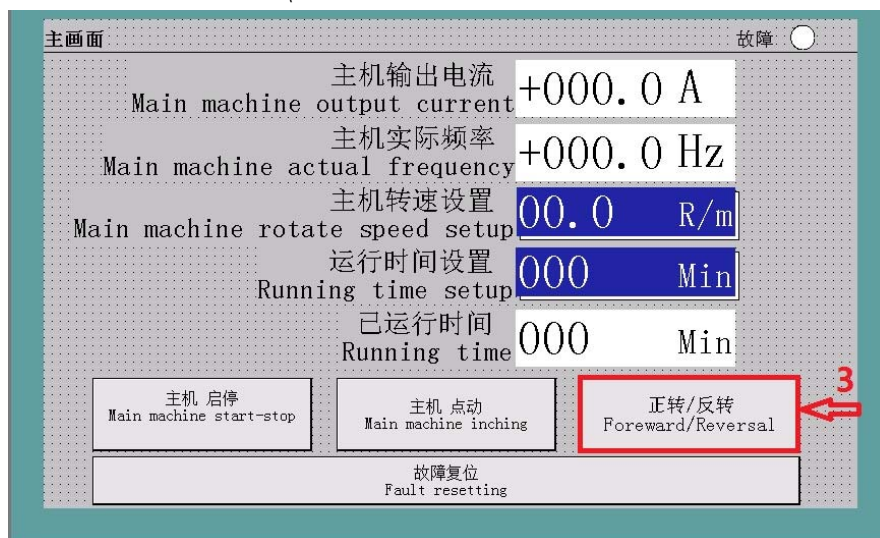
SPEED SETTING (0~20 r/m)



SET TIME



SELECT POSITIVE \ INVERSION



SET UP, CLICK ON THE RELEVANT OPERATING SCREEN START-STOP BUTTON, YOU CAN OPERATE.

USE ENVIRONMENT

- This machine is applicable to the environmental temperature of -5 degrees Celsius, 40 degrees Celsius, relative humidity <90%, the most suitable temperature, should be placed in ventilated dry and clean place.
- The charging port to the above, open the feeding cover by charging, charging amount does not exceed the specified volume, and then close the feeding cover, start the machine running on the way, such as abnormal, to stop check.
- When used or shut down, the remaining materials in the bucket should be removed and the remaining powder in each part of the machine will be cleaned. If the stopping time is longer, the mixer must be wiped clean and covered with tarpaulin.
- After work or replace varieties must be washed clean inside and outside the hopper.

MAINTENANCE MEASURE

- During maintenance or repair, make sure that the power is turned off and pull the plug out of the socket hole.
- Open the rear fuselage, check whether the line is damaged, burned, breakdown etc.. If found above, can not be used, please contact the supplier.
- Reducer and bearing should be regularly injected with lubricating oil and grease. Such as the use of reducer lubrication oil immersed, the oil must be kept in the oil mark line, the oil must be kept clean. Such as the frequent use of every three months for a new oil should be replaced, reducer and after cleaning, add new oil.
- Mixer electrical control parts, should be kept clean, sensitive, found fault should be repaired in time.
- Light loading stability, with demolition, dismantling the barrel bucket, to avoid deformation damage.
- Regularly check the parts, 1-2 times a month, check the project as the power shaft, transmission, gearbox and other movable part is flexible rotation and wear, found defects should be repaired in time, so that the normal use of mixed function.
- Check the instrument once a week; check the instrument once a year.
- Fill in the relevant records after the maintenance work.

MATTERS NEEDING ATTENTION IN TRANSPORT PROCESS

- Minimize the number of handling.
- Before handling the object, should estimate the weight and size of the object, too big too heavy not convenient for human handling, it is best to use other means of handling. Try to use the handling tool.
- Corrosion proof, waterproof, shockproof, equipment.
- Place the items that should be handled with care, to prevent the collision, to prevent damage to the object.
- To prevent scratching the LCD panel draw hair.
- Before carrying objects, it is best to take protective measures, such as gloves, masks, overalls, helmets, etc.
- Handling objects, should first check whether there are sharp edges and objects, each component is loosening, so as to avoid the injury of objects and people.
- When handling palm grip objects, you can not only grasp the object with your fingers, so as not to slip objects.
- Handling, footsteps to be steady, careful walking, to slip down or stumble.
- A method for identification of objects to be placed, according to the identification method can not be upside down, at the same time, the object material labels outward, easy to read and recognition.

QUALITY ASSURANCE

- The warranty period of one year, electronic components warranty for three months. The normal use of equipment components wear, not within the scope of the warranty.

- Within one month, if the quality problem, the supplier is responsible for the unconditional replacement; a year product quality problems, the supplier responsible for free maintenance.
- Mechanical failure or damage caused by the use of the party, not within the warranty.
- Maintenance or replacement over warranty period or not within the warranty area shall be borne by the user.



EMERGENCY RESPONSE MEASURES

- In the mixing process, if the machine is found to have a significant jitter, noise should immediately stop, identify the reasons, troubleshooting, before they can re work.
- In case of mechanical or electrical failure, turn off the power immediately and pull the plug out of the socket hole. Ensure power off.
- Such as electrical fire, please put the fire with dry powder. Forbidden to use water to put out, to avoid two damage.
- Such as causing harm, please go to the nearest hospital.
- Contact with suppliers or manufacturers.

■ ABOUT THE QUESTION OF COMPENSATION FOR SAMPLE MATERIAL

The manufacturer shall not be responsible for any loss caused by the malfunction or defect of the machine or its accessories.

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