

Top 10 Rotary Tool Attachments in Jewelry Making

Visual Reference Guide & Bench Handbook to Burs, Polishers, Mandrels & Abrasives

COMPATIBLE WITH: FOREDOM FLEX SHAFTS • DREMEL • MICROMOTORS (3/32" & 1/8" SHANKS)

VISUAL STUDIO EDITION

Overview: Rotary tools and flexible shaft machines are essential in modern metalsmithing. This reference guide pairs visual profiles with grit specifications, RPM ranges, and pro bench tips for the top 10 daily attachments.

Quick Comparison & Selection Matrix

ATTACHMENT	PRIMARY APPLICATIONS	COMMON GRIT / TYPES	RECOMMENDED RPM
 1. HSS & Carbide Burs	Stone setting, carving seats	Hart, Ball, Round, Setting (70°/90°)	5,000 – 15,000 RPM
 2. Radial Bristle Discs	Detail cleaning, fire scale	80 grit down to 1-micron polish	3,000 – 10,000 RPM
 3. Silicone Polishers	Smoothing solder, pre-polish	Coarse (Grey/Black) to X-Fine (Pink)	4,000 – 12,000 RPM
 4. Diamond Cut-Off Discs	Cutting sprues, ring sizing	Ultra-thin slitting, electroplated	10,000 – 20,000 RPM
 5. Miniature Buffs & Bobs	High mirror polish w/ compound	Hard felt bobs, soft muslin wheels	3,000 – 8,000 RPM
 6. Snap-On Sanding Discs	Flat surfaces, edge truing	Emery, Garnet, Adalox (Coarse → Fine)	4,000 – 8,000 RPM
 7. Diamond Point Burs	Stones, glass, pearls, texture	Medium to fine diamond grit	8,000 – 20,000 RPM (Wet)
 8. Split Sanding Mandrels	Inside ring bands & curves	Accepts 220–2000 grit emery paper	5,000 – 10,000 RPM
 9. Miniature Wire Brushes	Satin finish, casting clean-up	Crimped brass, stainless steel wire	2,000 – 5,000 RPM (Low)
 10. Rotary Flap Wheels	Inside curve blend, deburring	80, 120, 240, 320, 400 aluminum oxide	5,000 – 12,000 RPM

Detailed Breakdown: Top 10 Attachments



1 High-Speed Steel (HSS) & Carbide Setting Burs

STONE SETTING & CARVING

Fundamental cutting tools for bench jewelers. Available in exact geometric shapes engineered for clean metal removal and stone seating.

- **Hart / Bearing Burs (45° & 70°):** Cut perfect bearing grooves in prongs and bezel walls for faceted stones.
- **Ball / Round Burs:** Excellent for hollowing, texturing, opening pilot holes, and seat prep.
- **Setting Burs:** Cut crisp flat-bottomed or conical seats for flush and gypsy settings.

Shank: Standard 3/32" (2.35mm)

Metals: Gold, Silver, Platinum, Brass

Pro Tip: Always coat burs with bur lubricant (e.g., BurLife) to reduce friction heat and double tool lifespan.



2 Radial Bristle Discs (3M™ Sunburst™)

CLEANING & FINISHING

Embedded with ceramic abrasive grain throughout the plastic bristles. They conform effortlessly to intricate filigree and textures without rounding crisp edges.

- **No Compound Needed:** Pre-charged abrasive cleans fire scale, deburrs, and polishes dry.
- **Stackable:** Mount 3 to 6 discs together on a screw mandrel for wider coverage.
- **Color-Coded Grits:** Yellow (80 grit), White (120), Red (220), Blue (400), Pink (Pumice), Light Green (1-micron).

Shank: Screw Mandrel (3/32")

Best For: Castings, tight corners, filigree

Pro Tip: Mount bristles curving away from rotation direction. Use featherlight pressure.



3 Silicone & Rubber Polishing Wheels, Points & Discs

PRE-POLISH & SMOOTHING

Flexible silicone rubber bound with graded abrasives (EVE, Dedeco, Cratex). Essential for erasing file scratches and smoothing joints before final buffing.

- **Knife-Edge Wheels:** Get directly into inside prongs, prong bases, and tight junctions.
- **Bullet & Cylinder Points:** Ideal for inside ring shanks, bezel interiors, and concave curves.
- **Multi-Step System:** Coarse (grey/black) → Medium (brown) → Fine (green) → Extra-Fine (pink).

Shank: Mounted (3/32") or Unmounted

Metals: All precious & non-ferrous alloys

Pro Tip: Keep the polisher moving constantly across the metal surface to avoid creating flat spots.



4 Diamond Cut-Off & Separating Discs

CUTTING & SIZING

Ultra-thin steel discs electroplated with diamond grain. Far safer and more durable than brittle silicon carbide slitting discs.

- **Sprue Removal:** Cuts through thick casting sprues close to the piece with minimal gold/silver kerf waste.
- **Ring Sizing:** Creates clean, parallel square cuts through ring shanks without bending the band.
- **Precision Slitting:** Ultra-thin kerf profiles down to 0.15mm – 0.30mm for tight tolerances.

Mount: Reinforced Screw Mandrel

Safety: Wear eye protection

Pro Tip: Never apply lateral side force during a cut; let the diamond grit cut smoothly with light, straight passes.



5 Miniature Felt & Muslin Buffs

FINAL HIGH POLISH

Rotary buffs loaded with specialized compounds (Tripoli, Dialux, Zam, Rouge) to polish small recesses and inside surfaces bench lathes cannot reach.

- **Hard Felt Bobs & Cones:** Preserves crisp edges on flat signet tops, bezels, and channels without rounding.
- **Soft Flannel & Muslin:** Creates mirror-like clarity on domed surfaces, prongs, and under-galleries.
- **Dedicated Buffs:** Never cross-contaminate coarse and fine compounds on the same buff.

Compounds: Tripoli, Zam, Rouge, Dialux

Shank: 3/32" Mounted Mandrels

Pro Tip: Charge compound lightly onto spinning buffs; excess compound cakes into crevices and requires ultrasonic cleaning.



6 Snap-On Sanding Discs (Moore's Discs)

RAPID STOCK REMOVAL & FLATTENING

Flexible brass-centered paper or plastic discs that snap instantly onto a dedicated mandrel. Unmatched for rapid edge truing and prong leveling.

- **Grit Media:** Sand, Emery, Adalox (aluminum oxide), and Garnet in Coarse to Extra-Fine.
- **Reversible:** Can be mounted grit-facing inward or outward to reach awkward angles.
- **Instant Swap:** Pop off worn discs in one second without unthreading screws.

Mount: Moore's Snap-On Mandrel

Sizes: 1/2", 5/8", 3/4", 7/8" diameter

Pro Tip: Use the flexible outer perimeter to blend smooth bevels on prong tips and bezel tops.



7 Diamond Coated Points & Micro-Drills

HARD MATERIALS & GEMSTONES

Solid steel shafts electroplated with industrial diamond grit. Essential for working on materials that dull standard steel burs instantly.

- **Gemstone Modifications:** Adjusting gemstone girdle seats, modifying cameos, or carving stones.
- **Pearl & Bead Drilling:** Diamond twist and core drills create clean holes in pearls without chipping nacre.
- **Sparkle Matte Texture:** Creates stipple and starlight textures on finished metal.

Shank: 3/32" (2.35mm)

Media: Pearls, Enamel, Glass, Gems

Pro Tip: Always drill wet (submerged in water or drip lube) to prevent heat build-up and thermal shock cracking.



8 Split Mandrels & Cartridge Sanding Rolls

INSIDE RING FINISHING

A slotted steel shaft that accepts strips of standard wet/dry abrasive paper (220–2000 grit) rolled tightly around the stem.

- **Custom Grits:** Use any specialty polishing paper, micro-mesh, or emery sheets.
- **Inside Ring Bands:** The most economical tool for smoothing and rounding inner comfort curves.
- **Tapered vs. Straight:** Tapered mandrels allow quick entry into smaller ring finger sizes.

Shank: 3/32" or 1/8" Steel Stem

Cost Efficiency: Highest in the workshop

Pro Tip: Wrap the paper in the same direction the motor spins so centrifugal force keeps the roll tight.



9 Miniature Wire Scratch Brushes (Brass & Steel)

MATTE FINISH & CLEAN-UP

Rotary brushes fitted with fine crimped brass, stainless steel, or nickel silver wires for surface texturing and decontamination.

- **Brass Wire:** Gentle on precious metals; produces a soft satin sheen when lubricated with soapy water.
- **Stainless Steel:** Strips stubborn investment from raw castings and creates a clean frosted finish.
- **End & Cup Shapes:** Reaches deep recesses of hollowware and filigree baskets.

Operating Speed: Low RPM (< 4,000)

Shapes: Wheel, Cup, End brush

Pro Tip: Never run dry on high polish work. Use with mild soapy water to prevent dark metal galling marks.



10 Abrasive Flap Wheels & Ceramic Mini-Caps

CONTOUR GRINDING & BLENDING

Constructed from dozens of overlapping abrasive cloth flaps mounted radially. Fresh abrasive continuously exposes as outer edges wear down.

- **Consistent Cut:** Delivers uniform surface blending without gouging risks associated with rigid drums.
- **Curved Surfaces:** Conforms smoothly over bracelet curves, ring shanks, and organic forms.
- **Deburring Castings:** Blends parting lines and sprue stumps into the piece seamlessly.

Grits: 80, 120, 240, 320, 400

Diameters: 3/4" to 1-1/4"

Pro Tip: Excellent for blending uneven solder joins on thick cuffs without flattening round wire profiles.

Rotary Tool Studio Safety & Bench Best Practices

- **Eye Protection:** Always wear impact-rated safety goggles. Burs and discs spin at high RPM and can throw sharp metal burrs.
- **Hair & Clothing:** Tie back long hair, remove necklaces, and roll up loose sleeves to prevent snagging in the handpiece.
- **Lubrication:** Use beeswax or BurLife on burs and cut-off discs to keep cutting friction and temperatures low.
- **Collet Fit:** Match your handpiece collet precisely to your shank size (3/32" vs 1/8") to prevent slippage or runout.