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**SERVO PRESS  
& AUTOMATIC STAMPING LINE**



S-T INTELLIGENCE\_E\_2023\_V01

**SUZHOU S-T INTELLIGENCE TECHNOLOGY CO., LTD.**

## COMPANY PROFILE

Suzhou S-T Intelligence Co., Ltd. (hereinafter referred to as S-T Intelligence) was founded in May 2021, which is a key project introduced by Suzhou Industrial Park (SIP), a “Leading Intelligent Equipment Enterprise” in SIP (identified by SIP government), a council member of Jiangsu Intelligent Equipment Industry Alliance, and a council member of SIP Technology Innovation Alliance.

S-T Intelligence offers one-stop servo stamping solutions to customers, ranging from **servo presses, servo motors with independent intellectual property rights, servo drives and control systems, stamping process analysis, to stamping automation ancillary equipment.**

S-T Intelligence has a strong R&D team, headed by senior engineers with extensive experience in research and development of servo press technology over many years. The core team comprises of **2 doctors, 5 masters and 6 senior engineers.**

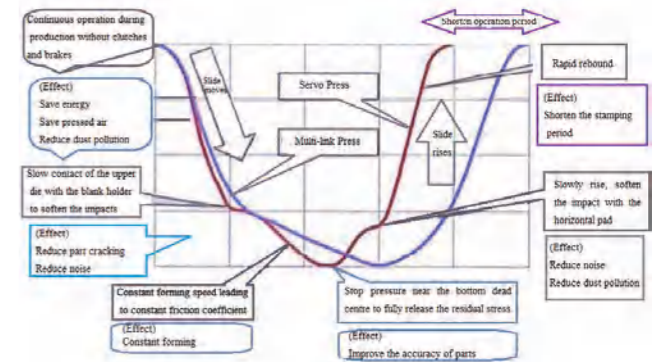
S-T Intelligence has completely independent research and development capability in servo press and control system. For the servo press main transmission structure and key components, S-T Intelligence has more than **30 patents**, including **3 invention patents, 4 software copyrights.** Our servo press technology is independent and controllable, with stable and reliable products.

S-T Intelligence is committed to becoming a **leading national brand in China with autonomous development of servo press control system and one-stop solution for servo press.**



## ADVANTAGES OF SERVO PRESS

- Direct drive via servo motor, providing stamping energy in place of the flywheel for the press, eliminating clutches and brakes.
- Fewer mechanical parts, less inertia of the transmission structure, lower noise level, simplified maintenance, and cheaper maintenance costs.
- Precise control of the stamping process by arbitrarily setting and adjusting the servo motor speed. Optimized stamping process curve by arbitrarily programming the operating speed, stroke position and pressure of the slide, greatly improving the accessibility and flexibility of production.
- Full load operation while stamping at low slide speed (above 1 spm).
- Reduced press working cycle time, enhanced production rate and production efficiency by increasing the speed of slide's return stroke.
- Improvement of the accuracy and quality of stamped parts, minimization of the impact on the dies, extension of the dies' life time cycle, and reduction of the cost through utilization of low stamping stroke speed.
- Efficient drive solution to reduce energy consumption.
- Comprehensive energy management system, recycling of excess energy, and controlling instantaneous energy release during stamping.
- Handwheel fine-tuning function, significantly reducing the time of tryout.
- Same safety and logic control as mechanical press.

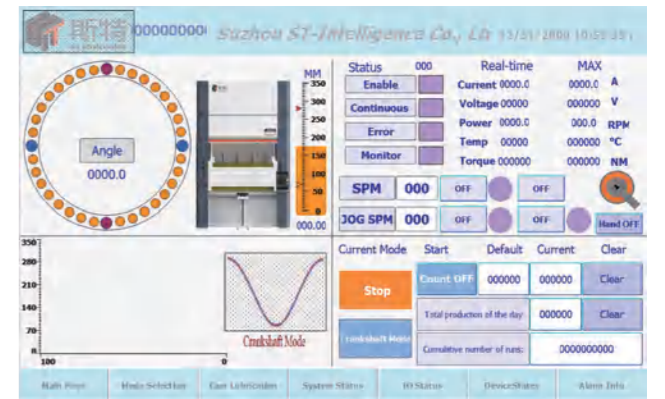


## SERVO PRESS & AUTOMATIC STAMPING PRODUCTION LINE

- |   |  |     |
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| 1 | STSC1 Type Servo Single Point C-frame Press  | P5  |
| 2 | STSZG1 Type High Rigid Servo Straight Side Single Point High Precision Coining Press | P6  |
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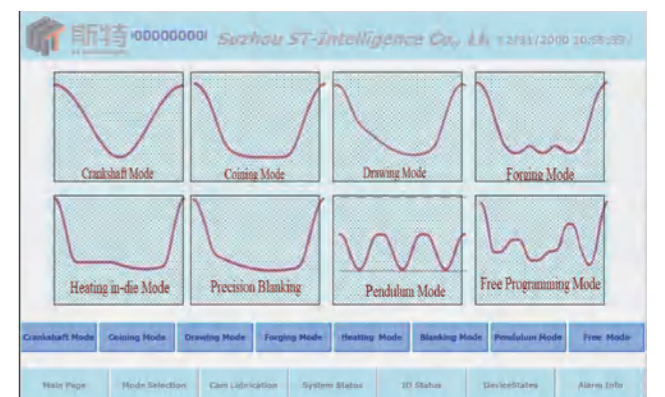
## HMI FUNCTIONS

- Motion curve planning (crankshaft mode, multi-link mode, pressure holding mode, unilateral mode, pendulum mode, silent stamping mode, repeated pressure mode, free programming mode)
- Production process status detection and production volume presetting and counting, etc.
- Real-time curve display of motor torque, crankshaft angle, slide movement, etc.
- Management system for die libraries with big data storage function



## SLIDE OPERATION MODES

- Multiple preset curve modes and free programming modes
- Normal crankshaft operation mode
- Arbitrarily connecting rod operation mode
- Repeated pressure mode conducting short stroke near the bottom dead centre
- Blanking processing mode at low speed near the bottom dead centre to reduce processing noise
- Pressure holding mode that stops pressure near the bottom dead centre
- Joint control mode combined with the movement of feeding device
- Stamping operation mode determined by stamping trial



Servo press fully embodies the future development direction of forging and stamping equipment with the advantages of composite, high efficiency, high precision, high flexibility, low noise, energy saving and environmental protection. Servo press replacing mechanical press is an inevitable trend of the progress of scientific and technological research and development promoting the production method change.

# EXAMPLE OF SERVO PRESS REFERENCE



STSC1 TYPE SERVO SINGLE POINT C-FRAME PRESS

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STSZG1 TYPE HIGH RIGID SERVO STRAIGHT SIDE SINGLE POINT HIGH PRECISION COINING PRESS



STSM2 TYPE SERVO STRAIGHT SIDE DOUBLE POINTS PRESS

P7

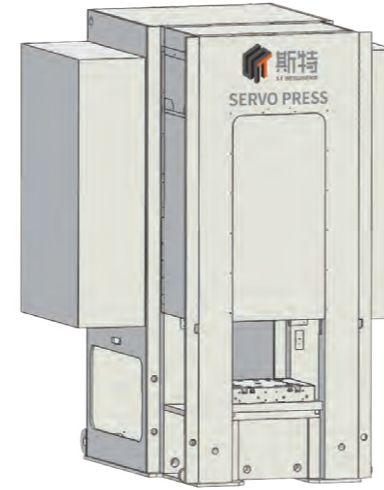
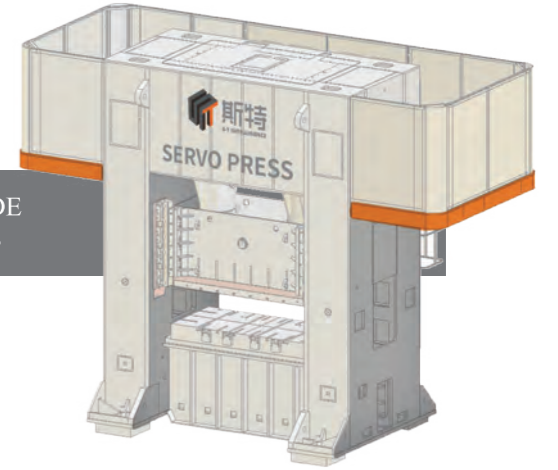
P7

STSM2 TYPE SERVO STRAIGHT SIDE DOUBLE POINTS FOUR-PRESS AUTOMATIC TANDEM LINE



P9

STSH2 TYPE SERVO STRAIGHT SIDE DOUBLE POINTS HIGH PRECISION PRESS



STSEP TYPE SERVO ELBOW LINK-STYLE HIGH PRECISION COINING PRESS

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STSP2 TYPE SERVO STRAIGHT SIDE DOUBLE POINTS PRESS FOR AUTOMOTIVE SECTORS



STSP4 TYPE SERVO STRAIGHT SIDE FOUR POINTS PRESS FOR AUTOMOTIVE SECTORS

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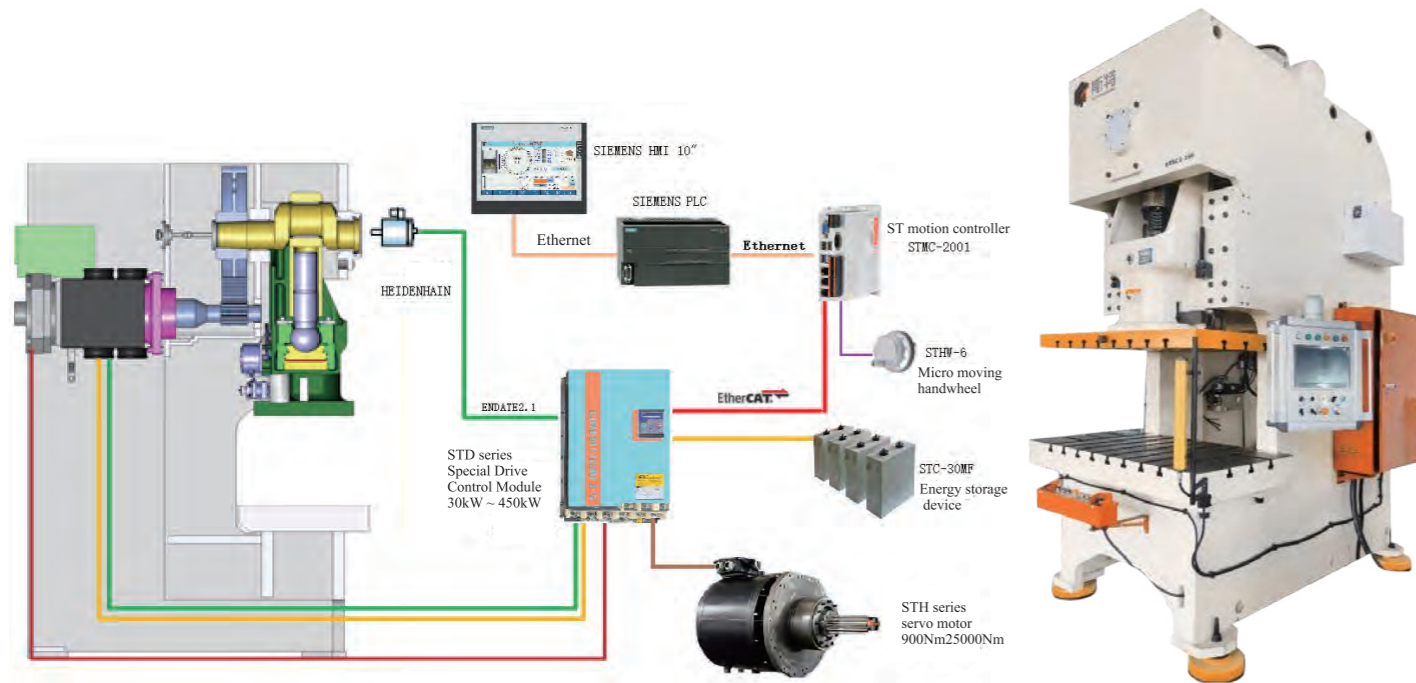
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SERVO PRESS AND AUTOMATIC STAMPING LINE FOR 18650 TYPE & 46 SERIAL CYLINDRICAL STEEL SHELL



## STSC1 TYPE SERVO SINGLE POINT C-FRAME PRESS

### S-T Control System Diagram



### STSC1 Type Servo Single Point C-frame Press Specification

Type	Unit	STSC1-25	STSC1-35	STSC1-45	STSC1-60	STSC1-80	STSC1-110	STSC1-125	STSC1-160	STSC1-200	STSC1-250	STSC1-315
Nominal Force	KN	250	350	450	600	800	1100	1250	1600	2000	2500	3150
Nominal Force Stroke	mm	1.5	2	3	4	5	5	5	6	6	6	6
Stroke	mm	70	80	100	120	150	180	180	180	200	220	250
Number of Strokes (Max.)	spm	120	100	90	70	60	55	50	45	40	40	35
Die Height (Max.)	mm	200	235	265	310	340	360	360	420	460	500	500
Die Height Adjustment	mm	50	55	60	70	80	80	80	100	110	120	120
Bolster Size	Left to Right	mm	680	800	850	900	1000	1150	1150	1250	1400	1500
	Front to Back	mm	300	400	450	500	550	600	600	800	820	850
Slide Size	Left to Right	mm	300	350	400	500	550	650	650	700	850	950
	Front to Back	mm	230	250	300	400	450	500	550	650	700	700
Distribution Capacity	KVA	13	15	20	30	50	55	60	65	80	100	130
Circuit Breaker Current	A	32	40	50	80	125	140	160	175	200	250	320
Air Pressure Level	MPa	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Cooling	/	Air	Air	Air	Air	Air	Water	Water	Water	Water	Water	Water
Number of Motor Drives	/	1	1	1	1	1	1	1	1	1	1	1

## STSZG1 TYPE HIGH RIGID SERVO STRAIGHT SIDE SINGLE

## POINT HIGH PRECISION COINING PRESS

### Structure Features

- Main structure: Gantry welding frame (Mono-block)
- Main transmission form: Top drive, horizontal single crankshaft single point servo press
- Anti deviated load: The guide rail adjustment adopts an anti deviated load structure to ensure the vertical precision of the slide during transfer stamping
- Lubrication: The main drive bearing part is lubricated with thin oil
- Main motor: Low-speed high-torque water-cooled servo motor, ensuring reliable operation over extended periods
- Application: Precision stamping forming of power battery metal structural parts such as explosion-proof valve



### STSZG1 Type High Rigid Servo Straight Side Single Point High Precision Coining Press Specification

Type	Unit	STSZG1-35	STSZG1-60	STSZG1-125	STSZG1-250
Nominal Force	KN	350	600	1250	2500
Nominal Force Stroke	mm	1.5	1.5	2	2
Stroke	mm	30	40	50	50
Number of Strokes (Max.)	spm	200	200	150	80
Die Height (Max.)	mm	300	350	400	450
Die Height Adjustment	mm	-	-	10	10
Slide Size (Left to Right × Front to Back)	mm × mm	550 × 300	650 × 400	750 × 600	1000 × 700
Bolster Size (Left to Right × Front to Back)	mm × mm	550 × 300	650 × 400	750 × 600	1000 × 700
External Power Voltage	/	AC380V 50Hz	AC380V 50Hz	AC380V 50Hz	AC380V 50Hz
Control Circuit Voltage	/	DC24V	DC24V	DC24V	DC24V
Air Pressure Level	MPa	0.55	0.55	0.55	0.55
Rigidity of Bolster	/	1/20000	1/20000	1/20000	1/20000

# STSM2 TYPE SERVO STRAIGHT SIDE DOUBLE POINTS PRESS

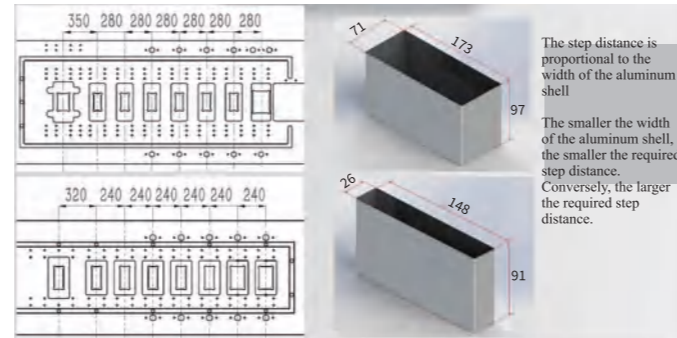
## AND AUTOMATIC STAMPING LINE

### Structure Features

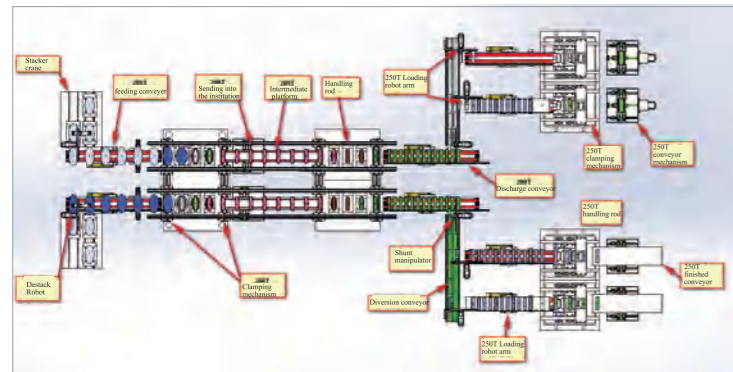
- Main structure: Gantry welding frame (Mono-block)
- Main transmission form: Top drive, crankshaft double points servo press
- Anti deviated load: The guide rail adjustment adopts an anti deviated load structure to ensure the vertical precision of the slide during stamping
- Lubrication: The main drive bearing part is lubricated with oil
- Main motor: Low-speed high-torque water-cooled servo motor, ensuring reliable operation over extended periods
- Application: 1. Single-machine transfer production line for square aluminum shell for power battery, production rate 40~50 PPM  
2. Multi-machine automatic tandem line for square aluminum shell for power battery, production rate 80~120 PPM



STSM2Type Servo Straight Side Double Points Transfer Production Line



Two Typical Square Aluminum Shell Sizes and Stamping Steps



STSM2 Type Servo Straight Side Double Points Four-press Automatic Tandem Line



### Square Aluminum Shell for Power Battery to STSM2 Type Servo Press Reference Table

No.	Type of Square Aluminum Shell for Power Battery	Shell Size (Width × Length × Height) mm × mm × mm	Type of Servo Press	Stroke of Servo Press mm
1	26148	26*148*91	STSM2-250	350
2	39148	39*148*91	STSM2-250	350
3	2670	26*70*120	STSM2-300	400
4	46173	46*173*130	STSM2-300	400
5	46173	46*173*170	STSM2-400	450
6	26148	26*148*172	STSM2L-300	450
7	26148	26*148*199	STSM2L-300	600
8	46173	46*173*200	STSM2L-300	600
9	27148	27*148*240	STSM2L-400	620
10	36130	36*130*235	STSM2L-400	620
11	40173	40*173*204	STSM2L-400	620
12	53148	53*148*178	STSM2L-400	600
13	53173	53*173*200	STSM2L-400	600
14	71173	71*173*200	STSM2L-400	600

### STSM2 Type Servo Straight Side Double Points Press Specification

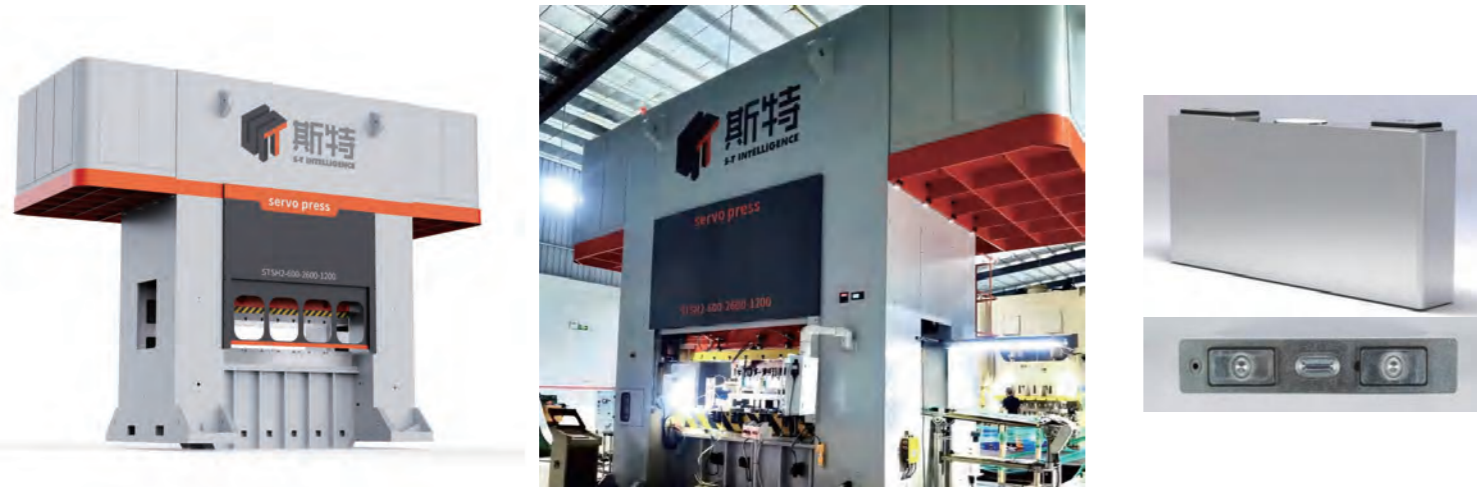
Type	Unit	STSM2-200	STSM2-250	STSM2-300	STSM2-300	STSM2L-300	STSM2L-400	STSM2L-400
Nominal Force	KN	2000	2500	3000	3000	3000	4000	4000
Nominal Force Stroke	mm	5	5	5	6	7	6	7
Stroke	mm	300/350	300/400	350	400	600	550	600/620
Number of Strokes (Max.)	spm	55	55	55	50	40	40	40
Die Height (Max.)	mm	600	650	700	750	750	800	850
Die Height Adjustment	mm	120	120	120	120	120	120	120
Slide Size (Left to Right × Front to Back)	mm × mm	2200 × 1200	2200 × 1200	3200 × 1200	3200 × 1200	3200 × 1200	3200 × 1200	4000 × 1400
Bolster Size (Left to Right × Front to Back)	mm × mm	2200 × 1200	2200 × 1200	3200 × 1200	3200 × 1200	3200 × 1200	3200 × 1200	4000 × 1400
Bolster Thickness	mm	200	200	250	250	250	250	250
Side Opening Size (Front to Back × Up to Down)	mm × mm	1200 × 800	1200 × 800	1200 × 800	1200 × 800	1200 × 800	1200 × 800	1200 × 800
Height of Bolster over the Floor	mm	700	700	700	700	700	700	700
External Power Voltage	/	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz
Control Circuit Voltage	/	DC24V	DC24V	DC24V	DC24V	DC24V	DC24V	DC24V
Air Pressure Level	MPa	0.55	0.55	0.55	0.55	0.55	0.55	0.55

# STSH2 TYPE SERVO STRAIGHT SIDE DOUBLE POINTS

## HIGH PRECISION PRESS

### Structure Features

- Main structure: Gantry welding frame (Mono-block) with high rigidity of 1/15000
- Main transmission form: Top drive, horizontal single crankshaft double points servo press
- Anti deviated load: The guide rail adjustment adopts an anti deviated load structure to ensure the vertical precision of the slide during high precision stamping
- Lubrication: The main drive bearing part is lubricated with thin oil
- Main motor: Low-speed high-torque water-cooled servo motor, ensuring reliable operation over extended periods; Synchronized control of two motors
- Application: Precision stamping forming of lithium battery metal structural parts such as square aluminum cover plates



### STSH2 Type Servo Straight Side Double Points High Precision Press Specification

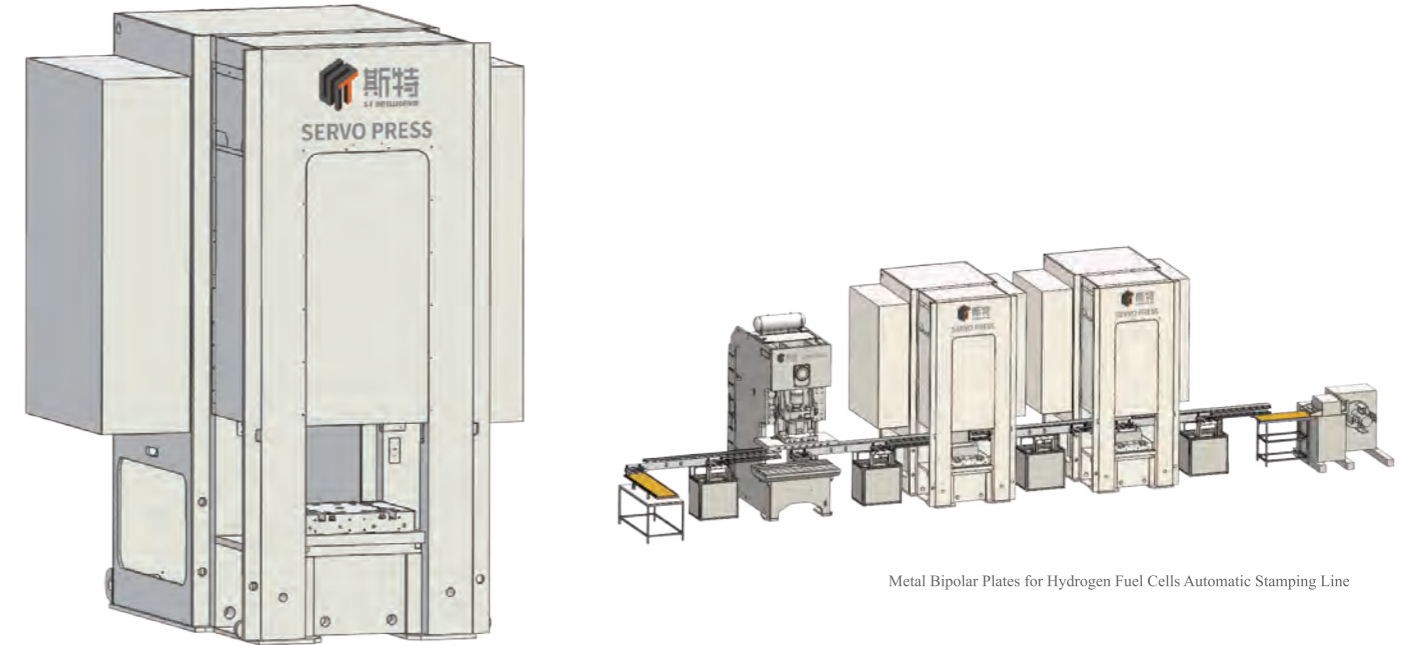
Type	Unit	STSH2-500	STSH2-600	STSH2-600
Nominal Force	KN	5000	6000	6000
Nominal Force Stroke	mm	3	3	3
Stroke	mm	30	40	100
Number of Strokes (Max.)	spm	150	130	80
Die Height (Max.)	mm	600	600	600
Die Height Adjustment	mm	120	150	150
Bolster Size (Left to Right × Front to Back)	mm × mm	2500 × 1100	2600 × 1200	2600 × 1200
Slide Size (Left to Right × Front to Back)	mm × mm	2500 × 1100	2600 × 1200	2600 × 1200
External Power Voltage	/	AC380V 50Hz	AC380V 50Hz	AC380V 50Hz
Control Circuit Voltage	/	DC24V	DC24V	DC24V
Air Pressure Level	MPa	0.55	0.55	0.55
Rigidity of Bolster	/	1/15000	1/15000	1/15000

# STSEP TYPE SERVO ELBOW LINK-STYLE HIGH PRECISION

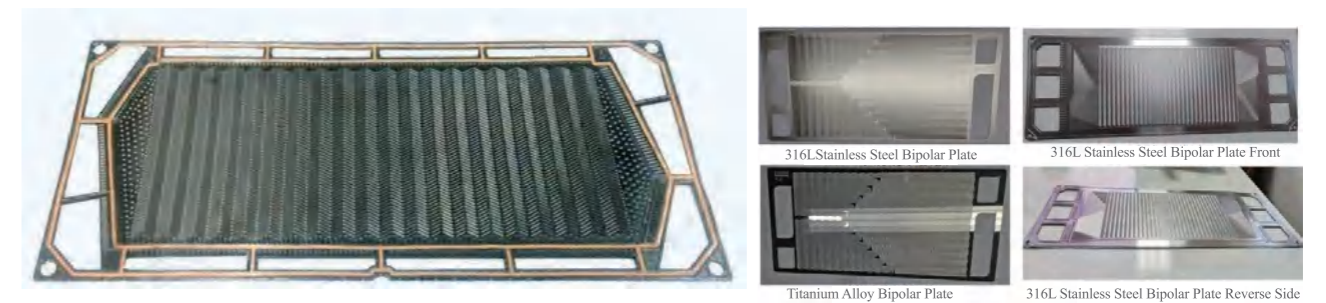
## COINING PRESS

### Structure Features

- Main structure: Gantry welding frame (Mono-block) with high rigidity and strong combined frame design to achieve high precision of products
- Main transmission form: Top drive, horizontal single crankshaft single point servo press; The machine adopts a special elbow link-style structure that enables wide range of processes; The flat bottom of the motion curve enables stable pressurization of cold forging parts towards the end of precision forming process, benefiting the filling degree of the forming and reducing size rebound of the parts
- Anti deviated load: The eight-sided long slide guide rail has exceptional anti deviated load capability to ensure the vertical precision of the slide during operation and effectively extend the life time cycle of precision dies
- Lubrication: The main drive bearing part is lubricated with thin oil
- Main motor: Low-speed high-torque water-cooled servo motor, ensuring reliable operation over extended periods
- Application: Precision stamping forming of metal bipolar plates for hydrogen fuel cells; precision cold extrusion forming of aluminum radiator for new energy vehicle inverter; precision cold extrusion forming of IGBT aluminum/copper radiator; precision cold forging and cold extrusion forming of a variety of vehicle components and mechanical components



Metal Bipolar Plates for Hydrogen Fuel Cells Automatic Stamping Line



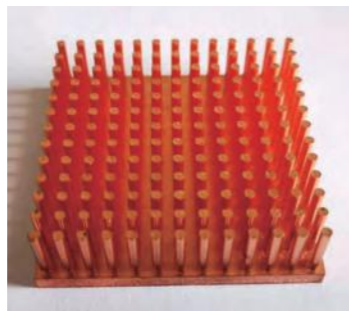
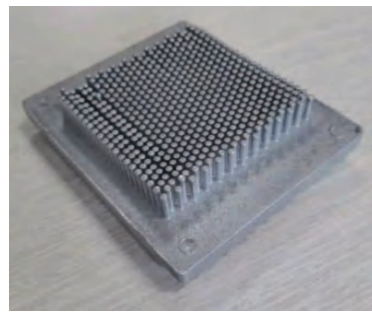
Metal Bipolar Plates for Hydrogen Fuel Cells



Aluminum Radiator for New Energy Vehicle Inverter



Aluminum Radiator



Clutch Gear (SCR420)



Clutch Gear Sleeve (SCM415)



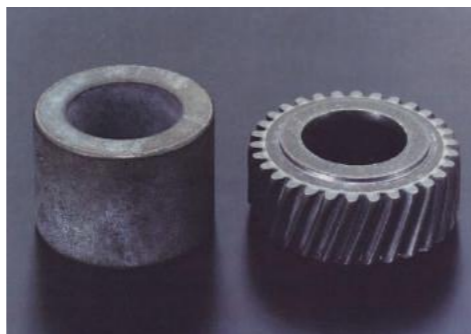
Pawl Ratchet (SPHC)



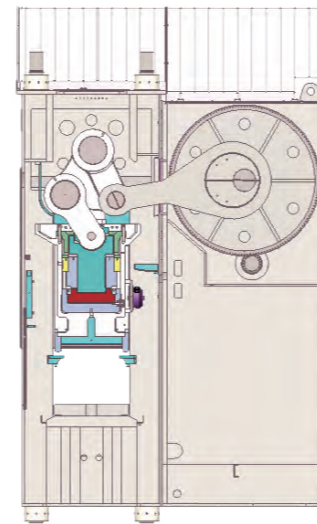
Bevel Gear (SCM420)



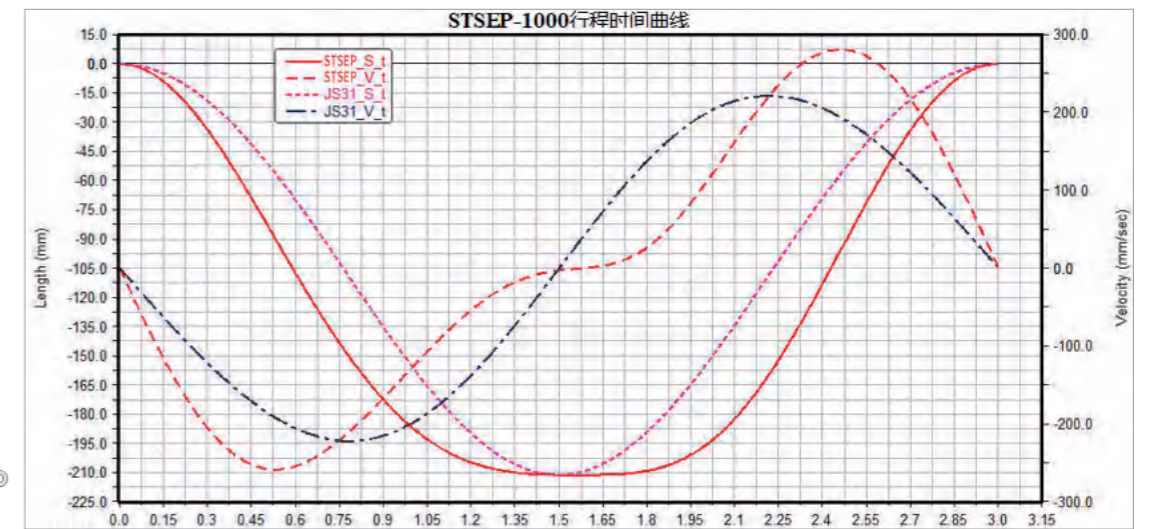
Synchronization Gear (SPHC)



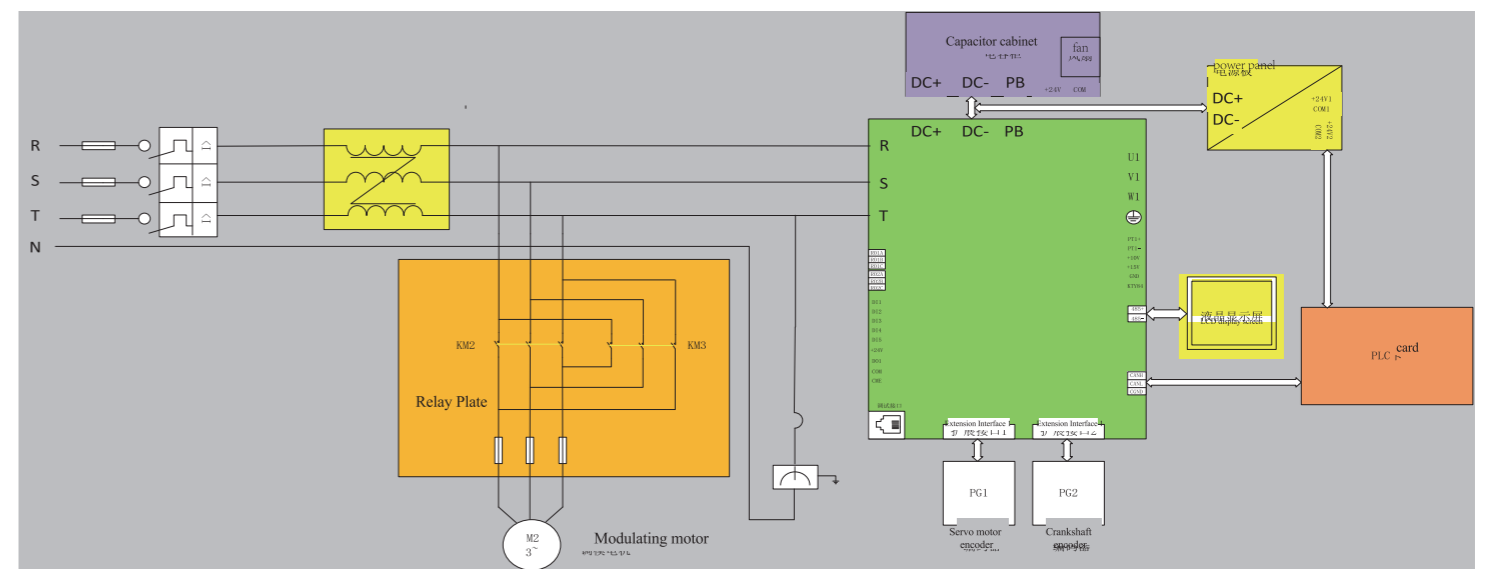
Helical Gear (SCM420)



650-ton Servo Elbow Link-style High Precision Press Transmission Structure



Servo Elbow Link-style High Precision Press Working Curve



Control System

### STSEP Type Servo Elbow Link-Style High Precision Coining Press Specification

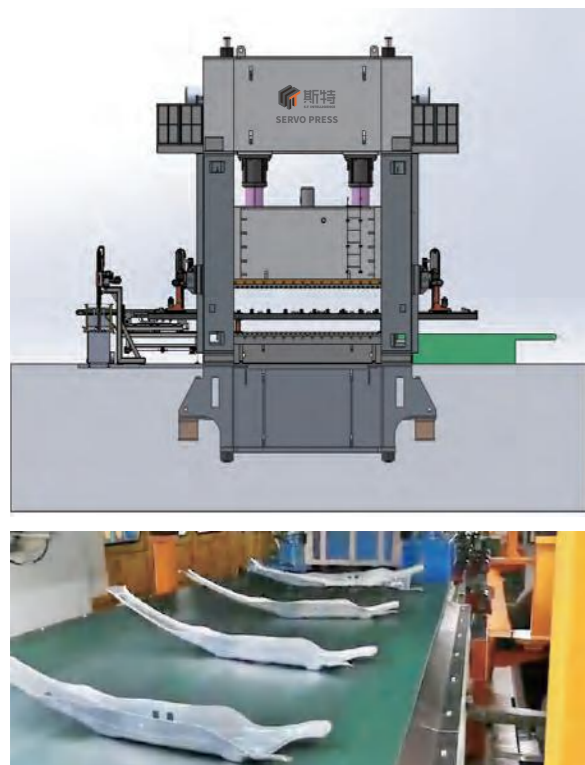
Type	Unit	STSEP-400	STSEP-650	STSEP-800	STSEP-1000	STSEP-1250	STSEP-1600
Nominal Force	KN	4000	6500	8000	10000	12500	16000
Nominal Force Stroke	mm	7	7	7	7	7	7
Stroke	mm	200	250	250	250	300	350
Number of Strokes (Max.)	spm	55	45	35	35	30	30
Die Height (Max.)	mm	500	550	550	550	550	550
Die Height Adjustment	mm	50	50	50	50	50	50
Slide Size (Left to Right × Front to Back)	mm × mm	650 × 600	800 × 750	900 × 800	1000 × 900	1200 × 1000	1300 × 1100
Bolster Size (Left to Right × Front to Back)	mm × mm	650 × 600	800 × 750	900 × 800	1000 × 900	1200 × 1000	1300 × 1100
Cooling	/	Water	Water	Water	Water	Water	Water
External Power Voltage	/	AC380V 50Hz	AC380V 50Hz	AC380V 50Hz	AC380V 50Hz	AC380V 50Hz	AC380V 50Hz
Control Circuit Voltage	/	DC24V	DC24V	DC24V	DC24V	DC24V	DC24V
Air Pressure Level	MPa	0.55	0.55	0.55	0.55	0.55	0.55
Rigidity of Bolster	/	1/20000	1/20000	1/20000	1/20000	1/20000	1/20000

## STSP2 TYPE SERVO STRAIGHT SIDE DOUBLE POINTS

### PRESS FOR AUTOMOTIVE SECTORS

#### Structure Features

- Main structure: Separated welding combined body
- Main transmission form: Top drive, eccentric gear type double points servo press
- Anti deviated load: The eight-sided guide rail adjustment adopts a large point distance anti deviated load structure to ensure the precision of the slide during transfer stamping
- Lubrication: The main drive bearing part is lubricated with thin oil
- Main motor: Low-speed high-torque water-cooled servo motor, ensuring reliable operation over extended periods
- Application: Transfer/Progressive stamping forming of automotive parts

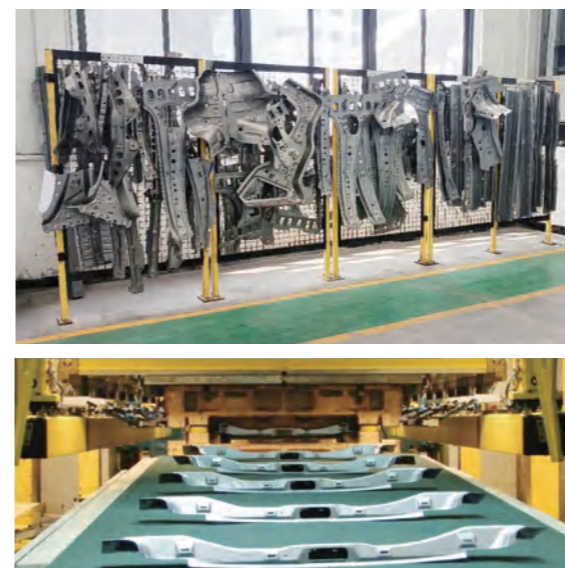


## STSP4 TYPE SERVO STRAIGHT SIDE FOUR POINTS

### PRESS FOR AUTOMOTIVE SECTORS

#### Structure Features

- Main structure: Separated welding combined body
- Main transmission form: Top drive, eccentric gear type four points servo press
- Anti deviated load: The eight-sided guide rail adjustment adopts a large point distance anti deviated load structure to ensure the precision of the slide during transfer stamping
- Lubrication: The main drive bearing part is lubricated with thin oil
- Main motor: Low-speed high-torque water-cooled servo motor, ensuring reliable operation over extended periods
- Application: Transfer stamping forming of automotive parts



#### STSP2 Type Servo Straight Side Double Points Press for Automotive Sectors Specification

Type	Unit	STSP2-630	STSP2-800	STSP2-1000	STSP2-1250	STSP2-1600	STSP2-2000
Nominal Force	KN	6300	8000	10000	12500	16000	20000
Nominal Force Stroke	mm	7	7	8	8	10	10
Stroke	mm	350	450	500	500	600	600
Number of Strokes (Max.)	spm	35	35	30	30	25	25
Die Height (Max.)	mm	800	800	1000	1000	1000	1000
Die Height Adjustment	mm	300	300	300	300	300	300
Slide Size (Left to Right × Front to Back)	mm × mm	3500 × 1400	3500 × 1400	4000 × 1600	4000 × 1600	4200 × 1800	4200 × 1800
Bolster Size (Left to Right × Front to Back)	mm × mm	3500 × 1400	3500 × 1400	4000 × 1600	4000 × 1600	4200 × 1800	4200 × 1800
External Power Voltage	/	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz
Control Circuit Voltage	/	DC24V	DC24V	DC24V	DC24V	DC24V	DC24V
Air Pressure Level	MPa	0.55	0.55	0.55	0.55	0.55	0.55

#### STSP4 Type Servo Straight Side Four Points Press for Automotive Sectors Specification

Type	Unit	STSP4-630	STSP4-800	STSP4-1000	STSP4-1600	STSP4-2000	STSP4-2500
Nominal Force	KN	6300	8000	10000	16000	20000	25000
Nominal Force Stroke	mm	7	7	8	8	10	10
Stroke	mm	450	450	500	500	600	600
Number of Strokes (Max.)	spm	30	30	30	25	25	25
Die Height (Max.)	mm	1000	1000	1000	1100	1100	1100
Die Height Adjustment	mm	300	300	300	300	300	300
Slide Size (Left to Right × Front to Back)	mm × mm	4000 × 2200	4000 × 2200	5000 × 2200	5000 × 2200	6100 × 2400	6100 × 2400
Bolster Size (Left to Right × Front to Back)	mm × mm	4000 × 2200	4000 × 2200	5000 × 2200	5000 × 2200	6100 × 2400	6100 × 2400
External Power Voltage	/	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz	380V 50Hz
Control Circuit Voltage	/	DC24V	DC24V	DC24V	DC24V	DC24V	DC24V
Air Pressure Level	MPa	0.55	0.55	0.55	0.55	0.55	0.55



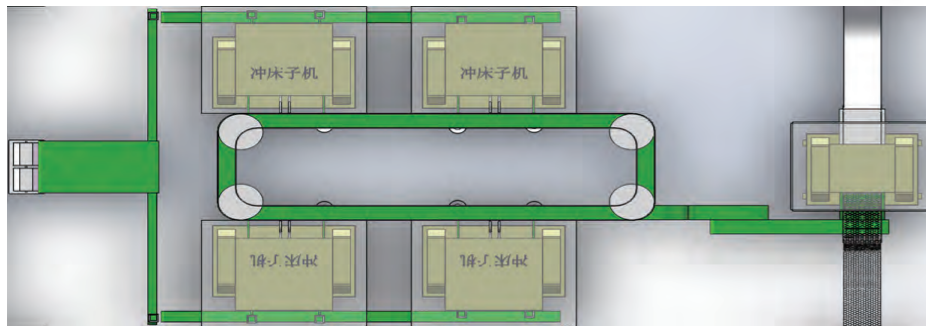
# SERVO PRESS AND AUTOMATIC STAMPING LINE FOR 18650

## TYPE CYLINDRICAL STEEL SHELL

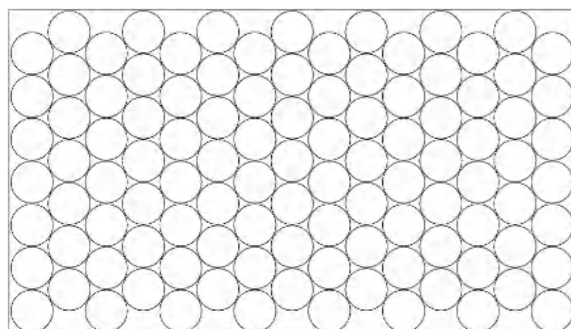
### Stamping Line Features

The automatic stamping production line for 18650 lithium battery cylindrical steel shell adapts a 220-ton servo double slides patented specialized machine to conduct the blanking and shallow drawing process, with four 160-ton deep-drawing presses, supplemented by decoiling & recoiling automatic equipment and steel shells automatic conveyor.

- The specialized machine for blanking and shallow drawing supplemented by decoiler to feed the rolls, recoiler to collect scraps, adopts multi-position blanking dies to produce 15 shallow drawing parts in one stamping process.
- The automatic conveyor transports the shallow drawing parts to 4 deep-drawing presses respectively to deep-draw the parts into shape.
- Dies of each 160-ton deep-drawing press are considered on a one-out-of-two basis.
- All presses are servo-driven, which can be adjusted in real-time according to the production dynamics, perfectly matching the production rate of each press.
- The entire auto-line is designed for a capacity of 550 pieces per minute.
- Auto-Line expansion solution: up to six 160-ton deep-drawing presses with a higher production capacity of 675 pieces per minute.



18650 Cylindrical Steel Shell Automatic Stamping Line Sketch



18650 Type Cylindrical Steel Shell One-out-of-fifteen Blanking Sketch



### 18650 Type Cylindrical Steel Shell Automatic Stamping Line Press Specification

Type	Unit	STSD2-110-110		STSM2-160
		Inner Slide	Outer Slide	
Nominal Force	KN	1100	1100	1600
Nominal Force Stroke	mm	4	4	4
Stroke	mm	100	50	200
Number of Strokes (Max.)	spm	80		80
Die Height (Max.)	mm	435	300	500
Die Height Adjustment	mm	—	50	50
Slide Size (Left to Right × Front to Back)	mm × mm	880 × 300	1100 × 500	1800 × 700
Bolster Size (Left to Right × Front to Back)	mm × mm	1300 × 600		1800 × 700
Bolster Thickness	mm	200		150
Cooling	/	Water		Water
Number of Motor Drives	/	1	1	1

### 18650 Type Cylindrical Steel Shell Servo Transfer Press Specification

Type	Unit	STSM2-160
Nominal Force	KN	1600
Nominal Force Stroke	mm	5
Stroke	mm	200
Number of Strokes (Max.)	spm	80
Die Height (Max.)	mm	500
Die Height Adjustment	mm	100
Slide Size (Left to Right × Front to Back)	mm × mm	2100 × 1000
Bolster Size (Left to Right × Front to Back)	mm × mm	2100 × 1000
Bolster Thickness	mm	150
Side Opening Size (Front to Back × Up to Down)	mm × mm	1200 × 800
Height of Bolster over the Floor	mm	700
Cooling		Water
Number of Motor Drives		1
External Power Voltage	/	AC380V 50Hz
Control Circuit Voltage	/	DC24V
Air Pressure Level	MPa	0.55
Mode of Production	/	One-out-of-two

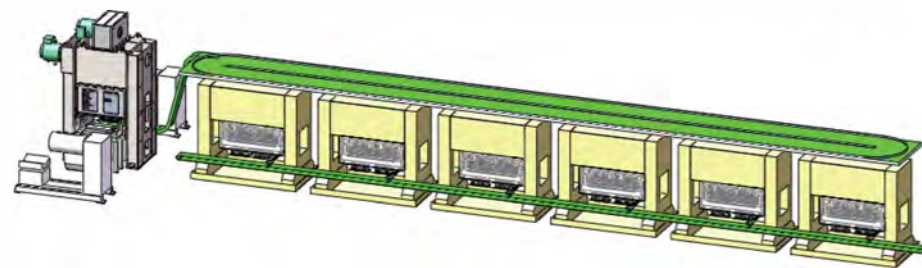
# SERVO PRESS AND AUTOMATIC STAMPING LINE FOR 46

## SERIAL CYLINDRICAL STEEL SHELL

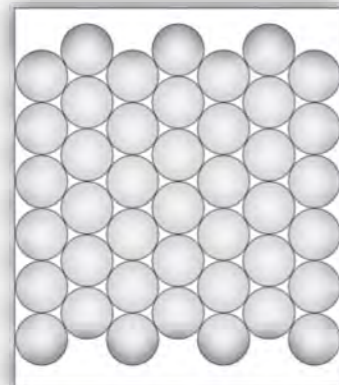
### Stamping Line Features

The automatic stamping production line for 46 serial lithium battery cylindrical steel shell adapts a servo double-slides patented specialized machine to conduct the blanking and shallow drawing process, with six 200-ton deep-drawing presses, supplemented by decoiling & recoiling automatic equipment and steel shells automatic conveyor.

- The specialized machine for blanking and shallow drawing supplemented by decoiler to feed the rolls, recoiler to collect scraps, adopts multi-position blanking dies to produce 7 shallow drawing parts in one stamping process.
- The automatic conveyor transports the shallow drawing parts to six 200-ton deep-drawing presses respectively to deep-draw the parts into shape.
- Dies of each 200-ton deep-drawing press are considered on a one-out-of-one basis.
- All presses are servo-driven, which can be adjusted in real-time according to the production dynamics, perfectly matching the production rate of each press.
- The entire auto-line is designed for a capacity of 400 pieces per minute.



46 Serial Cylindrical Steel Shell Automatic Stamping Line Sketch



46 Serial Cylindrical Steel Shell One-out-of-seven Blanking Sketch

### 46 Serial Cylindrical Steel Shell Automatic Stamping Line Press Specification

Type	Unit	STSD2-110-110		STSM2-200
		Inner Slide	Outer Slide	
Nominal Force	KN	1100	1100	2000
Nominal Force Stroke	mm	4	4	4
Stroke	mm	100	50	250
Number of Strokes (Max.)	spm		80	80
Die Height (Max.)	mm	435	300	550
Die Height Adjustment	mm	—	50	50
Slide Size (Left to Right × Front to Back)	mm × mm	880 × 300	1100 × 500	2000 × 800
Bolster Size (Left to Right × Front to Back)	mm × mm		1300 × 600	2400 × 800
Bolster Thickness	mm		200	160
Cooling	/		Water	Water
Number of Motor Drives	/	1	1	1

### 46 Serial Cylindrical Steel Shell Servo Transfer Press Specification

Type	Unit	STSM2-200	STSM2-300
Nominal Force	KN	2000	3000
Nominal Force Stroke	mm	5	5
Stroke	mm	250	350
Number of Strokes (Max.)	spm	70	60
Die Height (Max.)	mm	550	600
Die Height Adjustment	mm	120	120
Slide Size (Left to Right × Front to Back)	mm × mm	2100 × 1200	4200 × 1200
Bolster Size (Left to Right × Front to Back)	mm × mm	2100 × 1200	4200 × 1200
Height of Bolster over the Floor	mm	700	700
External Power Voltage	/	AC380V 50Hz	AC380V 50Hz
Control Circuit Voltage	/	DC24V	DC24V
Air Pressure Level	MPa	0.55	0.55
Mode of Production		One-out-of-one	One-out-of-two