



Ningbo  
**SUNPRIDE**  
Mould Technology Co., Ltd.

- ▶ HIGH EFFICIENCY
- ▶ STABLE WORKING
- ▶ ENERGY SAVING

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Ningbo Sunpride Mould Technology Co., Ltd. is specialized in manufacturing moulds and die casting automation equipments.

Our main products are auto ladle, auto spray (electrical type and servo type), auto extractor and combined auto spray with extractor.

Our product quality and service are in the leading level of the automation industry. In line with the principle of "customer first, quality assurance and technology innovation", we are doing our best to serve customers and contributing the greatest strength to the industry automation.

We deeply realized that the excellent product quality, perfect services are our customers' greatest production guarantee. Continuous development, innovation, and customer satisfaction is our eternal mission, also this is the cornerstone for us to stand firmly in the automation industry.

Ningbo Sunpride Mould Technology Co., Ltd. is your trustworthy partner.

## Five-linkage Auto Ladle

### Features

- 1.The five-linkage structure arm has the perfect movement track with high precision of material feeding and stable running.
- 2.Integral casting turbine box, one time completed with CNC machining, with high precision and excellent mechanical strength.
- 3.Horizontally mounted vortex rod and bearings are always below the oil line to ensure good lubrication.
- 4.Used Japanese NSK bearings and imported oil seals.
- 5.Super wear resistant copper alloy turbine which can ensure long life.
- 6.Used Japanese OMRON touch monitor and frequency converter, which is suitable for long time operation even in bad environment.
- 7.Used KOYO electronic cam to control the position of arm and ladle. The setting of feeding quantity and position is digitized and the failure rate is reduced.
- 8.Equipped with touch interface, very convenient to set all the parameters, and with fault self-diagnosis function, so that operation and maintenance are extremely easy.
- 9.Multiple standby mode can match any complex situation, even the moulds with core pulling can also cooperate freely. We have 2 options with manual and automatic operation method, 3 kinds of standby mode and the coordinated control of before standby and after standby.



### Models and Parameters

Models	SPAL-1	SPAL-2	SPAL-3	SPAL-4	SPAL-5	SPAL-6	SPAL-7
Suitable die casting machine	125T-200T	250T-400T	450T-550T	630T-1000T	1250T-1600T	1800T-2500T	2500T-4000T
Max. pouring capacity	3Kg	4.5Kg	6.5Kg	10Kg	20Kg	30Kg	50Kg
Pouring accuracy	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Max. distance	1600mm	1740mm	1900mm	1970mm	2300mm	2400mm	2900mm
Arm motor	0.75Kw	0.75Kw	0.75Kw	0.75Kw	1.5Kw	1.5Kw	1.5Kw
Cup motor	0.18Kw	0.37Kw	0.37Kw	0.37Kw	0.37Kw	0.37Kw	1.5Kw
Power capacity	380V/1KVA	380V/1.2KVA	380V/1.2KVA	380V/1.2KVA	380V/2KVA	380V/2KVA	380V/3KVA
Cycle time	10sec	12sec	15sec	16sec	20sec	22sec	25sec

## Linkage Type Auto Spray



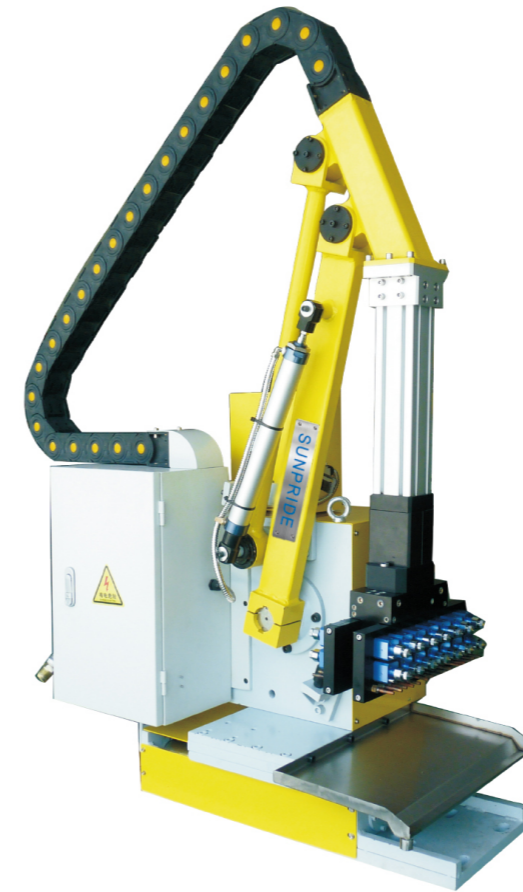
### Features

1. Used multi-linkage structure, with high mechanical strength, good stability and long life.
2. Used speed reducer and motor from Taiwan, Japanese NSK bearings.
3. Customer can choose Japanese OMRON frequency converter control or YASKAWA servo control (optional).
4. Customer can choose copper nozzle or independent spraying nozzle (optional).
5. With hand-held operating device, the spray program can be edited freely with touch interface. Floating spray or fixed-point spray are available.
6. Equipped with the function of going down in advance, the spray cycle time can be saved effectively.
7. Equipped with the function of mould thickness adjustment.
8. Equipped with the function of fault self-diagnosis display.

### Models and Parameters

Models	SPAS-1	SPAS-2	SPAS-3	SPAS-4	SPAS-5
Suitable die casting machine	125T-200T	250T-400T	450T-550T	630T-1000T	1250T-1600T
No. of copper tube	> 35PCS	> 40PCS	> 70PCS	> 80PCS	> 90PCS
Lifting stroke	700mm	850mm	1100mm	1200mm	1500mm
Base stroke	250mm	250mm	400mm	400mm	500mm
Base motor	90W	90W	90W	90W	90W
Lifting motor	0.37Kw	0.37Kw	0.75Kw	0.75Kw	1.5Kw
Power capacity	380V/0.5KVA	380V/0.5KVA	380V/0.8KVA	380V/0.8KVA	380V/2KVA
Compressed air pressure	5bar	5bar	5bar	5bar	6bar
Mould release agent pressure	4bar	4bar	4bar	4bar	4bar
Air consumption	0.8M <sup>3</sup> /Min	1.0M <sup>3</sup> /Min	1.3M <sup>3</sup> /Min	1.4M <sup>3</sup> /Min	1.5M <sup>3</sup> /Min
Cycle time	5sec	5sec	6sec	7sec	9sec

## Linkage Type Servo Spray



### Features

1. Used linkage structure, with high mechanical strength, good stability and long life.
2. Used YASKAWA servo motor and Japanese NSK bearings.
3. It can stand by at the closest place of the spray point after mould opening to reduce the going down time and improve the working efficiency.
4. Equipped with the function of mould thickness Adjustment, time-saving, labour-saving and safe.
5. Different spray programs can be saved in the system, customer only need to change the program through the man-machine interface when they want to change the mould.
6. There is signal reservation in the control cabinet, can be connected to the die casting machine and extractor to make a fully automatic system.
7. Used man-machine interface touch screen, it is convenient to set and adjust all the parameters, also it has the function of fault self-diagnosis display.
8. Equipped with nozzle type spray heads, which have good atomization effect and convenient to change and install. Also, it has the function of fixed point spray, circulating spray and floating spray.
9. The moving and fixed die can be blown at the same time or separately. The spray and blow function can be used separately. It has the function of blow when going up, which means it can blow when the spray head is going up after spraying to clean the mould.
10. Used the bladder type accumulator to control the spray nozzle, the flow rate can be accurately controlled to suit different products and positions. And it is convenient to clean and maintain.

### Models and Parameters

Models	SPSS-1	SPSS-2	SPSS-3
Suitable die casting machine	125T-200T	250T-400T	500T-580T
Spray type	2 layers each spray for moving and fixed die, totally 24 spray positions	2 layers each spray for moving and fixed die, totally 28 spray positions	2 layers each spray for moving and fixed die, totally 32 spray positions
No. of nozzle	12 Pcs (6 each for moving and fixed die)	14 Pcs (7 each for moving and fixed die)	16 Pcs (8 each for moving and fixed die)
No. of blow copper tube (φ6 X 60mm)	12 Pcs (6 each for moving and fixed die)	14 Pcs (7 each for moving and fixed die)	16 Pcs (8 each for moving and fixed die)
Spray head control unit	Controlled through layer, each layer is a control unit, totally 4 units		
Lifting stroke	650 mm	800 mm	1100 mm
Base stroke	250 mm	250 mm	400 mm
Lifting motor	3.0 Kw	3.0 Kw	2.0 Kw
Power capacity	380V / 0.5KVA	380V / 0.5KVA	380V / 0.8KVA
Cycle time	5 Sec	5 Sec	6 Sec
Outer size	850 X 700 X 1290 mm	850 X 700 X 1400 mm	1000 X 700 X 1590 mm
Net weight	280Kg	300Kg	330Kg

## Auto Extractor



### Features

- 1.Used horizontal multi-linkage arm, floor mounted and compact design.linkage arm can have strong bearing capacity.Used imported motor, speed reducer and frequency converter.Used multistage speed control for the arm which is more stable than pneumatic control, it can move at a high speed with no vibration.
- 2.Used an electrical driven arm for the function of advanced follow-up (the arm will reach the edge of the mould in advance before die opening), which can save the cycle time effectively.
- 3.The extract device adopts pneumatic claw, which can easily change to three claws and four claws and can match different situations.
- 4.Used Japanese KOYO electronic cam to control the position of arm. It is more accurate and lower failure rate compared with the traditional mechanical cam, and the position setting is digitized.
- 5.All the time parameters and position settings can be set by touch screen,which has the function of operation prompt and fault diagnosis,also it can monitor all actions of the extractor.
- 6.The height of the whole unit can be adjusted, used four columns up and down structure, stable, reliable and labour saving. It is suitable for multi-station extracting.

### Models and Parameters

Models	SPAE-1	SPAE-2	SPAE-3	SPAE-4
Suitable die casting machine	125T-200T	250T-400T	450T-550T	630T-1000T
Lifting weight	3Kg	4.5Kg	6.5Kg	12Kg
Arm stroke	1550mm	1650mm	1920mm	2100mm
Drawing stroke	300mm	300mm	400mm	500mm
Arm motor	0.37Kw	0.37Kw	0.75Kw	0.75Kw
Drawing motor	Pneumatic	Pneumatic	Pneumatic	0.37Kw
Claw diameter	Φ40-60	Φ50-70	Φ60-80	Φ80-110
Air inlet bore	PT1/2"	PT1/2"	PT1/2"	PT1/2"
Power capacity	380V/1KVA	380V/1.2KVA	380V/1.5KVA	380V/1.5KVA
Cycle time	10sec	12sec	15sec	16sec

## Gantry Type Auto Spray cum Extractor



### Features

- 1.Intelligent four-axis spray with extractor integrated structure.
- 2.Used Rexroth precise linear guideway and YASKAWA servo system, and with high protection level which is suitable for long-term and stable operation in harsh environment.
- 3.Used four-axis servo driver with a Min. speed of 1.5 m/s, which can improve the working efficiency for 30% than traditional automation.
- 4.It locates in the opposite side of the die casting machine operating area, which is safe for the mould and workers.
- 5.Modular spray system, No. of spray nozzle is adjustable and the spray head can go to 6 directions.
- 6.With hand-held touch man-machine interface which combines operating and setting together, the program can be edited freely with interface. It is very easy to understand and equipped with the function of fault self-diagnosis.
- 7.Different moulds' parameter settings can be saved with serial numbers, when the customers want to change the mould, they only need to input the serial number which can save a lot of setting time.

### Models and Parameters

Models	SPSE-1	SPSE-2	SPSE-3	SPSE-4	SPSE-5	SPSE-6
Suitable die casting machine	125T-200T	250T-400T	500T-630T	800T-1000T	1250T-1600T	1800T-2500T
No. of spray nozzle	14Pcs	20Pcs	28Pcs	40Pcs	40Pcs	56Pcs
X axis stroke	1500mm	2100mm	2500mm	3000mm	3500mm	4000mm
Y axis stroke	500mm	600mm	700mm	800mm	1000mm	1200mm
Z1 / Z2 axis stroke	800mm	900mm	1100mm	1300mm	1500mm	1800mm
Moving speed	2m/s	2m/s	1.5m/s	1.5m/s	1.5m/s	1.5m/s
Compressed air pressure	5bar	5bar	5bar	5bar	5bar	6bar
Mould release agent pressure	4bar	4bar	4bar	4bar	4bar	4bar
Air consumption	0.4M <sup>3</sup> /Min	0.6M <sup>3</sup> /Min	0.8M <sup>3</sup> /Min	1M <sup>3</sup> /Min	1.2M <sup>3</sup> /Min	1.2M <sup>3</sup> /Min
Power capacity	380V/3.5KVA	380V/3.5KVA	380V/4.5KVA	380V/4.5KVA	380V/7KVA	380V/7KVA
Cycle time	7sec	8sec	10sec	12sec	18sec	22sec

## Die Coat Mixer



### Features

1. Used imported brands for main parts and electronic accessories, which are having less failure and long life. ( e.g. French DOSATRON proportional valve; Canadian SKYLINK pump, Japanese CKD pressure regulating filter; Taiwan CKC time relay and level relay, Taiwan SHAKO solenoid valve.)
1. Used automatic proportional valve to control the die coat and water ratio. It can also adjust the consistence automatically according to the flow rate to ensure the accuracy and stability of the mixed liquid ratio. Adjustable range: 1 : 50 - 1 : 500.
2. Can be used for common die coat and special die coat.
3. Equipped with stainless steel mixing tank and intelligent level detection system, when the liquid level is lower than the set value, the alarm will give a signal.
4. Used automatic bubble stirring which makes the liquid mix evenly.
5. Used imported pneumatic diaphragm pump, can supply the mixed liquid automatically with constant pressure.

#### Function

1. When mixed liquid level is lower than the set limit, the proportional valve and water valve will open automatically. They will start supplying the liquid until it reaches the upper limit.
2. When the liquid is finished, the yellow light and alarm light will be on, the proportional valve and water valve will open automatically. When the liquid is supplied enough, it will come back to normal work.

### Models and Parameters

Models	SDCM-1 (single)
No. of supported sprays	1
No. of pumps	1
Mixing tank capacity	91L
Max. output volume of proportional valve	2.5m <sup>3</sup> /h
Air pressure	6kgf/cm <sup>2</sup>
Water pressure	1 - 4kgf/cm <sup>2</sup>
Water inlet	PT3/4 "
Air inlet	Φ10
Mixed liquid outlet	PT1 "
Dilution times	1 : 50 - 1 : 500
Mixed liquid output pressure	6kgf/cm <sup>2</sup>
Dilution ability	(0.1 - 2.5) m <sup>3</sup> /h affected by water inlet pressure
Power supply	Single phase 220V

Models	SDCM-2 (centralized)
No. of supported sprays	1 - 8
No. of pumps	2
Mixing tank capacity	325L
Max. output volume of proportional valve	2.5m <sup>3</sup> /h
Air pressure	6kgf/cm <sup>2</sup>
Water inlet	PT3/4 "
Air nozzle bore	PT1/2 "
Mixed liquid outlet	PT1 "
Dilution times	1 : 50 - 1 : 500
Mixed liquid output pressure	6kgf/cm <sup>2</sup>
Dilution ability	(0.1 - 2.5) m <sup>3</sup> /h affected by water inlet pressure
Power supply	Single phase 220V

## Vacuum Machine

### Features

1. Used imported vacuum pump which can ensure long life and reliable in quality.
2. The vacuum machine can be operated individually or connected with the die casting machine.
3. Used Mitsubishi PLC controller, and the control box is easy to clean and maintain.
4. Equipped with high standard parts, used Japanese SMC / CKD main control valve body, which can reduce the failure considerably.
5. Used quick adapter to connect, it is simple and fast to use.
6. The unique digital display of insufficient vacuum degree and block alarm can make the die casting process monitoring more convenient.
7. With stable running, and the noise not more than 65dB.



### Models and Parameters

Models	SPVM-40	SPVM-65	SPVM-100
Suitable die casting machine	500T and below	500T - 1000T	1200T and above
Speed of evacuation (m <sup>3</sup> /h)	40	65	100
Noise level	< 62dB	< 62dB	< 62dB
Motor power (Kw)	1.1	1.5	2.2
Final vacuum	0.5mbar	0.5mbar	0.5mbar
Air pressure	6kgf/cm <sup>2</sup>	6kgf/cm <sup>2</sup>	6kgf/cm <sup>2</sup>
Power supply	three phase 380V/50Hz	three phase 380V/50Hz	three phase 380V/50Hz
Vacuum nozzle bore	1/2 "	1/2 "	1/2 "
Air nozzle bore	3/4 "	3/4 "	3/4 "

## Hydraulic Trimming Machine

### Features

1. Used PLC to control, with unique programming design and multiple protection function.
2. With the function of air blow, also equipped with manual guide groove and safety cover.
3. Used water-cooled cooler, all the hydraulic parts are famous brands which can ensure the machine life.
4. Other function: upper and lower ejection cylinders are optional to suit the products which have the ejection requirements.



### Models and Parameters ( 1 )

Models	Unit	SPTM-10	SPTM-15	SPTM-20	SPTM-30	SPTM-40
Clamping force	T	10	15	20	30	40
Opening force	T	4.8	6	5.7	7.8	8.1
Space between tiebars	mm	540 X 340	600 X 400	650 X 450	725 X 525	800 X 575
Min. mould thickness	mm	150	200	200	250	250
Mould opening stroke	mm	350	350	400	450	450
Max. opening space	mm	500	550	600	700	700
Dropping port	mm	250 X 200	250 X 200	300 X 200	300 X 250	300 X 250
Max. oil pressure	Kg/cm	140	140	140	140	140
Oil pump motor	Kw (HP)	3.7 (5)	5.5 (7.5)	7.5 (10)	7.5 (10)	7.5 (10)
Total electricity consumption	Kw	3.7	5.5	7.5	7.5	7.5
Machine weight	T	1.5	1.8	2.8	3.2	4.2
Machine dimensions	m	1.2 X 1.4 X 2.1	1.3 X 1.0 X 2.2	1.4 X 1.6 X 2.4	1.4 X 1.7 X 2.7	1.6 X 1.4 X 2.8

### Models and Parameters ( 2 )

Models	Unit	SPTM-50	SPTM-60	SPTM-80	SPTM-100	SPTM-140
Clamping force	T	50	60	80	100	140
Opening force	T	8.4	8.8	10	12.5	20
Space between tiebars	mm	850 X 640	900 X 720	1000 X 800	1100 X 900	1300 X 1000
Min. mould thickness	mm	250	300	300	300	350
Mould opening stroke	mm	500	500	500	500	650
Max. opening space	mm	750	800	800	800	950
Dropping port	mm	300 X 250	300 X 250	350 X 250	350 X 250	350 X 300
Max. oil pressure	Kg/cm	140	140	140	140	140
Oil pump motor	Kw (HP)	11 (15)	11 (15)	11 (15)	15 (20)	15 (20)
Total electricity consumption	Kw	11	11	11	15	15
Machine weight	T	4.3	4.8	5.5	6.8	8.5
Machine dimensions	m	2.0 X 1.9 X 3.1	1.8 X 1.6 X 3.0	1.9 X 1.7 X 3.3	2.0 X 1.8 X 3.7	2.6 X 2.5 X 4.0

## Conveyor



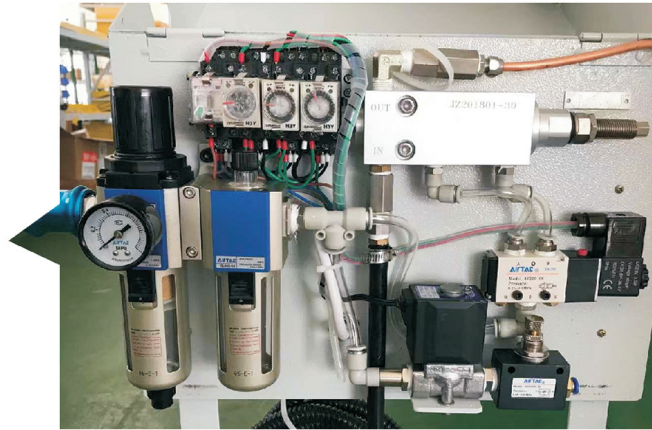
### Features

1. Used stainless steel or carbon steel for the chain belt.
2. Equipped with strong fans for product cooling.
3. Height can be adjusted by hand wheels at both ends.
4. Used Taiwan brand speed reduction motor and frequency changing device.
5. Conveyor belt speed is 1 - 5m / min.
6. The conveyor can run intermittently by setting time or run according to the extractor signal.
7. Conveyor size is customized.

### Models and Parameters

Models	SPMC-1	SPMC-2	SPMC-3	SPMC-4	SPMC-5	SPMC-6	SPMC-7
Suitable die casting machine	125T - 200T	250T - 400T	450T - 630T	800T - 1000T	1250T - 1600T	1800T - 2500T	2500T - 3000T
Chain belt effective width	300mm	400mm	500mm	600mm	800mm	1000mm	1200mm
Deliver distance	2500mm	3000mm	3000mm	3500mm	4000mm	5000mm	6000mm
Max. deliver weight	40Kg	40Kg	60Kg	80Kg	100Kg	150Kg	200Kg
Max. speed	5m/min	5m/min	5m/min	5m/min	5m/min	5m/min	5m/min
No. of cooling fans	1	1	1	2	2	3	4
Motor power	0.37Kw	0.37Kw	0.37Kw	0.37Kw	0.75Kw	0.75Kw	0.75Kw
Power supply capacity	220V / 0.8KVA	220V / 0.8KVA	220V / 0.8KVA	220V / 1.0KVA	220V / 1.5KVA	220V / 2.0KVA	220V / 2.2KVA

## Automatic Plunger Lubrication



### Features

1. Used imported main parts to ensure the machine quality and long life.
2. Easy to operate and maintain.
3. Can be directly fixed on the machine, it is convenient and saving space.
4. Oil dripping is adjustable and with the function of self-blowing, which can lubricate the plunger more effectively, increase the plunger life and save oil.
5. With good lubrication, the quality of castings can be improved considerably.



Five-linkage Auto Ladle



Linkage Type Auto Spray



Linkage Type Servo Spray



Auto Extractor



Gantry Type Auto Spray cum Extractor



Die Coat Mixer



Vacuum Machine



Hydraulic Trimming Machine



Conveyor



Automatic Plunger Lubrication