

SOLVENT-BASED LAMINATING AND COATING MACHINE FOR BARRIER FILMS



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II Technical Specification and Description

1. Model: Solvant-Based Laminating And Coating Machine For Barrier Films

2. Main technical specification

- 1). Applicable products: CPP film for metalizing and lamination
- 2). Product structure: A/B/C
- 3). Product layers proportion: 1: 3: 1
- 4). Finished film width: 2200mm
- 5). Film thickness: 0.015-0.05mm
- 6). Film thickness tolerance: $\pm 3\%$
- 7). Normal production speed: 200m/min (based on CPP 18 μ m, practical

speed is determined by product structure and thickness)

- 8). Max theoretic extrusion throughput: 496kg/h
- 9). Max rewind O.D.: $\Phi 1000$ mm
- 10). Installed power: about 600kW
- 11). Machine weight: about 25Tons

3. SDEX-integrated control system | .1.0 : (MODEL: SDEX-TSVCRS-SMART | .1.0)

3.1 Vacuum control system | .1.0(MODEL:SDEX-VSMART | .1.0)

Adopt dual chambers vacuum cabinet, composed of main chamber and assistant chamber, controlled by two individual vacuum systems for closed loop control, visible and adjustable vacuum degree, stable pressure, stable air speed, stable

internal air flow, no occurrence of air turbulence.

3.2 Water recycle control system I.1.0(MODEL:SDEX-C SMART I.1.0)

Respectively control to the cast roll and the secondary chilling roll, makes temperature of incoming and outgoing water visible and adjustable; automatically complement chilled water, ensures temperature tolerance of the surface of the casting roll $\leq \pm 1^{\circ}\text{C}$

3.3 Rewind control system I.1.0(MODEL:SDEX-R SMART I.1.0)

- a. The rewinder oscillates integrally, which frequency and stroke can be adjusted in terms of production.
- b. Central rewinding, with two types of rewinding: gap rewinding and contact rewinding.
- c. Optimizing function to the film flare angle of rewinding, adjust and control function to sensitive tension.
- d. Tension control mode under large diameter roll.
- e. With roll diameter increasing, the precision control to inspection and drive system makes the dancing roller move stably, ensures quality of the rewinded roll.
- f. PLC control enables compile, modify and store at will different tension control curves, tension and pressure curves must be multiply spots adjustable, modified at will. Rewind tension, pressure curve can set multi-spot curve (10-20 sectioning spots, and can make error alarm.

3.4 Safety control system I.1.0 (MODEL:SDEX-S SMART I.1.0)

- a. Temperature protective device
- b. Corona treatment stop alarm
- c. Motor temperature/ current overload alarm
- d. Nip roll safety pull switch
- e. Emergency stop switch

4. Technical conditions (prepared by customer, not included in the offer)

4.1 Chilled Water Requirements:

Water chiller	45HP
Cooling water	60 tons
Water pump flux	80m ³ /h
Pressure:	3~5bar
Temperature:	15~35℃
PH Value (25℃)	7.5~9
Electricity conductivity	<150μs/cm
Hardness	<5℃
Carbonized hardness	<3°dH
Chloride	<40mg/l

4.2 Power Requirements:

TN-C network has a direct connecting spot to the earth, and one earth conductor (PE) is connected with this spot.

Three phased electricity

Voltage	3×380V/220V
Voltage fluctuation	±5%
Frequency	50Hz
Frequency fluctuation	±4%
Protective method	Protective combined connection to the earth

Surrounding temperature	Min 10℃; Max 38℃
Air humidity	Min 40%; Max 90%
Altitude to be installed	0~1000m

4.3 Conditions to meet the production and operational demands:

To operate this production line, it is necessary to supply compressed air to meet stipulated requirement, cooling water and electricity. Meanwhile, the customer must supply conformity conditions to ensure installation, commissioning and test for the production line is affected due to unexpected delay. They must satisfy the following demands:

- a) Construct in advance concrete ground with sufficient strength, thickness 300mm.
- b) Install main power supply (power distribution station)
- c) Install compressed air connecting device
- d) Inlet and outlet for cooling water (water pressure 0.3~0.5Mpa)
- e) Lighting appliance: 250lux
- f) Ventilating device, surrounding temperature 18~35℃, air humidity 60~90%. dust free.

5. Compose of the machine(range of supply)

5.1. Extruder A, screw, barrel, 1set

- 1). Smooth type barrel, barrel material 38CrMoAl, water cooling for the feeding inlet, 1set
- 2). $\Phi 90$ screw diameter, L/D 32:1 barrier type screw, screw material 38CrMoAl, screw max rotary speed: 93RPM. 1pcs

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- 3). Max extrusion throughput: 160kg/h, motor power: 75kW, maintain stability of extrusion throughput, SIEMENS AC driver, 1set
 - 4). Hydraulic column type screen changer (single column single runner), 1set
 - 5). Melt connecting pipe, adopts stainless steel heater, 1set
 - 6). Melt connecting pipe adopts secondary pressure increasing device, coming from screen changer is the first pressure increasing, before feedback is the secondary pressure increasing, so as to meet demand of inlet pressure due to die pressure decrease, 1set
 - 7). Static mixer, 1set
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- 1). Smooth type barrel, barrel material 38CrMoAl, water cooling for the feeding inlet, 1set
 - 2). $\Phi 150$ screw diameter, L/D 32:1 barrier type screw, screw material 38CrMoAl, screw max rotary speed: 93RPM. 1pcs
 - 3). Max extrusion throughput: 450kg/h, motor power: 200kW, maintain stability of extrusion throughput, SIEMENS AC driver, 1set
 - 4). Hydraulic column type screen changer (dual columns single runner), 1set
 - 5). Melt connecting pipe, adopts stainless steel heater, 1set
 - 6). Melt connecting pipe adopts secondary pressure increasing device, coming from screen changer is the first pressure increasing, before feedback is the secondary pressure increasing, so as to meet demand of inlet pressure due to die pressure decrease, 1set
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- 1). Three layers feedblock A/B/C (USA CLOEREN), (manually adjustable type to each layer of the feedblock), 1set
- 2). Temperature preservation hood, 1set
- 3). Dual chambers vacuum box(internal and external underneath exit with silicon rubber sheet 2CM for sealing, pressure adjustment to the dual chambers by frequency inverter , 1set
- 4). Die online separator, 1set
- 5.6. Cast section model: SDEX-C2700×Φ1000/Φ400, 1set
 - 1). Plus pressure air knife with fan, 1set
 - 2). Static (30kW) and pneumatic edge locking system, 1set
 - 3). Clean up roller, solid silicon rubber, 1piece
 - 4). Water temperature control unit, 1set
- 5.7. Thickness gauge (SCANTECH X-ray automatic thickness gauge), 1set
- 5.8. Corona treatment (Italian MERO), 1set
- 5.9. Trim reclaim system, 1set
- 5.10. Dual stations integrally oscillating rewinder SDEX-TR2500-D, 1set
 - 1). Contact winding, tension/pressure curves multiply spots adjusting device (normally

15 zones according to the diameter)

- 2). Gap winding
- 3). Static eliminating system, 1set
- 4). Rewind steel core, 2pieces
- 5). Spare parts