SVP/3

EASYMASTER

Third Generation Servo Drive Series

80-560 tons

The Chen Hsong Group

Our products are developed through relentless pursuit of perfection and continuous innovation.

The SVP/3 series of servo-driven injection moulding machines combines Chen Hsong's long tradition in optimised machine design with new concepts and modules, resulting in an offering that sets new standards in performance and ease-of-use. New ergonomic features, an enlarged power pack and structurally-strengthened platens yield large improvements in stability and precision, while further opitmisations in hydraulics reduce energy wastages due to pressure drops.

The SVP/3 series cumulates from more than half a century of technical excellence and is your ideal choice for the future.

Excellence

Intelligent, high-precision, environmentally-friendly and highly efficient

Quality

Total quality control, assembly-line production

Flexibility

Mix-and-match multiple modules for fast responses and shorten delivery lead-time

Value-Added

"VIP" service levels

Efficiency and Precision

Saves up to 80% of electricity and water compared to traditional power packs. Product repeatability up to ±0.25% Injection speed 23% higher than previous generation

Reliability

Compliant with national standards

EASYMASTER Third Generation Servo Drive Series

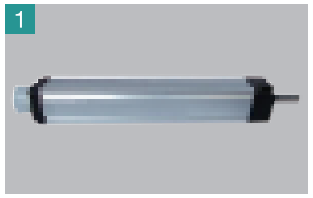
80-220 tons

260-320 tons

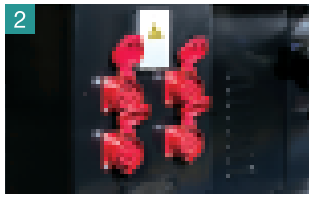
400-560 tons

Product images are for reference only and subject to change without notice

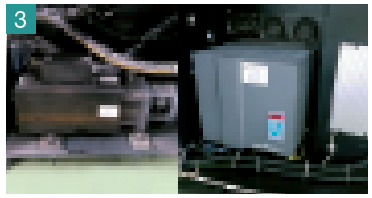
10 Convenience and User-friendly designs



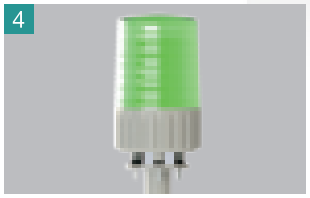
High-precision potentiometers for clamping, injection and ejection – product quality ensured



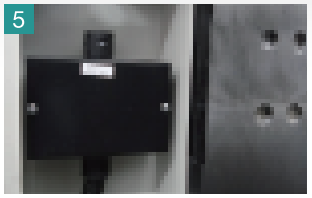
External power outlets for easy connection of auxiliary equipment: 16A x4 (80-220t), 16A x2, 32A x2 (260-560t)



High-power servo-drive system



Two-color alarm light



Robot interface (non-Euromap Standard)

6

1 core pull standard (220-560t),
2 reserved for easy later installation (80-560t)

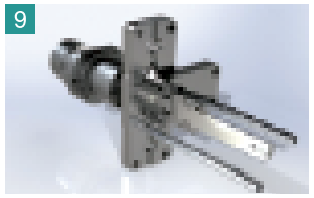
7

Strengthened fixed and moving platens help minimize flashes

8

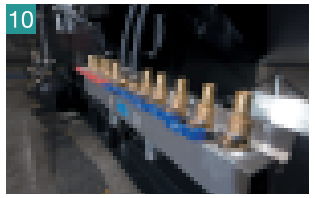
Auto-adjust mechanical safely bar

9



EUROMAP ejector (260-560t), with retracted-position sensor

10



Larger water manifold: 4/4 (80-120t), 6/6 (150-320t), 8/8 (400-560t)

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Energy Saving and Efficiency Comparison*

For 200,000 pieces of product, roughly one year at 8 hours/day

Model	Product	Resin	Cavity
EM480-SVP/3	Air conditioner lid	ABS	2

Model	Pump	Cycle Time (s)	Cooling Time	Time for Test (h)	Electricity Comsumption (kWh)	Product (pcs)	Electricity Consumption for each piece (kWh)	Consumption (%)	Energy Saving (%)
CJ480M3	Fixed Pump	57	25	8	169.49	1010	0.17	100%	0%
EM480-V	VDP	57	25	8	127.16	1010	0.13	76%	24%
EM480-SVP/ 3	SVP3 Servo System	52	25	8	115.26	1108	0.10	59%	41%

	CJ480M3		EM480-V		EM480-SVP/3	
	Fixed Pump		VDP		SVP/3 Servo System	
Production Time (Days)	198		198		181	
	kWh	RMB	kWh	RMB	kWh	RMB
200,000 pieces total	33,559	26,847	25,178	20,142	20,862	16,690

Based on RMB 0.8/k kWh

Time savings per year

17days

Cost savings per year

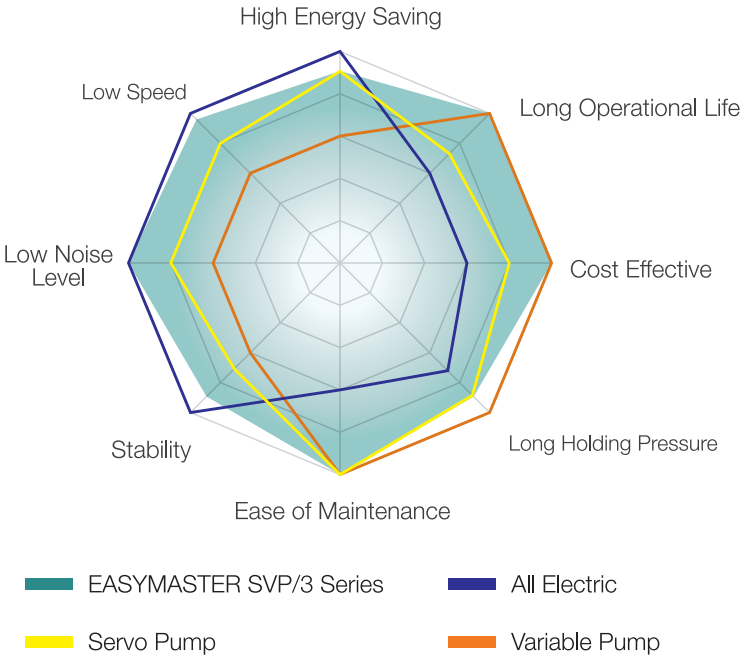
¥10,157

Ultimate Energy Saving

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

Ultimate Response

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



Ultimate Precision and Repeatability

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

Long Operational Life

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

Items	EM-SVP/3	Servo Pump	All Electric	Variable Pump
High Energy Saving	✓	✓	✓	●
High Precision	✓	●	✓	●
High Repeatability	✓	●	✓	●
Dynamic Response	✓	X	✓	●
Low Speed Control	✓	●	✓	X
Long Holding Pressure	✓	●	X	✓
Low Noise Level	✓	✓	✓	X
Low Cooling Water Consumption	✓	✓	✓	X
Long Operational Life	✓	●	X	✓
Ease of Maintenance	✓	✓	X	✓

✓ Excellent ● Average X Poor

* Subject to different product applications and cycle times

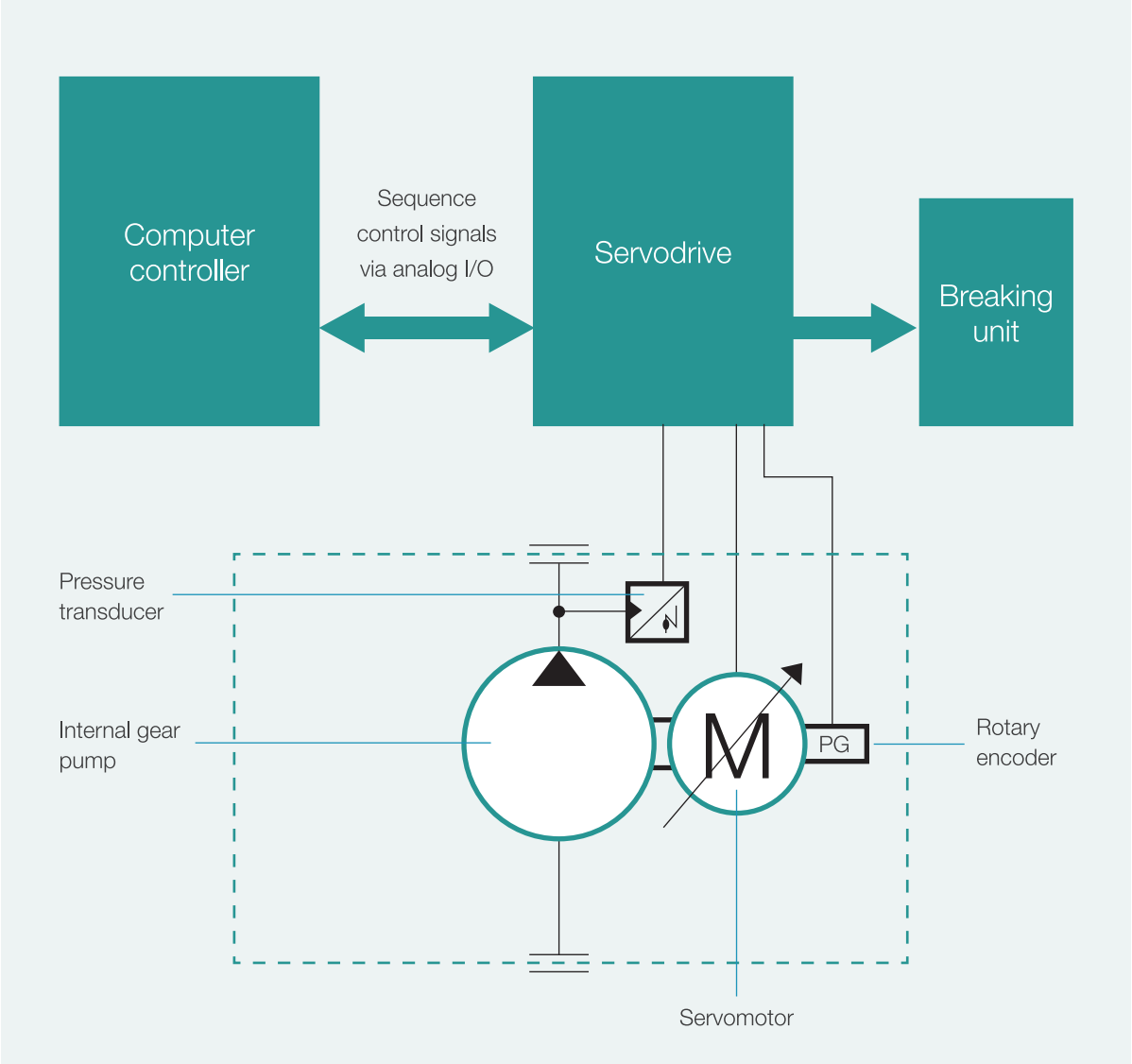
Servo drive control principle

An SVP/3 servo-drive system consists of a servodrive, a servomotor, and fixed displacement pump.

Servodrive : Automatic closed-loop control of flow and pressure

Servomotor : Higher speed, larger torque and faster responses than async motors.

Fixed displacement pump : High-pressure internal gear pump with low internal leakage and low impulses, resulting in enhanced stability and energy saving.



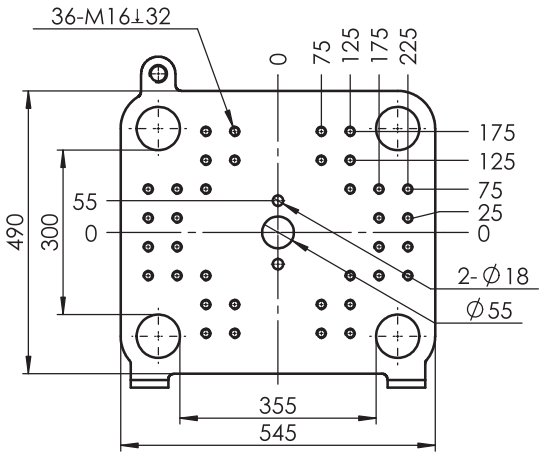
EASYMASTER Third Generation Servo Drive Series

	UNIT	EM80-SVP/3	EM120-SVP/3	EM150-SVP/3	EM180-SVP/3	EM220-SVP/3	EM260-SVP/3	EM320-SVP/3	EM400-SVP/3	EM480-SVP/3	EM560-SVP/3
Injection Unit											
Swept Volume	cm^3	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
Shot Weight (PS)	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
	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
Screw Diameter	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
Injection Pressure (Max.)	MPa	206 153 112	185 136 113	190 159 124	208 163 123	230 180 135	226 169 136	219 175 140	217 173 141	209 171 145	209 171 145
	kgf/cm^2	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
Screw L/D Ratio		22.7 19.6 16.8	22.7 19.6 17.5	21.8 19.5 17.3	22.2 19.8 17.2	23.3 20.6 17.9	24.2 21 18.8	23.5 21 18.8	23.8 21 19.2	23.2 21 19.4	23.2 21 19.4
Screw Stroke	mm	160	160	200	230	235	275	320	345	400	400
Screw Rotation Speed (Max.)	rpm(max)	198	224	246	185	182	195	183	181	194	194
Plasticizing Rate	kg/h	33 49 76	58 91 110	89 123 164	86 154 157	86 137 157	140 167 262	182 213 329	233 279 398	244 314 406	244 314 406
Injection Rate	cm^3/s	66 89 121	116 158 190	138 166 212	158 202 269	153 195 260	189 252 314	263 328 411	310 389 476	429 525 617	429 525 617
	liter	33	33	55	55	82	82	87	87	87	87
Nozzle Force	t	3.3	4.3	4.6	6.1	6.1	6.1	10.3	10.3	10.3	10.3
Nozzle Stroke	mm	250	250	250	280	325	325	360	420	460	460
Clamping Unit											
Clamping Force (Max.)	ton	80	120	150	180	220	260	320	400	480	560
Opening Stroke	mm	320	340	410	460	490	530	600	670	770	835
Space Between Tie Bar (H*V)	mm×mm	355x300	410x360	455×425	505×500	560×560	580×580	660×660	730×730	810×810	855×855
Mould Dimensions (H*V)	mm×mm	545x490	610x560	670×614	745×715	795×795	840×840	940×940	1050×1050	1155×1155	1210×1210
Maximum Daylight	mm	640	720	860	960	1090	1130	1280	1420	1590	1685
Mould Thickness (Min.-Max.)	mm	130-320	145-380	160-450	180-500	195-600	195-600	220-680	250-750	275-820	330-850
Ejector Stroke	mm	80	100	100	130	130	180	180	215	250	250
Ejector Force (Max.)	ton	2.3	4.2	4.2	4.9	7.7	7.7	7.7	11.1	11.1	11.1
Mould Register Hole(H7)	mm	100	100	100	100	160	160	160	200	200	200
Power/ Heating Unit											
System Pressure	MPa	14.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
	kgf/cm^2	148	178	178	178	178	178	178	178	178	178
Servomotor Power	kW	11	13	16	27	27	35.6	48.1	50	54	54
Electrial Heating Power	kW	6.8	9.1	9.9	10	15.6	18.3	19.9	21.6	30	30
Temperature Control Zone		3+Nozzle	3+Nozzle	3+Nozzle	4+Nozzle	4+Nozzle	5+Nozzle	5+Nozzle	5+Nozzle	5+Nozzle	5+Nozzle
Others											
Oil Tank Capacity	liter	170	170	275	275	360	430	525	600	800	800
Machine Dimensions (L*W*H)	m×m×m	4.3×1.2×1.8	4.3×1.2×1.8	5.0×1.3×2.0	5.6×1.3×2.1	5.8×1.5×2.1	6.4×1.5×2.2	6.7×1.6×2.3	8.0×1.7×2.3	8.5×1.9×2.3	8.8×2.0×2.3
Macine Weight (Approx.)	ton	2.7	2.9	4.0	5.1	5.8	7.5	9.8	12.8	16.8	18.1

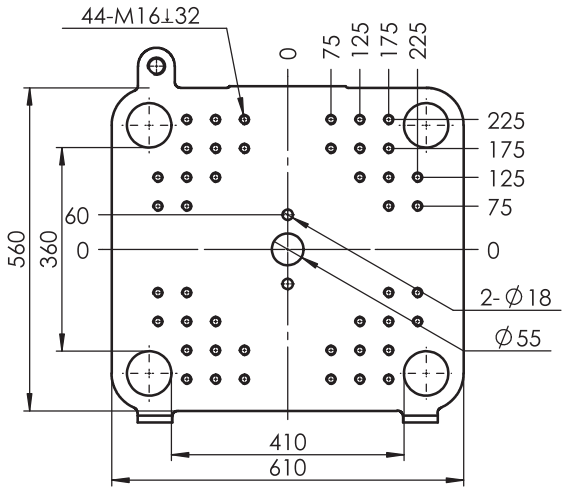
Remark : The technical parameters above are for reference only and discrepancies may arise in different circumstances. The company keeps upgrading the products and reserves the right to change the product specifications and parameters without prior notice. The final interpretatation to the above specifications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

Mould Platen

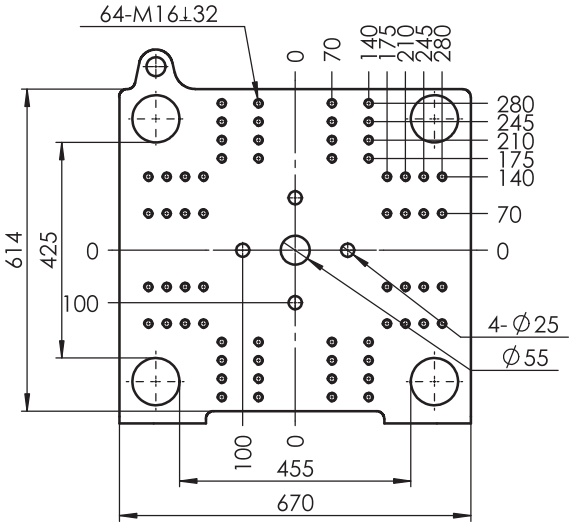
EM80-SVP/3



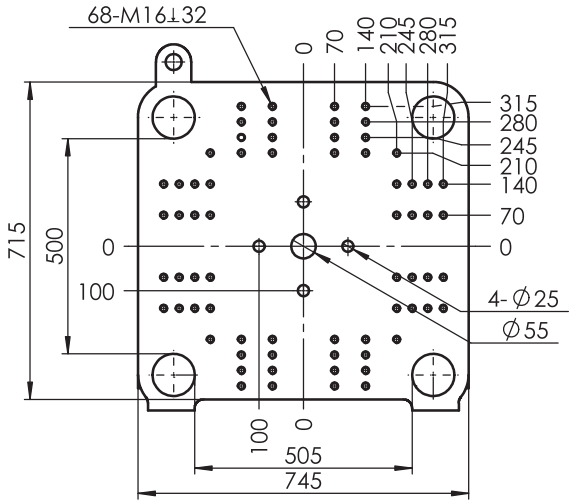
EM120-SVP/3



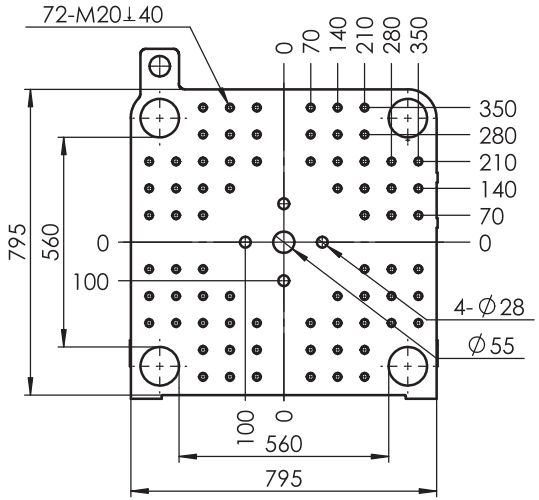
EM150-SVP/3



EM180-SVP/3



EM220-SVP/3



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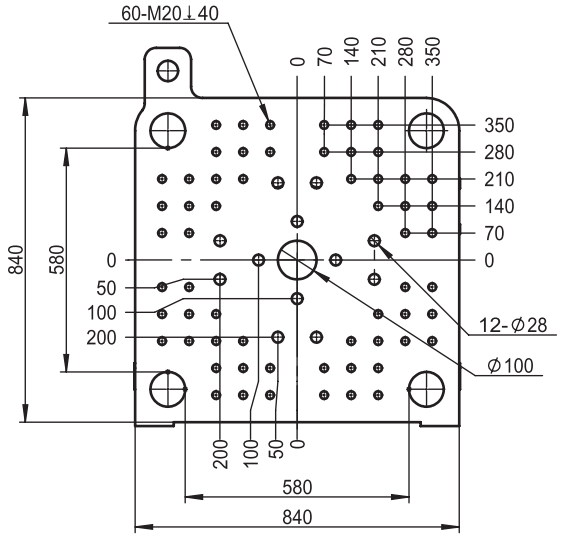
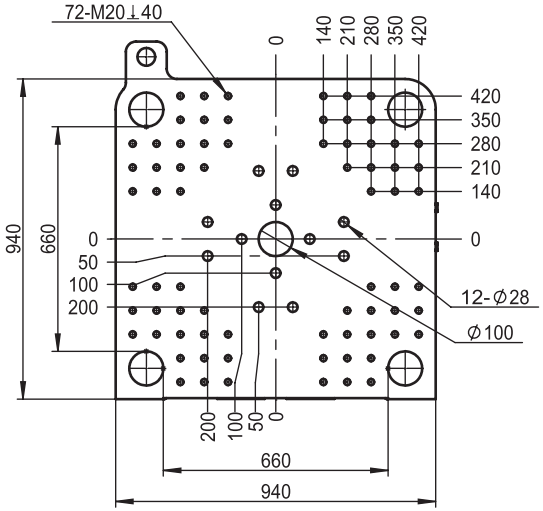
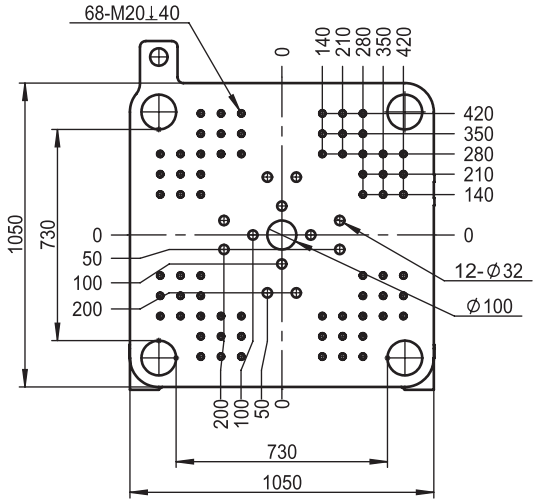
EM260-SVP/3



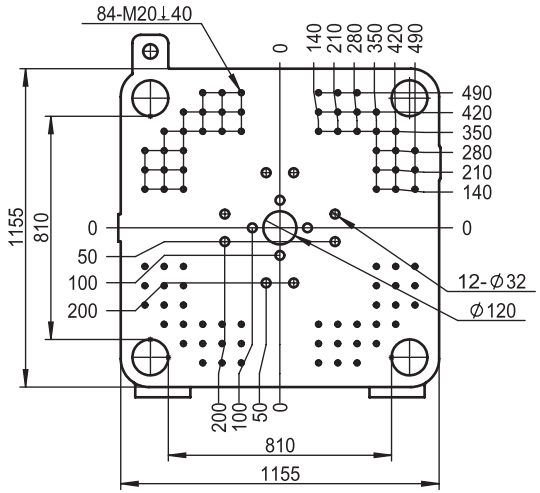
EM320-SVP/3



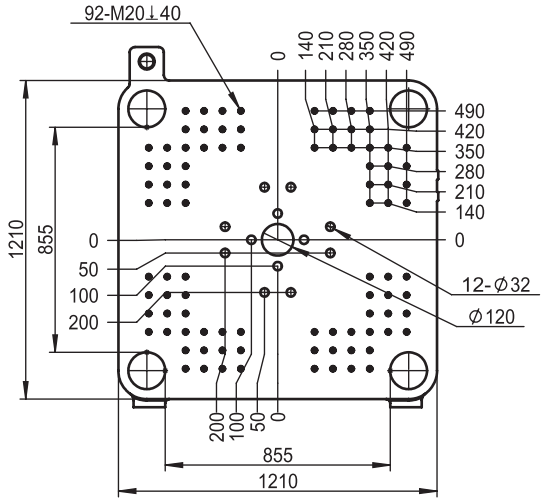
EM400-SVP/3



EM480-SVP/3



EM560-SVP/3



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