

JETMASTER **Second Generation** Servo Drive Large Series

650 - 3000 tons

Your Precision Energy Saver



C³-SVP/2 LARGE



The Chen Hsong Group

Hand in Hand Over 50 Years

JETMASTER Second Generation Servo Drive Large Series

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

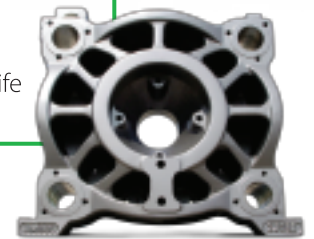
Injection Unit

- High resolution potentiometer provides superior positional control precision
- Nitrided injection screw and barrel with supreme anti-wear properties and long useable life
- Compact twin injection cylinder design
- Back pressure control
- Balanced dual-cylinder design provides secure holding pressure for injection carriage and prevents drooling (on certain models)
- Screw and barrel maintenance are made easy with pivot cylinder to turn injection unit (on certain models)
- PID barrel and nozzle temperature control ensures high melt quality
- Radial piston-type hydraulic motor drives the screw directly.
The high torque is able to process a wide range of materials with optimal melt quality and mixing, effectively shortening recovery time
- Cold-start prevention ensures that the screw does not rotate until the preset temperature profile is reached



Exclusive Circular Platen

- Even stress distribution to moulds, improves production stability and quality
- Greatly reduces stress concentration, lengthens mould life
- Enhanced stress distribution



(Patented ZL 01 2 57876.2)



Clamping Unit

- T-slots (Optional)
- Designed via finite element analysis with a focus on high structural integrity
- Adjustable slider supports movable platen
- High-tensile tie-bars, induction hardened, with chrome-plated surfaces
- Automatic mould height and clamping force adjustment
- Electrical, mechanical and hydraulic safety devices
- Regenerative hydraulic circuit shortens cycle time and enhances efficiency
- Multiple ejector system
- Core pulling devices
- Mould cooling water distributor
- Electrical / pneumatic automatic front guard door (on certain models)
- Low pressure mould protection feature effectively prevents mould damage
- Mould height adjustment by hydraulic motor combined with gear mechanism (Standard feature)



Ai-12 intelligent network computer controller

The *Ai-12* is a high-performance, new-generation intelligent computer controller available exclusively from Chen Hsong. Designed in Japan and constructed with the latest SMT technology, it boasts fully compatibility with JIS standards, enhanced stability and ultimate reliability. This controller comes standard with multi-lingual interfaces, built-in networking, advanced intelligent diagnostics, and the ability to retain data for over five years without external power.



Multi-pump Combination Hydraulic Power System (Patent no.:ZL200910192111.6)

The patented Multi-pump Combination Hydraulic Power system, provide closed-loop control with single-pump pressure and rapid pressure relief. Highest energy efficiency is achieved while maintaining fast response, low-impact pressure and high control accuracy.

Second Generation Servo-Drive System Saves up to 80% Electricity*

Ultimate Energy Saving

Saves up to 80% of electricity compared to traditional fixed pump systems*

Ultimate Response

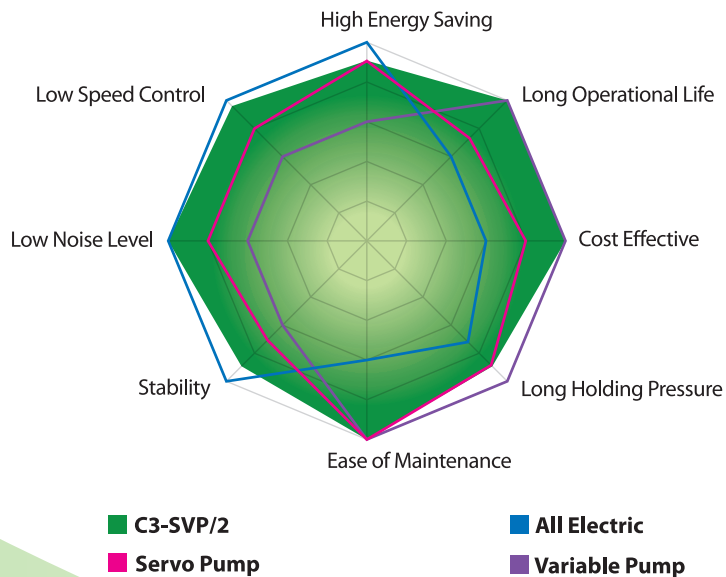
The response speed is more than double of a variable displacement pump

Ultimate Precision & Repeatability

Up to 0.5% repeatability even under extremely low speed & prolonged holding conditions

Long Operational Life

Low oil temperature conserves cooling water and reduces the need for hydraulic oil thus extends the useable lives of hydraulic parts



*Subject to different product applications and cycle times.

Items	C3-SVP/2	Servo Pump	All Electric	Variable Pump
High Energy Saving	✓	✓	✓	●
High Precision	✓	●	✓	●
High Repeatability	✓	●	✓	●
Dynamic Response	✓	✗	✓	●
Low Speed Control	✓	●	✓	✗
Long Holding Pressure	✓	●	✗	✓
Low Noise Level	✓	✓	✓	✗
Low Cooling Water Consumption	✓	✓	✓	✗
Long Operational Life	✓	●	✗	✓
Ease of Maintenance	✓	✓	✗	✓

✓ Excellent ● Average ✗ Weak

Electricity Consumption*

Model	System	Cycle Time (s)	Injection Holding Time (s)	Time for Test (h)	Electricity Consumption (kWh)	Product (pcs)	Electricity Consumption for each piece (kWh)	Consumption (%)	Energy Saving (%)
CJ650MIII	Fixed Pump	52	4	8	167.6	554	0.3	100%	0%
JM650-C2	VDP	52	4	8	93.12	554	0.17	56%	44%
JM650-C³-SVP/2	SVP/2	50	4	8	42.4	576	0.07	24%	76%



Practical Example*

Resin: PP

Product: Exercise Bike

Energy Saving & Efficiency Consumption*

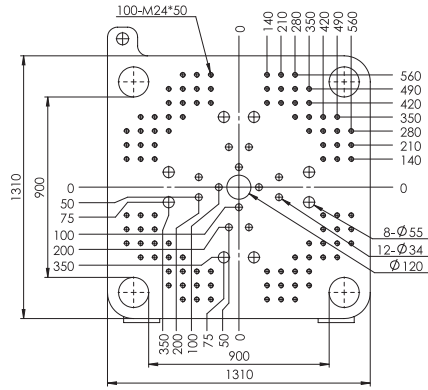
(For 500,000 pieces of product, roughly one year at 20 hours/day, 6 days/week, 52 weeks)

	CJ650MIII		JM650-C2		JM650-C ³ -SVP/2	
	Fixed Pump		VDP		SVP/2	
	kWh	RMB	kWh	RMB	kWh	RMB
Production time (days)	421	-	421	-	405	-
Product (per pieces)	0.34	0.27	0.21	0.16	0.1	0.08
500,000 piece total:	169,953	135,963	102,700	82,160	52,083	41,667

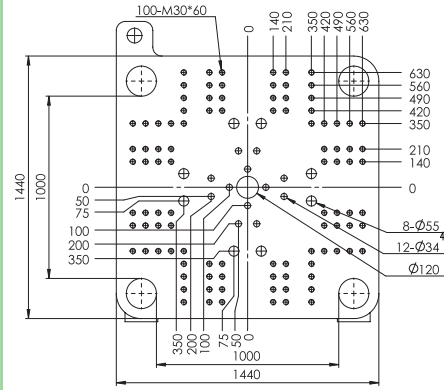
Based on RMB 0.8/kwh

Time Savings per year: 16 days
Cost Savings per year: RMB 94,296

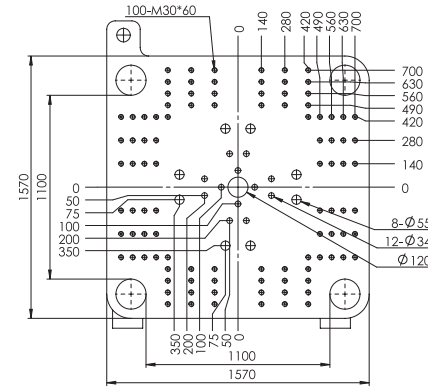
* subject to different product applications and cycle times



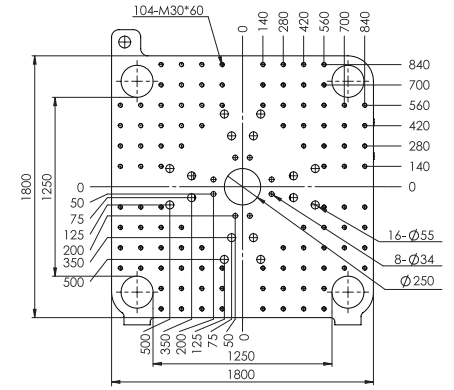
JM650-C3-SVP/2



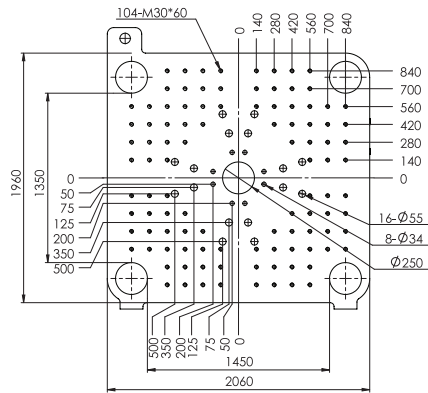
JM800-C3-SVP/2



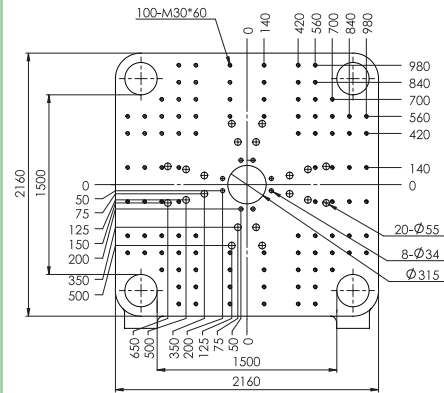
JM1000-C3-SVP/2



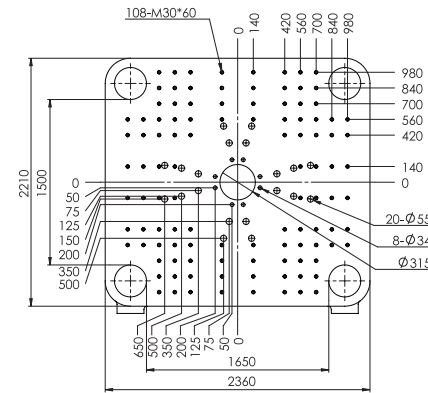
JM1200-C3-SVP/2



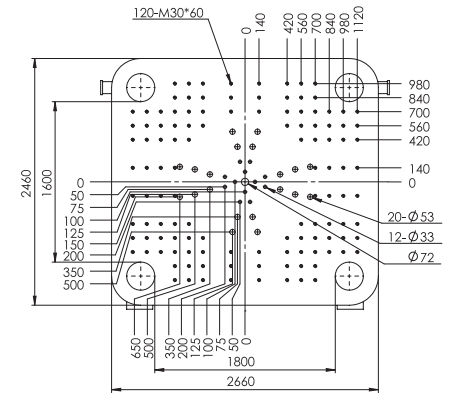
JM1400-C3-SVP/2



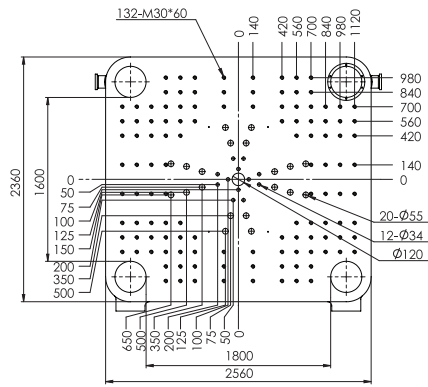
JM1600-C3-SVP/2



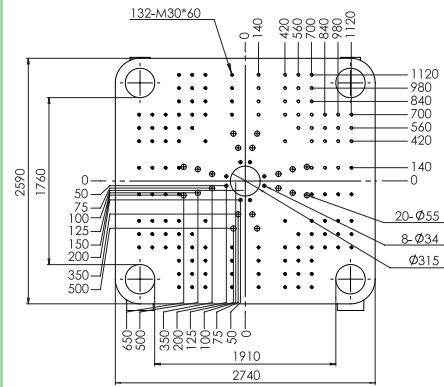
JM1850-C3-SVP/2



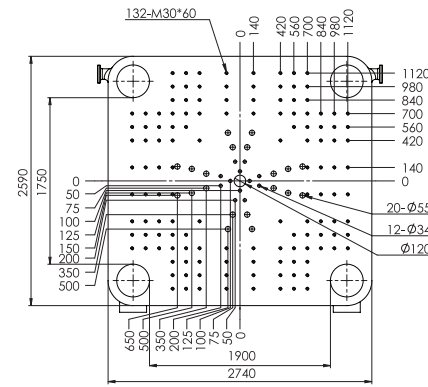
JM2000-C3-SVP/2



JM2200-C3-SVP/2



JM2600-C3-SVP/2



JM3000-C3-SVP/2

Injection Unit	Unit	JM650-C ³ -SVP/2	JM800-C ³ -SVP/2	JM1000-C ³ -SVP/2	JM1200-C ³ -SVP/2	JM1400-C ³ -SVP/2	JM1600-C ³ -SVP/2	JM1850-C ³ -SVP/2	JM2000-C ³ -SVP/2	JM2200-C ³ -SVP/2	JM2600-C ³ -SVP/2	JM3000-C ³ -SVP/2
Swept Volume	cm ³	2300 2704 3206	2926 3469 4371	3922 4941 5881	5701 6785 7963	7351 8627 10005	9290 10776 12370	9290 10776 12370	11545 13253 16036	11545 13253 16036	14579 17640 20993	19244 22902 26878
Shot Weight(PS)	g	2116 2488 2950	2692 3191 4021	3608 4546 5411	5244 6242 7325	6983 7936 9204	8547 9914 11380	8547 9914 11380	10621 12193 14753	10621 12193 14753	13413 16229 19314	17704 21069 24728
	oz	75 88 104	95 113 142	127 160 191	185 221 259	247 281 326	301 350 436	301 350 436	375 430 520	375 430 520	473 572 681	624 743 930
Screw Diameter	mm	83 90 98	90 98 110	98 110 120	110 120 130	120 130 140	130 140 150	130 140 150	140 150 165	140 150 165	150 165 180	165 180 195
Injection Pressure(Max.)	Kgf/cm ²	2160 1840 1550	2180 1840 1460	2140 1690 1420	1690 1420 1210	1830 1560 1350	1960 1690 1470	1960 1690 1470	1990 1735 1429	1990 1735 1429	2122 1755 1469	1726 1451 1236
Screw L/D Ratio	mm/mm	24 22 20.3	24 22 20	24.7 22 20.2	24 22 20.3	23.8 22 20.4	23.7 22 20.4	23.7 22 20.4	23.6 22 20	23.6 22 20	24.2 22 20.2	24 22 20.3
Plasticizing Rate	g/s	85 98 130	72 90 129	77 105 137	100 128 151	107 125 134	150 160 214	160 170 228	162 194 245	158 190 240	180 227 290	200 255 299
Injection Rate	cm ³ /s	429 505 598	467 554 698	597 752 895	835 994 1167	769 903 1047	1084 1257 1443	1156 1341 1539	1152 1322 1600	1152 1322 1600	1353 1637 1948	1637 1948 2286
Screw Stroke	mm	425	460	520	600	650	700	700	750	750	825	900
Screw Rotation Speed (Max.)	rpm	160	110	98	90	75	90	95	90	88	86	75
Clamping Unit												
Clamping Force(Max.)	t	650	800	1000	1200	1400	1600	1850	2000	2200	2600	3000
Opening Stroke	mm	920	1025	1150	1310	1500	1600	1650	1700	1700	1900	2000
Space Between Tie Bars(HxV)	mm	900 X 900	1000 X 1000	1100 X 1100	1250x1250	1450x1350	1500x1500	1660x1510	1800x1600	1800x1600	1910x1760	1900x1750
Maximum Daylight	mm	1830	2100	2350	2610	2950	3200	3300	3500	3500	3750	4000
Mould Thickness(Min.-Max.)	mm	350 - 910	400 - 1075	450 - 1200	500-1300	650-1450	700-1600	750-1650	900-1800	900-1800	950-1850	1000-2000
Ejector Stroke	mm	265	300	350	350	380	400	420	420	420	420	460
Ejector Force(Max.)	t	18.2	28.9	28.9	35	35	40	40	46	46	46	46
Power/Heating Unit												
System Pressure	Kgf/cm ²	178	178	178	178	178	178	178	178	178	178	178
Servo Motor Power	kW	54	84	100	136	136	204	192	192	192	272	272
Electrical Heating Power	kW	35.4	39.0	50.9	55.2	60.0	92.5	92.5	110.1	110.1	115.0	130.7
Temperature Control Zone		6	8	8	8	8	8	8	8	8	8	8
Others												
Oil Tank Capacity	liter	850	1050	1200	1600	2000	2400	2400	2500	2600	3500	3200
Machine Dimensions(LxWxH)	m x m x m	10 X 2.1 X 2.3	11.2 X 2.4 X 2.3	11.8 X 2.4 X 2.5	13.2X2.8X2.7	14.1X3.1X3.1	15.2X3.3X3.2	15.4X3.4X3.2	18.2x3.7x3.4	16.9x3.8x3.4	19.4x3.9x3.8	18.8x3.8x3.7



*The technical parameters above are for reference only and discrepancies may arise in different circumstances. The company keeps upgrading the products and reserves the right to change the product specifications and parameters without prior notice. The final interpretation to the above specifications and parameters belongs to the company.



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