Sabre™ DXG

Heavy-Duty Gantry Cutting Machine

The Sabre DXG is a heavy-duty, low profile gantry designed for high speed plasma and oxy-fuel shape cutting with up to 2 plasma torches or up to 8 oxy-fuel torches, over widths up to 14 feet. It is built around a reinforced main beam featuring dual precisioin linear ways that provide outstanding accuracy. The gantry sits on a heavy-duty crane rail system mounted on H-beams, providing a stable foundation and easy installation. The Sabre DXG is equipped with an advanced drive system using the latest generation digital AC drives and high-speed motors, and an precision gearbox optimized for shape cutting machines. This system provides the wide speed range with accuracy and smoothness of motion.

Gantry Sizes

Sabre DXG	2500	3000	3500	4000	4500	5000
Recommended Plate Width	5’	6’	8’	10’	10’	12’
Cutting Width* 1 - 3 Tools	74” (1881 mm)	93” (2381 mm)	113” (2881 mm)	133” (3381 mm)	152” (3881 mm)	172” (4381 mm)
Cutting Width* with 4 Tool	66” (1678 mm)	85” (2178 mm)	105” (2678 mm)	125” (3178 mm)	144” (3678 mm)	164” (4178 mm)
Cutting Width* with 5 Tool	58” (1475 mm)	77” (1975 mm)	97” (2475 mm)	117” (2975 mm)	136” (3475 mm)	156” (3975 mm)
Cutting Width* with 6 Tool	50” (1272 mm)	69” (1772 mm)	89” (2272 mm)	109” (2772 mm)	128” (3272 mm)	148” (3772 mm)
Cutting Width* with 7 Tool	42” (1069 mm)	61” (1569 mm)	81” (2069 mm)	101” (2569 mm)	120” (3069 mm)	140” (3569 mm)
Cutting Width* with 8 Tool	34” (865 mm)	53” (1365 mm)	73” (1865 mm)	93” (2365 mm)	112” (2865 mm)	132” (3365 mm)
Maximum Table Width	77” (1962 mm)	97” (2462 mm)	117” (2962 mm)	136” (3462 mm)	156” (3962 mm)	176” (4462 mm)
Internal Clearance	83” (2117 mm)	103” (2617 mm)	122” (3117 mm)	142” (3617 mm)	162” (4117 mm)	182” (4617 mm)
Rail Gauge	98.4” (2500 mm)	118.1” (3000 mm)	137.8” (3500 mm)	157.5” (4000 mm)	177.1” (4500 mm)	196.8” (5000 mm)
Machine Width[1]	140” (3567 mm)	160” (4067 mm)	180” (4567 mm)	199” (5067 mm)	219” (5567 mm)	239” (6067 mm)

* Cutting Width is valid for standard straight cutting plasma and oxy-fuel station only. Bevel tools or special stations reduce the available cutting width.

[1] Machine width includes CNC, but does not include the cable chain and its tray, which can be mounted on the floor, or overhead.

General Machine Specifications

Machine Height	90” (2291 mm) to top of plasma station
Parking Area	74” (1879 mm) with Safety Bumpers
Track Height	21.5” (546.1 mm)
Work Table Height	26” - 30” (660 - 762 mm)
Speed Range	2 - 1400 ipm (50.8 - 35560 mm/min)
Power Requirement	230/460/575 VAC, 50/60 Hz, Single-Phase, 30 Amp (Special input voltages are available upon request)

Tool Specifications

Cutting Processes	Plasma, Oxy-Fuel, Drill
Plasma System Options	Up to 600 Amps
Plasma Cutting Thickness	max. 6 inch, depending on plasma unit
Oxy-Fuel Cutting Capacity	48 Torch-Inch
Maximum Pierce Thickness	6 inch (max. recommended)
Maximum Marking Tools	2 Plasma, Pneumatic, or other Marker
Maximum Tool Configurations	0 plasma / 8 oxy-fuel 1 plasma / 6 oxy-fuel 2 plasma / 4 oxy-fuel

Standard Features

- **3 Axis Gantry with Rack-and-Pinion Drives**
- **Reinforced Box Beam Design Provides a Solid, Precision Platform For the Cutting Tool**
- **Dual Precision Linear Rail Y-Axis Guide Ways For Greater Accuracy**
- **Low Profile End Trucks, Machined and Welded, with Oversized Wheel Bearings for Increased Stability and Accuracy**
- **Machined Mating Surfaces for high stiffness and accuracy**
- **Vision™ T5 CNC - Windows® XP based, touch-screen controller with Operating Wizard for simple step-by-step guided operation.**
- **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 (35560 mm/min)**
- **Cross Axis Powertrack Hose & Cable Carriers**
- **Cuts Material up to 6" thick (150 mm)**
- **Positioning Accuracy: +/- .010", Repeatability: +/- .003" (over a 5' x 5' area)**
- **Precision drive rack mounted directly to machined surface for precise rack alignment**
- **Heavy Duty H-Beam Rail Supports**
- **Adjustable Rail Pads for Adjusting Height, Level and Straightness**
- **Machined 85# Crane Rail System for Accuracy and Durability**

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

Plasma Stations

The Sabre DXG features ESAB's m3 Precision Plasmarc System, which allows the machine to cut and mark with the same plasma torch. The m3 plasma system is available on the Sabre DXG in configurations from 200 up to 600 Amp.

The m3 system offers precision cutting with current ranges from 20 up to 600 amps, cutting gauge material up to 2.5" thick carbon steel or stainless steel and aluminum up to 6" thick. The system is completely automated by the Vision CNC, the operator simply selects the material type and thickness, and the CNC automatically sets the optimal start, cut and shield gas combination.

Oxy-Fuel Torch Stations

The Sabre DXG may be equipped with up to 8 oxy-fuel cutting stations. The Advanced Electronic Gas Control System uses electronic proportional flow control valves for Cutting Oxygen, Preheat Fuel Gas, and Preheat Oxygen pressures. Also allows setting and adjusting gas pressure from the Vision CNC. Makes oxy-fuel cutting easy to setup and simple to use. With a maximum cutting capacity of 48 torch-inch, the Sabre DXG can oxy-fuel cut up to 6 inch thick with up to 8 torches.

Marking or Drilling Stations

The Sabre DXG can be equipped with a number of different processes tools, including routers, drill stations, plasma markers, scribe markers, or many others. Each of these process can be accurately combined for use on the same parts.

Additional Options

The following tool and machine options are available on the Sabre DXG:

- Air Curtain for under-water plasma cutting
- Water Injection Module for cutting Stainless & Aluminum
- Laser Pointer for manual plate alignment
- Down draft or water cutting tables
- Columbus programming software

ESAB Cutting Systems

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