

LKIMM



ELETTRICA SERIES

**ALL-ELECTRIC HIGH PERFORMANCE
INJECTION MOLDING MACHINE**

LK INJECTION MOLDING MACHINE CO.,LTD.

Address: Unit A, 8/F., Mai Wah Industrial Building, 1-7 Wah Sing Street, Kwan Chung, Hong Kong

Tel: +852 3412 5500

Fax: +852 3412 5511

E-mail: sales@lk.world

Website: www.lkimm.com



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LK INJECTION MOLDING MACHINE

ELETTRICA SERIES



All-Electric Injection Molding Machine

Application industry: medical consumables, electronic products, home appliances, thin-walled products and other high-end applications.



High efficient and precision

Combine high efficiency and high accuracy, suitable for various products in the industry



Save space

Optimized construction, compact design



Safety and high repeatability

High sensitive low pressure protection function and with the highest safety integrity level device, mold and human always stay safe



Less energy consumption

High efficiency, low loss, go green, unlimited possibilities for green and cleaner production



Expansibility

Open source platform provide freedom to user to implement secondary development

HIGH EFFICIENCY ALL-ELECTRIC SERIES

20% 

Compared with traditional hydraulic machine,
energy saving up to

Benchmarking with international performance standard and level of technology

LK Elettrica series all-electric injection molding machine integrated the advanced technology and R&D concepts, with flexibility through modularity to cope with different production requirement.

The series combined advantages of high repeatability, stability, quick response, energy-saving and user-friendly, especially suitable for the application in communication, optics, medical, packaging industry.

Efficient and precise

The operation of Elettrica series is driven by multi servo electric motors that achieve movement parallel and bring the outstanding performance.

Expansibility

LK Elettrica combined with ergonomic design concept, operation panel can be rotated at multiple angles, easy to use and for maintenance.

An open platform operation system is available management more smart integration, graphical free programming,more convenience adding automation.



Safety and high repeatability

With superior low-pressure protection algorithm, safety of the mold can be sensed instantly by real-time monitoring speed and torque changes on mold clamping servo motor. It can effectively protect the mold from damage by foreign object.

Save space

Create Maximum efficiency for each cubic meter.

Eco-friendly and energy saving

The most of benefits of the all-electric is to save energy compared with traditional hydraulic models; less wear and more than 95% energy utilization rate, ensure high repeatability of injection molding;No hydraulic oil, no seal aging and no oil pollution problems, suitable for clean production;Low noise, providing more comfortable environment at mass production scale.

CLAMPING UNIT

0.01mm

Clamping position control accuracy up to

Smooth and precise, linear support

High-precision platen guidance which ensures high parallelism, stable movement, and reduce energy consumption effectively;

Non-contact tie bars and linear guide rails greatly improve the position accuracy of mold opening and closing;

Adopted sophisticated FEA software to optimize the design, makes platen with high rigidity and low deformation.

Mold automatic protection function

The mold protection function can prevent the danger or failure caused by objects caught in the mold. High rigidity platen integrated with sensitive protection system to ensure the safety of the mold.

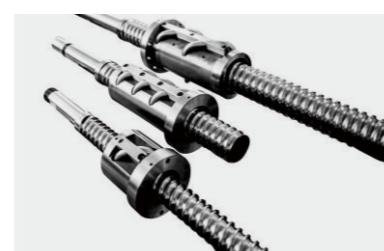
Parallel motions to reduce cycle time

Each motions is driven by an independent servo motor, which can realize the synchronization of multi-axis movements of mold opening, eject and metering.

Dry cycle time can be less than 2 seconds that greatly reduces the time, thereby improving production efficiency. Servo electric ejection is standard and perform ejection parallel motions.

Powerful and strong ejection

Equipped with high-quality high-rigidity ball lead screw, which make sure machine parallelism movement optimally match the mold. The ejector part adopts high-load servo motor to drive ball lead screw which can perform parallelism movement with high sealing and low noise.



INJECTION UNIT

0.01mm

Injection position control accuracy up to

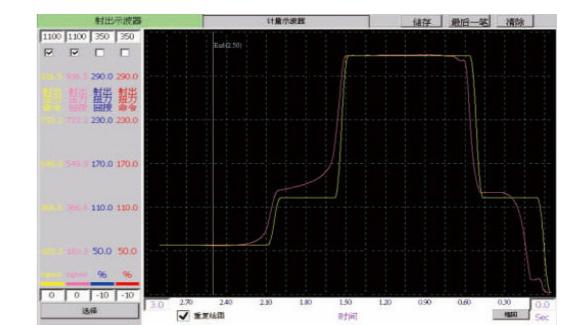
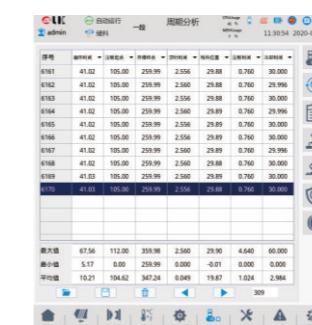
High-performance servo motors and drives

Combine with low-inertia injection moving parts design, high injection speed as well as speed accelerationon. Excellent repeatability injection end position for high precision parts production requirement.



Control accuracy with high precision

Guide rails support provides less friction and high response movement. To satisfy high precision production, machine driven by high performance servo motor, integrated with the design of low-inertia injection parts, speed response reaches up to 1G and meets accurate injection end position.



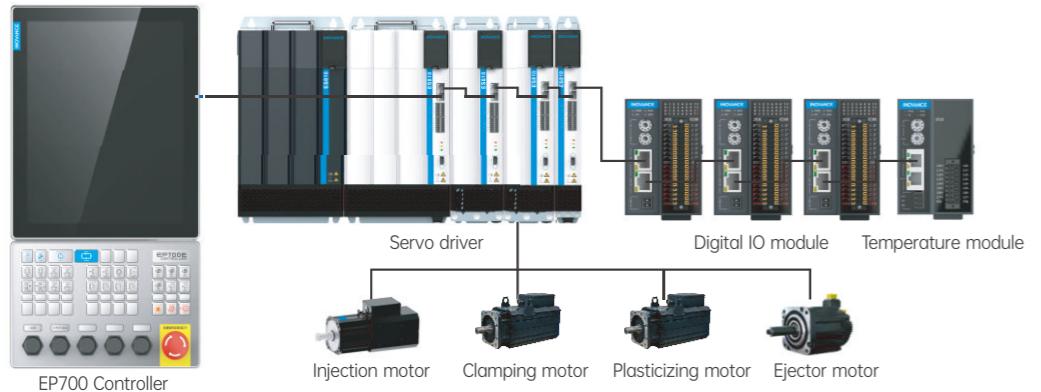
CONTROL UNIT

4.0

OPC-UA communication protocol

Precise control accuracy

Adopting Germany high-performance control system connected through EtherCAT bus with injection molding machine controller and servo-drive and servo motor, sharing real-time data, to achieve closed-loop control.



Systematically SPC data, easy to read

All processes data can be checked and display with statistically calculation result compare with reference settings, greatly facilitates process management.

Open system, supporting smart factory networking

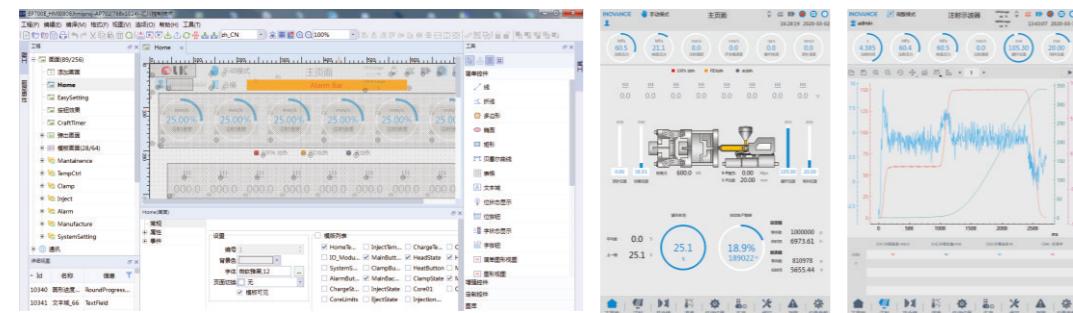
The LK Elettrica all-electric machine complies with the OPC-UA communication protocol of Industry 4.0, and operation of all equipments can monitor anytime and anywhere through the networked system.

Realize smart factory, smart production, smart logistics, support Internet, EtherNET 100M network port, support Modbus-TCP protocol, reduce social cost of production and improve production efficiency.

Support for production management systems (ERP, MES) and provide shortcuts for remote digital management.

Simple and easy-to-use control system

- 15-inch high-performance all-in-one display and sequence processor
- Real-time sampling oscilloscope with high sampling rate, convenient for process debugging
- Support free programming, permit secondary development, ease for complex integration
- Machine configuration can be flexibly expanded to support the industrial Internet of Things (IoT)
- Support IEC61131 defined multiple programming languages and with offline simulation, graphical Programming of interface design.
- Support for multiple languages
- Free programming available, secondary open platform for complex processing



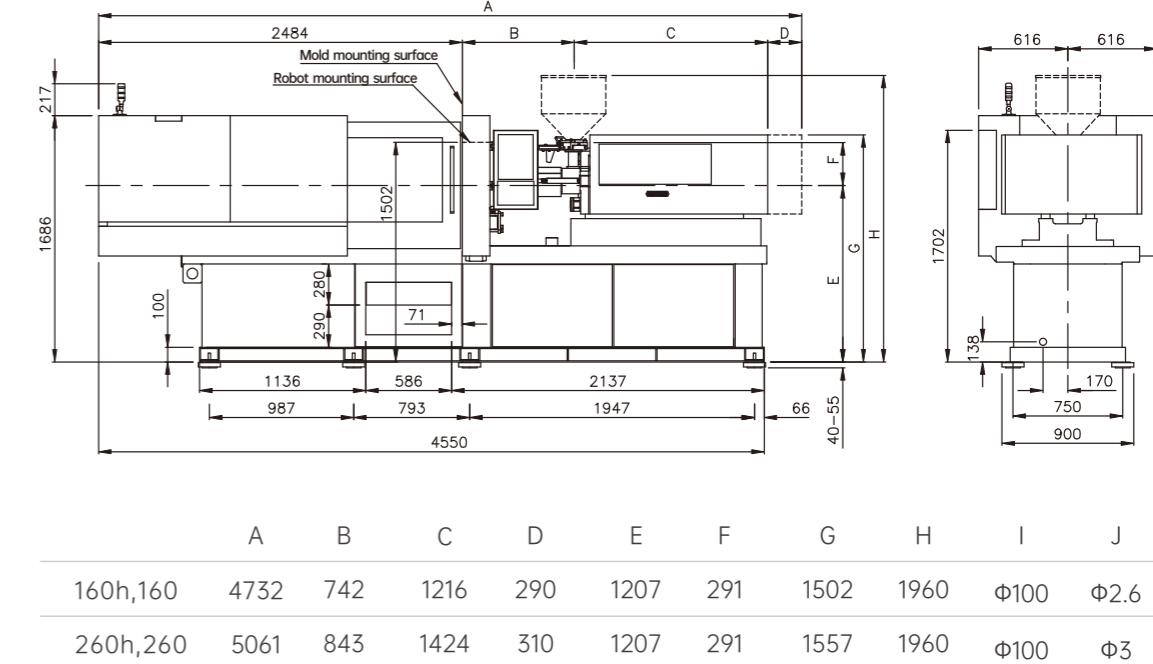
Ui Screen Functionality Display

Specifications EL100

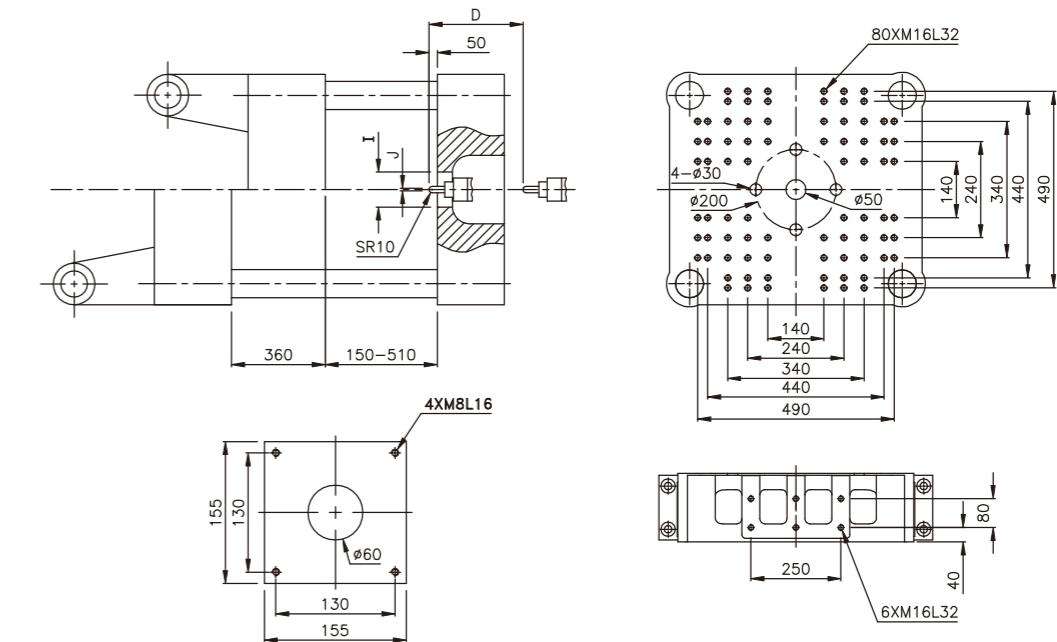
Item		EL100					
Injection unit	Unit	A	B	C	A	B	C
Injection weight(PS)	g	54	63	72	70	92	116
	OZ	1.9	2.2	2.5	2.5	3.3	4.1
Screw diameter	mm	26	28	30	28	32	36
Screw L/D ratio		21	21	20	22	22	20
Injection volume	cc	59	69	79	78	102	129
Injection stroke	mm	112			128		
Injection pressure	Mpa	273	235.2	205	345	264	209
Holding pressure	Mpa	204	176.4	153	345	264	209
Screw rpm	rpm	350			350		
Plasticizing capacity (PS)	kg/h	31	41	47	41	62	89
Carriage contact force	kN	19.6			24.5		
Injection unit		160(Standard)			260		
Injection speed	mm/s	200			200		
Injection rate	cc/s	106	123	141	123	161	203
Injection unit		160h			260h		
Injection speed	mm/s	350			350		
Injection rate	cc/s	186	215	247	215	281	356
Clamping unit							
Clamping force	kN	1000					
Mould thickness (Min.-Max.)	mm	150-510					
Maximum daylight	mm	870					
Opening stroke	mm	360					
Space between tie bars(HxV)	mm	465x405					
Platen Size(HxV)	mm	630x575					
Minimum mold size	mm	310x270					
Ejector stroke	mm	100					
Ejector force	KN	24.5					
Others							
Power capacity(KW/A)	kW/A	160:14.5/29.8		260:18.1/35.4		160h:19.3/39.8	
Heating Power	kW	6.42		8.22			
Machine dimension (LxWxH)	m	4.8x1.3x2.0		5.1x1.3x2.0			
Machine weight	ton	3.8		4.1			

When you are molding PVC, PC, ABS (fireproof), PMMA, POM and other engineering plastic products or have other special requirements, please contact our company.
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Machine Dimensions EL100



Platen Dimensions EL100

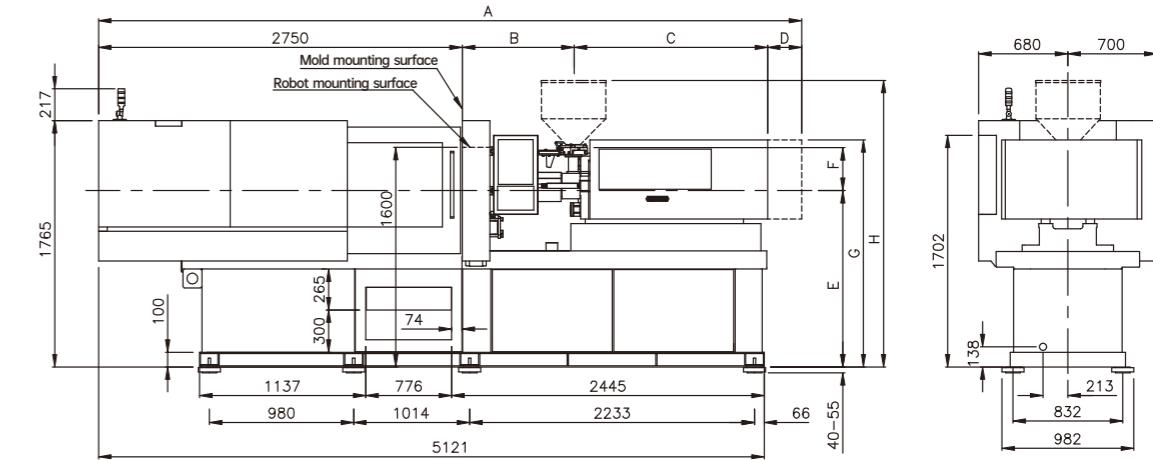


Specifications **EL130**

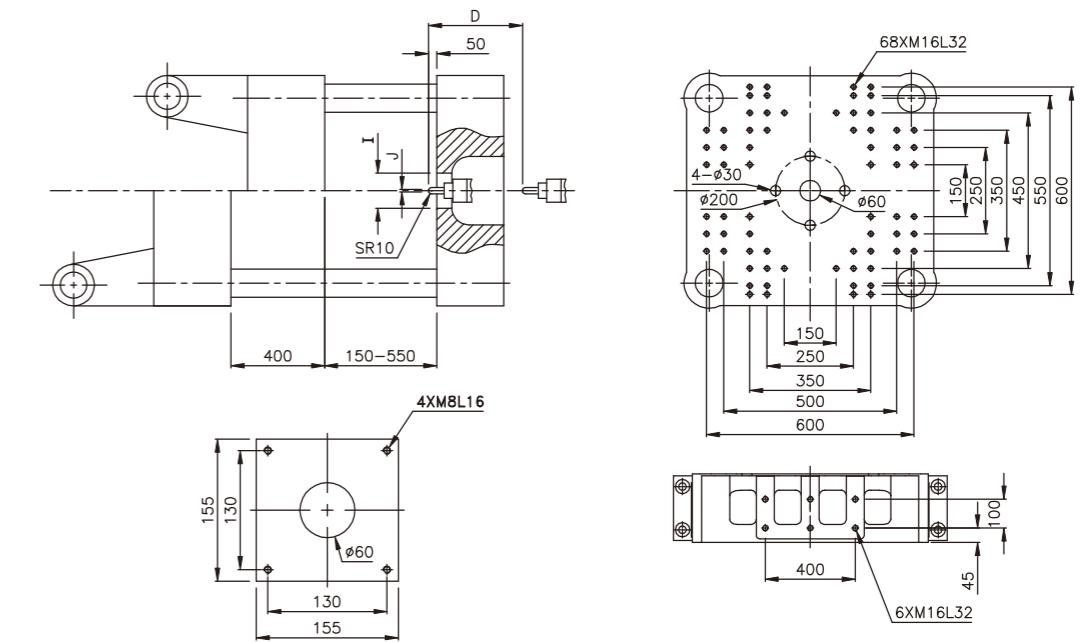
Item		EL130								
Injection unit	Unit	A	B	C	A	B	C	A	B	C
Injection weight(PS)	g	54	63	72	70	92	116	104	132	163
	OZ	1.9	2.2	2.5	2.5	3.3	4.1	3.7	4.7	5.8
Screw diameter	mm	26	28	30	28	32	36	32	36	40
Screw L/D ratio		21	21	20	22	22	20	22	22	20
Injection volume	cc	59	69	79	78	102	129	115	146	180
Injection stroke	mm	112			128			144		
Injection pressure	Mpa	273	235	205	345	264	209	316	250	203
Holding pressure	Mpa	204	176	153	345	264	209	316	250	203
Screw rpm	rpm	350			350			350		
Plasticizing capacity (PS)	kg/h	31	41	47	41	62	89	62	89	113
Carriage contact force	kN	19.6			24.5			24.5		
Injection unit		160			260(Standard)			360		
Injection speed	mm/s	200			200			200		
Injection rate	cc/s	106	123	141	123	161	203	161	203	251
Injection unit		160h			260h			360h		
Injection speed	mm/s	350			350			350		
Injection rate	cc/s	186	215	247	215	281	356	281	356	440
Clamping unit										
Clamping force	kN	1300								
Mould thickness (Min.-Max.)	mm	150-550								
Maximum daylight	mm	950								
Opening stroke	mm	400								
Space between tie bars(HxV)	mm	510x460								
Platen Size(HxV)	mm	715x665								
Minimum mold size	mm	340x310								
Ejector stroke	mm	100								
Ejector force	KN	34.3								
Others										
Power capacity(KW/A)	kW/A	160:14.5/29.8 160h:19.3/39.8		260:18.1/35.4 260h:31.4/60.7		360:18.1/35.4 360h:31.4/60.7				
Heating Power	kW	6.42			8.22			11.32		
Machine dimension (LxWxH)	m	5.0x1.4x2.1			5.3x1.4x2.1			5.6x1.4x2.1		
Machine weight	ton	5.2			5.5			5.7		

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Machine Dimensions EL130



Platen Dimensions EL130

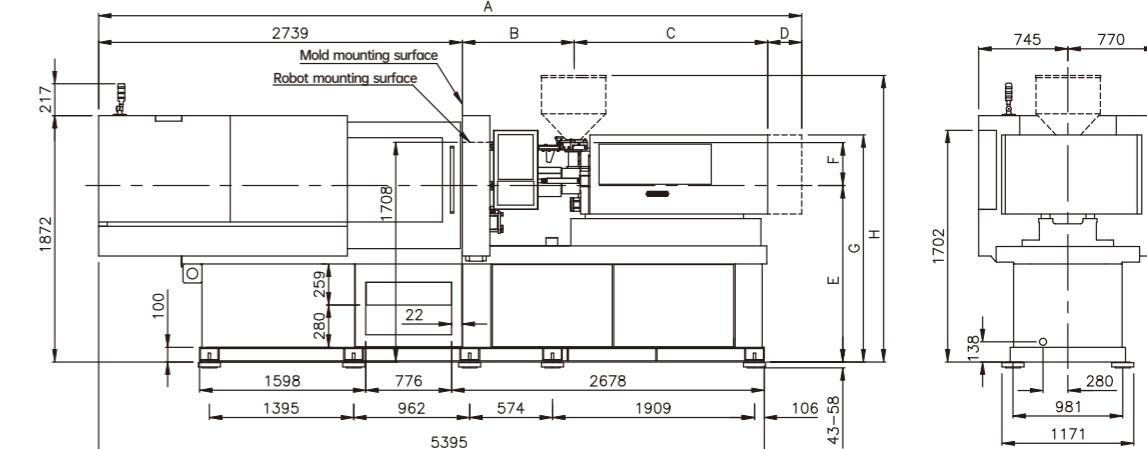


Specifications **EL180**

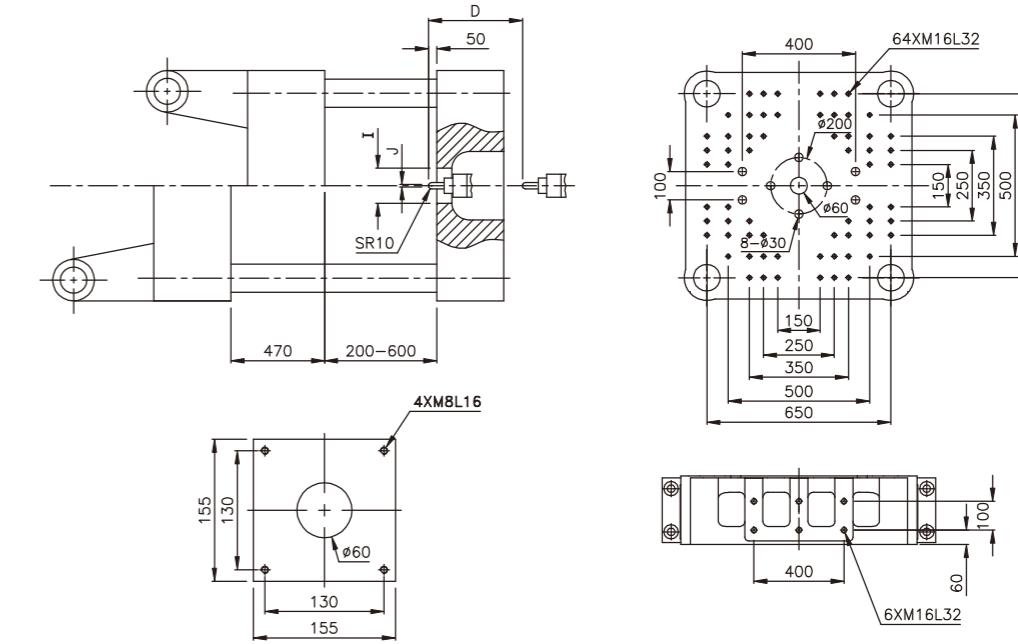
Item		EL180								
Injection unit	Unit	A	B	C	A	B	C	A	B	C
Injection weight(PS)	g	70	92	116	104	132	163	147	182	230
	OZ	2.5	3.3	4.1	3.7	4.7	5.8	5.2	6.4	8.1
Screw diameter	mm	28	32	36	32	36	40	36	40	45
Screw L/D ratio		22	22	20	22	22	20	22	22	20
Injection volume	cc	78	102	129	115	146	180	163	201	254
Injection stroke	mm	128			144			160		
Injection pressure	Mpa	345	264	209	316	250	203	266	215.6	170
Holding pressure	Mpa	345	264	209	316	250	203	230	186.2	147
Screw rpm	rpm	350			350			350		
Plasticizing capacity (PS)	kg/h	41	62	89	62	89	113	89	113	172
Carriage contact force	kN	24.5			24.5			24.5		
Injection unit		260			360(Standard)			430		
Injection speed	mm/s	200			200			200		
Injection rate	cc/s	123	161	203	161	203	251	203	251	318
Injection unit		260h			360h			430h		
Injection speed	mm/s	350			350			350		
Injection rate	cc/s	215	281	356	281	356	440	356	440	556
Clamping unit										
Clamping force	kN	1800								
Mould thickness (Min.-Max.)	mm	200-600								
Maximum daylight	mm	1070								
Opening stroke	mm	470								
Space between tie bars(HxV)	mm	560x560								
Platen Size(HxV)	mm	800x800								
Minimum mold size	mm	370x370								
Ejector stroke	mm	120								
Ejector force	KN	34.3								
Others										
Power capacity(KW/A)	kW/A	260:18.1/35.4 260h:31.4/60.7		360:18.1/35.4 360h:31.4/60.7		430:23.6/48.5 430h:31.4/60.7				
Heating Power	kW	8.22		11.32		12.52				
Machine dimension (LxWxH)	m	5.3x1.6x2.2		5.6x1.6x2.2		5.8x1.6x2.2				
Machine weight	ton	7.0		7.2		7.5				

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Machine Dimensions EL180



Platen Dimensions EL180

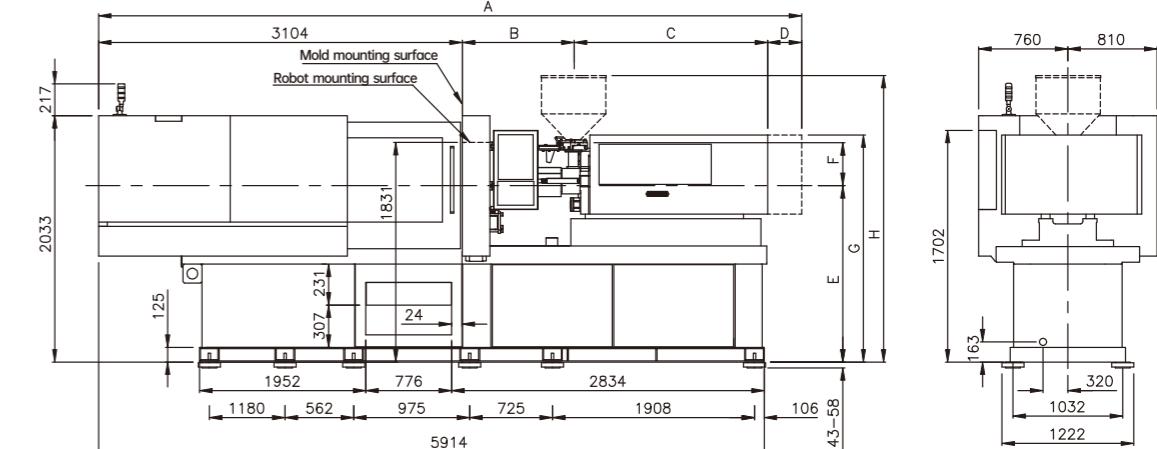


Specifications EL230

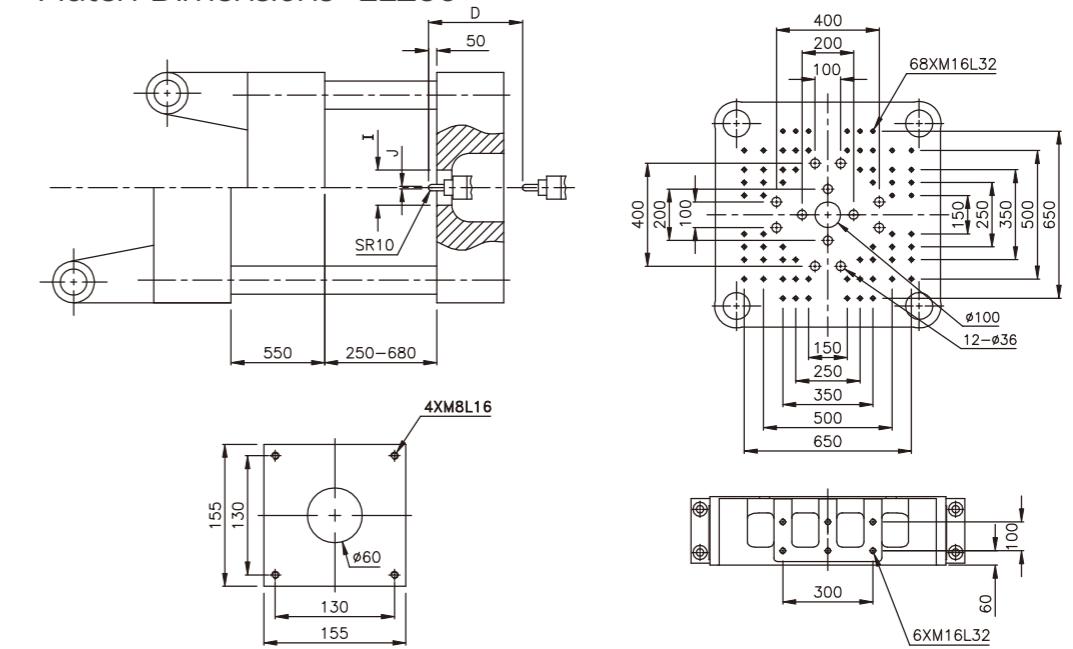
EL230											
Item	Unit	A	B	C	A	B	C	A	B	C	
Injection unit	g	104	132	163	147	182	230	205	260	321	
Injection weight(PS)	OZ	3.7	4.7	5.8	5.2	6.4	8.1	7.2	9.2	11.3	
Screw diameter	mm	32	36	40	36	40	45	40	45	50	
Screw L/D ratio		22	22	20	22	22	20	22	22	20	
Injection volume	cc	115	146	180	163	201	254	226	286	353	
Injection stroke	mm	144			160			180			
Injection pressure	Mpa	316	250	203	266	215.6	170	248	196	159	
Holding pressure	Mpa	316	250	203	230	186.2	147	223	176.4	143	
Screw rpm	rpm	350			350			300			
Plasticizing capacity (PS)	kg/h	62	89	113	89	113	172	97	157	200	
Carriage contact force	kN	24.5			24.5			29.4			
Injection unit		360			430(Standard)			560			
Injection speed	mm/s	200			200			160			
Injection rate	cc/s	161	203	251	203	251	318	201	254	314	
Injection unit		360h			430h			560h			
Injection speed	mm/s	350			350			300			
Injection rate	cc/s	281	356	440	356	440	556	377	477	589	
Clamping unit											
Clamping force	kN	2300									
Mould thickness (Min.-Max.)	mm	250-680									
Maximum daylight	mm	1230									
Opening stroke	mm	550									
Space between tie bars(HxV)	mm	610x610									
Platen Size(HxV)	mm	875x875									
Minimum mold size	mm	410x410									
Ejector stroke	mm	150									
Ejector force	KN	51.9									
Others											
Power capacity(KW/A)	kW/A	360:18.1/35.4 360h:31.4/60.7			430:23.6/48.5 430h:31.4/60.7			560:23.6/48.5 560h:31.4/60.7			
Heating Power	kW	11.32			12.52			17.35			
Machine dimension (LxWxH)	m	6.0x1.6x2.4			6.2x1.6x2.4			6.4x1.6x2.4			
Machine weight	ton	9.4			9.7			10.2			

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Machine Dimensions EL230



Platen Dimensions EL230

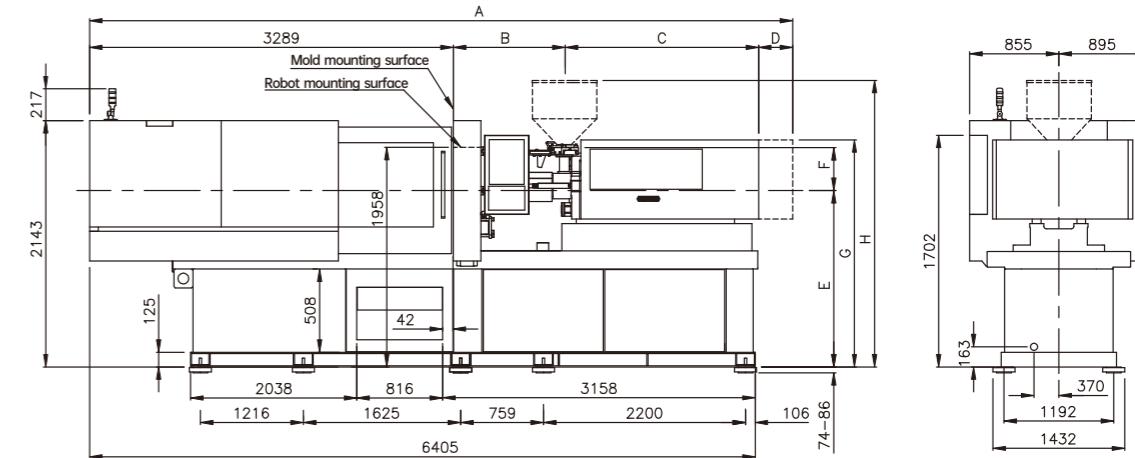


Specifications EL280

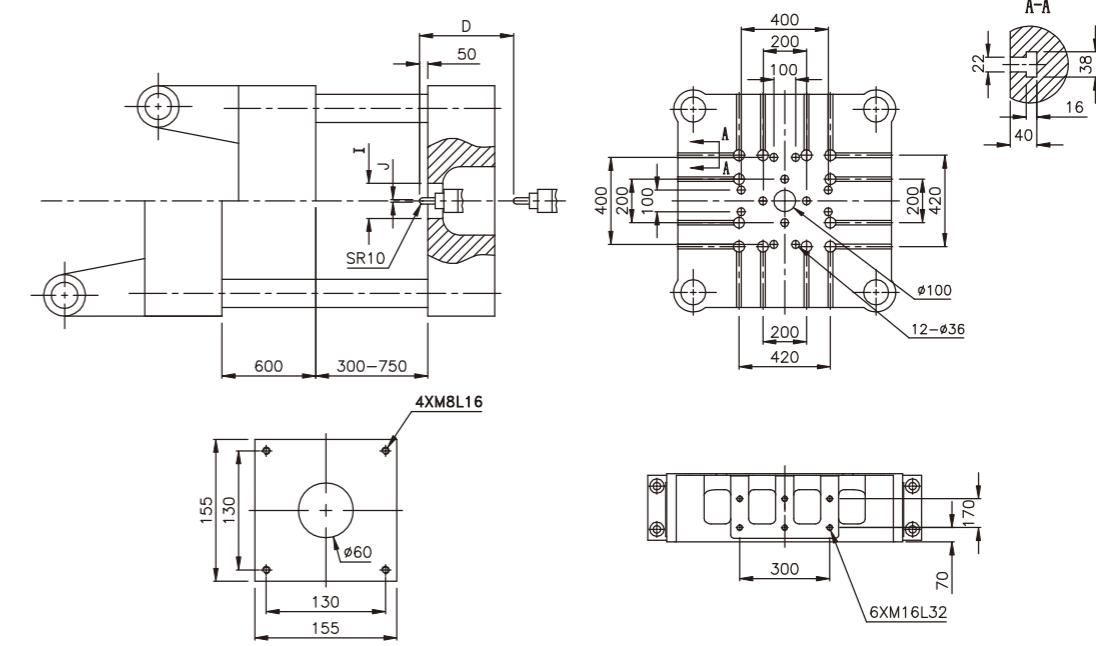
EL280											
Item	Unit	A	B	C	A	B	C	A	B	C	
Injection unit	g	147	182	230	205	260	321	393	475	565	
Injection weight(PS)	OZ	5.2	6.4	8.1	7.2	9.2	11.3	13.9	16.8	20	
Screw diameter	mm	36	40	45	40	45	50	50	55	60	
Screw L/D ratio		22	22	20	22	22	20	22	22	20	
Injection volume	cc	163	201	254	226	286	353	432	522	622	
Injection stroke	mm	160			180			220			
Injection pressure	Mpa	266	215.6	170	248	196	159	225	186	156	
Holding pressure	Mpa	230	186.2	147	223	176.4	143	198	164	138	
Screw rpm	rpm	350			300			300			
Plasticizing capacity (PS)	kg/h	89	113	172	97	157	200	200	227	242	
Carriage contact force	kN	24.5			29.4			39			
Injection unit		430			560(Standard)			970			
Injection speed	mm/s	200			160			160			
Injection rate	cc/s	203	251	318	201	254	314	314	380	452	
Injection unit		430h			560h			970h			
Injection speed	mm/s	350			300			300			
Injection rate	cc/s	356	440	556	377	477	589	589	712	848	
Clamping unit											
Clamping force	kN	2800									
Mould thickness (Min.-Max.)	mm	300-750									
Maximum daylight	mm	1350									
Opening stroke	mm	600									
Space between tie bars(HxV)	mm	730x730									
Platen Size(HxV)	mm	980x980									
Minimum mold size	mm	490x490									
Ejector stroke	mm	150									
Ejector force	KN	60									
Others											
Power capacity(KW/A)	kW/A	430:23.6/48.5 430h:31.4/60.7			560:23.6/48.5 560h:31.4/60.7			970:31.4/60.7 970h:45.3/73.3			
Heating Power	kW	12.52			17.35			22.98			
Machine dimension (LxWxH)	m	6.3x1.8x2.5			6.6x1.8x2.5			7.0x1.8x2.5			
Machine weight	ton	12.3			12.8			13.0			

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Machine Dimensions EL280



Platen Dimensions EL280

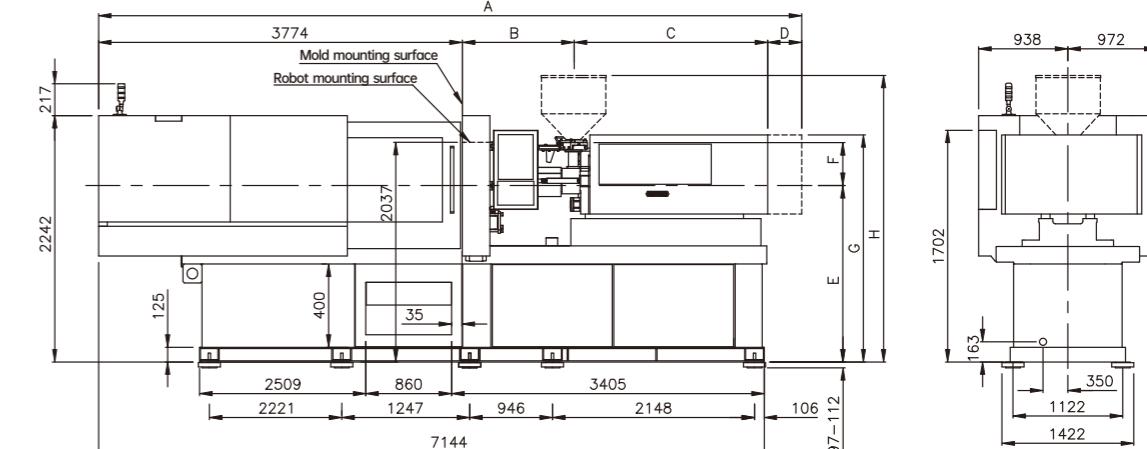


Specifications EL350

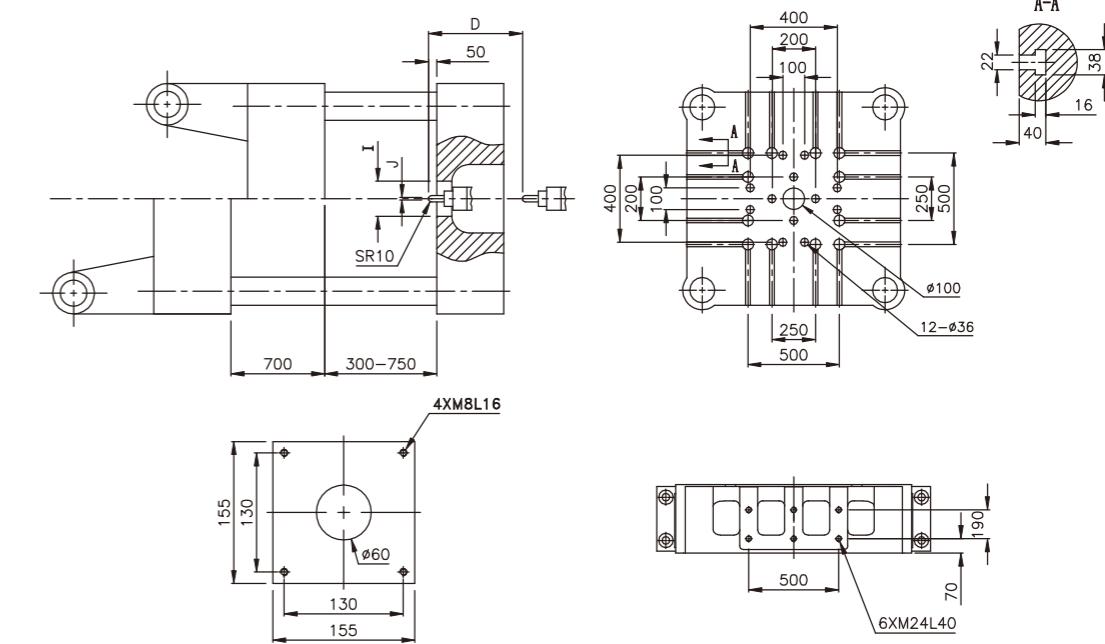
Item		EL350					
Injection unit	Unit	A	B	C	A	B	C
Injection weight(PS)	g	205	260	321	393	475	565
	OZ	7.2	9.2	11.3	13.9	16.8	20
Screw diameter	mm	40	45	50	50	55	60
Screw L/D ratio		22	22	20	22	22	20
Injection volume	cc	226	286	353	432	522	622
Injection stroke	mm	180			220		
Injection pressure	Mpa	248	196	159	225	186	156
Holding pressure	Mpa	223	176.4	143	198	164	138
Screw rpm	rpm	300			300		
Plasticizing capacity (PS)	kg/h	97	157	200	200	227	242
Carriage contact force	kN	29.4			39		
Injection unit		560			970(Standard)		
Injection speed	mm/s	160			160		
Injection rate	cc/s	201	254	314	314	380	452
Injection unit		560h			970h		
Injection speed	mm/s	300			300		
Injection rate	cc/s	377	477	589	589	712	848
Clamping unit							
Clamping force	kN	3500					
Mould thickness (Min.-Max.)	mm	300-750					
Maximum daylight	mm	1450					
Opening stroke	mm	700					
Space between tie bars(HxV)	mm	810x810					
Platen Size(HxV)	mm	1080x1080					
Minimum mold size	mm	540x540					
Ejector stroke	mm	160					
Ejector force	KN	60					
Others							
Power capacity(KW/A)	kW/A	560:23.6/48.5		970:31.4/60.7		560h:31.4/60.7	
Heating Power	kW	17.35		22.98			
Machine dimension (LxWxH)	m	7.2x2.0x2.6		7.4x2.0x2.6			
Machine weight	ton	16.8		17			

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Machine Dimensions EL350



Platen Dimensions EL350



STANDARD FEATURES

Injection unit

- Hard chrome plating screw assembly
- Injection/melting motor stroke control
- Double carriage linear guide sliding mechanism
- Sliding hopper base
- Barrel double layers protective cover
- Nozzle safety cover
- Protective cover for injection unit
- Injection pressure sensor
- Digital back pressure control for melting
- Screw revolution display function
- Material feeding throat temperature display
- Ceramic heating system

Clamping unit

- Toggle clamping structure
- Gear type electric drive mold height adjustment
- Precision encoder for clamping/ejector stroke control
- Grease lubrication system
- Ejector control with electric setting
- Screw thread mounting hole platen (EL100-EL230)
- T-slot platen (EL280 or above)
- Electrical and mechanical safety interlock
- Robot mounting holes
- Ejector parallel with mold opening
- Plasticizing parallel with mold opening
- Mold protection
- Repeatedly clamping function
- Inside mold ejector function
- Repeatedly ejection function

Control unit

- 15" touch screen control panel
- Emergency stop button (operation&non-operation side)
- Molding conditional memory function
- Maintenance alarm
- Production monitor function
- Quality monitoring function
- Heating control by solid state relay
- Suck back function
- Auto-purge function
- Screw cold start protection
- Resin anti-carbonization function
- Barrel insulated function
- Complied with CE Machinery Directive
- Movement cycle display function
- I/O position free change function
- Alarm recording
- Operation recording
- Curve display for injection or material storage
- Curve display for mold opening / clamping & ejection
- Molding cycle Gantt chart
- Parameters fast setting function
- Nozzle/needle valve interface
- Sequential injection interface
- Air blast interface (6sets)
- Robot customized function

Others

- Tool with tool box
- Product slide
- Mold mounting clamp
- Waterproof socket
- Water drain (5-in-5-out with Φ12 fast joint)
- Three-color alarm lamp
- Lighting socket one set
- OPC-UA industry 4.0 interface

OPTIONAL FEATURES

Injection unit

- Bi-metallic screw and barrel set
- Extended nozzle
- Air shut-off nozzle (needle valve type)
- R angle customized for nozzle head
- Stainless steel
- Standard hopper

Clamping unit

- Air blast device
- Special mold fange(position ring)
- Special core pulling function
- Core pulling device
- Special platen design (T-slot/mounting holes)
- Clamping close-loop control

Control unit

- Extra lighting socket
- LK NET
- Extra waterproof power socket
- Euromap 67 robot control device
- Hot runner control internal device
- Mold temperature display and control function

Others

- Extra water drain
- Detecting device for product slide
- Water distributor for mold cooling
- External transformer
- Energy saving infrared heating device
- Electrical interface for detecting cavity pressure