

# RoSI

## Robotic Seal Inserter

P/N: 01-03-0003



**StoneShield**  
ENGINEERING



RoSI is designed to insert blind seals and/or hard pins into connectors in a fast and fully automatic way.

It has a rotating working area with 2 trays where the operator puts the connectors after selecting the production order, i.e. the insertion pattern and qty.

The workstation rotates the tray inside and the robot automatically picks up the required insertion tool and the seal feeder shots the seals to the head of the robot into the connector's via.

It has up to 3 seal feeders, which allows up to 3 different seals per connectors. The entire process is done automatically and at the end, the vision system will inspect the insertion process.

The flexibility is total, since the connector trays' are designed for quick replacement and the feeders can be changed completely without complex setups, since the insertion tools are not hard fixed to the robot.



### Flexibility:

Local setup of new configurations  
Insertion of seals and/or hard pins  
Process of different connectors with quick setup trays



### Productivity:

Insertion time of 0.5 sec/pin  
(1 sec/pin with add. tasks)  
Rotating trays for non-stop production  
Up to 3 seal/hard pins feeders (that can be replaced)



### Error-Proof:

Vision system to validate connector's position, compensating any variation and to perform final visual inspection, identifying OK and NOK connectors



### Connectivity and Traceability:

Network connection via OPC-UA to KSK servers  
Batch production  
Production reports and dash board analysis  
Interface with touchscreen and barcode



### Controlled Process:

Controlled insertion depth, with constant monitoring of the insertion tool height  
Protocol to discard NOK parts  
Calibration of vision system



**STONESHIELD** - ENGINEERING, LDA

### HEADQUARTERS:

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### Applications:

Blind seal insertion into connectors

Hard pins insertion into connectors



### Technical Features:

- ▶ 1 load area with 2 trays (rotating trays), to ensure flexibility and non-stop production;
- ▶ Connectors tray's with quick fix for fast and easy replacement;
- ▶ Insertion time of 0.5 sec/seal. Global cycle time of 1 sec/seal (inc. setup and visual inspection tasks);
- ▶ Up to 3 seals/hard pins automatic feeders, which allow 3 different seals per connector;
- ▶ Possibility to change seal feeders, since the insertion tools are not hard fixed to the robot.
- ▶ Automatic detection of connector's presence and position, using vision system;
- ▶ Vision system to perform final visual inspection, to mark OK and NOK parts;
- ▶ Constant monitoring of vision system;
- ▶ Controlled insertion depth, with constant monitoring of the insertion tool height;
- ▶ New configurations done locally, without the supplier;
- ▶ Selection of references using barcode readers or remotely by KSK servers, via OPC-UA protocol;
- ▶ Export configurations by USB stick or network to other machines;
- ▶ Configuration and maintenance mode password protected;
- ▶ Partial and global connector's counters, including down-counter associated to the production: batch production;
- ▶ Working time counter;
- ▶ Several system's languages, including English, German, Portuguese, French...;
- ▶ Easy upgradable software, that can be done through a USB stick or remotely.

### Technical Data:

#### Dimensions:

Length:	1350 mm
Width:	1820 mm
Height:	1900 mm
Weight:	500 kg

#### Connections:

Electrical:	230 VAC @ 50 Hz - 1 IEC standard male socket
Consumption:	1.5 kW (peak)
Air pressure:	5 to 7 Bar - quick-coupler socket - Ø 8 mm
Interface:	Touchscreen, barcode, USB, Ethernet and tower LED.

### Options:

#### Connectors Trays' (pair)

P/N: 08-06-0001

#### Feeder Module (Complete Unit)

P/N: 08-06-0002

#### Insertion Tool

P/N: 08-06-0003



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