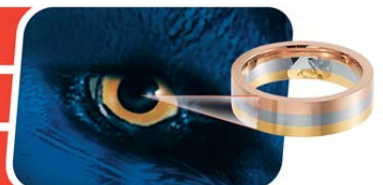


[Indutherm SU 450]

THE WEDDING RING MACHINE



**Sensor
Control
System**



Multicolour rings in excellent quality –
with the new high-precision sintering unit SU 450
fast and easy as never before.


INDUTHERM
Erwärmungsanlagen GmbH

High precision sintering unit SU 450 for multicolour rings

Diffusion welding, also called sintering, refers to “welding” single ring layers consisting of different metals at temperatures just under the solidus temperature. Thereby the ring layers are exposed to mechanical pressure.

For a perfect result it is crucial to stick to the parameters: on the one hand the layers need to have a solid connection. On the other hand they should not be deformed due to high temperature or too much pressure.

The new model SU 450 offers a significantly improved sintering technique due to the development of a precise control system.

Up to now the perfect fusion of single ring layers required a lot of accuracy and experience in order to precisely adjust the process parameters temperature, pressure and duration of pressure. The new SU 450 has a highly sensitive sensor system, which permanently controls the reduction of the rings and provides real-time information about the reduction values on the display. Therefore the temperature can be regulated very precisely until the reduction begins.

As soon as the pre-defined reduction value has been reached, the process stops automatically and so too much deformation can be eliminated.

Depending on composition and alloy the pre-defined reduction value lies between 0.1 mm and 0.3 mm.

In order to avoid oxidation, the sintering process takes place in vacuum or in a protective gas atmosphere.

The “Sensor-Control-System” considerably reduces the time and material required for the production for two major reasons: firstly because the process parameters can be defined quickly and without making lots of test rings; and secondly because the quality of the sintering process is constantly very high. Therefore the finishing effort is reduced, as well as the loss of material, which occurs during subsequent diamond dressing or turning.

At a glance

- 4.8 kW induction generator
- program control with the possibility of saving 100 different process cycles and different alloys, LCD display
- sensor control system for permanent control of the sintering process and real-time display of the reduction
- no long-winded preliminary tests, less finishing effort and loss of metal
- process cycle time only about 5 minutes
- up to 6 rings per cycle possible
- vacuum / protective gas atmosphere to avoid oxidation
- precise and very resilient fusion of the metal layers



Precise and very resilient fusion of the metal layers.

Even widening the rings by multiple sizes is easily possible.



Permanent control of the sintering process, real-time display of the reduction.

During the sintering process the rings are being compressed by about 0.1 to 0.3 mm. By measuring this value, the sintering process can be controlled – perfect results are guaranteed.



Simple, fast and save.

The process cycle time averages only about five minutes. 5-6 rings can be processed simultaneously.