Handling notes
for PCD face milling cutters – Eco system

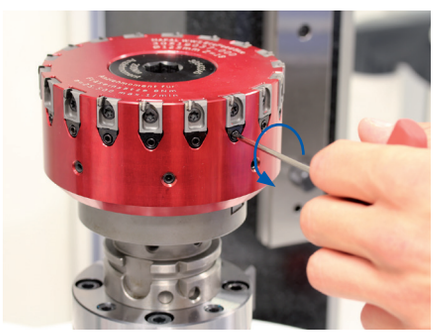
In order to achieve optimal surface finishes in face milling, all cutting edges must run perfectly axially. MAPAL uses a special adjustment system for the face milling head system series (NeoMill-Diamond-Eco, NeoMill-Diamond-EcoBlue, NeoMill-Diamond-RapidBlue and NeoMill-Diamond-FlyCutter). By means of a high-precision wedge adjustment, the axial run-out can be effortlessly set in the required µm range.

The achievable accuracy in combination with the simple handling set this system apart. A MAPAL setting fixture is recommended for straightforward, convenient, quick and precise setting. For example, the UNISET-V expert with measuring sensor* allows the axial run-out to be set easily and with µm precision in record time.

Changing and setting PCD milling cartridges

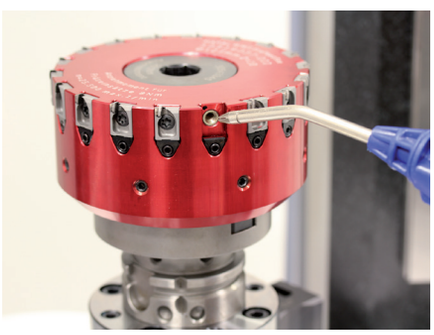
Requirements:
The milling cutter is clamped on the setting fixture and the milling cutter clamping screw/coolant screw is tightened (see table "Tightening torque for milling cutter clamping screw/coolant screw" on the next page).

Comment:
- Only for trained personnel
- Clean the cutting edges on the milling cartridges using a cleaning compound to prevent measurement inaccuracies

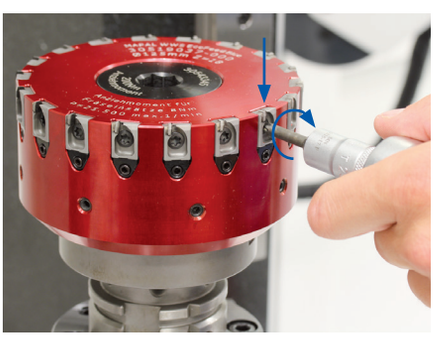


1. Turn the threaded spindle one turn anticlockwise with a hex-wrench, width across flats 2.5.

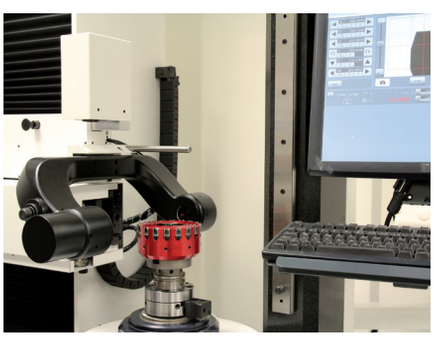
2. Loosen the clamping screw of the milling cartridge and remove it upwards from the dovetail guide.



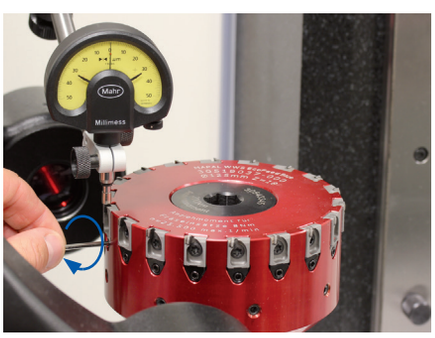
3. Clean the seat of the milling cartridge with compressed air and then insert the new milling cartridge from above into the dovetail guide.



4. Press the milling cartridge lightly while tightening so that the adjusting wedge is in contact.
Insert the clamping screw** of the milling cartridge and tighten it clockwise with 1-2 Nm.

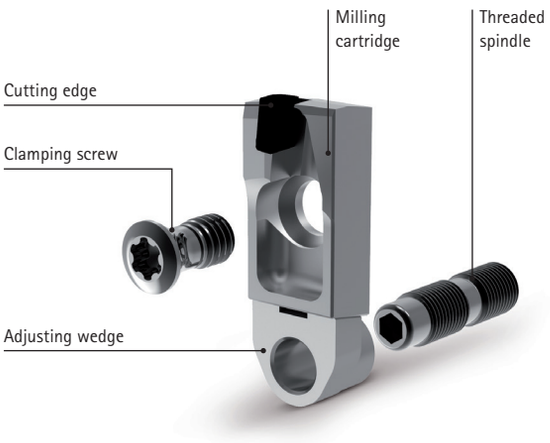


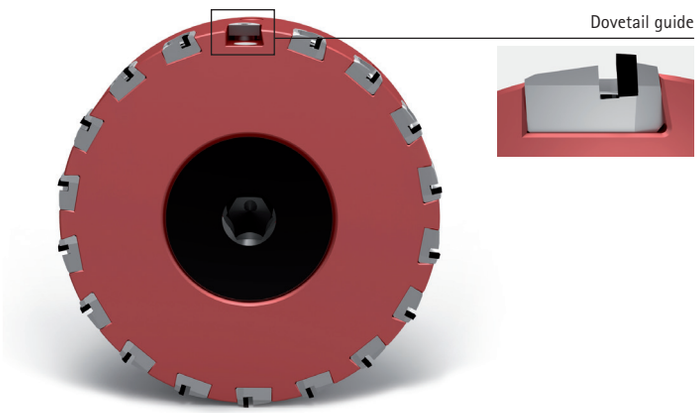
5. Use the setting fixture to optically set a milling cartridge -0.01 mm before the setting dimension (EM). To do this, measure the cutting edge with the optical measuring device and turn the threaded spindle clockwise with a hex-wrench until EM = -0.01 mm is reached.
For purely optical setting, repeat this process for the remaining milling cartridges (then continue with step 7).

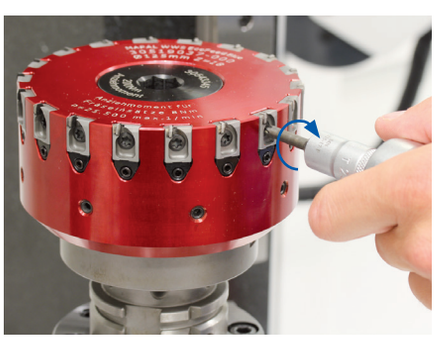


6. Position the dial gauge on the set milling cartridge and set it to zero. Set the milling cartridges with a dial gauge 0.01 mm before EM: To do this, turn the threaded spindle clockwise with a hex-wrench until zero dimension is reached.

* While optical systems reach their limits when it comes to µ-accurate adjustment, high-precision adjustments to the axial run-out can be easily realised with the help of the measuring sensor.
** For the use of the clamping screw, please note the information on page 380.

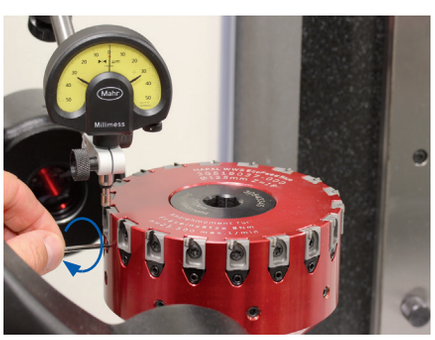






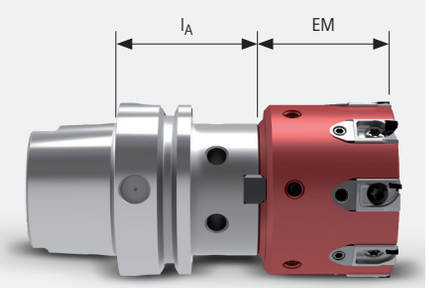
7. Note:
The measuring sensor must not sit on the milling cartridge during this step.

Tighten the clamping screw of the milling cartridge clockwise with a torque wrench (for tightening torques see table "Tightening torque for clamping screws").



8. Using the setting fixture, identify the milling cartridge with the highest protruding cutting edge and set the dial gauge to zero. Set all milling cartridges in relation to the highest protruding cutting edge using the dial gauge: For this purpose turn, the threaded spindle clockwise using a hex-wrench until the zero dimension is reached (tolerance ± 2 µm).

Setting dimension (EM):
Refer to the related product pages for the setting dimensions. The setting dimension EM relates only to the milling cutter's tool body incl. milling cartridges. If a milling cutter with connection is set, the height of the connection l_A must always be taken into account. In this situation the setting dimension is l_A + EM.



Tightening torque for clamping screws

Clamping screw Order no.	Dimensions	TORX®-/TORX PLUS® input size	Tightening torque [Nm]
30696524	M5x11	TX25	8
30412229	M4x8,5	15IP	5
30499981	M5x8	TX25	8

Tightening torques for the milling cutter clamping screw / coolant screw

Clamping screw Order no.	Milling head diameter [mm]	Dimensions	Wrench size	Tightening torque [Nm]
30543340	50	M10	SW 8	20
30543341	63	M10	SW 10	50
30543342	80	M12	SW 12	80
30543344	100	M16	SW 14	100
30543345	125	M20	SW 14	200
10006594	160	M12	SW 10	70
10007775	200 - 400	M16	SW 14	70

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