

## **PRESS RELEASE**

### **PRIMA AERODAYS: THE WORKSHOP DEDICATED TO AEROSPACE INDUSTRY ORGANIZED BY PRIMA INDUSTRIE**

*November 16<sup>th</sup> 2010* – PRIMA INDUSTRIE has organized an event dedicated to laser material processing in the aerospace industry, which is being held in its main plant, Collegno (Torino) on November 17<sup>th</sup> and 18<sup>th</sup>. This event, called PRIMA AERODAYS, aims at bringing together the most significant companies in the aerospace sector in Europe, to share their opinions and experiences on production processes based on laser technology.

The aerospace industry increasingly focuses its efforts on the reduction of weight and emissions, consumption of fuel and resources. This effort is pushing both industrial research and production engineers to find new materials, new aerodynamic structures, and technological innovations that improve sustainability of the aircrafts and of their manufacturing process. The companies taking part in PRIMA AERODAYS will analyze the opportunities offered by laser technology that are helping them face and win the challenges deriving by these industry trends.

PRIMA INDUSTRIE, with its wide offering and its deep experience in designing and producing laser systems, is at the centre of this evolution. For welding, cutting and drilling of aerospace components laser systems offer significant benefits: application flexibility, high productivity and efficiency. The increasing number of aircrafts and engines to be manufactured will lead to large scale production, differently from the past, when manufacturing volumes were low and distributed over a longer time span.

The PRIMA AERODAYS workshop is made of a theoretical and a practical session. Conference Chairman is Prof. Giacomo Frulla, Politecnico di Torino. The topics dealt with cover the latest and most innovative laser technologies, such as aluminium and titanium welding, drilling of special alloys and processing of aerospace materials with fiber laser. The speakers are from Politecnico di Torino and Milano, Alenia Aeronautica, APR, Avio, TurboCare, PRIMA INDUSTRIE and PRIMA North America.

During the practical session of the workshop welding, cutting and drilling demonstrations on various aerospace material will be shown using PRIMA systems. These examples will prove the benefits of general purpose machines, easily programmable for the different parts to be manufactured, of cycle times reduction, to keep production volumes high, of lower consumptions and reduced impact on environment, all without sacrificing quality, which must be excellent.

**Companies taking part to PRIMA AERODAYS:**

- 1) CRMA Air France KLM – France
- 2) DE FONTAINE – France
- 3) SIBI - France
- 4) SNECMA - France
- 5) SOERMEL – France
- 6) SOCATA – France
- 7) Turbomeca - France
- 8) AVIO – Italy
- 9) AgustaWestland – Italy
- 10) Alenia – Italy
- 11) APR – Italy
- 12) CREAS – Italy
- 13) LASERGATE – Italy
- 14) NUOVO PIGNONE – General Electric Oil & Gas – Italy
- 15) SIDERSTAMP – Italy
- 16) TURBO SERVICE Torino – Italy
- 17) TURBOCARE (Siemens) – Italy
- 18) GI&E – Italy
- 19) WSKRZ (P&WC) – Poland
- 20) TECHNICHAPA - Spain
- 21) CFR – Italy
- 22) POLITECNICO Milano – Italy
- 23) POLITECNICO Torino – Italy
- 24) POLTECNICO Bari– Italy

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**About PRIMA INDUSTRIE Group**

PRIMA INDUSTRIE S.p.A., established in 1977 and listed on the Italian stock market since 1999 (STAR segment), develops, manufactures and markets laser systems for industrial applications and sheet metal fabrication machines.

PRIMA INDUSTRIE leads today a Group with about 1,400 employees and manufacturing sites in Italy (PRIMA INDUSTRIE S.p.A, PRIMA ELECTRONICS S.p.A, FINN-POWER Italia Srl), Finland (FINN-POWER Oy), USA (PRIMA North America Inc.) and China (Shanghai Unity Prima Ltd. and Wuhan OVL Convergent Laser Co. Ltd.).

Prima Industrie Group operations are based on three business segments:

**Laser machines and sources** for cutting, welding and drilling of 3D and 2D components.

**Sheet metal treatment systems**, including punching machines, combined punching/shearing and punching/laser cutting systems, bending systems and automation.

**Industrial electronics**, including power and control electronics, and numeric controls which are also installed on its own laser machines.

With over 30 years of experience the Group can count on thousands of machines installed in more than 60 countries worldwide, is present with property commercial and assistance units in over 15 countries and it is among the main worldwide constructors in its own reference market.

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For further information:

PRIMA INDUSTRIE S.p.A. - [www.primaindustrie.com](http://www.primaindustrie.com)

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## **PRESS RELEASE**

### **THE NEW RAPIDO: A PERFECT COMBINATION OF PERFORMANCES AND EFFICIENCY**

November 17<sup>th</sup>, 2010 – During PRIMA AERODAYS, the aerospace workshop organized by PRIMA INDUSTRIE, participants will also attend the demonstrations of laser welding and cutting of aerospace components with the latest generation of RAPIDO.

*“Higher dynamics and greater efficiency – declares Matteo Cardinale, 3D Product Manager for PRIMA INDUSTRIE - are the main features of the RAPIDO Evoluzione2, obtained through the introduction of many innovations on this tried-and-tested, “evergreen” machine, launched on the market twenty years ago and constantly updated and enhanced all over the years.”*

The new generation of RAPIDO is available with fiber or CO<sub>2</sub> laser source. This is the first important innovation, which remarkably increases the machine's flexibility. RAPIDO can be equipped with an even wider range of laser sources, in order to suit every specific application.

The high brilliance fiber laser with high energy efficiency, eco-compatible use and no maintenance gives the greatest benefits to large series production. Thanks to the high energy efficiency of this laser source it is possible to work with higher powers and a considerable reduction in cycle times can be reached. Lower rates of power consumption and less spare parts contribute to the eco-compatibility of the machine.

The CP or CV series of CO<sub>2</sub> lasers feature top application flexibility, high reliability and low running costs, and are particularly suitable for frequent changes of production.

It is important to underline that the performances and profitability of fiber or CO<sub>2</sub> lasers depend on the application. For this reason, the supplier's experience plays an essential role: more than 30 years in the field of laser processing allow us to suggest our Customers the best solutions in each specific case.

Another important innovation of the newest RAPIDO version is the synthetic granite frame, featuring a special shape obtained through state-of-the-art topology optimization software. This solution grants excellent stiffness (+25% compared to previous model) and damping capacity, resulting in extreme smoothness of the machine axes movements, even at the highest dynamics.

RAPIDO Evoluzione2 is equipped with the new P30L numerical control by PRIMA ELECTRONICS, with higher computational power, more powerful HMI and Windows® embedded. The new slim console is user-friendly and features a 17" touch screen, with trackball and retractable keyboard. New advanced algorithms for predictive trajectory control and axes management contribute to the significant cycle time reduction allowed by RAPIDO.

The focusing head with direct drives and transducers grants high dynamics and accuracy, no backlash and reduced maintenance. The dedicated adaptive axis with very high dynamics maintains workpiece surface stand-off distance, and the double safety joint operates in case of collision with the component or the fixtures.

Another winning feature typical of PRIMA 3D machines is the possibility of conversion from one type of production to another, maintaining high levels of efficiency. The quick change of the head attachment allows cutting of higher thicknesses materials, welding with gas protection or wire feeder, cladding, remote welding, etc.

Thanks to TOB (Technology On Board) and TOBIA (Technology On Board Interface Application), the parameters' management is very simple. The portable handbox for self-teach programming is ergonomic and intuitive to use (large screen, graphic interface, joystick).

Many new functions have been introduced in order to optimize production times and reduce the machine's set-up operations. With features such as the graphic interface for part-program optimization, user-friendliness is even higher, as all editing is graphically performed and there is no need of G-Code modifications.

RAPIDO can be equipped with different automation solutions, ranging from very simple to very complex ones, depending on the type of process, the quantity and size of the parts to be manufactured and the process duration for each part. Different types of support, fixtures and loading/unloading solutions give maximum flexibility to the machine.

*"Many aspects – closes Matteo Cardinale - contribute to the efficiency of a laser machine: high dynamics, low operating costs, low maintenance, application flexibility, highest material exploitation. We are particularly satisfied of the new RAPIDO because we managed to improve all these elements and to create a really efficient tool for our Customers. In this way they can produce more profitably, respecting at the same time the environment with this lower impact machine."*

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With over 30 years of experience the Group can count on thousands of machines installed in more than 60 countries worldwide, is present with property commercial and assistance units in over 15 countries and it is among the main worldwide constructors in its own reference market.

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## PRESS RELEASE

### **ZAPHIRO: THE PERFECT CUT BECOMES EVEN MORE FLEXIBLE**

November 17th, 2010 – ZAPHIRO is a very fast laser cutting machine with top cutting quality. The linear motors and the rigid structure allow a combined speed of 240 m/min, drastically reducing production times and costs.

A highly innovative and unique feature of this machine is the Perfect Cut system, granting a zero-defect, zero-waste production: an important advantage for every customer, it becomes absolutely essential in case of intensive, unmanned production.

*“For us efficiency and ecology – explains Johannes Ulrich, 2D Laser Product Manager for PRIMA and FINN-POWER – have always been main guidelines in products design and development. The Perfect Cut system grants a highly efficient use of the machine and the materials. Not only does it avoid scraps and material waste, it also optimizes the use of the machine in unmanned operation. For example, you can be certain that during night shifts your machine will run to produce only effective parts.”*

Perfect Cut is an intelligent system allowing real time monitoring of cutting quality and automatic correction of parameters in case the quality differs from the desired standards. The operator stores a sample cutting piece for each material and thickness on the machine CNC; this is used by the system as reference to judge the quality during the process. No risk of production defects or wastes: in two words, “perfect production”.

ZAPHIRO standard laser head features a high dynamics focus axis allowing substantial cycle time reduction and superior cutting quality. A “cartridge design” lens change system is extremely quick and easy-to-use. This head makes it possible to equip the head with the most suitable lens (5”, 7.5”, 9”) according to the specific application.

*“ZAPHIRO now comes with the new single-lens head allowing the cutting of all materials and thickness without lens change, and with the 12-place automatic nozzle change device. With these new features parts can be produced using the widest variety of materials and thickness also during unmanned operation. Whatever you have to produce, there is no need for manual intervention – focal parameters are automatically set. It is obvious that with the wide range of Prima Finn-Power automation solutions available, all the way up to Night Train FMS®, unprecedented levels of productivity are now easy to reach.”*

ZAPHIRO offers another big advantage for the user: every application with top performance and result. Thanks to the Beam Size Control (BSC), the laser beam diameter is adjusted to the material and thickness to be cut. Flexibility, productivity and quality are thus further improved.

ZAPHIRO is also equipped with the new, robust sheet metal supporting table, with more efficient fume exhaust, and with the new, faster pallet changer, featuring a smart system which adjusts the transfer speed according to sheet weight.

The latest generation numerical control P30L, manufactured within the PRIMA Group, has higher computational power and highly advanced algorithms and is compatible with all previous versions and with all PRIMA INDUSTRIE 2D machines. Ergonomic and user-friendly, it features a slim console with 17" touch screen and retractable keyboard.

For off-line programming ZAPHIRO takes advantage of the easy, fast and smart MAESTRO-Libellula system. The highly effective and accurate Nesting Module, the Tables-on-Board (TOB), the Integrated Virtual Machine with accurate production costs and times calculation, and detailed and precise reporting are some of the winning features of this system. With the FBS (Fast Beam Switching) function for grid cutting speed can be boosted in case of parallel profiles.

ZAPHIRO is equipped with the Group own high power 5,000 Watt CO<sub>2</sub> laser, and can cut material up to 25 mm thickness with quality and efficiency. Other features include a magnetic support turbine, a solid state high voltage power unit and servo-controlled gas mixing.

As all PRIMA INDUSTRIE flat-bed machines, ZAPHIRO can be integrated with automation systems, from the simplest sheet metal loading/unloading systems, to the most complex FMS, as FINN-POWER *Night Train*, generally acknowledged to be the leader in factory wide systems.

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