



# Avenger X

## Large Gantry Cutting Machine

The Avenger X represents the latest in engineering excellence from ESAB Cutting Systems. This large gantry design delivers the speed, accuracy, and flexibility desired by fabricators, ship builders, and equipment manufacturers around the globe. Its dual-precision linear ways and high-stiffness fabricated beam structure make it ideal for precision cutting, marking, and beveling. High-speed AC drives and oversized gearboxes make it fast, precise, and durable for added productivity.

A maximum positioning speed of 1,400 inches per minute keeps traverse time to a minimum. Combined with ESAB's high-speed lifters and integrated process control, this means maximum throughput, and lowest cost per part. The machine features a heavy-duty 85# floor mounted crane rail system for extreme durability. The Avenger X features positioning accuracy of +/- 0.010" and repeatability of +/- 0.003".



Available in widths to cover 8 to 18 feet, the Avenger X can carry a wide variety of cutting and marking tools, including precision plasma torches, oxy-fuel torches, plasma or oxy-fuel bevel heads, punch markers, drills, and router stations. Additional options include a rider's platform, heat shields, and overhead cable track drag bracket.

### Specifications

Avenger X	3500	4000	4500	5000	5500	6000	6500
Maximum Table Width	118" (2992 mm)	137" (3492 mm)	157" (3992 mm)	177" (4492 mm)	197" (4992 mm)	216" (5492 mm)	236" (5992 mm)
Rail Gauge	137.8" (3500 mm)	157.5" (4000 mm)	177.2" (4500 mm)	196.9" (5000 mm)	216.5" (5500 mm)	236.2" (6000 mm)	255.9" (6500 mm)
Machine Width	183" (4653 mm)	203" (5153 mm)	222" (5653 mm)	242" (6153 mm)	262" (6653 mm)	281" (7153 mm)	301" (7653 mm)

### General Machine Specifications

Machine Height	84" (2133 mm)
Parking Area	96" (2438 mm)
Work Table Height	26" - 30" (660 - 762 mm)
Speed Range	2 - 1400 ipm (50 - 35560 mm/min)
Power Requirement	230/460/575 VAC, 50/60 Hz, 3-Phase, 30 Amp (Special input voltages are available upon request)

#### Notes:

- Rails are available in increments of 8' and 16' (2438 and 4876 mm)
- Machine Width does not include powertrack hose/cable carrier or optional rider's platform.
- Machine Height is to top of standard plasma station.

### Tool Specifications

Cutting Processes	Plasma, Oxy-Fuel, Drill
Plasma System Options	Up to 720 Amps
Plasma Cutting Thickness	max. 6 inch, depending on plasma unit
Maximum Plasma Stations	4
Oxy-Fuel Cutting Capacity	72 Torch-Inch
Maximum Pierce Thickness	6 inch (max. recommended)
Maximum Oxy-Fuel Stations	12
Maximum Marking Tools	4 Plasma, Pneumatic, or other Marker
Maximum Total Stations	12
Maximum Bevel Stations	2

## Standard Features

- **3 axis gantry with rack-and-pinion drives**
- **Reinforced fabricated welded beam for stiffness and accuracy**
- **Precision dual-linear rail Y-axis guiding system for greater accuracy**
- **Welded and machined end trucks with long wheel base for added stability**
- **Machined mating surfaces for high stiffness and accuracy**
- **Digital AC drive amplifiers for years of maintenance free operation**
- **AC brushless motors for wide speed range with accurate speed control**
- **Precision heavy-duty gearboxes for accuracy and smooth motion**
- **Maximum machine speed: 1400 ipm (35,560 mm/min)**
- **Cross axis powertrack hose & cable carriers**
- **Precision drive rack mounted directly to machined surface for precise rack alignment**
- **Heavy-Duty 85# Machined Crane Rail System for Accuracy and Durability**
- **Wide variety of cutting and marking process tools available**
- **Precision Linear Rail Drive Engagement**
- **Positioning Accuracy: +/- .010", Repeatability: +/- .003"**
- **Adjustable steel mounting pads for adjusting height, level, straightness**

## Process Tool Stations

The Avenger X supports a wide array of process tool station options. Each machine is custom built-to-order depending on the application and customer needs. Tool configuration can include nearly any combination of the following:

- **Plasma Torch Station** - for vertical plasma cutting from 100 Amp to 720 Amp. Used for cutting mild steel up to 2.5 inch thick, or stainless steel and aluminum from gauge thickness up to 6 inch thick.
- **Plasma VBA Station** - for cutting both vertical and bevel cuts. For use with plasma up to 400 amps, allows cutting up to 1.25 inch thick at 45 degrees on mild steel.
- **Plasma Edge Prep Station** - for straight line bevel cuts in either X or Y direction.
- **Oxy-Fuel Torch Station** - for vertical cutting of mild steel up to 6 inches thick standard, thicker if necessary.
- **Oxy-Fuel Edge Prep Station** - three torch unit for weld edge prep cutting along a straight line in X or Y direction.
- **Oxy-Fuel Contour Bevel Station** - three torch unit has manually adjusted torches, but rotates automatically to cut a bevel along any contour.
- **Ink Jet Marker** - the fastest marking method for text marking on cut parts and plates.
- **Pneumatic Punch Marker** - air hammer type marking for lines or center point punch marks.
- **Plasma Marker** - high speed line marking with variable width and depth can also be used for lettering.
- **Drill Station** - drill stations are customized to the application but typically handle up to 3/4 inch holes in up to 2 inch plate.
- **Oxy-Fuel Grate Cutting Station** - for automated cutting of steel grating material.

Specifications are subject to change without notice. Please contact ESAB Cutting Systems for the most current specifications, numerical control, and available equipment.



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