

MK6.6/B *Brilliance*

88 - 658 Ton



202402

CHEN HSONG

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About Chen Hsong

Chen Hsong, established in 1958, is one of the largest manufacturers of injection moulding machines in the world, with annual sales exceeding 20,000 sets.

For over 60 years, Chen Hsong sold to more than 85 countries across the globe, supplying injection moulding machines with clamping force from 20 tons to 6,500 tons. In 1991, Chen Hsong became listed on the Hong Kong Stock Exchange (stock code: 00057). Headquartered in Hong Kong, Chen Hsong operates numerous manufacturing and research facilities in China, including Shenzhen, Shunde, Ningbo and Taiwan, as well as in Japan.

Since 2011 when Chen Hsong and Mitsubishi Plastics Technology of Japan entered into a worldwide strategic partnership, Chen Hsong has been progressively upgrading its internal management, production and quality systems with industry best practices, including TPS (lean manufacturing), M-System (Mitsubishi quality system) and a Japanese “perfect quality” focus towards all R&D, procurement and production activities. For over a decade since then, and leveraging its superior supply chain and production capabilities, Chen Hsong also supplied Mitsubishi, as OEM, with world-renowned “MMX” large-tonnage two-platen injection moulding machines (up to 3,500 tons).

To provide customers with even better peace-of-mind, Chen Hsong insists on being the only fully vertically-integrated maker of injection moulding machines globally, starting from basic ductile iron casting to high-end fabrication and machining, and all major production steps until the completed assembly of each machine. Only through absolute control of each fine step of the manufacturing process would customers be best served with professionalism, quality and perfection.

60+ Years of Excellence

Since 1958

20,000 Sets / year

One of the largest producers of injection moulding machines in the world

200+

Patented technologies

20+

Software IP

Operates **800,000m²**

Production facilities with global presence

Wide Adaptability – A Machine for All Seasons

Perfect for all applications in diverse industries, meets all needs



Automotive



Electronics



Medical Consumables



Optics



Toys



Home Appliances



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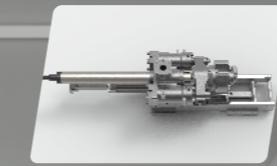
Brain of the machine – superiority guaranteed
New CPC6.6 professional controller – power and ergonomics perfected



Advanced toggle design from decades of experience
Optimised motion control profile guarantees high speed with high stability



High-strength platens ensure high-quality precision parts
Patented high-strength platens have low deformation



Perfect parts from high-precision injection unit
Linear guide rails for injection - highly stable, high precision, high repeatability

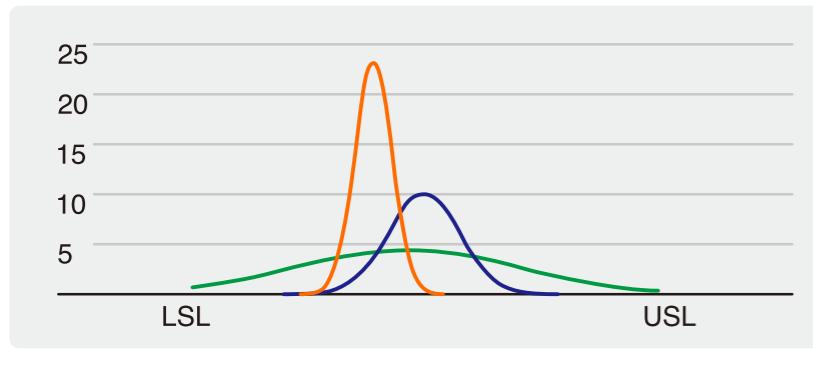
Break-Away Performance Speaks for Itself

Application Cases

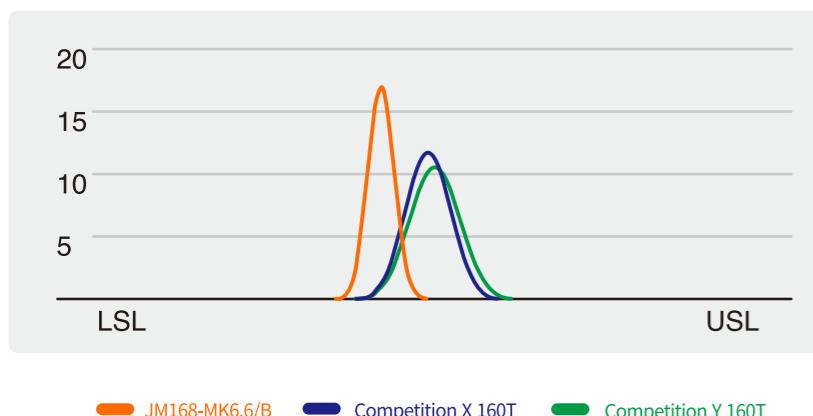


Production data for LED lighting part

Part Weight Distribution



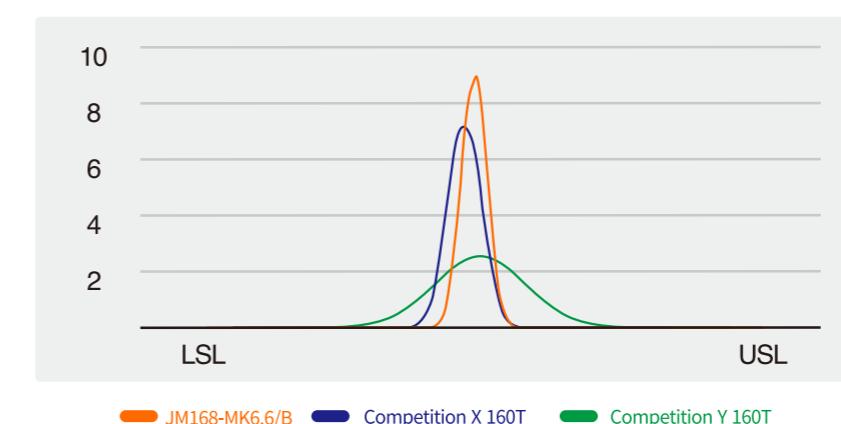
Wall Thickness Distribution



CPK (Process Capability Index) – higher is better, indicating higher stability and quality.

Breaks No Sweat – Sustainable Productivity

Clamp Open Position Distribution

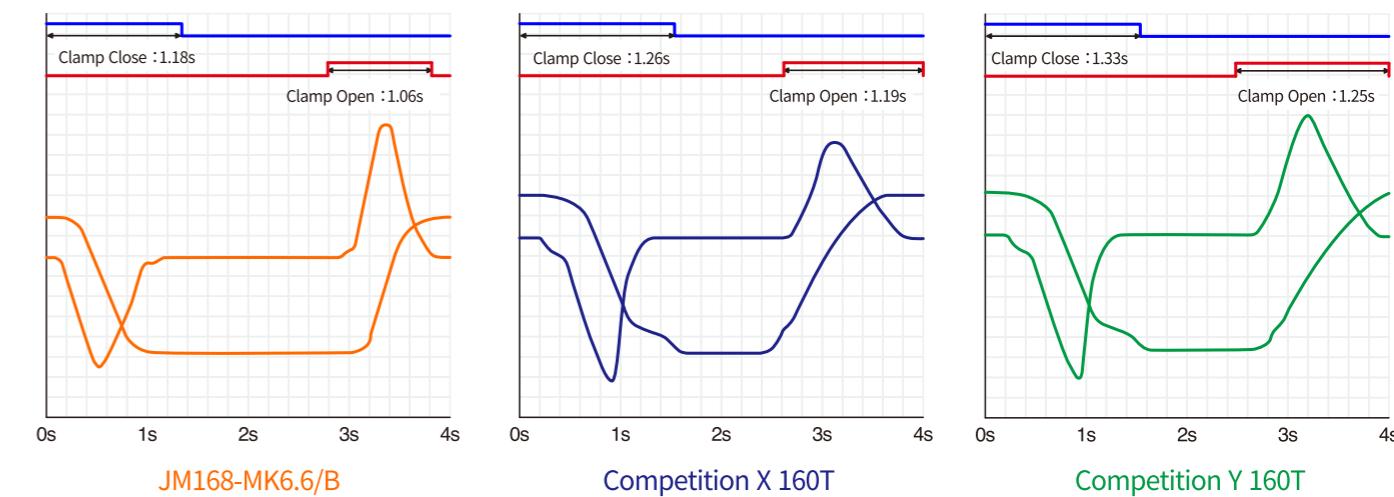


CMK (Machine Capability Index) – higher is better, indicating higher repeatability and better control

How Fast Is Fast Enough

Dry Cycle Comparison

Average (s)	Clamp Close (s)	Clamp Open (s)	Total Cycle (s)	Stroke (mm)
JM168-MK6.6/B	1.18	1.06	2.24	300
Competition X 160T	1.26	1.19	2.45	300
Competition Y 160T	1.33	1.25	2.58	300



13% Faster Dry Cycle 15% More Speed

The Economics of Production

How productivity and energy saving translate into real profits

Power consumption comparison (against industry average for 160T)

Application Case Example : LED lighting part

Model	Cycle Time (s)	Production Time (h)	Power Consumption (kW · h)	Total Number of Cycles	Total Product Weight (g)	Average Power Consumption per Kg (kW · h/kg)	Average Power Consumption per Cycle (kW · h/Cycle)
JM168-MK6.6/B	32.4	8	50.4	889	107556	0.469	0.0567
Industry average for 160T	35.7	8	57.6	807	98420	0.585	0.0714

Show Me The Numbers

Production Simulation

11 M

11 months of production per year

21 H

21 hours of production per day

\$ 0.10

\$ 0.1047/kW · h

10 Y

10 years of primary usage

Faster is always better

JM168-MK6.6/B produces more shots in 10 years

(889-807) x3x21/24x30x11x10=

710,325 more shots

Efficiency is the name of the game

JM168-MK6.6/B produces 8 million shots in 10 years, saving about \$12,500 in energy costs

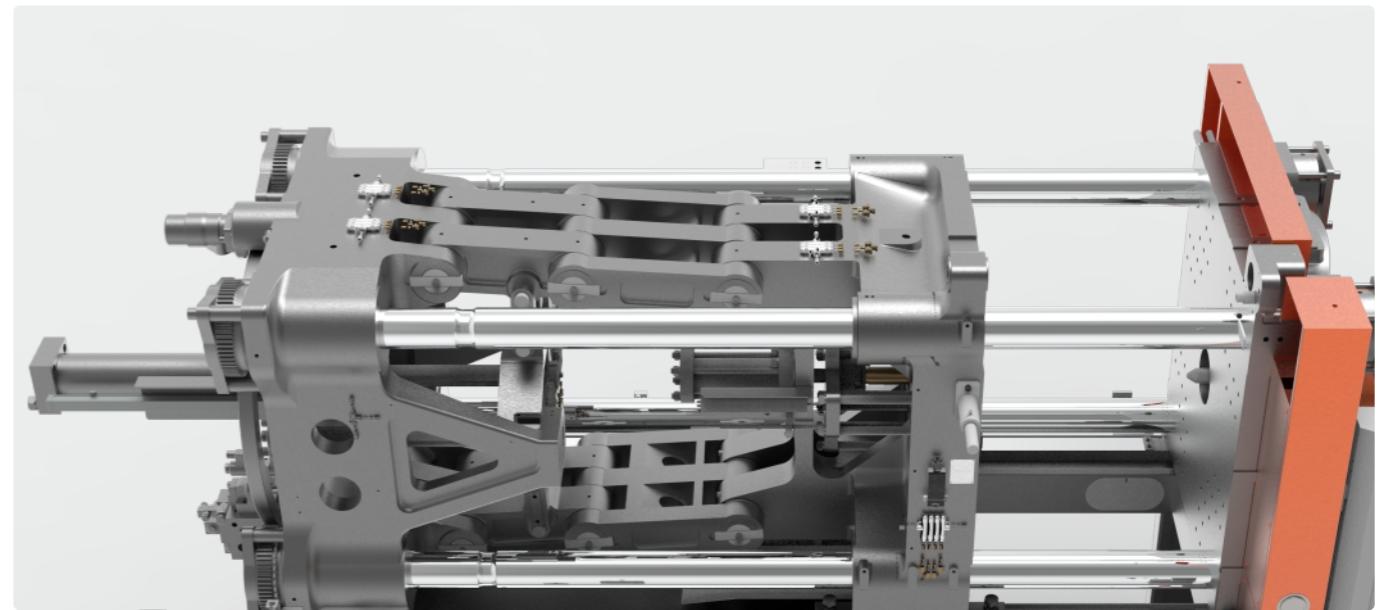
(0.0714-0.0567) x8,000,000x0.1047=

\$12,321.58

9% higher productivity

Toggle Design from Decades of Experience

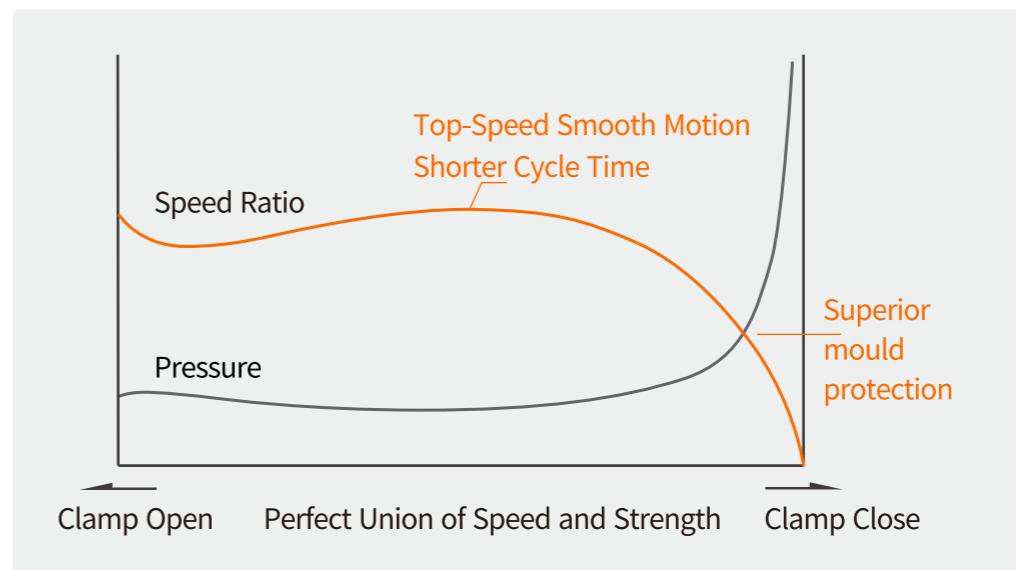
Optimised motion control profile guarantees high speed with high stability



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

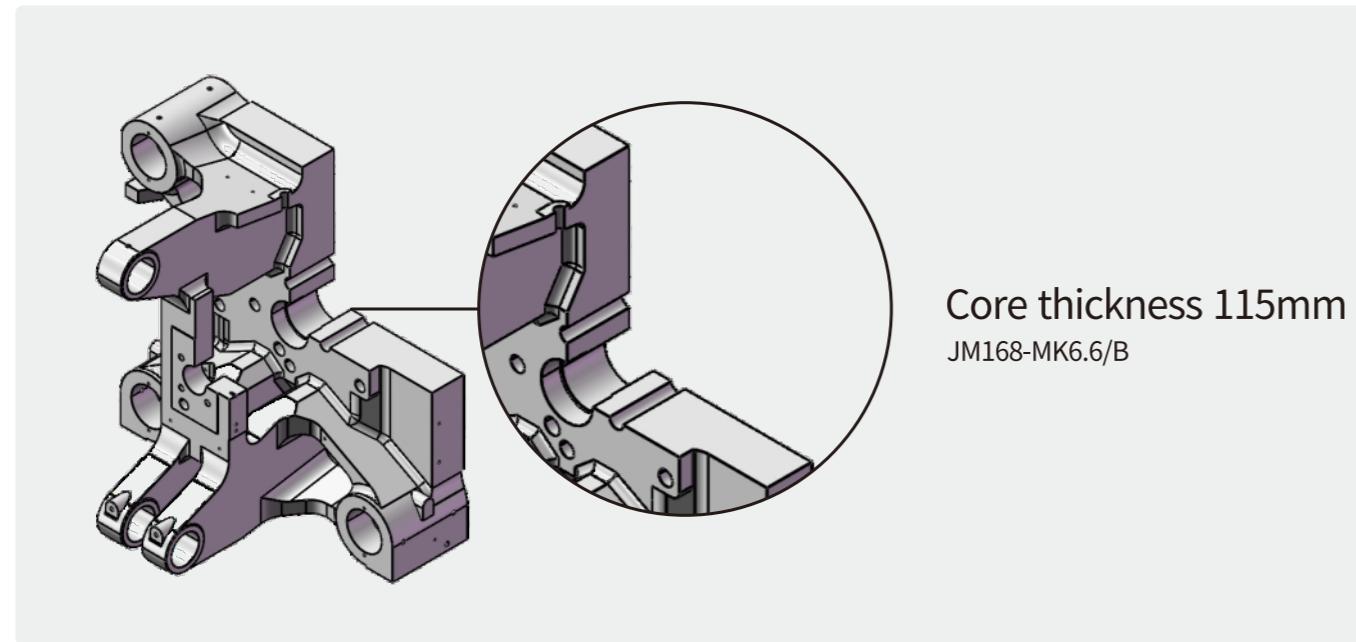
Fast and Precise



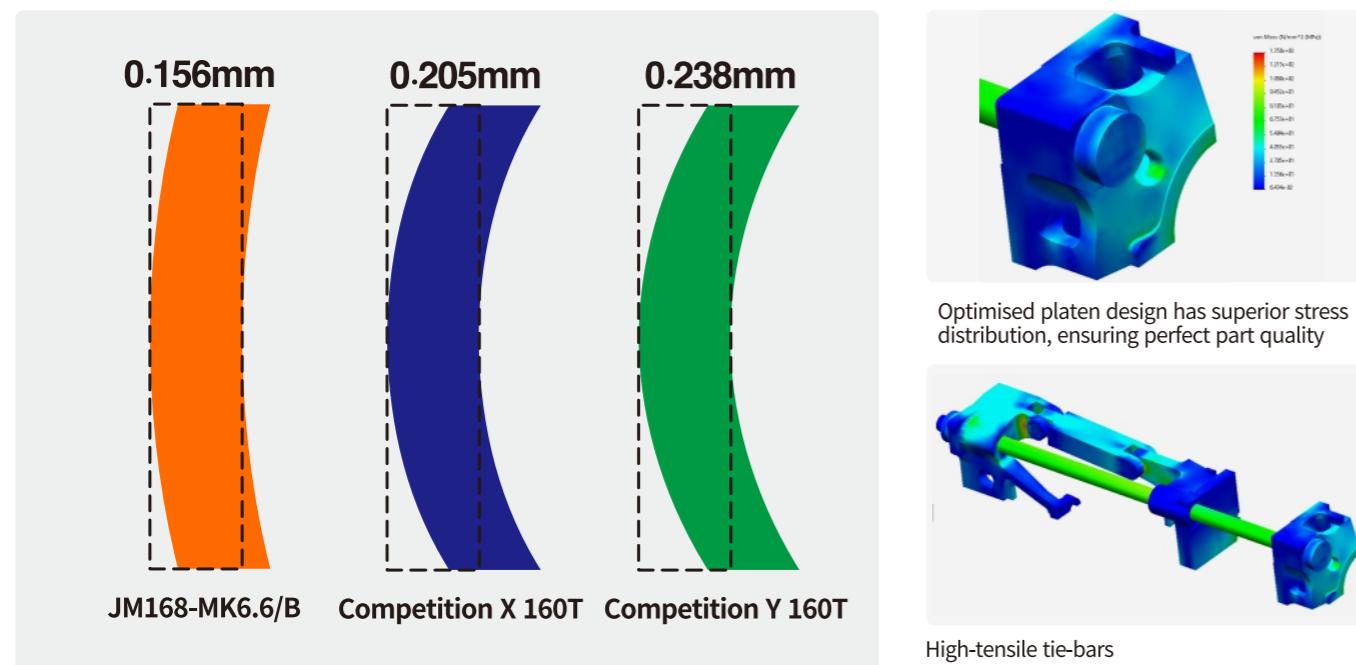
Finely tuned by leading Japanese hydraulic experts, and enhanced via proprietary fluid-dynamics simulation software, the entire hydraulic circuit is optimised to a high degree of perfection.

Strong Platens for High Quality Parts

Patented high-strength platens with low deformation

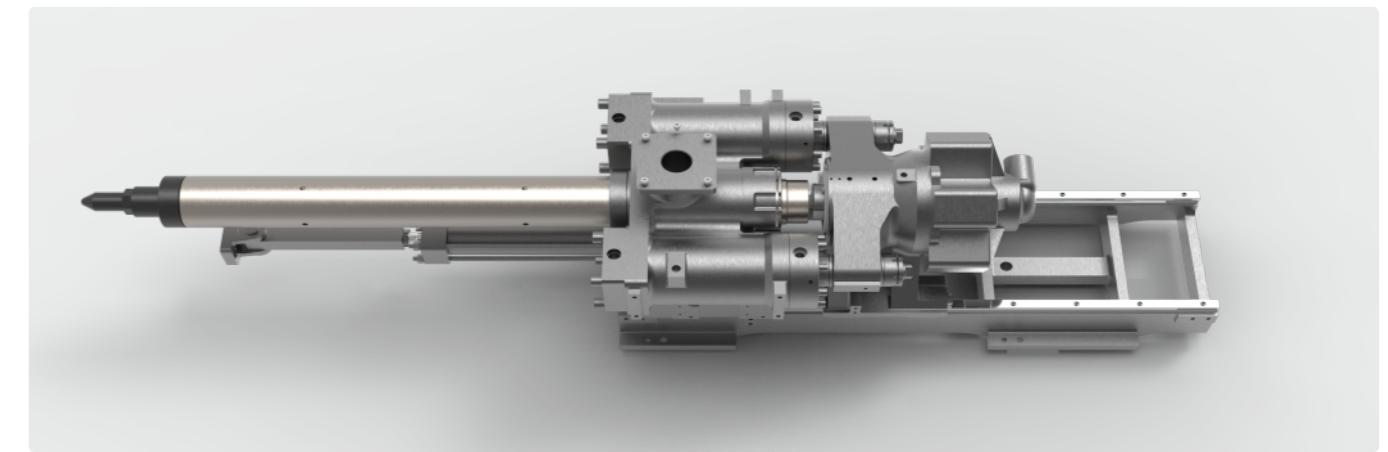


The centre of both platens is thickened to achieve lower deformation, and thus more uniform clamping force on the mould, than most competitive offerings.



Low platen deformation ensures high part quality and superior mould protection

Linear Guide Rails for Stable Injection



High Accuracy - Low-friction linear guide rails ensure silky-smooth, highly repeatable injection curves.
High Speed - Inject at high speeds without sacrificing precision, that's a guarantee.

Brain of the Machine—Superiority Guaranteed

New CPC6.6 professional controller – power and ergonomics perfected



1. High-clarity 10" LCD panel with wide colour range
2. Precision Hydraulics™ technology enables industrial-grade mould protection – detection of obstacles less than 0.1mm in thickness (or a single sheet of A4 paper)
3. High-accuracy PID barrel temperature control
4. Advanced motion-control algorithms are finely coupled to the hydraulic circuit, ensuring silky-smooth mechanical movements
5. Designed and developed in Japan
6. Complies with JIS and IEC testing standards
7. LED backlight with high brightness and long usage life
8. Advanced SMT technology with highest stability and reliability
9. Full suite of networking/data features for Industrie 4.0

The CPC6.6 runs, at its core, the ITRON industrial-grade hard-real-time operating system, widely used in high-end Japanese machine tools, which provides extremely high repeatability and short reaction times.