Guangzhou Zhen Gao Die-casting Machine Co.,Ltd

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HT 20240802-IV

ZG Cold Chamber Die Casting Machine

ZG180-4500

ZHENGAO
Die-casting Machine

ZHENGGAO'S HISTORY

IN Sep,2012
Bao Helin, chairman of Guangzhou Huayan Precision Machinery Co., Ltd., is a wholly-owned acquisitions, and renamed "Guangzhou Zhen Gao Die-casting Machine Co.,Ltd. " continue to serve customers.

IN 2009-May,2012
Guangzhou Machinery Engineering Research Institute (China mechanical equipment group Company) become a wholly owned holding company.
CCM series cold chamber machine (380T-680T) was successfully developed and put into the market.

IN 2009
Adopted ISO9001 certification .

IN 2006
Awarded Guangdong famous brand .

IN 2005
Fast melt and energy-saving furnace ,awarded national patent .
Awarded CE certification .
The first CCM series (130-280T) cold chamber machine was successfully developed and put into the market.

IN 2004
Evaluated as "Qualified Products in National Quality Checking", by China Quality Checking Association.

IN 2003-2008
Hong Kong Chen Hsong out of fund stock,and remain technical stock ,instead by Guangzhou Machinery Engineering Research Institute (China mechanical equipment group Company) holding 75% shares, and the remaining shares by Australian, American composition.

IN 2002
Evaluated as "Excellent quality brand", by the China Technology Monitoring Information Association .

IN 1996
In an only one-time national wide, among monitoring draw-checking for product quality, Zhen Gao runs No.1 .

IN 1993-2003
Hong Kong Chen Hsong Group and Guangzhou Machinery Institute (formerly China Machinery Industry Ministry of enterprise) joint venture, set up "Zhen Gao" company , specializing in manufacturing die casting machine.

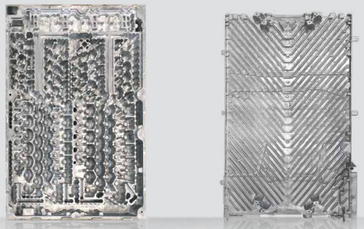
COMPANY PROFILE

Guangzhou Zhen Gao Die-casting Machine Co., Ltd. was established in the year of 1993, and it is mainly in manufacturing hot chamber & cold chamber die casting machine. In the year of 1996, in an only one-time national wide, among monitoring draw-checking for product quality, it runs Number one in the profession. In the year of 2002 again, it is evaluated as "Excellent quality brand", by the China Technology Monitoring Information Association. In the year of 2004, our "Zhen Gao" Cold Chamber & Hot Chamber Die Casting Machine are evaluated as "Qualified Products in National Quality Checking", by China Quality Checking Association. Nowadays, "Zhen Gao" is already become a well-known leading brand in domestic market of die casting machine. Zhen Gao die casting machine has owned CE. The products are well sold to all places in China, and also as far as to many countries, such as Europe, South America, Africa,Russia ,Middle-East, and South-East Asia.

Followed with the principle of "Customers are honored and Precision is reached for after precision," quality and service management is further enhanced. We have the ability to provide high quality machine and good service. Take high tech & excellent quality as a tenet, and provide for customers with superior machines at performance vs prices. Zhen Gao will be more and more professional!

Product Application of Zhengao Die Casting

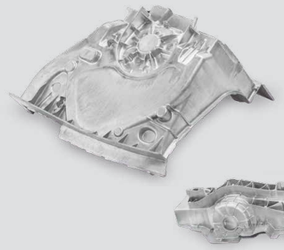
Provide customers with efficient die casting solutions

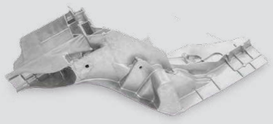


SOLUTION FOR 5G COMMUNICATION

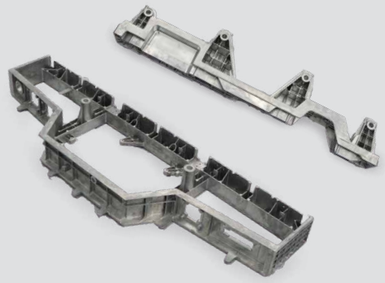
SOLUTION FOR 3C PRODUCTS

SOLUTION FOR LARGE INTEGRATED STRUCTURAL COMPONENT



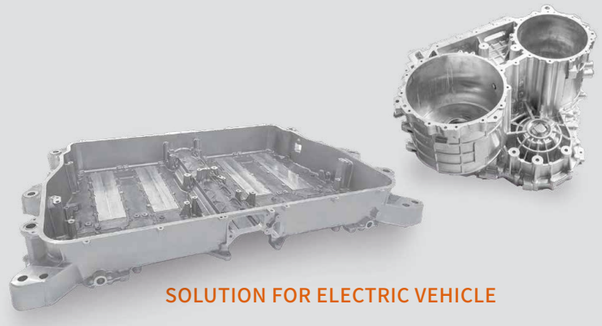


SOLUTION FOR AUTOMOBILE STRUCRAL PARTS



SOLUTION FOR BUILDING FORMWORK

For more customized solution, please contact us.

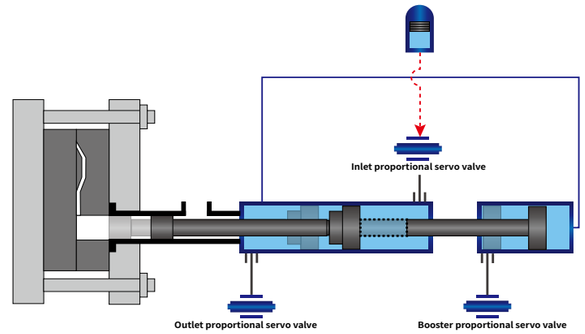


SOLUTION FOR ELECTRIC VEHICLE

Dual closed-loop full real-time control injection system (optional)

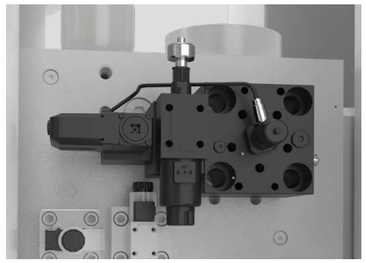
ZG cold chamber die casting machine series

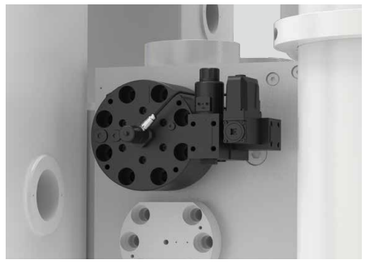
Zhengao Die Casting's newly developed next-generation dual closed-loop real-time control injection system utilizes an advanced control system to achieve closed-loop control of casting pressure and injection speed. It also provides closed-loop control of intensification pressure and pressure build-up time, with the intensification pressure adjustable in six stages. This system enables a high-quality, highly stable, and perfect injection process, offering ideal equipment support for the production of high-precision, high-quality die-cast parts.

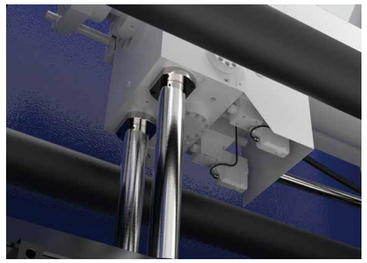


Performance of dual closed-loop full real-time control injection system

- 0.25ms real-time control cycle
- With uniform acceleration function
- Configurable ten-stage injection speed, six-stage intensification pressure, wider process adjustment range
- ±1bar intensification pressure real-time control and intensification pressure repeat accuracy
- 0.05m/s-8m/s stepless adjustment for Injection speed, superior acceleration with ultra-low speed extrusion function
- Closed loop control of pressure with very short build-up time
- Excellent high speed repetition accuracy and slow speed repetition accuracy
- With end brake to realize the injection without flash
- Start without impact

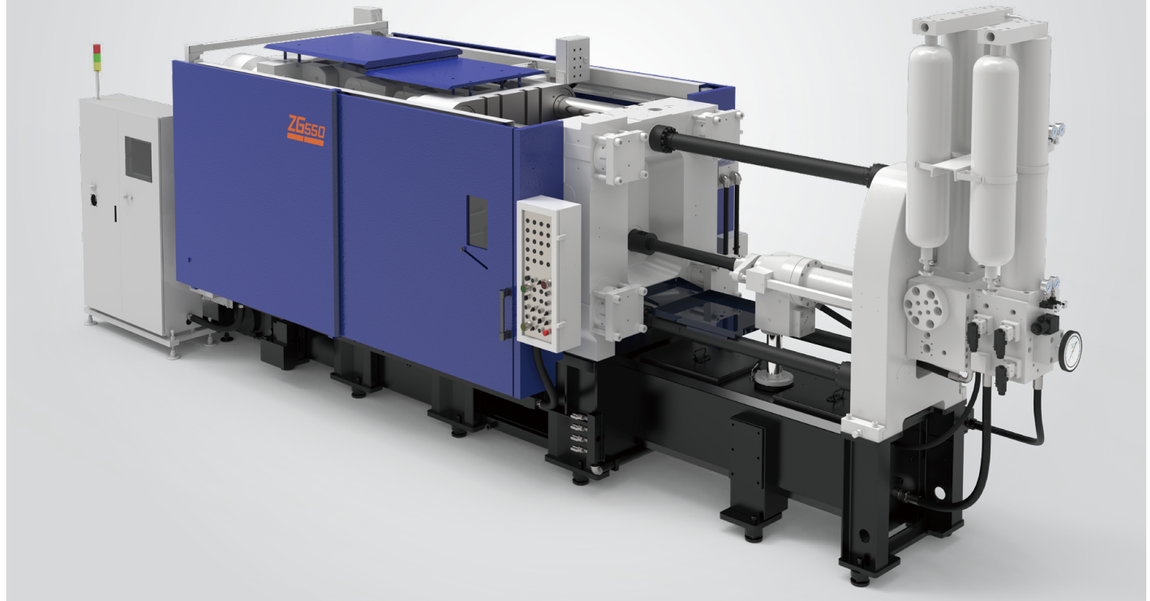


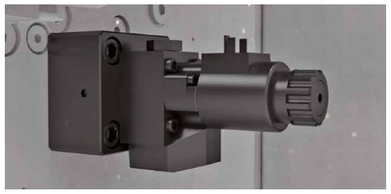




ZG cold chamber die casting machine

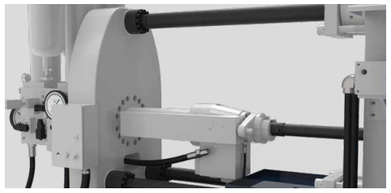
180T-850T





◎ Customized second fast valve

The fast response valve specially developed for the speed II acceleration performance of the die casting machine has faster, more stable and more durable injection speed.



◎ Thickened enterprise board

The thickened enterprise board and the thick pull rod are conducive to maintaining the coaxial degree of injection for a long time.

◎ Automatic pressure relief of accumulator

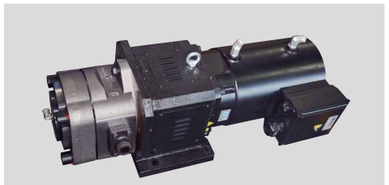
Equipped with quick/boost accumulator unloading valve, it can realize automatic pressure relief of shutdown accumulator with high safety.

◎ Active oil temperature cooling

Active cooling with an independent cooling pump drawing oil from the oil tank to circulate cooling, making the cooling more reliable. (servo)

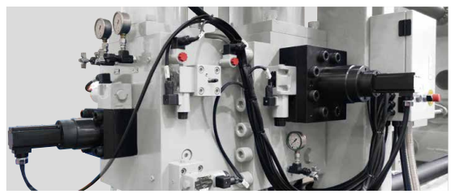
◎ High performance servo system

Adopting Zhengao high performance servo system with remarkable energy saving and configured with efficient and stable oil cooling method. (servo)



◎ Dual closed-loop real-time control injection system (optional)

Equipped with fast inlet servo valve + fast outlet servo valve + booster outlet servo valve to realize double closed-loop control of pressure and speed.



◎ Semi closed-loop injection system (optional)

Equipped with electric control valve + injection curve to realize the automatic adjustment of speed I, speed II and boost speed, and automatic correction; at the same time, it can display the pressure, speed, position and other curves, and record the injection data.

◎ Intelligent Keba computer control system

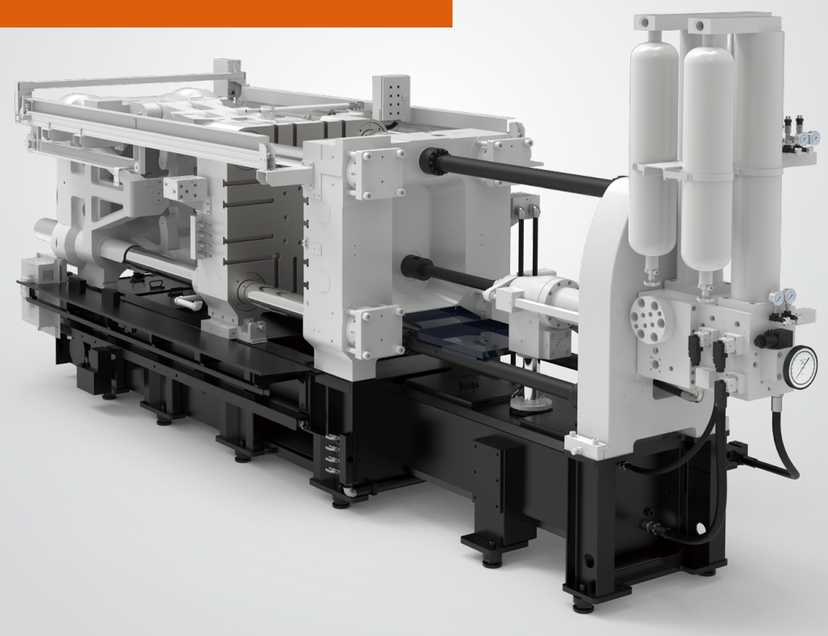
Equipped with the mold locking force display (servo), injection curve and intelligent quality online function of the whole machine, it has a 12 Inch Touch screen with powerful function, stable performance, good expansibility and long service life.

◎ Two-in-one independent electric box

The main control electric box and servo electric box are combined into one, realizing the integral hoisting. After installation, it is separated from the frame without vibration interference.

ZG cold chamber die casting machine

180T-850T

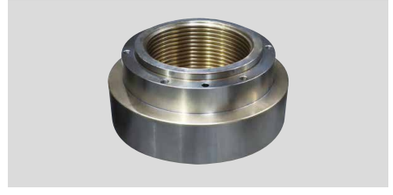


◎ Special tie bar

The tie bar is made of special materials developed by the Zhengao Materials Research Institute, with an enlarged diameter, good stress and strong rigidity. After years of practical use, it can significantly extend the service life of the pull rod.

◎ High-performance lock shaft

The lock shaft is made of 38CrMoAl material and is nitridated, with a large diameter, high strength, good toughness and long service life.

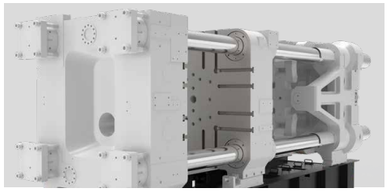


◎ Adjustment nut

The adjustment nut is made of inner pouring aluminum bronze, which has higher mechanical properties, wear resistance, corrosion resistance, cold resistance, heat resistance and no ferromagnetism; it has good antifriction, good elongation and long service life; it can ensure smooth mold adjustment, effectively prevent mold adjustment from not moving, and protect pull rod thread.

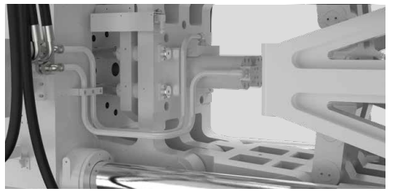
◎ Thickened three platens

Thickened three platens have high strength, good wear resistance and small deformation.



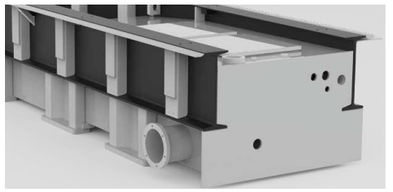
◎ Stiffener structure of middle plate

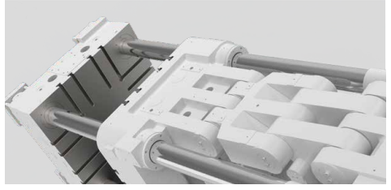
The structure of supporting rib plate is added to the middle plate, which effectively reduces the deformation of the middle plate, and fixes the ejector cylinder on the rib plate, which solves the problems of ejector cylinder swing, uneven ejector force, broken ejector pin, broken ejector cylinder piston rod, etc.



◎ Machine body design

The machine body is of high-strength I-beam structure. The centerline of the sliding foot of the template and the center line of the upper and lower tie bars are in the same plane with the I-beam support bar. After annealing treatment, the anti-twisting ability and rigidity of the frame are greatly enhanced, which ensures the overall accuracy of the machine for a long time.



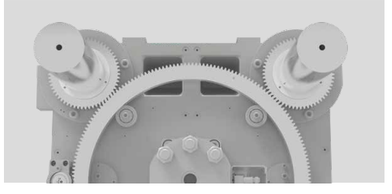


◎ Mold closing motion analysis

Through the analysis of Zhengao's unique hinge motion software, the five-point mechanical structure is optimized and advanced slope control mode is adopted to make the energy output curve of the pump station system, the motion curve of the mold locking cylinder and the motion curve of the mechanical hinge be almost perfectly matched; within the range of the mold opening stroke, the middle plate can stop at any position within the opening stroke and with high repetition accuracy, effectively shortening the production cycle.

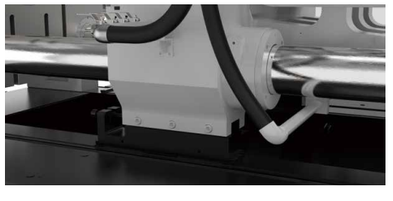
◎ Intelligent mold adjustment structure

Equipped with automatic mold adjustment function, the hinge can be extended to adjust the mold. The mold adjustment motor is equipped with a self-locking function, which effectively solves the problem of the reduction of the clamping force caused by the retreat of the mold closing mechanism, and better guarantees the stability of the product.



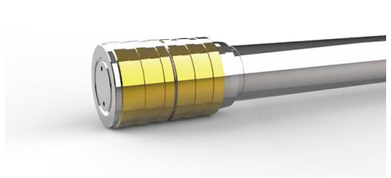
◎ Extended guide sleeve structure

The extended guide sleeve structure of middle plate can ensure more smooth and reliable operation of middle plate.



ZG cold chamber die casting machine

1000T-4500T



◎ Large material cylinder piston

The exclusive rigid welding structure can reduce the friction resistance in the process of movement, reduce energy loss, effectively avoid the internal leakage caused by the pulling of the injection cylinder and prolong the service life of the seal.

◎ Multiple hydraulic oil filtration

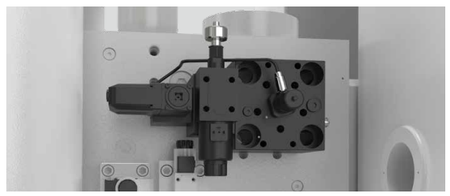
Equipped with oil suction filter, outlet high-pressure filter, bypass filter, core-pulling oil return filter, injection servo filter, etc., it can greatly improve the protection of hydraulic oil cleanliness and ensure the reliable work and service life of hydraulic components.

◎ Detection and control of hydraulic oil

Equipped with multiple oil temperature and oil level display and alarm, and equipped with automatic oil temperature preheating function and independent pump active water cooling system, oil temperature control is more reliable.

◎ Design of independent oil tank

The independent oil tank structure and paint baking process are more favorable to the hydraulic system, and the oil change and maintenance are more convenient.

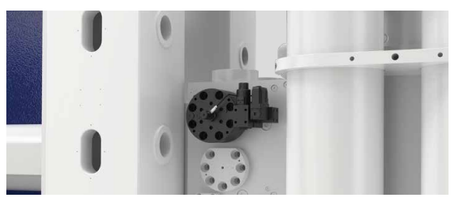


◎ Double closed-loop full real-time control system

Equipped with fast inlet servo valve + fast outlet servo valve + booster outlet servo valve to realize fast double closed loop control of pressure.

◎ Substation mode

The industry's first to use the mode of substation mode (IO distributed), which is more stable and anti-interference; multiple CPU partitions are independently controlled and the circuit is simplified, making the signal transmission faster.



◎ High system pressure

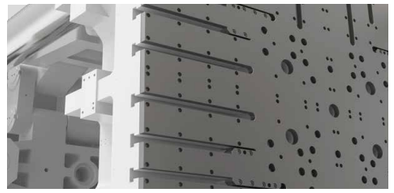
The pressure of the system can reach 210bar, the reaction speed of the whole machine is faster and the performance is better.

◎ High performance servo system

Adopting Zhengao high performance servo system with remarkable energy saving and configured with efficient and stable oil cooling method.

◎ Upgraded tie bar material

CL516, which is newly developed by Zhengao Materials Research Institute, has higher strength and better toughness.



◎ Auxiliary template

The movable and fixed platen mold surfaces are equipped with P20 mold steel (auxiliary templates), completely solving the long-standing industry issue of mold surface indentation. This also enhances the rigidity of the templates (optional for models 1000 and 1300).

◎ Hydraulic pulling rod

Hydraulic pulling rod is above the operation side; the installation position of the hydraulic pulling rod above the non-operation side is reserved for self-selection.

◎ Intelligent KEBA control system

High performance hardware and rich functionality software systems can collaborate with various peripheral devices and MES digital factories (OPC-UA) to provide customers with precise and efficient control solutions; The 18 inch multi touch screen provides a better user experience with its simple operation.

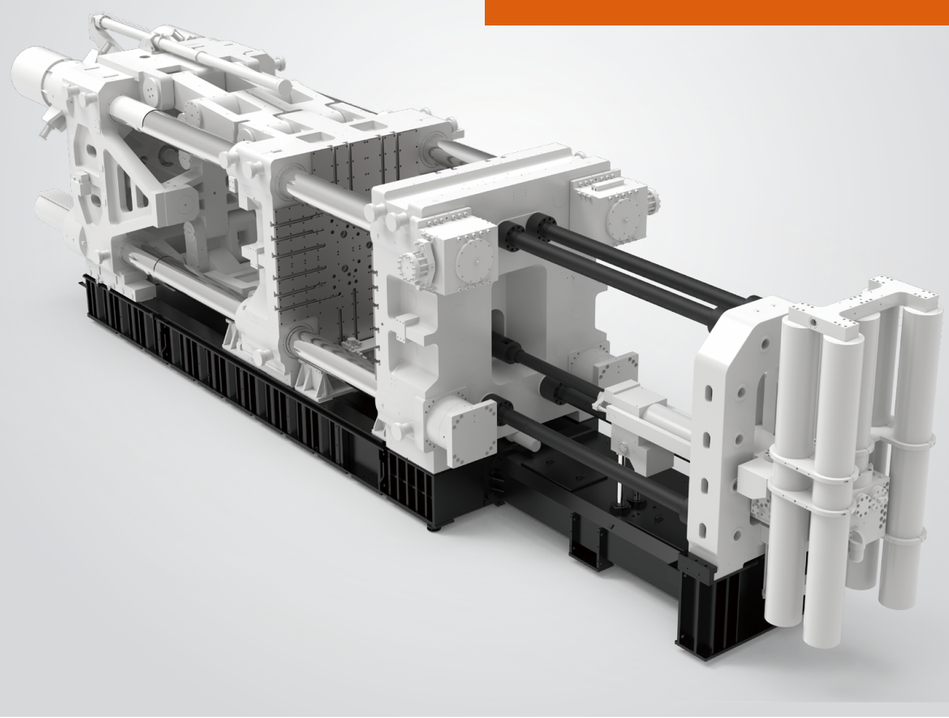
◎ Mold opening and closing control

The large flow proportional valve is used to control mold opening and closing, making the mold opening and closing reaction faster and the position more accurate. At the same time, the clamping hydraulic safety valve is configured, making the clamping safety protection more reliable.

◎ Ejector mechanism

The ejector position is controlled by MTS magnetic scale + travel switch, which is a dual configuration for easy switching.

ZG cold chamber die casting machine 1000T-4500T

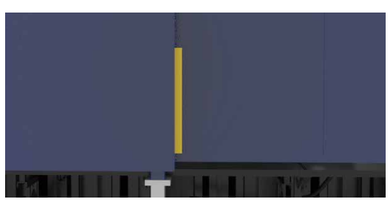


◎ High-strength body

Exclusive use of I-beam or H-beam structure frame, and the overall annealing stress relief, good force, rigidity, good resistance to deformation.

◎ Multiple security facilities

Equipped with safety module, front door safety grating, life safety lock, mold locking confirmation, machine hinge grating protection and multiple emergency stop switches, making operation safety more secure.



Technical parameters
180T-1000T

		ZG180	ZG350	ZG450	ZG550	ZG700	ZG850	ZG1000
Clamping force	kN	1800	3500	4500	5500	7000	8500	10000
Clamping stroke	mm	380	460	550	580	670	760	880
Mold thickness (min-max)	mm	250-600	250-700	300-750	350-850	350-900	400-950	450-1150
Tie Bar Spacing (Horizontal x Vertical)	mm	460×460	570×570	650×650	755×755	860×860	930×930	1030×1030
Platen Size (Horizontal x Vertical)	mm	710×710	910×910	1050×1050	1200×1200	1380×1380	1470×1470	1680×1680
Ejection force	kN	125	180	200	250	360	360	500
Ejection stroke	mm	85	110	130	150	160	180	200
Injection Force (Intensified)	kN	300	380	476	580	605	695	885
Injection stroke	mm	350	410	510	600	650	760	800
Plunger Tip Diameter	mm	40/50/60	50/60/70	60/70/80	70/80/90	70/80/90	80/90/100	90-120
Injection volume (aluminum)	kg	0.8/1.3/1.9	1.5/2.2/3.0	2.7/3.7/4.8	4.3/5.7/7.2	4.7/6.1/7.7	7.2/9.1/11.2	9.5-17
Injection position	mm	-140	-125/-140	-175	-175	-250	0,-250	0,-300
Plunger Tip Protrusion	mm	147	152	210	270	280	300	300
Shot Sleeve Flange Diameter	mm	101.6	101.6	101.6	165	165	200	240
Shot Sleeve Flange Protrusion From Fixed Platen	mm	12	12	12	15	15	20	20
Casting Pressure (Intensified)	MPa	239/153/106	194/135/99	168/124/95	151/115/92	157/120/95	138/109/89	139-78
Casting area	cm^2	75/117/170	180/259/353	268/363/474	364/478/601	446/583/737	616/780/955	719-1278
Maximum casting area (40MPa)	cm^2	450	875	1125	1375	1750	2125	2500
Motor power/servo motor power	kW	18.8	31.8	43	55	65	65	65
System working pressure	MPa	16	16	16	16	16	16	19
Lifting reference weight	T	7	11.8	16.8	22	34	38	62
Hydraulic Oil Filling Volume	L	420	680	760	960	1150	1250	1850
Overall dimension (L x W x H)	mm	5900×1600×2750	6200×1800×2550	7300×2000×2900	8350×2250×2950	8800×2350×2950	9500×2500×3200	9850×3800×3100

The Company reserves the right to modify the technical parameters without prior notice.

Technical parameters
1300T-4500T

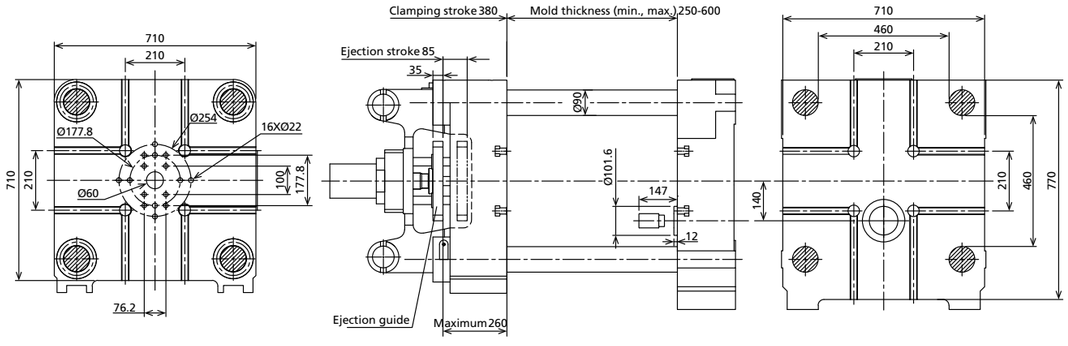
		ZG1300	ZG1650	ZG2000	ZG2500	ZG3000	ZG3500	ZG4000	ZG4500
Clamping force	kN	13000	16500	20000	25000	30000	35000	40000	45000
Clamping stroke	mm	1000	1200	1400	1500	1550	1600	1800	1900
Mold thickness (min-max)	mm	450-1200	500-1400	600-1600	750-1800	800-2000	800-2000	900-2100	900-2200
Tie Bar Spacing (Horizontal x Vertical)	mm	1100×1100	1250×1250	1450×1350	1600×1500	1650×1650	1750×1650	1850×1850	1965×1865
Platen Size (Horizontal x Vertical)	mm	1760×1760	2000×2000	2350×2250	2500×2500	2650×2650	2800×2700	2960×2900	3100×3000
Ejection force	kN	560	570	650	750	900	900	1000	1000
Ejection stroke	mm	210	250	300	300	300	300	350	400
Injection Force (Intensified)	kN	1170	1295	1700	1700	2110	2410	2500	2500
Injection stroke	mm	910	970	1050	1100	1250	1400	1600	1600
Plunger Tip Diameter	mm	100-140	110-150	130-170	140-180	150-190	160-200	160-200	180-220
Injection volume (aluminum)	kg	13.4-26.3	17.3-32.1	26.1-44.7	31.7-52.5	41.4-66.4	52.8-82.5	60.3-94.2	76.3-114
Injection position	mm	-160,-320	-175,-350	-175,-350	-200,-400	-250,-450	-300,-600	-300,-600	-300,-600
Plunger Tip Protrusion	mm	355	400	440	450	550	600	745	700
Shot Sleeve Flange Diameter	mm	240	260	260	280	280	320	320	340
Shot Sleeve Flange Protrusion From Fixed Platen	mm	25	25	30	30	30	35	35	35
Casting Pressure (Intensified)	MPa	143-73	136-73	128-75	110-67	119-74	120-77	124-80	98-66
Casting area	cm^2	910-1780	1210-2260	1562-2670	2270-3730	2510-4030	2915-4545	3217-5027	4580-6842
Maximum casting area (40MPa)	cm^2	3250	4125	5000	6250	7500	8750	10000	11250
Motor power/servo motor power	kW	55x2	55x2	55x3	55x3	55x3	55x4	55x4	55x4
System working pressure	MPa	21	21	21	21	21	21	21	21
Lifting reference weight	T	82	110	135	160	190	220	270	300
Hydraulic Oil Filling Volume	L	2120	2120	3350	3350	3450	3750	3750	3750
Overall dimension (L x W x H)	mm	12150×4450×4250	13100×4600×4300	14400×4750×4450	15000×5450×4500	15800×5450×4500	16600×5900×4600	18250×5900×4800	19000×6000×5100

The Company reserves the right to modify the technical parameters without prior notice.

Note: if an independent core-pulling pumping station is selected, the injection volume of hydraulic oil will be increased by 450L.

Template diagram
180T-550T

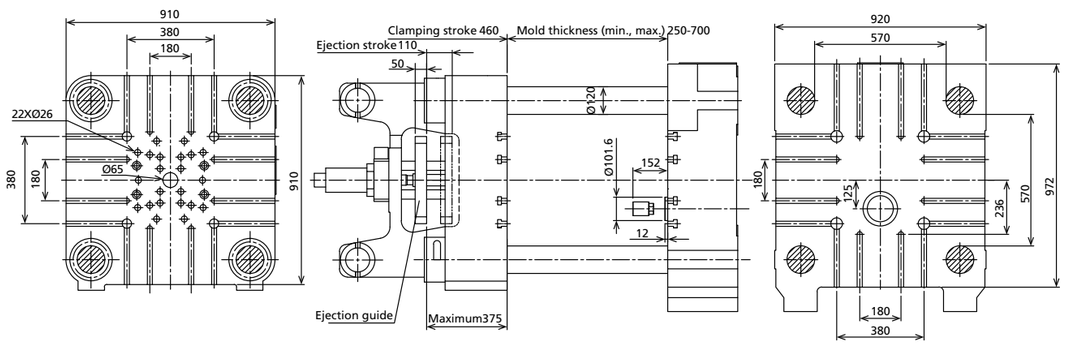
ZG180



Front view of ejection guide

T-slot

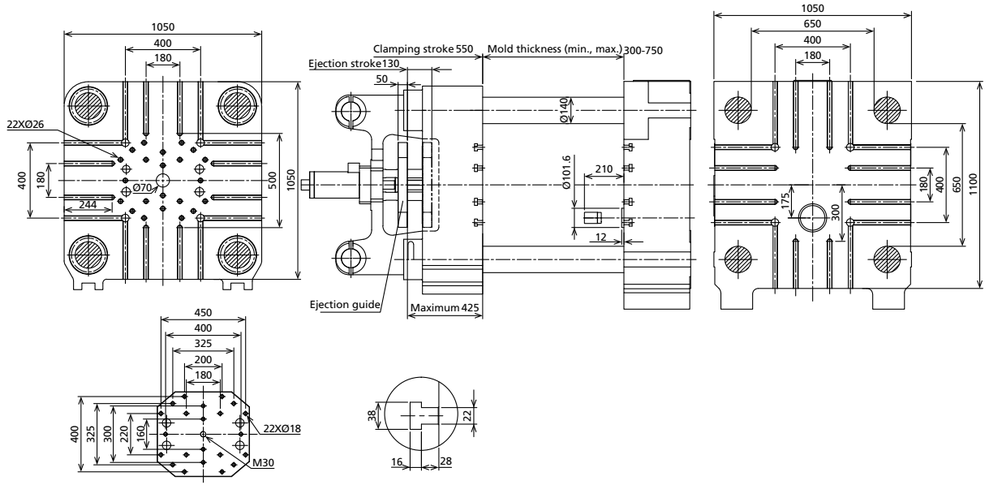
ZG350



Front view of ejection guide

T-slot

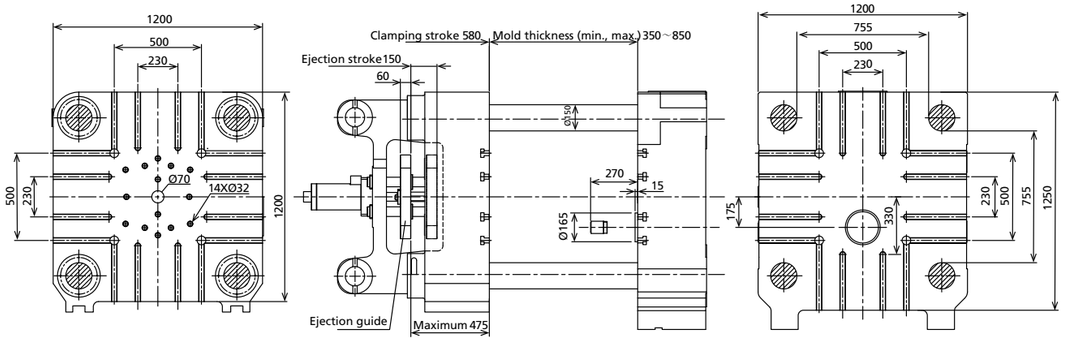
ZG450



Front view of ejection guide

T-slot

ZG550

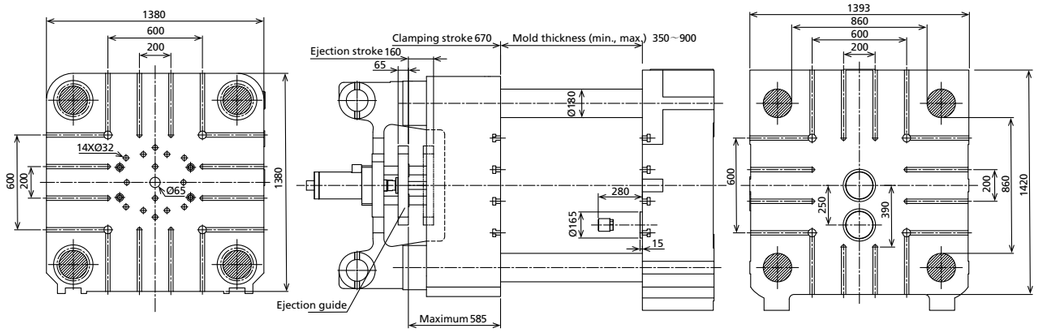


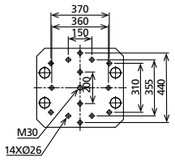
Front view of ejection guide

T-slot

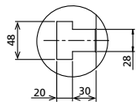
Template diagram
700T-1300T

ZG700



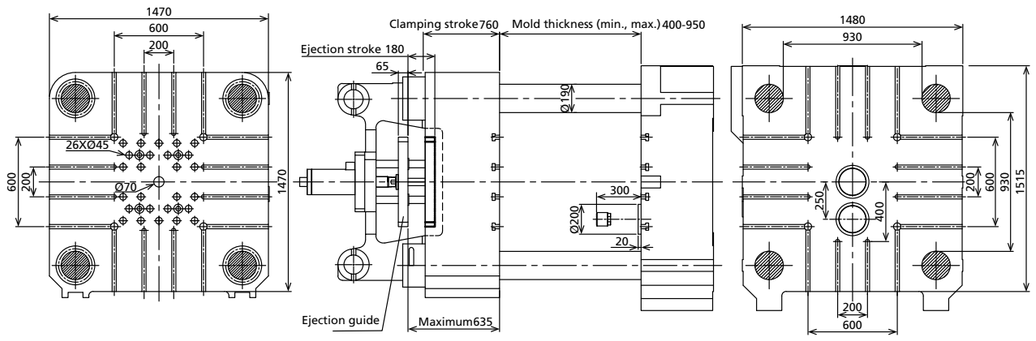


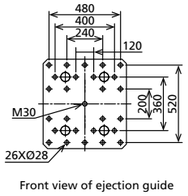
Front view of ejection guide



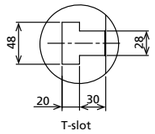
T-slot

ZG850



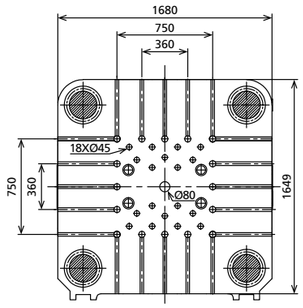


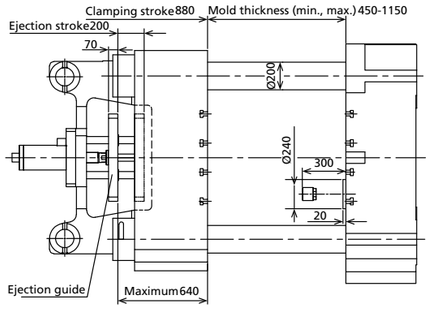
Front view of ejection guide

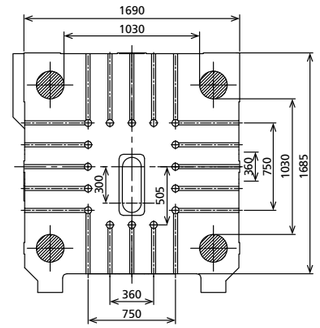


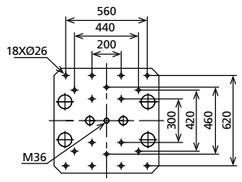
T-slot

ZG1000

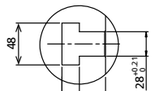






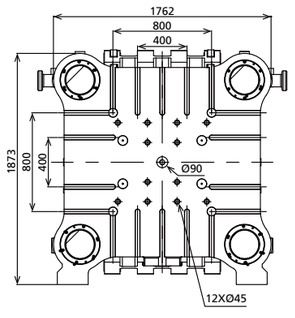


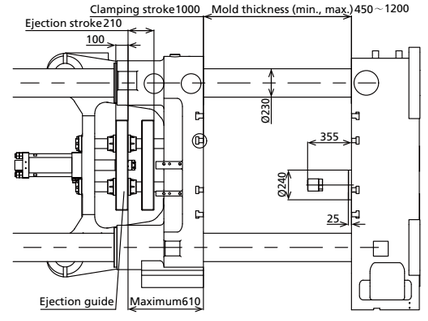
Front view of ejection guide

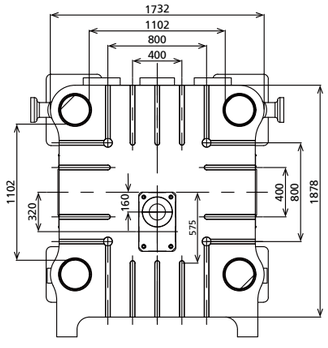


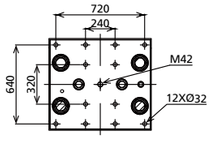
T-slot

ZG1300

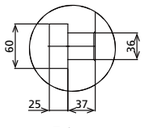








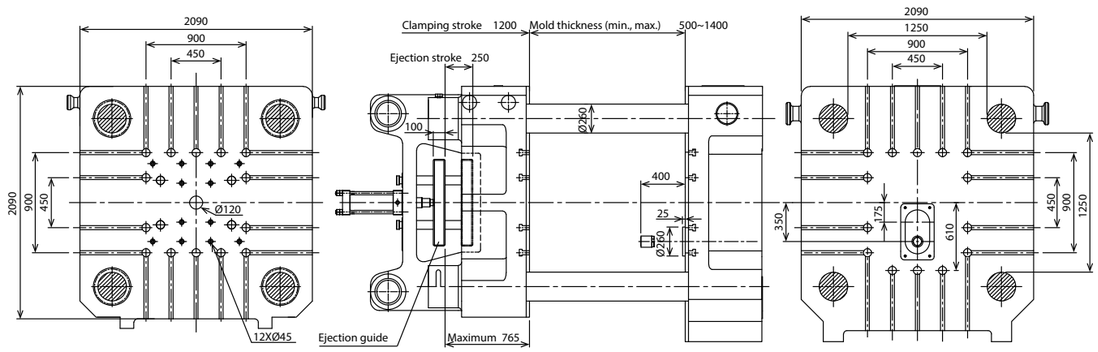
Front view of ejection guide

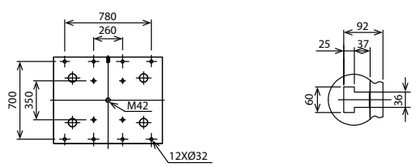


T-slot

Template diagram
1650T-3000T

ZG1650

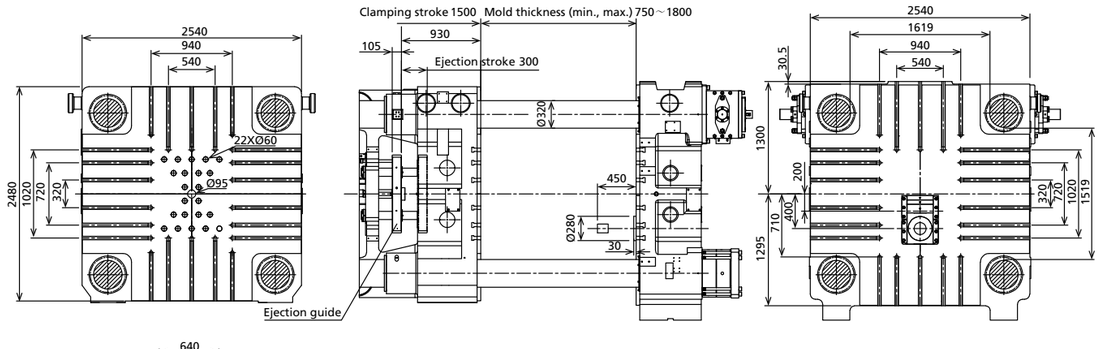


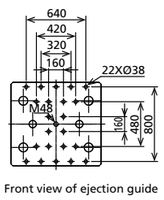


Front view of ejection guide

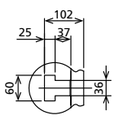
T-slot

ZG2500



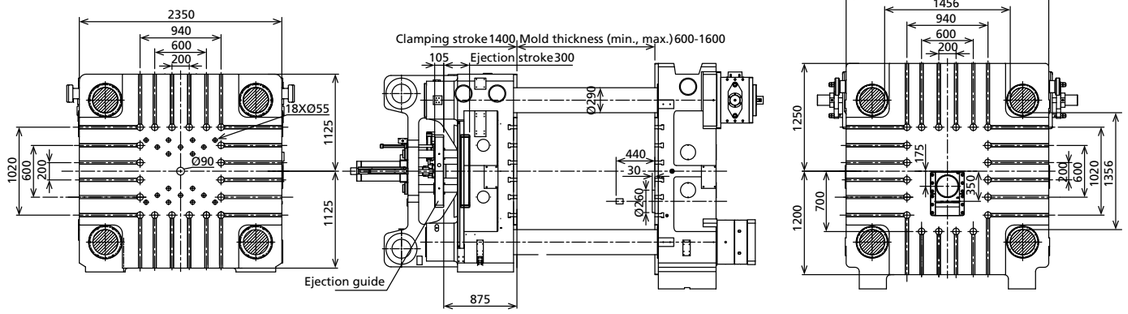


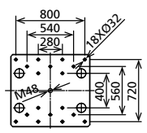
Front view of ejection guide



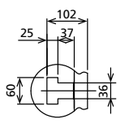
T-slot

ZG2000



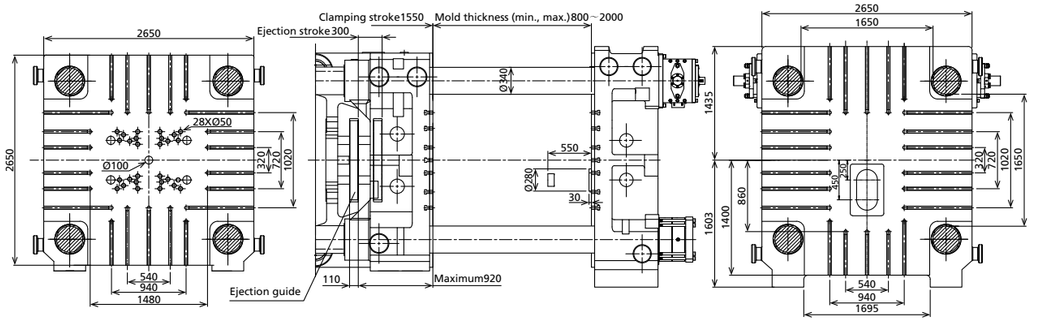


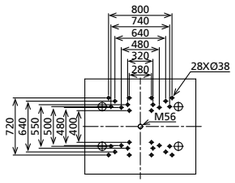
Front view of ejection guide



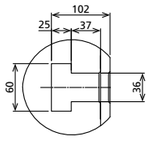
T-slot

ZG3000





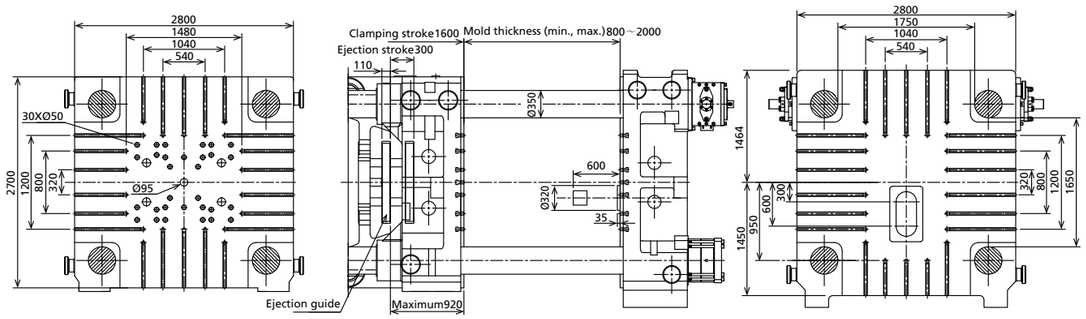
Front view of ejection guide

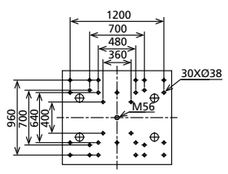


T-slot

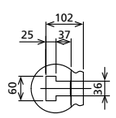
Template diagram
3500T-4500T

ZG3500



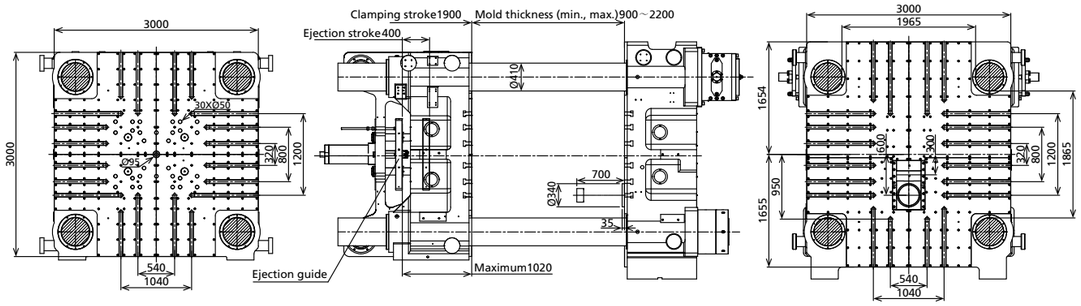


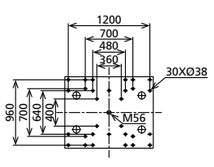
Front view of ejection guide



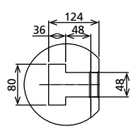
T-slot

ZG4500



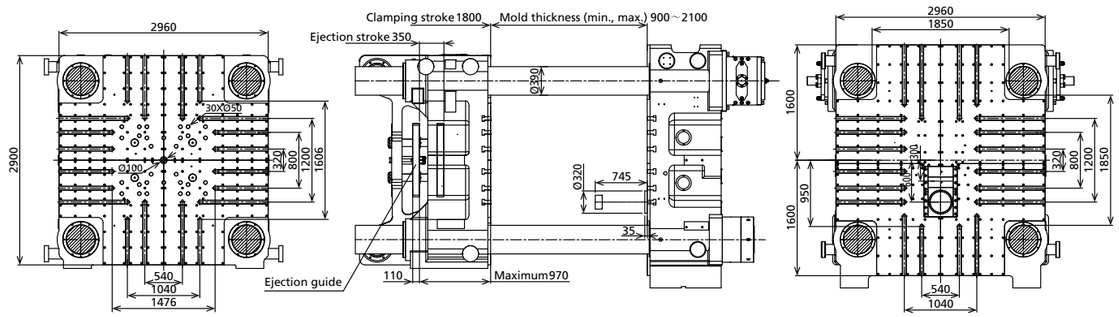


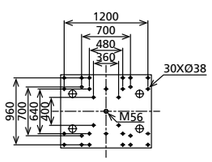
Front view of ejection guide



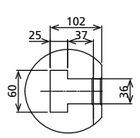
T-slot

ZG4000



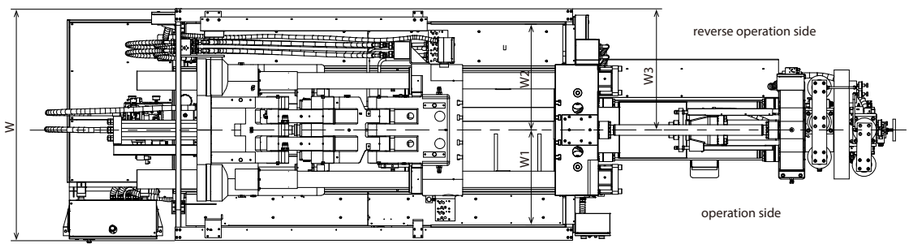


Front view of ejection guide



T-slot

Top view of equipment



Distance between front and rear safety doors

Model	ZG180	ZG350	ZG450	ZG550	ZG700	ZG850
RTC injection system	○	○	○ / ●	○ / ●	○ / ●	○ / ●
Overall width W (mm)	1650	1825	1975/2075	2200/2520	2300/2810	2470/2825
Inner distance W1 of safety door on operation side (mm)	740	760	870/820	925/1080	1010/1230	1070/1230
Inner distance W2 of safety door on reverse operation side (mm)	760	880	940/900	1000/1080	1090/1230	1210/1230
Maximum distance W3 (mm) of picker	850	970	1030/1060	1090/1240	1180/1390	1300/1390

Model	ZG1000	ZG1300	ZG1650	ZG2000	ZG2500	ZG3000	ZG3500	ZG4000	ZG4500
RTC injection system	●	●	●	●	●	●	●	●	●
Overall width W (mm)	3940	4560	4620	4960	5230	5330	5620	5620	5830
Inner distance W1/W2 of safety door(mm)	1770	2080	2110	2280	2415	2445	2590	2590	2695

Note: The standard width of the single-side inner platform is 850mm for ZG1000T-1650T models, and 1000mm for ZG2000T and above.

Note

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