

Our offices and agents



Special Injection for PET (170~660Ton)



Welltec Machinery Ltd

   www.welltec.com.hk

Version: PETIII-202403W

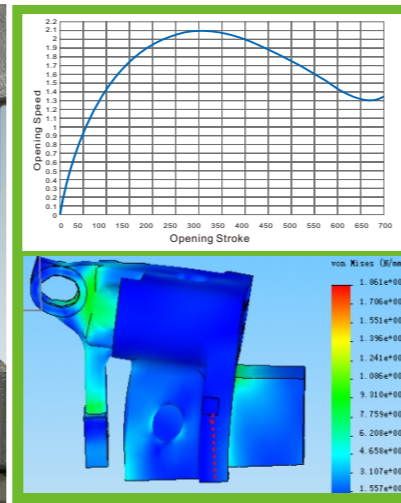
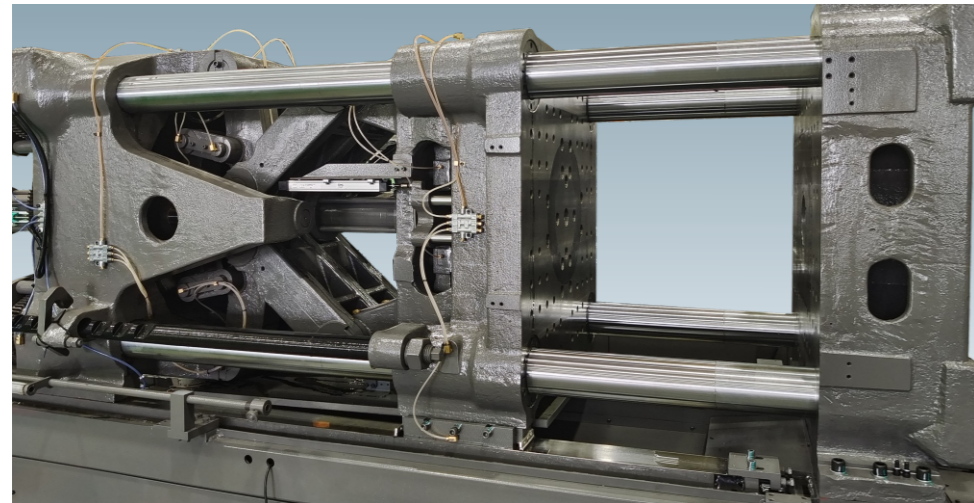


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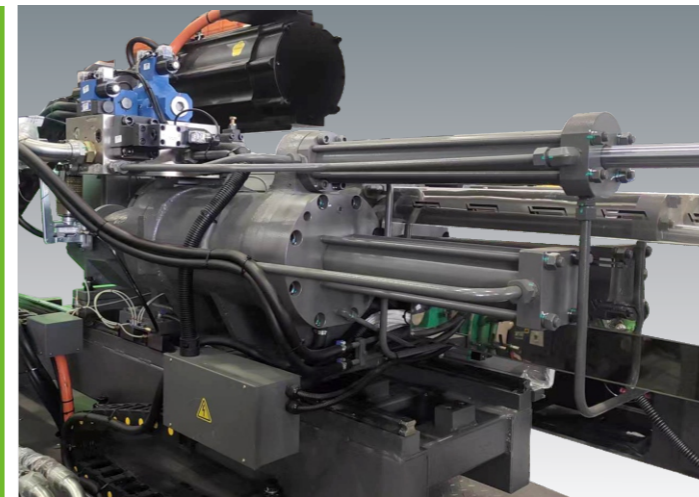
PET Preform Injection Moulding System / Process Diagram



Machine Features



Machine Features

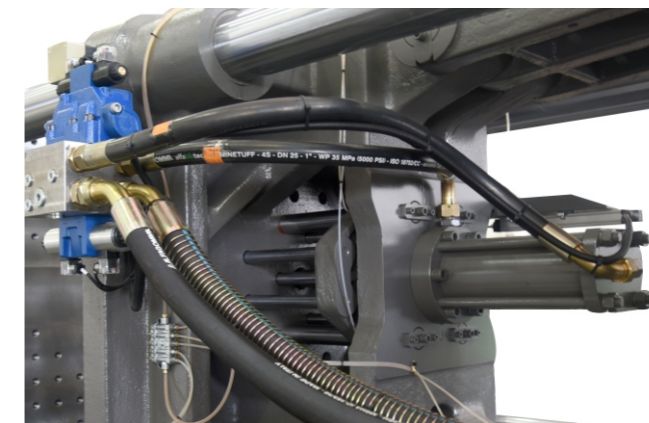


Linear guide rail injection unit

Linear guide rail greatly reduces mechanical back pressure and energy consumption.
Oil-discharge injection cylinder with low resistance and fast response.

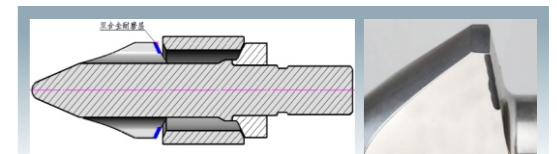
Advanced design of clamping structure

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.



Strong ejector design

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



Stable and precise injection

Wear-resistant bi-metallic tip set is provided.



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.

The features of electric plasticising

The synchronisation of plasticising, mould opening and object picking shortens the production cycle.
20-40% energy saving is attained. Reduction in hydraulic oil and cooling water consumption
High-performance motor and server ensures stable plasticising.
Low-noise.



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.

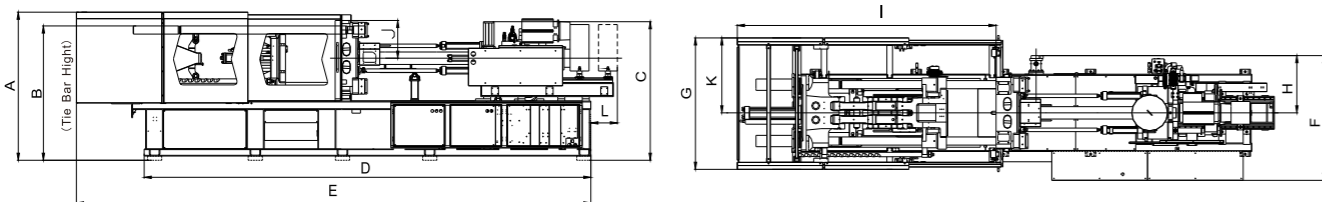
⚙️ PET electric plasticising parameters

ITEM	UNIT	270PET III /e		330PET III /e		420PET III /e		
International specification		2700-1500	2700-1920	3300-1930	3300-2860	4200-2860	4200-3520	4200-4760
INJECTION UNIT								
Screw diameter	mm	65	75	80	90	90	100	105
Theoretical shot volume	cc	995	1436	1634	2386	2386	3142	3810
Shot weight (PET)	g	1165	1680	1911	2791	2791	3676	4458
Shot weight (PP/PE)	g	727	1048	1193	1742	1742	2293	2781
Length/Diameter ratio	L/D	24	24	24	24	24	24	24
Injection pressure	MPa	151	134	118	120	120	112	125
Injection rate(PET)	g/s	397	447	636	624	781	841	751
Injection stroke	mm	300	325	325	375	375	400	440
Max. screw speed	rpm	157	138	138	134	134	122	110
Plasticizing capacity (PET)	g/s	89.3	141.3	175.0	218.4	218.4	247.0	250.1
CLAMPING UNIT								
Clamping force	Ton	270		330		420		
Max. daylight	mm	1210		1400		1530		
Clamping stroke	mm	600		700		780		
Distance btwn. tie bars	mm	580X580		680X680		740X740		
Min. mould dimension	mm	400X400		470X470		520X520		
Mould thickness range	mm	195-610		250-700		250-750		
Ejector force	Ton	11.1		19.8		23.2		
Ejector stroke	mm	195		215		230		
No. of ejector pins	unit	13		13		13		
POWER UNIT								
Max. motor power	kW	32	32	46.1	46.1	56.5	56.5	56.5
Plasticising motor power	kW	31.4	46.1	46.1	62.8	62.8	73.3	83.8
No. of heating zones	unit	5+1	5+1	5+1	5+1	5+1	5+1	5+1
Heating power	kW	31.40	43.24	46.24	61.94	61.94	68.05	73.01
Total power	kW	95.80	122.34	139.44	171.84	182.24	198.85	214.31
Total current	A	131.0	167.3	190.7	235.0	249.2	271.9	293.1
GENERAL DATA								
Machine dimensions(LxWxH)	m	6.9x1.7x2.0	7.3x1.7x2.0	7.7x2.1x2.1	8.1x2.1x2.1	8.5x2.1x2.2	9.0x2.1x2.2	9.3x2.1x2.2
Machine weight	Ton	9.15	9.45	12.2	12.6	15.5	15.9	17.1
Oil filling capacity	L	500	500	535	635	660	660	660

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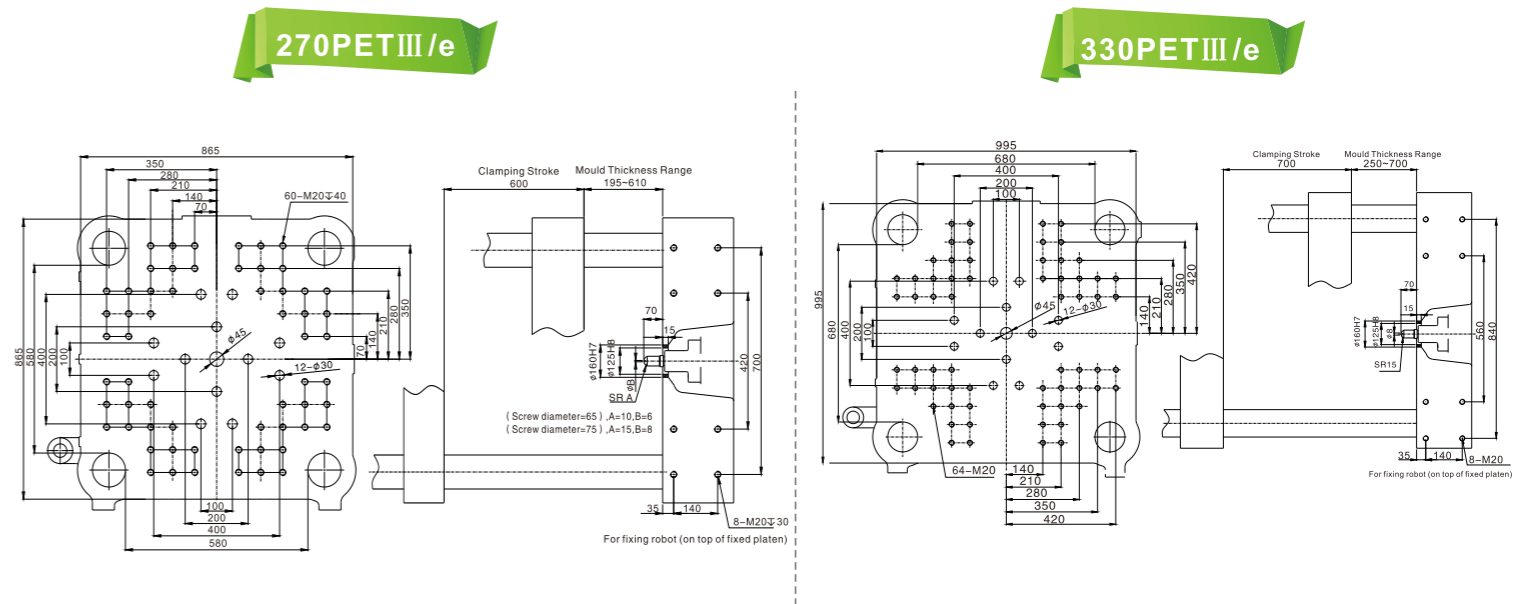
⚙️ Machine Dimensions

◀ 270-420PET III /e

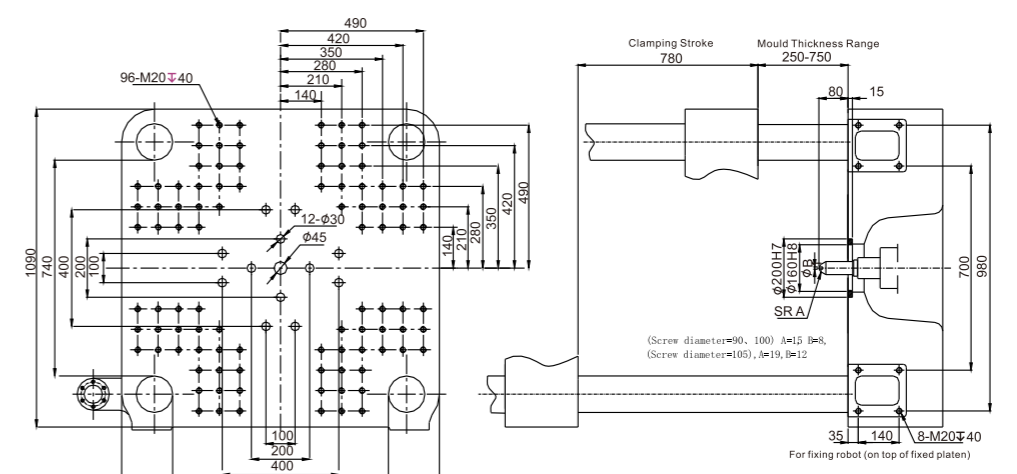


Model	DIA	A	B	C	D	E	F	G	H	I	J	K	L
270PET III /e	65	2011	1807	1912	5125	6056	1582	1462	734	3248	468	731	727
270PET III /e	75	2011	1807	1927	5475	6398	1630	1462	781	3248	468	781	758
330PET III /e	80	2153	1934	1994	6300	7261	1760	1845	808	3650	533	1054	371
330PET III /e	90	2153	1934	2054	7025	7986	1760	1845	808	3650	533	1054	185
420PET III /e	90	2206	1953	2032	7678	8640	1732	1980	823	4053	580	1100	0
420PET III /e	100	2206	1953	2038	7906	8868	1745	1980	729	4053	580	1100	63
420PET III /e	105	2206	1953	2028	7906	8868	1745	1980	729	4053	580	1100	403

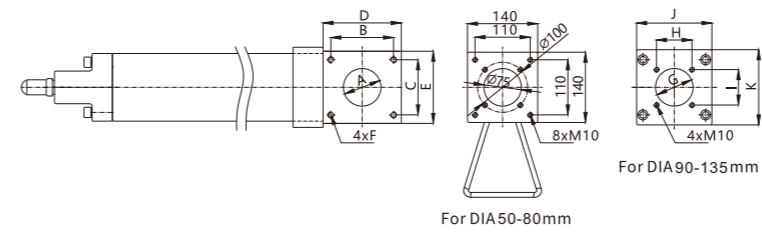
Platen/Nozzle Dimensions



420PET III /e



⚙️ Hopper mounting surface



Shot Volume	DIA	A	B	C	D	E	F	G	H	I	J	K
442	50	68	125	110	145	230	M12					
707	60	75	125	110	150	220	M12					
995	65	80	125	110	155	230	M12					
1436	75	85	125	110	185	230	M12					
1634	80	85	125	110	185	230	M12					
2386	90	95	155	135	195	230	M12	120	110	110	190	180
2776	94	105	155	135	205	240	M12	120	110	110	190	180
3142	100	105	155	135	205	240	M12	120	110	110	190	180
3810	105	120	180	180	320	330	M16	117	180	180	220	220
4942	110	120	180	180	320	330	M16	117	180	180	220	220
6220	120	140	180	180	300	350	M16	117	180	180	220	220
7363	125	140	180	180	300	350	M16	117	180	180	220	220
9304	135	140	180	180	300	350	M16	117	180	180	220	220

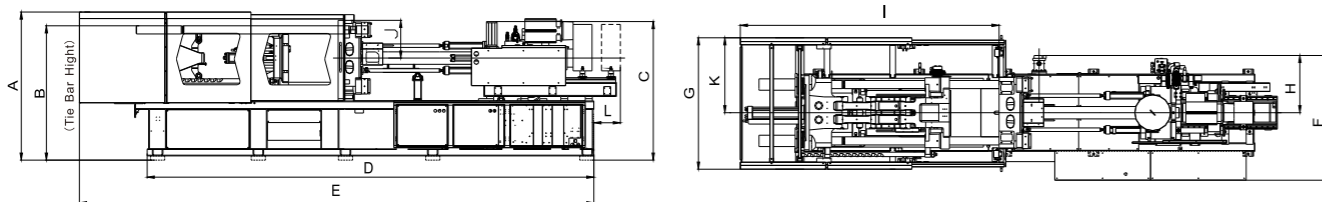
⚙️ PET electric plasticising parameters

ITEM	UNIT	480PET III /e			530PET III /e		
		4800-3520	4800-4760	4800-5630	5300-4760	5300-5630	5300-8300
INJECTION UNIT							
Screw diameter	mm	100	105	110	105	110	125
Theoretical shot volume	cc	3142	3810	4942	3810	4942	7363
Shot weight (PET)	g	3676	4458	5782	4458	5782	8615
Shot weight (PP/PE)	g	2293	2781	3607	2781	3607	5375
Length/Diameter ratio	L/D	24	24	26	24	26	25
Injection pressure	MPa	112	125	114	125	114	113
Injection rate(PET)	g/s	1095	978	1073	978	1073	1083
Injection stroke	mm	400	440	520	440	520	600
Max. screw speed	rpm	122	110	100	110	100	88
Plasticizing capacity (PET)	g/s	247.0	250.1	262.4	250.1	262.4	327.0
CLAMPING UNIT							
Clamping force	Ton	480			530		
Max. daylight	mm	1600			1700		
Clamping stroke	mm	780			850		
Distance btwn. tie bars	mm	820X800			840X830		
Min. mould dimension	mm	570X560			580X580		
Mould thickness range	mm	300-820			300-850		
Ejector force	Ton	26.9			26.9		
Ejector stroke	mm	270			250		
No. of ejector pins	unit	13			13		
POWER UNIT							
Max. motor power	kW	73.3	73.3	73.3	73.3	73.3	73.3
Plasticising motor power	kW	73.3	83.8	83.8	83.8	83.8	100.5
No. of heating zones	unit	5+1	5+1	5+1	5+1	5+1	5+1
Heating power	kW	68.05	73.01	83.81	73.01	83.81	116.60
Total power	kW	215.65	231.11	241.91	231.11	241.91	291.40
Total current	A	294.9	316.0	330.8	316.0	330.8	398.5
GENERAL DATA							
Machine dimensions(LxWxH)	m	9.3x2.2x2.3	9.5x2.2x2.3	10.0x2.2x2.3	9.7x2.2x2.3	10.3x2.2x2.3	10.6x2.2x2.3
Machine weight	Ton	17.7	18.9	19.4	24.0	24.8	26.9
Oil filling capacity	L	660	660	660	660	660	660

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⚙️ Machine Dimensions

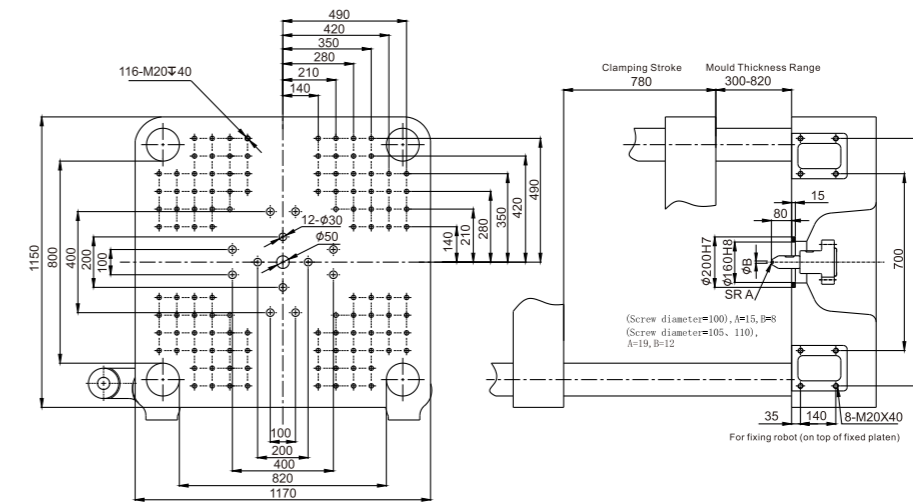
480-530PET III /e



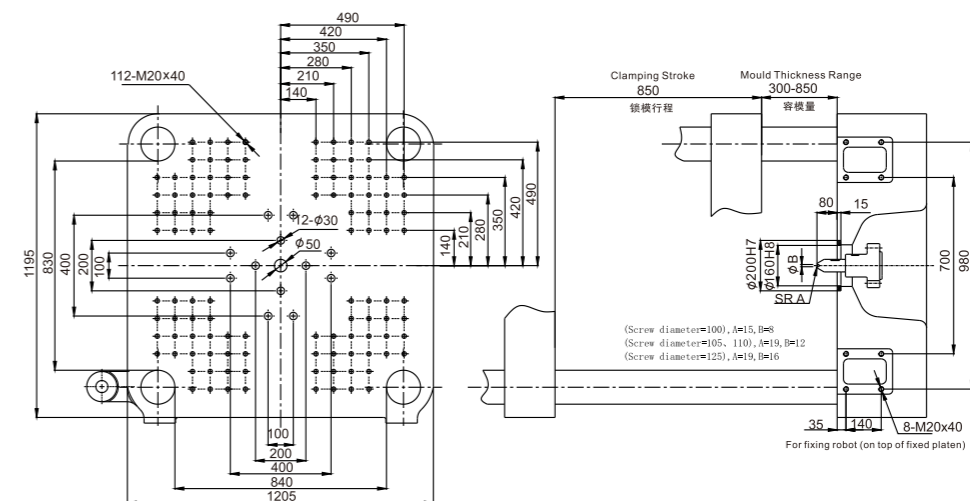
Model	DIA	A	B	C	D	E	F	G	H	I	J	K	L
480PET III /e	100	2286	2025	2026	8216	9180	1697	2104	793	4249	600	1162	70
480PET III /e	105	2286	2025	2065	8766	9730	1697	2104	793	4249	600	1162	214
480PET III /e	110	2286	2025	1708	8766	9730	1697	2104	793	4249	600	1162	245
530PET III /e	105	2284	2045	2065	8351	9405	1697	2130	793	4474	625	1175	299
530PET III /e	110	2284	2045	1708	8901	9955	1697	2130	793	4474	625	1175	268
530PET III /e	125	2284	2045	1810	9681	10735	1832	2130	795	4474	625	1175	177

Platen/Nozzle Dimensions

480PET III /e



530PET III /e



For PET machines of 300 T or below
Built-in with 15 sets of ball valves with 10mm quick-release fittings.

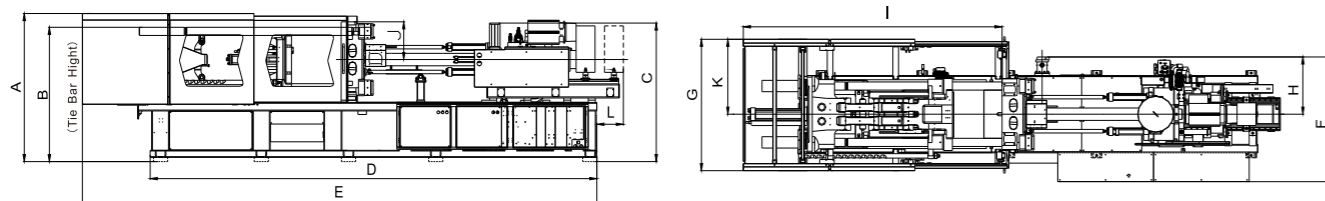
⚙️ PET electric plasticising parameters

ITEM	UNIT	500PP-SeIII (Special Reference)	660PET III/e		
International specification		5000-4770	6600-7900	6600-8300	6600-10900
INJECTION UNIT					
Screw diameter	mm	110	118	125	135
Theoretical shot volume	cc	4181	6233	7363	9304
Shot weight (PET)	g	4892	7293	8615	10886
Shot weight (PP/PE)	g	3052	4550	5375	6792
Length/Diameter ratio	L/D	24	25	25	25
Injection pressure	MPa	114	127	113	118
Injection rate(PET)	g/s	1073	965	1083	1195
Injection stroke	mm	440	570	600	650
Max. screw speed	rpm	125	91	88	88
Plasticizing capacity (PET)	g/s	240.2	258.3	327.0	355.6
CLAMPING UNIT					
Clamping force	Ton	500	660		
Max. daylight	mm	1700	1830		
Clamping stroke	mm	730	910		
Distance btwn. tie bars	mm	920X1120	920x920		
Min. mould dimension	mm	640X780	645x645		
Mould thickness range	mm	450-970	350-920		
Ejector force	Ton	49.4	26.9		
Ejector stroke	mm	180	290		
No. of ejector pins	unit	16	21		
POWER UNIT					
Max. motor power	kW	73.3	73.3	73.3	87.9
Plasticising motor power	kW	94.2	100.5	100.5	119.4
No. of heating zones	unit	5+1	5+1	5+1	5+1
Heating power	kW	68.18	92.61	116.60	122.60
Total power	kW	236.68	267.41	291.40	330.90
Total current	A	323.6	365.7	398.5	452.5
GENERAL DATA					
Machine dimensions(LxWxH)	m	10.5x2.3x2.6	10.5x2.3x2.3	10.8x2.3x2.3	11.3x2.3x2.3
Machine weight	Ton	35.0	33.1	35.2	38.3
Oil filling capacity	L	700	700	700	1000

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⚙️ Machine Dimensions

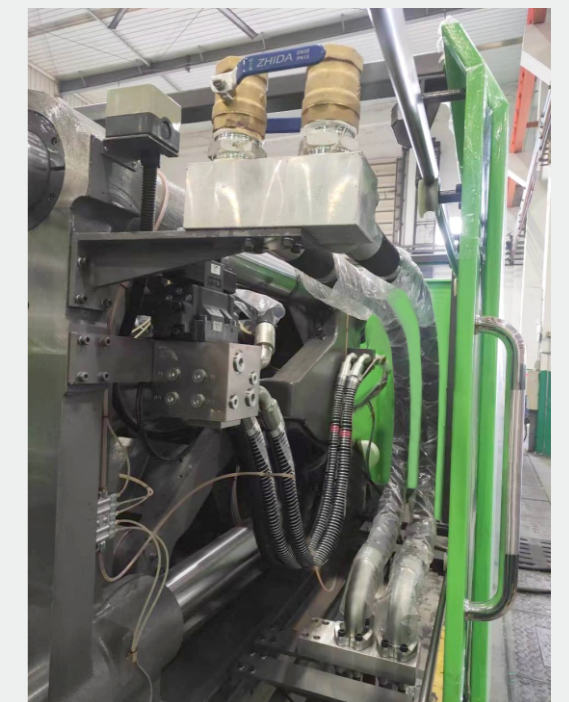
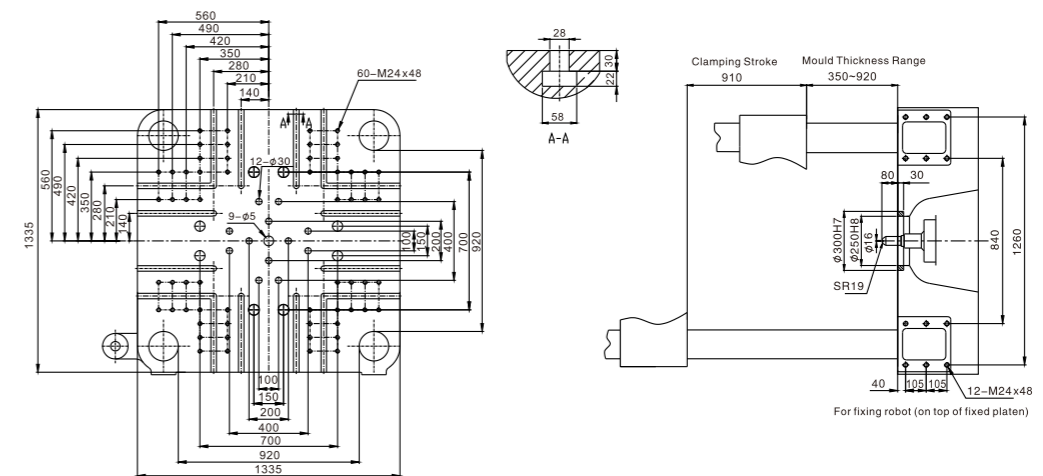
▶ 500PP-SeIII, 660PET III/e ▶



Model	DIA	A	B	C	D	E	F	G	H	I	J	K	L
500PP-SeIII	110	2625	2278	1781	9098	10145	1704	2298	802	4617	793	1249	348
660PET III/e	120	2320	2271	1810	9477	10851	1950	2200	795	4690	688	1230	0
660PET III/e	125	2320	2271	1810	9477	10851	1950	2200	795	4690	688	1230	177
660PET III/e	135	2320	2271	1810	9700	11075	2050	2200	850	4690	688	1230	135

Platen/Nozzle Dimensions

660PET III/e



Integrated and large diameter water divider

330 / 420 PET machines built-in with copper ball valve:

Main 2", 2"x 1pc for the moving platen, 2"x1pc + 1/2"x 2pcs for the fixed platen

480 T or above PET machines built-in with copper ball valve:

Main 3", 2"x 2pcs for the moving platen, 2"x2 pcs + 1"x 4pcs for the fixed platen

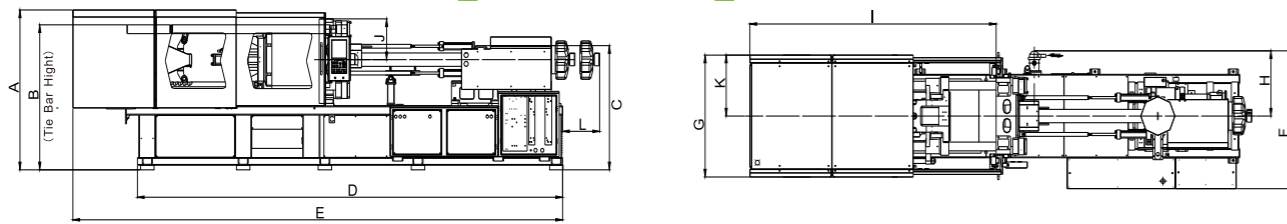
PET Servo pump parameters

ITEM	UNIT	170PETIII	210PETIII	270PETIII	300PETIII	330PETIII	3300-1930	3300-2860	3300-3520
International specification		1700-620	2100-870	2700-1500	2700-1920	3000-3500	3300-1930	3300-2860	3300-3520
INJECTION UNIT									
Screw diameter	mm	50	60	65	75	94	80	90	100
Theoretical shot volume	cc	442	707	995	1436	2776	1634	2386	3142
Shot weight (PET)	g	517	827	1165	1680	3248	1911	2791	3676
Shot weight (PP/PE)	g	323	516	727	1048	2026	1193	1742	2293
Length/Diameter ratio	L/D	24	24	24	24	24	24	24	24
Injection pressure	MPa	142	123	151	134	126	118	120	112
Injection rate(PET)	g/s	264	401	397	447	967	636	781	1095
Injection stroke	mm	225	250	300	325	400	325	375	400
Max. screw speed	rpm	180	160	155	125	115	118	103	99
Plasticizing capacity (PET)	g/s	45.4	72.8	87.9	127.9	203.6	150.4	167.2	200.5
CLAMPING UNIT									
Clamping force	Ton	170	210	270	300	330			
Max. daylight	mm	1000	1090	1210	1160	1400			
Clamping stroke	mm	480	540	600	500	700			
Distance btwn. tie bars	mm	470X470	535X535	580X580	660X860	680X680			
Min. mould dimension	mm	320x320	370x370	400X400	460X660	470X470			
Mould thickness range	mm	150-520	175-550	195-610	300-660	250-700			
Ejector force	Ton	7.7	9.9	11.1	19.8	19.8			
Ejector stroke	mm	160	170	195	180	215			
No. of ejector pins	unit	5	9	13	13	13			
POWER UNIT									
Major motor	kW	23	31.4	32	32	73.3	46.1	56.5	73.3
No. of heating zones	unit	5+1	5+1	5+1	5+1	5+1	5+1	5+1	5+1
Heating power	kW	15.72	22.32	26.00	37.24	62.73	39.34	48.94	68.05
Total power	kW	39.72	54.72	59.00	70.24	137.03	86.44	106.44	142.35
Total current	A	54.3	74.8	80.7	96.0	187.4	118.2	145.6	194.7
GENERAL DATA									
Machine dimensions(LxWxH)	m	5.4x1.5x1.8	6.3x1.6x1.9	6.7x1.7x2.0	7.1x1.7x2.0	8.1x1.9x2.2	7.6x2.1x2.1	8.0x2.1x2.2	8.5x2.1x2.1
Machine weight	Ton	5.9	7.4	9.0	9.3	14.4	12.0	12.3	12.7
Oil filling capacity	L	320	320	500	500	660	535	535	635

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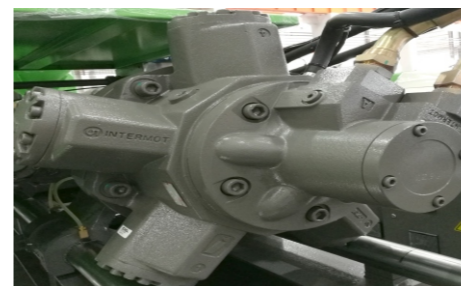
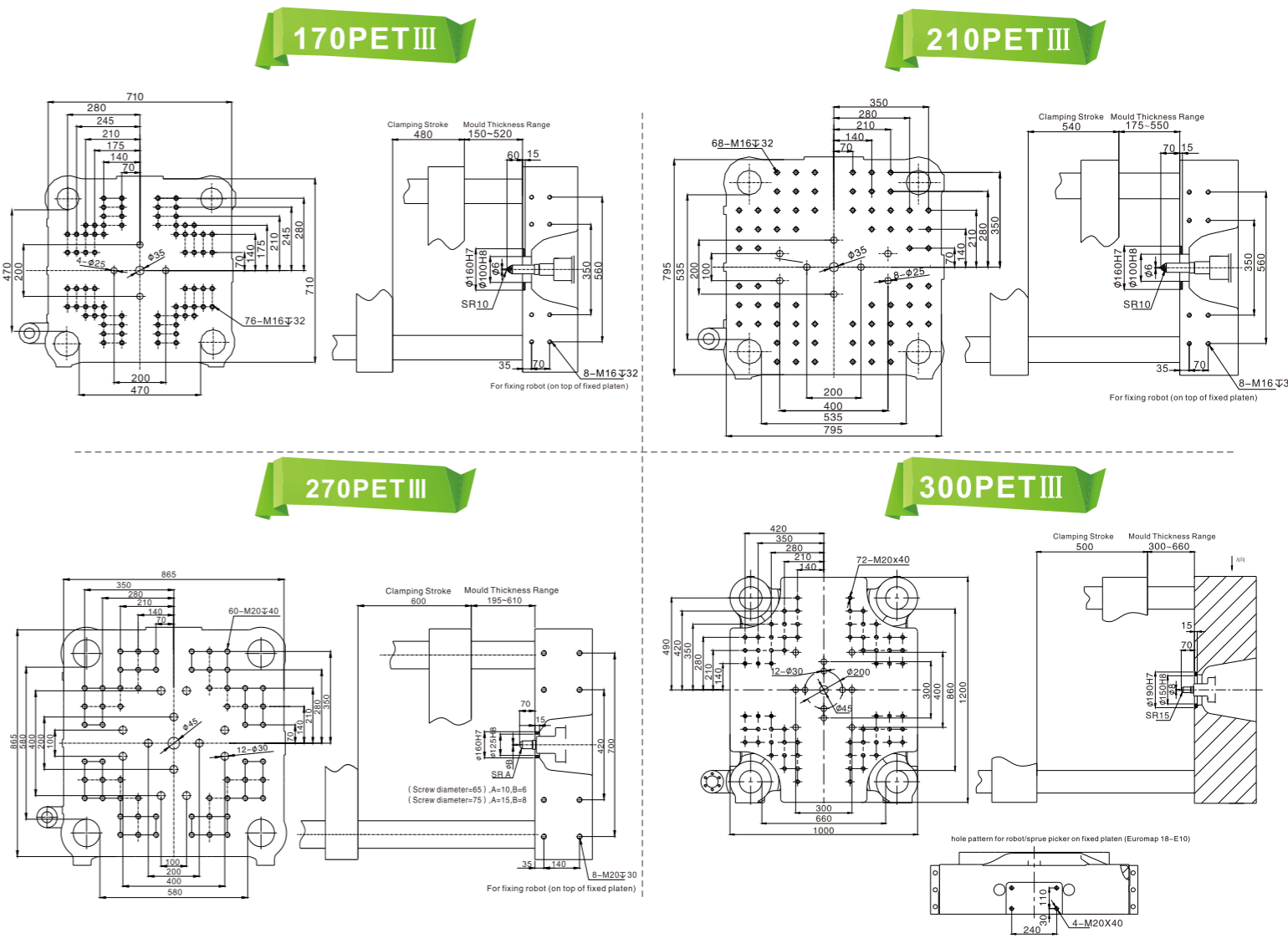
Machine Dimensions

170-330PETIII



Model	DIA	A	B	C	D	E	F	G	H	I	J	K	L
170PETIII	50	1808	1617	1427	4513	5215	1458	1302	669	2730	375	651	255
210PETIII	60	1883	1695	1480	4978	5823	1526	1412	702	3208	413	706	397
270PETIII	65	2011	1807	1562	5125	6056	1582	1462	734	3248	468	731	639
270PETIII	75	2011	1807	1577	5475	6398	1630	1462	781	3248	468	781	681
300PETIII	94	2166	2008	1637	6901	7651	1732	1790	823	3300	611	895	418
330PETIII	80	2153	1934	1644	6300	7261	1760	1845	808	3650	533	1054	366
330PETIII	90	2153	1934	1654	7025	7986	1760	1845	808	3650	533	1054	137
330PETIII	100	2153	1934	1660	7025	7986	1760	1845	808	3650	533	1054	635

Platen/Nozzle Dimensions



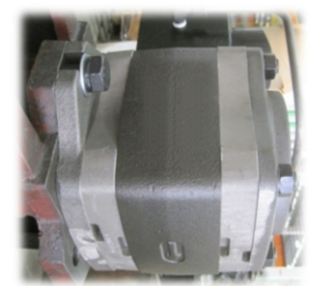
Large torque hydraulic motor

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.



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

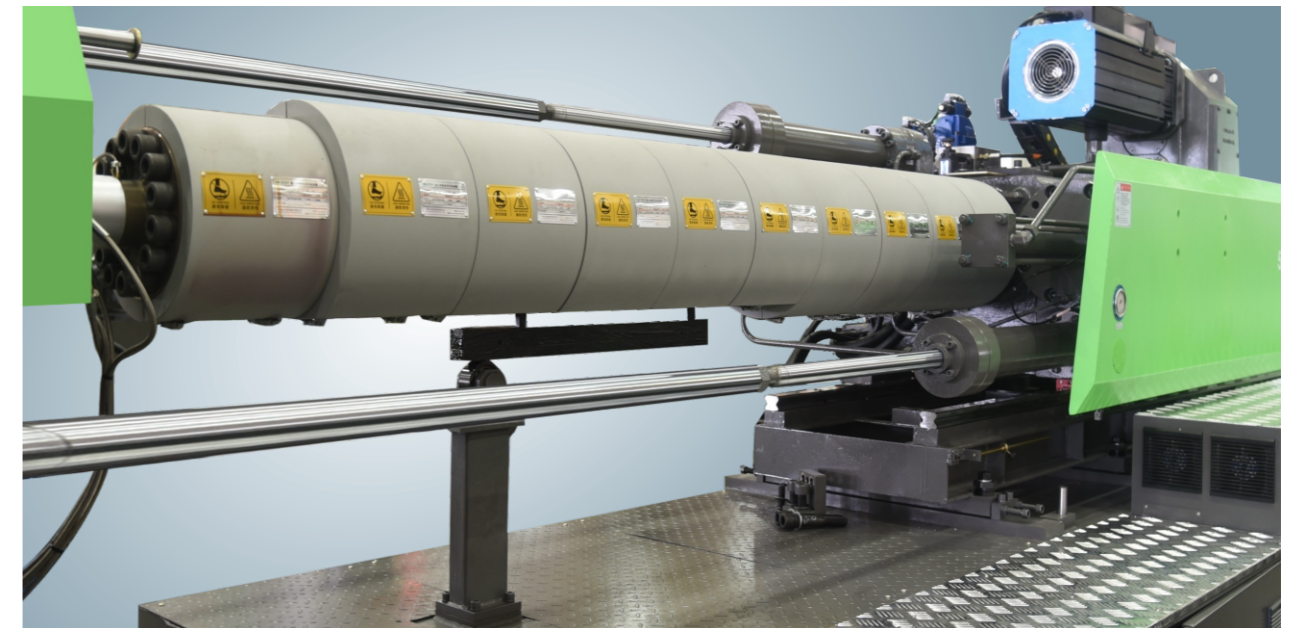


Preform of PP beverage bottle

- 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