


Commissioning // Instruction manual

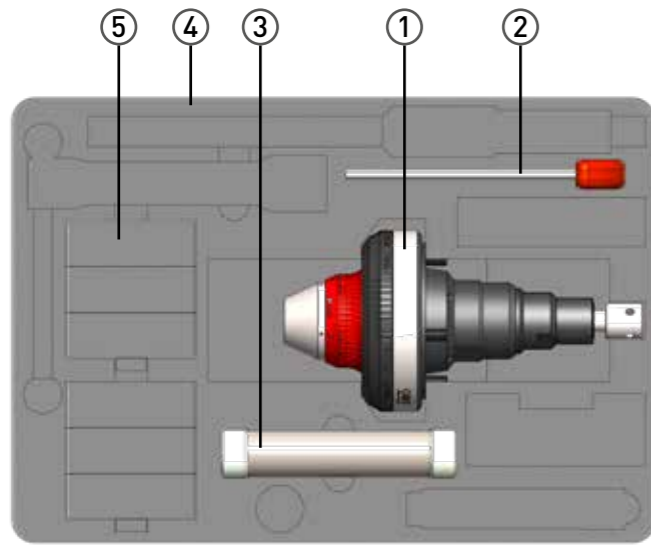


μGrind booster
ANCA HPS 20 // HPS 20 L

grinding deserves SOLUTIONS

GDS[®]
Made in Germany

Case includes:



- ① μGrind booster ANCA HPS 20 // HPS 20 L
- ② GDS wrench SW 5.0 x 150
- ③ Adjustment hammer D30x155
- ④ Foam body with recesses
- ⑤ Attachment for clamping sleeve recesses

To use on following machine(s):



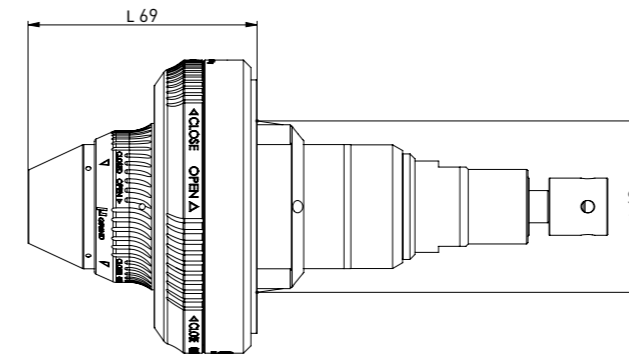
ANCA FX
ANCA MX7
ANCA TX

Weitere Maschinentypen auf Anfrage.

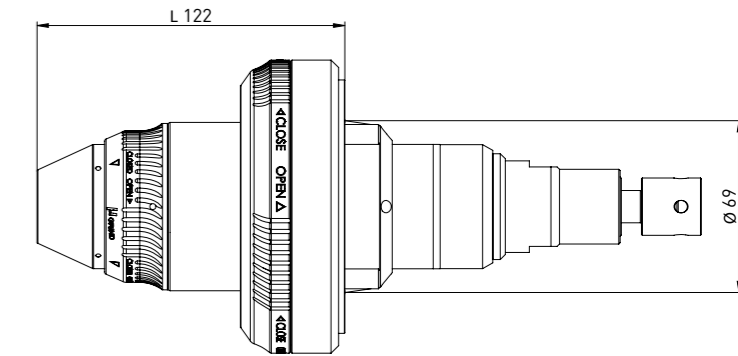


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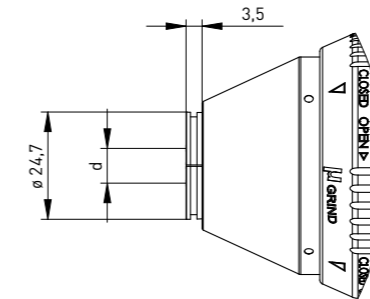
μGrind booster ANCA HPS 20



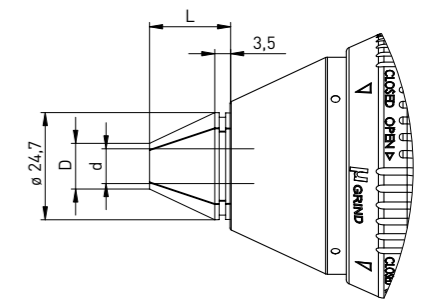
μGrind booster ANCA HPS 20 L



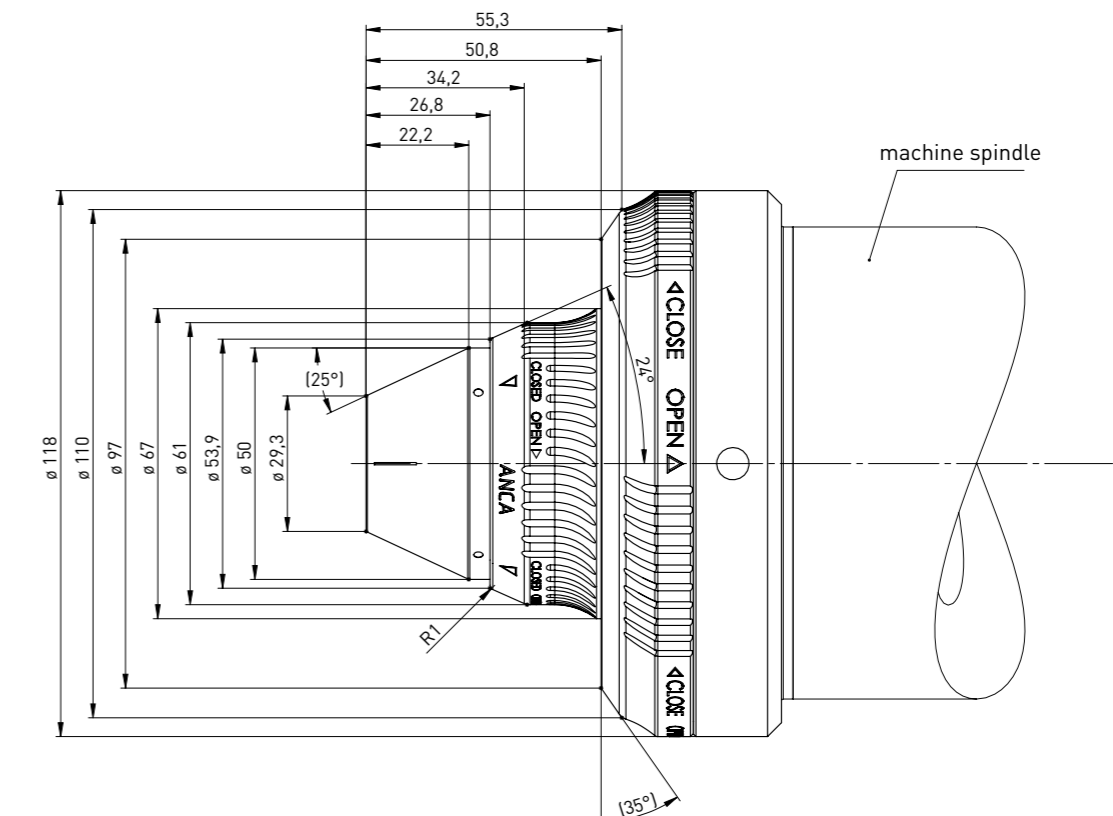
Collet flat:

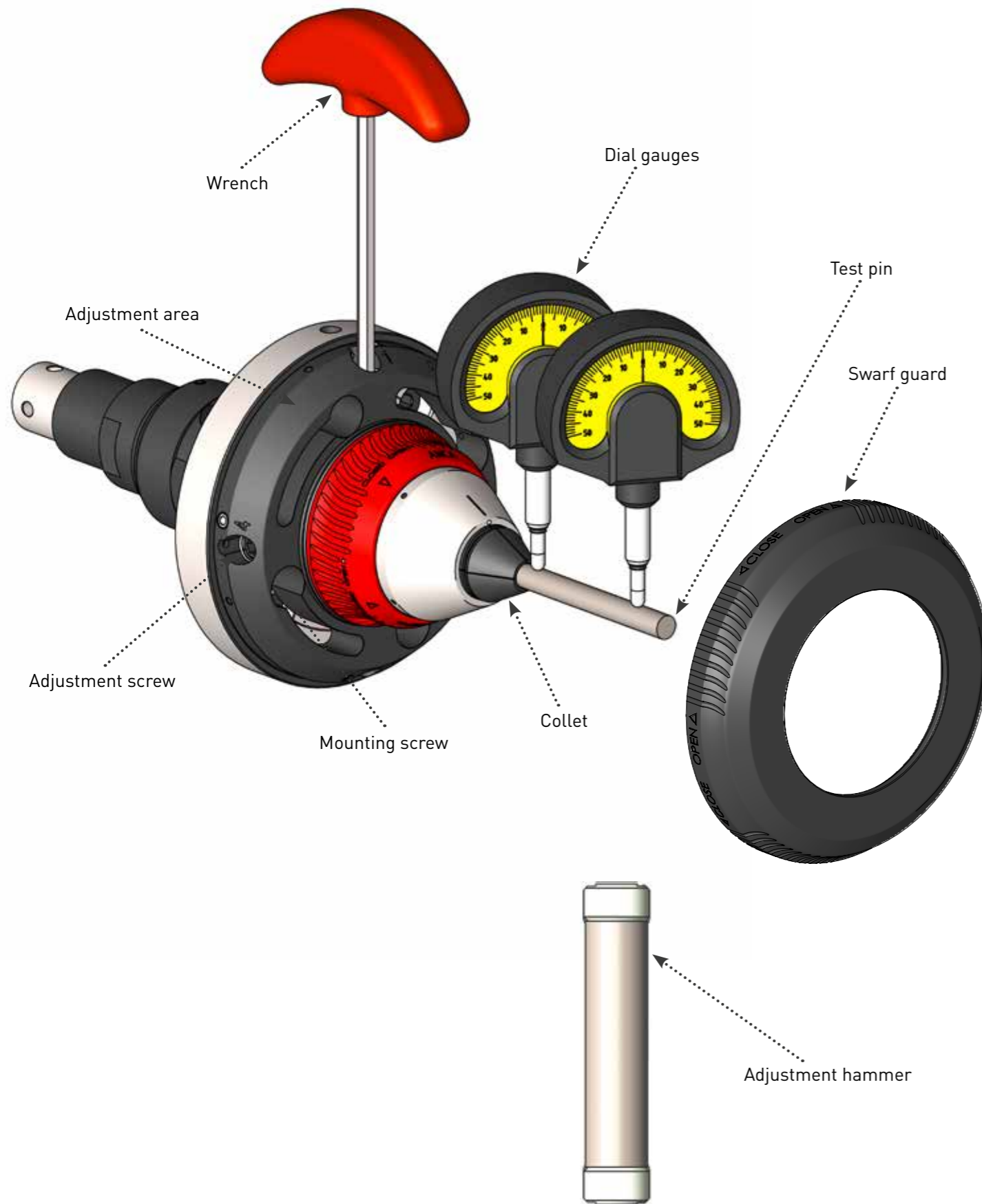


Collet tapered:



! Collet dimensions see page 11



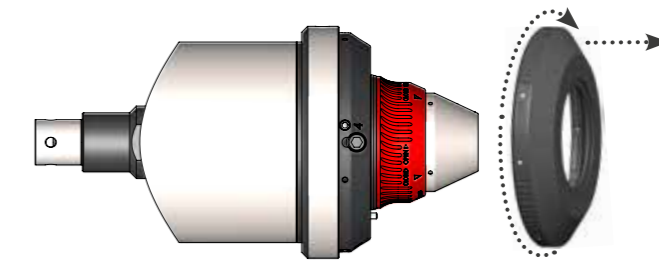


Step 1: Preparation

1. Clean all contact surfaces of the chuck.
2. Assure cleanliness and planarity of machine interface.
3. The μ Grind chuck needs to be at room temperature.

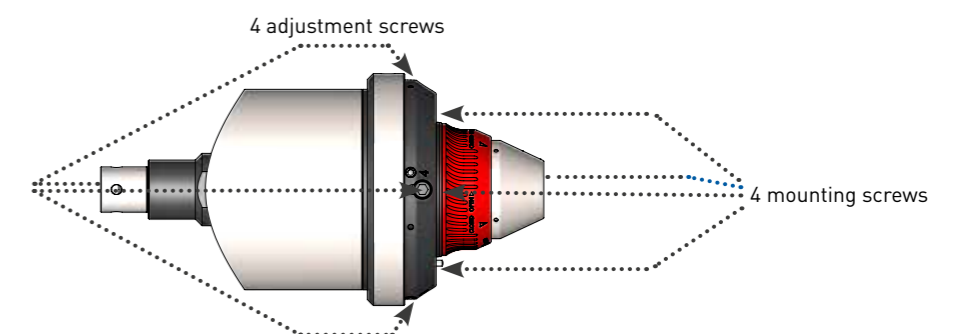
Step 2: Preparation of the chuck

1. Please check whether you have installed the suitable pressure rod for the μ Grind.
2. The control dimension for this is 134.6 mm from the plane surface of the machine spindle to the plane surface of the pressure rod.
3. Remove the splash guard of the chuck. Observe the OPEN & CLOSE markings.
4. Move the pressure rod with the machine control to the rear.



Step 3: Mount μ Grind Chuck

1. Loosen the adjustment screws.
2. Mount the μ Grind chuck on the spindle face using the wrench (2). SLIGHTLY tighten the mounting screws. They will be tightened later, when adjusting the run-out.



Step 4: Prepare for HPS collet

1. Use machine control to move push rod into forward position. The μ Grind chuck opens automatically.
2. Turn the red ring into OPEN position (fig. 1)

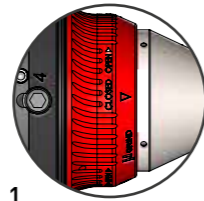
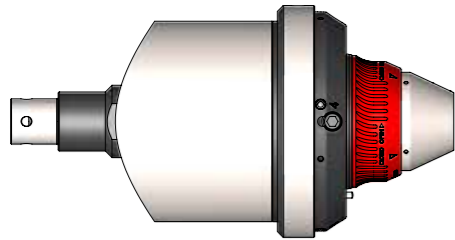


Fig. 1
Detail: red ring in OPEN position



Step 5: Install HPS collet

1. Insert the HPS collet and screw in clockwise until resistance is noticed. Now turn the HPS collet counterclockwise until the closest slit meets the marking point on the chuck (fig.1).
2. Turn the red ring into CLOSE position (fig. 2). Please see **note** below.

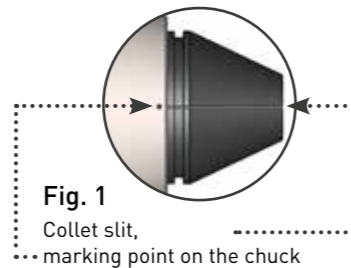


Fig. 1
Collet slit, marking point on the chuck

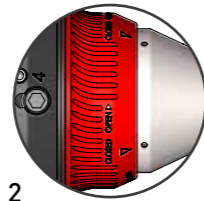
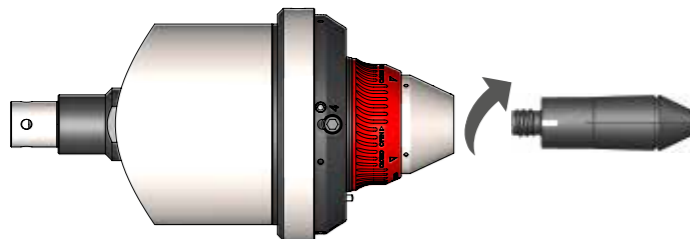


Fig. 2
Detail: red ring in CLOSE position



Note: When turning the red lock ring from OPEN to CLOSE position, a pin is inserted into one of the locking notches at the end of the HPS collet to interlock the collet.

Step 6: Insert Test Pin

1. Insert a fitting test pin into the HPS collet and move the push rod into backward position using machine control.

This procedure clamps the test pin.



Collet must NEVER be clamped without pin / blank / tool inside.



ATTENTION: Before each shutdown of the machine, make sure that a tool remains in the chuck.

Adjustment Run-out and Repeatability

Please take some time to adjust run-out and wobble. The better you adjust the μ Grind chuck the first time, the more precise it will remain when changing collets.



Use 2 precision dial gauges with a resolution of at least 0.001mm.



Note: To ensure proper function, disassemble and clean the chuck once a month.



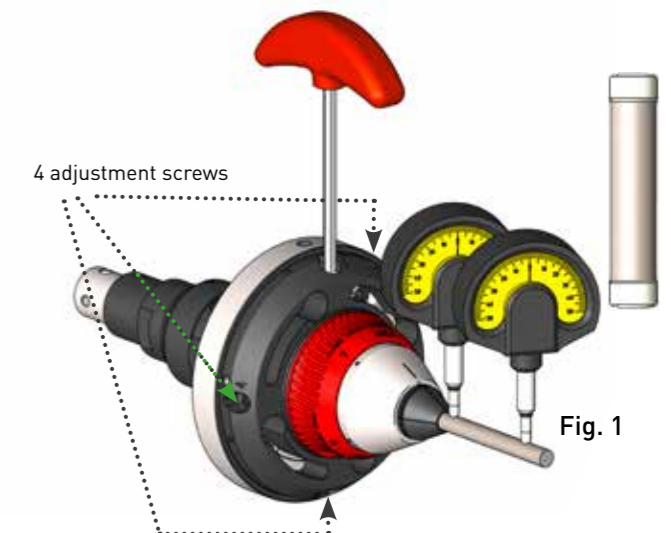
To achieve the highest accuracy when changing collets, align the chuck with two different diameters. Recommended diameters are $\varnothing 8$, $\varnothing 10$ or $\varnothing 12$.



Always set the concentricity of the setting pin with two dial gauges and a setting pin that is as long as possible. The longer the setting pin, the higher the accuracy. Pay attention to the quality of the setting pin.

Step 1: Preparation

1. Install the two dial gauges (Fig. 1)
2. Get the adjustment hammer (3) and the wrench (2) ready.
3. Assure adjustment screws to be loosened.
4. Run the machine on manual mode.

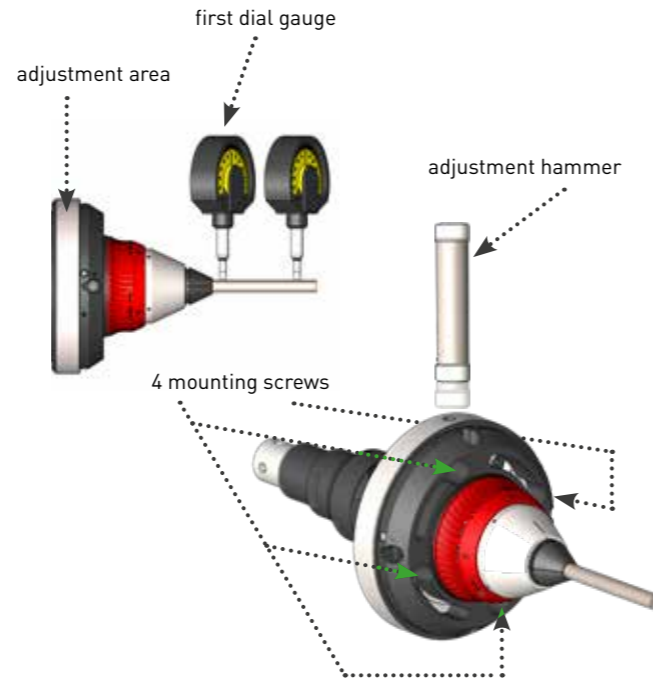


Step 2: Run-Out

Focus on first dial gauge.

Run-out is adjusted by tapping on the adjustment area with the adjustment hammer (3).

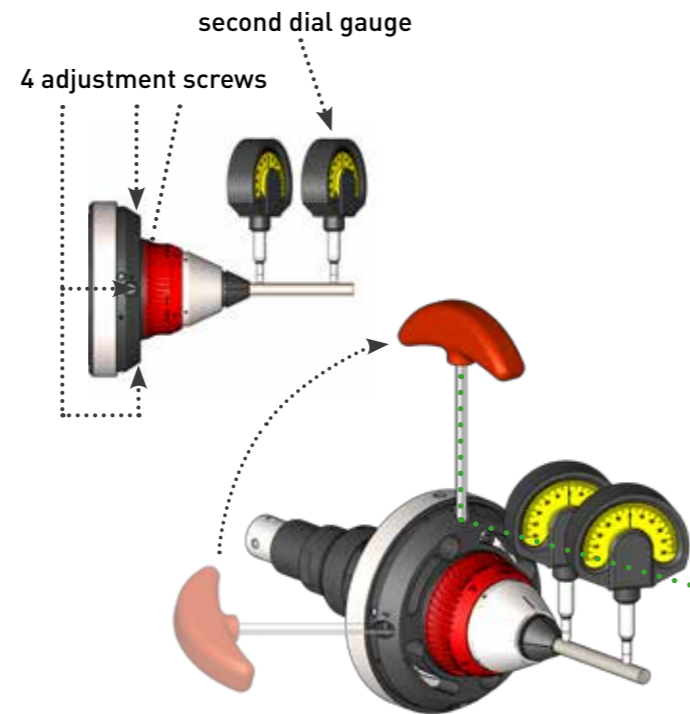
1. Constantly turn A-axis until the dial gauge reaches the peak. Reduce this value by half in lightly tapping the adjustment area with the adjustment hammer.
2. Repeat this procedure until you adjusted run-out to 0,001 mm. Now tighten the four mounting screws crosswise with 12Nm.
3. Unclamp and clamp the test pin three to five times, so the μ Grind chuck can settle and tensions disappear.
4. Check the run-out again and readjust, if necessary.



Step 3: Wobble

Focus on second dial gauge.

1. Lightly tighten the 4 adjustment screws.
2. Constantly turn A-axis and stop, when the dial gauge reaches the peak.
3. Tighten the adjustment screw closest to the peak point using the wrench (2), so the dial gauge result is halved.
4. Turn the chuck for two to three rounds. If wobble is still detectable repeat step 2 and 3 until run-out and wobble are below 0,001mm.
5. Mount the swarf guard again.
6. Now you can start grinding.



Depending on the application, it is advisable to check the concentricity at regular intervals.



Note: During grinding operation, make sure that the chuck does not come into contact with the coolant hoses. Clean the chuck after each use. Always ensure corrosion protection when storing the chuck.

Change collet

Step 1:

- Move push rod into forward position to unclamp the chuck. Remove the test pin/ blank/ tool.

Step 2:

- Turn the blue locking ring from CLOSE to OPEN and unscrew the HPS collet.

Step 3:

- Screw the new HPS collet into the chuck, following the descriptions on page 6.

Step 4:

- Clamp a new adjustment pin and check the runout/ wobble with two dial gauges. If necessary, adjust again as described on pages 7 and 8.

Remove chuck

Step 1:

- Move push rod into forward position to open the chuck. Remove the test pin/ blank/ tool.

Step 2:

- Turn the red locking ring from CLOSE to OPEN and unscrew the HPS clamping sleeve.

Step 3:

- Remove the swarf guard and loosen the four adjustment screws with the wrench (4).

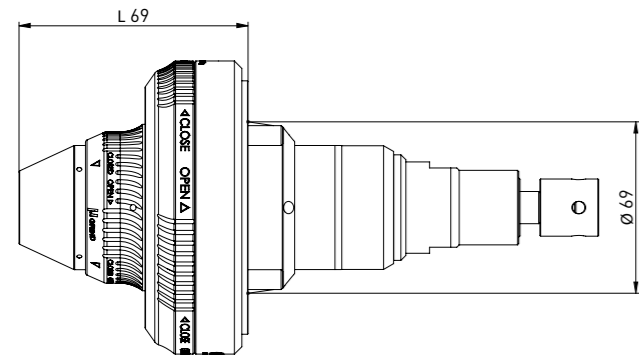
Step 4:

- Move push rod backwards.
- Loosen the four mounting screws.
- Remove the μ Grind chuck from the machine spindle and store in the original bag. **Pay attention to store the chuck in an anticorrosive environment.**
- Keep the μ Grind chuck and accessories in the μ Grind case.

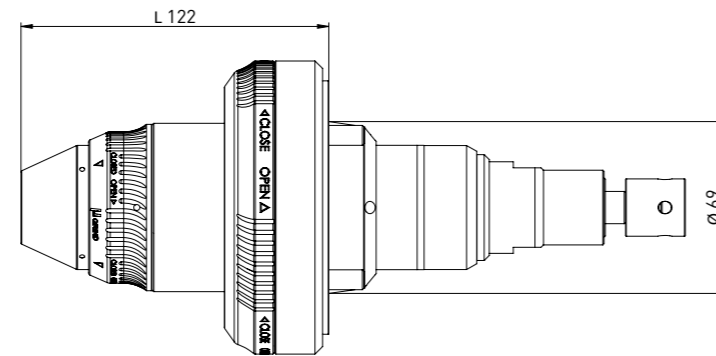


Note: If you wish to remove the μ Grind chuck with an HPS collet mounted, a test pin/ blank/ tool must remain clamped in the collet to assure chuck and collet not to be damaged.

μGrind booster ANCA HPS 20



μGrind booster ANCA HPS 20 L



Delivery includes:

Case, GDS wrench, adjustment hammer

Item No.	Name	D	L
400001008	μGrind booster ANCA HPS 20	69,95	92
400001009	μGrind booster ANCA HPS 20 L	69,95	122

Can be used for the following machines



ANCA FX
ANCA MX7
ANCA TX



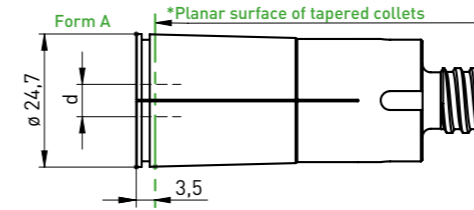
Other machine types on request.

Accessories:

Item No.	Name
350290010	Push rod for ANCA FX EM 134,6 mm
350290011	Push rod for ANCA MX7 EM 134,6 mm
350290012	Push rod for ANCA TX EM 134,6 mm

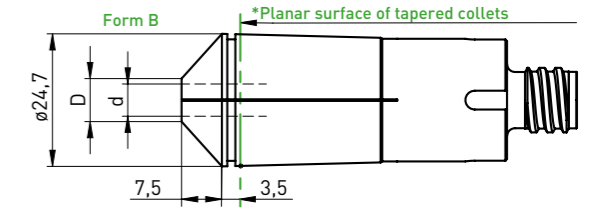


Accessories flat collets:

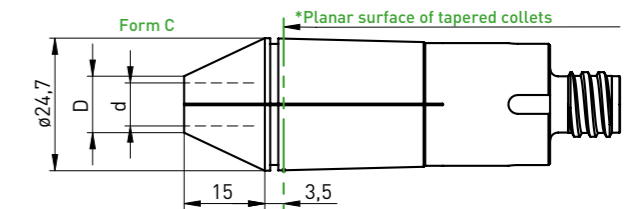


Item No.	Name - Ø d	Form
350260003	HPS collet 20 - Ø3 mm	A
350260004	HPS collet 20 - Ø4 mm	A
350260005	HPS collet 20 - Ø5 mm	A
350260006	HPS collet 20 - Ø6 mm	A
350260007	HPS collet 20 - Ø7 mm	A
350260008	HPS collet 20 - Ø8 mm	A
350260009	HPS collet 20 - Ø9 mm	A
350260010	HPS collet 20 - Ø10 mm	A
350260011	HPS collet 20 - Ø11 mm	A
350260012	HPS collet 20 - Ø12 mm	A
350260013	HPS collet 20 - Ø13 mm	A
350260014	HPS collet 20 - Ø14 mm	A
350260015	HPS collet 20 - Ø15 mm	A
350260016	HPS collet 20 - Ø16 mm	A
350260017	HPS collet 20 - Ø17 mm	A
350260018	HPS collet 20 - Ø18 mm	A
350260019	HPS collet 20 - Ø19 mm	A
350260020	HPS collet 20 - Ø20 mm	A
350260201	HPS collet 20 - Ø1/8"	A
350260202	HPS collet 20 - Ø3/16"	A
350260203	HPS collet 20 - Ø1/4"	A
350260204	HPS collet 20 - Ø5/16"	A
350260205	HPS collet 20 - Ø3/8"	A
350260206	HPS collet 20 - Ø7/16"	A
350260207	HPS collet 20 - Ø1/2"	A
350260208	HPS collet 20 - Ø9/16"	A
350260209	HPS collet 20 - Ø5/8"	A
350260210	HPS collet 20 - Ø11/16"	A
350260211	HPS collet 20 - Ø3/4"	A

Accessories tapered collets:



Item No.	Name - Ø d	Form
350260130	HPS collet 20K - Ø2,35 mm	B
350260103	HPS collet 20K - Ø3 mm	B
350260104	HPS collet 20K - Ø4 mm	B
350260105	HPS collet 20K - Ø5 mm	B
350260106	HPS collet 20K - Ø6 mm	B
350260301	HPS collet 20K - Ø1/8"	B
350260302	HPS collet 20K - Ø3/16"	B
350260303	HPS collet 20K - Ø1/4"	B



Item No.	Name - Ø d	Form
350260107	HPS collet 20K - Ø7 mm	C
350260108	HPS collet 20K - Ø8 mm	C
350260109	HPS collet 20K - Ø9 mm	C
350260110	HPS collet 20K - Ø10 mm	C
350260111	HPS collet 20K - Ø11 mm	C
350260112	HPS collet 20K - Ø12 mm	C
350260304	HPS collet 20K - Ø5/16"	C
350260305	HPS collet 20K - Ø3/8"	C
350260306	HPS collet 20K - Ø7/16"	C
350260307	HPS collet 20K - Ø1/2"	C



Minimum clamping depth from *Plane surface of collet min. 2.5 x Ø

Important:

- The μ Grind series (clamping chucks) has been designed for equipping and changing rotation-symmetrically blanks and tools with shaft tolerance of h6 or better.
- Shaft tools according to DIN 1835 Form A, B, E resp. DIN 6535 Form HA, HB, HE can be clamped.
- Products of the μ Grind series (chucks and collets) must be only used according to their technical specification.
- These products are intended for industrial application.
- The use of μ Grind products includes respecting all specifications and according to all regulations, included in this instruction.
- Faultless functioning as well as warranty claims can only be granted when using original GDS-accessories.

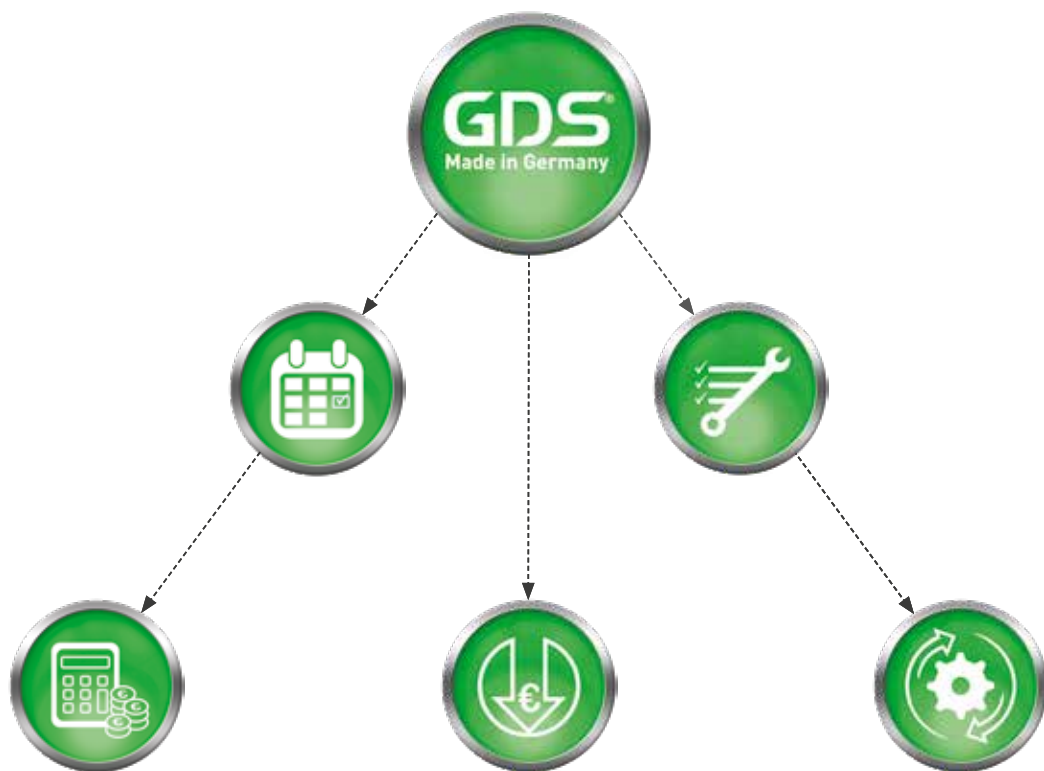


Check following issues:

- Check locking pressure.
- Check blank.
- Check if μ Grind chuck is soiled.
- Check if red locking ring is closed properly.
- Check if mounting and adjustment screws are tightened enough.
- Check if push rod is screwed in correctly.
- Check if μ Grind chuck is at room temperature.
- Uninstall all parts. Clean and start off from the beginning again, following the instructions.
- Please check if the appropriate pressure bar for the μ Grind is installed, the control dimension for this is 134.6 mm from the plane surface of the machine spindle to the plane surface of the pressure bar.



REVOLUTION IN TOOLGRINDING



GDS Präzisionszerspanungs GmbH // Endelbergstraße 8 // 72131 Ofterdingen

Telefon: + 49 (0) 74 73 - 27 26 72
Telefax: + 49 (0) 74 73 - 27 26 49

E-Mail: info@gds-praezision.de
Web: www.gds-praezision.de

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