

## 3D spray head for forging presses Custom-made, lightweight, compact



# A tradition of progress

## The next step towards the future

With its well-known Eumuco Hasenclever brand, SMS group can look back on a long tradition of press engineering that has gradually taken us from the conventional closed-die forging press to today's automated forming systems. Modern closed-die forging presses are characterized by their wide range of applications for a large variety of forged parts – with or without burrs, made of aluminum or steel from various different alloys – for both hot-forming and warm-forming processes.

SMS group offers highly effective spray systems that are perfectly integrated into the operational sequence of the forging plant. They ensure that modern forging presses exploit their full performance potential and achieve the highest forging quality. Spray heads are used to remove scale from the dies between the individual press strokes, cool the surface, apply lubricants, and dry the die surface. This is where conventional spray heads reach their limits time after time.



# 3D spray head

## Lightweight, flexible, tried and tested

### Lower weight, improved handling

SMS group exploits the possibilities offered by additive manufacturing in the production of its new 3D spray heads for closed-die forging presses. With 3D printing, extremely light and compact 3D spray heads can be manufactured from various materials – plastic or metal – and individually adapted to the geometry of individual dies. SMS group design engineers can configure the individual nozzles to meet the customer's precise requirements and even produce customized nozzle shapes.

A 3D spray head made of plastic weighs just one tenth of a conventional spray head. In this way, even quicker handling systems can now be used. The new 3D spray heads therefore reduce press dead cycle times and increase yield. The lightweight design of the 3D spray heads means they are easier to install and replace, while at the same time ensuring the handling systems are subject to less wear.

### Tried and tested technology taken one step further

The operation of the new 3D spray heads is another area in which SMS group is opening up new possibilities: The 3D spray head control system enables in-cycle maintenance of the dies with precisely programmable spraying times and quantities. Each nozzle can be activated individually, for spraying or for separate blowing of the atomizing air – either simultaneously or with a time delay. The 3D spray heads are able to generate a variety of spray patterns. In this way, they can produce a homogeneously distributed spray pattern on the tool surface with a minimum of spray fluid, thus ensuring a long tool service life. Our product range covers almost all spraying requirements.

The new 3D spray heads are suitable not only for use in new presses but also for subsequent integration into existing systems. The flexible operation of individual nozzles paired with fast handling and a homogeneously distributed spray mist shortens press cycle times and extends the service life of the dies.

### How you benefit

- Highly efficient die maintenance with minimal spray fluid consumption
- Faster handling systems thanks to lightweight 3D spray heads
- Customizable design and free arrangement of individual nozzles, even at an angle, ensure homogeneous spray patterns
- Precisely programmable spraying times and quantities
- Usable operating pressure of between three and ten bar.
- Easy to install and maintain



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