



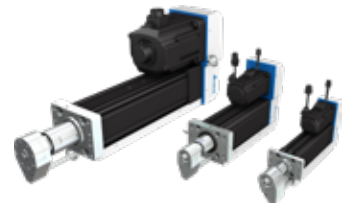
Digitized Automation for a Changing World

Delta Electric Cylinder Servo Press AM-ESP E Series

Efficiency · Flexibility · Excellence

- Accurate press and flexible control
- Multiple processes adaptable to changeovers
- High repeatability and multiple strokes
- Remote control and fast command execution
- Multiple machine connection and data analysis
- Seamless hardware and software integration for high efficiency

Electric Cylinder Servo Press for Accurate and Smart Production



Delta's electronic cylinder servo press is lightweight and easy to use with a simple structure. It can be quickly integrated with users' systems for pressing in production lines. It can implement crimping of general metal parts and press complicated electronic components, automobile charging product assembly, and oil-sealing processes for industrial robots. In addition, it is high-performance and exerts flexible processes and strokes on pressing without any conventional press part (e.g. flywheel, pneumatic cylinder, press motor, clutch, or others) to enhance quality and efficiency, reduce pollution and errors caused from poor crimping, and save consumables costs.

All of the key components are designed and manufactured by Delta for seamless integration, stable operation, high production efficiency and provided as a one-stop-shop service. The electric cylinder servo press can be used with equipment management platforms for data monitoring in real time and flexible changeover with smart automated production lines. It accomplishes high efficiency and energy saving for the electronics manufacturing industry and helps customers increase yield rates and competitiveness in fast-changing and diversified markets.

Applications



Vehicle Charging Devices



Gearboxes



Electronic & Mechanical Components



Brake Systems



Bicycle Parts



Bearing Components

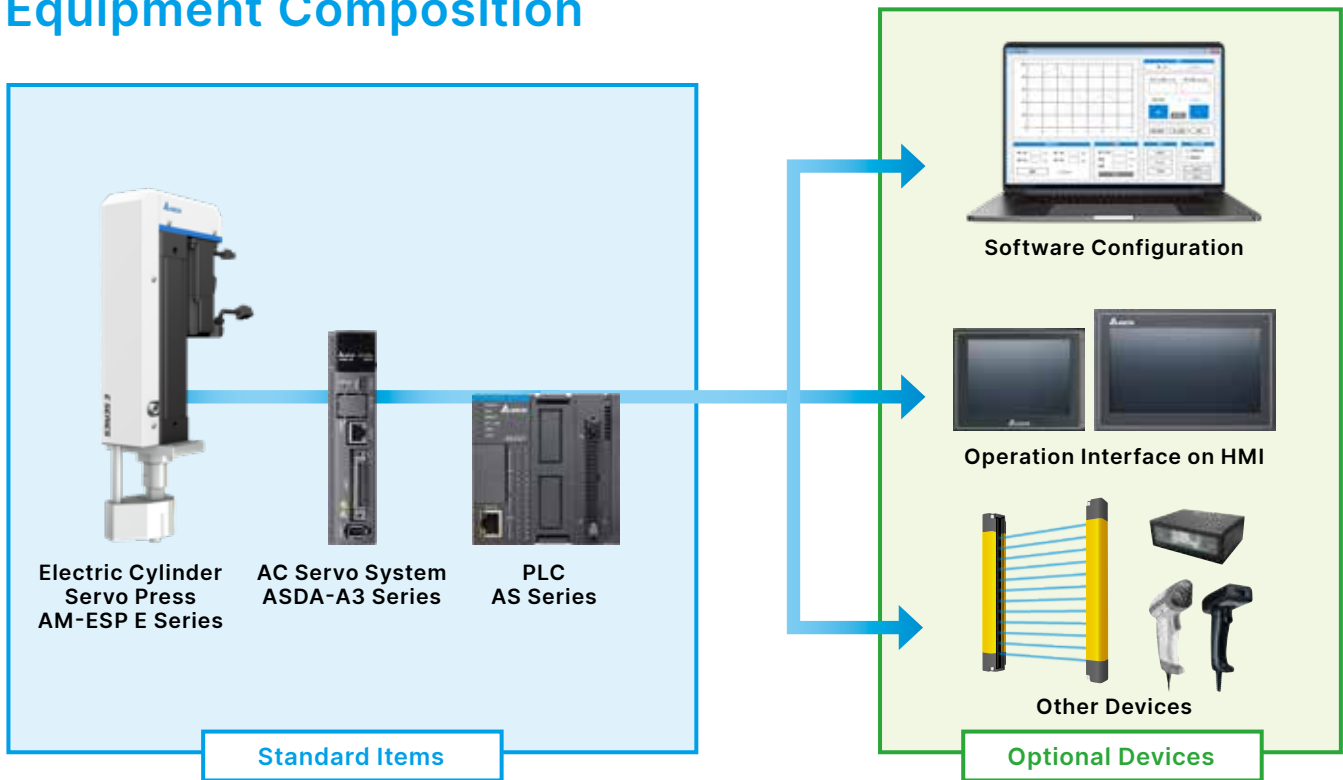


Pressing Production Lines

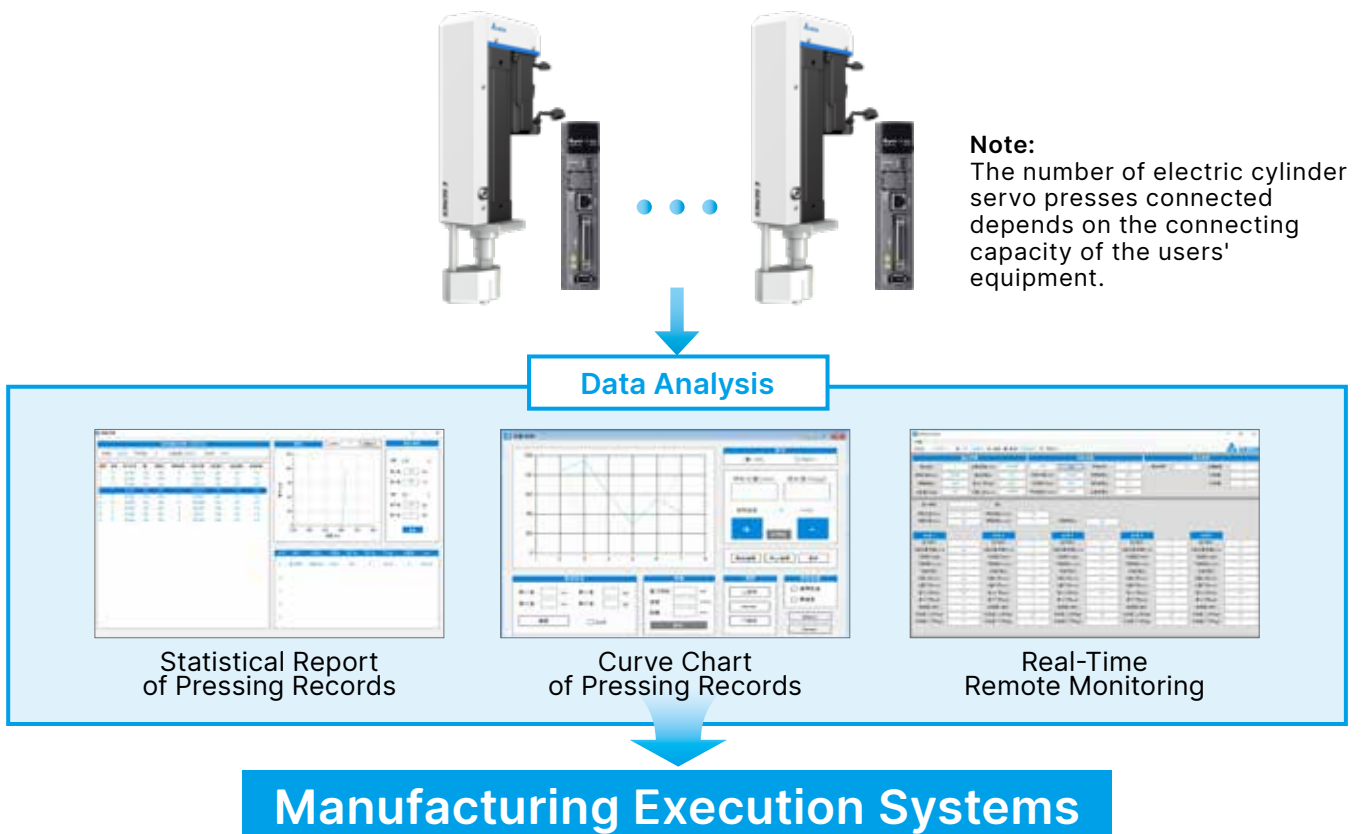


Medical Supplies

Equipment Composition



Machine Networking



Easy Operation

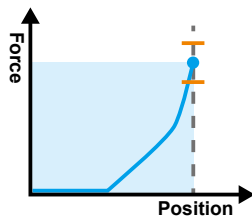
- Intuitive operation interface for quick configuration
- Real-time pressing records and data upload
- Production data acquisition and tracking
- Data visualization with statistical reports and graphs output
- Data upload to the Cloud for remote management and analysis via manufacturing execution system (MES)



Control Modes

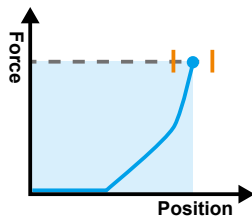
Position Mode

Enables the press punch to move downwards to a defined absolute position and avoids over-press force



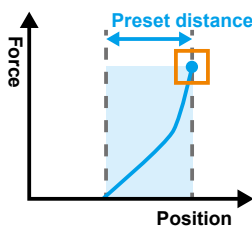
Force Mode

Makes the press punch press to a defined force and ensures the precise press position



Distance Mode

Allows the press punch to press a workpiece to a relative distance and ensures the precise press force and position



For Powder and Fluid Forming

Force Distance Mode

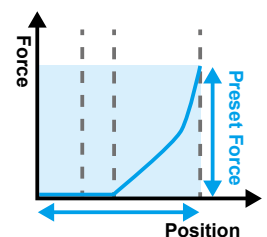
Presses to a relative distance with a constant force and ensures the precise press position

Force Position Mode

Presses to an absolute position with a constant force

Multiple Mode

All of the modes mentioned above can be applied interchangeably per users' demands



Model Information

AM - ESP - E 001 - 1 0 H D

Category	Product Type	Serial	Max. Press Force	Max. Stroke	Voltage	Accessory	Certification
Advanced Manufacturing	Electric Servo Press	E: External Electric Cylinder Servo Press	001 = 100 kgf 002 = 200 kgf 005 = 500 kgf 010 = 1,000 kgf 030 = 3,000 kgf 050 = 5,000 kgf	1 = 100 mm 2 = 200 mm 3 = 300 mm 4 = 400 mm	0 = 220V/1 Ø 1 = 220V/3 Ø 2 = 380V/3 Ø*	H: HMI (DOP-107EG), 3 m cable & module N: HMI (DOP-107EG), 5 m cable & module K: HMI (DOP-110WS), 3 m cable & module P: HMI (DOP-110WS), 5 m cable & module M: Panel PC (15 inch), 3 m cable & module Q: Panel PC (15 inch), 5 m cable & module R: 3 m cable & module S: 5 m cable & module	D = Digital

Note: 380 V model supports press force 3,000 kgf and above.

Specifications

Model Name		AM-ESP-E001- -0-D	AM-ESP-E002- -0-D	AM-ESP-E005- -0-D	AM-ESP-E010- -0-D	AM-ESP-E030- -1-D	AM-ESP-E050- -1-D	
Force	Max. Press Force (kgf)	100	200	500	1,000	3,000	5,000	
	Force Range (kgf)	1 ~ 100	2 ~ 200	5 ~ 500	10 ~ 1,000	30 ~ 3,000	50 ~ 5,000	
	Min. Increment / Decrement (kgf)	0.1				1		
	Max. Deviation (%)	± 0.5 FS*3						
Spindle Stroke	Max. Stroke (mm)	100/200		100/200/300		100/200/300/400		
	Min. Increment / Decrement (mm)	0.001						
Spindle Speed	Max. No-load Speed (mm/s)	500	30	270		200		
	Max. Press Speed (mm/s)	40*4						
	Min. Increment / Decrement (mm/s)	0.001						
Load Capacity of Press Punch (kg)*6		15		50		125		
Repeatability of Position Control (mm)		± 0.01*5						
Power Supply		AC 220V/1Ø, 10A				AC 220V/3Ø, 30A		
Scanning Time (ms)		< 1						
Locking Method		Flange Locking						
Over-press Protection		Yes						
Dwell Time (hr)		> 24 hrs						
Weight (kg)*1		12	12.5	30	33	110	125	
Dimensions (L x W x H mm)*2		535 x 171.5 x 65		690 x 251 x 110		1,014.5 x 377 x 190		
Environment	Surrounding Temperature	0 ~ 40°C						
	Humidity	20 ~ 90% (non-condensing)						
	Protection Level	IP20						
Language	HMI	English, Traditional Chinese, Simplified Chinese, Japanese						
	PC Software	English, Traditional Chinese, Simplified Chinese, Japanese						
Unit		Force: N, kgf, lbf / Length: mm, inch						

Note 1/2: Max. dimensions of different models for max. stroke length.

Note 3: FS = Full Scale

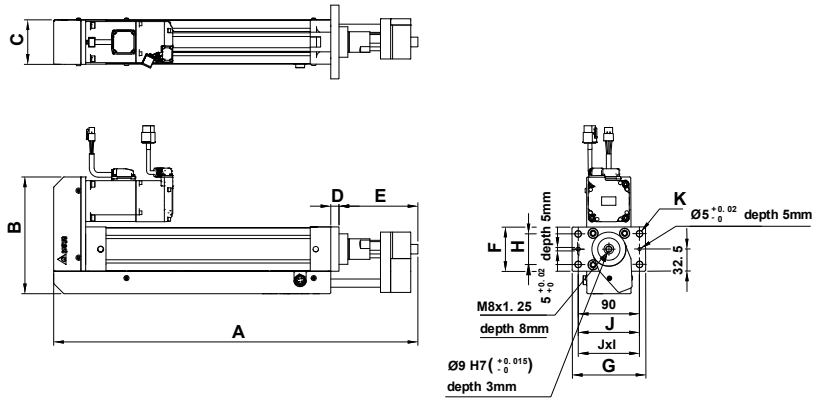
Note 4: Pressing speed is altered by pressing value

Note 5: The equipment should be operated under constant temperature and pressure to maintain the precision of press repeatability, not absolute accuracy.

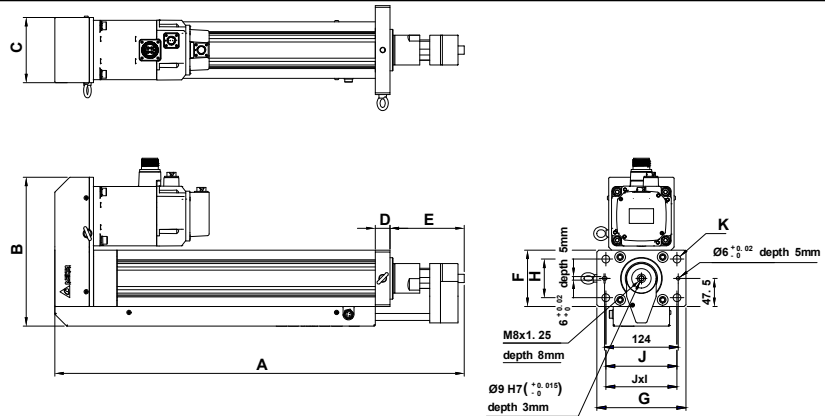
Note 6: Suggested value. For specific applications, please contact Delta and distributors.

Dimensions

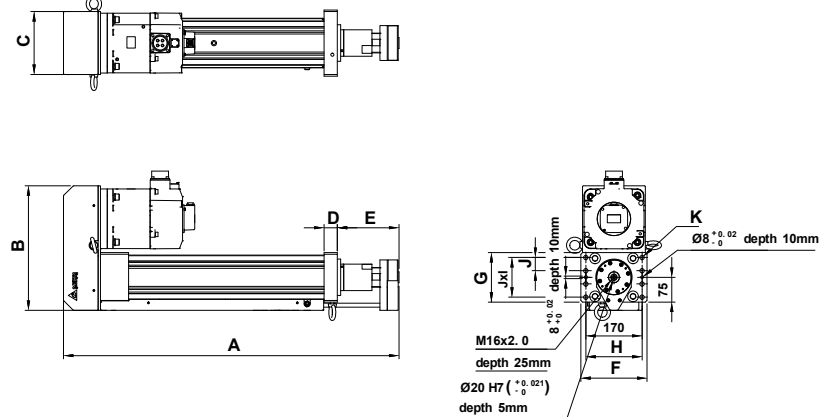
AM-ESP-E001-0-D
AM-ESP-E002-0-D



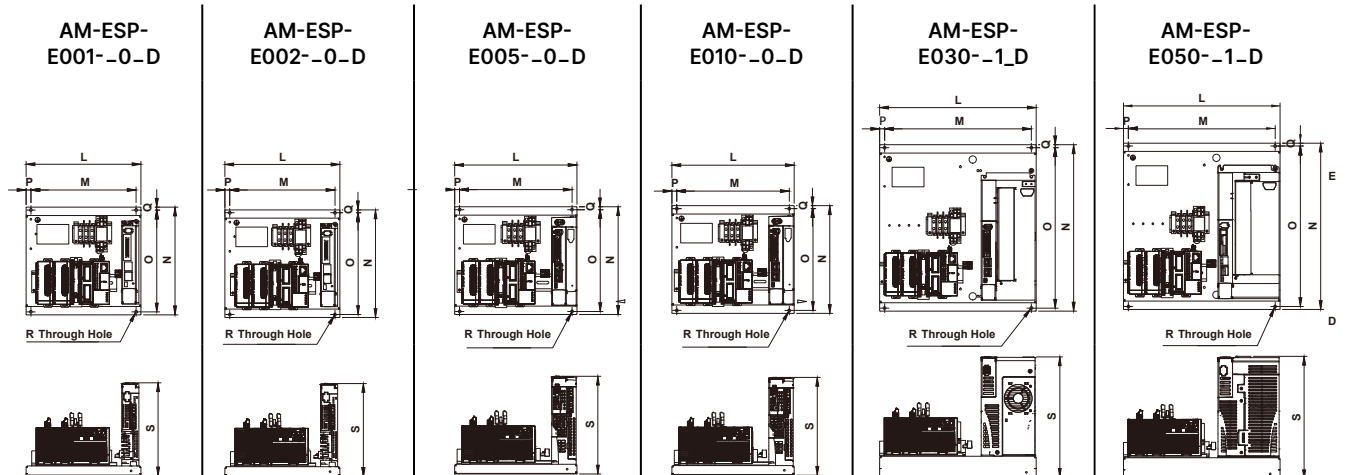
AM-ESP-E005-0-D
AM-ESP-E010-1-D



AM-ESP-E030-1-D
AM-ESP-E050-1-D



Electric Switchboard Dimensions



Model Name	A	Stroke (mm)	Motor Encoder Cable (m)	Power Cable (m)
AM-ESP-E001-10-D	435	100 200	3 m/5 m/10 m/20 m cables available	3 m/5 m/10 m/20 m cables available
AM-ESP-E001-20-D	535			
AM-ESP-E002-10-D	435			
AM-ESP-E002-20-D	535			
AM-ESP-E005-10-D	490	100 200 300		
AM-ESP-E005-20-D	590			
AM-ESP-E005-30-D	690			
AM-ESP-E010-10-D	490			
AM-ESP-E010-20-D	590			
AM-ESP-E010-30-D	690			
AM-ESP-E030-11-D	714.5	100 200 300 400		
AM-ESP-E030-21-D	814.5			
AM-ESP-E030-31-D	914.5			
AM-ESP-E030-41-D	1,014.5			
AM-ESP-E050-11-D	714.5			
AM-ESP-E050-21-D	814.5			
AM-ESP-E050-31-D	914.5			
AM-ESP-E050-41-D	1,014.5			

Model Name	B	C	D	E	F	G	H	I	J	K
AM-ESP-E001--0-D	171.5	65	12	1,116	65	108	45	1	90	4-Ø9
AM-ESP-E002--0-D										
AM-ESP-E005--0-D	251	110	25	125	95	150	65	1	120	4-Ø13
AM-ESP-E010--0-D										
AM-ESP-E030--1-D	377	190	40	186.5	200	150	170	3	40	8-Ø13
AM-ESP-E050--1-D										

Model Name	L	M	N	O	P	Q	R	S
AM-ESP-E001--0-D	235	215	220	208	10	6	4-Ø6	190
AM-ESP-E002--0-D								200
AM-ESP-E005--0-D	250	230	220	228				246
AM-ESP-E010--0-D								250
AM-ESP-E030--1-D	320	300	340	328				250
AM-ESP-E050--1-D								250

Note 1: The measurement unit for the data in the columns A~S and Stroke is mm.





Note 2: Please contact Delta and distributors for 10m / 20m wiring demands.

Ordering Information

Kilogram-force (kgf)	Stroke (mm)	Voltage (V)	Model Name	Kilogram-force (kgf)	Stroke (mm)	Voltage (V)	Model Name
100	100	220/1 \emptyset	AM-ESP-E001-10-D	3,000*	100	220/3 \emptyset	AM-ESP-E030-11-D
	200		AM-ESP-E001-20-D		200		AM-ESP-E030-21-D
200	100	220/1 \emptyset	AM-ESP-E002-10-D		300		AM-ESP-E030-31-D
	200		AM-ESP-E002-20-D		400		AM-ESP-E030-41-D
500	100	220/1 \emptyset	AM-ESP-E005-10-D	5,000*	100	220/3 \emptyset	AM-ESP-E050-11-D
	200		AM-ESP-E005-20-D		200		AM-ESP-E050-21-D
	300		AM-ESP-E005-30-D		300		AM-ESP-E050-31-D
1,000	100	220/1 \emptyset	AM-ESP-E010-10-D		400		AM-ESP-E050-41-D
	200		AM-ESP-E010-20-D				
	300		AM-ESP-E010-30-D				

Note: 380V model supports press force 3,000kgf and above.

Optional Accessories

Item	HMI		Panel PC	Operation Software
Accessory				
Part Number	7 inch - AM-TAC-00X02-01	10 inch - AM-TAC-00X02-02	15 inch - AM-TAC-00X02-03	DIAServoPress PC-based Software for Delta Servo Press

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