

EKH Series Hydraulic Servo Energy Saving Injection Moulding Machine



The Passionate Pursuit of Perfection

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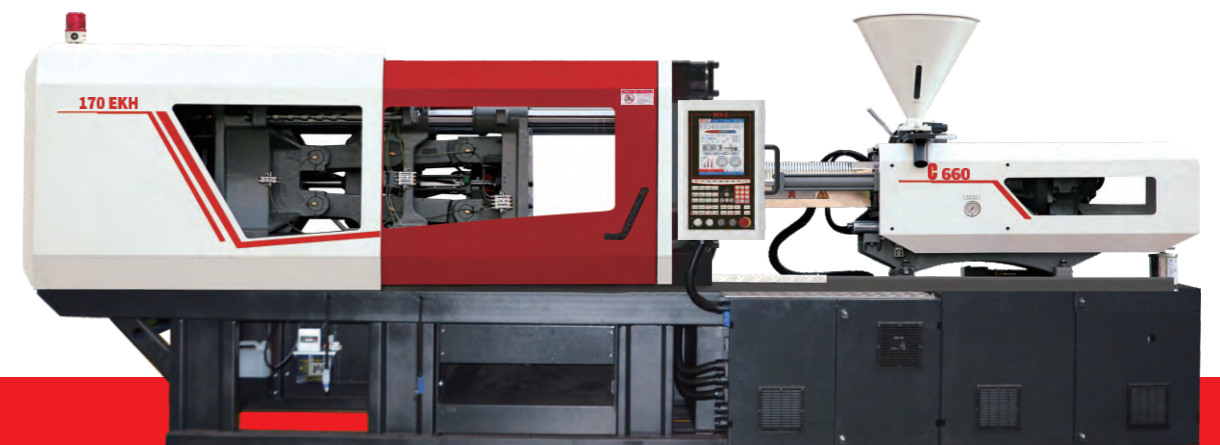
ADD: No.99 Weisan Road, Xiaogang, Ningbo, China

P.C: 315821

TEL: +86-574-86188007

FAX: +86-574-86188008

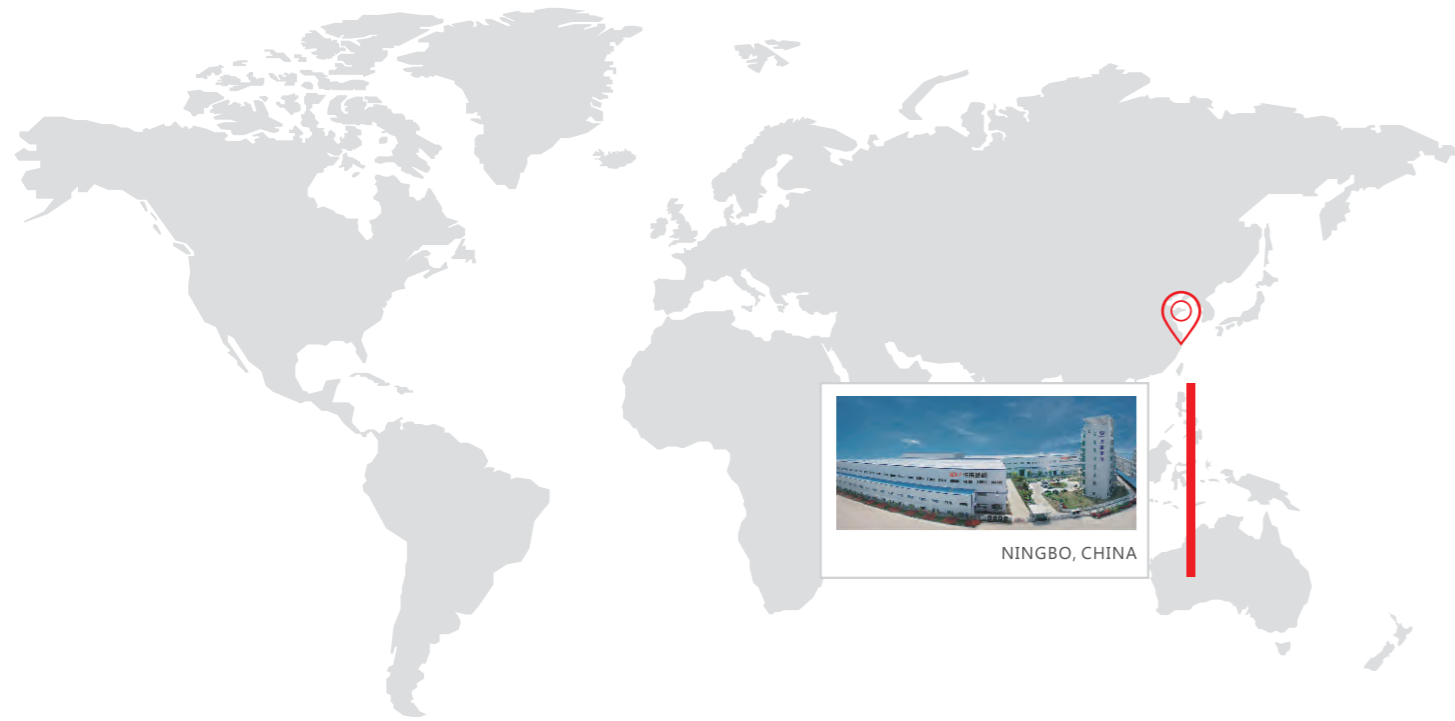
E-mail: bole-sales@bole-machinery.com



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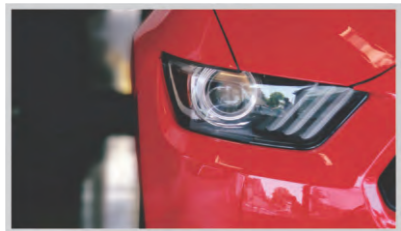
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ANY DIFFERENCE SPECIFICATION FROM OLD VERSION SHOULD BE SUBLICT TO THIS VERSION.





Central Clamping Toggle Invention Patent in China

(Patent No.: ZL2011 10250342.5)



Automobile industry



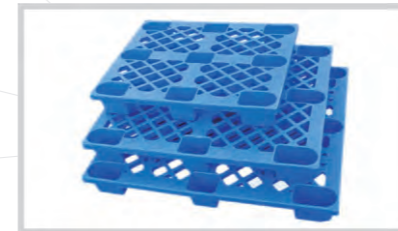
Commodity industry



3C Electronics

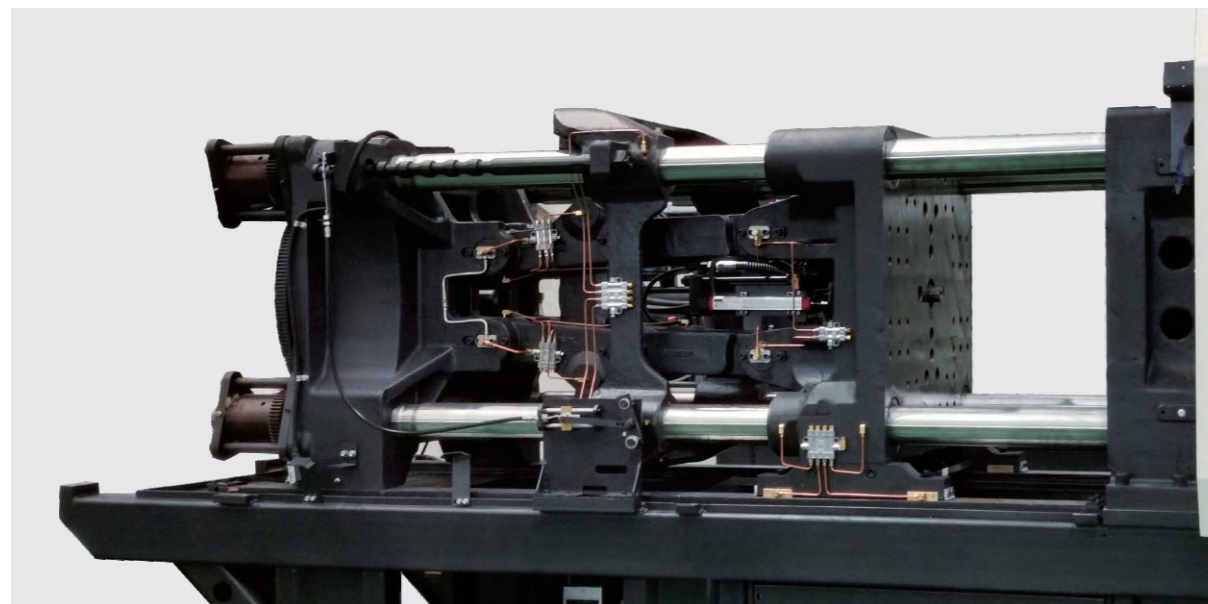
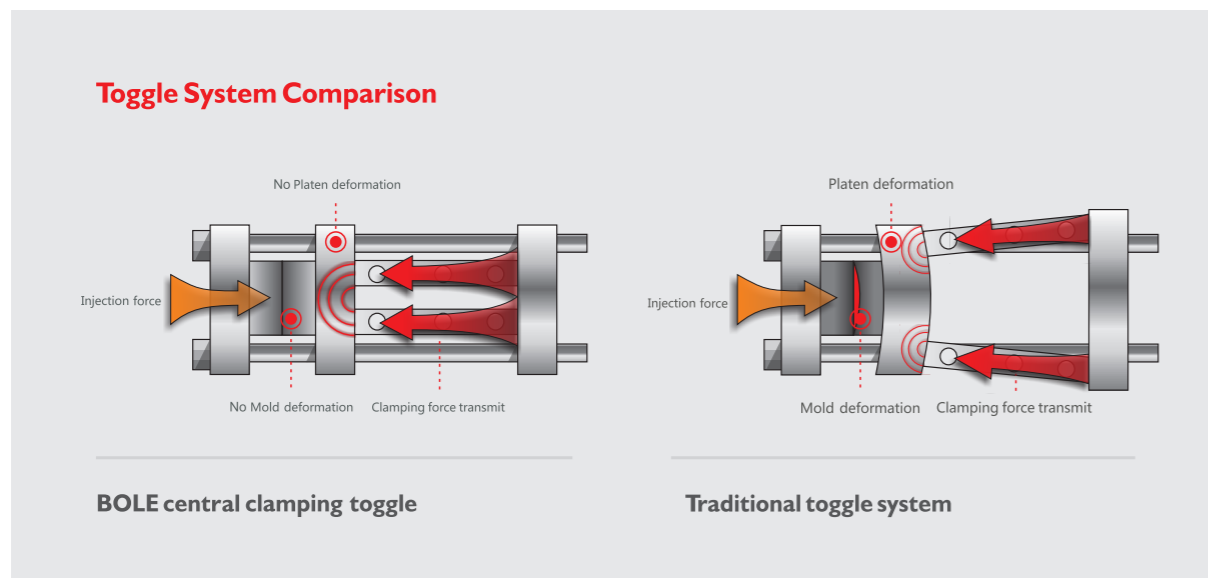


Home appliance



Logistics

Central Clamping Toggle, Invention Patent in China



01 High utilization of clamping force

After sample survey, clamping force efficiency of BOLE central clamping toggle design can reach 100%, Clamping force efficiency of traditional edge clamping force only can reach 80-85%.

02 Material Saving

BOLE central clamping toggle design can save 2-5% material for 80% of customers mould (comparing to customer's moulds clamping toggle design).

**03 High accuracy
Less possibility of flash**

Repetitive positioning accuracy of mold opening&closing: ± 1 mm
Product weight repetitive accuracy: $\leq 0.5\%$
Less possibility of flash, and save flash trim process

04 Offer better protection for molds and platens

The latest design of clamping structure, averaged force and less distortion for mould platen. Precise low- pressure function for mould closing, proportional pressure control, iso-stress mould platen design, to extend mould life.

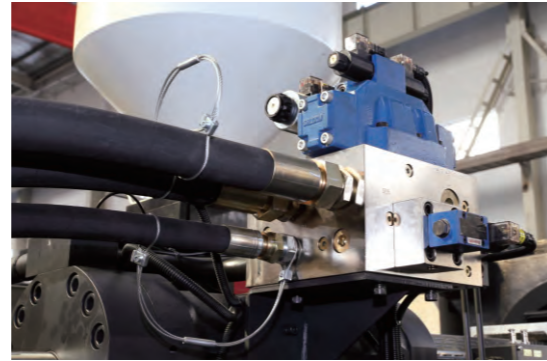
05 Bigger opening stroke

Central clamping structure can provide bigger opening stroke&ejection stroke than other brands' stroke, and can install larger moulds easier (Especially for deep cavity working condition.)

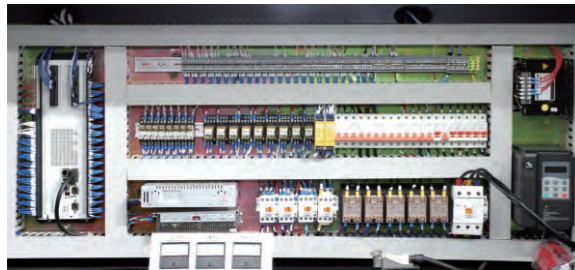


Large volume injection moulding machine

- Fully optimized hydraulic system, improve efficiency.
- Hydraulic parts from famous international manufacturers, ensure machine with reliable performance.



- Optimized electrical cabinet design, conform to GB, CE, UL, KCS or other safety standard.
- Electrical parts from famous international manufacturers, ensure machine with reliable performance.
- EST controller is standard.



- Plasticizing system originated from Germany design, and its efficiency improve 20% above the performance of other Chinese manufacturers. (Common plastic materials ABS, PS, PP, etc.)
- Meet Custom-made requirement for complex technical process and special plasticizing solutions.

Technical Data

DESCRIPTION	UNIT	BL70EKH/C170			BL100EKH/C340			BL140EKH/C460			BL170EKH/C660			BL230EKH/C910			BL280EKH/C1500		
International specification		170			340			460			660			910			1500		
Screw type		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw diameter	mm	25	28	32	32	36	40	36	40	45	40	45	50	45	50	55	55	60	65
L/D ratio		22.4	20.0	17.5	22.5	20.0	18.0	22.2	20.0	17.8	22.5	20.0	18.0	22.2	20.0	18.2	22.9	21.0	19.4
Theoretical injection capacity	cm ³	71	89	117	145	183	226	203	251	318	283	358	442	397	491	594	689	820	962
Shot weight (PS)	g	65	82	107	133	168	208	187	231	292	260	329	406	366	451	546	634	754	885
	oz	2.3	2.9	3.8	4.7	6.0	7.3	6.6	8.2	10.3	9.2	11.6	14.4	12.9	15.9	19.3	22.4	26.6	31.3
Max. injection rate into Air	cm ³	78	98	128	81	102	126	106	131	166	134	169	209	168	207	251	224	267	313
Max. injection rate into Air	g/s	71	89	117	73	93	115	97	120	151	122	154	190	153	189	228	204	243	285
Injection pressure	Mpa	246	196	150	239	189	153	230	186	147	235	185	150	230	186	154	219	184	157
Theoretical plasticizing speed	g/s (PS)	7	10	13	10	14	18	15	20	27	17	24	33	25	35	68	43	55	68
Injection stroke	mm	145			180			200			225			250			290		
Max. injection speed	mm/s	160			100			105			106			106			94		
Max. screw speed	r/min	331			221			240			215			221			210		
Sys. Pressure	Mpa	17.5			17.5			17.5			17.5			17.5			17.5		
Pump Motor	kW	8.9			8.9			13.4			16.4			20.5			26.7		
Heater power	kW	5.4			6.8			8.85			12.2			13.72			19.55		
Number of temp. control zones		3+1			3+1			3+1			3+1			4+1			4+1		
Clamping force	kN	700			1000			1400			1700			2300			2800		
Opening stroke	mm	320			360			420			480			530			580		
Space between tie bar	mm x mm	360x330			405x355			455x405			505x455			555x505			655x605		
Min. mould height	mm	105 (105)			160 (125)			180 (145)			200 (165)			220 (175)			250(205)		
Max. mould height	mm	305 (305)			430 (395)			500 (465)			530 (495)			570(525)			660(615)		
Max. Daylight	mm	625 (625)			790 (755)			920 (885)			1010 (975)			1100(1055)			1240(1195)		
Ejector stroke	mm	70			120			145			150			150			190		
Ejector force forward	kN	34			34			49			49			67			67		
Ejector force backward	kN	22			22			37			37			39			39		
Number of ejector bar	PCS	5			5			5			5			9			13		
Hopper capacity	kg	25			25			25			25			50			50		
Oil tank capacity	L	120			150			180			230			280			350		
Machine dimensions (L×W×H)	m x m x m	3.5x1.15x1.7			4.2x1.3x2.1			4.9x1.3x2.1			5.1x1.4x2.2			5.7x1.5x2.4			6.2x1.7x2.4		
Machine weight	Ton	2.4			3			3.7			5.1			6.3			8.2		

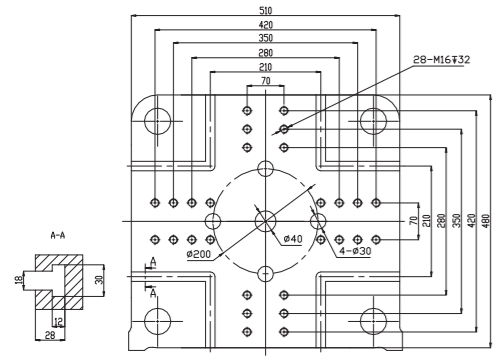
Technical Data

DESCRIPTION	UNIT	BL360EKH/C2200			BL450EKH/C3100			BL530EKH/C4000			BL600EKH/C4700			BL700EKH/C5800		
International specification		2200			3100			4000			4700			5800		
		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw type		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw diameter	mm	62	68	80	70	75	85	75	80	90	80	90	100	85	95	105
L/D ratio		23.0	21.0	17.9	22.5	21.0	18.5	22.4	21.0	18.7	23.6	21.0	18.9	23.5	21.0	19.0
Theoretical injection capacity	cm ³	1041	1252	1733	1462	1678	2155	1943	2211	2798	2286	2893	3572	2836	3542	4327
Shot weight (PS)	g	958	1152	1595	1345	1544	1983	1787	2034	2574	2103	2662	3286	2609	3259	3981
	oz	33.8	40.7	56.3	47.5	54.5	70.1	63.2	71.9	91.0	74.3	94.1	116.1	92.2	115.2	140.7
Max. injection rate into Air	cm ³	280	280	467	361	414	532	439	500	633	520	658	812	595	743	907
Max. injection rate into Air	g/s	255	255	425	328	377	484	400	455	576	473	599	739	541	676	826
Injection pressure	Mpa	219	182	131	212	185	144	209	184	145	206	163	132	206	165	135
Theoretical plasticizing speed	g/s (PS)	48	58	75	60	90	115	80	95	116	81	112	148	91	145	187
Injection stroke	mm	345			380			440			455			500		
Max. injection speed	mm/s	93			94			100			103			105		
Max. screw speed	r/min	175			164			158			153			150		
Sys. Pressure	Mpa	17.5			17.5			17.5			17.5			17.5		
Pump Motor	kW	40.9			50.7			40.9+16.4			50.7+16.4			40.9+40.9		
Heater power	kW	24.05			27.35			32			36.1			43		
Number of temp. control zones		4+1			4+1			4+1			5+1			5+1		
Clamping force	kN	3600			4500			5300			6000			7000		
Opening stroke	mm	660			750			850			900			970		
Space between tie bar	mm x mm	710×660			760×710			860×800			910×855			955×855		
Min. mould height	mm	270(225)			330(285)			330			380			400		
Max. mould height	mm	710(665)			780(735)			850			910			960		
Max. Daylight	mm	1370(1325)			1530(1485)			1700			1810			1930		
Ejector stroke	mm	190			210			210			220			260		
Ejector force forward	kN	123			123			123			123			166		
Ejector force backward	kN	82			82			82			82			117		
Number of ejector bar	PCS	13			13			13			21			21		
Hopper capacity	kg	50			50			100			100			100		
Oil tank capacity	L	420			420			630			750			850		
Machine dimensions (L×W×H)	m x m x m	6.9×1.8×2.4			7.3×1.8×2.5			8.2×2.1×2.1			8.8×2.2×2.75			9.7×2.27×2.8		
Machine weight	Ton	11.1			13.4			17			19.5			23		

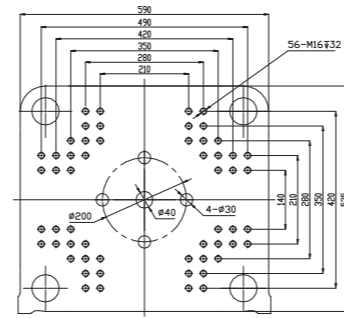
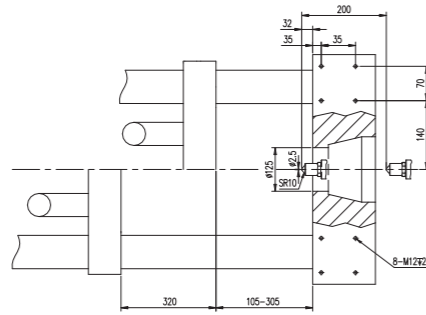
Technical Data

DESCRIPTION	UNIT	BL800EKH/C8600			BL900EKH/C8600			BL1000EKH/C10500			BL1200EKH/C10500			BL1400EKII/C13000			BL1600EKII/C16000		
International specification		8600			8600			10500			10500			13000			16000		
Screw type		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Screw diameter	mm	95	105	115	100	110	120	110	120	130	110	120	130	120	130	140	130	140	150
L/D ratio		23.2	21.0	19.2	23.1	21.0	19.3	22.9	21.0	19.4	22.9	21.0	19.4	22.8	21.0	19.5	22.6	21.0	19.6
Theoretical injection capacity	cm ³	3861	4717	5658	4278	5177	6161	5652	6726	7894	5652	6726	7894	7235	8491	9847	9021	10462	12011
Shot weight (PS)	g	3552	4339	5205	3936	4763	5668	5199	6188	7262	5199	6188	7262	6656	7811	9059	8300	9625	11050
	oz	125.5	153.3	183.9	139.1	168.3	200.3	183.7	287.7	256.6	183.7	218.7	256.6	235.2	276.0	320.1	293.3	340.1	390.4
Max. injection rate into Air	cm ³	617	754	904	684	827	984	827	984	1155	827	984	1155	1016	1193	1384	1193	1383	1588
Max. injection rate into Air	g/s	561	686	823	622	753	896	753	896	1051	753	896	1051	925	1086	1259	1086	1259	1445
Injection pressure	Mpa	223	183	152	202	167	140	185	156	133	185	156	133	181	154	133	180	155	135
Theoretical plasticizing speed	g/s (PS)	116	151	185	116	151	185	140	170	200	140	170	200	144	176	218	144	176	218
Injection stroke	mm	545			545			595			595			640			680		
Max. injection speed	mm/s	87			87			87			87			90			90		
Max. screw speed	r/min	152			152			122			122			117			108		
Sys. Pressure	Mpa	17.5			17.5			17.5			17.5			17.5			17.5		
Pump Motor	kW	40.9+50.7			40.9+50.7			50.7+50.7			50.7+50.7			40.9+40.9+40.9			50.7+50.7+40.9		
Heater power	kW	50.1			53			56.2			56.2			74.6			79.7		
Number of temp. control zones		5+1			5+1			6+1			6+1			6+1			6+1		
Clamping force	kN	8000			9000			10000			12000			14000			16000		
Opening stroke	mm	1050			1120			1150			1320			1450			1550		
Space between tie bar	mm x mm	1055×955			1110×1010			1160×1060			1260×1120			1420×1220			1520×1320		
Min. mould height	mm	450			450			480			500			580			680		
Max. mould height	mm	1000			1100			1160			1200			1300			1450		
Max. Daylight	mm	2050			2220			2310			2520			2750			3000		
Ejector stroke	mm	270			300			300			350			350			400		
Ejector force forward	kN	166			232			248			248			248			363		
Ejector force backward	kN	117			132			165			165			165			280		
Number of ejector bar	PCS	21			21			21			21			29			29		
Hopper capacity	kg	100			100			100			200			200			200		
Oil tank capacity	L	1000			1200			1200			1400			1650			2000		
Machine dimensions (L×W×H)	m x m x m	10.5×2.5×2.85			10.8×2.4×2.7			10.9×2.8×3.4			11.3×3.1×3.9			12.3×3.3×4.15			13.5×3.56×4.3		
Machine weight	Ton	28			35			40			50			65			85		

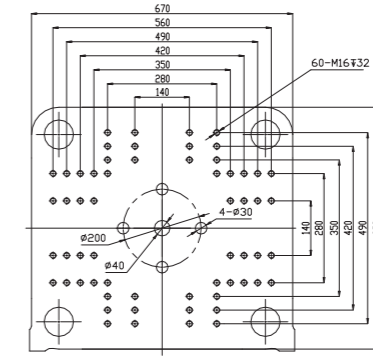
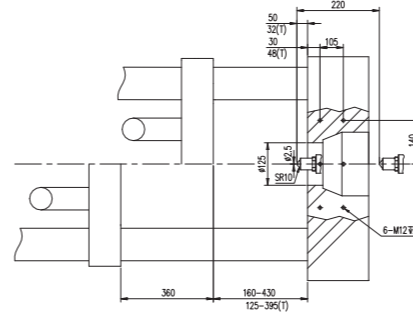
Platen Dimensions



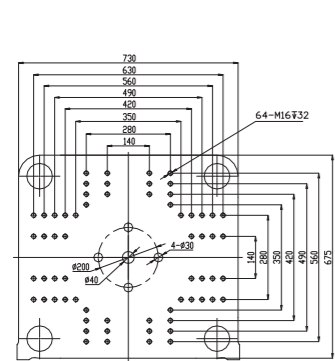
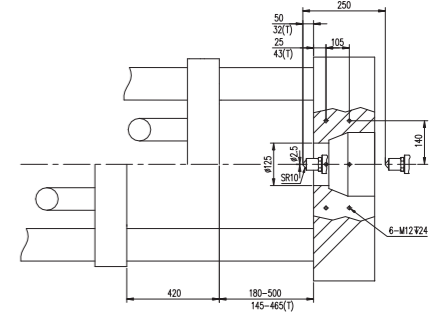
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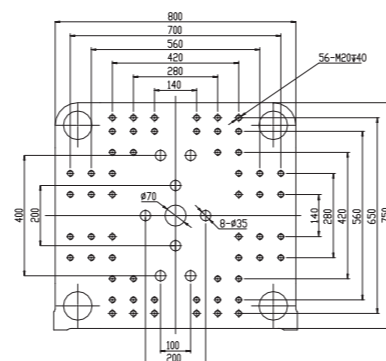
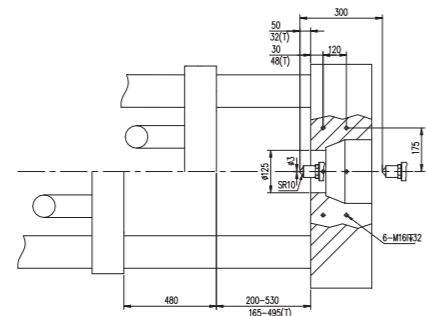
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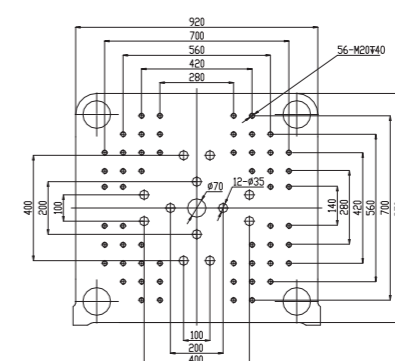
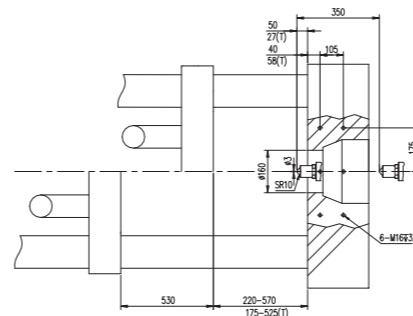
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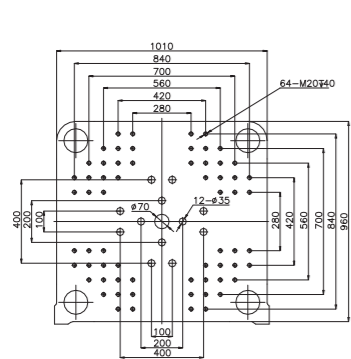
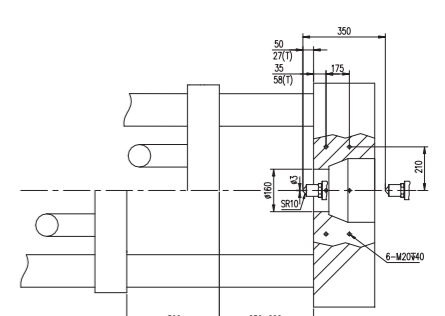
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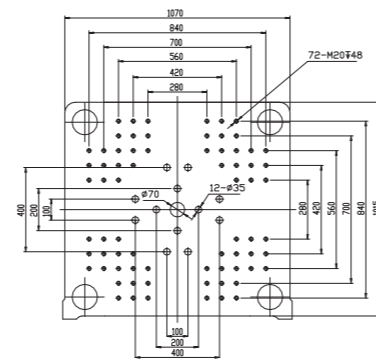
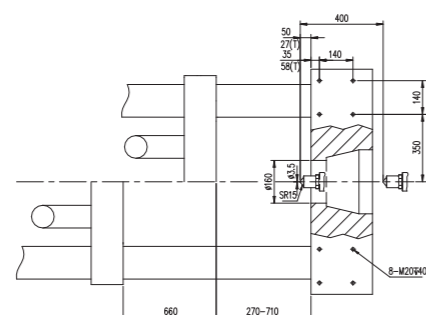
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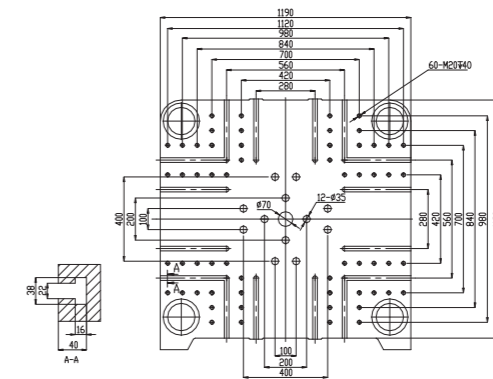
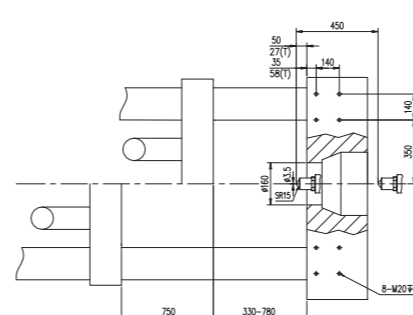
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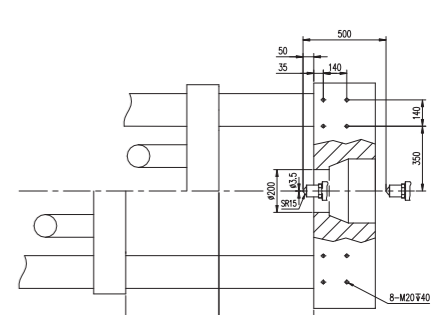
BL360EKH



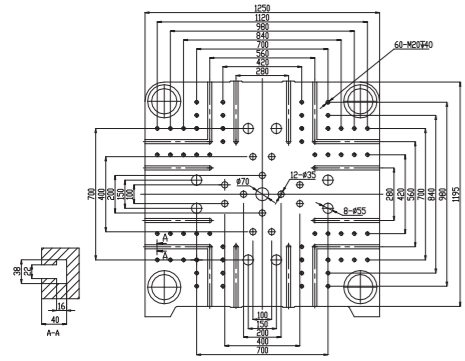
BL450EKH



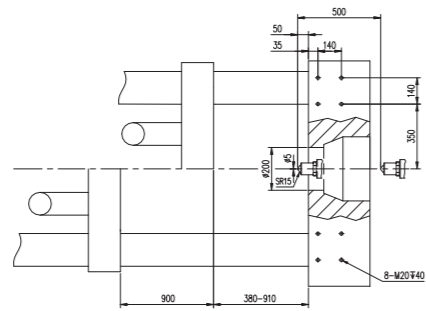
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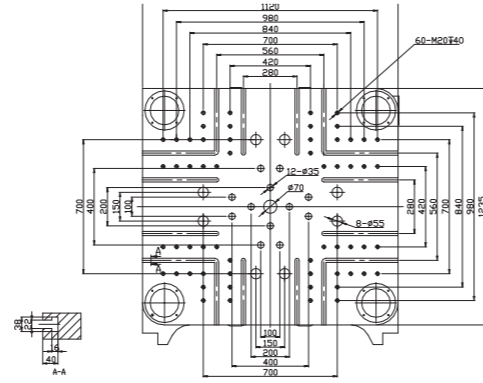
Platen Dimensions & Machine Dimensions



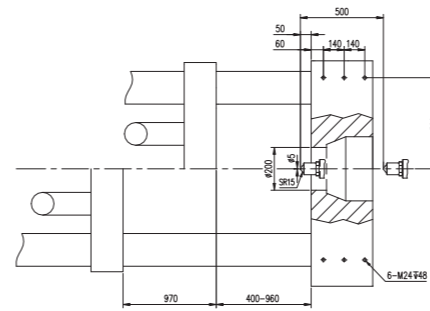
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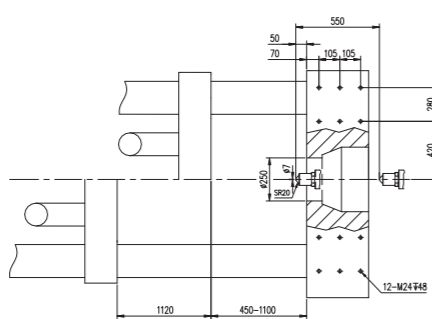
BL700EKH



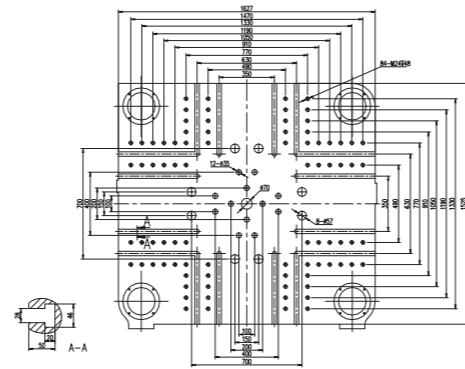
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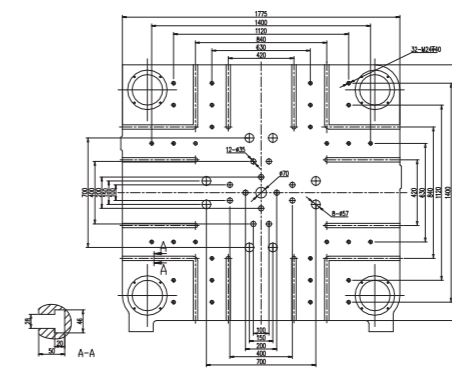
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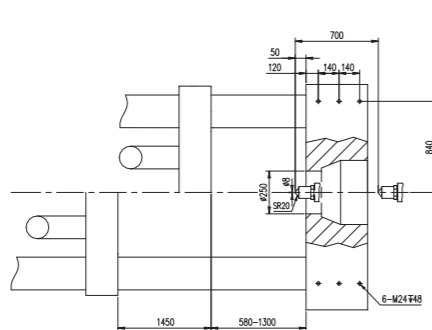
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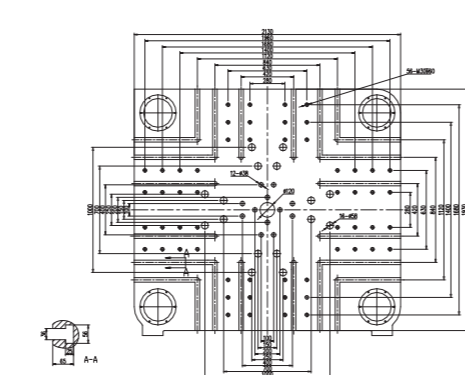
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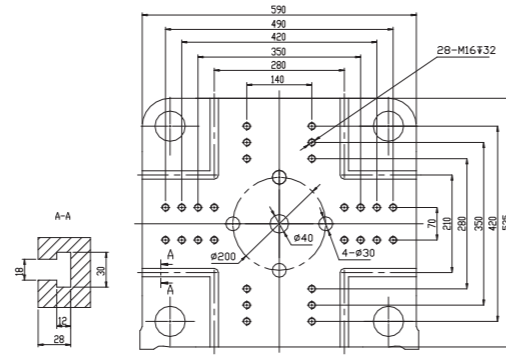
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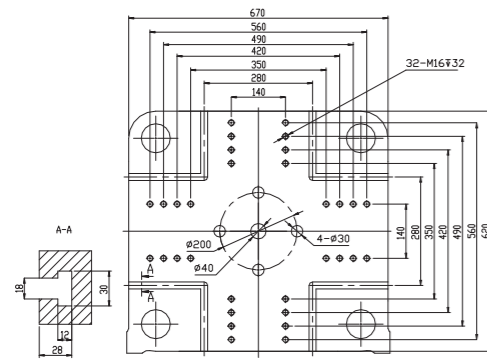
BL1600EKH



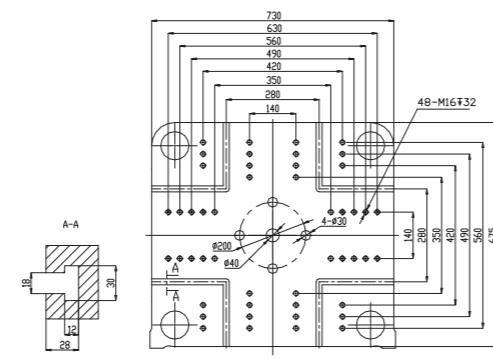
100-450EKH Platen Dimensions Optional



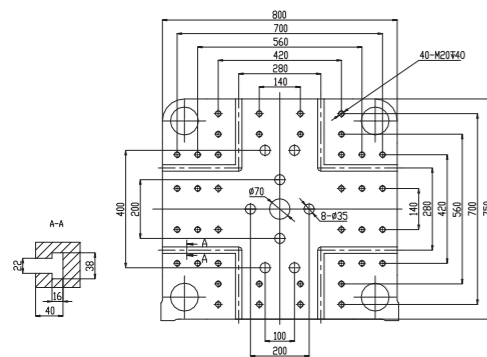
BL100EKH



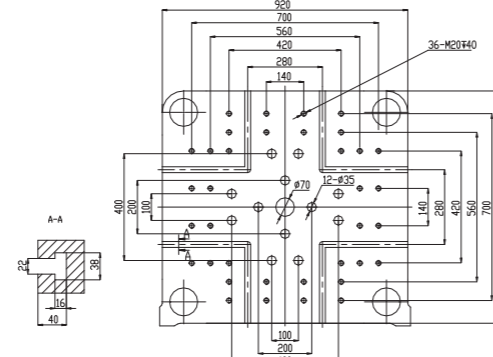
BL140EKH



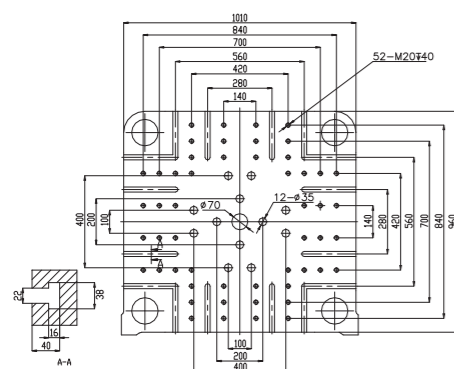
BL170EKH



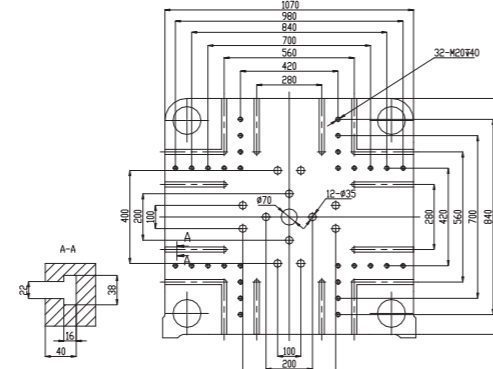
BL230EKH



BL280EKH



BL360EKH



BL450EKH

Standard Configuration Menu of BL EKH series

Clamping Unit

- >> Patent of the five point outside mould clamping mechanism with big opening stroke
- >> Wide platen design, can adapt to a larger size mould
- >> Low-pressure mould protect with high precision
- >> Hydraulic motor drive gear automatic mould high adjust mode
- >> Adjustable moving platen support structure, reduce the tie bar deformation
- >> Mechanical, electrical, hydraulic two/three safety protection devices
- >> Clamping part is equipped with mold pedal (BL1200EKII above)
- >> Automatic safety door control (BL750EKII above)
- >> Open and close mold, ejection movement with high precision transducer control
- >> A variety of optional ejection patterns, pressure, speed setting respectively
- >> Centrel ejector on 70-850EKII, Euro standard ejector on 400EKII above
- >> Five period of opening and closing mode speed and pressure can be adjusted
- >> Automatic detector volumetric centralized lubrication system

Injection Unit

- >> High quality nitride steel efficient plasticizing screw barrel
- >> Time delay setting for cold start on screw, timing heating, automatic heat preservation function
- >> High quality high torque hydraulic motor for plasticizing
- >> Automatic detection of the nozzle choke and the raw materials overfeeding
- >> Twin injection cylinder design
- >> High rigid beam supporting structure
- >> The trimming device of the nozzle
- >> Injection stroke control with precise transducer
- >> Six stages of injection, five stages of holding pressure, five stages of charging, pressure/speed can be adjusted
- >> Screw rotation speed detection
- >> "Auto Purge" function for cleaning the barrel function
- >> Proportional back pressure
- >> 1000EKII above with central lubrication for inject unit
- >> 1200EKII above with feeding platform
- >> Attached to the extended nozzle(70-750EKII:50mm longer,850-4000EKII:100mm longer)

Hydraulic Unit

- >> Servo energy-saving system
- >> Oil temperature deviation automatic alarm
- >> Motor overload protection function
- >> 520EKII above with self sealing oil suction filters
- >> Core pulling device
- >> Quick insert mold cooling water(φ 10)

Electrical Control Unit

- >> Process parameters of presetting function
- >> Have value reference and online operating instructions auxiliary function
- >> Simple robot interface
- >> Parameter data protection lock
- >> PID automatic temperature control, realizes the cylinder temperature self-correcting
- >> USB interface, easy backup panel application update and mould parameters save
- >> Have stop memory function, random can store 200 sets mould data
- >> 100 groups of alarm and 100 groups of modification record
- >> Multi-level password settings to prevent the error revising / changing unintentionally and the user could be freely authorized the qualifier to access the related password level as request.
- >> Input and output point inspection and I/O online simulation function, and can confirm the machine status quickly
- >> Multiple sets of backup sockets
- >> 70-440EKII with the hopper and drop out magic eye
- >> Emergency stop front and back door, scram protection of mould area on 1200-1600EKII
- >> Alarm lamp with buzzer optional

Others

- >> Standard machine color of Bole
- >> Adjustable level pad
- >> Spare parts tool box
- >> Common tools
- >> Vulnerable parts

Optional Configuration Menu of BL EKH series

Clamping Unit

- >> Bigger mould height
- >> Bigger eject force
- >> Bigger eject stroke
- >> Wider machine cover& door
- >> With mould open mechanical limit
- >> With mould heat shield plate
- >> Non-standard mould screw holes(Japanese standard, SPI, ect.)
- >> T slot platen(70-440EKII)
- >> Mould hanging formwork
- >> Hydraulic/electric rotating demould device (twisted tooth device)

Injection Unit

- >> Increase/decrease of shot volume
- >> Bigger / smaller plasticizing motor
- >> Chrome plating/bimetallic screw components
- >> PVC,PET,PC,PA,bakelite,etc all kinds of special plasticizing unit
- >> Pneumatic/hydraulic/spring self-locking nozzle
- >> Accumulator inject(ACC)
- >> Gas-assisted/wit interface
- >> Sequential injection device
- >> Differential high-speed injection device
- >> Hot runner control built in

Hydraulic Unit

- >> Increase/decrease power system
- >> Increase the oil cooler
- >> The hydraulic/pneumatic core-pulling device
- >> Pneumatic ejection device
- >> Simultaneous ejection/core-pulling device
- >> Simultaneous plasticizing
- >> The oil temperature automatic control function
- >> The oil temperature preheating function
- >> Equipped with hydraulic/pneumatic core-pulling device
- >> Install bypass filter

Optional Auxiliary

- >> Robot
- >> Hopper dryer
- >> Dehumidifier
- >> Crusher
- >> Mould temperature controller
- >> Magnetic shelf
- >> Auto-loader
- >> Mould cooling flow meter glass tube

Electrical Control Unit

- >> The (Euro map) robot interface
- >> IML interface
- >> Change the voltage and frequency
- >> The change of control system
- >> Add working lamp
- >> Hot runner controllers