

Complete Set 100L Vacuum Emulsifying Machine



I. The description, appearance and instruction of Emulsifying Machine.

1.1 **The** turbine emulsifying machine is a coaxial and triple type mixer, suitable to stable homogenizing and emulsifying, the finished granular is very small. The quality of emulsifying depends on the disperse of the granular on the preparation stage. The smaller the granular is, the weaker the trend of accumulation to the surface becomes, thus the smaller the opportunity for the emulsifying to be broken becomes. Relying on mixing of reversed impeller, under the condition of homogenizing turbine and vacuum status, you can get the high-quality effect of emulsifying and mixing. . The parts of vacuum emulsifying machine touching with material are all made for high quality stainless steel 316L and non-toxic and non-poison material, mirror polishing inside and outside, meet the requirement of foodstuff sanitation, and can satisfy the emulsification process requirement of detergent, toothpaste, cosmetic and ointment etc under the condition of vacuum. Several types adopt various scale of producing in the valid working range.

1.2 This Emulsifying turbine emulsifying machine has very good performance in the aspect of insuring high quality of the finished material.

1.3 Instruction of machine

The Vacuum Emulsifying Mixer is specially designed by introducing foreign updated technology and on the basis of ointment-making technics for processing cosmetics and ointment. It is composed of pretreatment boiler, vacuum emulsifying mixer boiler, vacuum pump, hydraulic system, tilting system, and electric control system, etc.

2. The basal equipment of machine body and technical parameters

The whole equipment of this system is composed of parts below: pretreatment mixing tank, emulsifying mixer tank, vacuum system, hydraulic system, tilting system, electric control system.

2.1 Emulsifying Vessel:

Working volume: 100L(total 125L), material: SUS316L stainless steel, electrical heating and water-cooling

Structure: With 3-layer structure, upper and lower end sockets. The upper end socket is connected to the tank body with flange between them. The internal layer of tank body is made of 6mm thick SUS316L stainless steel and interior polished in 400 MESH (sanitary level). The middle layer of tank body is made of 5mm thick SUS304 stainless steel and can stand max working pressure 0.09 MPa(coil tube). The external layer of tank body is made of 2mm thick SUS304, and exterior polished in 300 MESH (sanitary level). All the welding seams shall be polished after rubdown, and as to the treatment interface, turned over edge arc transition is adopted. The heat preservation layer is made of PU polyurethane foaming. In the tank, there are 3 mixers:

2.1.1 Cutting and vortex emulsify mixer: 3kw, 0-3500 rpm (frequency control)

2.1.2 Low-speed frame type scraping mixer: 1.5kw, 0-40 rpm (frequency control)

2.1.3 The motor of Low-speed converse mixer and low-speed frame type scraping mixer is the same with speed 0-40rpm.

2.1.4 Attached units of the tank: Liquid feed inlet with stainless steel pipe filter, solid material inlet, vacuum inlet, compressed air inlet, breaking vacuum inlet, sight glass, temperature sensor, CIP cleaning head, discharging hole, dustproof asepsis respiratory device.

2.2 Pretreatment Mixing tank:

Oil Mixing tank and water mixing tank one each, material: SUS316L. Structure: open (half-open) type, three feet with mixing. Detailed Technical requirements: Effective volumes: oil boiler of 300L, water boiler of 300L, and material: SUS316L, 3 layers structure. The material of the inner of tank body is made of 5mm thick SUS316L and interior polished in 400MESH (sanitary level). The middle of the tank body is made of 4mm thick SUS304 and can stand max working pressure 0.09 MPa. The external layer of tank body is made of 2mm thick SUS304 and exterior polished in 300MESH (sanitary level). All the welding seams shall be polished after rubdown, and as to the treatment interface, turned over edge arc transition is adopted. The heat preservation layer is made of PU polyurethane foaming. In the

tank, there is a turbine mixer, 900 rpm inlet rotary speed. Discharge hole is equipped with butterfly valve of sanitary level and pipeline.

2.3 Vacuum system

Adopting vacuum pump with Siemens 2BV2-061

2.4 Hydraulic system

Composed of oil cylinder, solenoid valve, over-fall valve, oil box, and pressure-keeping valve.

2.5 Electric control system (PLC touch screen control)

1. Touch screen adopts Simatic Model: 10.4" – PT270-10
2. On the touch screen, it is possible to adjust and vision mixing speed, temperature of each jar, set upper limit and lower limit of temperature, control automatic valve. It is possible to set the time control for slow speed emulsifies mixing and control performance of lift of hydraulic system.

Electric elements: Siemens

Transducer: Siemens

Button/switch: Siemens

Name Producer Type Note

- 1 Transducer Siemens PLC
- 2 Emulsifying motor Siemens Co. 4KW
- 3 Reducer motor WanNan motor Co. 0.55KW
- 4 Sight glass F.H.Papeomeier DN80
- 5 Vacuum pump Siemens (GDNASH) 3.85KW
- 6 Vacuum pressure gauge
Beijing Bulaitong of China and America joint venture
Dissepiment type
- 7 Temp. sensor OMRON
- 8 Solenoid valve Taiwan yadeke 4V-210
- 9 Low-pressure electrics Siemens
- 10 Head switch Siemens
- 11 Button switch Siemens
- 12 Hydraulic pump station
Taiwan Qiyang Co.
- 13 Steam angle valve Shanghai shengyu Co.
- 14 Bearing Made in China
- 15 Oil seal Made in China

Spare parts:

Heating & cooling pipe & valve, Stainless steel Screw-shaped connection

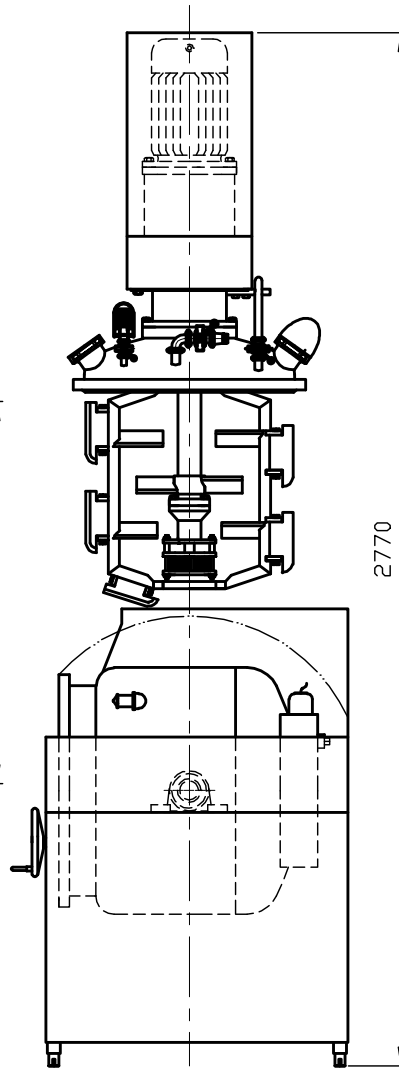
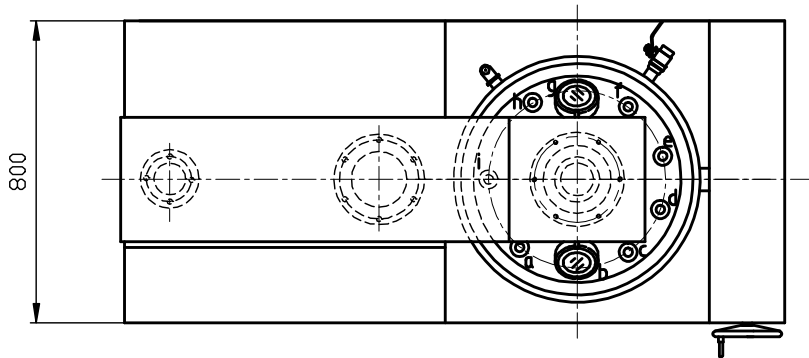
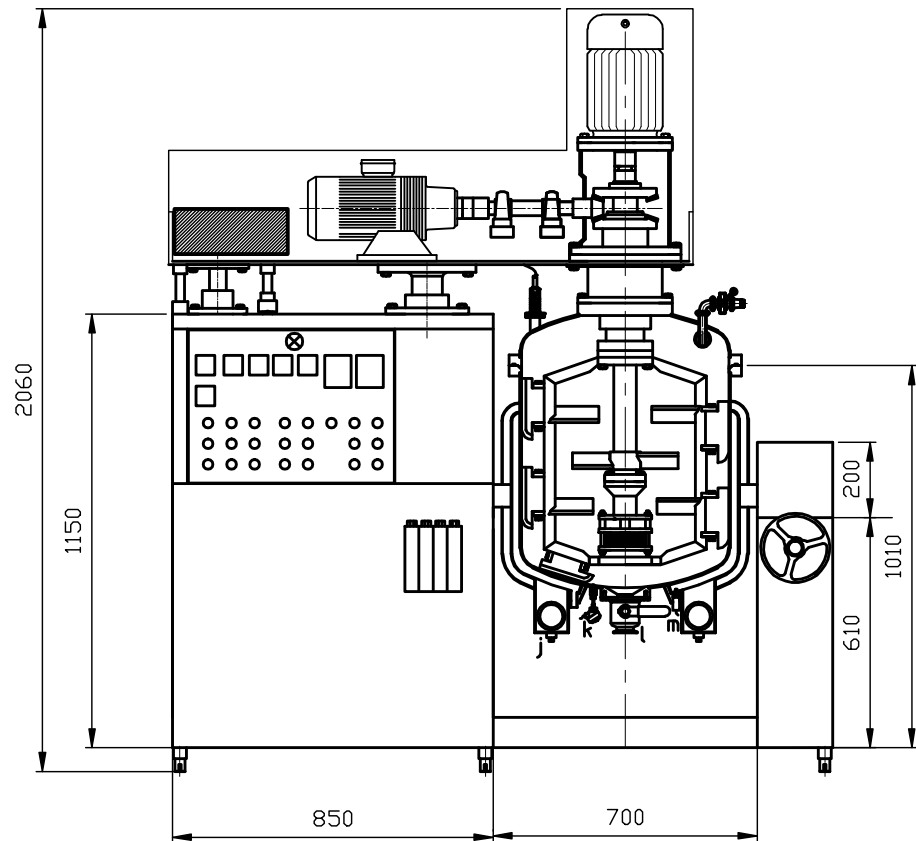
Gage, relief valve, etc. on main vessel lid

Stainless steel Clamp connection

Dimensions (L×W×H): 2920×2120×2200 (Lifting height 800) ~mm

Total power: 17kw 380V, 50Hz, Ph3

Main installation power 24KW



Parameter:

- 1.Length=1750, Width=800, Max. Height=2770.
- 2.Working Volume:100L,Total Volume:120L.
- 3.Hydraulic Lift, Power: 15KW
- 4.Vacuum Pump:0.75KW.Vacuum:-0.097Mpa.
- 5.Double-way mixing Power:1.5KW.Speed:0~60r/min.
- 6.Emulsifier Power:4KW.Speed:0~3000r/min.

Main Tank:

- 1.Total volume:120L
- 2.Min. mixing volume:30L.
- 3.Min. emulsifying volume: 40L
- 4.Max. working volume: 100L
- 5.Max. temperature: 120℃.
- 6.Contact part: SS 316L; Jacket : SS 304
- 7.PU FOAM Insulation
- 8.Fitting: sight glass,light glass,inlet,spraying ball, air vent, safety valve, vacuum hole, vacuum gauge, spare hole.

Emulsifying Mixing system in Main Tank

1. Double Motion Agitator

Power: 1.5KW, 0-60 Rpm

380V 50HZ

Scrapers: Teflon

2. High Shear Emulsifier

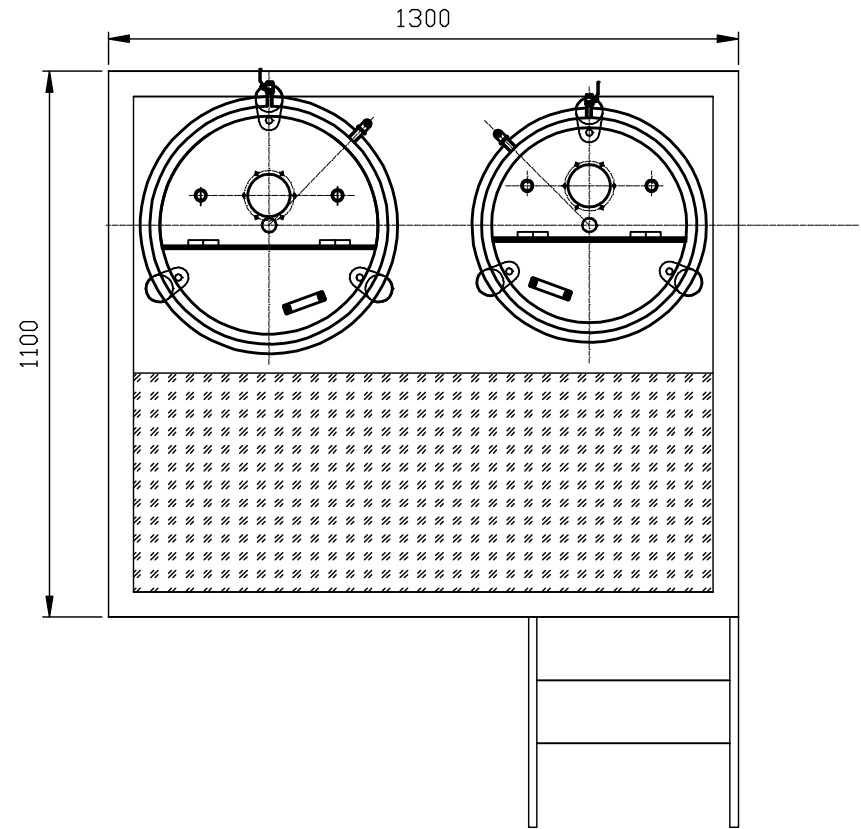
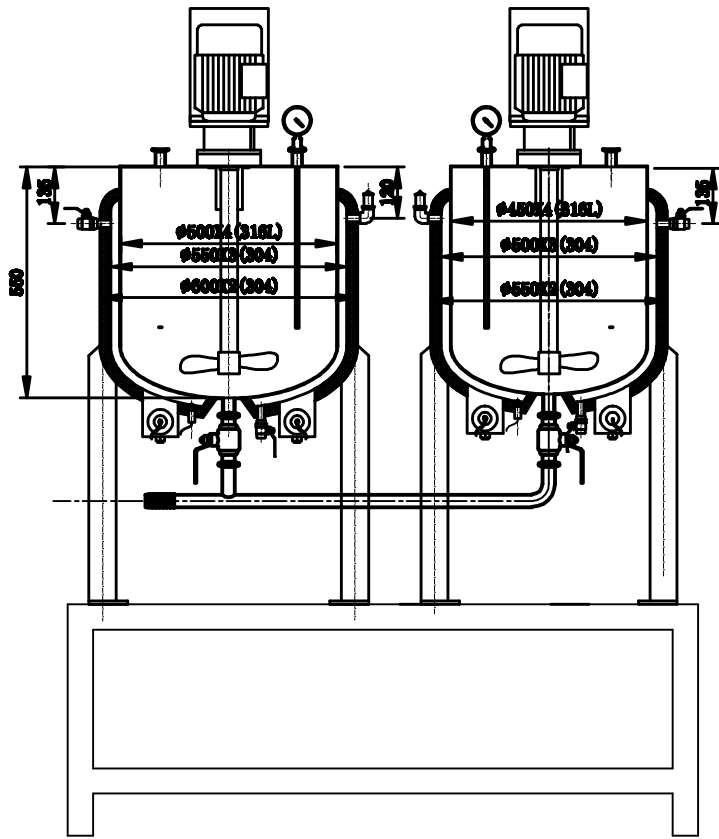
Power: 3.7KW, 0-3000 Rpm

380V 50HZ

Emulsifier type top emulsifier

- a.Vacuum Pressure Gauge
- b.Sight Glass
- c.Vacuum relief Hole
- d.Adding Hole
- e.Cleaning Hole
- f.Inlet
- g.Sight light
- h.Vacuum hole
- i.Vacuum protection Hole
- j.Electric heating
- k.Temperature Probe in the tank
- l.Outlet
- m.Temperature Probe in the Jacket

名称	规格	数量	备注
真空压力表	0-0.1MPa	1	
视镜	φ50	1	
真空泄压孔		1	
加料口		1	
清洗口		1	
进口		1	
视镜		1	
真空孔		1	
真空保护孔		1	
电加热		1	
罐内温度探头		1	
出口		1	
罐外温度探头		1	
100L Emulsifying machine		1	



Oil phase Tank

1. Total volume:70L
2. Contacting part: SS 316L ; Jacket: SS304;
3. Output: Bottom outlet valve
4. Agitator Motor: 0.75KW, 960Rpm
380V , 50HZ
5. Connection type: by flange

Water phase Tank

1. Total volume:70L
2. Contacting part: SS 316L ; Jacket: SS304;
3. Output: Bottom outlet valve
4. Agitator Motor: 0.75KW, 960Rpm
380V , 50HZ
5. Connection type: by flange

图号	图名	比例	材料	数量	备注
1	10L标准乳化机	1:1	SS316L/SS304	1	
2	电动机	1:1	Y系列	1	
3	减速机	1:1	行星减速机	1	
4	搅拌器	1:1	316L	1	
5	视镜	1:1	316L	1	
6	压力表	1:1	Y系列	1	
7	法兰	1:1	316L	1	
8	视镜	1:1	316L	1	
9	压力表	1:1	Y系列	1	
10	法兰	1:1	316L	1	
11	视镜	1:1	316L	1	
12	压力表	1:1	Y系列	1	
13	法兰	1:1	316L	1	
14	视镜	1:1	316L	1	
15	压力表	1:1	Y系列	1	
16	法兰	1:1	316L	1	
17	视镜	1:1	316L	1	
18	压力表	1:1	Y系列	1	
19	法兰	1:1	316L	1	
20	视镜	1:1	316L	1	
21	压力表	1:1	Y系列	1	
22	法兰	1:1	316L	1	
23	视镜	1:1	316L	1	
24	压力表	1:1	Y系列	1	
25	法兰	1:1	316L	1	
26	视镜	1:1	316L	1	
27	压力表	1:1	Y系列	1	
28	法兰	1:1	316L	1	
29	视镜	1:1	316L	1	
30	压力表	1:1	Y系列	1	
31	法兰	1:1	316L	1	
32	视镜	1:1	316L	1	
33	压力表	1:1	Y系列	1	
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35	视镜	1:1	316L	1	
36	压力表	1:1	Y系列	1	
37	法兰	1:1	316L	1	
38	视镜	1:1	316L	1	
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42	压力表	1:1	Y系列	1	
43	法兰	1:1	316L	1	
44	视镜	1:1	316L	1	
45	压力表	1:1	Y系列	1	
46	法兰	1:1	316L	1	
47	视镜	1:1	316L	1	
48	压力表	1:1	Y系列	1	
49	法兰	1:1	316L	1	
50	视镜	1:1	316L	1	
51	压力表	1:1	Y系列	1	
52	法兰	1:1	316L	1	
53	视镜	1:1	316L	1	
54	压力表	1:1	Y系列	1	
55	法兰	1:1	316L	1	
56	视镜	1:1	316L	1	
57	压力表	1:1	Y系列	1	
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59	视镜	1:1	316L	1	
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95	视镜	1:1	316L	1	
96	压力表	1:1	Y系列	1	
97	法兰	1:1	316L	1	
98	视镜	1:1	316L	1	
99	压力表	1:1	Y系列	1	
100	法兰	1:1	316L	1	