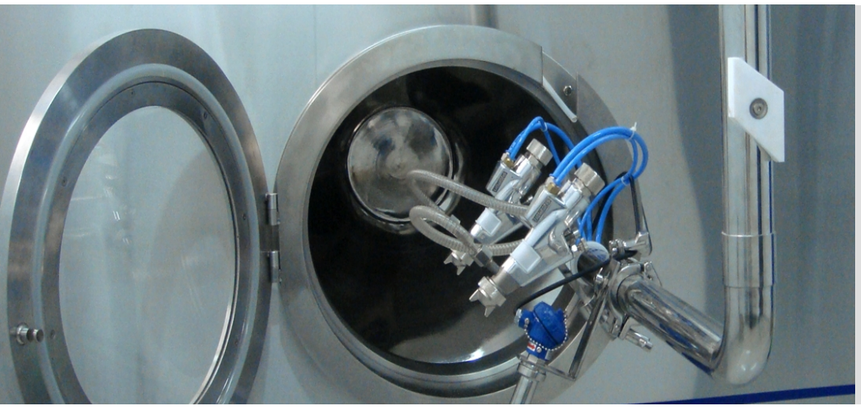
Technical Parameters

MODEL	FSC-5	FSC-50	FSC-100	FSC-120	FSC-150	FSC-200
Working capacity (kg/bach)	5	50	100	120	150	200
Number of Spray gun	1	1	2	2	3	4
Motor power of main coater (kw)	0.75	1.5	2.2	2.2	2.2	4
Speed adjusting range of coating drum (r.p.m)	1-30	1-20	1-14	1-14	1-14	1-14
Motor power of hot air unit (kw)	0.75	2.2	2.2	2.2	2.2	3.7
Motor power of exhaust (kw)	2.2	3.7	5.5	5.5	7.5	11.2
Electric heater (kw)	8	36	36	36	48	48
Steam (kg/h)		120	160	160	200	250
Range of hot air temperature (oC)	80	80	80	80	80	80
Weight of main machine (kg)	450	1000	1100	1300	1500	1800



ISO 9001
BUREAU VERITAS Certification

UKAS QUALITY MANAGEMENT

Local Agent / Representative

T & T PHARMACEUTICAL MACHINERY CO., LTD.
82 Giai Phong St., Ward 4, Tan Binh District, HCM City, Vietnam
Tel: +84.8. 3596 0139 - Fax: +84.8. 3596 0021
Email: tivati7@gmail.com / tivati108@vnn.vn

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UKAS QUALITY MANAGEMENT

T & T MACHINERY

www.tivati.com.vn

FSC COATER

T & T PHARMACEUTICAL MACHINERY CO., LTD.
82 Giai Phong St., Ward 4, Tan Binh District, HCM City, Vietnam
Tel: +84.8. 3596 0139 - Fax: +84.8. 3596 0021
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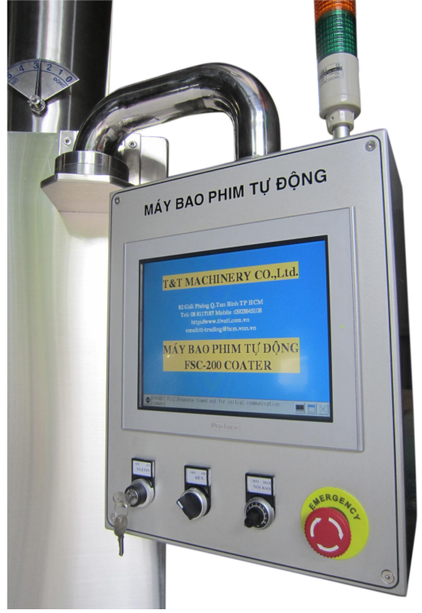
I - Main Machine:

Material of construction:

- All metallic product contact surfaces should be constructed of SS 316L grade stainless steel or better with internal surface finish < 0.5Ra and external surface finish 1.2Ra, made finish.
- All none product contact surfaces should be constructed of SS 304 grade stainless steel or better, external surface finish< 1.3Ra, matte finish.
- Gaskets, seals and O-ring coming in direct/indirect contact of product surface should be constructed of FDA approved polymeric materials only.
- All welds should be ground finished.
- The cabinet has a double skin construction to reduce the external surface temperature to a safe level to prevent operator injury.
- Perforated round drum (perforation should be round)
- The drum unit should only be run when all guards are fixed in position. Enclosed rear drum chain drive and front drum support rollers
- A light is fitted to the top of the coater for the illumination of the drum contents



Drum :

- With two conical end pieces welded to a perforated cylindrical drum, the inside of the drum is equipped with detachable baffles which guarantee that the product is mixed effectively.
- Coating baffle: Total 6 baffles are attached on the inside surface of the coating drum, while the drum is revolving the baffle is stirring and spreading the tablets for the efficient mixing and drying process.
- Material of baffle and holder : SS 316L..
- Drum speed 1-20 rpm.
- Drum drive motor with speed control achieved via a frequency inverter (ABB or Commander – England or Siemens-Germany).
- Gear motor of drum : Italy 400V, 3phase, 50Hz
- Sight Glass window: machine should be guarded by hinged viewing panels made of acrylic sheet with SS 304 frame and bottom will be fully coved by SS sheet.
- The production condition processed can be checked by eyes through the sight glass during the production
- Spraying nozzles: Walther Pilot, Germany.

II- Inlet Air Handling Unit.

Type of heating:

- Electric Heater : made by SS 304
  or Steam
- Blower fan: motor Siemens - Germany: 415V±10%, 3 phase, 50Hz, 1,400rpm

Pre-filter:

- Class: EU3/EU4

Intermediate Filter:

- Class: EU8 or EU9

Final filter:

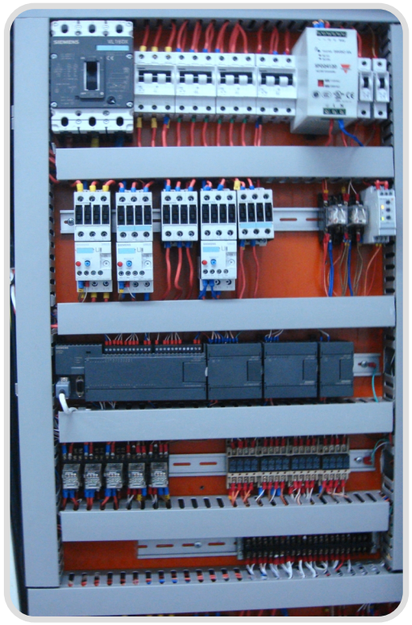
HEPA filter with 2 DOP port before and after the filter

- Class: EU1313
- Efficiency: 99,99%

Optional:

- **Dehumidifier** with 3-way control valve with temperature controller by chilled water
- Chilled water temperature: Inlet 6°C, Return 12°C

- Max drying temperature: 80°C.
- Automatic flow control damper including local indication of differential pressure of handler.



III - Exhaust Air Handler:

- Bag in bag out type dust collection system
- Automatic bag filter shaking device for a cleaner by cylinder (FESTO).
- Centrifugal type high performance fan, impeller made by long lasting materials with statically and dynamic balanced.
- Vibration absorber mounted with base frame of fan.
- Motor Siemens - Germany 415V±10%, 3phase, 50Hz, 2.800rpm
- Two-stage filter housing with washable EU9 and EU13 filter including local indication of differential pressure.
- Automatic flow control damper including local indication of differential pressure of handler.
- Silencer at the end of duct to keep the noise level within 75dB.

IV - Solution Preparation Vessel.

- The coating solution preparation vessel shall be on castor wheels provided with agitating motor, type: rotary air motor (Taiyo, Japan) with explosion proof and 3 casters. The agitator shall be of variable speed switched on for validated period of time
- The vessel material: SS 316L
- All connection and valve of vessel should be sanitary type and GMP comply

V - Peristaltic Pump (Non-flame Proof)

- (Watson-Marlow, England)
  Silicon tube (Watson-Marlow, England)

VI - Discharging

Discharge chute: When the coating production is completed, the final product is discharged through the discharge chute. Discharging process is performing with the discharge guide and the drum is revolving opposite direction. Discharging control is operated by the discharge select switch in the touch screen control panel.

VII - Cleaning

- Cleaning –in-place (CIP) is preferable. The CIP should be an integrated washing system complete with pump, spray jet/ nozzles, tanks etc

VIII - Process Control System

- Control panel: Color Touch Screen (Siemens-Germany or Proface-Japan)
- Language: English
- Program Controller: PLC (Siemens- Germany or Japan)
- All the functions of the machine are taken placed in this unit. All the parameters necessary to coating process can be set in touch screen in detail.
- Coating pan speed.
- Inlet and outlet air temperature.
- Product temperature.
- Display shows any safety oriented warning on the screen for operator to find out the problems
- Switches, emergency button, CB, contactor (Germany).

- PERISTALTIC PUMP (Watson-Marlow England) will show Spray liquid flow rate (ml/min) or r.p.m
- Compressed air pressure- atomizing air on the panel

IX - Safety :

- Emergency stop button.
- All the error will be displayed on the screen and the machine will automatically stop in case of – air pressure is low, electric phase is lost, emergency s/w not in On position.
- Inlet air temperature is too low – auto control
- Coating drum motor stops – peristaltic pump stops – spray gun stops spraying.

XI - Noise:

- The noise levels at the work place for each machine, operating at maximum speed must be below 72dB(A) at operator work position.

FSC COATER

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