THINK TECH FORWARD

Designed by YIZUMI, February 2025

YIZUMI

SPET-C 200T-480T

SPET-C SERIES
INJECTION MOLDING MACHINE
FOR COSMETICS

CREATING MORE VALUE TO PET CUSTOMERS

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Core Value Propositions

Intelligent and efficient

High plasticizing capacity

PET plasticizing screw for higher plasticizing capacity.

Intelligent clamping force management system

Quick and convenient setting of clamping force.

Intelligent weight V/P control system

Dynamically adjust the switchover point of holding pressure based on injection pressure to ensure product weight stability.

Energy-saving

New energy-saving hydraulic system

New energy-saving low-viscosity, anti-wear hydraulic oil reduces friction and resistance. Optimized low-energy hydraulic circuit design.

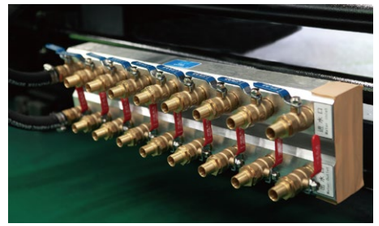
Professional

PET plasticizing components

PET plasticizing components, including specialized components for pearlescent, iridescent, and composite materials, enhance color mixing effects.

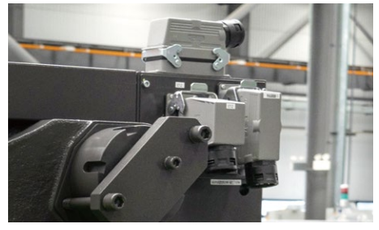
Integrated cooling water circuit design

New integrated water circuit design reduces pressure loss in cooling pipes and facilitates connection.



Specialized needle valve control program

Multiple needle valve opening modes with simple and quick operation.



Enhanced hydraulic motor

Equipped with enhanced hydraulic motor as standard, offering longer service life and increased output.

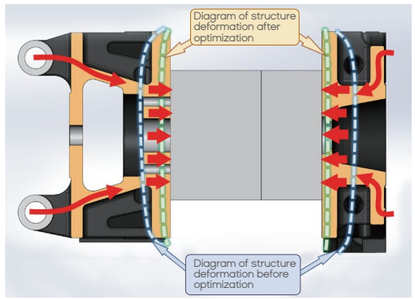
* The data above were acquired by testing in the factory, only for your reference. The specific data please accord to the actual equipment.

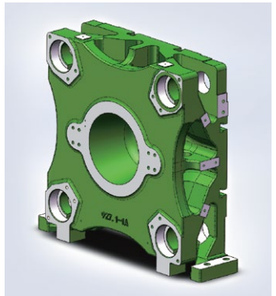
Main Configuration

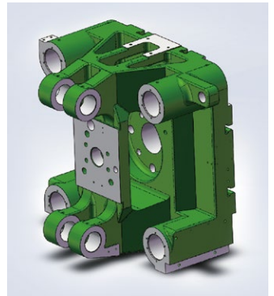
New-generation clamping unit

Dual pressure-center platens

SPET-C series has a new upgrade with dual pressure-center platens. Both fixed and movable platens utilize YIZUMI's patented pressure-center structure. This design, optimized through simulation, provides excellent rigidity, reduces deformation, and supports better product molding.





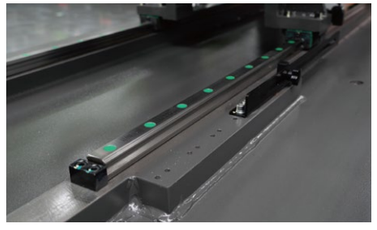


- **Increased molding precision** —— optimized design decreases overall deformation of fixed and movable platens by 10% to 25%, resulting in reduced stress on platens during clamping and significantly less cavity deformation.
- **Improved utilization of clamping force** —— effectively addresses problems like flash and low product consistency, while allowing high-strength, low-deformation structure to employ lower clamping force for stable clamping.
- **Extended service life of mold and equipment** —— enhanced strength, lightweight structure, and reduced clamping force minimizes wear on molds and machines, resulting in less maintenance and longer service life.
- With "intelligent clamping force optimization" function, optimal clamping force can be sustained, making operation more effortless, reliable, and stable.

New injection unit

Dual linear guides with self-lubricating function for clean and tidy operation

- With oil change interval of over 5 years, it minimizes oil contamination in the workshop and the environment.
- The latest power system improves injection speed by an average of 9%, screw speed by an average of 18%, and plasticizing efficiency by an average of 20%.

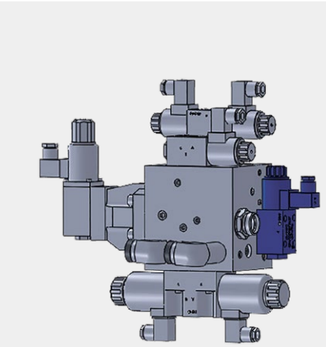


New hydraulic circuit design

Optimized oil circuit design for lower pressure loss and more accurate positioning

SPET-C series is equipped with new energy-efficient hydraulic system, achieving average energy saving of over 12%.

- The newly optimized hydraulic oil channels and pipelines reduce pressure loss and minimize energy consumption.
- By using new low-viscosity, anti-wear hydraulic oil, the system delivers over 10% energy savings in dry cycle test.



Upgraded control system

Upgraded control system with KEBA 12-inch controller

- Standard feature of KEBA's new control system:
- 12'' TFT true color LCD display for 200T-480T models.
- Storage for 700 sets of mold parameters.
- MES interface (standard feature).
- Supports common communication interfaces: RS-485, USB, CANOPEN, EtherCAT, OPC UA (optional) and Euromap77 (optional).
- Multi-curve display function, allowing for the direct display of curves for actions such as mold opening and closing, plasticizing, temperature, and injection monitoring.

It reflects YIZUMI's unique design philosophy and ergonomic button layout, providing infinite possibilities for digital and intelligent advancements.

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SPET-C Series Injection Molding Machine for Cosmetics

Specifications

Description	UNIT	S200PET-C		S260PET-C		S320PET-C		S400PET-C		S480PET-C	
International size		640/2000	945/2000	945/2600	1340/2600	1340/3200	1995/3200	1995/4000	2845/4000	2845/4800	3520/4800
INJECTION UNIT											
Theoretical shot volume	cm^3	371	518	518	749	749	1071	1071	1496	1496	2049
Shot weight	g	434	606	606	876	876	1253	1253	1751	1751	2398
Screw diameter	mm	48	53	53	60	60	68	68	76	76	84
Injection pressure	Mpa	172.2	182.8	182.8	179.1	179.1	186.2	186.2	190.3	190.3	171.9
Injection rate	g/s	207.0	252.4	247.7	317.5	331.0	425.2	397.9	497.0	408.7	499.3
Screw L:D ratio		24:1	24:1	24:1	24:1	24:1	24:1	24:1	24:1	24:1	24:1
Max. injection speed	mm/s	124.3	101.2	122.0	102.3	127.3	100.3	119.1	98.2	97.9	93.4
Screw stroke	mm	205	235	235	265	265	295	295	330	330	370
Screw speed (hydraulic plasticizing)	r/min	0-260	0-200	0-250	0-205	0-255	0-205	0-250	0-174	0-190	0-145
CLAMPING UNIT											
Clamping force	kN	2000		2600		3200		4000		4800	
Opening stroke	mm	490		550		640		700		780	
Space between tie bars (W×H)	mm×mm	530×530		610×570		710×680		760×710		830×810	
Max. daylight	mm	1040		1160		1300		1430		1590	
Mold thickness (min.-max.)	mm	180-550		195-610		220-660		240-730		260-810	
Ejector stroke	mm	150		160		170		210		220	
Number of ejector pin holes		5		13		13		13		17	
Ejector force	kN	62		82		82		118		118	
POWER UNIT											
Max. power of hydraulic motor	kW	28.7		36.4		50.9		58.6		67.4	
Heating capacity	kW	13.1/15.7		15.7/19.9		19.9/30.3		30.3/33.4		33.4/40	
Number of temp control zones		6		6		6		7		7	
GENERAL UNIT											
Dry cycle time	s	2.4		2.7		2.8		4		4.5	
Oil tank capacity	L	240		315		390		500		545	
Machine dimensions (L×W×H)	m×m×m	5.56×1.38×2.16		6.31×1.54×2.40		6.98×1.64×2.44		7. 84×2.04×2.37		8.39×2.16×2.46	
Machine weight	kg	5500		7600		9700		14700		17900	

Note:

1. Theoretical shot volume = barrel sectional area × injection stroke; 2. Shot weight = theoretical shot volume × 1.17 (PET);
3. Due to improvement, specifications may be changed without prior notice.

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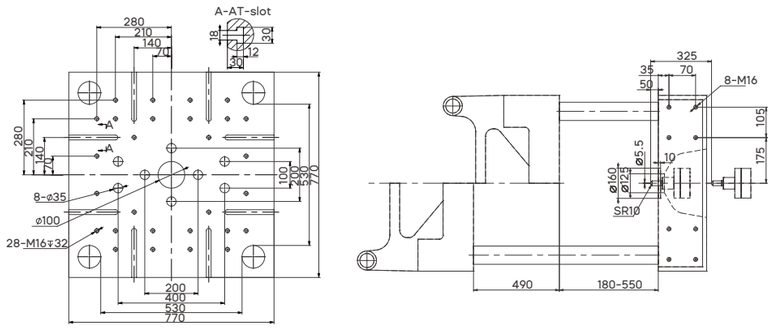
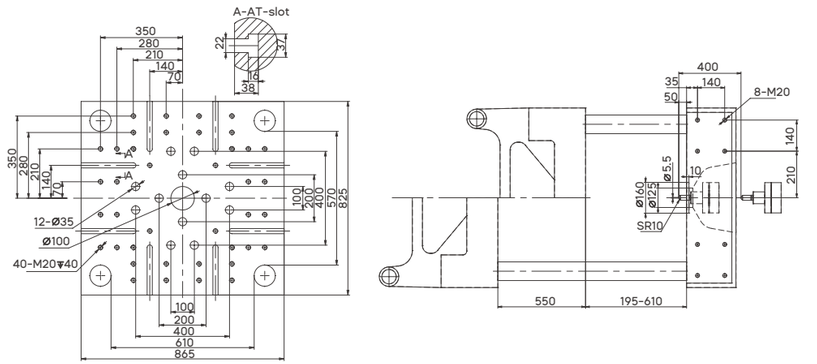
SPET-C Series Injection Molding Machine for Cosmetics

Platen Dimensions

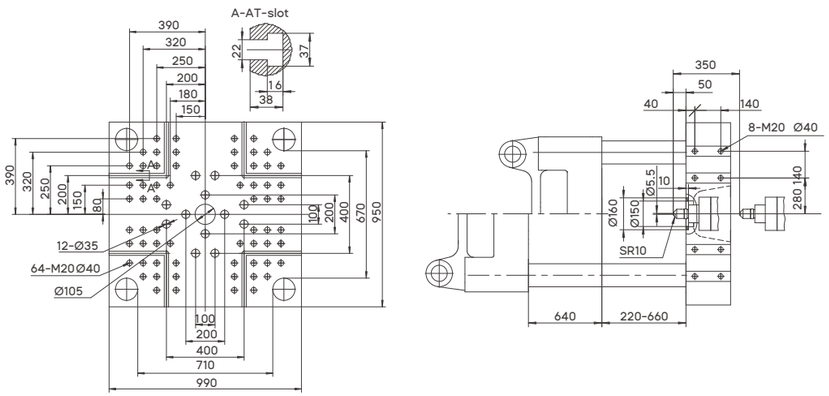
S200PET-C



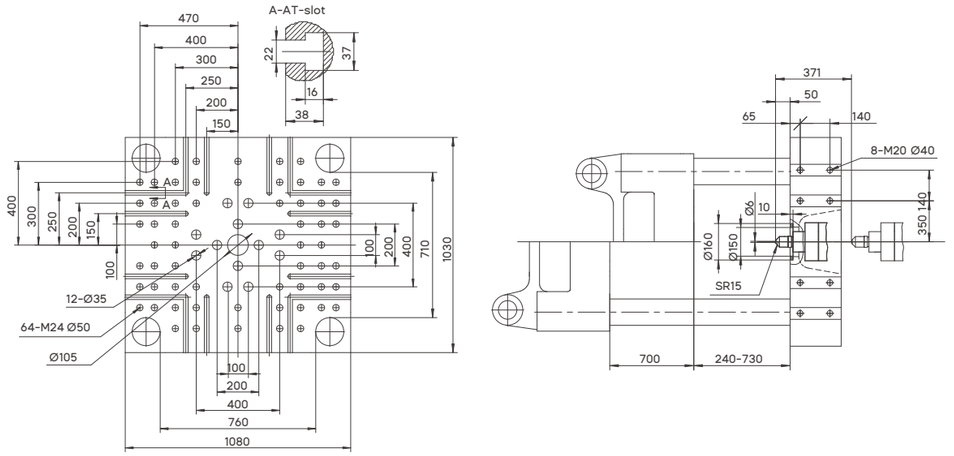
S260PET-C



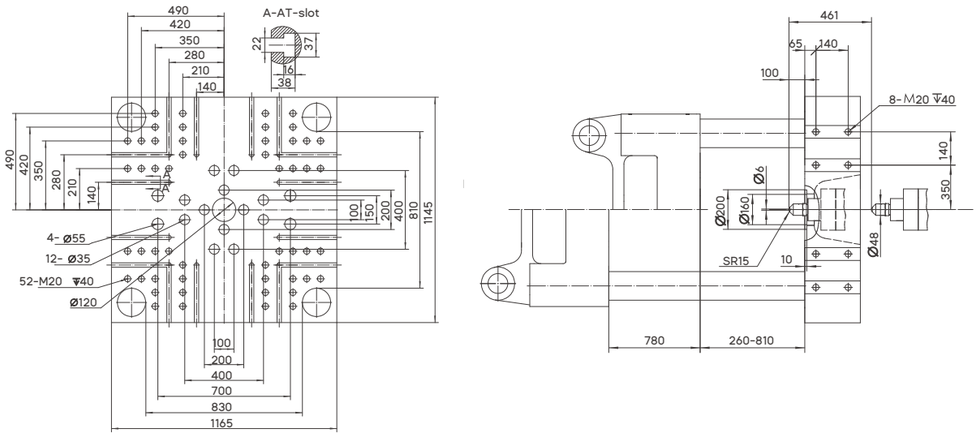
S320PET-C



S400PET-C



S480PET-C



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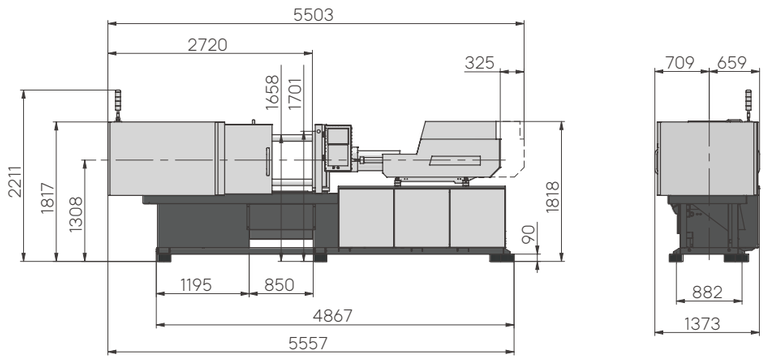
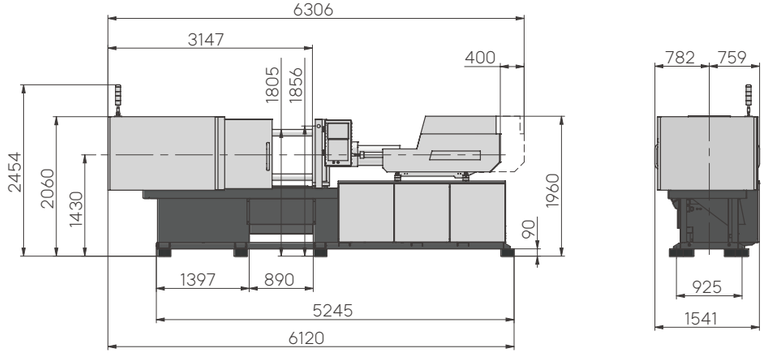
SPET-C Series Injection Molding Machine for Cosmetics

Machine Dimensions

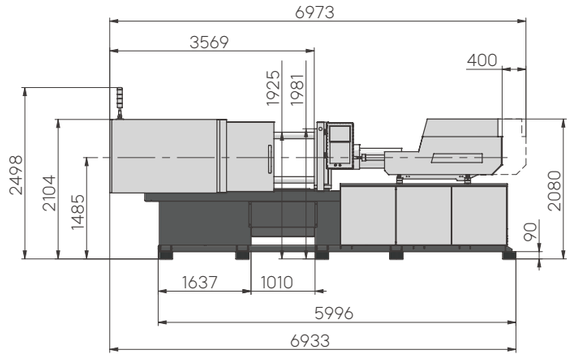
S200PET-C



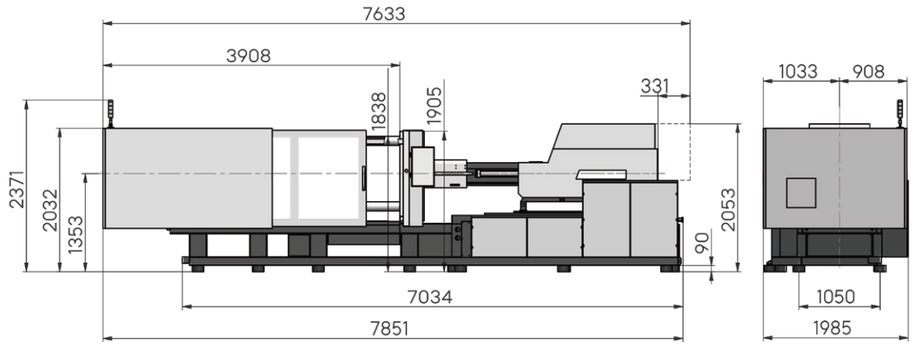
S260PET-C



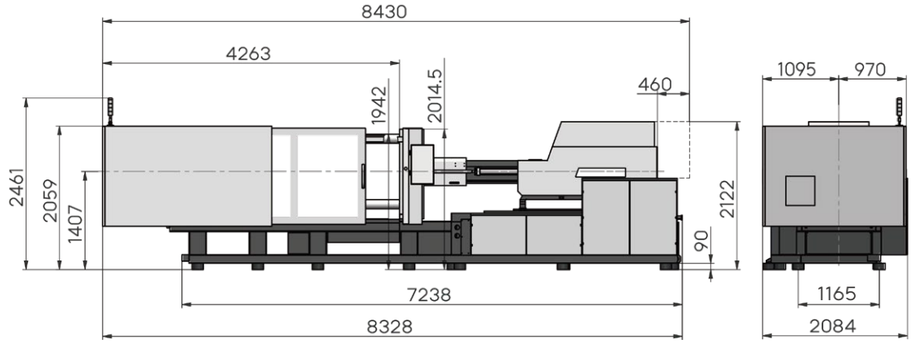
S320PET-C



S400PET-C



S480PET-C



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Standard & Optional Features (S200-480PET-C series)

	Standard	Optional
Injection Unit		
Integrated injection unit with linear guides	●	
Parallel double-cylinder injection system	●	
Hydraulic plasticizing with enhanced motor	●	
PET screw & barrel component	●	
Energy-saving groove design of barrel (patented design)	●	
Multi-stage PID barrel temperature control (5-6 stages)	●	
Double-carriage cylinder	●	
Precise transducer control of plasticizing stroke / injection stroke	●	
Nozzle purge guard (with electrical protection)	●	
Screw speed detection	●	
Cold start protection	●	
Automatic purging	●	
Selectable suck-back before or after plasticizing	●	
6-stage injection control (speed, pressure, position)	●	
5-stage holding pressure control (speed, pressure, time)	●	
3-stage plasticizing control (speed, pressure, position)	●	
Extended nozzle		○
Barrel cooling fan		○
Spring shut-off nozzle/hydraulic nozzle		○
Increased injection stroke or upgraded/degraded injection unit		○
Swiveling injection unit		○
Parallel electric plasticizing		○
Enclosed barrel heat-retaining guard		○
Clamping Unit		
Precision transducer for clamping / ejector stroke control	●	
QT500-7A high-rigidity platens/toggle	●	
2-stage ejector forward/backward control	●	
EUROMAP-based robot mounting holes	●	
Hydraulic mold height adjustment device	●	
Hydraulic / electrical safety devices	●	
Wear-resistant manganese steel guides for movable platen	●	
Automatic centralized lubrication system	●	
Multiple ejector function settings	●	
Low pressure mold protection	●	
Platen with T slots and mounting holes	●	
Safety edges for machine gates	●	
Compulsory ejector-back function	●	
One-button automatic mold height adjustment	●	
Special mold mounting hole		○
Mold thermal insulation plate		○
Increased ejector force		○
Increased mold thickness		○
Magnetic platen		○
Mold lifting device		○
Mechanical safety devices		○
Hydraulic System		
High-precision servo system (with energy recovery)	●	
Precise real-time by-pass oil filter	●	
Low-noise and energy-saving hydraulic circuit	●	
Proportional valve control for mold opening and closing	●	
High performance hydraulic control valve	●	
External cooler	●	

	Standard	Optional
Numerical control proportional backpressure	●	
Safety chain for exposed HP hydraulic hose	●	
Multi-channel cooling water devices with fast connectors (12 outlet-inlet for 200-320T, 16 outlet-inlet for 400-480T)	●	
Low-friction seal	●	
Automatic oil temperature detection and alarm	●	
Closed-loop oil temperature cooling control	●	
Core puller (one set standard for 90-260T, reserved one set for valve plate interface; two sets standard for 320-480T)	●	
Multilevel enhanced pump motor		○
Multilevel enhanced plasticizing motor		○
Mold opening synchronized with ejection/ core pulling		○
Servo valve for injection		○
Additional core pulling device		○
Additional hydraulic unscrewing device		○
Control System		
Barrel heater protection	●	
Input/output inspection	●	
Automatic heat retaining and automatic heating setting	●	
Time / position / time + position controlled switchover from injection to holding	●	
Separate adjustment of motion slope	●	
Automatic clamping force adjustment	●	
Process parameter locking	●	
700 sets of process parameters storage memory	●	
12" color LCD display	●	
Multiple operating languages	●	
Three-color alarm light	●	
3-phase power socket (3x16A+2x32A) for 260T and below models	●	
3-phase power socket (2x16A+3x32A) for 320T and above models	●	
Reserved interfaces for air blowers, core pulling, and ejector backward protection	●	
One set of air valves for both movable and fixed platens	●	
Emergency stop of front and rear safety guard	●	
Intelligent injection weight control system	●	
Preventive monitoring and maintenance system for key components	●	
Intelligent mold opening	●	
Ceramic heater band	●	
Multi-curve display	●	
Two sets of 220V power socket	●	
Hot runner interface		○
Pneumatic sequence gate valve		○
Interface for electric unscrewing interface		○
Air blowing with valve		○
Air-assisted injection device		○
Central (networked) monitoring system		○
Safety light curtain inside safety guard		○
Display of overall energy consumption		○
Change of power supply voltage		○
General		
Operation manual	●	
Leveling pad	●	
Mold retaining plate	●	
A tool kit and a filter element	●	
Stainless steel hopper		
Auto loader		○
Glass tube flowmeter		○
Dryer		○
Dehumidifier		○
Mold temperature control unit		○

● Standard ○ Optional