

宝捷精机
PowerJet

KII 系列
精密注塑机
(900 ~ 1,000kN)



KII Series

Precision Injection Molding Machine



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KII series 全新系列高精密注塑机

High Precision Injection Molding Machine

更快的注射速度和熔胶速度，
更好的稳定性，
更高的生产效率。

KII series

Faster injection speed & charging speed,
Better stability,
Higher efficiency.

全新钣金外观设计，新颖时尚
New sheet metal appearance design, novel and fashionable

中心压力锁模结构，稳定快速
Center-press toggle system designed, fast and stable

全新改良注射系统，射速更快、更精密
New improved injection system, higher injection speed, more precise



加强刚性机架，减震更明显、生产更稳定
Strengthen rigid frame, better damping performance, production more stable

搭载全新伺服系统，响应快、精度高
New servo motor system, high response and high precision



中心压力锁模机构

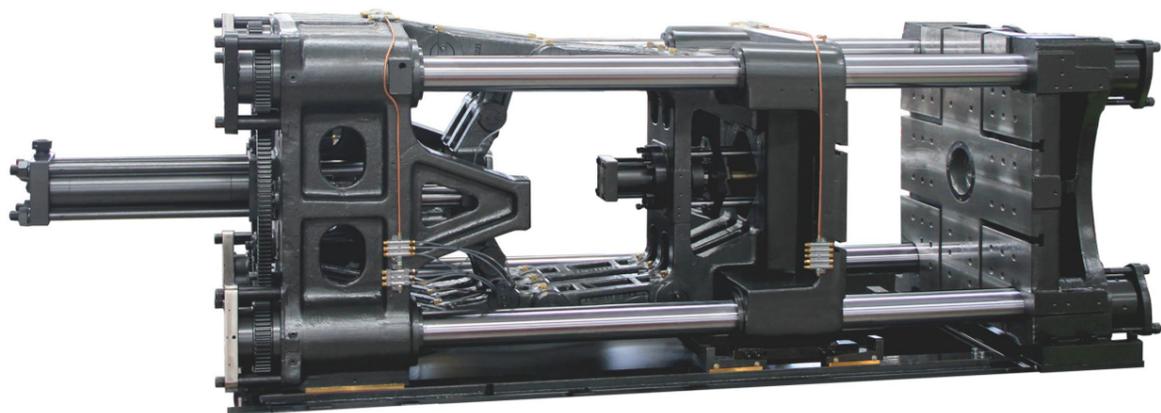
- 提高成型稳定性
- 减轻对模板的损害
- 模板运行更快更稳定

- 中心压力锁模结构使模具均衡受力，也避免了模板的损伤；
- 全新设计的锁模结构，确保模板刚性提升20%以上
- 防倾侧底脚设计，保证开合模的高速平稳性；
- 欧式顶针设计，提升对模具的适应性；

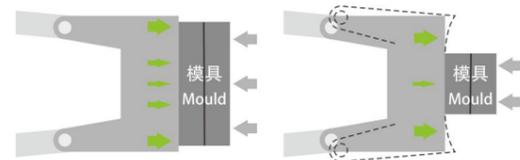
Center-Press Toggle System

- Improve stability in molding
- Minimize platen's damage
- Higher speed and stable platen's movement

- Center-press toggle system designed to apply equal force on mold during clamping and preventing platen's damage.
- New design of the clamping structure, ensures the rigid mold platen enhancement increasing more than 20%.
- Anti-tilt side design of the foot ensures the opening and closing of smooth high-speed;
- European ejector design, enhances the adaptability of the mold;

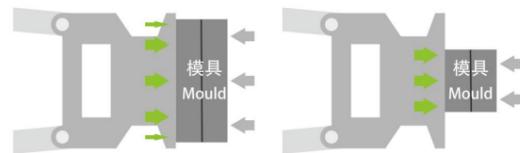


普通锁模结构
General type toggle



当模具变小时，作用于模具的4个角落的压力会变大
When the mold get small, compression increases on the corners of the mold.

中心压力锁模结构
Center press type toggle



不论模具尺寸变化如何，其作用于模具的压力都是一样的
Even though there is change of mold size, compression will be same on the mold.

注射系统 Injection System



射胶机构——精密、稳定，塑化效果好

Injection mechanism - precision, stability, good plasticization

- 高刚性整体式线性导轨低摩擦，提高射胶精度；
- 双射移高寿命射移油缸；
- High rigidity integral linear guide low friction, improve the accuracy of injection.
- Long lifespan double carriage movement cylinders.



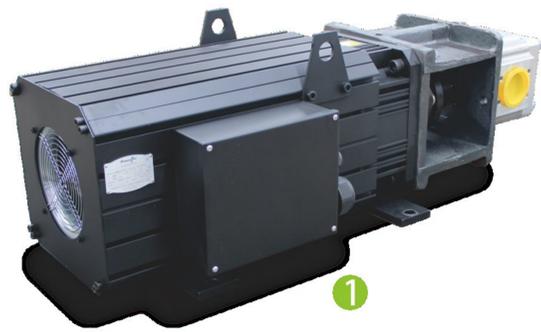
集中润滑模块
Centralized lubrication module



射移双拉标杆结构，定位更牢固、对中更准确
Injection movement structure of duplex pull rods can consolidate location and have more precise centering.

KII series 液压系统

Hydraulic System



- 新一代伺服系统的应用确保整机动力提升10%以上;
 - 管路布局合理整齐, 大大降低油路损耗;
 - 油路零件大量采用标准件, 提高油路可靠性。
- New servo system applications ensures machine power to increase more than 10%;
 - Reasonable and orderly piping layout, significantly reducing loss in oil channel;
 - Oil circuit consists of standard components, improving the reliability of hydraulic system.



- ① 专用伺服电机及进口高压齿轮泵, 惯量小、噪声低、动态响应快;
 - ② 低冲击油路设计。
- ① Special servo motor and imported high pressure gear pump, Small inertia, low noise and fast dynamic response;
 - ② Low-impact oil channel design.

控制系统 Controlling System

- 更合理的电路布局, 提高抗干扰能力及稳定性;
 - 预留联网管理系统接口, 方便生产管理;
 - 软件功能更强大, 扩展性能好;
 - 优化的控制系统, 实现节能, 提高响应。
- More reasonable electric circuit layout, improving anti-interference ability and stability;
 - Central (network) management system interface, easy for production management;
 - More powerful software, high scalability;
 - Optimized control system, energy saving and high response.



参数 Parameter

说明	DESCRIPTION	单位UNIT	KII90-V7/S7			KII128-V7/S7			KII160-V7/S7		
国际公认型号	International size rating		900-285			1280-420			1600-600		
锁模单元 CLAMPING UNIT											
锁模力	Clamping force	kN	900			1280			1600		
开模行程	Opening stroke	mm	320			360			440		
模板最大开距	Max.daylight	mm	680			810			960		
模板外形尺寸	Platen size	mm	540×540			610×610			686×686		
导柱内距	Space between bars	mm	360×360			410×410			470×470		
最大模厚	Max.mold height	mm	360			450			520		
最小模厚	Min.mold height	mm	130			145			160		
顶针行程	Ejector stroke	mm	100			120			140		
顶出力	Ejector force	kN	34			42			49		
顶针数	Ejector number	PCS	1+4			1+4			1+4		
注射单元 INJECTION UNIT											
			is285			is420			is600		
螺杆直径	Screw diameter	mm	30	35	40	36	40	45	42	46	52
螺杆长径比	Screw L/D ratio	L/D	20.7	20.5	18	23	20	18.2	23	20.5	18
注射压力	Injection pressure	MPa	253	186	142	243	197	156	213	177	139
理论注射容积	Shot volume	cm ³	113	154	201	173	214	270	284	341	435
实际注射量 (PS)	Shot weight (PS)	g	103	140	183	157	194	246	253	303	388
		oz	3.6	4.9	6.4	5.5	6.8	8.7	8.9	10.7	13.7
注射速率 (PS)	Injection rate	g/s	80	108	142	104	128	162	141	169	216
塑化能力 (PS)	Plasticizing capacity	g/s	11	14	17	19	25	30	28	36	46
螺杆行程	Screw stroke	mm	160			170			205		
螺杆转速	Screw speed	rpm	253			271			299		
射移行程	Carriage stroke	mm	275			336			308		
动力/电热 POWER UNIT											
油压系统压力	Hydraulic system pressure	MPa	17.5			17.5			17.5		
油泵电机功率	Pump motor power	kW	15 / 14.1			15 / 16.1			18.5 / 21.8		
加热功率	Heater power	kW	7.5			7.5			9.8		
温度控制区数	Number of temp control zones	PCS	1+3			1+3			1+3		
其他 GENERAL											
油箱容量	Oil tank capacity	L	150			190			225		
理论机重	Machine weight	T	3.5			3.8			5		
外形尺寸	Machine dimensions	m	4.13×1.23×1.51			4.36×1.44×1.61			4.95×1.52×1.71		
模板正面尺寸 Platen dimensions											
模板侧面尺寸 Platen dimensions											
机械手安装孔尺寸 Mechanical installation hole size											
外形尺寸 Machine dimensions											

备注: 本公司根据产品提升的需要, 可对技术参数、部份元件配置及服务内容进行更改, 恕不另行通知。
Remarks: According to upgrading of machine, we will change technical parameters, configuration of some parts and service's items without further notice.

KII series 参数 Parameter

说明	DESCRIPTION	单位UNIT	KII200-V7/S7			KII250-V7/S7			KII288-V7/S7			KII330-V7/S7			KII400-V7/S7			KII500-V7/S7			KII560-V7/S7			KII680-V7/S7			KII850-V7/S7			KII1000-V7/S7					
国际公认型号	International size rating		2000-930			2500-1250			2880-1500			3300-2050			4000-2500			5000-3600			5600-4000			6800-5200			8500-6800			10000-8300					
锁模单元 CLAMPING UNIT																																			
锁模力	Clamping force	kN	2000			2500			2880			3300			4000			5000			5600			6800			8500			10000					
开模行程	Opening stroke	mm	490			540			550			640			710			830			860			930			1030			1150					
模板最大开距	Max.daylight	mm	1040			1120			1160			1320			1440			1680			1740			1870			2080			2350					
模板外形尺寸	Platen size	mm	793×793			871×871			905×905			980×980			1080×1060			1230×1190			1230×1230			1400×1400			1550×1550			1690×1690					
导柱内距	Space between bars	mm	530×530			580×580			610×610			670×670			740×720			820×780			860×860			940×940			1040×1040			1160×1160					
最大模厚	Max.mold height	mm	550			580			610			680			730			850			880			940			1050			1200					
最小模厚	Min.mold height	mm	180			220			280			250			300			300			300			350			380			500					
顶针行程	Ejector stroke	mm	150			150			150			180			210			220			240			280			280			350					
顶出力	Ejector force	kN	65			77			77			77			110			135			135			184			184			290					
顶针数	Ejector number	PCS	1+4			1+4			1+12			1+12			1+12			1+12			1+16			1+20			1+20			1+20					
注射单元 INJECTION UNIT																																			
螺杆直径	Screw diameter	mm	is930			is1250			is1500			is2050			is2500			is3600			is4000			is5200			is6800			is8300					
螺杆长径比	Screw L/D ratio	L/D	23	20	17.5	21	21	19	21	21	19	21	20.6	19	22	20	19	19	21	21.8	20	19	21	21.8	20	19	23.5	22.4	20	23.6	21	19.3	23	21	19.2
注射压力	Injection pressure	MPa	230	180	135	209	187	157	248	186	145	233	182	149	208	171	140	119	211	172	147	119	211	172	147	119	202	180	146	227	184	152	205	169	142
理论注射容积	Shot volume	cm ³	407	520	693	595	665	792	595	792	1017	877	1126	1370	1198	1458	1786	2099	1723	2110	2481	3063	1922	2354	2767	3416	2554	2863	3534	2990	3691	4467	4084	4942	5881
实际注射量 (PS)	Shot weight (PS)	g	363	463	617	540	604	719	540	719	924	796	1023	1244	1088	1324	1622	1907	1538	1883	2084	2734	1711	2096	2464	3042	2279	2555	3154	2669	3295	3986	3645	4410	5249
		oz	12.8	16.3	21.8	19.1	21.3	25.4	19.1	25.4	32.6	28.1	36.1	43.9	38.4	46.7	57.2	67.3	54.2	66.4	73.5	96.4	60.5	74.1	87.1	107.6	80.4	90.1	111.3	94.1	116.2	140.6	128.6	155.6	185.1
注射速率 (PS)	Injection rate	g/s	175	224	298	216	241	287	227	303	389	270	346	421	367	446	546	642	412	504	593	732	412	504	593	732	539	604	746	584	721	872	841	1081	1211
塑化能力 (PS)	Plasticizing capacity	g/s	38	47	55	30	38	45	38	51	62	42	52	61	47	69	81	94	62	77	87	109	61	73	86	106	92	102	125	106	130	153	117	140	162
螺杆行程	Screw stroke	mm	245			280			280			310			330			390			435			450			470			520					
螺杆转速	Screw speed	rpm	253			189			236			193			160			164			164			171			159			136					
射移行程	Carriage stroke	mm	340			386			386			406			461			520			520			520			650			700					
动力/电热 POWER UNIT																																			
液压系统压力	Hydraulic system pressure	MPa	17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5			17.5		
油泵电机功率	Pump motor power	kW	22 / 30.8			30 / 42			30 / 53.3			37 / 53.3			45 / 57			55 / 25.1+30.8			55 / 25.1+30.8			37+37 / 32.7+41			55+37 / 49+41			37+37+37 / 49+41+41					
加热功率	Heater power	kW	11.5			13.8			13.8			18			22			28			28			38			42			54					
温度控制区数	Number of temp control zones	PCS	1+4			1+4			1+4			1+4			1+4			1+5			1+5			1+5			1+5			1+8					
其他 GENERAL																																			
油箱容量	Oil tank capacity	L	300			320			400			440			520			810			810			1000			1100			1200					
理论机重	Machine weight	T	6.4			7.6			8.5			9.7			13.1			17			23			26			35			50					
外形尺寸	Machine dimensions	m	5.29×1.58×1.8			5.79×1.71×1.9			6.07×1.69×1.89			6.45×1.81×1.97			7.97×1.97×2			8.54×2.18×2.09			8.4×2.27×2.13			9.62×2.4×2.1			10.44×2.35×2.2			11.44×2.69×2.34					
模板正面尺寸	Platen dimensions																																		
模板侧面尺寸	Platen dimensions																																		
机械手安装孔尺寸	Mechanical installation hole size																																		
外形尺寸	Machine dimensions																																		

Remarks: According to upgrading of machine, we will change technical parameters, configuration of some parts and service's items without further notice.

KH series 设备配置

Device Configuration

名称	国内版	国际版
锁模系统		
精密电子尺控制锁模/顶出行程/射胶行程	●	●
锁模大板及射胶大板及机铰采用QT500-7A	●	●
欧标18机械手接口安装螺孔	●	●
液压驱动齿轮模装置	●	●
机械、电气双重保护	●	●
移动模板耐磨锰钢带轨道	●	●
自动集中容式润滑系统	●	●
多种顶出功能可选	●	●
低压模具保护功能	●	●
T型槽、码模孔复合模板	○	○
自动顶出功能	●	●
锁模力按需自动调整功能	●	●
顶出强制复位功能	●	●
机门边加装防夹缓冲条设计	●	●
锁模板金四角全封闭防护(高度2米内加活动盖板)	●	●
免调节式机械安全锁撞杆	●	●
特殊模具安装孔	○	○
吊模架(2000kN以下机型)	○	○
加模具隔热板	○	○
加大顶出力、加大顶出行程	○	○
加大容量	○	○
磁力模板	○	○
顶盖确认功能	○	○
锁模自动润滑泵集中加润滑油(6800kN以上机型)	●	●
锁模自动润滑泵集中加润滑油(6800kN及以下机型)	○	○
锁模手动润滑泵集中加润滑油(自动顶模、二板处)	○	○
美式标准码模孔及顶出孔(无T型槽)	/	/ (美标配)
更改头板模具定位环	○	○
增加二板模具定位环	/	○
机架与活动门间防护挡板	○	●
落料斗国际安全挡板	○	●
注射系统		
双缸平衡注射系统	●	●
低速大扭矩液压马达	●	●
氮化合金钢螺杆料筒	●	●
下料口冷却装置	●	●
射嘴及料管多段PID温度控制	●	●
双射油缸缸	●	●
全封闭式保温罩、射嘴防护罩	●	●
螺杆防冷启动功能	●	●
自动清料功能	●	●
熔胶前、后松退可选	●	●
移动或滚动料斗装置(900-3300kN机型)	●	●
螺杆转速检测	●	●
陶瓷发热圈(6800kN及以上机型)	●	●
陶瓷发热圈(6800kN以下机型)	○	○
熔胶马达壳体泄油回路采用黑色橡胶管	●	●
高速低扭矩液压马达	○	○
专用料管组(电鍍、双合金、PC、PMMA、PBT、PA等)	○	○
料筒风冷装置	○	○
弹簧自锁射嘴	○	○
加大注射行程或加大(减少)一级射胶机构	○	○
旋转射台(6800kN及以上机型)	○	○
红外发热圈	○	○
射移电子尺	○	○
射台手动润滑泵集中加润滑油(4000kN及以上机型)	●	●
射台手动润滑泵集中加润滑油(4000kN以下机型)	○	○
不锈钢上料斗	○	○
料斗滑轨(4000kN及以上机型)	○	○
料斗滑轨(4000kN以下机型)	●	●
下料口防护装置	○	○
液压系统		
第三代伺服泵系统	●	●
高精度实时旁路溢油器装置	●	●
低噪音节能型液压回路	●	●
进口名牌液压控制阀	●	●
进口名牌液压密封件	●	●
差动快速合模油路	●	●
内置式冷却器(3000kN及以下机型)	●	●
开模刹车油路设计(开模背压)	●	●
油温自动检测及高低温报警	●	●
外露高压油管防爆链	●	●
全机标配一组带视油芯(5000kN以上机型两组)	●	●
多组运水装置并配快速接头	●	●
熔胶比例背压控制	●	●

名称	国内版	国际版
变量泵系统		
加大多级油泵、电机	○	○
加大多级熔胶马达	○	○
同步顶出、抽芯、熔胶系统	○	○
高响应蓄能伺服注射系统	○	○
多组抽芯装置	○	○
加装液旋脱模装置	○	○
玻璃管冷却流量计	○	○
油温电控水阀	○	○
下料口电控水阀	○	○
增加液压油位置传感器	○	○
带位置反馈液安全阀	○	●
液压安全凸轮(3300kN以上机型)	●	/
控制系统		
料筒加热强制保护	●	●
输入、输出检视画面	●	●
自动保温及自动加热设定功能	●	●
射胶转保压方式：时间/位置/时间+位置	●	●
12寸TFT真彩色LCD显示屏(3300kN及以上机型)	●	●
8寸TFT真彩色LCD显示屏(3300kN以下机型)	●	●
200组大容量工艺参数存储空间，USB存储接口	●	●
多种操作语言	●	●
可设置多级密码保护，操作面板带锁按健钥匙	●	●
前后机门急停开关保护	●	●
质量数据过程控制界面	●	●
生产统计过程控制(SPC)实时列表界面	●	●
预留吹风、抽芯回保护等多种接口(有软件，无硬件)	●	●
三组AC380V/16A三相插座，一组AC220V/10A多功能二三插座	●	●
热流道模具针阀控制(有软件，无硬件)	●	●
国内机械手电气接口(有软件，无硬件)	●	●
SP112机械手电气接口	/	/ (美标配)
欧标67机械手电气接口	/	○
欧标12机械手电气接口	/	○
电动安全门(6800kN及以上机型)	●	●
双色报警灯	○	○
热流道接口	○	○
气动顺序阀	○	○
电动旋转脱模接口	○	○
更改电源电压	○	○
一组吹气带阀装置	○	●
多组吹气带阀装置	○	○
气辅注射装置	○	○
中央(联网)监控系统	○	○
前、后机门内光栅保护(6800kN及以上机型)	○	○
电脑整机功耗显示	○	○
增加电表	○	○
电热圈加装固态继电器	○	●
欧洲品牌电脑系统	○	○
射嘴直接温度控制	○	○
后安全门操作(需客户承诺安全责任)	○	○
前安全门关门到位置屏确认	○	○
NR12认证增加配置(其余3组安全继电器模块及相关电气元件)*	/	○
电脑程序里的国际单位转换为英制单位	/	/ (美标配)
前后活动门加装安全开关	/	○
接线端子按美标工艺要求	/	○
总开关增加旋转手柄(4000kN及以上机型)	●	●
总开关增加旋转手柄(4000kN以下机型)*★	○	○
抽芯系统根据欧规13	/	○
总空气开关锁定(4000kN以下机型)	○	○
欧规接线端子	/	○
前后安全门配一件安全继电器模块	/	○
电热总控制配交流接触器	/	○
强制断开功能的行程开关(前后安全门及射嘴防护罩)	/	○
隔离变压器	/	○
工业连接器单独开关控制	/	○
其它部份		
中文说明书	●	/
英文说明书	/	●
避震脚	●	●
工具箱及工具一套，精密滤芯一件	●	●
码模夹(朱氏)	●	●
射嘴专用扳手	●	●
液压油	○	/
干燥机	○	○
自动上料机	○	○

备注：●表示该功能标配；○表示该功能选配；/表示该功能不可选
*代表NR12强制增加项目；★代表KCS强制增加项目

Name	China	International
Clamping System		
Clamping transducer / Ejecting transducer /Injection transducer	●	●
Platens and toggles using QT500-7A material	●	●
Euromap 18 robot mounting thread holes	●	●
Hydraulic drive gear for mold adjustment	●	●
Mechanics and electrical safety protection	●	●
Wearable manganese steel rail below movable platen	●	●
Automatic centralized lubrication system	●	●
Multi ejection funtions	●	●
Low pressure mold protection	●	●
T-slot & mounting hole platen	○	○
Automatic mold thickness adjustment	●	●
Automatic clamping force adjustment	●	●
Ejector backward reset function	●	●
Anti-jamming buffer strip on safety door	●	●
Machine cover on clamping unit full closed protection (Top cover for machines lower than 2m)	●	●
Mechanical safety lock	●	●
Special mold mounting holes	○	○
Mold hanger (Below 2000kN models)	○	○
Mold insulation board	○	○
Enlarged ejector force and ejector stroke	○	○
Enlarged max. mold height	○	○
Magnetic platen	○	○
Ejector backward confirmation	○	●
Automatic centralized grease lubrication pump on clamping unit (Above 6800kN models)	●	●
Automatic centralized grease lubrication pump on clamping unit (6800kN and the following models)	○	○
Manual centralized grease lubrication pump on clamping unit (Back platen and movable platen)	○	○
American standard mounting hole platen (NO T-slot)	/	/ (American standard)
Change fixed platen mold positioning ring	○	○
Add moveable platen mold positioning ring	/	○
Protective baffle between rack and movable door	○	○
Hopper international safety baffle	○	●
Injection System		
Double injection cylinders	●	●
Low speed high torque hydraulic motor	●	●
Nitriding alloy steel screw & barrel	●	●
Cooling device on hopper feeding area	●	●
Nozzle and barrel multi-section PID temperature control	●	●
Double carriage movement cylinders	●	●
Fully enclosed insulation barrel cover, nozzle protection cover	●	●
Anti-cold start screw protection	●	●
Automatic purge function	●	●
Nozzle back and forth moveable before and after plasticizing	●	●
Hopper sliding or scrolling unit(900-3300kN models)	●	●
Screw speed detection	●	●
Ceramic heater (6800kN and above models)	●	●
Ceramic heater (Below 6800kN models)	○	○
Plasticizing motor drain circuit using black rubber tube	●	●
High speed low torque hydraulic motor	○	○
Special screw and barrel(Electroplating, bimetallic, PC, PMMA, PBT, PA,etc)	○	○
Fan for cooling barrel	○	○
Spring self-locking nozzle	○	○
Increase injection stroke, or Increase/decrease screw & barrel size	○	○
Rotating injection unit (6800kN and above models)	○	○
Infrared heating	○	○
Carriage movement transducer	○	○
Manual centralized grease lubrication pump on injection unit (4000kN and above models)	●	●
Manual centralized grease lubrication pump on injection unit (Below 4000kN models)	○	○
Stainless steel hopper	○	○
Hopper slide rail (4000kN and above models)	○	○
Hopper slide rail (Below 4000kN models)	●	●
Protecting device on hopper feeding area	○	○
Hydraulic System		
Third generation servo pump system	●	●
High precision real-time bypass filter device	●	●
Low noise energy saving hydraulic circuit	●	●
Imported brand hydraulic valve	●	●
Imported brand hydraulic seal	●	●
Differential fast mold clamping oil circuit	●	●
Built-in cooler()	●	●
Mold open brake oil circuit(mold open back pressure)	●	●
Automatic detection of oil temperature/high and low temperature alarm	●	●
Exposed high pressure tubing with explosion - proof chain	●	●
1 set hydraulic core pull with valve(2 sets for above 5000kN models)	●	●
Multi-sect water distributor with fast plug	●	●
Plasticizing proportional back pressure control	●	●

Name	China	International
Control System		
Barrel heating protection	●	●
Input, output viewing interface	●	●
Automatic insulation and automatic heating setting	●	●
Injection to holding pressure :time/position/time+position	●	●
12" TFT LCD screen (3300kN and above models)	●	●
8" TFT LCD screen (below 3300kN models)	●	●
200 sets mould data save, with USB port	●	●
Multi operating languages	●	●
Multi-level password protection, operation panel with keys	●	●
Front and rear safety door emergency stop switches	●	●
Quality data process control interface	●	●
Production process control (SPC) real-time list interface	●	●
Reserved interfaces of air blast / hydraulic core pull, etc (With software, without hardware)	●	●
3 sets 16A AC380V/3phase/50Hz sockets, 1 set 10A AC220V multi-function 2 or 3 hole socket	●	●
Mold hot runner pin valve control (With software, without hardware)	●	●
Domestic robot terminal (With software, without hardware)	●	●
SP112 robot terminal	/	/ (American standard)
European 67 robot terminal	/	○
European 12 robot terminal	/	○
Electric safety door (6800kN and above models)	●	●
Two-color warning lights	○	○
Hot runner mold interface	○	○
Pneumatic sequence valve	○	○
Electric rotary unscrewing interface	○	○
Change the supply voltage and hertz	○	○
One set air blast with valves	○	○
Multi-set air blast with valves	○	○
Gas assistant injection device	○	○
Central (network) monitoring system	○	○
Front and rear safety door grating protection	○	○
Energy consumption display on screen	○	○
Electricity meter	○	○
SSR for heaters	○	●
European brand PLC	○	○
Nozzle heating direct temperature control	○	○
Back safety door operation (Customer commitment to safety responsibility)	○	○
Front safety door closed in place and to be confirmed on screen	○	○
NR 12 identification additional allocation (The rest of 3 sets safety relay module and relevant electrical components)*	/	○
British unit in PLC	/	/ (American standard)
Safety switches on front and rear doors	/	○
Wiring terminals according to American standard	/	○
Rotary handle on main switch (4000kN and above models)	●	●
Rotary handle on main switch (Below 4000kN models)*★	○	○
Core pull system conformed to Euromap 13	/	○
Main air switch locking (Below 4000kN models)	/	○
Wiring terminals according to European standard	/	○
Safety relay module on front and rear door	/	○
AC contactor for electric heating main switch	/	○
Travel switch with forced disconnection function (Front and rear doors and nozzle cover)	/	○
Isolation transformer	/	○
Single switch control for industrial linkers	/	○
Others		
Chinese Instruction Manual	●	/
English Instruction Manual	/	●
Level pad	●	●
1 set of tools, 1 precision filter	●	●
Mould clamp(the Zhus)	●	●
Special wrench for nozzle	●	●
Hydraulic oil	○	/
Hopper dryer	○	○
Autoloader	○	○

Remarks: ● indicates the function standard; ○ indicates that the function is selected; / indicates that the function is not optional.
*Mandatory additions on behalf of NR12; ★Mandatory Increase Projects on behalf of KCS