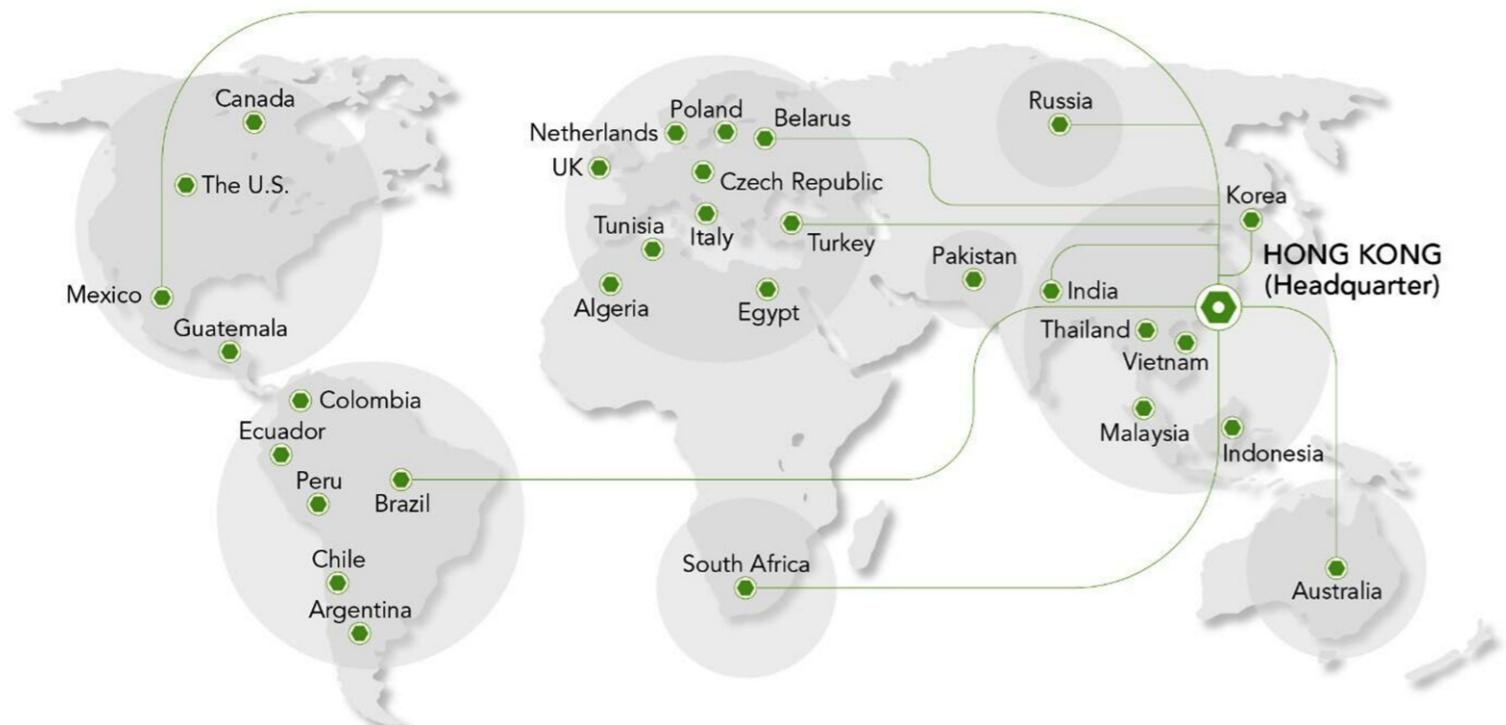


Our offices and agents



CPMIA CPMIA

Energy Saving Award

WELLTEC

1000-4000JSe II

Ultra Large-sized Servo-driven
Two-platen Injection Moulding Machine



Welltec Machinery Ltd



Version: JSeII-202312W



Ultra-short moulding cycle



We know you want to shorten the cycle time.

We also know you expect a very high reproducibility.

To achieve a significant increase in productivity,
we are always your right partner.



Patented technologies

Advanced clamping toggle structure



Energy saving and environmental friendly

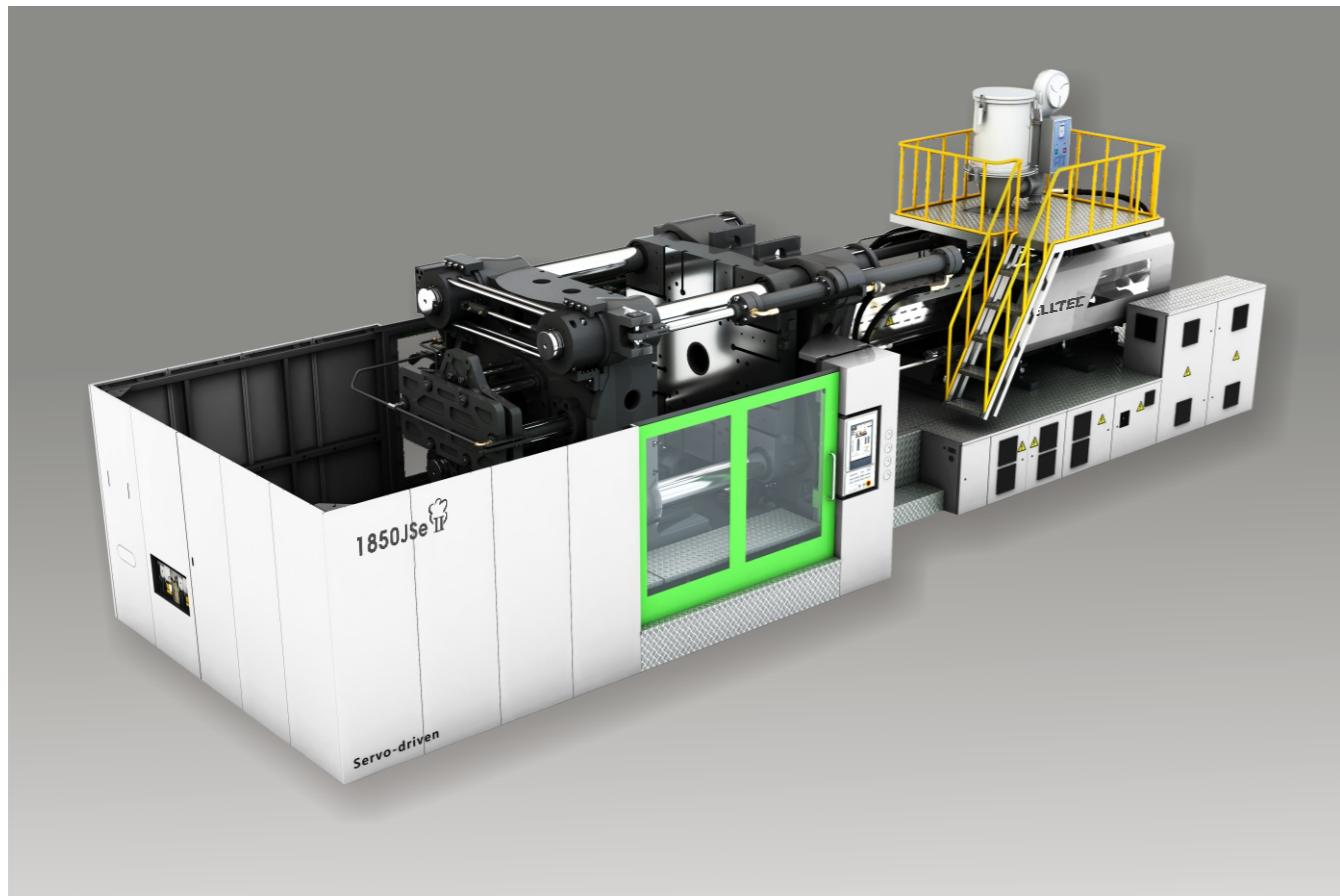
Energy saving by more than 50% on average



High repeatability

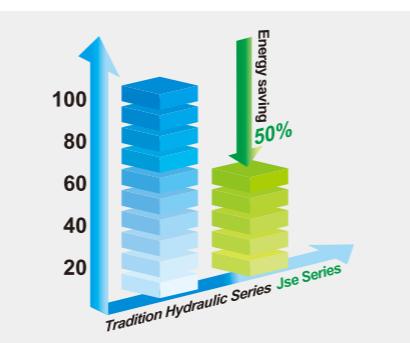
Product weight repeatability of less than 0.3%





Energy saving and environmental friendly

Driven by revolutionary intelligent energy saving servo system, it has been rated Grade 1 energy saving efficiency as per the National Standards. Saving more than 50% electricity compared to traditional fixed pump systems.



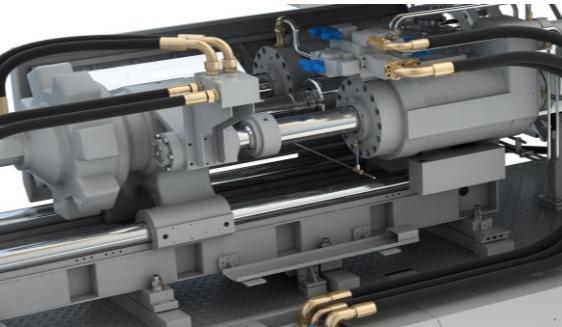
High products weight repeatability

Ultimate product weight repeatability of less than 0.3%



State-of-art injection unit designs

- Compact structure and high-rigidity injection unit.
- Modular designs to allow mix-and-match with unparalleled flexibility between injection and clamping units for catering wide range of injection shot weights and moulding needs. Short machine production lead time is realised.
- Double cylinder injection carriage and barrel support to avoid vertical positional shifts and enable easy adjustments. Stable injection unit movements and accurate volumetric injection controls to make sure the parts are precisely moulded. High-strength guide rail to reduce deformation of the injection unit. Maintenance work at the screw and barrel is serviceman-friendly due to the swiveling injection design.



High-response proportional valve

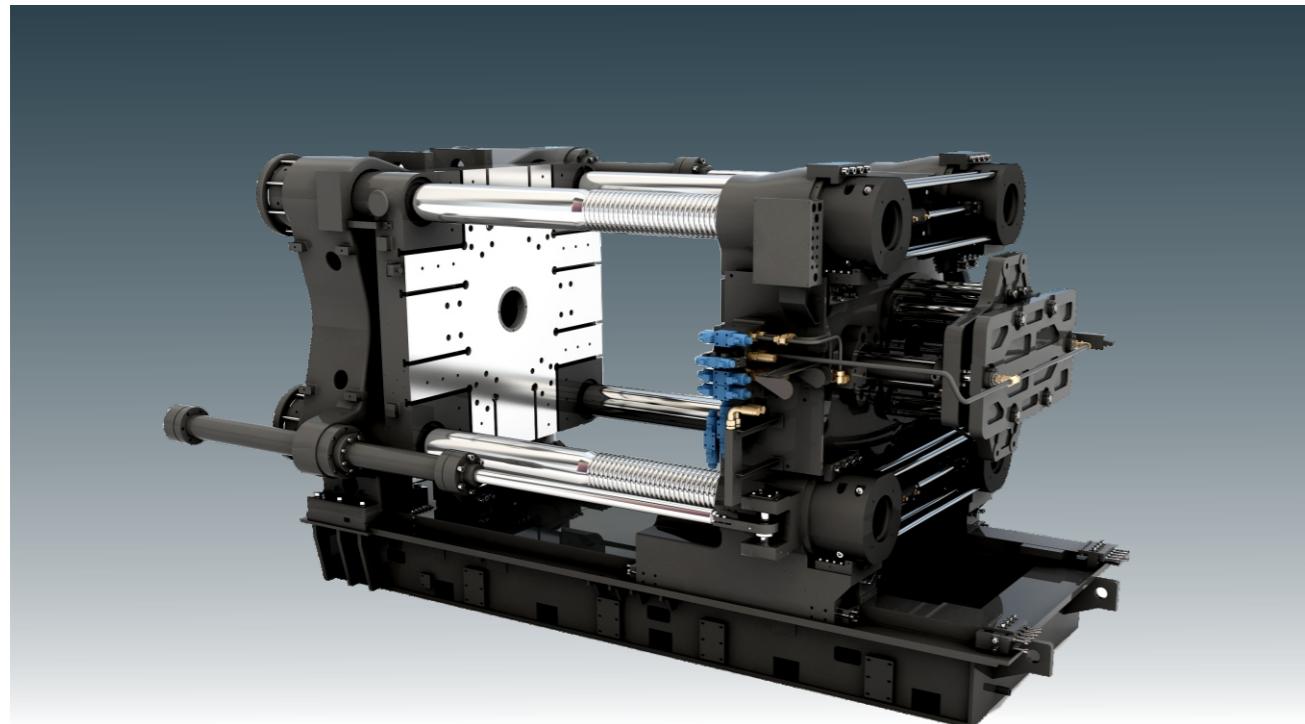
The hydraulic system uses a high-response proportional valve to improve the accuracy and stability of mould open/close. This also shortens the brake response time.



B&R control system

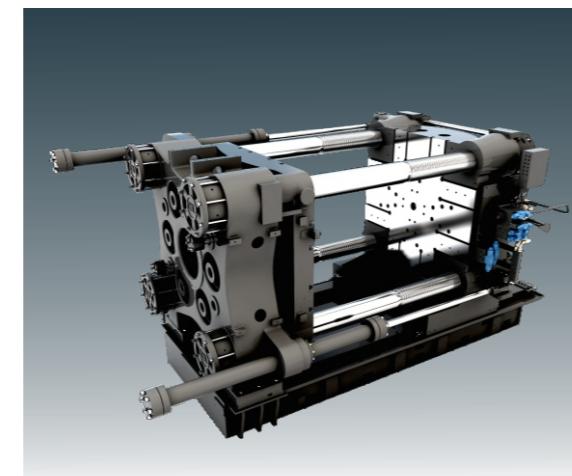
- Austrian made, advanced professional control system for injection moulding machine from B&R Automation
- 15" TFT colour LCD display
- Log for parameter changes, historical logs are available to see what, when and who did the changes for troubleshooting and maintenance conveniences
- QC data logger is available to assist in statistical process control and machine fine-tuning
- Multi-lingual HMI
- The whole control system adopts full digital control and the CPU has an extremely short response time. With optimizations to combine and switching among various hydraulic power packs, the speed and pressure follow a well-tuned linearity curve. It enables smooth movements, accurate positioning and high repeatability of product weight and dimension
- **iSee** Remote monitoring software enables the operator to see the exact same screen as if physically present at the machine, where one can check and monitor real-time machine working status and get QC reports from anywhere at anytime





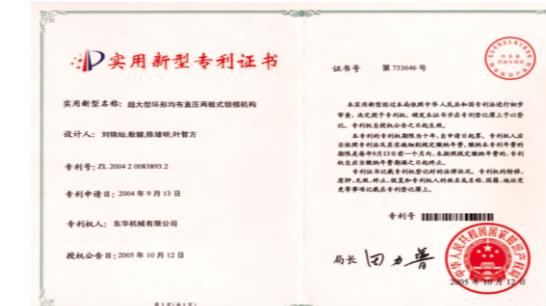
Six cylinders direct clamping structure

Mould open/close and high pressure clamping are done by two groups of mechanical structures. Machine motion stability is greatly enhanced. Six cylinders aligned hexagonally behind the moving platen act directly on the mould mounting surface, which contributes to less mould deformation and better mould protections, thus minimizing product defective rates.



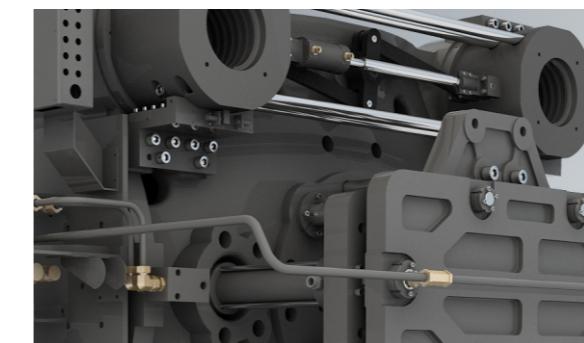
Patented design

Patented design (Patent No. : ZL 200420083893.2)
High pressured direct hydraulic clamping by six hexagonally distributed cylinders.



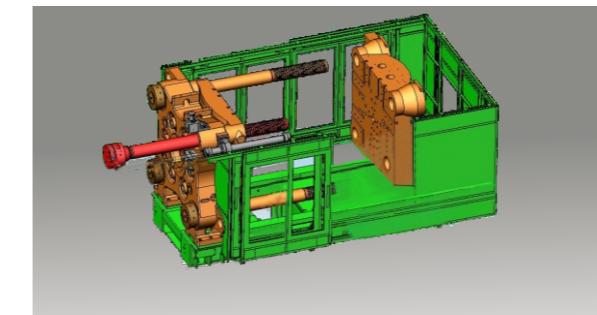
Accurate tie-bars locking with zero shocks

Locking nuts are linked by connecting rods. They are highly synchronized and moving swiftly. Buffering mechanism is equipped to ensure low noise and zero shocks.



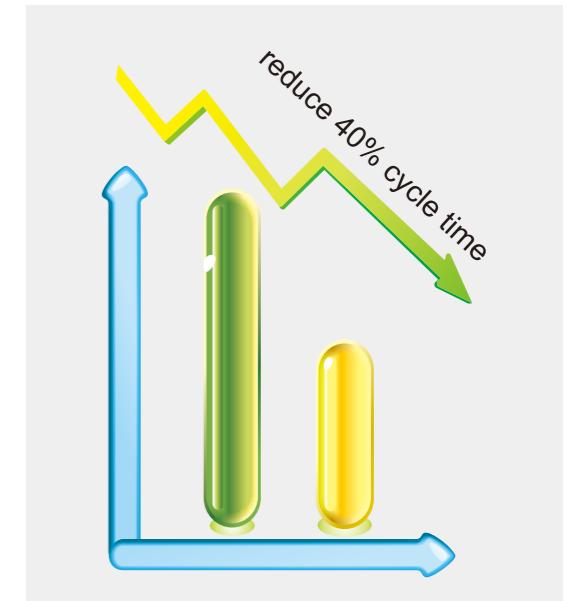
Retractable tie bar (Option)

Side entry of the mould to the clamping unit is possible. It is especially useful and essential for the production floor with low ceiling.



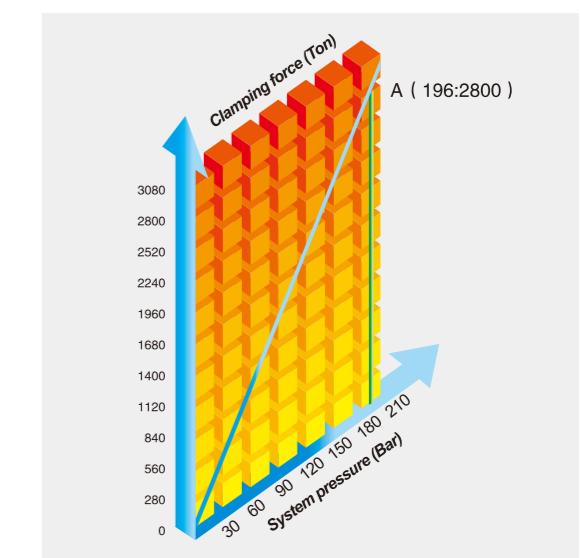
Super-short cycle time

Comparing to traditional toggle machine models, the dry cycle time is shortened by 40%.



High precision and stable clamping force

High precision clamping force stability, repeatability, excellent-tuned linearity curve against the system pressure, result in strengthening mould protection and minimizing product weight variations.



Standard and Optional Features

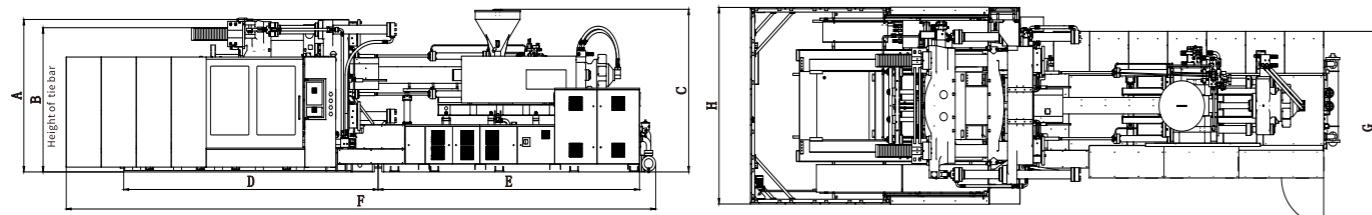
Injection Unit		
▪ Injection stroke controlled by transducer	●	
▪ Proximity sensor for carriage	●	
▪ Single-flight screw + mixing head	●	
▪ Regenerative circuit on injection	●	
▪ Nozzle protrusion 100mm	●	
▪ Barrel protection cover	●	
▪ Nozzle protection cover	●	
▪ Diagonal layout of carriage cylinders	●	
▪ Anti-drooling function	●	
▪ Automatic detection of injection failure	●	
▪ Screw cold start prevention	●	
▪ Auto purging function	●	
▪ Heater on/off switch	●	
▪ Powered swivel injection unit	●	
▪ Nozzle centre adjustment device	●	
▪ Cooling water for feeding throat	●	
▪ 10 stages closed loop injection speed control	●	
▪ 10 stages closed loop hold pressure control	●	
▪ 5 stages closed loop metering control	●	
▪ 5 stages closed loop back pressure control	●	
▪ Centralised manual grease lubrication	●	
▪ Reduced / Enlarged ONE STEP injection unit	○	
▪ Movable hopper	○	
▪ Extended nozzle	○	
▪ Spring-loaded nozzle	○	
▪ Hydraulic / Pneumatic shut-off nozzle	○	
▪ Material loading platform	○	
▪ Linear transducer for injection carriage	○	
▪ Upgrade varieties of screw and barrels for engineering/ recycled/ glass fiber contented resins	○	
▪ Electric plasticising	○	
Clamping Unit		
▪ Patented clamping mechanism	●	
▪ Clamping stroke controlled by contactless linear transducer	●	
▪ Ejector stroke controlled by linear transducer	●	
▪ Auto-mould height adjustment	●	
▪ Automatic lubrication system	●	
▪ Mould protection function	●	
▪ Ejector modes selection (Maximum 9 ejector rods)	●	
▪ T slot mould platen	●	
▪ Moulding area safety pedal (1200- 4000JSeII)	●	
▪ 4 stages clamping speed, pressure adjustment	●	
▪ 4 stages opening speed, pressure adjustment	●	
▪ 2 stages ejector forward speed, pressure adjustment	●	
▪ 2 stages ejector backward speed, pressure adjustment	●	
▪ Increase mould thickness range	○	
▪ Mechanical safety bar	○	
▪ SPI mounting holes platen	○	
▪ Quick mould change system (T-slot necessary)	○	
▪ Increase ejector force	○	
▪ Increase ejector stroke	○	

Hydraulic Unit		
▪ High efficiency energy saving servo motor and pump	●	
▪ Paralleled movement of ejector or core pulling during mould open	●	
▪ Hydraulic safety device	●	
▪ Proportional back pressure control for plasticising	●	
▪ Two sets core pulling device at movable platen	●	
▪ Return line filtering device with blockage	●	
▪ Non-return check valve for injection carriage	●	
▪ Hydraulic oil temperature display and alarm	●	
▪ Hydraulic oil level alarm	●	
▪ Lubrication oil level / pressure alarm	●	
▪ Core pulling on fixed / movable platen	○	
▪ Hydraulic unscrew device with motor	○	
▪ Extra air blast	○	
▪ Oil level sensor and alarm	○	
▪ Core pulling / Ejector plasticising during mould open	○	
▪ Injection accumulator from half to full stroke	○	
▪ Proportional direction valves for clamping	○	
▪ Hydraulic/ Pneumatic sequential injection	○	
▪ Enlarged motor and pump (hydraulic circuit)	○	
▪ Solenoid valve for oil cooler to control water flow	○	
Control Unit and Electric Components		
▪ Advanced professional control system for IMM from B&R Automation	●	
▪ 10.4" TFT LCD screen and touchscreen keyboard	●	
▪ Processor PID temperature control	●	
▪ Barrel temperature hold and pre-heat function	●	
▪ Screw RPM sensor	●	
▪ Closed loop control on injection, holding, plasticising and back pressure	●	
▪ Automatic fault detection and display	●	
▪ Production counter	●	
▪ Emergency button on non- operator side	●	
▪ 380V 50Hz voltage	●	
▪ 380V 16A socket x 2 sets	●	
▪ 380V 32A socket x 1 set	●	
▪ Electrical safety interlock	●	
▪ 4 levels password protection	●	
▪ SPC quality control	●	
▪ Real time curve display	●	
▪ 100 sets of mould data storage (Optional: USB)	●	
▪ Robot interface	●	
▪ Individual power plug of different voltages	○	
▪ Voltage stabiliser	○	
▪ Solid state relays	○	
▪ Power meter	○	
▪ Hot runner control	○	
▪ Ceramic / Infrared heater bands	○	
▪ Lighting inside electric cabinet	○	
▪ Electric unscrew (Device interface)	○	
▪ Robot interface EUROMAP 12 & 67	○	
▪ Air conditioner for electric cabinet	○	
▪ Circuit check for heater bands	○	
▪ iSee intelligent management system(self-developed software)	○	
Others		
▪ Water regulating valves	●	
▪ Safety guard for injection unit	●	
▪ Water flow regulator	○	

Specifications

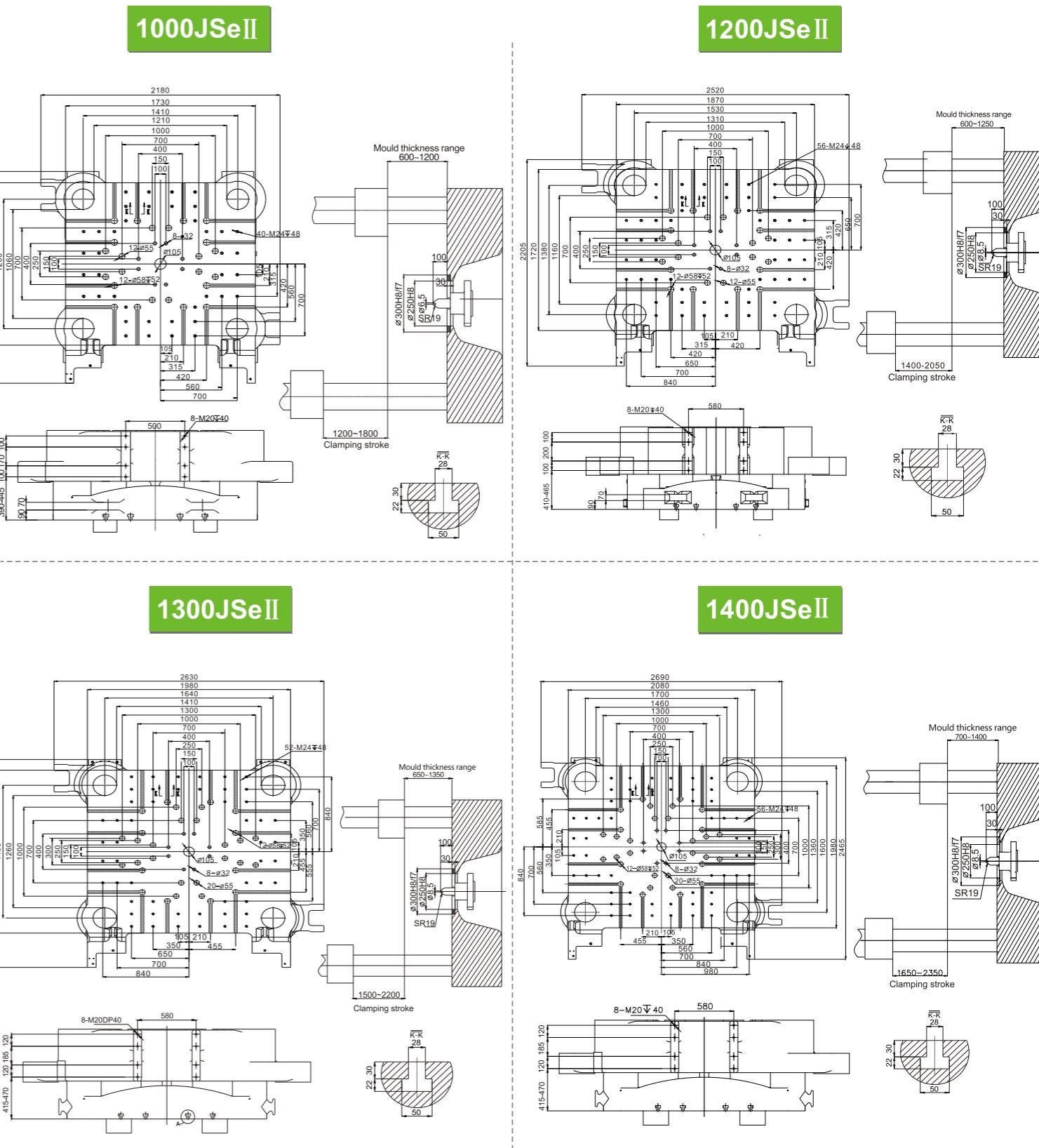
Item	Unit	1000JSeII	1200JSeII	1300JSeII	1400JSeII
Injection Unit					
Screw diameter	mm	100	110	125	100
Theoretical shot volume	cm ³	3848	4657	6013	3848
Shot weight (PS)	g	3464	4191	5412	3464
Length/Diameter ratio	L/D	22.3	20.0	17.7	22.3
Injection pressure (high pressure and low speed)	MPa	215	178	138	215
Injection pressure (low pressure and high speed)	MPa	156	129	100	156
Injection rate (high pressure and low speed)	cm ³ /s	671	812	1048	745
Injection rate (low pressure and high speed)	cm ³ /s	925	1119	1445	1028
Plasticizing capacity (PS)	g/s	93	118	154	93
Injection stroke	mm	490		490	
Screw speed	rpm	115		115	
Injection unit force	Ton	20.0		20.0	
Carriage stroke	mm	920		980	
Clamping Unit					
Clamping force	Ton	1000		1200	
Opening force (High pressure locking cylinder)	Ton	106.1		130.7	
Opening force (Close and open cylinder)	Ton	34.7		42	
Max. daylight	mm	2400		2650	
Clamping stroke	mm	1200~1800		1400~2050	
Distance btwn. tie bars	mm	1210X1060		1310X1160	
Min. mould dimension	mm	840x740		910x810	
Mould thickness range	mm	600~1200		600~1250	
Max. mould weight	Ton	15		20	
Ejector force	Ton	18.2		21.5	
Ejector stroke	mm	300		350	
No. of ejector pins	unit	21		21	
Power Unit					
Dry Cycle (Euromap 6)	S	5.7		6.5	
Major motor	kW	88.4		102.6	
System pressure	MPa	17.5,22.1		17.5,22.1	
No. of heating zones	unit	5+1		5+1	
Heating power	kW	58		58	
Total power	kW	147.4		161.6	
Total Current	A	179.2		196.4	
General					
Machine weight	Ton	50		60	
Oil filling capacity	L	1400		1400	
We are always working on improvement and reserve the rights to change design and specifications without prior notice					

Machine Dimensions



Model	A	B	C	D	E	F	G	H
1000JSeII	2615	2425	2329	4550	4721	10499	3295	3360
1200JSeII	2710	2495	2329	5050	4721	10959	3295	3500
1300JSeII	2795	2620	2412	5100	5565	11818	3505	3570
1400JSeII	2925	2755	2487	5325	5565	12053	3505	3670

Platen/Nozzle Dimensions

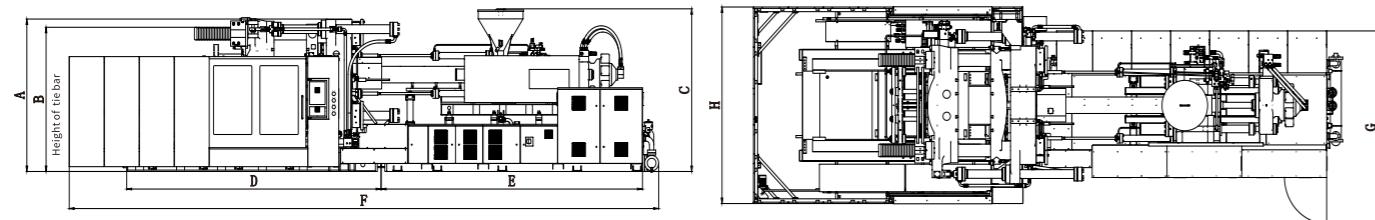


Specifications

Item	Unit	1600JSeII	1850JSeII	2100JSeII	2550JSeII
Injection Unit					
Screw diameter	mm	125	135	145	135
Theoretical shot volume	cm ³	7915	9232	10651	9232
Shot weight (PS)	g	7124	8309	9586	8309
Length/Diameter ratio	L/D	23.0	21.1	19.7	21.1
Injection pressure (high pressure and low speed)	MPa	224	192	166	192
Injection pressure (low pressure and high speed)	MPa	174	149	129	149
Injection rate (high pressure and low speed)	cm ³ /s	1074	1253	1445	1253
Injection rate (low pressure and high speed)	cm ³ /s	1386	1617	1865	1617
Plasticizing capacity (PS)	g/s	161	199	236	190
Injection stroke	mm	645		645	
Screw speed	rpm	110		106	
Injection unit force	Ton	29.5		29.5	
Carriage stroke	mm	1050		1100	
Clamping Unit					
Clamping force	Ton	1600		1850	
Opening force (High pressure locking cylinder)	Ton	166.5		184.6	
Opening force (Close and open cylinder)	Ton	48.2		49.1	
Max. daylight	mm	3250		3300	
Clamping stroke	mm	1700-2550		1700-2550	
Distance btwn. tie bars	mm	1560X1410		1660X1560	
Min.mould dimension	mm	1090x990		1160x1090	
Mould thickness range	mm	700~1550		750~1600	
Max. mould weight	Ton	33		40	
Ejector force	Ton	36		36	
Ejector stroke	mm	350		400	
No. of ejector pins	unit	29		33	
Power Unit					
Dry Cycle (Euromap 6)	S	7.5		8.6	
Major motor	kW	143.5		143.5	
System pressure	MPa	17.5, 21.3		17.5, 22.3	
No. of heating zones	unit	5+1		5+1	
Heating power	kW	92		92	
Total power	kW	236.5		236.5	
Total Current	A	287.5		287.5	
General					
Machine weight	Ton	95		100	
Oil filling capacity	L	2000		2000	

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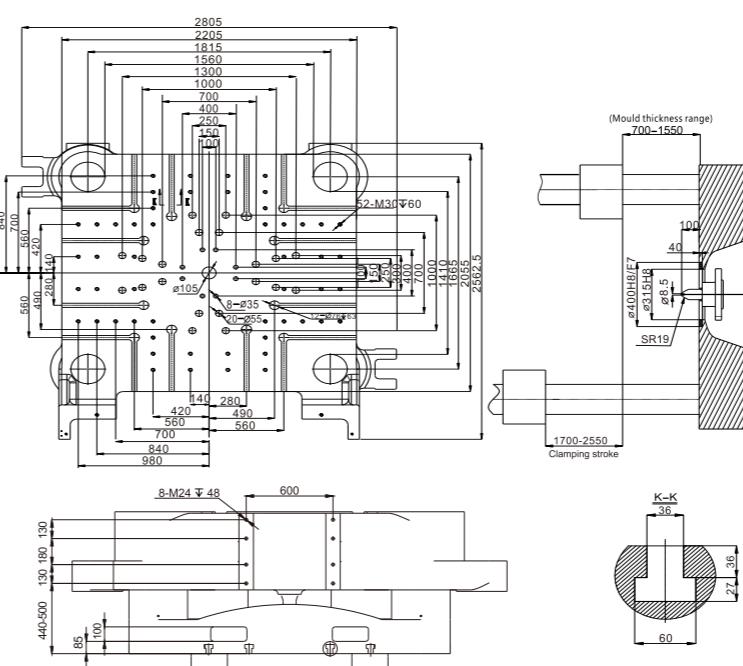
Machine Dimensions



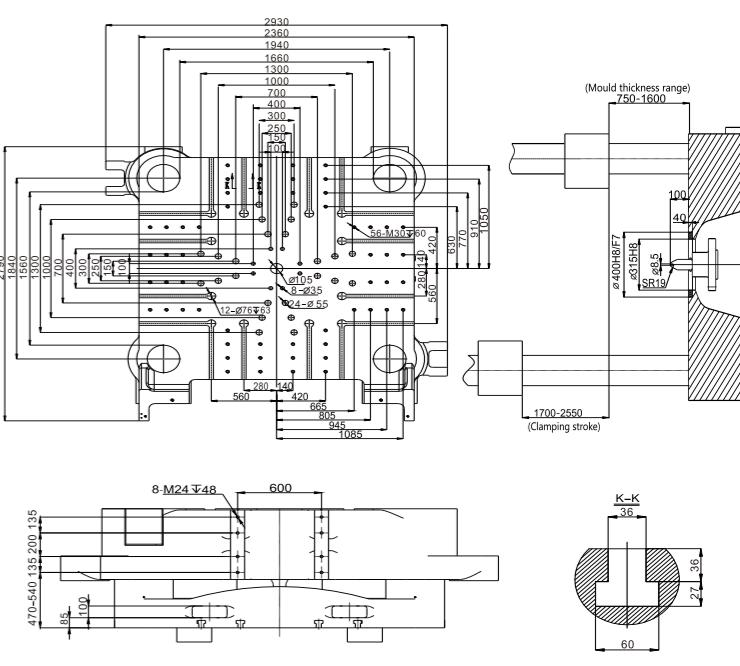
Model	A	B	C	D	E	F	G	H
1600JSeII	3110	2860	3939	5790	5565	12874	4010	3820
1850JSeII	3315	3070	4049	5920	5565	13134	4010	3930
2100JSeII	3370	3125	4074	6140	5565	13344	4010	4130
2550JSeII	3810	3450	4404	6785	6472	14401	4333	4410

Platen/Nozzle Dimensions

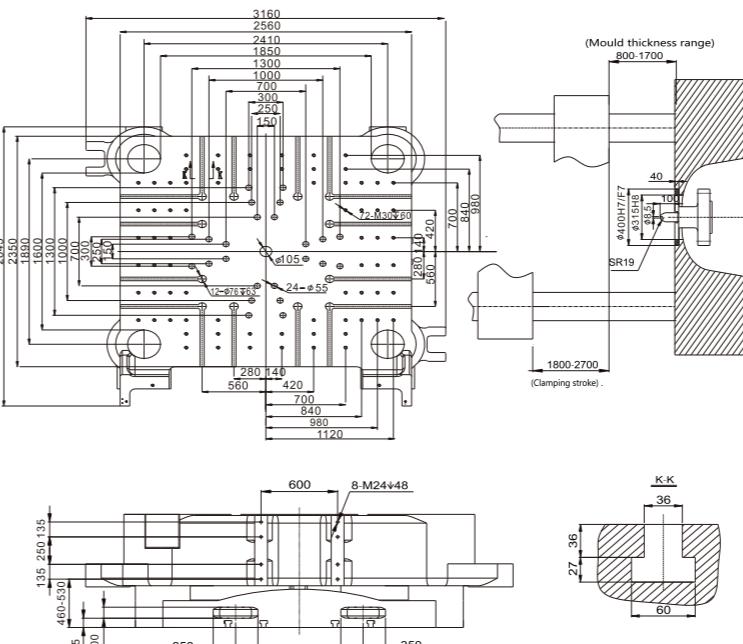
1600JSeII



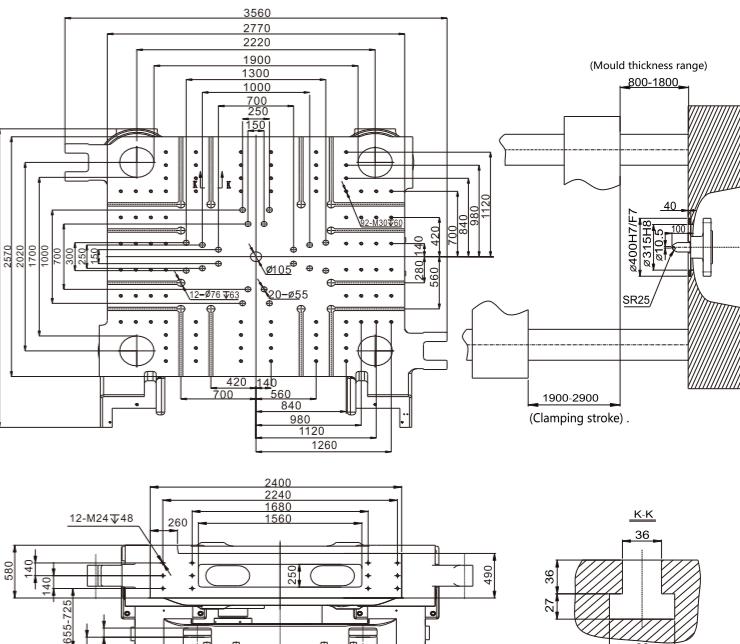
1850JSeII



2100JSeII



2550JSeII

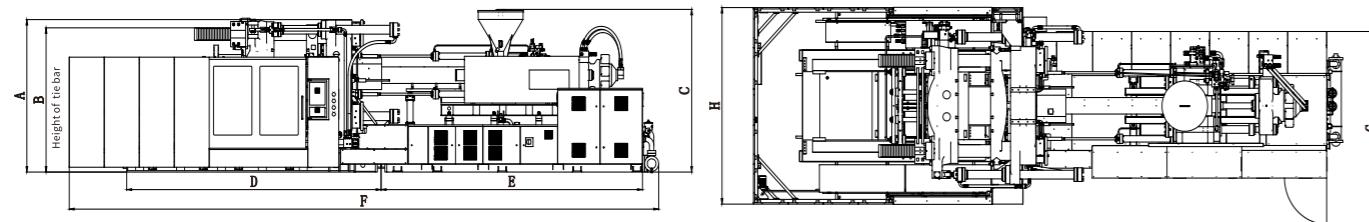


Specifications

Item	Unit	2850JSeII			3350JSeII		4000JSeII	
Injection Unit								
Screw diameter	mm	160	180	200	215	240	260	
Theoretical shot volume	cm ³	15281	19340	23876	45381	56775	69021	
Shot weight (PS)	g	13753	17406	21489	40843	51097	62119	
Length/Diameter ratio	L/D	23.0	20.7	18.4	21.7	21.0	20.0	
Injection pressure (high pressure and low speed)	MPa	208	165	133	136	160	161	
Injection pressure (low pressure and high speed)	MPa	164	130	105	111	127	129	
Injection rate (high pressure and low speed)	cm ³ /s	1262	1597	1972	2601	3118	3580	
Injection rate (low pressure and high speed)	cm ³ /s	1602	2028	2503	3175	3905	4478	
Plasticizing capacity (PS)	g/s	174	230	281	324	324	330	
Injection stroke	mm	760			1250	1255	1300	
Screw speed	rpm	60			55	45	40	
Injection unit force	Ton	31.7			31.7	34	34	
Carriage stroke	mm	1370			1550	1770	1770	
Clamping Unit								
Clamping force	Ton	2850			3350	4000	4000	
Opening force (High pressure locking cylinder)	Ton	300.3			352.3	432.7	432.7	
Opening force (Close and open cylinder)	Ton	53.9			70.3	109.9	109.9	
Max. daylight	mm	4100			4160	4370	4370	
Clamping stroke	mm	2200~3200			2160~3160	2260~3270	2260~3270	
Distance btwn. tie bars	mm	2000X1800			2160X1900	2420 x 2020	2420 x 2020	
Min. mould dimension	mm	1400X1260			1510X1330	1690X1410	1690X1410	
Mould thickness range	mm	900~1900			1000~2000	1100~2110	1100~2110	
Max. mould weight	Ton	70			75	86	86	
Ejector force	Ton	53.9			61.8	61.8	61.8	
Ejector stroke	mm	450			550	550	550	
No. of ejector pins	unit	21			29	29	29	
Power Unit								
Dry Cycle (Euromap 6)	s	12.5			13.2	15.4	15.4	
Major motor	kW	169.8			196.5	273.9	324.6	
System pressure	MPa	17.5,20			17.5,18.5	17.5,19.5	17.5,19.5	
No. of heating zones	unit	5+1			6+1	6+1	6+1	
Heating power	kW	134			201.4	228.6	240	
Total power	kW	304.8			398.9	503.5	565.6	
Total Current	A	370.5			484.9	612.0	687.5	
General								
Machine weight	Ton	175			215	280	300	
Oil filling capacity	L	2900			3800	6000	7200	

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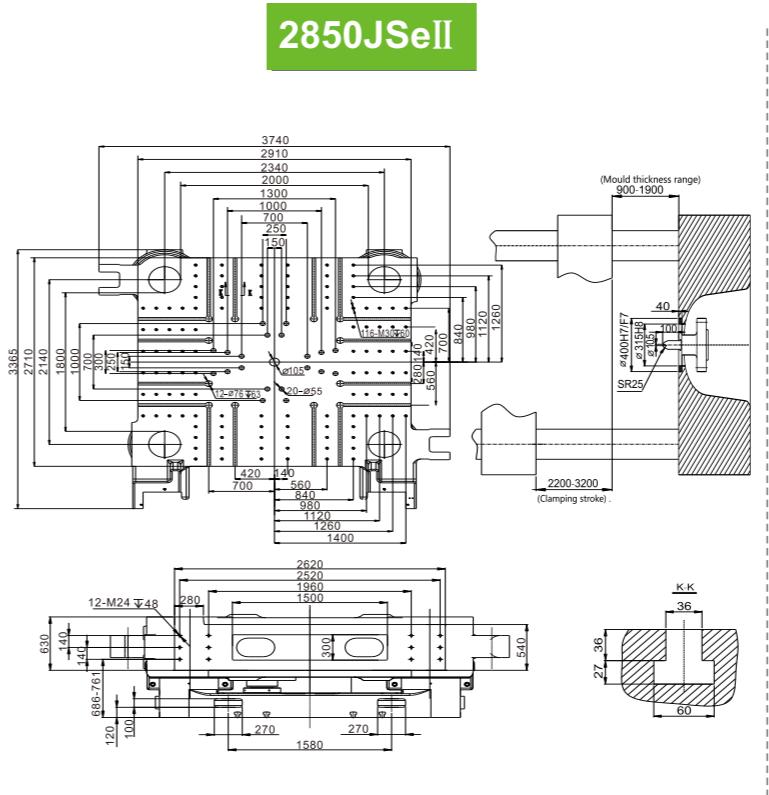
Machine Dimensions



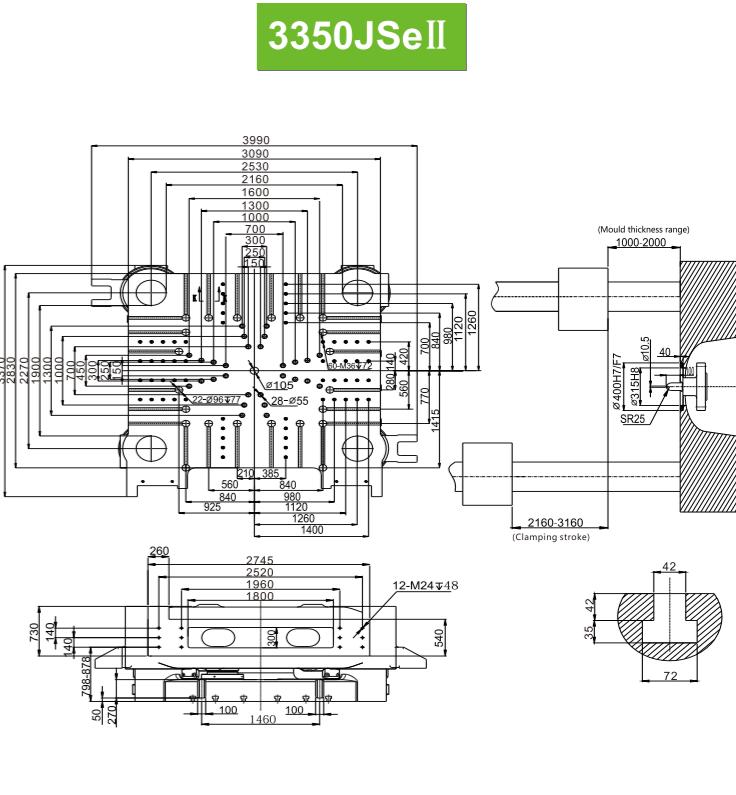
Model	A	B	C	D	E	F	G	H
2850JSell	3960	3600	4514	7320	6882	15340	4333	4730
3350JSell	4135	3795	4629	7735	8207	16966	4333	4730
4000JSell	4475	4375	4185	7770	10702	19441	4306	5242

Platen/Nozzle Dimensions

2850JSell



3350JSell



4000JSell

