

350L Vacuum homogeneous emulsifier

1. Overall dimensions and component name of the whole machine:



Main structure description:

350 vacuum homogeneous emulsifying machine is composed of main pot, oil pan, water pot, electrical control system, hydraulic system, vacuum system and frame.

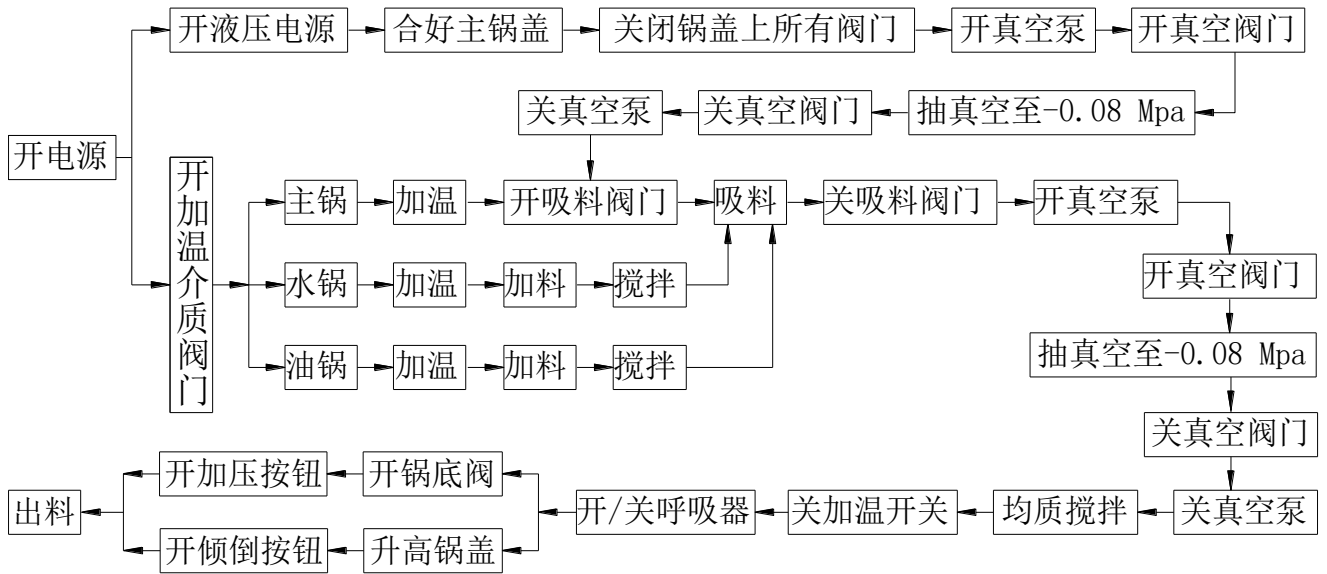
The main pot is composed of homogeneous mixing pot, homogenization mechanism, two-way mixing mechanism, etc.

2. Working principle:

The material is first preheated and stirred in the water and oil pot, and then it can be directly inhaled into the homogeneous pot under vacuum through the conveying pipeline.

Material in the homogeneous pot through the PTFE scraper (scraper always cater to the pot, clean wall adhesive), constantly produce new interface, and then through the frame mixer and its reverse mixing leaf cut, compression, folding, mixing, mixing to the homogenizer below the pot, then through the high speed rotating rotor and stator generated by strong shear, impact, turbulence in the shear seam, quickly broken into $200\text{nm} \sim 2\text{ }\mu\text{m}$ particles. Material microization, emulsification, mixing, homogenization and dispersion can be completed in a short time. Because the homogeneous pot is in a vacuum state, the bubbles produced by the material in the mixing process are removed in time. After the homogenization, raise the lid, press the dump button switch to discharge the material in the pot into the outer pot container (or open the bottom valve and pressure valve to discharge the material directly).

The heating temperature of homogeneous pot and water and oil pan is set by the temperature controller on the control panel; homogeneous mixing and blade mixing can be used separately; the length of homogeneous mixing time is controlled by the user and can be adjusted by the control panel. After the work, you can open the spray ball valve to clean the pot body.



5. Main technical parameters

project	parameter
Equipped with power supply	380 V 50 Hz (3-phase power)
Design volume of the emulsified	350 L
swept volume	300 L
power of agitator	4Kw
speed of agitator	0~68 r pm (variable frequency)
Homogenous power	.57Kw
Homogenous speed	0~3000 rpm (variable frequency)
Water pan design volume	250 L
swept volume	200 L
power of agitator	0.75 Kw
speed of agitator	960 rpm
Oil pan design volume	180 L
swept volume	150 L
power of agitator	0.75 Kw
speed of agitator	960rpm

1. Main pot: 350L working volume, maximum working volume of 300L, and minimum working volume of 100L.

Main pot structure: three-layer flange structure, the bottom is standard elliptical shaped head. The inner wall is imported SUS316 high quality stainless steel, 4mm thickness, inner polishing; middle layer SUS304 thickness 4mm, outer layer SUS316 thickness 3mm, special bright light treatment (sublight level). Heating is formed between the inner and middle layers, which can pass into the cooling water for heating or cooling.

Pressure and temperature: pot limit vacuum-0.09Mpa, maximum temperature crossing 100°C, jacket can withstand pressure 0.2Mpa, temperature 100°C.

Body configuration: upper suction port, liquid (particle) inlet, observation hole, 1 visual mirror with illumination, vacuum port, pressure gauge (-1~1bar). Bottom supply outlet (discharge valve is pot bottom valve), temperature sensor (measuring range 0~199°C). The bottom of the pot is equipped with a 12kw electric heating device as the main engine heating.

2. Homogenizer and agitator

Homogenizer: vortex high-speed shear, upper homogenization. The material passes through the high-speed rotating cutting wheel and the fixed cutting sleeve stator with powerful shear, shock and turbulence process, the material is cut in the shear seam and quickly broken into 200nm~2um particles. Make the material in

a short time to complete the microgranular, emulsification, mixing, mixing, dispersion, etc. Through the lighting observation hole, grasp the emulsifying state of the pot products at any time. Speed 2900 r/min, power 5.5kw, voltage 380V. Axial seal adopts skeleton seal.

Frame scraping wall mixer: speed 0 ~ 68 r/min, variable frequency speed regulation. The Power is 2.2kw, and the voltage is 380V. Scraper material PTFE, shaft seal using skeleton seal. Through the lighting observation hole, grasp the stirring state of the pot products at any time.

Central mixer: the same motor as the scraping wall mixer, the speed of 0 ~ 68 r/min, variable frequency speed regulation. Power 3kw, voltage 380V. Axial seal adopts skeleton seal. Through the lighting observation hole, grasp the stirring state of the pot products at any time.

The shaft seal of the above three sets of mixing devices is coaxial skeleton seal (contact sealing material is fluorinated rubber), which can better prevent the wear of shaft seal and other contaminated liquid in the actual production process.

3. Vacuum system

Using water circulation vacuum pump, can be through vacuum suction. Voltage: 380V, power: 3kw.

4. Hydraulic lifting system

The hydraulic lifting function of the pot lid can effectively emulsify the material under closed conditions. Hydraulic pot body dumping function, but also easy to clean the pot, easy to operate. Voltage: 380V, power: 2.2kw.

5. Control system

With digital time relay, temperature display, you can adjust the speed and working time of the homogenizer according to the process and characteristics of different products. scram button. Electrical total range control cabinet, all the machine all power open, off, temperature display, control, voltage, current and frequency regulation, homogenization time set are reasonably concentrated together, the operation is clear at a glance.

6. Host size

2800×1330×2520-3600 (mm)

7. Main frame weight: 2000kg

two. Premixed pot (water pan, oil pan)

Specification: water pot volume 250L, working volume 200L; oil pan volume 180L, working volume 150L.

1. Pot body structure: two-layer structure, the inner wall is SUS316 imported high-quality stainless steel, thickness 3mm, outer layer SUS316 thickness 3mm. Special bright light treatment. Cooling water can be used for heating or cooling.

Pressure and temperature: pot maximum temperature 100°C (set), jacket can withstand pressure 0.2Mpa.

Pot body configuration: upper semi-open pot cover, bottom with material outlet (discharge valve for pot bottom valve),

temperature sensor (range 0~199℃). Each bottom of the pot is attached with an 8kw electric heating device as a sandwich heating.

2. Mixator: upper decentralized mixing device, installed in the eccentric position, rotation speed 1400 r/min, voltage 380V, power 1.1kw.

3. Control system: control with the main pot on the main range control cabinet.

4. Operation platform: water pot, oil pan and emulsified pot.

5. Overall dimension: 2000 * 868 * 1650 (mm)

three. Device function:

1. Add liquid into the top of the main pot and add trace elements. Water pot, oil pan is half-open type, convenient feeding.

2. Vacuum feed function of the main pot.

3. Frame mixing and blade mixing into the opposite direction of operation, frequency conversion and speed adjustment, frame mixing is equipped with a scraper, no dead corners.

4. Using German technology high shear homogenizer, upper homogenization.

5. The bottom of the main pot adopts the bottom valve of the pot, with the function of positive pressure discharge and no dead corners.

6. Electric lifting function of the main pot and pot lid. Manual pot body dumping function, easy cleaning in the pot.

7. The control panel has the setting of open, off, emergency switch, upper and lower limit of adjustment temperature, mixing speed (variable frequency speed regulation), homogeneous speed,