

Launch of Automation system for progressive stamping press production "ALFAS," a press operator's dream come true!

Operability improved by integrating the operation screens and controls of the stamping servo press machine and the straightener-feeder.



SDE-1515i3 + ALFAS-03KR

AMADA PRESS SYSTEM CO., LTD. (Isehara, Japan) launches the automation system for progressive stamping press production "ALFAS," which integrates the operation screens and controls of the stamping servo press machine with our latest servo press control system the "i3 (i-three)" control and the straightener-feeder. The first system to be released is the "SDE-1515i3 + ALFAS-03KR" on September 1, 2021.

ALFAS has consolidated the operations and controls of individual machines into a single operation screen. As a result, the operation, setting, and planning for the straightener-feeder can be performed at the same time, improving workability. This system also enables a series of data management steps using the program number for each product.

In recent years, there has been a growing need for simplification and laborsaving of setup and operations at stamping press processing sites due to a labor shortage and the decline in skilled labor in the work force.

In response to these issues, ALFAS provides improved visibility and simpler operability through the "i3" control, which in turn helps improve productivity.

Based on our management policy, "Aim to be a company that can provide optimal press systems on a global basis," we focused on helping to resolve the issues customers are facing and contribute to manufacturing by considering customers' manufacturing sites from a comprehensive perspective.

Main features of SDE-1515i3 + ALFAS-03KR

1. Improved productivity with high-speed feed

In addition to the conventional standard feed speed, a high-speed mode with a faster top speed has been newly installed. For materials with smaller stock width and thickness or yield strength, selecting the high-speed mode increases the top speed by approximately 40% to boost productivity.

2. Simplified setup operations with the feeder timing setting* *Patent pending

In the past, if the stamping press machine and the straightener-feeder were to be linked with each other, it was necessary to manually set the rotary cam switch and the position switch of the stamping press machine according to the dies. ALFAS can automatically detect the start/end positions of dies processing based on the load's waveform detected by the built-in load monitor at the time of test processing. This makes it possible to automatically set the timing of release, feed start and feed interference of the straightener-feeder by inputting the height of the pilot pin and the workpiece.

3. Simple analog loop control for improved quality and labor-saving

Conventionally, when a coiled material is fed to a stamping press machine, the uncoiler repeatedly started and stopped rotating, and this caused the coiled material to loosen. However, the ALFAS simple analog loop control, which is installed in this system as a standard feature, synchronizes the rotating speed of uncoilers with the line speed. This enables uncoilers to continually rotate at a constant speed during auto operation, allowing stabilized behavior and preventing loosening. This reduces material scratches during loop formation, leading to better product quality. Moreover, this makes it easier to replace the coiled material midway because it results in less workload on operators. This system is also equipped with a function where it is stopped by the upper and lower limit photoelectric sensor to prevent uncoiling errors when a wrong coil outer diameter is input.

System specifications of SDE-1515i3 + ALFAS-03KR

Model	Details		
Entire system	Dimensions (W x H x D)	mm	5200 x 3400 x 2000
Stamping servo press machine SDE-1515i3	Capacity	kN	1500
	Continuous no-load stroke rate	min ⁻¹	~ 95
	Stroke length	mm	150
	Die height	mm	380
	Slide face dimensions (LR x FB)	mm	950 x 580
	Bolster dimensions (LR x FB x T)	mm	1290 x 750 x 160
Straightener- feeder ALFAS-03KR	Stock width	mm	50 ~ 300
	Stock thickness	mm	0.3 ~ 3.2
	Coil mass	kg	~ 2,000
	Coil outer diameter	mm	~ ø1,200
	Coil inner diameter	mm	ø508
	Feed length	mm	~ 400
	Line speed	m/min	~ 16
	Number of work rolls (upper/lower)	rolls	6 / 5
	Mandrel expansion		Manual

* The information in this release is as of the launch date. Please note that the information is subject to change without notice. We would appreciate your understanding in advance.