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CHEN HSONG

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CH 20260325-CV

CHEN HSONG

DM III

All-New 3rd Generation Multi-Material Injection Molding Machine

168-568T

SINCE 1978

CHEN HSONG

Powering Your Future in Intelligent Injection Molding

Driven by its founding principle, "Your Vision is Our Mission", the Chen Hsong Group, established in 1958 and publicly listed in Hong Kong since 1991, has evolved over nearly 70 years from an injection molding machine manufacturer into a one-stop total solutions provider in plastics manufacturing. As one of the world's largest producers of injection molding machines, Chen Hsong achieves unmatched quality through complete in-house manufacturing. This vertically integrated approach means controlling everything from ductile iron castings, parts fabrication and core components (such as advanced controllers) to final assembly. With a comprehensive product matrix serving diverse industries like automotive and medical, we are also spearheading smart manufacturing upgrades through the iChen™ Smart Family Suite, including the iChen™ Smart Factory MES, iChen™ Cloud platform, and iChen™ AI Molder, making the path to Industry 4.0 easily accessible for our global clientele.

1,000,000m²
R&D and Production Facilities (Five locations)

85+
Countries Globally

1,000,000+
Injection Molding Machines in the Field

120+
Global Technical & Service Centres

Hong Kong Headquarters


Shenzhen Industrial Park Facility — 560000m²


Taiwan Taoyuan Facility — 30000m²


Foshan Shunde - Two Facilities — 150000m²


Zhejiang Ningbo Facility — 70000m²


Shanwei Luhe Facility — 62360m²

Over 1 Million+ Chen Hsong Machines Are in Operation Worldwide.

They all use Chen Hsong.

BYD · &alongs · CHANGHONG · JAKI · DEFY
ALPHA GROUP · SM TOYS · 華隆玩具有限公司 Wah Lung Toys Co., Ltd. · mindray · arçelik
Porsche · Mercedes-Benz · Dawlance · Foxconn · GREE
TTI · Zen Global · CHINT · Jingjin Equipment Inc. · DAIKIN
FAW · beko · Haier · Midea · Skyworth
vtech · Rotoplas · DONLIM · AEQUS ecosystems of efficiency
BOE · Joybos · PICA · GREEN LEAF

DM III

Your Professional Multi-Mat Solution

Discover DM III Series, Chen Hsong's third-generation multi-material innovation, engineered for specialised applications. Its modular design and dedicated multi-material controller offer powerful flexibility. The servo-driven rotary platen ensures rapid, smooth, and precise rotation. Precision engineering across all components-injection, clamping, and electronics guarantees superior stability and broad compatibility. Achieve seamless single-shot multi-material molding with consistently high yields and unwavering reliability, making the DM III your expert solution for complex production challenges.

25+ Years in
Multi-Material Innovation

4 Core Patented
Technologies

2 Dedicated
Electronic Control Systems

5 Key Expert-Crafted
Precision Components

~70 Years
of Unwavering Quality

DM III

In 2022, Chen Hsong unveiled the brand-new third-generation multi-material injection molding machine, now featuring advanced digital controls for unparalleled performance.

Elevating multi-material production with 70 years expertise, 25 years specialization.

DM

In 1997, Chen Hsong introduced the industry's first servo-driven rotary platen multi-material injection molding machine, pioneering the field.

DM II

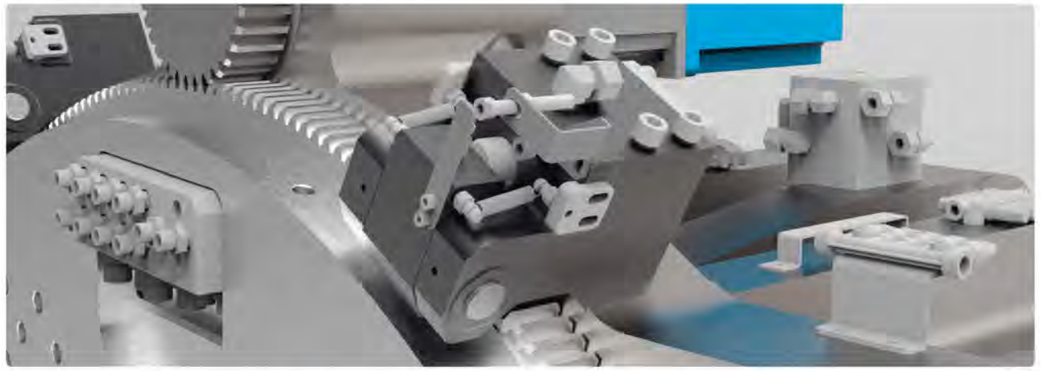
Building on that legacy, Chen Hsong launched the second-generation in 2011, all-servo high-precision multi-material injection molding machine, setting new standards for accuracy.

Unrivaled precision. Exceptional value.

Four Core Patent Technologies

1 Patented Rotary Platen Clamping Device (Patent No: ZL 2022 2 1048581.2)

Protect molds, perfect parts. Our patented clamping device prevents platen tilt, ensuring uniform force, higher precision, and extended mold life for flawless products.



JM168-DM III, JM268-DM III: 2 set M398-DM III, JM568-DM III: 4 set

2 Patented Rotary Platen Support Device (Patent No: ZL 2023 2 2478460.2)

Unrivaled stability, consistent quality. Chen Hsong's unique support device is easily adjustable, stays firm, and eliminates loosening to guarantee rock-solid stability and reliable product quality. It offers a level of adjustment and stability that competitors simply can't match. See how our technology translates directly into superior performance and product quality for your operation:

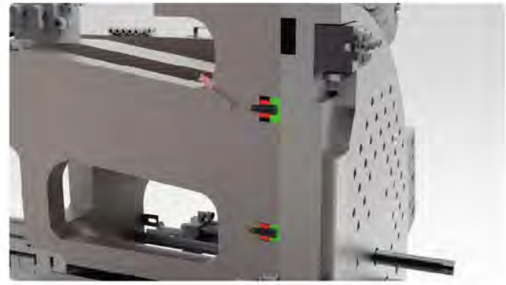
Feature	DM III	Competitor 1	Competitor 2
Support Mechanism	Integrated support adjustment with eccentric fine-tuning.	Segmented support adjustment with top-center shaft fine-tuning.	Single-point adjustment via top-center shaft.
Key Characteristics & Outcomes	Easy to adjust, highly resistant to loosening, significantly boosts product yield.	Relatively complex adjustment, prone to uneven loading.	Complex adjustment, prone to uneven loading.

3 Patented Rotary Platen Ejection Device (Patent No: ZL 2023 2 2478456.6)

Extend machine life, cut maintenance. Our exclusive ejection device drastically reduces friction during rotation, boosting durability and simplifying upkeep for maximum machine uptime.

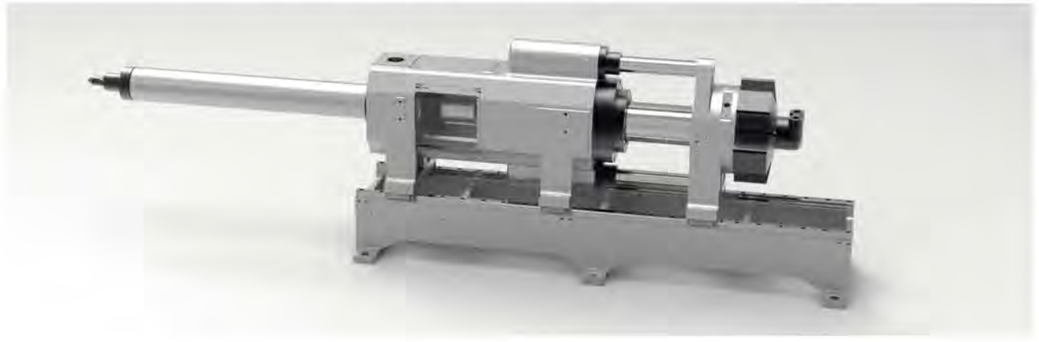
The spring-loaded friction ring mechanism with grease lubrication features:

1. Simplified installation and maintenance procedures
2. Uniform ejection force distribution and rotation stability
3. Reduced friction coefficient for extended service life
4. Improved clamping precision and product quality



4 Patented Injection Cylinder Device (Patent No: ZL 2023 2 2478463.6)

Pinpoint accuracy, zero oil leaks. Our innovative cylinder design ensures linear injection without rotary movement, delivering unmatched precision and eliminating leak points that plague competitor systems.

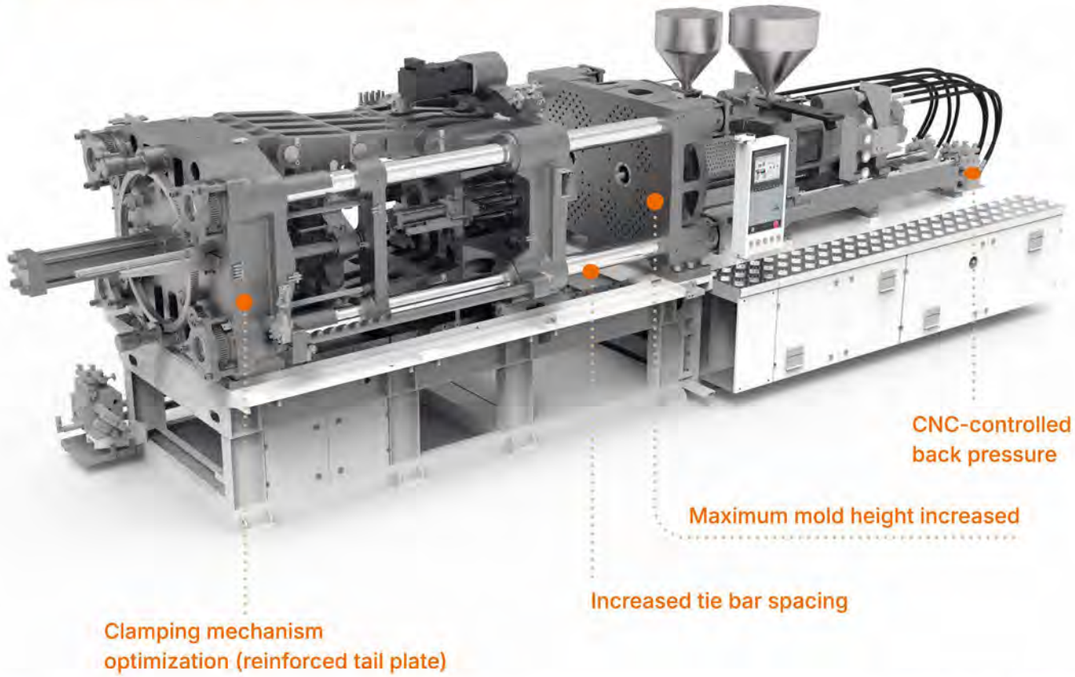


	DM III	Competitor 1	Competitor 2
Support Mechanism	Separated Structure of Injection Piston Rod and Retraction Rod	Rotary Injection Rod	Rotary Injection Rod
Key Characteristics & Outcomes	Features easy manufacturing/installation, leak-proof design, enhanced injection precision and improved production yield	The rotary oil seal machining demands high precision but may cause oil leakage issues	The rotary oil seal machining demands high precision but may cause oil leakage issues

High reliability

Five major professional precision components

5 Professional devices and optimized design



6 Professional rotary table cooling water system

As dual-color molds continue to increase in size, the requirements for mold temperature control become more demanding - not only requiring high-flow cooling channels but also high temperature resistance capabilities.

Model	JM168-DM III	JM268-DM III	JM398-DM III	JM568-DM III	Competitor
Cooling Channels	1 In/1 Out (Pre-installed 1 Set)	1 In/1 Out (Pre-installed 1 Set)	2 In/2 Out (Pre-installed 2 Set)	4 In/4 Out	1 In/1 Out
Diameter	DN15	DN15	DN15	DN15	DN15
Material	Steel-Braided PTFE Hose (High-Temperature Resistant & Durable)				Rubber Hose (Not Heat-Resistant)

7 Professional Rotary Table Mechanical Positioning Design

Chen Hsong's professional rotary table mechanical positioning system incorporates precision locating holes on the rotating platen, hydraulic positioning cylinders on the moving platen, and anti-overtravel hardened dowel pins, which collectively simplify mold installation during machine commissioning while ensuring table positioning accuracy, effectively safeguarding mold precision and improving production yield rates.

	DM III	Competitor
Positioning Device	Mounted on the Back Side of the Rotary Table	Mounted on the Side of the Rotary Table
Key Characteristics & Outcomes	Non-Frequent Replacement Does Not Occupy Table Surface Space	Frequently Replaced Parts Occupies Table Surface Space

8 Professional Injection Unit Linear Guide Design

Smooth Operation: Low friction coefficient ensures buttery-smooth injection motion.
Precision: Superior to traditional guide systems, significantly improving injection accuracy.
High Speed: Delivers superior startup speed and acceleration compared to conventional guide systems.
Durability: Offers extended service life over standard guides under equivalent production conditions.
Stability: Ensures high repeatability precision and more reliable product qualification rates.

9 Professional reinforced frame rigidity design

Chen Hsong's proprietary reinforced frame rigidity design enhances frame bending resistance, minimizing frame and platen deformation during operation to maintain stable production conditions, thereby improving both product quality and yield rates.

AI-Driven Process Optimisation

Dual Independent Control Systems

10 3rd Gen Multi-Material Controller

The third-generation dedicated multi-material machine controller, integrated with servo motor drives and absolute encoders, precisely regulates rotary table angle and speed, delivering high rotational velocity, rapid response, and exceptional signal anti-interference capability that remains unaffected by power outages or component rotation; with enhanced detection accuracy enabling real-time algorithmic processing and instantaneous feedback, this system significantly improves overall rotary table motion stability for superior positioning precision and higher product quality.

01
Enhanced motion stability

02
Superior positioning accuracy

03
Higher-quality end products

	DM III	Competitor 1	Competitor 2
Rotary Table Control	Servo Motor Control	The system utilises hydraulic motors with mechanical stoppers while incorporating partial servo motor control.	Smaller machines utilise hydraulic motors with mechanical stoppers while incorporating partial servo motor control.
Key Characteristics & Outcomes	High-speed rotary table with precise positioning and easy adjustment	The hydraulic motor with stopper mechanism exhibits positioning inaccuracy and impact issues.	Positioning inaccuracies and impact problems persist in hydraulic motor/stopper systems.
Control Computer	1. Easy program modification and updates 2. Panel with RS232 serial port and Ethernet communication interface 3. Main unit supports CAN bus and EtherCAT network communication 4. 64 output points, 48 input points 8-channel analog output 8-channel analog input, with easy expansion	1. Program modification and updates are relatively complex 2. Panel-host communication is identical to CH system	1. Program modification and updates are relatively complex 2. Panel-host communication is identical to CH system 3. 56 output points, 48 input points 6-channel analog input 8-channel analog output

11 Third-Generation Dedicated Multi-Material Machine Controller

Advanced, Expandable & High-Tech!

Design Advantages:

01 Independent Panel with Rich Keys , facilitates operator debugging and status control

02 Host with Superior Resources , meets multi-component, high I/O demands of dual-color machines

03 Dedicated E502 Temp Module . Eliminates temperature deviation

Technical Advantages:

01 01 CPU cycle time <500μs , First heating overshoot <3°C , Steady-state fluctuation <±1°C

02 Multi-group isolated switching power supplies with superior isolation & lightning-proof design for system reliability

03 Redefinable I/O inputs/outputs for flexible configuration

04 Precision servo-dedicated bus interface supports system resource expansion

05 Program updates & user configuration migration via front-panel USB

Smart, Stable, Powerful!

Color/Material Pattern Options

Assuming A=Main Barrel, B=Subsidiary Barrel

01 A Only: Single injection from main barrel

02 B Only: Single injection from subsidiary barrel

03 A+B Simultaneous: Co-injection from both barrels

04 A→A+B Sequential: 1st shot (A only) → 2nd shot (A+B)

05 B→A+B Sequential: 1st shot (B only) → 2nd shot (A+B)

06 A→B Sequential: Complete A injection before B injection

07 B→A Sequential: Complete B injection before A injection

Ejection Sequence Management

Two-Color Injection Molding Ejection Sequence

01 Ejection A Only: Single ejection by mold plate A

02 Ejection B Only: Single ejection by mold plate B

03 A+B Simultaneous: Synchronised ejection by both mold plates

04 A→B Sequential: Ejection by plate A followed by plate B

05 B→A Sequential: Ejection by plate B followed by plate A

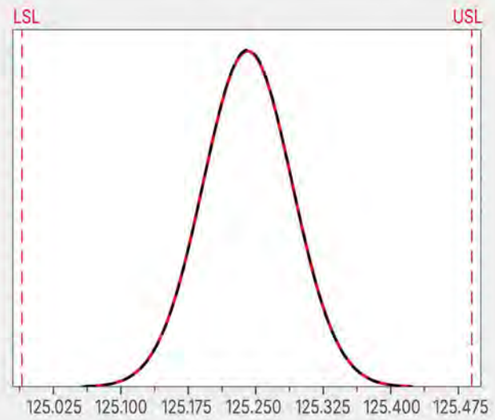
High Yield Rate

Industry-leading Yield Rate

Digitally-controlled Precision Injection

Trial-molded Products	Coasters
Product Material	Group A: ABS (Yongxing) Group B: TPE Elastomer
Production Quantity	4-cavity Mold
Product Weight	125.24g

Response Injection with ±0.2% Accuracy



Product Weight Normal Distribution

Standard Feature

Injection Unit

1. Patented single-cylinder injection mechanism	2. Integrated injection carriage with linear guide rails	
3. Low-speed, high-torque hydraulic motor	4. Single injection cylinder	
5. Nitrided barrel and chrome-plated mixing screw	6. Nozzle guard and high temperature resistant closed barrel cover	
7. Safety guard	8. Centralised lubrication system for injection unit	

Clamping Unit

1. High strength ductile cast iron	2. Fully coded mold hole template (Eu2)	3. Servo motor turntable
4. Turntable clamping device	5. Carousel support device	6. Turntable ejector
7. Turntable mechanical positioning	8. Automatic lubrication system for machine hinge	
9. Manual lubrication pump for mold setting	10. Bamboo type mechanical safety lock	
11. Hydraulically driven gear mold setting	12. Automatic mold thickness adjustment	13. Selflubricating graphite sleeve
14. Two sets of independent control ejectors	15. Vibrating ejector function	16. Robot mounting holes
17. Turntable water transportation (168-268T in 1 outlet, reserved 1 in 1 outlet, 398T 2 in 2 out, reserved 2 in 2 out, 568T 4 in 4 out)		

Hydraulic/Frame Unit

1. Rigid reinforced frame configuration	2. Intemal gear servo oil pump	3. Optimization of mold opening and closing oil circuit
4. Differential fast mold clamping	5. Low pressure mold protection function	6. Numerically controlled back pressure
7. Core extraction (turntable side) 168-398T, 2 groups reserved, 568T, 2 groups core extraction, 2 groups reserved		
8. Oil level display	9. High efficiency built-in cooler	
10. High efficiency built-in cooler	11. Water drain (6 inlet and 6 outlet for 168-568T, 2 groups)	

Electric Unit

1. 10-inch dual-color machine computer	2. High response servo drive	3. Temperature PID control system
4. 10 stages of injection and pressure control	5. Melting screw speed display	6. Thermal wire break detection
7. Automatic cleaning function	8. Cold material start protection	9. I/0 signal monitoring
10. Emergency stop switch for front and rear safety doors		11. Three-colour alarm light
12. Input and output inspection function	13. Automatic heat preservation and automatic heating setting function	
14. Multiple operating languages	15. U disk program update and upgrade	16. Process parameter lock function
17. Communication interface (RS232/RS485/CAN)	18. Dynamic templates equipped with extracted core wiring	
18. Socket (168T, 2 group three-phase 16A, 1 group single-phase, 268-398T, 2 group three-phase 32A, 2 groups three-phase 16A, 1 group single-phase, 568T, 4 group three-phase 32A, 2 groups single-phase)		

Other Unit

1. Adjustable shock-absorbing feet

Optional Feature

Injection Unit

1. Cylinder energy-saving device (infrared heating ring)	2. Extended nozzle	3. Enlarged oil motor
4. Solenoid valve control for cylinder cooling	5. Increase the power of heating coil	
6. Specialised tube set (plating, alloy, PC, TPE, TPU, etc.)	7. Hopper	8. Hopper moving chute
9. Modular combination of shooting table	10. Optional centre distance of injection table	
11. Multi-colour molding with three or more colours		

Clamping Unit

1. Magnetic mold plate	2. Increase ejector force and ejector stroke	3. Installation of mold heat insulation plate
4. Increase mold capacity	5. Turntable center distance optional	6. Rotary Table Water Lines (Red/Blue Colour-Coded)

Hydraulic/Frame Unit

1. Increase core pulling (turnntable side, fixed mold side)	2. External oil filter
3. Proportional directional valve for mold opening and closing	4. Enlarged cooler
5. Oil temperature closed-loop control and detection	6. Oil temperature display
7. Enlarged servo oil pump motor	8. Pressure oil preheating
9. Increased number of water drains	10. Adopt glass water drain
11. Hydraulic Sequence Valve & Independent Power Unit	

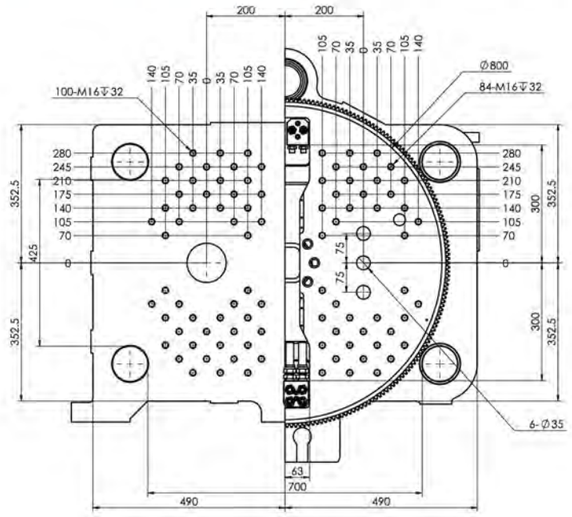
Control System

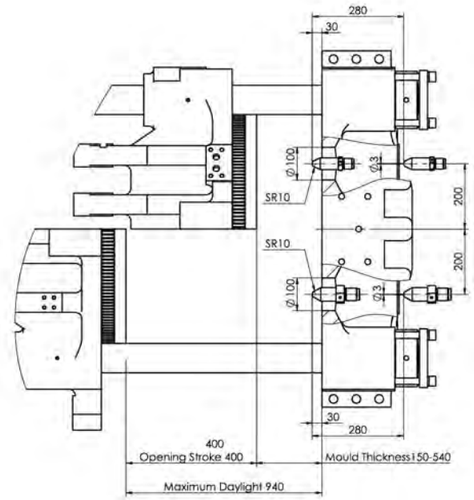
1. 12-inch touch screen dual-colour machine computer	2. Internal and external module expansion
3. Increase the type and number of sockets	4. Manipulator interface U67/UI2/National standard
5. Hot runner interface	6. Blowing device
7. Voltage Power Supply Changeover	8. Motorised door (568T)

Other Unit

1. Tool box and wearing parts	2. Dryer and other auxiliary machines	3. Mold platen

JM168-DM III Specifications





Injection Unit		A	B	C	A	B	C
Screw Diameter	mm	31	36	41	25	28	31
Screw LD Ratio	L/D	24.4	21	18.4	23.3	20	18.2
Injecion Pressure	Mpa	266	197	152	252	201	164
Shot volume	cm^3	121	163	211	64	80	98
Shot weigh	g	111	150	194	59	74	90
Iniection Rate	cm^3/s	88	118	153	58	73	89
Iniection Rate	g/s	81	109	141	53	67	82
Injection Stroke	mm		160			130	
Injeclion Speed	mm/s		116			118	
Screw Rolation Speed	rpm		220			200	

Power Pack			
System	Mpa	17.5	17.5
Motor Power	kW	17.8	12.4
Heaing Capacity	kW	8	5
Temperalure Control Zone		4	4

Clamping Unit		
Clamping Force	t	168
Opening Strake	mm	400
Space Between Tie Bars	mm	700×425
Maximum Daylight	mm	940
Mold Thickness (Min-Vax.)	mm	150-540
Ejector Stroke	mm	90
Ejector Foroe	kN	33
Rotary Table Size	mm	Φ800
Rotary Table Mold Diameter	mm	Φ850
Rotary Table Load Capacity	t	1
Dual-Mold Center Distance	mm	400

Others		
Machine Dimensions	m	5.7×1.7×2.15
Oil Tank Capacty	L	350
Machine Weight	t	8

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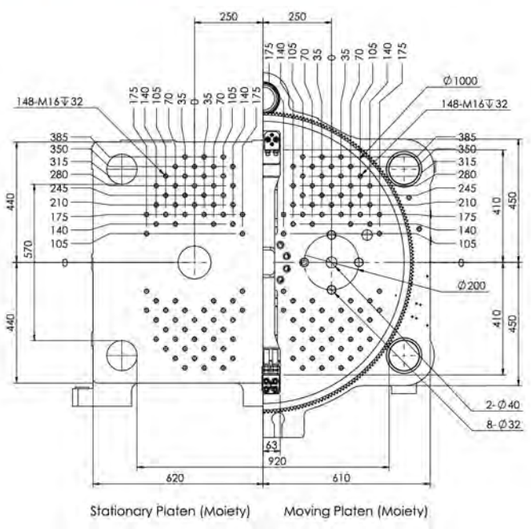
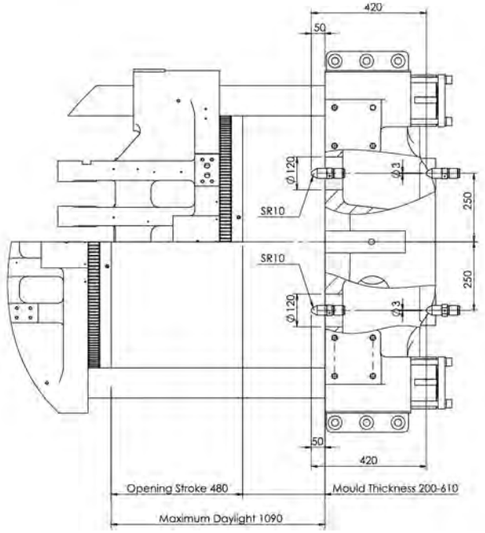
JM268-DM III Specifications





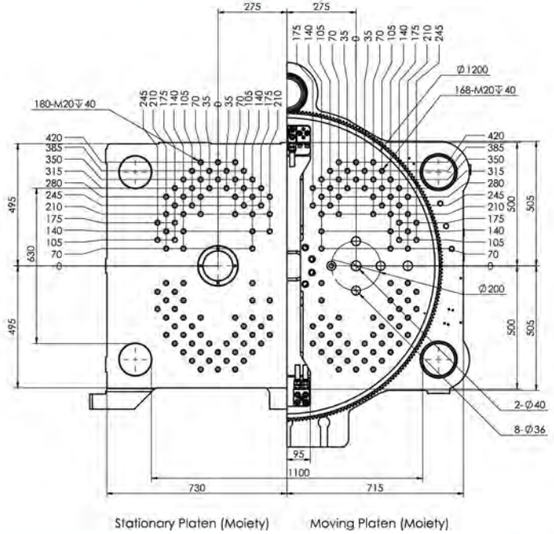
Injection Unit		A	B	C	A	B	C
Screw Diameter	mm	41	46	52	31	36	41
Screw LD Ratio	L/D	23.6	21	18.6	24.4	21	18.4
Injecion Pressure	Mpa	247	196	154	266	197	152
Shot volume	cm^3	264	332	425	136	183	238
Shot weigh	g	243	306	391	125	169	219
Iniection Rate	cm^3/s	149	187	239	88	118	153
Iniection Rate	g/s	137	172	220	81	109	141
Injection Stroke	mm		200			180	
Injeclion Speed	mm/s		113			116	
Screw Rolation Speed	rpm		220			220	

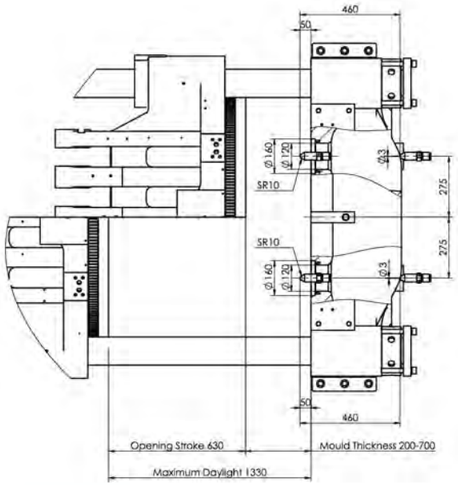
Power Pack			
System	Mpa	17.5	17.5
Motor Power	kW	29.3	17.8
Heaing Capacity	kW	12.2	8
Temperalure Control Zone		4	4

Clamping Unit		
Clamping Force	t	268
Opening Strake	mm	480
Space Between Tie Bars	mm	920×570
Maximum Daylight	mm	1090
Mold Thickness (Min-Vax.)	mm	200-610
Ejector Stroke	mm	120
Ejector Foroe	kN	42
Rotary Table Size	mm	Φ1000
Rotary Table Mold Diameter	mm	Φ1120
Rotary Table Load Capacity	t	2.2
Dual-Mold Center Distance	mm	500

Others		
Machine Dimensions	m	6.8×2.05×2.35
Oil Tank Capacty	L	450
Machine Weight	t	13

JM398-DM III Specifications





Injection Unit		A	B	C	A	B	C
Screw Diameter	mm	46	52	60	36	41	46
Screw LD Ratio	L/D	23.7	21	18.2	23.9	21	18.7
Injecion Pressure	Mpa	251	197	148	275	212	169
Shot volume	cm^3	415	531	707	204	264	332
Shot weigh	g	382	488	650	187	243	306
Iniection Rate	cm^3/s	186	237	316	106	137	173
Iniection Rate	g/s	171	218	291	91	126	159
Injection Stroke	mm		250			200	
Injeclion Speed	mm/s		112			104	
Screw Rolation Speed	rpm		200			220	

Power Pack			
System	Mpa	17.5	17.5
Motor Power	kW	35.2	21.4
Heaing Capacity	kW	17.5	11.3
Temperalure Control Zone		4	4

Clamping Unit		
Clamping Force	t	398
Opening Strake	mm	630
Space Between Tie Bars	mm	1100×630
Maximum Daylight	mm	1330
Mold Thickness (Min-Vax.)	mm	200-700
Ejector Stroke	mm	150
Ejector Foroe	kN	67
Rotary Table Size	mm	Φ1200
Rotary Table Mold Diameter	mm	Φ1295
Rotary Table Load Capacity	t	3
Dual-Mold Center Distance	mm	550

Others		
Machine Dimensions	m	7.9×2.3×2.55
Oil Tank Capacty	L	700
Machine Weight	t	19

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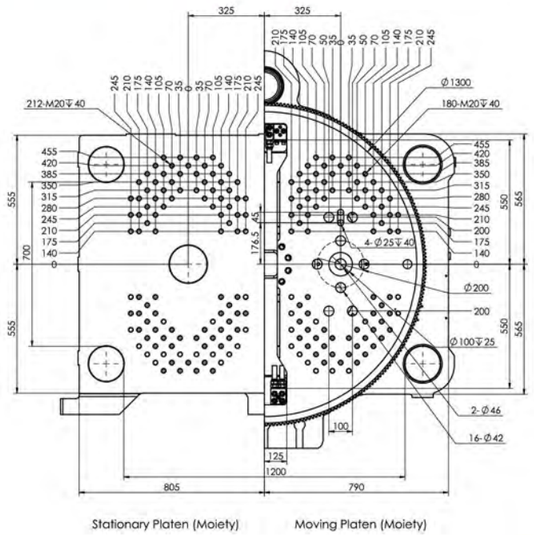
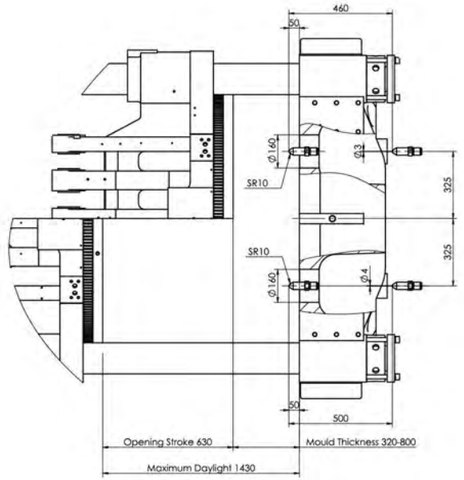
JM568-DM III Specifications





Injection Unit		A	B	C	A	B	C
Screw Diameter	mm	60	67	75	36	41	46
Screw LD Ratio	L/D	23.5	21	18.8	23.9	21	18.7
Injecion Pressure	Mpa	242	194	155	275	212	169
Shot volume	cm^3	905	1128	1414	204	264	332
Shot weigh	g	832	1038	1301	187	243	306
Iniection Rate	cm^3/s	301	375	470	106	137	173
Iniection Rate	g/s	277	345	432	91	126	159
Injection Stroke	mm		320			200	
Injeclion Speed	mm/s		106			104	
Screw Rolation Speed	rpm		190			220	

Power Pack			
System	Mpa	17.5	17.5
Motor Power	kW	51.3	21.4
Heaing Capacity	kW	26.5	11.3
Temperalure Control Zone		5	4

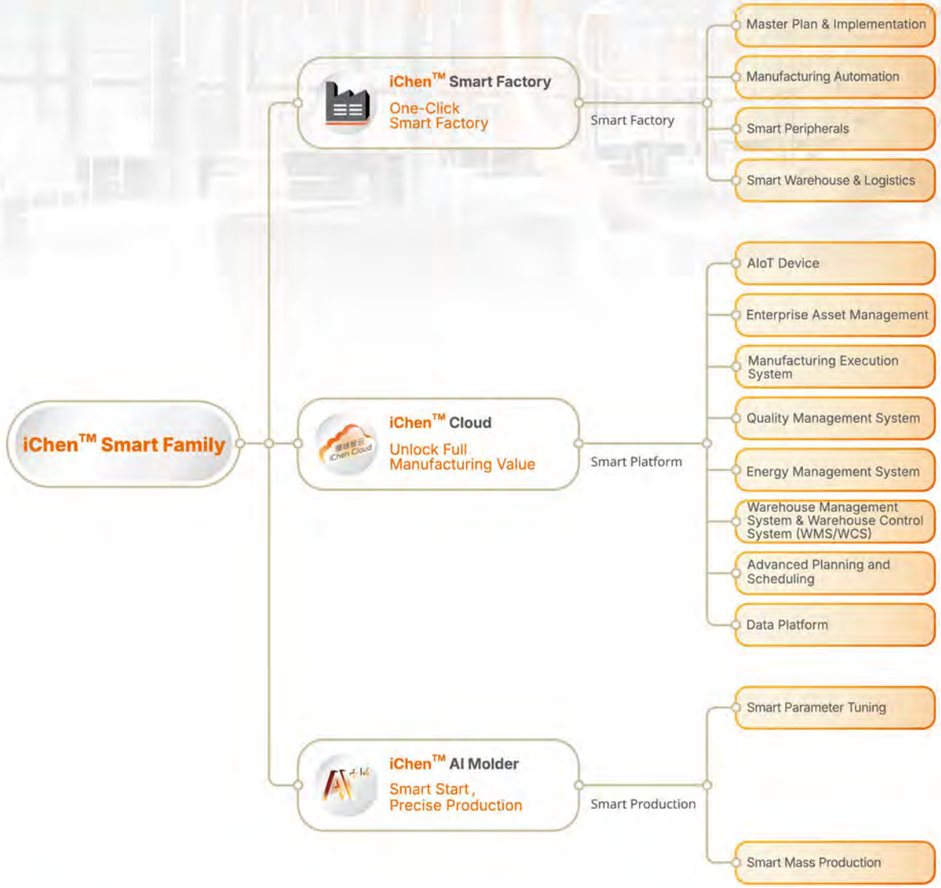
Clamping Unit		
Clamping Force	t	568
Opening Strake	mm	630
Space Between Tie Bars	mm	1200×700
Maximum Daylight	mm	1430
Mold Thickness (Min-Vax.)	mm	320-800
Ejector Stroke	mm	150
Ejector Foroe	kN	110
Rotary Table Size	mm	Φ1300
Rotary Table Mold Diameter	mm	Φ1425
Rotary Table Load Capacity	t	4
Dual-Mold Center Distance	mm	650

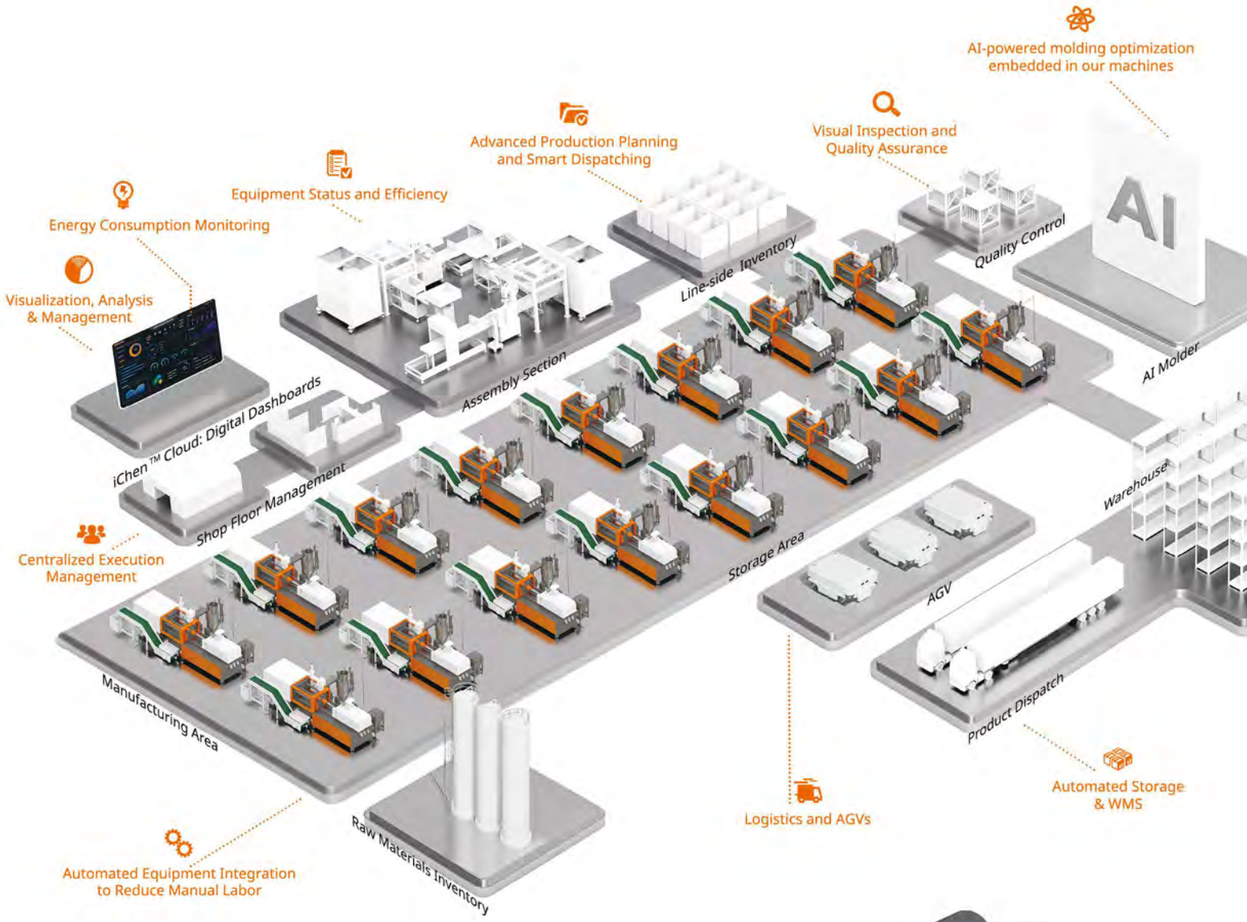
Others		
Machine Dimensions	m	9.2×2.6×2.6
Oil Tank Capacty	L	800
Machine Weight	t	29

Engineered for Multi-Material Excellence

Encounter Chen Hsong's craftsmanship where least expected

iChen™ Smart Family





iChen™ Smart Factory

One-Click Smart Factory

iChen™ Smart Factory delivers plant-wide, end-to-end line engineering and integration. Covering planning and design, auxiliary-system configuration, automation, smart peripherals, and warehouse and logistics setup, we integrate the entire production chain and deliver complete turnkey factory projects.

iChen™ Cloud

Unlock Full Manufacturing Value

iChen™ Cloud is a Smart Manufacturing Operations Management Platform covering Artificial Intelligence Internet of Things (AIoT), Enterprise Asset Management (EAM), Manufacturing Execution System (MES), Quality Management System (QMS), Energy Management System (EMS), Warehouse Management System & Warehouse Control System (WMS/WCS), Advanced Planning and Scheduling (APS) , and the Data Platform. Together, these enable end-to-end digital control with real-time visibility and executive dashboards for faster, data-driven decisions.

iChen™ AI Molder

Smart Start, Precise Production

iChen™ AI Molder is an AI-driven injection-molding solution developed by Chen Hsong Group in collaboration with industry–academia research teams. It integrates AI with injection-molding process expertise to recommend and optimize parameters, stabilize mass production, reduce defects, and increase yield.

iChen™ Smart Family

CHEN HSONG SINCE 1958

"Your Vision is Our Mission"