

力松®—让增效降本发生

精密 高速制笔专用注塑机

Precision High Speed Injection molding machine for pens



LISONG 力松®

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宁波力松注塑科技有限公司



关于力松 / About US

宁波力松注塑科技有限公司专业从事高速精密自动注塑成型系统、自动化系统框架和安全、注塑人工智能和工业4.0开发及其应用的研制。公司产品主要应用于医疗用品、化妆品包装、食品包装、文具制笔等领域，在细分市场竞争力强。

公司以技术革新为驱动力，由国家千人计划专家领衔国内技术研发团队，引入一批曾就职于HUSKY、KBASE INC的高级技术人才，领导公司技术革新与开拓前沿市场。同时，依托加拿大新锐工业自动化控制企业，在高速精密注塑设备自动化、注塑机应用行业的工厂自动化等领域为来自全球的客户提供专业的注塑机整体系统解决方案和智能自动化方案。

力松致力于为客户创造更多价值，让增效降本发生！

Ningbo Lisong Injection Moulding Technology Co., Ltd. specialises in high-speed injection moulding systems, automation and Industry 4.0. The company's products are used in many fields, including medical supplies, cosmetics, food packaging and stationery. They are very competitive.

The company is led by experts from the National Thousand Talents Programme. They are responsible for leading the domestic technology research and development team. They have also brought in a group of senior technical talents from HUSKY and KBASE INC. These people are leading the company's technological innovation and exploring new markets. Lisong also works with Canadian companies to provide customers with injection moulding machine solutions.

Lisong is committed to creating more value for customers and making efficiency and cost reduction happen!



发明专利、软件著作权几十余项 • 国家高新技术 • 宁波专精特新企业



*ISO9001:2015质量管理体系认证

*TUV频发的CE证书



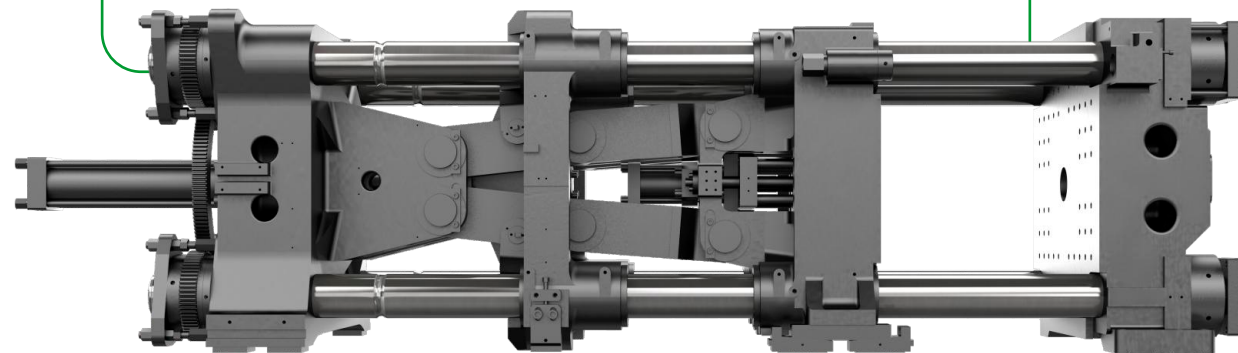
锁模单元

MOULD CLAMPING UNIT

FUNCTIONS & FEATURES

- 高刚性机架，重心低，稳重
- 上模高度低，充分考虑厂房层高
- 骨骼粗壮，钣金紧凑，占空少

- 大开模行程，大拉杆间距。
- 机械直压锁模，锁模力传递均匀、稳定，产品重量轻，省料。
- 加厚模板具有高刚性，弹性形变少，成形锁模力更低，有效保护模具。
- 开合模伺服阀，重复定位精度 ± 0.1



- High rigidity frame, low centre of gravity, stable.
- Low height of upper mould, fully consider the height of plant floor.
- Strong bones, compact sheet metal, occupying less space.

- Large mould opening stroke, large tie bar spacing.
- Mechanical direct pressure clamping mould, clamping force transmission is uniform and stable. Product weight is light, save material.
- Thickened formwork has high rigidity and less elastic deformation. Lower clamping force for forming and effective protection of moulds.
- Servo valve for opening and closing moulds, repeat positioning accuracy ± 0.1

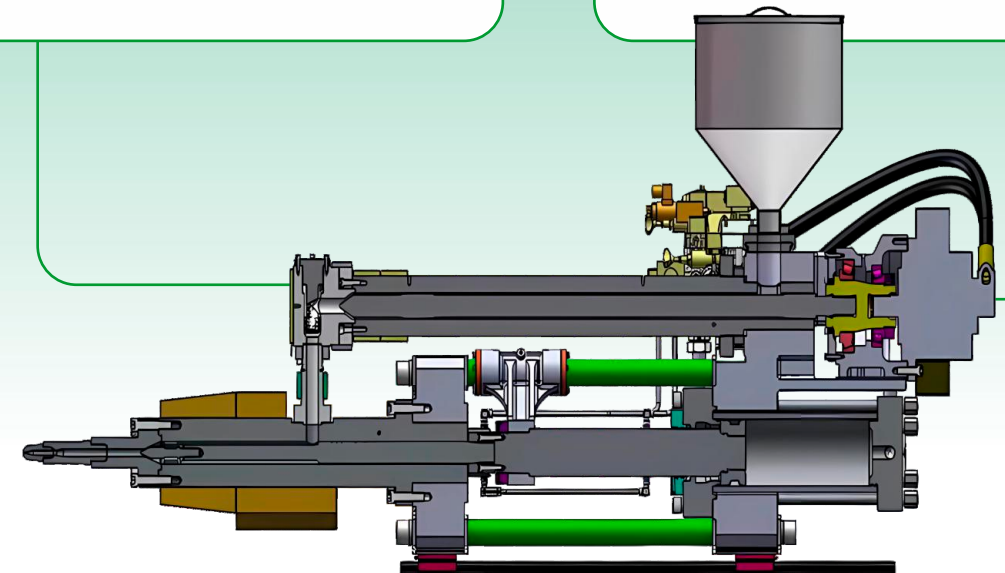
注射单元

INJECTION UNIT

FUNCTIONS & FEATURES

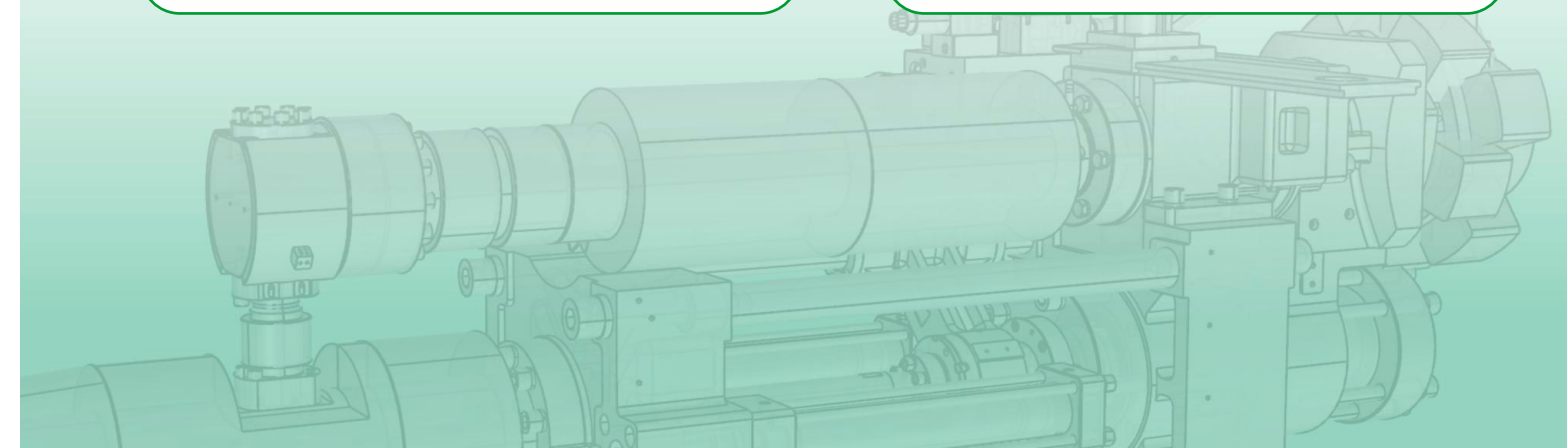
- 优化设计的注射结构 注射惯量更低,起步快,停的稳,注射精度高。
- 标配红外纳米加热圈,升温快、保温性能好,节电超 30%，闭环 PID 温度控制，温度控制精准。

- 优化设计的料筒螺杆,滤网设置在加料段,不堵喷嘴,产品稳定。
- 采用双螺杆设计,注射行程长、克重大。
- 采用大 /D 比 低剪切 高混炼优化螺杆,混炼效果好、塑化效率好。



- Optimised design of the injection structure Lower injection inertia, quick start, stable stop, high injection precision.
- Standard infrared nano heating ring, fast warming, good heat preservation performance, power saving of more than 30%, closed-loop PID temperature control, precise temperature control.

- Optimised design of the barrel screw, screen in the charging section. No clogging nozzle, stable product.
- Double screw design, long injection stroke and high weight.
- Adoption of large /D ratio, low shear, high mixing optimised screw, good mixing effect, good plasticising efficiency.



Technical Data LS 170PII/ LS 380PII... 技术参数



Ningbo LiSong Injection Technology Co.,Ltd.		LS 170 PII	LS 220 PII	LS 290 PII	LS 380 PII
Model description	型号	170/510-1000	220/580-1300	290/630-1600	380/670-3200
International size description	国际标准尺寸	1700-1000	2200-1300	2900-1600	3800-3200

Clamping unit 合模装置			170/470	220/580	290/630	380/670
Clamping force	合模力	[KN]	1700	2200	2900	3800
Locking force	锁模力	[KN]	1870	2420	3190	4180
Max.mould opening stroke	最大开模行程	[mm]	430	500	550	690
Min.mould height	最小模厚	[mm]	180	200	220	250
Max.mould height	最大模厚	[mm]	520	550	600	680
Max.daylight	最大模板间距	[mm]	950	1050	1150	1370
Mould platen(h×v)	模板尺寸 (水平×垂直)	[mm]	750x750	830x830	900x900	1000x970
Distance between tie bars(h×v)	拉杆间距 (水平×垂直)	[mm]	510x510	580x580	630x630	670x640
Ejection stroke	顶出行程	[mm]	160	160	160	160
Ejection force	顶出力	[KN]	67	89	110	158

Injection unit 注射装置			1000	1300	1600	3200
Screw diameter	螺杆直径	[mm]	52	55	60	70
Screw geometry	螺杆形状		Standard 标准	Standard 标准	Standard 标准	Standard 标准
L / D ratio	长径比		25	24	22	24
Injection screw diameter	注射螺杆直径	[mm]	45	52	52	60
Spec.inj.Press. (up to 400 °C)	注射压力 (至 400°C)	[bar]	1778	1710	1710	1690
Max. cylinder head volume	理论注射容积	[cm³]	588	786	786	1781
Max. shot weight (PS)	最大注射量	[g]	535	715	715	1621
Max. Rate of injection 最大注射速率						
> without accumulator	> 无蓄能器	[cm³/s]	329	429	429	506
Injection speed 注射速度 (Under 1000bar injection pressure)						
> without accumulator	> 无蓄能器	[mm/s]	207	202	202	179
Max. screw stroke	最大螺杆行程	[mm]	370	370	370	630
Max. nozzle dipping depth(SVO)	最大喷嘴伸出模板长度 (SVO)	[mm]	80	80	80	80
Number of heating zones	加热段数量		8	8	8	10
Hopper capacity	料斗容积	[ltr.]	35	35	35	70

General data		综合数据	
Oil tank capacity	油箱容量	[ltr.]	
Installed electrical rating		额定电气功率	
> capacity with hydraulic drive	> 液压驱动功率	[≈ kW]	
> heating capacity of screw cylinder>	料筒加热功率	[≈ kW]	
> capacity with electr drive	> 电器总功率	[kW]	
Net weight (without oil)	机器净重 (不含油)	[≈kg]	
Machine dimensions(l × w × h)	机器尺寸 (l×w×h)	[≈ m]	

170/510-1000	220/580-1300	290/630-1600	380/670-3200
250	250	250	560
37	45	45	55
29.2	29.2	29.2	45.4
66.2	74.2	74.2	100.4
7200	8700	11200	15200
5.4x1.43x2.4	5.8x1.5x2.4	5.9x1.62x2.4	7.5x1.75x2.8

Technical Data LS 170Ps...LS328Ps 技术参数



Ningbo LiSong Injection Technology Co.,Ltd.		LS 170 Ps	LS 220 Ps	LS 270 Ps	LS 328 Ps
Model description	型号	170/470-780	220/530-1210	220/580-1440	328/630-2000
International size description	国际标准尺寸	1700-780	2200-1210	2700-1440	3280-2000

Clamping unit 合模装置			170/470	220/530	270/580	328/630
Clamping force	合模力	[KN]	1700	2200	2700	3280
Locking force	锁模力	[KN]	1870	2420	2970	3608
Max.mould opening stroke	最大开模行程	[mm]	430	500	550	640
Min.mould height	最小模厚	[mm]	180	200	220	250
Max.mould height	最大模厚	[mm]	520	550	580	610
Max.daylight	最大模板间距	[mm]	950	1050	1130	1250
Mould platen(h×v)	模板尺寸 (水平×垂直)	[mm]	745x655	800x800	875x875	940x900
Distance between tie bars(h×v)	拉杆间距 (水平×垂直)	[mm]	470x410	530x470	580x515	630x585
Ejection stroke	顶出行程	[mm]	160	160	160	160
Ejection force	顶出力	[KN]	67	89	110	133

Injection unit 注射装置			780		1210		1440		2000
Screw diameter	螺杆直径	[mm]	45	50	50	55	55	60	65
Screw geometry	螺杆形状		Standard 标准	Standard 标准	Standard 标准	Standard 标准	Standard 标准	Standard 标准	Standard 标准
L / D ratio	长径比		23	23	24.2	22	22	20.1	22
Injection screw diameter	注射螺杆直径	[mm]							
Spec.inj.Press. (up to 400 °C)	注射压力 (至 400°C)	[bar]	2192	1776	2064	1706	2024	1700	1704
Max. cylinder head volume	理论注射容积	[cm³]	358	442	589	713	713	848	1178
Max. shot weight (PS)	最大注射量	[g]	326	402	536	649	649	772	1072
Max. Rate of injection 最大注射速率									
> without accumulator	> 无蓄能器	[cm³/s]	267	330	324	392	364	433	501
Injection speed 注射速度 (Under 1000bar injection pressure)									
> without accumulator	> 无蓄能器	[mm/s]	168	168	165	165	153	153	151
Max. screw stroke	最大螺杆行程	[mm]	225	225	300	300	300	300	355
Max. nozzle dipping depth(SVO)	最大喷嘴伸出模板长度 (SVO)	[mm]	80	80	80	80	80	80	80
Number of heating zones	加热段数量		4	4	5	5	5	5	6
Hopper capacity	料斗容积	[ltr.]	35	35	35	35	35	35	35

General data 综合数据		170/470-780		220/530-1210		270/580-1320		320/630-2000	
Oil tank capacity	油箱容量	[ltr.]		250		540		540	
Installed electrical rating 额定电气功率									
> capacity with hydraulic drive	> 液压驱动功率	[≈kW]		37		45		45	
> heating capacity of screw cylinder> 料筒加热功率		[≈kW]		13.3		14.8		24.3	
> capacity with electr drive	> 电器总功率	[kW]		50.3		51.8		69.3	
Net weight (without oil)	机器净重 (不含油)	[≈kg]		6600		6800		8400	
Machine dimensions(l×w×h)	机器尺寸 (l×w×h)	[≈m]		5.3x1.5x1.85		6.1x1.55x2.1		6.3x1.62x2.1	