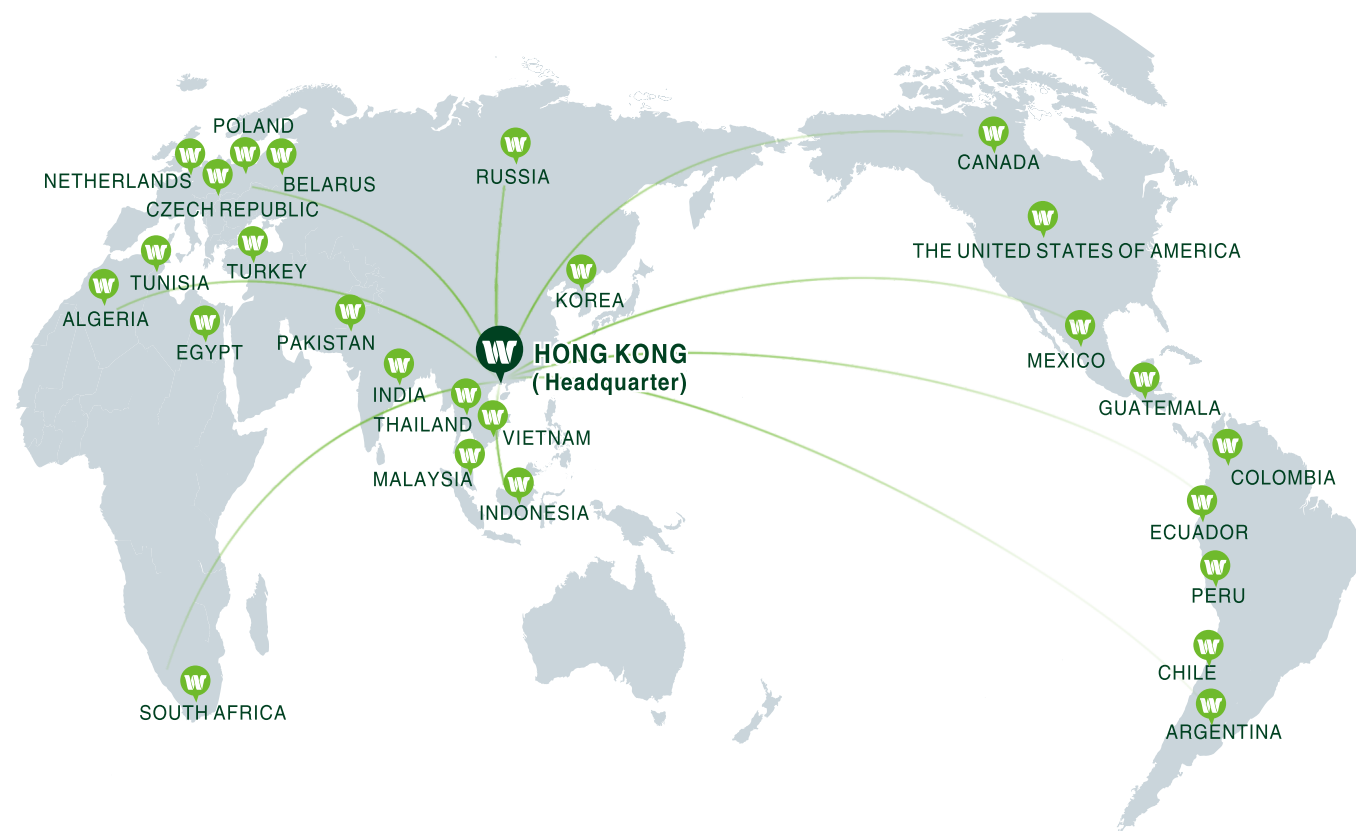


Our offices and agents



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WELLTEC

Special Injection for PET

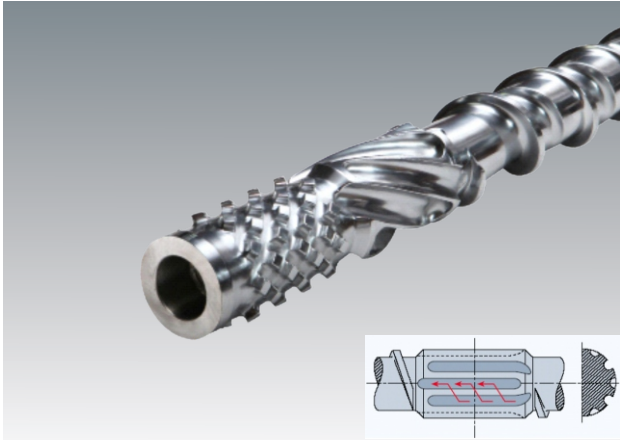


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PET Preform Injection Moulding System / Process Diagram



Machine Features



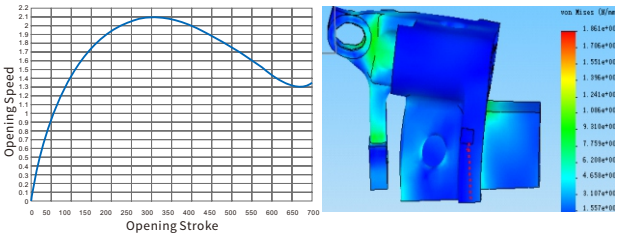
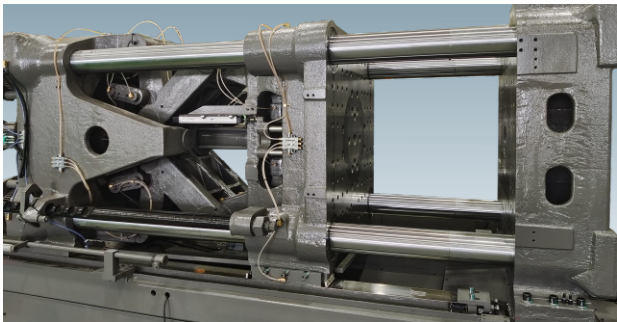
Efficient and high-performance screw

The design of low shear and high L/D ratio increases the plasticising efficiency by more than 30%, and effectively reduces acetaldehyde level.



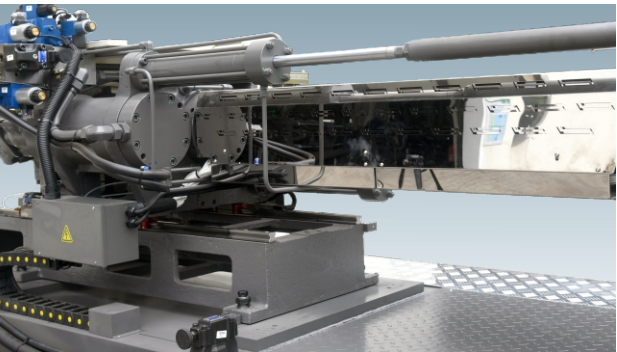
Excellent plasticising effect

It ensures the high transparency of the preform. Even colouring by mixing master batch, pigment or liquid colourant is attainable. Resins with higher proportion of recycled plastics can be also evenly plasticised.



Advanced design of clamping structure

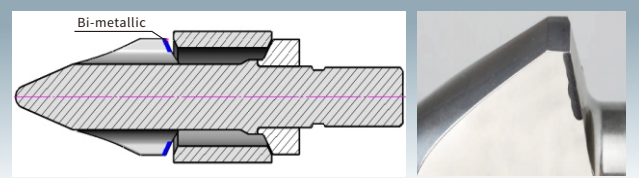
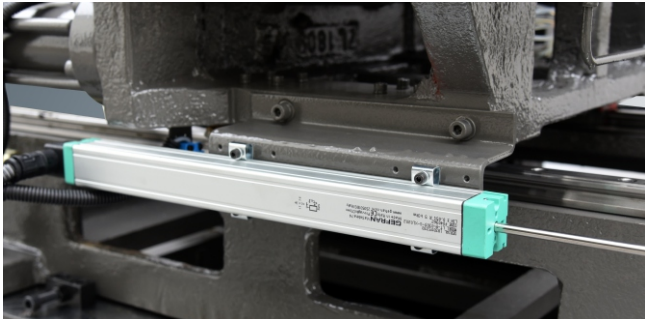
Extra durability achieved through even mould platen stress dispersion and high-strength clamping structure. Extra large opening stroke satisfy the production of long depth preform.



Linear guide rail injection unit

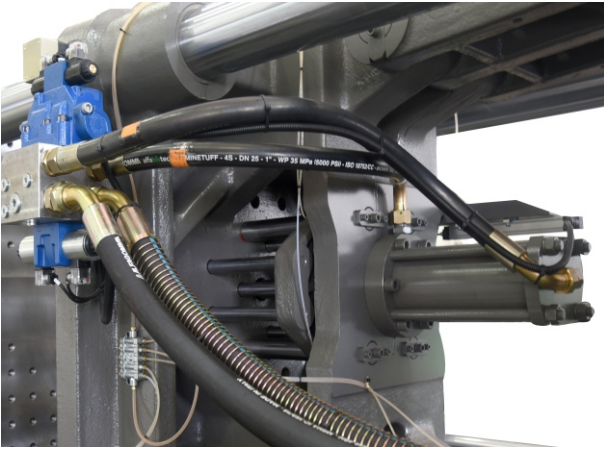
Linear guide rail greatly reduces mechanical back pressure and energy consumption.

Machine Features



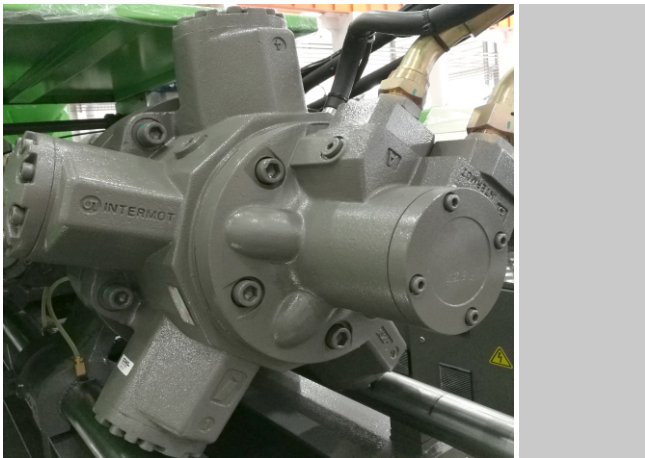
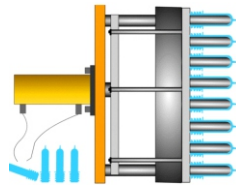
Stable and precise injection

Wear-resistant bi- metallic tip set is provided.



Strong ejector design

Enlarged ejector hydraulics to enhance ejector speed, force and stroke.



Large torque hydraulic motor

Stable and continuous output of high torque to meet the requirement of high speed plasticising for PET. Some of the standard equipment are with high torque motor of 210 bar.



Excellent energy saving

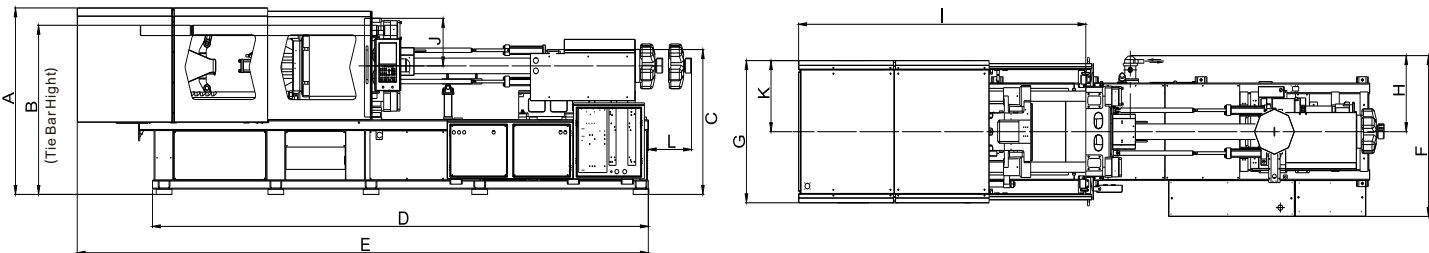
Precise, energy saving servo motor and high performance gear pump. Large diameter hydraulic pipeline.

⚙️ PET servo pump parameters

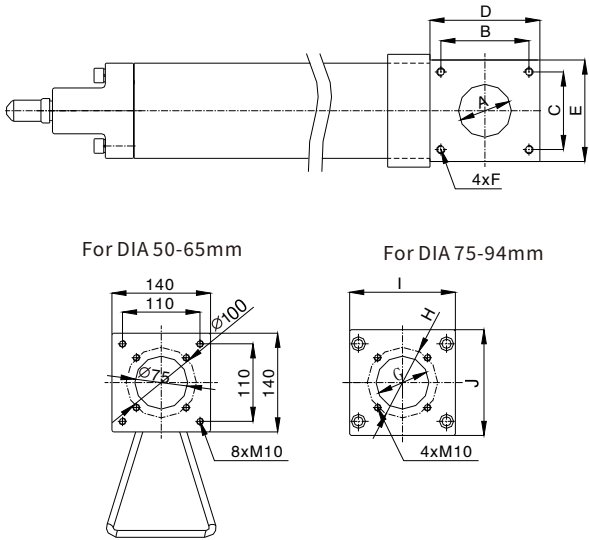
ITEM	UNIT	170PET III	210PET III	270PET III		300PET III	330PET III			420PET III			480PET III		530PET III	660PET III
		1700-620	2100-870	2700-1500	2700-1930	3000-3500	3300-1930	3300-2860	3300-3500	4200-2860	4200-3500	4200-4760	4800-3500	4800-4760	5300-3500	6600-6500
INJECTION UNIT																
Screw diameter	mm	50	60	65	75	94	75	85	94	85	94	105	94	105	94	120
Theoretical shot volume	cc	442	707	995	1436	2776	1436	2128	2776	2128	2776	3810	2776	3810	2776	5316
Shot weight (PET)	g	517	827	1165	1680	3248	1680	2490	3248	2490	3248	4458	3248	4458	3248	6219
Shot weight (PP/PE)	g	323	516	727	1048	2026	1048	1553	2026	1553	2026	2781	2026	2781	2026	3880
Length/Diameter ratio	L/D	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Injection pressure	MPa	142	123	151	134	126	134	135	126	135	126	125	126	125	126	123
Injection rate(PET)	g/s	264	401	397	447	967	559	696	967	696	967	978	967	1129	967	1532
Injection stroke	mm	225	250	300	325	400	325	375	400	375	400	440	400	440	400	470
Max. screw speed	rpm	180	160	155	125	115	130	120	115	120	115	96	115	110	115	100
Plasticising capacity (PET)	g/s	45.4	72.8	87.9	127.9	180.2	133.7	165.1	180.2	165.1	180.2	218.8	180.2	250.1	180.2	314.0
CLAMPING UNIT																
Clamping force	Ton	170	210	270	270	300	330	330	330	420	420	420	480	480	530	660
Max. daylight	mm	1000	1090	1210	1210	1160	1400	1400	1400	1530	1530	1530	1600	1600	1700	1830
Clamping stroke	mm	480	540	600	600	500	700	700	700	780	780	780	780	780	850	910
Distance btwn. tie bars	mm	470X470	535X535	580X580	580X580	660X860	680X680	680X680	680X680	740X740	740X740	740X740	820X800	820X800	840X830	920X920
Min. mould dimension	mm	320x320	370x370	400X400	400X400	460X660	470X470	470X470	470X470	520X520	520X520	520X520	570X560	570X560	580X580	645X645
Mould thickness range	mm	150-520	175-550	195-610	195-610	300-660	250-700	250-700	250-700	250-750	250-750	250-750	300-820	300-820	300-850	350-920
Ejector force	Ton	7.7	9.9	11.1	11.1	19.8	19.8	19.8	19.8	19.8	19.8	19.8	23.2	23.2	23.2	23.2
Ejector stroke	mm	160	170	195	195	180	215	215	215	230	230	230	270	270	270	300
No. of ejector pins	unit	5	9	13	13	15	13	13	13	13	13	13	13	13	17	21
POWER UNIT																
Major motor	kW	23	31.4	32	32	73.3	46.1	56.5	73.3	56.5	73.3	73.3	73.3	87.9	73.3	113
No. of heating zones	unit	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1
Heating power	kW	15.24	22.39	26.05	37.24	61.25	37.24	45.93	61.25	45.93	61.25	77.21	61.25	77.21	61.25	92.54
Total power	kW	39.24	54.79	59.05	70.24	135.55	84.34	103.43	135.55	103.43	135.55	151.51	135.55	166.11	135.55	206.54
Total current	A	53.7	74.9	80.7	96.0	185.4	115.3	141.4	185.4	141.4	185.4	207.2	185.4	227.1	185.4	282.4
GENERAL DATA																
Machine dimensions(LxWxH)	m	5.3x1.5x1.8	5.8x1.6x1.8	6.3x1.7x2.0	6.7x1.7x2.0	8.1x1.8x2.2	7.4x2.0x2.1	7.6x2.0x2.1	8.1x2.0x2.1	8.4x2.0x2.2	8.7x2.0x2.2	9.0x2.0x2.2	8.6x2.1x2.2	9.3x2.1x2.2	8.8x2.1x2.3	10.2x2.3x2.3
Net weight	Ton	5.9	7.4	9.0	9.3	14.4	12.0	12.3	12.7	15.2	15.6	16.5	17.3	18.3	19.3	32.5
Oil filling capacity	L	320	360	480	480	600	600	600	600	600	600	600	600	1000	600	1000

■ We are always working on improvement and reserve the rights to change design and specifications without prior notice

⚙️ Machine Dimensions



⚙️ Hopper mounting surface



Screw diameter	A	B	C	D	E
50	68	125	110	145	220
60	75	125	110	150	220
65	80	125	110	155	230
75	85	125	110	185	230
85	95	155	135	195	230
94	105	155	135	205	240
105	120	180	180	320	330
120	120	190	190	300	350

Screw diameter	F	G	H	I	J
50	M12				
60	M12				
65	M12				
75	M12	80	100	150	150
85	M12	120	155	190	180
94	M12	120	155	190	180
105	M16				
120	M16				

Model	DIA	A	B	C	D	E	F	G	H	I	J	K	L
170PET III	50	1758	1567	1377	4513	5215	1506	1302	717	2730	375	651	254
210PET III	60	1833	1645	1430	4778	5623	1576	1414	752	3008	413	707	422
270PET III	65	1961	1757	1512	5125	6056	1660	1462	810	3245	468	731	564
300PET III	75	1961	1757	1527	5475	6406	1660	1462	810	3245	468	731	651
330PET III	94	2158	2000	1558	6689	7836	1745	1796	836	3449	610	896	440
330PET III	75	2078	1884	1594	6300	7256	1814	1852	865	3649	533	1056	244
330PET III	85	2078	1884	1604	6300	7256	1814	1852	865	3649	533	1056	693
330PET III	94	2078	1884	1610	7025	7981	1814	1852	865	3649	533	1056	270
420PET III	85	2176	1923	1552	7421	8439	1745	1980	836	4054	580	1100	0
420PET III	94	2176	1923	1558	7421	8439	1745	1980	836	4054	580	1100	440
420PET III	105	2176	1923	1568	7906	8869	1703	1980	787	4054	580	1100	302
480PET III	94	2246	1985	1636	7216	8180	1849	2087	907	4249	600	1150	858
480PET III	105	2246	1985	1646	9216	9250	2051	2087	1135	4249	600	1150	190
530PET III	94	2244	2005	1636	7416	8380	1849	2100	907	4474	625	1150	858
660PET III	120	2280	2075	1740	8372	9746	2239	2180	1335	4690	688	1209	880

Remark: C-hopper height for reference only

⚙️ PET servo pump parameters

ITEM		330PETIII/e		420PETIII/e			480PETIII/e		500PP-SeIII
	UNIT	3300-1930	3300-2860	4200-2860	4200-3500	4200-4760	4800-3500	4800-4760	5000-4760
INJECTION UNIT									PP-144cav
Screw diameter	mm	75	85	85	94	105	94	105	110
Theoretical shot volume	cc	1436	2128	2128	2776	3810	2776	3810	4181
Shot weight (PET)	g	1680	2490	2490	3248	4458	3248	4458	4892
Shot weight (PP/PE)	g	1048	1553	1553	2026	2781	2026	2781	3052
Length/Diameter ratio	L/D	24	24	24	24	24	24	24	24
Injection pressure	MPa	134	135	135	126	125	126	125	114
Injection rate(PET)	g/s	559	557	696	743	751	967	978	1073
Injection stroke	mm	325	375	375	400	440	400	440	440
Max. screw speed	rpm	125	125	125	112	112	112	112	125
Plasticising capacity (PET)	g/s	128.4	172.1	172.1	175.3	254.7	175.3	254.7	240.2
CLAMPING UNIT									
Clamping force	Ton	330	330	420	420	420	480	480	500
Max. daylight	mm	1400	1400	1530	1530	1530	1600	1600	1700
Clamping stroke	mm	700	700	780	780	780	780	780	730
Distance btwn. tie bars	mm	680X680	680X680	740X740	740X740	740X740	820X800	820X800	920X1120
Min.mould dimension	mm	470X470	470X470	520X520	520X520	520X520	570X560	570X560	640X780
Mould thickness range	mm	250-700	250-700	250-750	250-750	250-750	300-820	300-820	450-970
Ejector force	Ton	19.8	19.8	19.8	19.8	19.8	23.2	23.2	49.4
Ejector stroke	mm	215	215	230	230	230	270	270	180
No. of ejector pins	unit	13	13	13	13	13	13	13	16
POWER UNIT									
Pump motor power	kW	46.1	46.1	56.5	56.5	56.5	73.3	73.3	73.3
Plasticising motor power	kW	46.1	62.8	62.8	71.2	80.1	71.2	80.1	94.2
No. of heating zones	unit	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1
Heating power	kW	44.54	57.93	57.93	61.25	77.21	61.25	77.21	68.98
Total power	kW	137.74	167.83	178.23	189.95	214.81	206.75	231.61	237.48
Total current	A	188.4	229.5	243.7	259.7	293.7	282.7	316.7	324.7
GENERAL DATA									
Machine dimensions (LxWxH)	m	7.5x2.0x2.1	8.0x2.0x2.1	8.5x2.0x2.2	8.8x2.0x2.2	9.0x2.0x2.2	9.0x2.1x2.2	9.5x2.1x2.2	10.2x2.3x2.6
Net weight	Ton	12.0	12.3	15.2	15.6	16.5	17.3	18.3	35.0
Oil filling capacity	L	600	600	600	600	600	600	600	600

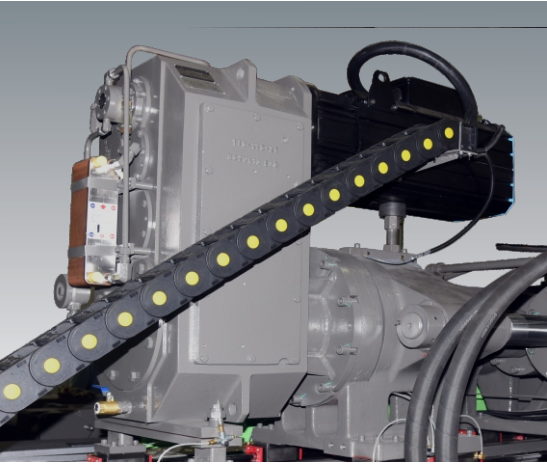
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⚙️ Simultaneous electric plasticising

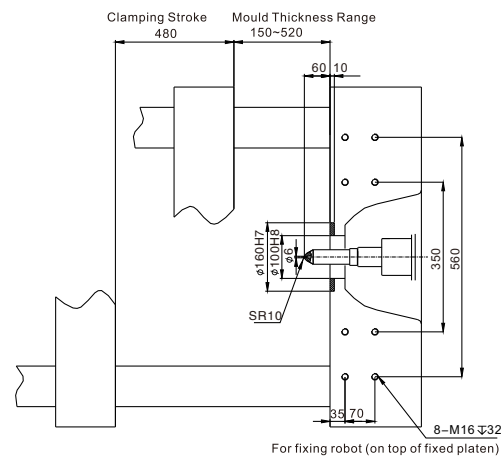


■ The features of simultaneous electric plasticising

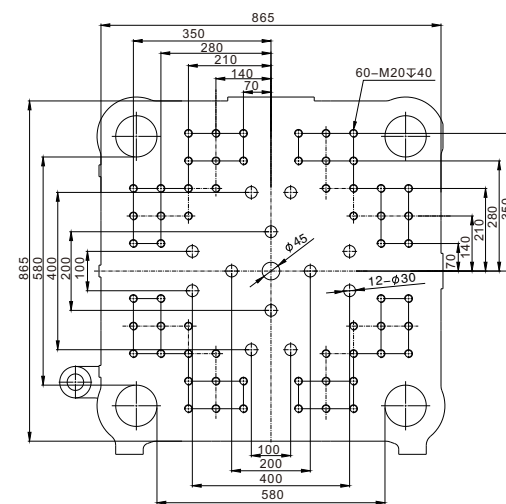
- The synchronisation of plasticising, mould opening and product take-out shortens the cycle time.
- 20-40% energy saving is attained. Reduction in hydraulic oil and cooling water consumption.
- High-power motor and driver ensure stable plasticising.
- Low-noise.



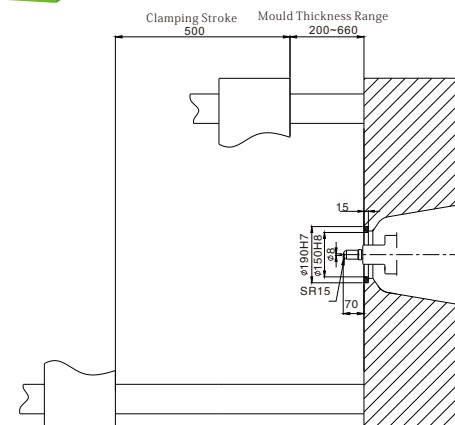
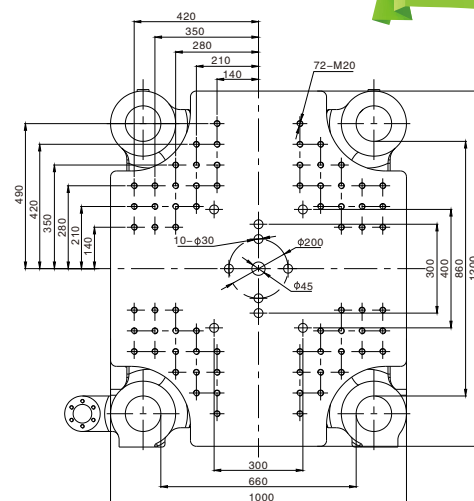
170PET III



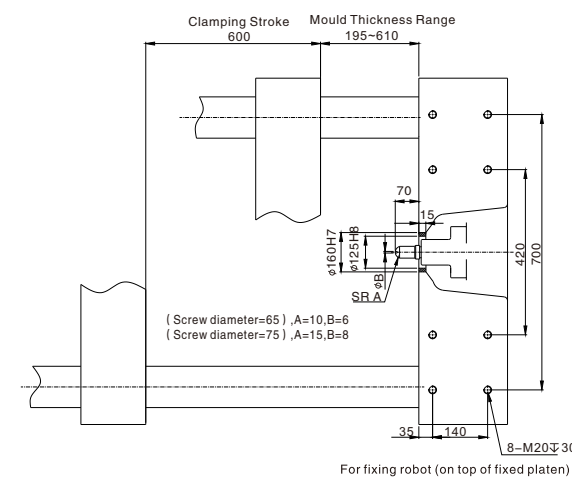
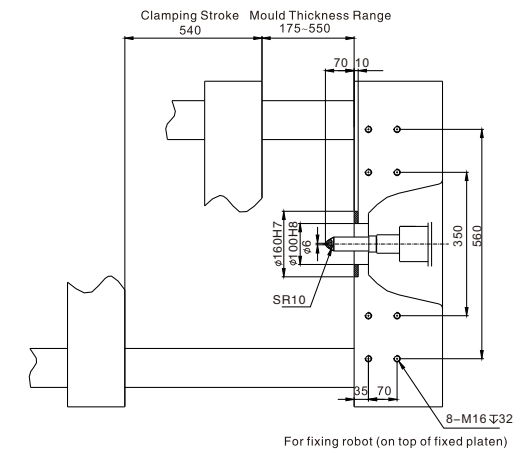
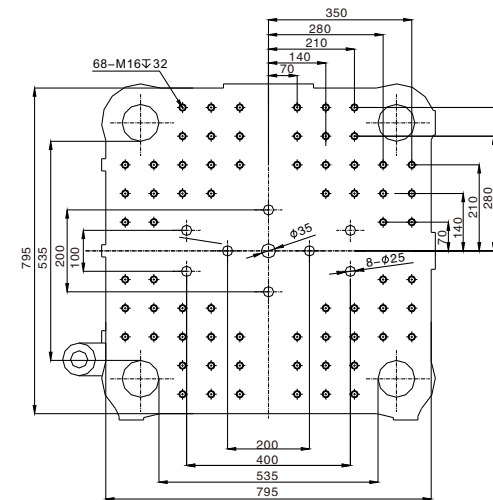
270PET III



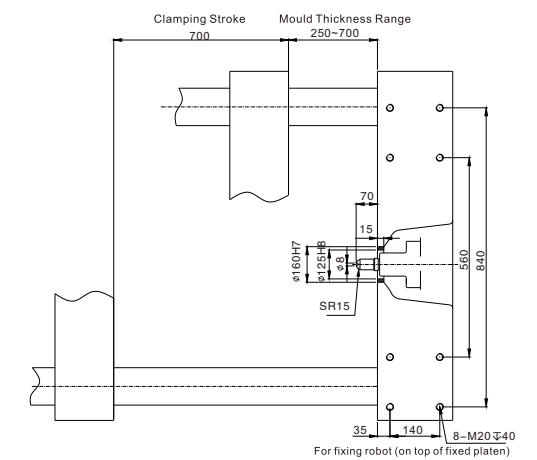
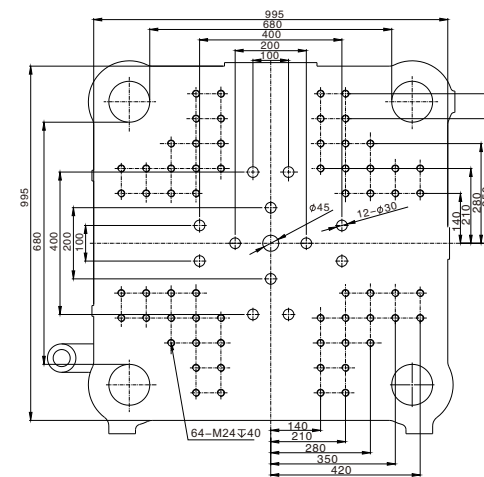
300PET III



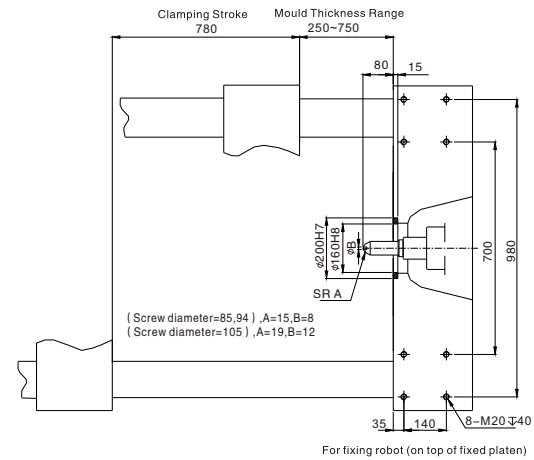
210PET III



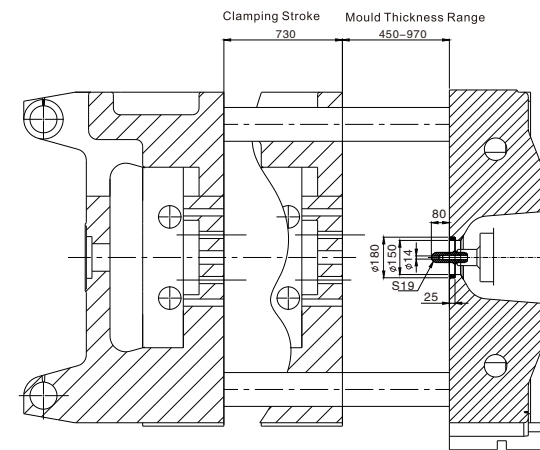
330PET III



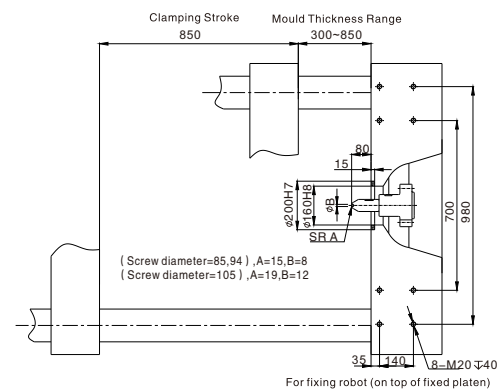
420PET III



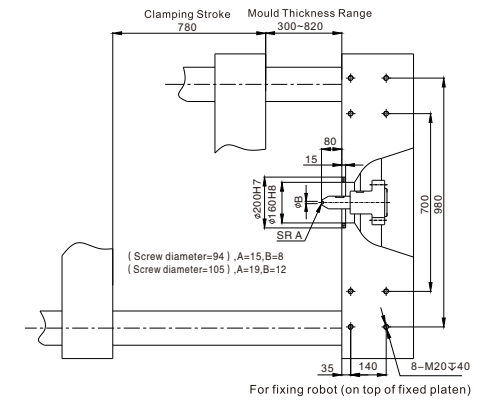
500PP-SE III



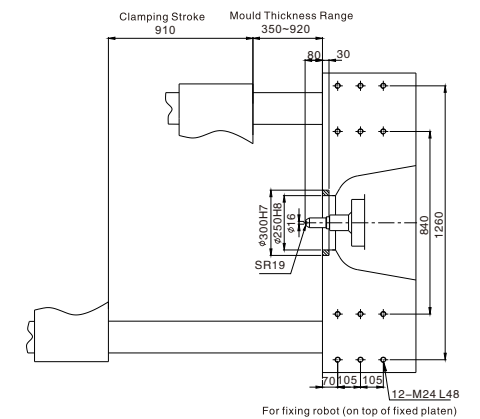
530PET III



480PET III



660PETIII



Application

Preform of mineral water bottle

- One mould with 64 cavities.14g each
- Cycle time: 15 seconds
- Machine model 420PET III/s
Screw diameter of 94 mm



Preform of cooking oil bottle

- One mould with 32 cavities. 105g each
- Cycle time: 40 seconds include robot take-out time
- Machine model 480 PET III /e
Screw diameter of 105 mm



Preform of wide mouth bottle

- One mould with 32 cavities
Bottle diameter of 76mm, 37g each
- Cycle time: 27 seconds
- Machine model 480PET III
Screw diameter of 94 mm



Preform of PP beverage bottle

- One mould with 48 cavities. 35g each
- Cycle time: 35.8 seconds
- Machine model 320PET III/h
Screw diameter of 100 mm



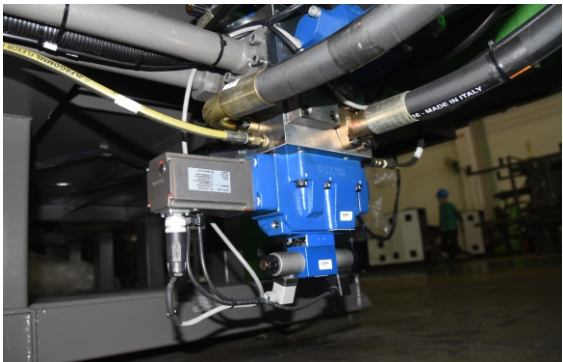
Optional Items



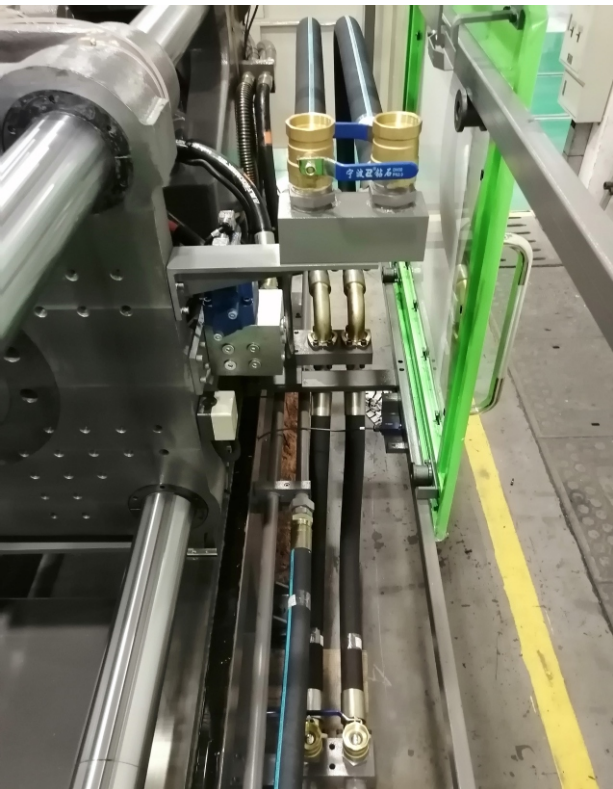
▲ Nano infrared heater bands



▲ Side entry robot



▲ Proportional valves for mould open/close



▲ Integrated cooling water circuits