Sphinx Tools Ltd. is the right partner for innovative solutions in machining. The right tool for each application, with after-sales service being provided as a matter of course. All Sphinx products are developed and manufactured entirely in Switzerland.

## **Drill starting holes five times faster**

## Coated, high precision micro deep-hole drill for hole depths up to 80 × d

The micro deep-hole drill has been specially developed by Sphinx Tools Ltd., Derendingen/Switzerland, for starting holes for a subsequent wire-eroding. Thanks to the highly abrasion-resistant and smooth coating and the specially tough, fine-grained hard metal, the slender drills work extremely reliably in standard tool steels and mould steels such as materials No. 1.2162, 1.2316 and 1.2379. They produce starting holes in a fraction of the time that was previously needed when done by wire erosion. This means that the machining and processing times are significantly reduced. This is especially true when a number of starting holes need to be made in a plate for various different mould inserts.





For example a micro deep-hole drill of 0.9 mm diameter requires 15 minutes less per starting hole when making the holes in a 30 mm thick plate of 1.2316 tool steel as compared to the earlier method by wire erosion. First the centering is done using a solid carbide micro pilot drill 56033 from Sphinx Tools Ltd.. Then the micro deep-hole drill prepares the starting hole with a cutting speed of 20 m/min, 7000 revs min-1 and 0.004 mm/rev forward feed. While doing this, the feed path is cleared of chips by pecking-cycle after every 0.7 mm.

Because many starting holes need to be drilled in the plate, the mould maker is much more productive when using micro deep-hole drills than was the case with the former wire erosion of starting holes. Furthermore it can prepare the starting holes on standard machining centres. This shortens processing times because there is no need to exchange tools and no waiting times. Tool and mould makers are thus able to realise enormous savings in time and costs by using innovative solid carbide micro deep-hole drills by Sphinx Tools Ltd.

## **Increase** in productivity

Available as standard models are the coated solid carbide drills of 0.4 to 1.00 mm diameter in steps of 0.1 mm, for hole depths up to 20, 40, 60 and  $80 \times d$ . The manufacturer Sphinx Tools Ltd. also produces other diameters and lengths when required.



Five times faster than wire erosion: Coated solid carbide micro deep-hole drills reliably drill starting holes with hole depths of up to  $80 \times d$  in mould plates made of high-strength alloyed tool steels.

Sphinx Tools Ltd. Gewerbestrasse 1 CH-4552 Derendingen Phone +41 32 671 21 00 Fax +41 32 671 21 11 www.sphinx-tools.ch

