



*Specialist in PVC solutions*



**PVC Injection Moulding Machine**

**PVC-SEIII**

**PVC-KII**

**(60-1800Ton)**

**ЕВРОПОЛИМЕР ТРЕЙДИНГ**

Адрес: Ростов-на-Дону, ул. Вавилова 59

Тел: +7 (863) 309-03-88

Сайт: <https://tpa-ep.ru/>

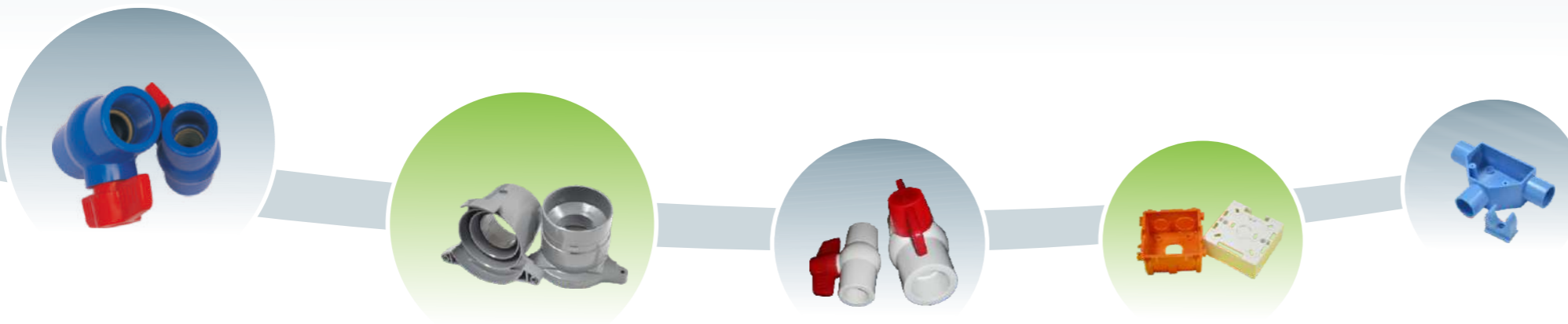
Email: [tpa@ep-group.ru](mailto:tpa@ep-group.ru)

# Specialist in PVC solutions



## Features

- At least 30% more energy saving than the traditional variable pump system .
- AC servo motor to achieve smooth motion even under low- speed.
- Higher products repeatability with the use of double- closed loop control of flow and pressure.
- Exceptional and stable performance under low pressure and low flow attained by the servo-driven hydraulic pumps.
- Ultra- strong corrosion resistance thanks to the special PVC screw that also enables excellent plasticising.
- Widened guarding between moulding area and movable door with two sets of core pulls to better suit a range of PVC products.





## Clamping Unit



- Extra durability achieved through optimised clamping structure. High-rigidity machine frame minimises vibrations and supports smooth movements that satisfies heavy-duties production needs.



- High precision of mould height adjustment by gear to better protect the mould and improve production efficiency.

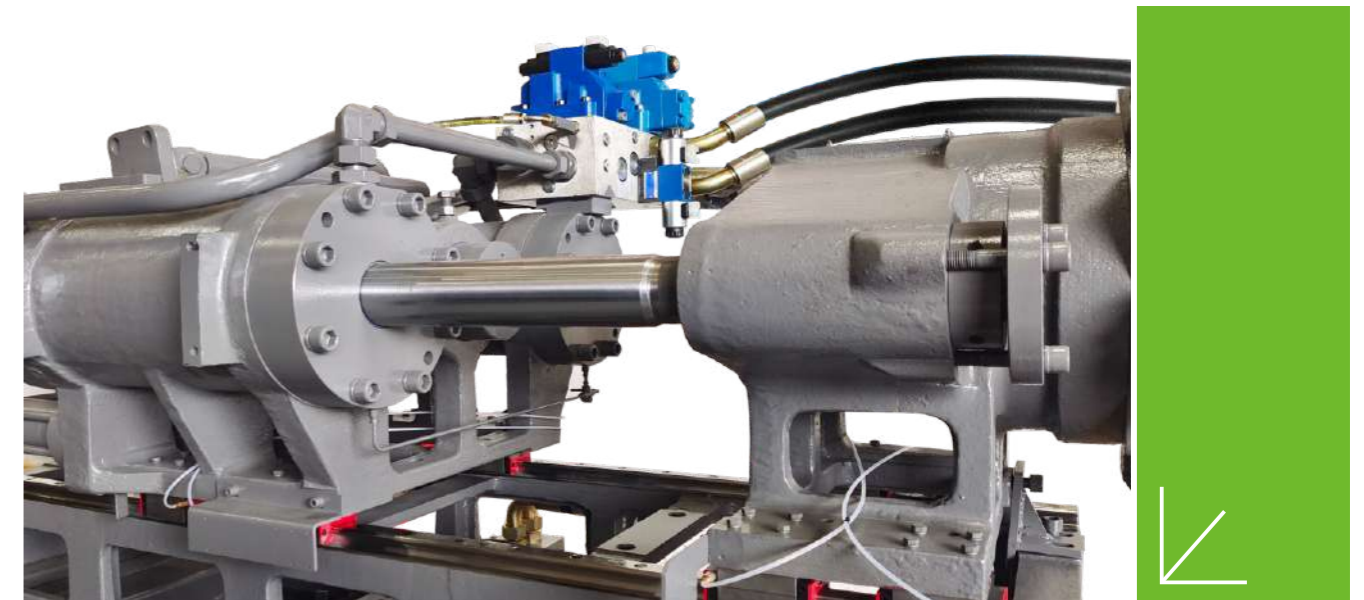


- Optimised platen designs to disperse stress and enhance product repeatability.



- Optimised toggle designs to ensure smooth platen movements and accurate stopping position.

## Injection Unit



- High rigidity injection unit reduces deformation of carriage and cylinder rods. Spacing between screw and barrel is well maintained to avoid unilateral scratches and over shear-heating.
- Uniform plasticising and injection reduce products burns, oil seals damages and oil tank leaks.



- Injection cylinders are diagonally positioned to effectively disperse stress.



- Linear guide rail realised high precision and low friction carriage movements which effectively lowered mechanical back pressure and overall energy consumption.



- High precision linear transducer ensures stable injection.

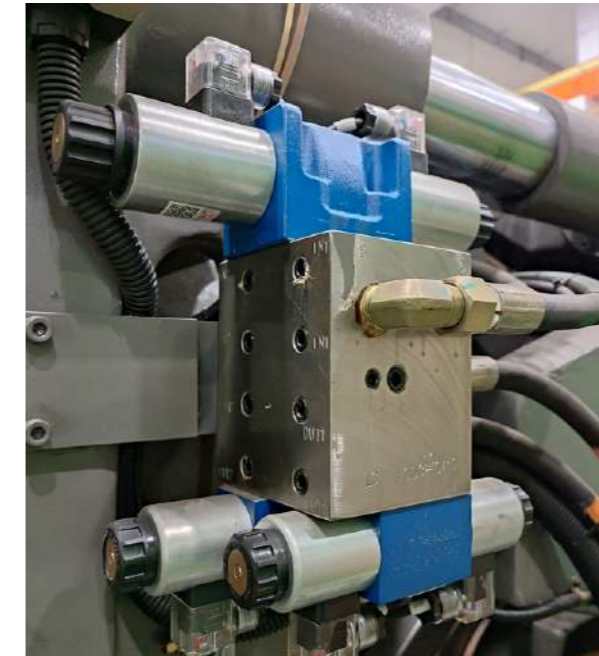


## Features of PVC Special



### Optimised air cooling and temperature control device

- Multiple PID controlled barrel fans to ensure accurate and stable temperature control. Speed-adjustable fans to balance the barrel temperature.
- Optimised barrel thickness is to ensure high heat retention. Thermocouples are properly positioned and probed based on the resin properties to maximise measurement accuracy. High power heater bands are to ensure adequate heating.



### Two sets of core pulls on the moving platen

- Standard two sets of core pulls to work with moulds for fittings.

### Abundant injection pressure

- Thickened injection cylinder and strengthened cylinder rod to ensure injection pressure is same high as in small diameter screw to enable PVC being injected by high pressure and low speed hydraulics.
- Wide range of injection parameter settings are to better protect the servo driver, motor and hydraulic pump and extend the lifespan of screw tip set.



### Screw and tip set specialised for PVC

- Adopting chrome-plated screw and nozzle enables higher wear resistance. Special screw material and heat treatment process enables smooth material feeding.
- Screw designs (L/D ratio/compression ratio/ three-section ratio) for different users and products to ensure excellent plasticising and smooth products surface.



### Optimal arrangement of high efficiency plasticising motor

- Enlarged plasticising motor is to supply high torque for PVC being high viscosity and low mobility, to ensure stable plasticising.
- Further enlarged plasticising motor is available as an option to cope with CPVC resin being even more viscous and less mobile.



### Robust power pack

- Servo driver coupled gear pump to drive stronger system pressure. Excellent handlings for low pressure and low flow rate hydraulics.

### Stainless steel hopper

- Convenient replacement of raw materials attained by movable hopper (for specific tonnage).
- Powder-collection tray is located below the hopper mounting for easy cleaning.





Features of PVC Special



**Widened guard door**

- Widened guard doors at the clamping unit to accommodate extra-long core pulls for fitting moulds.

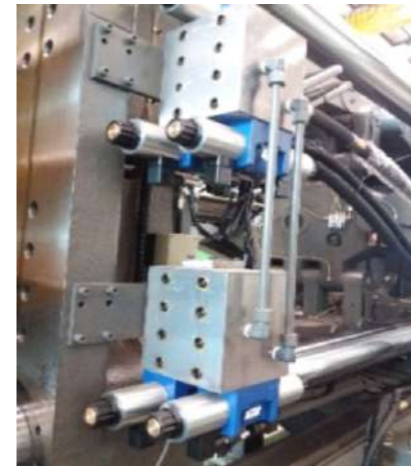


**Proportional back pressure**

- Back pressure is accurately controlled by digital proportional valve to cope with PVC resin which is highly sensitive to shearing heat.



Optional features



- Three sets or more of core pulls on the moving platen.



- Machine frame and product-drop area are risen and widened to ensure conveyor is properly aligned to connect the centralised product conveying and collection automated lines.



- PVC (380T and above) equipped with hopper slider.



- Adjustable guard door according to the factory layout and floor space.



- Screw driven by gear box in high tonnage PVC machine is to ensure sufficient torque for plasticising.
- Oil cooling circuits run through the screw center for better control resin temperature to achieve the best plasticising.



## SEIII control system



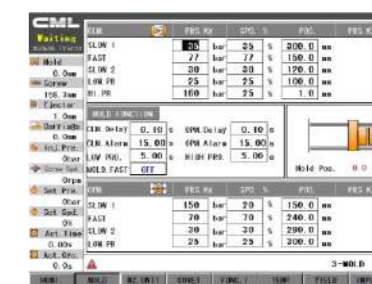
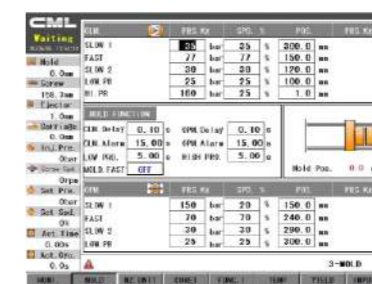
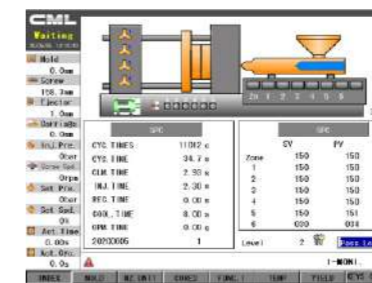
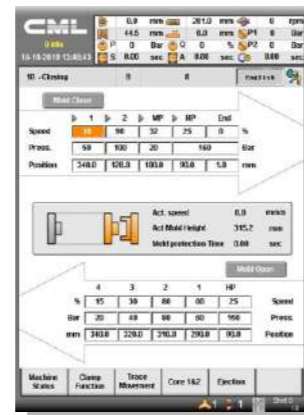
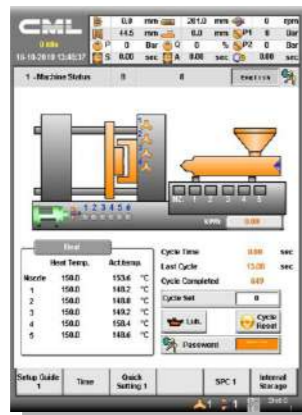
## KII control system



### Software & Functions

- High performance European B&R control system
- 10.4" TFT colour LCD display
- Users can identify the changes of parameter and source of changes
- Parameter data statistics for quality control
- Automatic control of temperature parameter by PID
- Mould parameter can be stored in USB devices and used in another injection moulding machine
- Remote monitoring of parameter and operation sequence by Modem or Ethernet
- Multi-language selection

- 8" TFT colour display
- User-friendly interface
- 4-stage injection. 4-stage holding pressure. 3-stage plasticising
- Pressure flow curve display
- Screw RPM display
- Barrel preheating function
- 100 sets of mould data



Facilitates real-time monitoring, remote diagnosis and smart factory management (optional)

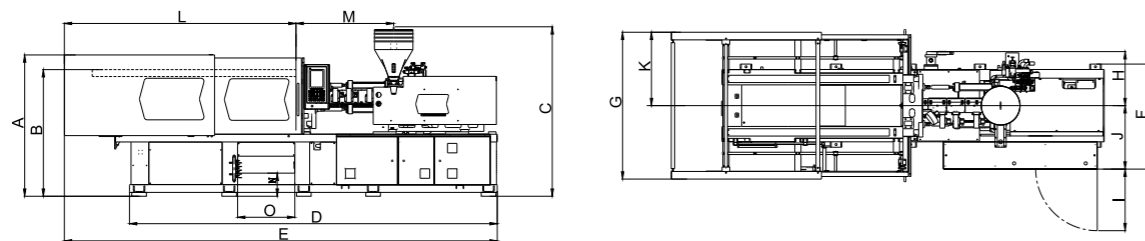
PVC servo pump parameters

Item	Unit	170PVC-SeIII		210PVC-SeIII		270PVC-SeIII		330PVC-SeIII	
		1700-870		2100-1055		2700-1510		3300-1930	
<b>Injection Unit</b>									
Screw diameter	mm	45	50	50	55	55	60	60	65
Theoretical shot volume	cc	398	491	491	594	713	848	919	1078
Shot weight (PVC)	g	477	589	589	713	855	1018	1103	1294
Shot weight (PVC)	oz	16.9	20.8	20.8	25.2	30.2	36.0	39.0	45.7
Injection pressure	MPa	219	177	215	178	211	178	210	179
Injection rate	cm <sup>3</sup> /sec	126	156	152	184	200	238	244	287
Injection stroke	mm	250		250		300		325	
Max. screw speed	rpm	126		115		117		135	
Injection unit force	Ton	9.1		9.1		9.1		9.1	
Carriage stroke	mm	350		350		400		400	
<b>Clamping Unit</b>									
Clamping force	Ton	170		210		270		330	
Max. daylight	mm	1000		1090		1210		1400	
Clamping stroke	mm	480		540		600		700	
Distance btwn. tie bars	mm	470x470		535x535		580x580		680x680	
Min. mould dimension	mm	320x320		370x370		400x400		470x470	
Mould thickness range	mm	150-520		175-550		195-610		250-700	
Ejector force	Ton	7.7		9.9		11.1		11.1	
Ejector stroke	mm	160		170		195		195	
No. of ejector pins	unit	5		9		13		13	
<b>Power Unit</b>									
Max. motor power	kW	16.4		16.4		20.5		26.7	
System pressure	MPa	17.5		17.5		17.5		17.5	
Hydraulic pump capacity	L/min	95		112.5		145		176	
No. of heating zones	unit	4+1		4+1		5+1		5+1	
Heating power	kW	14.03		16		18.7		22	
Total power	kW	31.43		33.4		40.2		49.7	
Total current	A	43.0		45.7		55.0		68.0	
<b>General</b>									
Machine weight	Ton	6		7.1		8.55		11.52	
Oil filling capacity	L	280		300		450		540	

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

Machine Dimensions

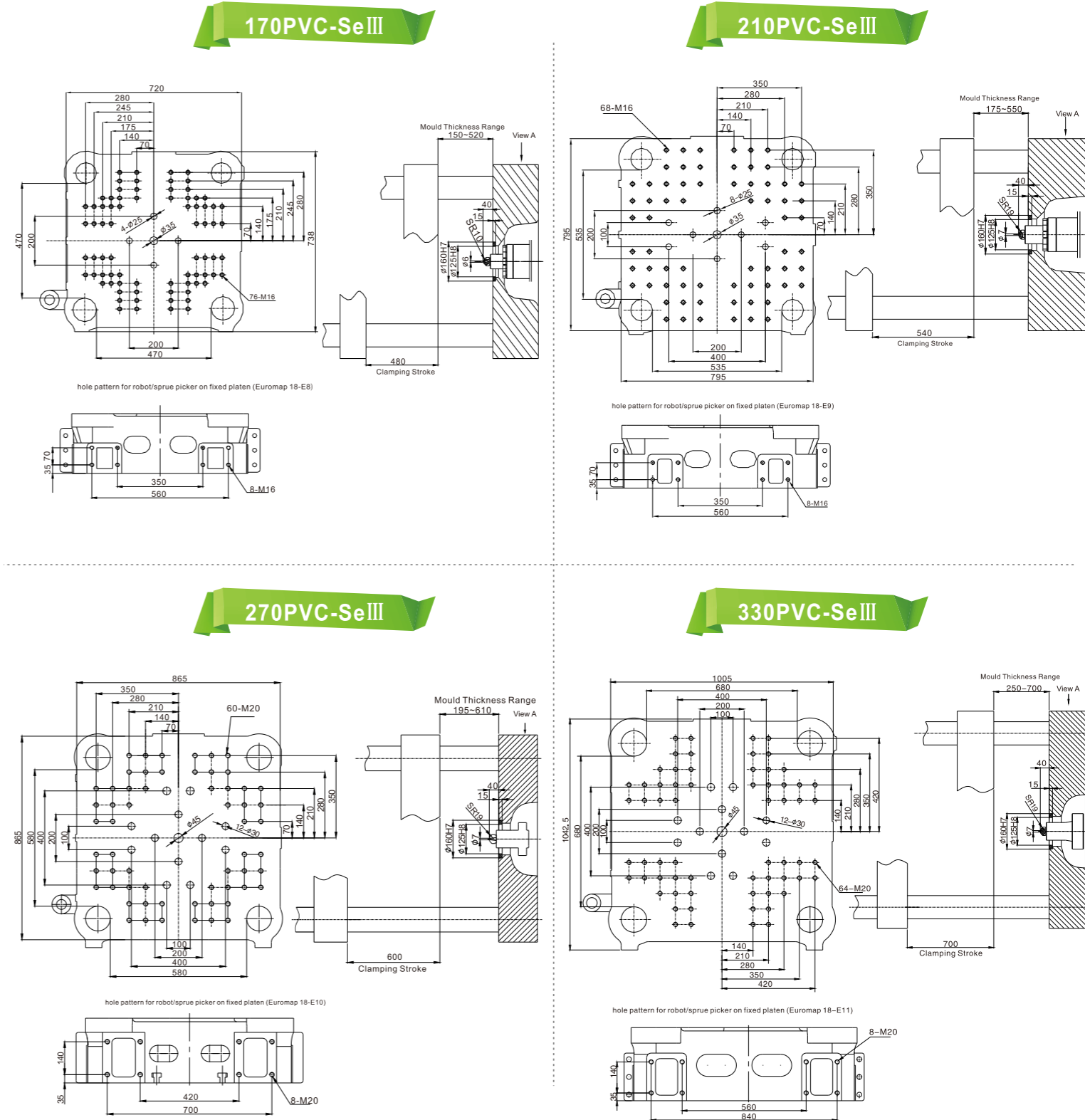
【170~330PVC-SeIII】



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
170PVC-SeIII	1762	1567	2161	4513	5252	1284	1737	658	800	789	869	2729	1487	300	680
210PVC-SeIII	1835	1645	2200	4778	5625	1364	1907	702	800	824	954	3009	1269	300	743
270PVC-SeIII	1961	1757	2398	5125	6048	1414	2002	781	800	849	1001	3248	1370	300	848
330PVC-SeIII	2078	1884	2284	5575	6531	1514	2137	805	800	899	1069	3649	1494	320	910

Remark: C-hopper height for reference only

Platen/Nozzle Dimensions



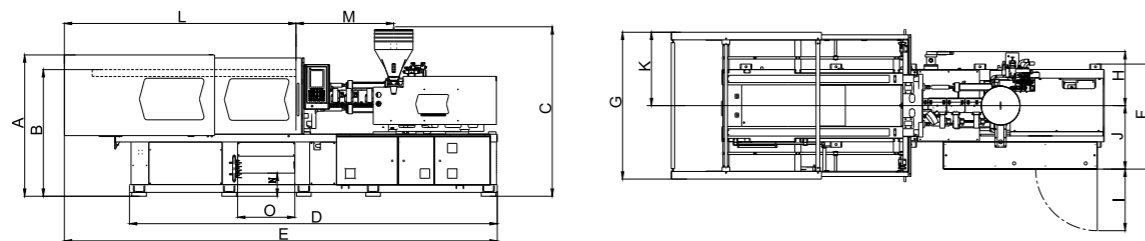
PVC servo pump parameters

Item	Unit	420PVC-SeIII		480PVC-SeIII		530PVC-SeIII		660PVC-SeIII	
		4200-2868	4800-3958	4800-3958	5300-5875	5300-5875	6600-5875		
<b>Injection Unit</b>									
Screw diameter	mm	70	75	80	85	90	95	90	95
Theoretical shot volume	cc	1443	1657	2011	2270	2799	3119	2799	3119
Shot weight (PVC)	g	1732	1988	2413	2724	3359	3743	3359	3743
Shot weight (PVC)	oz	61.2	70.2	85.3	96.2	118.7	132.2	118.7	132.2
Injection pressure	MPa	199	173	197	174	210	188	210	188
Injection rate	cm <sup>3</sup> /sec	323	371	407	460	489	545	535	596
Injection stroke	mm	375		400		440		440	
Max. screw speed	rpm	108		102		102		111	
Injection unit force	Ton	12		12		20.4		20.4	
Carriage stroke	mm	435		480		600		600	
<b>Clamping Unit</b>									
Clamping force	Ton	420		480		530		660	
Max. daylight	mm	1530		1600		1700		1830	
Clamping stroke	mm	780		780		850		910	
Distance btwn. tie bars	mm	740x740		820x800		840x830		920x920	
Min. mould dimension	mm	520x520		570x560		580x580		645x645	
Mould thickness range	mm	250-750		300-820		300-850		350-920	
Ejector force	Ton	16.6		16.6		16.6		16.6	
Ejector stroke	mm	210		240		240		290	
No. of ejector pins	unit	13		13		13		21	
<b>Power Unit</b>									
Max. motor power	kW	40.9		50.7		71.2		67.1	
System pressure	MPa	17.5		17.5		17.5		17.5	
Hydraulic pump capacity	L/min	220		275		352		385	
No. of heating zones	unit	5+1		5+1		5+1		5+1	
Heating power	kW	28.95		35.85		39.7		39.7	
Total power	kW	70.85		87.55		111.9		107.8	
Total current	A	96.9		119.7		153.0		131.0	
<b>General</b>									
Machine weight	Ton	14.68		17		23		26	
Oil filling capacity	L	700		720		775		1000	

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Machine Dimensions

【420~660PVC-SeIII】

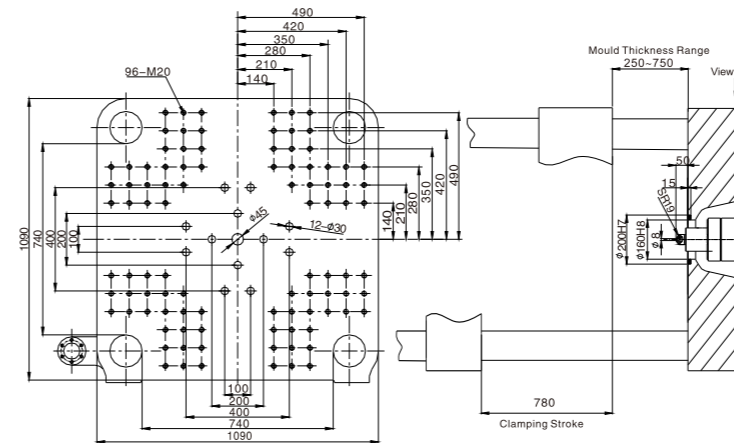


Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
420PVC-SeIII	2176	1923	2417	6480	7556	1499	2314	840	800	915	1157	4050	1730	(300)	865
480PVC-SeIII	2246	1987	2526	7061	8025	1549	2428	856	800	942	1214	4249	2012	(300)	825
530PVC-SeIII	2244	2005	2495	7846	8995	1809	2450	865	800	945	1225	4474	2094	(300)	915
660PVC-SeIII	2402	2125	2537	7729	9103	2194	2644	1234	850	960	1322	4690	2094	(300)	700

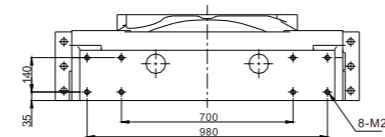
Remark: C-hopper height for reference only

Platen/Nozzle Dimensions

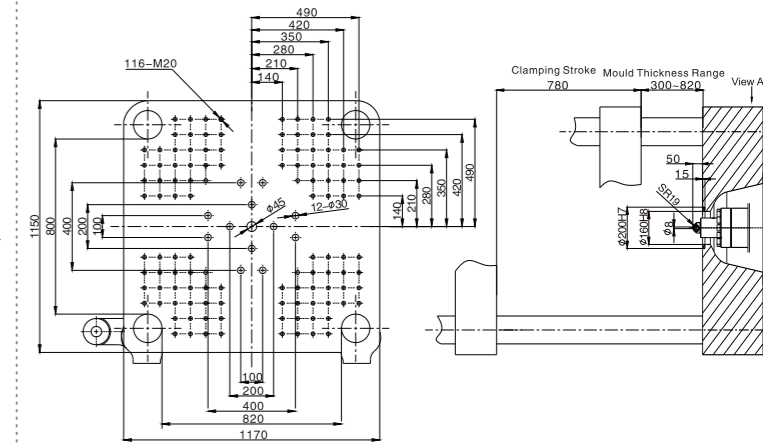
420PVC-SeIII



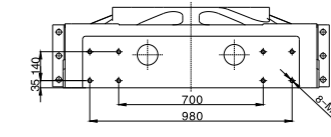
hole pattern for robot/sprue picker on fixed platen (Euromap 18-E12)



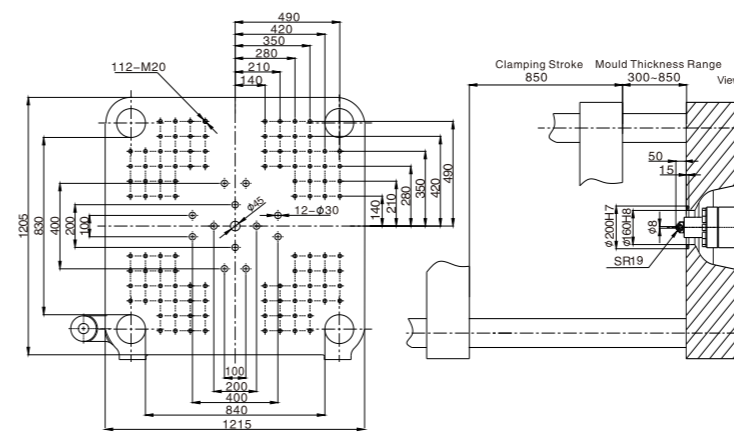
480PVC-SeIII



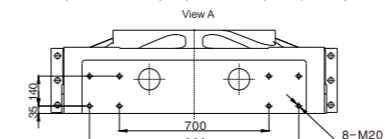
hole pattern for robot/sprue picker on fixed platen (Euromap 18-E13)



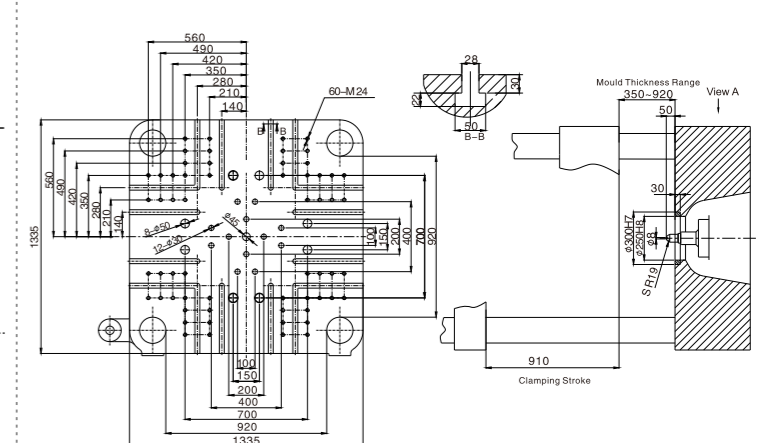
530PVC-SeIII



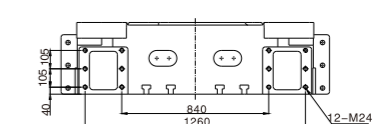
hole pattern for robot/sprue picker on fixed platen (Euromap 18-E13)



660PVC-SeIII



hole pattern for robot/sprue picker on fixed platen (Euromap 18-E15)





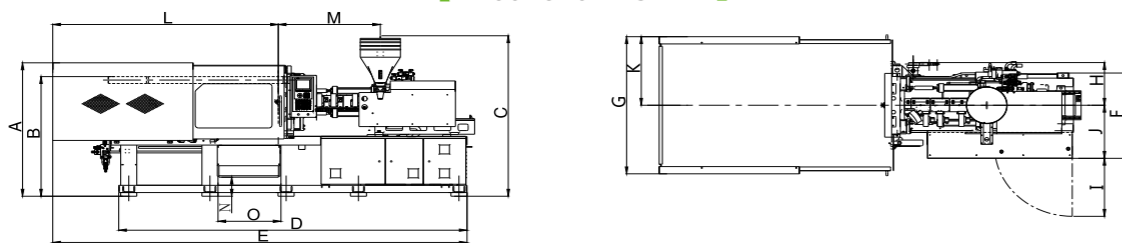
PVC servo pump parameters

Item	Unit	160PVC-KII		190PVC-KII		260PVC-KII		320PVC-KII	
		1600-870		1900-1055		2600-1510		3200-1930	
<b>Injection Unit</b>									
Screw diameter	mm	45	50	50	55	55	60	60	65
Theoretical shot volume	cc	398	491	491	594	713	848	919	1078
Shot weight (PVC)	g	477	589	589	713	855	1018	1103	1294
Shot weight (PVC)	oz	16.9	20.8	20.8	25.2	30.2	36.0	39.0	45.7
Injection pressure	MPa	219	177	215	178	211	178	210	179
Injection rate	cm <sup>3</sup> /sec	126	156	152	184	191	228	244	287
Injection stroke	mm	250		250		300		325	
Max. screw speed	rpm	126		115		112		135	
Injection unit force	Ton	9.1		9.1		9.1		9.1	
Carriage stroke	mm	350		350		400		400	
<b>Clamping Unit</b>									
Clamping force	Ton	160		190		260		320	
Max. daylight	mm	906		1000		1130		1275	
Clamping stroke	mm	446		490		550		615	
Distance btwn. tie bars	mm	460x460		510x510		580x580		660x660	
Min. mould dimension	mm	320x320		350x350		400x400		460x460	
Mould thickness range	mm	150~460		175~510		200~580		250~660	
Ejector force	Ton	4.9		4.9		6.7		6.7	
Ejector stroke	mm	130		140		160		180	
No. of ejector pins	unit	5		5		9		13	
<b>Power Unit</b>									
Max. motor power	kW	17.3		23		31.4		32	
System pressure	MPa	17.5		17.5		17.5		17.5	
Hydraulic pump capacity	L/min	95		112.5		139		176	
No. of heating zones	unit	4+1		4+1		5+1		5+1	
Heating power	kW	14.03		16		18.7		22	
Total power	kW	32.33		40		51.1		55	
Total current	A	44.2		54.7		69.9		75.2	
<b>General</b>									
Machine weight	Ton	5.2		6.1		7.64		10.5	
Oil filling capacity	L	220		275		340		430	

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Machine Dimensions

【 160~320PVC-KII 】

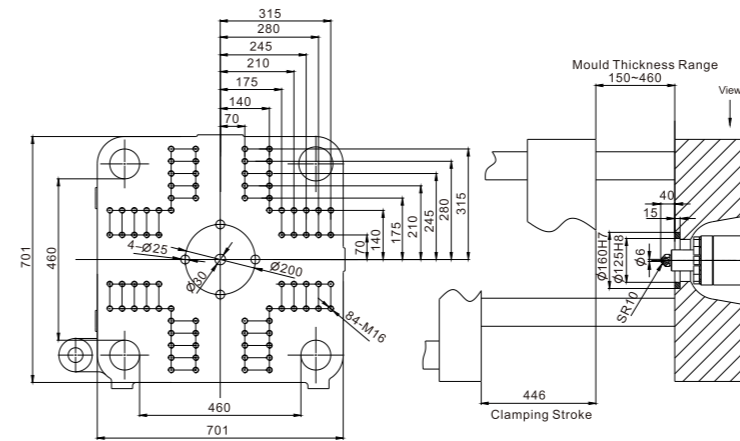


Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
160PVC-KII	1777	1596	2195	4015	4772	1271	1726	564	800	707	863	2585	1187	297	694
190PVC-KII	1840	1650	2214	4332	5152	1177	1892	589	800	732	946	2805	1269	261	783
260PVC-KII	1914	1722	2248	4855	5764	1224	1828	674	800	792	914	3009	1369	221	905
320PVC-KII	2051	1917	2360	5211	5212	1381	2160	751	800	871	1080	3315	1494	259	1109

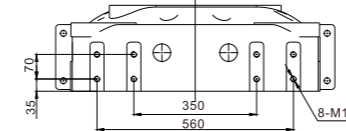
Remark: C-hopper height for reference only

Platen/Nozzle Dimensions

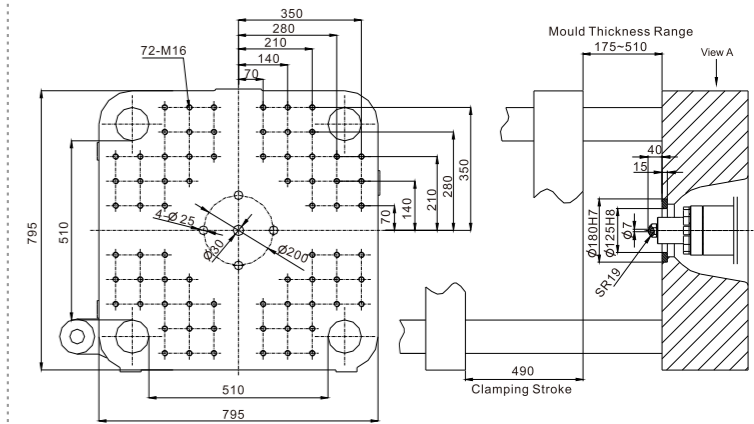
160PVC-KII



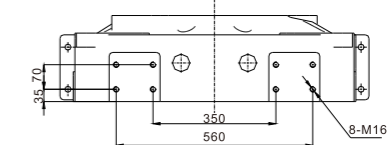
hole pattern for robot/sprue picker on fixed platen (Euromap 18-E8)



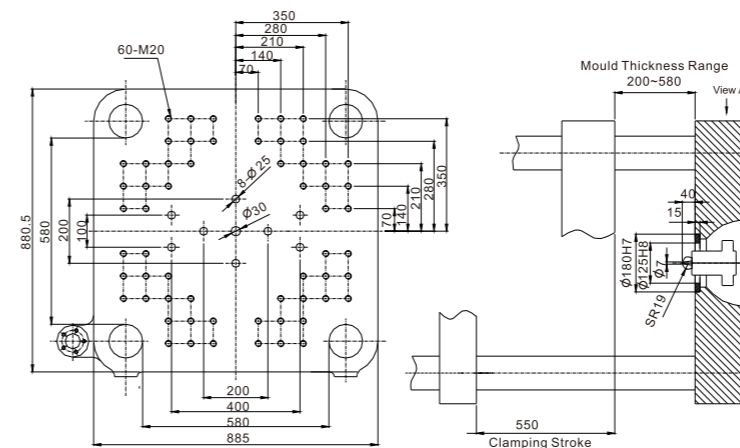
190PVC-KII



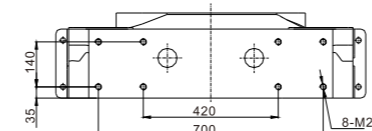
hole pattern for robot/sprue picker on fixed platen (Euromap 18-E9)



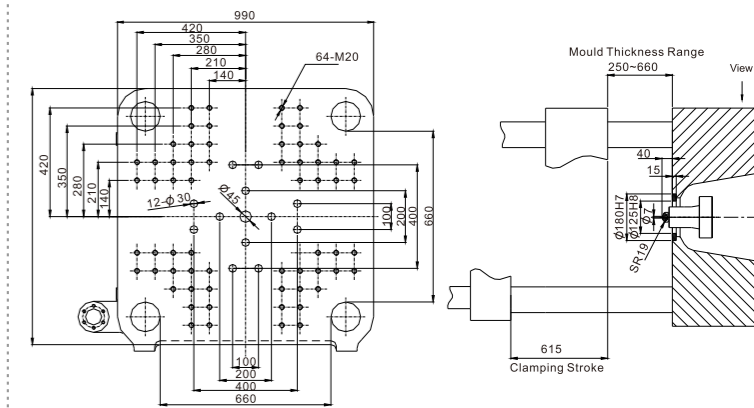
260PVC-KII



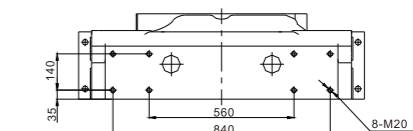
hole pattern for robot/sprue picker on fixed platen (Euromap 18-E10)



320PVC-KII



hole pattern for robot/sprue picker on fixed platen (Euromap 18-E11)



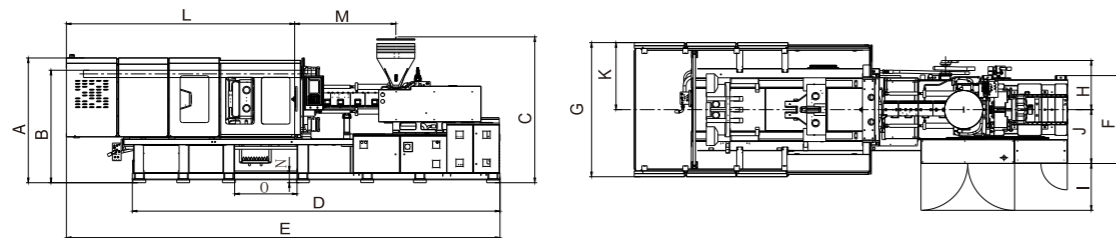
PVC servo pump parameters

Item	Unit	420PVC-KII		480PVC-KII		530PVC-KII		660PVC-KII	
		4200-2868	4800-3958	4800-3958	5300-5875	5300-5875	6600-5875	6600-5875	
<b>Injection Unit</b>									
Screw diameter	mm	70	75	80	85	90	95	90	95
Theoretical shot volume	cc	1443	1657	2011	2270	2799	3119	2799	3119
Shot weight (PVC)	g	1732	1988	2413	2724	3359	3743	3359	3743
Shot weight (PVC)	oz	61.2	70.2	85.3	96.2	118.7	132.2	118.7	132.2
Injection pressure	MPa	199	173	197	174	210	188	210	188
Injection rate	cm <sup>3</sup> /sec	323	371	407	460	489	545	489	545
Injection stroke	mm	375		400		440		440	
Max. screw speed	rpm	108		102		102		102	
Injection unit force	Ton	12		12		20.4		20.4	
Carriage stroke	mm	435		480		600		600	
<b>Clamping Unit</b>									
Clamping force	Ton	420		480		530		660	
Max. daylight	mm	1530		1600		1700		1830	
Clamping stroke	mm	780		780		850		910	
Distance btwn. tie bars	mm	740x740		820x800		840x830		920x920	
Min. mould dimension	mm	520x520		570x560		580x580		645x645	
Mould thickness range	mm	250-750		300-820		300-850		350-920	
Ejector force	Ton	16.6		16.6		16.6		16.6	
Ejector stroke	mm	210		240		240		290	
No. of ejector pins	unit	13		13		13		21	
<b>Power Unit</b>									
Max. motor power	kW	46.1		56.5		73.3		73.3	
System pressure	MPa	17.5		17.5		17.5		17.5	
Hydraulic pump capacity	L/min	220		275		352		352	
No. of heating zones	unit	5+1		5+1		5+1		5+1	
Heating power	kW	28.95		35.85		39.7		39.7	
Total power	kW	76.05		93.35		114.0		114.0	
Total current	A	104.0		127.7		155.9		155.9	
<b>General</b>									
Machine weight	Ton	14.68		17		23		26	
Oil filling capacity	L	540		720		775		1000	

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Machine Dimensions

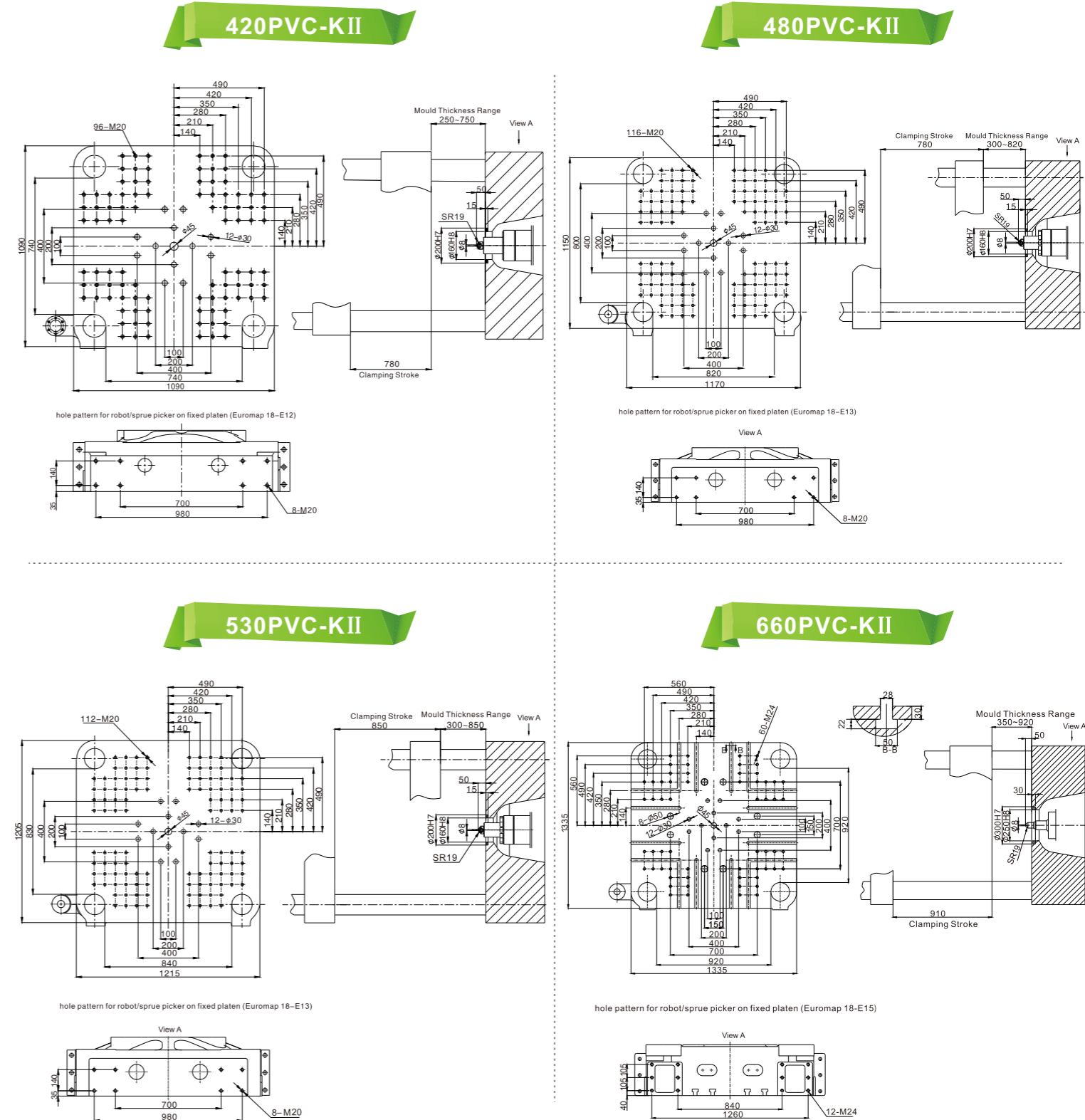
420~660PVC-KII



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
420PVC-KII	2176	1923	2417	6480	7556	1499	2314	840	800	915	1157	4050	1730	(300)	865
480PVC-KII	2246	1987	2526	7061	8025	1549	2428	856	800	942	1214	4249	2012	(300)	860
530PVC-KII	2244	2005	2495	7846	8995	1809	2450	865	800	945	1225	4474	2094	(300)	915
660PVC-KII	2402	2125	2537	7729	9103	2194	2644	1234	850	960	1322	4690	2094	(300)	700

Remark: C-hopper height for reference only

Platen/Nozzle Dimensions





Large-sized PVC servo pump parameters

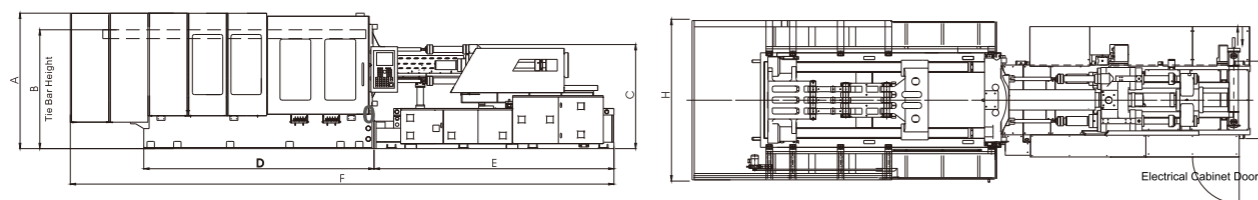
Item	Unit	750 PVC-SeIII	850 PVC-SeIII	1000 PVC-SeIII
<b>Injection Unit</b>				
Screw diameter	mm	100	100	110
Theoretical shot volume	cc	3691	3691	4657
Shot weight (PVC)	g	4430	4430	5588
Shot weight (PVC)	oz	157	157	197
Injection pressure	MPa	171	171	173
Injection rate	cm <sup>3</sup> /sec	706	706	787
Injection stroke	mm	470	470	490
Max. screw speed	rpm	0~81	0~81	0~71
Injection unit force	Ton	19.8	19.8	19.8
Carriage stroke	mm	600	600	650
<b>Clamping Unit</b>				
Clamping force	Ton	750	850	1000
Max. daylight	mm	2050	2200	2300
Clamping stroke	mm	1025	1100	1150
Distance btwn. tie bars	mm	1000x1000	1060x1060	1100x1100
Min. mould dimension	mm	700x700	740x740	780x780
Mould thickness range	mm	350~1025	450~1100	450~1150
Ejector force	Ton	25	25	25
Ejector stroke	mm	350	350	350
No. of ejector pins	unit	21	21	21
<b>Power Unit</b>				
Max. motor power	kW	67.6	67.6	77.4
System pressure	Mpa	17	17	17
Hydraulic pump capacity	L/min	440	440	495
No. of heating zones	unit	5+1	5+1	5+1
Heating power	kW	48	48	56
Total power	kW	116.6	116.6	134.4
Total current	A	141.7	141.7	163.4
<b>General</b>				
Machine weight	Ton	40.0	44.0	53.0
Oil filling capacity	L	1500	1500	1600

Item	Unit	750 PVC-KII	850 PVC-KII	1000 PVC-KII
Max. motor power	kW	83.8	83.8	94.2
Total power	kW	132.8	132.8	151.2
Total current	A	161.4	161.4	183.8

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Machine Dimensions

750~1000 PVC-SeIII/PVC-KII

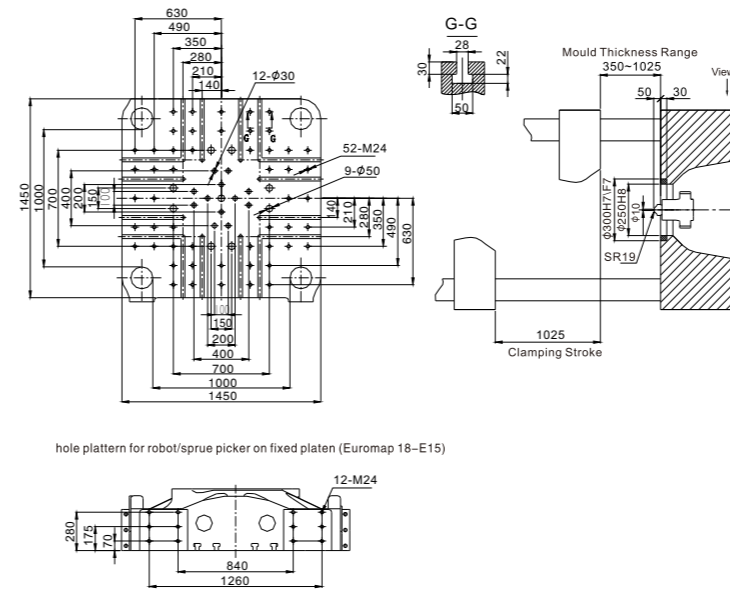


Model	A	B	C	D	E	F	G	H
750 PVC-SeIII/PVC-KII	2539	2227	2635	4318	4497	10192	1410	2946
850 PVC-SeIII/PVC-KII	2420	2300	2635	4668	4497	10514	1410	3100
1000 PVC-SeIII/PVC-KII	2687	2370	2717	4904	4900	11090	1482	3380

Remark: C-hopper height for reference only

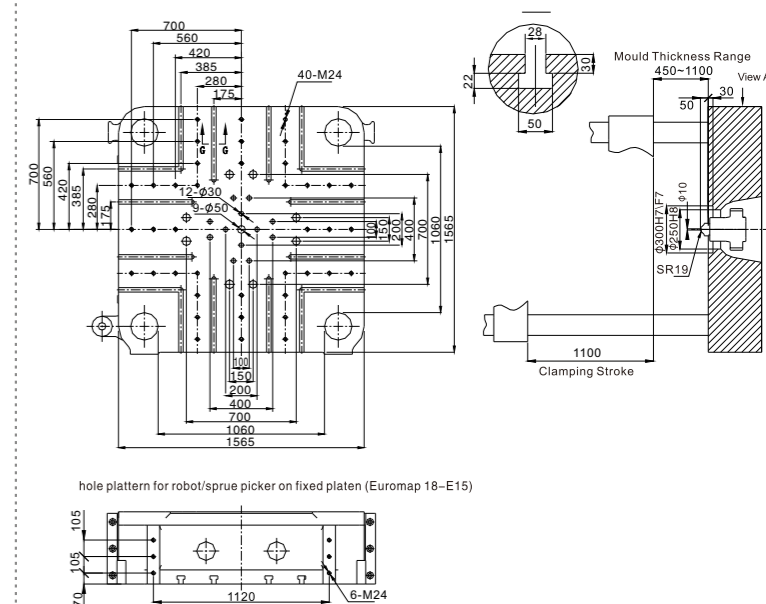
Platen/Nozzle Dimensions

750 PVC-SeIII/PVC-KII



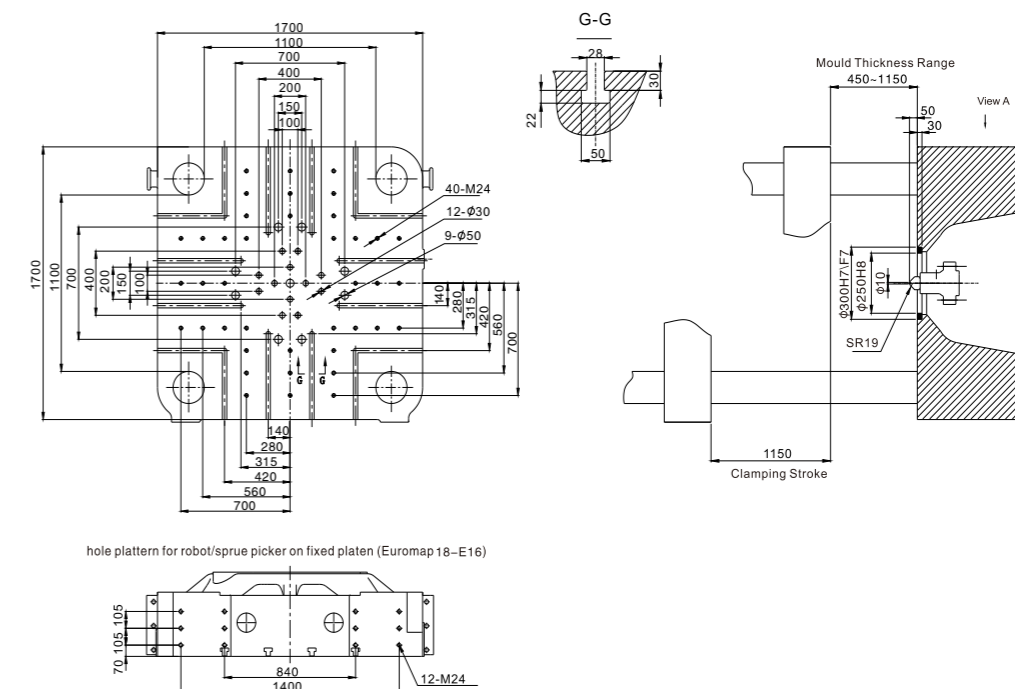
hole pattern for robot/sprue picker on fixed platen (Euromap 18-E15)

850 PVC-SeIII/PVC-KII



hole pattern for robot/sprue picker on fixed platen (Euromap 18-E15)

1000 PVC-SeIII/PVC-KII



hole pattern for robot/sprue picker on fixed platen (Euromap 18-E16)

Large-sized PVC servo pump parameters

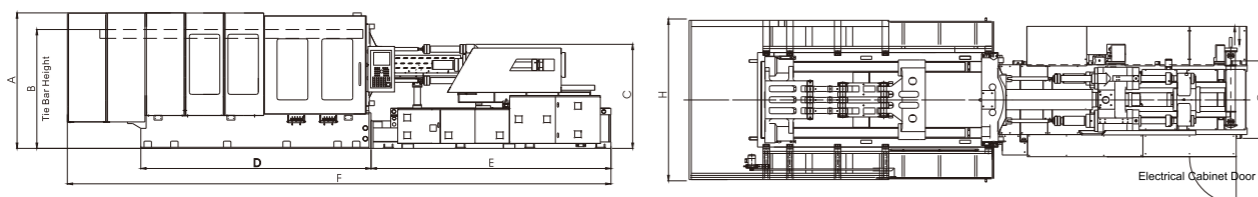
Item	Unit	1250 PVC-SeIII	1500 PVC-SeIII	1800 PVC-SeIII
<b>Injection Unit</b>				
Screw diameter	mm	125	135	145
Theoretical shot volume	cc	6835	9232	10651
Shot weight (PVC)	g	8203	11079	12781
Shot weight (PVC)	oz	290	391	452
Injection pressure	MPa	180	187	162
Injection rate	cm <sup>3</sup> /sec	839	810	1215
Injection stroke	mm	557	645	645
Max. screw speed	rpm	0~60	0~46	0~47
Injection unit force	Ton	19.8	28.8	28.8
Carriage stroke	mm	800	800	850
<b>Clamping Unit</b>				
Clamping force	Ton	1250	1500	1800
Max. daylight	mm	2600	2900	3000
Clamping stroke	mm	1300	1500	1500
Distance btwn. tie bars	mm	1250x1250	1400x1400	1600x1400
Min. mould dimension	mm	875x875	980x980	1100x980
Mould thickness range	mm	500~1300	600~1400	700~1500
Ejector force	Ton	25	33	33
Ejector stroke	mm	350	350	380
No. of ejector pins	unit	21	33	33
<b>Power Unit</b>				
Max. motor power	kW	91.6	91.6	104.1
System pressure	Mpa	17	17	17
Hydraulic pump capacity	L/min	550	550	715
No. of heating zones	unit	5+1	5+1	5+1
Heating power	kW	72	90	90
Total power	kW	164.6	182.6	195.1
Total current	A	200.1	222.0	237.1
<b>General</b>				
Machine weight	Ton	71.0	103.0	130.0
Oil filling capacity	L	1600	2000	2000

Item	Unit	1250 PVC-KII	1500 PVC-KII	1800 PVC-KII
Max. motor power	kW	112	112	131.9
Total power	kW	185	203	222.9
Total current	A	224.9	246.7	270.9

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Machine Dimensions

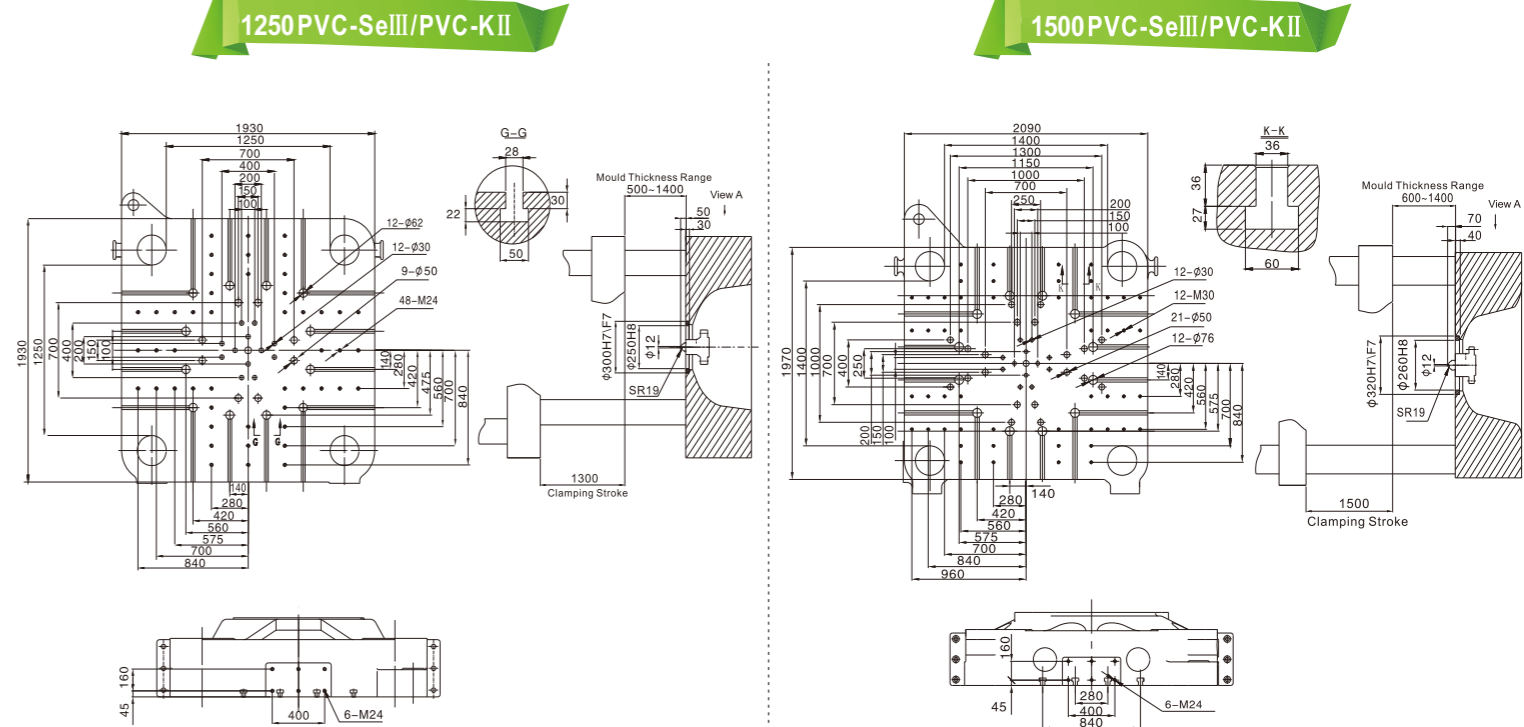
1250~1800 PVC-SeIII/PVC-KII



Model	A	B	C	D	E	F	G	H
1250 PVC-SeIII/PVC-KII	2867	2530	2853	5485	5060	12149	1482	3620
1500 PVC-SeIII/PVC-KII	2808	2700	3200	6158	5360	13290	1340	4000
1800 PVC-SeIII/PVC-KII	2808	2720	3200	6340	5360	13439	1340	4240

Remark: C-hopper height for reference only

Platen/Nozzle Dimensions



1800 PVC-SeIII/PVC-KII

