

"荃笙" 压铸机

TSUENSAINT SERIES DIE-CASTING MACHINE



"荃笙" 高精冲床

TSUENSAINT SERIES HIGH PRECISION PRESS MACHINE



NINGBO TSUENSAINT TECHNOLOGY DEVELOPMENT CO.,LTD.
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EUROPEAN STYLE
INJECTION MOLDING MACHINE

融合 创新 超越
Integration, Creation, Transcendence



宁波荃笙科技发展有限公司
NINGBO TSUENSAINT TECHNOLOGY DEVELOPMENT CO.,LTD.

自润滑专用套

用于关节、拉杆、导杆处，大幅增加合模部件的使用寿命，并减少润滑加油的频率。

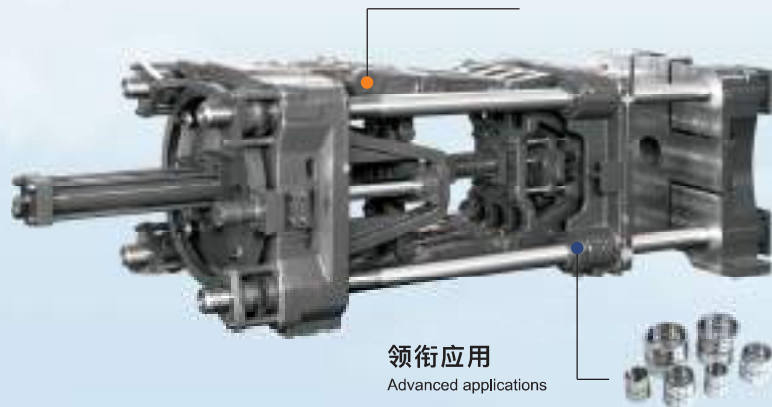
Self-lubricating special sets

Used for joints, tie-bars and guide bars, which can substantially increase the lifetime of clamping unit, and reduce the lubricating frequency as well.



含油轴套

Oil bushings



领衔应用

Advanced applications

U系列&J款伺服节能机



U Series / J Type Energy Saving Servo Machine



高精注射单元压力闭环/选配

High precision injection with pressure closed loop function (OPTIONAL)

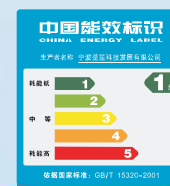


高品质螺杆组

特殊优质合金材料和处理，对结构与精度进行重点设计，达到与众不同的射出计量和高标准精度。

High quality screw set

The use of special high-quality alloy materials and processing, to focus on the structure and precision design to achieve different injection metering accuracy and high standards.



欢迎选购CE标准产品

Welcome to choose machines with CE standard as option



曾列火炬计划★倡导节能技术

Included in the National Torch Plan,
Advocating energy-saving technology

展现高精度

机器工况中的精确位置、压力、速度和保压，确保射胶计量的重复精度误差<0.3%，实现精密成型

Show High Precision

The accurate injection positioning, pressure, speed and pressure maintaining, to ensure the repeatability error of injection accuracy less than 0.3% to achieve precision molding.

超强节能特性

同样塑料制品的生产与普通注塑机相比较，节能率通常可达到45%-75%

Super Energy-Saving Features

Compared with standard injection machine, the energy saving rate can reach 45%-75% for the same plastic production.

高效率

总效率比普通机提高10%左右，拖动能力提高18%左右

High Efficiency

Compared with standard machine, the total efficiency can increase by 10% and dragging capacity is can increase by 18%.

高响应系统

系统加速和减速性能敏捷，力和速度的调整灵敏，采样处理速度达100KHz，快速启动时间0.05s

High Response System

The system acceleration and deceleration performance is quite agile and force&speed regulation is very sensitive. The sampling processing speed can reach 100KHz and system quick start time can reach 0.05s.

保持稳定可靠

压力 / 速度稳定，保压切换平稳精确

Maintain Stability and Reliability

The pressure or speed is stable and switch of pressure maintaining is smooth and accurate.

低油温

实现避免高压卸荷，工况中低油温状态，提高机器使用性能与使用时效，节约大量冷却水

Low Oil Temperature

Avoid high pressure unloading and low oil temperature situation during operation. Improve the operation performance, promote using efficiency and save a large quantity of cooling water.

节能J型特性 Energy-saving J series main features

J型系统的设计为公司技术领先者倡导的国内最早发起和研制被国家列入火炬计划的高节能注塑机。采用伺服马达驱动对机器工作状态是根据注塑制品工要求，将数据编入控制器后高速指令机器个动作不同负载需求，伺服驱动系统运行过程的线性与工艺指令保持高度跟随性，使系统的压力 / 流量形成闭环，实现了高机能 & 高节能(45%~75%)的科学结合，高响应系统使机器效率>98%。

J Series system design high energy-saving injection molding machine has been listed in our National Torch Plan and we're the earliest domestic company who is engaged in this project. Servo motor can dictate different machine action according to product workmanship requirement, it will input data into the controller and instruct each machine's movement quickly based on different load demand. The linearity of servo driving system operational process keeps good tracking with technological instruction. Therefore, the system pressure and flow becomes a closed loop, which achieves scientific combination of high machine performance & high energy-saving(45%~75%). With this high-response system, the machine working efficiency can reach 98% or more.



U系列/J款伺服节能系统/装置

U series / J type energy saving
servo system configuration

控制系统

- EST彩屏多功能/高端控制器
- 程序深层调整&维护的网通
- 空/负载参数设定/节能输出自控模块
- 高响应压力/流量闭环控制
- 多国语言选用&大容量模具组记忆功能

CONTROL SYSTEM

- EST multifunction high end controller
- Program further adjustment & Network maintenance
- Zero load & Over load parameter settings / Energy-saving output self-control module
- High-response pressure/flow closed-loop control
- Multiple language selection & Large-capacity mold group memory function

液压系统

- 伺服马达驱动（装置）高性能泵浦
- 系统压力/流量分离调节多级控制
- 空/负载节能输出自动控制

HYDRAULIC SYSTEM

- Servo motor drive unit & high performance pump
- System pressure/flow separation regulation and multilevel control
- Non-load & over load energy-saving output self-control

锁模系统

- 斜排式双曲肘锁模机构/同步齿轮液压调模
- 高灵敏低压模具保护装置
- 多级开合模压力/速度&位置尺数控制
- 集中式自动分配油脂润滑&含油轴承
- 中、大机液压抽插芯（中子2组）接口

CLAMPING SYSTEM

- Diagonal hinges twin toggle clamping mechanism/ Mold adjustment by synchronous gear hydraulic driving
- High sensitivity & low pressure mold protection device
- Multi-step mold opening & clamping pressure / Speed & position transducer digital control
- Centralized automatic distribute grease lubrication & oil bushings
- Hydraulic pull and insert cores (2 pcs of core) connector for medium and large size machine

注射系统

- 双缸平衡式高敏捷注射机构
- 多级注射压力/速度&位置数控
- 液压马达驱动螺杆与转速检测
- 储料电液比例背压阀控制（360T及以上机）
- 注射计量重复精度监测控制
- 储料动作防流涎控制
- 冷料启动储料防护控制
- 料管加热PID控制
- 喷嘴校准微调

INJECTION SYSTEM

- Double cylinder balanced type & High agility mechanism
- Multi-step injection pressure/ Speed & position digital control
- Hydraulic motor drives screw and rotation speed (RPM) detection
- Material charging electro-hydraulic proportional back pressure valve control (360T machine and above)
- Injection metering repetitive precision (repeat accuracy) monitoring and controlling
- Nozzle control in charging movement
- Cool material starts with charging protection control
- Barrel heating by PID control
- Nozzle calibration by fine adjustment

产品配置表，敬请另行垂询。

Please feel free to contact us if you need machine configuration list for more details, thank you!

PET & PVC

PET & PVC Special Injection
Molding Machine



- ◆ 高性能电镀铬或不锈钢PVC专用螺杆
- ◆ 加宽机门
- ◆ 配备两组以上的抽芯装置
- ◆ 多段机筒风冷装置，精确控制料温
- ◆ 大扭矩塑化液压马达
- ◆ PVC special screw with high performance hard chromium plating or with stainless steel
- ◆ Widen the safety door (Optional)
- ◆ Equipped with two or more core pulling device
- ◆ Multi stage of air cool device on barrel for precise control of material temperature
- ◆ Large torque plasticizing hydraulic motor

垫填料夹芯注塑机

Filler Sandwich Injection
Molding Machine

在传统塑料射出成型机上增加一组复合式喷嘴及料管组成独立的双料管，在射出的过程中可以同时或间隔方式将两种溶胶透过共同喷嘴射入模穴中达成双料共射，其中外层的溶胶称为皮层料，内层的溶胶称为核心料。



For some special products production, such machine add one set of compound nozzle and feeding barrel assembly on the traditional machine so as to achieve independent double barrels. During injection period, they can achieve double injection by charging with two materials and inject to mold cavity through the conjunct nozzle simultaneous or intervalic, in which the outer charge material is called external material while the inner one is called core material.

BMC 专用机款

BMC Special Injection Molding
Machine

配备针对BMC原料专用的热固性类理化部件，具有特殊填料自动压紧装置和特别高扭力液压马达储料&特殊射出油缸等组成的系统优化模块。

BMC injection molding machine is equipped with thermosetting physicochemical components which is specialized for BMC material. And it has system optimization module which is composed of specific charging automatic compressing device, specially high torque hydraulic motor for charging and special injection hydraulic cylinder etc.



① 进口品牌控制器

进口常选：KEBA科霸与B&R贝加莱为主
以体现高响应&多功能人性化控制

② CE标准系统&款型

获CE认证，电/液系统&机器款型
以提升工况中安全概率

③ 双油路快速系统

当开合模的同时进行顶出或选预塑的双动作
以实现增快机器循环高效率

④ 高效非标功率/扩容系统

在标准机功率上增加驱动功效
以明显加快工况循环&实现优质高效

⑤ 高增速/蓄能器装置

适用于超薄&快速成型类制品产出
以解决精密&高难度制品工艺要求

⑥ 高精注射单元压力传感装置

提升注射单元工况中系统压力实时循环
以实现注射/保压/预塑背压闭环功效

⑦ 高精注射伺服阀/闭环装置

适用于极精密高端制品工艺要求
以实现注射重复精度有效提高

⑧ 单缸快速注射装置

适用含360T以下合模匹配单缸高速射出成型
以确保超薄类制品产出实现优质高效

⑨ 合模&注射最佳机能组合

适用于针对性特种制品合模&注射/非标/优化匹配的
个性化组合机，以实现最佳量产的适性应用

I. Imported brand controller

Imported options: mainly KEBA and B&R, Display the concept of high response & multifunction people-oriented control.

II. CE standard system & series

Hybrid system & machine series, which is honored with CE Certificate, To improve the safety rate during machine operation.

III. Overlap movement high speed system

Ejection or plasticizing when mold opening & clamping, To increase machine cycle and achieve high efficiency.

IV. High efficiency non-standard power/capacity expansion system

Add driving function on standard machine power, So to increase operation cycle obviously & achieve super quality and high efficiency.

V. High speed acceleration /accumulator unit

Suitable for the production of thin-wall & fast molding products, So to meet the processing requirements of precision & high difficulty products.

VI. High precision injection unit pressure sensor device

Improve system pressure real time cycle during injection unit operation, So to realize the closed-loop effect of injection/holding pressure and pre-plasticizing & back pressure.

VII. High precision injection servo valve/closed-loop device

Applicable to processing requirements of extremely precision high end products, So to increase injection repeat accuracy efficiently.

VIII. Single cylinder fast injection device

Appropriate for 360T (or below) machine's clamping unit to match single cylinder high injection molding. So to ensure the production of ultrathin-wall products, and realize super quality and high efficiency.

IX. Optimum function combination of clamping & injection

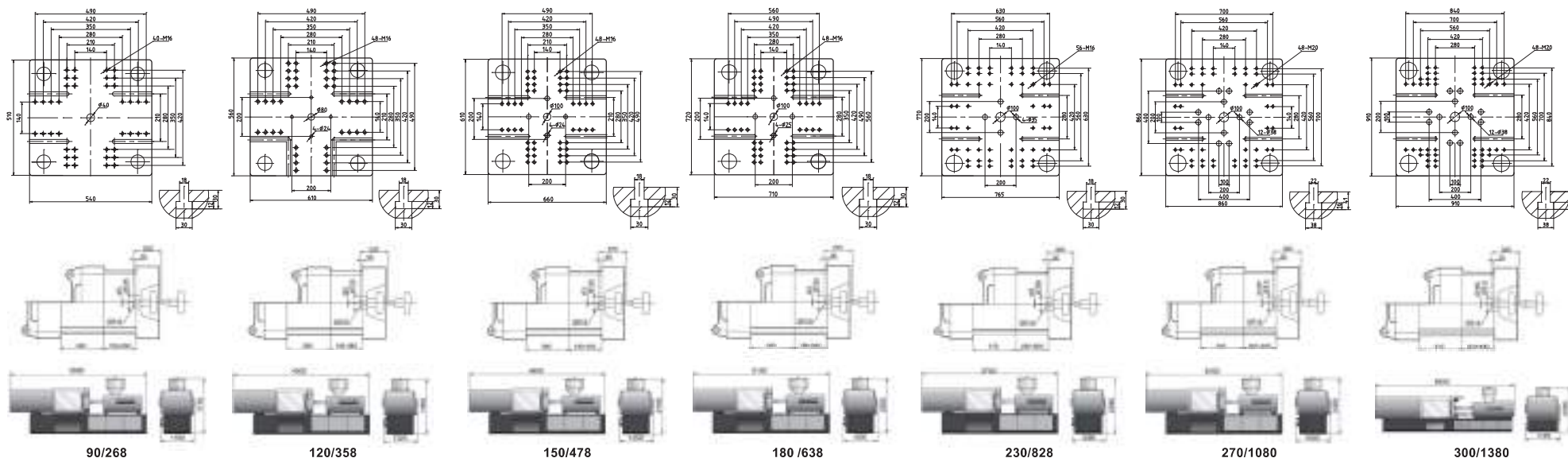
Suitable for the pertinent special products by nonstandard and optimum customized combination of clamping unit & injection unit machine, So to reach most suitable application of optimum mass production.



U系列规格参数

U series technical parameters

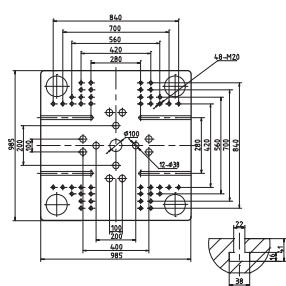
国际标准型号	INTERNATIONAL CLASS NO.	90/268				120/358				150/478				180/638				230/828				270/1080				300/1380				
项目/规格	TYPE / SPECIFICATION	U/90C				U/120C				U/150C				U/180C				U/230B				U/270C				U/300C				
螺杆型式	Screw type	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D					
注射装置	Injection Unit																													
螺杆直径	Screw diameter	mm	30	32	35	38	32	35	38	42	38	42	45	42	45	50	45	50	55	50	55	60	55	60	65					
螺杆长径比	Screw L/D ratio	L/D	23.5	22	20.1	18.5	24.1	22	20.3	18.4	21	19	17.7	23.6	22	19.8	24.4	22	20	24.2	22	20.2	24	22	20.3					
理论注射容量	Shot volume (theoretical)	CM ³	117	133	160	190	136	163	192	235	227	277	318	311	357	441	397	490	593	530	641	763	676	805	945					
注射重量(PS)	Injection weight (PS)	g	106	121	146	173	124	148	175	214	207	252	289	283	325	401	361	446	540	482	583	694	615	733	860					
注射速率	Injection rate	g/s	71	81	97	114	74	89	105	128	94	115	132	139	160	198	136	168	203	188	227	270	224	266	312					
注射压力	Injection pressure	Mpa	230	203	170	144	260	219	186	152	209	171	149	203	177	143	207	168	139	204	169	142	202	170	145					
螺杆转速	Screw speed	rpm	225				210				185				180				155				180				220			
合模装置	Clamping Unit																													
合模力	Clamping force	KN	900				1200				1500				1800				2300				2700				3000			
移模行程	Open stroke	mm	320				350				380				435				475				560				610			
拉杆内间距(宽×高)	Space between tie-bars(W*H)	mm	360×330				410×370				460×420				490×470				520×520				580×580				650×650			
最大模厚	Max. mould height	mm	370				400				470				590				560				620				700			
最小模厚	Min. mould height	mm	150				150				160				180				200				200				200			
顶出行程	Ejector stroke	mm	90				120				140				140				150				180				180			
顶出力	Ejector force	KN	30				38				50				50				70				70				70			
其它	Others																													
最大油泵压力	Pump max. pressure	Mpa	16				16				16				16				16				16				16			
电机功率(伺服)	Pump motor power (servo)	KW	11 (11)				13 (14)				13 (18.5)				18.5 (23)				18.5 (23)				22 (29)				30 (33)			
电热功率	Heating power	KW	6.8				7.5				9.3				12.3				14.8				16.8				18.3			
加热段数	Numbers of heating area	Segment	3+1				3+1				3+1				3+1				3+1				3+1				3+1			
外形尺寸(长×宽×高)	Machine dimension (L*W*H)	M	3.9×1.19×1.77				4.3×1.32×1.95				4.6×1.45×2.1				5.15×1.52×2.2				5.75×1.58×2.28				6.1×1.65×2.35				6.55×1.72×2.45			
油箱容积	Oil tank cubage	L	180				230				270				300				300				380				385			
机器重量	Machine weight	TON	2.8				3.5				4				6				7				9				10			



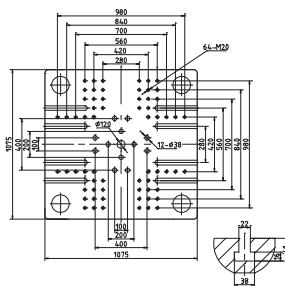
U系列规格参数

U series technical parameters

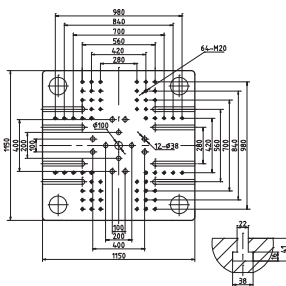
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项目/规格	TYPE / SPECIFICATION	U/360C				U/410C				U/460D				U/560D				U/680C				U/780C				
螺杆型式	Screw type	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	
注射装置	Injection Unit																									
螺杆直径	Screw diameter	mm	60	67	70	75	70	75	80	85	75	80	85	90	80	85	90	100	90	95	100	105	90	95	105	110
螺杆长径比	Screw L/D ratio	L/D	24.6	22	21.1	19.7	23.6	22	20.7	19.4	22	20.6	19.4	18.3	22	20.7	19.6	17.6	23.2	22	20.9	19.9	23.2	22	19.9	19
理论注射容量	Shot volume (theoretical)	CM ³	947	1181	1289	1480	1501	1723	1960	2213	1767	2010	2269	2544	2212	2497	2799	3456	2926	3260	3612	3982	3085	3437	4199	4608
注射重量(PS)	Injection weight (PS)	g	862	1075	1173	1347	1366	1568	1784	2014	1608	1829	2065	2315	2013	2272	2547	3145	2663	2967	3287	3624	2807	3128	3821	4193
注射速率	Injection rate	g/s	278	346	378	434	335	384	438	493	356	405	457	513	443	500	561	692	549	612	678	747	574	640	782	858
注射压力	Injection pressure	Mpa	231	186	170	148	199	173	152	135	191	168	149	133	179	159	142	115	177	159	143	130	195	175	143	130
螺杆转速	Screw speed	rpm	200				150				160				130				150				115			
合模装置	Clamping Unit																									
合模力	Clamping force	KN	3600				4100				4600				5600				6800				7800			
移模行程	Open stroke	mm	675 (705)				715 (720)				780 (790)				850 (860)				900 (920)				1000 (1020)			
拉杆内间距(宽×高)	Space between tie-bars(W*H)	mm	680×680				730×730				780×780				830×830				910×895				1010×980			
最大模厚	Max. mould height	mm	750				800				800				850				900				1000			
最小模厚	Min. mould height	mm	250				250				250				330				350				400			
顶出行程	Ejector stroke	mm	180				180				220				240				250				300			
顶出力	Ejector force	KN	70				90				110				150				150				210			
其它	Others																									
最大油泵压力	Pump max. pressure	Mpa	16				16				16				16				16				16			
电机功率(伺服)	Pump motor power (servo)	KW	37 (45.2)				37 (45.2)				45 (52)				55 (58)				30+37 (66)				37+37 (79)			
电热功率	Heating power	KW	24.7				29.3				29.3				31.4				42.95				56.7			
加热段数	Numbers of heating area	Segment	4+1				5+1				5+1				5+1				5+1				6+1			
外形尺寸(长×宽×高)	Machine dimension (L*W*H)	M	7.38×1.95×2.55				7.65×2.05×2.6				8.05×2.1×2.8				8.45×2.15×2.84				10.6×2.28×2.89				11.58×2.3×3.2			
油箱容积	Oil tank cubage	L	510				690				695				795				1100				1200			
机器重量	Machine weight	TON	13.5				16				18				21				29.8				43			



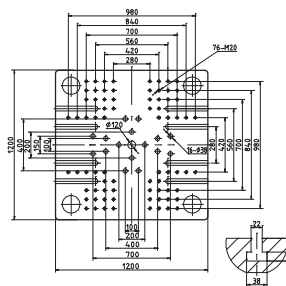
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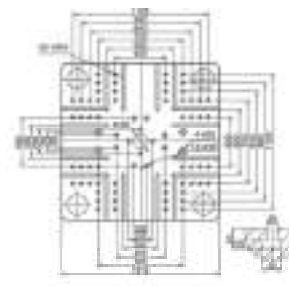
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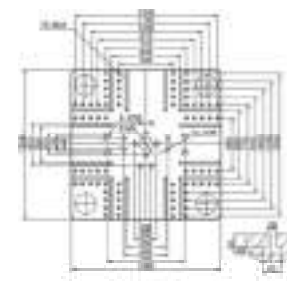
460/3380



560/3980



680/5180



780/6080

U系列规格参数

U series technical parameters

国际标准型号	INTERNATIONAL CLASS NO.	1080/6380				1280/9780				1420/11580				1680/12980				2200/16580				3000/62000			
项目/规格	TYPE / SPECIFICATION	U/1080C				U/1280C				U/1420C				U/1680C				U/2200C				U/3000C			
螺杆型式	Screw type	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	A	B	C		
注射装置	Injection Unit																								
螺杆直径	Screw diameter	mm	90	100	110	120	110	115	120	125	110	120	130	140	120	130	140	150	150	160	170	180	210	220	
螺杆长径比	Screw L/D ratio	L/D	25.6	23	20.9	19.2	23	22	21.1	20.3	25.1	23	21.2	19.7	26	24	22.3	20.8	23.5	22	20.7	24.8	21	21	
理论注射容量	Shot volume (theoretical)	CM³	3180	3927	4750	5655	5270	5760	6272	6806	5559	6616	7765	9006	6673	7831	9082	10426	13900	15800	17900	29390	40000	43904	
注射重量 (ps)	Injection weight (PS)	g	2895	3574	4320	5145	4796	5242	5708	6193	5059	6021	7066	8195	6072	7126	8265	9488	12688	14436	16297	26740	36400	39953	
注射速率	Injection rate	g/s	581	717	868	1033	793	867	944	1024	752	895	1050	1218	1057	1240	1438	1650	1315	1496	1689	1468	2000	2200	
注射压力	Injection pressure	Mpa	217	176	145	122	186	170	156	144	208	175	149	128	194	165	142	124	173	152	134	210	154	141	
螺杆转速	Screw speed	rpm	100				90				90				85				75				50		
合模装置	Clamping Unit																								
合模力	Clamping force	KN	10800				12800				14200				16800				22000				30000		
移模行程	Open stroke	mm	1080				1300				1350				1550				1870				2000		
拉杆内间距(宽×高)	Space between tie-bars(W×H)	mm	1125×1080				1260×1160				1310×1300				1500×1400				1750×1600				1900×1750		
最大模厚	Max. mould height	mm	1100				1250				1400				1500				1700				1900		
最小模厚	Min. mould height	mm	400				450				600				700				780				1000		
顶出行程	Ejector stroke	mm	340				360				360				420				420				450		
顶出力	Ejector force	KN	248				248				260				420				490				565		
其它	Others																								
最大油泵压力	Pump max. pressure	Mpa	16				16				16				17.5				16				16		
电机功率(伺服)	Pump motor power (servo)	KW	37+45 (91)				45+55 (99)				55+55 (116)				45+45+55 (151)				45+55+55 (168)				55+55+55+55 (232)		
电热功率	Heating power	KW	59				66.1				86				94.9				114				117		
加热段数	Numbers of heating area	Segment	6+1				6+1				7+1				8+1				9+1				10+1		
外形尺寸(长×宽×高)	Machine dimension (L×W×H)	M	12.1×2.64×3				12.82×2.78×3.35				15.2×3.00×4.13				16.35×3.15×4.17				18.6×3.6×4.42				22.00×5.50×5.00		
油箱容积	Oil tank cubage	L	1600				2100				2900				3000				3700				4500		
机器重量	Machine weight	TON	53				62				90				125				140				220		

