

PAC-K3

250T-560T

PAC-K3 SERIES THIN-WALL
INJECTION MOLDING MACHINE



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THINK TECH FORWARD

One-stop service Address customer's pain points and solve the issues



Communication of Product Concept

Customers provide the concept of product requirements. The professionals from YIZUMI will assist customers in the design and development of the product to improve customers' production efficiency and product competitiveness.

Overall Planning

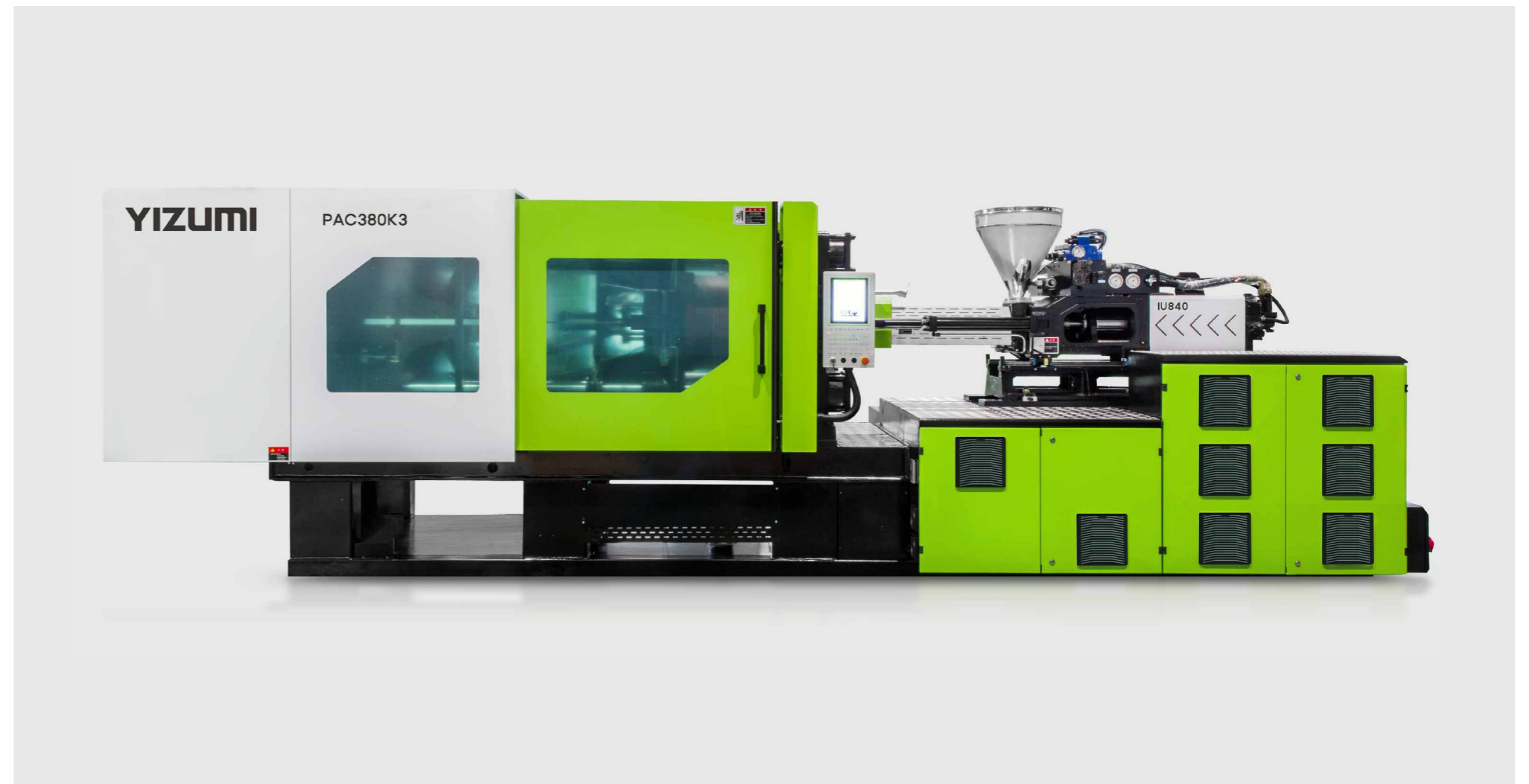
The professionals from YIZUMI will provide customers with capacity assessment, equipment and production line integration, manufacturing facility planning and other total solutions.

Connected Production

YIZUMI offers full-process control over in-plant wiring, equipment, mold, and automation from manufacturing to integration testing to eliminate integration risks. The system can be put into production as soon as it arrives.

YFO Exclusive Services

With the service concept throughout the entire process, YIZUMI is committed to reduce downtime by focusing on details. Improving the productivity of customers is our ultimate goal.



Overview Design of PAC-K3 Series Machine

Robust Toggles

The overall optimized design of toggle strength and rigidity greatly improves the stability of the clamping and effectively extends the service life of the machine.

Unique Large Beveled Crosshead Toggles Design

Large beveled structure can better transfer force from the tail toggle hole to the center of the platen to minimize the platen deformation, ensure the uniformity of force applied on the platens and mold, extend the service life, and make certain the quality of products.

Optimized Control Program

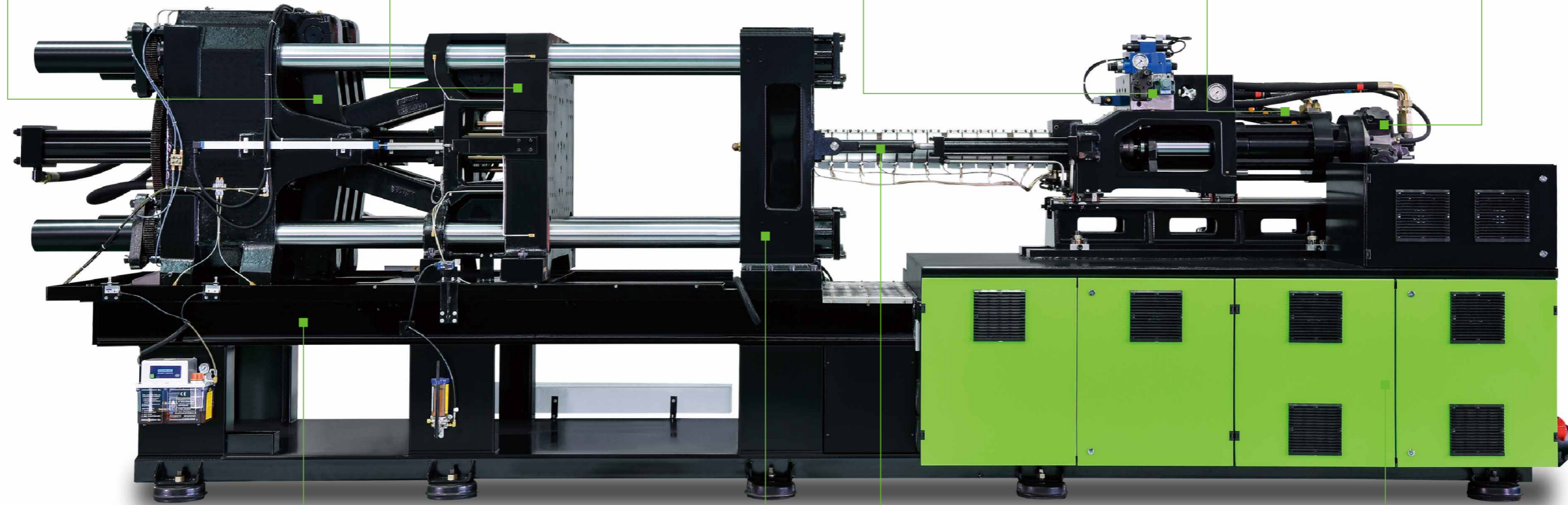
Selecting the high-quality hydraulic components to reduce response time, oil circuit impact, and overall machine noise. Machine will go through a number of tests and optimizing adjustments to meet the high quality requirements.

Single Cylinder Injection Unit

The compact single cylinder injection structure renders features such as small movement inertia, short acceleration time, and high repetitive accuracy of injection. It can be adapted to a variety of injection units according to different product processing requirements.

Optimized Cylinder Sealing Structure

Based on many years of manufacturing experience and the characteristics of oil circuit in high-speed single cylinder devices, the cylinder sealing structure is further optimized to ensure the durability of the injection unit and avoid oil leakage.



Highly-rigid Machine Frame

The Steel I-Beam type machine frame provides sufficient rigidity to ensure a smooth and vibration-free operation at high speed.

Highly-rigid and Low Deformation Platens

The adoption of reinforced platen design according to the characteristics of thin-walled packaging products. With perfect combination of strength and rigidity, while minimize the platen deformation, it maintains a flexible and smooth movement.

Horizontal Dual-carriage Design

The adoption of horizontal dual-carriage cylinder design effectively eliminates the turning torque of the injection mechanism and ensures a stable and reliable injection.

Efficient Power Output

Power output is optimized to realize the step distribution of 150-800mm/s injection speed.

Standard Features

Synchronous plasticizing

Synchronous plasticizing is the standard function for K3 series (except 280K3), with shorter molding cycle. Driven by servo motor, it is more energy-efficient and environment-friendly.

Inovance Iventure System

PAC-K3 Series adopt Inovance Iventure System, with greater power output, faster response speed and higher accuracy.



Quick and stable mold opening, smooth mold closing with no impact, less wear and tear to machine;

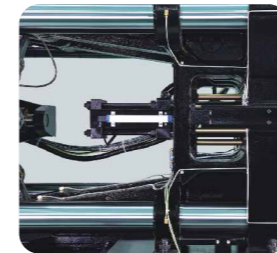
Mold opening repeatability is within $\pm 0.5\text{mm}$, with overshoot less than 2.0mm ;

Deviation of injection end position is less than 0.5mm ;

Deviation of material feeding position is less than 0.2mm ;

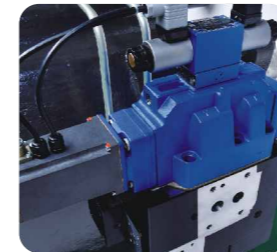
Temperature overshoot of first-time heating is less than 3°C , within $\pm 1^\circ\text{C}$.

Optional Features



Ejector-on-Fly

Ejector while mold opening to shorten the production cycle time.



High-speed Mold Opening /Closing Proportional Valve

Further reduce the reaction time. Double the repetitive accuracy of mold opening ends and increase the operating speed of mold opening/closing by 15%-20%, suitable for the production of various precision thin-walled products.



Linear Guide Rails

Reduce the friction from movable platen to further lower energy consumption, improve operating speed and shorten the production cycle time.



Electric Dozing Motor

Reduce production cycle time through parallel operation. Driven by servo motor, the dozing motor has higher energy conversion efficiency and saves more energy.



Control System

Optional with KEBA controller, user-friendly interface and fast response make operation more comfortable and convenient.



Use of Appropriate Screw and Barrels

Select from a variety of professional screw and barrels according to the characteristics of different raw materials and production processes to ensure the plasticizing quality.



Infrared Heater Band

The infrared heater band reduces the heat loss by 30%-68%.



Servo Injection with Accumulator

Increase the injection speed up to 800m/s and double the repetitive accuracy of injection. It is capable to produce thinner and more sophisticated products while shortening the injection time and improving the production efficiency.



Shut-off Nozzle

Choose the long-lasting precision shut-off nozzle. Effectively avoid nozzle drooling.

New Upgrade

Performance Upgrade

1 Max system pressure and injection speed

The system pressure and injection speed are upgraded to ensure the stable molding of thin-wall and multi-cavity products.

2 Clamping unit

The upgraded clamping unit can provide larger clamping force, more conducive to the molding of thin-wall and deep-cavity products.

3 Screw and barrel

Screw and barrel design upgraded, with increased length-diameter ratio of 24:1, for better plasticizing effect, more stable product size and higher flexibility.

Configuration Upgrade

PAC380K3 and above models are standard with hydraulic synchronous plasticizing (except 280K3), which shortens the product molding cycle.



Control System Upgrade

The PAC-K3 series is adopted with Inovance Iventure System, including INOVANCE Controller (EST), INOVANCE IS580T Servo Drive, and INOVANCE High-response Motor .

- Same brand controller and drive show better performance, faster and more accurate.
- Low inertia motor (0 ~ 2000r/min) has shorter response time (25ms), and that of ordinary servo motor is 35-40ms



INOVANCE Controller(EST)



INOVANCE High-response Motor



INOVANCE IS580T Servo Drive

Machine Design Upgrade

Humanized machine design facilitates daily operation and maintenance

- Independent electric cabinet design is convenient for replacement as required, less influenced by frame delivery.
- Sheet metal with IU specification mark is added on the injection unit (near injection cylinder).
- Sheet-metal design of clamping unit and nozzle guard design is upgraded.
- New structure design of clamping unit with higher rigidity can offer larger clamping force, more evenly distributed.



Thin-wall mold

We can offer customized mold for thin wall injection molding according to customer specific requirements, to better meet diversified demand.



Applications



Food Packaging

Cover a wide range of packaging for various food, beverages, cheese, disposable take-out food containers, plastic cutlery, IML packaging. Provide a variety of equipment and mold options. Offer production line turn-key delivery in collaboration with high-quality solution providers.

Disposable Medical Supplies

Injector, pipet tips, petri dish, and other products. Provide clean, efficient, and stable system solutions.

Various Types of Bottle Caps

Can make all kinds of bottle caps including beverage bottle seal caps, pull-off caps, folding caps, dustproof caps, etc. With the special kit for bottle cap machine to meet the requirements of precision bottle cap production.

Various Types of Thin-Walled Plastic Products

Such as 5L-20L industrial sealed barrels, all types of logistics cable ties, and multi-cavity silicon sealant barrels. For plastic products with high flow length ratio and light gram weight, it can effectively improve the productivity and product quality.

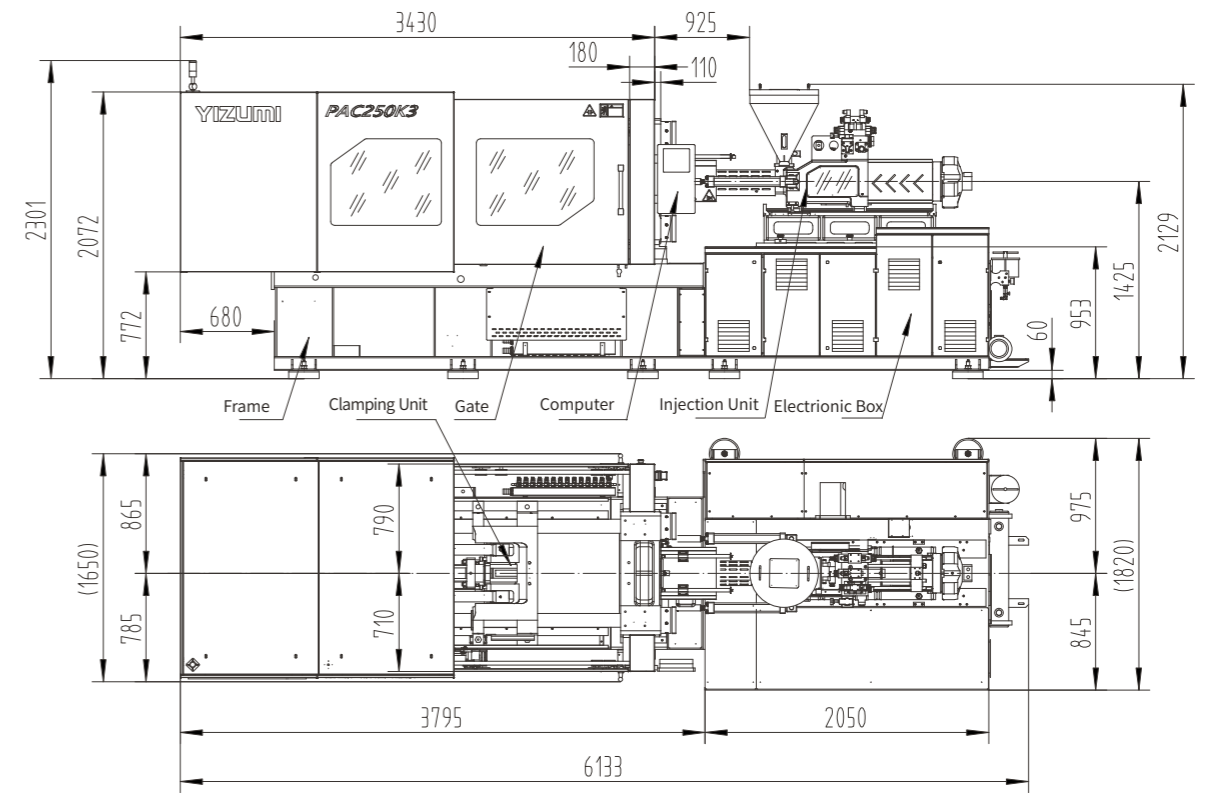
PAC Series serves at



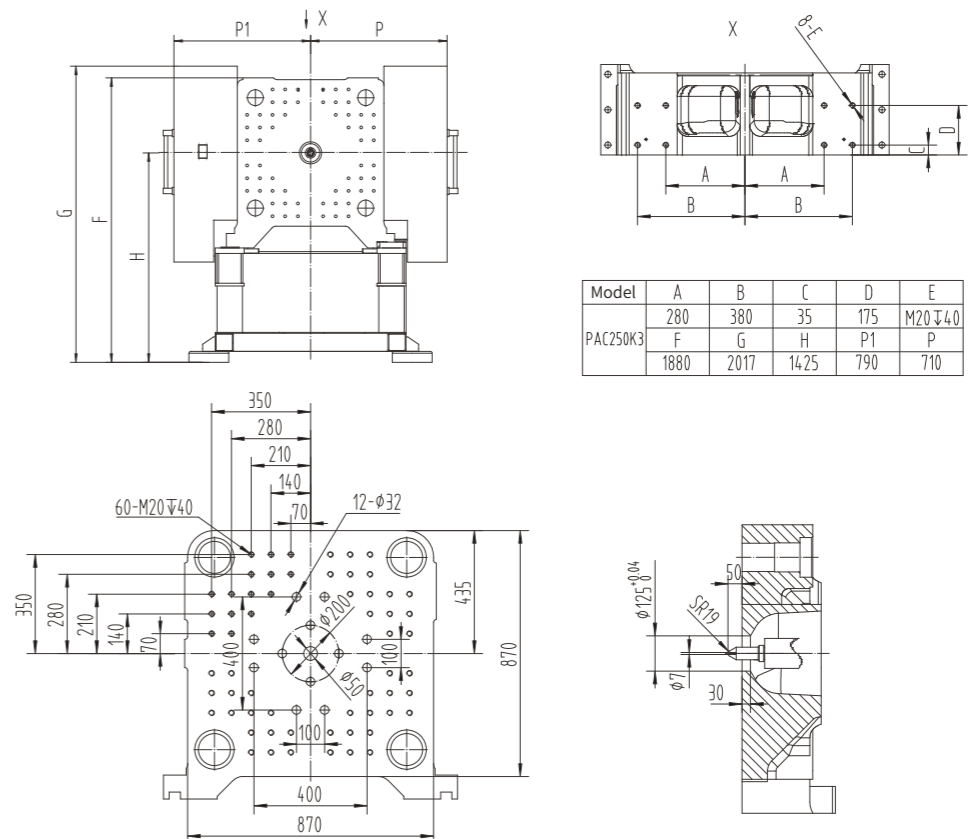
PAC250K3 High-speed Injection Molding Machine

DESCRIPTION	UNIT	PAC250K3	
International specification		480/2500	
INJECTION UNIT			
Shot volume	cm ³	221	280
Shot weight (PS)	g	203	258
	oz	7.2	9.1
Screw diameter	mm	40	45
Injection pressure	MPa	216	171
Screw L:D ratio		24:1	
Max.injection speed	mm/s	320	
Screw stroke	mm	176	
Screw speed (stepless)	r/min	0-300	
CLAMPING UNIT			
Clamping force	kN	2500	
Opening stroke	mm	560	
Space between bars (W×H)	mm×mm	580×580	
Max. Daylight	mm	1160	
mold thickness (Min.-Max.)	mm	220-600	
Hydraulic ejection storke	mm	180	
Ejector number		5	
Hydraulic ejection force	kN	77	
POWER UNIT			
Hydraulic system pressure	Mpa	19	
Pump motor	kW	40	
Heating capacity	kW	12	14
Number of temp control zones		5	
GENERAL UNIT			
Dry cycle time	s	2.2	
Oil tank capacity	l	430	
Machine dimensions (LxWxH)	mm×mm	6.2x1.8x2.2	
Machine weight	Ton	10.8	

PAC250K3 Layout Drawings



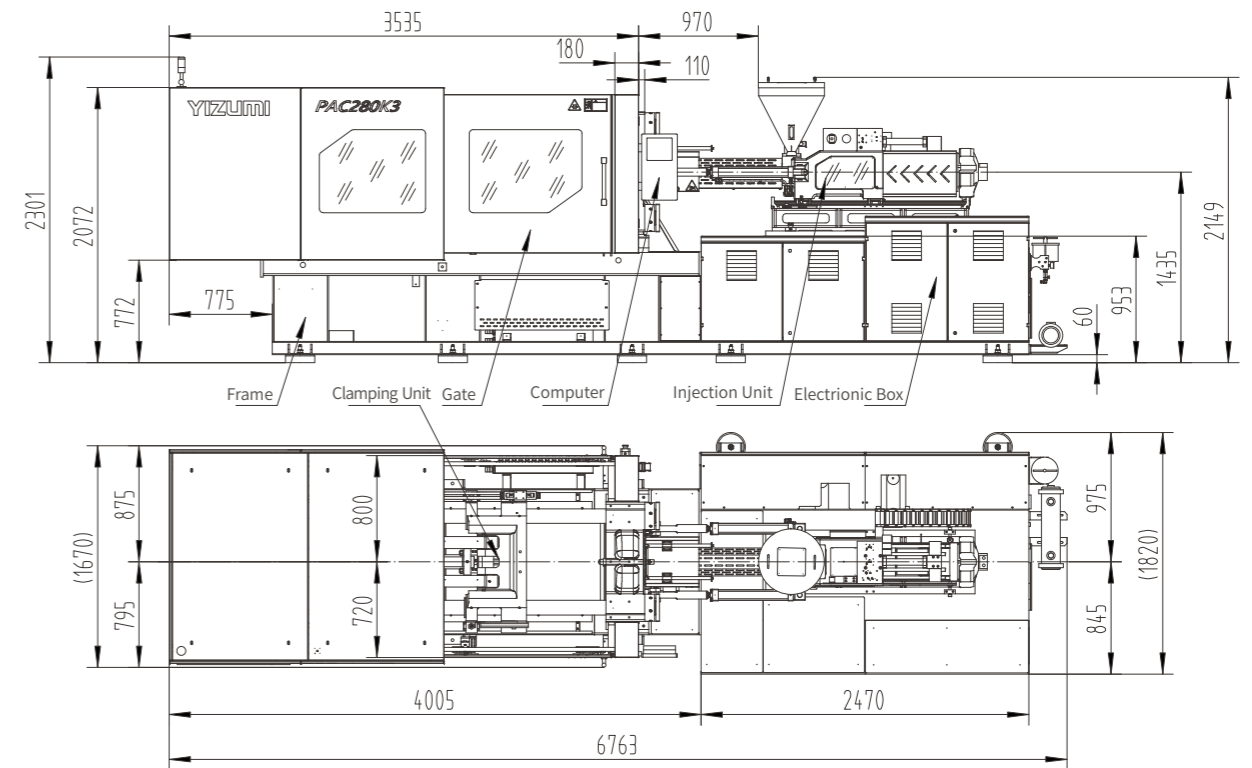
PAC250K3 Platen Dimension Drawings



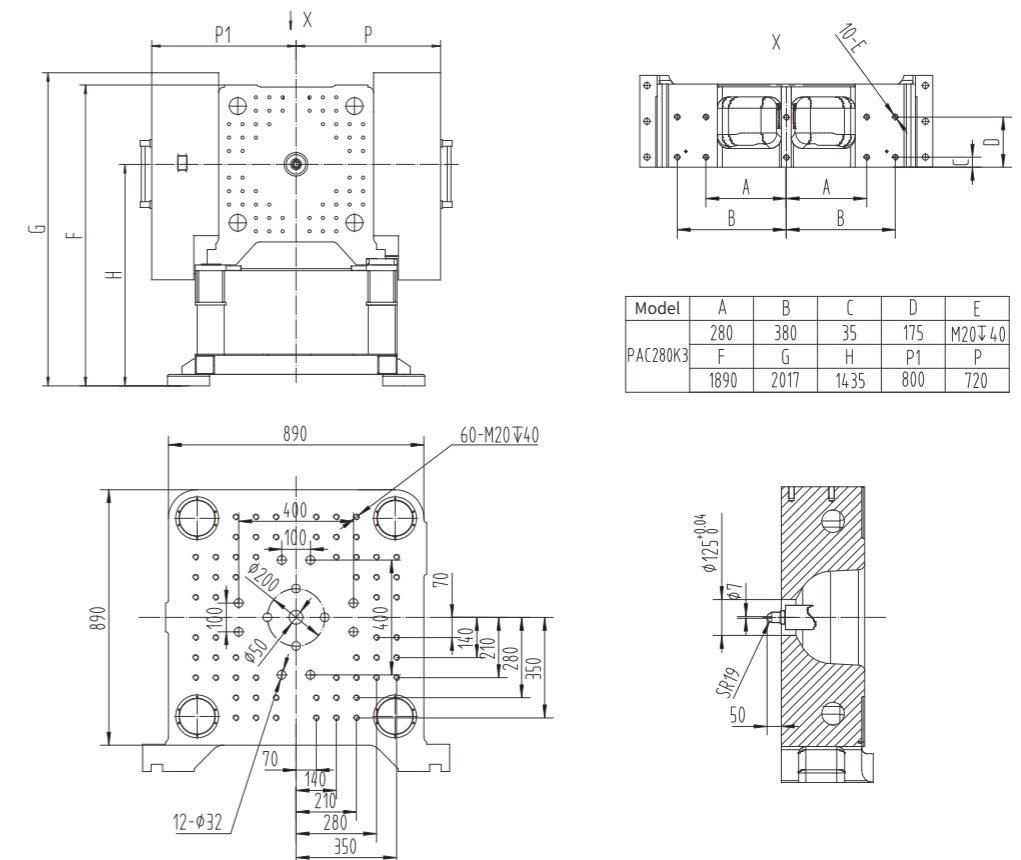
PAC280K3 High-speed Injection Molding Machine

DESCRIPTION	UNIT	PAC280K3	
International specification		480/2800	
INJECTION UNIT			
Shot volume	cm ³	221	280
Shot weight (PS)	g	203	258
	oz	7.2	9.1
Screw diameter	mm	40	45
Injection pressure	MPa	216	171
Screw L:D ratio		24:1	
Max.injection speed	mm/s	410	
Screw stroke	mm	176	
Screw speed (stepless)	r/min	0-300	
CLAMPING UNIT			
Clamping force	kN	2800	
Opening stroke	mm	585	
Space between bars (W×H)	mmxmm	580x580	
Max. Daylight	mm	1185	
mold thickness (Min.-Max.)	mm	220-600	
Hydraulic ejection storke	mm	150	
Ejector number		5	
Hydraulic ejection force	kN	77	
POWER UNIT			
Hydraulic system pressure	Mpa	19	
Pump motor	kW	51	
Heating capacity	kW	12	14
Number of temp control zones		5	
GENERAL UNIT			
Dry cycle time	s	2.2	
Oil tank capacity	l	430	
Machine dimensions (LxWxH)	mxmxm	6.8x1.8x2.2	
Machine weight	Ton	11.8	

PAC280K3 Layout Drawings



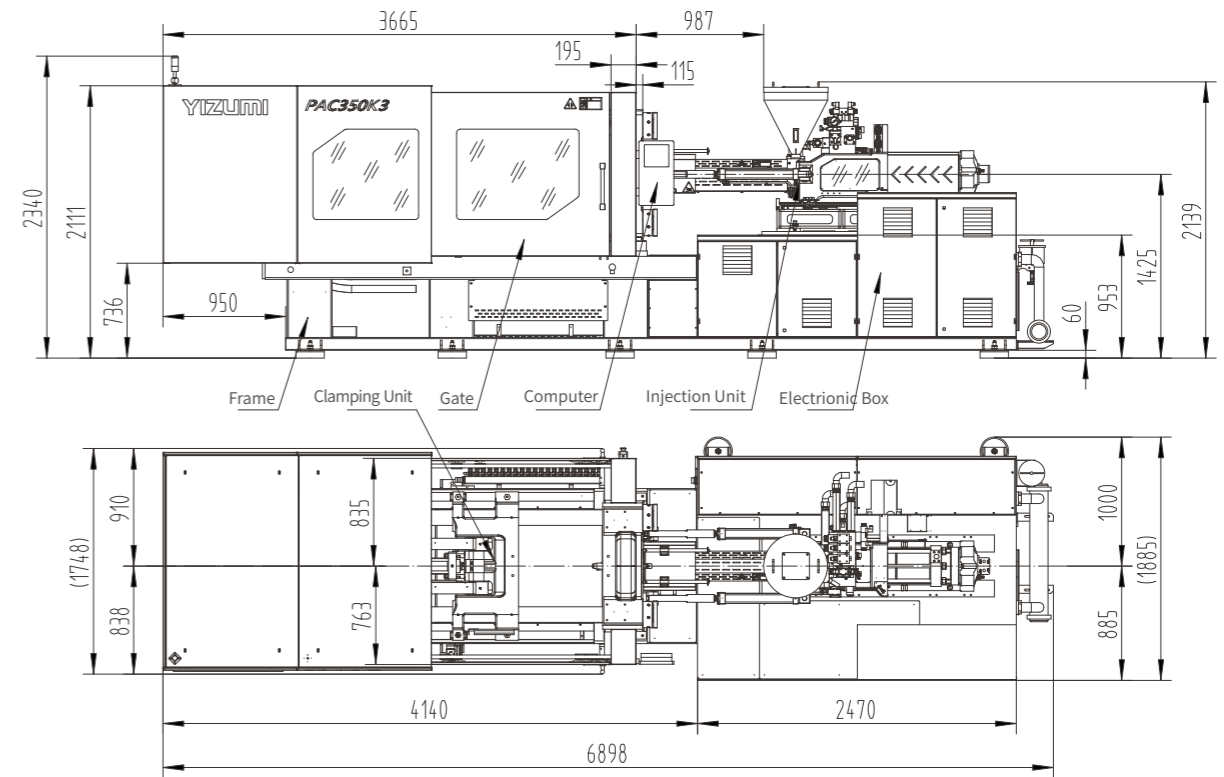
PAC280K3 Platen Dimension Drawings



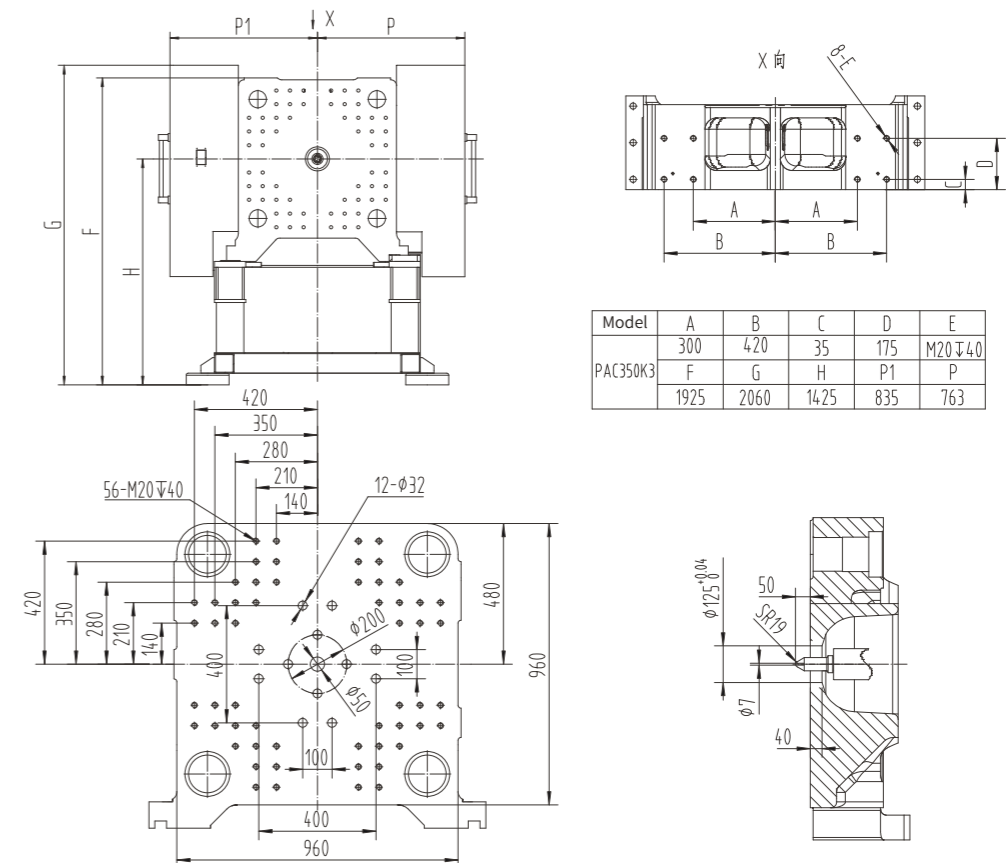
PAC350K3 High-speed Injection Molding Machine

DESCRIPTION	UNIT	PAC350K3		
International specification		915/3500		
INJECTION UNIT				
Shot volume	cm ³	442	535	636
Shot weight (PS)	g	406	492	585
	oz	14.3	17.3	20.6
Screw diameter	mm	50	55	60
Injection pressure	MPa	207	171	144
Screw L:D ratio		24:1		
Max.injection speed	mm/s	350		
Screw stroke	mm	225		
Screw speed (stepless)	r/min	0-300		
CLAMPING UNIT				
Clamping force	kN	3500		
Opening stroke	mm	610		
Space between bars (W×H)	mm×mm	630×630		
Max. Daylight	mm	1260		
mold thickness (Min.-Max.)	mm	250-650		
Hydraulic ejection storke	mm	180		
Ejector number		5		
Hydraulic ejection force	kN	77		
POWER UNIT				
Hydraulic system pressure	Mpa	19		
Pump motor	kW	40+31		
Heating capacity	kW	20	24	27
Number of temp control zones		5		
GENERAL UNIT				
Dry cycle time	s	2.4		
Oil tank capacity	l	600		
Machine dimensions (LxWxH)	mm×mm×mm	6.9x1.9x2.3		
Machine weight	Ton	13.3		

PAC350K3 Layout Drawings



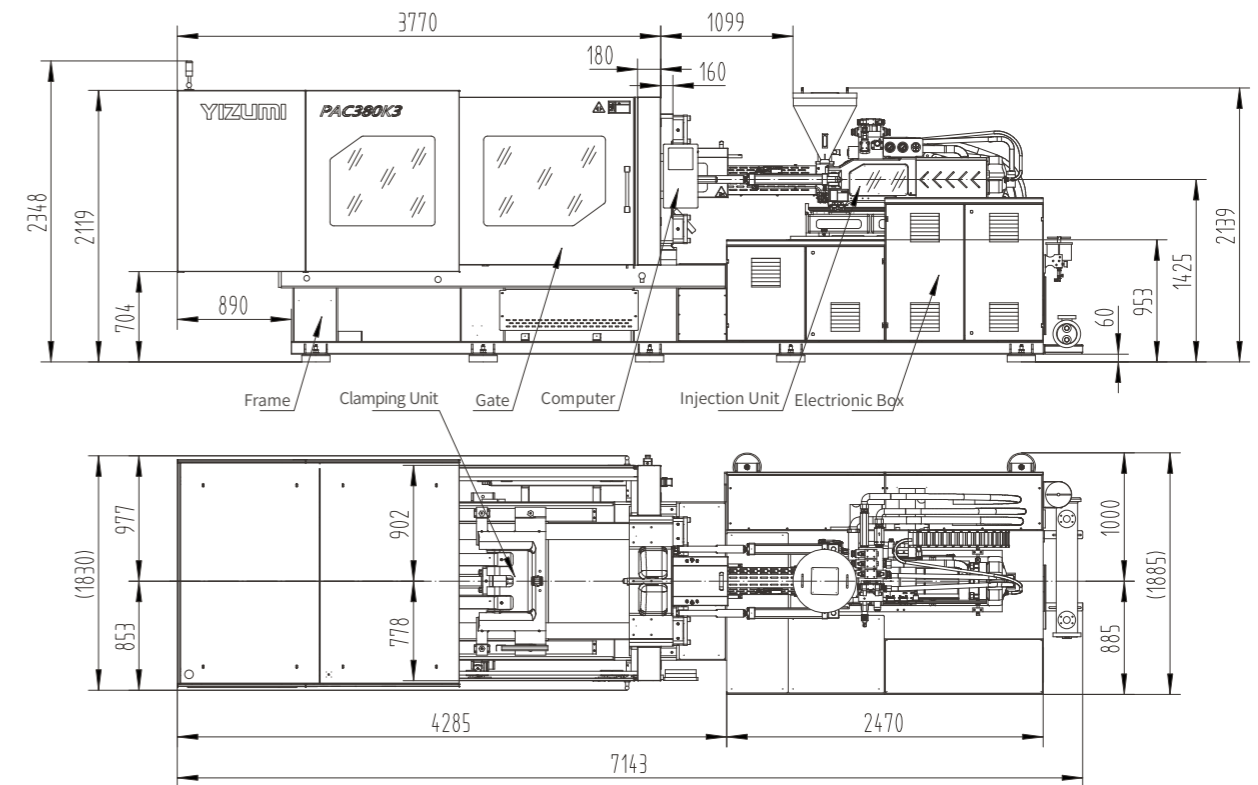
PAC350K3 Platen Dimension Drawings



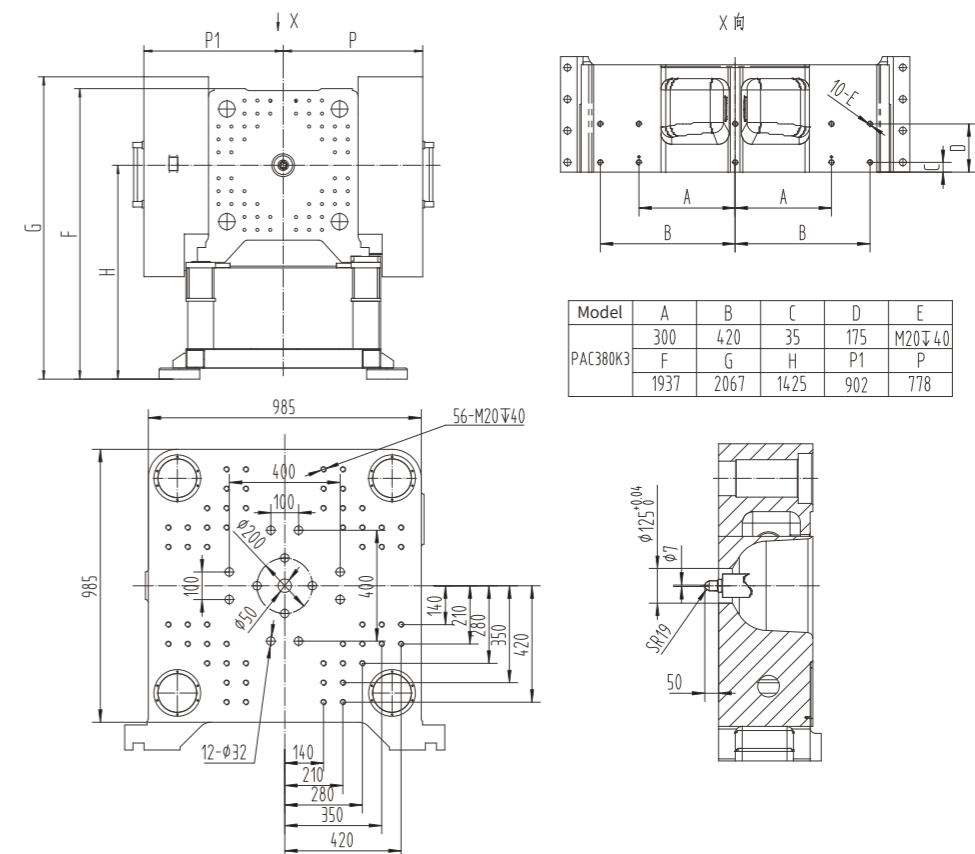
PAC380K3 High-speed Injection Molding Machine

DESCRIPTION	UNIT	PAC380K3		
International specification		915/3800		
INJECTION UNIT				
Shot volume	cm ³	442	535	636
Shot weight (PS)	g	406	492	585
	oz	14.3	17.3	20.6
Screw diameter	mm	50	55	60
Injection pressure	MPa	207	171	144
Screw L:D ratio		24:1		
Max.injection speed	mm/s	430		
Screw stroke	mm	225		
Screw speed (stepless)	r/min	0-300		
CLAMPING UNIT				
Clamping force	kN	3800		
Opening stroke	mm	640		
Space between bars (W×H)	mm×mm	650×650		
Max. Daylight	mm	1290		
mold thickness (Min.-Max.)	mm	250-650		
Hydraulic ejection storke	mm	150		
Ejector number		5		
Hydraulic ejection force	kN	77		
POWER UNIT				
Hydraulic system pressure	Mpa	19		
Pump motor	kW	40+40		
Heating capacity	kW	20	24	27
Number of temp control zones		5		
GENERAL UNIT				
Dry cycle time	s	2.5		
Oil tank capacity	l	600		
Machine dimensions (LxWxH)	mm×mm	7143x2346x1885		
Machine weight	Ton	14.3		

PAC380K3 Layout Drawings



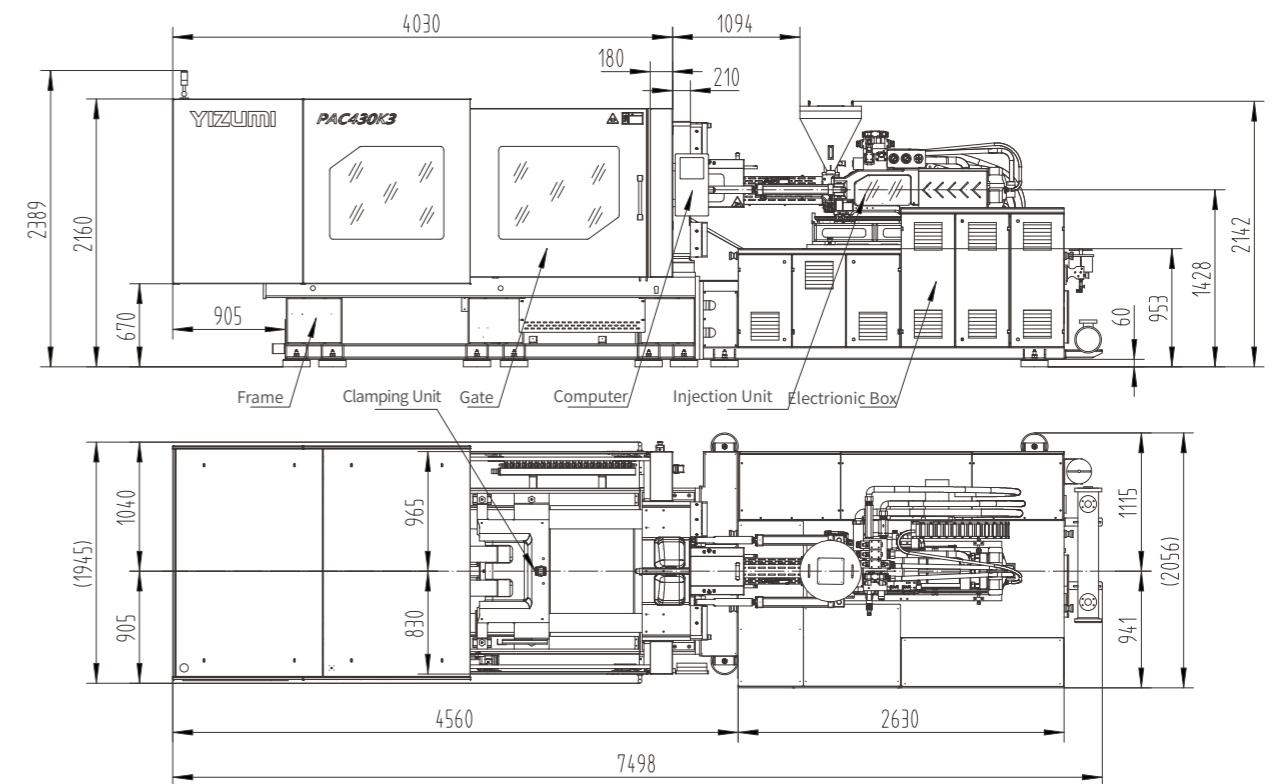
PAC380K3 Platen Dimension Drawings



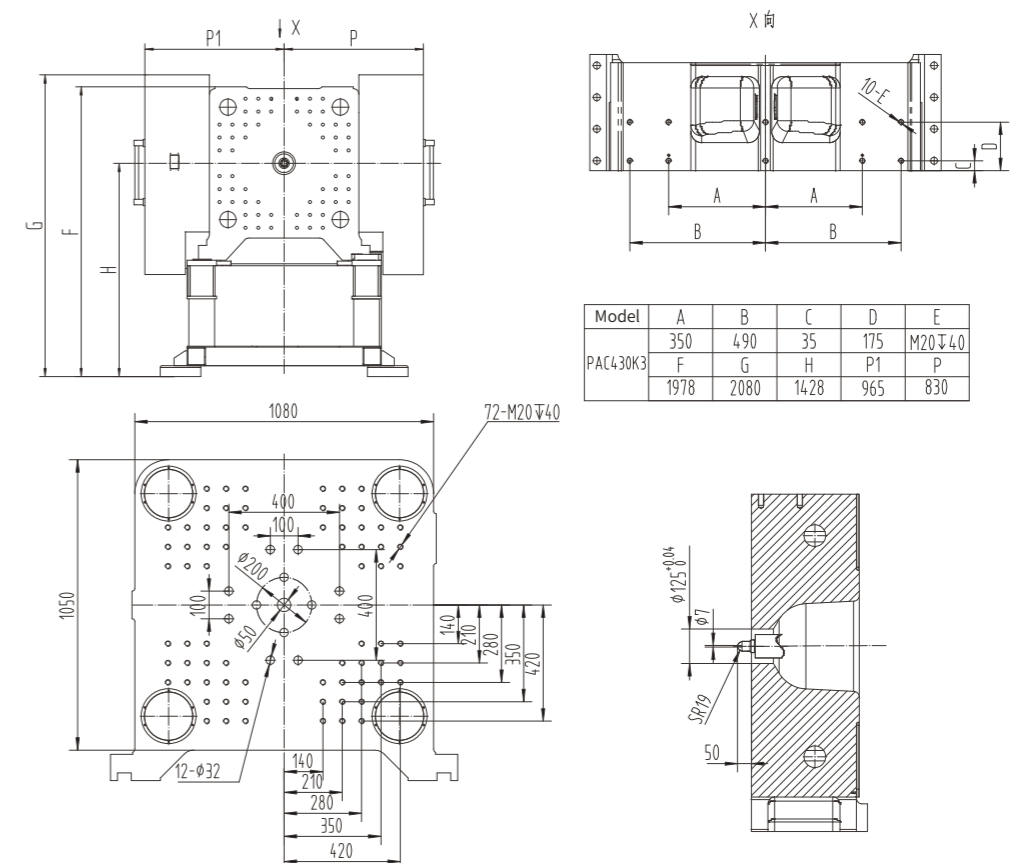
PAC430K3 High-speed Injection Molding Machine

DESCRIPTION	UNIT	PAC430K3		
International specification		915/4300		
INJECTION UNIT				
Shot volume	cm ³	442	535	636
Shot weight (PS)	g	406	492	585
	oz	14.3	17.3	20.6
Screw diameter	mm	50	55	60
Injection pressure	MPa	207	171	144
Screw L:D ratio		24:1		
Max.injection speed	mm/s	550		
Screw stroke	mm	225		
Screw speed (stepless)	r/min	0-300		
CLAMPING UNIT				
Clamping force	kN	4300		
Opening stroke	mm	650		
Space between bars (W×H)	mm×mm	680×650		
Max. Daylight	mm	1400		
mold thickness (Min.-Max.)	mm	350-750		
Hydraulic ejection storke	mm	150		
Ejector number		5		
Hydraulic ejection force	kN	77		
POWER UNIT				
Hydraulic system pressure	Mpa	19		
Pump motor	kW	51+51		
Heating capacity	kW	20	24	27
Number of temp control zones		5		
GENERAL UNIT				
Dry cycle time	s	2.8		
Oil tank capacity	l	800		
Machine dimensions (LxWxH)	mm×mm×mm	75x2.0x2.3		
Machine weight	Ton	19.3		

PAC430K3 Layout Drawings



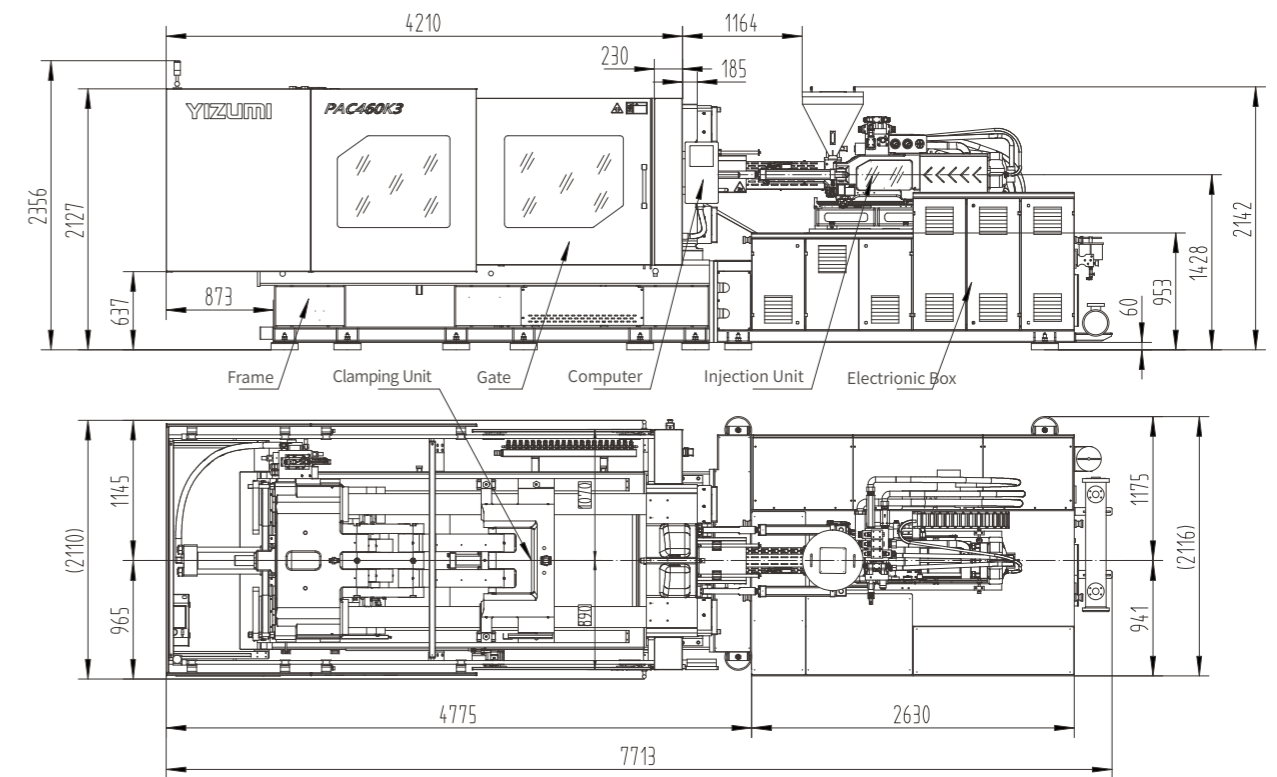
PAC430K3 Platen Dimension Drawings



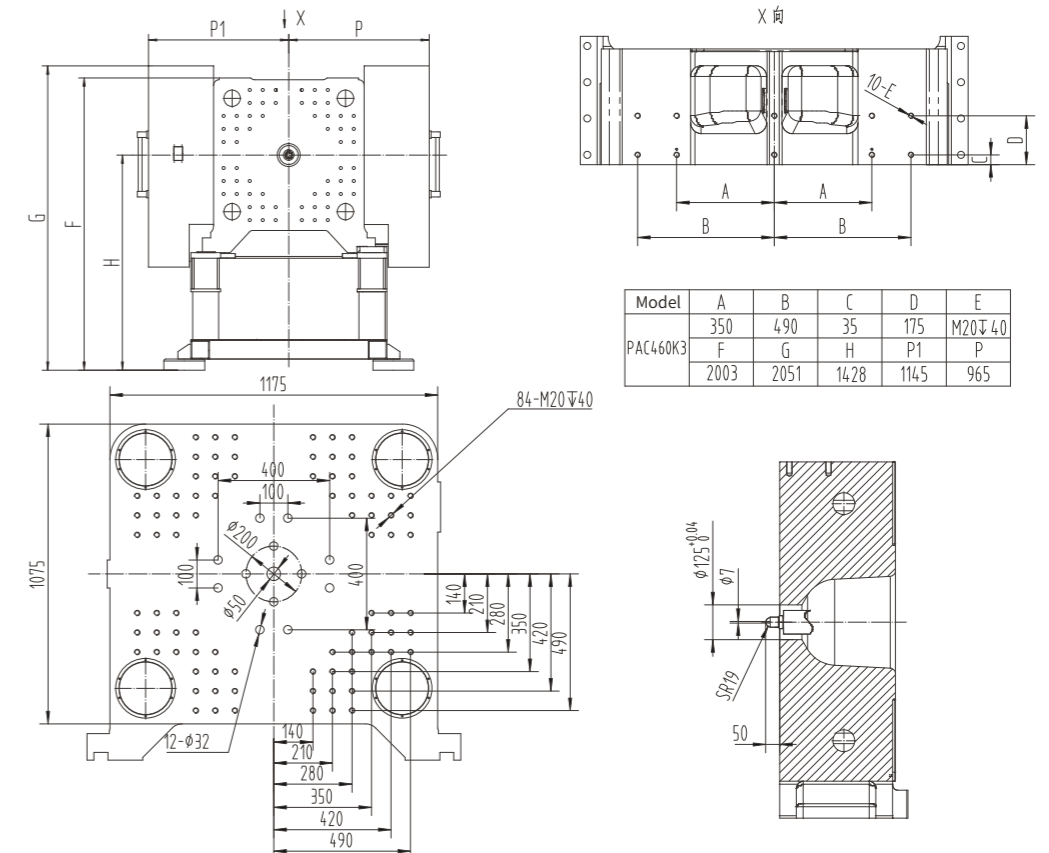
PAC460K3 High-speed Injection Molding Machine

DESCRIPTION	UNIT	PAC460K3		
International specification		915/4600		
INJECTION UNIT				
Shot volume	cm ³	442	535	636
Shot weight (PS)	g	406	492	585
	oz	14.3	17.3	20.6
Screw diameter	mm	50	55	60
Injection pressure	MPa	207	171	144
Screw L:D ratio		24:1		
Max.injection speed	mm/s	550		
Screw stroke	mm	225		
Screw speed (stepless)	r/min	0-300		
CLAMPING UNIT				
Clamping force	kN	4600		
Opening stroke	mm	660		
Space between bars (W×H)	mm×mm	750×650		
Max. Daylight	mm	1410		
mold thickness (Min.-Max.)	mm	350-750		
Hydraulic ejection stroke	mm	150		
Ejector number		5		
Hydraulic ejection force	kN	77		
POWER UNIT				
Hydraulic system pressure	Mpa	19		
Pump motor	kW	51+51		
Heating capacity	kW	20	24	27
Number of temp control zones		5		
GENERAL UNIT				
Dry cycle time	s	3		
Oil tank capacity	l	800		
Machine dimensions (LxWxH)	mm×mm	7.8x2.1x2.4		
Machine weight	Ton	22.7		

PAC460K3 Layout Drawings



PAC460K3 Platen Dimension Drawings



PAC560K3 High-speed Injection Molding Machine

DESCRIPTION	UNIT	PAC560K3		
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International specification 1610/5600

INJECTION UNIT

Shot volume	cm ³	763	896	1039
Shot weight (PS)	g	702	824	956
	oz	24.8	29.1	33.7
Screw diameter	mm	60	65	70
Injection pressure	MPa	211	180	155
Screw L:D ratio		24:1		
Max.injection speed	mm/s	490		
Screw stroke	mm	270		
Screw speed (stepless)	r/min	0-300		

CLAMPING UNIT

Clamping force	kN	5600		
Opening stroke	mm	780		
Space between bars (W×H)	mm×mm	820×770		
Max. Daylight	mm	1580		
mold thickness (Min.-Max.)	mm	350-800		
Hydraulic ejection storke	mm	160		
Ejector number		5		
Hydraulic ejection force	kN	111		

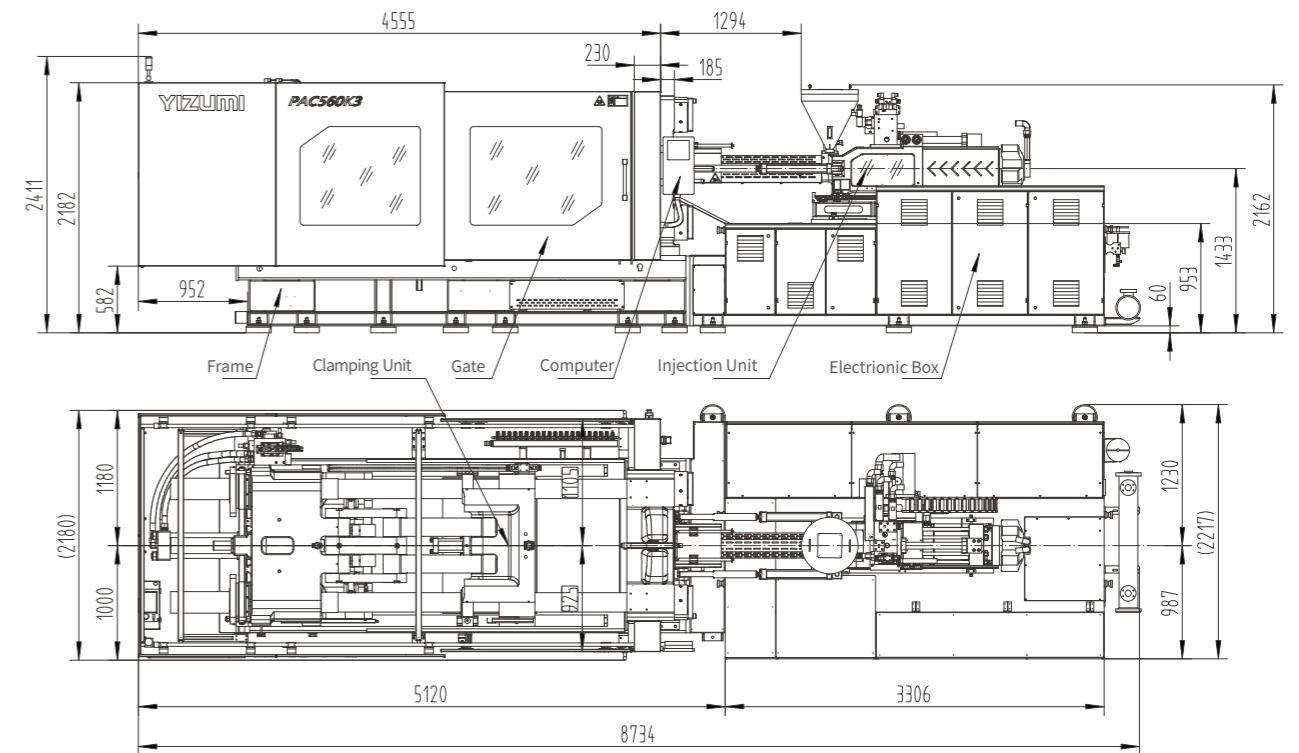
POWER UNIT

Hydraulic system pressure	Mpa	19		
Pump motor	kW	51+51+34		
Heating capacity	kW	24	26.5	30
Number of temp control zones		5		

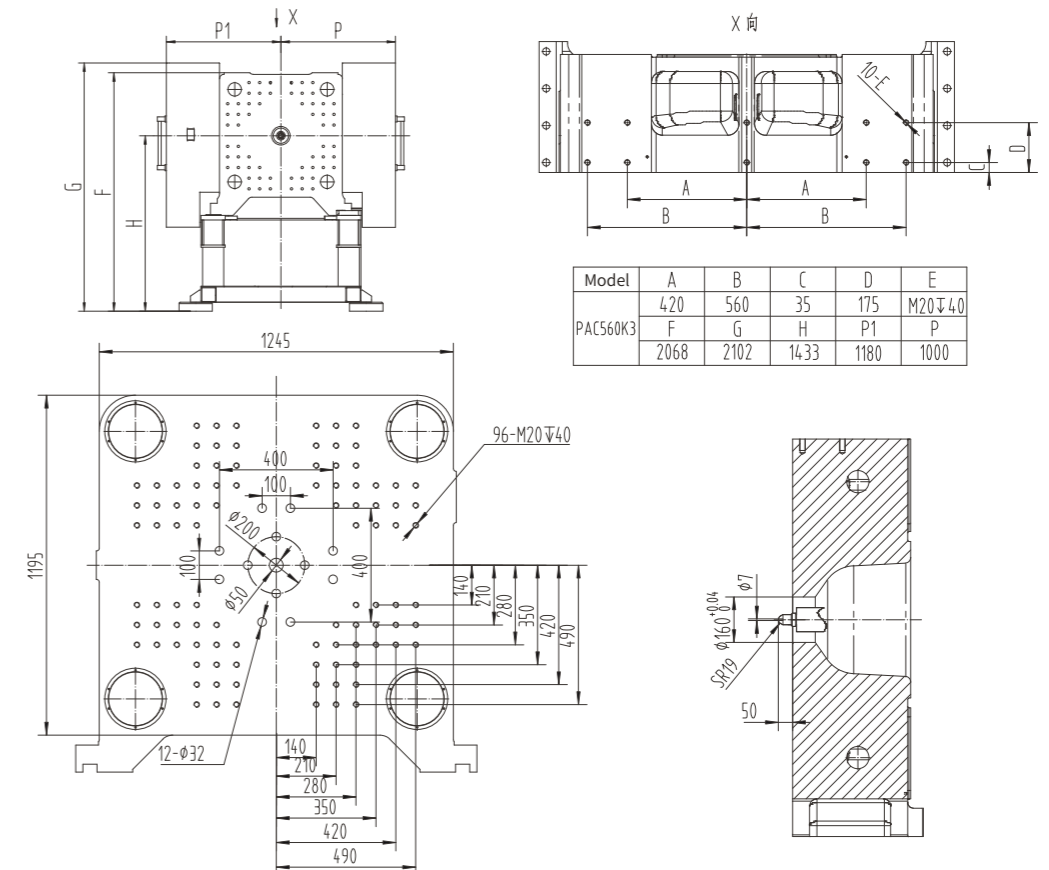
GENERAL UNIT

Dry cycle time	s	3.5		
Oil tank capacity	l	1000		
Machine dimensions (LxWxH)	mm×mm	8.8x2.2x2.5		
Machine weight	Ton	26.7		

PAC560K3 Layout Drawings



PAC560K3 Platen Dimension Drawings



Standard and Optional Features of PAC-K3

Injection Unit	Standard	Optional
Nitrided alloy-steel screw and barrel	●	
Nozzle PID temperature control	●	
Double-cylinder	●	
Automatic material cleaning function	●	
Selectable suck-back before or after plasticizing	●	
Multi-stage barrel PID temperature control	●	
Purge guard (with safety switch)	●	
Precise transducer for injection / plasticizing stroke control	●	
Multi-stage injection speed / pressure / position control	●	
Multi-stage holding pressure speed / pressure / time control	●	
Multi-stage plasticizing speed / pressure / position control	●	
Extended nozzle		○
Hard chrome plated screw component		○
Bi-metallic screw & barrel		○
Special screw set		○
Proportional back pressure control		○
Blowing device of barrel		○
Pneumatic/Hydraulic shut-off nozzle		○
Increased injection stroke		○

Hydraulic System	Standard	Optional
High-performance servo pump system	●	
Back pressure adjustment device of plasticizing	●	
High-precision by-pass oil filter	●	
Automatic system pressure and flow adjustment	●	
Imported hydraulic valve	●	
Imported hydraulic seal	●	
System pressure sensor	●	
Oil temperature detection and alarm	●	
Low-noise hydraulic system	●	
Hydraulic cooling device	●	
Hydraulic core pulling/ unscrewing device		○
Independent oil temperature control system		○
High-response servo injection system		○
High-response servo mold opening and closing system		○
Ejecting during mold opening		○
Enlarged oil cooler		○
Larger oil pump and motor		○
Accumulator injection		○
Multiple sets of core puller		○
Proportional back pressure control		○

Clamping Unit	Standard	Optional
Precise transducer for clamping / ejector stroke control	●	
Clamping platens / toggles made of highly-rigid ductile iron	●	
Two-stage ejector forward or back control	●	
Low-pressure mold protection	●	
Multiple ejector function settings	●	
Hydraulic gear-type mold height adjustment device	●	
Hydraulic/electrical safety devices	●	
Wear-resistant supporting tracks for movable platen	●	
Automatic centralized lubrication system	●	
Boost mold closing function	●	
Increased mold thickness		○
Increased ejector stroke		○
Mechanical position limit device of mold-open		○
Heat insulating plate for mold		○
Special mold mounting hole		○
Movable platen with linear guide rail		○

Electrical control System	Standard	Optional
Input/output inspection	●	
Automatic heat retaining and automatic heating setting	●	
Time / position / pressure controlled switchover from injection to holding	●	
Independent adjustment of slope	●	
Robot interface	●	
Molding data locking function	●	
Automatic clamping force adjustment	●	
LCD display screen	●	
Large memory for process parameters storage	●	
Plasticizing during mold opening Standard for PAC380 K3 and above model	●	
Multiple operating languages	●	
10 sets of independent air blowing with valve (5 sets standard for PAC350 K3 and below model)	●	
Working light/ single or multi color alarm light		○
Single-phase / three-phase power socket		○
Air blow device		○
Electrical unscrewing unit		○
Special power supply voltage		○
Interface for electric unscrewing device		○
Hot runner interface		○
Machine overall energy consumption display		○
Electric plasticizing device		○
Infrared / ceramic heater band		○

Other	Standard	Optional
Operation manual	●	
Adjustable leveling pad	●	
A tool kit	●	
Filter element	●	
Standard hopper	●	
Mold temperature controller		○
Auto loader		○
Dehumidifier		○
Glass-tube water flowmeter		○
Dryer		○

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