

High-tech for sheet metal



Punching beats welding

- The ARNOLD & SHINJO punching system based on the RIVTEX® and STRUX® philosophy cuts costs and assures quality -

(Dörzbach) This system philosophy also offers cost saving potential to connecting technologies and at the same time assures the high quality demanded of the connection. This is the findings of research-backed studies conducted by ARNOLD & SHINJO GmbH, one of the leading providers for fastening systems on the sector of industrial sheet metal production. Clinch studs and piercing nuts feature a processing technology that is tailored exclusively to the products for sustained cost effects over the whole process stream.

Not only have RIVTEX® and STRUX® Series clinch studs been proving their worth as cost killers in the automotive industry, also sectors like the domestic appliance, furniture, and construction industries have been profiting from this system for years. Instead of considering each product in the conventional manner these sectors are increasingly putting their trust in this system variant. The achievable effects are cost cuts of up to 80% depending on the quantities processed.

Time is money

Cost advantages in production are above all the result of shorter assembly times. For this to work, the fastening elements and the processing and tool technologies must be matched

welding, RIVTEX® and STRUX® fastening elements can be processed automatically. And in contrast to weld screws they are applied as an integral part of the sheet metal punching and pressing processes.

This time factor develops its beneficial potential above all when the punching technology is integrated either in the press or downstream in the press line. ARNOLD & SHINJO provides standardised tool and feed technologies that can punch several fastening elements in the one stroke. If necessary up to thirty punch heads can be integrated at any one time.

Wide range

The RIVTEX® range provides solutions to all processing requirements on steel and aluminium sheet up to 2.5 mm in thickness. STRUX® clinch studs can even handle sheets up to five millimetres thick. Both types cater to the sizes M5M10 in property classes 8 and 10.

They replace welding processes and the associated pollution to the environment. Because welding spatter does not have to be machined off in the risks of corrosion that are associated with welding work on steel sheets. All this culminates in a sustainably



lower burden on energy resources and the environment.

Strength of purpose

Clinch studs are pressed as captive fasteners in the ready-mount sheet metal component and are characterised by high twisting moments and press-out strengths. The punching process compresses the sheet over its rib geometry, boosting even more the twisting strength of the RIVTEX® and STRUX® fastening elements.

High level of performance

Owing to the stringent safety specifications, specifically in the automotive industry, applying to the tool and processing technologies of system suppliers, the processing installations at ARNOLD & SHINJO exhibit superior performance characteristics. The basic tools are standardised and comply with the stipulated process capability to the full extent. Despite their compact design

the tools are flexible and suitable for all axes. They are reliable and minimise the risk of plant downtimes to virtually zero. The inspection frequency drops considerably for perceptibly lower inspection costs.

To sum up Although the cost of investments, tools, and parts are greater than for conventional fastening technologies they are more than offset by the cost cutting potential of up to 80%. The crucial factor is the number of parts to be processed. This defines the time of the return on investment. A cost comparison clearly confirms the advantages over the welding variant.

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