



# SGX AUTOMATED CUTTING MACHINE



**A compact, rugged,  
and easy-to-use system** for  
plasma and oxy-fuel cutting.

# OPTIMAL SIZE. OPTIMISED PRODUCTIVITY.

When it comes to automated plasma and oxy-fuel cutting, ESAB believes you should not have to sacrifice size for performance. With its efficient design and advanced features, SGX produces high-quality parts with maximum material utilisation, using minimal floor space. Add in an affordable price and exceptional durability, and you get an industry-leading value. Do not settle for anything less—take your cutting to the next level with SGX.



## Compact Design

With space-saving features and multiple size configurations, SGX is ideal for growing fabricators and manufacturers.

## Rugged Construction

ESAB engineering and quality ensure SGX is a sturdy, durable, accurate, and high-speed cutting machine.

## Simplified Operation

SGX is fully integrated with ESAB's Vision T5<sup>®</sup> CNC, which automates operation with an easy-to-use touch screen and built-in process data for plasma and oxy-fuel cutting.



# COMPACT AND CONVENIENT.

Efficiently engineered, SGX offers plasma and oxy-fuel cutting with an impressively small footprint. The design is perfect for shops with no overhead crane. With its low rail design, you can easily load and unload materials by fork truck.

## Size Configurations

Available in one-metre rail increments, you can configure the machine to your needs and available floor space.

- Cutting widths: 1.5 to 2.5 m
- Cutting lengths: 2.5 m to 14.5 m





## Cutting Table Options

Featuring an open floor design, SGX can be used with a downdraft table for dry cutting, or water table for above or under-water plasma cutting.



# RUGGED MACHINE. POWERFUL PERFORMANCE.

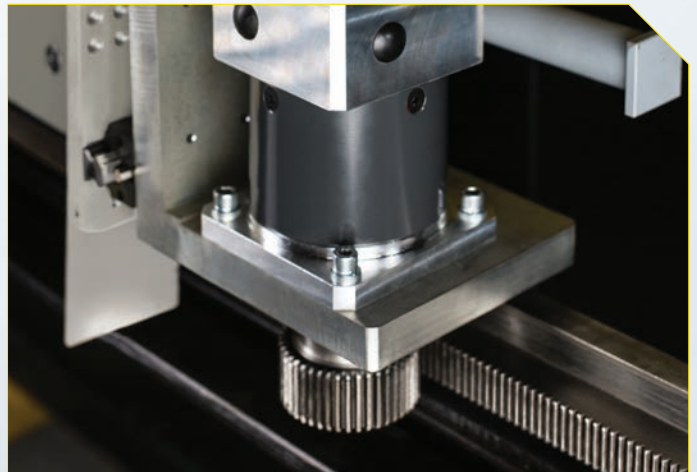
At ESAB, we take great pride in the quality and reliability of our cutting solutions. SGX is built with a heavy steel beam, precision-machined mating surfaces, and linear rail. So you can count on smooth motion and consistent accuracy right away, and a long service life to get the most return out of your investment.

- Triple machine T-rails provide smooth, accurate guidance
- Easy installation and alignment with sturdy, fully adjustable rail pedestals
- Precision drive rack mounts directly to machined rail for perfect alignment

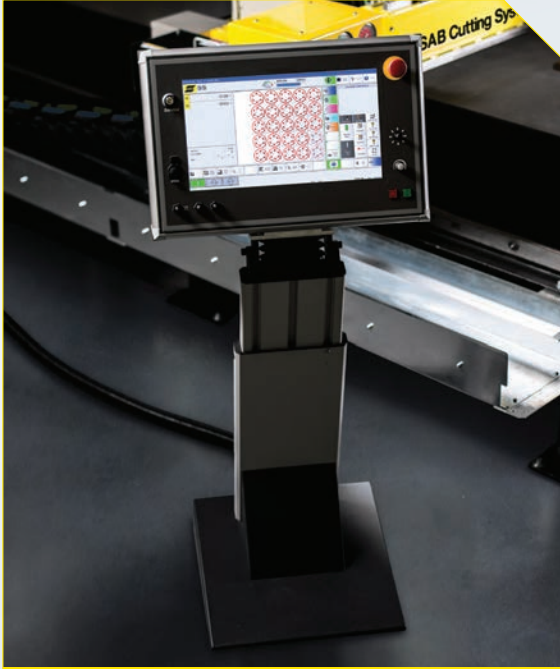
## High-productivity cutting.

Do not let its small size fool you—SGX delivers all the strength, speed, and precision you need.

- Dual-side drive, high-speed gantry design
- AC drives with 24,000 mm/min traverse speed and fast torch lifter deliver rapid cut-to-cut cycle times
- Linear guiding system provides high dynamic accuracy over the entire cutting area



# EASY TO USE. SIMPLE TO MASTER.



## Pedestal CNC Mount

The portable control system can be easily positioned for operator convenience and improved multitasking.

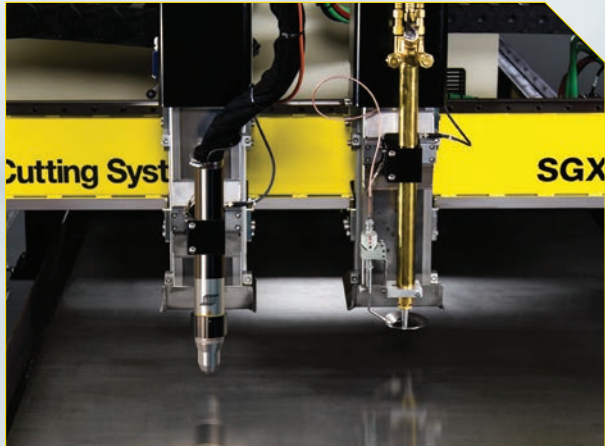


## Advanced Process Technologies

With SGX, you can take advantage of ESAB's leading-edge, automated technologies:

- Enhanced Hole Technology™—produces high-quality cut holes down to a 1:1 diameter-to-thickness ratio in mild steel up to 25 mm thick
- Smart Voltage Height Control—automatically compensates for electrode wear to achieve longer consumable life and more consistent cut quality
- ESAB's SmartCycle™ Technology—boosts productivity by optimising cut-to-cut cycle times on nested parts

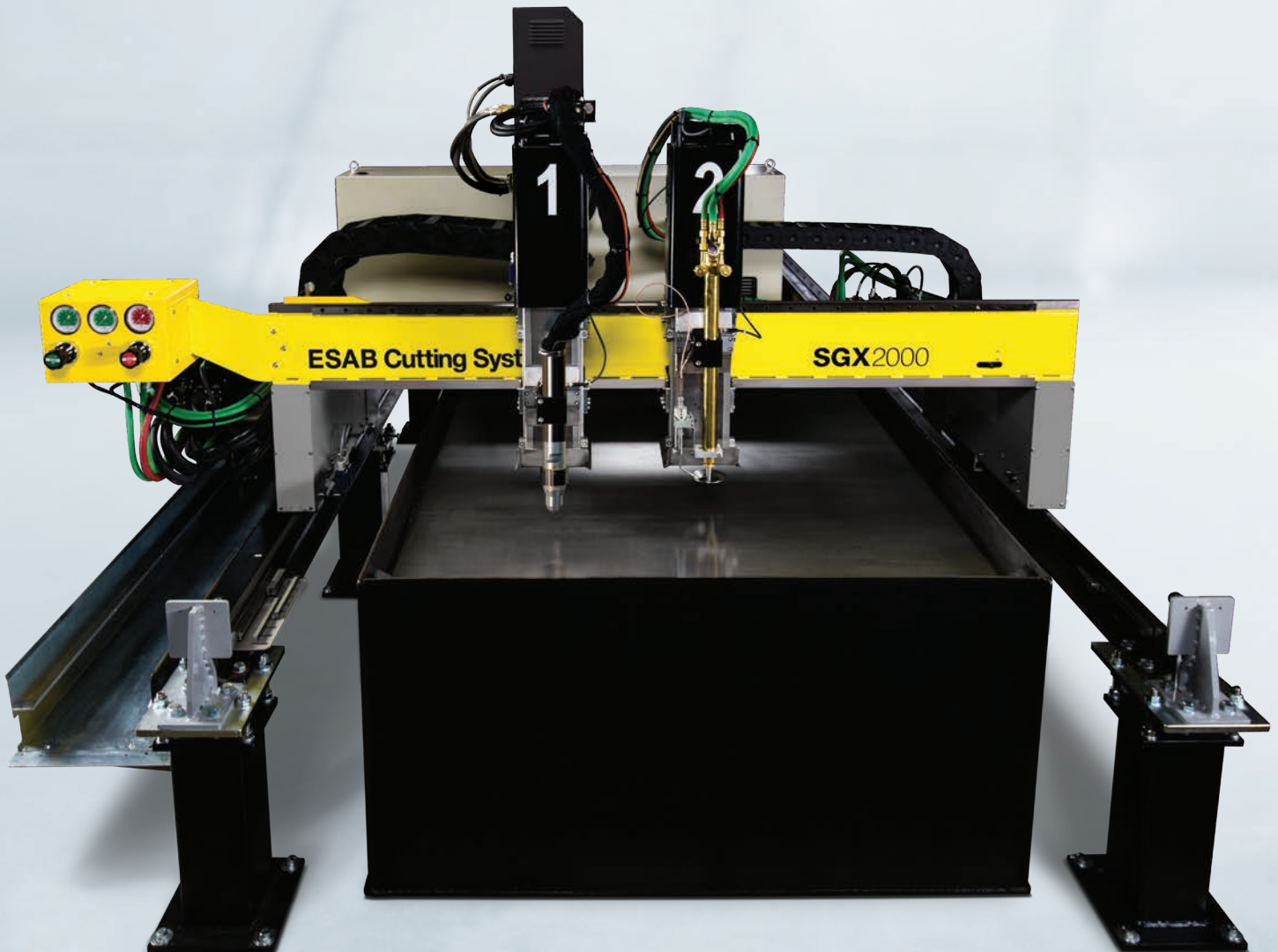
# FLEXIBLE TOOL STATION OPTIONS.



Equipped with up to three cutting stations, SGX gives you the choice of one plasma tool and up to two oxy-fuel tools.

Standard features:

- Heavy-duty lifter with linear rails and a ball screw for accuracy and rigidity
- Magnetic breakaway prevents torch damage
- Stainless steel heat shield protects lifter and beam against pierce spatter





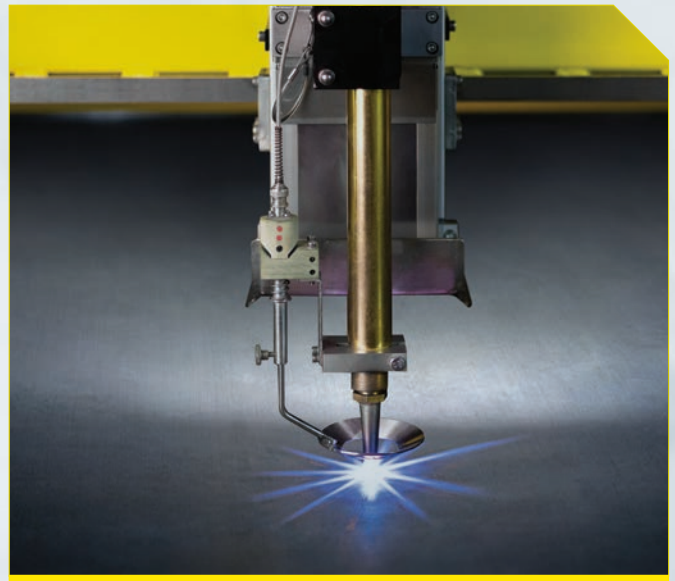


## Plasma Cutting

The plasma station features a high-speed lift for reduced cut-to-cut cycle time and improved productivity. Small hole cutting is enhanced by accurate initial height sensing. Setup is quick and easy thanks to the fully automatic gas control and Vision CNC's built-in process database.

Choose the plasma system option that best fits your needs:

- **iSeries Plasma System**—high-quality plasma cutting up to 50 mm on mild steel, stainless steel and aluminium. Available in 100, 200, and 300 Amps, and offers best cut quality on stainless and aluminium, with longest consumable life and lowest operating cost.
- **A-Series Air Plasma**—for economical cutting on materials up to 20mm.



## Oxy-fuel Cutting

Simplified oxy-fuel cutting is provided by a rugged, accurate torch station designed for cutting mild steel plate up to 100 mm thick. The station features solenoid valves for enhanced safety and reduce waste. Automatic height control optimises piercing and cutting height.

When you add an oxy-fuel station, your SGX will come with ESAB's Hi-Lo Oxy-Fuel Gas Control with ease-on cut oxygen.

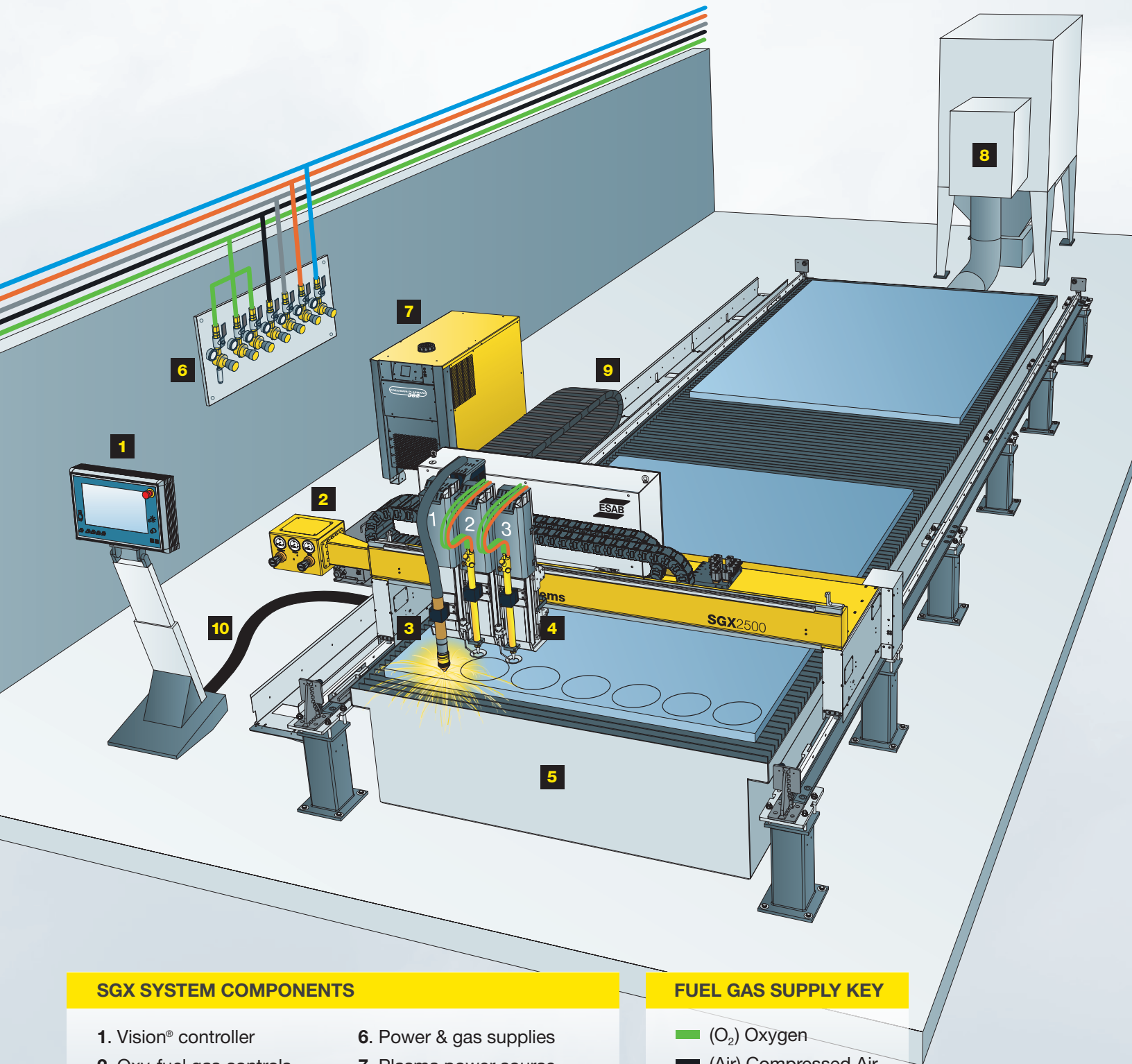
- Located for easy access and torch visibility
- Efficient piercing of thicker materials
- Automatic high/low preheat switching

## Optional Accessories

Customise and enhance your machine with additional features:

- **Laser pointer**—speeds up alignment of the machine to the raw plate
- **Air scribe marker**—eliminates secondary operations and improves accuracy
- **Machine safety**—improve personal protection with light curtains, truck guards, and safety-rated controller and drives

# SPECIFICATIONS.



## SGX SYSTEM COMPONENTS

- |                              |                                 |
|------------------------------|---------------------------------|
| 1. Vision® controller        | 6. Power & gas supplies         |
| 2. Oxy-fuel gas controls     | 7. Plasma power source          |
| 3. Plasma cutting station    | 8. Dust collector               |
| 4. Oxy-fuel cutting stations | 9. Rail axis cable chain & tray |
| 5. Cutting table             | 10. CNC umbilical               |

## FUEL GAS SUPPLY KEY

- |                                       |                            |
|---------------------------------------|----------------------------|
| <span style="color: green;">■</span>  | (O <sub>2</sub> ) Oxygen   |
| <span style="color: black;">■</span>  | (Air) Compressed Air       |
| <span style="color: grey;">■</span>   | (N <sub>2</sub> ) Nitrogen |
| <span style="color: orange;">■</span> | (FG) Fuel Gas              |
| <span style="color: blue;">■</span>   | (Ar) Argon                 |

## SGX SPECIFICATIONS BY MODEL

SGX Model	2000	2500	3000
Rail Gauge	2000 mm	2500 mm	3000 mm
Machine Width*	2759 mm	3259 mm	3759 mm
Max. Table Width	1626 mm	2126 mm	2626 mm
Max. Station Travel with One Tool	1560 mm	2060 mm	2560 mm
Max. Station Travel with Two Tools	1270 mm	1770 mm	2270 mm
Max. Station Travel with Three Tools	1070 mm	1570 mm	2070 mm

\*Machine width includes gas control and cable chain tray, but does not include the CNC which is pedestal-mounted.

## SGX SPECIFICATIONS ACROSS ALL MODELS

Min. Tool Spacing	200 mm
Max. Machine Speed	24,000 mm/min
Vertical Lifter Stroke	200 mm
Vertical Lifter Speed	15 m/min
Cutting Surface Height	700 mm
Machine Height (top of plasma station)	1667 mm
Rail Height (top of rail)	591 – 621 mm
Rail Lengths	3 – 16 m
Torch Travel Length	1.7 – 14.7 m
Recommended Plate Coverage	1.5 – 14 m
Parking Length on Rail (including travel limits)	1500 mm
<b>POWER</b>	
Machine Supply Voltage	230/400/460/575 VAC, 50/60Hz, Single Phase
Full Load Amperage	20 Amps

## SGX PROCESS SPECIFICATIONS ACROSS ALL MODELS

Available Process Tools	Plasma cutting, oxy-fuel cutting, plasma marking, air-scribe marking
Max. Tool Configurations	1 plasma torch/2 oxy-fuel torches 1 plasma torch/1 oxy-fuel torch/1 marker 0 plasma torches/2 oxy-fuel torches
<b>PLASMA TECHNOLOGY</b>	
Max. Number of Torches	1 plasma torch
Max. Cutting Thickness	50 mm depending on plasma power unit
<b>OXY-FUEL TECHNOLOGY</b>	
Number of Torches	1 or 2 oxy-fuel torches
Max. Cutting Thickness	100 mm
Fuel Gases	Acetylene, propane, natural gas, mixed fuel gases

Note: Specifications subject to change without notice. Products may vary from those pictured.

# UNRIVALED SERVICE AND SUPPORT.

Like all ESAB products, the SGX Automated Cutting Machine is backed by our commitment to superior customer service and support. Our skilled customer service department is prepared to quickly answer any questions, address problems, and help with the maintenance and upgrading of your ESAB equipment and software. We offer:

- Value packages, including machine and process audits to maximise your investment
- Proactive preventive maintenance programs and maintenance contracts to keep your equipment and software up and running
- ESAB plasma consumables for the perfect cut
- Specialised repair services
- Retrofit upgrade products and packages for the latest in machine, control, and software technology
- Complete product and process training, including advanced training programs

In addition, our products are backed with the most comprehensive warranty in the business. With ESAB, you can be confident that the product you purchased will meet your needs today and in the future. Ask your ESAB sales representative or distributor for a complete ESAB solution.

**For more information, visit [esab.com](http://esab.com)**



ESAB / [esab.com](http://esab.com)

