

MSS NUT WELDING SYSTEM

In order to reduce weight and to increase passive security, especially in the automobile industry, components are increasingly made from thinner, high-tensile material. Screws and nuts are often used as detachable fixture elements for assembly of these parts or for complete manufacture of subassemblies. For these applications the nuts are normally welded. Resistance projection welding is used as preferential welding procedure. In comparison with cut or formed threads, nuts offer higher stability resp. allow for higher tightening forces in thin materials.

Welding Unit Type MS 3

The patented nut welding unit MS 3 is suited for welding of standardized buckle nuts as per DIN 928 and DIN 929. For all other DIN nuts the weld projections will be formed in the base material. The feeding system is equipped with a vibratory bowl, a nut singling device and a positioning device.

The singled nuts will be transported in the right position to the welding station where they will be taken over by the positioning device. An NC servomotor generates a weld pressure of max. 10.000 N by means of a ball screw with a high acceleration rate.

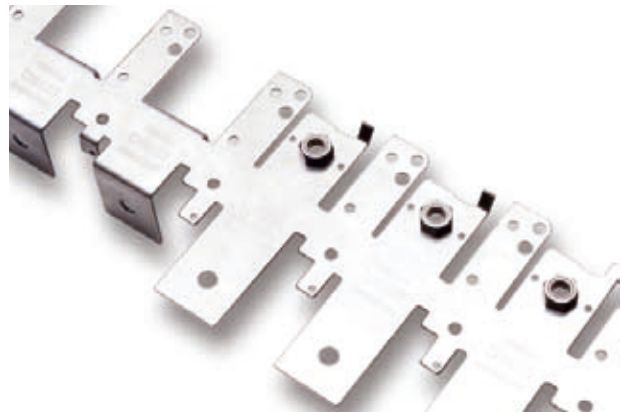
Contrary to conventional spring systems the welding follow-through pressure controlled by the NC servomotor is more dynamic and can be regulated actively. The unit can be used for any fully automatic production depending on the dimensions.



Nut welding system MSS

Bihler offers a complete package for the indicated applications which comprises the following standard accessories:

- Control cabinet rolling on casters with industrial grade PC, TFT Touchscreen for operation, positioning control, I/O bus module for connection of protective devices and functions, connection for cooling unit, space for max. 2 welding positions in one control cabinet.
- AC welding control B 50 with 50/60 Hz, current measurement, adapted welding transformer
- Nut welding unit MS 3 with NC-motor
- Feeding unit with vibratory bowl and nut singling
- Welding cables



Advantages

- Compact design for use in automatic processing lines
- Easy adaption to the respective application
- Almost splashless welding by means of NC welding load regulation
- Suitable for all types of nuts, e.g. square nuts, hexagon nuts, T-nuts, round nuts and special nuts
- Controlled feeding for exact positioning
- Output: up to 120 nuts/min.
- Not depending on mechanical actuation

(subject to change without notice 01/06)