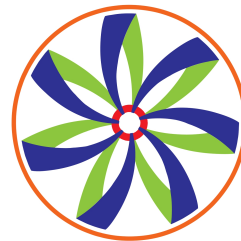


MMBT by Metro CAD Achieves World's First 11-Micron Stainless Steel Braid Opening New Frontiers in Innovation

MMBT achieves world's first 11-micron stainless steel braid, 3,603 MPa strength, unlocking ultra-strong, flexible solutions for medical, aerospace, electronics.

MAPLE GROVE, MN, UNITED STATES, October 1, 2025 /EINPresswire.com/ -- In a world-first, MMBT by Metro CAD, a leader in precision micro-braiding technology, has [successfully created a braid](#), using BenderWire 304NX stainless steel wire, with a tensile strength of 3,603 MPa, at an ultra fine diameter of just 11 microns (0.000433"). This groundbreaking capability pushes the limits of material engineering and paves the way for innovations across multiple high-tech industries.



Medical
Microtech
Braider
Technology

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MMBT By Metro CAD LOGO

“

Achieving a consistent 11-micron braid without breakage proves we can deliver ultra-strong, ultra-fine structures for real-world use.”

Scott Metcalf, Senior Braider Technician at MMBT by Metro CAD

The achievement was made possible on an unmodified [MMBT16CHFVB](#) 16-carrier Horizontal Braiding Machine, demonstrating the robustness and precision of MMBT by Metro CAD's proprietary braiding process. Visit Booth 3801 at MD&M Midwest to see MMBT16CHFVB perform live. BenderWire 304NX stainless steel wire was manufactured by Heinrich Stamm GmbH (Iserlohn, Germany) and provided via Sebastian Ablas & Carina Stoppel.

“When you're working at this scale, the margin for error is smaller than a speck of dust,” said Scott Metcalf, Senior Braider Technician at MMBT by Metro CAD, who led the

effort. “Achieving a consistent 11-micron braid without breakage proves we can deliver ultra-strong, ultra-fine structures for real-world use.”

Why This Matters

MMBT by Metro CAD's breakthrough overcomes long-standing challenges in micro-scale braiding, including wire breakage and material limitations. The result is ultra-high-strength micro braids with exceptional corrosion resistance — enabling lighter, more durable, and more flexible components than ever before.

Potential Applications

- Medical Devices – Microcatheters, neurovascular coils, guidewires, and flexible shafts
- Aerospace & Defense – Micro EMI shielding braids, sensor cables, and thermal meshes
- Electronics & Semiconductors – Ultra-fine bonding wire alternatives and micro cable assemblies
- Robotics & Wearables – Micro actuation tendons and precision flex cables
- Specialty Markets – Premium fishing tackle leaders, ultra-light sporting goods

Imagine a neurovascular coil thinner than a strand of hair that could save a life — or a micro EMI shield capable of protecting next-generation aerospace sensors. That's the scale of what's now possible.

An Open Call for Collaboration

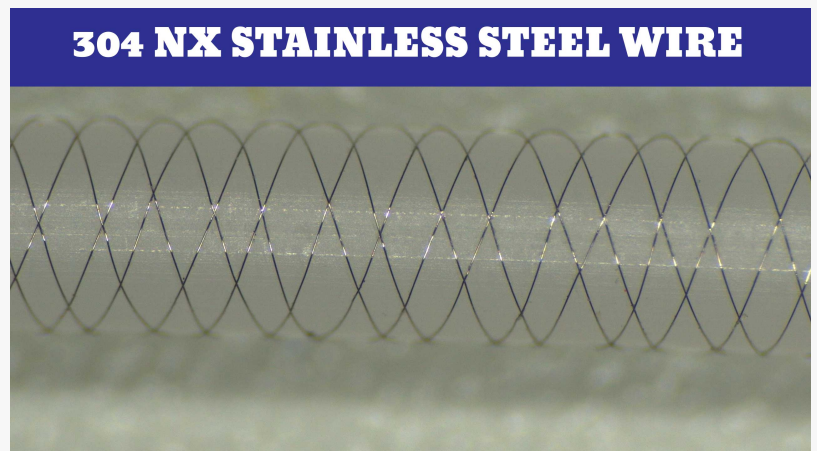
MMBT by Metro CAD offers prototype sample reels, collaborative development programs, and contract manufacturing for specialty braided microstructures. The company invites medical device developers, aerospace engineers, electronics manufacturers, and other innovators to explore how this technology can transform their products.

[About MMBT](#) by Metro CAD

Located in Maple Grove, Minnesota, MMBT by Metro CAD specializes in precision braiding and micro-scale advanced materials manufacturing, providing custom-engineered solutions to



MMBT16CHFVB Braider With Microscope Camera



304-nx-11-micron-stainless-steel-wire

industries worldwide.

Please feel free to contact us at EMAIL or PHONE or follow us on SOCIAL MEDIA CHANNELS, to learn more.

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