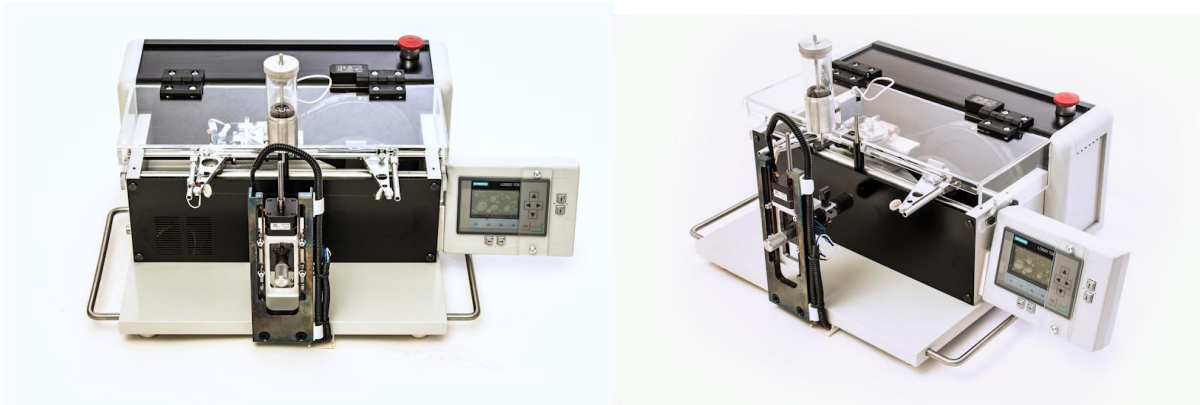


WS 25 Precision - Lapping - Wire Saw, Type WS 25 for cutting materials from very soft (Copper, bone, to very hard materials, like SiC)



TECHNICAL DESCRIPTION

The saw uses a Tungsten wire and slurry consisting of Carborundum, SiC, Boroncarbide or Diamond in a solution with oil or glycerine.

Alternative: Diamond dotted wire can be used.

- The high accuracy achieved by the saw is based on the following features :
- The saw uses Tungsten wire of different diameters from 20 to 60 μm .
- The smallest curveloss achieved based on 40 micron wire will be about 65 micron.
Using 20 μm wire and fine grain slurry, the loss will be in the range of 30 micron.
- The cutting wire is spooled from one spool to another, it is replaced continuously during cutting.
- The wire is cutting on long strokes, with a frequency of 150 - 200 /min. the cutting frame is fixed in a vertical position. (Wire guide posts are not required anymore).
- The sample support is automatically moved up as the wire cuts through the material.
- The material removal is based on a lapping type process - the results are smooth surfaces, which in general do not require lapping prior to polishing
For coarse cutting the diamond dotted wire can be used.
- The slurry is fed to the cutting/lapping interface by a special controlled dropping unit.
The dropping frequency can be preset.
- The cutting speed is set by a electronically controlled drive of the vertical slide with the sample holder, it allows the settings: manual, coarse and fine.
- The sample holder can be rotated around the vertical axis and can be fixed in any desired position.
- The time required for cutting depends on the hardness of the material to be cut.
- Ge or Si will be cut with a rate of 1 to 3 cm^2/h .
- The saw is equipped with an automatic switch off which responds in the following situations:
The preset depths of cut has been reached or in case of a rupture of the wire.
- Opening the top cover of the machine during operation will switch off the machine.

WS 25



TECHNICAL DATA

Power requirement :	220-240 V / 50 Hz
Wire diameter :	20, 40, 50, 60 micron
Diamond dotted wire	300 µm, app. 50m long
Max. Sample dimensions	40 x 40 mm
Wire Oscillation frequency :	150 or 200/min
Weight :	approx. 48 - 50 kg
Dimensions :	600 x 500 x 250 mm

changes in construction and design are possible