



Digitized Automation for a Changing World

Delta Electric Servo Press AM-ASP F Series

Precise · Agile · Fast

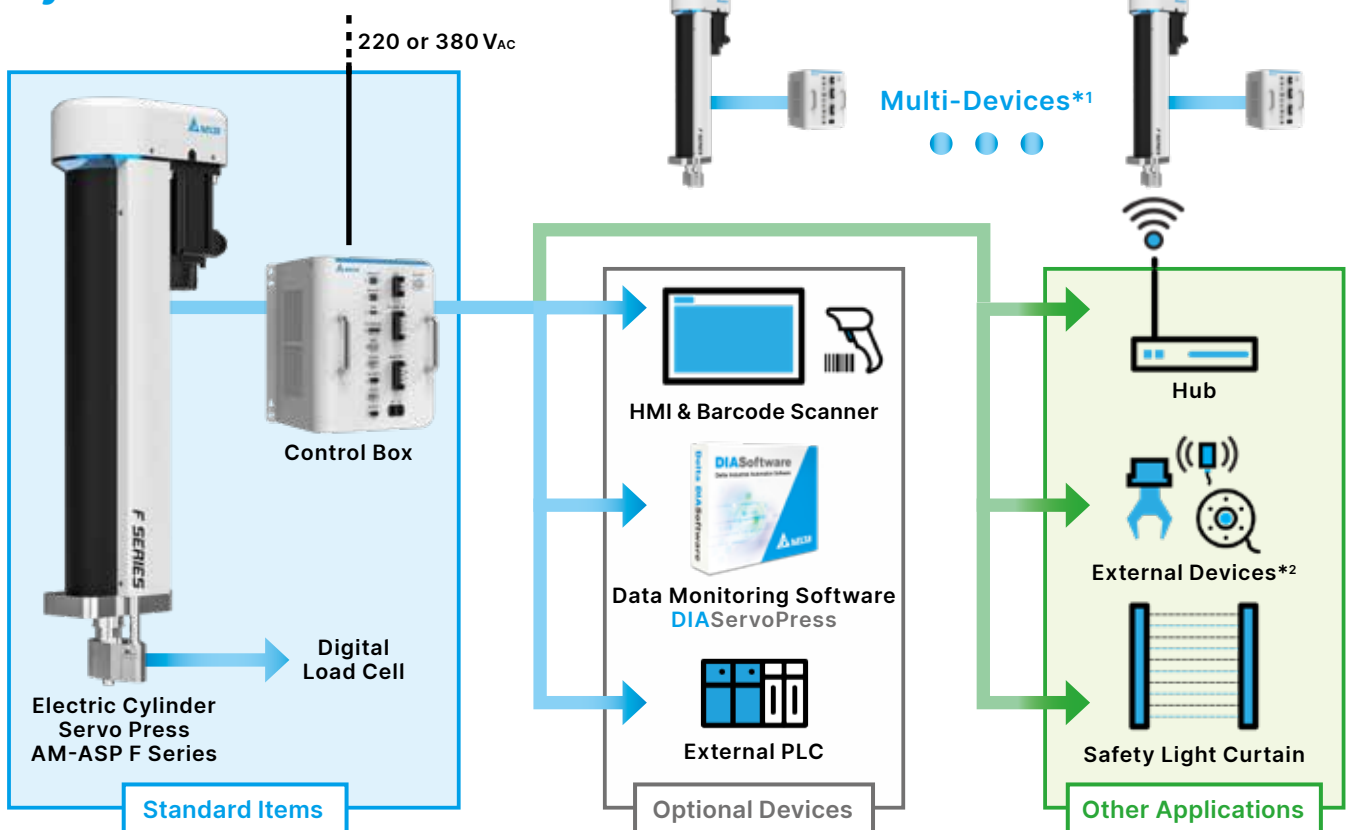
- Precise force control and fast response
- Multiple processes adaptable to production
- High rigidity and precision
- Real-time monitoring and tracking
- Various control for integration
- Real-time pressing curve and production data

Electric Servo Press AM-ASP F Series An Optimal Choice for Precise Pressing

The Delta Electric Servo Press can be widely used in various industries for assembly and press fitting, including automotive electronics, metal parts, electrical parts, and more. It features precise control of pressing travel and force. The servo press also saves material costs without the need for pneumatic or hydraulic press parts to solve noise pollution, high energy consumption, and oil leakage issues, while enhancing processing efficiency and product quality by recording and analyzing pressing data in real time.

The brand new Electric Cylinder Servo Press F Series inherits the E Series's distinct advantages such as a high integration design, greater energy saving, and precise press control. The F Series adopts a digital load cell to reduce noise interference and optimize control logic, which greatly enhances processing precision and speed. The process I/O automated control can control peripheral devices without an external host controller for cost efficiency. In compliance with EU CE marking certification (EN ISO 12100, EN ISO 16092, and others), the F Series ensures safety and achieves high pressing precision, speed, and quality.

System Architecture



Note: 1. The number of electric cylinder servo presses connected depends on the connecting capacity of the users' equipment
2. Based on customer needs, external devices (robot, cylinder, sensor, optical scale, and others) can be integrated

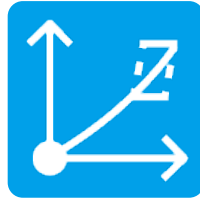
Features



Precise Force Control



Rapid Response Time



Dynamic Frame Limit



Process I/O Control



Long Time Holding Force



High Rigidity & Precision

Applications



Transmission



Electrical Machinery



Metal Parts

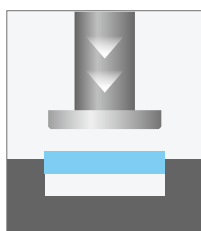


Electrical Parts

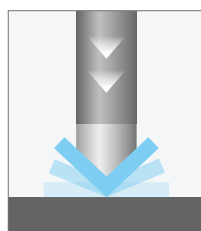


Medical Supplies

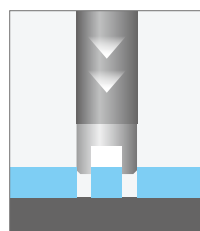
Press Applications



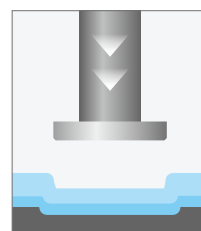
Press Fitting



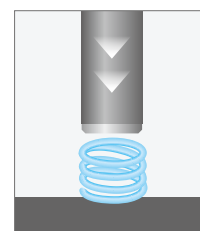
Bending



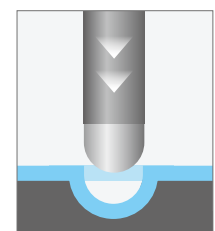
Punching



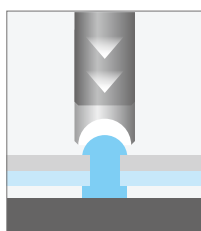
Compressing



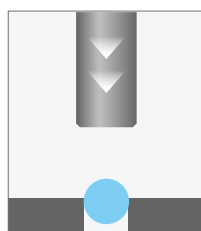
Testing



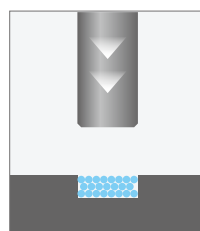
Drawing



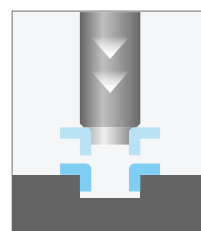
Riveting



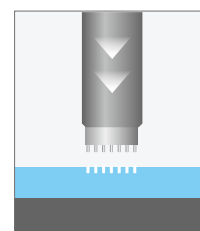
Sealing



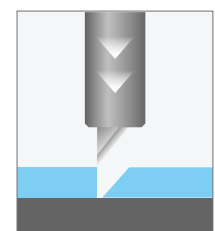
Forming



Caulking



Engraving

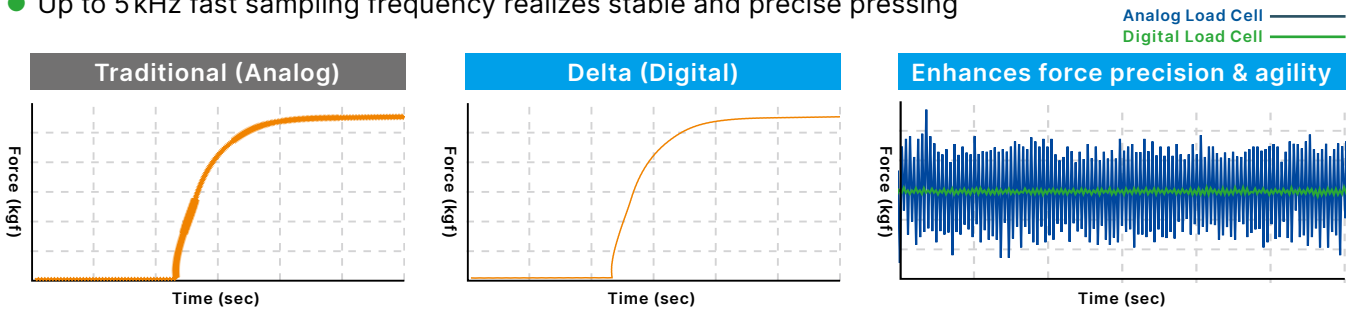


Cutting

Features

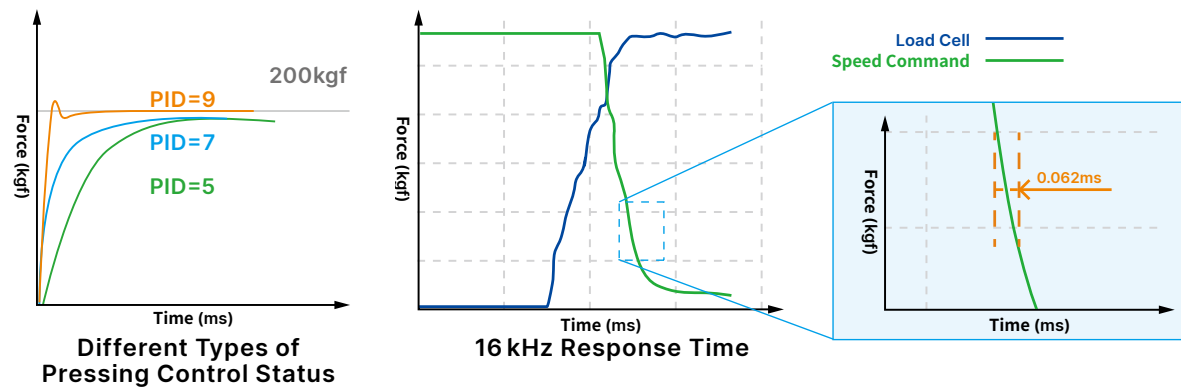
Precise Force Control

- Adopts a digital load cell, which reduces noise interference by 7 times, compared with traditional models
- Up to 5 kHz fast sampling frequency realizes stable and precise pressing



Rapid Response Time

- Up to 16 kHz response time enhances by 8 times, compared with traditional models
- Built-in smart PID control mode integrates automatic commissioning to simplify parameter setting for various pressing applications



Dynamic Frame Limit

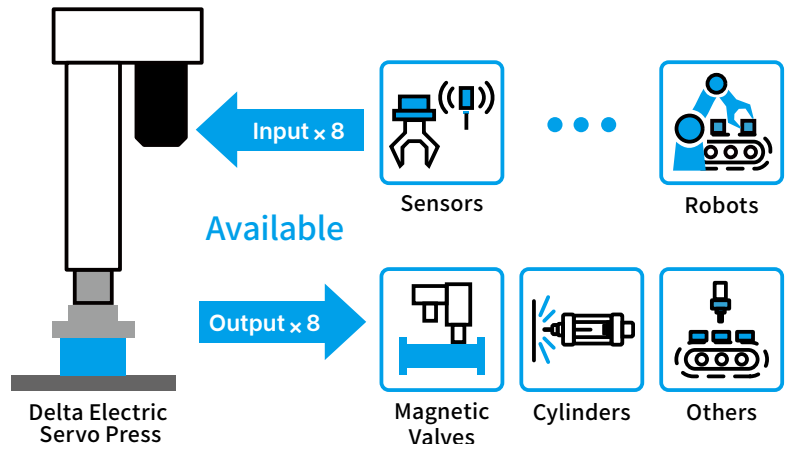
- 8 types of frames for selection. Each pressing process can set 10 groups of pressing monitoring
- Real-time monitoring of the pressing process. If an anomaly occurs, the system will send a shutdown notification without delay
- Capable of setting different conditions based on multiple materials



For Various Applications & Operations

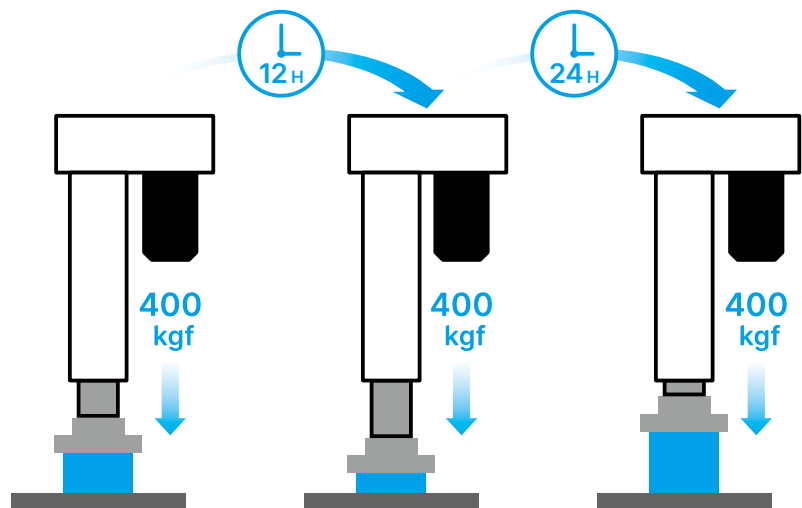
Process I/O Control

- Built-in I/O mode connects to external sensors or devices for control
- No external controller for cost efficiency. Actively controls peripheral devices to complete complex logic actions



Long Time Holding Force

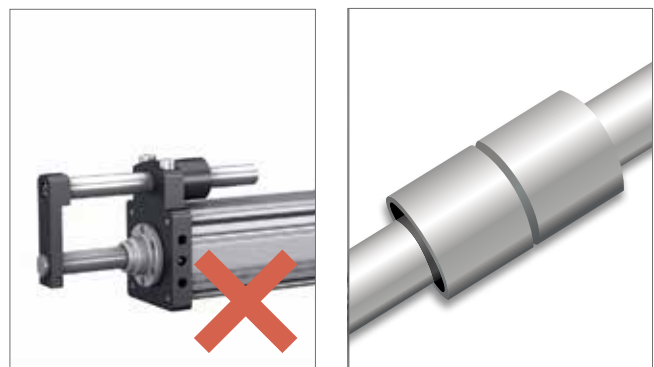
- Lasts longer than 24 hours and keeps constant force according to changes in the environment and manufacturing process
- If the external force changes, the servo press can correct correspondingly and immediately



When the workpiece is deformed, the servo press adjusts pressing parameters accordingly

High Rigidity & Precision

- The force screw is equipped with a ball spline, which features high rigidity, heavy load, and high durability
- No need for an external guide rod on the force screw for convenience



Guide Rod

Ball Spline

Functions

User-Friendly Interface

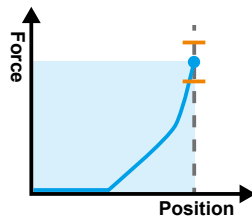
- Full-color HMI and user-friendly interface
- Displays thorough pressing information on one page for convenient recipe management



Comprehensive Control Modes

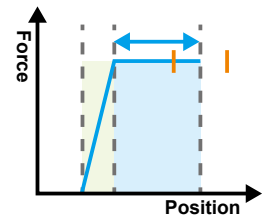
● Position Mode

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



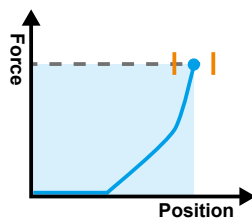
● Force Distance Mode

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



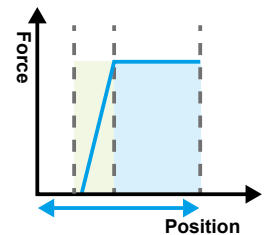
● Force Mode

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



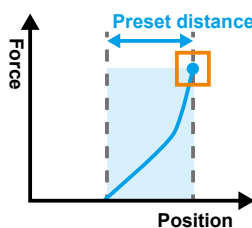
● Force Position Mode

Presses to an absolute position with a constant force



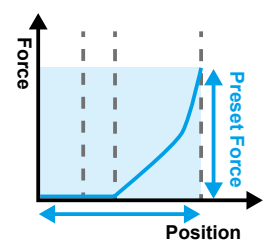
● Distance Mode

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



● Multiple Mode

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



Manufacturing Execution System (MES)

- Optional host system
- With workpiece and work order barcode, the host controls the current authority
- Controls real-time information of the machine and monitors pressing position, force, time, and the machine's current status during production



DIAServoPress Software (Optional)

Thorough Information & Data

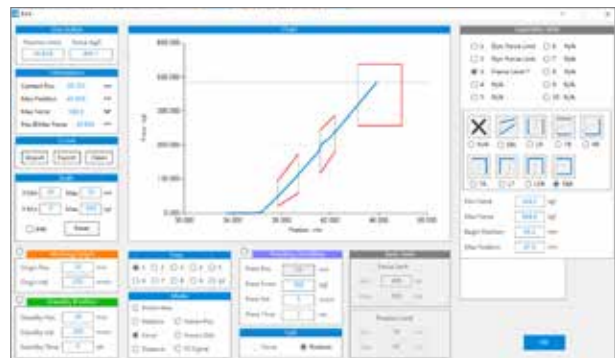
- Displays and monitors the following information as pressing completes:
 - Pressing output, forming position and force, and more
 - Corresponding charts of each pressing
- Output items set by users:
 - Batch statistical data, such as average forming force, standard deviation, Process Capability Index (Cpk), and more



Pressing Output

Real-Time Monitoring & Tracking

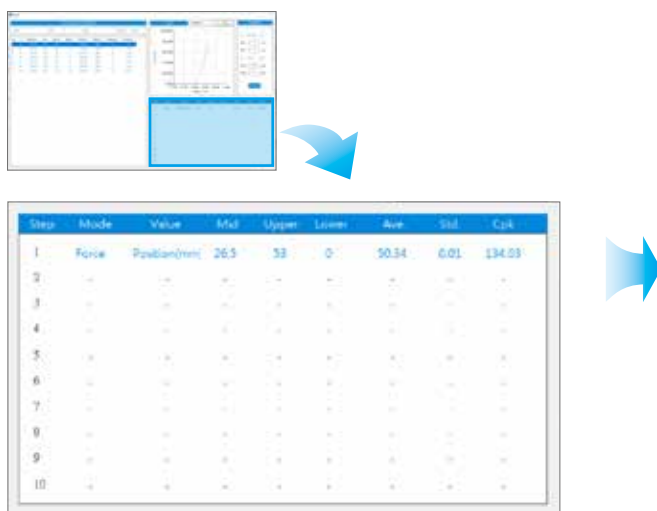
- The geometric constraint monitors the entire pressing process in real time
- Data analysis speed reaches max. 2,000 per second



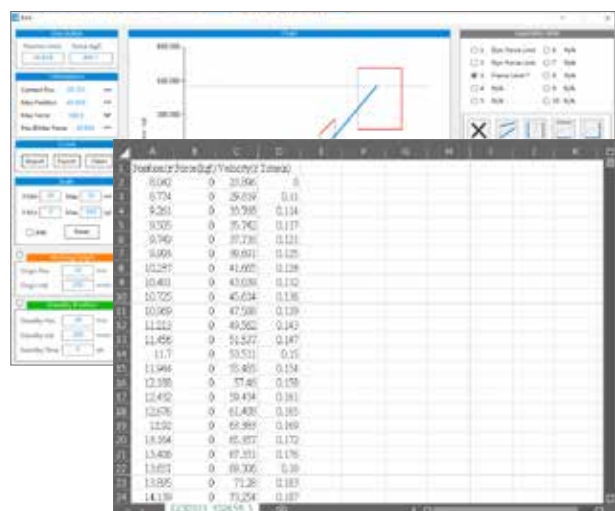
Comprehensive Interface

Complete Analysis of Statistical Data

- Provides pressing data and charts for curve monitoring and data tracking



Statistical Data



Pressing Records

Model Name Explanation

AM-ASP-F 050 - 4 1 H C

Category	Product Type	Serial	Max. Press Force	Max. Stroke	Voltage	Accessory	Certification
Advanced Manu-facturing	Electric Servo Press	F: External Electric Cylinder Servo Press	001: 100kgf 002: 200kgf 005: 500kgf 010: 1,000kgf 030: 3,000kgf 050: 5,000kgf	1: 100mm 2: 200mm 3: 300mm 4: 400mm	0: 220V/1Ø 1: 220V/3Ø 2: 380V/3Ø	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	N: Standard C: CE certified

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

Specifications

For CE certified models, 380V models, and other detailed information, please contact Delta

Model Name		AM-ASP-F001	AM-ASP-F002	AM-ASP-F005	AM-ASP-F010	AM-ASP-F030	AM-ASP-F050	
Force	Max. Press Force (kgf)	100	200	500	1,000	3,000	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	350	270			200	
	Max. Press Speed (mm/s)	40 *4						
	Min. Increment / Decrement (mm/s)	0.001						
Repeatability of Position Control (mm)		± 0.005 *5						
Load Capacity of Press Punch (kg) *6		15		50		125		
Control Response Frequency		12 kHz						
Locking Method		Flange Locking						
Dwell Time		> 24 hr						
Communication Interface		Modbus TCP / RS-485 / Ethernet IP						
External I/O	Fieldbus	IO / Modbus TCP / RS-485						
Power Supply		220 V _{AC} × 1Ø, 10 A				220 V _{AC} × 3Ø, 30 A		
Weight (kg) *1		12	12	35	38	135	140	
Dimensions (L × W × H mm) *2		530 × 150 × 102		660 × 235 × 140		1,000 × 366 × 185		
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

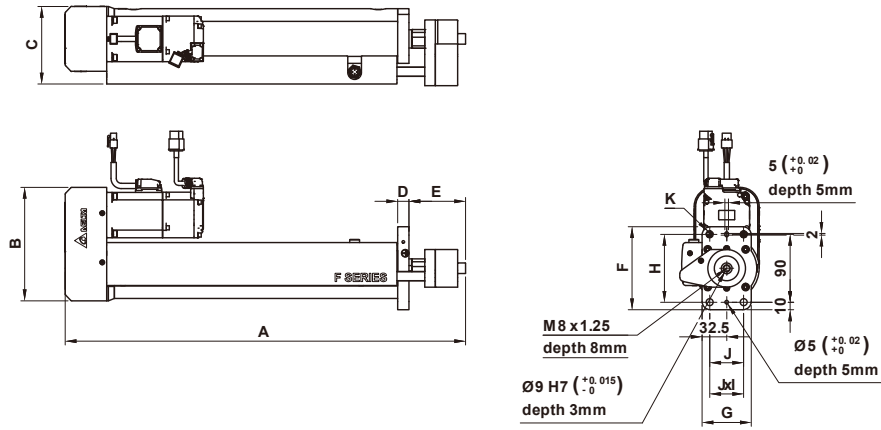
Note 4: Pressing speed is altered by pressing value

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 & Ordering Information

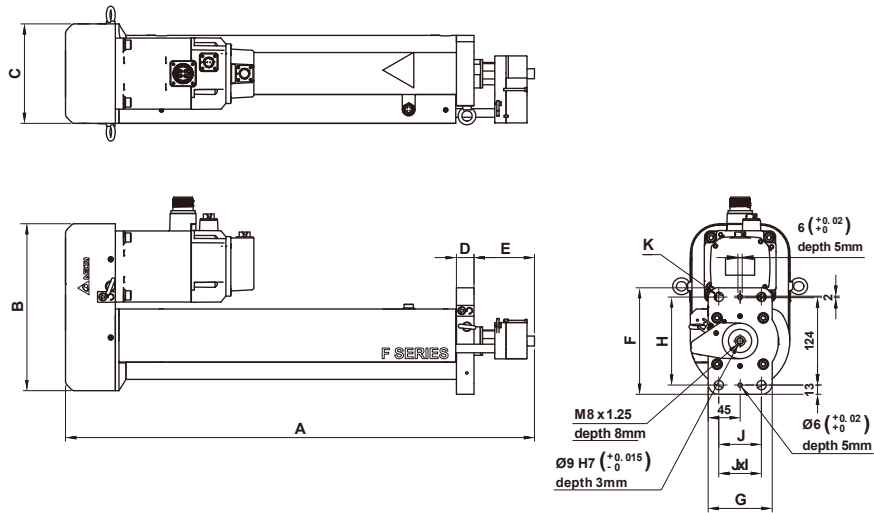
Electric Servo Press



AM-ASP-F002 Series as an example Unit: mm

Model Name	A	A (CE)*	Stroke	B	C	D	E	F	G	H	I	J	K
AM-ASP-F001-1_	430	470	100	150	102	15	75	110	65	90	1	45	4-Ø9
AM-ASP-F001-2_	530	570	200										
AM-ASP-F002-1_	430	470	100										
AM-ASP-F002-2_	530	570	200										

*CE certified models



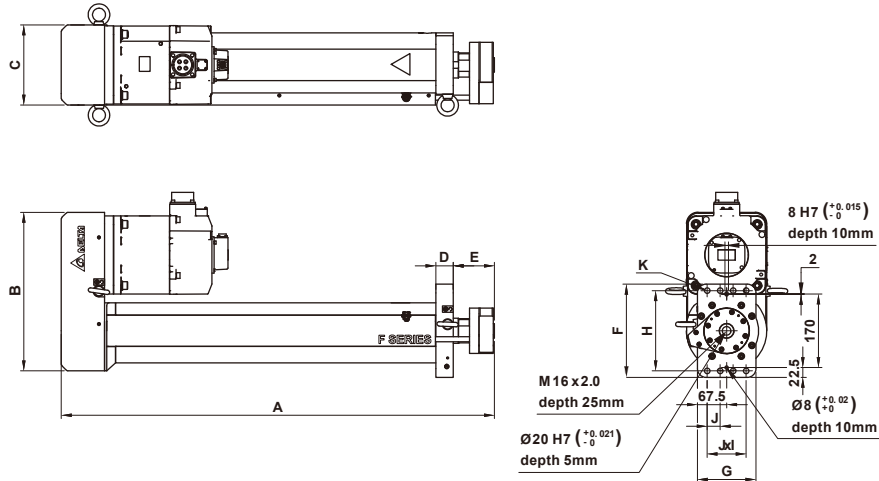
AM-ASP-F010 Series as an example Unit: mm

Model Name	A	A (CE)*	Stroke	B	C	D	E	F	G	H	I	J	K
AM-ASP-F005-1_	460	500	100	235	140	25	85	150	90	124	1	60	4-Ø13
AM-ASP-F005-2_	560	600	200										
AM-ASP-F005-3_	660	700	300										
AM-ASP-F010-1_	460	500	100										
AM-ASP-F010-2_	560	600	200										
AM-ASP-F010-3_	660	700	300										

*CE certified models

Dimensions & Ordering Information

Electric Servo Press

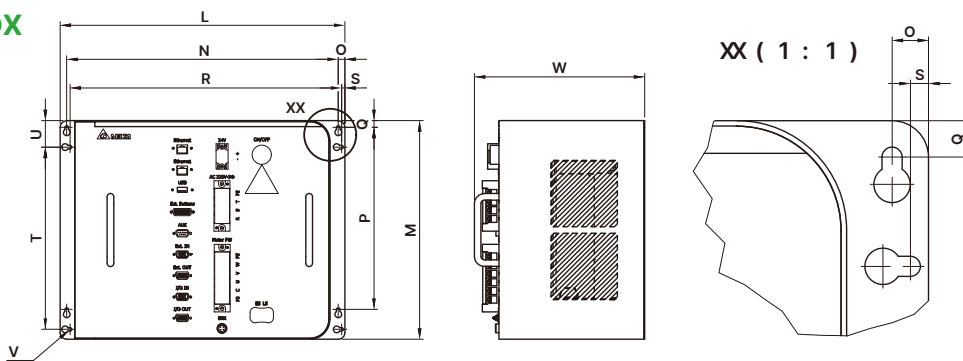


AM-ASP-F050 Series as an example Unit: mm

Model Name	A	A (CE)*	Stroke	B	C	D	E	F	G	H	I	J	K
AM-ASP-F030-1_ _ _	700	745	100	366	185	40	95	215	135	185	3	30	8-Ø13
AM-ASP-F030-2_ _ _	800	845	200										
AM-ASP-F030-3_ _ _	900	945	300										
AM-ASP-F030-4_ _ _	1,000	1,045	400										
AM-ASP-F050-1_ _ _	700	745	100										
AM-ASP-F050-2_ _ _	800	845	200										
AM-ASP-F050-3_ _ _	900	945	300										
AM-ASP-F050-4_ _ _	1,000	1,045	400										

*CE certified models

Control Box



AM-AH Series as an example Unit: mm

Series	L	M	N	O	P	Q	R	S	T	U	V	W	Weight (kg)	Model Name
AM-AL*	295	330	275	10	275	10	275	10	275	40	8-Ø5.5	257	15	AM-ASP-F001
														AM-ASP-F002
			AM-ASP-F005											
			AM-ASP-F010											
AM-AH*	430		410				410						25	AM-ASP-F030
														AM-ASP-F050

Note: The control box dimensions are measured from the backplane to handle

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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