

AMC SYSTEM TECHNOLOGY USA,INC

AMC400A Chocolate Enrober

Instruction manual

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Preface

Thank you for choosing our AMC chocolate enrobing machine. The machine is mainly used in producing chocolate with additional flavors.

Please read this manual before using. If you use wrong, it will affect the normal operation, reducing working life or causing failure .

Chapter One Safety Instructions

1.1 AMC400 enrobing machine is the specialized equipment for producing chocolate with additional flavors. The machine can painting chocolate syrup on the surface of the food, such as candy, cookie, biscuits and so on to make various chocolate with unique flavor.

1.2 Restriction and description on the usage of the machine

Installation and using environment of AMC400 chocolate enrober machine should meet the following criteria:

Ambient temperature: 18-25°C

Prevent from the rain or humid environment

Prevent oil mist, salinity attack

Avoid insolation directly

Prevent from corrosive liquor, gas

Far from radioactive material and combustible

Installation space should meet the attached map

1.3 The product adopts European regulation, criterion.

MD: 98137/EC 2006/42/EC

WD: 2006/95/EC

1.5 type specification

Type: AMC400A

Conveyor belt width: 400mm

Rated voltage: 220V

Gross weight: 300KG

Rated current

Rated frequency:60HZ

Gross power

1.6 See the attached map of the operation place.

1.7. Safety caution of using the product

Please read this instruction manual before installing, wiring (connecting), operating and maintaining make sure use properly. And please be familiar with related equipment knowledge, common knowledge of security aspects and all announcements.

Warning signs:



earthing sign



Mean high temperature,no touching to prevent burns.



Mean dangerous electricity,no touching to avoid the electric shock.

1. 7. 1 The electric cabinet can not install close to the combustibile mater,otherwise it may cause fire.

1. 7. 2 You can not open the electric cabinet when this product is drive into conduction.

1. 7. 3 You can not operate the electric cabinet with wet hands,otherwise it may lead to electric shock.

1. 7. 4 Turn off the main power of the electric cabinet when do the maintenance, examination and repair.

1. 7. 5 You can not maintain,repair and change the parts without the design guiding.

1. 7. 6 You can not open the preventer plate when working.

1. 7. 7 Don't touch electric heating parts when working to prevent burns.

Chapter Two Specification and Installation

2.1 Product type: AMC400A

Product name: chocolate enrober

2.2 Main technical parameters

2.2.1 mesh belt speed: 0~8m/min frequency control of motor speed

2.2.2 mesh belt width: 400mm

2.2.3 stock volume: 0-40kg/min frequency control of motor speed

2.2.4 Gross power: N=6.91 KW

main drive motor: 0.55KW

feeding pump motor:0.37KW

water pump:120W

small shaft motor:90W

electrical heated tube:4KW

mesh belt heater: 0.8KW

blowing fan:0.25KW

2.2.5 overall dimension: 2400×900×1800mm

2.2.11 overall weight:600kg

2.3 transport and storage

2. 3. 1 package

After acceptance test, disassembling and box separating package.

Disassembled parts: every parts of the cooling tunnel.

2. 3. 2 carrying

Transported by forklift or lifting appliance. The overall weight of the engine body is 800KG which should be transported by forklift or lifting appliance. See the attached transport map of the host hoisting transport.

2. 3. 3 transport

The equipment is suitable for land and sea transportation. Pay attention to the sign of the packing box when land transportation. Other parts can not get inversion,side sparking and over-bank except the base.

Adopt proper safeguard procedures when en-trucking to avoid damp, vibration

and impact.

Comply with the related criterion when sea transportation.

2. 3. 4 storage

The equipment should be stored indoor which is dry, ventilate, non-corrosive medium and non-librations.

2.4 primary structure and working principle

2.4.2 By the chain gearing coated materials arranged on the stainless steel mesh in the front of pouring paste machine are sent to the middle of stainless steel mesh for coat. The coated products are sent up to the coating conveyor belt in the tunnel. Through stainless steel mesh, Molding chocolate products are sent out of the cooling tunnel, enter the carriers apparatus, and so as to achieve the coating purpose.

2.4.3 Pouring machine is consists of pouring mechanism,slurry cylinder,feeding pump,feeding pipe,drive motor and frame.

2.4.3.1 Start the stirring motor,drive paddle of slurry cylinder by the chain.Start the main motor and drive network roller ,that is drive stainless steel mesh circle operation.

2.4.3.2 Start the feeding pump motor and send the slurry to the fill plate by feeding pump and feeding pipes. Meanwhile, the coated material send by the feeding mechanism entering to the below of the fill plate with the mesh belt. Then the blowing fan will blow the chocolate slurry.

2.5 Feature

2.5.1 Compact construction, fine outlook.

2.5.2 Automation temperature controls, controls accurate and convenient.

2.5.3 Simple operation, convenient installation and test.

2.5.4 The cylinder can be pulled out and easy to clean.

2.5.5 Wide applicable, mass production.

2.6 Installation and Commissioning

2.6.1 The coating-machine set installation field is expected to be smooth.

2.6.2 The plane requirement of the stock mesh belt, middle mesh belt and the

convey belt. The part can be a little higher than the export part, but the export part is not allowed to be higher than the stock part. The pouring paste machine and the refrigeration channel should be installed in line.

2.6.3 Before running ,checking the lubricate condition of the cycloid needle wheel reducer and worm wheel reducer before the equipment operates. If there is no lubricant, add the lube according to the user's guide.

The machine units should be installed far from the heating objects such as the furnace and kitchen range, etc.

2.6.4 Clean machine unit. Clean the cylinder,conveyor belt and wire-mesh belt with hot water. Then do the final cleaning by edible oil, and add cold water into the cylinder up to the water jacket.

2.6.5 Connect the electric cabinet,open every switch independent and do the debugging. Open the main motor,observe the paddle of the cylinder and mesh belt whether they work normal. Open the cylinder insulation to observe the transient temperature and whether the temperature controller works normal. Open the mesh belt heating and observe whether the warming is normal. If everything goes well,the debugging is over.

2.7About the scrap, please treat as the trade waste.

Chapter Three Operation and Usage

3.1 Warm up the material cylinder 30min before operations, and the max temperature is no more than 45°C which can be set by the temperature controller.

3.2 Open the refrigerator cooling water, Start electrical refrigeration units, and start cyclic air-cooled, and make the tunnel temperature below 10°C.

3.3 Control the temperature of core materials to coat between 20~25°C, no more than 30°C.

3.4 Control the workshop temperature between 18~25°C.

3.5 Control the chocolate paste temperature between 35~40°C usually, and it is necessary to regulate and control the outside and indoor temperature according to chocolate syrup ingredient.

3.6 Core materials food to coat cannot close together when arranging on the conveyor belt and it is necessary to have space between materials.

3.7 When core materials to coat enter the conveyor belt, coat Thickness could be controlled by adjusting the stock volume of the slurry feeding pump, and then blow to the homogeneous chocolate coating at a constant speed by blow paste wind turbines.

3.8 Coated foods enter the cold-pipe by conveyor belt. It is necessary to put Materials blocks straight artificially, and reinforce taste artificially if there are defects. There should have gaps between Materials blocks, so as not to make coated foods sticking together.

3.9 According to the requirements, the slurry flow can be controlled by adjusting the gate.

3.10 The specific operations process as follows:

Turn on the main switch---fill water into water jacket---turn on electric heating pipes---open the water circulating pump---preheat the tank/cylinder for 30min---open the mesh belt heating switch---open the blowing fan---open the main drive motor---open the stuff slurry motor---open the conveyor switch---chocolate flow from the top ss304 pipe to slurry flow ---start to work.

3.11 The unattended operations sequence of chocolate enrobing machine:

Close the stuff pump---close blowing fan---clean wire-mesh belt---close the mesh belt heating---close the cylinder heating---clean water circulating pump---close main drive---turn off the main power of the electric cabinet.

3. 12 OPeration of PLC :

3. 12.1 Turn on power, It shows operating screen.The right bottom goes to next screen .

3. 12.2 Screen I has main motor ,feeding pump 1,fan switch and main motor,feeding pump 1,fan ,roller ,small shaft running frequency setting button .The left bottom goes to previous screen .The right bottom goes to next screen .

3. 12.3 Screen II has stirring ,water pump,small shaft/axis,heating ,mesh belt heating,light ,pump2's manual or automatic control switch . Left bottom goes to previous screen ,right bottom goes to next screen .

3.13 The special limelight of the operation:

3.13.1 No foreign matter enters the chocolate taste cylinder. The paste must be warmed up to melt completely; the temperature must be above 35°C and be blow 45°C.

3.13.2 The paste in cylinder, pipe and pump, which felted up in the conveyor belt, must be drained and cleaned by edible oil, when the machines stop.

3.13.3 Clean the chocolate crumbs on the surface of conveyor,roller and carrier roller after stop.

Chapter Four Repair and Maintenance

Turn off the main power of the electric cabinet when you do the repair and maintenance

4.1 The lubrication of cyclonical-pin gear speed reducer and worm speed reducer should follow the instructions to change the lubricating oil periodically.

4.2 The cylinder, pump, pipe, hopper contacting the paste should be cleaned by edible oil.

4.3 Adjust the appropriate steel wire mesh tense properly.

4.7 Common faults and failure recovery

4.7.1 Check whether the setting of temperature controller is appropriate and the electric heating pipes burn fast when the cylinder insulation can not heat.

Chapter Five Attachment

5.1 AMC400A Electric schematic diagram