



Optimizing for Industry Demands



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SET series



High Speed Thin Wall Molding Machine

www.jonwai.com

SET Series

Optimization for Industry Demanding



Thin Wall Package
& IML Production



Thin Wall
Houseware



Disposable
Cups



Disposable
Cutlery

SET Series

The Evolution of Thin Wall Molding

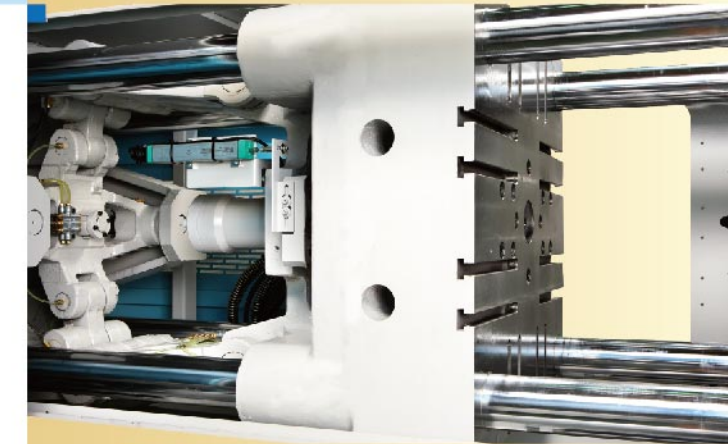
Jonwai TW model has been introduced successfully to global thin wall package industry for past decade.

Up to now there are more than 2000 sets of TW machines in global service, providing customers high quality & economical thin wall molding solution.

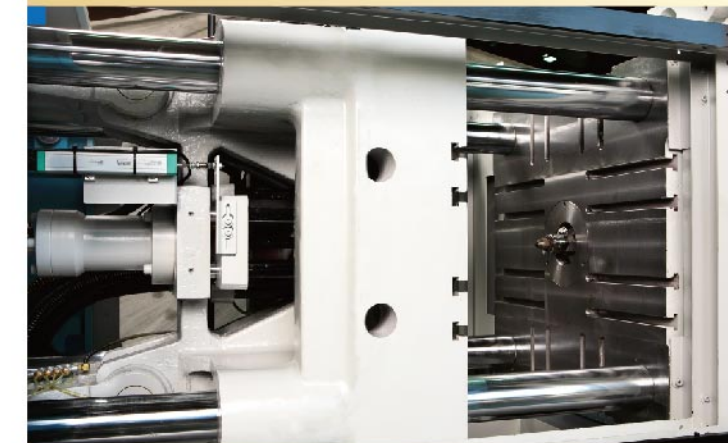
The update SET model inherited the advantages of TW model & further enhanced functions to make it more suitable for thin wall industry.

Special Feature :

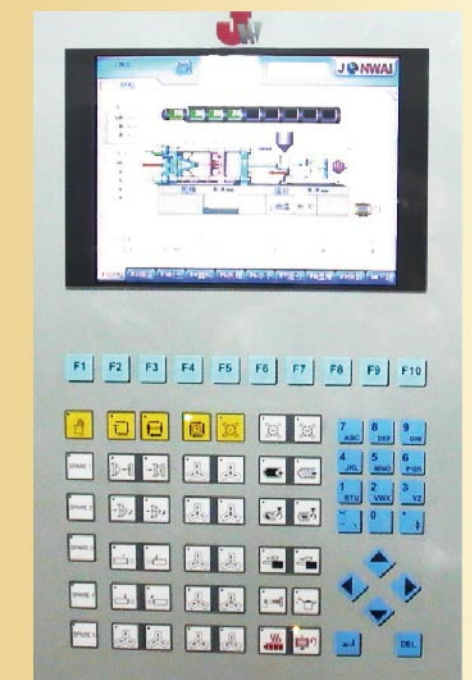
- New KEBA I-1000 Computer Control , High response , & execution Speed
- Injection Speed Increased to 500~550 mm./sec.
- Ejection Speed Increased
- High RPM/Low Torque Hydraulic Motor reduced material charging time
- Machine Base reinforced
- Increase caliber of cooling water distributor
- Increase caliber of air blow
- Safety door lever removable more convenient for robot in/out.



Fast Movement & Short Dry Cycle
Fast Movement due to 5-Point internal clamping system.



Solid Mould Closing Unit
Solid Box-Like structure mould closing unit with reinforce palten



User Friendly KEBA Control
Window based operation panel clear overview monitoring page. Modularized PLC design with widely function expandability.

Speed

- Fast Movement due to the 5-Point internal clamping system
- High injection speed and capacity
- High response of computer & hydraulic
- Fast Material Charging
- Short Dry cycle, Low cost per piece achieved

Precision

- High Repeatability Sequences
- Unique & Intelligent Close-loop control of process
- Mold open/close controlled by Pressure & Flow
- Proportional Valve achieved

SET Series

High Speed Thin Wall Molding Machine

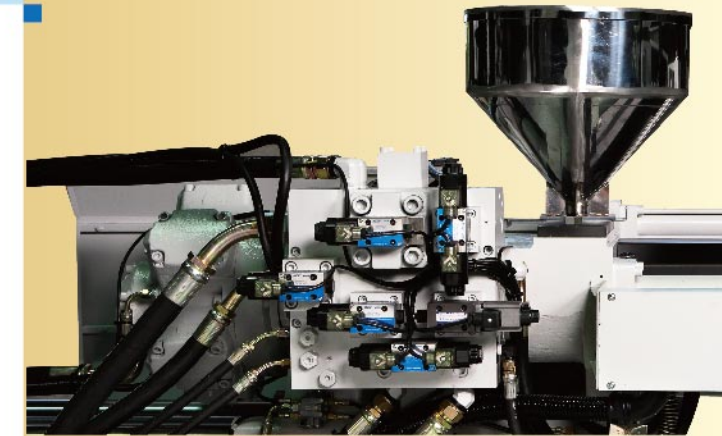


User Friendly

Window Based simple operation panel
Easy Programming & Clear Overview
Modularized PLC design for widely function expandability.
achieved

Reliability

Reinforce Platen
Reinforce Machine Base
Stable Mechanical Sequence
Solid IQC system before machine assembly and delivery



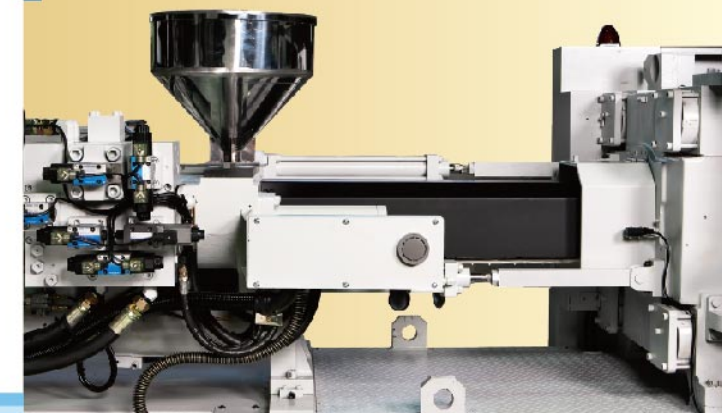
Quick Response Hydraulic System

Quick response hydraulic system coordinate with Jonwai unique servo power unit, response time only at 50 ms. Very applicable to long flow length, thin wall molding at multi cavities.



Excellent Stable Injection Unit

Holding pressure changeover position setting by time & screw position to cope with accumulator booster high speed injection.



Nozzle Center on Line & Linear injection movement

2 cylinders sliding guide bar ensure nozzle center on line. Injection position with twin-end support enhance the linear Injection movement.

SETS Series : with AC Synchronous Servo Power System

AC Synchronous Servo Power System

Unlike other companies outsourcing the servo system then equipped to machine, Jonwai integrate the entire system in house.

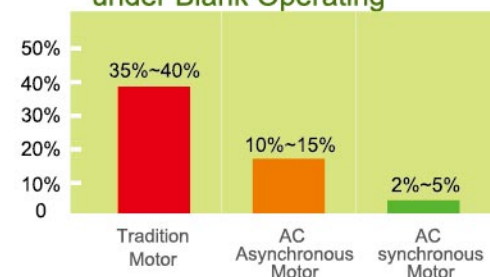
We fully grasp the key technologies of the servo power system & perfectly matching the mechanical, hydraulic system, PLC system & servo power system.

Advantages

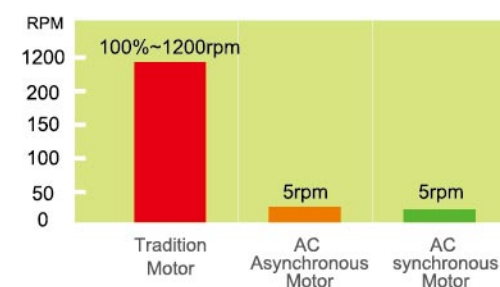
- **Water Saving** - The servo system only delivers hydraulic oil as it is needed. This prevents unnecessary generation of heat and substantial minimises oil cooling requirements. Under normal operating conditions, compared with conventional motor machines, machine cooling water savings 85% can be achieved.

- **Electricity savings** - Under normal operating conditions, compared with conventional motor machines, energy savings from 60%-85% can be achieved.
- **Hydraulic Oil Saving** - The servo system only delivers hydraulic oil as it is needed. This prevents unnecessary oil operation. Under normal operating conditions, compared with conventional motor machines, Hydraulic Oil savings 30% can be achieved.
- **Quick response** - Featuring a dynamic servo motor with a response time of only 50ms.
- **Moulding stability** - Due to the quick response of the servo motor and the closed-loop control. Compared with conventional motor machines, repeatability is greatly improved
- **Quiet operation** - The machine runs at much lower noise levels, particularly in low speed applications.
- **Reliable holding pressure** - Compared with traditional motor machine the holding pressure is more stable.
- **Unique Motor Control Design** - More Precise to command the motor pause & continue.
- **Flow Speed transmitted by Resolver** - PID logic and push-pull signal, The close loop corresponding flow and pressure adjustment ensures the highest quality and precision of the plastic parts produced.

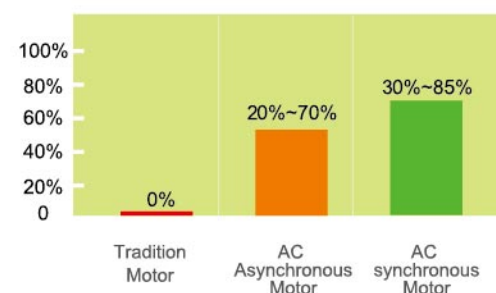
1. Motor Current Consumption under Blank Operating



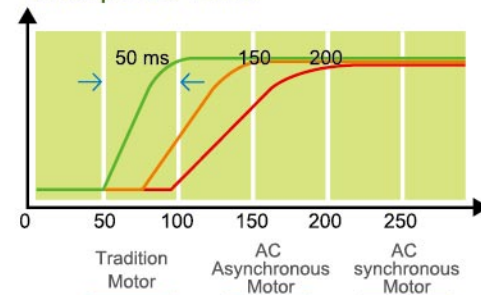
2. Motor Stand-by RPM



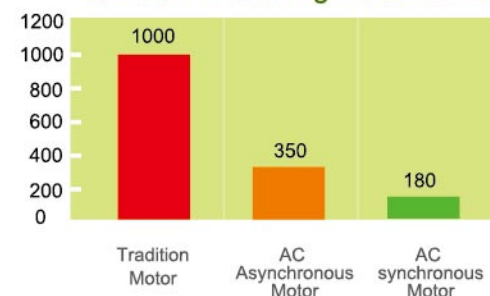
3. Power Saving



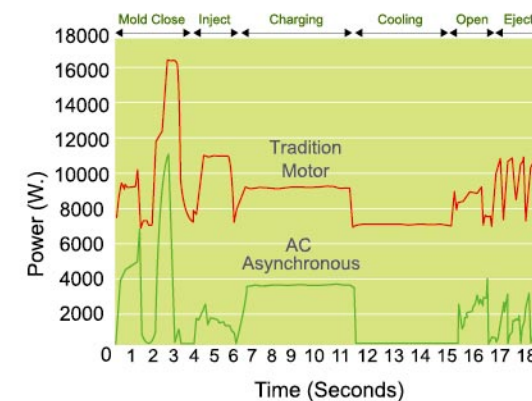
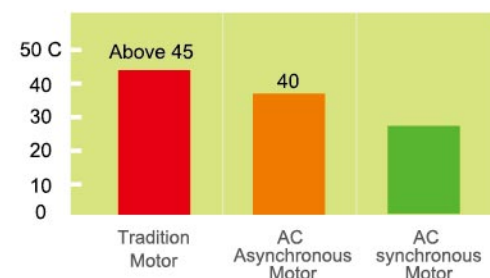
4. Response Time



5. Machine Cooling Water Consumption



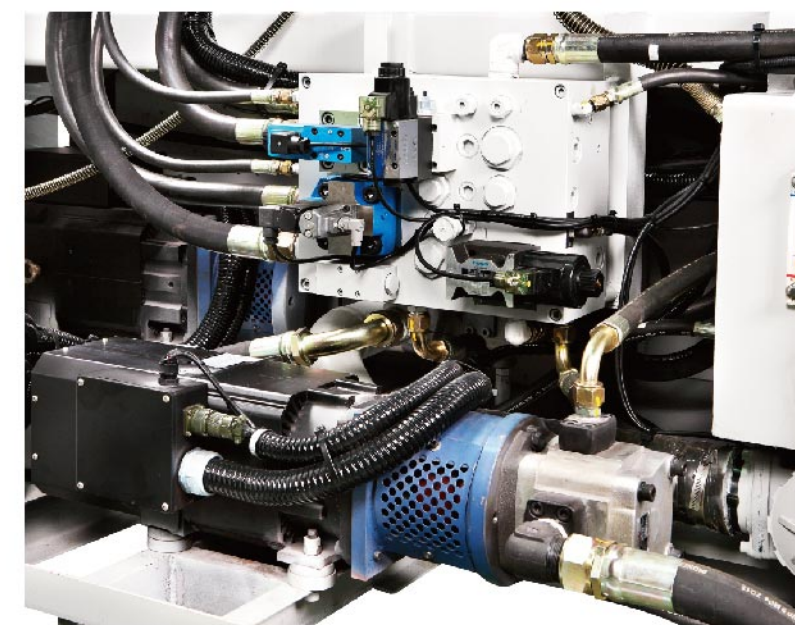
6. Hydraulic Oil Temp. Level



Test Product
Total Cycle time: 18 sec.
Cooling time: 5 sec.
Chargin time: 5.3 sec.

The power consumption of AC Asynchronous Motor is 78% less than traditional motor.

In Case of thick wall products or longer holding time or longer time products, power consumption could reach 80%~85%.



SET & SETS Specification

MODELS		JW-60SET			JW-100SET			JW-120SET			JW-150SET			JW-180SET			JW-220SET			JW-250SET			JW-300SET			JW-400SET			JW-500SET		
		JW-60SETS			JW-100SETS			JW-120SETS			JW-150SETS			JW-180SETS			JW-220SETS			JW-250SETS			JW-300SETS			JW-400SETS			JW-500SETS		
INJECTION UNIT		i6e			i10e			i12e			i15e			i18e			i22e			i25e			i30e			i40e			i50e		
SCREW DIAMETER	mm	32	35	38	35	38	42	38	42	45	42	45	50	50	55	60	55	60	65	60	65	70	65	70	75	70	75	80	75	85	95
INJECTION CAPACITY	cm³	120	144	170	153	181	221	192	235	270	277	318	392	471	570	678	617	735	862	791	929	1077	1028	1193	1369	1385	1590	1809	1811	2326	2906
SHOT SIZE(PS)	gr	106	127	150	136	160	195	170	208	238	244	281	347	416	503	599	546	649	730	699	821	952	908	1054	1210	1224	1405	1599	1601	2056	2569
PLASTICIZING CAPACITY	kg/hr	36	47	58	55	68	91	62	83	104	67	84	111	111	131	150	138	150	196	126	157	190	164	198	222	198	222	255	196	263	338
INJECTION RATE	cm³/sec	442	529	624	529	624	762	624	762	875	762	875	1080	1080	1307	1555	1307	1555	1825	1555	1825	2117	1659	1924	2209	1924	2209	2513	2209	2837	3544
INJECTION PRESSURE(MAX)	kg/cm²	2490	2082	1766	2280	1935	1584	2402	1966	1713	2318	2019	1635	2394	1978	1662	2428	2040	1738	2288	1949	1681	2173	1873	1632	2213	1928	1695	2321	1807	1447
SCREW SPEED RANGE	rpm	0~236			0~253			0~237			0~196			0~195			0~192			0~153			0~160			0~160			0~140		
SCREW TORQUE	kg-m	55			66			89			133			178			222			278			334			334			467		
NOZZLE STROKE	mm	275			305			325			345			365			395			425			485			525			575		
NOZZLE CONTACT FORCE	tons	3.5			3.5			4.6			4.6			5.9			5.9			8			8			8			8		
CLAMPING UNIT																															
CLAMPING FORCE	ton	60			100			120			150			180			220			250			300			400			500		
CLAMP STROKE(MAX)	mm	270			310			360			400			450			500			550			600			700			800		
MOLD HEIGHT(MIN-MAX)	mm	100~320			150~350			150~400			150~450			150~550			150~550			220~650			220~700			280~760			300~900		
OPEN DAYLIGHT	mm	370~590			460~660			510~760			550~850			600~1000			650~1050			770~1200			820~1300			980~1460			1100~1700		
PLATEN SIZE(H*V)	mm	470×470			560×560			610×610			650×650			720×720			780×780			860×860			940×940			1060×1060			1190×1190		
DISTANCE BETWEEN TIE-RODS	mm	310×310			370×370			410×410			430×430			480×480			520×520			580×580			630×630			720×720			820×820		
HYDRAULIC EJECTOR FORCE	ton	3.3			3.3			3.9			4.6			5.3			5.3			7			7			11			11		
HYDRAULIC EJECTOR STROKE	mm	75			90			100			110			130			150			160			180			210			210		
HYDRAULICS																															
OIL RESERVOIR CAPACITY	us.gal	45			57.5			75			92.5			127.5			135			167.5			165			185			222		
ELECTRICS																															
POWER SUPPLY(STANDARD)	volt	220			220			220			220			220			220			220			220			220			220		
MOTOR RATED	HP	25 30			30 35			40			40 45			50 55			60 70			60 70			85			90			105		
NUMBER OF HEAT CONTROL ZONES	set	4			4			4			4			4			5			5			5			5			6		
HEATING WATTAGE	kw	7.35			8.65			10.75			12.65			18.9			20.95			22.7			25.85			29.95			38.3		
GENERAL																															
WATER REQUIREMENTS(MAX)	gpm	11.2			11.2			11.2			16.2			18.7			18.7			18.7			21.2			21.2			26.2		
MACHINE DIMENSIONS(L*W*H)	M	3.95*1.13*1.6			4.22×1.23×1.67			4.62×1.28×1.73			5.08×1.32×1.79			5.67×1.42×1.86			6.07×1.5×1.93			6.57×1.58×2.06			7.48×2.1×2.1			8.24×2.12×2.3			9.17×2.21×2.5		
MACHINE WEIGHT	kg	3000			3800			4500			5600			6700			7600			11000			12000			16500			21000		
HOPPER CAPACITY	kg	25			25			50			50			50			50			100			100			100			100		



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