

# 易霸 第三代 伺服驱动注塑机系列

**EASYMASTER Second Generation** Servo Drive Series

80 - 560 tons

您的高精度  
节能方案



# SVP/2



The Chen Hsong Group  
震雄集團

携手同行五十年

# 易霸 第二代伺服驱动注塑机系列

## EASYMASTER Second Generation Servo Drive Series

集合了震雄成熟的节能注塑机制作经验，再配置第二代高效伺服电机油泵系统，采用德国原装进口的高效率齿轮泵，实现了节能环保、高响应速度、高重复精度、可靠耐用及宁静等特点。让客户以最低的成本换取最大的利润，加强竞争能力。

Driven by a revolutionary intelligent servo system, the EM-SVP/2 series combines a fast-response gear pump with a high-precision servo drive, integrated with a proprietary servo controller into an affordable package that guarantees the highest response, highest precision and lowest power consumption at the same time.

### 1 锁模部份 Clamping Unit

- 导柱表面镀铬硬铬和加大直径，坚固及减少磨损
- 模板及机铰使用高强度球墨铸件，保证模板不易变形及机械件长久耐用
- 多段锁模速度及压力控制
- 可自动设定高压锁模位置
- 中央电动定量润滑系统
- 震动顶针，退针速度及压力可调整。使用震动顶针时，毋须退针回至终点。可再次顶出动作，节省周期时间

- The bars are made of imported Japanese high tensile steel with a specially-hardened, chrome-plated surface. Diameter is lengthened to minimize wear-out and maximize durability
- Robust in-house manufactured ductile iron-casted platens guarantee durability and minimize platen deformation
- Multi-stage clamping speed and pressure control
- Automatic setting for high pressure clamping position
- Central electric fixed-dosage lubrication system
- Ejector speed and pressure adjustable and does not need to fully retract during vibration which shortens cycle time

### 独创专利圆形模板 Exclusive Circular Platen

- 应力传递极为平均，提高生产稳定性及质量
- 有效分散集中在模具的应力，帮助延长模具寿命
- 永不爆板，十年保用\*
- Even stress distribution to moulds, improves production stability and quality
- Greatly reduces stress concentration, lengthens mould life
- Improved stress distribution, ten years guarantee\*



\*客户在正确使用情况下，一手机即可享有十年保用  
 \*Under correct use and normal circumstances, free maintenance up to ten years for first hand owner

## 2 射胶部份 Injection Unit

- 五级射胶速度及射胶能力控制
- 温度控制精度可达±1°C
- 99段变速高扭力液压马达
- 螺柱防烫启动装置，降低温度警报，防止熔胶温度不足时产生螺柱损坏的情形
- 倒模装置，防止漏胶

- Injection speed, pressure and holding in five levels
- PID barrel temperature control with auto-tuning and  $\pm 1^{\circ}\text{C}$  accuracy
- High torque and high precision hydraulic motor with 99-step speed control for optimal melt environment
- Cold-prevention starting device with low temperature alarm to prevent damage of the injection unit caused by low temperature
- Decompression device to prevent nozzle from drooling

## 3 清洁宁静 Cleanliness

- 配有高性能精密滤油装置，在该装置正常工作情况下，油污等级能达到至美国NAS8级（即比新液压油还清洁），减少液压系统负担及维修，延长液压系统寿命
- 低噪音整体机器运作，确保生产车间宁静
- Equipped with a high-performance oil-filter, hydraulic oil is repeatedly filtered and cleaned during normal machine operation. It reaches NAS8 (USA) standard, which means the oil can be cleaner than new oil
- Noise is also minimized during operation

## 4 AL-02 智能联网计算机控制器 Intelligent Computer Controller

- 具智能故障检出、周期时间监测等功能，可配合温度及压力传感器(选项)，能实现注塑机的精密控制
- 全面支持 iChen System™ 车间联网管理系统及 iChen Wireless™ 无线联网，生产数据存取简单，提高管理效率
- The high-performance "AL-02" intelligent computer controller enables extremely high-precision process control (when combined with the appropriate temperature and pressure transducers (Optional)). It also includes built-in networking, intelligent diagnostics and on-line assistant features
- Integrates completely with the iChen System™ and iChen Wireless™ for shop-floor management

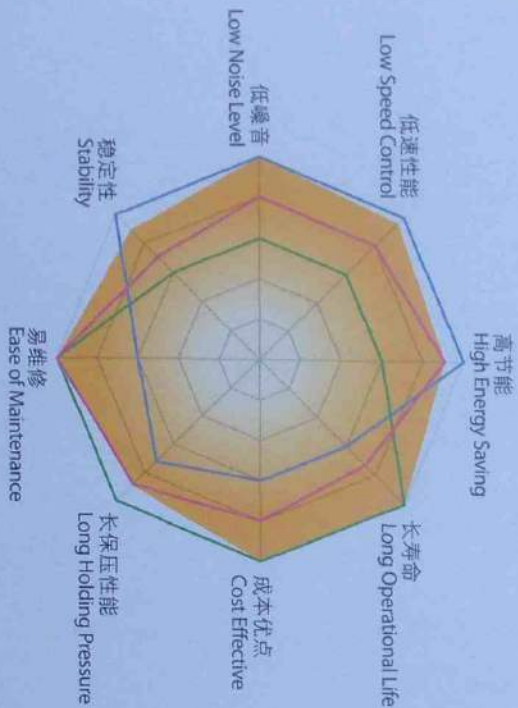


### 高效节能 Ultimate Energy Saving

比传统液压系统省电及省水最高可达80%\* 配合电磁加热发热圈，更能进一步提升省电效果#  
Saves up to 80% of electricity compared to traditional fixed pump systems\*

### 回应快速 Ultimate Response

反应速度是传统变量泵的两倍以上，对一些要求快速动作回应的产品，更能满足用家要求  
The response speed is more than double of a variable displacement pump



易霸第二代伺服驱动系统  
EM-SVP/2

一般伺服电机系统  
General Servo Pump

一般全电机系统  
General All Electric

一般变量泵系统  
General Variable Pump

\*视乎不同产品及生产周期而定  
Subject to different product applications and cycle times.

#附加装置  
Optional

### 高重复精度 Ultimate Precision & Repeatability

重复精度达0.5% - 即使在极低速度及长保压时间状况下仍能达到  
Up to 0.5% repeatability even under extremely low speed & prolonged holding conditions

### 延长寿命 Long Operational Life

有效减低油温上升，降低换油次数，延长油压配件寿命  
Low oil temperature conserves cooling water and reduces the need for hydraulic oil thus extends the useable lives of hydraulic parts

项目 (Items)	易霸第二代伺服驱动系统 (EM-SVP/2)	一般伺服电机系统 (General Servo Pump)	一般全电机系统 (General All Electric)	一般变量泵系统 (General Variable Pump)
高节能 (High Energy Saving)	✓	✓	✓	●
高精度 (High Precision)	✓	●	✓	●
高成型稳定性 (重复再现性) (High Repeatability)	✓	●	✓	●
高响应速度 (Dynamic Response)	✓	✗	✓	●
低速控制 (Low Speed Control)	✓	●	✓	✗
长保压性能 (Long Holding Pressure)	✓	●	✗	✓
低噪音 (Low Noise Level)	✓	✓	✓	✗
低冷却水 (Low Cooling Water Consumption)	✓	✓	✓	✗
长寿命 (Long Operational Life)	✓	●	✗	✓
易维修 (Ease of Maintenance)	✓	✓	✗	✓

✓ 优良 (Excellent)  
● 一般 (OK)  
✗ 差 (Weak)

# 电机省电率 Energy Consumption\*

机型 Model	系统 Pump	成型周期(秒) Cycle Time(s)	保压时间(秒) Injection Holding Time(s)	测试时间(小时) Time for Test(h)	耗电量(KWh) Electricity Consumption (KWh)	成型产品(件) Product(Pcs)	每件产品耗电量(KWh) Electricity Consumption for each piece(kWh)	耗电比例 (%) Consumption (%)	省电比例 (%) Energy Saving (%)
CJ380M3	定量泵 Fixed Pump	48.5	4	8	131.04	594	0.22	100%	0%
EM400-V	变量泵 VDP	48.5	4	8	72.8	594	0.12	56%	44%
EM400-SVP/2	伺服驱动系统 SVP/2 Servo System	46.5	4	8	40.8	619	0.07	30%	70%



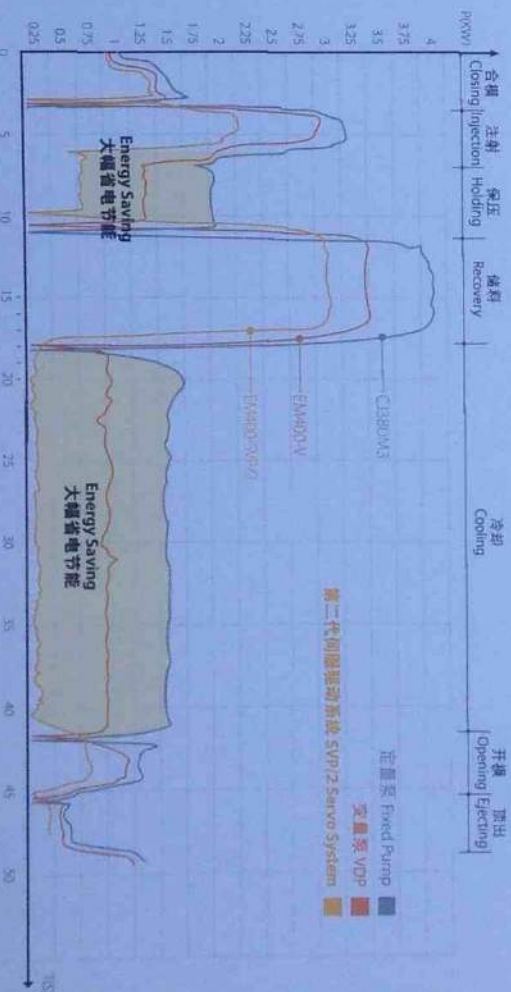
**节能测试案例**  
Practical Example  
原料 Resin: PP  
产品 Product: 健身脚踏车 Exercise Bike

## 整机省电及生产效率比较 Energy Saving & Efficiency Comparison\*

50万件产品，以一年生产时间计算(每天20小时，1星期6天，52个星期)  
For 500,000 pieces of product, roughly one year at 20 hours/day, 6 days/week, 52 weeks)

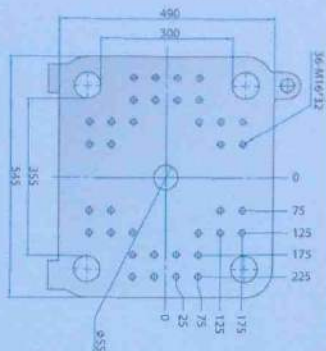
	CJ380M3		EM400-V		EM400-SVP/2	
	定量泵 Fixed Pump	变量泵 VDP	伺服驱动系统 SVP/2	耗电量 KWh	RMB	耗电量 KWh
生产时间(日) Production time(days)	393	-	393	-	377	-
产品(每件) Product (Per piece)	0.26	0.20	0.16	0.13	0.11	0.09
50万件总计 500,000 pieces total	127,717	102,173	78,678	62,942	57,146	45,717

以电费 RMB 0.8 / kWh 计算  
Based on RMB 0.8 / kWh  
**一年节省时间 Time Savings per year: 16 days**  
**一年节省电费 Cost Savings per year: ¥56,457**

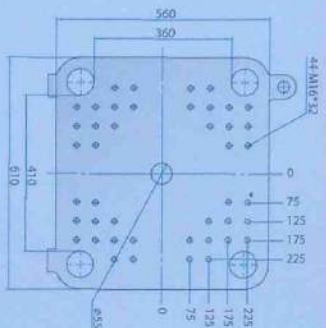


\* 根据不同产品及生产周期而定 \* Subject to different product applications and cycle times.

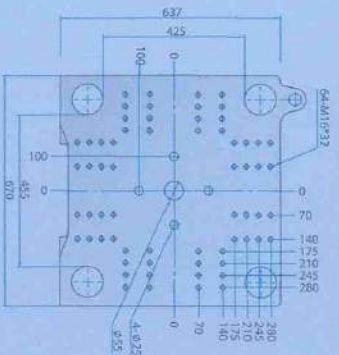
EM80 SVP/2



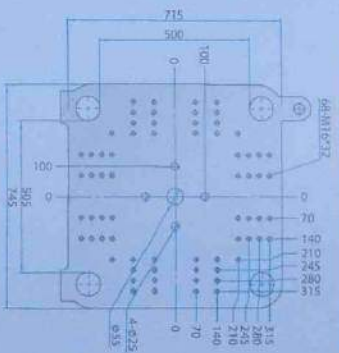
EM120 SVP/2



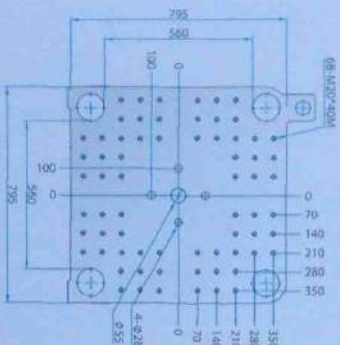
EM150 SVP/2



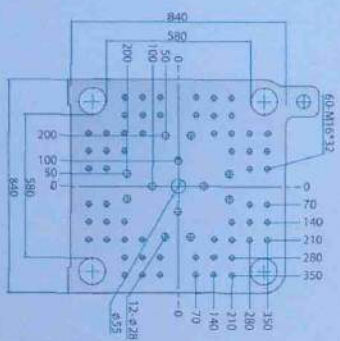
EM180 SVP/2



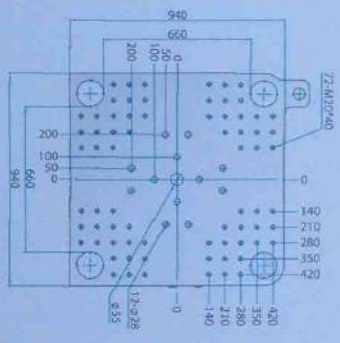
EM220 SVP/2



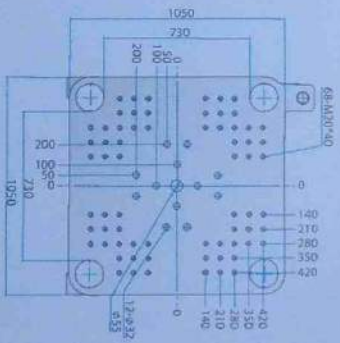
EM260 SVP/2



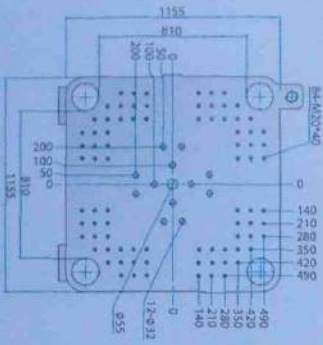
EM320 SVP/2



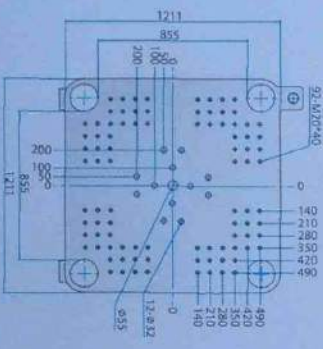
EM400 SVP/2



EM480 SVP/2



EM560 SVP/2



\*照片仅供参考，产品以实物为准  
Images of product are for reference and subject to change without notice

EM-SVP/2

射胶部份 Injection Unit

	单位/Unit	EM80-SVP/2	EM120-SVP/2	EM150-SVP/2	EM180-SVP/2	EM220-SVP/2	EM360-SVP/3	EM528-SVP/3	EM692-SVP/2	EM860-SVP/2	EM1080-SVP/2	EM1480-SVP/2	EM1960-SVP/2	EM2560-SVP/2																	
射胶容积 Swept Volume	cm <sup>3</sup>	121	163	221	163	221	265	277	332	425	382	488	650	390	499	664	584	777	969	904	1128	1413	1216	1524	1866	1767	2164	2544	1767	2164	2544
射胶重量(模腔) Shot Weight (P/s)	g	113	150	203	150	203	244	255	305	391	351	449	598	359	459	611	537	715	892	832	1038	1300	1119	1402	1717	1625	1990	2340	1625	1990	2340
螺杆直径 Screw Diameter	oz	4.0	5.3	7.2	5.3	7.2	8.6	9.0	10.8	13.8	12.4	15.8	21.1	12.7	16.2	21.6	18.9	25.2	31.4	29.3	36.6	45.9	39.5	49.5	60.6	57.3	70.2	82.5	57.3	70.2	82.5
射胶压力(最大) Injection Pressure (Max)	mm	31	36	42	36	42	46	42	46	52	46	52	60	46	52	60	52	60	67	60	67	75	67	75	83	75	83	90	75	83	90
螺杆长度与直径比 Screw L/D Ratio	kgf/cm <sup>2</sup>	2101	1561	1142	1887	1387	1153	1938	1622	1265	2122	1663	1255	2337	1827	1367	2295	1724	1387	2224	1785	1428	2203	1765	1438	2132	1734	1479	2132	1734	1479
塑化能力 Plasticating Rate	mm/min	227	196	169	233	20	18.2	21.9	20	17.7	22.6	20	17.3	22.6	20	17.3	24.2	21	18.8	23.5	21	18.8	23.8	21	19.2	22.2	21	19.4	23.2	21	19.4
射胶速率 Injection Rate	g/s	6.6	10.8	15.9	12.7	17.3	22.3	20.1	24.1	33	18.7	23.9	31.8	18.7	23.9	31.8	31.7	43.2	59.1	39.6	54.2	71.7	49.3	68.6	84	71.7	92.4	119.6	71.7	92.4	119.6
螺杆行程 Screw Stroke	g/s	57	77	105	95	130	156	115	138	177	133	169	225	120	154	205	175	233	290	222	277	347	264	330	405	342	419	492	342	419	492
螺杆最大转速 Screw Rotation Speed (Max)	mm	160	160	160	160	160	160	200	200	230	230	235	275	320	320	320	345	345	400	400	400	400	400	400	400	400	400	400	400	400	400
螺杆部份 Clamping Unit	rpm	170	170	170	185	185	200	200	145	145	171	180	180	165	165	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150

锁模部份 Clamping Unit

锁模力(最大) Moulding Clamping Force (Max)	t	80	120	150	180	220	260	320	400	480	560	670	770	835
开模行程 Opening Stroke	mm	320	340	410	460	490	530	600	600	670	770	770	835	
导柱内距(水平 x 垂直) Space Between Tie Bars (H x V)	mm	355 x 300	410 x 360	455 x 425	505 x 500	560 x 560	580 x 580	660 x 660	730 x 730	810 x 810	855 x 855	915 x 855	985 x 855	
模板最大距离 Maximum Daylight	mm	640	720	860	960	1090	1130	1260	1420	1590	1685	1885		
容模量(最薄 - 最厚) Mould Thickness (Min - Max)	mm	130 - 320	145 - 380	160 - 450	180 - 500	195 - 600	195 - 600	220 - 660	250 - 750	275 - 820	330 - 850	330 - 850		
顶杆行程 Ejector Stroke	mm	80	100	100	130	130	180	180	180	215	250	250		
顶杆推力(最大) Ejector Force (Max)	t	2.3	4.2	4.2	4.9	7.7	7.7	7.7	7.7	11.1	11.1	11.1		

电力 / 电热 Power / Heating Unit

系统压力 System Pressure	kgf/cm <sup>2</sup>	148	178	178	178	178	178	178	178	178	178	178	178
油泵马力 Pump Motor Power	KW	7.5	11	13	18	15	25	30	35	45	45	45	45
电热器 Electrical Heating Power	KW	6.5	8.8	9.7	9.8	13.9	18.3	20	21.6	30	30	30	30
温度控制区 Temperature Control Zones		3 + Nozzle	3 + Nozzle	3 + Nozzle	4 + Nozzle	4 + Nozzle	5 + Nozzle	5 + Nozzle	5 + Nozzle	5 + Nozzle	5 + Nozzle	5 + Nozzle	5 + Nozzle

其它 Others

循环时间 Dry Cycle Time	s	1.6	2.1	2.4	2.5	2.6	2.8	3.2	3.5	3.8	4.0	4.0
油缸容量 Oil Tank Capacity	liter	170	170	275	275	360	430	525	600	800	800	800
机身尺寸(长 x 宽 x 高) Machine Dimensions (L x W x H)	m x m x m	3.9 x 1.1 x 1.7	4 x 1.1 x 1.7	4.7 x 1.2 x 1.9	5.2 x 1.3 x 1.9	5.3 x 1.5 x 2.1	6.3 x 1.5 x 2.2	6.7 x 1.6 x 2.3	7.6 x 1.7 x 2.3	8.5 x 1.9 x 2.3	8.7 x 2.0 x 2.3	8.7 x 2.0 x 2.3
机重(约) Machine Weight (Approx)	t	2.8	3.5	4.5	6	7	8	10.6	14	18	20	20

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