MultiCam®

CNC Cutting Solutions

MultiCam® Graph-X-Cutter Feature and Specification Guide

Affordable High-Speed Digital Finishing System

The MultiCam® Graph-X-Cutter is an extremely flexible high-speed CNC finishing system. It combines digital registration with powerful routing and knife-cutting capabilities in a wide-format, sheet-feed cutting platform. Companies looking for a versatile machine that can register, route and knife cut at high speeds will appreciate the affordable price point of the Graph-X-Cutter.

Since 1989, MultiCam has been building and selling three-axis positioning systems. A global network of experts at over 70 factory-trained Technology Centers supports our CNC cutting solutions. With more than 8500 machines sold worldwide, MultiCam provides the experience, knowledge and service safety net to ensure your productivity.

For an affordable, configurable, production digital finishing system backed by the reliability of world-class service, choose the MultiCam Graph-X-Cutter.

Applications:

- ***Signs and Graphics***
- ***Digital Printing***
- ***Packaging***

And More

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All specifications subject to change.

Innovation. Quality. Performance.

Graph-X-Cutter Specifications

No digital finishing system in its class offers more standard features than the innovative and versatile MultiCam Graph-X-Cutter.

- EZ Control® with user-friendly operator interface
- Custom-engineered extruded aluminum frame
- Integrated V-cam roller bearings
- High-flow vacuum table
- 2" (50-mm) cut capacity with all tools
- Digital ac servo drives on all axes
- 2100-IPM rapid traverse
- Two independent Z-axis heads

Options Include

- 0.4-hp high-speed routing spindle
- Up to two tangential knife receivers
- Wide variety of knife cartridges
- MultiVision digital registration system
- Bar code scanning interface
- High-flow vacuum pumps
- EnRoute CAD/CAM software packages for enhanced workflow

0.4-hp Spindle

Router Spindle

The Graph-X-Cutter standard spindle is rated at 0.4 hp, 23,000 rpm and utilizes an ER-11 collet with a tool diameter capacity of up to ¼" (6 mm).

Graph-X-Cutter Specifications

MultiCam EZ Knife® Tangential Cutting System

MultiCam developed the EZ® Knife cartridge system to perform mechanized knife-cutting, creasing and perforation operations for the digital finishing market. Users may configure up to two independent tangential knife receivers on all MultiCam Graph-X-Cutter machines.

The EZ Knife system supports tangential drag, oscillating and ultrasonic cutting techniques. Choose from many blade types including rotary, spear point, utility, kiss cut and more. MultiCam high-performance motion-control systems coupled with a popular range of table sizes bring a new level of performance and utility to knife cutting.

EZ Knife Cartridge Options

- High-frequency oscillating
- Ultrasonic high frequency
- Drag knife
- Kiss cut knife
- Rotary knife
- Creasing wheel
- Perforating wheel
- 45-degree knife

MultiVision Digital Registration System

MultiVision is optional on all Graph-X-Cutter machines. It is a digital camera/software-based system that recognizes media registration marks visually and compensates for skew, distortion and image drift automatically. The MultiVision system integrates easily into your existing workflow. It provides the additional flexibility of utilizing state-of-the-art CAD/CAM software for enhanced tool path generation as well as high-end 3-D sign and graphic applications.

Graph-X-Cutter Specifications

Standard Work Surface

The Graph-X-Cutter standard working surface is 1" thick phenolic with a high-flow grid pattern utilizing .25" x .25" foam gasket sealing tape. Phenolic makes an excellent work surface because of its dependable mechanical strength and dimensional stability. Actual cutting surfaces may include LDF (light-density fiberboard), perforated polycarbonate sheets or fibrous belting material for knife cutting.

Base Frame

MultiCam fabricates the frame using aerospace-grade aluminum extrusions with integrated bearing datums. The legs are manufactured from heavy-gauge sheet steel.

Bearings

All axes feature self-contained integral V-cam roller bearings. This technology is ideal for CNC cutting systems because it isolates the bearings from the environment while the rolling contact between the wheel and track sweeps debris aside.

Graph-X-Cutter Specifications

Gantry

MultiCam custom engineered and precision machined the high-quality aluminum extrusion gantry for maximum stiffness. The extrusion's heavy wall thickness and 120-mm x 145-mm rectangular structure combine to make the gantry extremely rigid.

Gantry Supports

Cast aluminum gantry supports house X-axis servo drive motors. A four-axis horizontal machining center ensures that the supports are parallel and perpendicular. Castings provide extremely stable support for the gantry.

Drive Assembly

High-torque, brushless digital ac servo motors drive the X, Y and Z axes. This results in high acceleration of the gantry as well as excellent cut quality.

Graph-X-Cutter Specifications

Z-Axis Assembly

The Graph-X-Cutter utilizes two 10-mm precision-ground Z-axis screws. A precision mounting block with dual angular contact ball bearings holds each screw firmly in place for high axial force loads. The precision-machined steel nut carries the Z-axis load. A high-torque, brushless digital ac servo motor drives each Z-axis screw.

Dust Collection System

Our dust collector's XtremeClean™ feature prevents clogging. A burst of air cleans the washable filter automatically every 20 seconds while you work. This helps the system function at maximum efficiency. Includes an antistatic hose.

Vacuum Pumps

Standard vacuum pump options include an 8.5-hp (225-CFM) or 17-hp (335-CFM), two-stage regenerative blower. Both pumps can pull 14" HG, and their high CFM capacities lend themselves well to graphic arts sheet cutting applications.

Graph-X-Cutter Specifications

EZ Control®

MultiCam EZ Control® is one of the most powerful yet easy-to-use motion-control systems available on machine tools today. No wonder MultiCam named its motion system EZ Control!

Features include:

- Hand-held operator interface with graphic icons
- 12-MB memory with unlimited file-size transfer capabilities
- Multiple home positions
- Automatic Z surfacing
- Electronic depth safety system
- Proximity restart
- Tool compensation
- Cut speed override
- Spindle rpm override
- Standard Ethernet TCP/IP connection

Digital Servo Drive System

Digital servo drives and brushless digital ac servo motors form a digital vector servo drive system that is standard on all MultiCam Graph-X-Cutter machines. This drive system integrates position, velocity and torque loops seamlessly to provide uncompromised tracking accuracy, smoothness and reliability.

MultiCam servo-driven machine drives are the latest in high-performance technology. They advance the state of the art by utilizing seamless coordination and allowing information sharing in real time so all system functions cooperate in any situation. Realize tighter tracking, smoother motion and faster rapid traverse — all of which yield superior machine throughput and reliability.

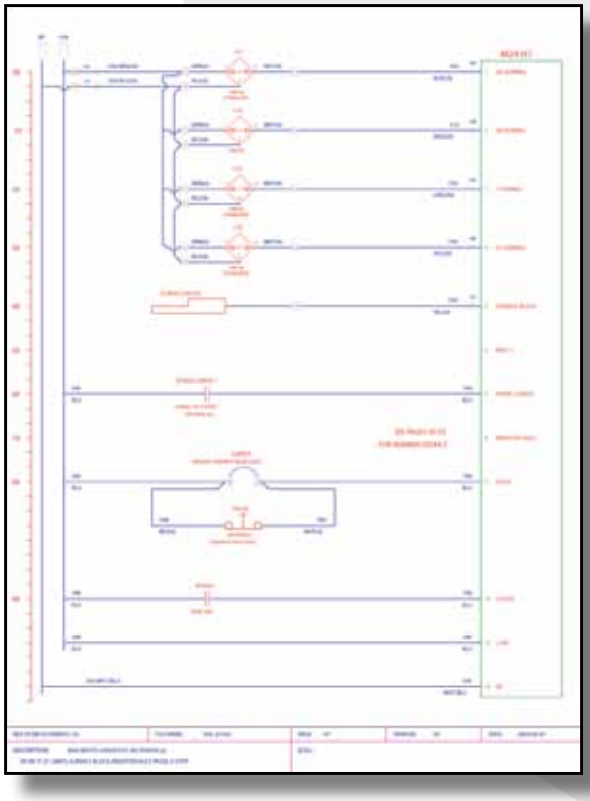
Graph-X-Cutter Specifications

Standard Features

Leveling Feet

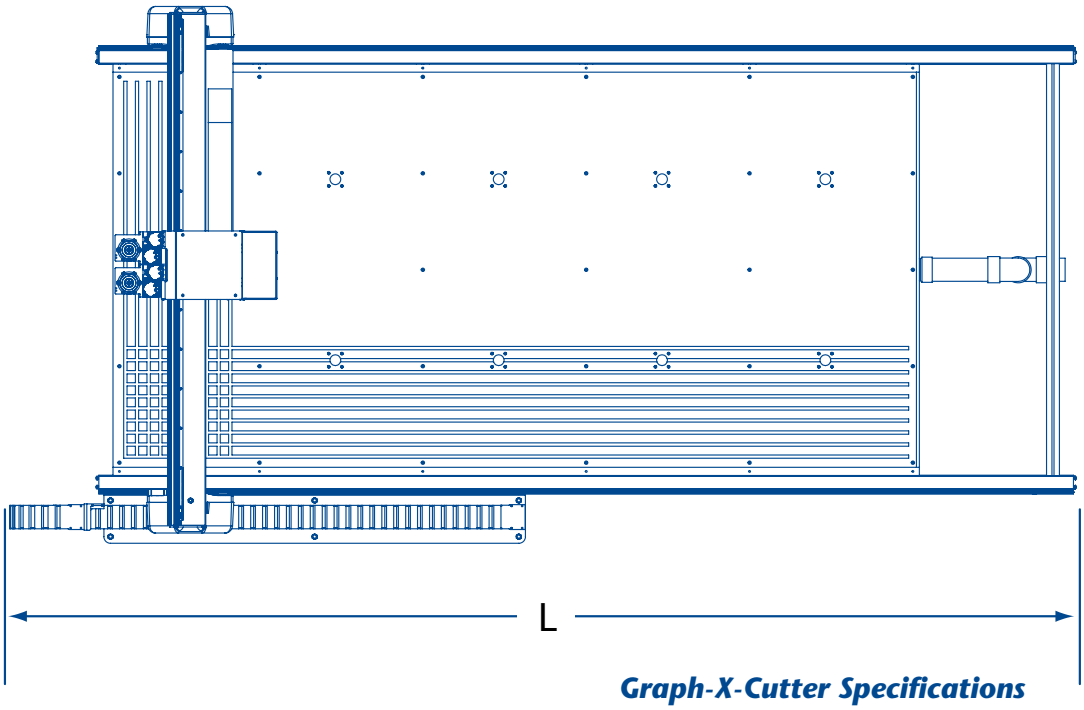
Tool Box

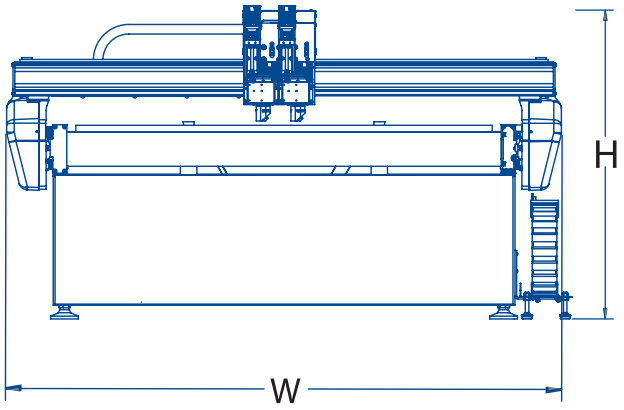
Operation Manual



Electrical Schematics

Graph-X-Cutter Specifications





Graph-X-Cutter Specifications

- Z-Axis Clearance: 3" (76 mm)
- Z-Axis Travel: 4.5" (114 mm)
- Repeatability: +/- 0.001" (0.025 mm)
- Positional Displacement Accuracy: +/- 0.005" (0.13 mm) over 10' (3 m)
- Cutting Speed: 1000 IPM (25.4 MPM)
- Rapid Traverse: 2100 IPM (53.3 MPM)
- Drive System X and Y Axes: Rack and Pinion
- Drive System Z Axis: Ball Screw
- Standard Work Surface: 1" Phenolic

Size Chart (Inches)

MODEL	L	W	H	WORKING AREA
G-101	83	60	45	50" x 50"
G-103	131	60	45	50" x 100"
G-204	155	80	45	60" x 120"
G-304	155	100	45	80" x 120"

Size Chart (Metric)

MODEL	L	W	H	WORKING AREA
G-101	2108	1524	1143	1270 x 1270
G-103	3327	1524	1143	1270 x 2540
G-204	3937	2032	1143	1524 x 3048
G-304	3937	2540	1143	2032 x 3048

Specifications subject to change.

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