JURA μ GRIND

USERS MANUAL

μGRIND
JURA
MICRO GRINDING SYSTEM
INSTRUCTION MANUAL

This is the only manual you'll actually want to read and study!

*The **JURA Micro-Grind** is the result of many professionals and students struggling with the time-consuming process of learning to sharpen gravers.*

This revolutionary grinding system is developed and produced by JURA, a world-class diamond setter and precision engineer. It reflects decades of expertise in high-precision diamond setting and engraving.

Every component is designed for maximum control, reliability, and efficiency in demanding workshop environments.

***This innovative sharpening system allows you to grind gravers directly under the microscope!** Its ergonomic, intuitive design ensures accurate, repeatable results while keeping your workflow smooth and efficient.*

Like any professional tool, it will take a little practice to learn the steps and get into the flow. Don't get discouraged—once the process becomes familiar, you'll truly enjoy the precision and efficiency this system brings.

*This is the only manual you'll actually want to read and study! And remember, we're here to help. We continually develop and update support videos and learning materials to guide you every step of the way. Make sure you **Follow @juratools on YouTube!***

If you'd like to deepen your skills and make the most of your tools, we'd love to see you in one of our JURA Courses @www.juratools.com/courses — designed to help you grow at your own pace.

Join us on a journey toward true excellence. - JURA

Table of Contents

Page 1. **CE Declaration of conformity**
Page 2. **SAFETY FIRST – PLEASE READ**
Page 3. - 4. **What is included & Unpacking**
Page 5. **1. Level All Diamond Wheels**
Page 6. **2. Micromotor Assy**
- *2.1 Lock the Handpiece*
- *2.2 Mount into Housing*

Page 7. - 8. **3. Prepare the Graver Assy : Graver mounting**
- *3.1 Choose Graver Shank Size & Matching Quick-Change Holder*
- *3.2 Select the matching Quick-Change Holder for your graver.*
- *3.3 Insert your Quick-Change Receiver into the receiver house.*
- *3.4 Mount the Graver in the Quick-Change Holder*
- *3.5 Install the Quick-Change Holder.*

Page 9. **4. Set Graver Length**
5. Set the AZP = Absolute Zero Position → Use Image on Page 7!!!
Page 10. **6 Prepare the Micromotor**
Page 11. **7. Sharpen the Face**
- *7.1 Preparation*
- *7.2 Set the Face Angle*
- *7.3 Position the Reciever House Assy*
- *7.4 Grinding Process*

Page 12. **8. Grind Top & Side Facets**
- *8.1 Grind the top facet*
- *8.2 Grind the Side Facets*
- *8.3 Add Decorative Facets (Optional)*

9. Now Refine the Shape
Page 13. **10. Add a Heel (Optional)**
11. Chamfering the Tip
Page 14. **12. Drill Bits and Onglettes**

CE DECLARATION OF CONFORMITY

Manufacturer:
JURA Tools / Diaset BV
Proostwetering 22-A, 3542AE Utrecht, The Netherlands

The JURA Microgrind system consists exclusively of mechanical fixtures, templates, and accessories. It is intended for use in engraving and sharpening applications and is not subject to CE marking obligations under current EU legislation.

The supplied micromotor and control unit are custom manufactured for Diaset BV / JURA Tools and CE-certified by our partner producer. These components comply with the relevant EU directives, and users are advised to consult the original manufacturer's documentation for detailed conformity information.

Warranty (EU consumer compliance):

- Metal parts of the housing: 2 years
- Control box: 2 years
- Motor: 2 years
- Rotating parts: 6 months (subject to normal wear)
- Accessories: excluded after use

Important: Warranty is void if instructions are not followed carefully. The system must be used according to the manual and only for its intended purpose. Improper use is at the user's own risk.

Compliance Note:
This warranty complies with applicable EU consumer directives. Accessories and parts subject to normal wear are excluded from full warranty coverage.

Safety Notice:
Read the manual carefully before use. The system is not intended for any other applications.

This statement is issued under the sole responsibility of JURA Tools / Diaset BV for the JURA Microgrind system. For support or questions, please contact [email/contact].

Signed:
K. Jerjomina, Director
Date: 01 October 2025

⚠ SAFETY FIRST – PLEASE READ

Electrical Safety => Read the separate Manual for Micromotor carefully!

- Use only a properly grounded outlet with surge protection (110V for U.S. / 220V for EU – check your model).
- Operate indoors only, in a dry, clean workspace.
- Do not use near water, sinks, or flammable materials.
- Never touch plugs, cables, or handpieces with wet hands.
- Unplug the system before cleaning, maintenance, or changing accessories.

Dust Extraction Required

- Always use a dusk mask and a professional dust extraction system.
- Diamond, metal and especially Carbide dust are hazardous to inhale.
- Wear approved eye protection and a mask when operating.

Professional Use Only

- Designed for trained professionals and supervised trainees.
- Not suitable for children or untrained users.
- Do not modify or open the unit; unauthorized changes void warranty and may cause injury.
-

Micromotor & Tool Precautions

- Do not run the motor without a blank/drill/bur firmly fixed.
- Wait for full RPM before applying any pressure.
- Use gentle pressure only — never force the wheel.
- Allow the motor and handpieces to cool down after extended use.

Personal & Workspace Safety

- Always wear eye protection.
- Secure small items before engraving or grinding—sharp tools or fragments can jump or fly off unexpectedly.
- Keep your hands clear of (sharp) moving or rotating parts/ cutting wheels.
- Maintain a clean, organized workspace.
- Store sharp tools safely when not in use.
- Keep the area free of loose clothing, hair, jewelry, and pets.

Storage

- Use the magnetic organizer to keep the Micromotor Assembly neatly positioned on your bench.
- Note: the magnetic organizer is only intended for positioning and will not prevent the assembly from falling.
- For safe and secure storage, fix the organizer to your bench using reinforced double-sided tape. This prevents the assembly from hanging over an edge where it could fall to the floor or be easily knocked off its place.
- The same applies to the control box: we recommend securing it to your bench with reinforced double-sided tape.
- Place it in a safe location where it cannot be bumped, pulled by the cable, or accidentally knocked to the floor.

Disclaimer

Although this manual has been prepared with care, JURA Tools / Diaset BV is not liable for printing mistakes, translation errors, or misinterpretations. Information may change without notice. Use all instructions and misuse is at the user's own risk.

The JURA Microgrind System is shipped in 2 boxes:

Box 1 of 2 – JURA Grinding Kit

- Micromotor Assy
- Complete set of grinding tools and accessories for sharpening gravers

Box 2 of 2 – JURA Micromotor Kit

- Micromotor
- Control box
- Grinding wheels specifically for gravers

Unpacking

- **Always unpack over a secure, flat surface to avoid losing or dropping parts.**
- *To remove the organizer and parts from Box 1, press the round protruding component on top to release the organizer from underneath the protective insert*

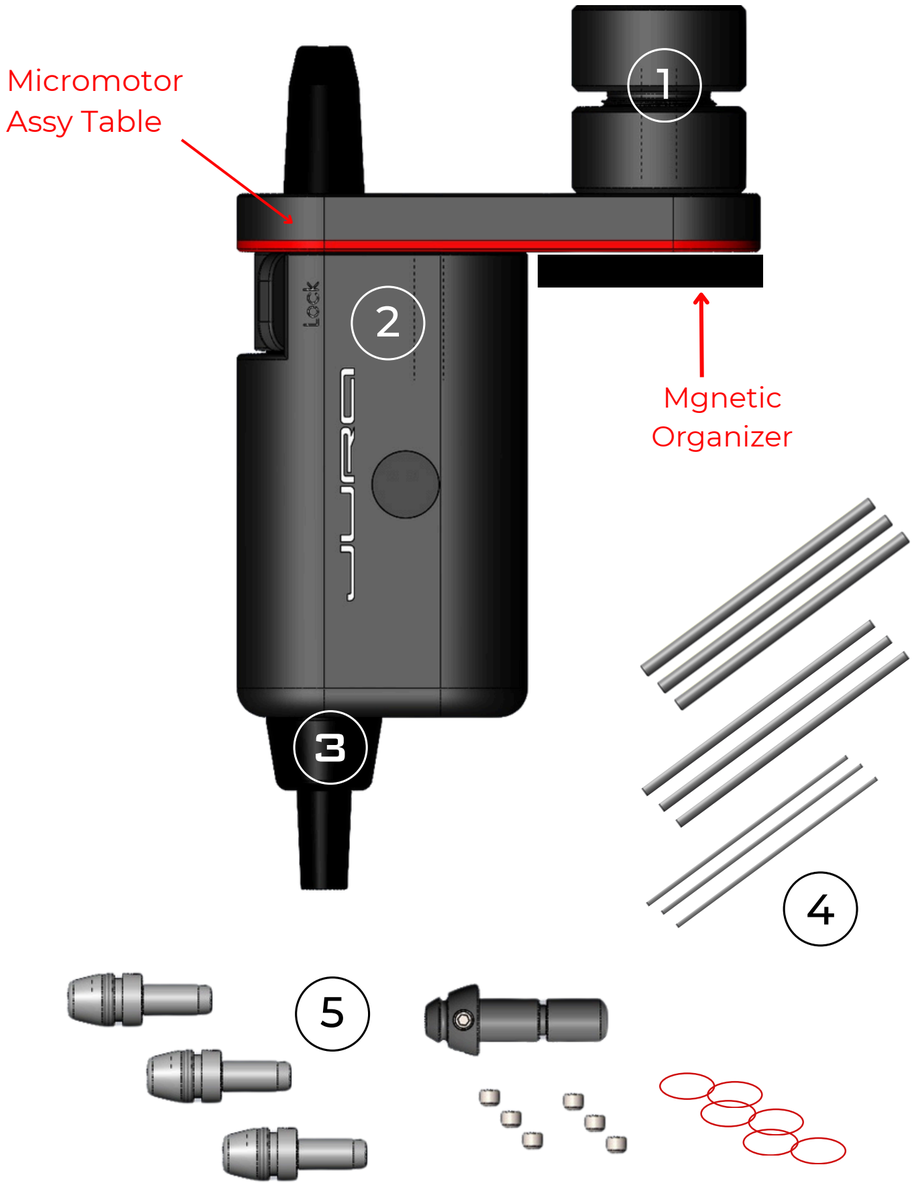
Micromotor Assy

1. AZP Leveling Assembly
2. Housing
3. Micromotor
4. Carbide Graver Blanks
3x 1,8 mm
3x 2,35 mm
3x 3,2 mm

5. Quick Changes + spare hex screw + color coding

- 1x Jura Style for 1,8 mm graver
- 1x Jura Style for 2,35 mm graver
- 1x Jura Style for 3,2 mm graver
- 1x Jura Style GRS Compatible for 3,2 mm round shank graver

Note:
Instead of the Jura Style GRS Compatible quick change you can also use your original GRS Quick Changes!



Box 1 of 2 – JURA Grinding Kit

Complete set of grinding tools and accessories for sharpening gravers

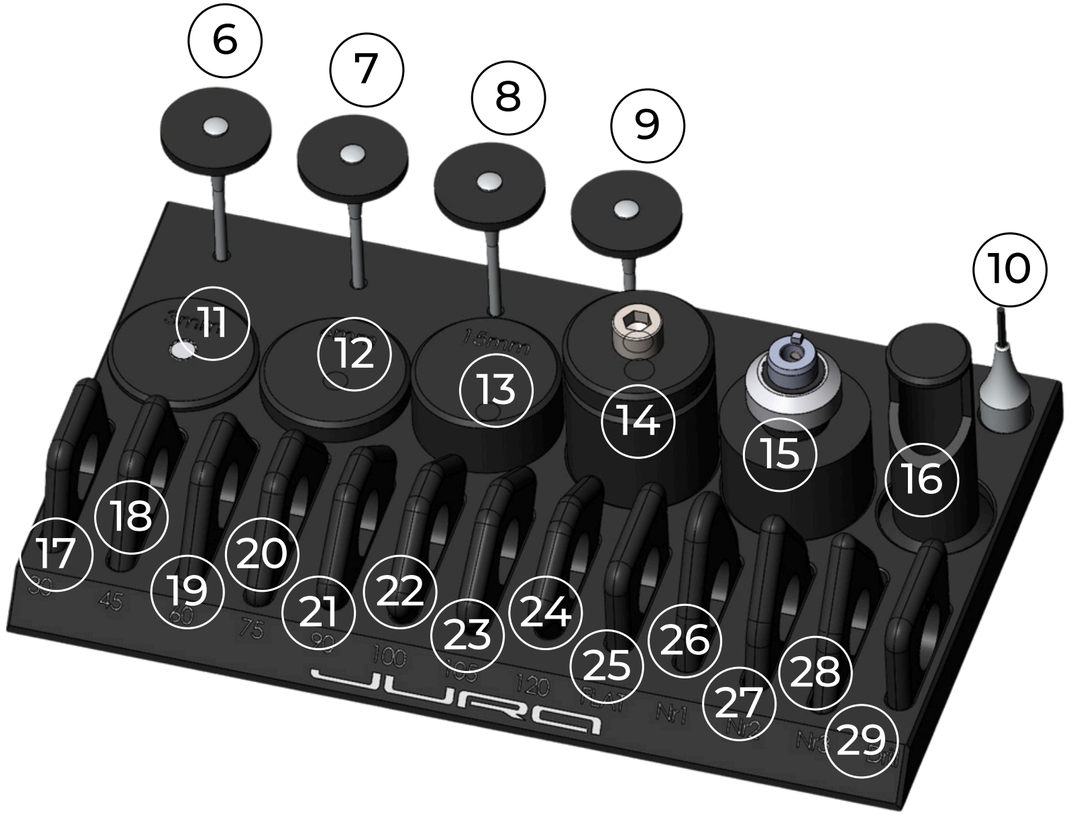
To remove the organizer and parts from Box 1, press the round protruding component on top to release the organizer from underneath the protective insert

Organizer with:

10. Mini Hex Key *(with spare hex screws & color Coding for quick changes)*
11. 3mm Spacer
12. 6mm Spacer
13. 15mm Spacer
14. FAA = Face Angle Adjuster
15. Quick-Change Receiver House
16. Length Template

Templates for graver angles;

17. 30°
18. 45°
19. 60°
20. 75°
21. 90°
22. 100°
23. 105°
24. 120°
25. Flat
26. Onglet 1
27. Onglet 2
28. Onglet 3
29. Drill



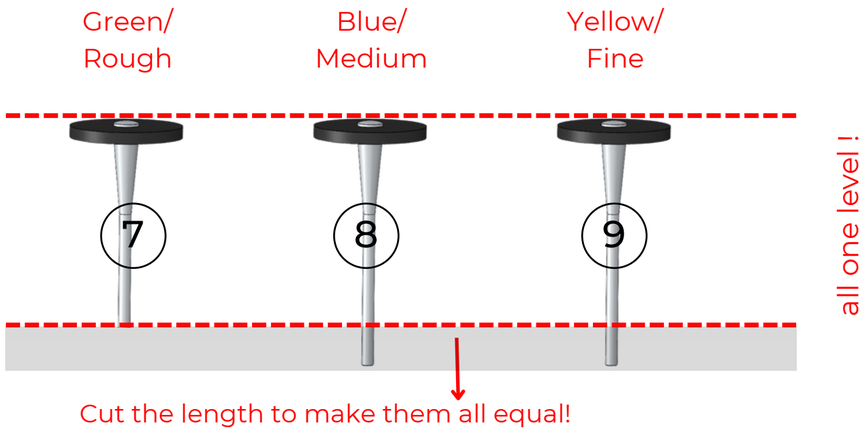
Packed In box 2 *(SKU PL.DW.SET)*

6. Diamond cutting Wheel *(SKU PL.CW)*
7. Diamond Grinding Wheel Green - Rough *(SKU PL.DW.R)*
8. Diamond Polishing Wheel Blue - Medium *(SKU PL.DW.M)*
9. Diamond Polishing Wheel Yellow - Fine *(SKU PL.DW.F)*

1. Level All Diamond Wheels

- Ensure the (7) Rough (green), (8) Medium (blue), and (9) Fine (yellow) diamond wheels are all the same length.
- Measure the distance between the top surface of the wheel and the end of the mandrel shank.
- If one is shorter, use the (6) Diamond cutting wheel *** to carefully shorten all mandrels to match the shortest one in the set.
- *Check the wheel alignment regularly to ensure they remain equal for the best result and work faster. (The frequency of checking depends on the wheel type and how often and carefully you use them.)*

Diamond Wheels & Leveling



***This step can be done with the micro grinder motor and Diamond Wheel (6), or with a separate micromotor to provide more flexibility, depending on your workflow.

Take Your Setup to the Next Level!
Upgrade your Starter Set with an additional JURA E-Type Micromotor (EQ.MG.ET) and a compatible handpiece to unlock new features.

- The plug-in system on the control box lets you easily switch between micromotors.
- Perfect for quick tool making and bench adjustments.
- Switch handpieces effortlessly by clicking them on or off the micromotor.
- Use with the Slim-Fit Handpiece (EQ.14.01) or Jura by NSK Handpiece (EQ.14.02) for small-stone diamond setting—ideal for small hands.
- Combine with the Micro-Filing Handpiece (EQ.14.04) to enhance grinding and filing performance.

UPGRADE OPTION

2. MICROMOTOR INSTALLATION

NOTE: The motor comes pre-installed in the set. The following steps should be used exclusively if the motor is damaged and needs to be replaced.

2.1 Lock the Handpiece

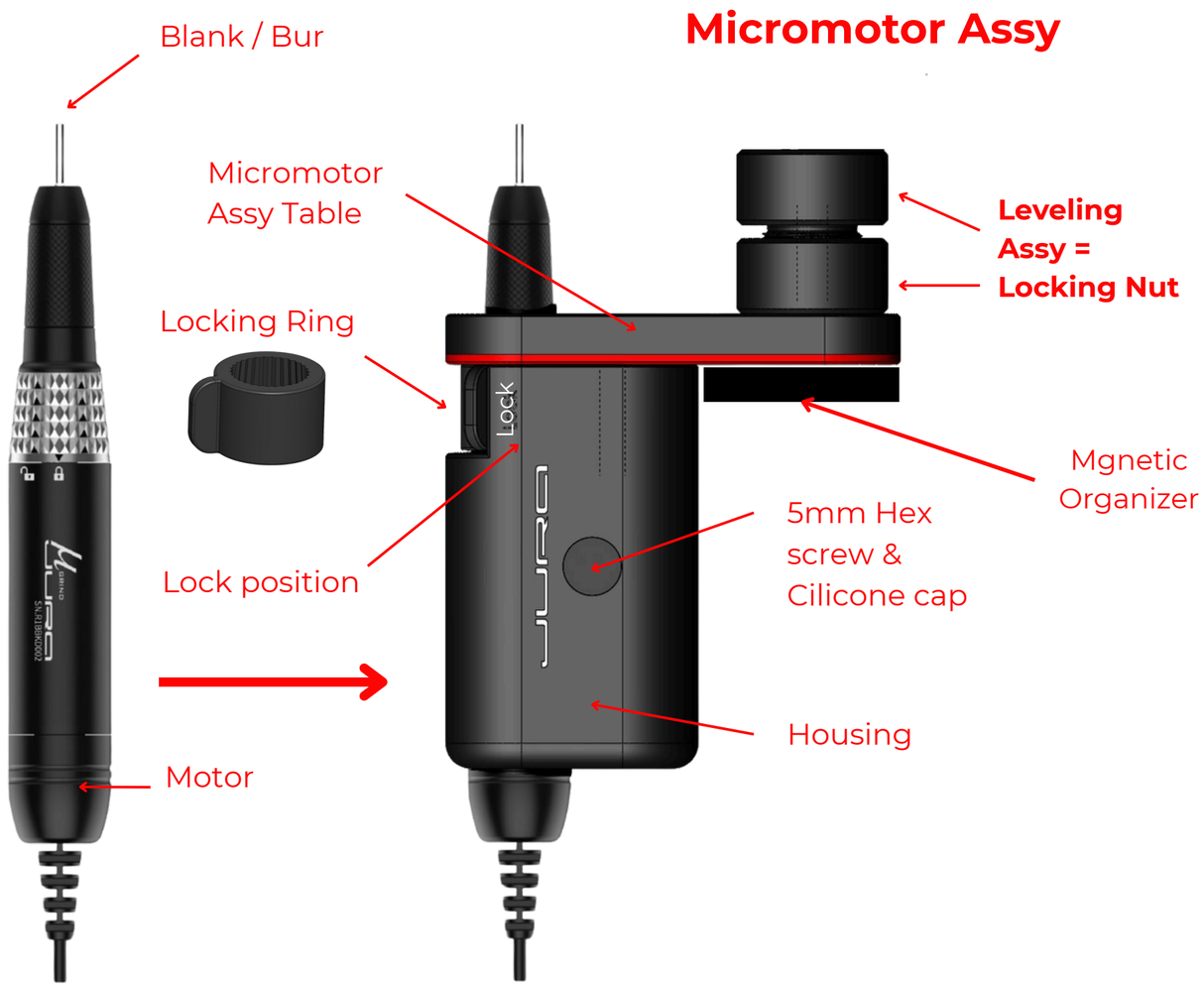
Insert a carbide blank or an old bur into the micromotor and turn the locking mechanism until it is fully secured.

2.2 Mount into Housing

- Unscrew the the Micromotor Assy Table (2x 3mm Hex screws)
- Unscrew the 5mm Hex screw until its completely loose.
- Insert the locking ring into the Housing. Note that the smallest diameter must face upward.
- Ensure the locking ring handle is in the lock position (see marking on the handle).
- Slide the micromotor through the handle until it connects with the locking ring.
- After confirming everything is aligned in the lock position, use the 5 mm JURA hex key to secure the position in the housing and fix back all the hex screws.
- Once secured, the locking ring controls the locking system of the motor.

⚠️ **Important:**

- There has a mid-click position in the locking ring. Never use the motor in the mid-lock position!
- Always ensure the locking ring is fully turned and securely fixed in the lock position before operating the motor.
- **NEVER** operate the motor without securely locked blank/bur!



3. Prepare the Receiver House Assy: Graver mounting *(see pictures on Page 7&8)*

3.1 Choose Graver Shank Size & Matching Quick-Change Holder
Determine your graver's shank diameter:
→ Ø2.35 mm (Standard JURA)
→ Ø3.2 mm (Standard JURA / GRS original or JURA GRS-compatible)
→ Ø1.8 mm (Standard JURA)

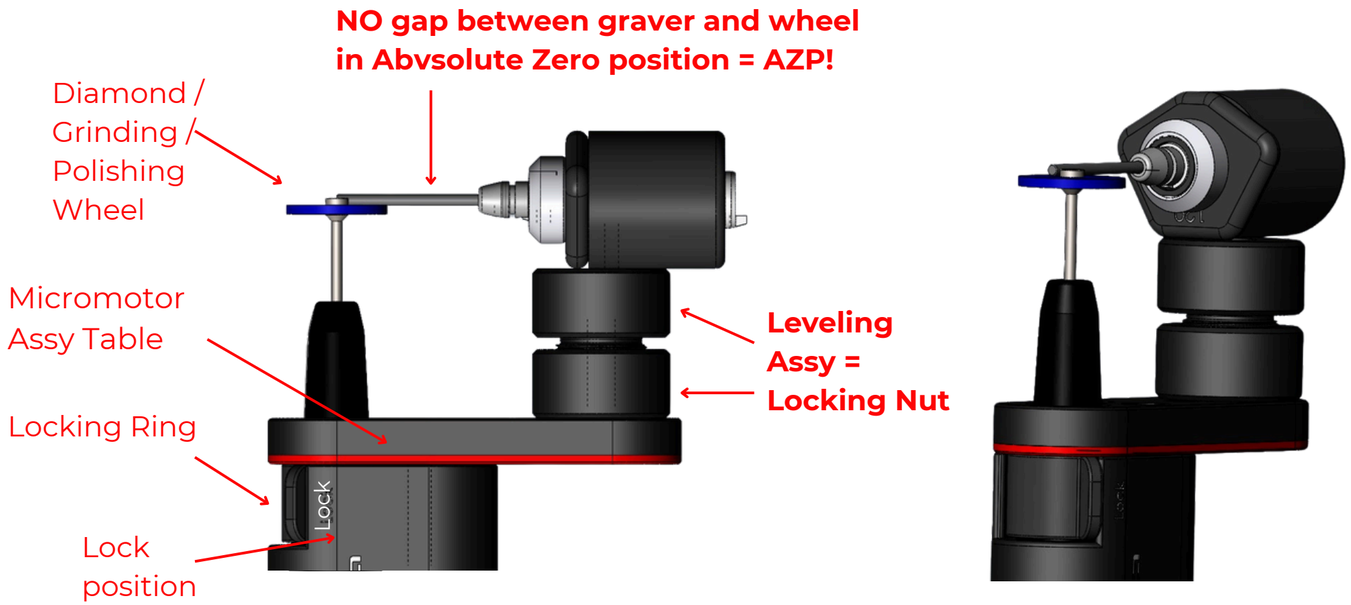
3.2 Select the matching Quick-Change Holder for your graver.
The Quick-Change Receiver has two sides:

- One side for JURA Quick-Change Holders
- One side for GRS original or JURA GRS-compatible Quick-Change Holders

3.3 Insert your Quick-Change Receiver into the receiver house.
Make sure the Quick-Change you are using is positioned at the front of the receiver house.

- The JURA Quick-Change is inserted from the **BACK** of the receiver house.
- The GRS Quick-Change is inserted from the **FRONT** of the receiver housing.

3.4 Mount the Graver in the Quick-Change Holder
Insert the graver into the selected Quick-Change Holder.
Tighten the locking screw (M3×3 mm) using a 3 mm JURA mini hex key.

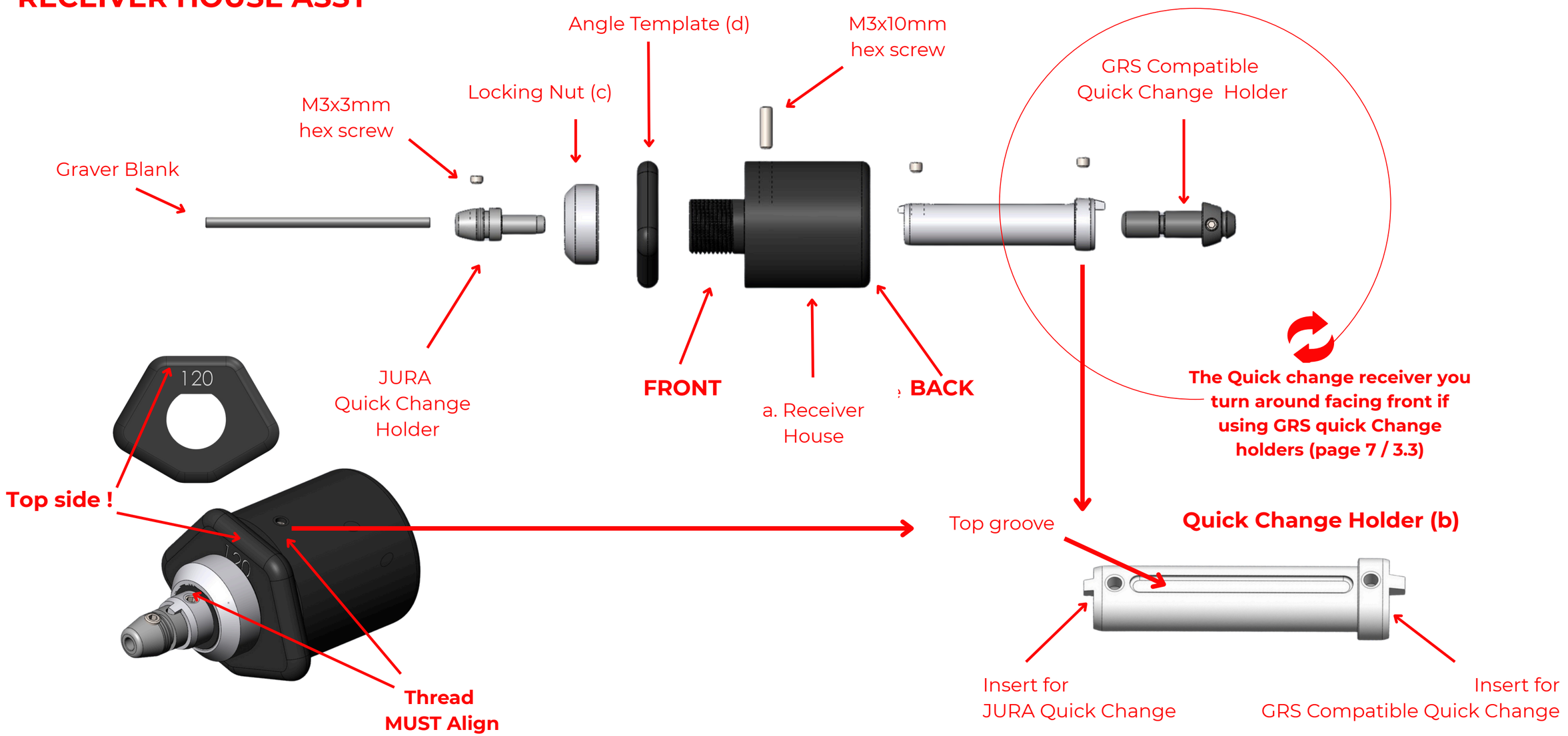


3.5 Install the Quick-Change Holder.
Insert the Quick-Change Holder into the Quick-Change Receiver.
Ensure that the pin on the Quick-Change receiver clicks into the pin of the Quick-Change holder for correct positioning.
Tighten the locking screw (M3×3 mm) using a 3 mm (JURA mini) hex key to prevent any movement of the Quick-Change Holder inside the receiver.

Note:

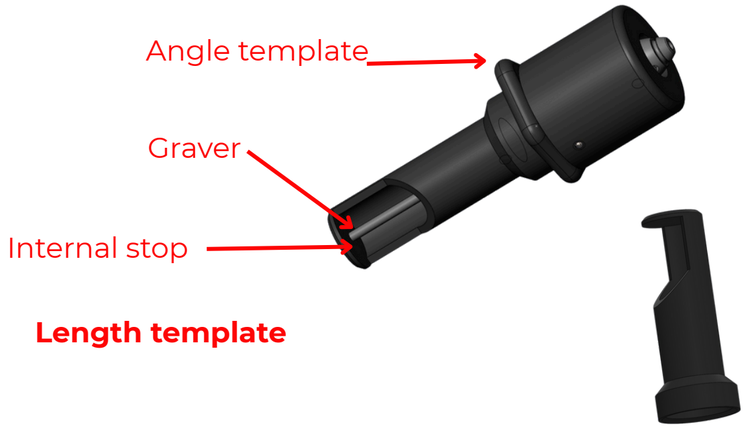
- The thread with the hex screw on both the Quick-Change Holder and the receiver house must align with each other and be positioned at the top.
- The longer hex screw on top of the receiver house must fit into the groove of the Quick-Change Holder when assembled.

RECEIVER HOUSE ASSY



4. Set Graver Length *(use picture page 8)*

- Loosen the hex screw on the Receiver House **(a)** to release the Quick-Change Holder **(b)**, allowing it to move forward and backward.
- Insert the Quick-Change Receiver with graver into the Length Template and position the template tightly over the Locking Nut **(c)** against the Angle Template **(d)** on the Quick-Change Receiver House.
- Then push the Quick-Change Holder forward until the graver touches the internal stop of the Length Template.
- Tighten the hex screw (M3×3 mm) on the Receiver House using the JURA Mini Hex Key until the Quick Change Holder is fixed.

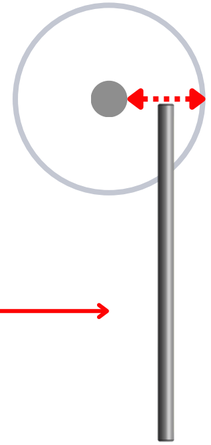


⚠️ **Important:** Ensure the Length Template sits flat and evenly against the Angle Template on the Receiver House. Any tilt or gap may result in incorrect graver length and uneven sharpening.

5. Set AZP = Absolute Zero Position *(see image on page 7.)*

- Insert the Diamond Grinding Wheel Green - Rough **(7)** into the motor and lock it securely.
- Now level the graver blank with the top surface of the wheel using the Leveling Assy — this is the Absolute Zero position = AZP, which serves as the calibration reference for the graver blanks.
- Depending on the graver Ø diameter, the AZP level must be adjusted accordingly.
- Place the Receiver House Assy onto the Leveling Assy (image page 7) with top side down!
- Adjust the Leveling Assy until the graver is:
  * Perfectly aligned with the wheel surface
    ->Without any visible tilt or gap!

The Leveling Assy / Locking Nut is a dual-part precision mechanism consisting of a top part and a bottom part that together form a lockable leveling base.

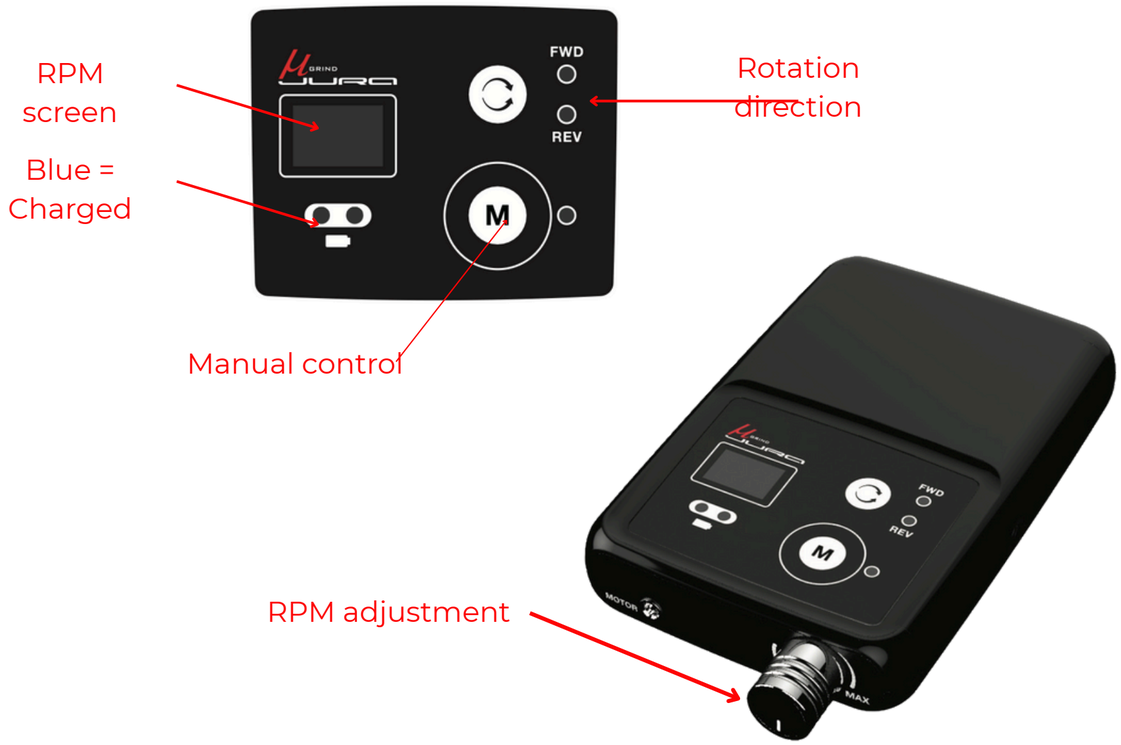


- Rotate both parts counterclockwise together to unlock.
- Turn the top part to make fine height adjustments until the graver is perfectly aligned with the center of the wheel surface → no gap!
- When the correct position is reached, hold the top part steady and rotate the bottom part clockwise to lock the setting securely.

6. Prepare the Micromotor

- Ensure the micromotor is charged or connected (blue light = ready).
- Make sure a blank/bur/dril or Wheel is securely fixed in the chuck of the micromotor!
- Set speed to a. 15,000RPM.
- Set rotation direction to clockwise (FWD)
- Activate the motor by pressing the foot pedal
- If you prefer OR if foot control is disconnected, use the Manual control button on the control box.

NOTE: A separate manual is provided for the micromotor. Read it thoroughly before use.



- ⚠️ **WARNING:**
- Only start grinding once full RPM has been reached — operating too early may damage the motor chuck.
- Never activate the motor without ensuring the wheel/drill/bur is securely locked.
- Forcing the graver on the wheel will damage your motor!
- Disconnect charger from the controller box when its fully charged.

TIP! *If you don't have many Quick Change holders (yet) and need to remove and reinsert gravers frequently, it helps to mark the graver for alignment by making a small flat surface on the tail (the part that goes into the quick-change holder) before you begin sharpening. This flat surface will serve as a reference point. When you reinsert the graver, the flat surface will align with the hex screw on top of the quick change*

7. Sharpen the Face (See image page 10)

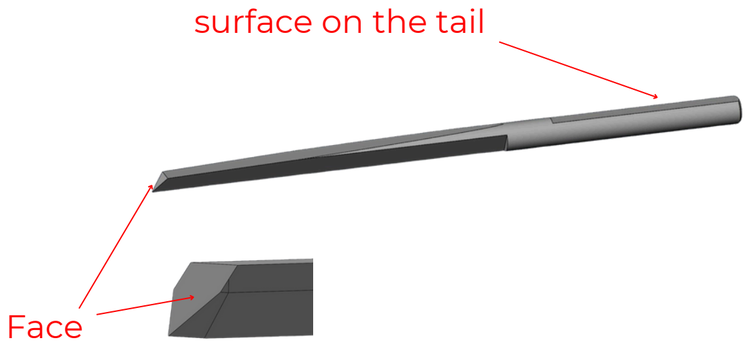
- We recommend always starting with the Face of the graver.
- For best working flow, firstly follow all the Sharpening steps with the Grinding Wheel (7), then repeat with Diamond Polishing Medium (8) and then repeat with Diamond Polishing Wheel Fine (9)

7.1 Preparation

- Unlock the chuck of the motor by turning the locking ring on the housing with your thumb.
- Insert the green (rough) Diamond Wheel into the motor and lock it securely.

7.2 Set the Face Angle

- Adjust the desired angle by turning the FAA
- Available angles of the face are marked on the fixture within the range of 45° degrees all the way down up to 65°.
- You can freely select any angle in between.
- Click the FAA onto the AZP Table (this fixture is magnetic)

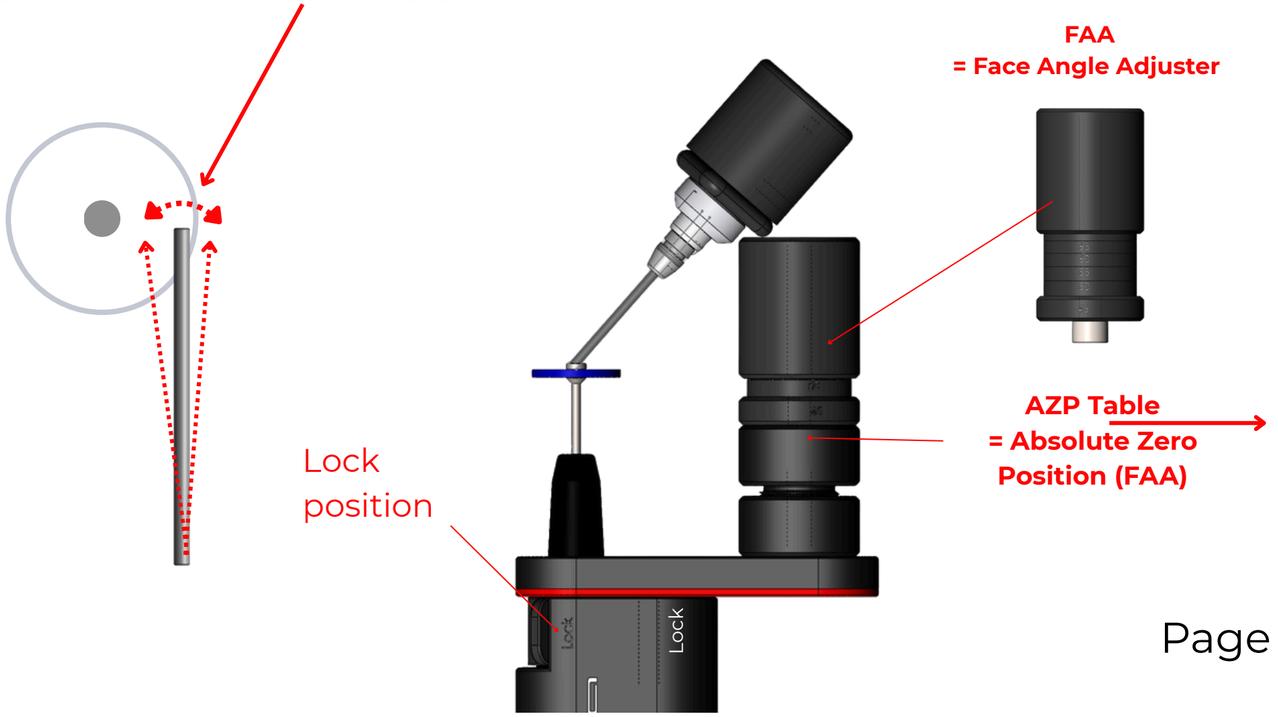


7.3 Position the Reciever House Assy

- Place the Receiver House Assy with the Top of the Angle Template on the FAA table → (The hex screw will be facing down!)
- This ergonomic position allows you to hold the Receiver House comfortably in the palm of your hand on top of the FAA, while guiding the graver with your fingers over the top surface of the diamond wheel.
- Ensure contact between the full lenth of template edge and the FAA at all times.

7.4 *Grinding Process*

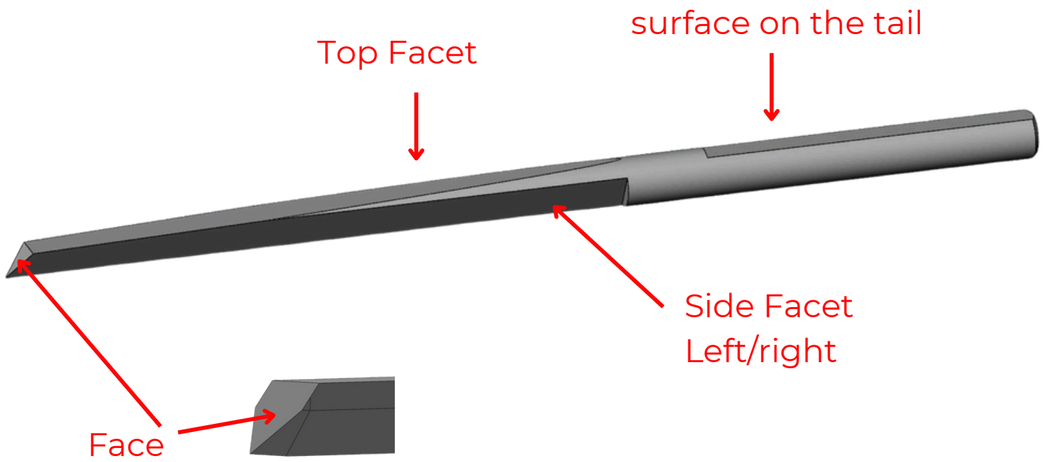
- *Once the motor reaches full RPM, lightly place the graver on the wheel surface & let the Grinding Wheel do the work-→* ⚠️ ***Do NOT Force!***
- *Use short, controlled swinging movements during grinding process to avoid creating grooves on the wheel.*



8. Grind Top & Side Facets

Replace the FAA with the 3 mm Spacer (11) *(same magnetic fixture).*

8.1 Grind the top facet (Some skip this facet, but we prefer it for better visibility — and let's admit, it just looks so much more satisfying 😉).
This facet will allow you a better orientation when sharpening the side facets!

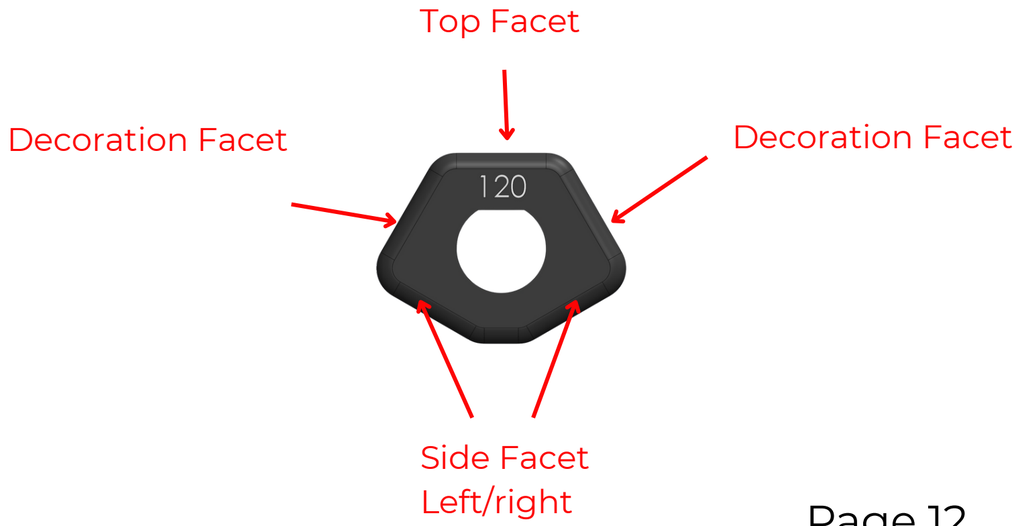


8.2 Grind the Side Facets

- Place the Receiver House ASSY with the side facet edge of the Angle Template on top of the 3 mm Spacer to grind the left and right facets.
- Left and right must get equal lenth.

8.3 Add Decorative Facets *(Optional)*

- Templates 90°, 100°, 105°, and 120° include an optional decorative facet to remove extra side material for a sharper, sleeker look.



9. Now Refine the Shape

Once the rough coarse grinding is complete, repeat the same steps using the blue (medium) Diamond Wheel to remove grinding scratches, followed by the yellow (fine) Diamond Wheel to polish the surface.

⚠️ **Note:** Do not skip any wheels, as this can cause unnecessary wear or leave grinding marks on the graver.

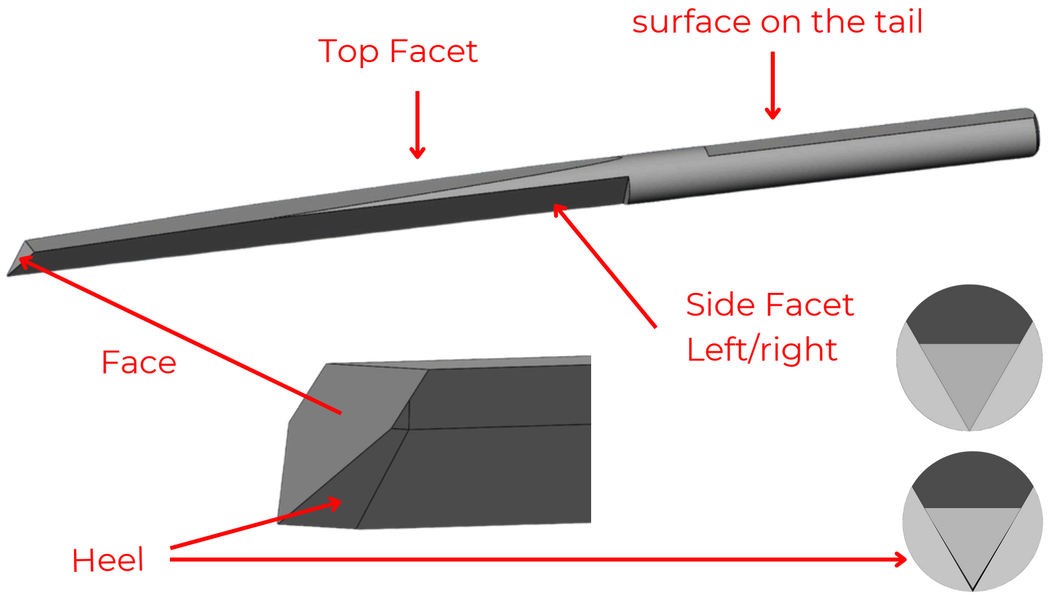
10. Add a Heel *(Optional)*

Replace the 3 mm Spacer with the 6 mm OR 15mm Spacer

- Spacer depends on the type of the work you do.
- This step requires very gentle handling, perform it using the Fine Diamond Polishing Wheel (9)

Now

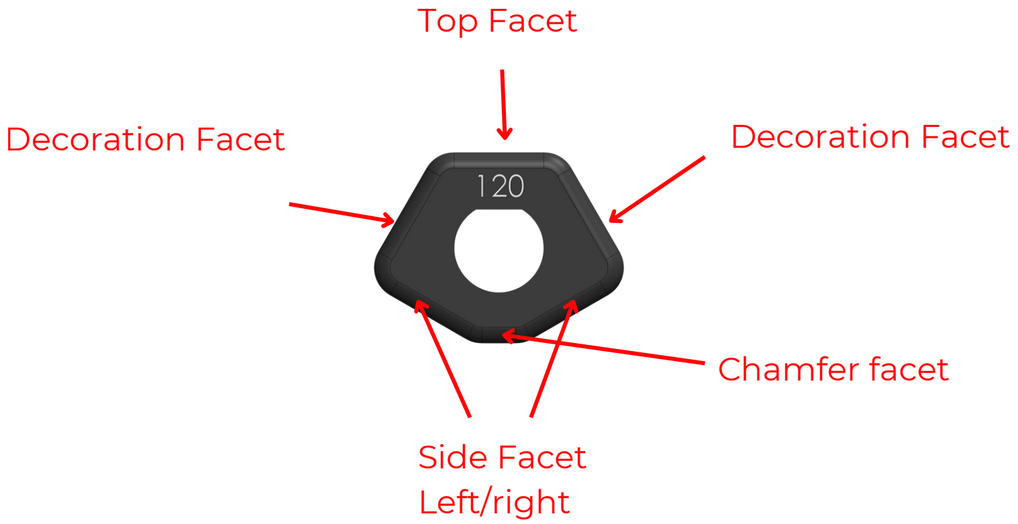
- Gently grind the left and right facets again.
- Use the Side Facet length as a visual symmetry reference — they must be equal on both sides.



11. Chamfering the Tip

Each template has a small stub facet on the bottom. This surface provides support if you wish to add a slight chamfer to the tip—for example, if your graver tends to chip when working on harder metals. This is a very delicate step, and the results depend greatly on your technique and the material you are working with. Achieving the right touch comes with practice and experience.

- Simply touch the tip lightly on the yellow (fine) Diamond Wheel — just enough to break the sharp edge without altering the geometry of the point.

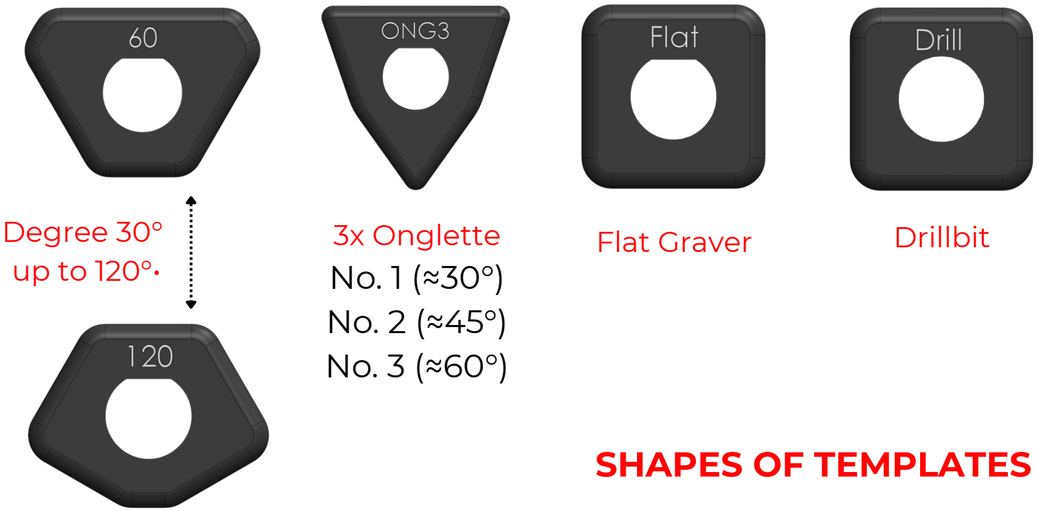


12. Drill Bits and Onglettes

The set includes several specialized templates, including one for making or modifying drill bits and others for sharpening onglette gravers.

The drill-bit template involves advanced techniques that are covered only in our professional training courses and therefore are not described in this manual.

The same sharpening principles apply to all onglette templates.



SHAPES OF TEMPLATES

The set includes several specialized templates—one for making or modifying drill bits and others for sharpening onglette gravers.

The drill-bit template uses advanced techniques taught only in our professional training courses, so it is not described in this manual.

We're not just a tool company—we're the Jura family, and we invite you to become part of it. Learn what our tools are truly meant for and get the most precision and value from your investment.

Join our training program and unlock the full potential of your tools. Become part of the Jura family and elevate your craft
@juratools.com/courses

& For now - Enjoy!