



# COMBIREX™ PRO

The new standard in precision,  
performance, and safety in a  
heavy-duty cutting machine.



# BEST-IN-CLASS SOLUTION FOR BETTER PRODUCTIVITY.

Combirex PRO does not just meet your expectations—it exceeds them. From superior engineering to reliable performance to advanced technology, the machine is packed with features you would expect from a larger, higher priced system. Plus, a modular design and versatile tool stations allow you to tailor the machine to your precise needs. It all makes Combirex the ideal choice for productive, economical oxy-fuel and plasma cutting and beveling.

## Heavy-duty design

Sturdy beam with dual-linear rails (Y-axis), heavy-duty crane rails (X-axis), parallel-shaft gearboxes with oversize output shaft and bearings.

## Precise positioning

Featuring oversize drives, Dual Linear Rails, and a stiff gantry design, Combirex excels at precision plasma beveling, and small hole cutting.

## Dependable performance

Combirex makes it easy to produce high-quality parts thanks to high speeds, excellent accuracy, and smooth motion.

## Industry-leading safety

The machine is equipped with an innovative safety package that provides full compliance with EC Machinery Directive.



# RUGGED AND RELIABLE.

## Heavy-duty design

Featuring a reinforced box beam design and all-steel construction, Combirex is an exceptionally strong, durable machine. It also comes in a compact package with extendable lengths to minimise floor space requirements. ESAB's advanced engineering ensures accurate machine motion and a long service life.

- High-stiffness, engineered beam assemblies with dual linear rails
- Redesigned for improved balance and higher machine speed
- Heavy-duty crane rails and steel H-beams for robust and accurate foundation, and long machine life
- Easy installation on any concrete floor
- Suitable for material up to 150mm thick standard



## Single-source quality

As a complete automated cutting supplier, ESAB ensures that all components of your machine—including CNC, software, height control, plasma, and gas torches—have been expertly designed and built to work together perfectly. This integration also eliminates the need to mix and match components from different vendors.

## Benefits of a single-source supplier:

- Streamlined support
- Lower operating cost over lifetime of system
- Increased reliability
- Simpler maintenance

# PRECISION WHERE IT COUNTS.

When producing high-quality parts, there is no room for error. That is why Combirex is optimised for precise positioning—from oversized drives to dual linear rails to a stiff, well balanced gantry design. You can count on outstanding dynamic accuracy, high traverse speed, smooth motion, superior cut edges, and high throughput.

- High-performance drive system with high-traverse speeds
- Low backlash parallel-shaft gearboxes with oversized output shaft and bearing
- Precision linear-rail drive engagement with quick disengage for improved serviceability

# THE PERFORMANCE YOU NEED.

## Fast and accurate

Combirex keeps pace with your demanding production needs and quality standards by providing high speeds, excellent accuracy, and smooth motion.

- AC brushless motors for wide speed range with accurate speed control
- Maximum machine speed of 35000 mm/min (1400 ipm)
- High positioning speed reduces part-to-part cycle time
- SmartCycle Technology reduces cycle times by optimising torch motion and plasma system integration



# CUTTING-EDGE SAFETY.

As an industry leader in safety, ESAB is proud to offer a complete machine safety package with Combirex. This innovative suite of features reduces operator risk, lowers cost of ownership, and provides full compliance with EC Machinery Directive.

- Safety package includes:**
- Light curtains protecting front and rear of machine
  - Safety bumpers over light curtains provide complete envelope protection
  - Safety bumpers on front and rear of side trucks
  - CNC mounted inside of protected envelope
  - Service Mode for enhanced operator safety
  - Safety-rated controller manages all E-stop and safety functions



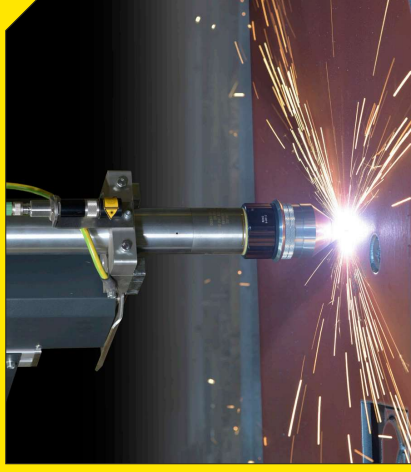
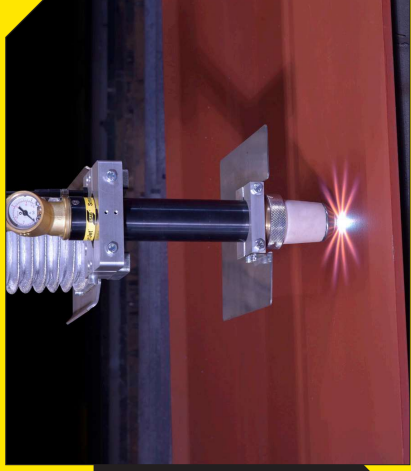
## Enhanced Design Elements



The Combirex PRO is equipped with a heavy-duty crane rail to ensure accurate motion and long machine life. A new quick-disengage mechanism for the X-axis drives improves serviceability to reduce down-time. The machine's new side carriage design allows faster drive speeds and improved stability.

# FLEXIBLE TOOL SELECTION.

With a modular design and a variety of tools available, Combirex can be customised to your production needs—whether it is high-precision plasma cutting, precision hole cutting, plasma bevel cutting, thick plate oxy-fuel cutting, or marking and labeling. Offering up to four stations, the machine can be equipped with multiple configurations of plasma and oxy-fuel torches.



## Oxy-fuel cutting

Combirex can carry up to four oxy-fuel cutting stations for cutting materials up to 150mm thick. The stations feature heavy-duty motorised lifters with automatic height control and torch ignitors.

- Built-in process database for quick setup
- Automatic gas regulation using proportional valve technology
- Quick-change consumables for reduced down-time
- ESAB's SmartJet Automated Torch features internal ignition, internal height control, and a built-in cutting Oxygen pressure gauge

## Plasma cutting and marking

A single torch gives you a wide range of plasma capabilities. Switching between plasma marking and cutting is effortless with an automatic gas control.

- Pneumatically balanced initial height sensing is fast and accurate
- High-accuracy arc voltage height control
- Magnetic break-away crash protection system
- Encoder equipped lifter improves accuracy and enables Smart Voltage Height Control
- Heavy-duty torch lifter provides 200mm of vertical stroke
- Intelligent positioning aid with laser diode

## Plasma beveling

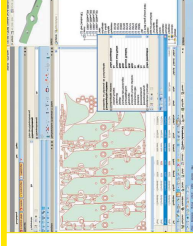
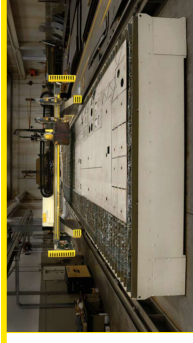
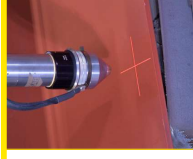
The optional DMX Automated Plasma Bevel system uses compound motion and ESAB's SmartBevel™ Technology to deliver high productivity with reliable beveling.

- Advanced Collision Protection—uses compliant motion in place of a breakaway device to detect and absorb torch collisions
- Automatically resets torch after collision, no need to touch the torch or climb onto the table
- No mechanical alignment required after torch crashes or consumable changes
- No exposed hoses or cables, for higher reliability
- No twisting of torch leads — reduces maintenance and downtime

## ACCESSORIES AND UPGRADES

Based on your production requirements, Combirex can be configured with a number of tool and machine options.

- Under water plasma
- Laser pointer for fast and easy tool alignment
- Water tables, down draft tables, and self-cleaning tables
- Columbus™ programming and nesting software
- CutCloud reporting and automation software



# SPECIFICATIONS.

## COMBIREX® PRO

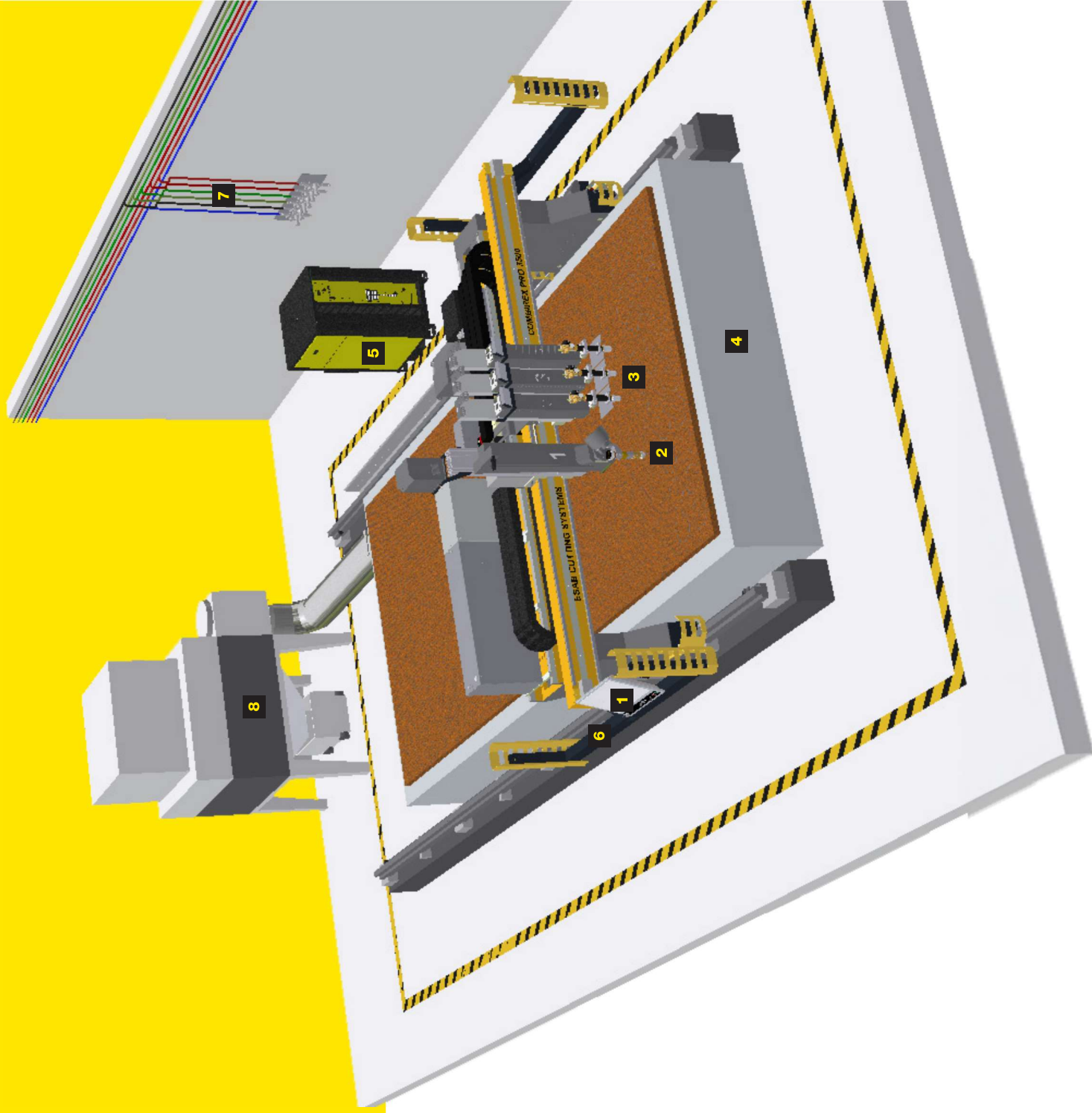
	METRIC
Track width	2600 - 4500 mm
Cutting length	max 18.000 mm
Cutting processes	Plasma and oxy-fuel
Plasma cutting thickness	max 50 mm, depending on plasma system
Maximum plasma torches	1
Oxy-fuel cutting thickness	max 150mm
Maximum oxy-fuel torches	4
Maximum plasma bevel units	1
Maximum positioning speed	35 m/min
Machine parking length	1500 mm
Overall Machine width	3590 - 5590mm incl. safety system
Overall Machine height	2193 mm
Cutting table surface height	700 mm +/- 50 mm
Rail height	500 mm from floor to top of rail

## COMBIREX SYSTEM COMPONENTS

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

Note: Number of oxy-fuel torches depends on the use of a plasma station. If no plasma is installed, up to 4 oxy-fuel torches can be used. If a plasma station is installed, up to 3 oxy-fuel torches can be used. If a plasma bevel station is installed, there may or may not be sufficient room for oxy-fuel equipment, depending on machine width.

Subject to technical modifications and enhancements. Products may vary from those pictured.



# UNRIVALED SERVICE AND SUPPORT.

Like all ESAB products, Combirex PRO 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

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-cutting.com](http://esab-cutting.com).



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