ALLIED
HIGH TECH PRODUCTS, INC.

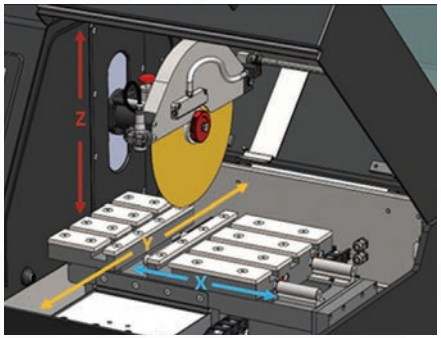
TechCut 6x™

Precision Sectioning Machine

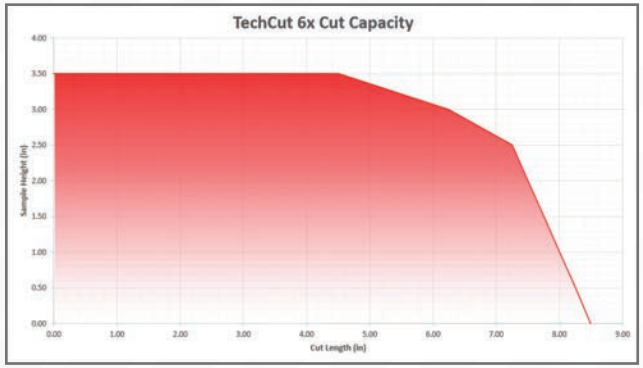
Product Spotlight

TechCut 6x™ Introduction

The TechCut 6x™ is a precision multiaxis sectioning machine that is highly configurable for a wide variety of cutting applications. Featuring fully programmable X, Y and Z-axis control, the system enables automated, repeatable sectioning of a wide range of materials.



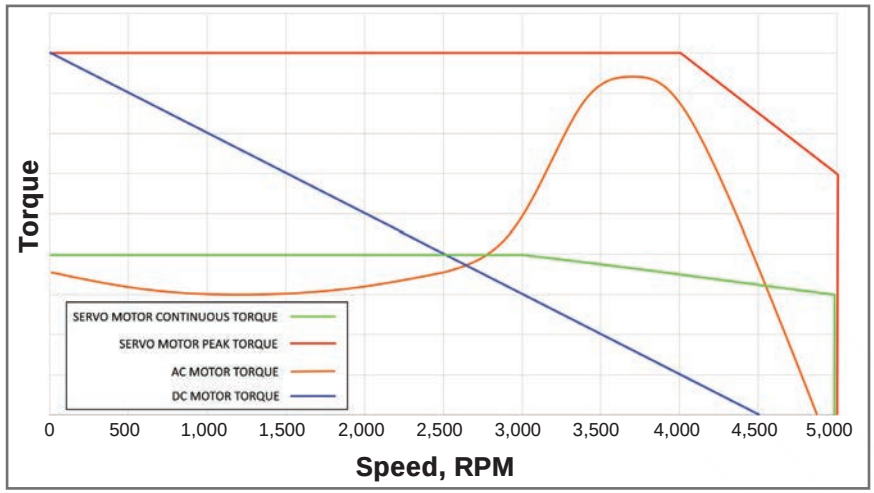
Industry Leading Cut Capacity



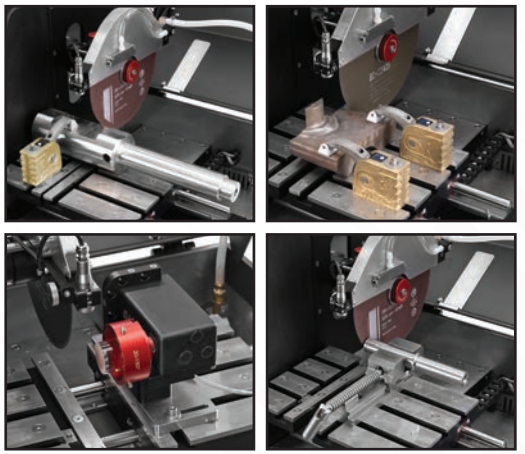
Features:

- 9" color LCD touchscreen to control all functions
- Intuitive interface optimized for productivity and efficiency
- Selectable units of measure — imperial or metric
- User programmable parameters for control of X (index), Y (feed) and Z (blade height) axis motions
- Selectable cutting force (low, medium, high)
- Display of estimated cut time and time remaining
- Closed-loop positional monitoring with live readout on X/Y/Z axes
- Closed-loop load monitoring for optimizing feed rate to reduce blade binding/breakage
- T-slot interface providing maximum versatility with a wide variety of fixtures/accessories
- Motorized X/Y/Z-axis sample/blade positioning with proportional joystick control
- Serial sectioning in either two (2) or three (3) axes
- Laser aid for quick, visual sample alignment
- Push-button spindle lock for easy blade changes
- Recirculating external coolant system

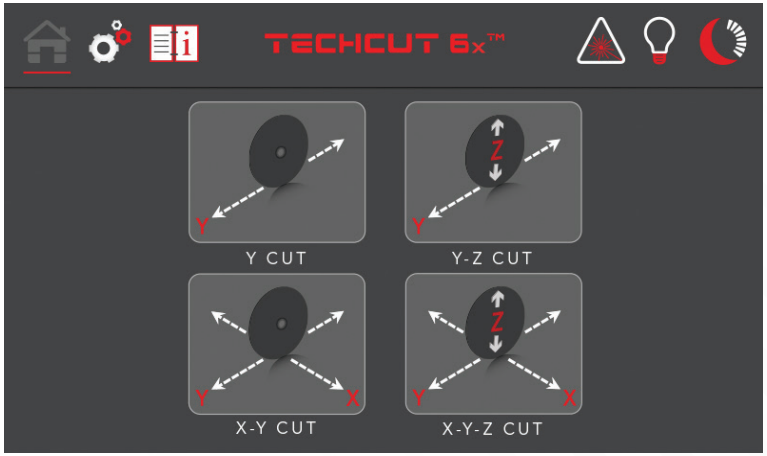
Servo Motor Advantage



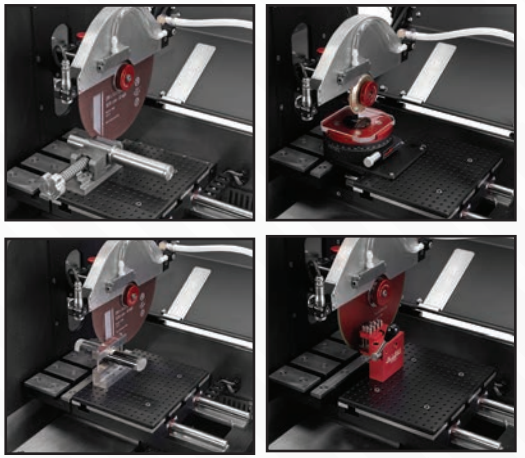
T-Slot Configurations



Multiple Programmable Modes

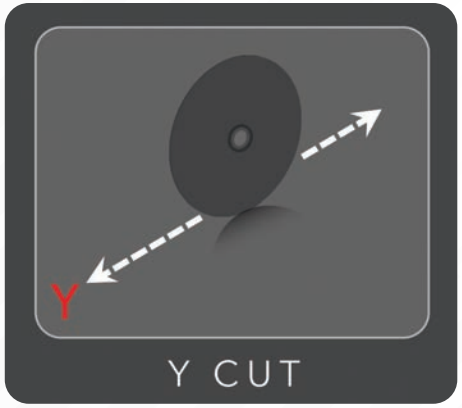


Adapter Plate Configurations



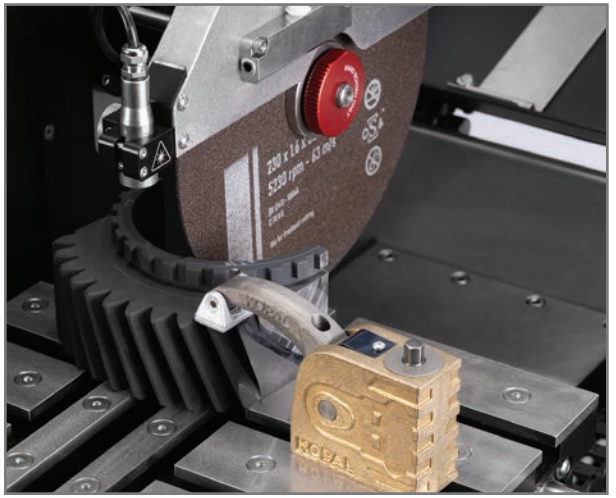
1-Axis Cut

In this single axis mode of motion, the sample is fed through the blade according to the user-input parameters controlling feed rate, cut length, blade RPM and force.



Surface Hardened Ferrous Gear

Size: Ø 7" x 2.5" H (Ø 177.8 mm x 63.5 mm H)
Hardness: 35.0 HRC (center)



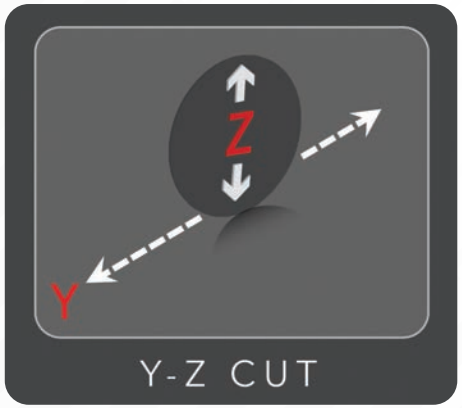
Sectioning Configuration

Blade Type: 9" (230 mm) Aluminum Oxide, Resin Bond
Fixture: Vertical Clamp

Parameters Used	
Blade RPM	3,500
Cut Length (Y)	4"–8" (102 mm–203 mm)
Feed Rate (Y)	0.75" (19 mm)/minute
Force	High
Time	5–10 minutes

2-Axis Cut

Useful for cutting through larger samples, in this 2-axis mode of motion the blade height (Z-axis) is adjusted to the user defined interval and the sample is fed (Y-axis) into the blade (in serial) until sectioning is complete.



Ferrous Weld Section

Size: 6" L x 6" W x 3.25" H (152.4 mm L x 152.4 mm W x 82.55 mm H)
Hardness: 54.2 HRA (Center)

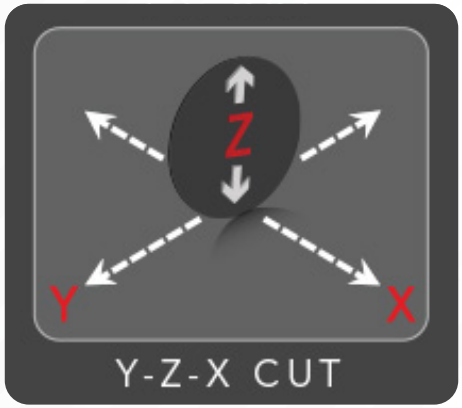
Sectioning Configuration

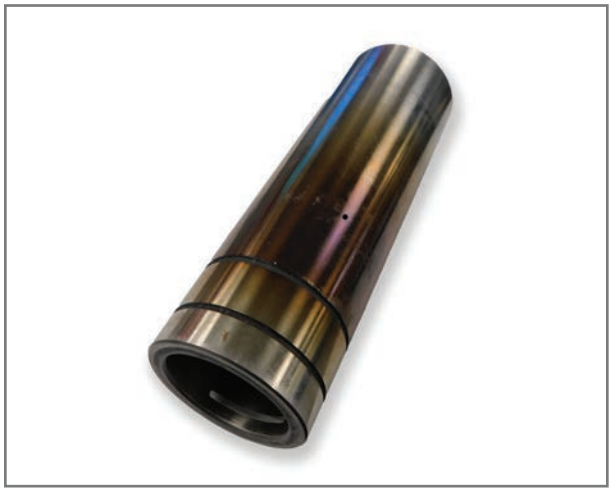
Blade Type: 9" (230 mm) Aluminum Oxide, Resin Bond
Fixture: Vertical Clamp

Parameters Used	
Blade RPM	3,000
Cut Length (Y)	8" (203 mm)
Feed Rate (Y)	1.5" (38 mm)/minute
Force	High
Depth Per Pass (Z)	0.5" (12.7 mm)
Total Depth (Z)	2.5" (63.5 mm)
Time	13–26 minutes

3-Axis Cut

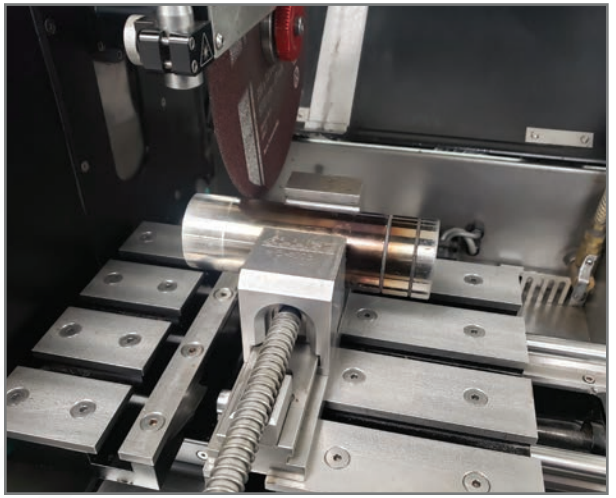
Useful for cutting several pieces of similar thickness from a sample, in this 3-axis mode of motion the blade height (Z-axis) and sample indexing (X-axis) are adjusted to the user defined intervals and the sample is fed (Y-axis) into the blade (in serial) until the serial sectioning cycle is complete.





Nitrided Ferrous Cylinder

Size: Ø 2.25" x 6" L (Ø 57.15 mm x 152.4 mm L)
Hardness: 41.4 HRC

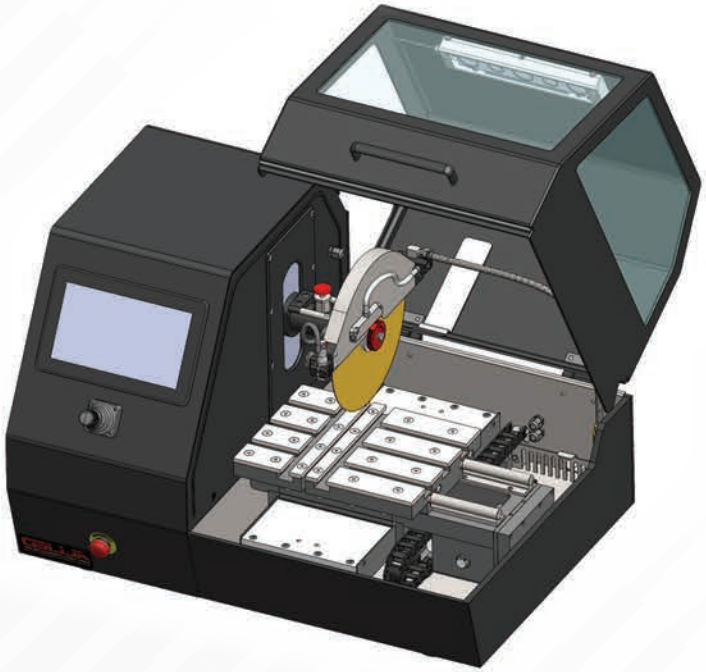


Sectioning Configuration

Blade Type: 9" (230 mm) Aluminum Oxide, Resin Bond
Fixture: Quick-Slide Vise

Parameters Used	
Blade RPM	3,000
Cut Length (Y)	4" (102 mm)
Feed Rate (Y)	1.5" (38 mm)/minute
Force	High
Sample Width (X)	0.25" (6.35 mm)
Blade Width	0.06" (1.5 mm)
Depth per Pass (Z)	1" (25.4 mm)
Total Depth (Z)	2" (50.8 mm)
Number of Samples	3
Time	10–16 minutes

Two Models Available

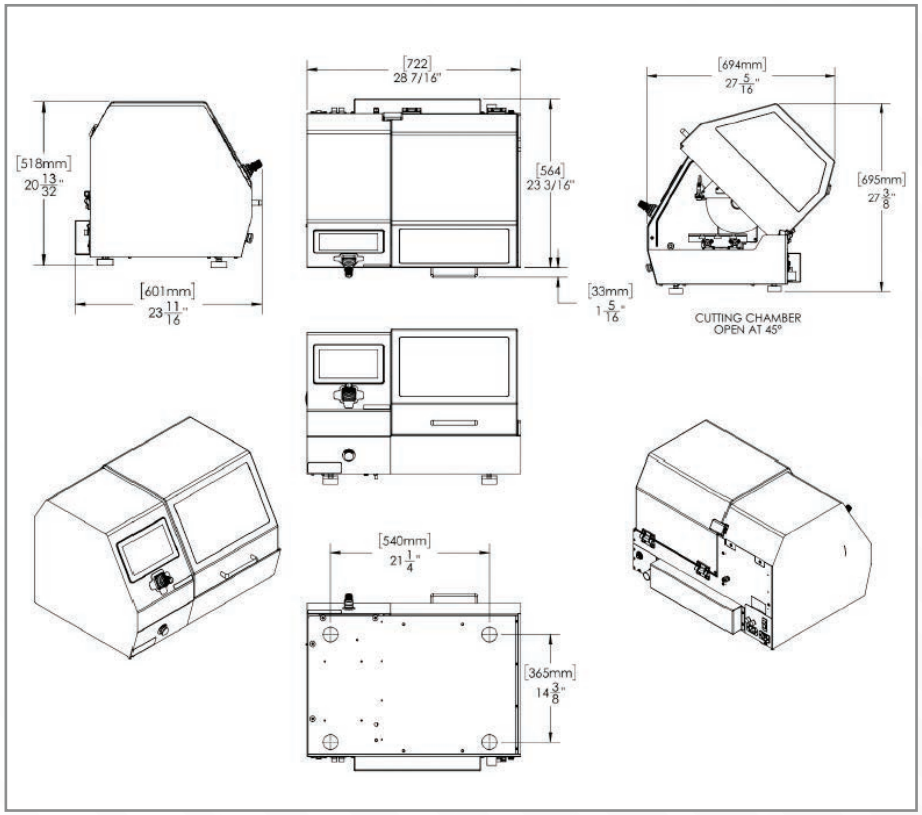


5-5650
3-Axis Model (X-Y-Z)

5-5675
2-Axis Model (Y-Z)

Technical Specs

- Operating voltage: 200–240V 50/60 Hz 1 Phase
- Blade motor: powerful, constant torque output servo, 84.5 in-lb. (9.55 N-m) peak torque
- Blade speed: 100–5000 RPM, 100 RPM +/- increments, 1 RPM input resolution
- Blade range: 3–9" (76–230 mm) with either 0.5" (12.7 mm) or 1.25" (32 mm) arbor hole
- Y-axis feed rate: 0.01"–10" (0.1 mm –250 mm) per minute, 0.01" (0.1 mm) increments
- Y-axis maximum travel: 9" (230 mm), 0.01" (0.1 mm) increments
- X-axis maximum travel: 4" (100 mm), 0.001" (0.01 mm) increments
- Z-axis maximum travel: 3.6" (91 mm), 0.01" (0.1 mm) increments
- T-slot table dimensions: 11" W x 8.5" L (280 mm x 215 mm) with 0.5" (12.7 mm) T-slots
- Cutting capacity: up to 3.5" (89 mm) bar stock
- Recirculating external coolant system: 7-gallon (26.5 L) capacity
- Dimensions: 28.5" W x 24.5" D x 20.75" H (724 mm x 622 x 527 mm)
- Weight: 204 lb. (92.5 kg)
- Two (2) year warranty
- Designed & manufactured by Allied in the USA



Advancing technology
through sample preparation!

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DESIGNED AND MANUFACTURED IN THE USA