

**AMADA**

High-Rigidity Digital AC Servo Press

# **SDEiIII/SDEWiIII GORIKI**

SERIES



Lineup

- 1-point SDE-1515i3 / SDE-2017i3 / SDE-3020i3
- 2-point SDEW-8010i3 / SDEW-1613i3



HIGH-RIGIDITY  
DIGITAL SERVO  
STABILITY  
PRECISION  
EFFICIENCY

**AMADA**

# 剛力 GO-RIKI

## High Rigidity & Powerful servo press



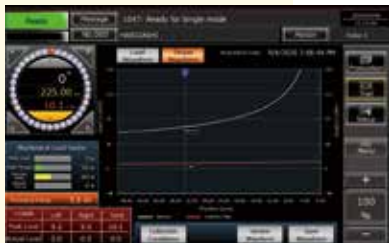
SDE-1515i3 + ALFAS-03KR



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.

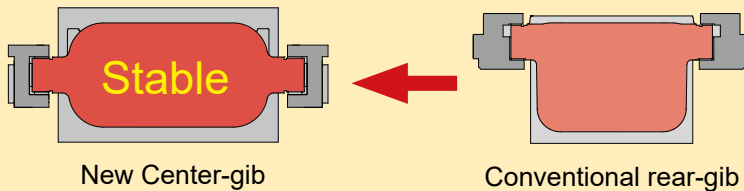
Chevron-shaped structure



## 3 High rigidity guide structure excellent in resistance to eccentric load

### Center-gib full-guide structure

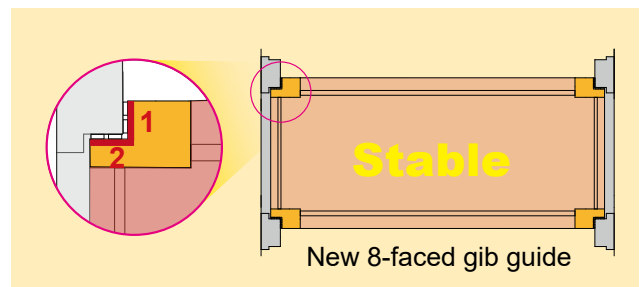
Making the slide gib into a center-gib full-guide structure and adding side ribs enhance the lateral rigidity compared with conventional models. The improved eccentric load resistance characteristics sustain stable stamping accuracy.



Center-gib full-guide structure

### 8-faced gib guide structure (SDEW-i3 GORIKI)

The high-rigidity framed GORIKI Series' first double-crank structure adopts an 8-faced gib guide for the slide. This improves eccentric load resistance and maintains stable processing accuracy during production. It is particularly effective in forming asymmetric parts that require high resistance to eccentric loads.







# New Technology of the SDE-i3 GORIKI Series

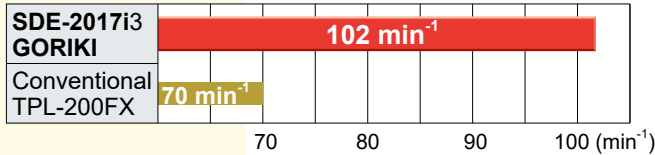
## 4 Pursuit of productivity to meet stamping needs

### 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**

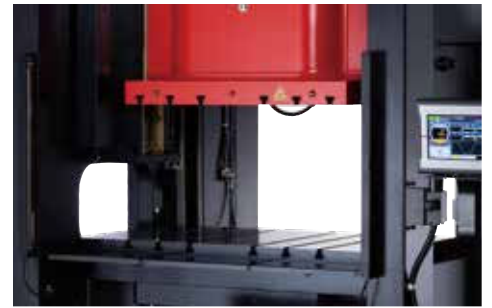
### Productivity comparison calculation conditions

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

## 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

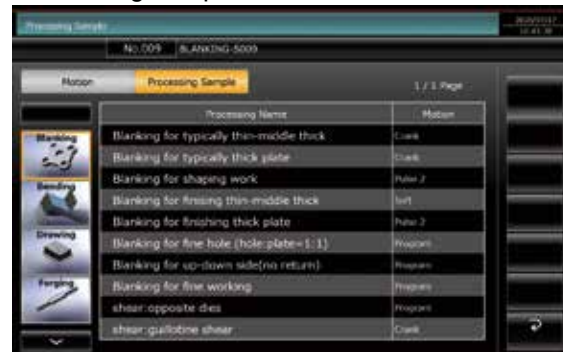
editing, makes the i3 control significantly more simple and easy to program, even for less experienced users. Available motions:

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



\* Mechanical stamping press machine of the same class

## Other Functions

### System Automation



**ALFAS** is an automated progressive stamping press system that integrates the operation panel of both the servo-drive stamping press and straightener-feeder into one to improve operability.

#### ALFAS-03KR

In addition to standard operation, a new high-speed mode with higher operating speed has been added. For materials with low stock width, thickness, and yield point stress, selecting high-speed mode increases the operating top speed by approximately 40%, improving productivity.

#### 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



# Other Functions



## ALFAS-03ARZ High-speed NC roll feeder line

By arranging the straightener diagonally and adopting an up-loop feed, the amount of loop between each device is optimized and the line length is shortened. This makes it possible to save approximately 40% more space compared to our traditional down-loop feed, while achieving stable high-speed and high-precision feeding.

### Uncoiler

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

### Straightener

Easy roll cleaning reduces product defects.

### High-speed NC roll feeder

By adopting a servo-motor release mechanism that uses a cam for release, it is possible to set the minimum release amount and optimum feed pressure. In addition to reducing material scratches and operating noise, improving durability of the roll feeder and reducing air consumption, it is possible to support a maximum top speed of 6 m/sec.

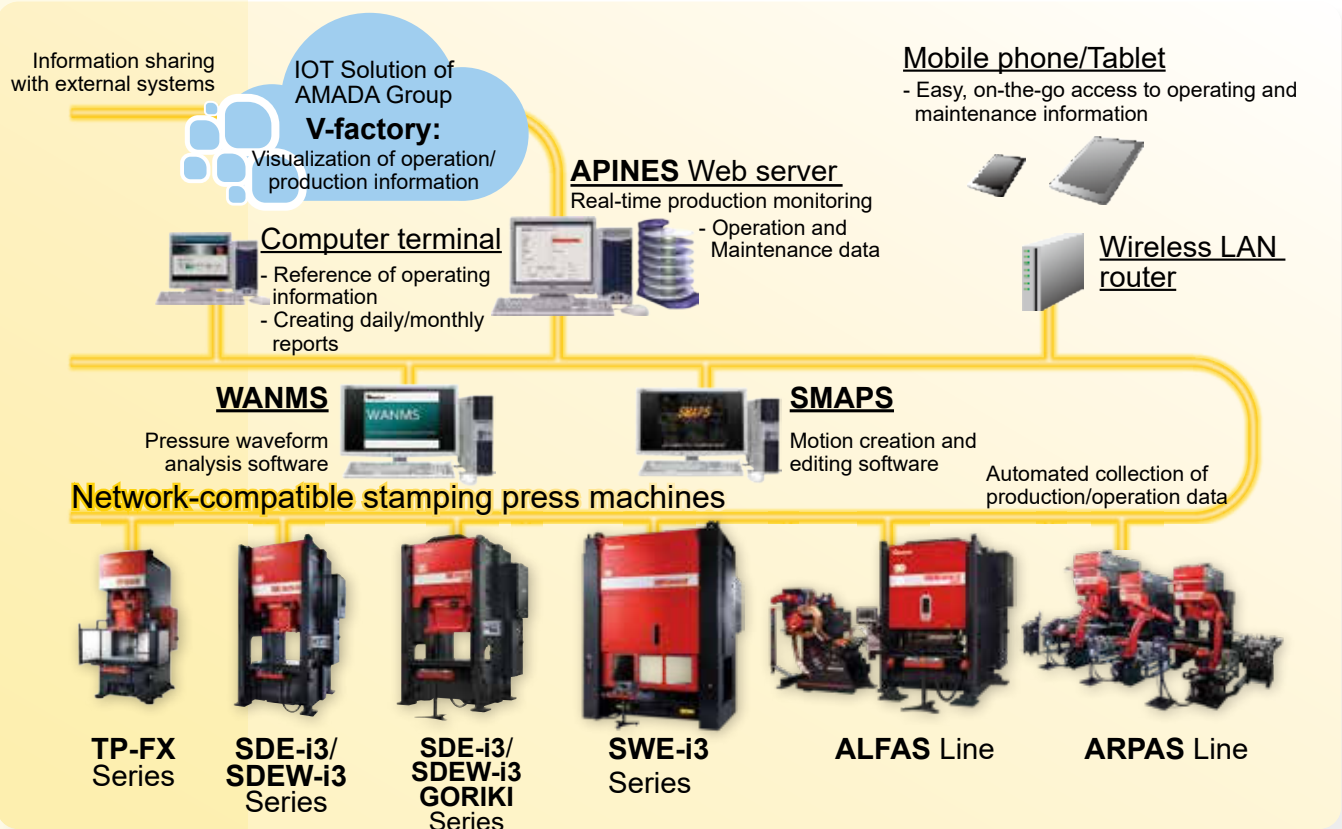


ALFAS-03ARZ & SDEW-8010i3

## 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.



## Processing examples with sample workpieces

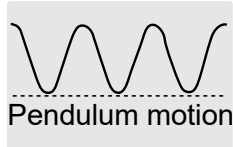
### High accuracy shear processing

Machine: **SDE-1515**

Material: Hot rolled mil steel sheet (JIS: SPHC)

Thickness: 0.12"

Size: 3.26" x 1.81"

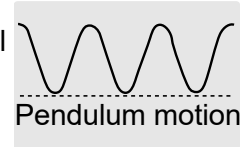


Machine: **SDE-1515**

Material: Hot rolled mil 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**

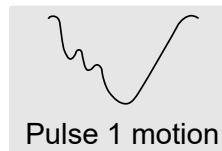
Material: Hot rolled mil steel sheet (JIS: SPHC)

Size:

Outer diameter:  $\phi 1.35$ "

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.

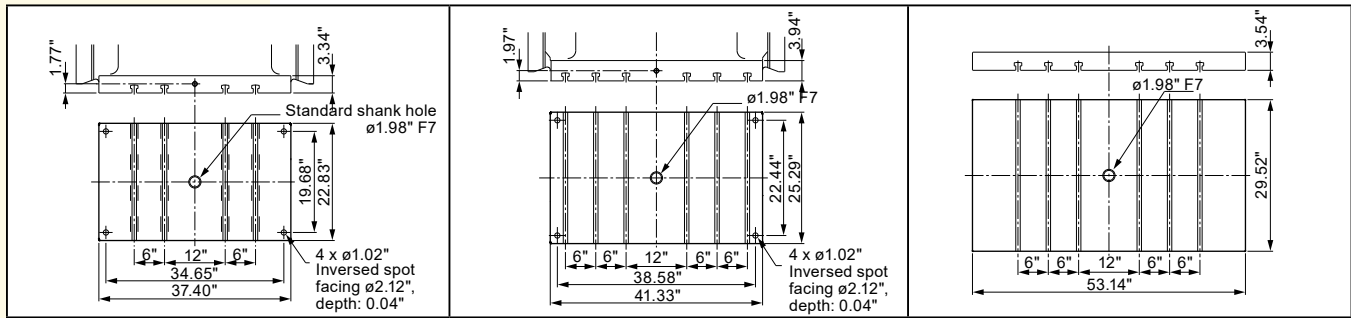


# Dimension Tables for Die Space

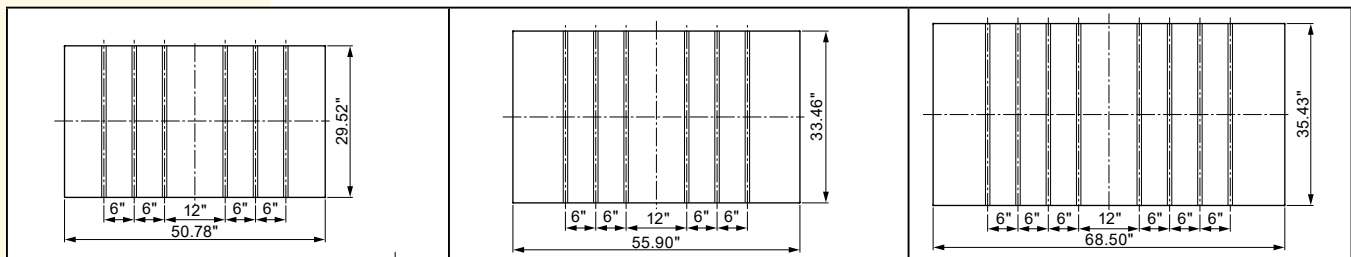
**SDEi III GORIKI** SERIES

SDE-1515i3	SDE-2017i3	SDE-3020i3
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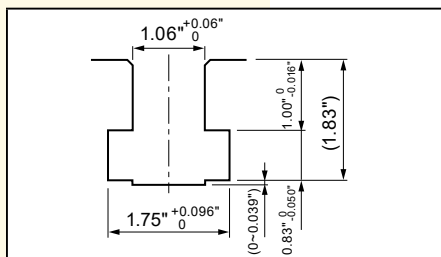
## Standard slide bottom drawing



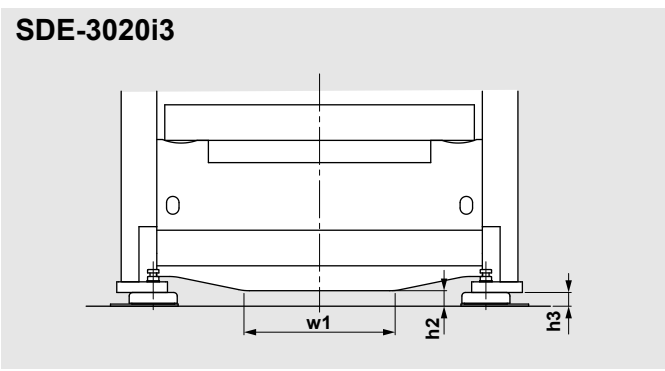
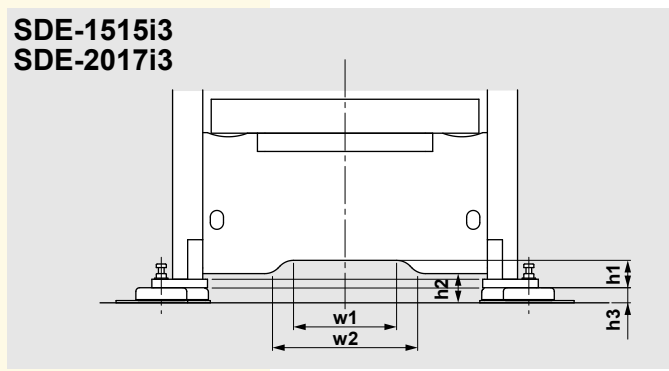
## Bolster plate drawing



## T-slot details (common)



# Dimension Tables for Bed Bottom



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"

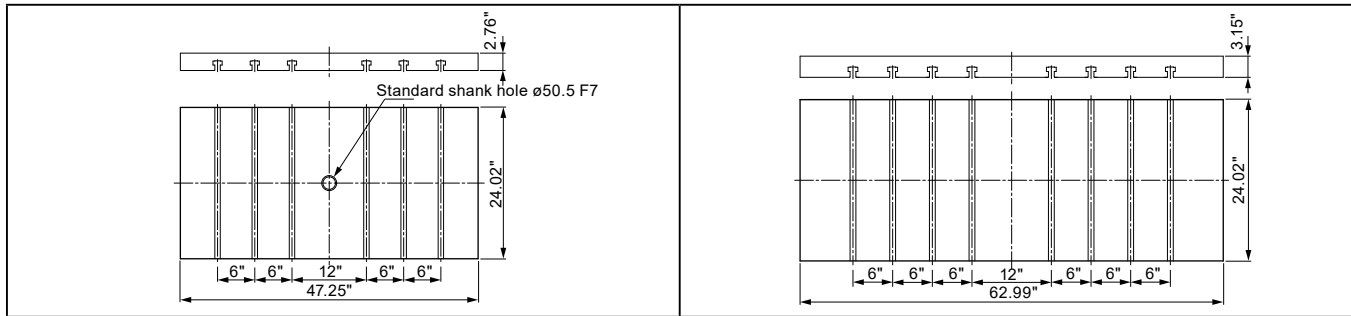
\*When the anti-vibration device with AD base plate is installed.



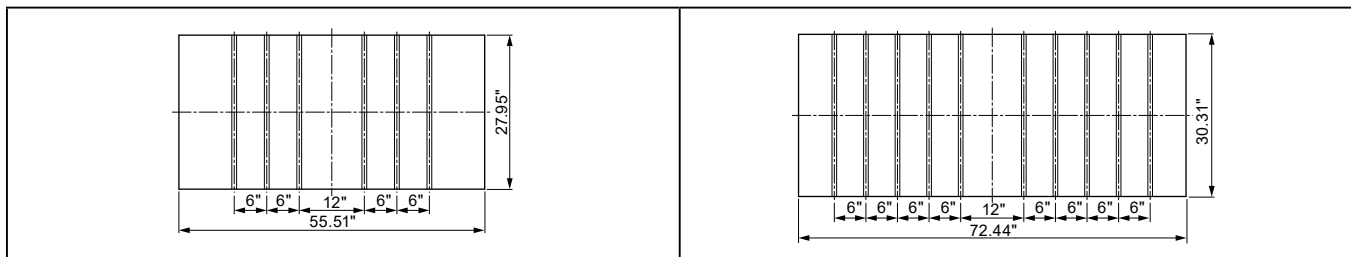
# Dimension Tables for Die Space

# SDEWiIII GORIKI SERIES

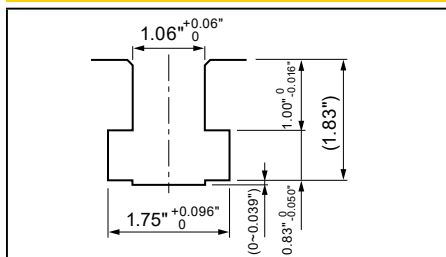
<b>SDEW-8010i3</b>	<b>SDEW-1613i3</b>
<b>Standard slide bottom drawing</b>	



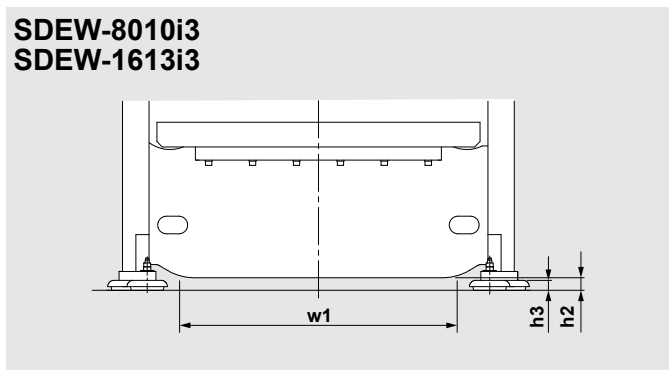
<b>Bolster plate drawing</b>
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<b>T-slot details (common)</b>
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# Dimension Tables for Bed Bottom



Machine name	SDEW-8010i3	SDEW-1613i3
w1	45.28"	62.21"
h2*	3.22"	2.83"
h3*	2.05"	2.25"

\*When the anti-vibration device with "EL" is installed.



# Specifications and Dimension Drawings

**SDE i III GORIKI** SERIES

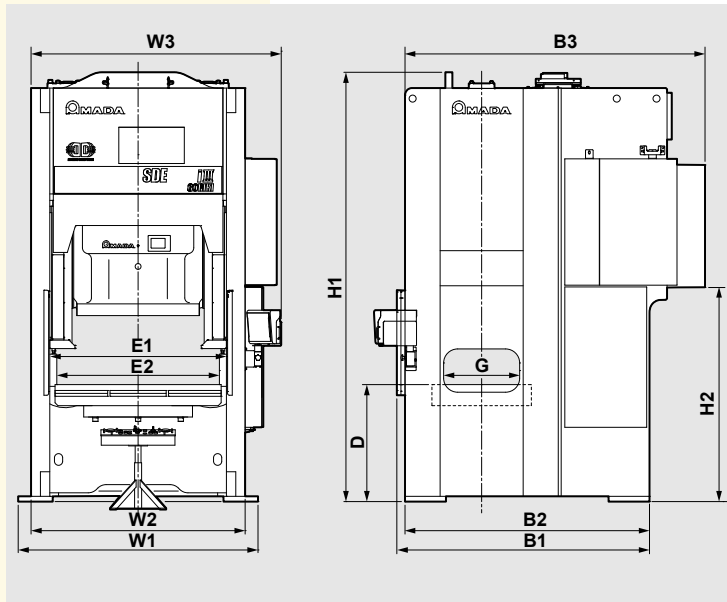
## Machine specifications

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 <sup>-1</sup>	~ 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
- Built-in die protection system
- Overload protector x 1
- Air ejector
- Built-in load monitor
- Auto slide adjustment
- Micro pulser
- Vibration isolator

## 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

## Machine specifications

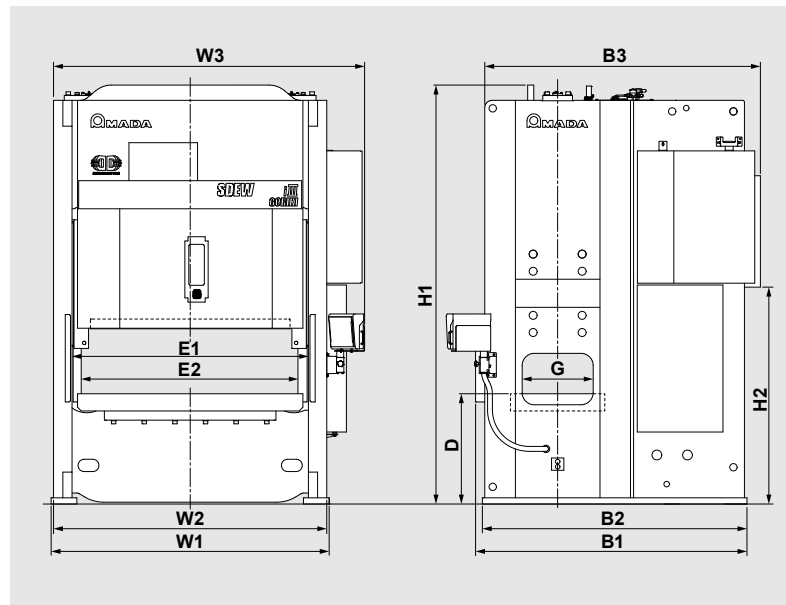
## SDEWiIII GORIKI SERIES

Machine name		SDEW-8010i3	SDEW-1613i3
Model name		SDEW8010I3	SDEW1613I3
Frame type		SF (GORIKI)	SF (GORIKI)
Capacity	US ton	88	176
Tonnage rating point above BDC	inch	0.16	0.2
Side opening*	inch	13.39 x 11.42	22.83 x 12.99
Continuous no-load stroke rate	min <sup>-1</sup>	~ 130	~ 100
Stroke length	inch	3.94	5.12
Die height	inch	12.6	15.75
Slide adjustment	inch	2.36	3.94
Slide face dimensions (LR x FB)	inch	47.24 x 24.02	62.99 x 24.02
Bolster dimensions (LR x FB x T)	inch	55.51 x 27.95 x 5.12	72.44 x 30.31 x 5.51
Main motor (AC servo), continuous rating	HP	28.2	46.9

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	SDEW-8010i3	SDEW-1613i3
W1	71.65"	89.37"
B2	68.9"	85.04"
H1	111.61"	134.65"
D	29.53"	35.43"
E1	59.06"	75.98"
E2	53.94"	71.26"
G	13.39"	22.83"
W3	94.29"	105.51"
W2	68.5"	87.8"
B1	71.06"	87.2"
B3	75.59"	88.78"
H2	58.66"	69.69"


## 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
- Light curtain (Front)
- Light curtain (Rear)

## Optional accessories

- Automation compatible
- Die lifter
- Automatic clamp
- Side guard
- Rear guard
- Vibration isolator
- Hand pulser
- Built-in die protection system
- 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 responsibility of the end user. Safety guards can be added as a line item 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.



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.

- \* 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 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.

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Inquiry



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