## ITALIAN MACHINE TOOLS, ROBOTICS & AUTOMATION INDUSTRY ~ NEWS

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PIATTAFORMA INDIA PROJECT

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## LINES FOR METAL COIL PROCESSING, THROUGH ELECTRIC PUNCHING AND FIBER LASER CUTTING TECHNOLOGIES

**Produtech S.r.I.** designs and produces lines for metal coil processing, through electric punching and fiber laser cutting technologies.

Competence, reliability and an exclusive technical know-how, together with a great focus on customers' needs: these are our business core values, which allowed us to grow and strengthen our presence worldwide since 1993.

In particular, one of the market's most important needs consists in having extremely flexible and productive systems: this productivity rate is not guaranteed by the traditional sheets-fed machines, which require big stocks and continuous sheets loading.



So, in order to maximize production, making it faster and completely automated, Produtech specialized in designing, implementing and marketing systems for processing metal coils through laser cutting and/or punching-forming technologies.

The combination of coil feeding and punching technology led to ALPI punching machines.

Through the interpolation of all the machine movements (i.e. sheet advancement, transversal motion of the working units, tools holder rotation and control over the hammer position), ALPI cuts any shapes or geometric figures out from coil, both in case of metal materials (carbon

steel, stainless steel, copper and aluminum) and other materials (PVC, nylon, Teflon): there are no limits in the production of holes, slots and notches.

Also, the processed parts can be marked with logos, and it is possible to make deep-drawing, air vents, ribs (even curvilinear, by means of suitable wheel-tools), small beads and references for folds. All the processes - including cutting - are made with mechanical tools that do not produce fumes or incandescent scraps, so they do not affect superficial finishing or any potential protective films on the processed materials.

All tools rotate and are operated by a hammer. The hammer is run by a reliable latest-generation mechatronic system providing high positioning precision with reduced electric power: thanks to this device, ALPI confers to the punches only the necessary strength for cutting the material, with high energy savings and accuracy (few hundredths of a millimeter) while positioning tools.

Last, linear and torque motors assure high speed, positioning precision and absence of backlashes and wear, as well as minimum maintenance: all these factors are fundamental in order to keep perfect punch&die match.

Following the ALPI experience, Produtech applied coil feeding to optic-fiber laser cutting machines, with lots of interesting results.

In particular, ISEO fiber laser lines join the typical advantages of coil processing (high productivity, optimized material usage, better and more flexible control over produced workparts) with innovative specs, like continuous cutting of a wide range of metal materials, including the most reflective ones (bronze, copper, brass and aluminum).

Fiber laser operation is easily carried out: optic paths are no longer necessary in order to lead the ray into the suitable area; so, the laser assembly on the machine is simpler and maintenance costs are eliminated, because focal lenses - which usually get dirty and damaged - are unnecessary. No maintenance involves money savings; in addition, further money savings are allowed by a strong reduction in energy consumption, which is much lower if compared with CO<sub>2</sub> lasers.

Also, the line provides further productive advantages, which are less visible but real; for example, in case of low thickness (typical of sectors like insulation and tinsmithery, for which ISEO was initially designed), the fiber laser better triggers the cutting activity and runs faster.

In conclusion, this machine enhances coil sheet processing by cutting faster than punching machines and with a remarkable productive autonomy, thanks to continuous feeding, reduced maintenance needs and optimized unloading of the cut workparts.

www.produtech.it/en



The project Piattaforma India has been promoted by UCIMU – Association of Italian Machine Tools Manufacturers and AMAPLAST – Italian Plastics and Rubber Processing Machinery and Moulds Manufacturers Association. The two associations agreed on the idea that promoting a network of associations and entrepreneurs who have developed knowledge and experience on the Indian market, can be useful in favoring of new paths of development for business. The Indian companies who are interested to form JV, cooperation, technical tie up, purchase machinery etc from/with Italian companies can contact below mentioned address for any assistance:

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