SOLUTION

AMADA DIGITAL INNOVATION V-factory

Digital AC Servo Press

SDE i III GORIKI SERIES

SDE-1515i3 / SDE-2017i3 / SDE-3020i3

Press




AMADA

GO-RIKI 剛力

High Rigidity & Powerful servo press

SDE-1515i3 + ALFAS-03KR

The new "i3" control offers the ability to achieve high-precision forming and improved productivity.

Improved quality and productivity

Contributes to product quality control with the built-in load monitor as standard equipment.

Reduction in setup time

The standard equipment of automatic slide adjustment greatly reduces the setup time.

Improved operability

The 12.1" wide screen operation panel has a swivel structure for improved visibility.

New Technology of the SDE-i3 GORIKI Series

1 Newly developed i3 control in pursuit of operability

Improved operability of the screen

Three types of basic operation mode screens are provided for ease of use. Verifying the necessary information in each operation mode can be done quickly and easily.

Production

Trial

Setup

2 High-rigidity frame structure for strengthening longitudinal rigidity

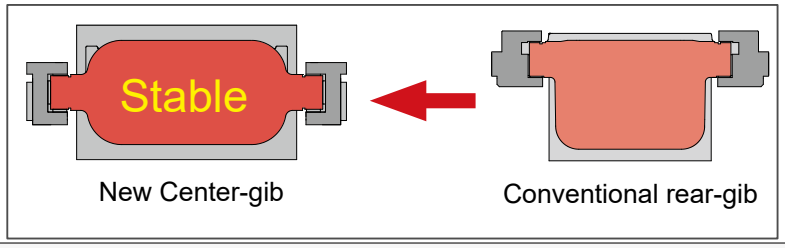
High rigidity structure by new solid-column frame

A new solid-column frame structure was adopted with a chevron-shaped structure on the upper part of the front frame and reduced cutout in the bed front plate. The longitudinal rigidity has been strengthened with the reduced expansion of the frame during stamping. With the reduction of breakthrough amount compared with conventional models, high precision, high quality manufacturing is supported.

3 High rigidity guide structure excellent in resistance to eccentric load

Center-gib full-guide structure

Making the slide gib into a center-gib full-guide structure and adding side ribs enhance the lateral rigidity compared with conventional models. The improved eccentric load resistance characteristics sustain stable stamping accuracy.

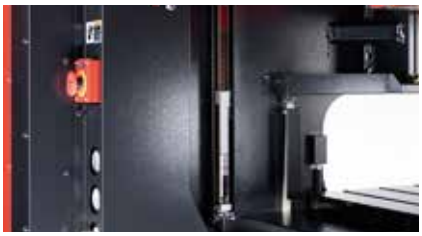


Center-gib full-guide structure

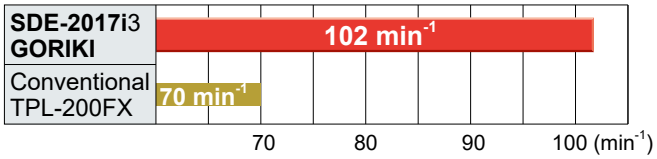
4 Pursuit of productivity to meet stamping needs

Further improvement of productivity

In order to improve workability in die change and accessibility from the rear, the frame front-to-rear dimension is reduced. In addition, productivity improves by increasing the number of strokes by pendulum motion.



Productivity comparison



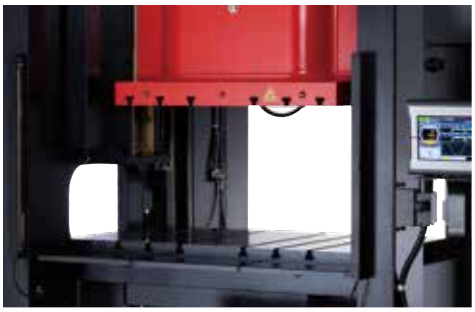
Strokes per minute: 1.45 times greater

Productivity comparison calculation conditions

Machine	SDE-2017i3 GORIKI	TPL-200FX
Motions	Pendulum motion Starting position: 3.54"	Link motion Stroke length: 6.88"
Approach strokes	75 min^{-1}	35 - 70 min^{-1}

New Technology of the SDE-i3 GORIKI Series

5 Enlarged slide area to meet multi-step progressive stamping



Enlarged slide area

In addition to the high-rigidity frame structure, the enlargement of the slide area allows for the ability to install multi-step dies. This satisfies a wide range of stamping needs, including high value-added forming of plates, forging, and high-tensile strength steel plates.

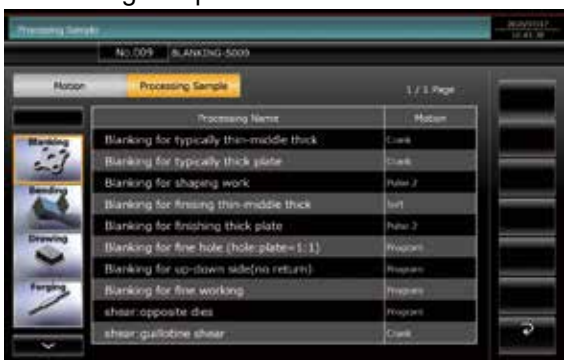
6 High value-added forming and improved productivity

Diverse motion patterns

By selecting the most optimal motion path according to the product, it is possible to improve formability, accuracy, and reduce cost.
The new standard process sample programming, along with motion sample programming and motion editing, makes the i3 control significantly more simple and easy to program, even for less experienced users.
Available motions:
Crank, link, soft, program, pendulum, coining, repeat, pulse 1, pulse 2, pulse 1 pendulum, pulse 2 pendulum

Sample motion screen

Processing sample screen



7 ECO machines with environmental consideration

Servo press machines with ECO-friendly

AMADA's servo press machines are 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*. It contributes to the visualization of power consumption.

2 Resource conservation:
Reduction of lubricating oil consumption

Lubricant consumption is drastically reduced compared to conventional machines* by abolishing oil pans and adopting a circulating oil lubrication system.

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.

ECO monitor screen

* Mechanial stamping press machine of the same class

Other Functions

System Automation

ALFAS
AMADA Leveler Feeder Automation System

Coil handling system

Complete turn-key systems with the press and coil handling equipment, designed by the same manufacturer, to meet your specific application.

Uncoiler

Equipped with an analog loop control function. Prevents the coil from loosening and reduces scratches.

Straightener

Easy roll cleaning reduces product defects.

Controls

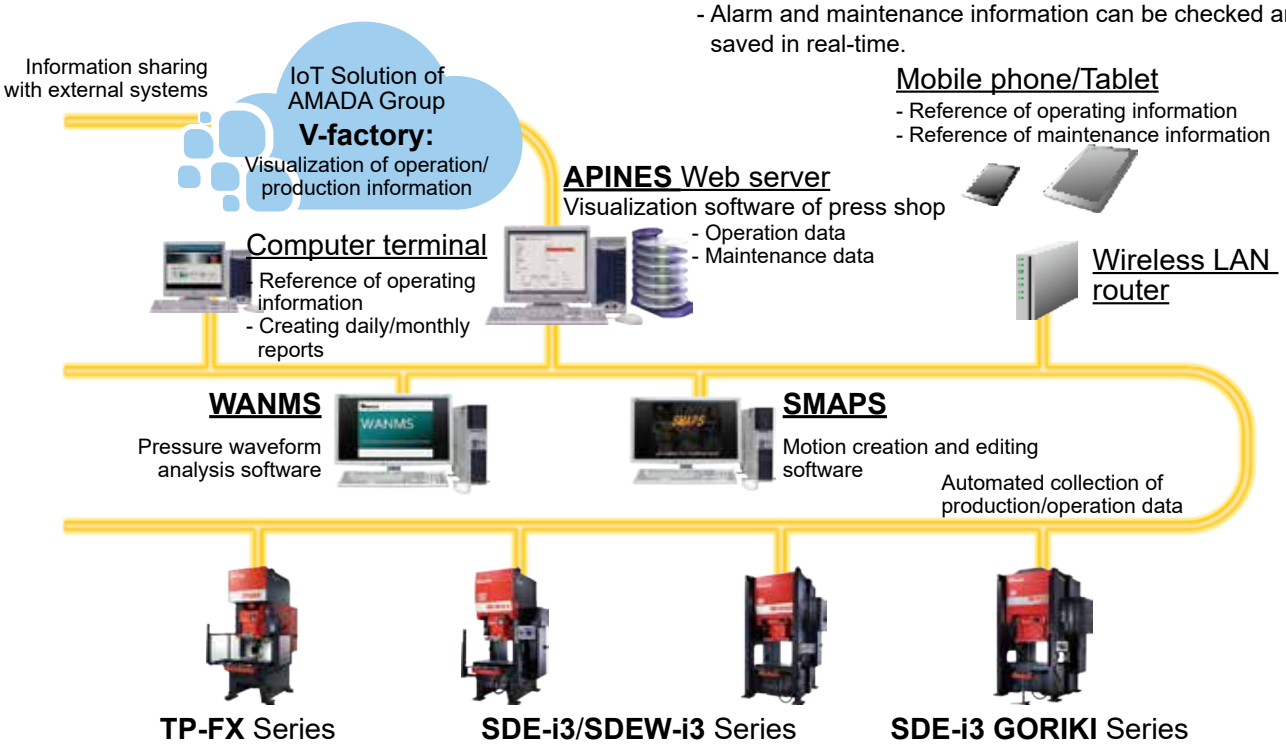
The **ALFAS** is the first-in-the-world integrated control system between a press machine and material feeder. Controls both equipment with one HMI.

SDE-1515i3 + ALFAS-03KR

Network-compatible stamping press machines

Visualization of stamping press operation status and maintenance information by PC

- Digital network connection is possible from general-purpose to servo presses.
- Real-time monitoring of presses connected to the factory network.
- Alarm and maintenance information can be checked and saved in real-time.

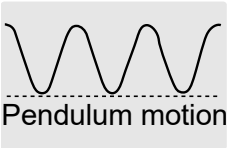


Network-compatible stamping press machines

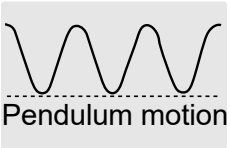
Processing examples with sample workpieces

High accuracy shear processing

Machine: **SDE-1515**
Material: Hot rolled mild steel sheet (JIS: SPHC)
Thickness: 0.12"
Size: 3.26" x 1.81"



Machine: **SDE-1515**
Material: Hot rolled mild steel sheet (JIS: SPHC)
Thickness: 0.12"
Size: 3.26" x 3.77"



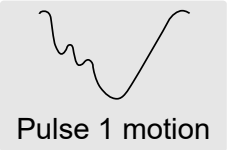
2 types processing in one die

Spot face by sheet metal forging, diameter of the hole by high accuracy shear processing.

Integrated forming by sheet metal forging technology

Machine: **SDE-2017**
Material: Hot rolled mild steel sheet (JIS: SPHC)

Size:
Outer diameter: ø1.35"
Flange thickness: 0.15"
Axial height: 0.45"



Sample workpieces supplied by OTA Co.,Ltd.

Flange part and axis part are formed integrally by sheet metal forging

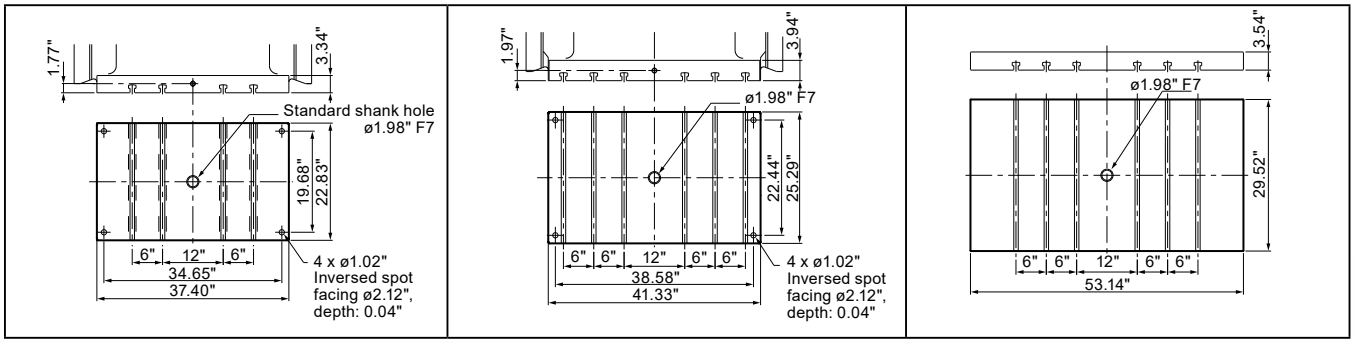
Conventionally, a product with a flange and axis is processed such as cutting, header processing, welding of two parts.

But this product has problems for strength, cost and accuracy. Sheet metal forging(Increasing thickness to axis section) has solved above problems.

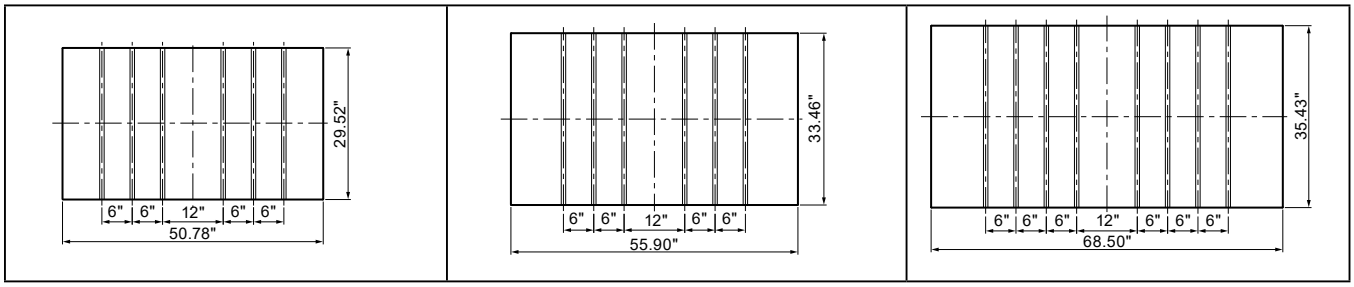
Dimension Tables for Die Space

SDE-1515i3 **SDE-2017i3** **SDE-3020i3**

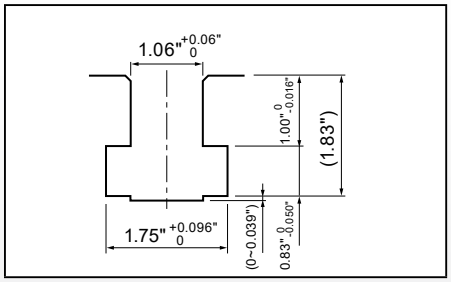
Standard slide bottom drawing



Bolster plate drawing

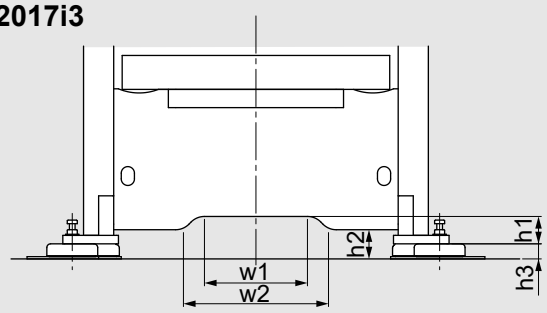


T-slot details (common)

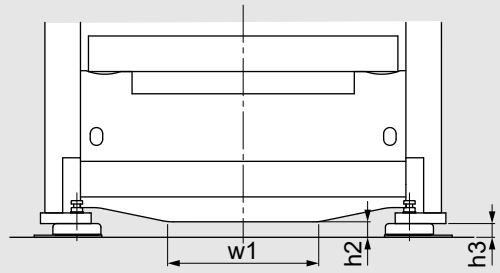


Dimension Tables for Bed Bottom

SDE-1515i3
SDE-2017i3



SDE-3020i3



Machine name	SDE-1515i3	SDE-2017i3
w1	21.54"	21.54"
w2	30.71"	30.31"
h1	5.71"	5.71"
h2*	5.91"	6.10"
h3*	3.15"	3.15"

Machine name	SDE-3020i3
w1	33.46"
h2*	3.54"
h3*	3.15"

*When the anti-vibration device with AD base plate is installed.

Specifications and Dimension Drawings

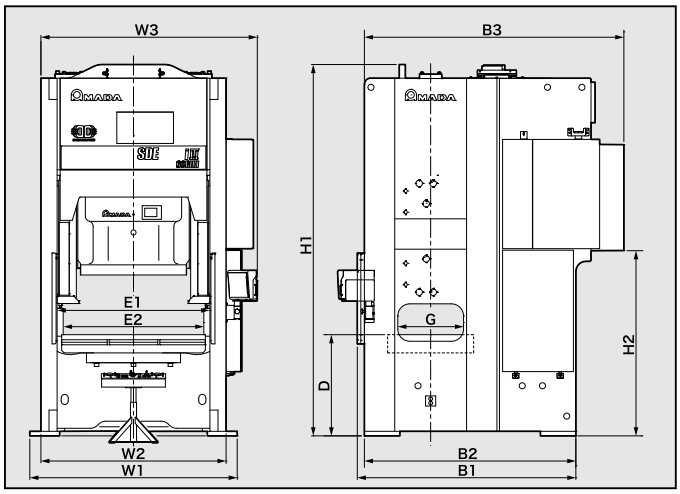
■ Machine specifications

Machine name		SDE-1515i3	SDE-2017i3	SDE-3020i3
Model name		SDE1515I3	SDE2017I3	SDE3020I3
Frame type		SF (GORIKI)	SF (GORIKI)	SF (GORIKI)
Capacity	US ton	165	220	330
Tonnage rating point above BDC	inch	0.169	0.208	0.196
Side opening*	inch	22.83 x 11.02	25.59 x 12.00	30.31 x 13.77
Continuous no-load stroke rate	min^{-1}	~ 95	~ 75	~ 60
Stroke length	inch	5.90	6.88	7.87
Die height	inch	14.96	16.33	18.11
Slide adjustment	inch	3.93	4.33	4.33
Slide face dimensions (LR x FB)	inch	37.40 x 22.83	41.33 x 25.59	53.14 x 29.52
Bolster dimensions (LR x FB x T)	inch	50.78 x 29.52 x 6.29	55.90 x 33.46 x 7.08	68.50 x 35.43 x 7.87
Main motor (AC servo), continuous rating	HP	46.9	53.61	67.02

These specifications, machinery, equipment, and appearance are subject to change without notice for reason of improvement.

*Side opening is height above bolster top surface.

■ Machine outline dimensions



Machine name	SDE-1515i3	SDE-2017i3	SDE-3020i3
W1	74.80"	80.70"	89.76"
B2	75.00"	82.28"	80.70"
H1	129.52"	144.48"	174.01"
D	35.43"	39.37"	41.53"
E1	54.33"	59.44"	72.04"
E2	49.60"	54.72"	67.32"
G	22.83"	25.59"	30.31"
W3	84.05"	89.96"	105.70"
W2	66.14"	72.04"	87.79"
B1	77.76"	85.04"	83.46"
B3	90.94"	100.98"	114.96"
H2	64.17"	72.04"	75.39"

■ Standard accessories

- Large-size color LCD touch screen
- Die information for 100 dies
- Total counter × 2
- Preset counter × 2
- Position switch × 4 spare switches
- Overload protector x 1
- Air ejector
- Built-in load monitor
- Auto slide adjustment
- Micro pulser
- Vibration isolator
- Built-in die protection system

■ Optional accessories

- Automation compatible
- Die lifter
- Automatic die clamps
- Light curtain* (Front)
- Light curtain* (Rear)
- Automatic clamp
- Side guard
- Rear guard
- Hand pulser
- Analyse software for stamping press machines

* Warning: The GORIKI model press does not include the O.S.H.A. required Point of Operation guards.
For protection of the operator, Point of Operation guards should be used at all times and are the responsiblity of the end user. Safety guards can be added as a line item option.

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. 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.

⚠ 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.

* Specifications, appearance, and equipment are subject to change without nitice for improvement and other purposes.
* The official "Model name" for machines and units listed in this catalogue are SDE1515I3, SDE2017I3, and SDE3020I3.
* Use these “Model numbers” when contacting authorities to apply for installation, export, or financing.
* In this catalogue, if there is a part with a hyphen in it, like "SDE-1515i3," it is for readability.
* 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 #200
ERLANGER, KY. 41018 U.S.A.
Phone: 859-746-3318
website : www.AmadaPressSystem.com

Inquiry

Aug 2021 US1