让中国装备技术与世界同步

WE WALK ALONGSIDE THE WORLD!

www.yizumi-group.com	(中文)
www.yizumi-group.com.hk	(English)
www.yizumi-group.ru	(Русский)
www.yizumi-group.es	(Español)
www.yizumi-group.ae	(العربية)
www.yizumi-group.pt	(Português)
www.yizumigroup.fr	(Français)

广东伊之密高速包装系统有限公司

GUANGDONG YIZUMI HIGH SPEED PACKAGING SYSTEM COMPANY LIMITED

ADD: No.22, Ke Yuan 3 Road, Hi-tech Industrial Zone, Ronggui, Shunde,
Foshan City, Guangdong Province, China

TEL: 86-757-2926 5150

E-mail: imm@yizumi-group.com

广东省名牌产品 广东省著名商标 国家级高新技术企业 CE认证 ISO9001 TÜVRheinland TUV认证

PET Preform Injection Molding System

YIZUMI 伊之密

Yizumi's Official Website

Stock Code: 300415

Contents

About Us

Located in National Hi-tech Industrial Zone in Shunde, Guangdong Yizumi High Speed Packaging System Company Limited is established to cope with the world's growing demands for high-speed packaging equipment. With strong financial base, large company size and elites in R&D, design, manufacturing, service and marketing, we pursue the mission of "Facilitate Chinese machine technology keeping pace with the world and provide global customers with better investment return and experience".

We offer complete turnkey high-speed injection molding systems used for manufacturing PET packaging products such as beverage bottles, oil bottles, food containers, daily chemicals and medical containers.

We have a team of innovative R&D elites, highly-efficient management, cutting-edge machining equipment and complete constant-temperature dust-free production lines. Innovation, the spirit of working earnestly and years of experience in machine manufacturing also ensure outstanding quality and performance of our products. Our technology emphasizes the concept of "highly-efficient, precise, economical, reliable, energy-saving and environment-friendly" and leads the trend in packaging.

Since establishment, we have always aimed to meet the current and latent needs of every customer, offer turnkey solutions for customers and serve them sincerely. The greatest significance of our job is to create the maximum value and provide the best investment return for customers. In addition, we are committed to establishing the best service system in the industry and consistently endeavor to provide speedy and accurate services for customers worldwide and increase their competitiveness.

Modern Clean Workshop

Some of Our Machining Equipment

Czech TOS WRD150Q

Japan TOSHIBA BTD-110H.R16

Japan TOSHIBA BTD-130H.R22

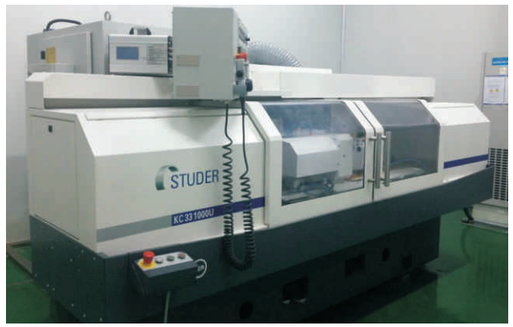
MORI SEIKI NH8000

MORI SEIKI NH6300

Japan MAZAK 8800-Ⅱ

Constant-temperature Mold Workshop

MORI SEIKI 9-axis turning-milling machine



Swiss STUDER CNC universal grinding machine

MAKINO electrical die machine

HAXAGON Swiss-made TESA Visio 300 DCC automatic video-based machine, contributing to the quality control of preform molding

Facilities for Mold Quality Control

ZEISS coordinate measuring machine

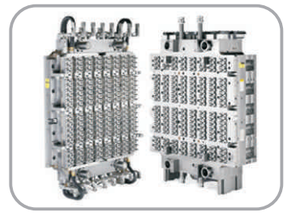
Mold component testing center

Accessories of PET Preform Molds

Our Customers

Coca-Cola	中粮 COFCO 自然之源 重塑你我	怡寶 Cestbon
	PEPSI	伊利
	农夫山泉 NONGFU SPRING	THC 宏全國際集團 TAIWAN HON CHUAN GROUP

PET Preform Injection Molding System Diagram

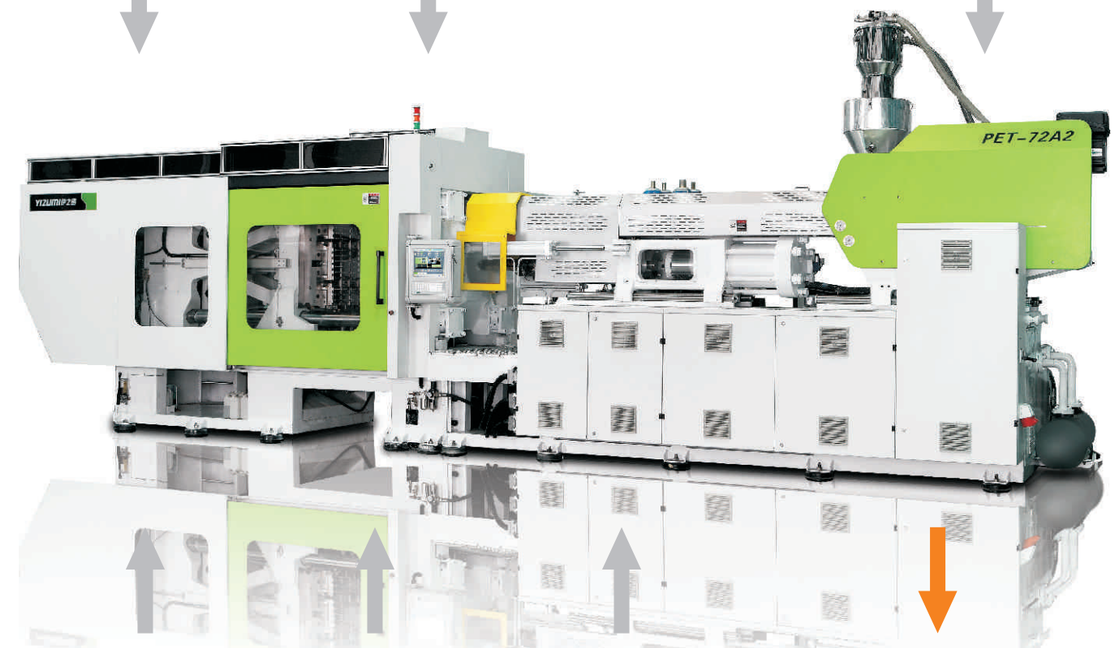


Preform mold

Dehumidifier

Raw material

Dryer



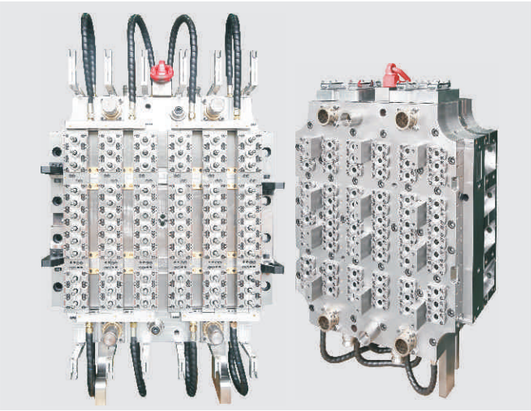
Cooling water

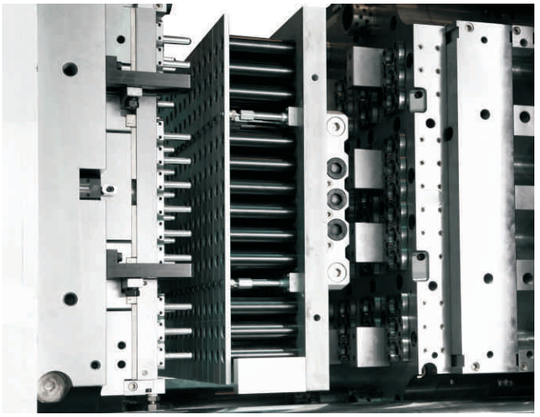
Compressed air

Part removal robot

Preforms

Mold





Features of Cold Half

- Die lip with patented water channel design to achieve more even cooling and to ensure dimensional stability of performs.
- Cavity cooling channel design based on CFD analysis, improving the preform cooling and shortening the production cycle.
- The core is made of imported 420ESR tool steel and subject to special surface treatment to ensure long mold life.
- The core rod and die lip employs Vapor Honing special surface treatment for easy ejection and reduced ejector resistance.
- The core with heat treatment is subject to special anti-corrosion treatment so that the cooling channels are durable with good resistance to rust.
- The mold core plate, cavity plate and other mold bases are made of 2316 high-strength stainless steel to ensure long service life.
- The core taper is processed via a precision Swiss grinding machine to ensure accuracy of 5 microns and to avoid premature wear of die lip.

Features of Hot Half

- Hot runner manifold design using natural balance to ensure 90-degree turns.
- The runner diameter is based on mold flow analysis and appropriate pressure drop design, ensuring the minimum cavity pressure during injection and prolonging the service life of the core.
- Major components of the valve gate, such as nozzle, insulation cap and valve pin are manufactured by Canadian professional subcontractor. The valve pin matches the pin sleeve diameter, with dimensional tolerance of 3 microns as required, significantly reducing the risk of plastic leakage.
- The bolts are carefully arranged as technically required and tightened according to bolt torque specifications. Thermal expansion will never cause deformation of the hot half plate or plastic leakage.
- The hot runner structure, with the latest disc spring design, has high capacity of thermal expansion absorption. The patented design of valve gate components and cylinder structure offers ease of maintenance and prolongs the life of seals. The design of hot runner is based on finite element analysis and thermal conduction analysis, which delivers high reliability and ensures no plastic leakage. The hot runner system does not need complete maintenance until it is used for over 5 years.

PET Preform Injection Molding Machine

Clamping Unit

- Five-point toggle clamp with excellence in motion, good mechanical properties and preeminent safety performance.
- Accurate control of position and shot weight due to applying closed-loop servo valves to mold opening and closing, injection and ejection.
- Clamping force is transmitted from the middle of platen with stability, which is in favor of reducing the clamping force and saving energy.
- Special design that matches the force distribution on clamping unit and mold.
- Higher strength and rigidity of clamping mechanism and enhanced dimensional accuracy of molded parts.
- Reduced resistance to the moving platen, enhanced the positioning accuracy and motion controllability, high-precision low pressure mold protection, prolonged mold life thanks to the non-contact tie bars.
- Proven bull gear for mold height adjustment with high reliability, compatible with different mold thickness.
- Two-stage high-thrust ejection mechanism ensures the parts can be ejected after cooled.
- The latest clamp structure delivers low clamping force and high injection pressure, and ensures the clamping force is applied to the mold evenly.
- Rigid cabinet-shape machine frame is made of thickened welded steel plates, with strong resistance to deformation. The machine frame can bear load uniformly and provide reliable support for high-speed mold opening and closing.
- Strengthened ejection mechanism, with larger ejector force and more parallel ejector rods, shortens the preform removal time and reduces the ejector plate deformation.

Injection Unit

- High response and no movement switching time thanks to the two-stage injection mechanism and cylinder-driven valve mechanism. Shortened cycle time due to highly-efficient synchronous plasticizing and injection.
- A new generation of screw that effectively reduces the AA content and IV value and achieves the maximum plasticizing efficiency.
- Linear rail type bearings, with less frictional resistance and accurate control of plasticizing back pressure.
- Imported motor-driven screw is used for plasticizing, which ensures continuous plasticizing, less energy consumption and over 30% of energy savings versus conventional hydraulic machines.
- The static mixer provides an even mixing of the plastic materials, facilitates uniform temperature of molten materials and contributes to the uniform density and stable properties of molded parts.

Hydraulic System

- High-reliability closed-loop hydraulic control system and imported hydraulic components based on pole assignment, with substantially increased stability and ease of maintenance.
- The oil return pipes are equipped with imported precise oil filters with increased flow. A separate oil tank cleaning system is added to ensure the normal use and longer life of hydraulic components.
- Water-cooled servo motor is applied to plasticizing, significantly reducing load on the motor and prolonging the motor life.
- Energy-saving branded accumulator provides high-speed and high-pressure hydraulic power.
- The upgraded hydraulic system meets the needs of injection molding applications and considerably shortens production cycle.

Electrical Control System

- Imported industrial computer-based controller that can effectively improve and overlap the response time of movements and the resistance to communication jamming.
- The powerful electrical control system, with statistic process control (SPC) function, is able to maintain the alarm history, record the technological parameters in real time and restore the history data anytime, which greatly facilitates operational maintenance and production monitoring.
- The user company can establish a real-time monitoring system based on the results of remote communication diagnosis.

Robotic System

- The slide base is cast in integrated precise aluminum alloy with light weight and high hardness. REXROTH linear guide rails and decentralized lubrication system that is maintenance-friendly are adopted.
- Three-station cooling support plate to extend the preform cooling time, to ensure the part quality, to eliminate the stress of preform, to reduce the power consumption of system and to shorten the whole cycle time.

Specifications

Model			PET-48A2		PET-72A2		PET-96A2	
Injection unit	Screw diameter	mm	95	110	110	120	120	130
	Injection pressure	mpa	152	113.4	130.2	109.4	124.4	106
	Shot weight	g	2900	3900	3950	4700	4900	5790
		oz	102.37	137.67	139.44	165.91	172.97	204.39
Clamping unit	Clamping force	kN	260		360		450	
	Toggle stroke	mm	700		780		880	
	Min./Max.mold thickness	mm	300～750		400～820		450～950	
	Space between tie bars (W×H)	mm	750x750		800x850		920x1020	
	Ejector stroke	mm	200		200		250	
	Ejector force	kN	77(142-40)		137(182-40)		166	
Max. system pressure		kg/cm^2	175		175		175	
Machine dimensions (L× W×H)		m	10x4.8x2.5		11x4.8x2.5		12.5x5x2.7	
Preform mold	Number of cavity (max.)	Piece	48		72		96	
	Thread	mm	<38		<38		<38	
	Preform length	mm	80-120		80-120		80-120	
	Preform weight	g	35		35		28	
Electrical System	Power of plasticizing motor & barrel heating	KW	60+85		60+97.45		94+115	
	Oil pump motor	KW	75		75		75	
	Robot power	KW	20		20		20	
	Temperature controller (0~400℃)	set	6		6		6	
	Power of filter pump motor	KW	7.5		7.5		7.5	
	Mold heating capacity	KW	36.548		41.216		52.228	
Automatic preform removal robot	Vacuum suction nozzle	Cavity	144		216		288	
	Three-station preform cooling	pcs	144		216		288	
General	Power supply (AC, three-phase, four-wire)	V	380		380		380	
		KVA	300		400		450	
	Chilled water	℃	8~12		8~12		8~12	
		mpa	0.6		0.6		0.8	
		L/min	1000		1200		1500	
	Cooling water	℃	<35		<35		<35	
		mpa	0.25		0.25		0.25	
		L/min	400		400		400	
	Compressed air	mpa	0.7～0.9		0.7～0.9		0.7～0.9	
		L/min	1500		1500		1500	

Note: Productivity is calculated with cooling water temperature of 5-8° C

■ Note: We reserve the right to make changes or improvements of the product without prior notice. The product photos in this catalog are for reference only.