CHEN HSONG

Chen Hsong

Unit 2001, 20th Floor, Citicorp Centre, 18 Whitfield Road, Hong Kong

marketing@chenhsong.com

+ 852-2665-3222

www.chenhsong.com

202305

CHEN HSONG

MK6plus

88-668 Ton

www.chenhsong.com

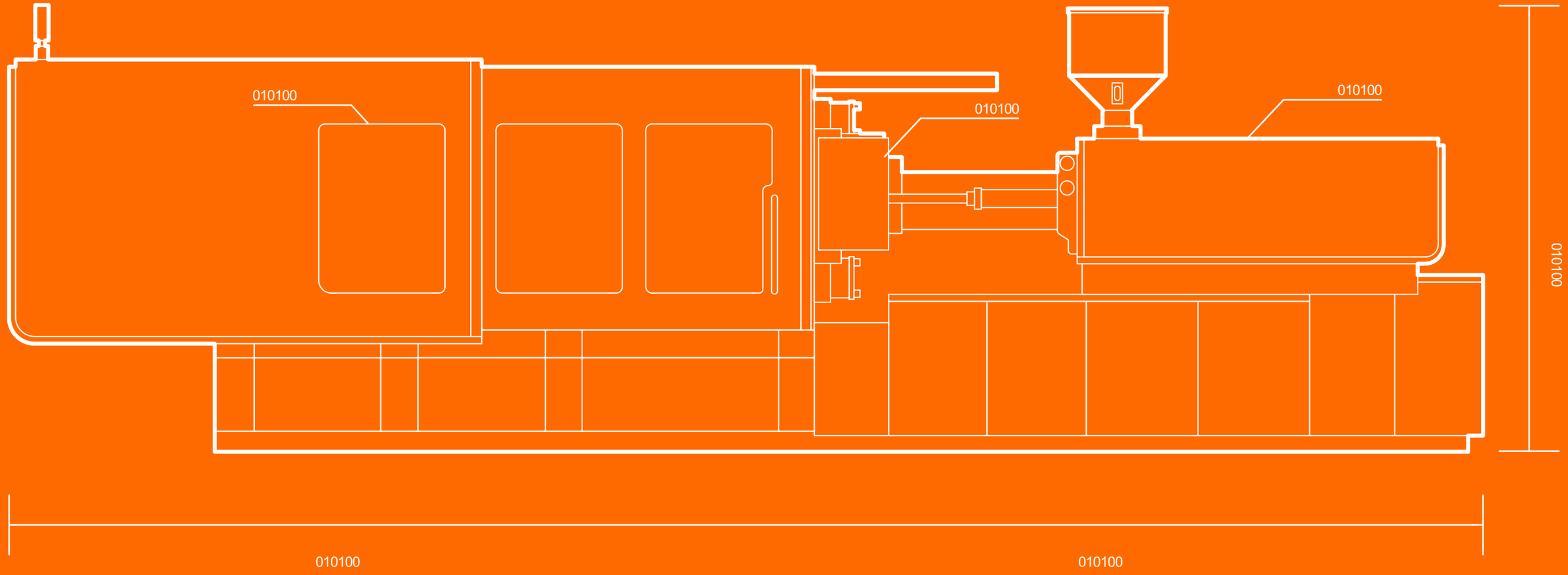
MK6 plus (the Power-User model)
Power Plus, Specifications Plus

The MK6 plus is an upgrade to the world-renowned MK6 series, which was originally created by Chen Hsong and Japanese engineers through combining half a century of applications experience with top-of-the-line advanced technology and controls expertise. It seeks to satisfy the most demanding power user in you.

The MK6 plus starts from the solid base of the ultra-popular MK6, which was world renowned for rock-solid stability, high yields, and high efficiency, but upgrades it to larger specifications for those who hunger for more power. It is the “Power-User Model” of the MK6 family.

King of the Road

Redefining Professionalism,
Performance and Value for The Plastics Industry



Chen Hsong Core Competences

Half a Century of Applications Expertise, Working for You

65 years of focusing on nothing but injection moulding technology – professionalism and technical capabilities you can trust.

In Pursuit of 100% Complete Satisfaction

Your need is our Command. Customers' choice in 100+ countries

Partnership of The Titans

In 2011, Chen Hsong joined forces with Mitsubishi (Japan) to form a worldwide strategic partnership covering the full range of technical and manufacturing cooperation. Shioda-sensei, ex-Chief Engineer of Mitsubishi, joined as technical consultant, up-lifting a complete overhaul of Chen Hsong's technical capabilities, including advanced hydraulics, mechanical design and motion control.

65
Years of Excellence
Since 1958

20,000
Sets / year
One of the largest manufacturers of injection moulding machines in the world

200+
Patented technologies

Operates
800,000 m²
of production facilities
With global presence

MK6 plus: King of the Road

All that you get from the original MK6 plus more

Yield Plus

The task may be demanding, delivery unforgiving, but the MK6 plus has you covered. Its ample power and generous specifications make any moulding task simple.

Stability Plus

Only the best machining equipment (e.g. Japanese FMS's and CNC's) is good enough to produce core components for the MK6 plus, which all but guarantees reliability and stability for long years of operation.

Productivity Plus

Productivity is never an after-thought. You need the MK6 plus power and specifications to stay ahead. And they keep you ahead.

Ergonomics Plus

Modern design emphasising ease-of-use and productivity

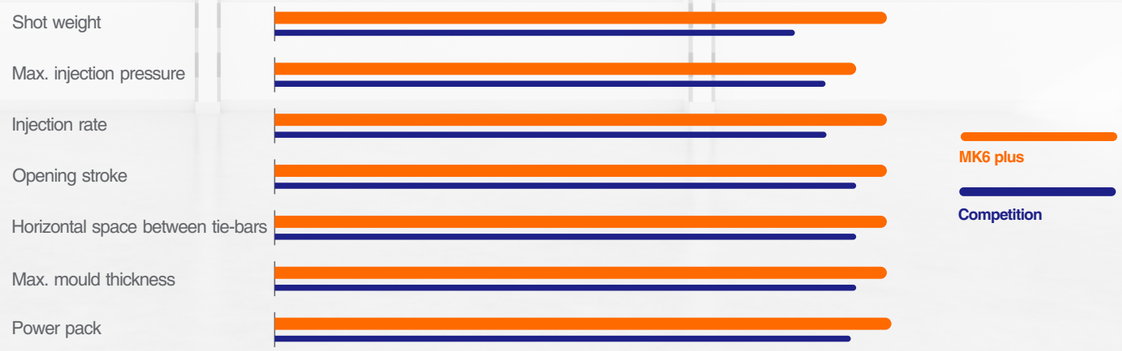
Beauty is both internal and external

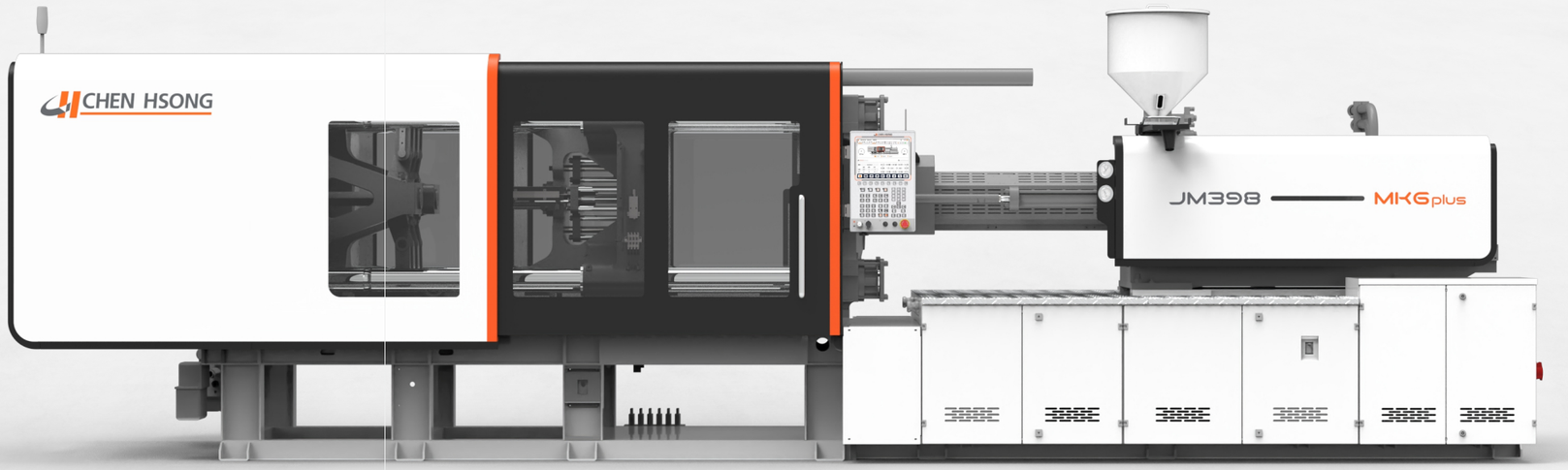
Professional ergonomics
User-friendly and easy to operate

Optimised structural design
High-strength construction with rock-solid stability

Masterpiece of industrial design
High precision with exceptional efficiency

Specifications that Leave Competition to The Dust





Upgraded Power Pack

Absolute power smashes through any difficult task you have

Wider applicability

Faster injection speed makes production of large, flat, thin-walled parts simple.

Higher productivity

Shorter cycle time means lower production costs.

Enhanced efficiency

Efficiency is the result of optimised components working together in perfect harmony.

Configuration Plus

Larger mould thickness

For ultra-thick moulds

Larger space between tie-bars

For larger moulds

Longer opening stroke

For deep-cavity moulds

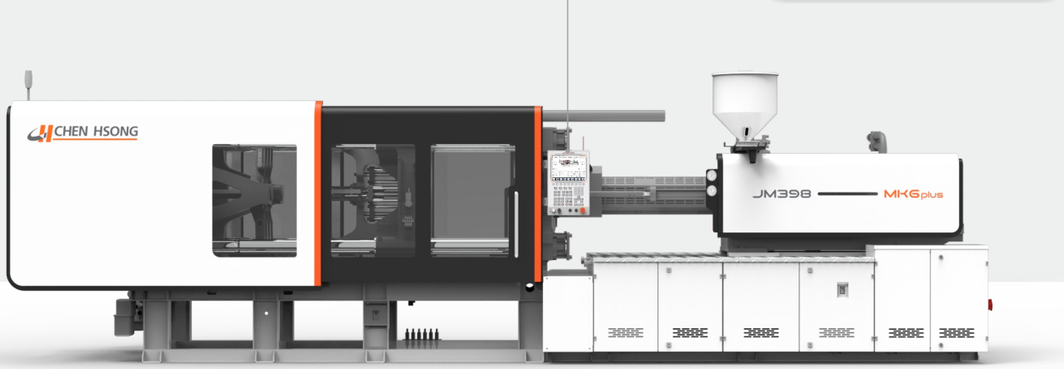
12” Next-gen Intelligent Computer Controller

Advanced high-speed CPU enables lightning-fast closed-loop calculations for faster responses and higher precision.

High-speed advanced CPU provides ample computing power for closed-loop calculations, leading to lightning-speed responses, ultra-high precision and repeatability.

Mainstream Linux-based O/S with modern GUI.

CPU HMI：1.0GHz PLC：168MHz



The Largest Features Set

All the professional features you'd ever need for demanding applications.

❶ USB socket	❷ Ethernet socket	❸ Smart clamp motion control	❹ Closed-loop injection/ejection
❺ Stored mould recipes	❻ Production log	❼ Upgrade system via USB	❽ Settings change audit log
❾ Standardised data interchange format		❿ Rapid-setting page	⓫ Comprehensive quality monitoring
⓬ Built-in digital oscilloscope to monitor any data point value		⓭ SPC data logs	⓮ One-touch access to pages
⓯ Remap I/O	⓰ Screenshot at any time	⓱ Interface with auxiliaries	⓲ Freely programmable movements
⓳ MES interface	⓴ User control		

The most intelligent

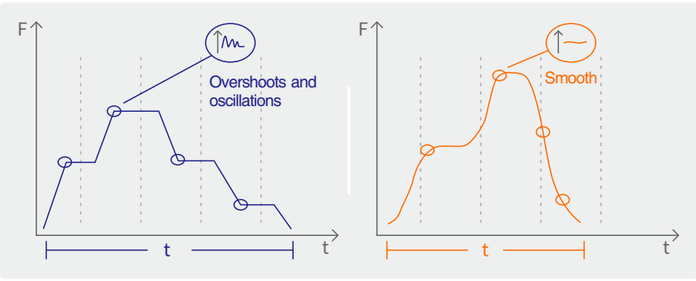
With Chen Hsong's proprietary advanced Japanese motion-control algorithms, running on a top-speed CPU, the highly-intelligent automatic clamping force adjustment mechanism achieves precision within ±5% of your set-point value without any human interaction.

There is no longer any need to rely on expensive high-precision transducers, experienced technicians or “black arts” for fine-tuned clamping adjustments. In the end, much fewer errors are made.

MK6 plus intelligent auto clamp adjustment

Dedicated page for one-touch operation

Simple and easy-to-use interface



Shorter cycle time and smoother clamp motion.

The most highly connected

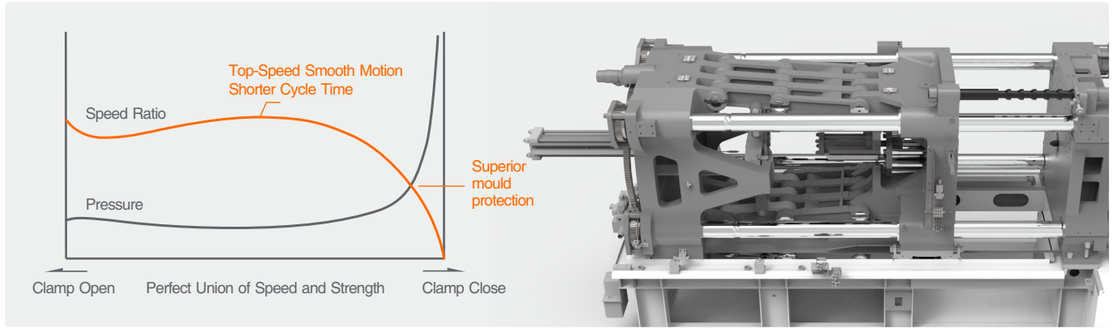
Easy and effective Industry 4.0 smart manufacturing, now at your fingertips, with Chen Hsong's Mega Cloud online data platform. True IOT connectivity, remote control and diagnostics, and fully networked productivity.

*** iPad visualisation interface**

Components Plus

Advanced Toggle Design

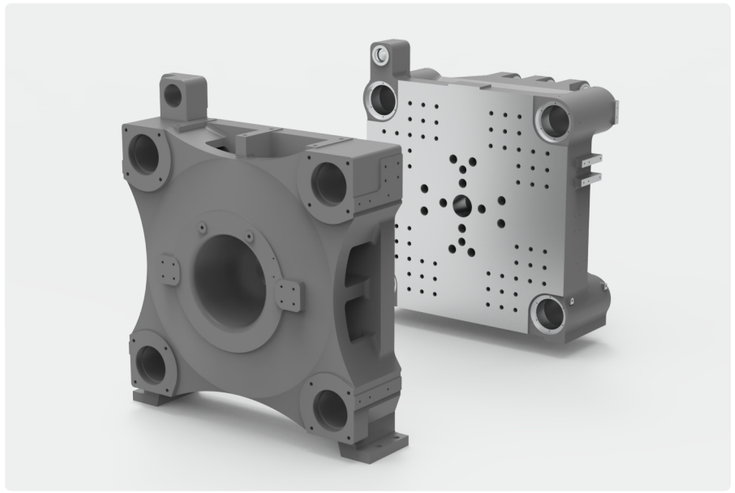
Professional Japanese mechanical experts took the latest and newest in toggle design and hand-fitted a motion-control profile based on large amounts of software simulation and real-life verification. This combination largely avoids unnecessary friction and shocks among mechanical components, distributes tension uniformly to all tie-bars, and ensures high degree of parallelism, in order to prevent flashes on parts and reduce toggle wear. The result is a toggle system that moves snappily, silky-smooth and with no vibrations, improving power efficiency and usage life while protecting against mould damages and unscheduled downtime.

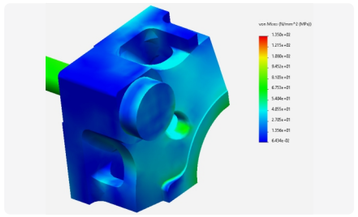


Perfect Union of Toggle Design and Hydraulics
Fast and Precise

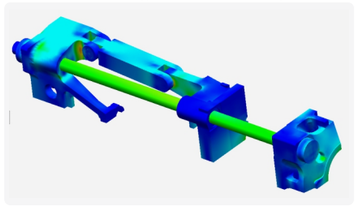
Patented Circular Platen Design

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





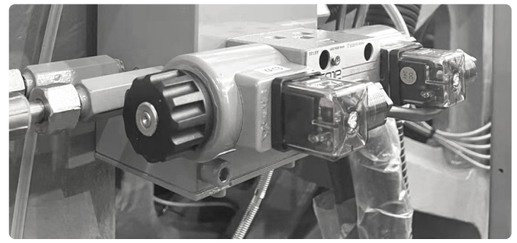
Optimised platen design has superior stress distribution, ensuring perfect part quality



High-tensile tie-bars

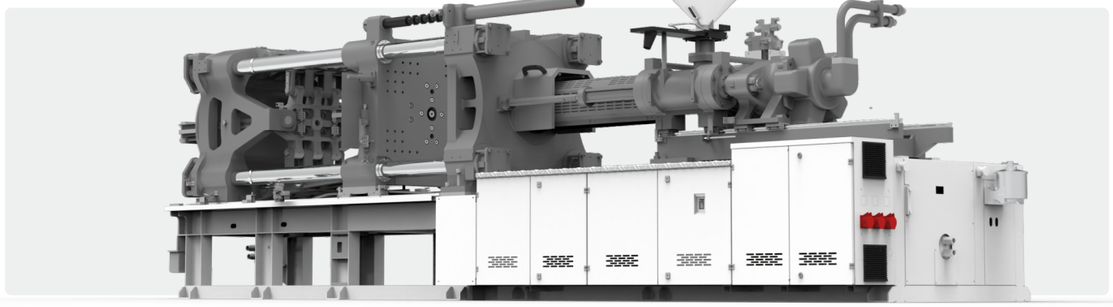
Core Pulls

Model	Core pulls
88T-208T	1 set
258T-568T	1 set plus 1 reserved slot
668T	2 sets

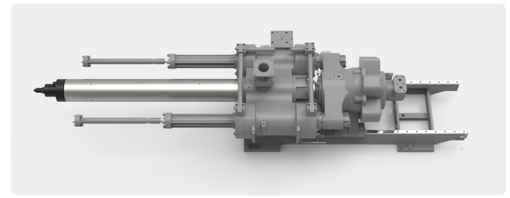


High-strength Machine Base

Improved structural stability, reduced deformation and enhanced torsion resistance from thicker and stronger I-beams that make up the machine base, plus an optimised design created through high-end computer stress simulations of various loading conditions.



High Precision Linear Guide Rails



Silky-smooth – low friction
Stable – higher positional accuracy for higher yields
Reliable – longer usage life
Fast – low friction enables higher speeds and better control
Precision – better control and accuracy leads to higher precision

Professional Screw Designs

Leveraging over 65 years of application expertise and field experience, professional screw designs are available for an amazingly wide range of applications demands and resins. There is always an optimised screw ready for your particular, unique processing needs.

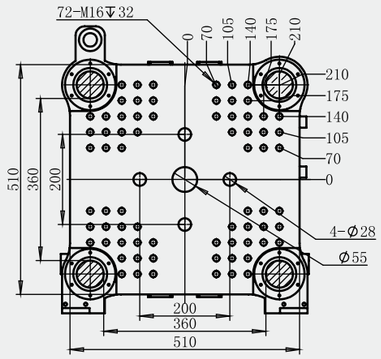
Versatile mixing screw that provides the right balance of speed, melt quality and mixing capabilities.

Standard Features

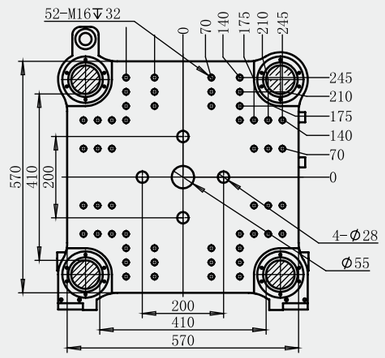
Clamping Unit			
❶ Automatic toggle lubrication	❷ Automatic mould thickness and clamping force adjustment		❸ EUROMAP ejector
❹ Hydraulic core pulls	❺ Safety door with mechanical and electrical safety interlock protection		❻ High-tensile chrome-plated tie-bars
❼ Adjustment-free mechanical safety lock		❽ Differential boost for high-speed clamping	
Injection Unit			
❶ Nitrided screw and barrel	❷ Automatic PID temperature control (including nozzle)		❸ Screw RPM display
❹ Nozzle guard	❺ Digital back pressure control	❻ Cold start prevention	❼ Barrel safety cover
❽ Broken thermocouple detection alarm		❾ Blocked nozzle and overflow detection	
❿ Movable hopper	⓫ Ceramic heater		
Hydraulics			
❶ Oil temperature control	❷ Low-noise internal gear pump	❸ High efficiency oil cooler	❹ Suction and return line filter
❺ Pressure controlled by servo system			
Controller			
❶ 12” touch-screen panel	❷ Tri-colour status indicator	❸ Robot interface	

Optional Features

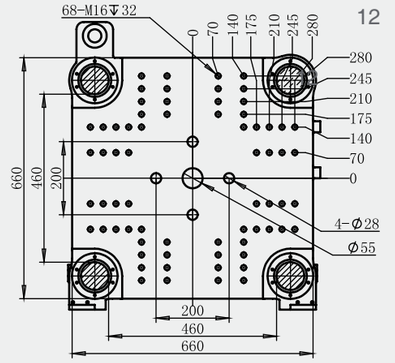
Clamping Unit			
❶ Additional core pulls	❷ EUROMAP 12 or EUROMAP 67 robot interface with connectors		❸ SPI mould platen
❹ Mould hanger	❺ Multi-function air blast device	❻ Ejection-on-fly/ core-pull-on-fly	❼ Increase ejector stroke
❽ Increase mould thickness	❾ Insulation board for mould	❿ T-slots	
Injection Unit			
❶ Bimetallic barrel	❷ Barrel thermal insulation cover	❸ Reduced/ enlarged injection unit	❹ Stainless-steel hopper
❺ Cooling ring with temperature control		❻ Extended nozzle	❼ Shut-off nozzle
❽ Chrome plated nozzle	❾ Bimetallic screw	❿ PVC specialised injection units	⓫ Infrared barrel heating system
⓬ Mixing screw head	⓭ Fans on barrel		
Hydraulics			
❶ Oil level alarm	❷ Unscrew	❸ Larger screw motor	❹ Larger oil cooler
❺ Larger power pack	❻ Hydraulic oil preheat	❼ High stability hydraulic control	
Controller			
❶ Feed-throat temperature control		❷ Hot runner temperature control	



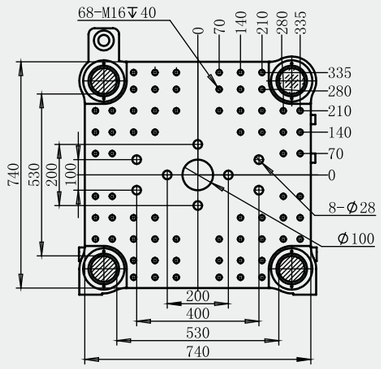
JM88-MK6 plus



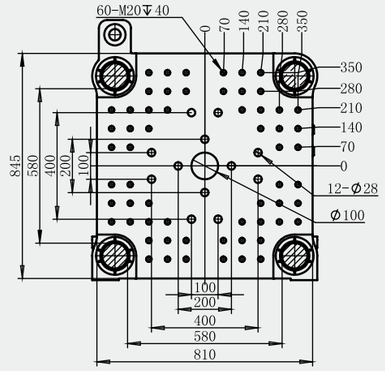
JM128-MK6 plus



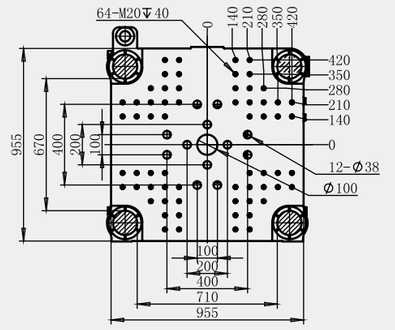
JM168-MK6 plus



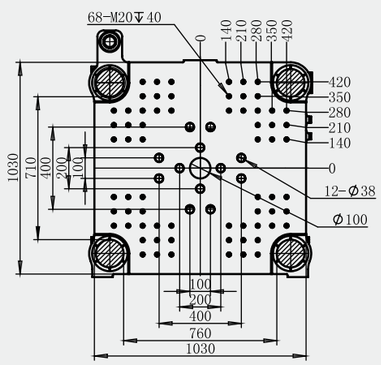
JM208-MK6 plus



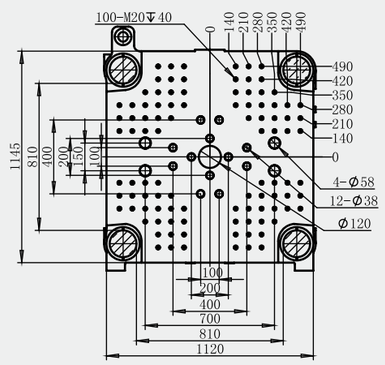
JM258-MK6 plus



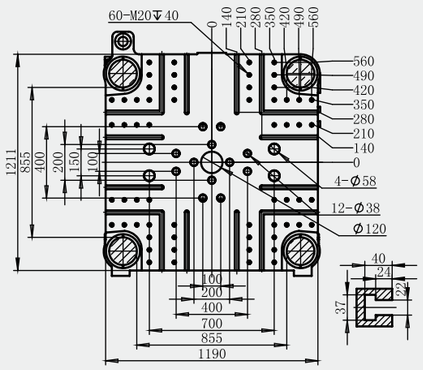
JM328-MK6 plus



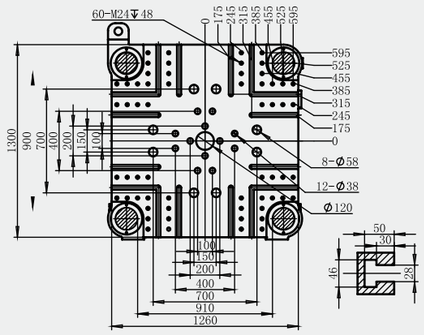
JM398-MK6 plus



JM468-MK6 plus



JM568-MK6 plus



JM668-MK6 plus

The company keeps upgrading the products and reserves the right to change the product specifications and parameters without prior notice.
The final interpretation to the above specifications and parameters belongs to the company.

MK6 plus Specifications

Injection Unit		JM88-MK6 plus			JM128-MK6 plus			JM168-MK6 plus			JM208-MK6 plus			JM258-MK6 plus			JM328-MK6 plus			JM398-MK6 plus			JM468-MK6 plus			JM568-MK6 plus			JM668-MK6 plus		
Screw Diameter	mm	31	36	41	36	41	46	41	46	52	46	52	60	52	60	67	60	67	75	67	75	83	75	83	90	75	83	90	83	90	98
Screw L/D	L/D	24.4	21.0	18.4	23.9	21.0	18.7	23.6	21.0	18.6	23.7	21.0	18.2	24.2	21.0	18.8	23.5	21.0	18.8	23.5	21.0	19.0	23.2	21.0	19.4	23.2	21.0	19.4	23.9	22.0	20.2
Screw Stroke	mm		180			205			230			260			300			335			375			415			415			450	
Calculated Injection Capacity	cm^3	135	183	237	208	270	340	303	382	488	431	551	734	636	847	1057	946	1180	1479	1321	1655	2027	1832	2244	2638	1832	2244	2638	2433	2861	3392
Practical Injection Shot Weight (PS)	g	123	166	216	189	246	309	276	347	444	393	502	668	579	771	962	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	20.4	27.2	33.9	30.4	37.9	47.5	42.4	53.2	65.1	58.8	72.0	84.7	58.8	72.0	84.7	78.1	91.8	108.9
Injection Pressure (Max.)	kgf/cm^2	2529	1875	1446	2433	1876	1490	2245	1784	1396	2295	1796	1349	2379	1786	1433	2263	1815	1448	2230	1780	1453	2165	1768	1504	2165	1768	1504	2114	1798	1516
Injection Rate	cm^3/s	96	129	167	123	160	201	160	201	257	192	253	336	240	319	398	316	395	495	360	451	553	419	514	604	481	589	693	502	591	700
Screw Speed	r/min		250			250			250			225			225			220			200			185			180			175	
Nozzle Contact Force	ton		4.5			4.5			4.5			4.5			9			9			9			9			9			9	
Nozzle Stroke	mm		250			250			250			280			330			360			420			420			420			460	

Clamping Unit											
Clamping Force (Max.)	ton	88	128	168	208	258	328	398	468	568	668
Opening Stroke	mm	330	370	420	490	530	640	700	770	835	920
Space Between Tie Bar (H×V)	mmXmm	360x360	410x410	460x460	530x530	580x580	710x670	760x710	810x810	855x855	910x900
Mould Thickness (Min.-Max.)	mm	130-380	145-450	160-520	180-550	195-610	220-680	250-730	275-810	330-850	350-900
Max. Daylight Between Platens	mm	710	820	940	1040	1140	1320	1430	1580	1685	1820
Ejector Force (Max.)	ton	2.8	4.2	4.2	6.7	7.7	7.7	11.1	11.1	16.6	18.2
Ejector Stroke	mm	100	120	140	150	170	170	220	220	250	265
Centre Bore	mm	100	100	125	125	125	125	160	160	160	200
Power Pack											
System Pressure	kgf/cm^2	175	175	175	175	175	175	175	175	175	175
Pump Power	kW	16	19	24	31	48	60	60	63	80	80
Barrel Heating	kW	9.4	13.5	17.1	20.7	26.3	34.3	42	49.2	49.2	59.3
Temperature Control Zones		3+1	3+1	3+1	3+1	4+1	4+1	5+1	5+1	5+1	6+1
Others											
Machine Dimensions (LxWxH)	mXmXm	4.4x1.2x1.9	4.7x1.3x2.0	5.3x1.4x2.0	5.9x1.5x2.1	6.5x1.6x2.3	6.9x1.7x2.4	7.8x1.8x2.3	8.3x1.9x2.4	8.6x2.0x2.4	9.6x2.2x2.5
Oil Tank Capacity	L	160	190	240	280	400	520	690	730	730	870

Note: PS density is calculated at $0.91g/cm^3$

The company keeps upgrading the products and reserves the right to change the product specifications and parameters without prior notice.
The final interpretation to the above specifications and parameters belongs to the company.