

**海天塑机集团有限公司**  
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Thermosetting product applications  
HA/TSP

HT 20220705-CV



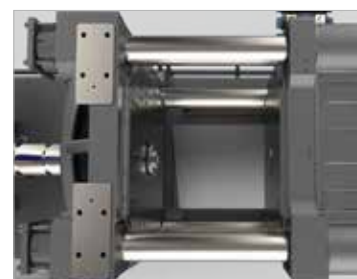
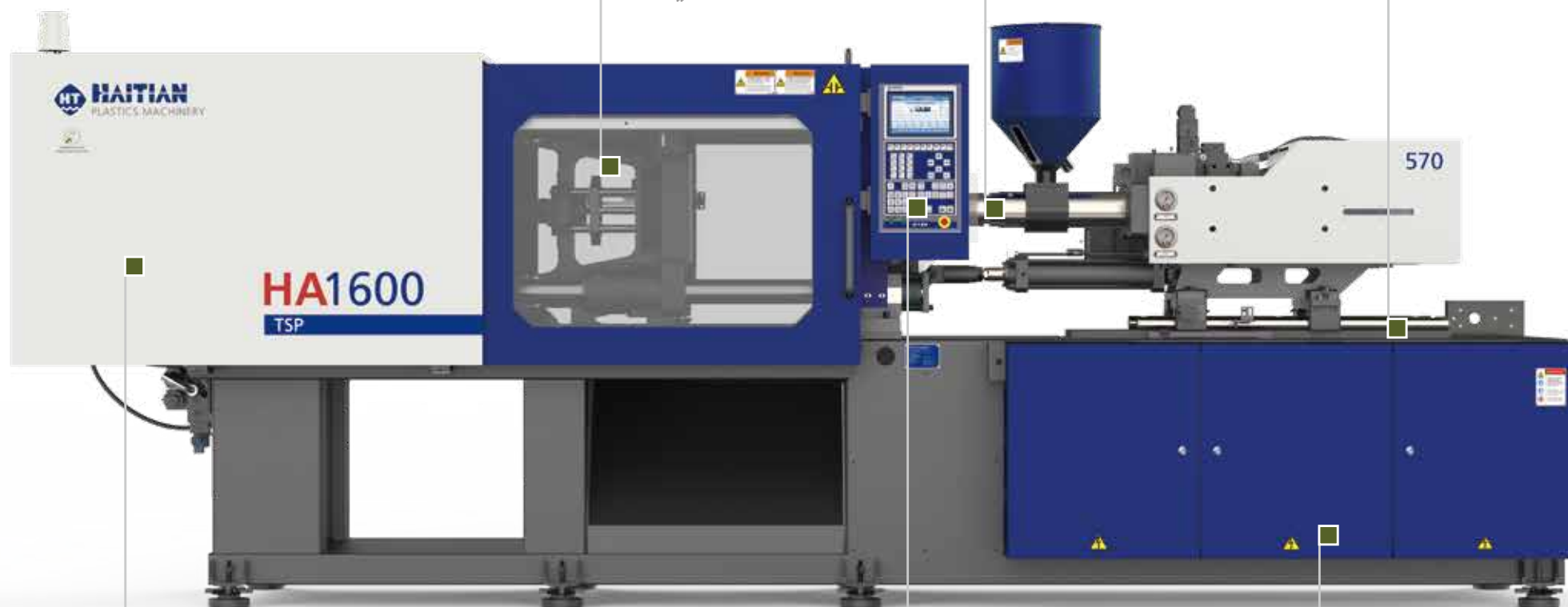
# Thermosetting product applications

In recent years, the market of small household appliances has become hot, and small household appliances such as air fryers, electric ovens and electric baking pans are favored. Among them, thermosetting plastics, mainly phenolic plastics (PF), have become the main raw materials for the production of small household appliances due to their high mechanical strength, good insulation, corrosion resistance, high temperature resistance and other characteristics. In order to better meet the market demand, Haitian has developed a special injection molding machine for thermosetting industry.

Haitian thermosetting industry special machine follows the classic design platform, on the basis of inheriting the traditional advantages, in response to the characteristics of industrial raw materials, specially made high wear-resistant screw cylinder and carbide nozzle. It is widely used for thermosetting products of various molding sizes.

## Main feature

- » The barrel is heated by internal circulation mode of hot kerosene, not by heater bands;
- » Special double zone mold temperature controller to control the barrel temperature, high control accuracy
- » Zero compression ratio of screw prevents excessive friction heat resulting in plastic curing in the barrel
- » Screw with smaller length-diameter ratio, easy to quickly replace materials, reduce the time of raw materials in the barrel;
- » 220V automatic heating and temperature control interface is reserved for moving and fixed mold. The signal is directly connected with the injection molding machine computer, PID precise control, and visually displayed on the screen;
- » The machine program is equipped with exhaust function, in order to deal with the thermosetting plastic in the mold cavity when the chemical reaction generated by the gas, timely release the mold cavity pressure;



**Mold insulation device**  
Imported composite material is adopted, which has high strength, small deformation, long life and remarkable heat insulation effect



**Special plasticizing components for thermosetting machine**  
Wear-resistant bi-metal screw and barrel, carbide nozzle



**Linear guide for injection**  
Small friction coefficient, high operation precision  
Low energy consumption



**Platen Structure with High Rigidity**  
Professional software finite element optimization, high rigidity and high strength structure, support faster dry cycle

**Professional injection molding machine control system**  
Simple operation, quick response, high control precision, real-time monitoring of the production process

**Famous brand, high performance electronic control components**  
Long service life, reliable component quality, to ensure the long-term stable work of the machine

# Thermosetting product applications



## Application1

Machine: HA3000/1700TSP  
 Product: Skillet handle1  
 Mold cavity: 6  
 Product weight: 115g(include built-in parts)



## Application2

Machine: HA3000/1700TSP  
 Product: Skillet handle2  
 Mold cavity: 4  
 Product weight: 155g



## Application3

Machine: HA3000/1700TSP  
 Product: Skillet handle3  
 Mold cavity: 6  
 Product weight: 130g



## Application4

Machine: HA3000/1700TSP  
 Product: Handles  
 Mold cavity: 8  
 Product weight: 90g



## Application5

Machine: HA860/280TSP  
 Product: Sark plug cap  
 Mold cavity: 4  
 Product weight: 17g



## Application6

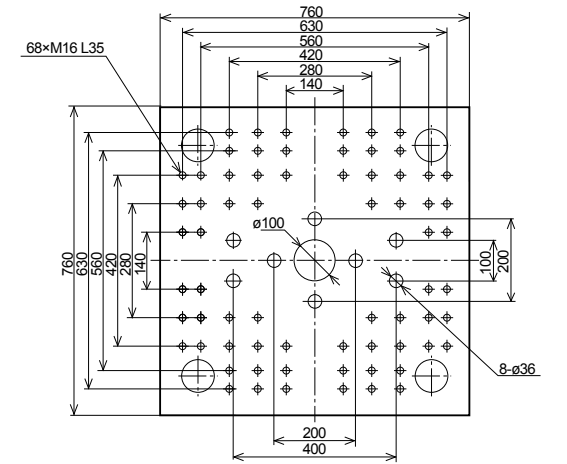
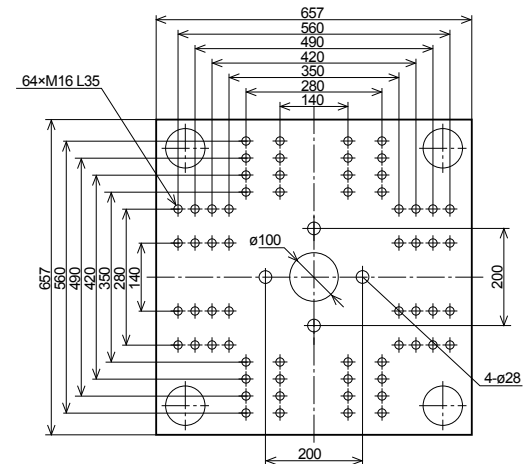
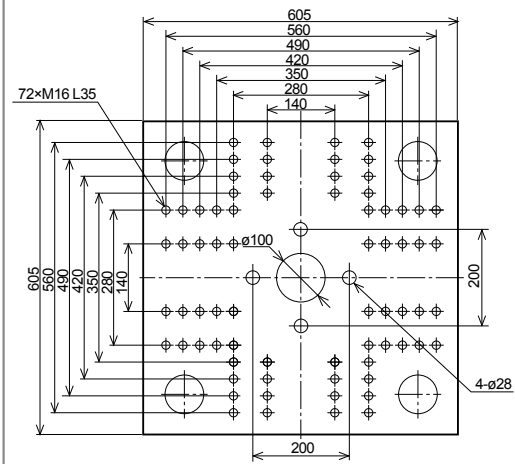
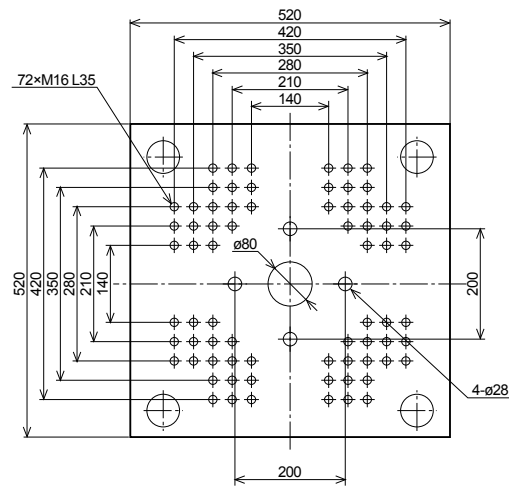
Machine: HA3000/1700TSP  
 Product: Electric baking pan cover  
 Mold cavity: 1  
 Product weight: 500g



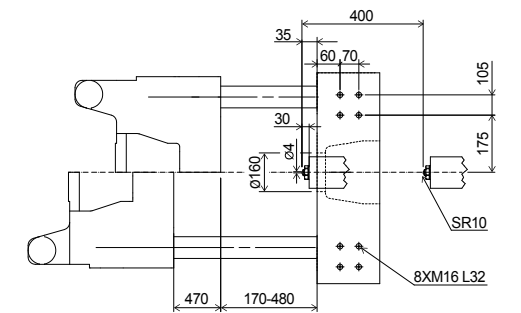
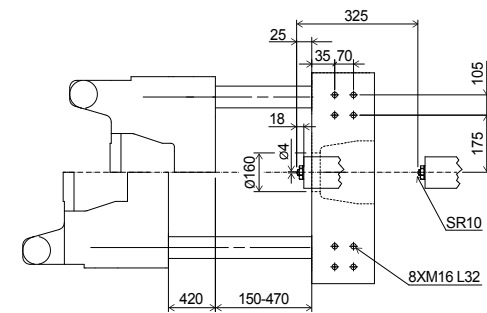
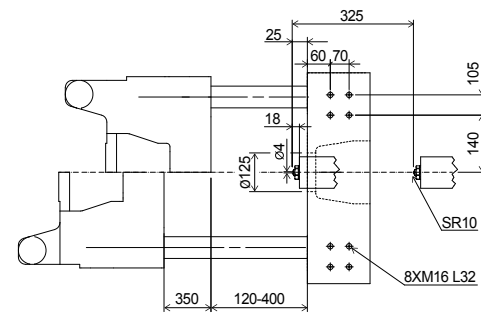
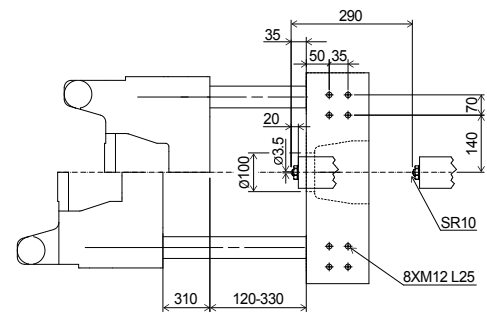
# 热固行业技术参数 HA/TSP (860-2000 kN)

			HA860/280TSP	HA1200/400TSP	HA1600/570TSP	HA2000/770TSP	
<b>注射装置</b>	<b>INJECTION UNIT</b>		B	B	B	B	C
螺杆直径	Screw diameter	mm	36	40	45	50	55
长径比	Screw L/D Ratio	L/D	16.6	16.7	15.8	16.3	15
注射容量(理论)	Injection volume (theoretical)	cm <sup>3</sup>	153	214	320	412	499
注射重量(PF)	Injection weight (PF)	g	181	253	378	486	589
注射速率(PF)	Injection rate (PF)	g/s	122	155	170	207	250
注射压力	Injection pressure	MPa	188	188	179	202	167
螺杆转速	Screw speed	rpm	0-180	0-190	0-125	0-150	0-150
<b>合模装置</b>	<b>CLAMPING UNIT</b>						
合模力	Clamping force	kN	86	1200	1600	2000	
移模行程	Mold opening stroke	mm	310	350	420	470	
拉杆内距	Dist. between tie bars (HxV)	mm	360x360	410x410	470x470	510x510	
最大模厚	Mold height max.	mm	330	400	470	480	
最小模厚	Mold height min.	mm	120	120	150	170	
顶出行程	Ejector stroke	mm	100	120	140	140	
顶出力	Ejector tonnage	kN	33	33	33	62	
<b>其它</b>	<b>OTHERS</b>						
油泵马达	Pump motor power	kW	13	18.5	18.5	22	
电热功率	Heater power	kW	2x2x1	2x2x1	2x2x1.5	2x2x1.5	
外形尺寸	Machine dimension (LxWxH)	m	4.2x1.1x1.8	4.6x1.20x1.9	5.0x1.3x1.9	5.8x1.4x2.0	
机器重量	Machine weight	t	3	4.1	4.9	6.5	
料斗容积(选配)	Hopper capacity(OP)	kg	25	25	50	50	
油箱容积	Oil tank	l	130	155	185	235	

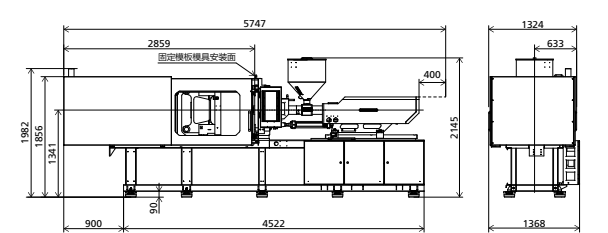
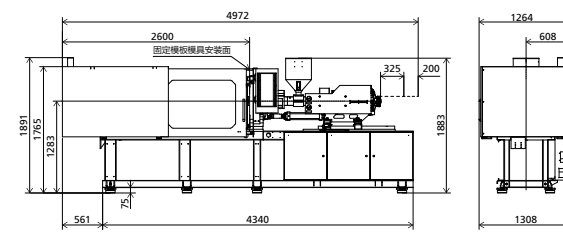
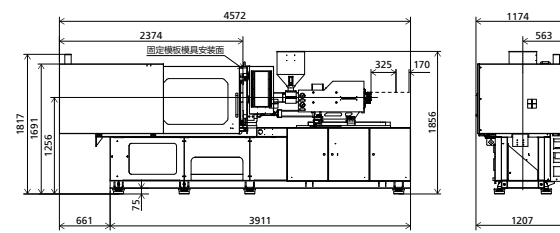
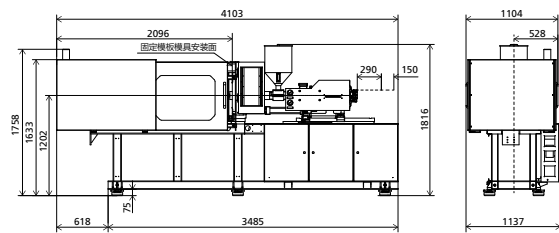
模板正面尺寸  
Platen dimensions  
Moving platen



模板侧面尺寸  
Platen dimensions  
Mounting hole for robot/sprue picker top view from fixed platen



外型尺寸  
Machine dimensions



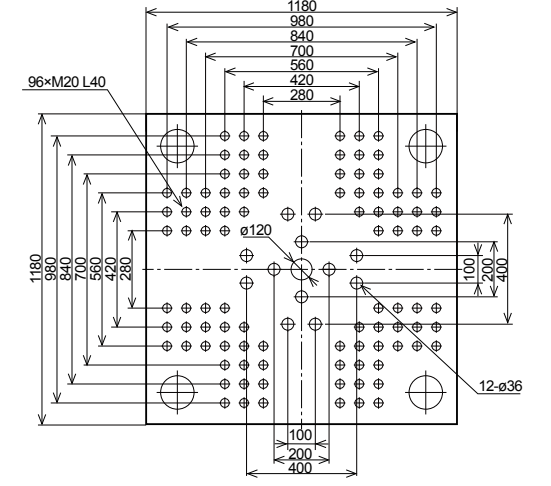
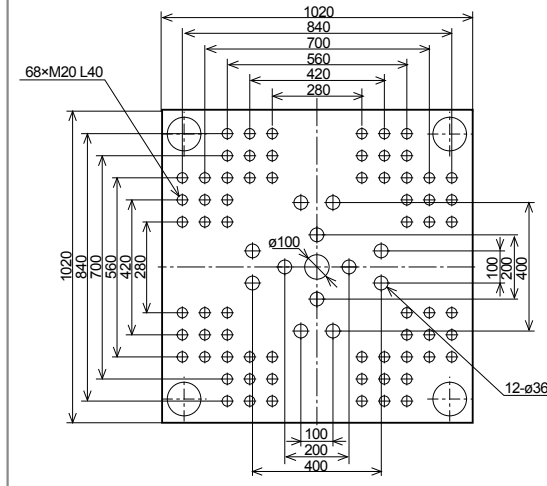
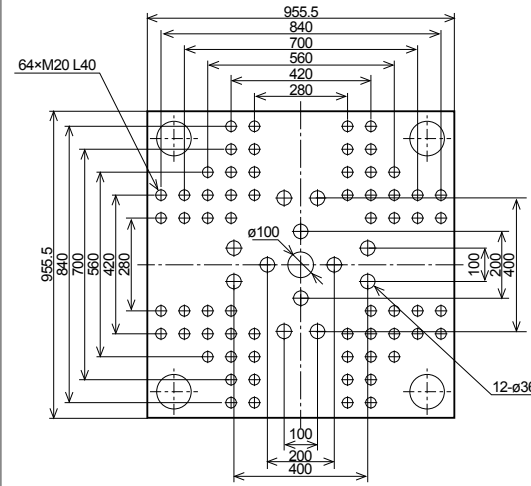
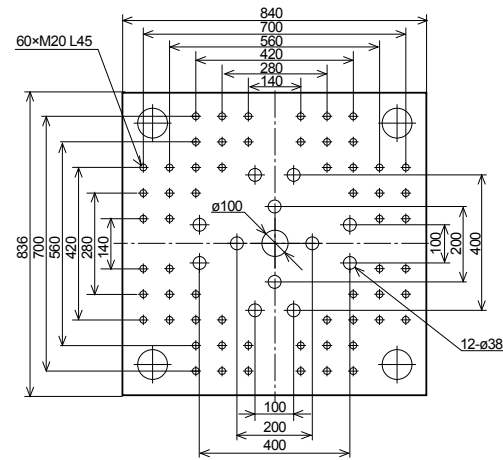
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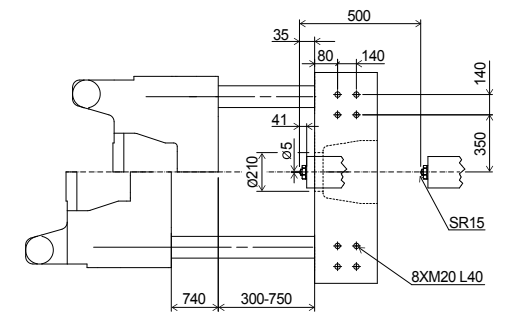
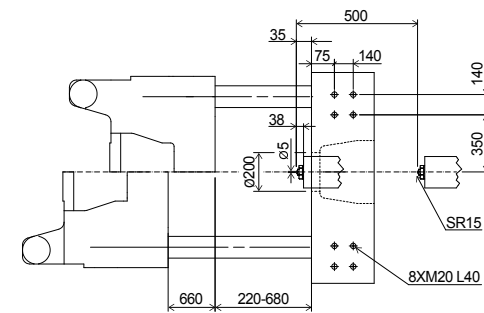
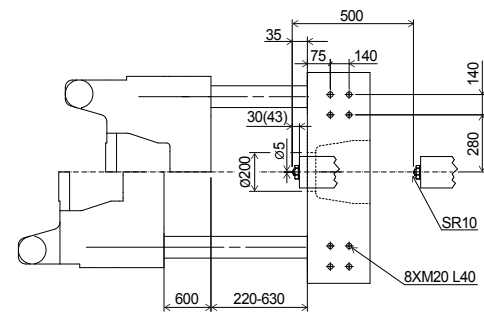
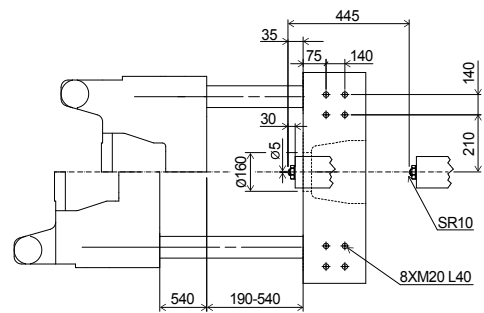
# 热固行业技术参数 HA/TSP (2500-4500 kN)

			HA2500/1000TSP		HA3000/1800TSP		HA3600/2250TSP		HA4500/3200TSP	
<b>注射装置</b>	<b>INJECTION UNIT</b>		B	C	B	C	B	C	B	C
螺杆直径	Screw diameter	mm	55	60	65	70	70	75	80	85
长径比	Screw L/D Ratio	L/D	15	15	15	15	15	15	15	15
注射容量(理论)	Injection volume (theoretical)	cm <sup>3</sup>	570	679	929	1078	1239	1423	1860	2100
注射重量(PF)	Injection weight (PF)	g	673	801	1096	1272	1462	1679	2195	2478
注射速率(PF)	Injection rate (PF)	g/s	325	380	420	490	420	480	601	680
注射压力	Injection pressure	MPa	204	171	197	170	197	172	184	163
螺杆转速	Screw speed	rpm	0-205	0-205	0-190	0-190	0-160	0-160	0-120	0-100
<b>合模装置</b>	<b>CLAMPING UNIT</b>									
合模力	Clamping force	kN	2500		3000		3600		4500	
移模行程	Mold opening stroke	mm	540		600		660		740	
拉杆内距	Dist. between tie bars (HxV)	mm	570x570		660x660		710x710		780x780	
最大模厚	Mold height max.	mm	540		630		680		750	
最小模厚	Mold height min.	mm	190		220		220		300	
顶出行程	Ejector stroke	mm	150		160		160		200	
顶出力	Ejector tonnage	kN	62		62		110		110	
<b>其它</b>	<b>OTHERS</b>									
油泵马达	Pump motor power	kW	37		45		45		65	
电热功率	Heater power	kW	2x2x2		2x2x5		2x2x5		2x2x5	
外形尺寸	Machine dimension (LxWxH)	m	6.4x1.5x2.1		7.0x1.8x2.4		7.4x1.8x2.4		8.4x1.9x2.6	
机器重量	Machine weight	t	7.9		11.5		14.8		18.8	
料斗容积(选配)	Hopper capacity(OP)	kg	50		50		50		50	
油箱容积	Oil tank	l	270		420		520		630	

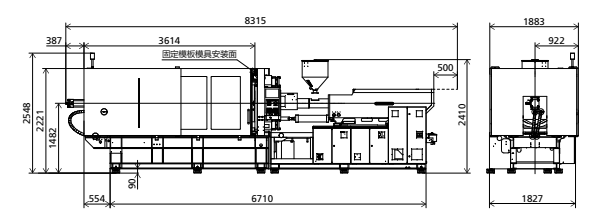
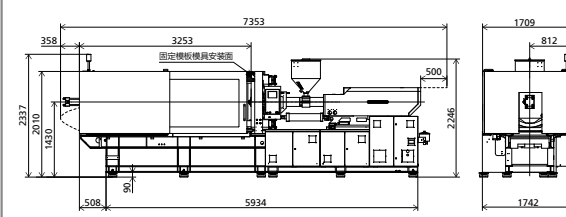
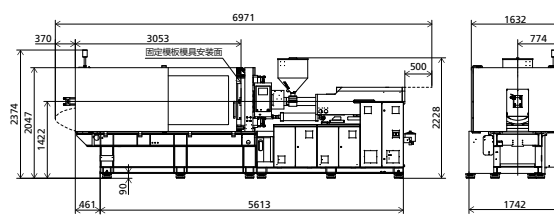
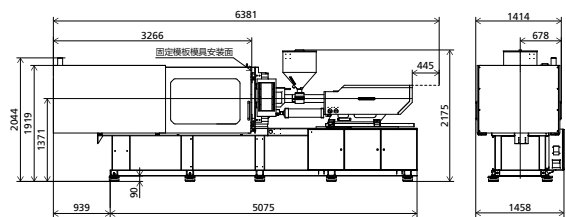
模板正面尺寸  
Platen dimensions  
Moving platen



模板侧面尺寸  
Platen dimensions  
Mounting hole for robot/sprue picker top view from fixed platen



外型尺寸  
Machine dimensions



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