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BOLE RULER



BOLE 伯乐塑机
Injection Moulding Machine

EKII Series
*Servo energy saving injection
moulding machine*

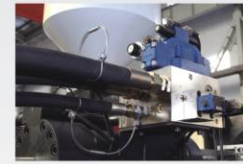
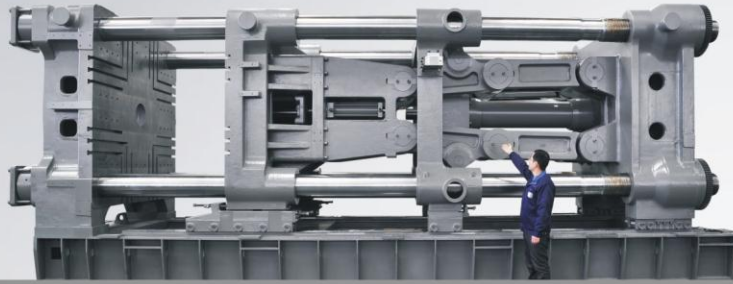


NINGBO BOLE INTELLIGENT EQUIPMENT CO.,LTD.



EKII series center clamping structure won the national invention patent

(Patent No : ZL2011 10250342.5)

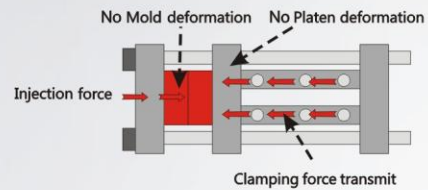


- Overall optimized hydraulic system, efficiency promote 10% more than the last generation.
- Use international famous hydraulic component, guarantee quality stability.
- Conform to GB, CE, UL and other safety standard.

- Optimized electrical layout, conform to CE standard.
- Use international famous electrical component, guarantee quality stability.
- KEBA, BECKHOFF highend controller are optional.

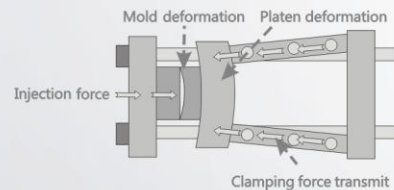
- World's leading performance plasticizing component with European design.
- Special screw for PC, PMMA, POM and others application are optional.
- Can be customized plasticizing component for your special application.

Clamping comparasion



BOLE centre clamping structure

- Clamping force utilization is 100%, which 10%-20% higher than traditional structure
- Less flash
- Standard thickness, save material 2-5%
- Protect mould, platen and tie-bar
- Opening stroke is longer than 10-20%



Traditional structure

- Clamping force waste, availability only 80-85%
- Movable platen will be deformed cause flash, waste both manpower and material



Big Bigger one size than other brand machines

Precision Products higher precision

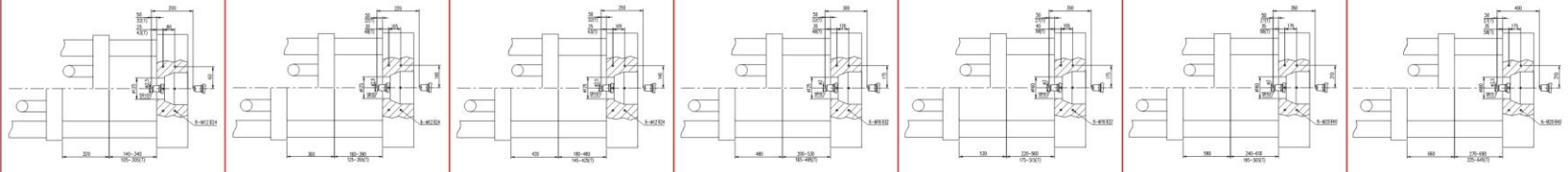
Save Help customer save 2-5% material

After sample survey, compared to traditional inner toggle machine, center clamping structure can help 80% of the mould save 2-5% material

BL70EKII-BL350EKII Series Technical Parameters

DESCRIPTION	UNIT	BL70EKII/C160			BL100EKII/C320			BL140EKII/C430			BL170EKII/C610			BL230EKII/C840			BL280EKII/C1400			BL350EKII/C1800		
Injection Unit																						
Injection capacity		160			320			430			610			840			1400			1800		
Screw type		A	B	C	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	60	65	70
Screw ratio		23	20	18	23	20	18	23	20	18	23	20	18	22.5	20	18	23	21	19.5	23	21	19.5
Theoretical injection capacity	cm ³	71	89	117	145	183	226	204	251	318	283	358	442	398	491	594	689	820	962	905	1062	1232
Shot weight	g	65	82	107	133	169	208	187	231	293	260	329	406	366	452	546	634	754	885	832	977	1133
(PS)	oz	2.3	2.9	3.8	4.7	5.9	7.3	6.6	8.2	10.3	9.2	11.6	14.3	12.9	15.9	19.3	22.4	26.6	31.2	29.4	34.5	40.0
Injection rate into Air	cm ³ /s	62	78	102	80	102	126	106	131	166	131	165	204	167	207	250	224	267	313	282	331	384
Injection pressure	MPa	225	180	138	220	173	140	211	171	135	215	170	138	211	171	141	200	168	143	200	170	146
Max. injection speed	mm/s	126			100			104			104			105			94			100		
Max. Screw speed	r/min	263			220			240			210			220			210			175		
Clamping Unit																						
Clamping force	KN	700			1000			1400			1700			2300			2800			3500		
Opening stroke	mm	320			360			420			480			530			580			660		
Space between tie bar	mm×mm	360×330			410×360			460×410			510×460			560×510			660×610			710×660		
Min. mould height(T-slot)	mm	140(105)			160(125)			180(145)			200(165)			220(175)			240(195)			270(225)		
Max. mould height(T-slot)	mm	340(305)			390(355)			460(425)			530(495)			560(515)			610(565)			690(645)		
Max. distance Platen(T-slot)	mm	660(625)			750(715)			880(845)			1010(975)			1090(1045)			1190(1145)			1350(1305)		
Ejector stroke	mm	70			100			130			150			150			190			190		
Ejector force forward	kN	31			31			45			45			62			62			62		
Ejector force back	kN	20			20			34			34			36			36			36		
Number of ejector bar	PC	5			5			5			5			9			13			13		
Power electric																						
Sys. Pressure	MPa	16			16			16			16			16			16			16		
Pump Motor	kW	9			13			17			21			25			30			37		
Heater power	kW	5.4			6.8			8.85			12.2			12.92			18.4			24.05		
Number of temp. Control zones		3+1			3+1			3+1			3+1			4+1			4+1			4+1		
Other																						
Hoper capacity	kg	25			25			25			25			50			50			50		
Oil tank capacity	L	120			150			180			230			280			350			480		
Machine dimensions (L×W×H)	m×m×m	3.5×1.15×1.7			3.8×1.3×1.85			4.35×1.35×1.85			4.97×1.38×1.88			5.5×1.45×2.15			6.1×1.48×2.2			6.75×1.68×2.25		
Machine weight	Ton	2.4			3			3.5			4.8			6.0			8.0			10.8		

Platen Side Size



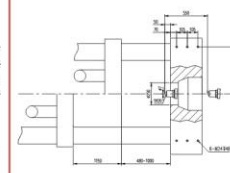
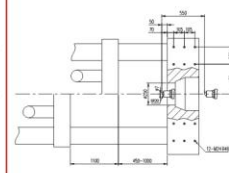
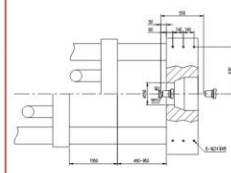
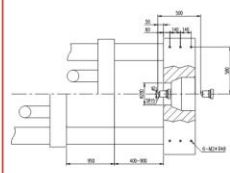
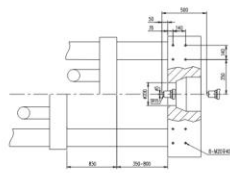
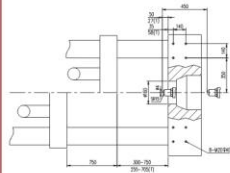
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BL400EKII-BL1000EKII Series Technical Parameters

DESCRIPTION	UNIT	BL440EKII/C2400	BL520EKII/C3500	BL520EK/C4300	BL650EKII/C4300	BL750EKII/C5400	BL850EKII/C7200	BL1000EKII/C7200	
Injection Unit									
Injection capacity		2400		3500		4300		4300	
Screw type		A B C D	A B C D	A B C D	A B C D	A B C D	A B C D	A B C D	
Screw diameter	mm	65 70 75 80	70 80 85 90	80 85 90 100	80 85 90 100	85 90 100 110	90 100 110 120	90 100 110 120	
Screw ratio		23 21 20 18.5	24 21 20 19	22.5 21 20 18	22.5 21 20 18	22 21 19 17	23 21 19 17.5	23 21 19 17.5	
Theoretical injection capacity	cm ³	1211 1405 1613 1835	1597 2086 2355 2640	2287 2582 2895 3574	2287 2582 2895 3574	2837 3181 3927 4752	3467 4280 5179 6164	3467 4280 5179 6164	
Shot weight	g	1114 1292 1484 1688	1469 1919 2167 2429	2104 2375 2663 3288	2104 2375 2663 3288	2610 2926 3613 4372	3190 3938 4765 5671	3190 3938 4765 5671	
(PS)	oz	39.3 45.6 52.3 59.5	51.8 67.7 76.4 85.7	74.2 83.8 93.9 116.0	74.2 83.8 93.9 116.0	92.1 103.2 127.4 154.2	112.5 138.9 168.1 200.0	112.5 138.9 168.1 200.0	
Injection rate into Air	cm ³ /s	355 412 473 538	357 467 527 591	484 546 612 756	484 546 612 756	595 667 823 996	608 750 908 1080	608 750 908 1080	
Injection pressure	MPa	197 170 148 130	220 168 149 133	189 167 149 121	189 167 149 121	188 168 136 113	208 168 139 117	208 168 139 117	
Max. injection speed	mm/s	107		93		96		96	
Max. Screw speed	r/min	188		163		137		137	
Clamping Unit									
Clamping force	KN	4400		5200		6500		7500	
Opening stroke	mm	750		850		950		1050	
Space between tie bar	mm×mm	760×710		860×800		960×860		1060×960	
Min. mould height(T-slot)	mm	300(255)		350		400		450	
Max. mould height(T-slot)	mm	750(705)		800		900		950	
Max. distance Platen(T-slot)	mm	1500(1455)		1650		1850		2000	
Ejector stroke	mm	210		210		240		270	
Ejector force forward	kN	113		113		152		152	
Ejector force back	kN	75		75		107		107	
Number of ejector bar	PC	13		13		21		21	
Power electric									
Sys. Pressure	MPa	16		16		16		16	
Pump Motor	kW	47		17+37		25+37		25+37	
Heater power	kW	27.35		32.15		36.1		36.1	
Number of temp. Control zones		4+1		5+1		5+1		5+1	
Other									
Hoper capacity	kg	50		100		100		100	
Oil tank capacity	L	600		750		850		850	
Machine dimensions (L×W×H)	m×m×m	7.4×1.76×2.3		8.1×2.2×2.6		8.5×2.22×2.7		8.8×2.22×2.7	
Machine weight	Ton	13		17		19		23	

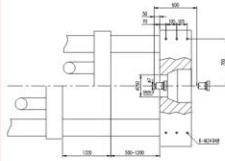
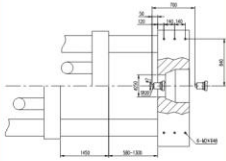
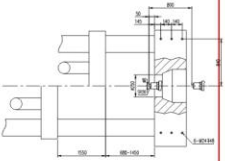
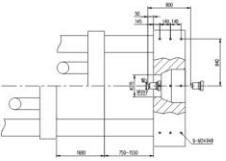
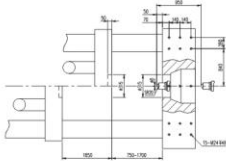
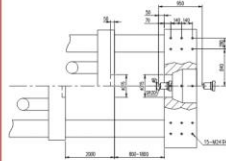
Platen Side Size



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BL1200EKII-BL2500EKII Series Technical Parameters

DESCRIPTION	UNIT	BL1200EKII/C9600	BL1400EKII/C12000	BL1600EKII/C15000	BL1850EKII/C18500	BL2200EKII/C23000	BL2200EK/C28000	BL2500EK/C28000																									
Injection Unit																																	
Injection capacity		9600				12000				15000				18500				23000				28000				28000							
Screw type		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Screw diameter	mm	100	110	120	130	110	120	130	140	120	130	140	150	130	140	150	160	140	150	160	170	150	160	170	180	150	160	170	180				
Screw ratio		23	21	19	18	23	21	19.5	18	23	21	19.5	18	23	21	20	18.5	24	22	21	19	23	22	21	20	23	22	21	20				
Theoretical injection capacity	cm ³	4673	5654	6729	7898	6082	7238	8495	9852	7691	9026	10468	12017	9623	11161	12812	14577	12084	13872	15783	17818	14756	16789	18953	21248	14756	16789	18953	21248				
Shot weight	g	4299	5202	6191	7266	5596	6659	7815	9064	7075	8304	9630	11055	8853	10268	11787	13411	11117	12762	14521	16393	13575	15446	17437	19548	13575	15446	17437	19548				
(PS)	oz	151.6	183.5	218.4	256.3	197.4	234.9	275.7	319.7	249.6	292.9	339.7	390.0	312.3	362.2	415.8	473.0	392.1	450.2	512.2	578.2	478.8	544.8	615.0	689.5	478.8	544.8	615.0	689.5				
Injection rate into Air	cm ³ /s	684	827	984	1155	854	1016	1193	1384	1016	1193	1383	1588	1093	1268	1455	1656	1296	1488	1693	1911	1409	1603	1809	2028	1409	1603	1809	2028				
Injection pressure	MPa	205	170	142	122	197	166	141	122	193	165	142	124	193	166	145	127	190	165	145	129	189	166	147	132	189	166	147	132				
Max. injection speed	mm/s	87				90				90				82				84.2				79.7				79.7							
Max. Screw speed	r/min	93				84				74				63				56				53				53							
Clamping Unit																																	
Clamping force	KN	12000				14000				18500				18500				22000				25000											
Opening stroke	mm	1250				1450				1550				1680				1850				2000											
Space between tie bar	mm×mm	1160×1060				1420×1220				1520×1320				1620×1420				1720×1520				1820×1620											
Min. mould height(T-slot)	mm	480				580				680				750				750				800											
Max. mould height(T-slot)	mm	1100				1300				1450				1550				1700				1800											
Max. distance Platen(T-slot)	mm	2350				2750				3000				3230				3550				3800											
Ejector stroke	mm	300				350				400				400				450				500											
Ejector force forward	kN	227				227				332				332				425				425											
Ejector force back	kN	151				151				256				256				334				334											
Number of ejector bar	PC	21				29				29				29				25				33											
Power electric																																	
Sys. Pressure	MPa	16				16				16				16				16				16											
Pump Motor	kW	47+47				37+37+37				37+47+47				47+47+47				25+47+47+47				37+47+47+47				37+47+47+47							
Heater power	kW	56.2				74.6				79.7				89.9				112.1				122.6				122.6							
Number of temp. Control zones		6+1				6+1				6+1				6+1				8+1				8+1				8+1							
Other																																	
Hoper capacity	kg	100				200				200				200				400				400				400							
Oil tank capacity	L	1400				1650				2000				2250				2500				2750				2750							
Machine dimensions (L×W×H)	m×m×m	11.2×3.1×3.9				12.3×3.3×4.15				13.5×3.56×4.3				14.2×3.6×4.3				15.2×3.75×4.3				16.1×3.75×4.5				17.2×3.95×4.5							
Machine weight	Ton	45				65				85				105				130				140				160							
Platen Side Size																																	

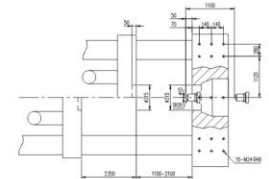
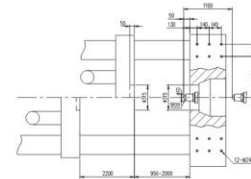
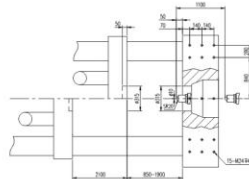
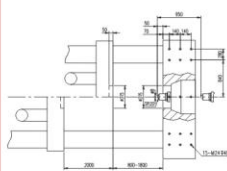
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BL2500EKII-BL4000EKII Series Technical Parameters

DESCRIPTION	UNIT	BL2500EK/C41000	BL2800EK/C41000	BL2800EK/C70000	BL3300EKII/C70000	BL3300EKII/C90000	BL4000EK/C90000						
Injection Unit													
Injection capacity		41000				70000				90000			
Screw type		A B C D	A B C D	A B C D	A B C D	A B C D	A B C D						
Screw diameter	mm	170 185 200 220	170 185 200 220	200 220 230 240	200 220 230 240	230 240 250 260	230 240 250 260						
Screw ratio		24 22 20 19	24 22 20 19	24 22 21 20	24 22 21 20	23 22 21 20	23 22 21 20						
Theoretical injection capacity	cm ³	20996 24864 29060 35162	20996 24864 29060 35162	36285 43905 47987 52251	36285 43905 47987 52251	53804 58584 63568 68755	53804 58584 63568 68755						
Shot weight	g	19316 22875 26735 32349	19316 22875 26735 32349	33383 40393 44148 48071	33383 40393 44148 48071	49500 53898 58483 63255	49500 53898 58483 63255						
(PS)	oz	681.3 806.9 943.0 1141.1	681.3 806.9 943.0 1141.1	1177.5 1424.8 1557.3 1695.6	1177.5 1424.8 1557.3 1695.6	1746.0 1901.2 2062.9 2231.2	1746.0 1901.2 2062.9 2231.2						
Injection rate into Air	cm ³ /s	1443 1709 1997 2416	1443 1709 1997 2416	1816 2197 2402 2615	1816 2197 2402 2615	2511 2734 2967 3209	2511 2734 2967 3209						
Injection pressure	MPa	194 164 141 116	194 164 141 116	193 160 146 134	193 160 146 134	168 154 142 131	168 154 142 131						
Max. injection speed	mm/s	63.5		57.8		60.5							
Max. Screw speed	r/min	48		54		57							
Clamping Unit													
Clamping force	KN	25000		28000		33000							
Opening stroke	mm	2000		2100		2200							
Space between tie bar	mm×mm	1820×1620		1920×1720		2110×1910							
Min. mould height(T-slot)	mm	800		850		950							
Max. mould height(T-slot)	mm	1800		1900		2000							
Max. distance Platen(T-slot)	mm	3800		4000		4200							
Ejector stroke	mm	500		500		550							
Ejector force forward	kN	425		425		565							
Ejector force back	kN	334		334		442							
Number of ejector bar	PC	33		33		25							
Power electric													
Sys. Pressure	MPa	16		16		16							
Pump Motor	kW	47+47+47+47		47+47+47+47+47		47+47+47+47+47+47							
Heater power	kW	175.8		175.8		246							
Number of temp. Control zones		8+1		8+1		8+1							
Other													
Hoper capacity	kg	400		400		400							
Oil tank capacity	L	3000		3500		4000							
Machine dimensions (L×W×H)	m×m×m	18.1×3.95×5.1		18.5×4.15×5.1		21.5×4.45×6.0							
Machine weight	Ton	170		190		210							

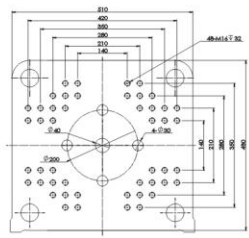
Platen
Side Size



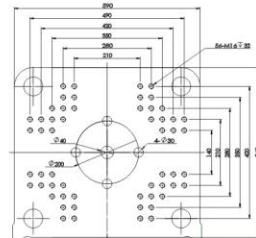
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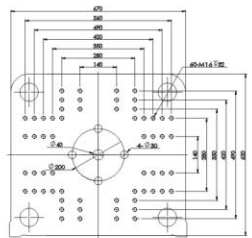
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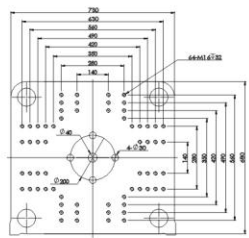
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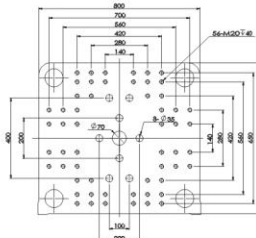
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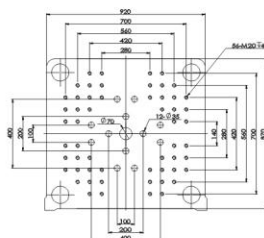
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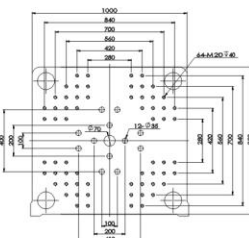
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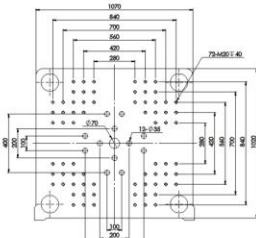
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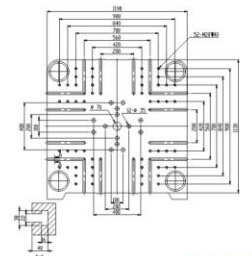
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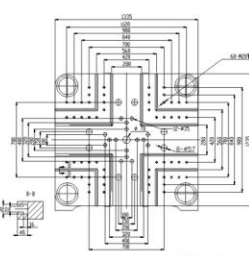
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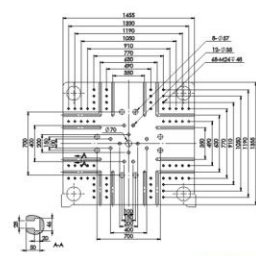
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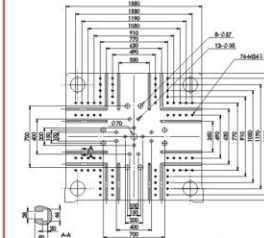
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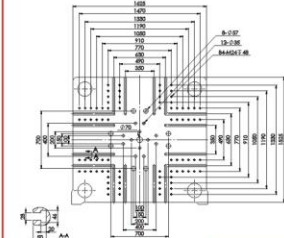
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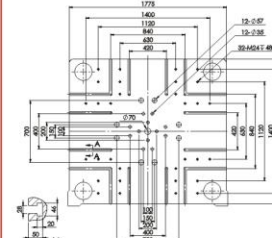
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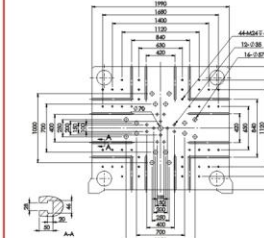
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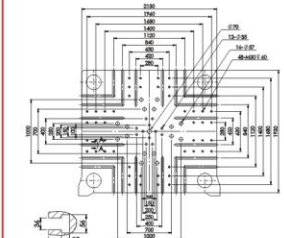
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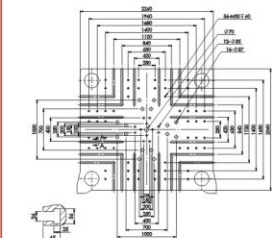
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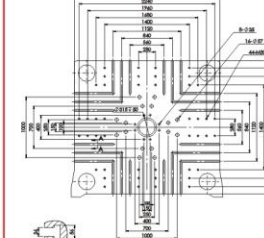
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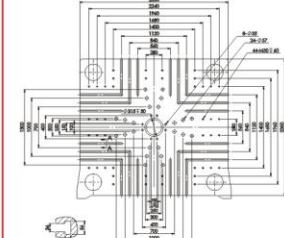
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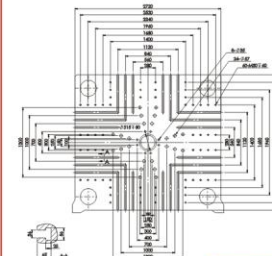
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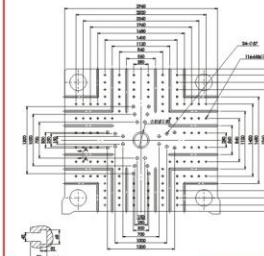
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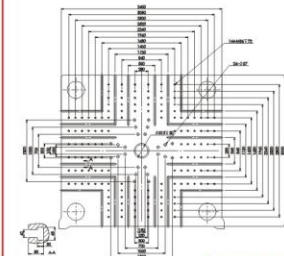
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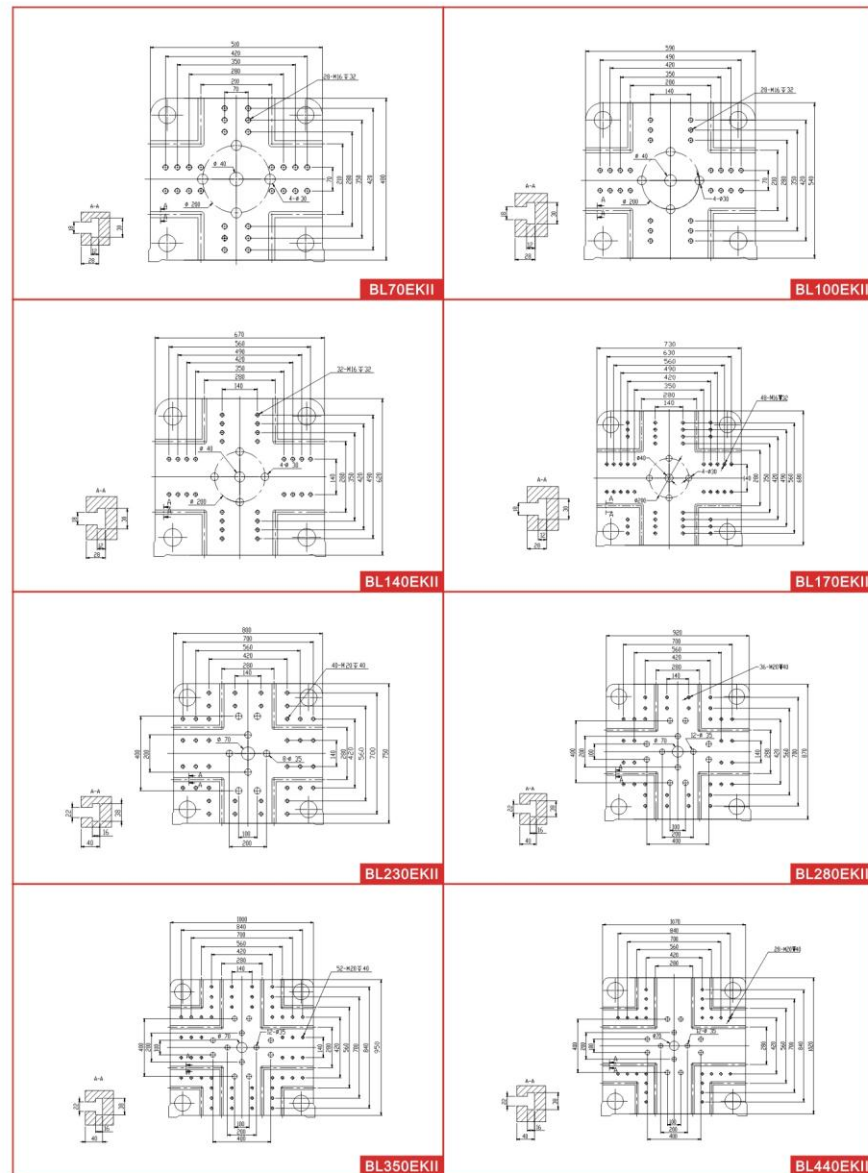
BL3300EKII



BL4000EKII

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70-400EKII T Slot Platen Dimension Obverse Drawing(Optional)



Standard Configuration Menu of BL EK series

Clamping Unit

- >> Patent of the five point outside mold clamping mechanism, has the largest mould stroke
- >> Wide type template design, can adapt to a larger mold
- >> Low-pressure protect mould with high precision
- >> Hydraulic motor drive gear automatic adjustment mode
- >> Adjustable mobile template support structure, reduce the rod bearing deformation
- >> Mechanical, electrical, hydraulic two/three safety protection devices
- >> Clamping part is equipped with mold pedal (BL1100EK above)
- >> Automatic safety door control (BL1100EK above)
- >> Open and dose mold, ejection movement with high precision electronic scale control
- >> A variety of optional ejection patterns, pressure, speed setting respectively
- >> Standard synchronization function of ejection/core pulling is equipped on 2100EK-4000EK
- >> Centrel ejector on 60EK-800EK, Euro standard ejector on 900EK 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 drive melt
- >> Automatic detection of the nozzle choke and the raw materials overfeeding checkup function selection by the user self-control independently.
- >> Bijection moving oil cylinder design
- >> High rigid beam supporting structure
- >> The trimming device of the nozzle
- >> Electronic scale control of shoot stroke with high precision
- >> Six stages of injection, five stages of holding pressure, five stages of charging, pressure/speed can be adjusted
- >> The screw rotation speed detection
- >> 'Auto Purge' function for cleaning the barrel set automatically
- >> Melt back pressure ratios
- >> Above 900EK with central lubrication of ejection unit
- >> Above 1100EK with feeding platform
- >> Attached to the extended nozzle(60EK-700EK:50mm more, 800EK-4000EK:100mm more)

Hydraulic Unit

- >> Servo energy-saving system
- >> Oil temperature deviation automatic alarm
- >> Motor overload protection function
- >> Above 500EK with self sealing oil absorption 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 mechanical interface
- >> Parameter data protection lock
- >> PID automatic temperature control, realizes the cylinder temperature self-correcting
- >> USB interface, can be convenient to backup panel application update and mould parameters
- >> Have stop memory function, random can store 200 sets mould data
- >> 100 groups of abnormal alarm and 100 groups of modified a record store
- >> 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 socket
- >> 60EK-400EK with the hopper and check out magic eye
- >> Scram protection of front and back door,scram protection of mould area on 1100EK-4000EK
- >> Alarm lamp with voice prompt

The Rest

- >> Standard color of Shuangma
- >> Adjustable shock pad
- >> Accessory box
- >> Common tools
- >> Damageable spare parts

Optional Configuration Menu of BL EK series

Clamping Unit

- >> Increase in mold volume
- >> Increase in the eject force
- >> Increase in the eject stroke
- >> Widen the machine door
- >> With open mold mechanical limit
- >> Add mold heat shield
- >> Non-standard mould mounting holes (Japanese standard, American standard, etc.)
- >> T slot template(60EK-600EK)
- >> Mould hanging formwork
- >> Hydraulic/electric rotating demould device (twisted tooth device)

Injection Unit

- >> Increase/decrease the injection quantity
- >> Increase/decrease melt motor
- >> Chrome plating/bimetallic screw components
- >> PVC, PET, PC, PA, bakelite, etc all kinds of special plasticizing unit
- >> Pneumatic/hydraulic/spring self-locking nozzle
- >> Nitrogen auxiliary quick shoot glue device
- >> Gas-assisted/wit interface
- >> Sequential injection device
- >> Differential high-speed injection device
- >> Inlet temperature control device

Hydraulic Unit

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

Optional Auxiliary

- >> Magic hand
- >> Dryer
- >> Dehumidifier
- >> Crusher
- >> Mold temperature controller
- >> Magnetic shelf
- >> Auto-loader
- >> Mold cooling flow meter glass tube

Electrical Control Unit

- >> The Euro robot interface
- >> A mould labeling machine interface
- >> Change the voltage and frequency
- >> The change of control system
- >> Add working lamp
- >> Hot runner controllers