

# SOLUTION



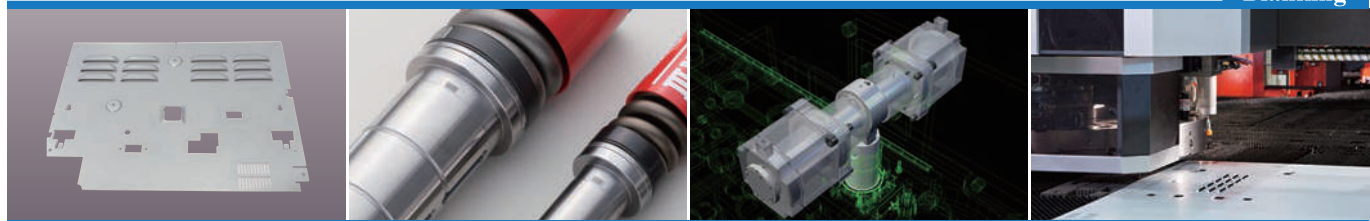
High quality punching automated solution

## EM ZR

SERIES

EM-3510ZRTe / EM-3612ZRTe / EM-3510ZRBe / EM-3612ZRBe

Blanking



あける

曲げる

切る

成形する

The Engineering AMADA

研削

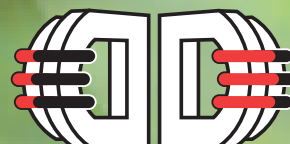


The decarbonized society is rediscovering its potential appeal.

## Premium NCT takes you one step further

The EM Series, equipped with the unique AC servo direct twin drive system, is now attracting interest again as a machine that can both realize a sustainable society and benefit customers!

Experience premium processing with the power realized with the EM-ZRe's minimum energy, high speed, high precision machining & the advantages of a turret with the usability of a single punch.



AC Servo/Direct Twin Drive

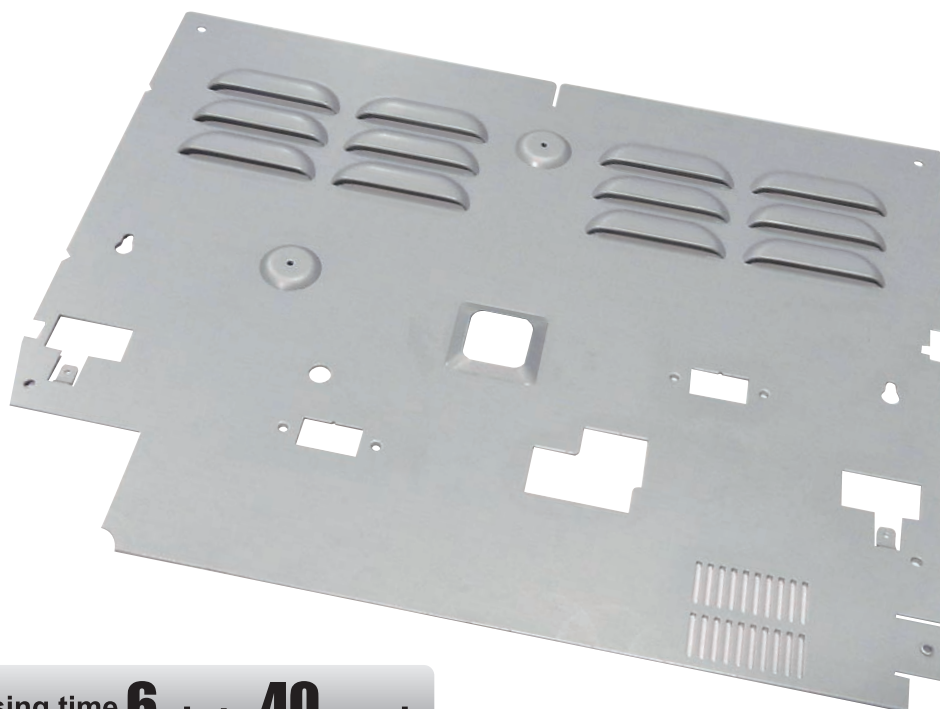
Machines with AC servo direct twin drives are marked with the DD symbol.

Fully-automatic punching machine

# EM ZR SERIES

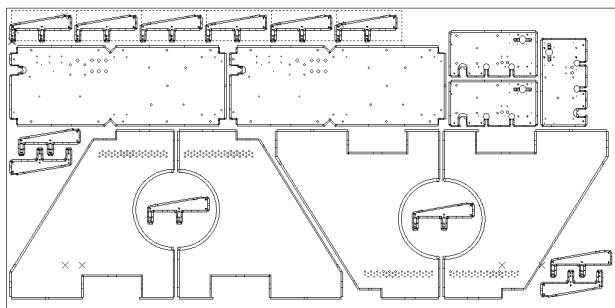
# Processing examples with sample workpieces

Material: SECC 1.6 mm  
 Size :500×400 mm  
 Processing features: **Integrated forming and tapping processes**

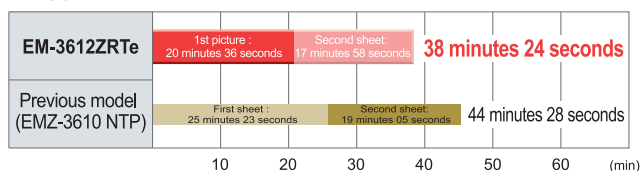


Processing time **6 minutes 40 seconds**

Material: Aluminum 3.0mm  
 Size :2000×1000 mm  
 Number of workpieces: 2  
 Number of tools used: 21  
 Processing features: **Tapping 114 hit**



Comparison of processing time  
**15% reduction**



Material: SECC 1.6 mm  
 Size :184×180 mm  
 Processing features: **share joint with common cut processing**



Processing time **1 minute 20 seconds**

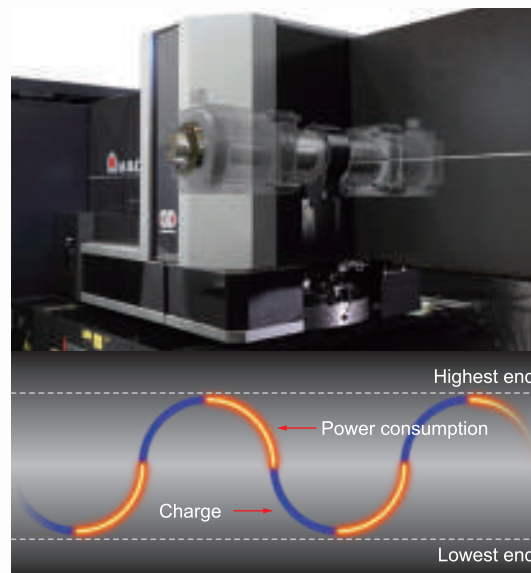
# EM-ZRe Series New Technology

## 1 Energy-saving, high quality, stable and secure processing

### Eco&Power AC servo direct twin drive

The AC servo direct twin drive combines the features of both the mechanical type that performs high-speed processing with its inherent power and the hydraulic type that produces high precision processing through hydraulic control. This drive system is energy-saving, oil-free, and low-noise, making it suitable for a sustainable society.

Braking energy during ram control is recovered and stored in a capacitor. A power leveling energy-saving circuit that reuses this energy during ram acceleration to realize energy-saving processing.



### ZR Turret solves issues of bottom scratches and top and bottom forming and is ideal for processing with the latest tooling

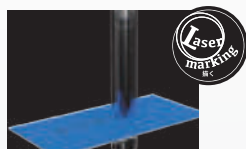
With the EM-ZRe, concern about bottom scratches caused by dies, and devising a program for forming are no longer necessary. ZR turret and the full flat table revolutionized the turret punch press. Since only the die required for processing is raised and lowered, top-and-bottom forming and high-height forming can now be processed without flaws. Additionally, high-capacity tool storage expands the range of processing.



(ARFT ball chamfer tool)  
note)

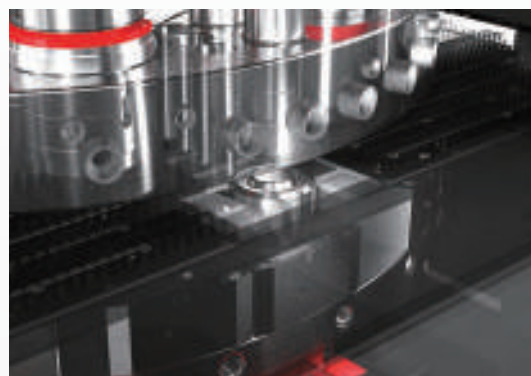


T-UpII tool  
(Positioning tool)



ARFT marking tool  
(Positioning tool)

NOTE) Optional roller tool software is required.



Only the die required for processing is raised and lowered.

### Digital control of quality with ID tools

#### 1 Prevent tool setting errors ID tool

Each tool is digitally controlled by an ID engraved on the tool. The machine automatically checks the ID when the tool is installed, eliminating installation errors.

#### 2 Tool condition management ensures high quality processing

Tools that require maintenance are identified and maintained best condition at all times.

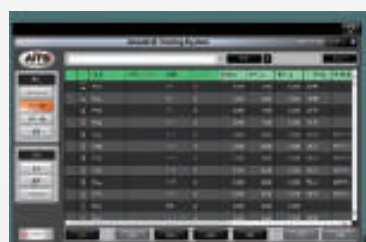
#### 3 Elimination of shimming time Automatic die height adjustment

The height of dies is automatically adjusted to suit their regrinding amount. This means that their height doesn't need to be adjusted by shimming.

#### 1 ID tool



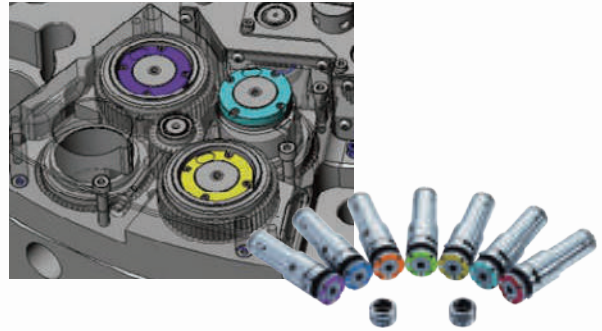
#### 2 Tool condition management



## MPT tapping unit

Equipped with a tapping unit in the turret.  
The range of punching and tapping is common, reducing program time and processing time.

- \*Compatible with M2.5~M8
- \*Can be used for cutting and rolling taps



## 1-clamp punch and tapping of 5'x10' material

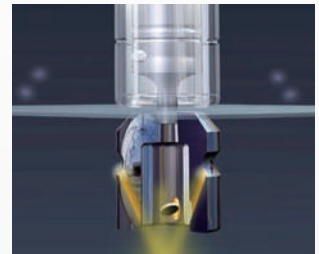
The X-axis travel of 3050 mm (in the case of EM-3612ZRte/EM-3612ZRBe) enables high speed, stable punching, forming, and tapping of 5' x 10' material without having to reposition. It also reduces complicated work on the program.



## Stable and high speed processing with less debris

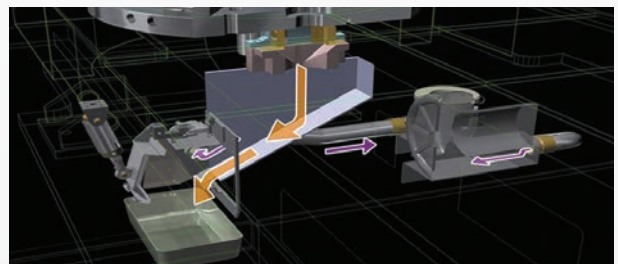
### 1 Power vacuum system to prevent slug pulling in small diameters (standard)

Power vacuum system injects powerful air downward inside the die to suction extracted slug to the bottom.



### 2 Large-diameter slug pull prevention by slug suction unit (standard)

Vacuum discharges the extracted shavings into the scrap box, preventing shavings from rising up.



## Reduce setup time with clamp positioner (option)

Clamps are automatically positioned as programmed to allow for long, continuous automatic operation.

### ■ Clamp Positioner Specifications

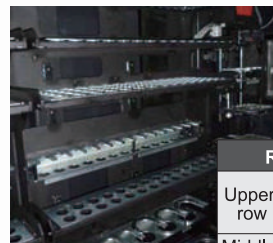


# EM-ZRe Series New Technology

## 2 Automation of tool setup

### 2 clearances for 1 punch, maximum 300 tools for automatic exchange operation

Tool changes are a mentally and physically demanding task for punching machine operators, and the time spent on this task directly affects machine operation rates. The EM-ZRe series automates this process and can automatically change up to 300 tools. 2 dies with different clearances for each punch allow processing of different plate thicknesses and materials with the proper clearance. This makes it easy to create nesting data according to the production plan.



Mass tool storage

|            | Rack             | Type 179   | Type 300   |
|------------|------------------|------------|------------|
| Upper row  | 1/2"             | 88         | 152        |
|            | 1 1/4"           | 76         | 125        |
| Middle row | 1 1/4"           | 11         | 25         |
| Lower row  | 2"               | 10         | 15         |
|            | 3 1/2" or 4 1/2" | Together 5 | Together 8 |

## 3 Linking machines with customers

### AMNC 4ie

The new AMNC 4ie NC system is developed based on the concept of the "4 e's" to address the key issues in sustainability, namely "human issues" and "environmental issues." In addition to controlling machines and peripheral devices, the AMNC 4ie has enhanced interface functions to connect customers and machines.



Easy operation for anyone to use

**Easy**

Efficiency in remote operation from anywhere

**Efficiency**

Environmental sustainability in production

**Environmental**

Evolution together with our customers

**Evolution**



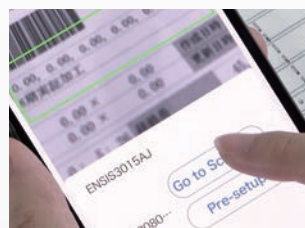
#### Facial recognition

Language and screen display can be switched. (setting is required in advance)



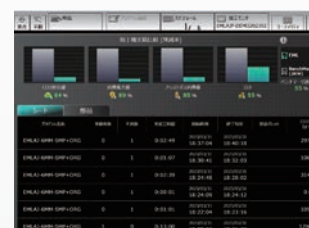
#### Startup inspection guidance

Navigation video that allows anyone to perform startup inspections according to the procedures. Management and sharing of inspection history.



#### Mobile HMI

Notification of remote start/end prediction/completion using mobile HMI.



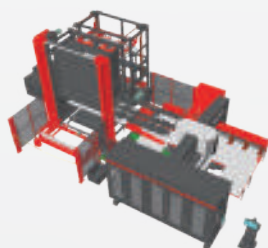
#### CO<sub>2</sub> emission reporting function

CO<sub>2</sub> emissions are measured for each component, and reports can be created and filed.

## 4 Automation

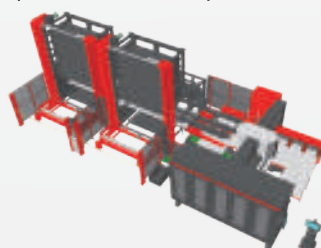
#### Space saving

The single sheet pick-up device in the tower allows flexible scheduling regardless of material thickness and types.



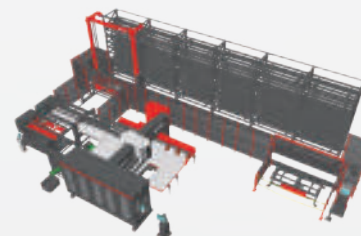
#### 2 tower specifications (material and product tower)

The two tower specification of material, product and skeleton tower enables continuous operation of multiple materials and products.



#### Automatic warehouse connection specification

Continuous operation is realized by connecting automatic warehouses. Efficient layout is possible according to the customer's installation space and height.



## 5 V-factory

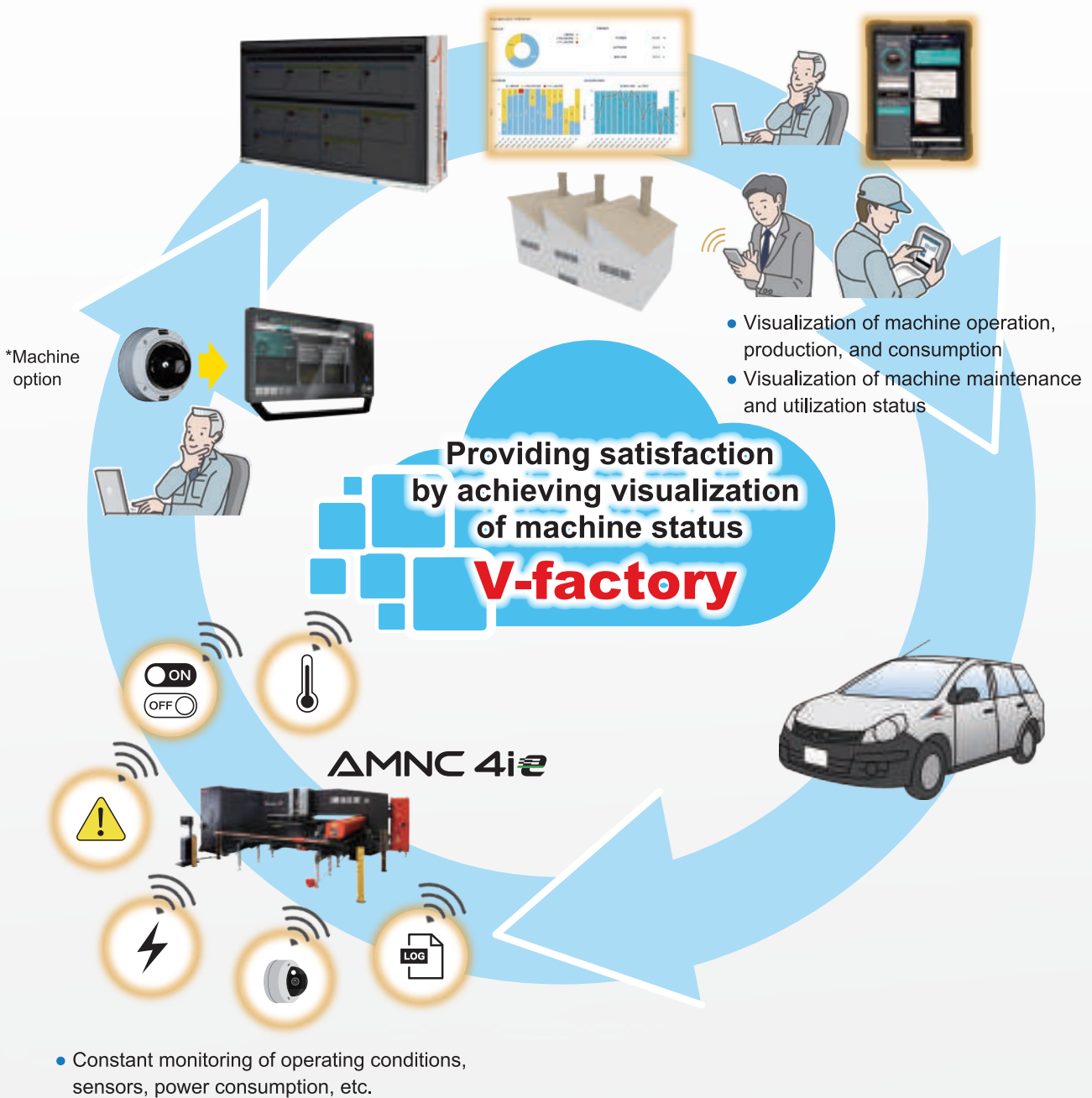
Amada's recommended V-factory is based on the concept of "creating profits for customers". V-factory will co-create factory reforms with customers by providing visualization, taking advantage of IoT technology and maximizing machine utilization.

### V-factory Connecting Box

Used to connect machines to the cloud and start V-factory.

### V-monitor \*

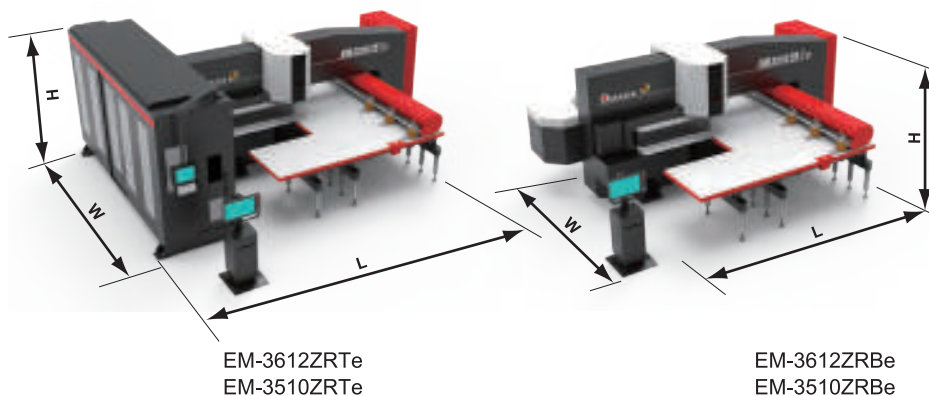
Automatically records the state of the machine during automatic operation.



## Dimensions

Unit :mm

- EM-3612ZRTe  
(L : 7415 x W : 6220 x H : 2666)
- EM-3510ZRTe  
(L : 7005 x W : 5120 x H : 2666)
- EM-3612ZRBe  
(L : 6582 x W : 6220 x H : 2367)
- EM-3510ZRBe  
(L : 6157 x W : 5120 x H : 2367)



## Machine specifications

| Model                                     | EM-3510ZRTe   | EM-3612ZRTe | EM-3510ZRBe            | EM-3612ZRBe |
|---|---|-------------|------------------------|-------------|
| Model name (Note the points listed below) | EM3510ZRTE  | EM3612ZRTE  | EM3510ZRBE             | EM3612ZRBE  |
| Press capability                          | kN 300  |             |                        |             |
| Drive system                              | AC servo direct twin drive                              |             |                        |             |
| Turret specifications                     | ZR turret   |             |                        |             |
| Number of stations (TSU)                  | 179 or 300 stations                                     |             | —                      |             |
| Number of stations (Buffer)               | —   |             | 69 or 65 or 75 station |             |
| Processing range                          | mm 2500 x 1275  | 3050 x 1525 | 2500 x 1275            | 3050 x 1525 |
| Maximum workpiece thickness               | mm 3.2  |             |                        |             |
| Maximum workpiece mass                    | kg 50(F1)/150(F4)                                       |             |                        |             |
| Table feed rate                           | m/min 120 x 80  | 100 x 80    | 120 x 80               | 100 x 80    |
| Hit rate                                  | min <sup>-1</sup> 500(Stroke length= 5mm pitch= 25.4mm) |             |                        |             |
| Pass line                                 | mm 1050 (Standalone configuration)                      |             |                        |             |
| Processing accuracy                       | mm ±0.1 (according to our inspection standards)         |             |                        |             |
| Slug pulling prevention device            | Slug suction  |             |                        |             |
| Mass of machine                           | kg 23500  | 25000       | 20000                  | 21500       |

### 32ST-4AI Maximum tool diameter: D range



Turret



Buffer

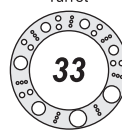
| Tool size   | Number of tools |        |
|-------------|-----------------|--------|
|             | Turret          | Buffer |
| 1/2"        | 14(14)          | 23     |
| 1 1/4"      | 8(8)            | 17     |
| 1 1/4" (AI) | 2(2)            |        |
| 1-1/4"-tap  | 4(4)            |        |
| 2"          | -               | 2      |
| 2" (AI)     | 2(2)            | 1      |
| 3 1/2"      | 2(2)            |        |
| 4 1/2"      | -               | -      |

1.Numbers in parenthesis indicate the station numbers where shaped tools can be installed.  
2.Tapping stations ca be used for punching and forming tool

### 32ST-4AI Maximum tool diameter: E range



Turret

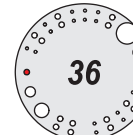


Buffer

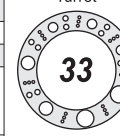
| Tool size   | Number of tools |        |
|-------------|-----------------|--------|
|             | Turret          | Buffer |
| 1/2"        | 14(14)          | 20     |
| 1 1/4"      | 8(8)            | 9      |
| 1 1/4" (AI) | 2(2)            |        |
| 1-1/4"-tap  | 4(4)            |        |
| 2"          | -               | 2      |
| 2" (AI)     | 2(2)            | 1      |
| 3 1/2"      | 1(1)            |        |
| 4 1/2"      | 1(1)            | 1      |

1.Numbers in parenthesis indicate the station numbers where shaped tools can be installed.  
2.Tapping stations ca be used for punching and forming tool

### 36ST-2AI Maximum tool diameter: E range



Turret



Buffer

| Tool size   | Number of tools |        |
|-------------|-----------------|--------|
|             | Turret          | Buffer |
| 1/2"        | 16(16)          | 20     |
| 1 1/4"      | 10(10)          | 9      |
| 1 1/4" (AI) | 2(2)            |        |
| 1-1/4"-tap  | 4(4)            |        |
| 2"          | 2(2)            | 2      |
| 2" (AI)     | -               | 1      |
| 3 1/2"      | 1(1)            |        |
| 4 1/2"      | 1(1)            | 1      |

1.Numbers in parenthesis indicate the station numbers where shaped tools can be installed.  
2.Tapping stations ca be used for punching and forming tool

**!** For your safe use, be sure to read the "Instruction Manual" carefully before use.

•When using this product, appropriate personal protection equipment must be used.

\*Specifications, appearance and equipment are subject to change without notice.

\*The official model names of machine and units described in this catalogue is EM3510ZRTE, EM3612ZRTE, EM3510ZRBE, EM3612ZRBE.

Use these registered model names when you contact the authorities for applying for installation, exporting, or financing.

The hyphenated spelling like EM-3510ZRTe, EM-3612ZRTe, EM-3510ZRBe, EM-3612ZRBe are used in some portions of this catalog for sake of readability.

\*Photographs of the machine's hazard-prevention measures and some of the covers have been removed for the purpose of filming.

\*The specifications described in this catalog are for use in Japan.

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Inquiries



E157-HQ01en

Jan. 2024