



GF Machining Solutions

Microlution

Sample Ablation Catheter Tips

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Overview



- Microlution ML5
 - 5-Axis motion platform
 - GF Femto FlexiPulse Laser
 - 5-Axis laser scanhead
- Part
 - Ablation catheter tips
 - Material – Stainless steel
 - 29 laser drilled features
 - Overall cycle time < 1.5 minutes
 - Includes part measurement and compensation

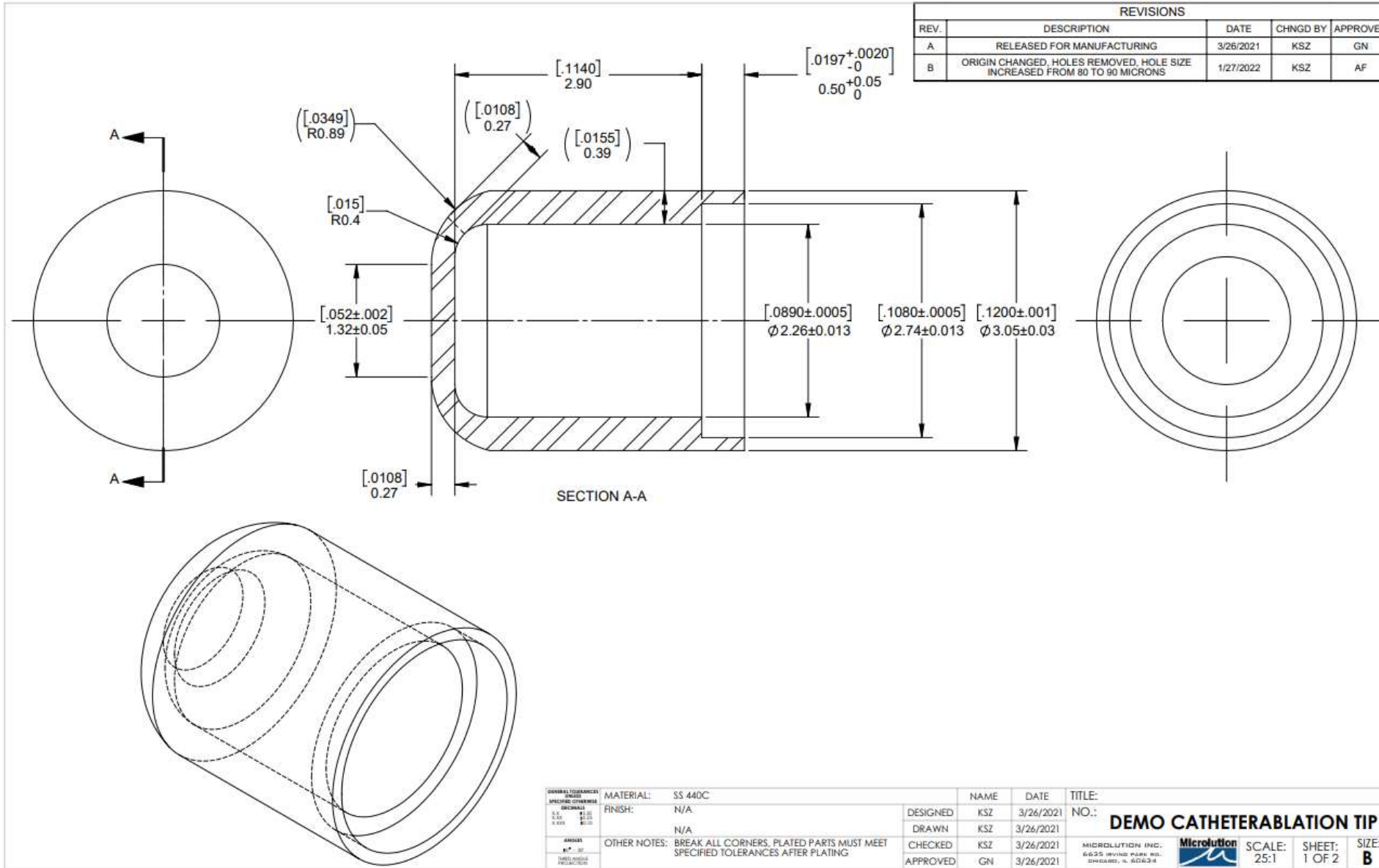


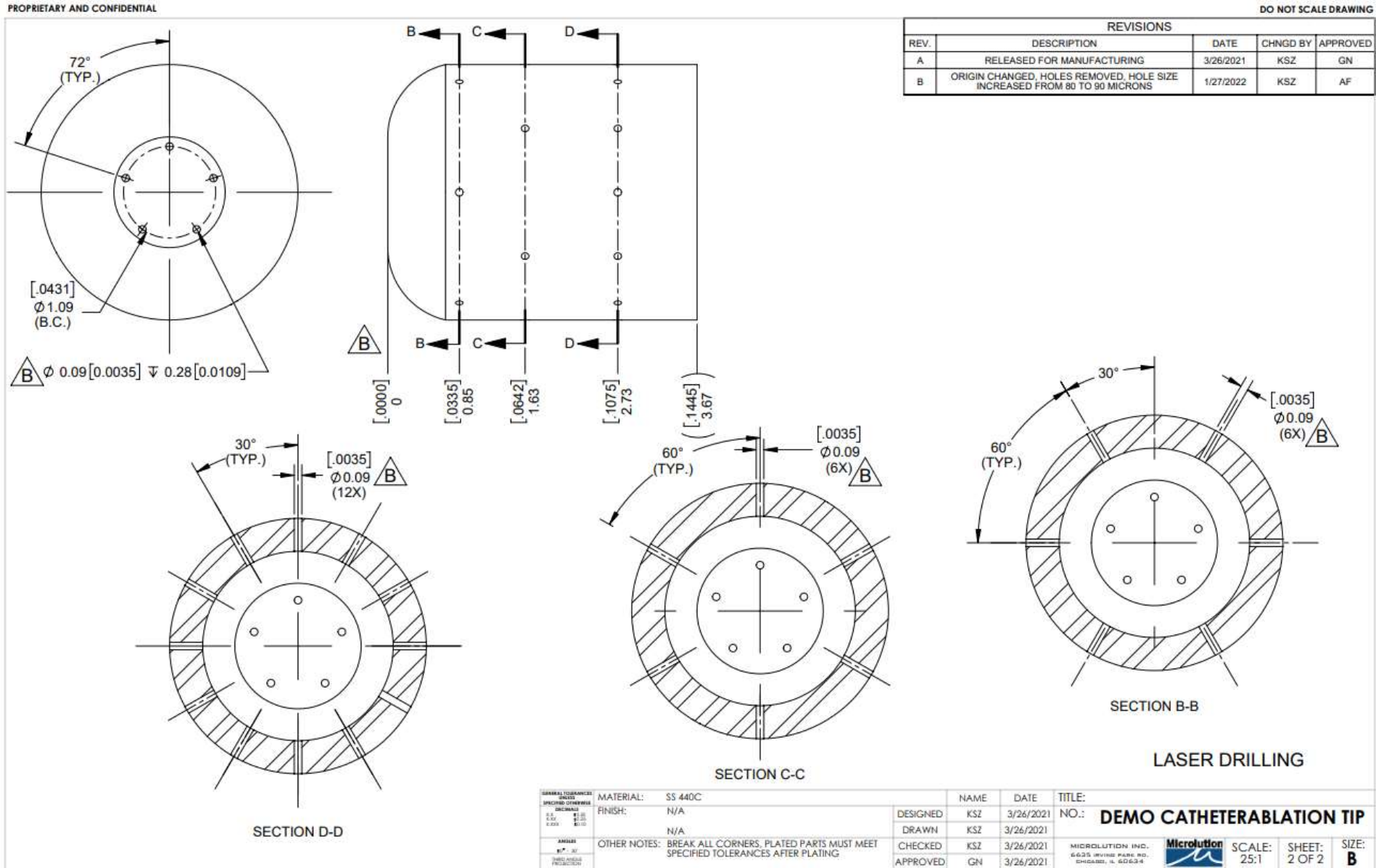
Print – Page 1



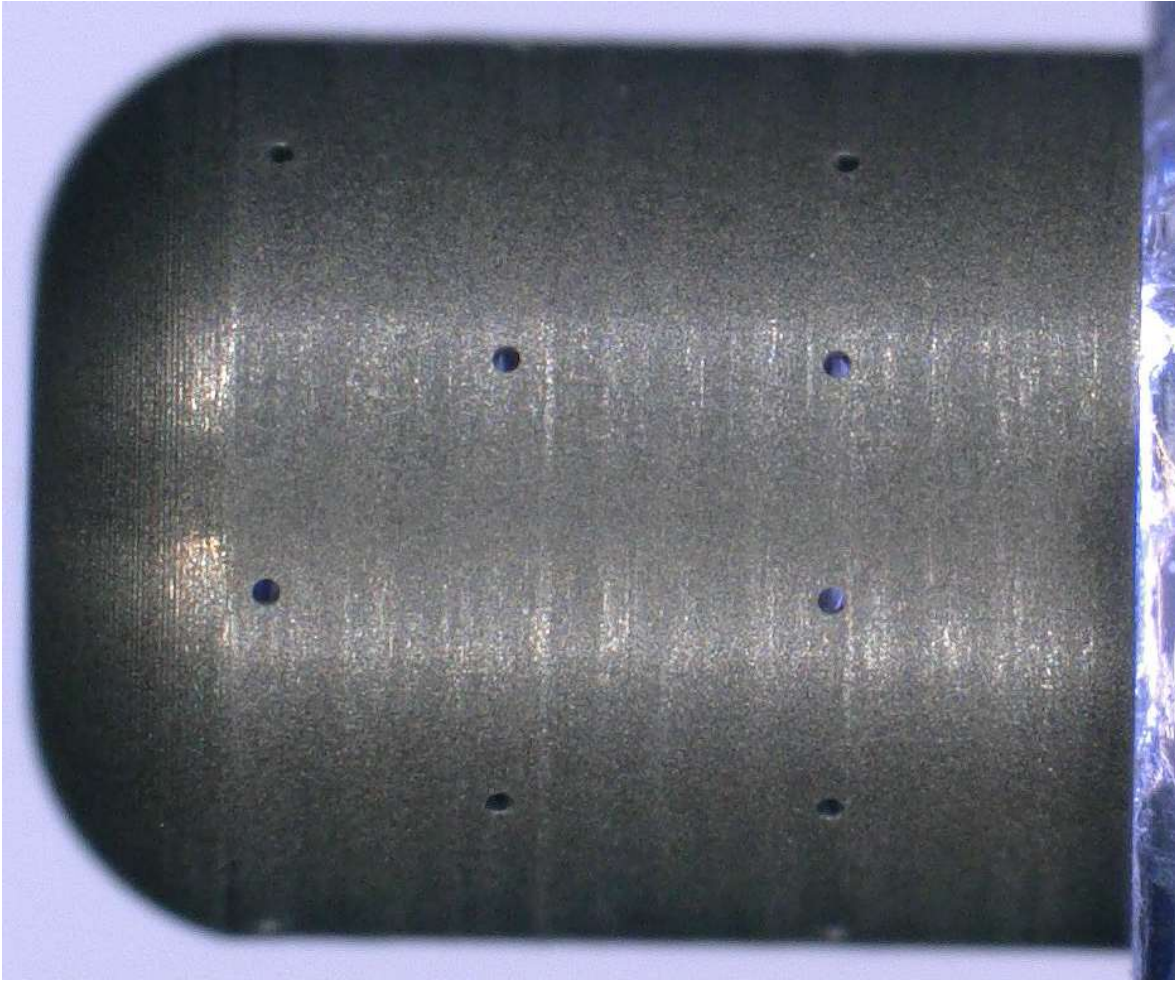
PROPRIETARY AND CONFIDENTIAL

DO NOT SCALE DRAWING





Low Magnification Images

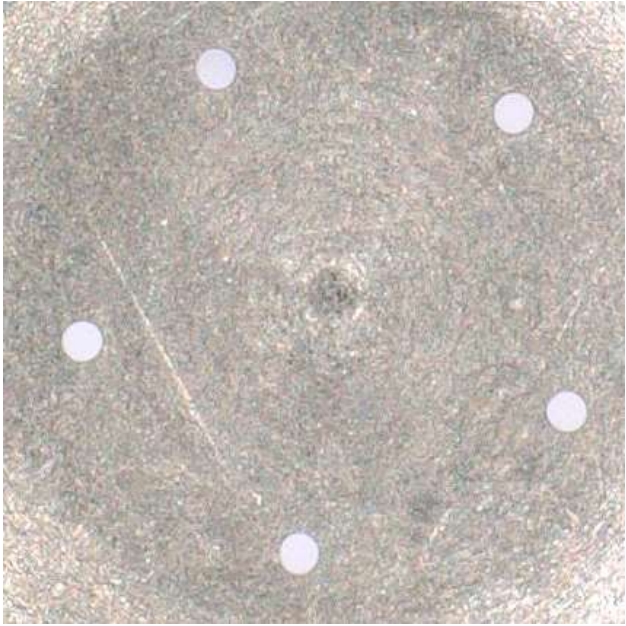
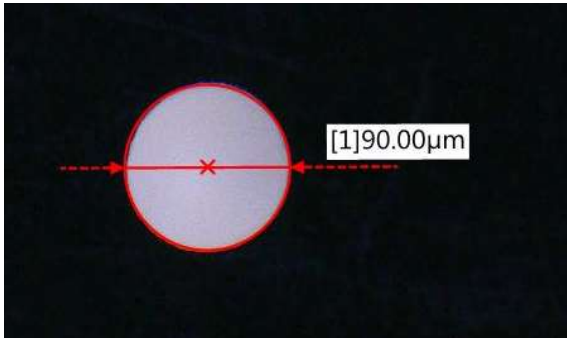


Images – Row A

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Row A



Images – Rows B, C, & D

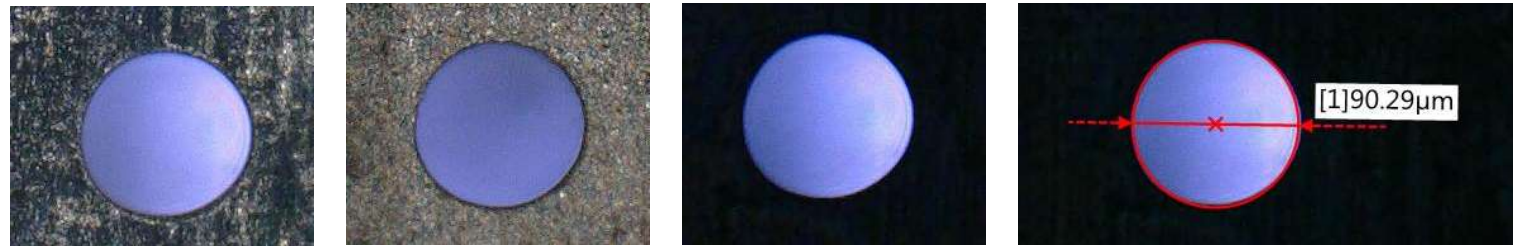
Row B



Row C



Row D



Part Measurements



| | | Average | Median | Max | Min | Range | Std. Dev |
|-----------------|---------------------------|---------|---------|---------|---------|-------|----------|
| Holes | Section A Entrance | 89.52 | 89.32 | 92.67 | 88.03 | 4.64 | 0.9574 |
| | Section A Exit | 90.81 | 90.72 | 93.19 | 88.75 | 4.44 | 0.8719 |
| | Section B | 90.31 | 90.32 | 91.94 | 88.36 | 3.58 | 0.8864 |
| | Section C | 90.16 | 90.09 | 91.91 | 88.37 | 3.54 | 0.7609 |
| | Section D | 89.94 | 89.93 | 92.94 | 87.62 | 5.32 | 0.8800 |
| | Overall | 90.11 | 90.11 | 93.19 | 87.62 | 5.57 | 0.9465 |
| Distance | Top to Section B | 852.66 | 853.20 | 858.63 | 845.69 | 12.94 | 4.4946 |
| | Top to Section C | 1631.43 | 1630.39 | 1639.11 | 1625.62 | 13.49 | 4.3601 |
| | Top to Section D | 2729.17 | 2729.28 | 2736.76 | 2721.94 | 14.82 | 4.3130 |

- All measurements are in units of microns
- The first 5 parts were measured and then 1 part from every batch of 5
- All parts were inspected

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Thank you



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**Passion for
Precision**