

FLX

CARBIDE TOOL GRINDING



 STAR CUTTER



FLX: FLEXIBILITY, IT'S MORE THAN JUST THE NAME

With a long-standing reputation for grinding innovation, Star Cutter developed the FLX to deliver faster, more efficient carbide tool production while maintaining the precision and repeatability needed across a wide range of tools—from end mills and drills to boring bars and form cutters. Designed with real-world operator needs in mind, the FLX features a modular footprint and thoughtful design details that enhance ease of use, accessibility, and overall grinding performance.



OPERATOR-FRIENDLY DESIGN

The machine features multiple access doors to maximize accessibility and simplify maintenance, complemented by a large touchscreen panel for easy setup and intuitive programming.

FLEXIBLE SPINDLE OPTIONS

Choose from two spindle configurations to handle a wide range of carbide grinding tasks—from general manufacturing and regrinding to large scale production.

WIDE TOOL CAPABILITY

FLX is engineered to grind both small and large diameter tools, with a sweet spot in the range of 9" length and 1" diameter.

CONSISTENT, HIGH-PRECISION OUTPUT

Designed for high-volume production, the FLX maintains tight tolerances even in harsh environments—ensuring dependable results no matter the conditions.



MODULARITY FOR AUTOMATION WHEN YOU'RE READY

FLX is built to evolve with your operation. Its modular architecture is designed for scalability, allowing key features—such as automation—to be added easily in the field with minimal disruption. Whether you're looking to boost output or adapt to growing production demands, FLX makes it simple to upgrade.

AUTOMATION-READY

The FLX automation bay is fully modular, designed to support both high-volume unattended machining and true lights-out manufacturing.

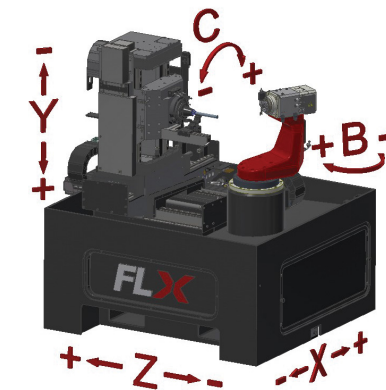
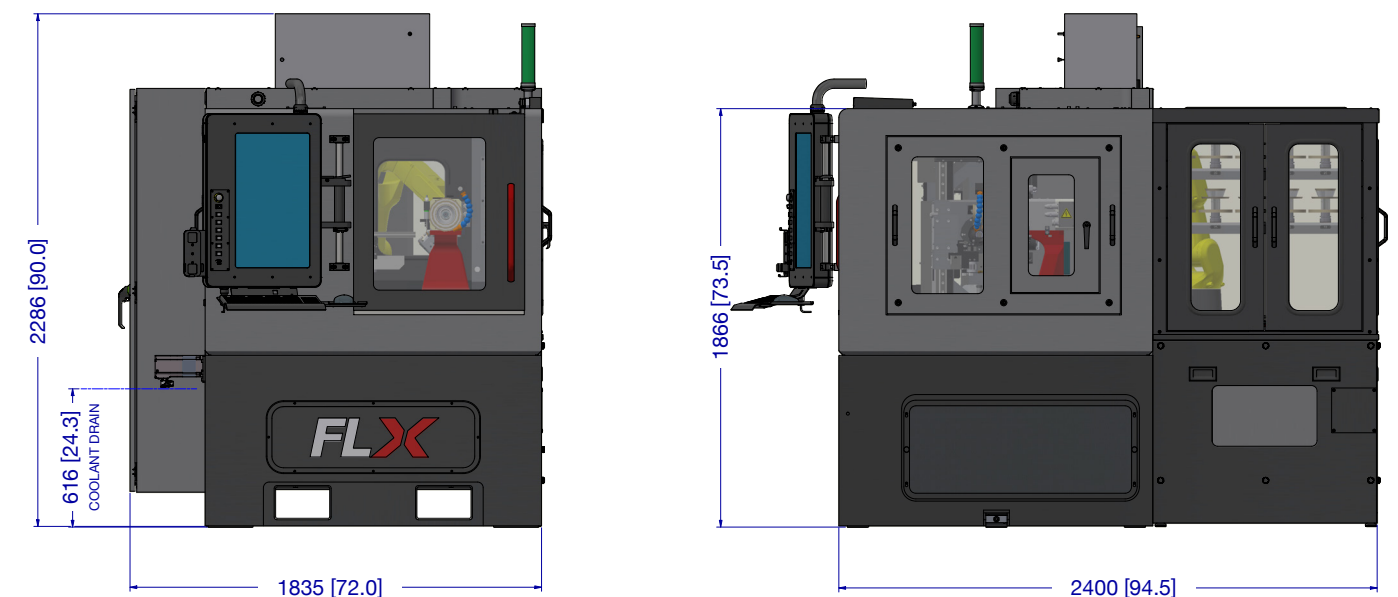
- Two wheels (up to 15 with automation)
- Magazine design reduces changeover time by 30% compared to standard solutions
- Automatically loads parts from 3–20 mm (0.118–0.787 in.) in diameter and up to 228 mm (9 in.) long, with pallet capacities of up to 1,105 parts depending on part size

RIGHT SIZED FOR ANY FLOOR

Big performance, compact footprint. FLX is ideal for busy shops where every square inch counts.

- Compact design
- Base model footprint: 72.0" W x 55.0" D
- With automation: 94.5" D
- Height: 73.5"
- Weight: 7,000 lbs. (9,000 lbs. with automation)

FLX not only fits easily into tight spaces—it also fits your budget. This value-priced solution delivers performance that outpaces industry-standard machines, at a cost that makes automation more accessible than ever.





SOFTWARE ENGINE: *flexium^{pro}*

At the heart of the FLX is the FlexiumPro® CNC—a powerful, next-generation control platform designed to optimize grinding efficiency and flexibility.

- Up to 10x faster processing than previous generations
- 32-axis or spindle control capability
- 3D simulation and elevation drawing creation
- Extensive probing cycles for tool and wheel measurement
- In-process wheel dressing and adaptive grinding
- Job control features for streamlined operations
- Improved data security and system reliability
- Lower power consumption and smaller electrical panel
- Preserves behavior and functions of NUM's Flexium+ CNC system

SPECIFICATIONS

MACHINE FOOTPRINT

- Base Model: 72.0" (L) × 55.0" (W) × 73.5" (H)
(1,829 mm × 1,397 mm × 1,862 mm)
- With Automation: 72.0" (L) × 94.5" (W) × 73.5" (H)
(1,829 mm × 2,400 mm × 1,862 mm)
(15% smaller than the Star Cutter NXT model)

WORKPIECE SIZE CAPACITY

Sharpening / Handload

- Max Diameter: 4" (100 mm)
- Max Length: 9" (228 mm)

New Manufacturing / Autoload

- Max Diameter: 1" (25 mm)
- Max Length: 9" (228 mm)

MACHINE TRAVEL

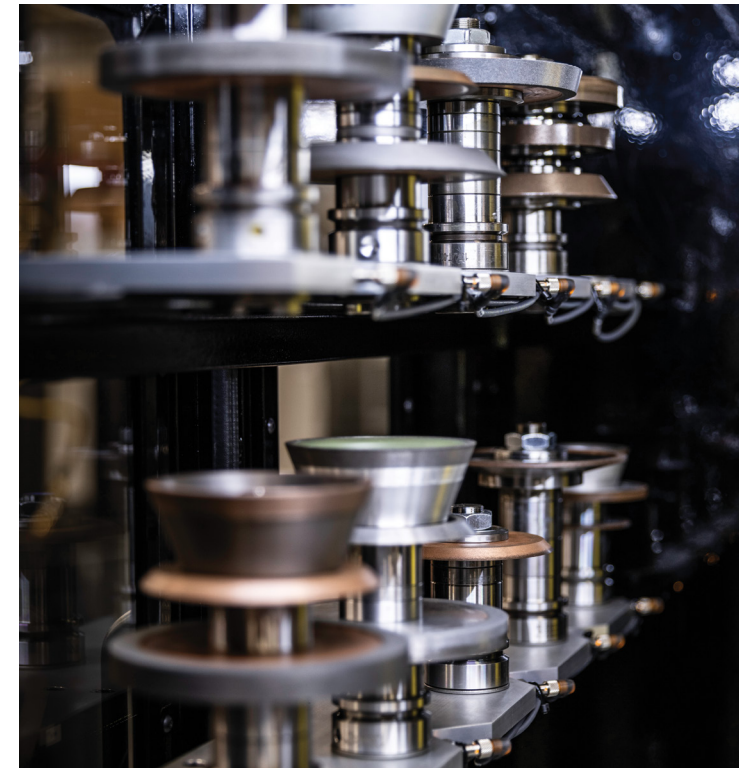
- X-Axis: 16.9" (429 mm)
- Y-Axis: 11" (280 mm)
- Z-Axis: 13.38" (340 mm)
- B-Axis Rotation: 260°
- C-Axis Rotation: 360° (1,500 RPM)

GRINDING SPINDLE

- Max Speed: 24,000 RPM
- Max. Power: 15kW

MACHINE WEIGHT

- Base Model: 7,000 lbs (3,175 kg)
- With Automation: 9,000 lbs (4,082 kg)



PRODUCTIVITY- BOOSTING OPTIONS

FLX is designed to adapt to your operation with scalable options that enhance output, flexibility, and ease of use.

MODULAR AUTOMATION

- Up to 15 wheel changing stations
- Capacity for 1,105 tools (3-20mm diameter)

SPINDLE CONFIGURATIONS

- Asynchronous: Auto HSK50, 7 kW
- Synchronous: Auto HSK50, 15 kW

BOLT-ON TOOLING RAIL

- T-slot construction with runout minimizer for enhanced accuracy

THE FLX ADVANTAGE

COMPACT FOOTPRINT

- 15% smaller than Star Cutter NXT—ideal for maximizing shop floor space

FLEXIBLE WHEEL CHANGE

- Two wheels standard, up to 15 wheel changing stations

FASTER CHANGEOVER

- 30% reduction in wheel change time vs. standard systems

DUAL SPINDLE OPTIONS

- Supports everything from tool regrinding to high-volume production

ERGONOMIC DESIGN

- Adjustable for operator comfort and accessibility

INTEGRATED COOLANT CONTROL

- Built-in system optimizes cooling and fluid management

OIL-LUBRICATED CARRIAGE & SCREWS

- Reduces wear and extends service life

U.S. MANUFACTURING & SUPPORT

- Made in the USA with dedicated domestic service and 24-hour response time



FLX



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