



HDC Cold Chamber Die Casting Machine  
**HDC200-HDC8800 II**



HT 20260421-CV

**宁波保税区海天智胜金属成型设备有限公司**  
Ningbo Free Trade Zone Haitian Zhisheng Die Casting Equipment Co., Ltd.

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# FOCUS AND EXPANSION THROUGH DIVERSIFICATION

## SMART MANUFACTURING WITH TECHNOLOGY TO THE POINT



Pioneering innovation and committed to building

## FIRST-CLASS METAL FORMING EQUIPMENT

### Haitian Die Casting

Haitian Die Casting, located in Beilun District, Ningbo City, with 3 manufacturing bases covering over 200,000 square meters and a 5,000-square-meter global application center, is engaged in R&D and production of various series of cold chamber die-casting machines, hot chamber die-casting machines, and thixomolding magnesium machines. Based in Ningbo and serving the globe, Haitian Zhisheng has established a global development network integrating sales, application and service in 20+ countries across five continents.

Haitian Die Casting, inheriting Haitian's half-century of precision equipment manufacturing and management philosophy, and adhering to technological innovation and win-win cooperation, is committed to providing customers with cost-effective high-end die casting, magnesium-alloy injection molding equipment and total solutions.

## 2024

- ◎ HMG3600 thixomolding magnesium machine launched

## 2022

- ◎ HMG series thixomolding magnesium machine launched

## 2020

- ◎ Haitian Die Casting Global Application Center inaugurated

## 2018

- ◎ A dedicated thixomolding magnesium R&D team established

## 2016

- ◎ Haitian Die Casting incorporated

## 2025

- ◎ 2<sup>nd</sup>-generation HDC cold-chamber die-casting machine launched
- ◎ HMG7000 thixomolding magnesium machine launched

## 2023

- ◎ HMG3000 thixomolding magnesium machine launched

## 2021

- ◎ 100,000-sq.m manufacturing facility in Free Trade Zone commissioned
- ◎ First HDC8800 die-casting machine delivered

## 2019

- ◎ First HDC4500 die casting machine delivered

## 2017

- ◎ HDC series die casting machine launched

# Manufacturing Capability

## 60 years of experience in machinery manufacturing



Skoda Large Floor-Type Boring and Milling Machine



SHW Large Machining Center



100%

Self-Manufactured Core Component



Digital Productivity



Automated assembly line of die-casting machine



Intelligent and efficient logistics and warehousing system

### The Group's Strategic Platform Resources



Professional Material Research Institute



Professional Electroplating Workshop



Professional Heat Treatment Workshop

# Global Application Center 3.0

## Large die-casting and thixomolding magnesium



HDC8800 Die Trial Unit



HDC3500/2500 Die Trial Unit



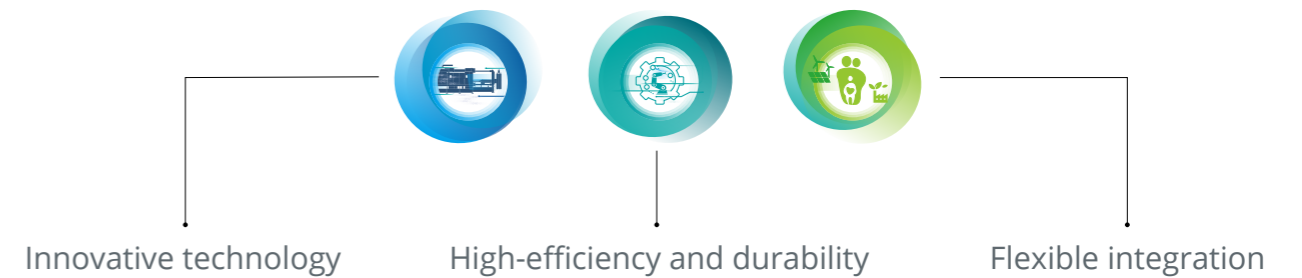
HMG3600 Die Trial Unit

<p>Worldwide First Large Al-Mg Application Center</p>	<p>100<sup>+</sup> set</p> <p>Bodywork Structural Member Die Trial</p>	<p>Integrated die-casting die trial unit Worldwide First</p>	<p>20<sup>+</sup> set</p> <p>Integrated die-casting die trial</p>	<p>Materials Laboratory</p>
<p>100,000<sup>+</sup> PCS</p> <p>Magnesium-alloy casting trial production</p>	<p>Full series Thixomolding Magnesium Die Trial Model</p>	<p>100<sup>+</sup> per/year</p> <p>Thixomolding magnesium die trial</p>	<p>Die trial unit configuration Full Automation</p>	<p>X-ray inspection equipment</p>



## CASTING THE FUTURE

With a decade of die casting technology accumulation, integrating quality and innovation concept, Haitian Die Casting has erected a second-generation new die casting technology platform, which is born for challenges. With the accession to a new development phase, Haitian Die Casting has maintained customer-centricity and deepened her understanding and responsiveness to the demand of the global market. Persisting in innovation, daring to break through, continuously iterating and upgrading her core technologies, Haitian Die Casting is committed to building a new manufacturing ecosystem integrating high-end die casting equipment, forming and application technologies, and one-stop solutions to accelerate the industrial transformation.



# HDC Series Cold-chamber Die-casting machine

## HDC200-HDC850II

### High system pressure

- Maximum System Pressure Up to 19Mpa, Faster Response

### Die surface quenching

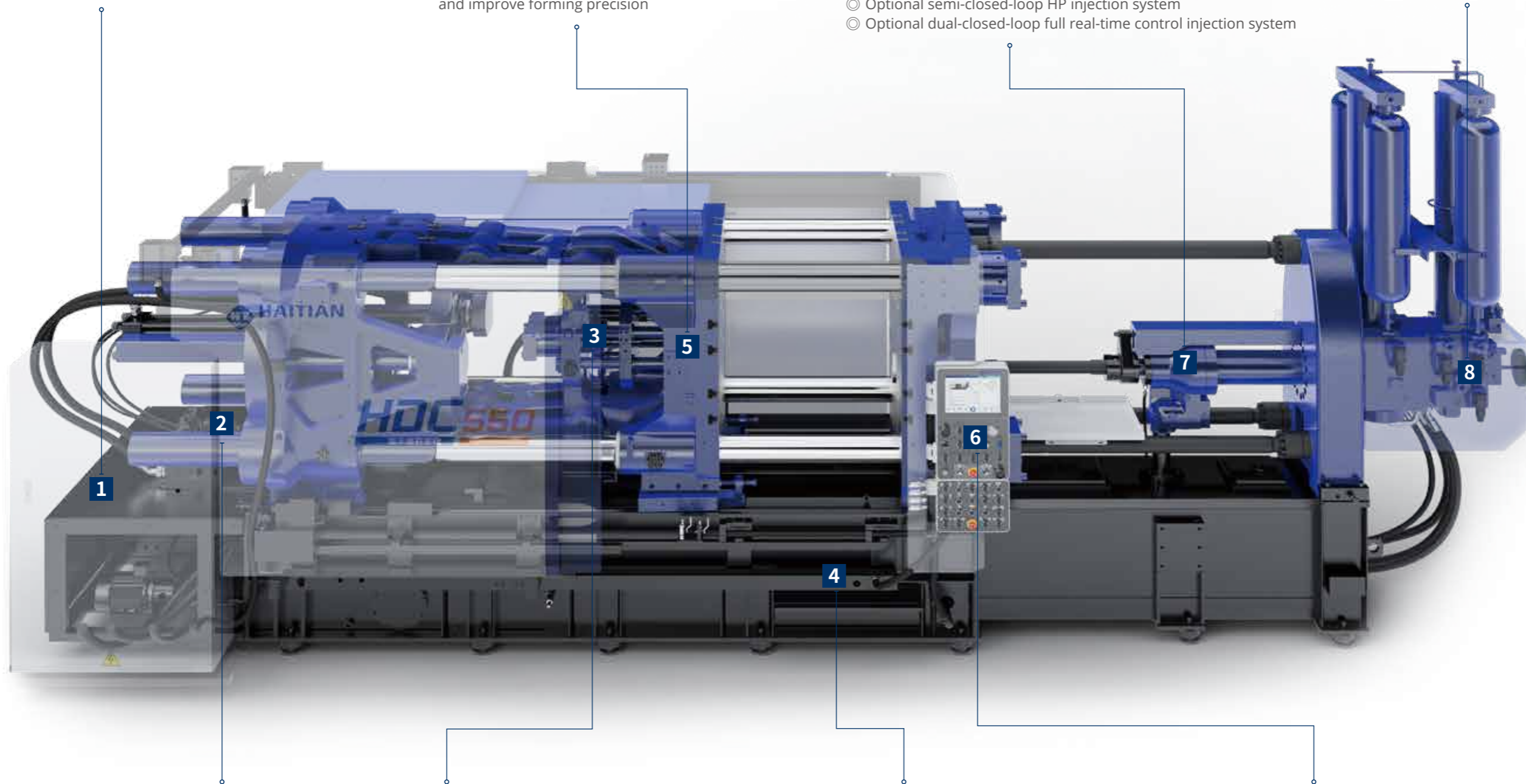
- Standard laser quenching on die surface, with Hardness>30HRC, Prevent die surface collapse and improve forming precision

### Innovative HP Injection System

- Multi-Stage Acceleration-Controlled Injection System, Variable Acceleration Design and Wider Application Range
- Optional semi-closed-loop HP injection system
- Optional dual-closed-loop full real-time control injection system

### Automated nitrogen charging

- Automated nitrogen charging simplified the process and reduced the cost



### Smart Mold Opening/Closing

- Self-learning self-correcting algorithm enabling mold opening/closing to stop at an arbitrary position for higher efficiency with repeatability precision  $\pm 1\text{mm}$

### High-Rigidity Die Clamping Structure

- Large-size locking shaft and steel-bushed machine hinge reduce contact stress for enhanced durability
- Tie bars are made of Haitian Research Institute-developed material with special processing for high rigidity.
- Box-Type movable platen design, with platen deformation reduced and overlap minimized

### High-Rigidity Body

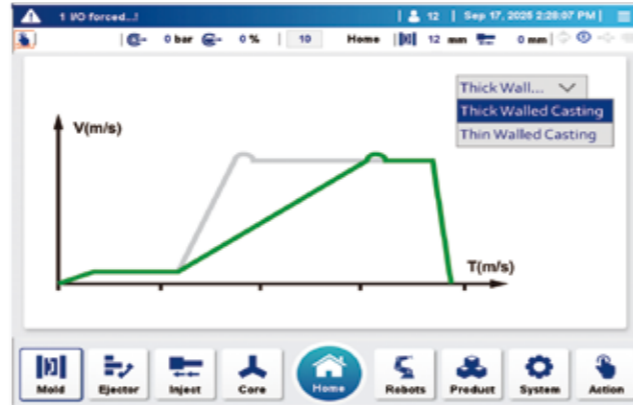
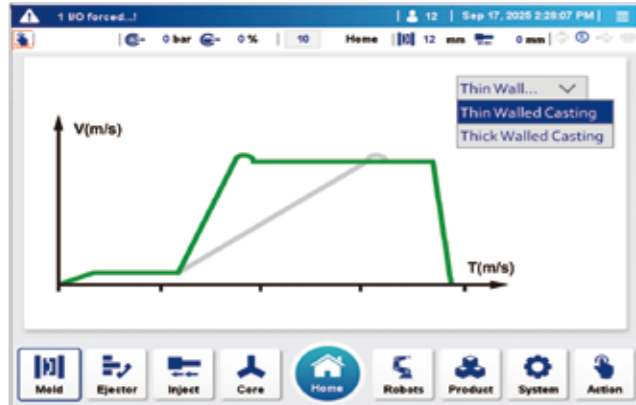
- High-strength I-beam steel structure body annealed for enhanced overall rigidity

### Smart control technology

- KEBA Control System, with upgraded dual-core CPU for faster operation
- U-optimized design with rotatable screen for enhanced interaction experience
- Intelligent Die Clamping Force and Real-Time Monitoring for Better Safety

# Injection Unit HDC200-HDC850II

Multi-Stage Acceleration Control Injection System:  
variable acceleration design and broadened process window to match more process demands.



Standard injection system: multi-stage acceleration control adopted, with customized second-stage intensification valve and optimized runner design to achieve exceptional acceleration performance and high stability.



Optional semi-closed-loop injection system: equipped with motorized valve + injection curve for automatic speed/pressure regulation and correction



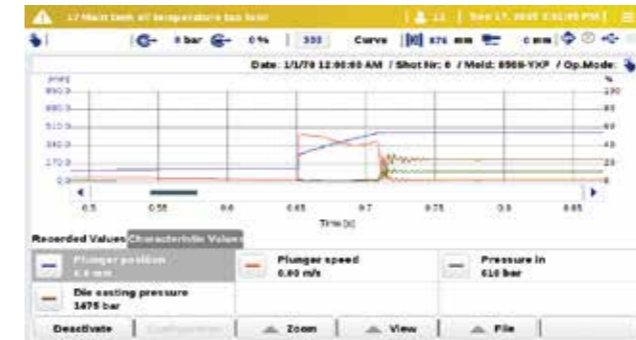
Optional dual closed-loop real-time injection system: quick-inlet + quick-outlet + boost-outlet servo valves enabling closed-loop control of pressure/speed



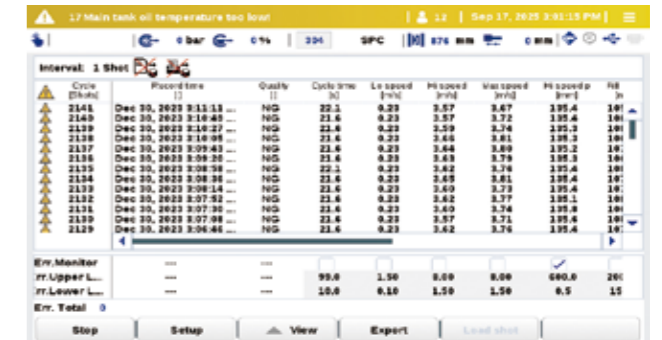
Quick-exit servo valve (dual closed-loop real-time control system)

# Electronic Control Unit

- KEBA control system with 12" colored touchscreen and dual-core CPU
- UI-optimized modular layout for improved user interaction
- Standard position/speed/inlet pressure/casting pressure injection curves (10,000+ curve memorable)
- Intelligent die clamping force and real-time monitoring for safer production
- Integrated screen and control panel and rotatable and ergonomic design for easy operation
- Upgraded digital pressure gauge, with pressure tap reserved for spot inspection, including a pressure test toolkit available for spot inspection
- Quality management, intelligent die adjustment, mold heating and filling function



Injection Curve



Quality Management

# HDC Cold Chamber Die Casting Machine

## HDC1000-HDC4500II

### High-Rigidity Die Clamping Structure

- ◎ Tie bars are made of Haitian Research Institute-developed material with special processing for high rigidity.
- ◎ Box-Type movable platen design, with platen deformation reduced and overlap minimized

### Smart Control Technology

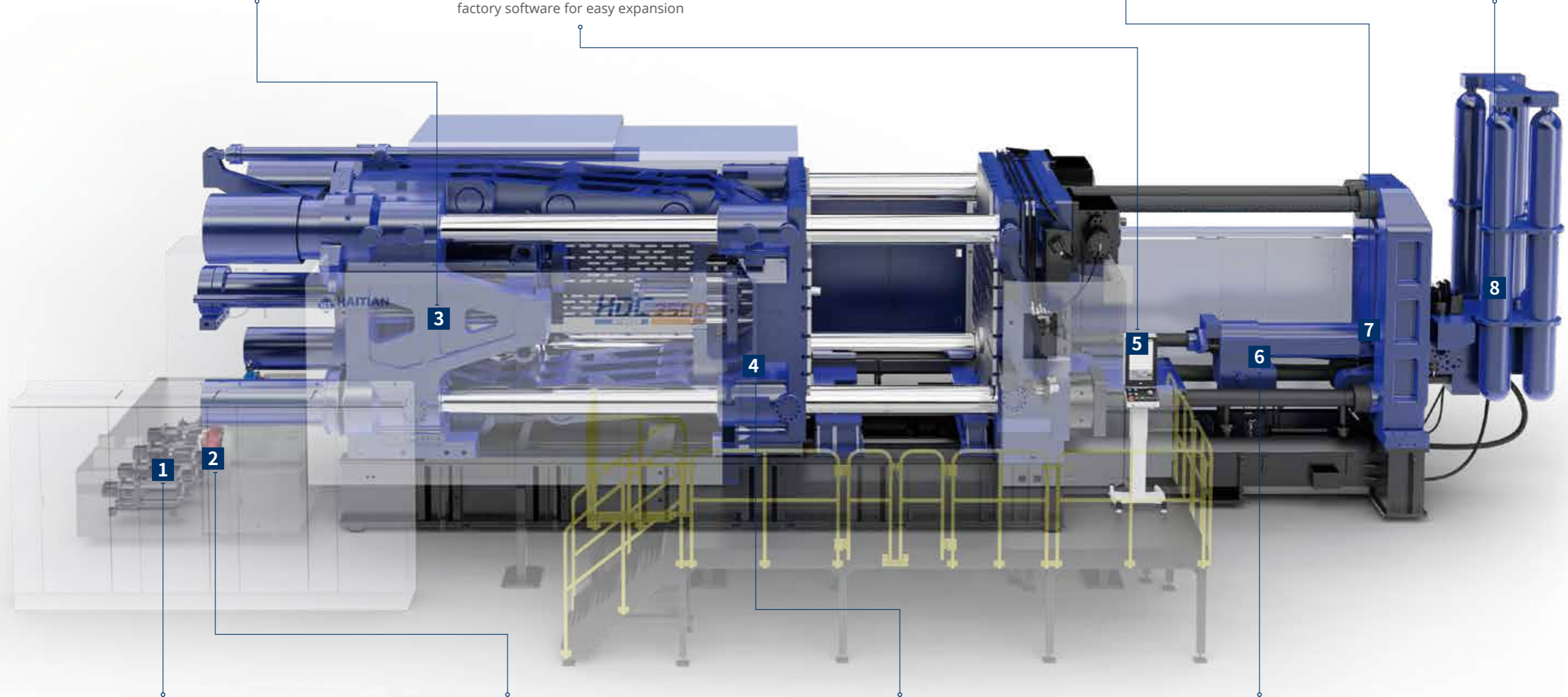
- ◎ KEBA control system with quad-core CPU for faster processing
- ◎ 18" color touchscreen with optimized UI for user-friendly interaction
- ◎ Data interaction with smart management factory software for easy expansion

### Auto Lift of Injection Position

- ◎ One-touch auto lift structure with built-in grip cylinder, easier to use

### Dual Closed-Loop Full Real-Time Control Injection System

- ◎ Equipped with fast inlet/outlet + boost outlet servo valve for dual closed-loop pressure/speed control (1,000T optional)



### High-response servo system

- ◎ Customized servo power system: high-speed response, dynamic sensitivity and surging power

### Multi-pass filtration system

- ◎ Multi-pass filtration for hydraulic system with high-precision bypass filtering

### Smart Mold Opening/Closing

- ◎ Self-learning self-correcting algorithm enabling mold opening/closing to stop at an arbitrary position for higher efficiency with repeatability precision  $\pm 1\text{mm}$

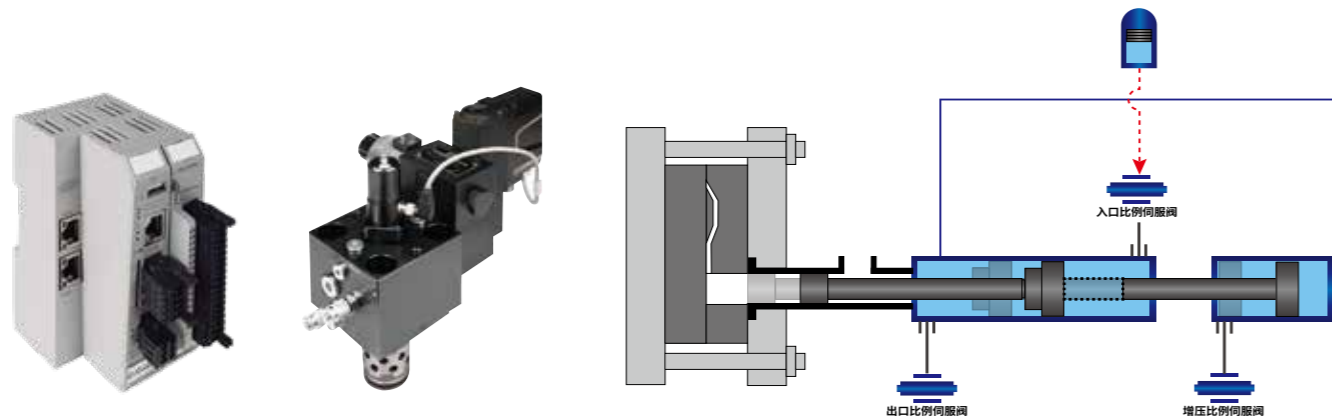
### High system pressure

- ◎ Forged-steel injection cylinder with copper-welded piston for 21MPa system pressure adaptation

# Dual Closed-Loop Full Real-Time Control Injection System

## HDC1300-HDC4500II

Next-gen dual closed-loop real-time control injection system developed by Haitian Zhisheng. Advanced control system adopted. Real-time closed-loop control of injection speed, casting pressure and pressure buildup time enables true in-die correction. High-quality, stable and perfect injection process ensuring perfect equipment performance for precision die-cast part production.



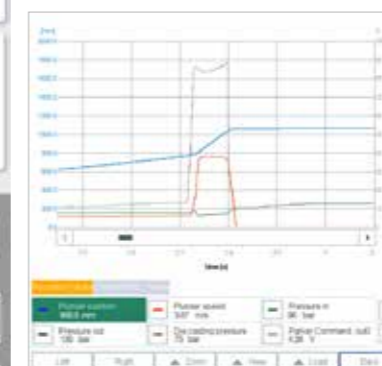
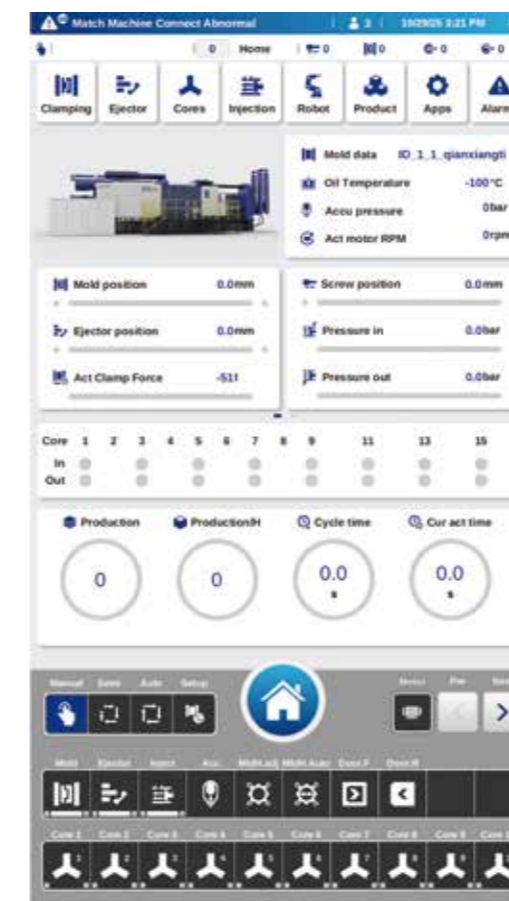
### Dual Closed-Loop Full Real-Time Control Injection System Performance

- 0.25ms real-time control cycle
- Uniform acceleration function
- 10-stage injection speed configurable and 10-stage boost pressure for wider range of process regulation
- Real-time boost pressure control with  $\pm 1$ bar repeatability precision
- Stepless speed regulation (0.05~10m/s) with excellent acceleration and ultra-low-speed extrusion capability
- Closed-loop pressure buildup control with shorter duration
- Excellent repeatability in both low/high injection speed
- End-position braking for flash-free injection
- Shock-free startup achievable



# Electronic Control Unit

- KEBA control system with 18" colored touchscreen and quad-core CPU
- Mouse knob function for screen navigation and parameter modification with mouse
- Data interaction with Smart factory management software for easy expansion
- Equipped with injection curve, quality management and energy consumption monitoring, etc.
- Injection curves increased to the maximum of 40,000; quality management records to the maximum of 20,000
- Smart die opening/closing setting to minimize parameters of die opening/closing configured
- Standard function provided for self-adaptation of injection speed
- Smart operation panel with HOME button function
- Screen ID search: direct access via numeric input
- New neutron sequence function with real-time graphical preview
- IO monitor interface aligned with the user habit



Injection Curve

Machine	Model	Number	Amount	Program	Injection	Robot	Product	Apps	Alarms
4007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quality Management

# Technical Parameters

## HDC200-HDC1000II

		HDC200 II-SF	HDC320 II-SF	HDC450 II-SF	HDC550 II-SF	HDC650 II-SF	HDC700 II-SF	HDC850 II-SF	HDC1000 II-SF
Clamping force	kN	2000	3200	4500	5500	6500	7000	8500	10000
Clamping stroke	mm	400	460	550	580	650	670	760	880
Ejection force	kN	125	180	180	250	360	360	360	500
Ejection stroke	mm	90	110	130	150	160	160	180	200
Mold height (Min-Max)	mm	250 ~ 600	250 ~ 700	300 ~ 750	350 ~ 850	350 ~ 850	350 ~ 900	400 ~ 950	450 ~ 1150
Platen size (Horizontal*Vertical)	mm	765×765	870×870	1015×1015	1180×1180	1230×1230	1340×1340	1435×1435	1590×1590
Tie bar spacing (Horizontal*Vertical)	mm	510×510	560×560	650×650	770×770	780×780	860×860	930×930	1030×1030
Injection force (Intensified)	kN	268	330	400	500	560	650	650	885
Injection stroke	mm	370	410	510	580	650	760	760	800
Plunger tip diameter	mm	40/50/60	50/60/70	60/70/80	70/80/90	70/80/90	70/80/90	80/90/100	90 ~ 120
Injection volume (Aluminum)	kg	0.9/1.4/2	1.5/2.2/3	2.7/3.7/4.8	4.2/5.5/6.9	4.7/6.1/7.8	5.5/7.2/9.1	7.2/9.1/11.1	9.5 ~ 17.0
Casting pressure (Intensified)	MPa	214/137/95	169/117/86	142/104/80	129/99/78	145/111/88	169/129/102	129/102/83	139 ~ 78
Casting area	cm <sup>2</sup>	93/146/211	189/274/372	317/433/563	426/556/705	447/583/738	414/543/686	659/833/1024	719 ~ 1278
Maximum casting area (40Mpa)	cm <sup>2</sup>	500	800	1125	1375	1625	1750	2125	2500
Injection position	mm	-140	-125/-140	-175	-175	-250	-250	0, -250	0, -300
Plunger tip protrusion	mm	140	152	210	250	300	300	300	300
Shot sleeve flange diameter	mm	101.6	101.6	101.6	165	165	165	200	240
Shot sleeve flange protrusion from fixed platen	mm	12	12	12	15	15	15	20	20
System working pressure	MPa	19	19	19	19	19	19	19	21
Servo motor power	kW	14.7	24.1	31.4	41.9	56.5	56.5	56.5	68.5
Hydraulic oil filling volume	L	470	630	730	920	1000	1000	1100	1270
Overall dimension (L*W*H)	mm	5455×1760×2805	5890×1865×2900	6565×2005×2930	7380×2175×3070	7700×2215×3020	8520×2340×3010	8710×2430×3065	10180×3627×3050

The company reserves the right to modify the technical parameters without prior notice

# Technical Parameters

## HDC1300-HDC4500II

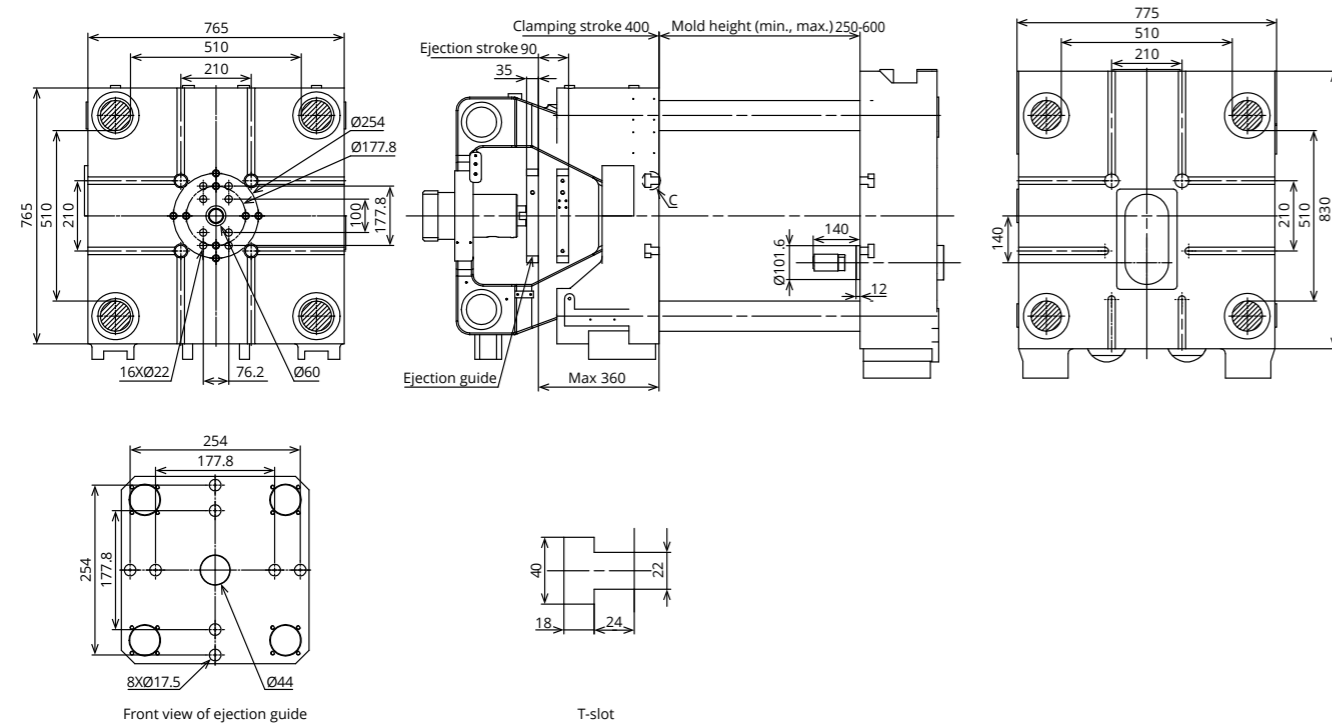
		HDC1300 II-SF	HDC1650 II-SF	HDC2000 II-SF	HDC2500 II-SF	HDC3000 II-SF	HDC3500 II-SF	HDC4000 II-SF	HDC4500 II-SF
Clamping force	kN	13000	16500	20000	25000	30000	35000	40000	45000
Clamping stroke	mm	1000	1200	1400	1500	1550	1600	1800	1900
Ejection force	kN	560	570	650	750	900	900	1000	1000
Ejection stroke	mm	210	250	300	300	300	300	350	400
Mold height (Min-Max)	mm	450 ~ 1200	500 ~ 1400	600 ~ 1600	750 ~ 1800	800 ~ 2000	800 ~ 2000	900 ~ 2100	900 ~ 2200
Platen size (Horizontal*Vertical)	mm	1760×1760	2000×2000	2135×2135	2340×2340	2605×2605	2730×2630	2915×2915	3085×2985
Tie bar spacing (Horizontal*Vertical)	mm	1100×1100	1250×1250	1358×1358	1500×1500	1650×1650	1750×1650	1850×1850	1965×1865
Injection force (Intensified)	kN	1170	1295	1700	1700	2110	2410	2720	2720
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	41.1 ~ 66.4	52.8 ~ 82.5	60.3 ~ 94.2	76.3 ~ 114
Casting pressure (Intensified)	MPa	143 ~ 73	136 ~ 73	128 ~ 75	110 ~ 67	119 ~ 74	120 ~ 77	135~87	107~72
Casting area	cm <sup>2</sup>	910 ~ 1780	1210 ~ 2260	1562 ~ 2670	2270 ~ 3730	2510 ~ 4030	2915 ~ 4545	2957~4620	4210~6289
Maximum casting area (40Mpa)	cm <sup>2</sup>	3250	4125	5000	6250	7500	8750	10000	11250
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
System working pressure	MPa	21	21	21	21	21	21	21	21
Servo motor power	kW	59.6×2	59.6×2	59.6×3	59.6×3	59.6×3	59.6×4	59.6×4	59.6×4
Hydraulic oil filling volume	L	2400	2500	3600	3700	3800	4100	4200	4300
Overall dimension (L*W*H)	mm	12550×3850×4215	13125×4230×4105	14515×4605×4830	14855×5170×4830	15605×5280×4975	16720×5520×4970	17765×5605×5165	18040×5810×5205

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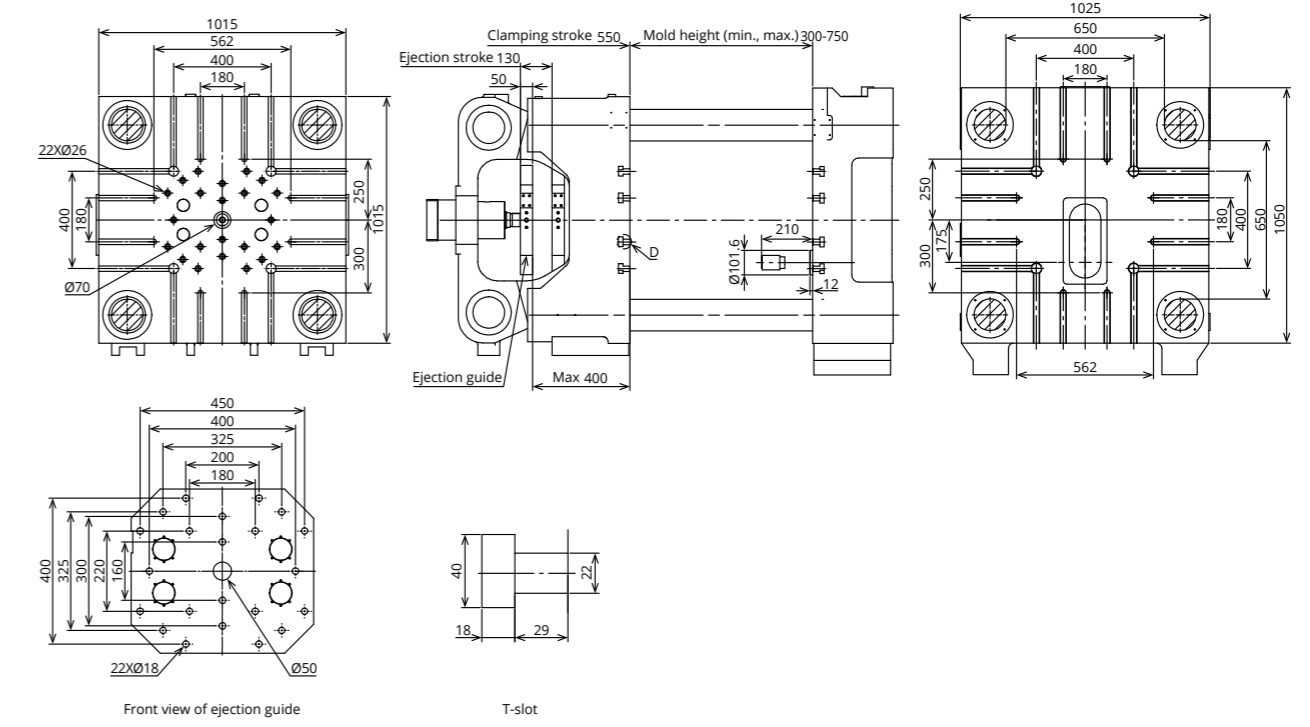
If the independent core pump station is selected, please consult the manufacturer regarding the volume of hydraulic oil.

# Platen dimension HDC200-HDC550II

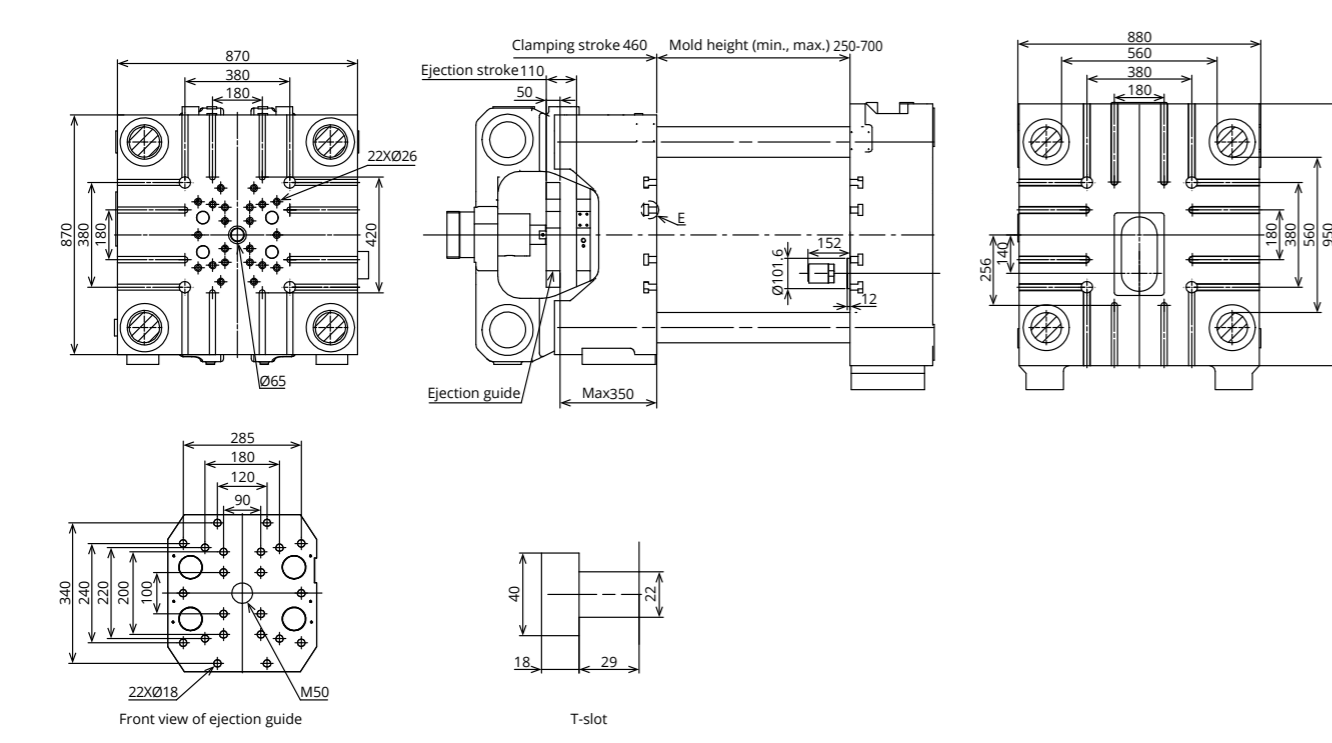
## HDC200 II-SF



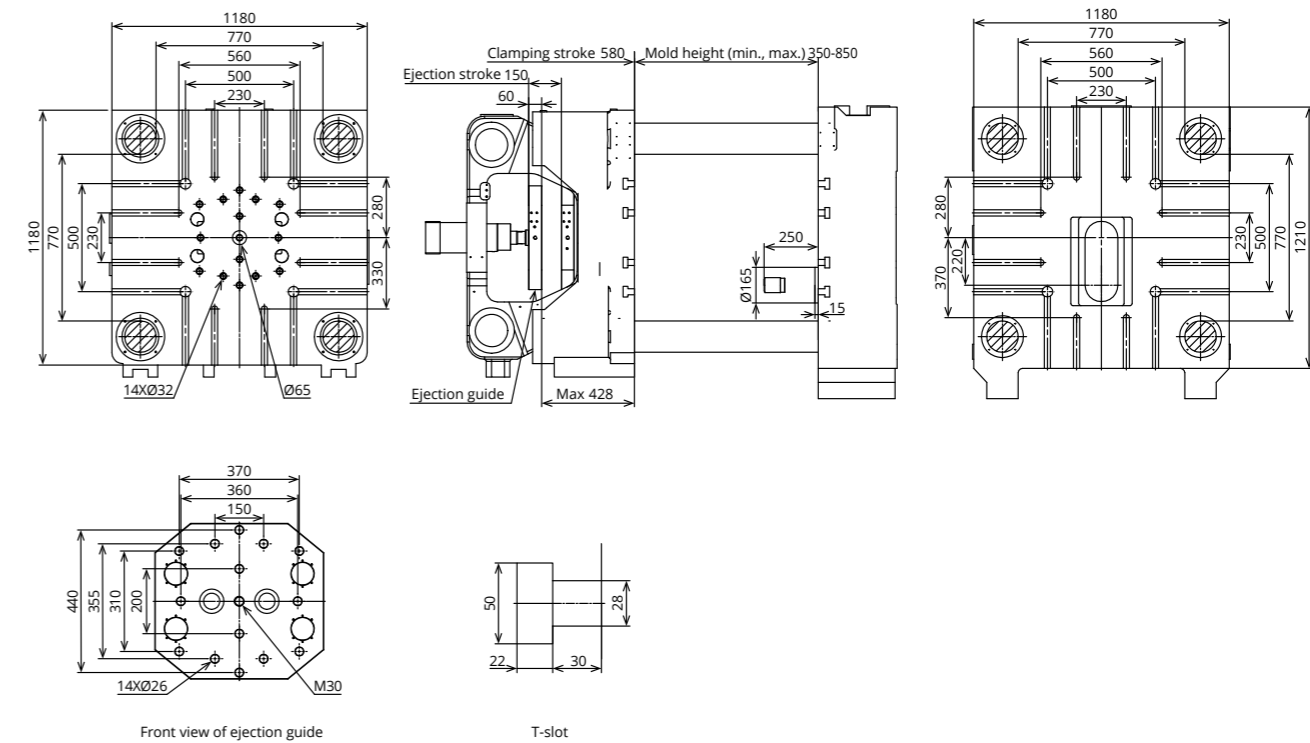
## HDC450 II-SF



## HDC320 II-SF

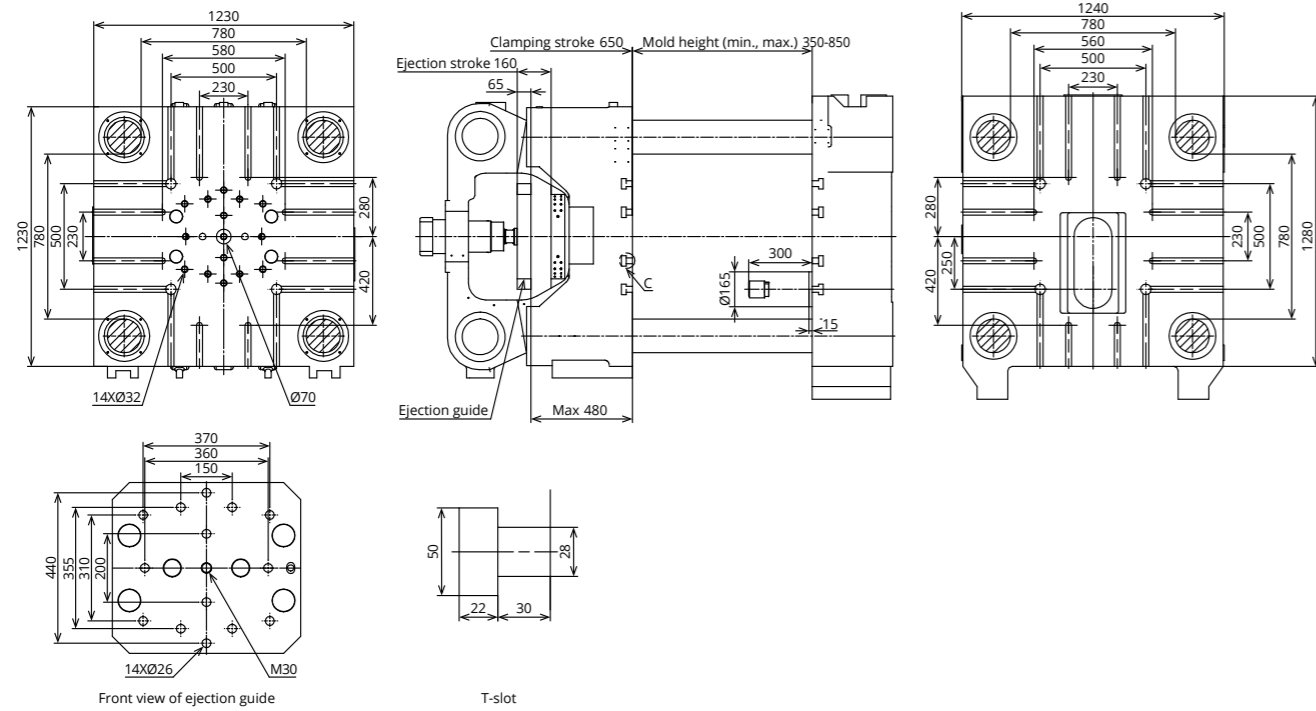


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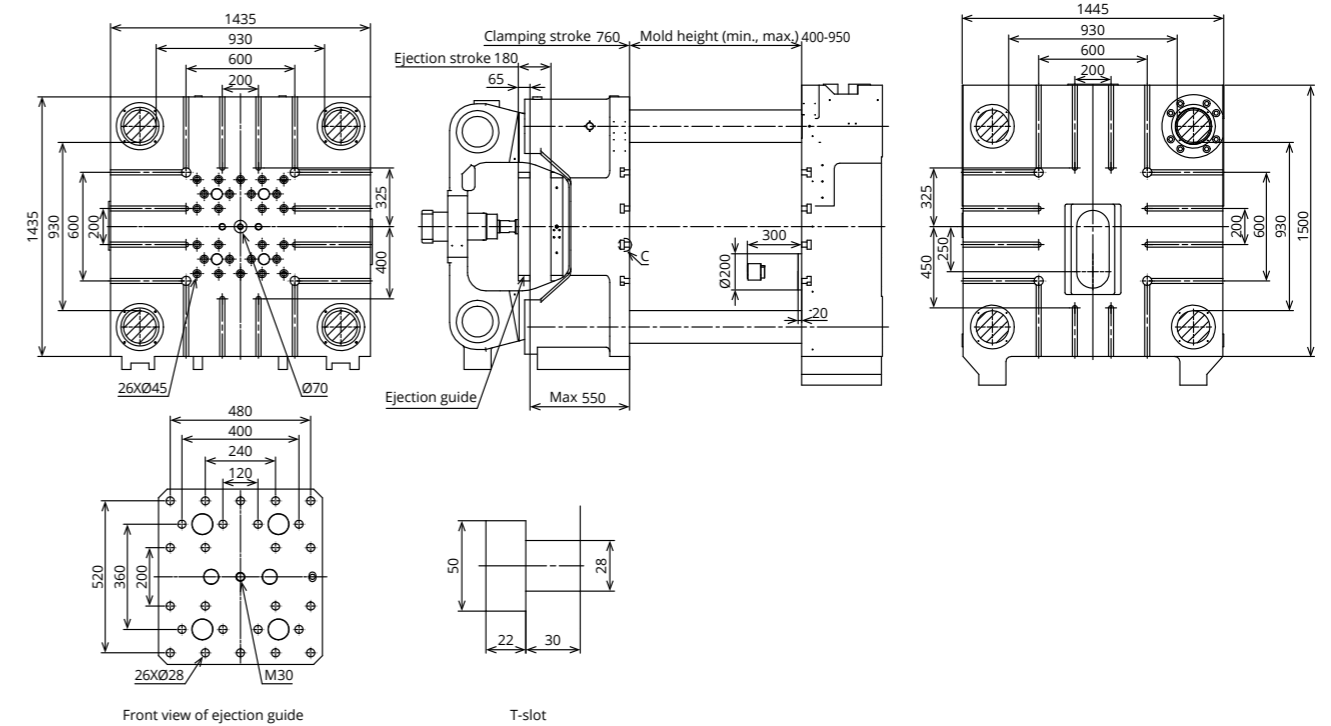


# Platen dimension HDC650-HDC1000II

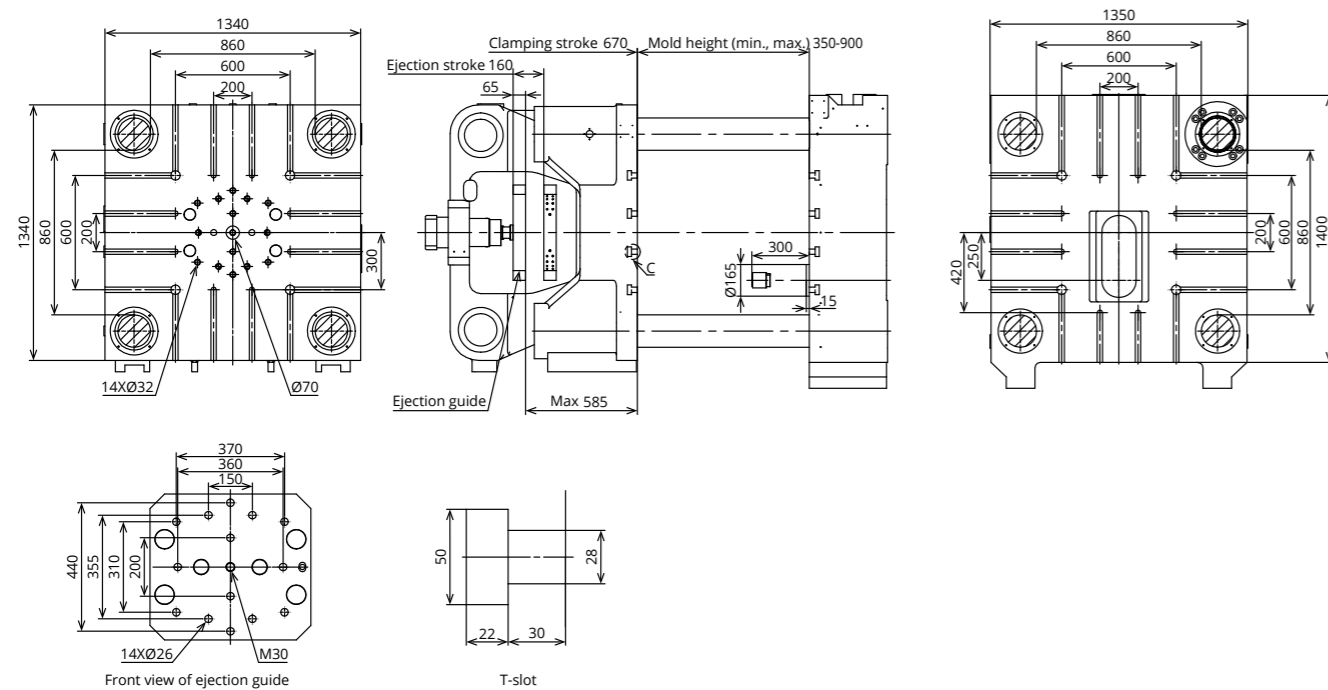
## HDC650 II-SF



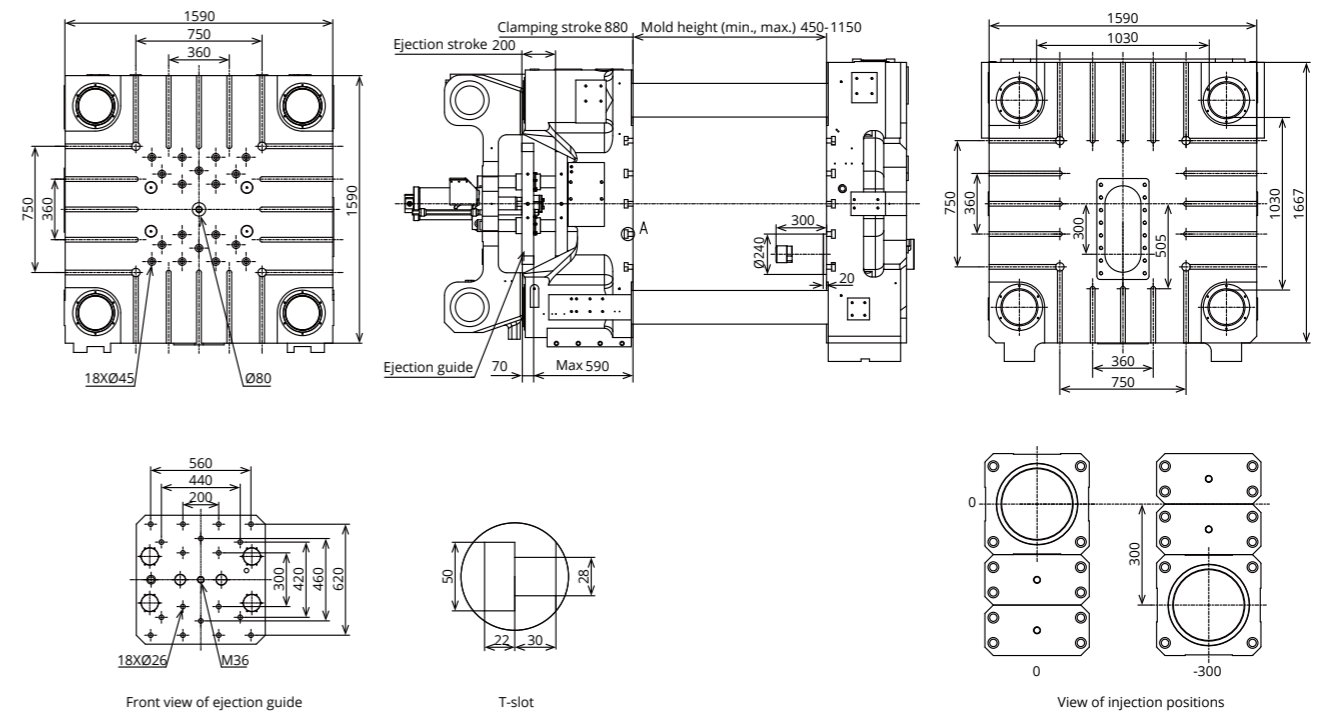
## HDC850 II-SF



## HDC700 II-SF

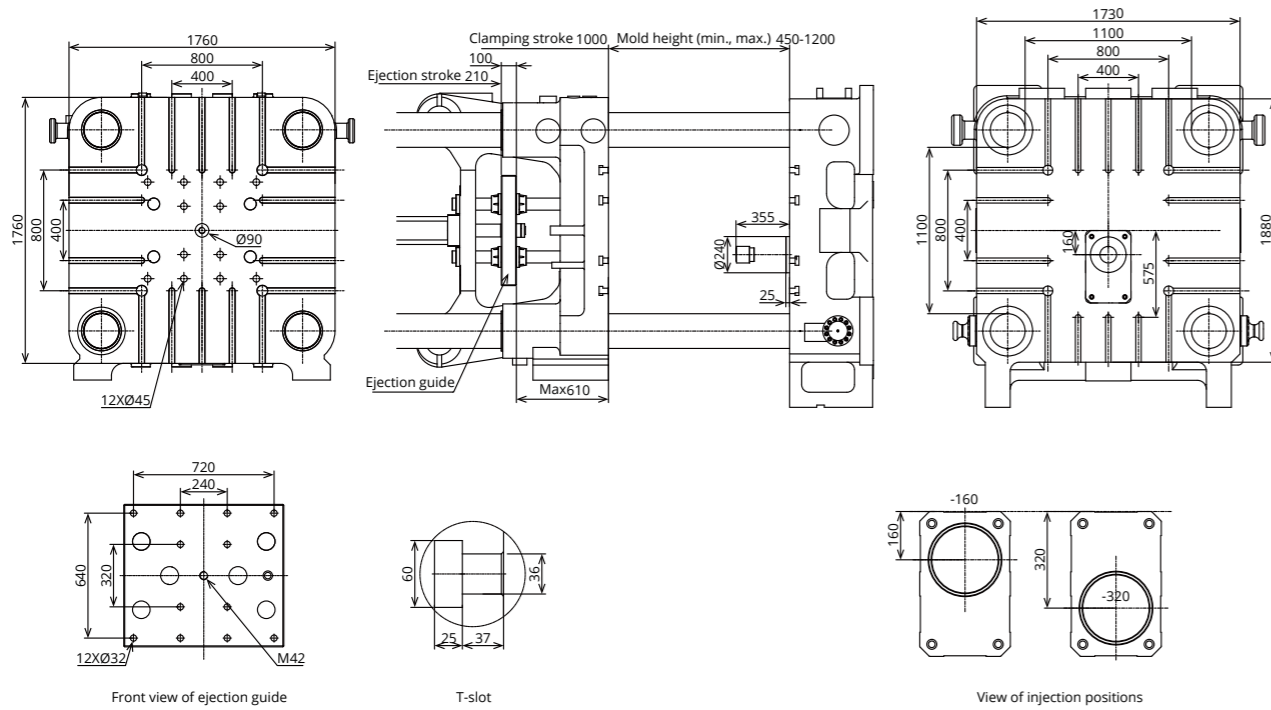


## HDC1000 II-SF

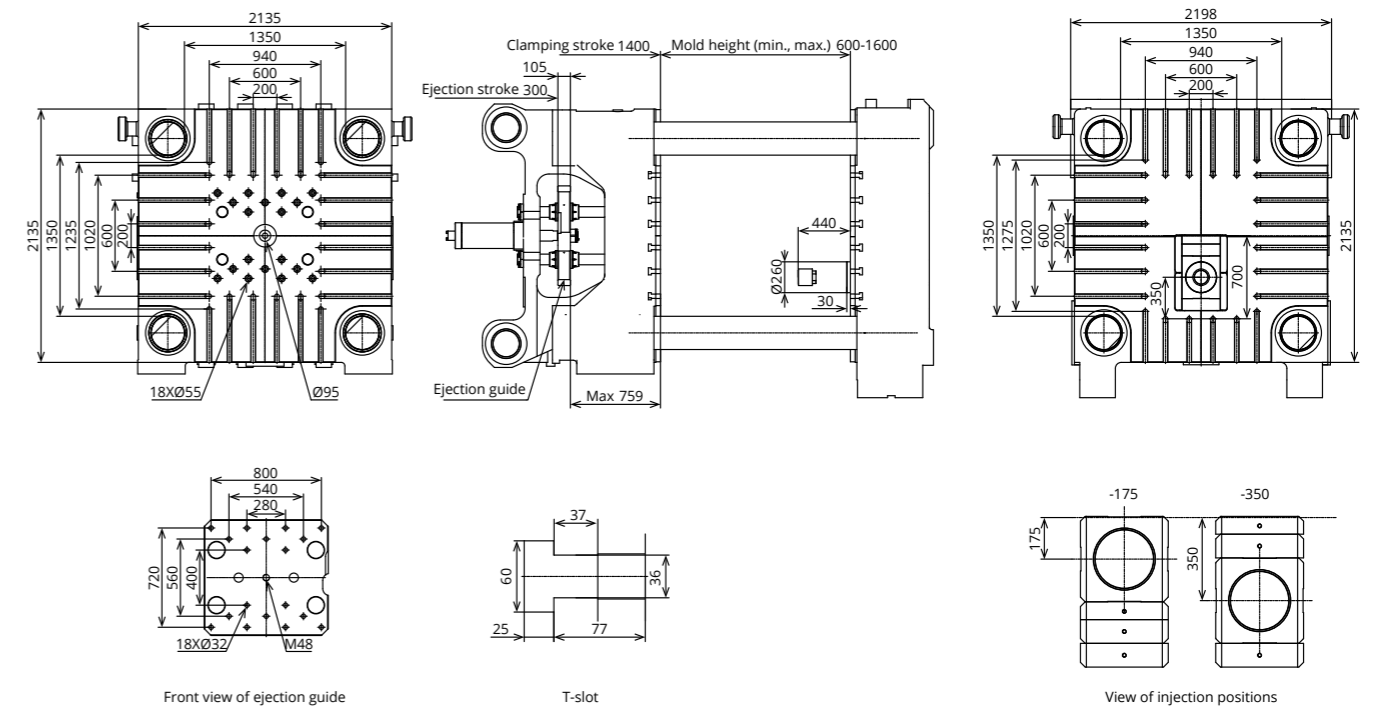


# Platen dimension HDC1300-HDC2500II

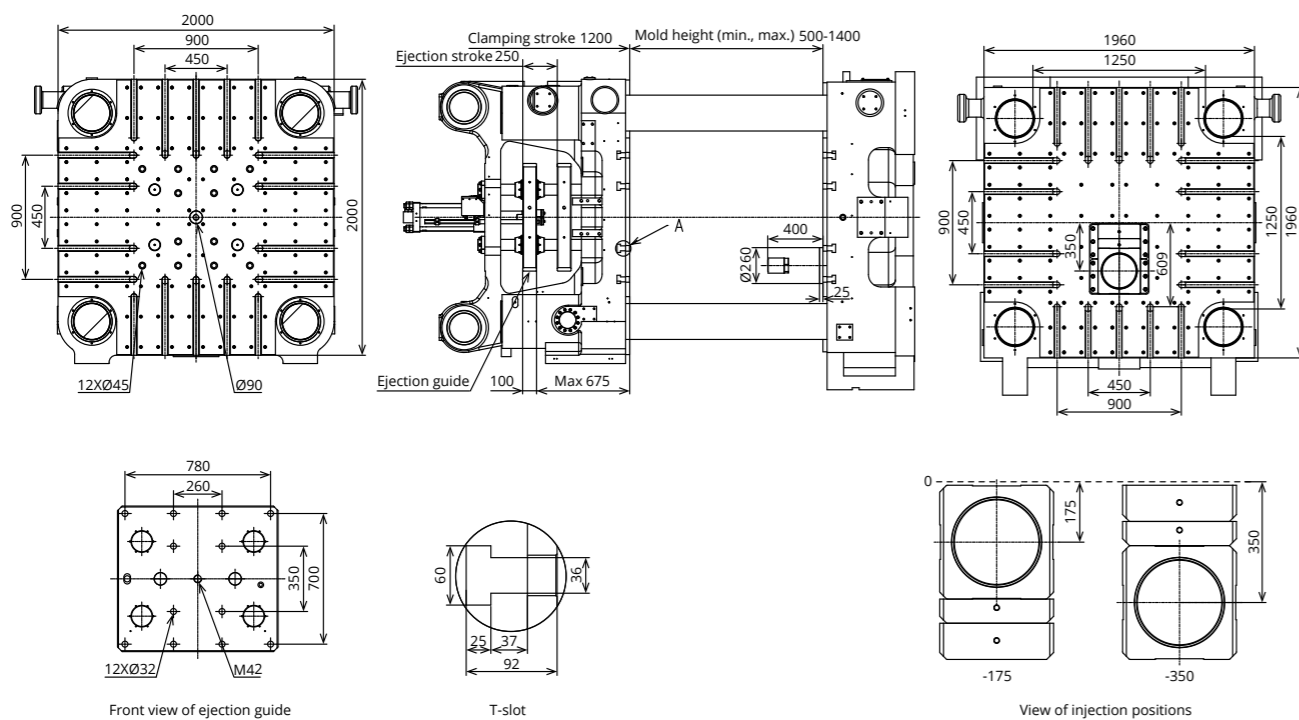
## HDC1300 II-SF



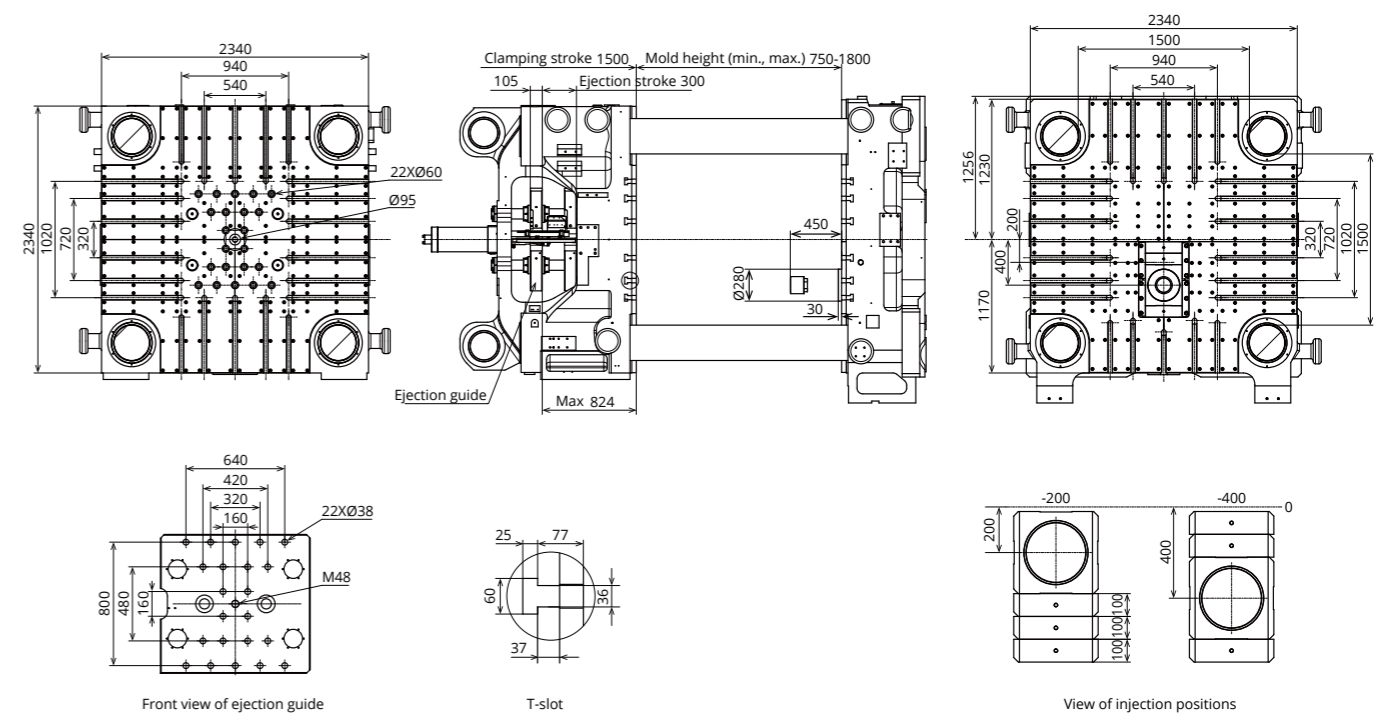
## HDC2000 II-SF



## HDC1650 II-SF

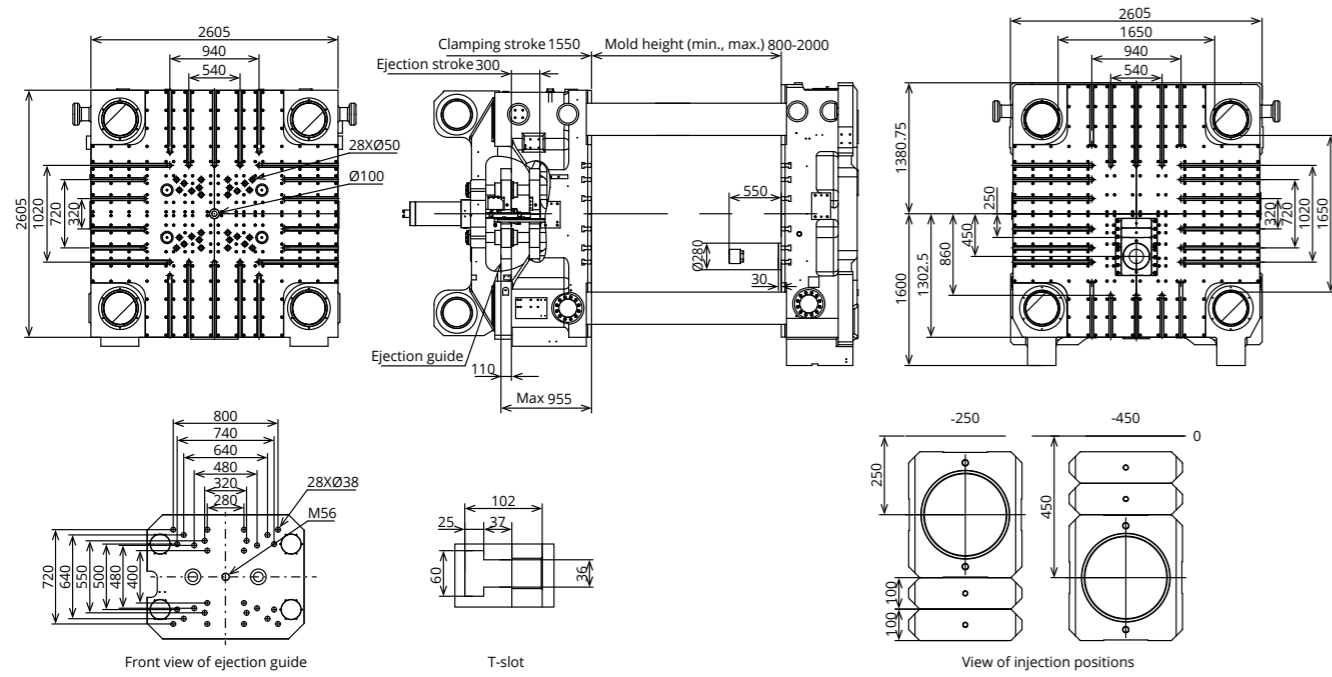


## HDC2500 II-SF

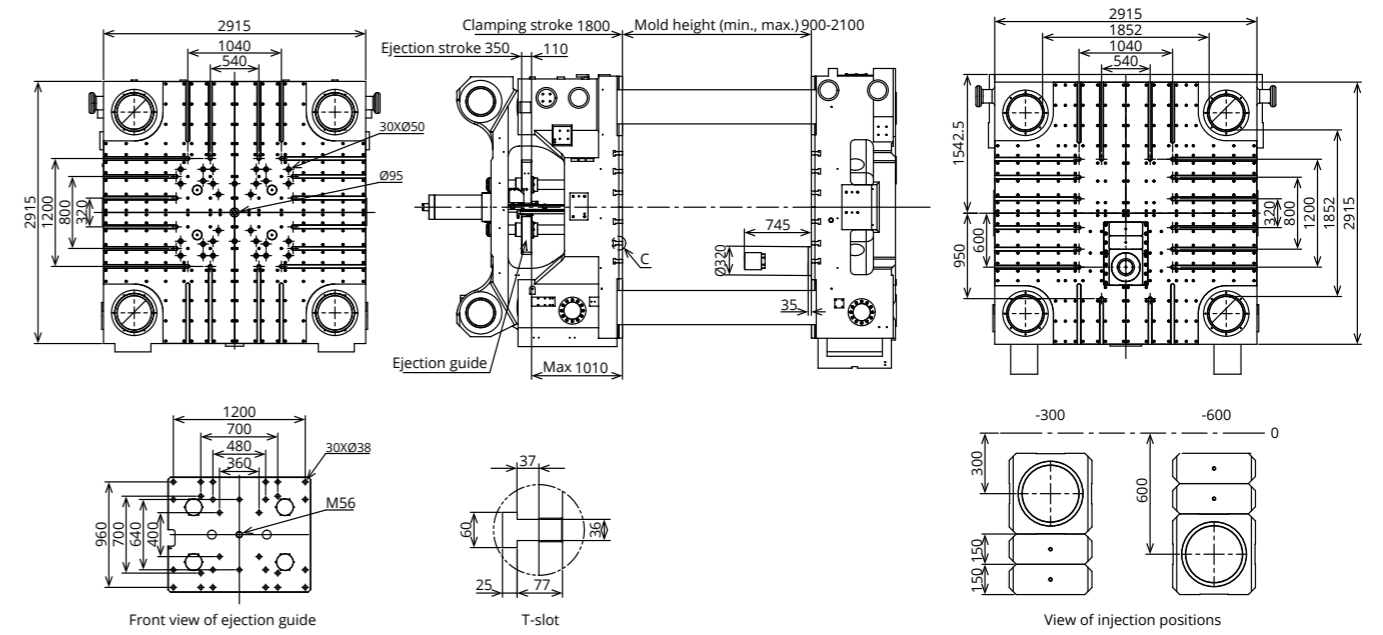


# Platen dimension HDC3000-HDC4500II

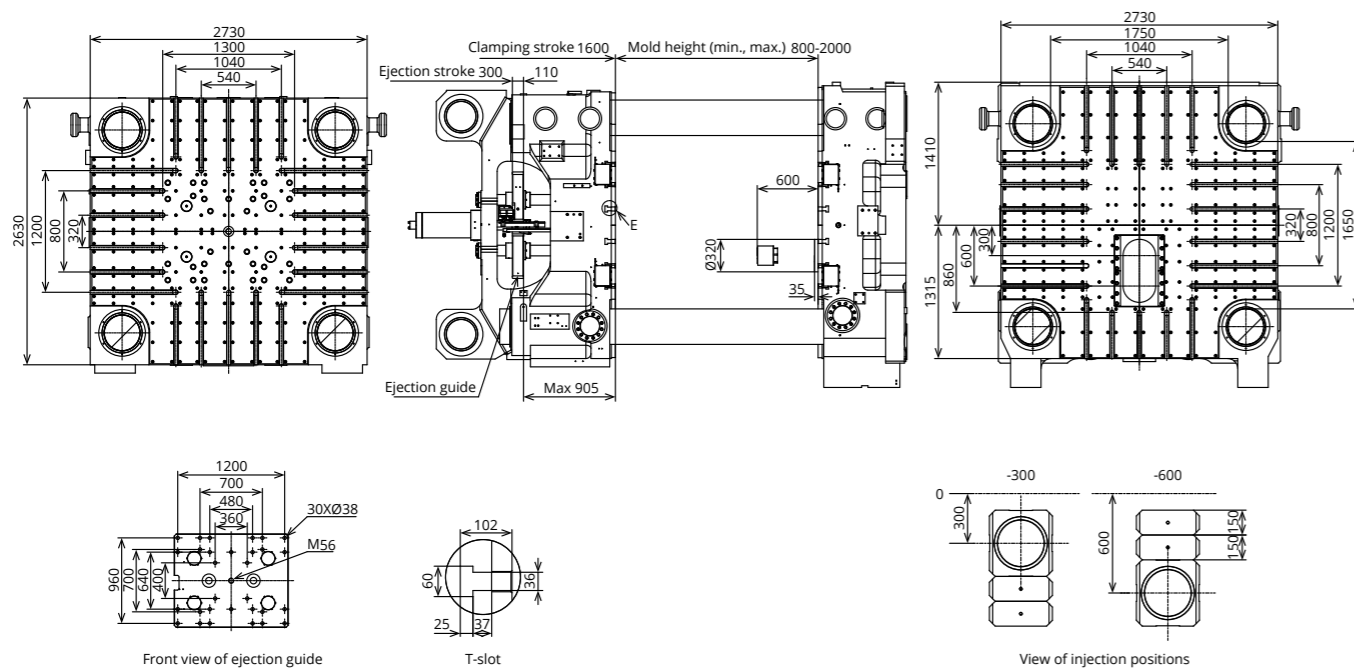
## HDC3000 II-SF



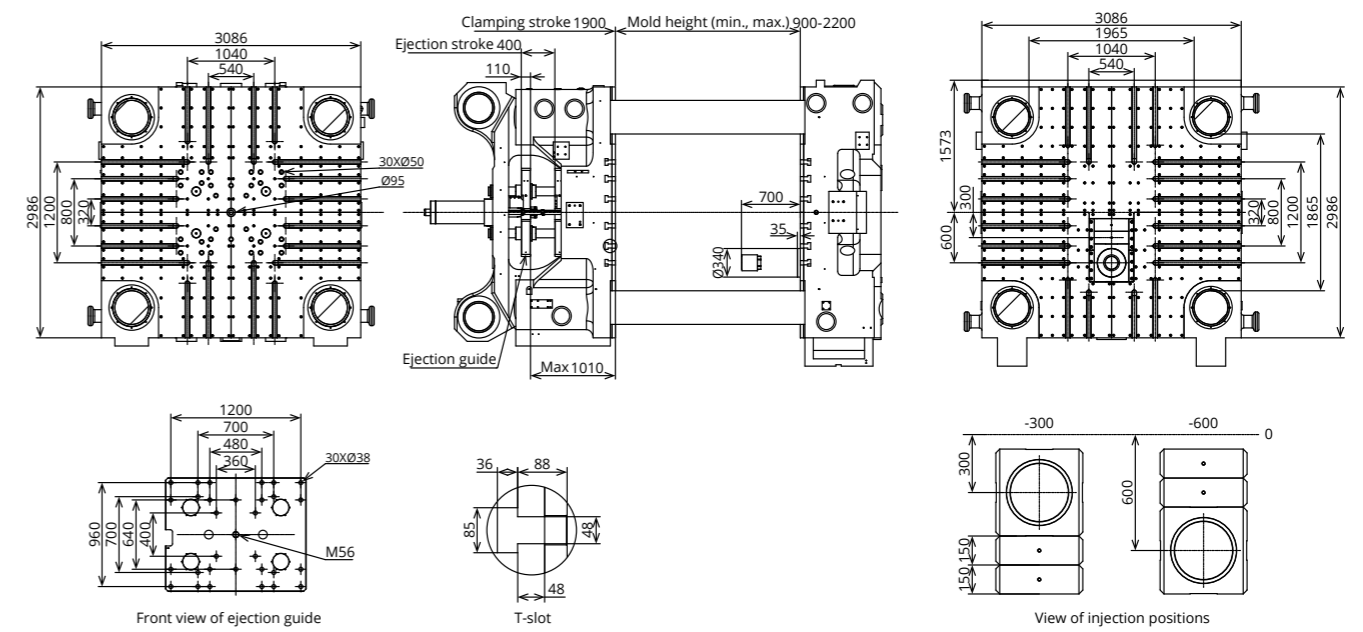
## HDC4000 II-SF



## HDC3500 II-SF

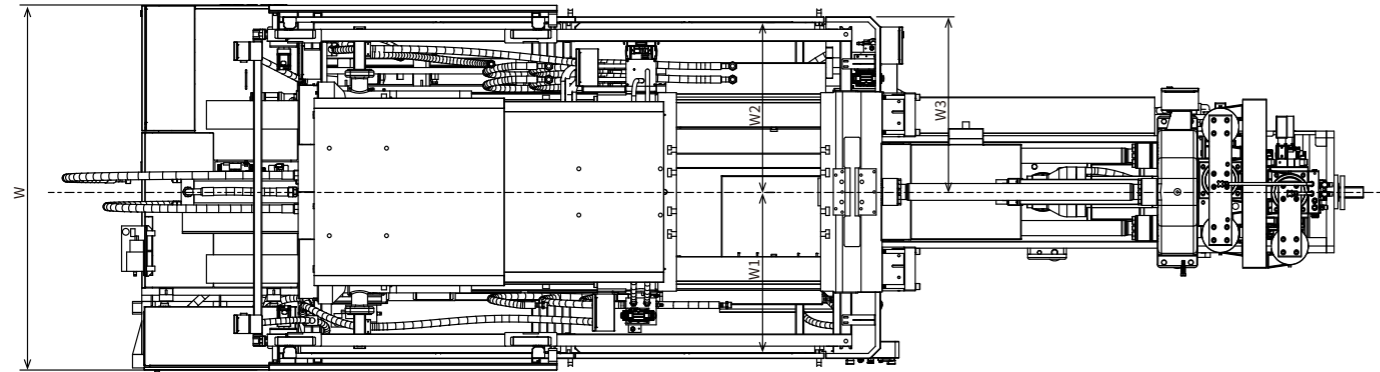


## HDC4500 II-SF



Note: For HDC5000-HDC8800, please consult their manufacturer.

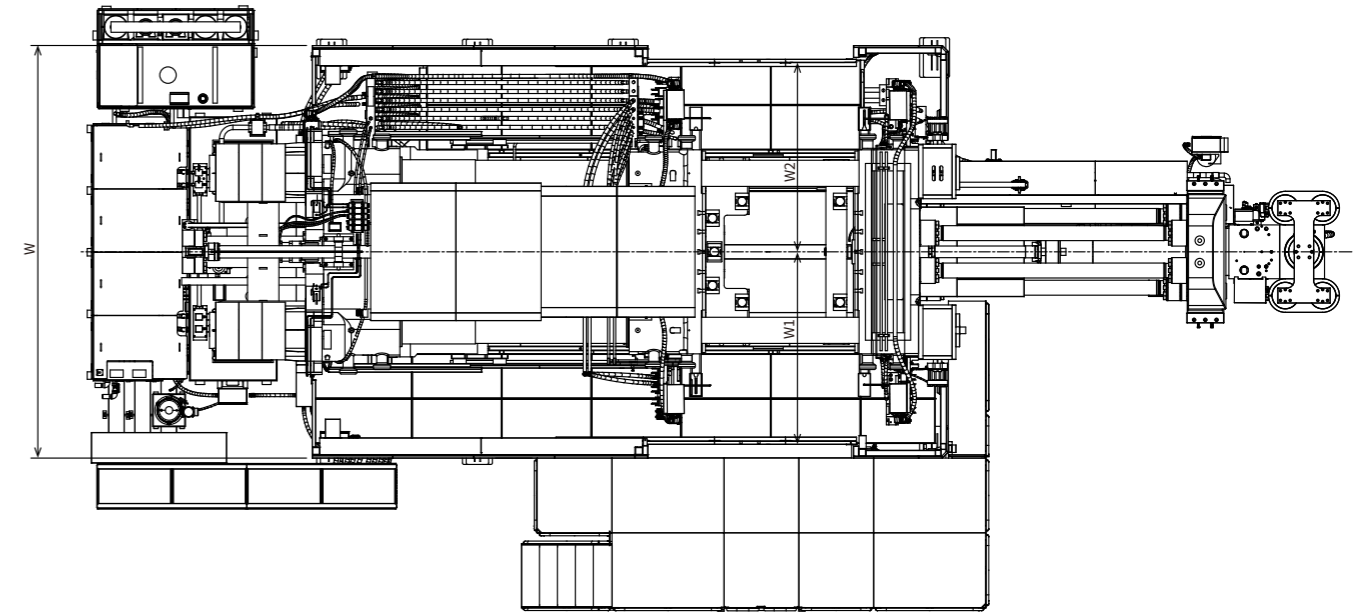
# Top View of equipment HDC200-HDC850II



## Distance between front/rear safety doors

Model	Protective door width W	Front sliding door to center W1	Rear sliding door to center W2	Maximum extractor width W3
HDC200 II-SF	1750	750	800	840
HDC320 II-SF	1860	805	855	895
HDC450 II-SF	2000	875	925	965
HDC550 II-SF	2165	955	1010	1050
HDC650 II-SF	2220	985	1035	1075
HDC700 II-SF	2330	1040	1090	1130
HDC850 II-SF	2420	1085	1135	1175

# HDC1000-HDC4500II



## Distance between front/rear safety doors

Model	Protective door width W	Front sliding door to center W1	Rear sliding door to center W2
HDC1000 II-SF	3630	1630	1630
HDC1300 II-SF	3850	1740	1740
HDC1650 II-SF	4230	1930	1930
HDC2000 II-SF	4610	2120	2120
HDC2500 II-SF	5170	2400	2400
HDC3000 II-SF	5275	2455	2455
HDC3500 II-SF	5520	2580	2580
HDC4000 II-SF	5610	2590	2590
HDC4500 II-SF	5810	2720	2720