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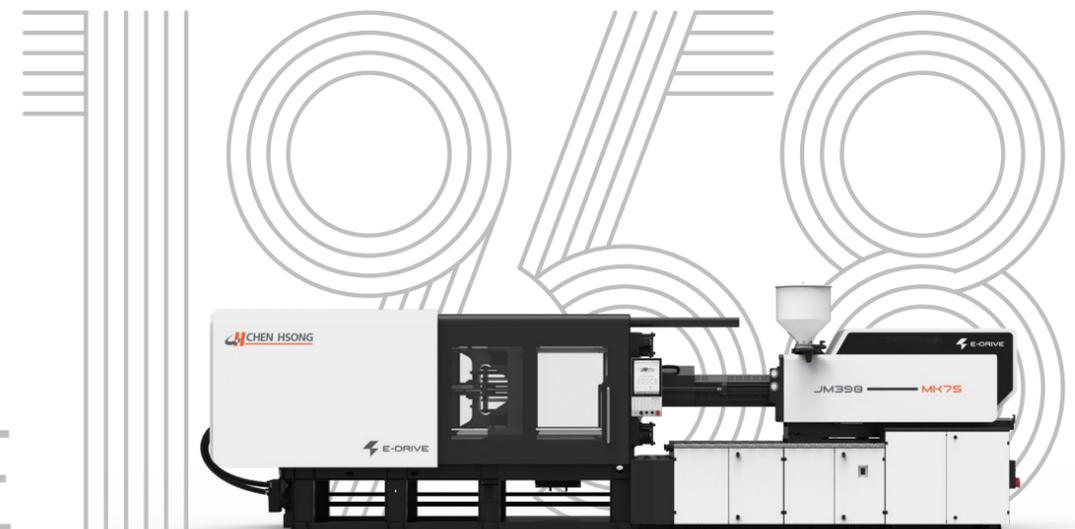
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# MK7S

*Precision Injection Molding with eDrive™*

88-688T

SINCE



# CHEN HSONG

"Your vision is our mission." — this is the founding principle and unwavering commitment of Chen Hsong.

Founded in 1958 and listed on the Hong Kong Stock Exchange (00057.hk) in 1991, Chen Hsong has evolved over nearly 70 years from an injection molding machine manufacturer to a comprehensive provider of injection molding solutions.

## A Global Leader in Injection Molding

Chen Hsong is one of the world's largest manufacturers of injection molding machines. With headquarters in Hong Kong and major manufacturing and R&D facilities throughout Mainland China and Taiwan, Chen Hsong operates nearly 900,000 square meters of factory space with an annual production capacity exceeding 20,000 machines. Our global presence extends to subsidiaries in Mexico, Brazil, Germany, the Netherlands, Turkey, Vietnam, India, Indonesia, and Dubai, with sales channels and support infrastructure spanning 85 countries worldwide.

## Fully Vertically-Integrated Production

Chen Hsong's vertically integrated manufacturing process sets us apart. From ductile iron casting to components machining to final assembly and testing, we maintain complete control over quality, ensuring superior performance and cost-effectiveness. Our in-house design and manufacturing of key components, including castings, tie-bars, flexible special-purpose screws and advanced computer controllers, further enhances our ability to deliver tailored solutions.

## The Right Machine for Any Job

Chen Hsong provides a comprehensive range of injection molding machines tailored to diverse applications and materials. Whether you need two-platen or toggle-driven, hydraulic to fully electric, or advanced multi-material solutions for automotive, electronics, medical, or other industries, we have the perfect machine for you. We also offer specialised machines for specific applications such as food containers with IML, produce crates, pales, pallets, and toys as well as for resins including PET and UPVC.

## Complete Smart Manufacturing Solutions for the Injection Molding Industry

Chen Hsong offers a complete range of smart manufacturing solutions to help you transform your operations. From advanced injection molding machines to intelligent factory solutions powered by our iChen Smart Family and iChen Cloud platform, we provide cost-effective and easily implemented upgrades for traditional manufacturers. This includes our iChen System™, first launched in 2003, which has been continuously updated to provide a comprehensive smart manufacturing transformation pathway.

## Investing into Our Future: The Chiang Chen Industrial Charity Foundation

In 1990, Dr. Chiang Chen, the founder of Chen Hsong, set a precedent for philanthropy in Hong Kong, donating his entire stake in Chen Hsong (valued at approximately HK\$800 million at the time) to establish the Chiang Chen Industrial Charity Foundation. To date, the foundation has donated over HK\$500 million, fostering industrial development and cultivating over 100,000 engineers and managers through partnerships with over 30 prestigious universities globally. When you choose Chen Hsong, you support this remarkable legacy of giving back.



Headquarters in Hong Kong



Shenzhen Industrial Park Factory — 560000m<sup>2</sup>



Taiwan Taoyuan Factory — 30000m<sup>2</sup>



Foshan Shunde - Two Factories — 15000m<sup>2</sup>



Zhejiang Ningbo Factory — 70000m<sup>2</sup>



Shanwei Luhe Factory — 62360m<sup>2</sup>

# Over 1 million+ Chen Hsong machines are in operation worldwide.

They all use Chen Hsong.



This is just a small part of it

# MK7S

## Precision Injection Molding with eDrive™

Four Leading Advantages

01

**Energy-Saving**

02

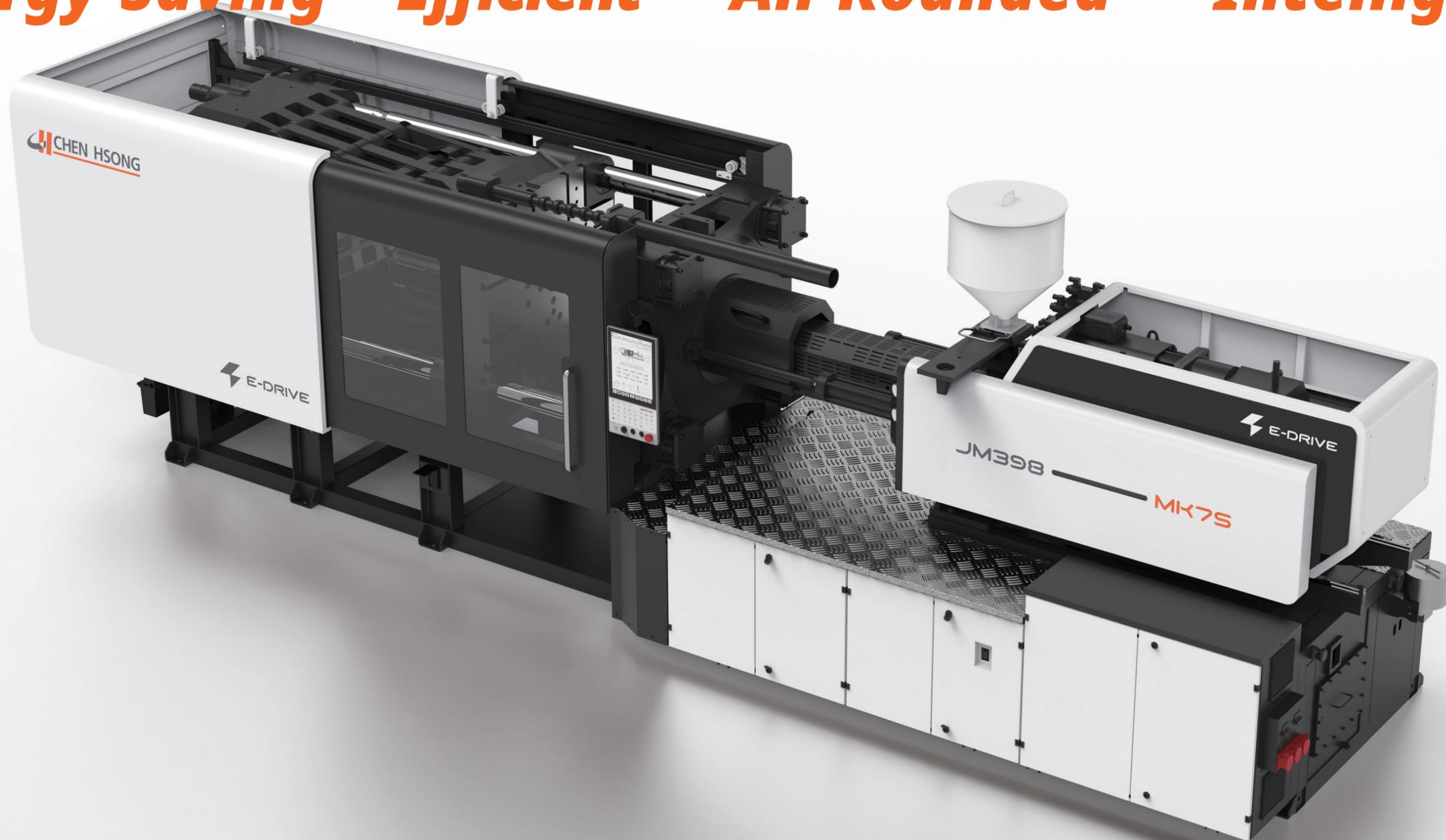
**Efficient**

03

**All-Rounded**

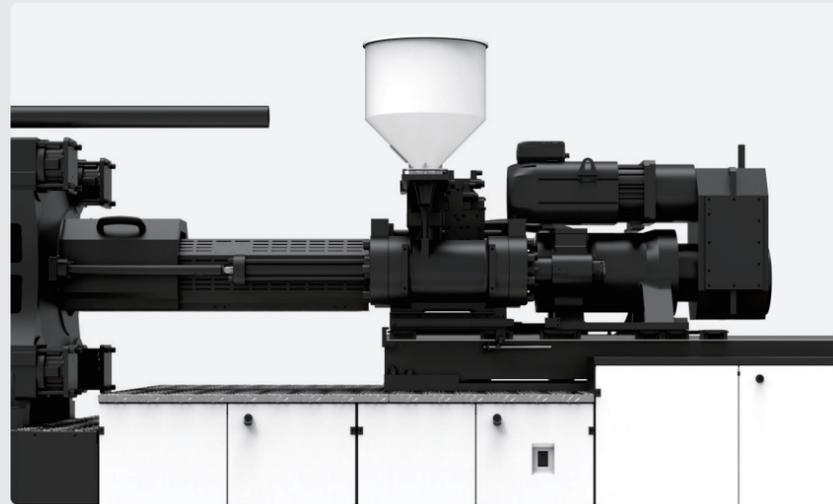
04

**Intelligent**



# 01

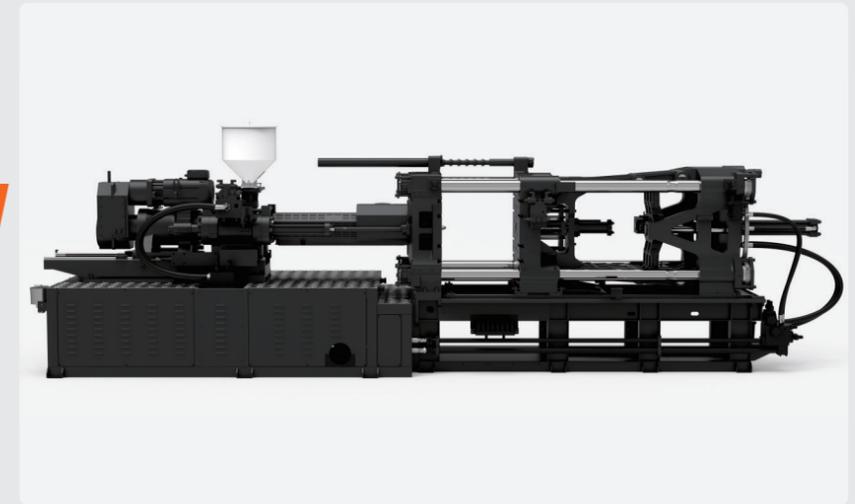
**Energy-Saving**



Plasticising/recovery via electric drive – eDrive™  
– Reduced power consumption by **10–25%**.

# 03

**All-Rounded**



**Easily Handle Difficult Molding Challenges**

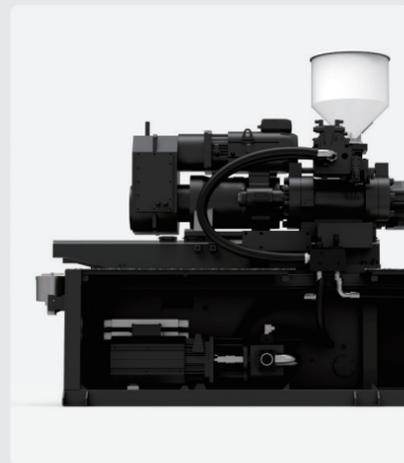
01 **12%–25%** higher injection speed with higher injection pressure  
02 Reduces dry cycle time by **10%–22%** for higher production efficiency

**Wide Adaptability**

01 Longer opening stroke and larger tie-bar distances  
02 Complete configurability

# 02

**Efficient**



Dual-drive power pack enables simultaneous movements for shortened cycle times and increased production efficiency, especially when paired with valve gates and/or a shut-off nozzle.



Screw rotation speed increases by **10%–40%**, bolstering recovery rate and production efficiency.

# 04

**Smart**

**The MK7S series comes standard with an advanced, intelligent computer controller.**

The controller, with a 15" touch-screen, seamlessly integrates the three essential aspects of injection molding — clamping, plasticising, and injection. It enables intelligence-controlled and monitored movements, smart recovery, and smart lubrication, empowering enterprises with efficient and intelligent production at their fingertips.

- Smart Clamp Open/Close
- Smart Clamping Force Adjustment
- Smart Plasticising/Recovery
- Smart Energy Management



# Clamping Unit

## Advanced Toggle Design with Enhanced Stability

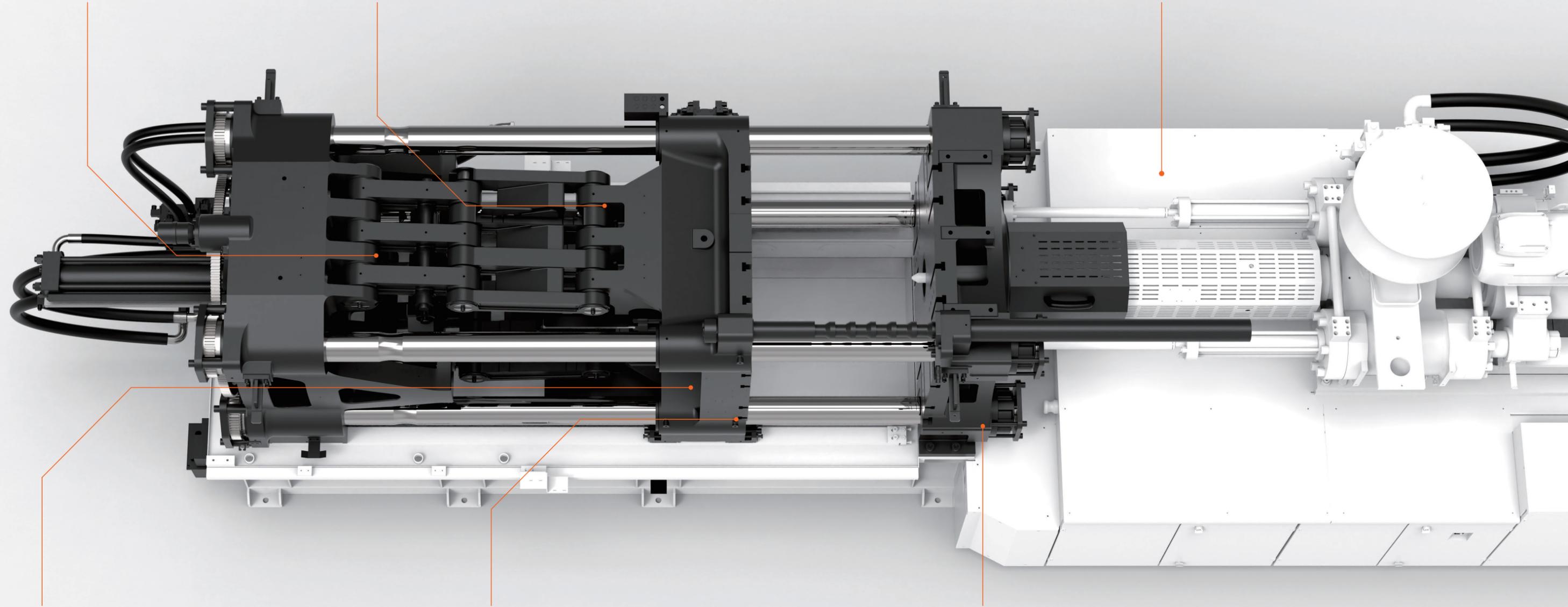
Speed + Precision: Perfect Union of Toggle Geometry and Hydraulics Control

## High-Efficiency Lubrication

Low-friction alloys combined with the SmartPlus lubrication control system provide excellent lubrication and enhanced durability of moving components.

## Strengthened Machine Base

Improved structural stability, reduced deformation and enhanced torsion resistance via thicker and stronger I-beams making up the machine base, plus an optimised design created through exhaustive computer stress simulations of most load conditions.



## Large Spaces

Larger tie bar distances, longer opening stroke and increased mold capacity to handle a much wider range of molds and applications.

## T-Slots with Mounting Holes

40% faster mold changing time.

## Patented Circular Platen Design

Proprietary Circular Platen design (patented) is a technological marvel perfected from years of details structural analysis, ensuring smooth stress distribution throughout the platen for maximum part quality and mold protection.

# Injection Unit

## High-Powered Heater Bands

High-powered heater bands with excellent thermal efficiency enable rapid faster plasticising/recovery speed.  
Precision PID temperature control:

**±0.5°C**

## Advanced Barrel Insulation

An aerogel layer in the barrel protective cover provides superior insulation, reduced heat dissipation and 28% lower power consumption.

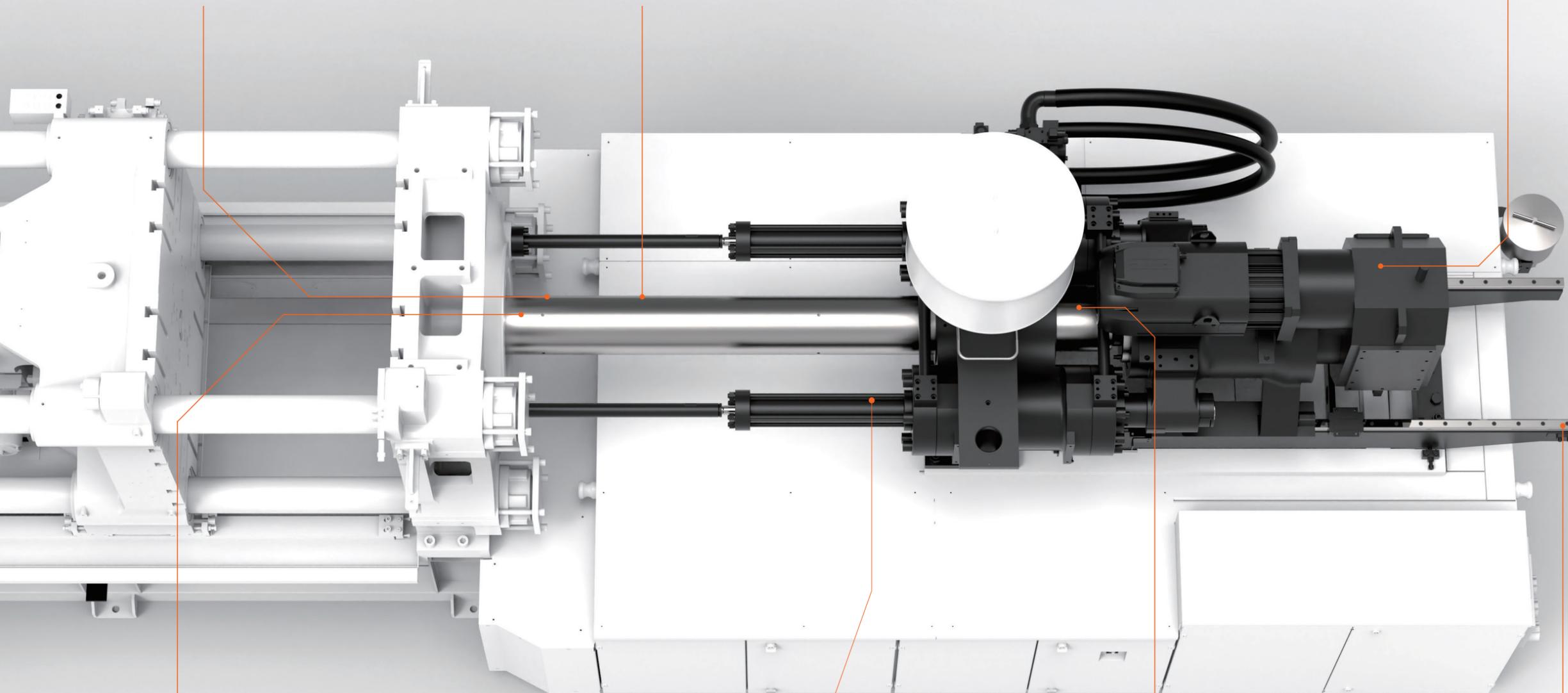
**28%**

## eDrive™

Plasticising via an electric motor reduces power consumption up to 30% and increases recovery speed by up to another 30% when compared to pure hydraulic systems.

## Recovery-on-Fly

When paired with valve gates or a shut-off nozzle, simultaneous plasticising/recovery further reduces cycle time in many applications.



## Chrome-Plated Nozzle and Flange

Smooth, corrosion-resistant and non-stick surfaces greatly improve melt quality.

## Balanced Dual Injection Cylinders

Facilitates nozzle alignment and effectively prevents leakages for smoother and more stable injection movements.

## Bimetallic Screw and Barrel

Advanced screw design plus bimetallic screw and barrel offer exceptional wear resistance, superior melt quality, high recovery efficiency and broad resin compatibility.

## High Precision Linear Guide Rails

Significantly lower friction during high-speed injection movements, ensuring silky-smooth operation and high precision at high speed.

# Control

## 15" Intelligent Touchscreen Computer Controller

All Models Come with "Smart" System  
Intelligent and Easy Operations

### Full-Cycle Monitoring

Real-time data tracking across the entire cycle, including injection, holding, plasticising/recovery, clamp opening/closing, and ejection.

### Ultra-Fast Responses

High-performance advanced CPU delivers ample computing power for ultra-fast execution and precision control.

### Multi-Protocol Interfaces

Support for RS232/485, CANBus, Ethernet (100Mbps), USB and other common industrial data interfaces, enabling easy and fast network communications.



### Smart Clamp Open/Close

Automatically adjusts deceleration profile based on mold weight to ensure smooth and precise positional control. Simplifies setup and reduces complexity in machine tuning.



### Smart Clamping Force Adjustment

Clamping force adjustment is completed with a single click. This enhances yield while reducing dependency on operator expertise.



### Smart Plasticising/Recovery

Powered by an intelligent algorithm, the control system dynamically adjusts screw rotational speed based on the status of the melt. In addition to guaranteeing a perfect melt every time, this also ensures optimal energy efficiency, reduces mechanical wear, and extends usage life.

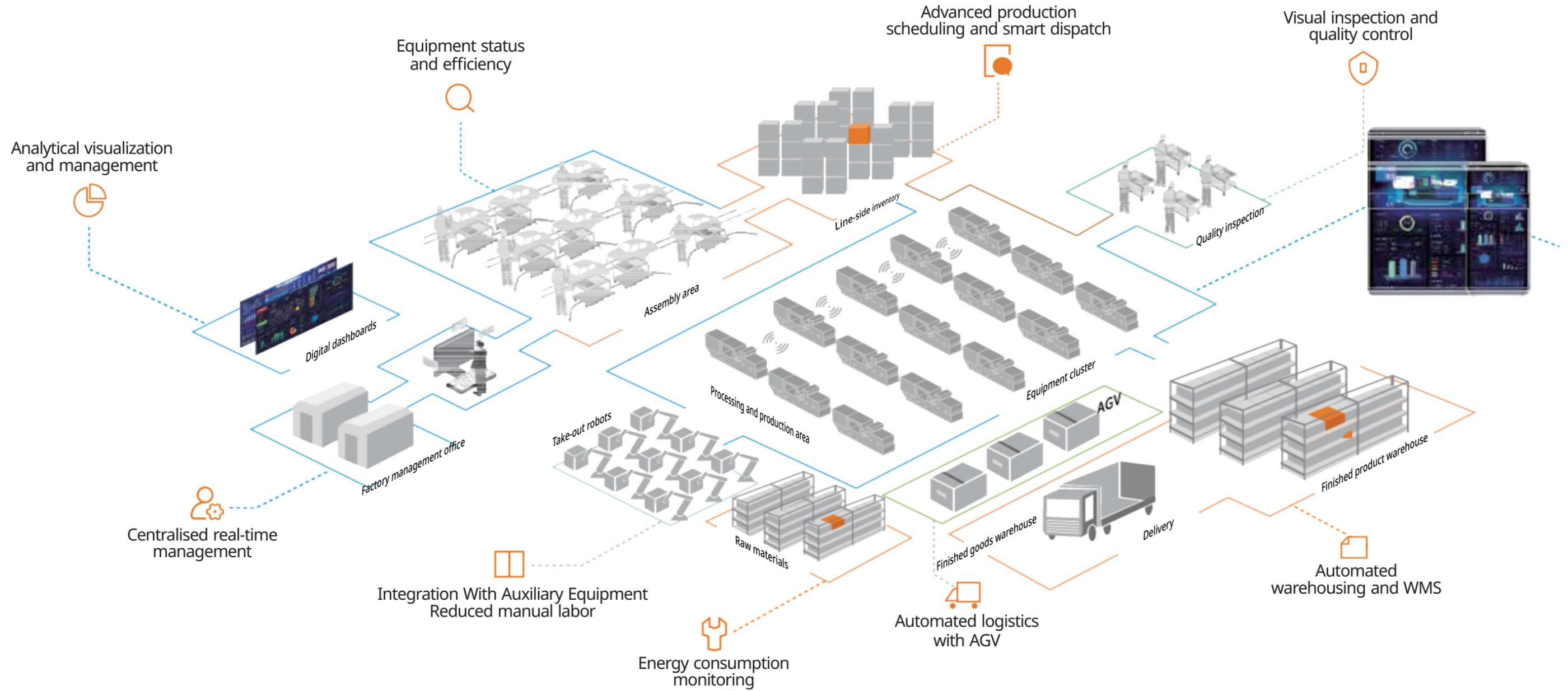


### Smart Energy Management

Precise energy consumption monitoring provides detailed analysis of energy consumption throughout the production process. This enables efficient energy utilization, reduces operating costs, and supports sustainable manufacturing.

# MK7S x Chen Hsong Smart Factory Solutions

Digitalized Management of the Entire Production Process



# Applications

 Automotive		
 Home Appliance		
 3C Electronics		
 Medical		
 Household Goods		

# MK7S Features

## Standard

Clamping Unit			
Automatic Toggle Lubrication	T-Slots + Mounting Holes	Ejector Rod Reverse Structure	
High-Tensile Chrome-Plated Tie Bars	Hydraulic core pulls	Automatic Mold Thickness and Clamping Force Adjustment	
Adjustable Ejector Stroke	Mold Positioning Ring	Dual International Safety Protection Functions	Differential boost for high-speed clamping
Injection Unit			
Bimetallic Screw and Barrel	PID Temperature Control	Screw RPM Display	Servo-Motor Plasticising/Recovery (eDrive)
Digital Back Pressure Control	Cold Start Prevention	Blocked Nozzle and Overflow Detection	
Linear Guide Rails on Injection Unit	Nozzle Alignment Micro-Adjustment	Aerogel Insulation System	Broken Thermocouple Detection with Alarm
Hydraulic Unit			
Low-Noise Internal Gear Pump	High-Efficiency Oil Cooler	Hydraulic Oil Temperature Control	Suction and By-Pass Filters
Servo Flow and Pressure Control			
Control Unit			
15" Touchscreen Panel	Tri-Color Status Indicator	Robot Interface	Low-Pressure Mold Protection
Electrical Safety Protection			

## Optional

Clamping Unit			
Additional Core Pulls	Additional Air Blows	Core-Pull-on-Fly/Ejection-on-Fly	Enlarged Ejection Force
Increased mold thickness	Insulation board for mold	Toggle Mechanism Grease Lubrication	
Injection Unit			
Reduced/Enlarged Injection Unit	Infrared Heater Bands	Movable Hopper	PC or PMMA Special Screw and Barrel Set
Hopper	Barrel Cooling Water with Electromagnetic Valve Control	Shut-Off Nozzle	Ceramic Heater Bands
Hydraulic Unit			
Hydraulic Oil Level Indicator with Alarm	Unscrew	Enlarged Oil Cooler	Enlarged Power Pack
Hydraulic Oil Preheat	High-Stability Hydraulics Control		
Control Unit			
EU12/EU67 Robot Interface with Connectors	Multiple Power Sockets	Hot Runners Temperature Control	Digital Electric Meter
Controller Networking Capability			

\*All technical parameters are for reference only and may vary under different conditions. The company reserves the right to modify product specifications and parameters without notice. Final interpretation of this specification sheet belongs solely to the company.

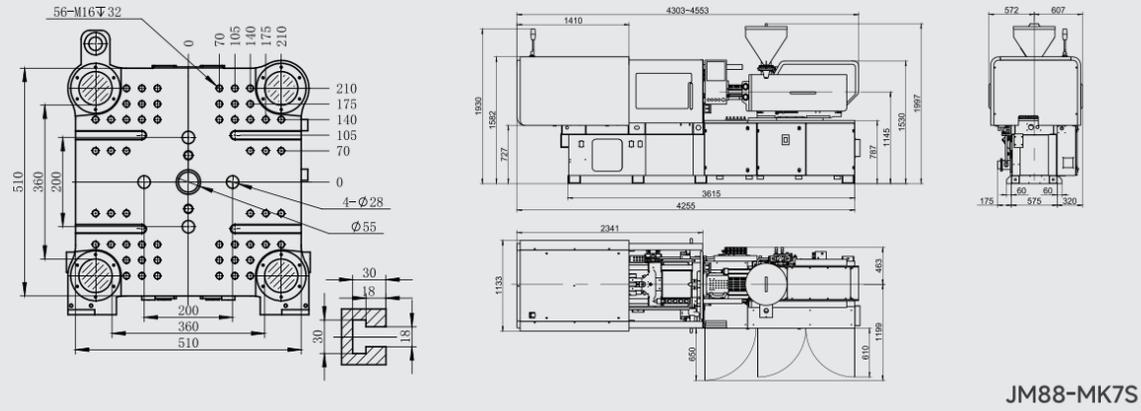
# MK7 Specifications

		JM88-MK7S			JM128-MK7S			JM168-MK7S			JM208-MK7S			JM258-MK7S			JM288-MK7S			JM328-MK7S			JM358-MK7S			JM398-MK7S			JM468-MK7S			JM568-MK7S			JM668-MK7S					
<b>Injection Unit</b>																																								
Screw Diameter	mm	31	36	41	36	41	46	41	46	52	46	52	60	46	52	60	52	60	67	60	67	75	60	67	75	67	75	83	75	83	90	75	83	90	83	90	98			
Screw L/D Ratio	/	24.4	21	18.4	23.9	21	18.7	23.6	21	18.6	23.7	21	18.2	23.7	21	18.2	24.2	21	18.8	23.5	21	18.8	23.5	21	18.8	23.5	21	19	23.2	21	19.4	23.2	21	19.4	23.9	22	20.2			
Calculated Injection Capacity	cm <sup>3</sup>	135	183	237	208	270	340	303	382	488	431	551	734	431	551	734	636	847	1057	946	1180	1479	946	1180	1479	1321	1655	2027	1832	2244	2638	1832	2244	2638	2433	2861	3392			
Shot Weight (PS)	g	123	166	216	189	246	309	276	347	444	393	502	668	393	502	668	579	771	962	861	1074	1346	861	1074	1346	1202	1506	1845	1667	2042	2401	1667	2042	2401	2214	2603	3087			
	oZ	4.4	5.9	7.6	6.7	8.7	10.9	9.7	12.3	15.7	13.9	17.7	23.6	13.9	17.7	23.6	20.4	27.2	33.9	30.4	37.9	47.5	30.4	37.9	47.5	42.4	53.2	65.1	58.8	72	84.7	58.8	72	84.7	78.1	91.8	108.9			
Injection Pressure (Max.)	Mpa	250	185	143	243	187	149	236	187	146	242	189	142	242	189	142	250	187	150	239	191	153	239	191	153	235	188	153	228	186	159	228	186	159	223	190	160			
Injection Rate	g/s	85	114	149	109	142	178	141	177	227	173	221	294	173	221	294	222	295	368	290	362	453	290	361	453	353	442	542	480	588	691	480	588	691	502	590	700			
Injection Speed	mm/s	124			118			117			114			114			115			112			112			110			119			119			102					
Injection Stroke	mm	180			205			230			260			260			300			335			335			375			415			415			450					
Screw RPM (Max.)	rpm	350			320			300			270			270			270			250			250			220			220			220			200					
Nozzle Contact Force (Max.)	kN	44			44			44			44			44			44			91			91			91			91			91			91			91		
Nozzle Stroke	mm	250			250			250			280			330			330			360			360			420			420			420			460					
<b>Clamping Unit</b>																																								
Clamping Force (Max.)	kN	880			1280			1680			2080			2580			2880			3280			3580			3980			4680			5680			6680					
Opening Stroke	mm	330			370			420			490			530			590			600			640			700			780			845			920					
Space Between Tie Bars (H*V)	mm	360×360			410×410			460×460			530×530			580×580			610×570			660×660			710×670			760×710			810×810			855×855			910×900					
Mould Thickness (Min-Max)	mm	130-390			145-450			160-520			180-550			195-610			195-630			220-680			220-710			250-730			275-810			330-880			350-900					
Max. Daylight	mm	710			820			940			1040			1140			1220			1320			1350			1430			1580			1685			1820					
Ejector Force	kN	28			42			42			67			77			77			77			77			111			111			166			182					
Ejector Stroke	mm	100			120			140			150			170			170			170			170			170			220			220			250			265		
Locating Ring Diameter	mm	100			100			125			125			125			125			125			125			125			160			160			160			200		
<b>Others</b>																																								
System Pressure	Mpa	17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5		
Rated Motor Power	kW	19			19			27			31			31			39			51			51			63			78			78			78					
Barrel Heating Power	kW	6.8			10.5			12.9			16.1			16.1			19.6			25.6			25.6			31.2			37			37			44					
Temperature Control Zone	Zone	3+1			3+1			3+1			3+1			3+1			4+1			4+1			4+1			4+1			5+1			5+1			5+1			6+1		
Machine Dimensions (L*W*H)	m	4.6*1.2*1.9			4.9*1.3*2.0			5.5*1.4*2.0			6.1*1.5*2.1			6.7*1.6*2.3			6.7*1.6*2.3			7.5*1.7*2.4			7.5*1.7*2.4			8.1*1.8*2.3			8.8*1.9*2.4			9.1*2.0*2.4			9.9*2.2*2.5					
Oil Tank Capacity	L	130			170			200			240			300			300			390			390			480			600			600			600					

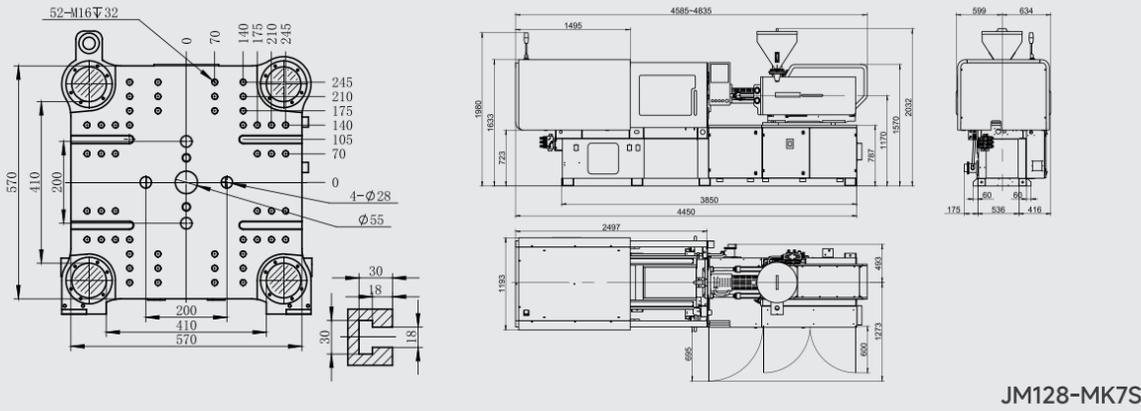
Note: Density of PS = 0.91 g/cm<sup>3</sup>.

\*The technical parameters above are for reference only and discrepancies may arise in different circumstances. The company keeps upgrading the products and reserves the right to change the product specifications and parameters without notice. The final interpretation to the above specifications and parameters belongs to the company.

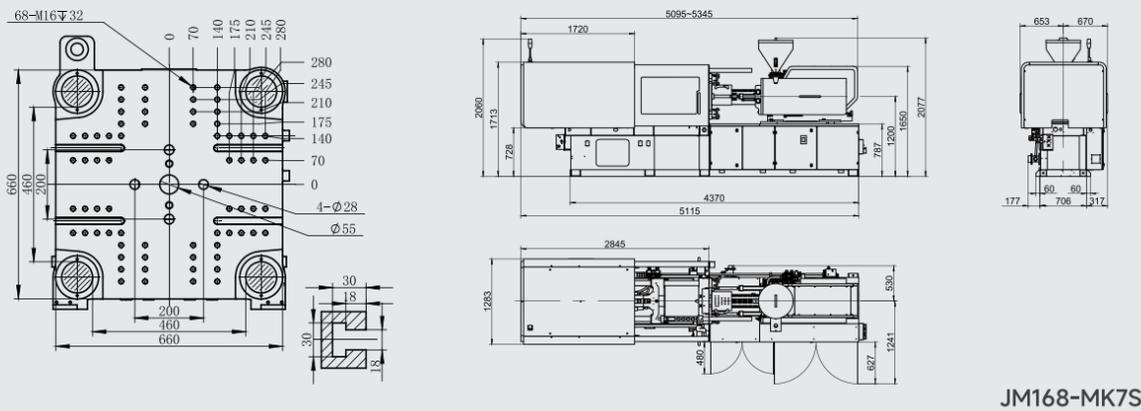
## 88-168T Mold Platen and Machine Dimensions



JM88-MK7S

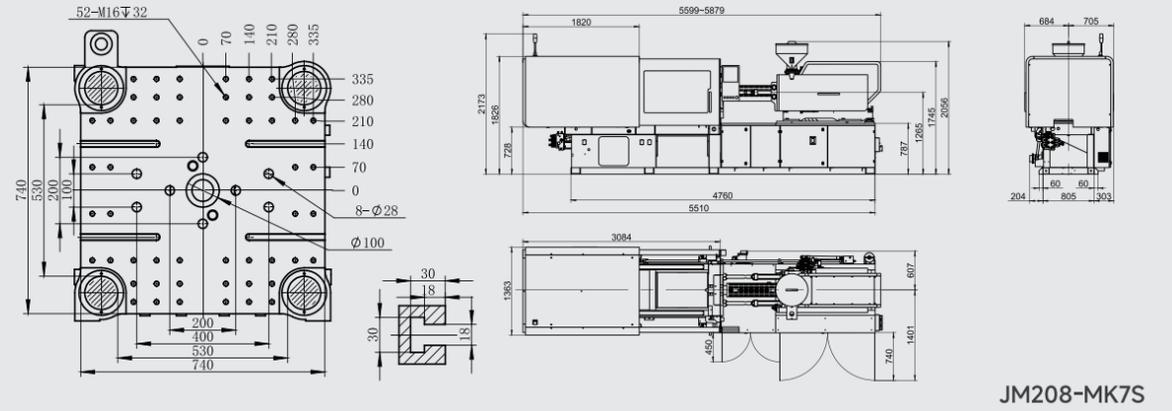


JM128-MK7S

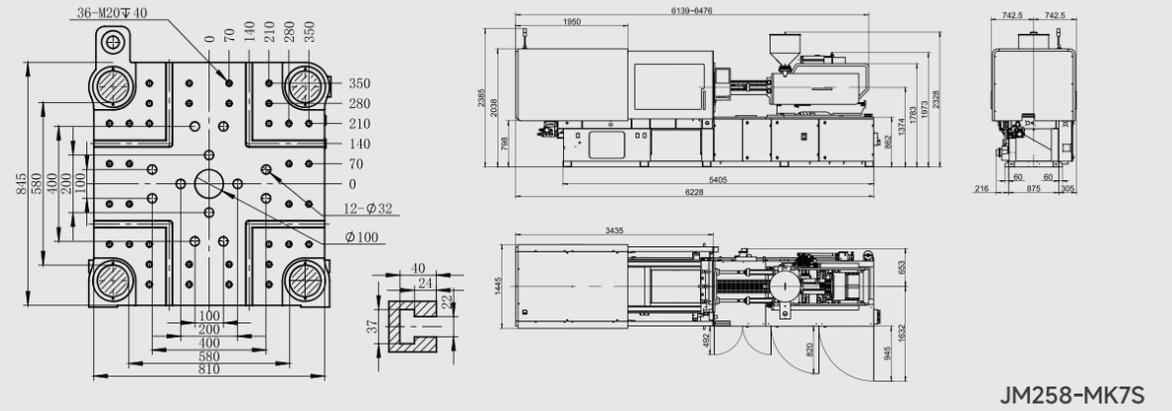


JM168-MK7S

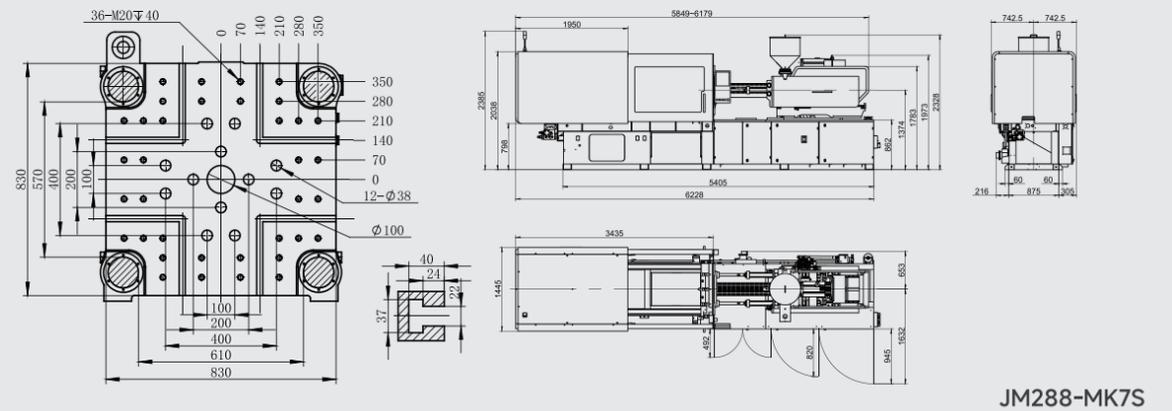
## 208-288T Mold Platen and Machine Dimensions



JM208-MK7S

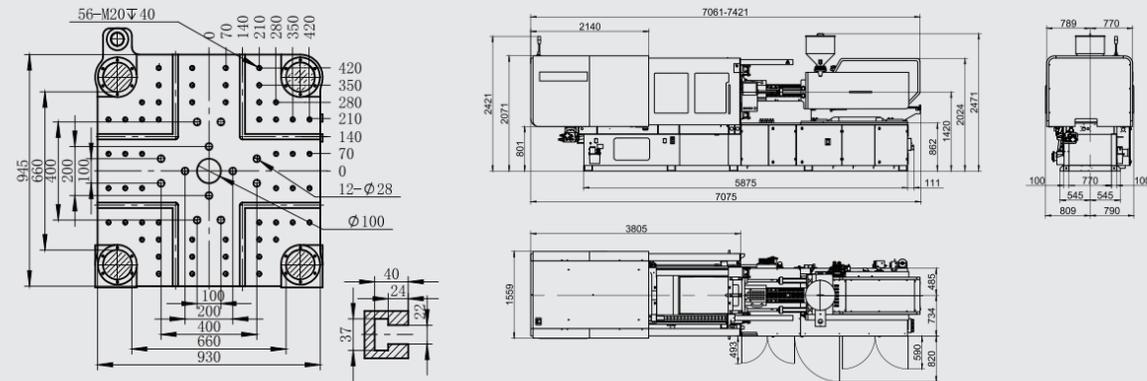


JM258-MK7S

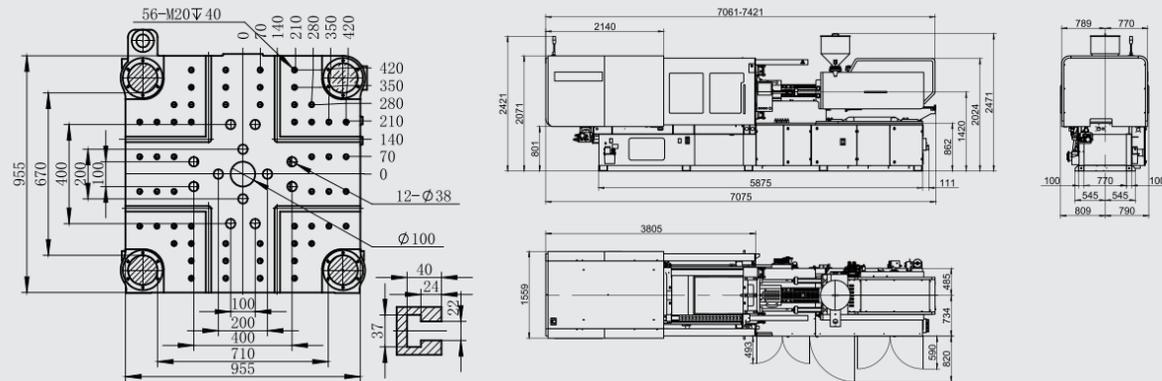


JM288-MK7S

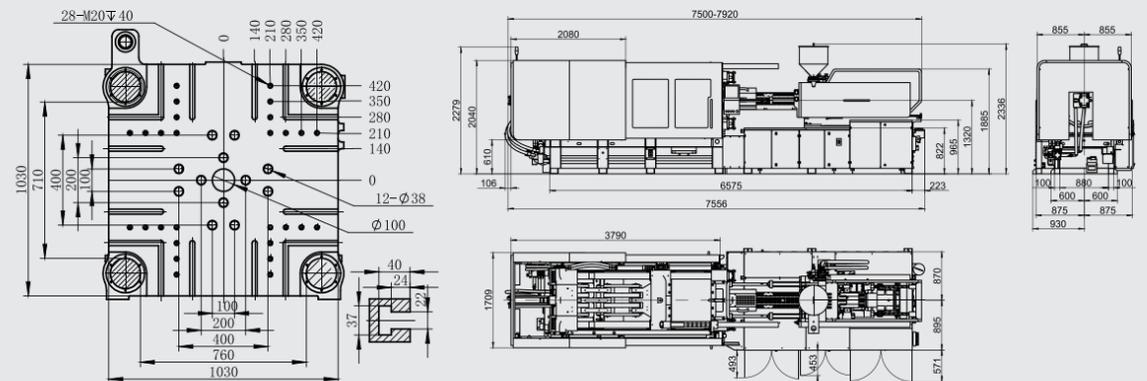
## 328-398T Mold Platen and Machine Dimensions



JM328-MK7S

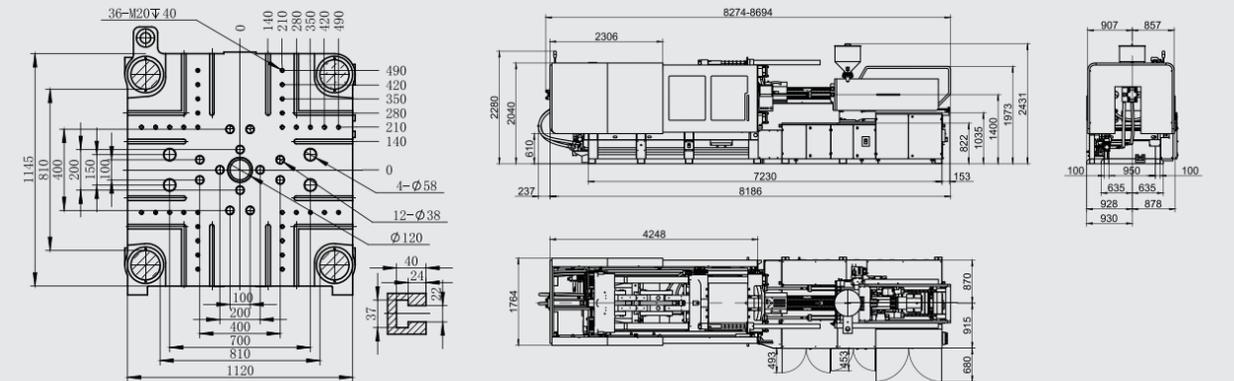


JM358-MK7S

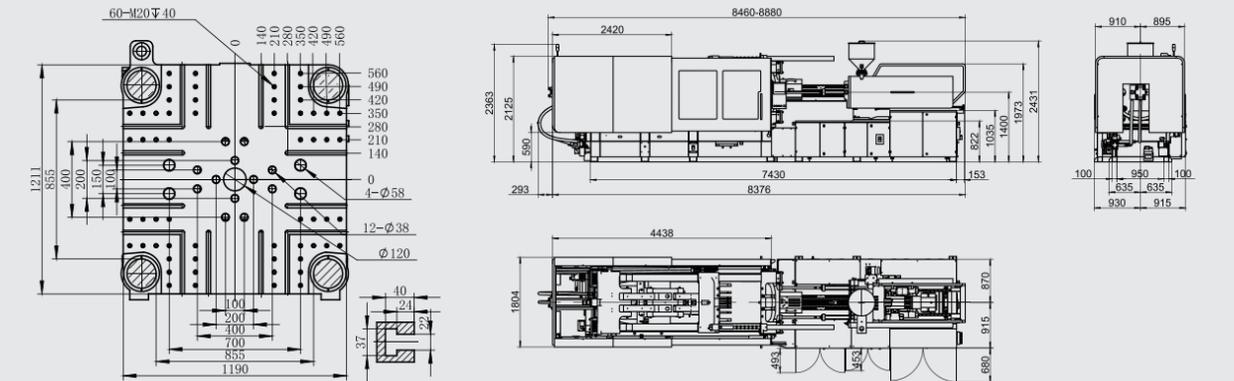


JM398-MK7S

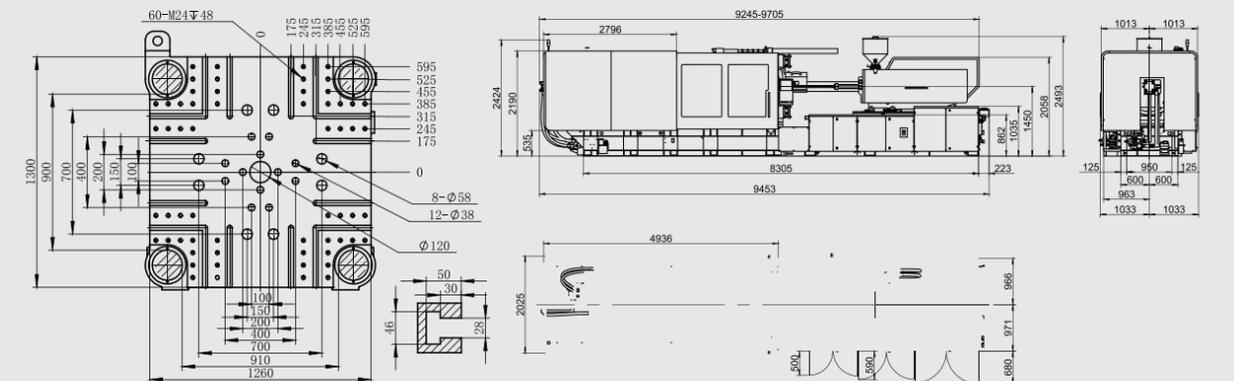
## 468-688T Mold Platen and Machine Dimensions



JM468-MK7S



JM568-MK7S



JM668-MK7S