



# UTG Broach Grinders

The Star UTG Series are CNC driven Universal Tool Grinders and are unsurpassed in versatility and performance. The UTG Series of Star grinders excel at grinding **round and flat broaches, straight and spiral gash hobs, shaper cutters, spiral broaches, slab mills, rack gear cutters, and worm gear hobs** with diameters from 3 mm (1/8 inch) to 305 mm (12 inches). Our machines are built in the USA and are backed with the best warranty, service, and training in the industry.

## Features

- FANUC 6-Axis CNC controller with digital servo motors
- Standard and custom software solutions available for a wide range of applications.
- Dual probe system for work piece and grinding wheel setup
- Manual HSK wheel pack mounting
- Movable A-Axis headstock for tools up to 3200 mm
- Glass scales on all linear axes
- On board programmable wheel truing



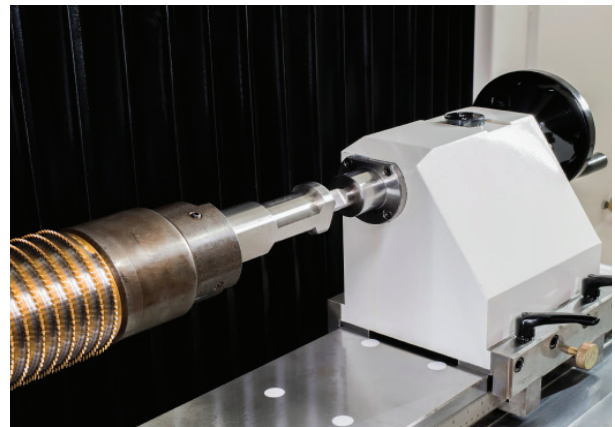
Pictured: UTG 2400

## Options

- Engineered tailstocks and steady rests
- Grinding wheel auto-sticking capabilities for unmanned operations
- Various coolant system and mist collecting options



6-Axis design allows for (3) rotary motions and (3) linear motions and are simultaneously controlled allowing for the manufacturing and re-sharpening to today's most demanding designs.



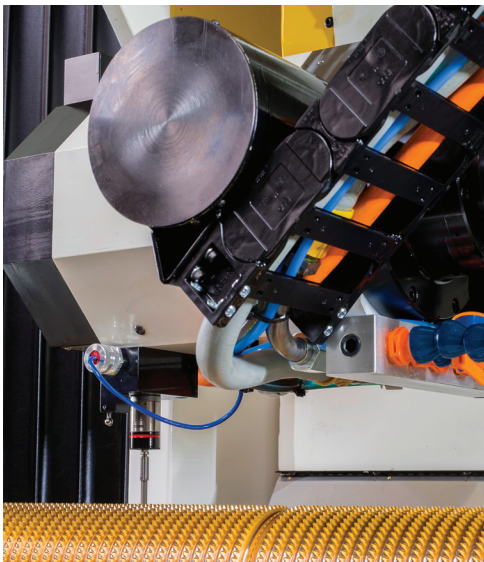
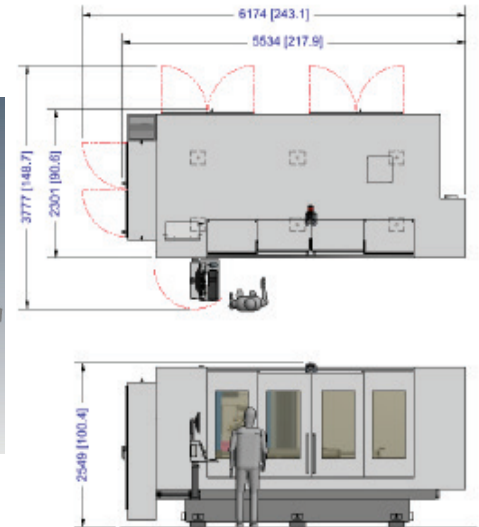
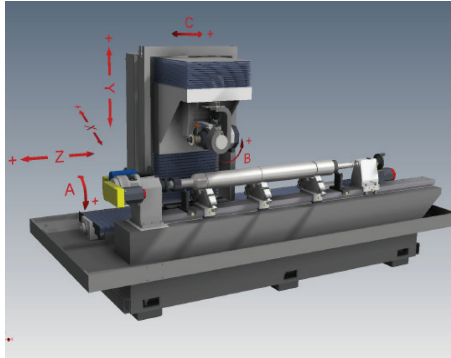
Standard screw actuated tailstock allows for the precise work between centers. Rail mounted, the tailstock can be easily moved to accommodate different setup lengths.

# UTG 6-Axis Machine Specifications

## Machine Dimensions



The wheel truing cycle is programmed into the machine. Simply enter the amount of stock removal and the machine automates the cycle.



The dual probe system allows for a part probe to locate the cutting edges of the workpiece and reference it to the machine while the wheel probe (shown) locates the grinding wheel relative to the workpiece.

|   | Metric                | Inch                |
|---|-----------------------|---------------------|
| Base Machine Dimensions (L x W x H)         | 5500 x 2300 x 2500 mm | 18.2' x 7.6' x 8.4' |
| Total Weight: Base Machine                  | 15,000 kg             | 33,000 lbs          |
| Maximum Workpiece Diameter                  | 305 mm                | 12 inches           |
| Maximum Workpiece Length                    | 3200 mm               | 126 inches          |
| A - Axis Workhead Spindle 360° Rotation     | 60 rpm                | 60 rpm              |
| B - Axis Grinding Spindle Swivel 180° Total | 22 rpm                | 22 rpm              |
| C - Axis Grinding Spindle Swivel +/- 30°    | 25 rpm                | 25 rpm              |
| X - Axis Horizontal Travel                  | 450 mm                | 17.7 inches         |
| X - Axis Travel Speed                       | 5000 mm/min           | 200 inches/min      |
| Y - Axis Vertical Travel                    | 400 mm                | 16 inches           |
| Y - Axis Travel Speed                       | 5000 mm/min           | 200 inches/min      |
| Z - Axis Horizontal Travel                  | 2680 mm               | 106 inches          |
| Z - Axis Travel Speed                       | 5000 mm/min           | 200 inches/min      |
| Grinding Spindle Speed                      | 10,000 rpm            | 10,000 rpm          |
| Peak Spindle Horsepower                     | 7 kw                  | 10 hp               |
| Maximum Grinding Wheel Diameter             | 203 mm                | 8 inches            |
| Smallest Programmable Movement - Linear     | 0.0001 mm             | 0.000004 inches     |
| Linear Axis Glass Scale Feedback Resolution | 0.00254 mm            | 0.0001 inches       |
| Smallest Programmable Movement - Rotary     | 0.0001 deg            | 0.0001 deg          |
| Optional High Accuracy Encoder              | 0.000000536 deg       | 0.00000536 deg      |
| Rotary Axis Feedback Resolution: A-axis     | 0.00000006 deg        | 0.00000006 deg      |
| Rotary Axis Feedback Resolution: B-axis     | 0.00000006 deg        | 0.00000006 deg      |

\* Dependent upon grinding operation being performed

\* Specifications for UTG 2400 Shown



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