WE WALK ALONGSIDE THE WORLD

Stock code: 300415

YIZUMI 伊之密

H Series High-end Cold Chamber Die Casting Machine

(180T-900T)

High-performance Product Line Customized for Global Markets

广东伊之密精密机械股份有限公司

GUANGDONG YIZUMI PRECISION MACHINERY CO., LTD.

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Heritage and Innovation

The accumulation and integration of technologies can inspire new energy boost in the unlimited area of innovation and creativity for an enterprise. YIZUMI inherits the technical genes of HPM, a century-old enterprise in the United States, and continuously integrates innovations, and establishes a German R&D center to better drive the technology and product upgrades.

YIZUMI - HPM

In 2011, Yizumi acquired all intellectual property, global supply chain system, global customer resources, etc. of the century-old HPM. It has attained the prestigious top two ranking in the die casting machine industry in the United States. With many years of accumulative technologies, it has more than 200 technical patents.

YIZUMI Germany

YIZUMI Germany was formally established in December 2017, and established a European R&D team in the local area to further connect China with Europe advanced molding technology.

China’s 50 Most Innovative Companies by Fast Company in 2016

Forbes Asia’s Best Under A Billion 2018

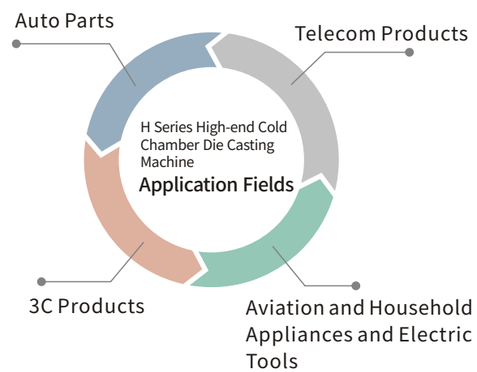
Annual sales volume reached 1,000~1,200 sets of machines

R&D Background

In view of the market demand for high-end machines, Yizumi’s technical team is joining hands with its R&D Center in North American to initiate a full upgrading of technologies, manufacturing processes and configurations based on the technological standards of the European and American die casting machines. By elevating various features such as stability, manufacturing precision, reliability, durability, working efficiency and safety to a whole new level, Yizumi is producing brand new H series high-end die casting machines that meet the demand of the European and American markets.

Application field

The H series high-end cold chamber die casting machine is suitable for manufacturing non-ferrous metal die-casting products such as high-demand automobile and communication parts, high-precision 3C electronic parts, aviation and building materials parts, and household appliances.



H Series High-end Cold Chamber Die Casting Machine

Five Value Propositions :

Precise and stable | Efficient and durable | Wide range of application | Safe and reliable | User-friendly

Wide range of application

- Stronger power and faster response.
- Wider processing range and lower recurring investment costs.

User-friendly

- Human-centric and user-friendly human-machine interface design.
- Integrates huge amount of commonly used hardware, making operation extremely convenient.
- Implements operational and sustainable solutions, making the usage smoother and more comfortable.

Safe and reliable

- Integrates with North American technology and process standard design, fully optimizes machine safety components.
- Software have been updated, intelligent monitoring of operation to prevent rule-infringement operations.

Precise and stable

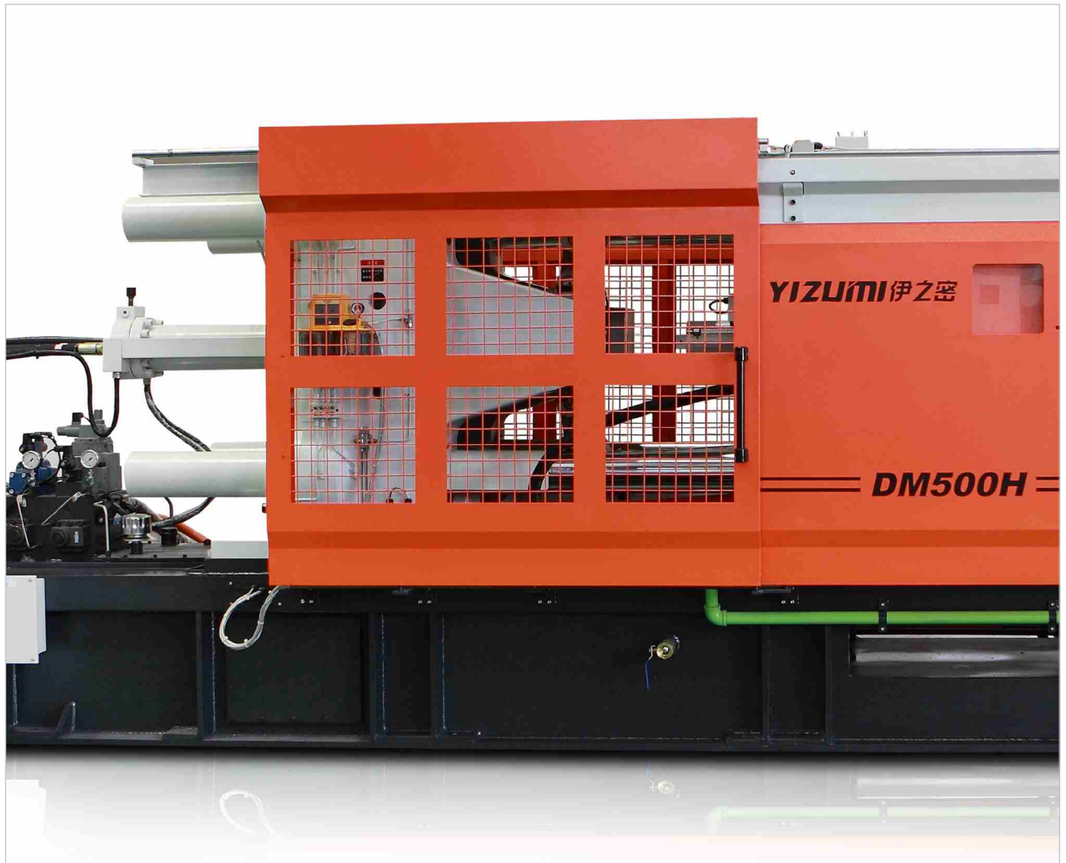
- Advanced machining equipment ensures machining accuracy and shares processing platform with HPM.
- The design of optimization details ensures repeated precision of position.

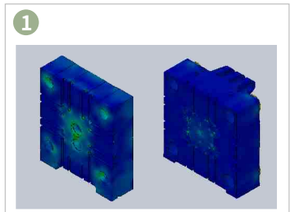
Efficient and durable

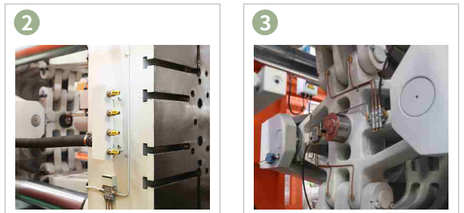
- Uses huge amount of high-quality parts, shares the same quality as European and North American machines while keeping the maintenance cost low.
- Optimizes the design of three platens, injection platen and tie bar to improve the mechanical performance of the whole machine.
- Integrates with North American technology and process standard to build a highly rigid and robust machine frame.
- Fully upgrades the hydraulic system and optimizes the pump and hydraulic loop.
- Dry cycle time shortened. Improve the productivity.

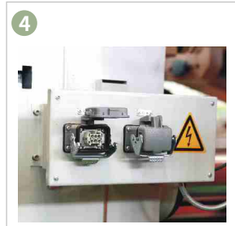
Clamping Unit

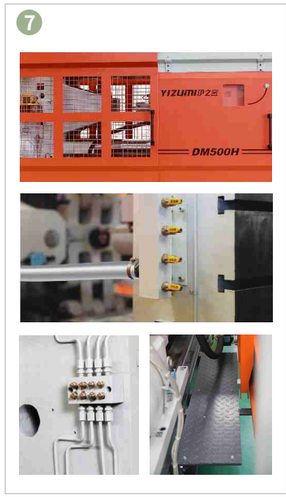
High Level of Customization with the Integration of the Advantages of European and American Design











1 Finite element analysis design

As the platen force uses finite element analysis design, it causes the clamping force on the platen to be evenly distributed, making a uniform stress distribution and protecting the platens and molds.

2 High-rigidity platen with T-slot

High-rigidity design for the platen ensuring the rigidity and reliability of the clamping unit.

3 Optimized Toggle Lubrication Design

By improving the effects of toggle lubrication, it effectively avoids damages to the toggle caused by lubrication faults.

4 Convenient and durable core -pulling interface

The total convenience of plug and socket; complete metallic shell; in compliance with the IP ratings in Europe and America.

5 Low Pressure Mold Protection

Fitted with an alarm in the low pressure stage when die close, it ensures effective protection for the molds.

6 Toggle Safety Protection

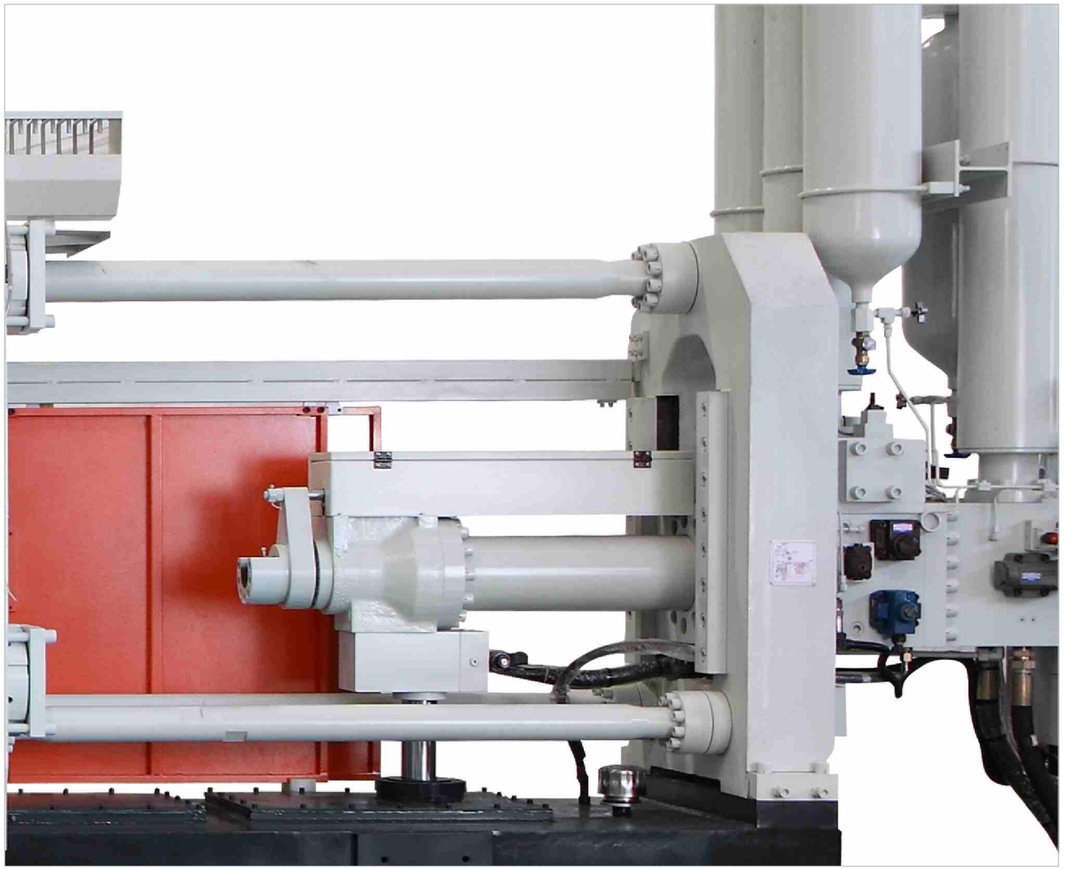
According to the European and American safety standards, the installation of toggle protective cover and mounting holes design makes it easier to observe the operating condition of the toggles, ensuring production safety.

7 Human-centric design

With the emphasis on centralized greasing point, machine body pedal design and front door observation window, it enhances the convenience in operation and maintenance and boosts the user experience.

Injection Unit

Fully Upgrades with European and American Design Concepts



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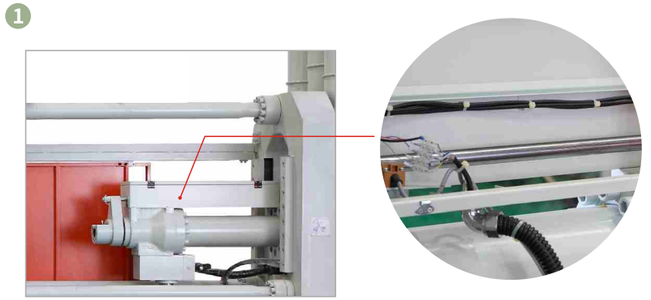

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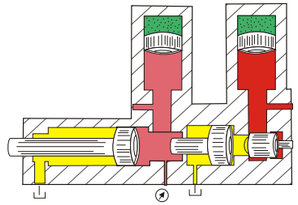

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4

5

1 High Precision Injection Positional Control

It uses a contactless magnetic grating ruler for position detection in a high precision level. The injection position is set directly on the screen, making operation more convenient while achieving precision control.

2 Optimized Injection uint

The Injection uint has adopted the NFP design, almost fault-free in eternity, refined structure with reliability and durability.

3 Injection safety protection

According to the European and American safety standards, it is fitted with an injection protective cover, effectively protecting the safety of the operators.

4 Reinforced Rigid injection Tie Bar

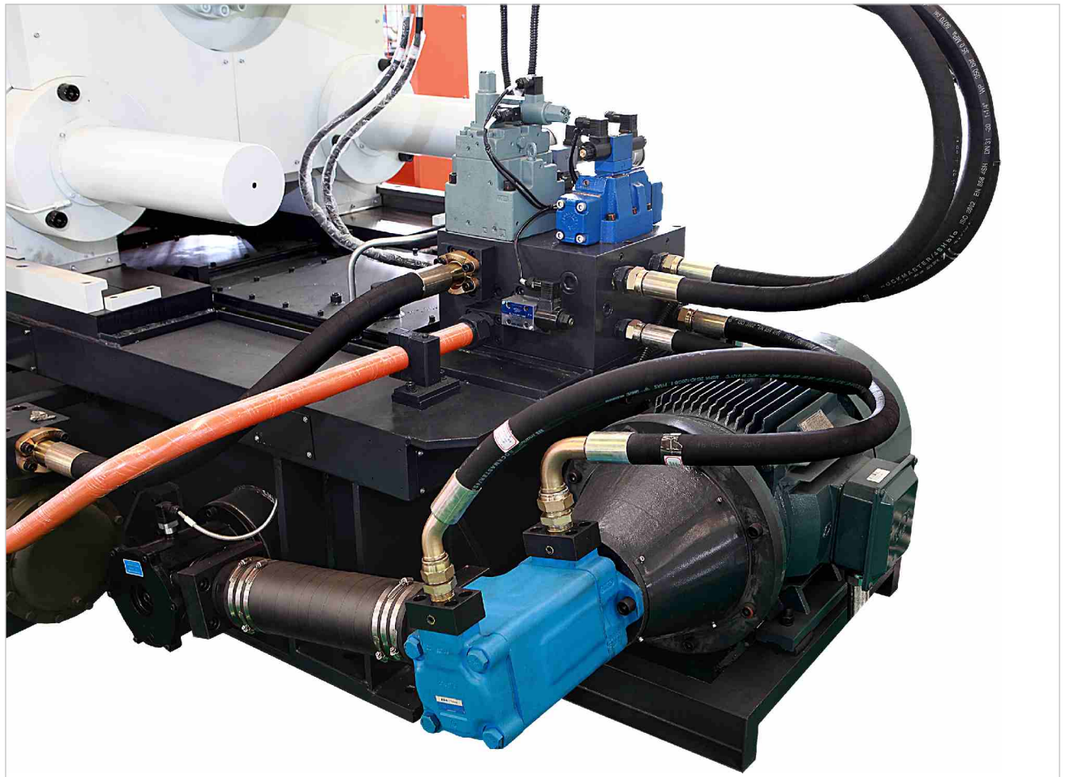
By reinforcing the rigidity of the injection tie bar, it reduces deformation by the application of force, ensuring injection stability.

5 Human-centric Design

Equipped with the automatic discharge function and centralized management of pressure gauges, it significantly enhances the convenience of operation and maintenance as well as boosts the user experience.

Hydraulic System

Highly Efficient Production and Precise Injection Ensures the Unique Feature of “Fast and Precise”



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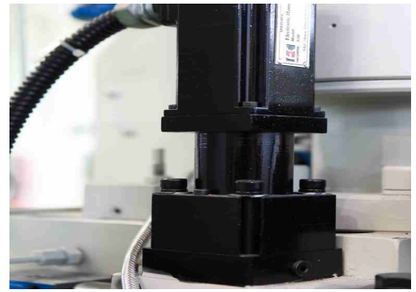

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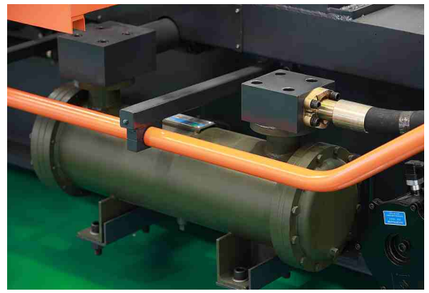


4

1 Full upgrading of the hydraulic system

Optimize the hydraulic system; improve the dry cycle efficiency of the whole machine.

2 Injection speed more stable

Upgrades the specifications of the accumulator; injection speed is more stable.

3 Superior Cooling Effects

Oil cooler has been updated; the oil temperature has apparently been lowered, effectively ensuring the working lifespan of the machine.

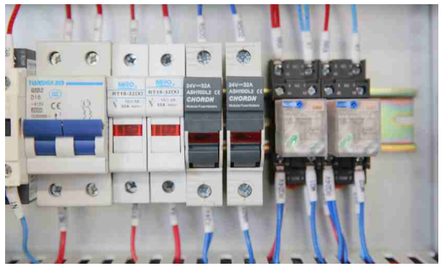
4 Human-centric Design

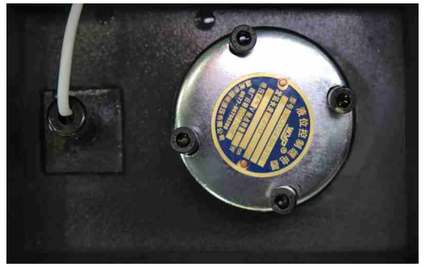
Boosts the user experience: different color markings for oil input and oil return, making it more convenient to check with contrast.

Electrical Control System

Safe and Stable with Benchmarking Against European and American safety standards

1





1 High standard electrical design

- Uses high protection standards electrical boxes and cabinets to effectively protect the electrical components.
- By Isolating the heavy current electrical box from the weak current electrical box, the layout will be more reasonable, providing convenience for maintenance with high safety features and strong anti-interference attribute.
- Short-circuit prevention design in circuit boards, effectively protecting the electrical components.
- Waterproof plug for core pulling, effectively protecting the electrical components.
- The oil temperature alarm system prevents the instability of hydraulic loop caused by the abnormal oil temperature.
- The low fluid level alarm system prevents the instability of hydraulic loop caused by the inhalation of gases when the oil level is excessively low.

2

3

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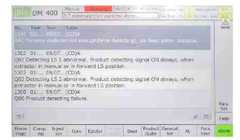
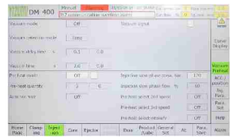




2 Efficient and stable control system

- Employs Siemens Industrial PLC to ensure high operating speed and excellent stability.
- Siemens 10” TFT color LCD touchscreen; clearer display, more convenient operation.

3 High precision control

The mold opening and clamping uses an electronic transducer for position detection in a high precision level.

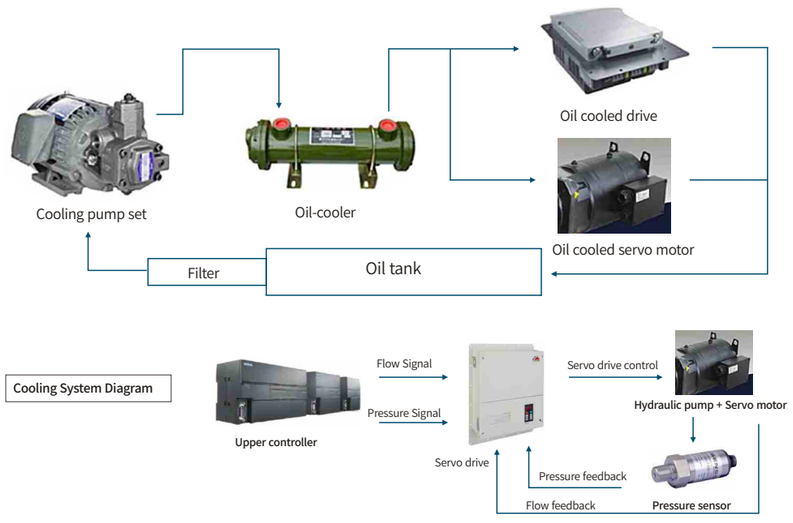
4 Human-centric design

- Optimizes the layout and frames of the display screen; the action unit uses a single page for display; intuitively display the I/O state of each function; maintaining well illustration with figures and texts; a sense of layering feel.
- Comprehensive operation guide and alarm reminder makes it convenient to check for faults.
- Rich computer contents make it convenient to use; additional hot mold injection function, vacuum machine interface and fast injection start position testing function.
- Modular processes make it convenient to invoke, effectively meeting the customers' needs.

Energy-saving System (Optional)

Substantially Reducing Energy Consumption

Through the dual closed loop control, Yizumi’ s energy-saving servo system delivers accurate control of pressure and flow, fast response and wider range of motor speed adjustment. In combination with the harsh production environment of the die casting machine, the R&D team of Yizumi has introduced a servo energy-saving system embedded with high efficiency, high stability, high energy saving rate and low maintenance rate through continuous testing and improvement, which can truly reduce energy consumption, save cost and control accuracy, and create greater benefits for customers.



High Energy-saving Rate per cycle

Saves the electrical energy wasted by the low pressure of traditional die casting machines.

Productive Efficiency Improvements

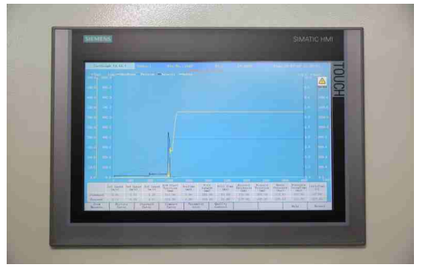
Larger pump flow and faster response time to improved the productive efficiency.

Mature and stable technology

With over 10 years of industrial experiences and continuous innovation and practical verification, it is proud to launch a mature, stable oil cooling servo energy-savings solution.

Quality Control System (Optional)

Position, Pressure & Speed Curve Display And Intelligent QC Technology

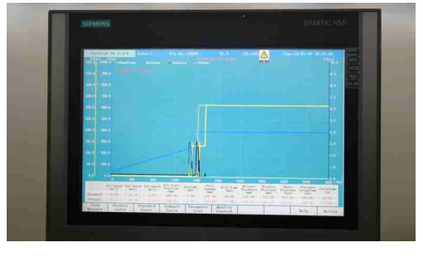


▶ Real-time display of precise injection curve

The real-time display device can monitor product quality and ensure steady and recurring product quality.

▶ Dynamic injection data display function

The injection curves are recorded and compared automatically during injection. Alarm for abnormal cases, which ensures product qualification rate.



▶ Standard curve setting and display comparison function

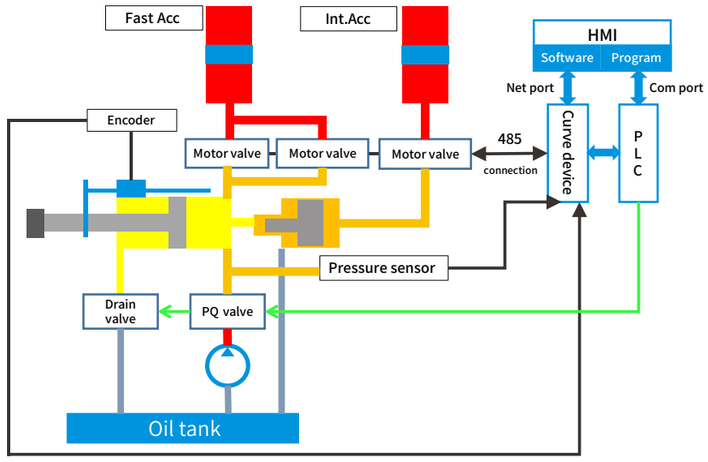
It can indicate the adjustment of the injection data clearly. The operators can adjust the injection data to the best setting for production.

Closed-loop Control (Optional)

Higher injection accuracy, more cost-effective, easy to maintain

A closed-loop can attain self-rectification for injection speed as well as closed-loop speed controls. The customers would only need to configure the injection specifications required by the product on the screen. The system would then self-adjust to reach the configured values.

Diagram



The closed-loop system is an optional feature which allows direct control of speed setting that enables it to achieve self-correction as well as smart controls.

Real-time Control (Optional)

Automatic Real-time Feedback and Modification, Accurate and Easy-to-Use

Applicable to Producing High-quality Die Cast Parts of Complex Structures

Yizumi's new generation of real-time control technology delivers closed-loop speed control through the whole process, as well as injection with high stability and consistency. With high-speed response, the system can automatically modify parameters and eliminate the possibilities of non-conforming products.

Constant-acceleration Slow Injection

Effectively reduce air trapped in molten metal. The plunger moves steadily to avoid impact on molten metal.

Fast Acceleration

Get ideal processes with shorter acceleration time.

Brake Under High Speed

Reducing pressure and speed is available during high-speed die casting, effectively avoiding flashes.

Integrated Automation Solution

(Optional)

What You Get Is Not Just A Die Casting Machine

Based on the concepts of "interconnection and integration" of Industry 4.0, Yizumi' s machines are equipped with interfaces and software for a variety of auxiliary equipment to establish a unified, standard, interconnected and automated work platform, providing customers with a complete automated integration solution for peripherals.

- Highly automated unmanned production, stable and reliable product quality, high repeatability.
- Shorter cycle time and higher productive efficiency.
- Highly integrated post-processing of semi-finished die cast parts, reducing space and transportation and achieving automation of machine and peripherals.
- Complete data record for the whole die casting process and production process, with real-time control and display.

Integration of Auxiliary Equipment

- Sprayer
- Ladler
- Part removal robot
- Air-cooling device
- Water-cooling device
- Pneumatic deslag device
- Dosing furnace
- Servo sawing device
- Safety fence
- Conveyor
- Vacuum machine
- Mold temperature controller
- Release agent mixing and feeding device
- Cylinder liner feed device
- Robotic polishing and deburring device
- Melting and holding furnace

YouTube
YIZUMI_official

Technical Data

	ITEMS	UNIT	DM180H	DM300H	DM400H	DM500H	DM650H	DM800H	DM900H
CLAMPING UNIT	Locking Force	kN	1800	3000	4000	5000	6500	8000	9000
	Locking Stroke	mm	380	460	550	580	670	760	760
	Space Between Tie Bars	mm	486×486	570×570	650×650	750×750	850×850	930×930	960×960
	Die Height (Min. - Max.)	mm	200-600	250-700	300-750	350-850	350-900	400-950	400-950
	Platen Size (H × V)	mm	710x710	870x870	1000x1000	1150x1150	1280x1280	1420x1420	1470x1470
	Ejector Force	kN	105	150	180	240	300	360	360
	Ejector Stroke	mm	90	110	130	140	150	180	180
INJECTION UNIT	Injection Force	kN	280	320	370	450	540	645	700
	Injection Stroke	mm	350	410	510	580	650	760	760
	Plunger Diameter	mm	50,60	50,60,70	60,70,80	70,80,90	70,80,90	80,90,100	80,90,100
	Injection Weight (Mg)	kg	0.9,1.3	1.0,1.5,2.0	1.9,2.6,3.4	2.9,3.8,4.9	3.3,4.4,5.5	5.1,6.4,7.9	5.1,6.4,7.9
	Injection Weight (Al)	kg	1.2,1.8	1.5,2.1,2.9	2.7,3.6,4.8	4.1,5.4,6.9	4.6,6.1,7.7	7.1,9,11.1	7.1,9,11.1
	Casting Pressure (intensifg.)	Mpa	142,99	163,113,83	130,96,83	116,89,70	140,107,84	128,101,82	139,110,89
	Casting Area	cm2	125,180	182,263,357	305,412,540	427,555,704	460,601,764	620,784,963	645,815,1010
	Max. Casting Area (40Mpa)	cm2	450	750	1000	1250	1625	2000	2250
	Injection Position	mm	0,-100	0,-125	0,-175	0,-220	0,-250	0,-250	0,-250
	Plunger Penetration	mm	130	155	210	250	280	300	300
	Casting Flange Diameter	mm	110	120	130	150	165	200	200
	Casting Flange Protrusion	mm	10	15	15	15	15	20	20
OTHER	Motor Capacity	kW	15	22	22	37	37	45	45
	System Working Pressure	Mpa	14	16	16	16	16	16	16
	Oil Tank Capacity	L	600	700	900	1100	1100	1600	1600
	Referential Machine Weight For Uplifting	kg	6400	11000	15000	25000	31000	40000	50000
	Machine Dimension (L× W× H)	mm	5600x1650x2700	6200x1870x2750	6900x2050x2880	7600x2300x2980	7950x2450x3100	9000x2580x3220	9200x2600x3250

Remark : We reserve the right to make any product improvement or specifications change without prior notice.
Any product photos shown in catalogue are for future reference only.

Standard and Optional Features (DM180H-DM900H)

ITEMS	DM180H	DM300H	DM400H	DM500H	DM650H	DM800H	DM900H
General					General		
Machine standard colour (White + Orange + Black)	●	●	●	●	●	●	●
Customer specified colour	○	○	○	○	○	○	○
Manual safety door (front, back)	●	●	●	●	●	—	—
Toggle safety door (front, back)	●	●	●	●	●	●	●
Electrical safety door (front)	○	○	○	○	○	●	●
Electrical safety door (back)	○	○	○	○	○	○	○
Electrical ground safety door (front, back)	○	○	○	○	○	○	○
Electrical System					Electrical System		
Siemens PLC	●	●	●	●	●	●	●
Omron PLC	○	○	○	○	○	○	○
10" touch screen	●	●	●	●	●	●	●
Exhaust fan	●	●	●	●	●	●	●
Air conditioner	○	○	○	○	○	○	○
Mould parameters storage	●	●	●	●	●	●	●
Extended mould parameters storage	○	○	○	○	○	○	○
Electronic locking force display	○	○	○	○	○	○	○
Clamping system					Clamping system		
Dual proportional control of die open and close	●	●	●	●	●	●	●
Lineal transducer for position control	●	●	●	●	●	●	●
DDC system	●	●	●	●	●	●	●
Manual die height adjustment	●	●	●	●	●	●	●
Smart-Self die height adjustment	○	○	○	○	○	○	○
Hydraulic tie bar extraction (1pc)	—	—	○	○	○	○	○
Hydraulic System					Hydraulic System		
TKS pump	●	●	●	●	●	●	●
Core and Ejector					Core and Ejector		
Dual proportional control	●	●	●	●	●	●	●
1 set on moving platen	●	●	—	—	—	—	—
2 sets on moving platen	○	○	●	●	●	●	●
1 set on fixed platen	○	○	○	—	—	—	—
2 sets on fixed platen	○	○	○	●	●	●	●
Partial squeezing function for core-pulling	●	●	●	●	●	●	●
Dual proportional control of ejector	●	●	●	●	●	●	●
Ejector stroke limit switch control	●	●	●	●	●	●	●
Injection System					Injection System		
Mechanical hand wheel control	●	●	●	●	●	●	●
Servo motor valve control	○	○	○	○	○	○	○
Electronic stroke control	●	●	●	●	●	●	●
Intelligent online PPS technology	○	○	○	○	○	○	○
Others					Others		
Oil temperture indiacator	●	●	●	●	●	●	●
Electronic oil temperature alarm	●	●	●	●	●	●	●
Plunger lubrication system	○	○	○	○	○	○	○
Electronic oil level alarm	●	●	●	●	●	●	●

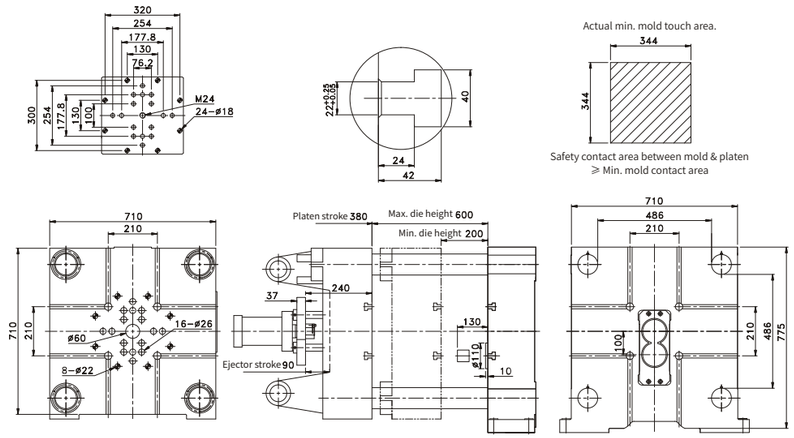
■ If the intelligent on-line QC system is selected, the HMI is changed to 12 inches.

● Standard feature ○ Optional feature

Platen Dimension Drawings

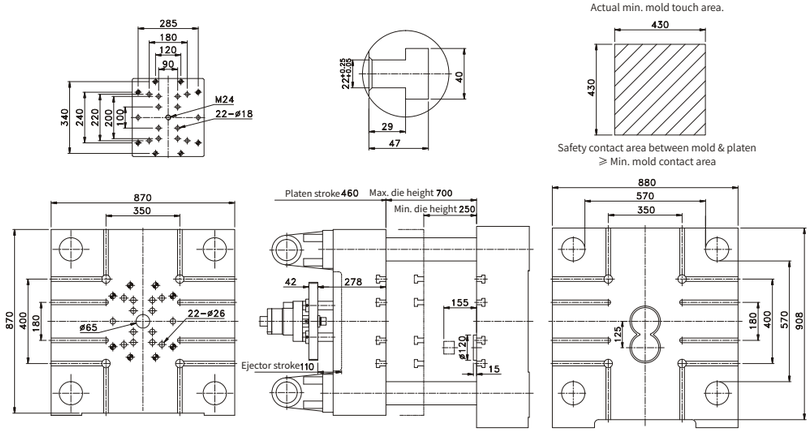
DM180H

Where marked with ⊕ , operator can put the ejector push / pull rod from the front or back of the ejector plate, Other holes only from the movable platen and to the rear platen. Mount the ejector push and pull rod symmetrically.



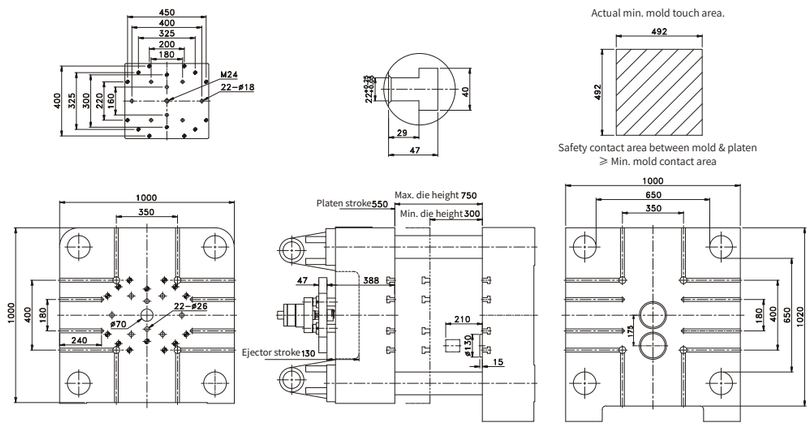
DM300H

Where marked with ⊕ , operator can put the ejector push / pull rod from the front or back of the ejector plate, Other holes only from the movable platen and to the rear platen. Mount the ejector push and pull rod symmetrically.



DM400H

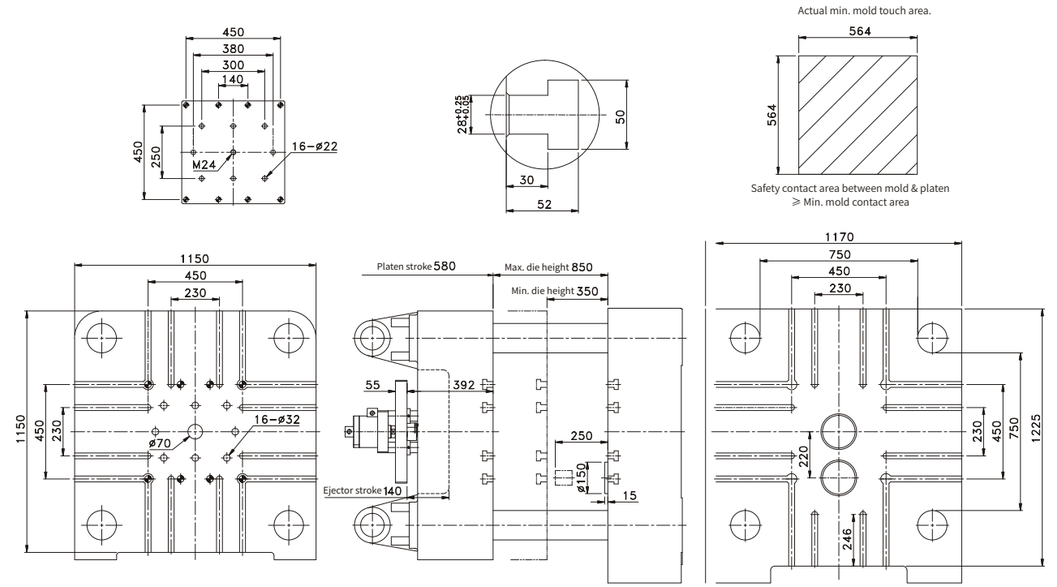
Where marked with ⊕ , operator can put the ejector push / pull rod from the front or back of the ejector plate, Other holes only from the movable platen and to the rear platen. Mount the ejector push and pull rod symmetrically.



Platen Dimension Drawings

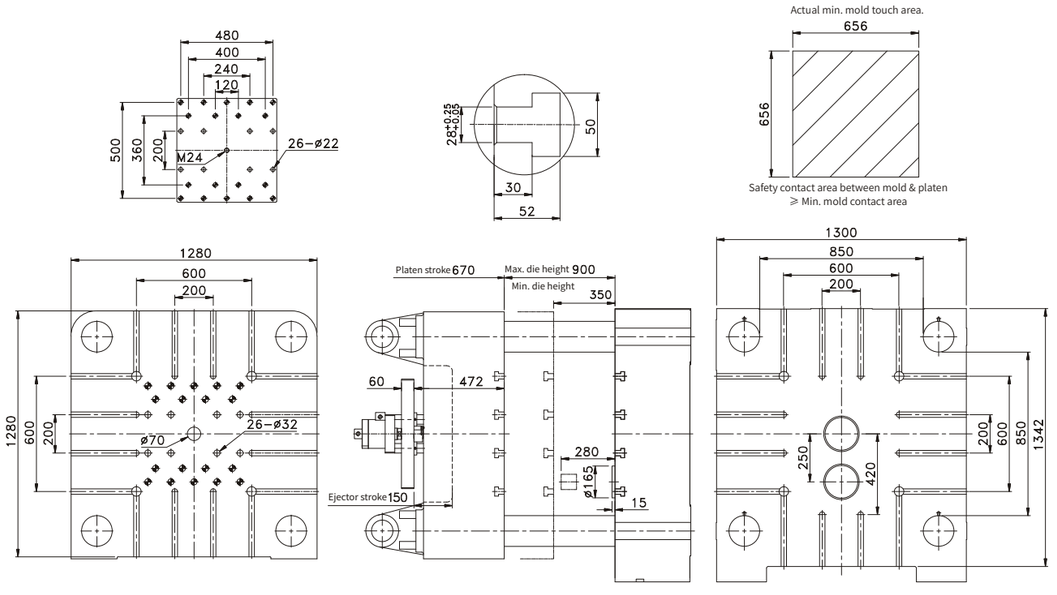
DM500H

Where marked with ⊕ , operator can put the ejector push / pull rod from the front or back of the ejector plate, Other holes only from the movable platen and to the rear platen. Mount the ejector push and pull rod symmetrically.



DM650H

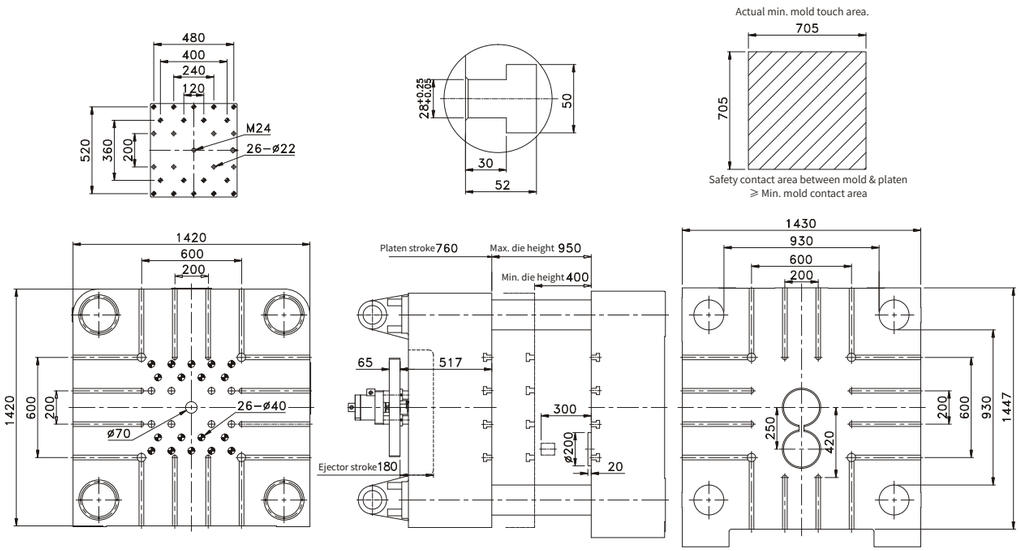
Where marked with ⊕ , operator can put the ejector push / pull rod from the front or back of the ejector plate, Other holes only from the movable platen and to the rear platen. Mount the ejector push and pull rod symmetrically.



Platen Dimension Drawings

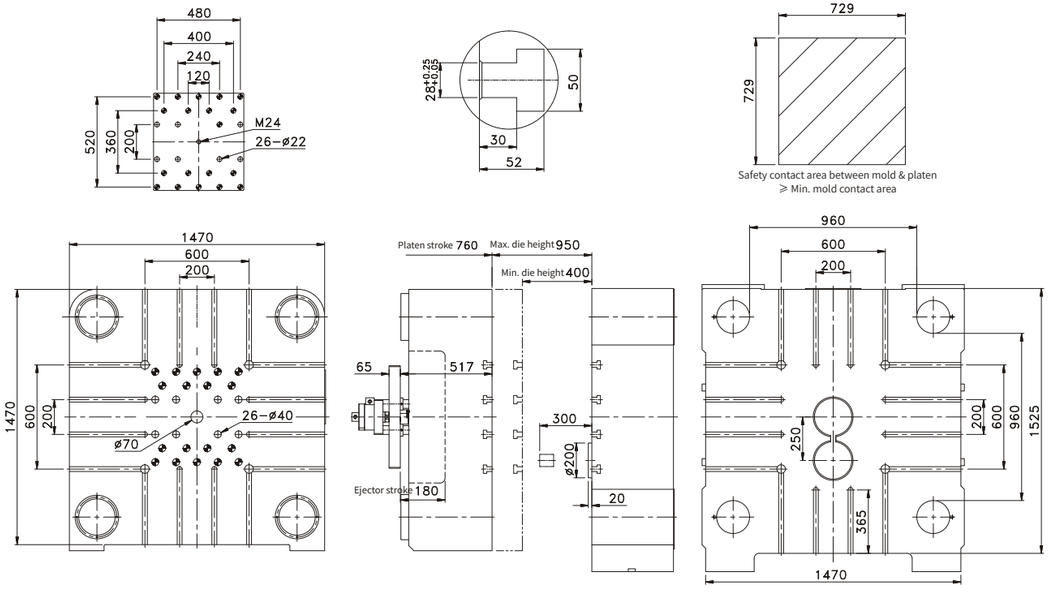
DM800H

Where marked with ⊕ , operator can put the ejector push / pull rod from the front or back of the ejector plate, Other holes only from the movable platen and to the rear platen. Mount the ejector push and pull rod symmetrically.



DM900H

Where marked with ⊕ , operator can put the ejector push / pull rod from the front or back of the ejector plate, Other holes only from the movable platen and to the rear platen. Mount the ejector push and pull rod symmetrically.



Yizumi's Service Network