

Hightech in sheet metal



# Arnold & Shinjo Piercing Nuts in Cars and Trucks

In sheetmetal works and press shops good use is made of the classical advantages of piercing nuts and press-in screws. The processing of the fastening elements is integrated into the manufacturing process of the sheetmetal parts and the finished component is obtained without an additional work station being necessary. This saving of further work steps can reduce the production costs by up to 30 %. The tool-bound processing ensures that the position tolerances of the connecting elements are reliably maintained.

For the above reasons **MAN**, one of the world's leading truck manufacturers, backs the use of piercing nuts from Arnold & Shinjo in particular for large sheetmetal parts. Each driver's cab of the company's heavy and medium truck ranges contains a large number of piercing nuts.

The customized tool and feed system makes it possible for, for example, the 30 piercing nuts needed for the frontend part of a driver's cab to be punched in in one stroke!

In the above application the feeding of the piercing nuts is carried out via two feeding units, each of which has two feed hoses. This means that for the insertion of 30 piercing nuts just four feed hoses have to be led into the press. This is made possible by the innovative Arnold & Shinjo multi feeder system which distributes the piercing nuts in the tool to the

individual punching heads. This system brings about a significant reduction in the number of interfaces to the tool and in this way minimizes set-up times.



Truck frontend part with 30 piercing nuts, processed in one stroke

As a consequence of the success of this economic and technically reliable solution, MAN will be using Arnold & Shinjo piercing nuts in more of its truck parts in the future.

**BMW** is using fastening elements from Arnold & Shinjo to an increased extent in its new models. One example is represented by the "hatchback reinforcement" component in the BMW 3-Series models. Two piercing nuts are inserted in the sheetmetal part directly in the press. The nuts are fed in via a "power feeder" unit. With an eye on the future, this unit was designed in such a way that

Arnold&Shinjo is a 100 percent subsidiary of the global Würth Group with 54,900 employees and 375 companies in 83 countries and global sales of over 7.74bn Euro.

- Optimum matching of the system components
- One interlocutor from the design stage through to series delivery of the fastening elements
- Innovative technique and high development potential



The „Power Feeder“ piercing nut feeding unit for use in presses. Delivery capacity up to 300 nuts / min.

up to 6 feedways are available for future cases of application.

The new BMW 3-Series touring model also has Arnold & Shinjo piercing nuts.

Decision-making criteria of the OEMs for the Arnold & Shinjo processing system and the related fastening elements are in particular:

- Compact modular form of construction
- Standardized components
- High process reliability, process monitoring

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