

## gravostar WS-20

The needle oscillation the gravostar WS-20 tool type is generated by the coolant of the ICS. All functional elements of the pulse control system are integrated in the tool. As soon as the tool internal cooling system is activated, the needle begins to oscillate at a frequency of approx. 300 Hz.

Due to the high oscillating frequency, the individual marking points are so close to each other that they can no longer be individually recognised. The marking contour therefore appears as a continuous deep line.

### Field of application

Individual markings of any workpieces

with large irregularities or dimensional differences such as rough casting parts etc.

### General information

- Use in machining centres, automatic lathes, etc.  
(no additional installations required)
- Needle actuation via internal tool cooling system  
(required coolant pressure approx. 5 - 50 bar)
- Standard model with 20 mm Weldon shank
  - various HSK, SK or special holders (optionally available)
- Needle holders with different extensions (optionally available)

### Tool specifications

- Integrated, **automatic distance compensation up to approx. 3 mm**  
(Regular marking depth also of uneven marking surfaces)
- The amount of distance compensation on the tool is adjustable
- Extremely high resistance to wear of the hard metal marking needle  
(material hardness 92 HRC)
  - needles are simple to replace with just a few manual operations
  - can be used for almost all machinable materials  
(hardness of marking surface up to approx. 62 HRC)
- Very short marking time
  - oscillation frequency of the marking needle: approx. 300 Hz
  - feed speed more than 5'000 mm/min possible
- Extremely high degree of process reliability due to easy pulse control integrated into the tool
- For universal use (Weldon shank shaft with a diameter of 20 mm)
  - VDI tool holders for lathes (optionally available)
  - various HSK, SK or special tool holders for machining centres (optionally available)

