

# **Polishing MT-SM Ferrule Directly on Angle Fixture**

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## Purpose

To provide complete guidelines how to polish MT ferrule-SM (*non pre-angle ferrule*) directly by using angle MT fixture (*AMT fixture*).

## Overview

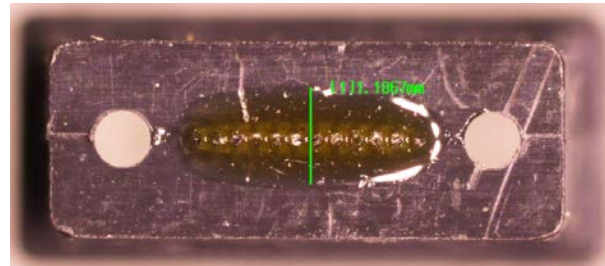
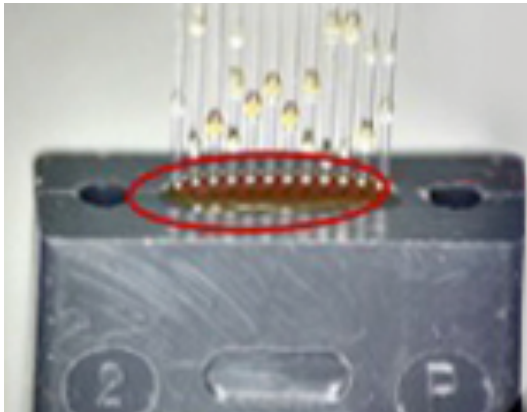
These guidelines only apply to MT non pre-angle ferrule.

## Epoxy Bead Size Recommendation

Epoxy bead must encapsulate the fibers completely at the ferrule/fiber bond. For more detail, see Senko recommended engineering note "MT Epoxy Injection Note". *See below.*

1 Epoxy bead should be appx 0.2mm thick.

2 Epoxy bead should be appx 1.2mm wide



2 Epoxy bead should not extend to the guiding holes as this can cause the guiding holes get contaminated.



Figure A: Good example of epoxy bead.

Figure B: Improper bead shown – Epoxy should not wick into the holes.

## Polishing Directly on the Angle Fixture

### Polishing Preparation

**1** Prior to loading ferrules into the polishing fixture, there should not be any excessive epoxy into the MT ferrule window. Excess epoxy in the MT ferrule window can cause improper loading of ferrules on the fixture which can cause bad polishing and 3D geometry.

**2** Load the ferrule directly into angle fixture and make sure all ferrules are loaded properly. During ferrule loading into the fixture, press the ferrule fully down and then tighter the Torque screw. Different fixture has different fixing mechanism. Make sure all ferrules are at same height after loading in the ferrules into the fixture. Inconsistence height can cause some ferrules are over polished and some are not polished enough.

**3** Epoxy beads must be hand polished using 30um or 15um Silicon film to reduce the bead height and should have even size. Operator must do this step once ferrules are loaded on the fixture.

**4** Hand polished bead sizes should be uniform with the polishing fixture for best results. See below image for guidance.



Figure C: Consistent bead size

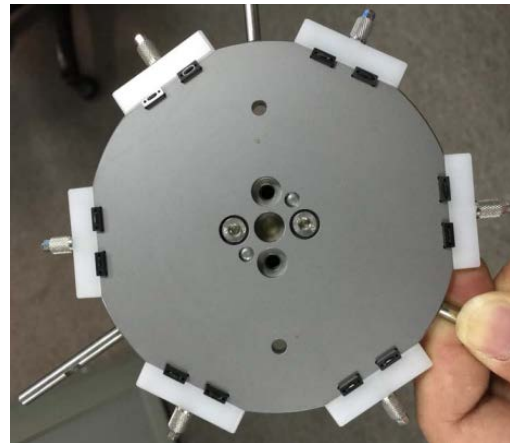


Figure D: Consistent bead size throughout fixture

### Polishing on the Angle Fixture

**1** Follow Senko recommended polishing procedure. Senko recommended polishing procedure designed for APC 8000. If operation is using different polishing machine, procedure can vary machine to machine, so slight pressure and time adjustment are needed depend on the machine.

**2** MT SM ferrule polishing procedure for APC8000 is given below as guidance.

Step No/ Operation	Film PN	Time (Sec)	Water	Grams Force	Pad Type	RPM	Film life
1. Epoxy	LFSIC-150-50R-P	60	Spray	350	Glass plate	100	
2. Angle Cut	LFSIC-150-50R-P	60	Spray	450	Glass plate	100	1
3 Rough Polish	LFSIC-030-50R-P	60	Spray	450	Glass plate	100	1
4. Step 4	LFFSC-030-50R-P	60	Spray	500	Glass plate	100	1
5. Step 5	LFFAO-010-50R-P	100-120	Spray	500	Glass plate	100	1
6. Step 6	LFFCO-005-50R-P	100-120	Spray	500	Glass plate	100	1

**Note 1:** If the epoxy bead is too big and epoxy is spread all over the ferrule, you cannot polish MT ferrule SM directly on the angle fixture. See Senko recommended procedure “MT Ferrule Epoxy Injection Application Note.”

**Note 2:** For detail, please see the Senko Polishing Procedure.