

SM PBM-80 Paper Bowl Forming Machine



Brief Description

SM PBM-80 paper bowl forming machine, a newly developed from turn-plates old type bowl machine, achieves a manufacturing speed of 80 pcs/min. This piece of paper converting equipment provides a multi-station design and is able to make single and double PE coated beverage bowls, ice cream bowls. In addition to that, this integrated automatic paper container forming machine combines all these processing procedures together: paper feeding, sealing, bottom cutting, lubricating, heating, knurling, curling and collecting.



Machine Specifications

1. Speed: **80 cups/min**
2. HMI **touch screen & PLC**, More intelligent operation control, Easy to operate/, PLC
3. Use well-known brand **inverter** of China, Stepless speed regulation
4. Use **Servo motor driven** paper cup bottom feeding, more precise, Save paper
5. About **11 sensors** on 1 machine to monitor the whole cup making process
6. Silicone sucker for paper fan sucking
7. Linear slider for paper fan feeding
8. **Single rotating turntable**, Fewer working stations, More compact and efficient
9. **Servo-driven direct bottom punching**, Accurate punching and save paper
10. **2 sets Hot air heater** for bottom inward folding/2
11. **Bottom knurling with aluminum alloy heater** for single PE coated paper bowl
/Bottom knurling with water cooling ring for double PE coated paper bowl (water cooling ring for free, easy to replace) Accurately processed **cup top curling system**, Tight, smooth and beautiful bowl top rimTop curling, bottom forming system adopts integrated lifting design, cam disc drive, consistent action
12. Air blower, acrylic pipe with collection table, Automatic counting, automatic stacking, saving time and labor
13. *Main motor with Gear reducer*
14. the system adopts intermittent open mark control, sheaves with indexing turntable, helical gears, high-quality bearings and shafts, which are easy to maintain and stable, much better than chain-driven gearboxes.
15. Automatic **continuous shower type** lubrication system
16. Automatic paper bowl collector



Machine's Parts



Rotary paper suction



Flat die head



Knurling moter is



Sealing heater



Swiss Leister Bottom heating



Curling device



Bottom cutting device



9-station(speed faster)



robot arm



Servo bottom cup feeding



Full gear and can system



Automatic lubrication system





Automatic collection manipulator + collection table

Samples



Salad Bowl



Soup Bowl



Main Technical Specification

Paper Cup Specification	20-35oz (150-1500ml) (mold exchangeable) Top: 50-150mm Height: 50-110 mm Bottom: 35-125mm
Paper Specification	150-350 GSM single/double PE coated paper
Production Capacity	70-80 pcs/min
Power Source	220V/380V 50HZ 3Phases
Average Power	8.5KW
Air Supply Requirement	Air pressure:0.4Mpa Air out-put:0.4cbm/min
Total Weight	3000KG
Package Size	(L*W*H): 2600*1300*1600 mm

Machine Configuration

Model		SM PBM-70
	Configuration	Brand/Origin
Electrical components	Switching power	MEAN WELL/Delta, Taiwan
	Main and branch breaker	Schneider/Siemens, France/Germany
	Thermal magnetic type motor protection circuit breaker	Schneider/Siemens, France/Germany
	A.C. contactor	Schneider/Siemens, France/Germany
	Three phase high voltage solid state silicon controlled module	Fotek, Taiwan



Electrical components

Solid state relay For temperature control	Fotek, Taiwan
Configuration	Brand/Origin
Miniature intermediate relay	Schneider/Siemens, France/Germany
Miniature electromagnetic relay	Schneider/Siemens, France/Germany
PLC I/O digital volume amplifier board	Delta,Taiwan
PLC programmable controller	Delta,Taiwan
Temperature control module	Delta,Taiwan
Touch screen	Delta,Taiwan
Servo motor for bottom paper feeding	Delta,Taiwan
Servo driver for bottom paper feeding	Delta,Taiwan
Frequency converter/Inverter	Delta,Taiwan
Paper fan lacking monitoring sensor	Panasonic, Japan
Bowl body horizontal displacement monitoring sensor	Panasonic, Japan
Bowl rotation displacement monitoring sensor	Panasonic, Japan
Bowl bottom delivery failure monitoring sensor	Panasonic, Japan
Bottom paper roll shortage monitoring sensor	Panasonic, Japan
Bowl drop-down and missing monitoring sensor	Fotek, Taiwan
Ultrasonic generator	KEJIAN, China
Ultrasonic welding head	KEJIAN, China
Bottom heater	2 pcs hot air gun
Rotary encoder	Omron, Japan
Main motor Electromagnetic braking three-phase asynchronous motor, China	GPG gear motor, China
Gear reducer	
Bottom paper roll unwinding motor	GPG, China
Top lip curling motor	GPG, China



Electrical components	Configuration	Brand/Origin
	Oil pump/motor	YISHIDA, China
	Silicone oil coating device	China
Pneumatic components	Vacuum sucker manipulator	China
	Pipe quick coupling	Airtac, Taiwan
	Cylinder	ZhengMao, China
	The Electromagnetic Valve / Mechanical valve	Airtac, Taiwan
Machine transmission	Machine frame	China Masteel Group Standard angle iron
	Bearing	FSB, China
	Lubrication system	Continuous shower type
	High precision open type intermittent indexing cam/ Gear/Chain	Heat treatment 38R material CNC machining center Gear
	Linear shaft	GCr15
	Transmission shaft	45#
	Turntable	Aluminum Alloy ZL104



Communication Details



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