



CHINA-HWAMDA
THE CRAFTSMANSHIP OF THE WORLD
中国的华美达,世界的工匠心



M9 高精度伺服节能注塑机

HIGH PRECISION SERVO TYPE
PLASTIC INJECTION MOLDING MACHINE

宁波华美达集团有限公司
NINGBO HWAMDA GROUP CO., LTD.

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宁波华美达机械制造有限公司地处“中国塑机之都”的浙江省宁波市，是一家专业化生产塑胶注塑成型机械的高新技术企业，经过不断的技术创新，公司自主研发的系列产品已广泛应用于汽车、电子、医疗、环保、包装、物流等众多注塑生产行业，目前，华美达已经成长为具有雄厚规模和竞争实力的中国注塑机行业前列企业。

华美达拥有4个生产基地，超过10万平方米厂房设施，各种大型先进精密加工设备，团结了一支高素质的企业管理与技术创新团队。公司一直致力于高效节能型注塑机的开发制造与市场推广，已成功推出的有伺服节能注塑机、二板注塑机、全电动注塑机、高速精密注塑机、双色注塑机等多个系列以及各种行业专用型产品。

为贴近客户，公司大力开拓国际市场，在国内外建立60余处完善的销售机构及海外服务中心，华美达注塑机受到了北美、中东、南美、东南亚、欧洲等各个国家和地区客户的使用和欢迎，建立了面向国际的市场营销体系。

华美达公司通过了ISO9001、ISO14001、OHSAS18001管理体系认证以及CE产品认证，所生产的各系列注塑机均配备世界知名品牌的液压、电器及控制系统，引进国际领先设计理念，通过严格的检验、加工、装配、调试，为客户提供最优质的产品与服务。

一流的品质，是华美达执着追求的重要目标。尽力满足顾客需求，以精益求精、开拓进取的企业精神缔造辉煌的未来，公司始终坚持“专心专注，做好塑机”的企业理念，为中国注塑机械产业的发展和提高做出自己的贡献。

关于华美达 About US



Ningbo Hwamda Machinery Manufacturing Co., Ltd. is a new and high technology enterprise devoted to manufacture plastic injection machine, lying in the "City of China plastic molding machine" - Ningbo, Zhejiang.

Now, Hwamda Company owns four factories with more than one hundred thousand square meters. There are over 400 workers and staff members, holding together a high-quality team of managers and technical team. Our company always devoted to R&D for high efficiency and energy-saving injection molding machine. At present, our main products including servo motor energy saving machines, two platen machines, full electric machines, high speed machine for thin-wall products, twin-color machines and other standard or special injection molding machines.

Following the idea of serving customers, we have established more than 60 perfect sales & service branch in China and abroad. Hwamda machine has sold to many countries such as North America, Europe, Russia, Poland, Mexico, India, Sri Lanka, Egypt, Brazil, Peru, Colombia, etc. Hwamda has gradually set up a marketing system covering both the domestic and overseas markets.

Hwamda has passed the ISO9001, ISO14001, OHSAS18001 and CE certification. All the series of injection machine are equipped with world famous hydraulic & electric elements and control system. Through strict inspection, assembly and test, Hwamda has provided first-class products and services to customers.

"First-class quality" is what we are pursuing the most. We will try our best to meet the requirements of customers and create even better future. Our company firmly sticks to the idea of "With undivided attention to manufacture excellent plastic injection molding machines", and makes our own contribution for the development and improvement of national plastic industry.



M9 SERIES

高精度伺服节能注塑机

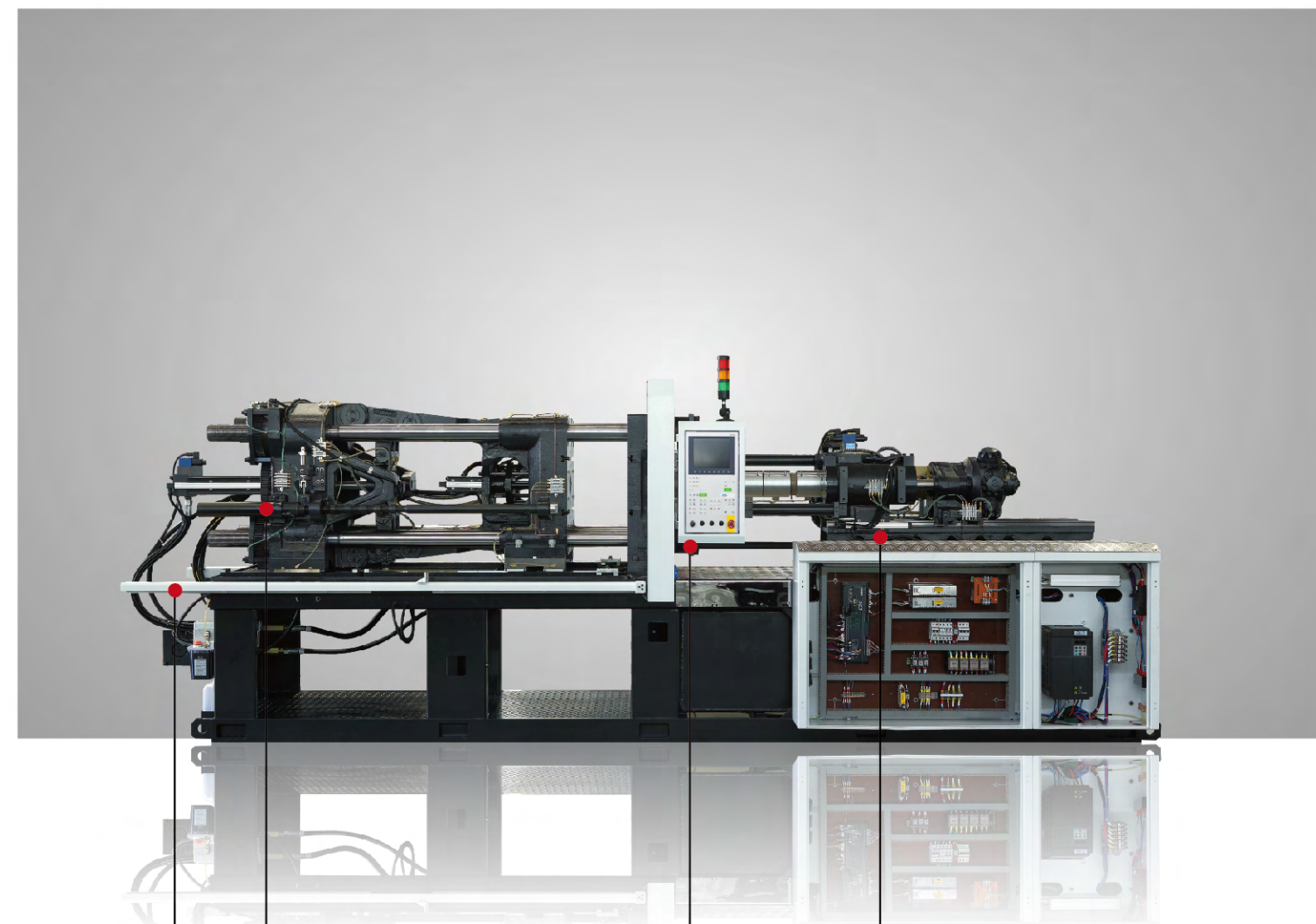
High Precision Servo Type
Plastic Injection Molding Machine



华美达M9系列是基于“精密”，“可靠”，“稳定”的研发理念，设计开发的全新系列伺服节能型精密注塑机，在集合M8系列产品的各种优势基础上，进一步升级强化机械部分设计，提升可靠性和稳定性，大幅度降低后期机器维修率。

The new concept M9 series hydraulic machine adopted high injection speed fast response and reliable span life. Combined with advantages of M8 series, M9 serial machine focuses on improving mechanical rigidity, performance stability and easy maintenance.

Overview M9系列机器特点



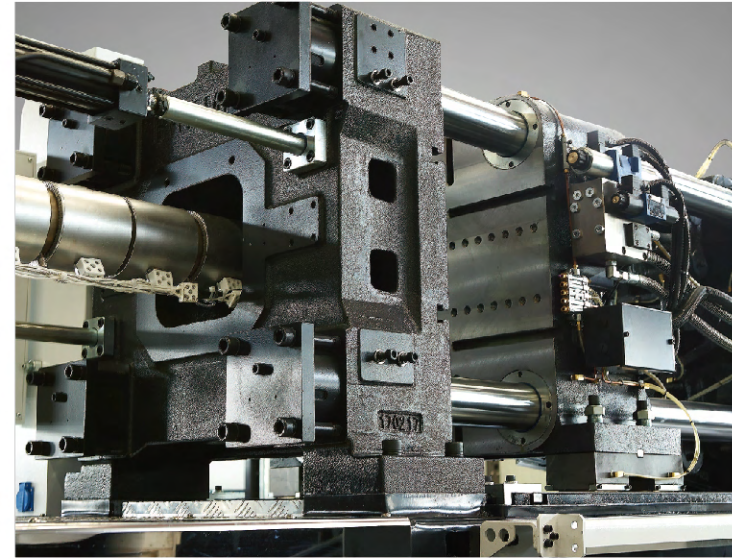
注射机构模块化设计
Modular Design for Injection Unit

全新设计高刚性锁模机构
New Designed Clamping Unit

高刚性机架
High Rigid Frame

高性能控制系统，响应快，精度高
Optimized Control System
Excellent in Response and Precision

Clamping unit 锁模单元

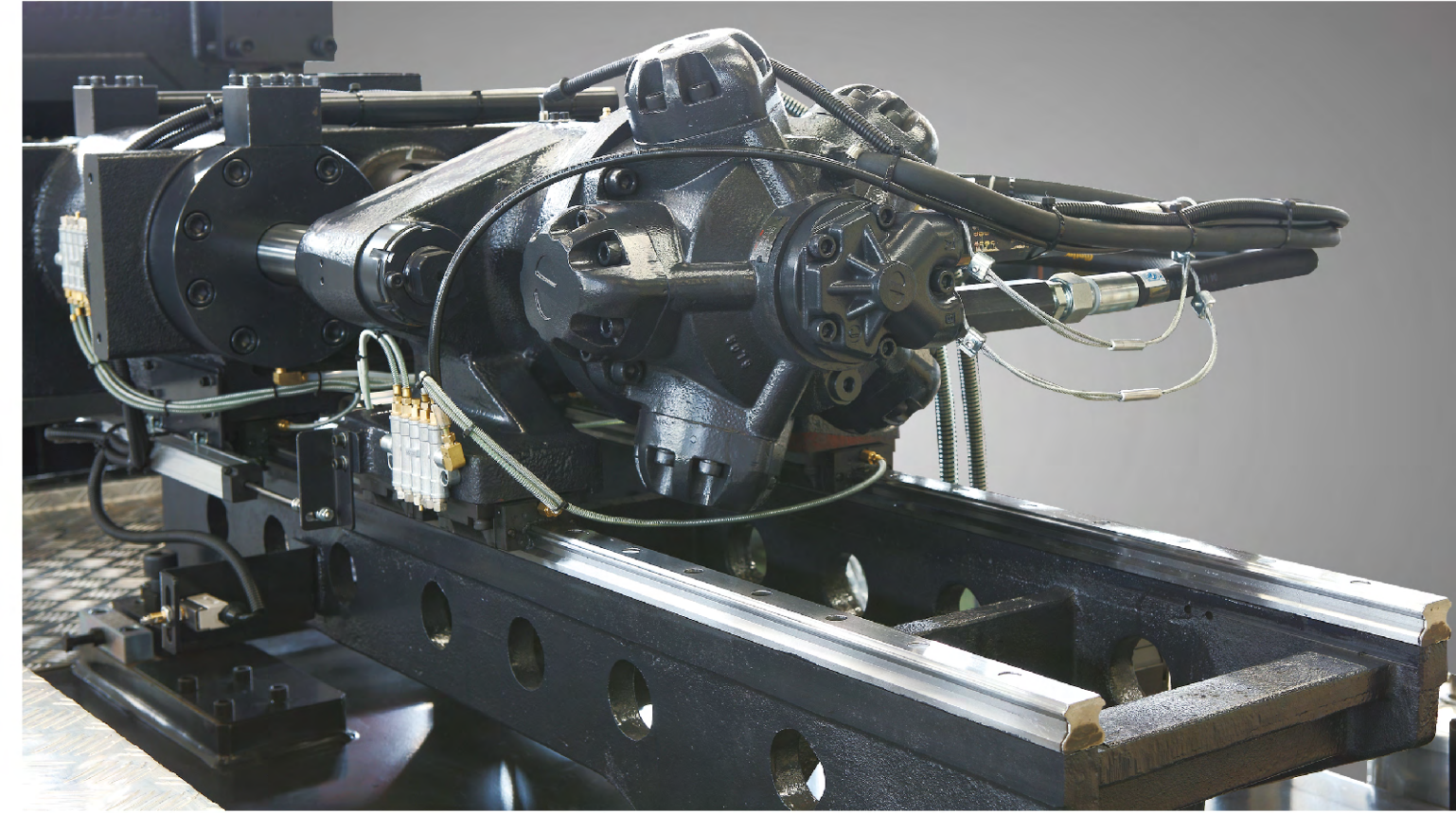
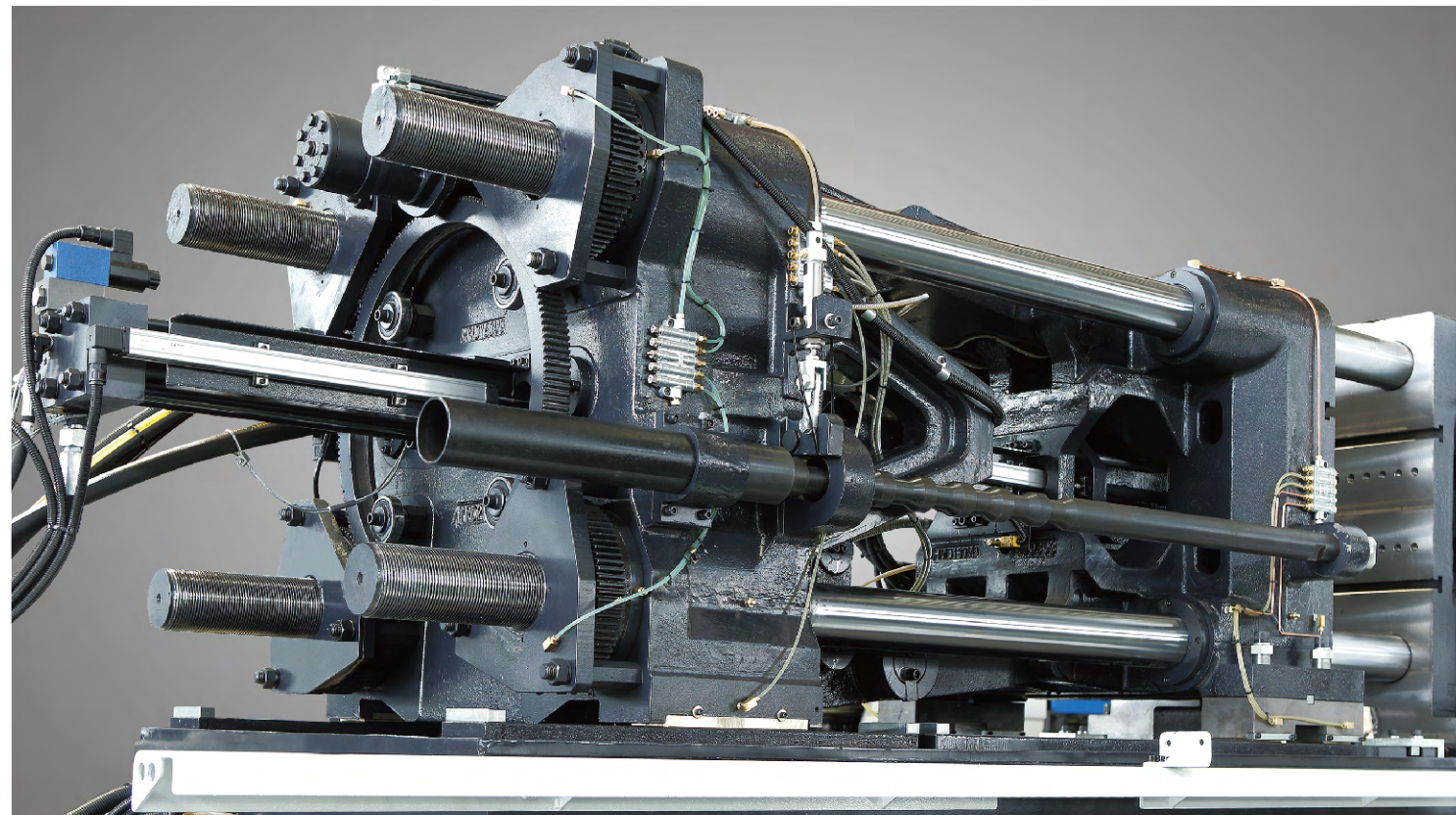


- 标配T型槽模板，上下模具方便快捷。采用封闭定量检知式稀油润滑系统，润滑油用量小，润滑可靠。

T-slot allows easy mold loading. Close type oil lubrication is optimal in precise and stable performance.

- 全新设计的锁模机构，运行特性平稳，快速。优化了拉杆内间距和开模行程。特别升级了整个机构的机械强度，刚性好，变形小，内应力小，耐疲劳度好，尤其适合成型周期短的制品和精密制品。

New design clamping unit prevents stable and fast performance. Not only tie bar distance and open stroke are optimized but also rigidity and fatigue are enhanced, especially suits for short circle and precise products.



注射单元 Injection unit

- 优化设计注射运动部件及导向机构。全系列产品采用线性导轨作为导向机构并对注射动板部分进行轻量化设计，使注射动态响应大幅提高。由于摩擦力的大幅下降，降低了熔胶时马达负载，进一步提升熔胶背压精准度。

Linear guide adopt in injection unit presents lighter weight and faster dynamic response. Due to friction force reduced, it drastically cut down motor load during charging period and raise back pressure precision.

- 射台采用前后安装位非对称设计，机台在不更改设计的情况下可以适应长径比17~25不同长度的各种专用螺杆，既可在同一个机架上安装大长径比的PET塑料螺杆料筒组，也可以安装小长径比的热固性塑料螺杆料筒组，组合灵活多变，通用性极佳。

Injection carriage unit with asymmetric installation design effectively prevents various universal usage for screw and barrel which allow equipping screw L/D ratio from 17-25. That means injection PET injection unit and thermosetting injection unit are both suitable for the same injection carriage unit.

- 采用斜排双射移布局，高压注射时，料筒受力平衡，有效避免在配备超小直径螺杆时，由于座台受力不平衡造成料筒螺杆弯曲断裂。

Double oblique cylinder design can effectively offer ideal force balance to avoid small size screw and barrel bent and crack.

- 全面提升注射压力和注射速度，相比M8系列，M9系列标准螺杆最大注射压力和速度提高了10%~15%。

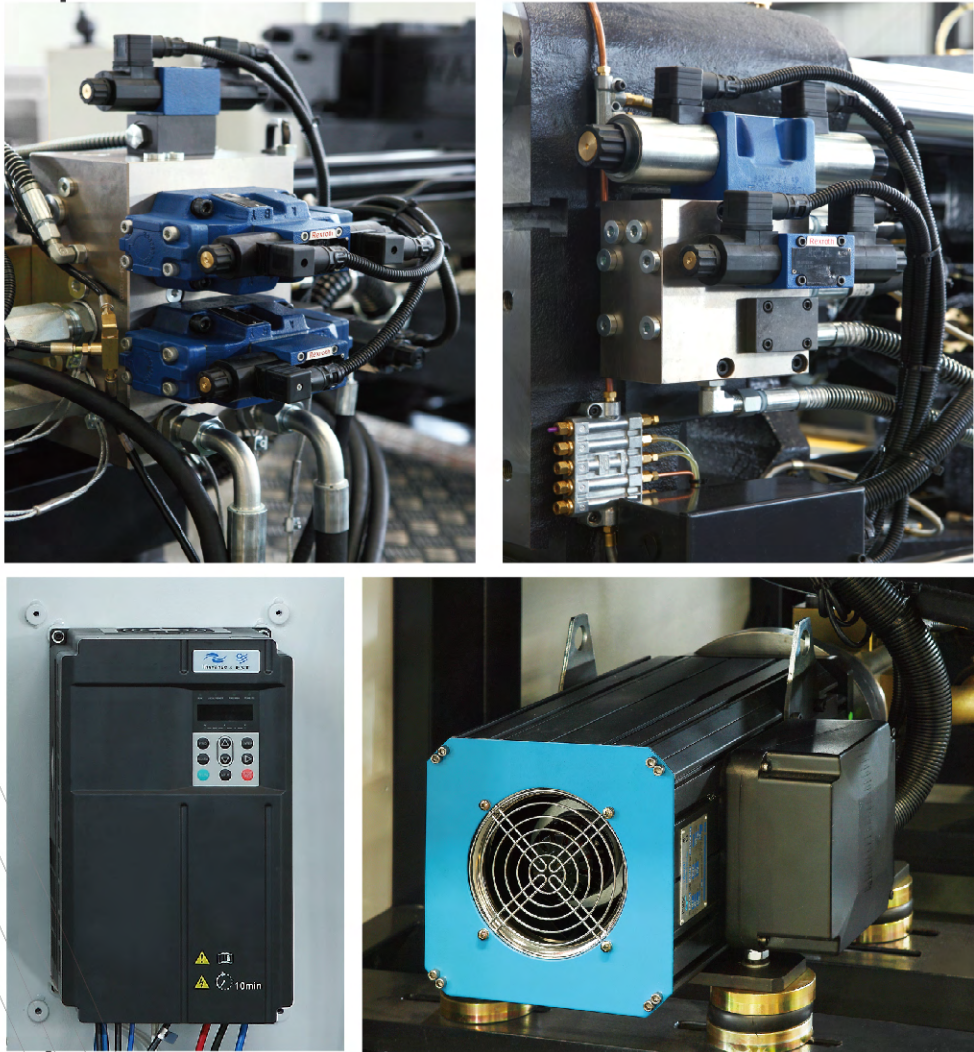
10%-15% injection pressure and speed are enhanced comparing with previous M8 series.

Control system

控制系统

● 液压换向阀、高压软管等配件选用知名品牌，油路运行稳定可靠。
全面改进油路块密封方式，杜绝渗漏现象。

Hydraulic circuits adopt top brands valve and hose to have optimal condition for sealing and avoiding oil leakage.



● 采用闭环永磁伺服泵系统，控制精确、稳定，同时节能。
Sync servo motor enables efficiency response and capacity and offers excellent performance in energy saving.

电控单元

Electronic control unit

● 采用高性能注塑机专用控制器，大规格彩色显示屏，精度高，人机界面友好。电器元件均采用ABB，施耐德，穆勒等进口品牌，质量稳定，使用寿命长。

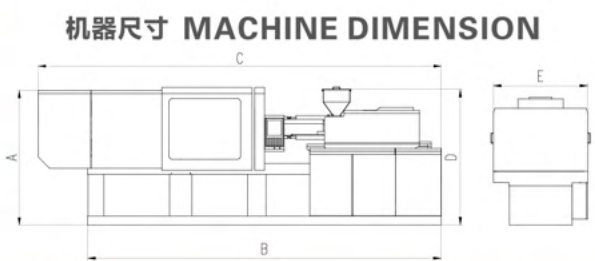
Equipped with high-performance controller, large LCD displayer and man-machine friendly interface. Certificated quality and long lifespan are guaranteed by utilizing world class brands such as Schneider, ABB, Muller etc.



HMD M9S

SPECIFICATIONS

技术规格参数表

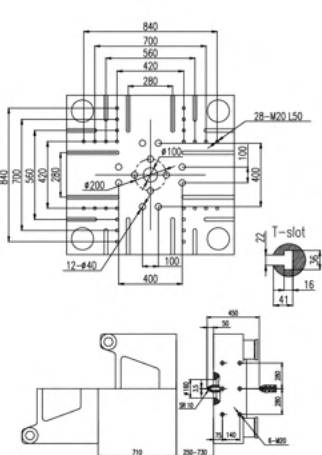
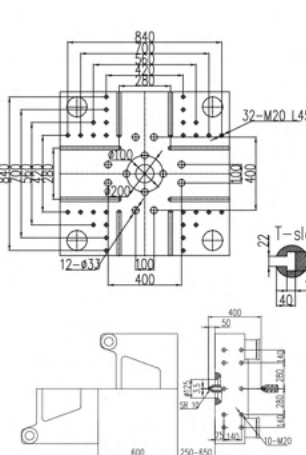
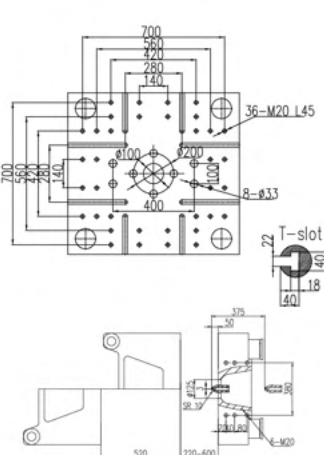
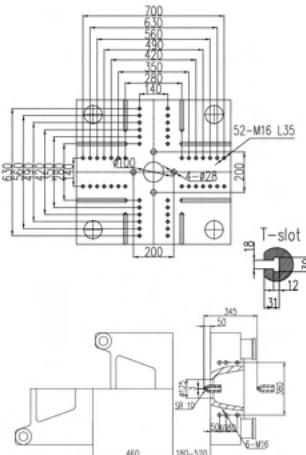
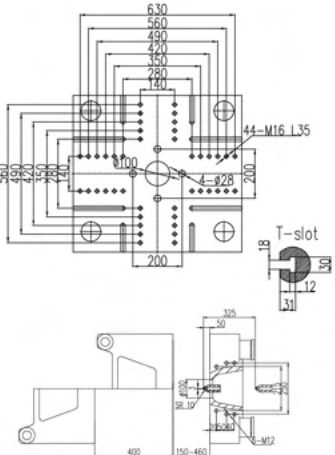
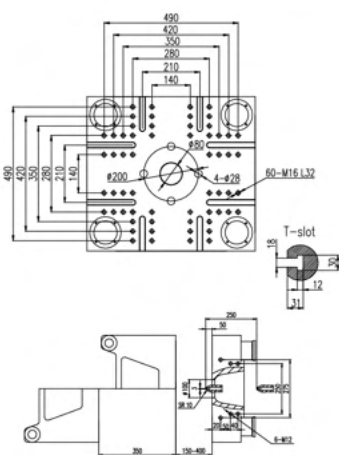


/	HMD108M9-S	HMD138M9-S	HMD180M9-S	HMD228M9-S	HMD288M9-S	HMD370M9-S
A	1570	1750	1828	1920	2050	2035
B	3870	4000	4700	5400	5810	6465
C	4315	4790	5467	6010	6530	7410
D	1838	1990	2282	2170	2310	2413
E	1350	1262	1408	1560	1750	1851

参数	PARAMETER	UNIT	HMD108M9-S			HMD138M9-S			HMD180M9-S				HMD228M9-S				HMD288M9-S				HMD370M9-S					
国际公认型号	International size rating	——	304/108			554/138			718/180				1005/228				1509/288				2674/370					
注射装置	INJECTION UNIT		A	B	C	A	B	C	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D		
理论注射容量	Injection volume(theoretical)	cm³	137	173	213	238	291	349	318	382	451	507	457	540	653	777	712	848	935	1057	1194	1385	1590	1809		
注射重量	Injection weight(PS)	g (克)	124	157	194	217	265	317	290	348	411	462	416	491	594	707	649	771	851	962	1087	1260	1447	1646		
		oz (盎司)	4.4	5.6	6.9	7.6	9.3	11.2	10.2	12.3	14.5	16.3	14.7	17.3	21.0	24.9	22.9	27.2	30.0	33.9	38.3	44.5	51.0	58.1		
注射速率	Injection rate(PS)	g/s	105	133	164	100	123	147	129	155	183	206	170	200	242	289	219	261	288	325	326	378	434	494		
螺杆直径	Screw diameter	mm	32	36	40	38	42	46	42	46	50	53	46	50	55	60	55	60	63	67	65	70	75	80		
注射压力	Injection pressure	MPa	222	176	142	233	190	158	226	188	159	142	220	186	154	130	212	178	161	142	224	193	168	148		
螺杆长径比	Screw L/D ratio	——	23:1	20:1	18:1	24:1	21.5:1	19.5:1	24.5:1	22.2:1	20.4:1	19:1	23.7:1	22:1	20:1	18:1	23:1	21:1	20:1	18.6:1	23.7:1	22:1	20.5:1	19.1:1		
螺杆行程	Screw stroke	mm	170			210			230				275				300				360					
螺杆转速	Screw speed	r/ min	0 ~ 255			0 ~ 255			0 ~ 240				0 ~ 235				0 ~ 195				0 ~ 152					
合模装置	CLAMPING UNIT																									
锁模力	Clamping force	kN	1080			1380			1800				2280				2880				3700					
移模行程	Mold opening stroke	mm	350			400			460				520				600				710					
模板尺寸	Platen size	mm	615×565			690×640			765×715				845×795				925×895				1055×1005					
拉杆内间距	Dist. between tie bars (HxV)	mm	410×360			460×410			510×460				570×520				630×600				730×680					
模板最大距离	Max.daylight	mm	750			860			980				1120				1250				1440					
容模量 (最小—最大)	Mold thickness(Min–Max)	mm	150~400			150 ~460			180 ~ 520				220~ 600				250 ~ 650				250 ~ 730					
顶出行程	Ejector stroke	mm	100			140			160				160				160				185					
顶出力	Ejector tonnage	kN	31			50			50				77				77				111					
动力/电热	POWER UNIT																									
油压系统压力	Hydraulic system pressure	MPa	17.5			17.5			17.5				17.5				17.5				17.5					
油泵马达	Pump motor power	kW	11.6			23			23				28.7				28.7				62					
电热功率	Heater power	kW	8			10.5			12.9				15.6				22.9				31.8					
温度控制区数	Number of temp control zones	——	4			4			4				5				6				6					
其 它	OTHERS																									
油箱容积	Oil tank	L (升)	135			170			225				255				315				505					
外形尺寸 (L x W x H)	Machine dimension (L x W x H)	m	4.3×1.4×1.9			4.8×1.3×2.0			5.5×1.5×2.3				6.0×1.6×2.2				6.6×1.8×2.4				7.4×1.9×2.5					
机器重量	Machine weight	Ton	4.0			5.5			7.3				9.3				10.9				14.5					

模板尺寸

PLATEN DIMENSION



说明：由于产品改进，技术参数的变更，恕不另行通知。

Remark:We reserve the right to make any technical improvement without prior notice.