

AMADA MACHINERY AMERICA, INC.



THE VISION OF PRECISION

HFA Series



Contents

Amada Machinery America	1
Amada Sawing Technology	2
SAWS	3
HFA Series	4
HFA250W	7
HFA400W	9
HFA500W	11
HFA700CII and HFA1000CII	13

Amada Machinery America



With more than 70 years of industry experience, Amada Machinery America is committed to helping our customers deliver dependable service and top-quality work with exceptional sawing solutions.

Whatever your sawing needs, we have the right solution for your specific application.

Market-Leading Quality—We believe quality work begins with quality tools designed and built from the ground up to deliver outstanding performance, time after time.

Customer-Driven Innovation—Every feature, function, and configuration we offer has been developed to address the needs of our customers.

Proven Accuracy—We help you take your work to the next level and exceed your customers' expectations.

Reliable Productivity—We understand productivity is the heart of your business, and we can help you optimize it in multiple ways.

A History of Cutting-Edge Manufacturing

Amada Machine Tools was founded on the manufacturing of saws back in 1946. Since that time, our goals have always been to provide our customers with increased productivity and reliability.

And, as technology has evolved, we've embraced CNC automation as a core strength, improving throughput and helping new operators become productive more quickly.

Today, we are uniquely positioned to help you expand your capabilities and grow your business.

Solutions Designed Around Customer Needs

No two customers' needs are exactly alike. Finding the right solution means thoroughly understanding your objectives and configuring a solution to match them precisely. Our engineers bring decades of industry experience to help you achieve your specified goals with a process that fits—and enhances—your workflow.

TECHNOLOGIES OF AMADA



GRINDING



MILLING



SAWING

Amada Sawing Technology



A Perfect Match with Amada Blades

Amada also offers another unique advantage in that we manufacture our own bandsaw blades. This allows you to precisely match the characteristics of the blade to the machine to achieve optimum cutting performance, no matter what material you're working with.

Because we manufacture our own blades, we're able to ensure we've got the right blades—in stock—when you need them. And we have expert engineers with years of industry experience on staff to answer any questions you might have.

Finding the Right Solution

No matter what kind of sawing capabilities you need, these machines deliver the proven quality and accuracy that have made Amada the trusted choice for productivity and reliability.

Series	Description
CTB	CNC-controlled horizontal bandsaws designed for carbide-tipped blades
DYNASAW	Dynamic, high-performance bandsaw machines
H	Highly rigid horizontal bandsaws for a wide range of cutting tasks
HA	Semi-automatic horizontal bandsaws
HFA	Fully automatic horizontal bandsaws
HK	Miter-cutting bandsaws for structural steel sections
HKB	NC bandsaws for bundled tubes, solids, and structural materials
PCSAW	Horizontal bandsaws with Amada's revolutionary pulse cutting technology
VM	Vertical bandsaws for cutting blocks and plates
CMB	Circular saws with exceptional surface finishing
SCP	Automated chip compactor



SAWING TECHNOLOGY

Saws

Throughout the steel processing world, the Amada name is known for quality and dependability. Our lineup of industry-leading saws brings a host of innovations designed to improve your productivity. From operator-friendly controls and intuitive CNC software to our patented pulse-cutting technology that offers dramatically improved cutting times while improving blade life, you can count on Amada



SAWING TECHNOLOGY

HFA Series

The HFA Series of fully automatic bandsaws was created to deliver extraordinary precision with highly accurate material indexing controlled by NC positioning. The squareness of each cut is monitored by a unique Amada-designed blade deviation monitor. A wide range of cutting capacities is available to match your application requirements.

HFA250W, HFA400W and HFA500W

MODEL	ROUND (DIAMETER)	RECTANGLE (W X H)	WORK LOAD CAPACITY
HFA250W	1.18"~10" (30 mm~250 mm)	10.6" x 10" (270 mm x 250 mm)	3307 lbs (1500 kg)
HFA400W	1.18"~16.54" (30 mm~420 mm)	16" x 16" (400 mm x 400 mm)	5511 lb (2500 kg)
HFA500W	1.18"~20" (30 mm~500 mm)	20" x 20" (500 mm x 500 mm)	6615 lb (3500 kg)
HFA700CII	11.4"~28" (290 mm~700 mm)	32" x 28" (800 mm x 700 mm)	17,637 lb (8000 kg)
HFA1000CII	15.7"~40" (400 mm~1000 mm)	15.7" x 3.9"~43" x 40" (400 mm x 100 mm~ 1100 mm x 1000 mm)	33,069 lb (15,000 kg)

Features

Saw Head Frame—The rigid “C” section frame carries the mountings for the two band wheels, the heavy-duty worm gear drive reducer, the band drive motor, and the saw guide arm mounting supports.

Drive Wheel Transmission—The drive wheel transmission is designed and built by Amada to provide high-efficiency speed reduction (without requiring external cooling) to deliver more power to the large-diameter drive shaft (drive hub on the HFA500W). This ensures that the torque developed is transferred to the blade with no strobing, enabling the machine to efficiently cut high alloys as well as free-machining materials.

Pressure/Flow Feed Control—The independent pressure and flow controls ensure the optimum cutting rate can be obtained regardless of section or alloy being cut. The pressure control determines the cutting force applied to the blade and the flow control sets the maximum fall rate of the head. For example, for difficult-to-machine materials, the pressure is set higher than free-machining alloys and the flow is set lower, as shown on the escutcheons above

the control knobs.

Idler Wheel Motion Detector—The wheel motion detector will turn off the blade drive in the event of a blade breaking or jamming in a workpiece. This feature also prevents premature wear on the drive wheel from a stalled blade.

Automatic Powered Chip Conveyor—The powered chip conveyor auger automatically removes the saw chips while draining cutting fluid back into the fluid reservoir. This greatly reduces cleanup time and enables the machine to run longer without operator cleanup.

Split Front Vise (HFA250W)—The work-holding vise is split so that it clamps the workpiece on both sides of the cutting plane. This additional support in front of the cutting plane minimizes the burr on the cut pieces.

Full-Stroke Vises—The work-handling and index vise cylinders are both full-stroke, which eliminates the need to manually set the clamping jaw for the work-width.

User-Friendly Controls—All cutting

Horizontal Fully Automatic Bandsaws



Blade Deviation Monitor



NC Control Panel



Wheel Cover Interlock

NC Functions

- Auto trim cut
- Hour meter
- Blade deviation monitor
- 99 cut-off lengths from the same bar
- Number of pieces required
- Number of pieces cut
- Does not have blade life
- Does not have blade history

STANDARD FEATURES	HFA250W	HFA400W	HFA500W
2-way opening vise			•
Auto trim cut	•	•	•
Blade deviation monitor	•	•	•
Chip conveyor	•	•	•
Full-stroke vise	•	•	•
Motion detector	•	•	•
Piece counter	•	•	•
Pressure flow valve	•	•	•
Programmable cut length	•	•	•
Self-diagnostics	•	•	•
Split vise	•		
Variable blade speed	•	•	•
Wheel cover limit switch	•	•	•

OPTIONAL ACCESSORIES	HFA250W	HFA400W	HFA500W
Return conveyor			
Roller table 6.5" (2 m)	•	•	•
Roller table 10" (3 m)	•	•	
Vertical clamps	•	•	•
Vise pressure control	•	•	•

HFA250W, HFA400W and HFA500W

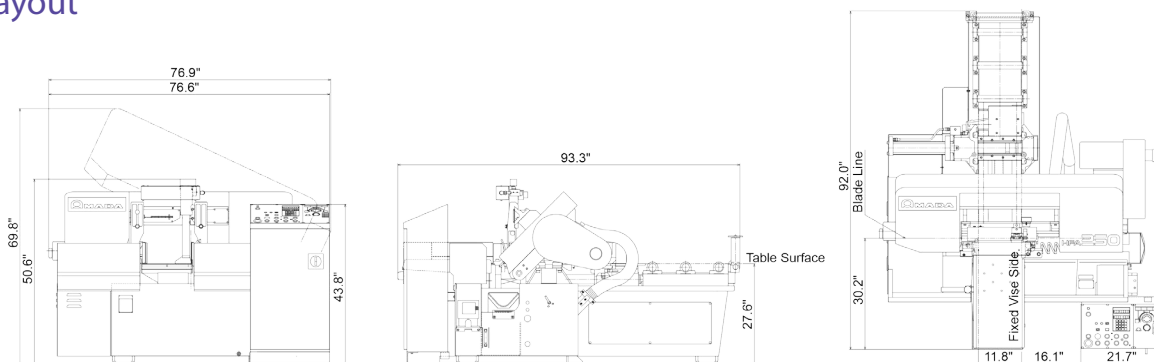


HFA250W

HFA250W Machine Specifications

CAPACITY	Cutting capacity	Round (diameter)	1.18"~10"	30~250 mm
		Rectangle (W x H)	10.6" x 10"	270 x 250 mm
	Work load capacity		3307 lb	1500 kg
BLADE AND VISE OPERATION	Saw blade	Dimensions (L x T x W)	11'6" x 0.042" x 1.25"	3505 x 1.1 x 34 mm
		Blade speed	89~295 ft/min, 60 Hz stepless	27~90 m/min, 60 Hz stepless
		Tension control	Hydraulic	
	Blade control	Top limit setting	Automatic setting with quick approach feeler	
		Cutting control	Hydraulic pressure and flow control valve	
	Vise operation	Type	Front split vise and rear vise	
MOTORS		Control	Hydraulic full-stroke cylinder	
	Saw blade motor	5 HP	3.7 kW	
	Hydraulic pump motor	1 HP	0.75 kW	
	Cutting fluid pump motor	1/4 HP	0.18 kW	
POWER REQUIREMENTS	Power supply voltage	AC220 \pm 10%, 3 PH, 60 Hz (or AC440V, 3 PH, 60 Hz)		
	Power requirement	8 kVA		
CUTTING FLUID AND HYDRAULIC	Cutting fluid	Tank capacity	22.4 gal	85 liters
		Pump type	Electric	
	Hydraulic	Tank capacity	7.9 gal	30 liters
		Pressure setting	384 psi	2.7 MPa (27 kgf/cm ²)
CHIP DISPOSAL	Chip conveyor			
MATERIAL INDEX	Index mechanism	Shuttle vise		
	Stroke	15.75"	400 mm	
	Length	0.39"~393.70"	10~9999.9 mm	
	Number of input stations	1~99		
	Number of cut-off pieces	1~9999		
	Remnant length	2.24" plus length of parts	57 mm plus length of part	
DIMENSIONS AND WEIGHT	Machine dimensions (W x L x H)	Head up position	76.9" x 93.1" x 69.8"	1945 x 2366 x 1772 mm
		Head down position	76.9" x 93.1" x 50.6"	1945 x 2366 x 1285 mm
	Table height (above floor)	27.6"	700 mm	
	Machine weight	3307 lb	1500 kg	

Floor Layout



* Specifications may change without notice at the sole discretion of Amada's Engineering Department.

HFA250W, HFA400W and HFA500W

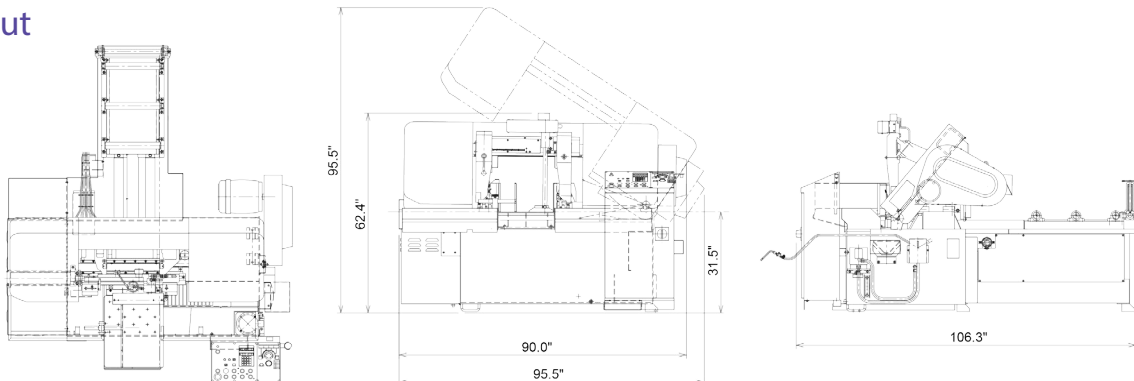


HFA400W

HFA400W Machine Specifications

CAPACITY	Cutting capacity	Round (diameter)	1.18"~16.54"	30~420 mm
		Rectangle (W x H)	16" x 16"	400 x 400 mm
	Work load capacity		5511 lb	2500 kg
BLADE AND VISE OPERATION	Saw blade	Dimensions (L x T x W)	15' x 0.050" x 1.5"	4570 x 1.3 x 41 mm
		Blade speed	56~295 ft/min, 60 Hz stepless	17~90 m/min, 60 Hz stepless
		Tension control	Hydraulic	
	Blade control	Top limit setting	Automatic setting with quick approach feeler	
		Cutting control	Hydraulic pressure flow control valve	
	Vise operation	Type	Front and rear vise	
		Control	Hydraulic full-stroke cylinder	
MOTORS	Saw blade motor	7.5 HP	5.5 kW	
	Hydraulic pump motor	2 HP	1.5 kW	
	Cutting fluid pump motor	1/4 HP	0.18 kW	
POWER REQUIREMENTS	Power supply voltage	AC220 ± 10%, 3 PH, 60 Hz (or AC440V, 3 PH, 60 Hz)		
	Power requirement	11 kVA		
CUTTING FLUID AND HYDRAULIC	Cutting fluid	Tank capacity	31.5 gal	120 liters
		Pump type	Electric	
	Hydraulic	Tank capacity	10.5 gal	40 liters
		Pressure setting	498 psi	3.5 MPa (35 kgf/cm ²)
CHIP DISPOSAL	Chip conveyor			
MATERIAL INDEX	Index mechanism		Shuttle type	
	Stroke		19.6"	500 mm
	Length		0.39"~393.70"	10~9999.9 mm
	Number of input stations		1~99	
	Number of cut-off pieces		1~999	
	Remnant length		3" plus length of parts	76 mm plus length of parts
DIMENSIONS AND WEIGHT	Machine dimensions (W x L x H)	Head up position	89.5" x 106.2" x 95.5"	2274 x 2697 x 2425 mm
		Head down position	89.5" x 106.2" x 62.0"	2274 x 2697 x 1575 mm
	Table height (above floor)		31.5"	800 mm
	Machine weight		4850 lb	2200 kg

Floor Layout



* Specifications may change without notice at the sole discretion of Amada's Engineering Department.

HFA250W, HFA400W and HFA500W

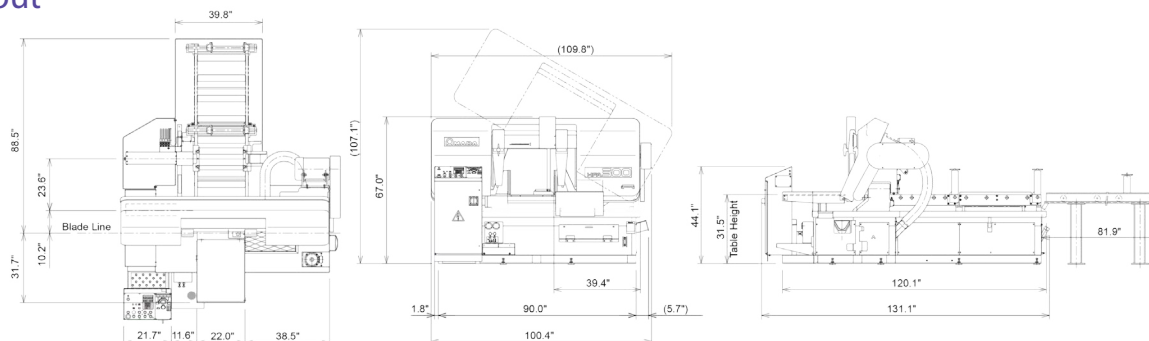


HFA500W

HFA500W Machine Specifications

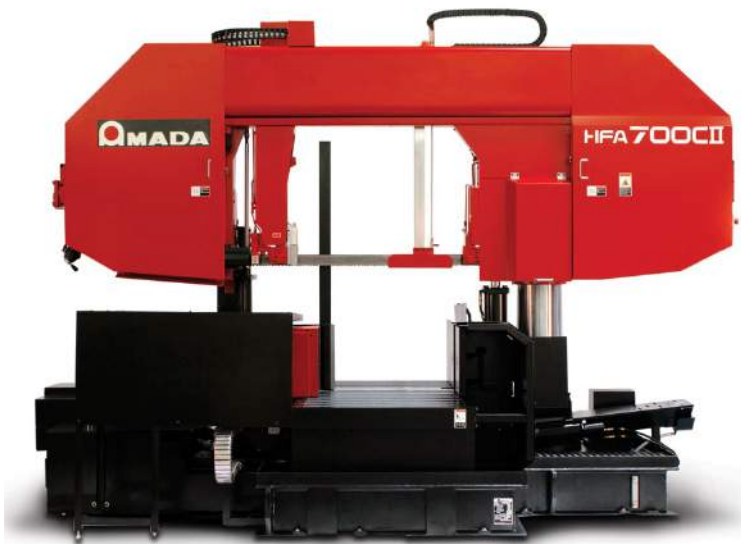
CAPACITY	Cutting capacity	Round (diameter)	1.18"~20"	30~500 mm
		Rectangle (W x H)	20" x 20"	500 x 500 mm
	Work load capacity		6615 lb	3500 kg
BLADE AND VISE OPERATION	Saw blade	Dimensions (L x T x W)	17'5" x 0.050" x 1.5"	5300 x 1.3 x 41 mm
		Blade speed	50~393 ft/min, 60 Hz stepless	15~120 m/min, 50/60 Hz stepless
		Tension control	Hydraulic	
	Blade control	Top limit setting	Automatic setting with quick approach feeler	
		Cutting control	Hydraulic pressure and flow control valve	
	Vise operation	Type	Front and rear vise	
		Control	Hydraulic full-stroke cylinder	
MOTORS	Saw blade motor	7.5 HP	5.5 kW	
	Hydraulic pump motor	2 HP	1.5 kW	
	Cutting fluid pump motor	1/4 HP	0.18 kW	
POWER REQUIREMENTS	Power supply voltage	AC220 ± 10%, 3 PH, 60 Hz (transformer required for other voltages)		
	Power requirement	21 kVA		
CUTTING FLUID AND HYDRAULIC	Cutting fluid	Tank capacity	18.5 gal	70 liters
		Pump type	Electric	
	Hydraulic	Tank capacity	18.5 gal	70 liters
		Pressure setting	498 psi	3.5 MPa (35 kgf/cm²)
CHIP DISPOSAL	Chip conveyor			
MATERIAL INDEX	Index mechanism		Hydraulic shuttle type	
	Stroke		23.6"	600 mm
	Length		0.39"~393.70"	10~9999.9 mm
	Number of input stations		1~99	
	Number of cut-off pieces		1~999	
	Remnant length		4.9" plus length of parts	125 mm plus length of parts
DIMENSIONS AND WEIGHT	Machine dimensions (W x L x H)	Head up position	100.4" x 131.1" x 107.1"	2550 x 3330 x 2720 mm
		Head down position	100.4" x 131.1" x 67"	2550 x 3330 x 1700 mm
	Table height (above floor)		31.5"	800 mm
	Machine weight		7940 lb	3600 kg

Floor Layout



* Specifications may change without notice at the sole discretion of Amada's Engineering Department.

HFA700CII and HFA1000CII



HFA700CII and HFA1000CII

The HFA700CII and HFA1000CII were purpose-built for maximum accuracy and durability when cutting large materials.

Features

High Accuracy for Large Materials

- HFA700CII: Up to 32" x 28"
(800 mm x 700 mm)
- HFA1000CII: From 15.7" x 3.9" to 43" x 40"
(400 mm x 100 mm to 1100 mm x 1000 mm)

Automatically Positioned Guide Arm—

The automatic setting of the guide arm eliminates the potential of operator error in the initial setup. The guide arm will always be as close as possible to the pieces being cut.

Automatic Adjusting Double Wire Brushes—

The new automatically adjusted double wire brush design keeps the blade clean for maximum blade life (and brush life) with all types of cutting.

Blade Deviation Monitor—The NC controller constantly monitors the cutting and blade conditions, including the twist of the saw blade. When any conditions exceed preset parameters, the machine will cease cutting and indicate the reason for the stoppage.

Front and Rear Vises—The vise configuration allows a minimum remnant length.

Hydraulic Blade Tensioning—A specially designed hydraulic cylinder produces the wide range of band tension required when utilizing both bi-metal and carbide-tipped blades. A direct-reading pressure gauge enables quick and accurate tension setting to accommodate all cutting applications.

Auto Trim Positioning

User-Friendly Operator Console—By simplifying the required input data, the cutting rate controller ("CNC-Lite") ensures the maximum cutting rate, accuracy, and blade life.

HFA700CII and HFA1000CII

NC Functions

- Automatic kerf compensation
- Hour meter
- Blade runout monitor
- History
- 99 cut-off lengths from the same bar
- Number of pieces required
- Number of pieces cut
- Blade life

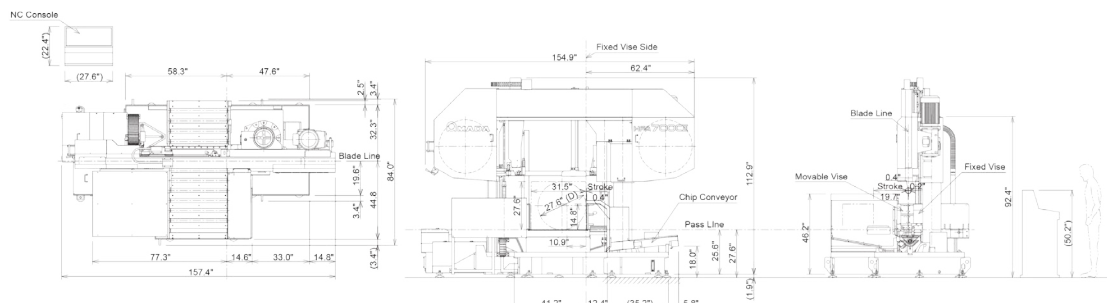
STANDARD FEATURES	HFA700CII	HFA1000CII
Automatically positioned guide arm	•	•
Blade deviation monitor	•	•
Blade speed controlled by inverter	•	•
Chip conveyor	•	•
CNC-controlled down feed	•	•
Drive: helical gear (no torque loss)	•	•
Full-stroke vises	•	•
Hydraulic blade tensioning	•	•
Motion detector	•	•
Piece counter	•	•
Outboard vise	•	•
Vibration dampening rollers	•	•
Wheel cover limit switch	•	•

OPTIONAL ACCESSORIES	HFA700CII	HFA1000CII
Beacon	•	•
Free roller table	•	•
Vertical clamp (must be factory ordered)	•	
Vise pressure control valve	•	

HFA700CII Machine Specifications

CAPACITY	Cutting capacity	Round (diameter)	11.4"~28"	290~700 mm
		Rectangle (W x H)	32" x 28"	800 x 700 mm
	Work load capacity		17,637 lb	8000 kg
BLADE AND VISE OPERATION	Saw blade	Dimensions (L x T x W)	27'3 x 0.063" x 2.625"	8300 x 1.3 x 67 mm
		Blade speed	49~394 ft/min, by inverter	15~120 m/min, by inverter
		Tension control	Hydraulic	
	Blade control	Top limit setting	Automatic setting with quick approach feeler	
		Cutting control	CNC-Lite, hydraulic flow control valve with stepping motor	
	Vise operation	Type	Front and rear vise	
MOTORS		Control	Hydraulic full-stroke cylinder	
	Saw blade motor	15 HP	11 kW	
	Hydraulic pump motor	5 HP	3.7 kW	
	Cutting fluid pump motor	1/2 HP	0.36 kW	
POWER REQUIREMENTS	Power supply voltage	AC220 \pm 10%, 3 PH, 60 Hz (all other voltages require a transformer)		
	Power requirement	26 kVA		
CUTTING FLUID AND HYDRAULIC	Cutting fluid	Tank capacity	26.4 gal	100 liters
		Pump type	Electric	
	Hydraulic	Tank capacity	30.4 gal	115 liters
		Pressure setting	784 psi	5.5 MPa (55 kgf/cm ²)
CHIP DISPOSAL	Chip conveyor			
MATERIAL INDEX	Index mechanism	Shuttle vise		
	Stroke	19.6"	500 mm	
	Length	0.39"~393.70"	10~9999.9 mm	
	Number of input stations	1~99		
	Number of cut-off pieces	1~9999		
	Remnant length (for clamp clearance of 0.79"/20 mm)	1.38" plus length of parts	35 mm plus length of parts	
DIMENSIONS AND WEIGHT	Machine dimensions (W x L x H)	Head up position	157.4" x 84.0" x 112.9"	3999 x 2133 x 2867 mm
		Head down position	157.4" x 84.0" x 112.9"	3999 x 2133 x 2867 mm
	Table height (above floor)	27.6"	700 mm	
	Machine weight	15,435 lb	7000 kg	

Floor Layout



* Specifications may change without notice at the sole discretion of Amada's Engineering Department.

HFA700CII and HFA1000CII

HFA1000CII Machine Specifications

CAPACITY	Cutting capacity	Round (diameter)	15.47"~40"	400 x 1000 mm
		Rectangle (W x H)	15.7" x 3.9"~43" x 40"	400 x 100 mm~1100 x 1000 mm
	Work load capacity		33,069 lb	15,000 kg
BLADE AND VISE OPERATION	Saw blade	Dimensions (L x T x W)	36'6" x 0.063"x 3"	11,100 x 1.6 x 80 mm
		Blade speed	49~394 ft/min, by inverter	15~120 m/min, by inverter
		Tension control	Hydraulic	
	Blade control	Top limit setting	Automatic setting with quick approach feeler	
		Cutting control	CNC-Lite, hydraulic flow control valve with stepping motor	
	Vise operation	Type	Front and rear vise	
		Control	Hydraulic full-stroke cylinder	
MOTORS	Saw blade motor	15 HP	11 kW	
	Hydraulic pump motor	5 HP	3.7 kW	
	Cutting fluid pump motor	1/2 HP	0.36 kW	
POWER REQUIREMENTS	Power supply voltage	AC220 ± 10%, 3 PH, 60 Hz (all other voltages require a transformer)		
	Power requirement	26 kVA		
CUTTING FLUID AND HYDRAULIC	Cutting fluid	Tank capacity	66.1 gal	250 liters
		Pump type	Electric	
	Hydraulic	Tank capacity	30.4 gal	115 liters
		Pressure setting	784 psi	5.5 MPa (55 kgf/cm ²)
CHIP DISPOSAL	Chip conveyor			
MATERIAL INDEX	Index mechanism		Shuttle type	
	Stroke		19.6"	500 mm
	Length		0.39"~393.70"	10~9999.9 mm
	Number of input stations		1~99	
	Number of cut-off pieces		1~9999	
	Remnant length (for clamp clearance of 0.79"/20 mm)		13" plus length of parts	330 mm plus length of parts
DIMENSIONS AND WEIGHT	Machine dimensions (W x L x H)	Head up position	211.3" x 126.6" x 154.1"	5420 x 3215 x 3924 mm
		Head down position	211.3" x 126.6" x 154.1"	5420 x 3215 x 3924 mm
	Table height (above floor)		33.5"	850 mm
	Machine weight		31,970 lb	14,500 kg

Floor Layout

