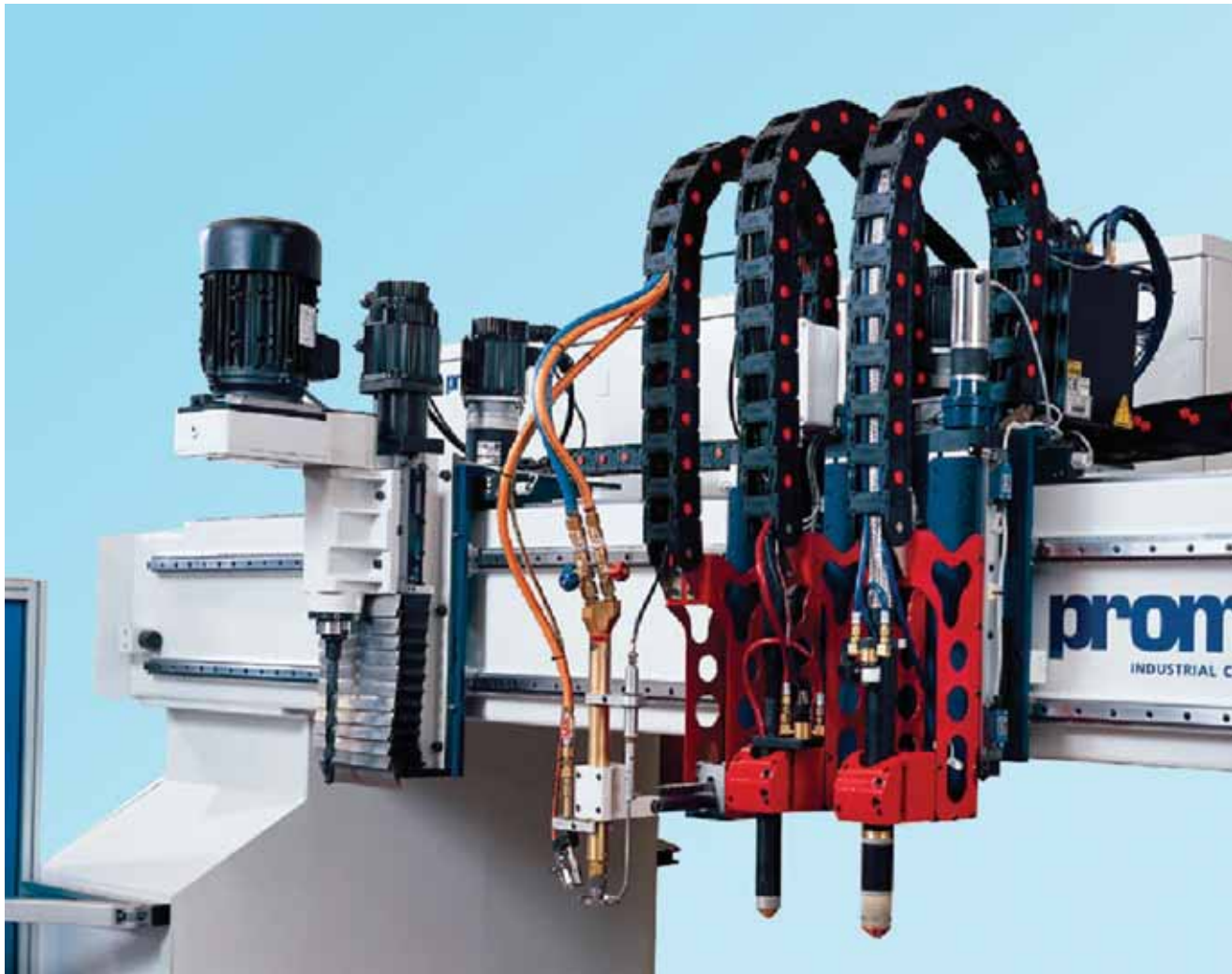


# promotecnews

Bimonthly information magazine. Year 1, Issue 1. April - May 2005



## *The editorial, by Paolo Marcato*

Dear friends,

to my great satisfaction I write this first leading article about "*promotec news*": the magazine will have fortnightly cadence and will inform you about the new activities and products we are going to carry out. I want to keep up contacts with our customers and with those who could become.

I want to convey you a message of **continuity, growth, technological innovation** more and more close to your needs and expectations. The machine tools sector for the metalworking has had, in the last years, a drop in the European market, both in volumes and above all in the contribution margins while, at the same time, the costs have raised. The search for new markets, the innovation of the offered products, the enlargement of the range, the rise in the services and the improvement of the reliability maintain a growth trend.

**The market proves you're right if you're right.**

The quality is the first objective necessary to be successful even if this is in contrast with the profits in the short term.

The low price product, prevalently connected to the low cost turned out into a drop in sales up to the creation of a negative company image that afterwards is impossible to contrast.

The search for quality is essential as well as to let it be perceived. This is a fundamental term to convince you that we can be your partner in your activity.

The range of the products offered to the market for the cutting of the sheet reaches, in September 2004, the finishing line to be present in the three technologies, Laser, Plasma and Oxicut with a range

of products that can compete in the international market without fear, but with the firm belief of offering you a quality and a service suitable to your expectations.

The choice to produce inside all the mechanical components, makes us flexible as well as rapid both in production and in qualitative and economic terms, but above all it allows us to satisfy your specific need in order to make standard a product defined as

special. Each customer interprets his need as the only one with the conviction that the cutting machine fits specifically to his needs. A wide range of models and accessories has been defined at the inside of the three technologies, Laser, Plasma and Oxicut so that with difficulty you could not meet with your

necessities.

The acquisition of customers more and more exacting from a production point of view and with specific needs gives us the opportunity to extend the range of our products putting at your disposal our experience.

Our ambition is to grow in spite of the objective difficulties imposed by the market. Dedication and will, humility to deal with the problems but determination to find the solution are the targets we set ourselves the task and that we want to pursue aware of the situation but with confidence and optimism.

A team of technicians highly qualified is at your disposal to resolve the problems that occur constantly in your company.

**Improving to grow, growing with you.**

*"THE MACHINE TOOLS SECTOR FOR THE METALWORKING HAS HAD, IN THE LAST YEARS, A DROP IN THE EUROPEAN MARKET, BOTH IN THE VOLUMES AND ABOVE ALL IN THE CONTRIBUTION MARGINS WHILE, AT THE SAME TIME, THE COSTS HAVE RAISED"*

# SMA OXICUT LASER PLASMA OXICUT

## *Fincantieri, La Spezia (Military Shipyards)*

Tested in July 2004, the prominent plasma machine made by **promotec** comes into production.

The technical characteristics and the production services are unique. Also the adopted solutions are unique.

After a long commercial dealings, connected essentially to the production needs of the customer and to a following series of modifications requested, the bigger and more complicated machine planned and produced by **promotec** comes into production. Satisfaction from the **promotec** technicians who have taken part in the realization of the installation, but above

all satisfaction from the **fincantieri** technicians who have appreciated the technical solutions and the production capability.

This is a further example of how **promotec** has succeeded in going into the merits of the production needs and in meeting the specifications required not simply connected to the contract clauses but above all to the necessities set out by the technical staff of the yard.

The installation and the starting of the machine lasted all July up to the finishing of the development of the supplement software with the software of the customer.



In the central photo: 3D plasma head

In the photos below: details of the plasma machine installed at Fincantieri La Spezia



# LASER PLASMA OXICUT LASER PLAS

Any cutting line, defined by the technical department, is automatically translated from an interface software with the Numerical Control of the machine. The possibility to do the caulking tool cutting, both steady and variable, is verified during the Cam preparation phase.

The machine, equipped with the three-dimensional cutting head and with the marking head, is predisposed to be doubled.

Considering the long experience matured, promotec has relied upon

Hypertherm for the supply of the plasma generator with which cuts with surprising performances have been obtained at higher speed than those indicated in the instruction manuals of the same Hypertherm and with an excellent cutting quality. No technical assistance has been necessary from Hypertherm as the generator has given the hoped results since his first lighting.

Now there are great expectations from the other fincantieri yards where promotec is already well introduced and from whom they expect similar results.

*"ANY CUTTING LINE, DEFINED BY THE TECHNICAL DEPARTMENT, IS AUTOMATICALLY TRANSLATED FROM AN INTERFACE SOFTWARE WITH THE NUMERICAL CONTROL OF THE MACHINE. THE POSSIBILITY TO DO THE CAULKING TOOL CUTTING, BOTH STEADY AND VARIABLE, IS VERIFIED DURING THE CAM PREPARATION PHASE"*

## TECHNICAL DATA OF THE MACHINE

**Model:** Plasmax

**Y Axis useful cutting length:** 8.000 mm.

**Y Axis speed:** 40 mt / min

**X Axis useful cutting length:** 38.000 mm.

**X Axis speed:** Limited at 30 mt / 1'

**Z1 Axis vertical stroke:** 350 mm.

**Z2 Axis vertical stroke:** 300 mm.

**Z Axes speed:** 25 mt/1'

**Three-dimensional head:** Alfa Axis rotation 360° continuous with rotating distributor for gas and electric power. Beta Axis hunting + / - 90°. Adaptive C Axis + / - 25 mm.

**Alfa Axis speed:** 20 giri / 1'

**Beta Axis speed:** 20 giri / 1'

**Plasma generator:** Hypertherm HT 4400

### BIDIMENSIONAL HEAD FOR MARKING

**Generatore al Plasma:** Hypertherm Arc Writer

### TECHNICAL SPECIFICATIONS REQUIRED:

- Simple cutting of carbon steel sheets painted in advance and stainless.
- Caulking tool cutting steady and variable of flat plates.
- Equal angles and bulbs cutting on XY, ZX and ZY flats with cutting both perpendicular to the surface and inclined.
- Parametric programming of more than 100 typical figures in the bulbs and equal angles cutting.
- Interactive software that can dialogue with the existing software and common to the whole Fincantieri group.
- Cutting capability from 3 mm to 60 mm carbon steel, from 3 mm to 50 mm stainless steel.

# SMA OXICUT LASER PLASMA OXICUT

*The first on-line sale: Bono Energia (Production of steam boilers of great size)*

**Bono Energia Spa**, a company specialized in the construction of energy systems, put up for auction, to the highest bidder, the supply of a plasma and oxicut cutting machine medium-sized 3 mt for 12 mt.

**promotec** has won.

The constructive need restricted the possible participants to 3 firms able to meet the technical request. As a matter of fact the system had to be provided with a plasma head and two oxicut heads one of which able to do automatically single vee grooves and double vee grooves both in straight and in curvilinear cutting.

The machine, equipped with proportional valves, automatic ignitions and capacitive sensor for the pursuit of the plate, has been working since January 2004 and it has immediately found favour with the technicians of **Bono Energia** by virtue of the carried out personalizations to make parametric much of the figures typical of their normal production with a considerable time saving, but above all with no error possibility.

Put in a database, all the cutting parameters both Plasma and Oxicut are automatically run on the basis of the thickness of the plate to cut making absolutely easier the operator's job.

During the oxicut cutting, the database contains not only the cutting parameters but also those concerning both the preheating and the breaking down. These operations are not always easy to do manually and often some years of practical experience in the field are necessary. Thanks to the matured experience on the laser cutting systems, where the whole cutting process is run completely in automatic, **promotec** has transferred the same experience in the oxicut cutting. Each

parameter can be moreover directly run from numerical control so that possible corrections necessary during the process are made easier if the material is different in quality of thickness from the programmed one.

*"THE INTERACTION BETWEEN THE MAN AND THE MACHINE IS ESSENTIAL: FOR THIS REASON ALL THE FUNCTIONS FROM THE NUMERICAL CONTROL ARE SIMPLE AND INTUITIVE"*

The interaction between the man and the machine is essential: for this reason all the functions from the Numerical control are simple and intuitive. The greatest problems using the cutting machines



In the photo: 3D oxicut head

# LASER PLASMA OXICUT LASER PLAS

come from the difficulty to manage properly the cutting parameters, to obtain a high quality product.

I remember a customer, very skilled and keen on laser, that creates a database of personalized cutting parameters on the basis of the original ones.

It's a question of little tricks that cannot be either written nor listed, but only acquired as the years go by.

Our task is to make a machine of easy functioning able to meet our customer's requirements and not to form the experience of the operators.

## TECHNICAL DATA OF THE MACHINE

**Model:** Combi

**Y Axis useful cutting length:** 3.100 with each head

**X Axis useful cutting length:** 12.200

**Z Axis vertical stroke:** 250 mm

### CUTTING HEADS:

Nr. 1 Plasma cutting head

Nr. 1 Oxicut cutting head with 3 torches for the caulking tool cutting. Rotation 360° continuous, rotation of the lateral torches manual

Nr. 1 single Oxicut cutting head

**Plasma generator:** Hyperthem HPR 130

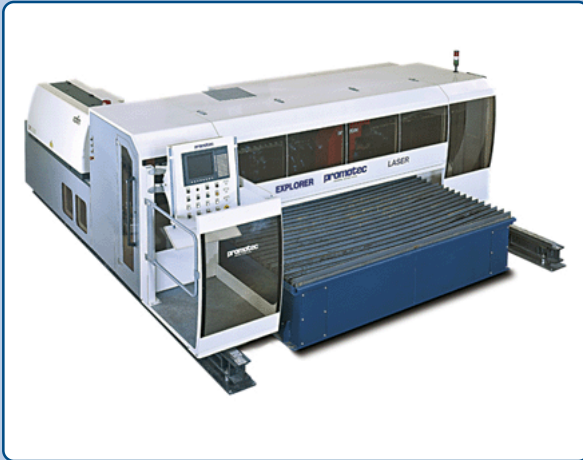
In the photos: the plasma-oxycut machine sold to Bono Energia spa



# SMA OXICUT LASER PLASMA OXICUT

## OUR MACHINES

### explorer



To satisfy a market request we have designed a New Big Laser Machine with high performances and flexibility. Big working Area and choice of power

#### Working Area:

Stroke Y 2600 mm, 3100 mm, 4100 mm;  
Stroke X as per request from 6.000 up to 42.000 mm;  
Local Stroke X1 100 mm;  
Stroke Z 200 mm.

#### Laser Generator:

- Rofin 2500 w, 3000 w, 3500 w, 4000 w.  
- Trumpf 2700 w, 3200 w, 4000 w, 5000 w, 6000 w.  
- Fanuc 3000 w, 4000 w, 5000 w, 6000 w.

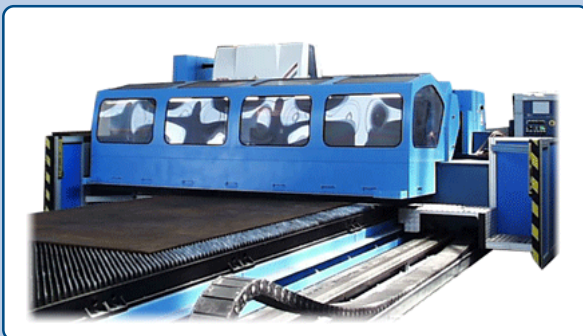
**Focal Length:** 5", 7,5" 10".

**Pallet Exchanger:** From 3.000 x 1.500 up to 3.000 x 12.000.

**Loading-Unloading System:** Up to a restricted area 4000 x 2000.

**Assistance:** Check of the machine's working 24 hours a day with telecamera and video on lease by customer's request. Tele-assistance.

### maximo 3d



Laser cutting machine of great dimensions for the 3D cutting of the sheet.

The machine has the following features:

**Local axes:** X 2500 3000 4000; Y1 = 1,250 Z = 370;

**Rotary axes:** A = 360° continuous and B +/-120 °;

**Automatic Transverse axe:** commanded by Numeric Control;

**External Y axe:** Between 6,000 and 36,000.

The ideal use is chamfer cutting on metal materials, with angles up to 45°, indispensable for high resistance welding, or cutting drawn products with maximum dimensions equal to the stroke of the local axes.

### plasma max



Large-size plasma cutter intended for large-scale sheet cutters. The machine can be fitted with Plasma generators for cutting in air or underwater cutting.

#### Working range:

Includes any length requested and widths of 2500 - 3000 - 4000 - 5000 - 6000.

#### Numerical and Operator Control:

May be installed on the machine - which is essential whenever the longitudinal travel is several metres long - or with Numerical and Operator Control installed separately for shorter longitudinal travel.

# LASER PLASMA OXICUT LASER PLAS

## oxicut



Machine of heat cutting of big dimensions.

**Working range:**

Width: from 2500 to 12000.

Length: on customer's request.

The machine can be equipped both with 3D head for the caulking tool cutting and with drilling unit ISO 30.

## supercompact



Versatile machine suitable for all the small firms.

Limited dimensions, high dynamics ideal for the cutting in high definition on thin thicknesses.

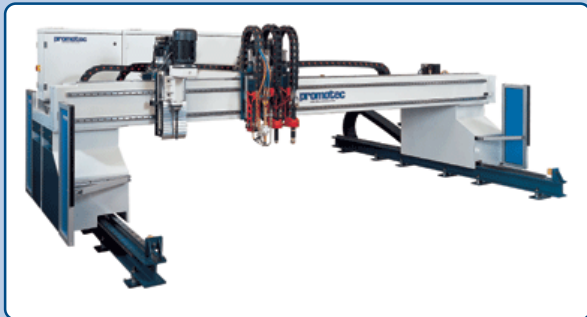
Possibility of insertion of an oxygen torch complete with proportional valves.

**Working range:**

Variable dimensions from 1500 x 3000 to 3000 x 12000.

Machine complete with bench for the support of the sheet, fumes filter and Cad Cam software.

## combi



Machine dedicated to the big cutters of sheet.

Versatile machine, high dynamics, high mechanical accuracy.

Multiple drilling units ISO 30 and ISO 20 with automatic tool changer.

# promotec

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