Anderson Group

5

HIGH PERFORMANCE MACHINING CENTERS

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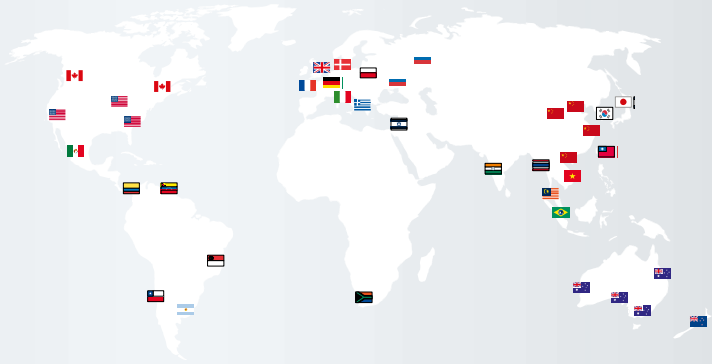
ABOUT US

Since the mid 80´s Anderson Industrial Corporation has been instrumental in the design and manufacturing of quality 5 Axis CNC machining centers to serve the leaders of industries around the world.

Designed around many applications to suit a variety of clients with varying products, Anderson CNC processing centers reflect 40 years of engineering and technological development. At the core of Anderson's 5 Axis CNC offering is our Maxxis, Mass 5, Axxion and Astrixx series. These centers form Anderson's standard production 5 Axis series and when joined by our CNC series of fully customized machines, offers our clients a solution that is both well-engineered and to the most exacting of standards.

Anderson 5 Axis machining centers are able to process a variety of materials with the highest accuracy and tolerances our clients demand. Thanks to their precision engineering, robust build quality and massive webbed steel platforms, these machines perform precise, full five axis movement with ease, all while offering support backed by the number one builder of 5 axis in the industry, Anderson Industrial.



ANDERSON SUBSIDIARIES

MARKETING & SERVICE PARTNERS

Global Operations
Through ours strategy of global expansion, Anderson has developed its business to better serve clients on all continents. Anderson is proud of being able to supply first-class engineering and high-quality products to a global market, while still maintaining local service and an individual connection to our clients. Along with our main manufacturing sites located in Taiwan, Anderson also has research, sales and service offices in Germany, Singapore, China and the United States of America. Anderson works closely with marketing partners around the world. Globalization has changed Anderson into a company that searches the world, not just to sell or to source, but to find intellectual capital - the world's best talents and the greatest ideas.

TECHNICAL SPECIFICATIONS

Astrixx

Machine	Astrixx Five Axis
Application	Plastic trimming/Composites
Table configuration	Flat
Table Style	Aluminum grid / T Slot
Zones	2 zones
Table size (metric)	1,500mm x 3,600 mm IP
Table Height	500mm
Standard Z (stroke) #1	3700mm
Standard Z (stroke) #2	1000mm
B and C-axis	„B : ± 120° // C : ± 270°“
Controller	Syntec Five Axis or Fanuc 31iMb5
Router spindle	HSK 32E, 11 HP (40,000rpm)
Type ATC	8
Barriers	Full Enclosure
Included	(optional)Vac. Prep Kit
Pump Size	(optional) BECKER 250cbm
Safety fence	Option
X Drive System	Ball Screw
Y Drive System	Rack
V Drive System	n/a
Z Drive System	Ball Screw
rapids/cutting X, Y, Z	X;Y;Z = 80/80/24m/m X;Y;Z = 36/26/15m/m
rapids/cutting C, B	B&C = 90°/sec 24m/m B&C = 90°/sec 15m/m
Remote Internet Diagnostics	Standard
Tool Holders	Option
Touch-Off Device	Option

Mass 5

Machine	Mass 5
Basic configuration	Table Style open, flat steel, T slot
Zones	1 zone
Table size (metric)	width : 3,000mm to 6,000m, length : 6,000mm to 16,000mm
Table Height	individual
Standard Z (stroke) #1	1,000mm to 3,000mm
B and C-axis	B : ± 100°, C : ± 200°
Control	SIEMENS 840D, FANUC 31i series
Router spindle	15 HP(HSK 63F, 22000rpm), 20HP, 25HP (HSK 63E, 18000 rpm)
Type ATC	Ranrob : 16, 20, 32
Included	Vac. Prep Kit
Pump Size	BECKER 250cbm
Safety fence	Option
X Drive System	rack/optional linear
Y Drive System	rack/optional linear
Z Drive System	Ball Screw
rapids/cutting C, B	X;Y;Z = 36/36/12m/m
rapids/cutting C, B	B&C = 60°/sec 24m/m
Positioning Tolerance(No Scales X, Y, Z)	± 0.05mm/M
Repeatabilty Tolerance(No Scales X, Y, Z)	± 0.03mm/M
Positioning Tolerance(No Scales C, B)	± 18 arcseconds
Positioning Tolerance(Scales X, Y, Z)	± 0.03mm/M
Repeatabilty Tolerance(Scales X, Y, Z)	± 0.02mm/M
Positioning Tolerance(Scales C, B)	± 30 arcseconds
HSSB RISC Look Ahead	Option

Maxxis

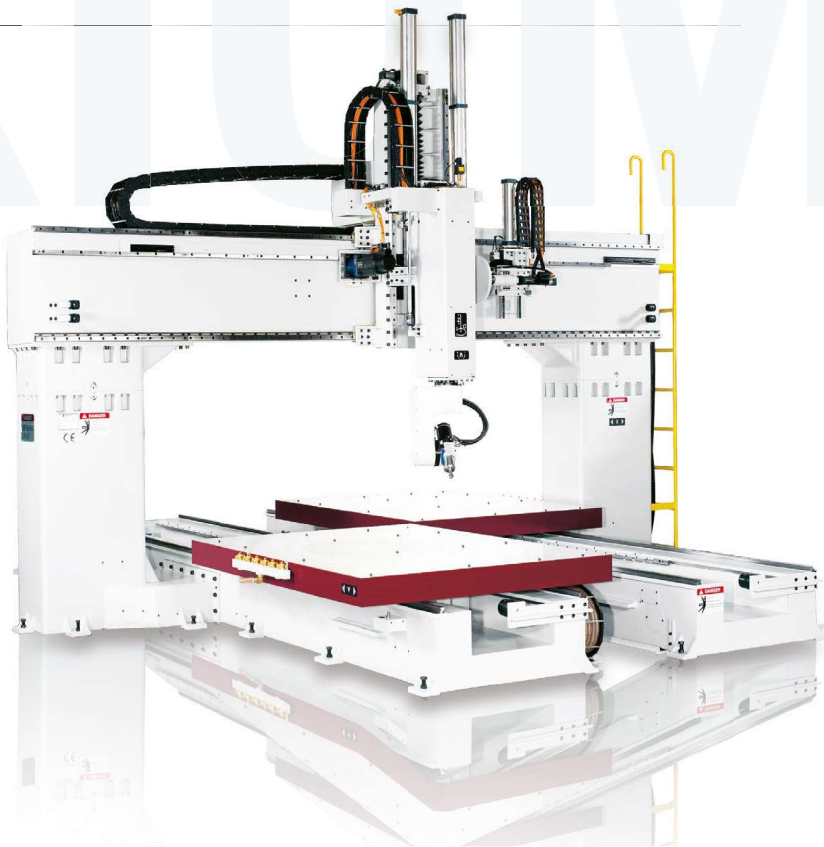
Machine	Maxxis (single table)	Maxxis (twin table)
Table Style	HPL Grid or Alum 50mm with T Slots	HPL Grid or Alum 50mm with T Slots
Table size (metric)	1600mm x 1800mm IP, 1600mm x 3100mm IP	1600mm x 1800mm IP, 1600mm x 3100mm IP
Zones	1 zone	1 zone x 2
Table Height	800mm	800mm
Standard Z (stroke) #1	800mm to 1200mm	800mm to 1200mm
Standard Z (stroke) #2	1200mm	1200mm
B and C-axis	**B : ± 100°, C : ±200°**	B : ± 100°, C : ± 200°
Control	FANUC 31i or SIEMENS 840D	FANUC 31i or SIEMENS 840D
Router spindle	10 HP, 15 HP, (HSK 63F, 22000rpm), 20 HP (HSK 63E, 18000 rpm)	10 HP, 15 HP, (HSK 63F, 22000rpm), 20 HP (HSK 63E, 18000 rpm)
Type ATC	ATC : 10, 16, 20, Ranrob : 12, 16, 20, 32	ATC : 10, 16, 20, Ranrob : 12, 16, 20, 32
Included	Vac. Prep Kit	Vac. Prep Kit
Pump Size	BECKER 500cbm	BECKER 500cbm
X Drive System	Ball Screw	Ball Screw
Y Drive System	Ball Screw	Ball Screw
V Drive System	n/a	Ball Screw
Z Drive System	Ball Screw	Ball Screw
rapids/cutting X, Y, Z	X;Y;Z = 80/80/24m/m	X;Y;Z = 80/80/24m/m
rapids/cutting C, B	B&C = 90°/sec 24m/m	B&C = 90°/sec 24m/m
Remote Internet Diagnostics	Standard	Standard
Positioning Tolerance(No Scales X, Y, Z)	± 0.05mm/M	± 0.05mm/M
Repeatabilty Tolerance(No Scales X, Y, Z)	± 0.03mm/M	± 0.03mm/M
Positioning Tolerance(No Scales C, B)	± 45 arcseconds	± 45 arcseconds
Positioning Tolerance(Scales X, Y, Z)	± 0.03mm/M	± 0.03mm/M
Repeatabilty Tolerance(Scales X, Y, Z)	± 0.02mm/M	± 0.02mm/M
Positioning Tolerance(Scales C, B)	± 18 arcseconds	± 18 arcseconds

Axxiom

Machine	Axxiom (1 zone)	Axxiom (1 zone x2)
Table size (metric)	1600mm x 1800mm IP, 1600mm x 3100mm IP	1600mm x 1800mm IP, 1600mm x 3100mm IP
Table Height	600mm	800mm
Standard Z (stroke) #1	800mm	800mm
Standard Z (stroke) #2	1200mm	1200mm
B and C-axis	B : ± 120°, C : ± 270°	**B : ± 120°, C : ± 270°**
Control	Syntec Five Axis	Syntec Five Axis
Router spindle	HSK 32E, 11 HP (40,000rpm)	HSK 32E, 11 HP (40,000rpm)
Type ATC	8	8
Included	Vac. Prep Kit	Vac. Prep Kit
Pump Size	BECKER 250cbm	BECKER 250cbm
X Drive System	Rack	Rack
Y Drive System	Rack	Rack
V Drive System	n/a	Rack
Z Drive System	Ball Screw	Ball Screw
rapids/cutting X, Y, Z	X;Y;Z = 80/80/24m/m	X;Y;Z = 60/60/20m/m
rapids/cutting C, B	B&C = 90°/sec 24m/m	B&C = 60°/sec 24m/m
Remote Internet Diagnostics	Standard	Standard
Tool Holders	Option	Option
Touch-Off Device	Option	Option
Positioning Tolerance(No Scales X, Y, Z)	± 0.05mm/M	± 0.05mm/M
Repeatabilty Tolerance(No Scales X, Y, Z)	± 0.03mm/M	± 0.03mm/M
Positioning Tolerance(No Scales C, B)	± 45 arcseconds	± 45 arcseconds
Positioning Tolerance(Scales X, Y, Z)	± 0.03mm/M	± 0.03mm/M
Repeatabilty Tolerance(Scales X, Y, Z)	± 0.02mm/M	± 0.02mm/M
Positioning Tolerance(Scales C, B)	± 30 arcseconds	± 30 arcseconds


PEAK PERFORMANCE

AXXIOM



The AXXIOM Series Moving Table 5-axis machining centers set a new level of 5-axis accuracy and machining performance. The combination of a highly rigid base, precision gearbox and high accuracy Servo System make the AXXIOM an ideal choice for machining plastics, aluminum and composite materials.

The Anderson fixed bridge and moving table design provides easy machine access in a compact easy-to-access design. The webbed steel substructure remains smooth and rigid while all 5 axis are in full 5-axis machining mode. The AXXIOM 5-axis machining centers set a new standard in high-speed 5-axis machining and is designed to handle trimming, slotting and drilling in thin rigid materials, such as thermoformed plastics and autoclaved composites.

It utilizes an industry-standard G-code for control functions that allows easy interfacing with all major CAD/CAM software and industry-standard solid modeling software packages. Additional options include work piece dimension probing, both single and dual zone capabilities and custom configurations upon request.

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TOOLING

Application Engineering Solutions
Anderson offers a high level of application engineering. This includes a detailed analysis of key application issues related to tooling and machining feedrates and chiploads.

Tool Design
Anderson engineers provide tool geometry suggestions to optimize cutting efficiency of several different tool designs, tooling materials and tooling configurations.

Feedrates and Chipload
Anderson aids clients in determining optimal feedrates and chiploads based testing on demonstration and showroom based equipment and extensive tooling experience.

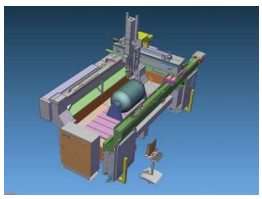
ENGINEERING TEAM

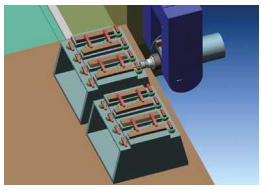
Engineering Solutions
Anderson offers a high level of multi-axis and specialized 5-axis mechanical and electrical engineering solutions.

5-axis Machine Design
Anderson engineers are capable of designing a Five Axis machining systems from the ground up. This would include base design, mechanical and electrical Servo Systems, PLC systems and specialized clamping systems. Anderson's in-house research and development engineering facilities employ over 70 engineering staff personnel which gives Anderson the ability to customize multi-axis solutions to meet customer's needs. Anderson's engineering team has integrated multi-axis controls from Siemens, Fanuc, Heidenhain and Syntec.

CAD /CAM integration and testing
Anderson develops multi-axis CNC systems to work efficiently with the latest CAD/CAM software packages. Integration includes PLC, Postprocessor and full multi-axis machine testing and application support.

FIXTURES





Solid Models available for 5-axis Fixture and Process design
Anderson's engineering staff has the ability to accurately and efficiently design clamping and part fixturing systems for complex five axis machining processes. This would include the following:

Solid Models of Five Axis Fixture Design
Anderson uses a variety of solid modeling CAD/CAM software packages to accurately model the interaction between the 5-axis machining center, the fixture and tool paths. This modeling process eliminates potential five axis collusions and allows efficient use of the 5-axis machining envelop.

Solid Models of 5-axis Process Design
Solid models allow the client to review the Five Axis machining process and aid in a detailed machining specification so that the design of the machine optimizes the 5-axis machining process.

Vacuum – Clamping – or Specialized designs
A variety of clamping systems can be viewed in the solid model to allow several different fixturing options to be tested through simulation.

LASERS

Laser Technology for 5-axis Machines
Anderson uses several Laser measurement technologies to install and maintain tolerances on 5-axis machining centers.

Laser Interferometers
Laser Interferometer technology is used to verify axis pitch error and positioning accuracy. This independent measurement device accounts for mechanical tolerances and environment issues.

3D Position Tracking Lasers
3D positioning lasers are used to verify machine envelope and mechanical setup from a centralized datum point which allows the machine technicians to verify multiple plane accuracy.

The device can also be used as a portable CMM to check position and part accuracies over long distances.

Ballbar Testing
Highly accurate Ballbar testing equipment is used to track and record circular interpolation of axis movements. After interpolation the Ballbar unit verifies actual machine position against specification.

ANALYSIS

Vibration Analysis

Anderson uses accelerometer-based devices to measure vibration over a wide spectrum and rpm ranges. This analysis can be done to tell the condition and wear level of a spindle bearing, as well as vibration in the cut situation.

NOTES

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