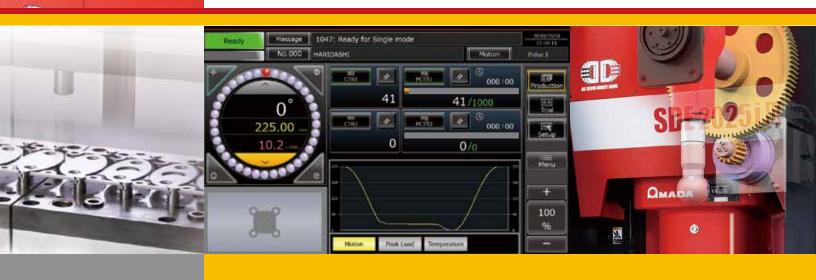


# AMADA PRESS SYSTEM CO., LTD. LINEUP FOR STAMPING PRESS MACHINES



**General Catalog** 

# STAMPING





## From high accuracy to ultra-high accuracy

In 1965, AMADA developed the TP Series of stamping press machines with the basic aim of reliable safety. The TP Series took the forefront of stamping press machines. For the first time, a stamping press utilizes a wet clutch-brake combination in the transmission mechanism, proving its effectiveness in consistent operation. Based on the highly trusted TP Series, AMADA's subsequent stamping presses evolved into a variety of series as all-encompassing systems of hardware, software, peripheral equipment, and service to meet the varied needs of its customers.

AMADA's stamping presses improve productivity and reduce total cost by reducing die setup time, improving material yield, promoting process rationalization through automation and configuration of production lines, and streamlining production management. Our stamping presses are constantly evolving, from high accuracy to ultra-high accuracy, such as the development of the low noise link motion press and the Digital AC Servo Press, which has greatly expanded the possibilities of press production.



# History of Progress

# -- AMADA Stamping Press Machines

| 1965 | Launched first <b>TP</b> machine                                | 2007 | Launched 2-point digital AC servo press <b>SDEW</b>   |
|------|---|------|---|
| 1973 | Launched TPW Series   |      | Series  |
| 1979 | Launched TP-B Series  | 2014 | Launched ECO function equipped TP-FX, TPL-FX, TPW-FX, TPWL-FX Series                                  |
| 1981 | Launched TP-C Series  | 2015 | Launched digital AC servo press <b>SWE-4025</b>   |
| 1982 | Launched TPW-B Series   |      |   |
| 1987 | Launched TPW-C Series   | 2016 | Launched high-rigidity digital AC servo press SDE Series GORIKI                                       |
| 1990 | Launched industry first C-frame link press in <b>TPL</b> Series | 2020 | Launched i3 control equipped digital AC servo press SDE-i3, SDEW-i3, SDE-i3 GORIKI Series             |
| 1995 | Launched silent link press TPL-Si Series                        | 2021 | Launched 2-point digital AC servo press   |
| 1996 | Launched 2-point link press TPWL Series                         |      | SWE-i3, SDEW-i3 GORIKI, automation system for progressive stamping press production ALFAS             |
| 1997 | Launched TP-EX Series   | 0000 | _   |
| 2003 | Launched digital AC servo press <b>SDE</b> Series               | 2022 | Launched high-speed line system with articulated robots and servo-drive stamping presses <b>ARPAS</b> |

## **Our Network**



Assembly plant in Fujinomiya Works, Japan



Second plant in Suzukawa Works,



Assembly plant in Guangdong, China

Manufacturing



AMADA Global Innovation Center, Japan



Kansai Technical Center, Japan



Overseas base in Thailand



Overseas base in U.S.A.



Sales

Stamping press automation solution business

Service



Development



AMADA Parts Center, where integrated supply base, Japan



AMADA Innovation Center in Fujinomiya Works, Japan



Suzukawa Works, Japan

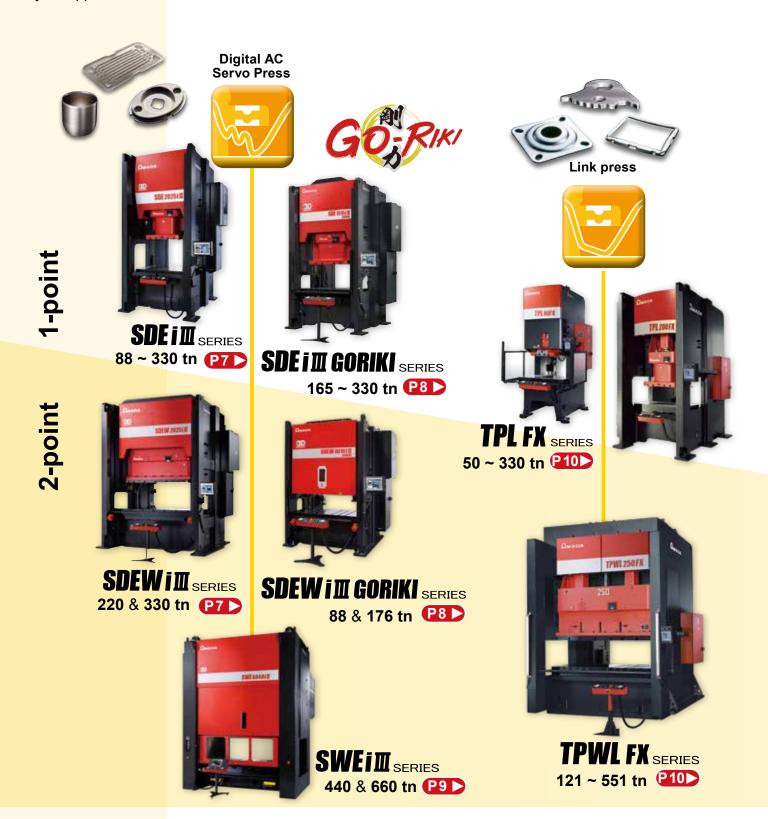


Service car

## Stamping press automation solution

AMADA PRESS SYSTEM has a line of stamping press machines and peripheral equipment to meet specific needs of customers.

You can select the correct machines and peripheral equipment that best suits your application in terms of lead time, cost, and other factors.



**High-Speed Line** System with **Articulated Robots** and Servo-Drive Stamping Presses













**High-Speed** Tandem Press Line System





**Software** 



P15>

V-factory

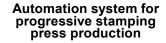


WANMS Pressure waveform analysis software

Motion creation and editing software **SMAPS** 

#### **Crank press**







TP FX SERIES 17 ~ 275 tn P11





SDE-1515i3 & ALFAS-03KR 88 ~ 330 tn P13▶



TPW FX SERIES 121 ~ 330 tn P11D



SDEW-8010i3 & ALFAS-03ARZ 88 & 176 tn

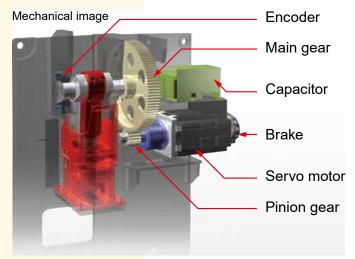
P13▶



## Digital AC Servo Press

### Designed for value-added forming and improved productivity

The Digital Servo Direct Drive (DSDD), a fusion of an i3-controlled servo stamping press and a performance-proven crank mechanism, provides optimum speed and position control, and opens a world of unprecedented high productivity and high value-added forming.



#### Sample motion screen



12 types\* of motion that enable high value-added forming and productivity improvement

\*Some models have optional motions. (As additional options: 15 motions)

### "MF Eco machines" with environmental consideration

#### AMADA's servo press machines are the first MF Eco machine-certified.

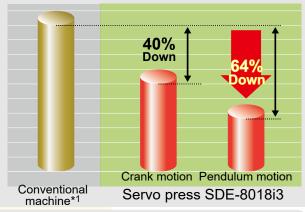
AMADA's servo press machines were certified by the Japan Forming Machinery Association as MF Eco machines, or environmentally conscious products, which contribute to environmental impact reduction and working environment improvement.



### 1 Power conservation: Sharp reduction of power consumption

The power load-leveling, energy-saving circuit of the servo presses sharply reduced their power consumption as compared with conventional machines. The ECO monitor screen allows for the visualization of power consumption.

#### Power consumption



#### ECO monitor screen



### 2 Resource conservation: Reduction of lubricating oil consumption

Lubricant consumption is reduced by 67%\*2 compared to conventional machines\*1 by abolishing oil pans and adopting a circulating oil lubrication system.

\*2 Compared with SDEW-3025i3

\*1 Mechanial stamping press machine of the same class

### 3 Working environment: Significant reduction of stamping noise

Optimum slide motions help to cut the high decibel range of stamping noise. This reduces noise generation and improves the working environment.

## SDE I III SERIES

1-point / 88 ~ 330 tn

# High value-added forming from prototype to mass production

This stamping press machine with servo motor achieves improvement of forming, accuracy and economy by selecting the optimum motion according to the product from 12 types of motions, such as crank, link, soft, program, pendulum, high-speed pendulum, coining, repetition, pulse 1, pulse 2, pulse 1 pendulum, pulse 2 pendulum.







| Machine name       |                   | SDE-8018i3 | SDE-1120i3 | SDE-1522i3 | SDE-2025i3 | SDE-3030i3 |
|--------------------|-------------------|------------|------------|------------|------------|------------|
| Frame type         |                   | C/SF       | C/SF       | C/SF       | C/SF       | SF         |
| Capacity           | tn                | 88         | 121        | 165        | 220        | 330        |
| Strokes per minute | min <sup>-1</sup> | ~ 80       | ~ 70       | ~ 60       | ~ 55       | ~ 40       |
| Stroke length      | inch              | 7.087      | 7.874      | 8.858      | 9.843      | 11.811     |
| Die height         | inch              | 13.78      | 15.354     | 16.929     | 18.11      | 21.654     |

## SDEW I III SERIES

2-point / 220 & 330 tn

# High value-added forming and improved productivity

- 1. The development of a digital servo direct drive that performs precise processing motion control and a high-rigidity integrated straight side frame maximizes stamping at two points.
- 2. We are able to achieve even high precision and productivity in processing with excellent repeatability by making full use of crank, link, soft, program, pendulum, high-speed pendulum, coining, and repetitive motions.



| Machine name       |                   | SDEW-2025i3 | SDEW-3025i3 |
|--------------------|-------------------|-------------|-------------|
| Frame type         |                   | SF          | SF          |
| Capacity           | tn                | 220         | 330         |
| Strokes per minute | min <sup>-1</sup> | ~ 50        | ~ 45        |
| Stroke length      | inch              | 9.843       | 9.843       |
| Die height         | inch              | 19.685      | 21.654      |



SDEW-2025i3



## Digital AC Servo Press

## **SDE i III GORIKI** series

1-point / 165 ~ 330 tn

# High-speed, high-precision processing and improved productivity

"GORIKI" is a high-rigidity stamping press machine which, as the Japanese name suggests, means "powerful (RIKI) servo press machines with enhanced rigidity (GO)."

A new solid-column frame structure was adopted with a chevronshaped structure on the upper part of the front frame and reduced cutout in the bed front plate. The GORIKI's full-guided center-gib slide structure with additional side ribs out performs the lateral rigidity when compared with conventional models. The improved eccentric load resistance characteristics sustain stable stamping accuracy.







| Machine name       |                   | SDE-1515i3  | SDE-2017i3  | SDE-3020i3  |
|--------------------|-------------------|-------------|-------------|-------------|
| Frame type         |                   | SF (GORIKI) | SF (GORIKI) | SF (GORIKI) |
| Capacity           | tn                | 165         | 220         | 330         |
| Strokes per minute | min <sup>-1</sup> | ~ 95        | ~ 75        | ~ 60        |
| Stroke length      | inch              | 5.906       | 6.89        | 7.874       |
| Die height         | inch              | 14.961      | 16.339      | 18.11       |

## SDEW I III GORIKI SERIES

2-point / 88 & 176 tn

# High-speed, high-precision processing and improved productivity

The high-rigidity GORIKI Series, equipped with "i3" control, is now available in a double crank mechanism that has 8-sided slide gibbing. The high eccentric load resistance in the left, right, front and back is ideal for manufacturing electrical components such as busbars, which often have asymmetrical shapes.



| Machine name       |                   | SDEW-8010i3 | SDEW-1613i3 |
|--------------------|-------------------|-------------|-------------|
| Frame type         |                   | SF (GORIKI) | SF (GORIKI) |
| Capacity           | tn                | 88          | 176         |
| Strokes per minute | min <sup>-1</sup> | ~ 130       | ~ 80        |
| Stroke length      | inch              | 3.937       | 5.118       |
| Die height         | inch              | 12.598      | 15.748      |





## **SWEII** SERIES

2-point / 440 & 660 tn

# High value-added forming and improved productivity

In addition to the high-rigidity straight-side integrated frame and the 8-sided gib guide system on the slide, the unique multiple servo motor design ensures repeatable for high-precision manufacturing. The double crank and cross shaft structure suppresses slide deflection, leading to improved product accuracy.

In addition, the newly developed tie-rod side insertion method has reduced the required installation height at the factory by approximately 30%.



| Machine name       |                   | SWE-4025i3 | SWE-6040i3 |
|--------------------|-------------------|------------|------------|
| Frame type         |                   | SF         | SF         |
| Capacity           | tn                | 440        | 660        |
| Strokes per minute | min <sup>-1</sup> | ~ 45       | ~ 40       |
| Stroke length      | inch              | 9.843      | 15.748     |
| Die height         | inch              | 23.622     | 23.622     |



SWE-6040i3









## Link Press

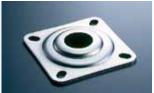
## TPL FX SERIES

1-point / 50 ~ 330 tn

# Achieves high-precision and high productivity

- 1. Unprecedented high accuracy, high productivity, and deep drawability are achieved with a link mechanism.
- 2. Eco-functions reduce power consumption.
- 3. Operability improvement and machine data management have also been achieved.









TPL-200FX (SF)

| Machine name       |                       | TPL-45FX            | TPL-60FX                   | TPL-80FX           | TPL-110FX          | TPL-150FX         | TPL-200FX         |
|--------------------|-----------------------|---------------------|----------------------------|--------------------|--------------------|-------------------|-------------------|
| Frame type         |                       | С                   | С                          | С                  | C/SF               | C/SF              | C/SF              |
| Capacity           | tn                    | 50                  | 66                         | 88                 | 121                | 165               | 220               |
| Strokes per minute | P/D min <sup>-1</sup> | 100 ~ 180 / 55 ~ 90 | $85 \sim 150 / 40 \sim 75$ | 80 ~ 130 / 40 ~ 70 | 50 ~ 100 / 30 ~ 60 | 40 ~ 80 / 25 ~ 45 | 35 ~ 70 / 25 ~ 45 |
| Stroke length      | P/D inch              | 2.756 / 5.512       | 3.543 / 6.299              | 3.937 / 7.087      | 4.921 / 7.874      | 5.906 / 9.843     | 6.89 / 11.811     |
| Die height         | P/D inch              | 10.039 / 11.417     | 11.417 / 13.189            | 12.598 / 13.78     | 13.78 / 15.354     | 14.961 / 16.535   | 16.339 / 18.11    |

<sup>&</sup>quot;P" is for progressive processing, "D" is for drawing processing.

The 330 tn type is a special specification.

### TPWL FX SERIES

2-point / 121 ~ 551 tn

# Achieves high precision and reduced production noise

- 1. A link mechanism is installed as standard on the C frame and 2 points.
- There are also bridge specifications (BI, BO, BN, and SF types) that limit gap opening in pursuit of high stamping accuracy.
- 3. Eco-functions reduce power consumption.









TPWL-300FX (SF)

| Machine name       |     |                   | TPWL-110FX        | TPWL-150FX        | TPWL-200FX        | TPWL-250FX        | TPWL-300FX        |
|--------------------|-----|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Frame type         |     |                   | C / BI            | C / BI            | C/BI/BO/SF        | C/BI/BO/BN        | BI/BO/BN/SF       |
| Capacity           |     | tn                | 121               | 165               | 220               | 275               | 330               |
| Strokes per minute | G/P | min <sup>-1</sup> | 35 ~ 65 / 40 ~ 80 | 30 ~ 55 / 40 ~ 75 | 25 ~ 45 / 40 ~ 65 | 20 ~ 40 / 30 ~ 60 | 20 ~ 40 / 30 ~ 55 |
| Stroke length      | G/P | inch              | 7.087 / 4.331     | 7.874 / 5.118     | 9.843 / 5.906     | 9.843 / 6.693     | 9.843 / 7.874     |
| Die height         | G/P | inch              | 15.748 / 13.78    | 17.717 / 15.748   | 19.685 / 17.717   | 21.654 / 17.717   | 21.654 / 17.717   |

<sup>&</sup>quot;G" is for general processing, "P" is for progressive processing.

440 ~ 551 tn types are special specifications.



## Crank Press



1-point / 17 ~ 275 tn

### A wide range of machines to meet your needs

- 1. The TP-FX Series adopts a highly rigid frame and a six-sided guide of construction designed against eccentric loading. These are the long-selling presses focusing on stamping accuracy and versatility.
- 2. Standard TFT color screen provides better visibility and operator interface.
- 3. Advanced eco-functions are installed to achieve lower power consumption as compared with conventional machines.







TP-150FX

| Machine name       |     |                   | TP-15FX  | TP-25FX  | TP-35FX  | TP-45FX         | TP-60FX         | TP-80FX        | TP-110FX       | TP-150FX        | TP-200FX       |
|--------------------|-----|-------------------|----------|----------|----------|-----------------|-----------------|----------------|----------------|-----------------|----------------|
| Frame type         |     |                   | С        | С        | С        | С               | С               | С              | С              | С               | С              |
| Capacity           |     | tn                | 17       | 28       | 39       | 50              | 66              | 88             | 121            | 165             | 220            |
| Strokes per minute | G/D | min <sup>-1</sup> | 70 ~ 140 | 70 ~ 120 | 60 ~ 100 | 55 ~ 100        | 45 ~ 85         | 40 ~ 75        | 35~65/30~55    | 30~55/25~45     | 30~55/25~45    |
| Stroke length      | G/D | inch              | 2.362    | 3.15     | 4.331    | 3.937 / 5.906   | 4.724 / 6.299   | 5.118 / 7.087  | 5.906 / 7.874  | 6.89 / 8.858    | 7.874 / 9.843  |
| Die height         | G/D | inch              | 7.874    | 8.661    | 9.843    | 10.039 / 11.417 | 11.417 / 13.189 | 12.598 / 13.78 | 14.37 / 15.354 | 15.354 / 16.929 | 16.535 / 18.11 |

"G" is for general processing, "D" is for drawing processing.

275 tn type is a special specification.

## TPW FX SERIES

2-point / 121 ~ 330 tn

# Basic models of wide bed stamping press machines

- 1. A planetary-geared transmission is adopted to increase the reduction ratio and to produce high torque and energy. This wide bed stamping press achieves stable continuous processing.
- 2. Standard TFT color screen provides better visibility and operator interface.
- 3. Advanced eco-functions are installed to achieve lower power consumption as compared with conventional machines.





TPW-110FX (C)

| Machine name       |       |                   | TPW-110FX               | TPW-150FX                | TPW-200FX                | TPW-250FX                |
|--------------------|-------|-------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| Frame type         |       |                   | C/BI                    | C/BI                     | C/BI/BO                  | C / BI / BO              |
| Capacity           |       | tn                | 121                     | 165                      | 220                      | 275                      |
| Strokes per minute | G/P/D | min <sup>-1</sup> | 35~65/55~110/25~50      | 30~55/45~90/25~45        | 25~45/40~75/20~35        | 20~40/30~60/15~30        |
| Stroke length      | G/P/D | inch              | 7.087 / 4.331 / 9.055   | 7.874 / 5.118 / 9.843    | 9.843 / 5.906 / 11.811   | 9.843 / 6.693 / 11.811   |
| Die height         | G/P/D | inch              | 15.748 / 13.78 / 17.717 | 17.717 / 15.748 / 19.685 | 19.685 / 17.717 / 21.654 | 21.654 / 17.717 / 23.622 |

<sup>&</sup>quot;G" is for general processing, "P" is for progressive processing, "D" is for drawing processing.

330 tn type is a special specification.



# Automation System for Progressive Stamping Press Production

ALFAS Digital AC Servo Press & Straightener-Feeder

1-point / 165 tn

# Improved operability through integrating operation screen and controls

Operability and productivity are improved by integrating the operation screen and control of the i3-controlled servo press machine and straightener-feeder.

It has excellent stability and achieves even higher precision and productivity in stamping press working.



#### System example

Single-crank servo stamping press machine

| Machine name       |                   | SDE-1515i3  |
|--------------------|-------------------|-------------|
| Frame type         |                   | SF (GORIKI) |
| Capacity           | tn                | 165         |
| Strokes per minute | min <sup>-1</sup> | ~ 95        |
| Stroke length      | inch              | 5.906       |
| Die height         | inch              | 14.961      |

#### Straightener-feeder

| Machine name     |      | ALFAS-03KR     |
|------------------|------|----------------|
| Width            | inch | 1.969 ~ 11.811 |
| Thickness        | inch | 0.012 ~ 0.126  |
| Max coil mass    | lbs  | 4409           |
| Max outer coil ø | inch | ø47.244        |
| Max feed length  | inch | 15.748         |



SDE-1515i3 & ALFAS-03KR

ALFAS Digital AC Servo Press & High-Speed NC Roll Feeder

2-point / 88 & 176 tn

# Improved productivity and quality with high-speed and high-precision feeding

This system integrates the high-rigidity GORIKI Series double-crank servo press machine developed for electrical components for EVs and a new concept high-speed NC roll feeder with servo driven pilot release and uploop straightener.



#### System example

Double-crank servo stamping press machines

| Machine name       |                   | SDEW-8010i3 | SDEW-1613i3 |
|--------------------|-------------------|-------------|-------------|
| Frame type         |                   | SF (GORIKI) | SF (GORIKI) |
| Capacity           | tn                | 88          | 176         |
| Strokes per minute | min <sup>-1</sup> | ~ 130       | ~ 80        |
| Stroke length      | inch              | 3.937       | 5.118       |
| Die height         | inch              | 12.598      | 15.748      |

#### Roll feeder and up-loop straightener

| Machine name     |        | ALFAS-03ARZ    |
|------------------|--------|----------------|
| Width            | inch   | 1.969 ~ 11.811 |
| Thickness        | inch   | 0.008 ~ 0.039  |
| Max coil mass    | lbs    | 4409           |
| Max outer coil ø | inch   | ø47.244        |
| Max feed speed   | ft/sec | 20             |



**SDEW-8010i3 & ALFAS-03ARZ** 



# High-Speed Line System with Articulated Robots and Servo-Drive Stamping Presses

ARPAS Stamping press machines & 6-axis articulated robots coordinated transfer

Automation system for stamping processing

# Achieves high-speed transfer by WAVE coordinated control operation

ARPAS

AMADA Robot Press Automation System

SDE-i3 servo stamping press machines equipped with "i3" control, with which improved visibility and operability, can be easily are integrated with a 6-axis articulated robots.

High productivity is supported by WAVE coordinated control operation that minimizes the time required to transfer parts from press to press to increase thru-put. In addition, we have automated the process for changing the End Of Arm Tooling (EOAT).

The automated (EOAT) change system shortens the setup time, contributes to labor saving, and enables continuous line operation.





## High-Speed Tandem Press Line System

Stamping press machines & 2-axis servo robots coordinated transfer

Automation system for stamping processing

### Pursuit of productivity and operability

A series of 2-axis high-speed servo robots that support stamping press automation with sophisticated designs and a wide variety of variations.

With the RHQ Robot Line, it is now possible to perform coordinated control operation in which the robot individually adjusts the timing with each stamping press machine through simple teaching, based on realistic alternating operation. Coordinated control operation achieves even higher production speeds.







## Straightener-Feeder

### **DRII** Straightener-Feeder

Width: 1.968" ~ 51.181" Thickness: 0.012" ~ 0.472"

### Pursuit of productivity and operability

A Compact straightener-feeder is a piece of equipment that feeds coil material to a stamping press machine. The ORII Compact Straightener-Feeders are known for their space-saving design and are available in a wide variety of sizes from small to extralarge and are designed to handle most materials.



High-Performance models designed to meet demanding production requirements.



Compact design requires less production floor space while offering High-Performance.



Heavy duty large capacity units are designed to handle todays demanding materials.



LCC-06HR3



### Lineup of "ECO Release" equipped products

By installing the "ECO Release" mechanism, we have succeeded in reducing excess electricity-consumption! Since it is possible to control the optimum air cylinder pressure according to the processing material and the thickness, power consumption can be reduced by up to about 50%, contributing to energy savings. This will achieve significant CO<sub>2</sub> reductions.

### LCC HF4/HF2 Series

Width: 1.968" ~ 39.370" Thickness: Max 0.177" High Performance



# LCC HR3 Series

Width: 2.756" ~ 51.181" Thickness: Max 0.236" High Performance



#### LCC HF1 Series

Width: 1.968" ~ 23.622" Thickness: Max 0.126"



#### LCC HL Series

Width: 2.756" ~ 51.181"
Thickness: Max 0.236"
ECO Release: optional



#### LCE HR3 Series

Width: 2.756" ~ 23.622" Thickness: Max 0.236"



#### LCC PM2 Series

Width: 2.756" ~ 51.181" Thickness: Max 0.354"





## Software

### APINES, WANMS, SMAPS

Software

### Visualization of operation status and maintenance information is easily accessible.

- A digital network can be constructed from mechanical to servo stamping press machines.
- Real-time monitoring of alarm and maintenance information for all machines on the network
- Offline capability to edit servo press motion path programs

### V-factory IOT Solution of AMADA Group

APINES Real-time production monitoring software

MADA



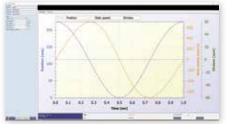


**SMAPS** Motion creation and editing software

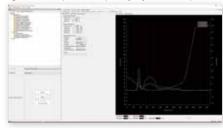
**WANMS** Pressure waveform analysis software

Ability to create servo press motion paths off-line

Visualization of operation/production information



Management of product quality by monitor processing load



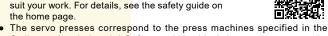


Warning: O.S.H.A. - required point of use guards for protecting the operator are not included and are the responsibility of the end user. These items can be purchased as a turn-key option.



Before using those products, please read the operator's manual carefully and follow all applicable instructions.

• Use of this product requires safeguard measures to suit your work. For details, see the safety guide on the home page.



- Ordinance on Industrial Safety and Health. It is necessary to make application for their installation and take any other measure required.
- Options are included in the photos.

This control meets or exceeds the current requirements for press control systems as defined in O.S.H.A. Standards Section 1910.217, paragraphs (b)13 and (b)14 as published in the Federal Register, July 1, 1991 and ANSI B11.1-2009 as interpreted by AMADA PRESS SYSTEM CO., LTD. Compliance with any local code(s) or requirements is the responsibility of the user.

- \* Specifications, appearance, and equipment are subject to change without notice for improvement and other purposes.
- The official "Model name" for machines are without hyphen, like SDE801813. Use these official "Model name" when contacting authorities to apply for
- \* installation, export, or financing.
- In this catalog, if there is a part with a hyphen in it, like "SWE-4025i3," it is
- for readability.

The specifications described in this catalog are for the North American \* market. Please ask your sales person for details.

©AMADA PRESS SYSTEM CO., LTD. All Rights Reserved.

### AMADA PRESS SYSTEM AMERICA INC.



