



HEFEI ZHONGCHEN LIGHT INDUSTRIAL MACHINERY CO., LTD  
CENTRAL INTERNATIONAL MACHINERY CO., LTD.  
ADD: No.206, Jinxiu Road, Hefei, 230601, Anhui Province, China  
TEL: +86-551-62552075/62552070 WEB: [www.hfqj.com](http://www.hfqj.com)

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## *Proposal of 7,200bph/350ml PET Hot-fill Blowing Machine*



PROPOSAL No.	REVISION No.	DATE
<a href="#">20221010</a>	<a href="#">Rev. 0.3</a>	<a href="#">Dec 11, 2023</a>
20221010	Rev. 0.2	Oct 28th, 2022
20221010	Rev. 0.1	Oct 10th, 2022



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### General Introduction:

The machine model is CP06, designed with 6 cavities, being widely used for beverage PET bottle blowing, technical specs and descriptions as following:

### A. Main Technical Parameters:

Machine Specifications and descriptions		
Type		<b>Automatic Rotary Blowing machine</b>
Mold Cavities	No.	6
Nominal output for 350mL, bottle (*)	pcs/hr	7,200 (max. 8,000)
Rate of finished product(*)	%	≥98.00
Max. bottle body diameter	mm	110



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Max. bottle height	mm	330
Max. neck diameter	mm	38
Max. bottle volume	L	1.5
<b>Machine Dimensions and weight</b>		
Main machine size ( Length) * (Width)* (Height)	mm	2230×1950×3050
Net Weight	kg	7300
Oven size ( Length) * (Width)* (Height)	mm	3904×1152×1935
Oven Weight	kg	3000
Preform Elevator (Length)*(Width)*(Height)	mm	4717×4823×3850
Elevator Weight	kg	2000
<b>POWER</b>		
Power supply	V/Hz	480V/400/220V, 60/50Hz/3-phase, as per customer
Main inlet cable diameter	mm <sup>2</sup>	95
Total power installed	KW	154
Main motor power	KW	5.5
Average power consumption	KW	72
Low voltage	V	DC24V
Wire system	/	3PH+N+PE or customized
<b>Preform Heating Oven</b>		
Oven zone and pitch	mm	4zones/50mm
Heating groups * pcs	No.	8x8+4
Heating time	S	41
<b>Compressed Air (**)</b>		
HP air for blowing	bar	35~40bar
HP air consumption	m <sup>3</sup> /min	12
LP air for machine motion	Bar	7
LP air consumption	m <sup>3</sup> /min	2.7, recovered from high pressure
<b>Cooling / Heating System (**)</b>		
Base mold:		
Water inlet temperature	°C	80



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Water inlet pressure	bar	3~5
Body mold:		
Water(oil)inlet temperature	°C	150
Water(oil)inlet temperature	bar	3~5
<b>Connections</b>		
LP air inlet	Inch.	1
HP air inlet	Inch.	2
Cooling water inlet	Inch.	2

**B. Main Components Standard**

No	Items	Brand	Country
1	Main motor	SEW	Germany
2	Inverter	Danfoss	Denmark
3	PLC	SIEMENS	Germany
4	Touch screen/HMI	SIEMENS	Germany
5	Low-voltage apparatus	Schneider/SIEMENS/AB	Germany/USA
6	Infrared heating lamp	Shangwei	China
7	Infrared thermometer	OPTEX	Japan
8	Encoder	KOYO/Sick	Japan/Germany
9	Limit switch	OMRON	Japan
10	Photoelectric switch	OPTEX/Sick	Japan/Germany
11	Proximity switch	Baumer/GARLO	Switzerland
12	Intermediate relay	OMRON/Weidmuller	Japan/Germany
13	Aviation plug	HARTING/SIBAS	Germany/China
14	Torque force clutch	R+W	Germany
15	Low pressure solenoid valve	AIRTEC/FESTO	Germany
16	High pressure solenoid valve	Seitz/NORGREN	Switzerland/Britain



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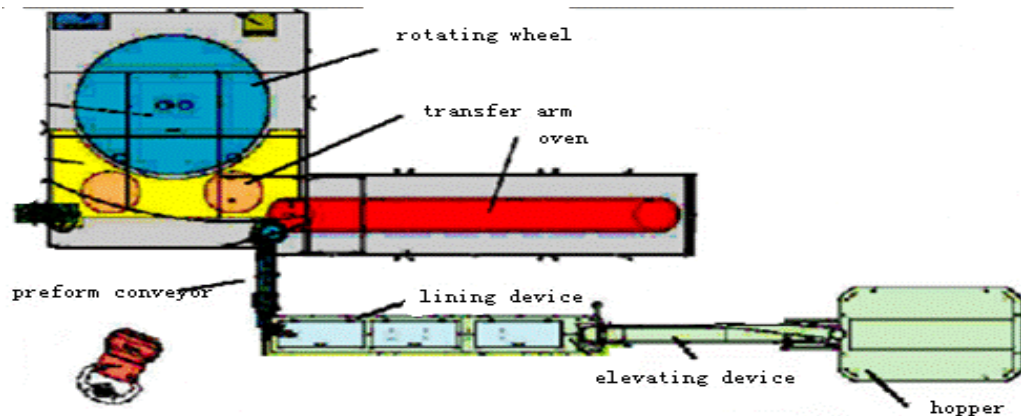
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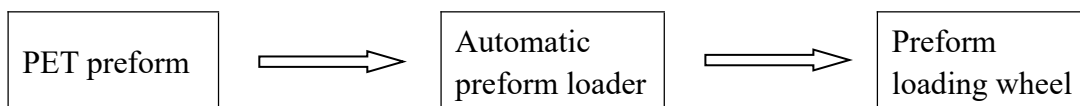
17	Blowing cylinder	AIRTEC	Germany
18	Air source filter device	FESTO	Germany
19	Linear slider	Rexoth	Germany
20	Main bearing	SKF/FAG	Sweden/Germany

### C. Main Structure of Blower

1) Automatic rotary blowing machine is successfully developed and researched by our company by absorbing the most advanced bottle producing technology in the world. It's mainly made of hopper, elevating system, lining device, oven and mainframe, electrical controlling system and pneumatic controlling system.



### 2) Bottle blowing chart:



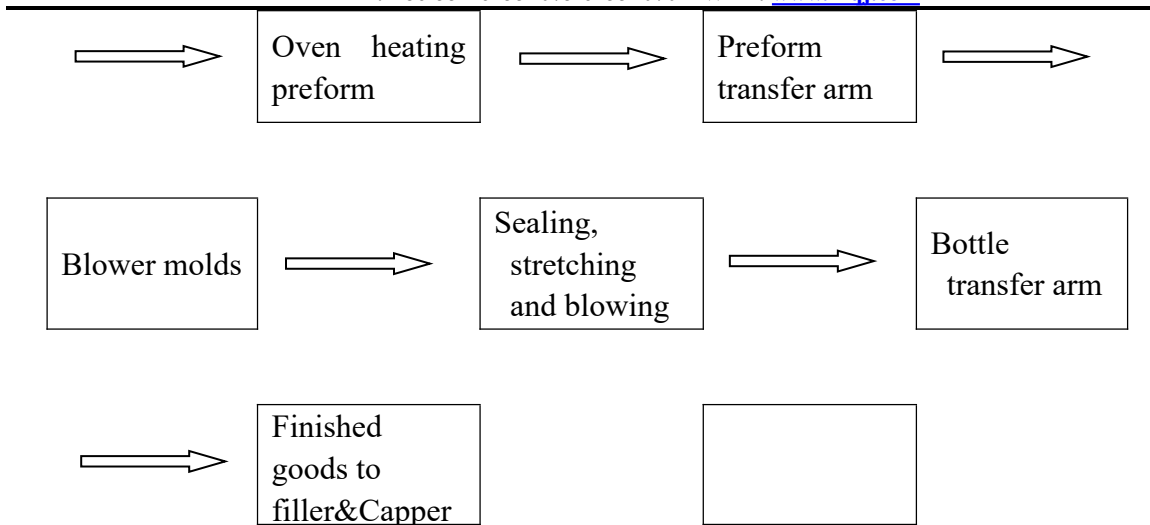


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#### D. Advantages of automatic rotary blowing machine:

##### 1) Preform loading system (option)

A preform dumper is equipped to load the preforms to the preform hopper. Preforms can be transferred and lined up automatically. It will alarm when there's no preform. It will stop loading preform when the temperature fails to meet the production requirements. All above make sure the safety use of equipment.

##### 2) Preform heating system

Before heating, it is equipped with preform dust removal unit. In the horizontal oven, cooling air naturally blows from down to up which make sure there's no effect between both sides. Preforms are heated by infrared lamps which has strong penetrability; Japanese infrared non-contact temperature checking device detect the temperature of performs to carry out the closed loop feedback controlling, the aim of automatically control temperature has been achieved, thus make sure the heating consistency of every preforms and implement the reasonable and effective use of energy.

##### 3) Main rotating wheel system

The water and air rotating distribute system is developed by American famous rotary sealing manufacturer and our company. It has reasonable structure and long service life; Pipes, mold frames and gas valves are easily to be installed and maintained.

##### 4) Air path system

High precision filter is separately controlled by German AIRTEC solenoid valves which have the characteristics of accurate action and easy and convenient maintenance. So the consistency of products and stability of production are guaranteed.



5) Transfer arm system:

The transfer of preform and bottle is completed by stainless steel transfer arm which guarantees the sanitary of bottles. Besides of that, the transfer arm system delivers bottle to the air conveyor which directly connects with the filling line.

6) Transmission system

The whole transmission system is driven by German SEW motor, which guarantees the synchronic of every action.

7) Mold changing system

Quick and easy mold changing system greatly improve the production efficiency.

8) Exhausting system

Unique exhausting design greatly decreases noise in the workshop which guarantees a quiet environment.

9) Equipment safety protection system

Every torque force point and key point of equipment has torque force protector, photo electricity protecting switch, stroke protecting switch and other safeguards which guarantees the safe operation of equipment, avoids human's operation and prolongs equipment's service life and saves maintenance fees.

10) Personal safety protection system with international safety standard.

11) Controlling system

Made of SIEMENS or equivalent PLC controller, the man-machine interface and other functional parts, the controlling system can automatically control preforms feeding and bottles transferring, breakdown checking and personal safety. The whole system is simple and easy to operate, safe and reliable, greatly reducing the investment of the human resource and equipment maintenance fees.