

## The Combicut

A new standard  
of cutting, built  
for the 21st  
century



The Combicut  
Plasma Cutting  
Sheet Metal

Extremely rigid,  
accurate and  
versatile

## The Combicut

Precision, Speed, reliability

- Dual precision rack and pinion drive system with AC brushless Servo motors and planetary reducers
- Hypertherm or Kjellberg plasma system with Torch Height Control (THC)
- Latest technologies such as True Hole (TM) Hypertherm and Contour Cut (Kjellberg) are completely integrated
- Multiple stations possible (Traditional Plasma lifter, Oxy Fuel, Drilling head, Robot lifter, Tube rotator)
- Automatic Arc Voltage adjustment resulting in a constant cut height
- Robot cutting: a unique combination of plasma cutting machine and robot
- Revolutionary programming software developed in-house: RoboStudio
- Auto nesting: minimize waste material



## FEATURES

- > Cutting width up to 6000mm
- > Cutting length up to 34000 mm
- > Available with Hypertherm or Kjellberg plasma sources
- > True Hole (TM) (Hypertherm) or ContourCut (Kjellberg) cutting technology
- > HDI ( High-Definition Inox) Hypertherm cutting technology
- > Helical rack and pinion drives and top quality linear guides
- > Dual synchronized drives in the X-axis
- > Ultra low backlash is accomplished by , precision planetary gearbox and pinion gear with direct connection to the gear rack
- > Heavy duty cutting table with effective fume extraction via cnc controlled zone selection
- > Portal parking zone behind the cutting table for collision free plate loading/unloading
- > Anti Torch collision system
- > Easy to use APC59-T with intuitive graphical touch screen CNC control
- > Oxy fuel burner with automatic height adjustment, automatic ignition and automatic gas pressure regulation via proportional valves
- > Portal extension with tube rotator

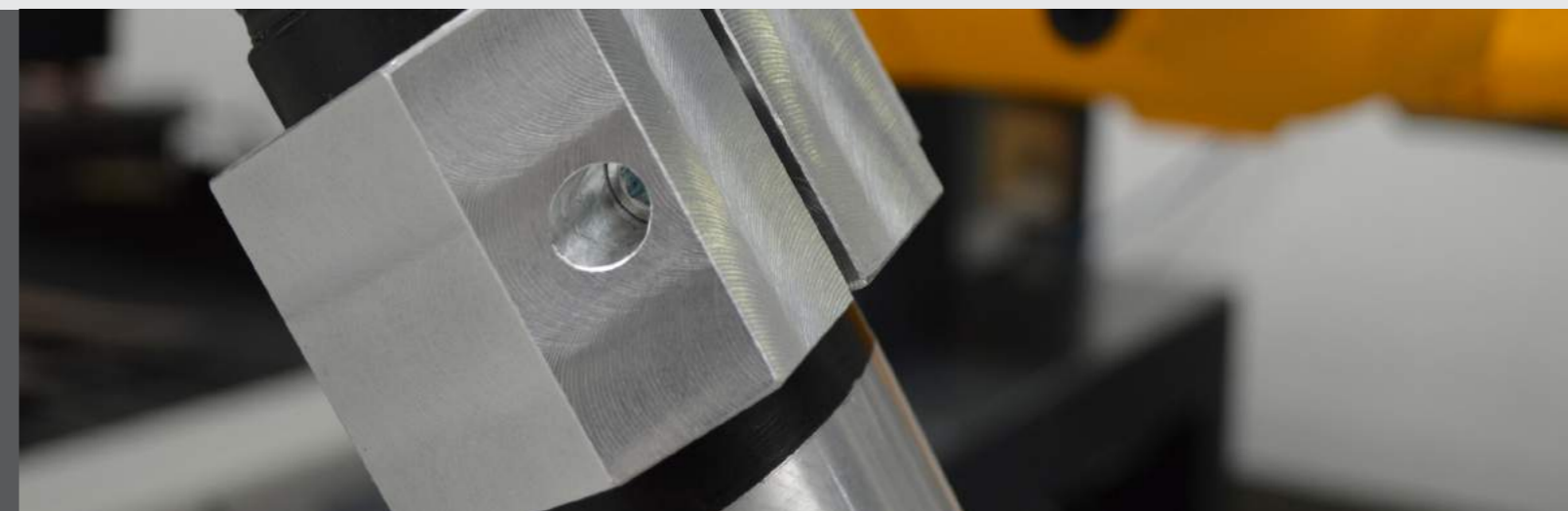
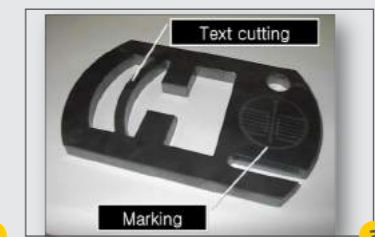
The CombiCut can be equipped with different carries on the portal (Standard plasma lifter, Robot plasma lifter, Oxy-fuel lifter, drilling head).

The best  
plasma system  
available

## The Combicut

Specific Robot operations

- 1 Classic plasma cutting (Robot act like a classic torch lifter in vertical movement)
- 2 2 Flat plate bevel (Cut height adjust by robot, fixed & variable bevel, K-Bevel, V-Bevel,...)
- 3 Marking/placing text or logo's
- 4 Notches and cutouts on flat plate or tubes
- 5 Dome cutting ( beveled holes , cutouts ...)
- 6 L-T-I Profiles: cutting holes, cutoff with bevel, web/flange notch, cope, beam splitting, cut to length...









# One machine more solutions

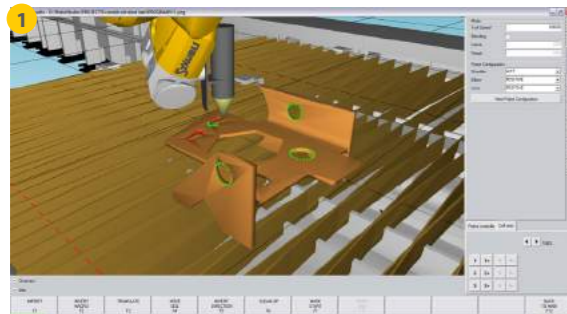
## The Combicut Specific features

**1 Starting from 3D CAD data, a virtual representation of the robot environment can be created.**

Trajectories can be created (semi) automatically or manually on the 3D drawing.

After creating the trajectory, a program is made and will be sent to the robot.

Importing a 3D drawing and generating the Robot program happens in a minimum of time.



**3 The CombiCut robot system offers a unique combination of machine and robot.**

This system is used for plasma cutting in 3D with assistance from a robot arm. The standard CombiCut exists out of a plasma table with on the gantry a robot.

**4 Torch height control via Arc voltage with Sampling.**

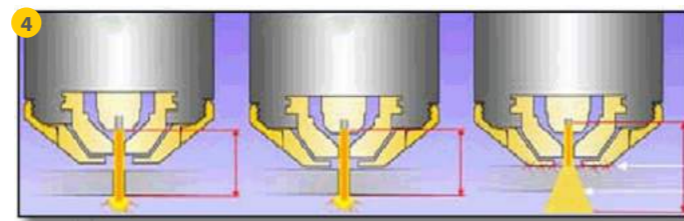
During the cutting process, the THC unit measures the Arc Voltage and adjusts the Z-axis motor to maintain a constant distance from torch to the sheet for optimum cutting results.

Traditional automatic torch height controls require operators to periodically adjust arc voltage to ensure proper cut height. Using HACO'S Techniques, the Plasma controller samples arc voltage and automatically adjust arc voltage for proper torch height over the entire life of the consumables without requiring operator input.

**2 One or more oxy-fuel torches can be mounted to the machine portal (mechanically connected with main carrier or individual motorized).**

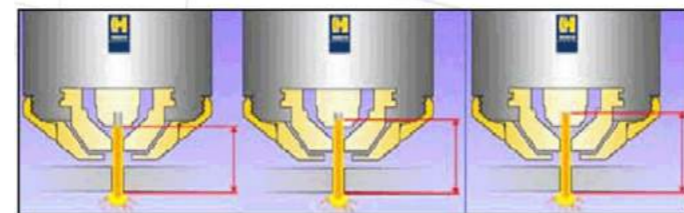
Each oxy-fuel torch carrier has an automatic flame ignition for the torch, as well as a capacitive sensor that controls the Z-axis movement (by brushless AC Servo motor ) for correct setting of the cutting height.

The Operator only has to select the plate thickness. Preheat time, cutting speed and gas selection is automatically set by the CNC. The required gas pressure is automatically set, and adjusted by the proportional gas valves.



Automatic height control **WITHOUT** arc voltage sampling.

Automatic height control **WITH** arc voltage sampling.

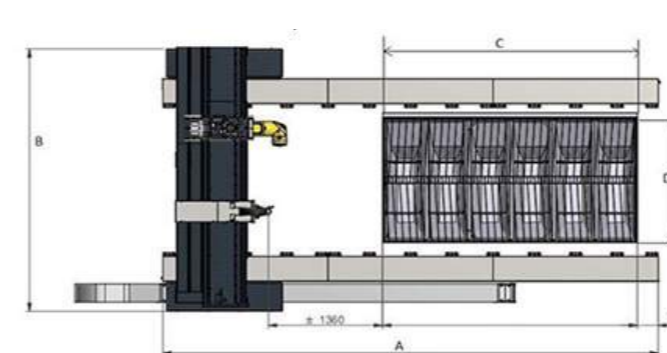


# Machine and software are one

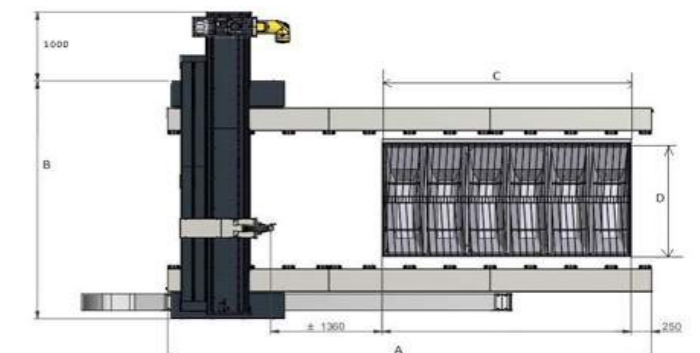
## The Combicut Specifications

COMBICUT	15	20	25	30	35	-	up to 60
Working width (D) mm	1600	2100	2600	3100	3600		up to 6100 mm
Working length (C) m	3, 4, 6, 8, 10, 12, 14,... max 60					THEN BY 500 mm	up to 60
Total width of the machine (B) mm	3270	3770	4270	4770	5270		up to 7770 mm
Total length of the machine (A) m	C + 2						up to 8
Maximum travel speed (m/min)	20	20	20	20	20	20	20
Positioning accuracy (mm)	+/- 0.15	+/- 0.15	+/- 0.15	+/- 0.15	+/- 0.15	+/- 0.15	+/- 0.15

COMBICUT	15	20	25	30	35	-	up to 60
Working width (D) inches	62.9	82.7	102.4	122	141.7		up to 240.2
Working length (C) inches	3, 4, 6, 8, 10, 12, 14,... max 60					THEN BY 19.7"	up to 2362.2
Total width of the machine (B) inches	128.7	148.4	168.1	187.8	207.5		up to 306
Total length of the machine (A) inches	C + 39.4"						up to 315
Maximum travel speed ("/min)	787	787	787	787	787	787	787
Positioning accuracy (")	+/- 0.006	+/- 0.006	+/- 0.006	+/- 0.006	+/- 0.006	+/- 0.006	+/- 0.006



STANDARD WITHOUT EXTENDED PORTAL



OPTIONAL WITH EXTENDED PORTAL



Poinçonneuses à CN



Cisailles Guillotines à CN



Press Brakes

**HACO NV**  
Oekensestraat 120  
8800 Roeselare  
Belgium  
T +32 (0) 51 74 64 54  
E-Mail: [info@haco.com](mailto:info@haco.com)  
[www.haco.com](http://www.haco.com)

The Combicut  
Plasma cutting  
Sheet metal

[WWW.HACO.COM](http://WWW.HACO.COM)

*For Impressive Performances*