Battistone 2-Handle Conversion Guide (V3.0)
RSR Hybrid G/Flex Internal + JB Weld Collar Edition

Step-by-Step Battistone Conversion Guide & Schedule
Developed by David Evans for Rock Solid Results (RSR)
Version 3.0 — November 18, 2025

Battistone 2-Handle Conversion Guide (V3.0)
RSR Hybrid G/Flex Internal + JB Weld Collar Edition

OVERVIEW

This guide provides the complete and optimized workflow for converting a standard tennis racket into the Battistone 2-Handle system using:

Internal Structural Epoxy (Primary Joint):
- West System G/Flex 650 + 403/406 fillers

Collar Epoxy (External Reinforcement):
- JB Weld Original (hard-shell collar)

Why Two Epoxies Instead of One?
Because no single epoxy gives you BOTH the flexibility needed inside the frame and the rigid support needed at the collar. The hybrid system solves both problems:
- G/Flex 650 (internal bond):
  High peel strength, high toughness, ideal for carbon/composite flexing.
- JB Weld (external collar):
  Rigid, heat-resistant, prevents rim flare and distributes stress.

Internal Bond – G/Flex 650
- Flexible, high peel strength (prevents separation under twisting).
- Absorbs vibration and frame flex.
- Bonds extremely well to graphite, foam, and composite walls.
- Ideal for the load path INSIDE the throat where flex and shock occur.

External Collar – JB Weld Original
- Rigid, strong in compression and hoop-support.
- Limits rim expansion and reduces peel forces on the internal epoxy.
- Better heat resistance for the exposed outer collar.
- Creates a stable, long-lasting mechanical brace.

Why This Matters to the Customer
Rackets experience:
- Twist forces
- Rim flare
- Impact shock
- Heat from sun and storage

The hybrid system is engineered so each epoxy is used where it performs best:
- G/Flex = toughness and vibration absorption.
- JB Weld = structural stability and heat resistance.

Results:
- Stronger, longer-lasting, more stable Battistone conversion than previous methods.
- Matches professional standards while keeping the feel and safety of the frame and arm.

START-UP TOOLS (One-Time Purchase)

Tool	Cost	Notes
DeWalt Chop Saw	$250	Handle Cutoff
Dremel Rotary Tool Kit	$100	Prep & Shaping
Wire Brush + 80/120 Grit Drums	$20	~60¢ Per Job
1/8” Drill Bit	$5	Tape Rivet Holes
1/8” Hole Punch	$10	Tape Hole Punch
Non-Marring Clamps	$20	Alignment
Digital Heat Gun	$80	Post-cure
IR Thermometer (optional)	$21	Surface Temps

Total Tools: $506 (~$5/Job Across 100+ Conversions)

CONSUMABLES (Per Racket)

Item	Cost	Notes
G/Flex 650 (internal)	$8	25ml
403 + 406 Fillers	$2	Microfibers + Silica
JB Weld Original (collar)	$6	Full Collar Batch
Black Epoxy Pigment	$1	5 Drops HTVRONT
Painter's Tape 90%+ Alcohol Syringes	$5	Shared

Total Consumable Cost Per Racket: ~$22

STEP 1 — HANDLE CUTOFF & PREPARATION

1. Cut off original handle with clean, straight cut.
2. Remove all foam and paint until raw carbon is exposed.
3. Wire-brush shaft to bare composite (add 3mm above socket).
4. Ensure 1.75” shaft insertion depth.
5. Dry-fit into Battistone socket; adjust as needed.
6. Drill 6 × 1/8” epoxy rivet holes:
    a. 4 holes ≈ ½” from rim (all 4 sides)
    b. 2 holes ≈ 1” down on logo sides (only 2 sides)
7. Prep racket shaft and handle socket interior with 80-grit.
8. Wipe shaft and socket with alcohol.
9. Mask off shaft and handle at margins using painter’s tape.
   Note: Use hole punch on painter’s tape to allow epoxy to exit rivet holes.

Battistone 2-Handle Conversion Guide (V3.0)
RSR Hybrid G/Flex Internal + JB Weld Collar Edition

STEP 2 — CONTINUOUS TIMELINE (Start → Finish)

This is a complete and uninterrupted workflow.
Print and Note Date and Time that you mix epoxy on Checklist
(Find on last page of this document)

T = 0:00 — MIX INTERNAL G/FLEX EPOXY

1. 1:1 resin and hardener
2. Add 403 microfibers + 406 silica until ketchup-thick
3. Mix for ~2 minutes

This batch is only for the internal structural bond.

T = 0:00 to 0:05 — APPLY INTERNAL G/FLEX EPOXY

Critical: These steps must all be completed in the first 5 minutes of mixing.

1. Load G/Flex into socket
2. Push epoxy into rivet holes
3. Coat shaft evenly along 1.75” overlap
4. Insert shaft fully
5. Clamp for correct alignment

T = 0:15 to 0:25 — MIX COLLAR JB WELD EPOXY

Collar batch is mixed AFTER internal is clamped

Mix a fresh batch of JB Weld:

1. Mix 1:1
2. Mix for 60–90 seconds
3. Let thicken for 5–10 minutes
4. Target Viscosity: peanut-butter-thick

✔ Internal and collar batches are always separate.
✔ Timing ensures the collar is perfect thickness.

T = 0:25 to 0:40 — APPLY COLLAR JB WELD EPOXY

1. Apply ~4-5mm tall and 1-2mm thick collar around the socket rim
2. Smooth and compress evenly
3. Shape with gloved finger or tool
4. Ensure clean, uniform ring
5. Leave clamped

JB Weld forms a strong, durable hard-shell collar.

STEP 3 — Cure & Finish Primary Bond

T = 4:00 to 6:00 — REMOVE TAPE

Remove painter's tape before it fuses into the epoxy:

- Slow pull
- 45° angle

T = 8:00 to 12:00 — GRIND & SMOOTH COLLAR

This is the ideal sanding window (JB Weld is firm but not brittle).

Use Dremel:

- 80-grit drum for shaping
- 120-grit for smoothing

STEP 4 — Post-Cure Heat Treatment

T = 24:00 to 30:00 — POST-CURE HEAT CYCLE

G/Flex Internal = composite-safe temperature:

- 118–122°F surface temperature
- Heat gun on LOW
- 8–10” distance
- 5 min ON / 5 min OFF × 3 cycles
- Rotate gently for even heat

Purpose of heat cycle:

- Improves cross-linking
- Increases fatigue resistance
- Hardens surface for longevity

T = 72:00 — READY TO PLAY

After 72 hours:

✔ Internal G/Flex fully cured
✔ JB Weld collar fully cured
✔ Max impact strength reached
✔ Vibration control optimized
✔ Torsion and peel resistance at full strength
✔ The racket is now 100% ready for match play!

Battistone 2-Handle Conversion Guide (V3.0)
RSR Hybrid G/Flex Internal + JB Weld Collar Edition

Battistone 2-Handle Conversion Checklist (Print)

Date: _____ Time: _____

Notes: _____

STEP 1 — HANDLE CUTOFF & PREPARATION

- ☐ **Handle Cut and Prepared**

STEP 2 — Mix & Apply Primary + Collar

- ☐ **+0:00 hours: Mix Internal Epoxy (G/Flex 650 + 403 + 406)**
- ☐ **+0:00 to +0:05 hours: Apply Internal Epoxy**
- ☐ **+0:15 to +0:25 hours: Mix Collar Epoxy (JB Weld Original — FRESH batch)**
- ☐ **+0:25 to +0:40 hours: Apply JB Weld Collar (Wet-on-Gel)**

STEP 3 — Cure & Finish Primary Bond

- ☐ **+4:00 to +6:00 hours: Remove Tape**
- ☐ **+8:00 to +12:00 hours: Grind & Smooth Collar**

STEP 4 — Post-Cure Heat Treatment

- ☐ **+24:00 to +30:00 hours: Apply Heat Cycles — G/Flex Internal Temperature**

STEP 5 — Final Cure & Ready to Play

- ☐ **+72:00 hours (3 Days): Ready for Full Use**
  - G/Flex internal reaches full structural cure
  - JB Weld collar fully hardened
  - **The racket is now 100% ready for match play!**