ABB Press Automation allows an expanding variety of manufacturers to be more flexible and cost competitive

ABB reaches major milestone – has now installed 200 press automation systems in North America

AUBURN HILLS, Mich. (March 4, 2009) – No longer the exclusive domain of automotive manufacturers, sophisticated Press Automation Systems are now becoming an emerging competitive advantage for a wide variety of manufacturers who stamp moderate to high volumes of metal as part of their production processes.

With consumer preferences continually changing and a cyclical economy adding to the uncertainty, building inventory of single product SKUs through long, static production runs is becoming an unacceptable practice. Manufacturers are being challenged now with frequent product design changes, lower production lot sizes and a need to reduce production costs.

Such is the backdrop for the Press Automation Systems unit of ABB Robotics, who recently reached a significant milestone – 200 press systems enhanced with transfer automation in North America since the presence of the unit in the continent in 1996.

“Speaking globally, ABB Press Automation Systems is the market leader with more than 500 worldwide press line installations,” said Enrique Pano, the ABB business development manager for press automation systems in North America. “Reaching more than 200 systems in North America alone is a very important milestone for us. Customer satisfaction is our first priority, and this achievement indicates that we are fulfilling our goal.”

The pressing or stamping of metal blanks or coil fed sheets to form component parts is one of the most capital intensive processes in the manufacturing of large, metal based consumer and commercial products. This is either a single stage operation where every single press stroke produces the desired form, or, as is more often the case in more complex operations, it is a multi-press process.
The transfer of the parts from the unfinished stack to the first press, between multiple presses, and ultimately to the completed part rack is the most time consuming part of the process. ABB Press Automation enhances the entire process by optimally automating and pacing the transfer of parts to and from each step of press cycle, achieving the most efficient flow for entire operation.

ABB systems are installed on both new and existing stamping operations, and typically involve one or more 6- or 7-axis press tending robots. Systems often include robotic or hard automation destacking systems to initially serve the blank metal sheets or coils on the front end, interpress transfer, and racking systems for finished goods on the back end. The IRB 6640, IRB 6650S (S for shelf-mount), the powerful IRB 7600 for very big parts and more recently the very fast IRB 6660 are popular ABB press tending robot models.

The portfolio of benefits that ABB Press Automation Systems provides is significant:

- **Safety**: Safety is not negotiable and it’s an important reason for the customer to automate systems in the press shop. Safety features such as the Electronic Position Switch (EPS) and SafeMove™ are unique to ABB.

- **Complete, easy to use systems**: ABB provides complete turnkey systems that are thoroughly tested and refined prior to final installation. Advanced Human Machine Interface (HMI) systems facilitate the intuitive programming and control of the equipment.

- **Flexibility**: Systems are engineered to allow customers to produce a large variety of parts on the same line with minimal robot programming. Automatic tool changes and the ability to reverse or split the line are two examples of additional process flexibility.

- **Energy efficiency**: The ABB systems consume less energy, an important factor for every company. Depending on the system energy savings range from 10 to 20%.

- **Cost/ROI**: ABB is always looking for cost effective solutions to improve the Return on Investment (ROI). The cost of a robotic press tending system is just a fraction of that of hard automation systems, and the cost of maintenance is also less.

Based on these benefits ABB provides press automation systems that improve the three main press automation performance criteria:
- **Speed:** ABB robots with their high torque and acceleration are best-in-class in speed optimization. New ABB products like the robots with a rotational seventh axis, robots with a linear seventh axis and more recently Dynamic Drive Chain (DDC®) help the customers to improve the throughput of the line.

- **Availability:** The up time of a robotic system in the Press Shop is typically better than 95% and the ABB systems help to improve this factor.

- **Quality:** More efficient part handling results in a consistently higher quality of finished parts. DDC is especially effective in optimizing the throughput where different stamping speeds are required on a single line.

“We like to be involved in the whole process, from stack to rack. This involves evaluating different solutions with accurate simulations, through the engineering, commissioning, start up and production support of the system,” said Pano. “We don’t just sell products, we are press automation specialists, and our project counsel adds great value to our customers.”

Robotic Press Automation Systems installed by ABB started in the European and Asian automobile operations in the mid 1990s and the first lines with robots (until then only hard automation was used) were installed in North America in 2000. The shear volume of stamped parts, the availability of capital and the competitive pressure to cut costs while improving manufacturing processes rapidly increased the presence and advancement of such systems. In recent years PAS systems have expanded beyond the automotive industry, adding great value to a variety of operations including:

- White Goods: (large household appliances)
- Commercial and industrial furniture
- General industry/metal fabrication where small, medium or large parts are stamped in volume.

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**About ABB, Inc.**

ABB ([www.abb.com](http://www.abb.com)) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in approximately 100 countries and employs about 120,000 people.
About ABB Robotics

The North American ABB Press Automation technology center is located in Brampton, Ontario, Canada, serving all systems in Canada, the United States and Mexico. ABB Robotics (www.abb.com/robotics) is a leading supplier of industrial robots – also providing robot software, peripheral equipment, modular manufacturing cells and service for tasks such as welding, handling, assembly, painting and finishing, picking, packing, palletizing and machine tending. Key markets include automotive, plastics, metal fabrication, foundry, electronics, pharmaceutical and food and beverage industries. A strong solutions focus helps manufacturers improve productivity, product quality and worker safety. ABB has installed more than 160,000 robots worldwide.

For more information, please contact:

Ted Wodoslawsky, VP Marketing
ABB Inc.
1250 Brown Rd.
Auburn Hills, MI 48326
Tel: (248) 391-8507
ted.wodoslawsky@us.abb.com