



MACHINE SETTING FOR SAMPLI Mill-Fe-R

MILLING DEGREES OF HARDNESS UP TO 64 HRC

We do not manufacture conventional CNC milling machines. Our milling machines are specially designed for sample preparation of hardness grades up to 64 HRC. To achieve this, we use spindles developed in-house, which are easy to operate thanks to our software. In addition, we combine our software perspective with our decades of experience in the selection of suitable cutterheads and their inserts. This is essential to ensure representative sample surfaces even at hardness levels of 64 HRC and to keep wear as low as possible. This also means that the speed of the spindles can be individually parameterized. The chip thickness and X-axis feed can also be set individually. Our machine has 2 spindles and 2 cutter heads as standard to cover different sample shapes and sample hardnesses. The number of milling cycles can also be adjusted (see picture above).

CYCLES

Up to four milling cycles can be selected which are run one after the other with different parameters and milling heads.

SPINDLE SPEED (RPM)

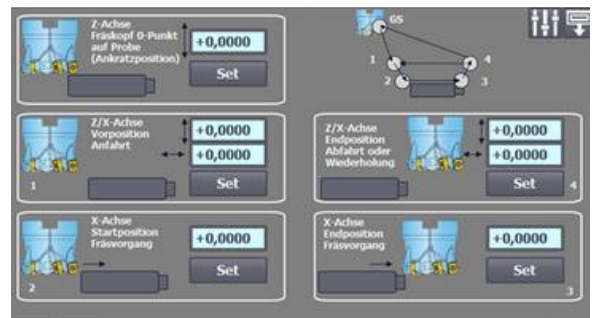
The right spindle speed plays a decisive role in achieving a perfectly flat sample surface, especially for very hard samples.

CHIP THICKNESS

Infeed of the height which specifies the amount of material removal per cycle. The sum of the chip thicknesses of all cycles must not exceed the maximum dimension. This setting is particularly helpful for expensive recal samples in order to mill off only as much as necessary.

X-AXIS FEED

Speed of the X-axis during the milling process. This parameter, in conjunction with the spindle speed, decisively influences the result of the finished sample surface.



HMI-Touch Terminal

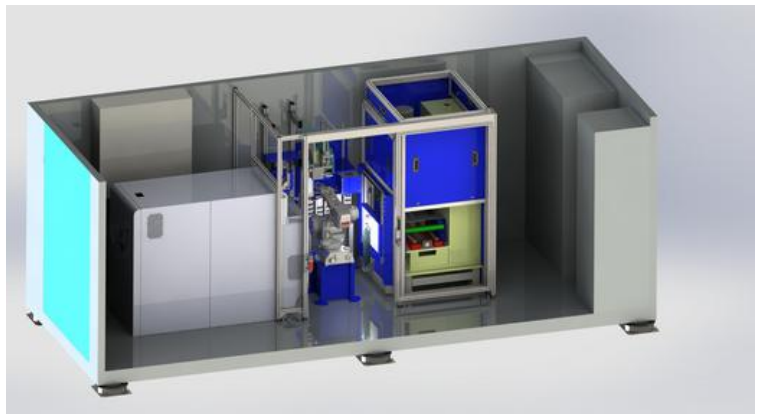
Various X- and Z-axis settings are possible to adjust the cutter heads and cutting plates to the sample shape and thickness. This includes, among other things:

- Z-axis positioning of the sample in the clamping device at the correct height using a hold-down device and our integrated height compensation
- X-axis positioning for the milling process at the speeds set in the programs
- Z combined X-axis positioning for the basic setting of several cycles

ABOUT SAMPLI Mill-Fe-R



SAMPLI-Mill-Fe-R with automated side and front door



QCS Container Lab with SAMPLI-Mill-Fe-R

COMPACT DESIGN

The milling machine boasts a highly compact structure, enabling straightforward installation even in confined spaces. Its volume is much smaller than that of standard CNC mills. In container laboratories, the SAMPLI-Mill-Fe-R effortlessly fits into standard cabins, providing additional space for movement. Within larger robot cells, the small machine base creates room for the integration of more extensive and larger equipment in the automation process. Despite its modest size, the machine offers exceptional serviceability and accessibility. The interior has been optimized to direct all waste chips efficiently into the chip containers on the back side for convenient removal. Maintenance, exchange, and repair of crucial machine components, including the spindle, motors etc. are easily accessible. The switch cabinet and the majority of pneumatic components are located at the rear side, ensuring convenient reachability for operators.

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