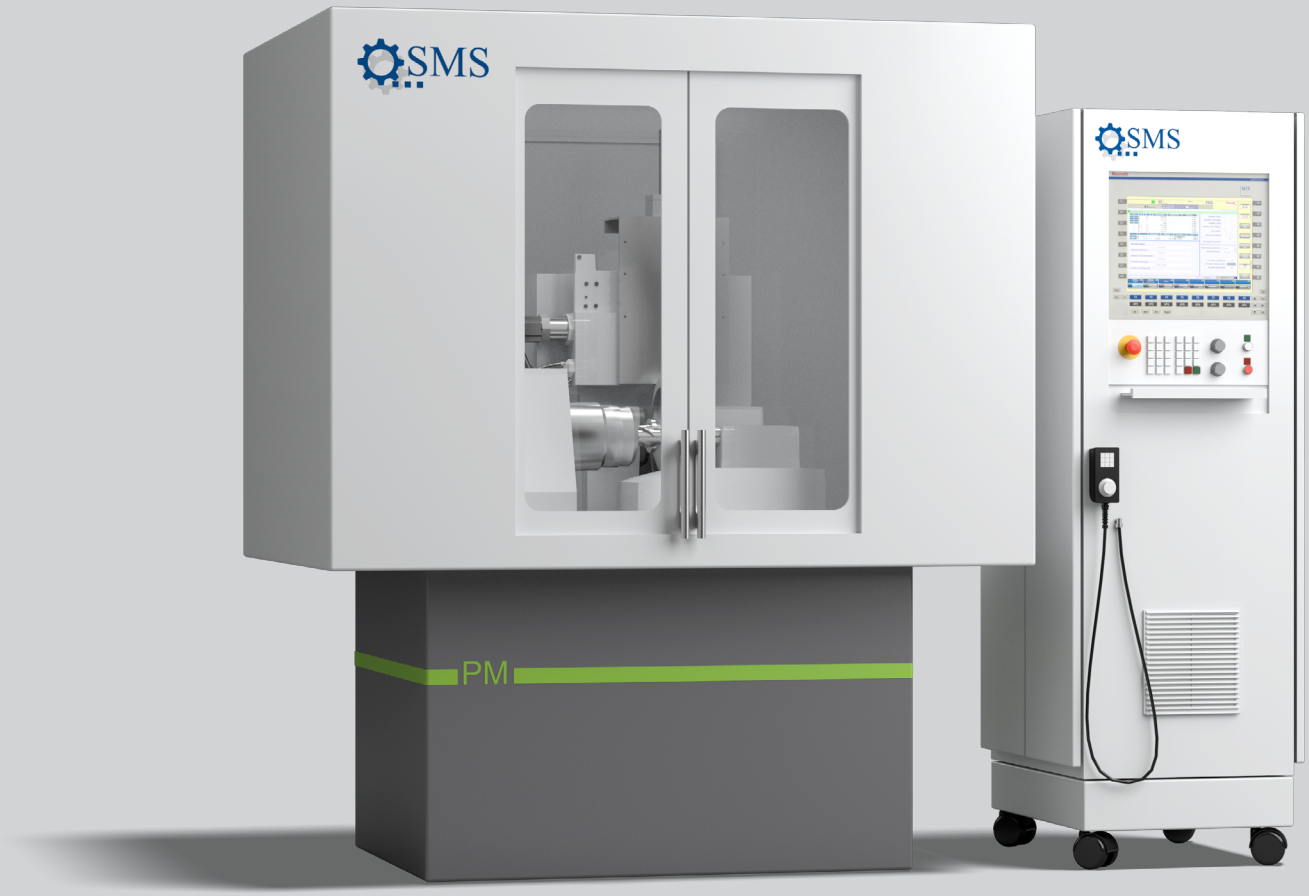
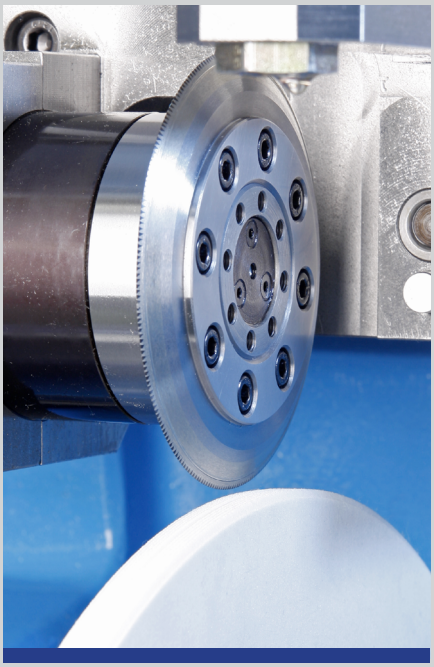
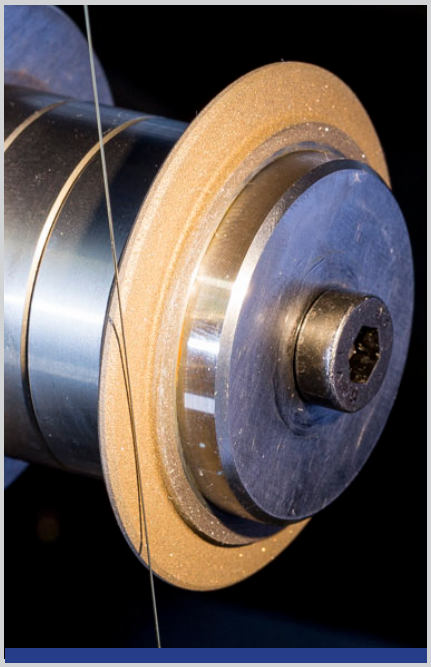
Dressing- / EDM-Technology







TECHNICAL DATA:

CNC profiling machine type PM400:

2 CNC-axes (cross-slide)

Traversing range horiz./vert.	110 x 125 mm
Grinding wheel diam.	max. 400 mm

CNC dressing unit type no. 1:
2 CNC-axes (cross-slide)

Traversing range horiz./vert.	110 x 125 mm

CNC dressing unit type no. 2:
2 CNC-axes (cross-slide)

Traversing range horiz./vert.	65 x 65 mm

(technical changes reserved)

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PRODUCT INFORMATION

Developments in the field of „dressing technology“ at SMS Maschinenbau GmbH include a standalone profiling machine (type PM 400) along with two CNC dressing units.

These dressing units are designed primarily for use on SMS grinding machines, but can also be supplied as individual units for retrofitting on other grinding machines. For this purpose, it must be possible to integrate the dressing units in the working room of the respective machine. For example, this allows existing thread grinding machines by Reishauer or other manufacturers to be retrofitted and partially upgraded with cutting-edge CNC dressing technology.

The units are highly stable and are manufactured and assembled with maximum precision, which guarantees highly accurate dressing. Equipped with direct measuring systems (Heidenhain) and dynamic, digital servo drives (Indramat), these units can also be fitted with the latest drive and control technology. Thanks to the workpiece-specific user interface by SMS (HMI), the CNC control system (Bosch Rexroth MTX) can easily be programmed by the operator in the dialogue system and allows for short setup times.

To calculate the grinding wheel profile as well as the requisite CNC dressing program, a powerful CAM software package, specifically developed for tool and gear manufacturing, can be supplied. The CNC dressing technology offers exceptional flexibility to guarantee high-precision dressing of the most diverse profile forms.

For CNC dressing, HF motor spindles with rotating diamond form rolls are used. Dressing can also be performed using a mechanism fitted with upright individual diamonds. For multi-ribbed wheel profiles, a diamond profile roll device can be fitted to the dresser. All of the units mentioned are on the front panel of the dressing unit and can be alternated. Finally, a crushing unit for crushing diamond wheels using HSS profile rolls is available.

Available options:

- Various dressing units
- Adaptation to customer-specific interfaces
- PM400: Special CNC crush dressing system (continuous-path-controlled point crushing) for profiling vitrified-bonded diamond grinding wheels available

SMS electrical eroding machining (EDM):

- Many times longer service life of the grinding wheels
- Up to twice the feed rate during the grinding process. Open-pored grinding wheels can be used directly
- Minimum inside radius of ≈ 0.07 mm
- Minimum outside radius ≈ grain size + binding material
- Multiple profiles on a single grinding wheel
- Optimum grinding wheel geometry and topography
- Profile accuracy in the µm range
- Filigree contours can be realised
- Simple programming using 2D contour specifications:
- DXF, DWG, etc.
- Process can be fully automated

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TÜVRheinland® CERT ISO 9001

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