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**Preform injection**  
 HA/PET

HT 20240528-IV



# PET preform industry applications

PET is widely used in the container packaging field of beverages, purified water, edible oil, cosmetics, pharmaceuticals and cleaning products; Haitian PET special injection molding machine series inherits Haitian's consistent excellent quality, combines product characteristics and advanced technology at home and abroad, market-oriented, covers a full range of models, and adapts to the selection of a variety of PET packaging products.

Haitian PET special injection molding machine has the characteristics of high efficiency and stability, energy saving and environmental protection, and is at the leading level in the industry in terms of product accuracy, plasticizing efficiency, machine energy consumption, etc.

At the same time, a full set of auxiliary facilities are available, providing customers with economical, efficient and stable overall solutions.



### Special plasticized components

The high-efficiency and high-mix chrome-plated screw for PET preforms achieves efficient and high-quality plasticization under low shear conditions, improves shrinkage and improves transparency



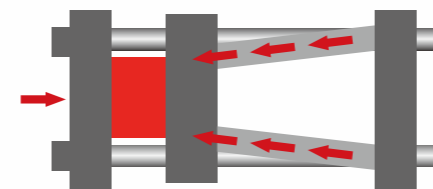
### Injection line rails

High rigidity injection unit, double-layer structure design, small friction coefficient, high operating accuracy and low energy consumption



### Intelligent opening and closing mold

Easier operation, more precise repeatability, faster dry cycle



### High rigidity clamping unit

Pressure center template design, high rigidity template uniform force, less deformation



水性漆工艺 碳标签认证



### High drive servo power

The new high-drive servo power system achieves high dynamics and high responsiveness

# Preform industry application

Applicable products: injection volume 650g-8300g

Special aircraft features:

- » The use of PET preform special high-efficiency plasticizing components, which can reduce the plasticizing temperature and AA value;
- » Efficient and stable heating system;
- » Efficient cooling systems;
- » Efficient ejection system.



## SPECIFICATION

MACHINE TYPE		HA1600		HA2000		HA2500		HA3000		HA3600		
		570-C	770-C	770-C	1000-C	1000-C	1800-C	2250-C	3200-C	2250-C	3200-C	4000-C
INJECTION UNIT		C	C	C	D	D	C	D	D	D	D	E
Screw diameter	mm	50	55	55	65	65	70	85	95	85	95	110
Screw L/D ratio	L/D	25	25	25	25	25	25	25	25	25	25	25
Injection volume (theoretical)	cm <sup>3</sup>	394	546	546	972	972	1154	2054	2906	2054	2906	4181
Injection weight (PET)	g	473	655	655	1166	1166	1385	2465	3487	2465	3487	5017
Injection pressure	MPa	145	142	142	126	126	155	119	122	119	122	105
Screw speed	rpm	138	152	152	133	133	163	148	109	148	109	100
CLAMPING UNIT												
Clamping force	kN	1600		2000		2500		3000		3600		
Mold opening stroke	mm	420		470		540		600		660		
Dist. between tie-bars (H×V)	mm	470×470		510×510		570×570		660×660		710×710		
Mold height max.	mm	500		510		570		660		710		
Mold height min.	mm	180		200		220		250		250		
Ejector stroke	mm	140		140		160		160		160		
Ejector force	kN	60		99		137		166		198		
OTHERS												
Pump motor power	kW	18.5	22	22	32	32	45	70	85	70	85	70+32
Electrical charging (OP)	kW	-	-	-	-	-	36	55	65	55	65	68
Heater power	kW	21.3	27.5	27.5	34.7	34.7	43	58.3	70.9	58.3	70.9	77.5
Machine dimension (L×W×H)	m	5.3×1.9×1.4	5.6×2×1.4	5.9×2×1.4	6.4×2×1.4	6.8×2.1×1.5	7×2.1×1.8	8.1×2.4×1.8	8.5×2.5×1.9	8.2×2.4×1.8	8.7×2.4×1.9	9.5×2.4×2
Machine weight	t	5	5.5	6.5	6.7	8.1	8.1	13.5	14.2	15	15.8	17.6
Oil tank	l	185	235	235	260	285	420	610	710	610	710	890

This parameter table is based on machine standard configuration;  
We reserve the right to make changes as a result of further technical advances.



# Preform industry application

Applicable products: injection volume 2400g-3400g

Special aircraft features:

- » The use of PET preform special high-efficiency plasticizing components, which can reduce the plasticizing temperature and AA value;
- » Efficient and stable heating system;
- » Efficient cooling systems;
- » Efficient ejection system.



## SPECIFICATION

MACHINE TYPE		HA3800			HA4500			HA4700		HA6500		
		2250-C	3200-C	4000-C	3200-C	4000-C	6530-C	3200-C	4000-C	7950-C	4550-D	
INJECTION UNIT		D	D	E	D	E	D	D	E	D	D	
Screw diameter	mm	85	95	110	95	110	120	95	110	130	110	
Screw L/D ratio	L/D	25	25	25	25	25	24	25	24	24	25	
Injection volume (theoretical)	cm <sup>3</sup>	2054	2906	4181	2906	4181	5541	2906	4181	7101	4181	
Injection weight (PET)	g	2465	3487	5017	3487	5017	6649	3487	5017	8521	5017	
Injection pressure	MPa	119	122	105	122	105	126	122	105	128	119	
Screw speed	rpm	148	109	100	109	100	82	109	100	78	95	
CLAMPING UNIT												
Clamping force	kN	3800			4500			4700		650		
Mold opening stroke	mm	700			740			780		900		
Dist. between tie-bars (H×V)	mm	730×730			780×780			820×800		920*920		
Mold height max.	mm	730			780			780		900		
Mold height min.	mm	280			330			320		400		
Ejector stroke	mm	180			200			200		170		
Ejector force	kN	198			198			198		40		
OTHERS												
Pump motor power	kW	70	85	70+32	85	70+32	70+55	85	70+32	65+85	70+32	
Electrical charging (OP)	kW	55	65	68	65	68	80	65	68	133	92.5	
Heater power	kW	58.3	70.9	77.5	70.9	77.5	114.9	70.9	77.5	136.2	77.5	
Machine dimension (L×W×H)	m	8.2×2.4×1.8	8.7×2.4×1.9	9.5×2.4×2	9.1×2.6×1.9	9.9×2.6×2	10.2×2.6×2.3	9.1×2.6×2	9.9×2.6×2	10.8×2.7×2.3	10.82×2.21×2.71	
Machine weight	t	15	15.8	17.6	19	20.8	22.4	19	20.8	25.4	31	
Oil tank	l	610	710	890	710	890	1000	710	890	1150	890	

This parameter table is based on machine standard configuration;  
We reserve the right to make changes as a result of further technical advances.

# Deep cavity preform industry application

Applicable products: injection volume 5000g-11000g

Special aircraft features:

- » The use of PET preform special high-efficiency plasticizing components, which can reduce the plasticizing temperature and AA value;
- » Efficient and stable heating system;
- » Efficient cooling systems;
- » Efficient ejection system;
- » Larger mold opening and ejection strokes.



## SPECIFICATION

MACHINE TYPE		HA5280				HA6180			
		4000-C	6350-C	7950-C	10600-C	4000-C	6350-C	7950-C	10600-C
INJECTION UNIT		E	D	D	C	E	D	D	C
Screw diameter	mm	110	120	130	140	110	120	130	140
Screw L/D ratio	L/D	25	24	24	24	25	24	24	24
Injection volume (theoretical)	cm <sup>3</sup>	4181	5541	7101	9544	4181	5541	7101	9544
Injection weight (PET)	g	5017	6650	8521	11452	5017	6650	8521	11452
Injection pressure	MPa	105	126	128	128	105	126	128	128
Screw speed	rpm	100	82	78	68	99	82	78	68
CLAMPING UNIT									
Clamping force	kN	5280				6180			
Mold opening stroke	mm	850				910			
Dist. between tie-bars (H×V)	mm	820×800				880*880			
Mold height max.	mm	810				880			
Mold height min.	mm	320				380			
Ejector stroke	mm	200				240			
Ejector force	kN	186				186			
OTHERS									
Pump motor power	kW	70+32	70+55	65+85	85+85	70+32	55+70	65+85	85+85
Heater power	kW	77.5	114.9	136.2	154.5	77.5	114.9	136.2	154.5
Electrical charging (OP)	kW	68	80	133	133	68	80	133	133
Machine dimension (L×W×H)	m	10.3×2.6×2.1	10.6×2.6×2.3	11.2×2.7×2.3	12×2.9×2.6	10.3×2.6×2.1	10.6×2.6×2.3	11.2×2.7×2.3	12×2.9×2.6
Machine weight	t	23.5	25	28	35	23.5	25	28	35
Oil tank	l	890	1000	1150	1360	890	1000	1150	1360

### Deep cavity preform selection reference

Specifications(L)	Single preform weight(g)	Number of cavities	Recommended model
380-420	650-750	4	HA5280/4000PET-C
		6	HA5280/6350PET-C
		8	HA5280/7950PET-C
		12	HA5280/10600PET-C
		4	HA6180/4000PET-C
380-420	650-750	6	HA6180/6350PET-C
		8	HA6180/7950PET-C
		12	HA6180/10600PET-C

This parameter table is based on machine standard configuration;  
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# Selection reference

## Water / oil preform

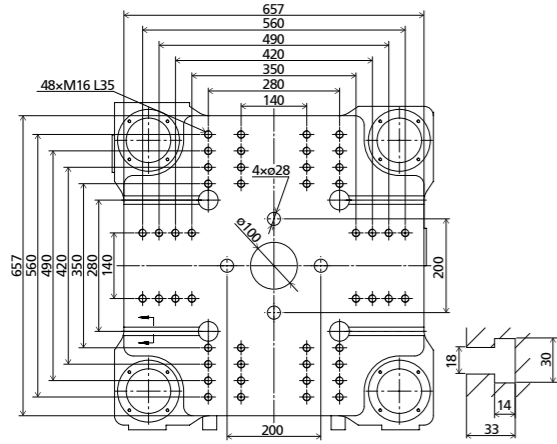
Specifications(L)	Single preform weight(g)	Number of cavities	Recommended model
0.5	10-19	24	HA2000/1000PET-C
		32	HA2500/1800PET-C
		48	HA3000/2250PET-C
		64	HA3000/2250PET-C
		72	HA4500/3200PET-C
		96	HA4700/4000PET-C
1	20-30	24	HA2500/1800PET-C
		32	HA3000/2250PET-C
		48	HA3000/2250PET-C
		64	HA3600/3200PET-C
		72	HA4500/3200PET-C
		96	HA4700/4000PET-C
1.5	35-60	12	HA2500/1800PET-C
		16	HA3000/2250PET-C
		24	HA3000/2250PET-C
		32	HA3000/3200PET-C
2	65-70	48	HA3600/4000PET-C
		12	HA2500/1800PET-C
		16	HA3000/2250PET-C
		24	HA3000/2250PET-C
2.5	75-80	32	HA3600/3200PET-C
		48	HA4500/4000PET-C
		12	HA2500/1800PET-C
		16	HA3000/2250PET-C

Specifications(L)	Single preform weight(g)	Number of cavities	Recommended model
5	85-95	8	HA2500/1800PET-C
		12	HA3000/2250PET-C
		16	HA3000/2250PET-C
		24	HA3600/3200PET-C
		32	HA4500/4000PET-C
		48	HA4500/6350PET-C
10	100-140	8	HA3000/2250PET-C
		12	HA3600/3200PET-C
		16	HA3600/3200PET-C
		24	HA4500/4000PET-C
		32	HA4500/6350PET-C
		48	HA4700/7950PET-C
15	150-200	8	HA3000/2250PET-C
		12	HA3600/3200PET-C
		16	HA4500/4000PET-C
		24	HA4500/6350PET-C
		6	HA3000/2250PET-C
		8	HA3000/3200PET-C
20	210-240	12	HA3600/4000PET-C
		16	HA4500/6350PET-C
		8	HA3000/3200PET-C
		12	HA3600/4000PET-C
		16	HA4500/6350PET-C
		8	HA3000/3200PET-C
20	250-300	12	HA3600/4000PET-C
		16	HA4500/6350PET-C
		24	HA4700/10600PET-C
		8	HA3600/4000PET-C
		12	HA4500/6350PET-C
		16	HA4500/7950PET-C
20	310-400	8	HA3600/4000PET-C
		12	HA4500/6350PET-C
		16	HA4500/7950PET-C

# Platen dimensions (1600-3600kN)

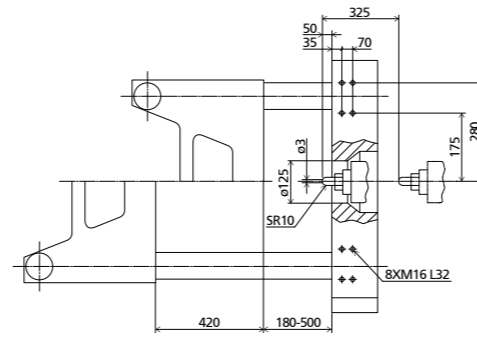
## Platen dimensions

### HA1600



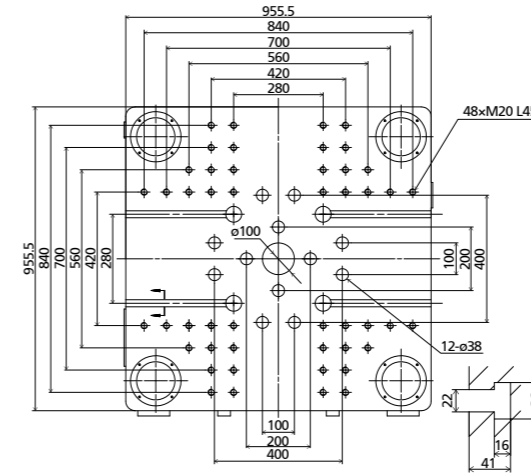
## Platen dimensions

Screw diameter	Nozzle hole diameter	Nozzle radius	Nozzle stroke
45	ø6	SR10	325
50	ø6	SR10	325



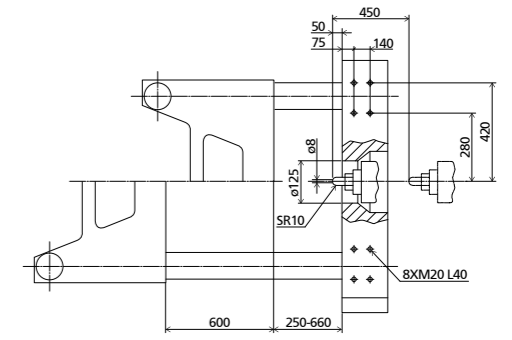
## Platen dimensions

### HA3000

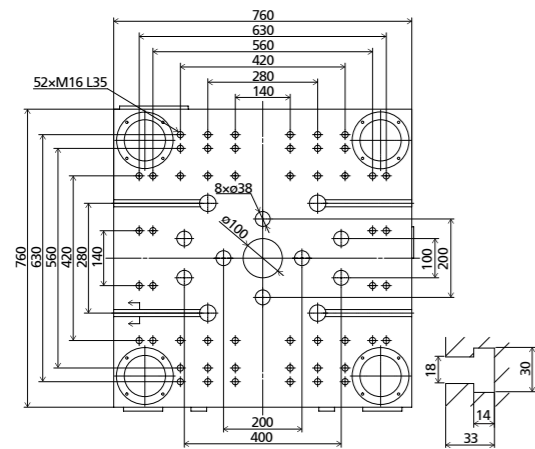


## Platen dimensions

Screw diameter	Nozzle hole diameter	Nozzle radius	Nozzle stroke
65	ø8	SR10	450
70	ø10	SR10	450
85	ø12	SR15	550
95	ø12	SR15	600
110	ø14	SR15	800

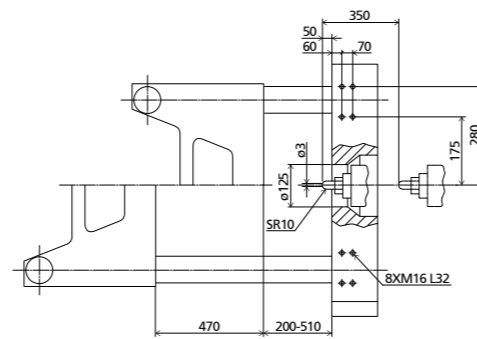


### HA2000

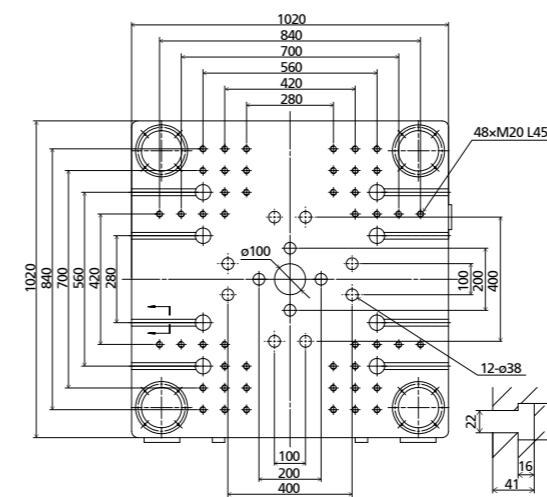


## Platen dimensions

Screw diameter	Nozzle hole diameter	Nozzle radius	Nozzle stroke
50	ø6	SR10	350
55	ø6	SR10	350
65	ø8	SR10	390

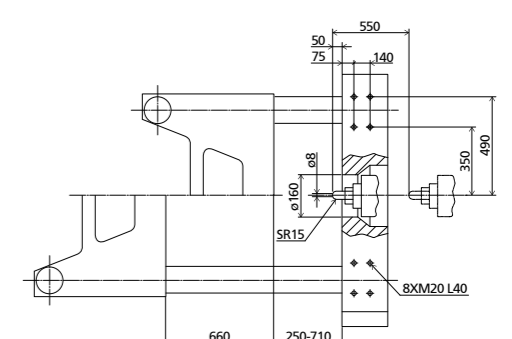


### HA3600

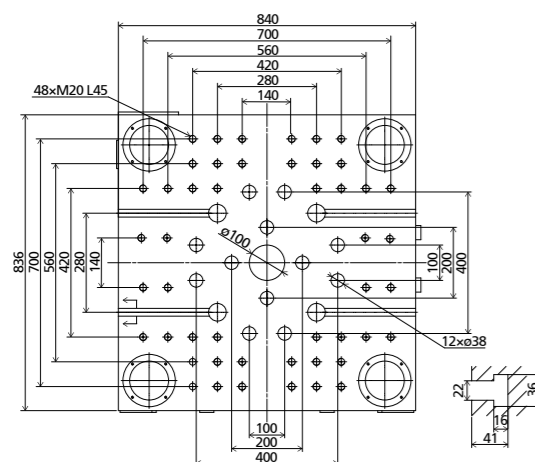


## Platen dimensions

Screw diameter	Nozzle hole diameter	Nozzle radius	Nozzle stroke
70	ø8	SR15	550
85	ø12	SR15	550
95	ø12	SR15	600
110	ø14	SR15	800

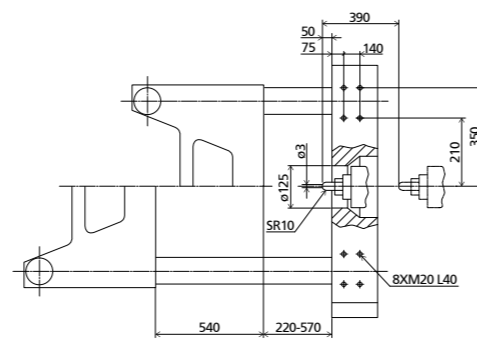


### HA2500

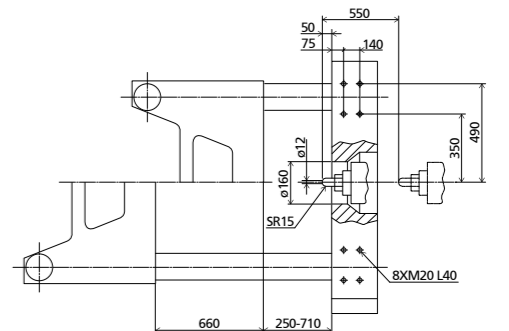
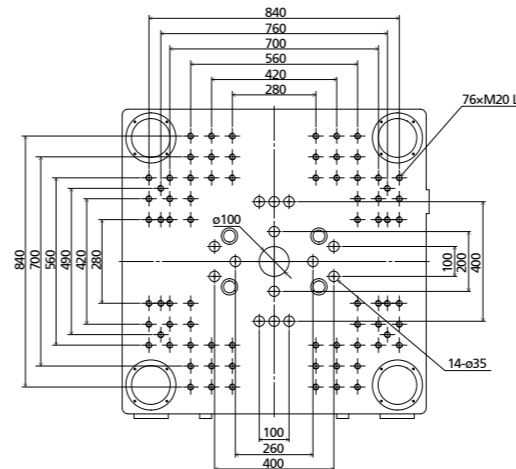


## Platen dimensions

Screw diameter	Nozzle hole diameter	Nozzle radius	Nozzle stroke
55	ø6	SR10	390
65	ø8	SR10	390
75	ø10	SR15	550



### HA3600 (High-speed preform custom template)



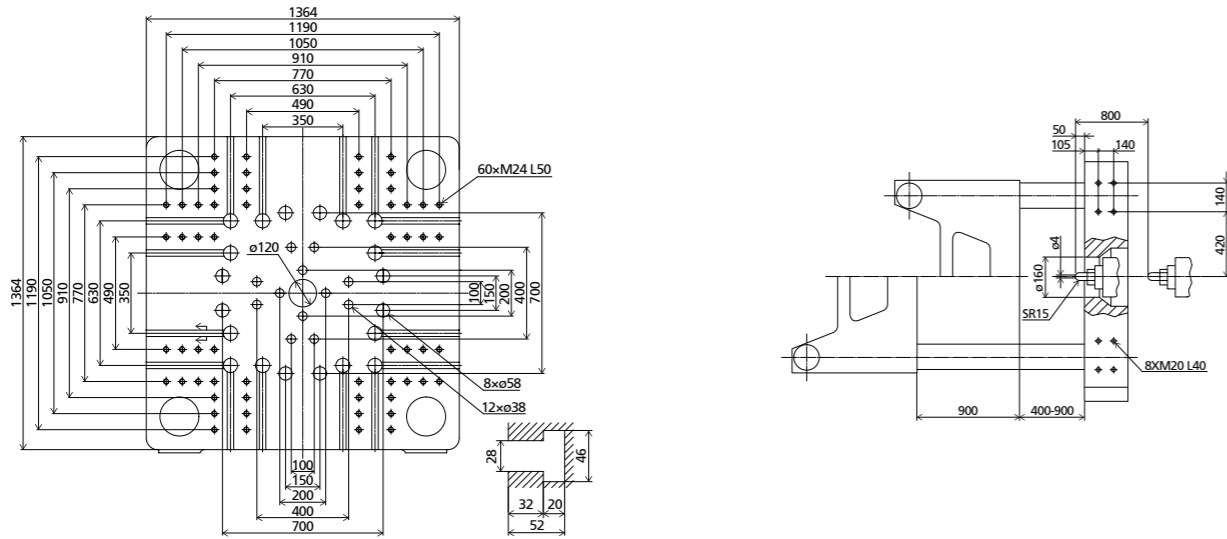




# Platen dimensions (6500kN)

## Platen dimensions

### HA6500



# Hopper installation dimensions drawing

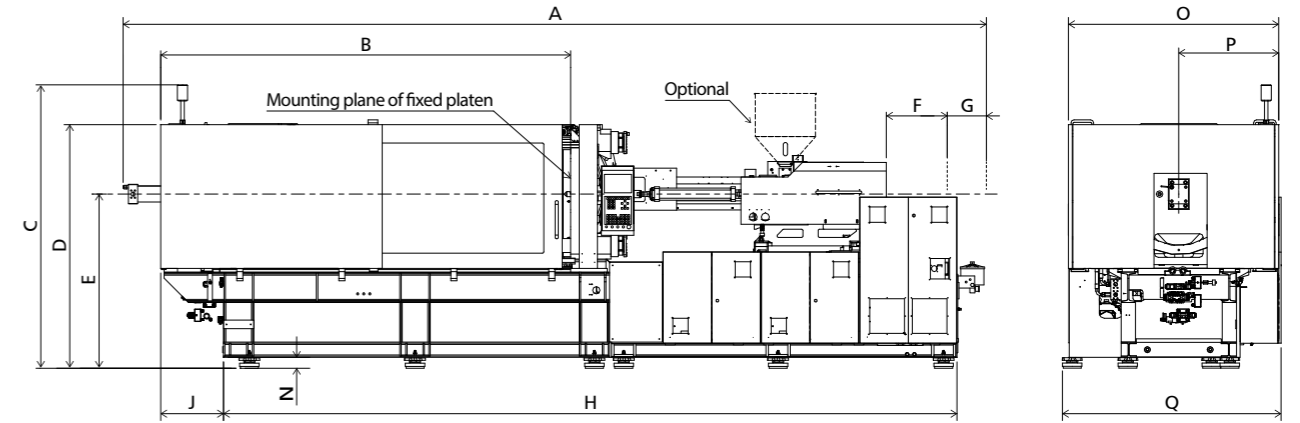
Injection unit	Slider size Drawing
570	
770	
1000	
1800	
2250	

Injection unit	Base Dimension Drawing	A	B	C	D
3200		80	115	115	M10
4000		108	170	170	M12
4550		108	170	170	M12
6350		108	170	170	M12
7950		108	170	170	M12
10600		108	170	170	M12

# Machine layout

## Machine layout



## Machine layout parameter

MACHINE TYPE	Screw diameter	Machine layout parameter												
		A	B	C	D	E	F	G	H	J	N	O	P	Q
HA1600/570	50	5370	2615	1891	1765	1283	325		4670	561	75	1264	600	1317
HA1600/770	55	5610	2615	1891	1765	1283	350		4670	561	75	1264	600	1317
HA2000/770	55	5902	2874	1982	1855	1340	350		4975	867	90	1324	633	1368
HA2000/1000	65	6408	2874	1990	1855	1340	390		4975	867	90	1324	633	1368
HA2500/1000	65	6815	3281	2044	1918	1370	390		5619	939	90	1414	678	1458
HA2500/1800	70	7020	3281	2095	1970	1422	450		5809	801	90	1414	678	1743
HA3000/2250	85	8072	3068	2382	2055	1430	550		6505	461	90	1632	774	1743
HA3000/3200	95	8563	3068	2434	2107	1482	600		7133	461	90	1632	774	1829
HA3600/2250	85	8260	3268	2337	2010	1430	550		6694	508	90	1709	812	1743
HA3600/3200	95	8751	3268	2389	2062	1482	600		7322	508	90	1709	812	1829
HA3600/4000	110	9520	3268	2389	2062	1482	800	440	8066	508	90	1709	812	1980
HA3800/2250	85	8311	3368	2329	2000	1430	550		6787	515	90	1728	821	1748
HA3800/3200	95	8794	3368	2329	2000	1430	600		7380	515	90	1728	821	1829
HA3800/4000	110	9571	3368	2329	2000	1430	800	440	8088	515	90	1728	821	1980
HA4500/3200	95	9141	3629	2548	2221	1482	800		7607	554	90	1883	922	1891
HA4500/4000	110	9910	3629	2548	2221	1482	800	440	8381	554	90	1883	922	1986
HA4500/6350	120	10234	3629	2582	2255	1516	800	490	8575	554	95	1883	922	2215
HA4700/3200	95	9160	3629	2559	2232	1482	600		7673	554	90	1917	938	1829
HA4700/4000	110	9899	3629	2559	2232	1482	800	440	8381	554	90	1917	938	2003
HA4700/7950	130	10850	3629	2652	2325	1575	880	535	9117	554	95	1917	938	2260
HA5000/4550	110	11200	4759	2897	2436	1652	800	440	9949	225	95	2367	1058	2265
HA5280/4000	110	10320	4088	2525	2198	1484	800	440	8656	736	90	1958	936	2059
HA5280/6350	120	10652	4086	2559	2232	1516	800	490	8850	736	95	1958	936	2229
HA5280/7950	130	11270	4086	2618	2291	1575	880	535	9392	736	95	1958	936	2275
HA5280/10600	140	11988	4084	2861	2534	1818	980	620	9880	736	95	1958	936	2532
HA6180/4000	110	10592	4250	2515	2188	1487	800	440	8998	572	95	2044	977	1983
HA6180/6350	120	10917	4250	2533	2206	1505	800	490	9098	572	95	2044	977	2195
HA6180/7950	130	11541	4250	2620	2293	1592	880	535	9600	572	95	2044	977	2260
HA6180/10600	140	12263	4250	2709	2382	1681	980	620	10263	572	95	2044	977	2504
HA6500/4550	140	10811	4542	2710	2184	1487	800	440	9501	237	95	2164	1002	2208

Note:  
Only when the width of the injection fuselage (including distribution box) exceeds the protective door, the data of Q needs to be filled in.