

让中国装备技术与世界同步  
WE WALK ALONGSIDE THE WORLD

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**YIZUMI**伊之密

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## C系列高端多物料成型注塑机

**C Series High-end Multi-component Injection Molding Machine**

**(120T-750T)**

C, 让生活更出彩

Make Life More Colorful

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## C 让生活更出彩

随着人们生活水平的提高,为满足人们对生活品质日益提高的要求及个性化需求,C系列高端多物料成型注塑机孕育而生。此平台产品引进欧洲研发中心的先进技术,以稳定和个性化定制作为客户核心价值,并致力于创造更丰富的生活色彩。

### C Series, Make Life More Colorful

Yizumi C series multi-component injection molding machine is created to meet the increasing demand for higher quality of life and customization. Based on advanced technology introduced from European R&D center and expected to provide the core value—stability and customization—to customers, the C series is committed to making our life more colorful.



#### 广泛应用于各类行业:

Widely used in different industries:



3C制品  
3C products



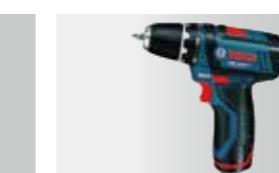
汽车配件  
Auto parts



日用品  
Daily necessities



家电配件  
Household appliance accessories



工具包胶  
Protective layers of tools



包装制品  
Packaging



建材制品  
Building materials



玩具制品  
Toys

## 客户核心价值主张: 稳定+个性化定制

### Core customer value propositions: stability + customization

#### ➤ 稳定 Stability

采用BFC对称均力锁模技术、MLT磁浮转盘技术、DCPC数字闭环定位技术等,结合超长滑脚设计和智能开模减速技术,整个锁模和转盘动作稳定可靠,开模位置重复精度可达 $\pm 0.3\text{mm}$ ,转盘重复精度可达 $\pm 0.001\text{度}$ 。

With the use of balanced force clamping technology, magnetically levitated turntable technology, digital closed-loop positioning technology, super long sliding shoes and smart mold-open deceleration technology, movements of the clamping unit and rotary unit are stable and reliable. The mold-open position repeatability is up to  $\pm 0.3\text{mm}$  and the turntable repeatability is  $\pm 0.001$  degrees.

#### 更耐用的转盘防损设计

采用多倍超载能力的双列滚针轴承结合 MLT 磁浮转盘技术,让转盘更耐用更可靠;

#### More durable anti-wear turntable design

The combination of double-row needle bearings that have high load capacity and magnetically levitated turntable technology makes the turntable more durable and reliable.

#### 更先进的转盘控制技术

采用 DCPC 数字闭环定位技术,转盘定位精度精确到小数点三位数,重复精度可达  $\pm 0.001$  度;

#### More advanced turntable control technology

With the digital closed-loop positioning technology, turntable positioning is accurate to three decimal places and the repeatability is up to  $\pm 0.001$  degrees.



#### 更高的三板机开模稳定性

最优化的油路设计和智能减速技术,开模位置重复精度可达  $\pm 0.3\text{mm}$ ;

#### Higher mold-open stability

Optimal hydraulic circuit design and smart deceleration technology enable the mold-open position repeatability to reach  $\pm 0.3\text{mm}$ .

#### ➤ 个性化定制 Customization

整机采用标准化模块化设计,包括注射单元模块、动力单元模块、塑化单元模块等等结合柔性软件模块化功能的自由编程组合让个性化定制逐步走向成熟。

Standardized and modular design is applied to the whole machine, including the injection unit, power unit and plasticizing unit. The integration with the free programming function in software makes customization more mature.

#### 更出色的注射稳定性

采用低惯量动作部件设计,结合精准温度控制和免粘高混炼螺杆设计,射胶精度进一步提升;

#### More excellent injection stability

The injection accuracy is further enhanced thanks to the low-inertia moving part design, accurate temperature control and non-stick plasticizing screw.

#### 更科学的个性化定制设计

可根据不同制品不同工艺需求,选择不同的射台及动力进行模块式组合,并结合柔性软件自由编程功能让个性化定制逐步走向成熟。

#### More scientific custom design

Modular combinations of different injection units and power units according to different processes requirements and the free programming function enable customization to become increasingly mature.

#### 更人性化的操作界面

采用防呆和 SS (Simple Style) 设计理念,充分考虑用户的使用习惯,控制系统操作更加便捷。

#### More user-friendly interface

The foolproof and simple operating interface design with the user habits fully considered makes the control system more easy to use.

※以上数据来源于伊之密实验室测试所得,可供参考;  
Data above come from Yizumi lab, available for reference.

## 锁模单元 Clamping unit

### 可靠稳定，转盘定位准 Reliable and stable, accurate turntable positioning

基于欧洲模板设计理念,提升模板受力分析基准,模板刚性更好;采用BFC技术调整锁模力传递方向,让模具受力更加均匀,成型更稳定;转盘设计采用MLT技术提升了转盘的耐用性;转盘控制采用DCPC技术确保了转盘定位的精确和高的重复精度。

Based on European platen design concept, platens are designed with higher rigidity and more accurate force analysis. The BFC (balanced force clamping) technology can adjust the clamping force transmission direction so that the force is applied to the mold more evenly and injection molding is more stable. The MLT (magnetically levitated turntable) technology enhances the durability of turntable. The DCPC (digital closed-loop positioning control) technology ensures the accuracy and high repeatability of turntable positioning.



#### ① BFC对称均力锁模技术 Balanced force clamping technology

模板刚性好,模具寿命长,工艺好调,制品不易飞边,成型精度和稳定性更有保证;  
The BFC technology delivers high platen rigidity, long mold life, easily-adjustable processes and minimized possible flashes and better ensures molding accuracy and stability.

#### ② MLT磁浮转盘技术 Magnetically levitated turntable technology

转盘采用磁浮式设计( $\leq 260T$ ),降低摩擦损耗,动作更加可靠,转盘寿命更长;  
The turntable is designed with magnetic levitation (for 260T machine and smaller models) to reduce frictional loss, increase the movement reliability and prolong the life of turntable.

#### ③ DCPC数字式闭环定位技术 Digital closed-loop positioning control technology

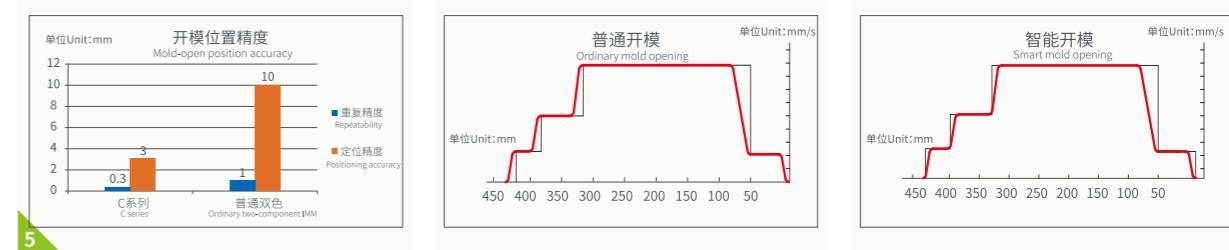
采用DCPC技术控制,转盘动作平滑,无冲击,定位准,重复精度可达 $\pm 0.001$ 度;  
The DCPC technology enables the turntable to rotate smoothly without impact. The positioning of turntable is accurate with repeatability of  $\pm 0.001$  degrees.

#### ④ 防倾滑脚设计 Tilt proof sliding shoes design

基于导向和重心支撑等需求设计的动板滑脚,能有效提升运动平稳性和模具寿命;  
The sliding shoes of movable platen, which are designed based on the needs of guiding and supporting the centre of gravity, can effectively increase the movement steadiness and prolong the mold life.

#### ⑤ 智能开模减速技术 Smart mold-open deceleration technology

开模终点重复精度可达 $\pm 0.3mm$ ,定位精度进一步提升,满足机械手精准取出和镶件要求。  
The mold-open end position repeatability is  $\pm 0.3mm$  and the positioning accuracy is further enhanced, which meet the needs of accurate part removal and inserting by robot.



※以上数据来源于伊之密实验室测试所得,可供参考;  
Data above come from Yizumi lab, available for reference.

## 注射单元 Injection unit

### 注射重复精度高 High injection repeatability

基于欧洲单缸注射成型技术,射胶惯量低,缸体防漏性能好,结合高混炼防粘螺杆设计和精确的温度控制让射胶的稳定性进一步提升,注射终点重复精度可达 $\pm 0.1\text{mm}$ ,产品重量重复精度可达3%。

Based on European single-cylinder injection technology, the injection unit has low inertia and the injection cylinder is highly leak-proof. The anti-sticking mixing screw and accurate temperature control also add to the injection stability. The injection end position repeatability is  $\pm 0.1\text{mm}$  and part weight repeatability is up to 3 %.



#### ① 高刚性低惯量注射机构

采用低惯量动作部件设计,惯量低射胶动作响应快,射胶精度进一步提升;

#### ① High-rigidity low-inertia injection unit

With the adoption of low-inertia moving parts, the injection movement response is quick and the injection accuracy is further improved.

#### ③ 出色的注射精度

射胶终点位置重复精度可达 $\pm 0.1\text{mm}$ ; 制品重量重复精度可达3%;

#### ③ Excellent injection accuracy

The injection end position repeatability is  $\pm 0.1\text{mm}$  and part weight repeatability is up to 3 %.

#### ⑤ 模块式射台组合设计

可以根据不同制品工艺需求,灵活搭配不同的射台,结合柔性软件功能,可实现个性化定制。

#### ⑤ Modular injection unit combination

Customization is available through the flexible combination of injection units according to different processes requirements and flexible software functions.

#### ② 高混炼防粘螺杆设计

采用最优化混炼参数设计,在保证高效塑化同时,到达最佳混炼效果,并消除粘料、发黄、发黑现象;

#### ② High-performance anti-sticking mixing screw design

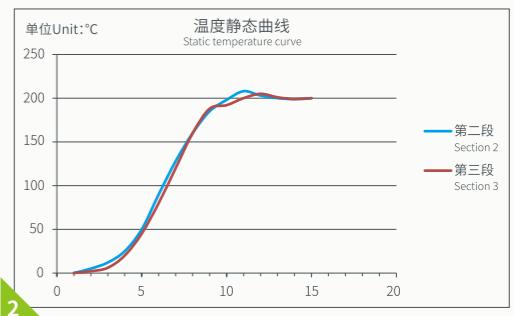
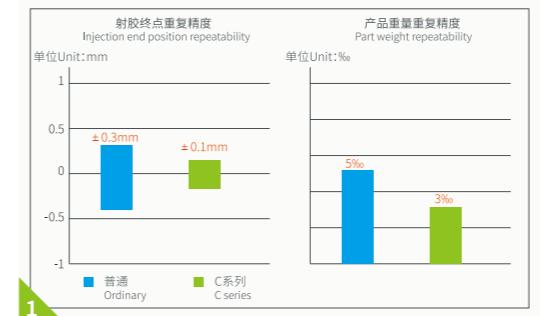
The screw not only ensures efficient plasticizing, but it is also optimally designed for the best mixing effect without material sticking, yellowing and blackening.

#### ④ 新一代PID温度控制

采用自适应PID温度控制,静态温度控制精度可达 $\pm 0.4\text{度}$ ;

#### ④ New-generation PID temperature control

With the self-adaptive PID temperature control, the static temperature control accuracy is up to  $\pm 0.4$  degrees centigrade.

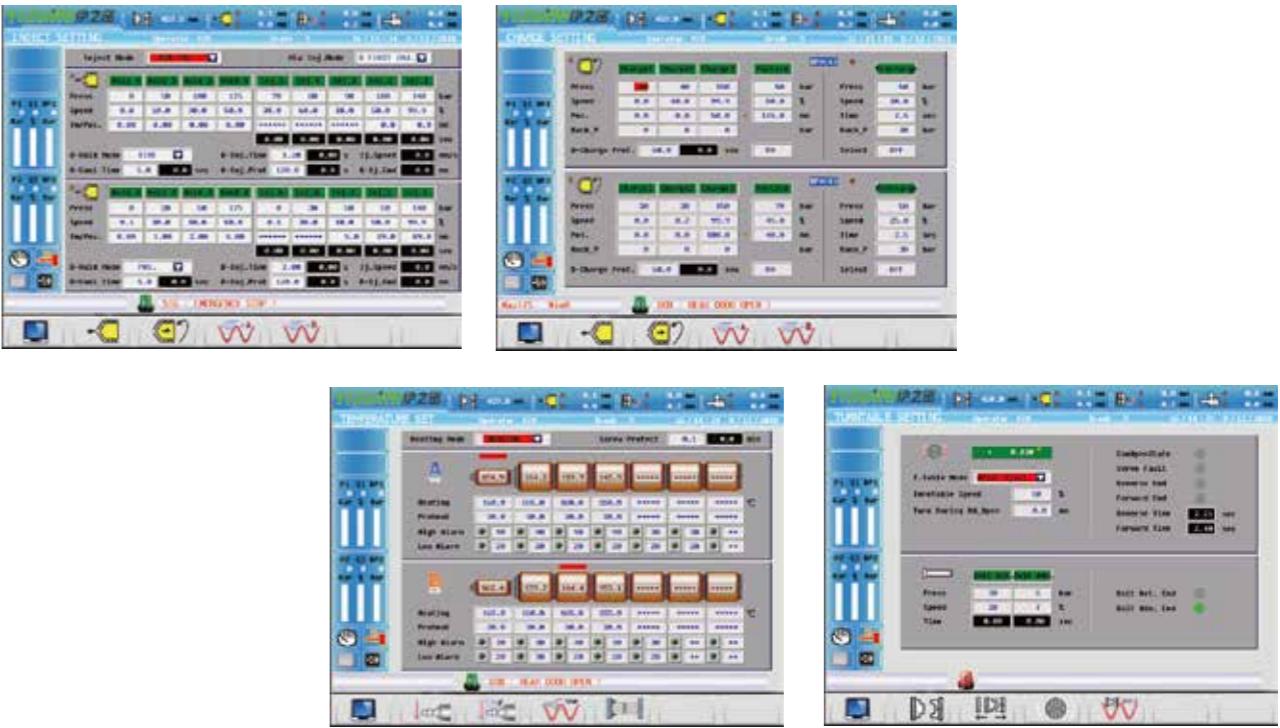


# 控制系统 Control system

## 功能强, 响应快, HMI人性化设计 Powerful, responsive, user-friendly HMI

采用多物料机专用的工控电脑, 功能强, 响应快, 对多个射台可实现同步精准控制, 并通过同步通信方式与转盘实现数据实时交换, 实现转盘精确定位控制; 人机界面和按键人性化设计, 操作更舒适, 更便捷。

The powerful and responsive industrial controller for multi-component injection molding machine can accurately and synchronously control several injection units.



### ①响应快

- 采用双CPU同步控制, 结合独立子程序设计, 提升程序执行效率, 确保每个射台动作运算时间控制在 1ms 内

### ②控制准

- 采用同步通信技术, 结合伺服闭环定位技术, 可实现转盘精度控制可达 0.001 度;
- 采用最新一代 PID 温度控制, 温度控制更加精致, 静态可达 ±0.4 度。

### ③功能强

- 远程联网生产在线监控功能;
- 通过 USB 实现无限的参数存储功能;
- 多射台 SPC 质量同步统计功能;
- 多级用户访问权限管理以及数据保护功能;
- 关键动作曲线规划和跟踪功能;
- 动作控制提前减速定位控制功能;
- 128 组内置扩展热流道控制功能;
- 辅机远程通信或 IO 连接和控制集成功能

### ①Responsive

- Synchronous control by double CPUs and separate subroutines make program execution more efficient and ensure the computing time of every movement of the injection unit is limited to 1ms.

### ②Accurate

- The turntable control accuracy is up to 0.001 degrees with the use of synchronous communication technology and servo closed-loop positioning technology.
- Static temperature control accuracy is ±0.4 degrees centigrade with the adoption of new PID control technology.

### ③Powerful

- Remote on-line monitoring of production
- Unlimited parameter storage through USB
- Statistical process control (SPC) for multiple injection units
- Multi-level user access and data protection
- Setup and tracking of key movement curves
- Early deceleration and positioning control of movements
- Up to 128-zone built-in hot runner control extension
- Integrated control of auxiliary equipment



### ④人性化设计

- 采用人机学旋转挂箱设计和防呆技术设计, 操作界面清晰、简洁、美观, 让操作更舒适更便捷。

### ④User-friendly design

- The ergonomic rotary controller cabinet, foolproof design and clear, simple operating interface make the operation of system more comfortable and convenient.

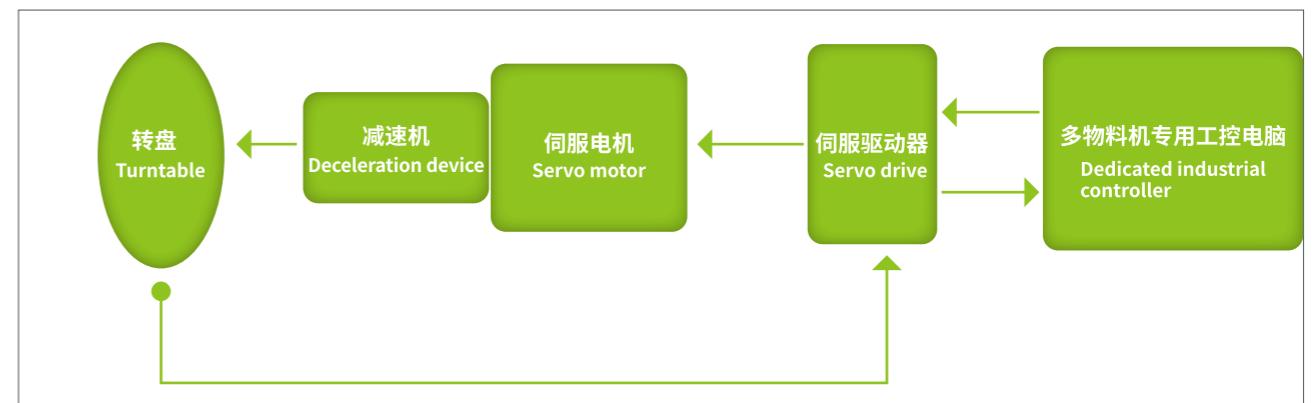


人机学电脑旋转挂箱  
Ergonomic rotary controller cabinet



便捷辅机插头  
Convenient power socket for auxiliary equipment

### ⑤转盘控制原理 Turntable control principle



转盘电动伺服控制系统包括多物料机专用工控电脑、伺服驱动器、伺服电机、减速机、高分辨率精度检测装置和转盘, 并由专用工控电脑为伺服驱动器规划控制方案, 并由伺服驱动器执行闭环定位控制, 转盘动作平稳, 定位精准。

The electric turntable servo control system consists of the industrial controller for multi-component injection molding machine, servo drive, servo motor, deceleration device, high-resolution accuracy inspection device and turntable. The controller offers the control plan to the servo drive which then performs closed-loop positioning control. The turntable has smooth movements and accurate positioning.

## 射台模块式多样化自由组合

### Diversified combinations of modular injection units

#### 宽板系列

母机:BTP系列  
组合形式:BTP/V、BTP/L、BTP/V/V、  
BTP/V/L

#### Wide platen series

IMM: BTP series  
Combinations: BTP/V, BTP/L, BTP/V/V, BTP/V/L



#### 窄板系列

母机:NT系列  
组合形式: NT/V、NT/L、NT/V/V、  
NT/V/L, NH/V

#### Narrow platen series

IMM: NT series  
Combinations: NT/V, NT/L, NT/V/V, NT/V/L, NH/V



#### 欧版W系列

母机:欧版W系列  
组合形式: W/V、W/L、W/V/V、W/V/L

#### Europe W series

IMM: Europe W series  
Combinations: W/V, W/L, W/V/V, W/V/L



## 射台配置表 Injection unit configuration

平行P型 P configuration		射台单元 Injection unit										
规格型号 Model	UNIT	70	110	190	300	420	630	930	1310	1870	2720	3700
螺杆直径 Screw diameter		Φ19/Φ22	Φ22/Φ26	Φ26/Φ30/Φ35	Φ30/Φ35/Φ40	Φ35/Φ43/Φ48	Φ43/Φ48/Φ53	Φ48/Φ53/Φ60	Φ53/Φ60/Φ68	Φ60/Φ68/Φ76	Φ68/Φ76/Φ84	Φ76/Φ84/Φ92
UN120C-BTP	iA											
	iB											
UN160C-BTP	iA											
	iB											
UN200C-BTP	iA											
	iB											
UN260C-BTP	iA											
	iB											
UN360C-BTP	iA											
	iB											
UN550C-BTP	iA											
	iB											
UN750C-BTP	iA											
	iB											

备注:1) 标有底色部分是每个吨位任意可选的射台, A、B射台的选择范围一样;2) 非任意可选的射台可以根据制品实际需要特工配置。

Note: (1) In the table above, the boxes in green represent the injection units available for each machine model. The range of selection for injection unit A and B is the same. (2) Injection unit not available as an option can be specially engineered according to actual needs.

直角L型 L configuration		射台单元 Injection unit										
规格型号 Model	UNIT	70	110	190	300	420	630	930	1310	1870	2720	3700
螺杆直径 Screw diameter		Φ19/Φ22	Φ22/Φ26	Φ26/Φ30/Φ35	Φ30/Φ35/Φ40	Φ35/Φ43/Φ48	Φ43/Φ48/Φ53	Φ48/Φ53/Φ60	Φ53/Φ60/Φ68	Φ60/Φ68/Φ76	Φ68/Φ76/Φ84	Φ76/Φ84/Φ92
UN120A5	iB											
UN160A5	iB											
UN200A5	iB											
UN260A5	iB											
UN320A5	iB											
UN400A5	iB											
UN480A5	iB											
UN560A5	iB											
UN650A5	iB											
UN800A5	iB											
UN1000A5	iB											
UN1400A5	iB											
UN1800A5	iB											
UN2200A5	iB											

备注:1) 直角L型主射台iA为A5对应的双缸射胶机构, 射台规格参考A5;2) 副射台iB为单缸射胶机构, 其标配为标有底色部分。

Note: For L configuration, the primary injection unit iA is the double-cylinder injection unit on A5 series (see A5 series specifications). Second injection unit iB is single-cylinder injection unit and standard specifications of iB are represented by green boxes above.

# 技术参数表 Specifications

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# 标配选配表 Features

	标配	选配	Standard	Optional
<b>锁模单元</b>				
高刚性对称均力模板 (BFC技术)	●			
电动伺服转盘	●			
磁浮转盘功能 (MLT技术, 120T~260T)	●			
转盘运水 (含1分2分水块)	●			
欧规EU18机械安装孔 (头板顶部机械手安装孔)	●			
机/电双重保护装置	●			
免调节机械安全锁	●			
自动集中润滑系统	●			
低压模具保护功能	●			
一键式自动调模功能	●			
模板平行度调节功能	●			
机门边加装防夹伤、缓冲条设计	●			
动模板耐磨锰钢带导轨	●			
安全踏板 (仅限750T及其以上机型)	●			
电动安全门		○		
双顶出独立油路控制功能		○		
液压伺服转盘		○		
液压非伺服转盘		○		
转盘10芯电信号插头		○		
转盘多组吹气		○		
欧规EU2码模孔		○		
磁力模板		○		
模具隔热板功能		○		
<b>射胶单元</b>				
高混炼免粘螺杆	●			
低惯量射胶传动机构	●			
多组射台模块式任意组合功能	●			
料管节能环结构 (专利设计)	●			
射嘴及多段PID温度控制	●			
螺杆防冷启动功能	●			
自动清料功能	●			
移动或滚动料斗装置	●			
螺杆转速检测	●			
全封闭式保温罩	●			
射嘴防护罩	●			
射移线性导轨	●			
射台手动集中润滑	●			
三色及以上多物料成型		○		
TPE专用料管组		○		
TPU专用料管组		○		
PC专用料管组		○		
特殊或可调中心距		○		
下料口温度检测		○		
陶瓷发热圈		○		
红外发热圈		○		
纳米保温功能		○		
硅胶射台		○		
电动射台		○		
气辅注射		○		
射移电子尺检测		○		
弹簧射嘴		○		
加长射嘴		○		
<b>液压系统</b>				
伺服泵系统	●			
低噪音节能型液压回路	●			
高精密实时旁路滤油器装置	●			
进口铭牌液压控制阀	●			
进口铭牌液压密封件	●			
差动快速合模装置	●			
<b>Clamping unit</b>				
High-rigidity platen with balanced force (BFC technology)	●			
Electric servo turntable	●			
Magnetically levitated turntable (MLT technology, 120-260T)	●			
Turntable water channel (with water manifold)	●			
Euromap 18 robot mounting hole (on the top of fixed platen)	●			
Mechanical/electrical protective device	●			
Adjustment-free mechanical safety lock	●			
Automatic central lubrication system	●			
Low-pressure mold protection	●			
One-button automatic mold height adjustment	●			
Platen parallelism adjustment	●			
Safety edges for machine gates	●			
Wear-resistant manganese steel guide rail for movable platen	●			
Safety foot plate (for 750T machine and larger models)	●			
Electric safety gate		○		
Hydraulic circuit control of double ejectors		○		
Hydraulic servo turntable		○		
Hydraulic non-servo turntable		○		
10-pin electrical connector for turntable		○		
Multiple sets of air blow		○		
Euromap 2 mold mounting hole		○		
Magnetic platen		○		
Mold thermal insulation plate		○		
<b>Injection unit</b>				
High-performance anti-sticking mixing screw	●			
Low-inertia injection drive mechanism	●			
Combination of multiple modular injection units	●			
Energy-saving groove design of barrel (patented design)	●			
Nozzle and multi-stage PID temperature control	●			
Cold start protection	●			
Automatic purging	●			
Movable or rolling hopper device	●			
Screw speed detection	●			
Fully-closed heat retaining cover	●			
Nozzle purge guard	●			
Linear guide rail for carriage	●			
Manual central lubrication of injection unit	●			
Three-component and multi-component injection molding		○		
Barrel unit for TPE		○		
Barrel unit for TPU		○		
Barrel unit for PC		○		
Special or adjustable mold locating hole center distance		○		
Feed port temperature detection		○		
Ceramic heater band		○		
Infrared heater band		○		
Nano thermal insulation function		○		
Injection unit for silicone		○		
Electric injection unit		○		
Gas-assisted injection		○		
Transducer for carriage position measurement		○		
Spring nozzle		○		
Extended nozzle		○		
<b>Hydraulic system</b>				
Servo pump system	●			
Low-noise energy-saving hydraulic circuit	●			
Precision real-time by-pass oil filter	●			
Imported branded hydraulic valve	●			
Imported branded hydraulic seal	●			
Differential fast mold closing device	●			

## 标配选配表 Features

	标配	选配
外露高压油管配防爆链	●	
熔胶数控背压	●	
液压油温度检测功能	●	
开模比例阀控制功能		○
射胶比例阀控制功能		○
高响应蓄能伺服注射功能		○
加大熔胶马达		○
独立液压油路顺序阀功能		○
气动顺序阀功能		○
动板(或定板)液压抽芯		○
液压油油位检测功能		○
油温预热功能		○
自封式吸油过滤器		○
同步控制功能(开模同步熔胶/顶出/抽芯)		○
加大动力功能		○
<b>控制系统</b>		
转盘数字闭环定位功能(DCPC技术)	●	
异常停电转盘保护功能	●	
转盘免归零功能	●	
开模智能减速功能	●	
多射台逻辑控制功能	●	
料管加热强制保护	●	
自动保温及预约加热功能	●	
USB数据下载及上传功能	●	
电线防鼠咬保护	●	
多级软件密码参数保护	●	
转盘开门连锁安全保护	●	
油温过高安全保护	●	
前、后门急停安全保护	●	
射嘴防护罩电器安全保护	●	
质量数据过程控制界面	●	
实时SPC监控功能	●	
熔胶前/后松退可选功能	●	
射胶转保压方式:时间/位置/时间+位置/压力	●	
工艺参数修改历史记录功能	●	
射胶同步信号功能	●	
多种操作语言	●	
10.4" TFT真彩色LED高清显示屏	●	
三色报警灯	●	
辅机电源插座(380VAC三组, 220VAC一组)	●	
欧规EU12机械手插头		○
欧规EU67机械手插头		○
抽芯顶出软件功能		○
集成热流道控制功能		○
气辅注射装置		○
电脑整机能耗统计显示功能		○
中央(联网)监控系统		○
安全门内侧安全光栅		○
更改电源电压		○
15"或12"高清显示屏		○
<b>其他</b>		
说明书	●	
避震脚	●	
工具箱及工具一套, 精密过滤器芯一件	●	
不锈钢料斗		○
码模螺丝		○
码模夹		○
自动上料机		○
玻璃管冷却流量计		○
干燥机		○

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