



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

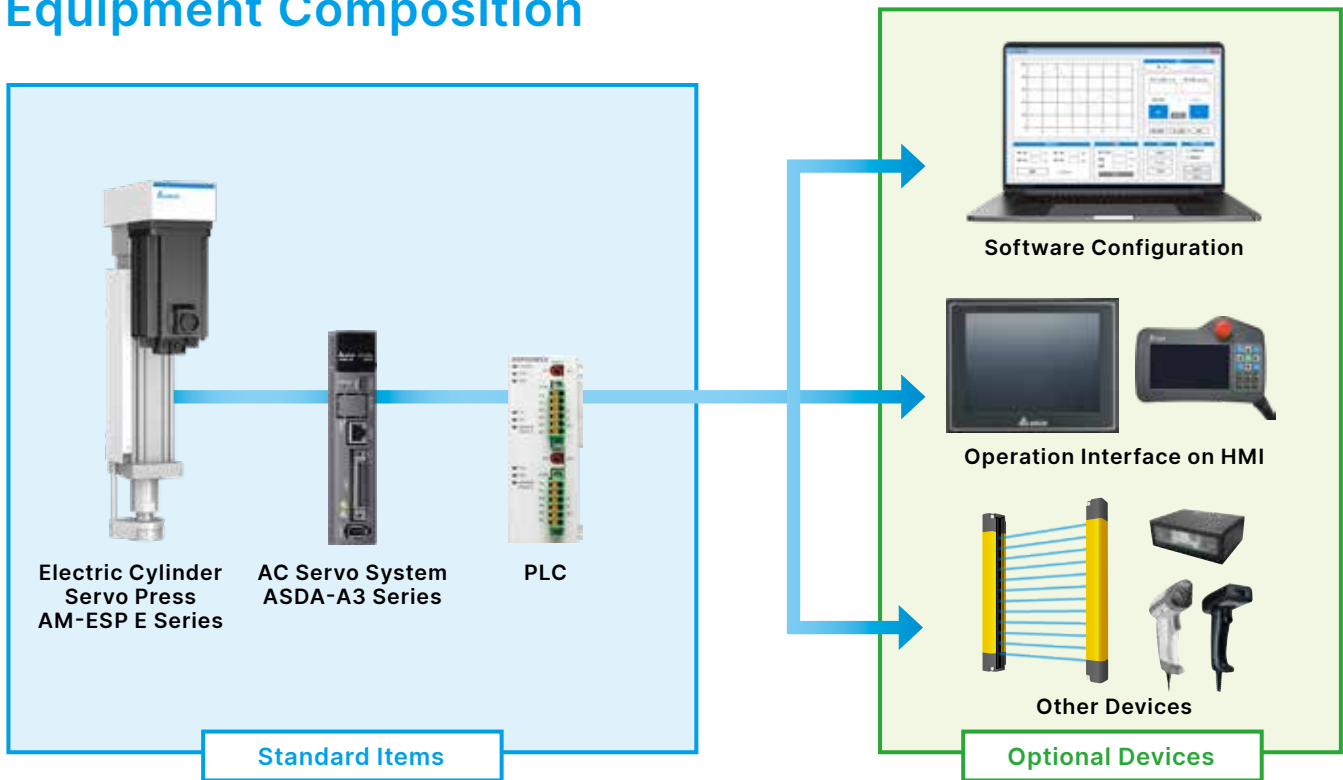


Pressing Production Lines

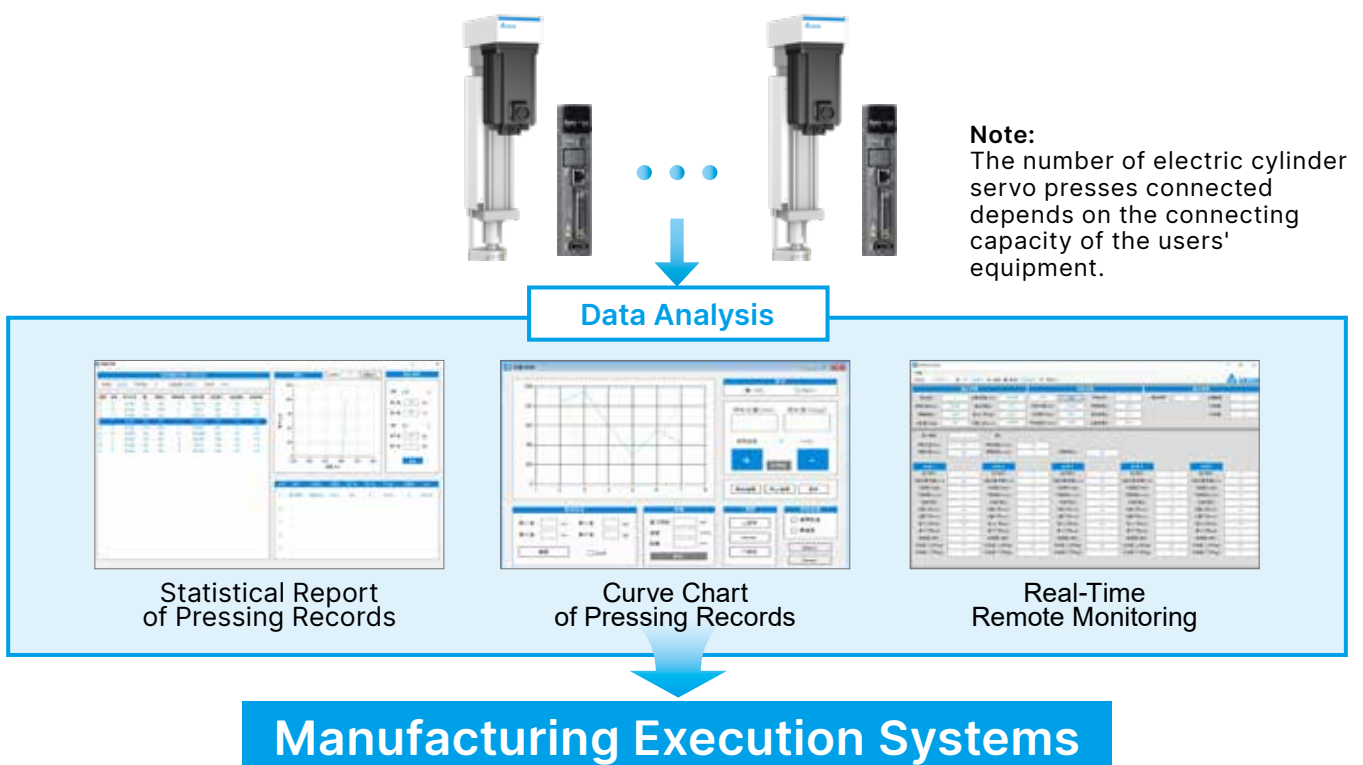


Medical Supplies

Equipment Composition



Machine Networking



Easy Operation

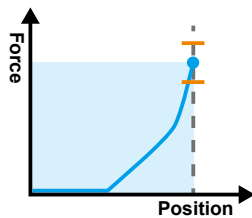
- Intuitive operation interface for quick configuration
- Real-time pressing records and data upload
- Production data acquisition and tracking
- Data visualization with statistical reports and graphs output
- Data upload to the Cloud for remote management and analysis via manufacturing execution system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



Control Modes

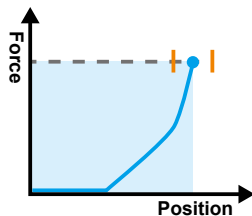
Position Mode

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



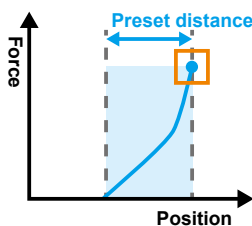
Force Mode

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



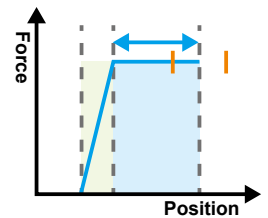
Distance Mode

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



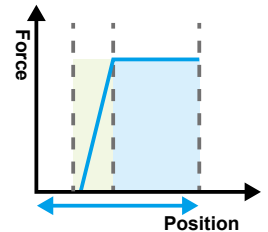
Force Distance Mode

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



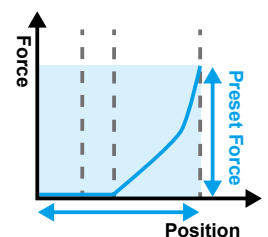
Force Position Mode

Presses to an absolute position with a constant force



Multiple Mode

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



For Powder and Fluid Forming

Model Information

AM - ESP - E 001 - 1 0 H N

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 φ 1 = 220V/3 φ 2 = 380V/3 φ*	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: HMI (TP-107HE), 3 m cable & module Q: HMI (TP-107HE), 5 m cable & module R: 3 m cable & module S: 5 m cable & module	N = Standard

*Coming up in Q4 2022

Specifications

Model Name		AM-ESP-E001- -0-N	AM-ESP-E002- -0-N	AM-ESP-E005- -0-N	AM-ESP-E010- -1-N	AM-ESP-E030- -1-N	AM-ESP-E050- -1-N	
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 (%)	± 1 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)	270				200		
	Max. Press Speed (mm/s)	40*4						
	Min. Increment / Decrement (mm/s)	0.001						
Load Capacity of Press Punch (kg)*6		5		50		150		
Repeatability of Position Control (mm)		± 0.01*5						
Power Supply		AC 220V/1φ, 10A			AC 220V/3φ, 30A			
Scanning Time (ms)		<1						
Locking Method		Flange Locking						
Over-press Protection		Yes						
Dwell Time (hr)		1.8						
Weight (kg)*1		12	12.5	30	33	110	125	
Dimensions (L x W x H mm)*2		519 x 166 x 87		665 x 247 x 110		1,004 x 371 x 187		

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 ;

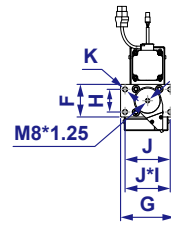
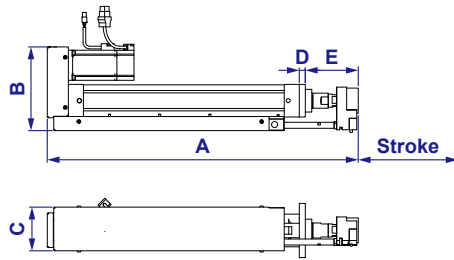
Note 5: The equipment should be operated under constant temperature and pressure to maintain the precision of press repeatability, not absolute accuracy.

Note 6: The index is not the breaking retaining force

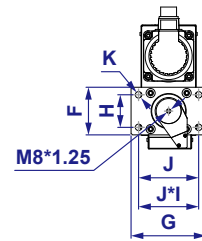
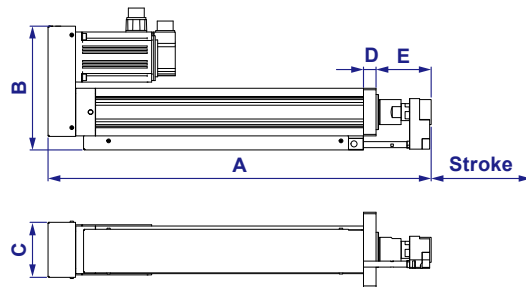


Dimensions

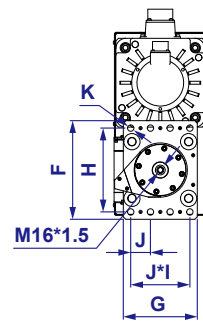
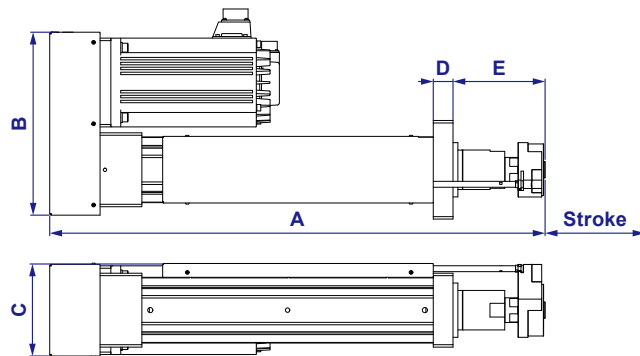
AM-ESP-E001-_-0-N
AM-ESP-E002-_-0-N



AM-ESP-E005-_-0-N
AM-ESP-E010-_-1-N



AM-ESP-E030-_-1-N
AM-ESP-E050-_-1-N



Electric Switchboard Dimensions

AM-ESP-E001-_-0-N

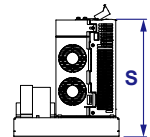
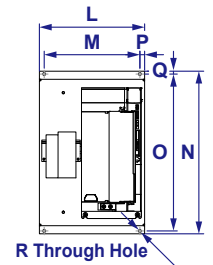
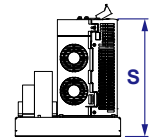
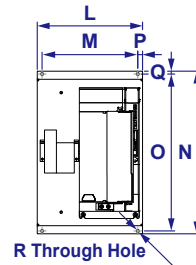
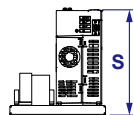
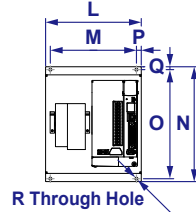
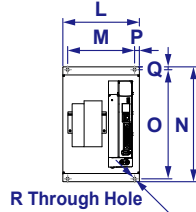
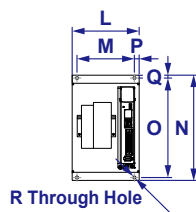
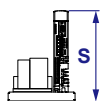
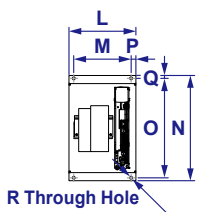
AM-ESP-E002-_-0-N

AM-ESP-E005-_-0-N

AM-ESP-E010-_-1-N

AM-ESP-E030-_-1

AM-ESP-E050-_-1-N



Model Name	A	Stroke (mm)	Motor Encoder Cable (m)	Power Cable (m)
AM-ESP-E001-10-N	419	100 200	3 m & 5 m cables available	3 m & 5 m cables available
AM-ESP-E001-20-N	519			
AM-ESP-E002-10-N	419			
AM-ESP-E002-20-N	519			
AM-ESP-E005-10-N	465	100 200 300		
AM-ESP-E005-20-N	565			
AM-ESP-E005-30-N	665			
AM-ESP-E010-11-N	465			
AM-ESP-E010-21-N	565			
AM-ESP-E010-31-N	665			
AM-ESP-E030-11-N	704	100 200 300 400		
AM-ESP-E030-21-N	804			
AM-ESP-E030-31-N	904			
AM-ESP-E030-41-N	1,004			
AM-ESP-E050-11-N	704			
AM-ESP-E050-21-N	804			
AM-ESP-E050-31-N	904			
AM-ESP-E050-41-N	1,004			

Model Name	B	C	D	E	F	G	H	I	J	K
AM-ESP-E001--0-N	166	87	12	105	65	108	45	1	90	4-Ø9
AM-ESP-E002--0-N										
AM-ESP-E005--0-N	247	110	25	110	95	150	65	1	120	4-Ø13
AM-ESP-E010--1-N										
AM-ESP-E030--1-N	371	187	40	186	200	150	170	3	40	8-Ø13
AM-ESP-E050--1-N										

Model Name	L	M	N	O	P	Q	R	S
AM-ESP-E001--0-N	140	120	220	208	10	6	4-Ø6	190
AM-ESP-E002--0-N								200
AM-ESP-E005--0-N	160	140	240	228				220
AM-ESP-E010--1-N								200
AM-ESP-E030--1-N	220	200	340	328				246
AM-ESP-E050--1-N								

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

Ordering Information

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

Note: The model with 380 V/3 ϕ of voltage for 1,000/3,000/5,000 kgf performance levels is coming up in Q4 2022.

Optional Accessories

Item	HMI	Handheld HMI	Handheld Barcode Scanner	Operation Software
Accessory				
Part Number	7inch - DOP107EG 5811132148 10inch - DOP-110WS 5811132149	7inch- DOP-107HE 5811132150	DAH2000H-USB	DIAServoPress PC-based Software for Delta Servo Press

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