NEWS RELEASE

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AIDA ENGINEERING, LTD.
Toshihiko Suzuki
Representative Director and President

Announcement of the Product Launch of the AIDA A-1Y Hand-in-Die Collaborative Robot

AIDA ENGINEERING, LTD. (Representative Director and President: Toshihiko Suzuki; hereafter referred to as 'AIDA') will be launching its "A-1Y Hand-in-Die Collaborative Robot," which takes the place of an operator in single-strike forming operations on general-purpose presses by loading the material, starting the press, and removing the formed product. Utilizing a value-adding robot that only a press manufacturer could offer enables optimal production automation.
AIDA is currently reviewing customer requirements and continuing the development of this product, and it will be marketed to customers willing to work in a partnership with AIDA.

Note: The "Hand-in-Die" Method:
The "hand-in-die method" is a press metalforming methodology used for single-strike forming applications where an operator places their hands inside the die to manually load material and to remove stamped products.

■ Development Background

Though hand-in-die forming requires one operator at each press, it is widely used in press shops both in Japan and overseas because it is suited for diversified lot production and enables high flexibility.
However, with shrinking labor forces, press operator shortages are expected in the future. Accordingly, we have put together a robot system from the unique perspective of a press manufacturer and have developed a collaborative robot that can be easily started and operated even without having a robotics expert onsite.

■ Product Features

1) Flexible Usage

(1) A Collaborative Robot
Because of its safety features, a collaborative robot can be utilized without safety fencing. This means there is no need to secure the large spaces required for conventional industrial robots.

(2) Manually Moveable
The robot has a cart to manually move it around, making it easy to move to the desired press. It can also be easily secured in place using the cart placement handle.

(3) No Wiring Connections With the Press (Option)
Wiring connections with the press are unnecessary, enabling the use of a single robot on multiple presses.
(The press is started by means of its camera-based slide height detection function and its light curtain PSDI control functions.)

2) Easy to Operate and Use

(1) The Laser Sensor-Based Position Compensation Function
The laser sensor at the end of the robot arm accurately corrects the position of the robot and press after the cart has been moved and secured, enabling presswork to begin immediately.

(2) The Direct Teaching Function
An operator can teach a position to the robot by moving the robot arm directly with their hands and then pressing the Direct Teach button located on the robot arm. Even workers unfamiliar with robot operation can easily perform this teaching operation.

(3) The Smart Pendant Function
To enable operators to intuitively understand which direction the robot will move when it is operated, the smart pendant is equipped with a smart mode that ensures that the direction of the robot's movement is the same as the orientation of the person holding the smart pendant.

3) Protects Personnel and Dies

(1) The Presence Detection Sensor
A 360° detection field is possible. When it detects personnel or objects, it reduces the robot speed.

(2) Workpiece Seating Detection Camera (Option)
This camera system can detect a workpiece when it is seated in the die and check its orientation.
It protects the die by detecting workpieces that have not been seated correctly.

■ Product and Sales Overview

(1) Product Model: "A-1Y"
※ Please contact AIDA for more information. This robot can be used in a system without a safety fence, but in all cases a risk assessment that also includes the press must be performed.

(2) Product Launch: July 2025 (to be exhibited at MF-TOKYO 2025)

< Inquiries Relating to This Subject >

Marketing Dept., Sales HQ, AIDA ENGINEERING, LTD. (Contact: Nakazawa)

TEL: 042-772-5271; Email: ae-sales@aida.co.jp

Please note that this information is subject to change without notice.