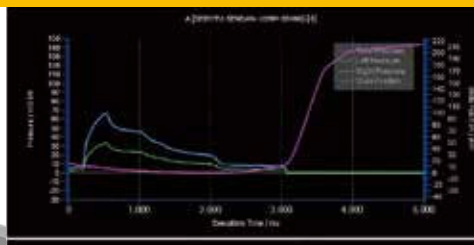
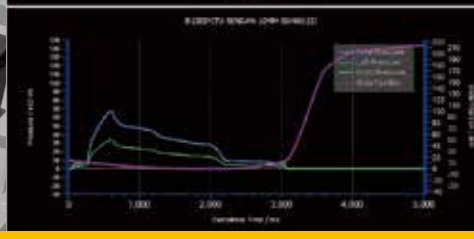
Software
for Stamping Press Machines





V-factory	AMADA Group IOT Solution
APINES	Visualization software for pressroom
WANMS	Pressure waveform analysis software
SMAPS	Motion creation and editing software

AMADA DIGITAL INNOVATION
V-factory

AMADA
APINES
AMADA Press-machine Information Network System

AMADA
WANMS
Wave Analysis Network Management System

SMAPS
Servo Motion Auto Programming System

AMADA®

Visualization software for pressroom

APINES

Operation and Production

Visualization software for pressroom

You can monitor operation status of stamping press machines easily only by connecting a LAN cable to an APINES server!
Operation and production history are accumulated automatically in the data base by the APINES server.
You can check status of remote machines simply with browser software through an internet connection.

- Viewed conditions of operation and production in real time
- Easy visualization with browser software
- Time chart and data output of operation and production history
- Maintenance control of machines
- Backup of important data

New Technology of APINES

1 Building digital network with server

Central control and monitoring of stamping press machines connected to network

Operation status of machines are collected and a data base is created in real time to display visualization of the manufacturing plant with browser software. When a wireless LAN is utilized, you can monitor with mobile devices.

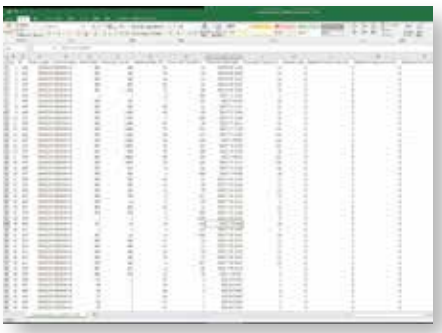
Real time monitor

Operation time chart

2 Operation history and production history data

Collection of history data such as machine, part, worker, date and time

- Collected operation status of machines can be presented in a time chart and other detailed indication in real time. Operation history and production history can be extracted in the status of machine, part, worker, etc. and presented in a CSV data file.
- By setting stopping reasons, Net working ratio and stop factors of each machine can be analyzed. Using various output data, you can prepare required forms such as work reports, production control data, etc. for production control.



CSV output data

3 Maintenance and inspection of machines

Service life of consumables and maintenance and inspection information are alerted.

Service life of oil and consumables are controlled and replacement time is notified. Alarm history is stored, which can be utilized for maintenance and inspection of machines.

Consumables and maintenance inspection screen

4 Backup of important machine data

Information about motions, dies, products, etc. are transmitted and received whole

- Parameters and setting details of each machine are backed up and restored anytime. Minimize down time such as unexpected loss of data that leads to delay in production.
- Data of workers, stopping reasons and defect reasons can be transmitted and registered to machines.
- Also, as image data of processing product* can be registered to machines, so production errors are prevented.

*Except i3 Series for a while

Registered part image

■ Specifications

APINES server	Conditions
Server computer	IBM computer/AT compatible (desktop or notebook)
OS*1	Windows 10 Professional (32 bit/64 bit)
CPU	Operating frequency: 1.5 GHz or higher
Main memory	2 GB or more*2
HDD	Approx. 1.5 GB necessary upon installing the software. Will need to be increased for saving the data automatically sampled.
Screen	Display resolution: 1024 x 768 or more, Display color: 32-bit colors
Network	Network adapter (1 port) supporting TCP/IP protocol*3
Other hardware configurations	To conform to the operating conditions of the OS in use

■ Recommended configurations

APINES server	Conditions
OS*1	Windows 10 Pro 64-bit
CPU	Operating frequency: 2.0 GHz or higher, Multi-core CPU (4 cores or more)
Main memory	4 GB or more*2
Screen	Full HD (1920×1080) or more
Network	Cable LAN connection of 100 Mbps or more

■ Stamping presses

Applicable models	SDE/SDEW Series TP/TPL-FX Series SWE Series*4
Number of presses connectable concurrently	Approx. 10 stamping presses per server*5

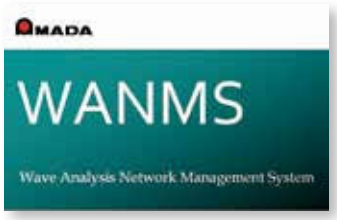
■ Functions list

APINES	Standard version	Limited function version
Maximum number of connectable presses	Up to 65,535 stamping presses*5	Max. 5 stamping presses
Press machine monitor	List of registered press machines, machine status, operation time chart, production information, operation information, alarm history, alarm count, maintenance information, one-year routine inspection history, oil change history	
Client software	Display with standard web browsers is possible (IE, Chrome, FireFox, Safari, etc.)	
Data export	Production history, operation history	—
Data manager	Program/machine parameter, backup and restore	—
Edit of user information	Organization, operator, facility, machine, stopping reason, reason for defect	—

*1 Operability confirmed OS's. For other editions or languages, consult us. Operation in a virtualized environment will not be covered by warranty.
*2 4 GB at maximum for 32-bit OS. To use a main memory over 4 GB, use a 64-bit OS.
*3 For connecting a press with the server computer, wired connection with a LAN cable is recommended. Connection in a wireless LAN environment is not recommended.
*4 Depending on when the press was shipped from our factory, updating the firmware may be necessary. Also, the system functions may be limited with a press with special specifications. For details, consult us.
*5 Numbers of units that operation is confirmed in our test environment. Numbers of connectable units vary depending on performance of server computers used and communication speed of the network.
*6 Designed maximum connectable numbers of units in the assumed condition, and not guaranteed connectable numbers of units. Actual connectable numbers may change depending on operation environments. Please consult our persons in charge for details.

Pressure waveform analysis software

WANMS



Pressure Waveforms

Analysis software for stamping press

Simply connected a press with a load monitor using a LAN cable, WANMS can easily sample and analyze the waveforms generated during processing.
WANMS also remotely monitors current operating status in real time.

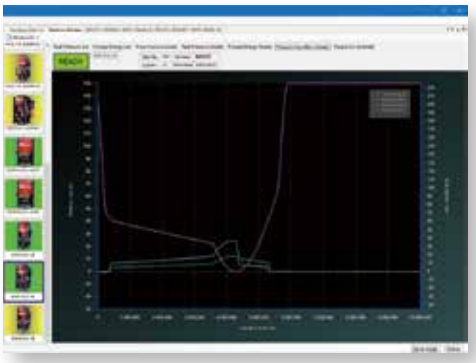
- Easy extraction and search from sampled data
- Analysis of processing contents and status through pressure waveform data
- Simultaneous recording and saving of servo press motion data
- Press operating status visible in real time
- Creation of documents using waveform data print and file export functions

New Technology of WANMS

1 Management of stamping pressure

From servo presses to general-purpose presses

- The peak pressure during processing is monitored in real time via network connection with a servo press or general-purpose crank press equipped with a load monitor.
- Capable of sampling one-shot pressure waveform data and registering it in the database.
- The servo press SDE Series can sample motion data simultaneously as well as pressure waveform and slide position data.
- Also applicable to the general-purpose press TP-FX Series.

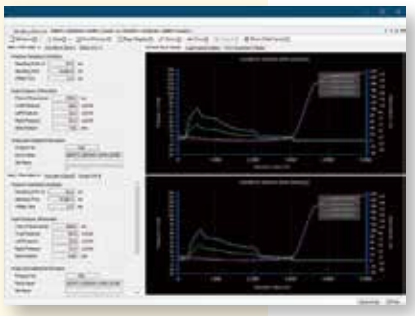


Pressure waveform (details)

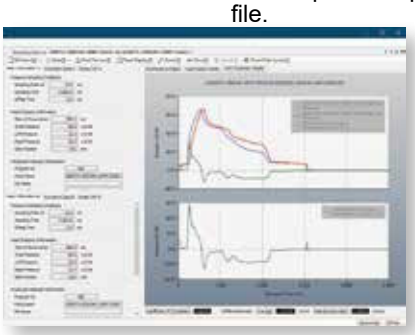
2 A variety of data analyses

Sampling and analysis of waveform data

- The individual or collective pressure applied on the left and right sides of the frame is displayed in both a graph and numerical data.
- When connected with a servo press, also capable of sampling torque waveform data and displaying energy values.
- Usable as an analysis tool of waveform data sampled, such as zoom-in/out and moving of waveforms, simultaneous display, comparison/overlapping display, and correlation of two waveforms, and more.
- Also capable of printing waveform data and exporting it to a file.



Pressure waveform comparison 1



Pressure waveform comparison 2

Pressure waveform sampling list

3 Monitoring of press operation

Monitoring of processing contents and peak pressure

- The presses connected to the network are remotely monitored in real time.
- The name of a part being stamped, number of shots, press operating status, etc. are displayed in an easy-to-understand manner.
- Deviation from the standard pressure or energy value range set for each part is shown as a change in a graph.

Real-time monitor

■ Specifications

APINES server	Conditions
Server computer	IBM computer/AT compatible (desktop or notebook)
OS*1	Windows 10 Professional (32 bit/64 bit)
CPU	Operating frequency: 1.5 GHz or higher
Main memory	2 GB or more*2
HDD	Approx. 1.5 GB necessary upon installing the software. Will need to be increased for saving the data automatically sampled.
Screen	Display resolution: 1024 x 768 or more, Display color: 32-bit colors
Network	Network adapter (1 port) supporting TCP/IP protocol*3
Other hardware configurations	To conform to the operating conditions of the OS in use

■ Recommended configurations

APINES server	Conditions
OS*1	Windows 10 Pro 64-bit
CPU	Operating frequency: 2.0 GHz or higher, Multi-core CPU (4 cores or more)
Main memory	4 GB or more*2
Screen	Full HD (1920×1080) or more
Network	Cable LAN connection of 100 Mbps or more

■ Stamping presses

Applicable models	SDE/SDEW Series TP/TPL-FX Series SWE Series*4
Number of presses connectable concurrently	Approx. 10 stamping presses per server*5

■ Functions list

WANMS	SDE/SDEW Series*6	TP/TPL-FX Series
Maximum number of connectable presses	Up to 65,535 stamping presses*7	
Automatic sampling of waveform data	Pressure waveform, peak pressure, stamping energy	Pressure waveform, peak pressure
Real-time monitor	Pressure waveform, peak pressure, stamping energy	Pressure waveform, peak pressure
Observation and analysis of various waveform data	Zoom-in/out and parallel moving of waveforms, comparison of two waveforms, evaluation of production status using statistics graph	
Various report output	Pressure waveform, peak pressure, process energy, motion	Pressure waveform, peak pressure
Others	CSV file export (pressure waveform, peak pressure, process energy), Waveform data import	CSV file export (pressure waveform, peak pressure), Waveform data import

*1 Operability confirmed OS's. For other editions or languages, consult us. Operation in a virtualized environment will not be covered by warranty.
*2 4 GB at maximum for 32-bit OS. To use a main memory over 4 GB, use a 64-bit OS.
*3 For connecting a press with the server computer, wired connection with a LAN cable is recommended. Connection in a wireless LAN environment is not recommended.
*4 Depending on when the press was shipped from our factory, updating the firmware may be necessary. Also, the system functions may be limited with a press with special specifications. For details, consult us.
*5 This is the number of connectable presses confirmed in our test environment. The number of connectable presses will vary depending on the performance of the server computer to be used and the communication speed of the network.
*6 The SWE Series has the same specifications as those of the SDE Series.
*7 This is the maximum number of connectable presses based on the specifications, and it does not guarantee successful connections of all those presses. The actual number of connectable presses varies depending on the operating environment. For details, consult us.

Motion creation and editing software

SMAPS

Off-line Motion Setup

Motion creation and editing software for servo-drive stamping press

SMAPS allows you to create and edit motion programs without stopping the servo-drive press.
The motions and complicated movements matched to the processing contents can be easily created by method from process types.
Without actually running the servo-drive press, detailed values such as cycle time, production takt time, slide position, and slide speed can be checked as well as material feeder interference check in progressive process.

- Off-line setup of motion creation and editing
- Easy motion creation by selecting process type example
- Checking detailed values for slide operation
- Registering die and motion information
- Backup of important motion data

New Technology of SMAPS

1 Off-line setup for motion creation

All-motion creation, editing, and checking on computer

- Capable of creating and editing all motions in all models of servo presses. Cycle time, number of strokes, etc. are automatically calculated with data input.
- The system guides for corrective actions with an alarm sign and message at the occurrence of an error.

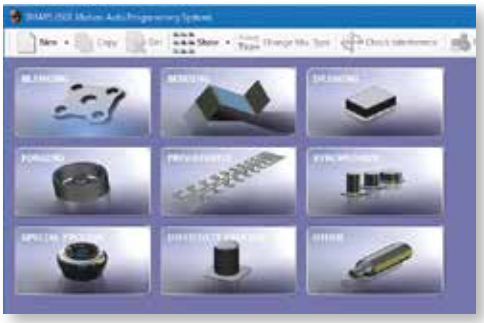
Motion selection

Motion descriptions

2 Processing type data

Incorporation of processing type data created from abundant past records

A complex motion is easily created by selecting from the database of processing type samples such as punching, bending, and drawing.

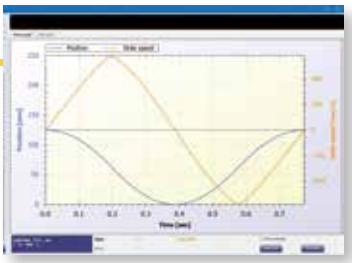


processing type selection

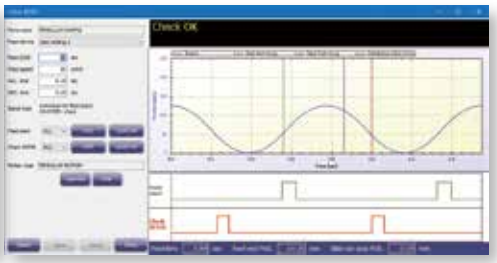
3 Detailed motion check

Calculation of detailed data for slide operation

- Detailed data can be calculated up to slide position, speed, time, and number of strokes. Also, motion contents and numerical data of slide motion can be utilized for creating and analyzing documents by printing, file-exporting, etc.
- Setting the position switch enables you to set the start timing of the material feeder, optimize motions, and check interference.



Motion chart



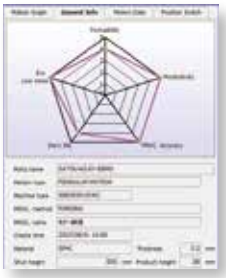
Interference check

4 Backup of important motion data

Registering and saving of die and motion information

- You can register not only the motion contents but parameters and contents of each part such as workpiece material and thickness, product height, die size and height. Data communication is capable between the presses and the computer.
- With the barcode printing function, automatic calling from the registration list is enabled by reading a barcode in the press.

Barcode print display



Basic setting display

■ Specifications

SMAPS	Conditions
Server computer	IBM computer/AT compatible (desktop or notebook)
OS*1	Windows 10 Professional (32 bit/64 bit)
CPU	Operating frequency: 1.5 GHz or higher
Main memory	2 GB or more*2
HDD	Approx. 150 MB necessary upon installing the software. Will need to be increased for saving motion data.
Screen	Display resolution: 1024×768 or more, Display color: 32-bit colors
Network	Network adapter (1 port) supporting TCP/IP protocol*3
USB port	Always occupies 1 port for license management.
Other hardware configurations	To conform to the operating conditions of the OS in use
USB flash drive	USB 2.0 with storage 500 MB or more*4

■ Recommended configurations

SMAPS	Conditions
OS*1	Windows 10 Pro 64-bit
CPU	Operating frequency: 2.0 GHz or higher, Multi-core CPU (2 cores or more)
Main memory	4 GB or more*2
Screen	Full HD (1920 x 1080) or more
Network	Cable LAN connection of 100 Mbps or more
Printer	Supporting A4 color printing

■ Stamping presses

Applicable models	SDE/SDEW Series*5 SWE Series

■ Functions list

SMAPS	Details
Creation and editing of motions	Standard motions, optional motions
Registration of basic information	Part name, motion type, stamping type, stamping name, workpiece material, workpiece thickness, die height, product height, radar chart
Motion creation method	Normal input, processing type selection, simple setting
Motion data contents	Cycle time, slide position, slide speed, number of strokes, time, interference check
Position switch setting	Position switch No., setting mode, area, position, section, timer
Capable number of data creations	Unlimited (depending on the HDD capacity of the computer in use)
Motion data transfer method	LAN connection, USB flash drive
External outputs	CSV file of motion chart, printing of setting parameters and charts, barcode printing of part names

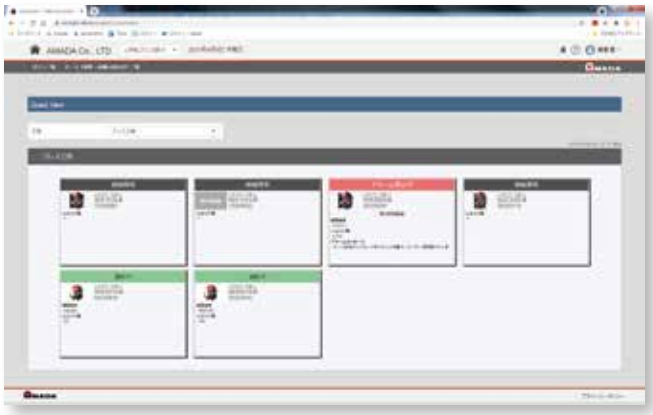
*1 Operability confirmed OS's. Supports the OS's of the Japanese, English, Chinese (simplified Chinese characters), German, and French versions. For other OS's and editions, consult us. Operation in a virtualized environment will not be covered by warranty.
*2 4 GB at maximum for 32-bit OS. To use a main memory over 4 GB, use a 64-bit OS.
*3 For connecting a press with the server computer, wired connection with a LAN cable is recommended. Connection in a wireless LAN environment is not recommended.
*4 Used for the motion data communication with presses. Not used for operations with the LAN.
*5 Depending on when the press was shipped from our factory, updating the firmware may be necessary. Also, the system functions may be limited with a press with special specifications. For details, consult us.

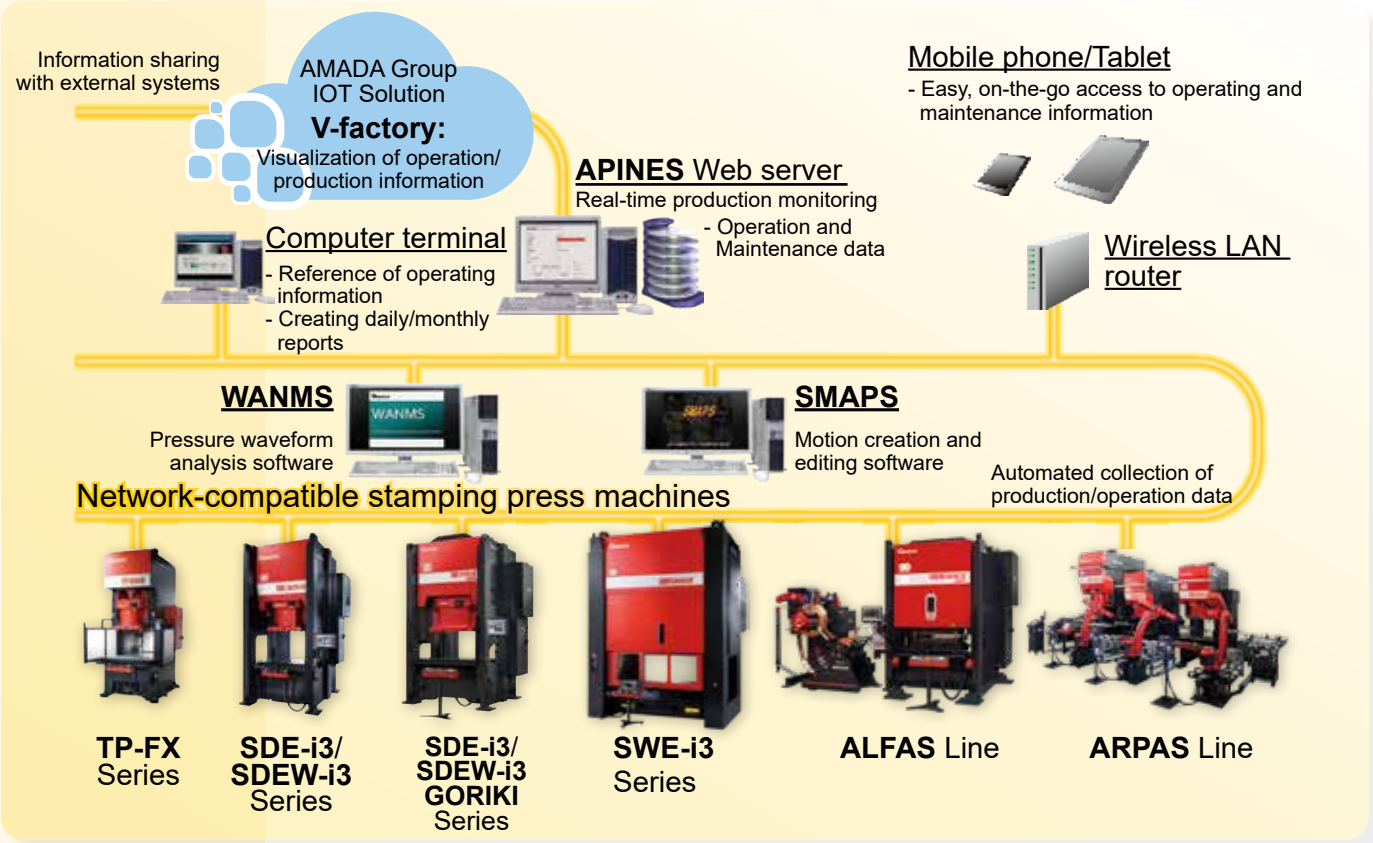
AMADA Group IOT Solution

V-factory

Visualization

Easy access to operation/ production information





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.
- The servo presses correspond to the press machines specified in the 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 and units listed in this catalogue are SWE4025I3 and SWE6040I3.
* Use these “Model numbers” when contacting authorities to apply for installation, export, or financing.
* The specifications described in this catalogue are for the North American market. Please ask your sales person for details.

AMADA PRESS SYSTEM AMERICA INC.
1840 AIRPORT EXCHANGE BLVD., SUITE #200
ERLANGER, KY. 41018 U.S.A.

Inquiry

Aug 2023 US