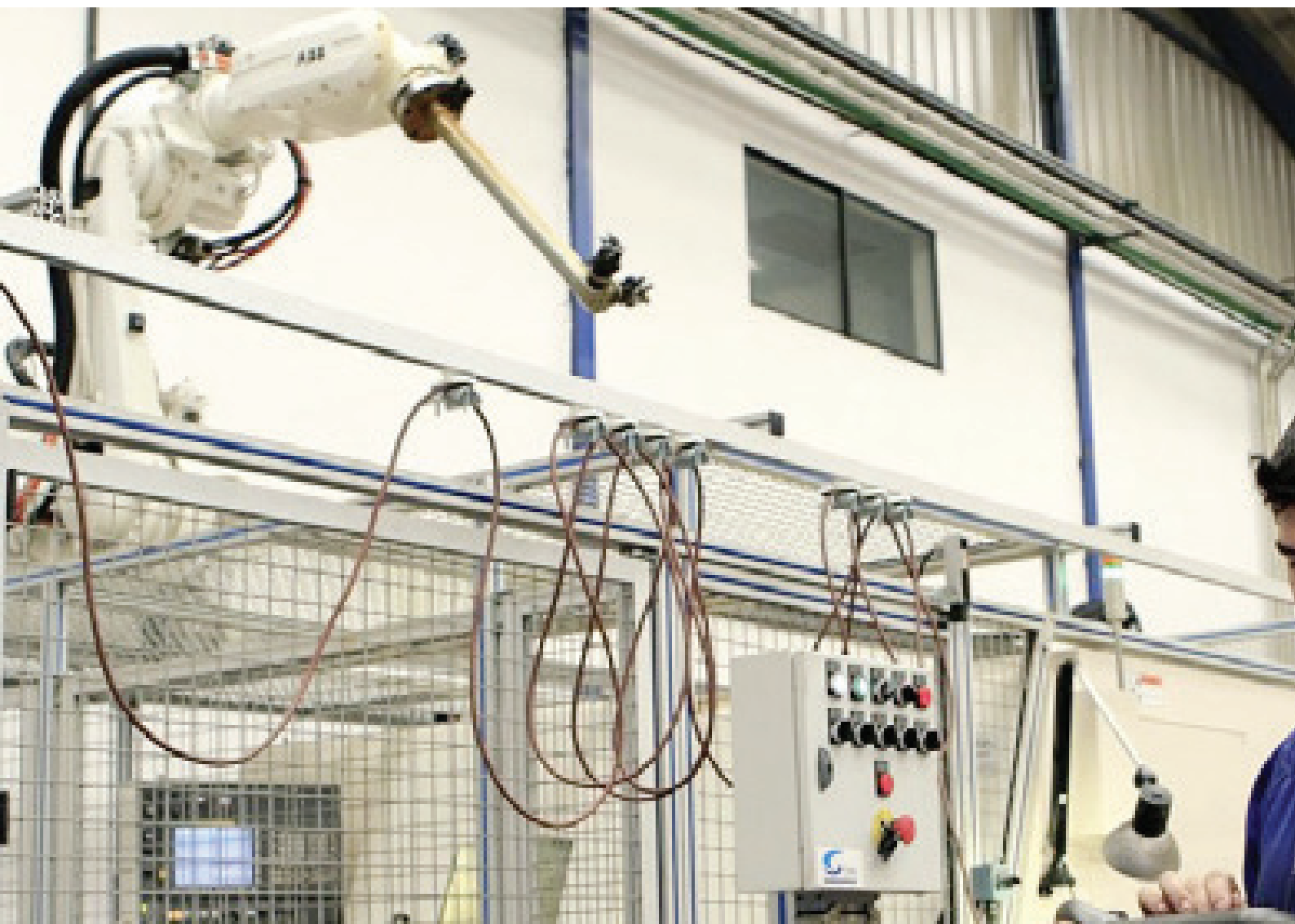


CASE STUDY

DAU Componentes, Spain

IRB 6620LX improves productivity



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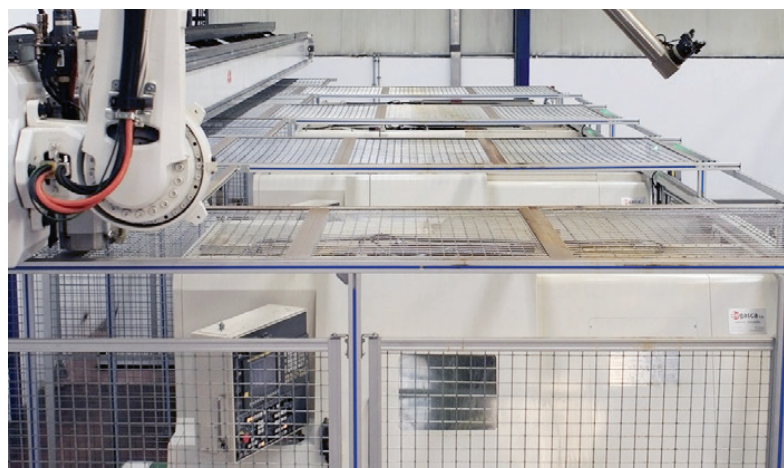
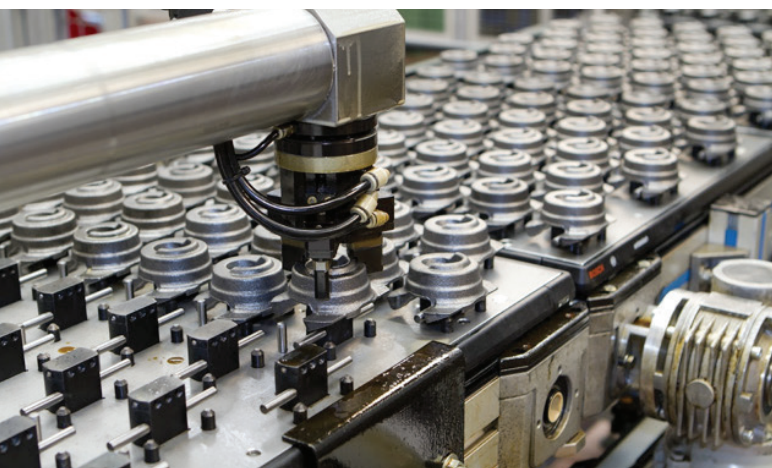
From manual to automatic - Auto parts manufacturer DAU Componentes in Burgos, Spain, steps up a gear on loading workpieces into CNC machines.

Automobile component manufacturer DAU Componentes was founded in Spain by the CROPU group of companies in order to produce more brake pistons. Today, the production facility produces an astonishing 20 million parts every year, mostly brake components and air conditioning compressor parts. That level of output requires continuous innovation in the company's production processes.

Recent changes at the factory in Burgos clearly demonstrate DAU's commitment to constant improvement. In January of 2010, DAU began automating the process of feeding "raw" workpieces into CNC machines, which cut the thread, polish the interiors and de-barb rough surfaces of the parts.

Until that time, workpieces had been loaded manually, by an operator – a slow and expensive solution. Today, this task is handled instead by two ABB robots, IRB 6620LX, each of which serves a line comprising four machines. The first step of the process, placing workpieces on trays, is now the only manual part of the operation. Top-mounted on a linear axis, a robot takes over by picking up a raw workpiece – in this case, a ball housing used in automobile air-conditioning systems – from its tray and lifting it into the air. The robot then moves along the track to the machines. After what seems like a momentary hesitation (it is actually waiting for the order to load from any one of the four machines), the robot top-loads the ball housing into the appropriate machine and places it on the chuck with great precision. Its job done, the robot returns to its initial position to pick up the next piece.





Robot benefits:

- Increase in productivity: 4%
- Reduction in cycle time: 3%
- Improved quality
- Less floor space
- Lower labour costs
- More highly-qualified workforce
- Return on investment: <3 years

When asked why DAU chose ABB robots, Isidro Alfonso, Grupo CROPU Industrial Director, points to the participation of TEMS, an engineering firm with 35 years of experience providing engineering solutions for Spanish industries and multinational automotive companies. TEMS was acquired by Grupo CROPU in 2007, making it the group's

engineering division.

"TEMS had the experience and the necessary know-how," says Alfonso. "They carried out a detailed analysis of our needs in this case, and as partners with ABB Spain, they felt they needed to look no further when it came to installing an automated system here. We had every confidence in their choice."

That confidence is well-placed, as this seemingly simple robotic solution has been a big success. Alfonso says, "We have eliminated the time it took for a manual operator to open the machine door, place the piece and close it again." The company thus achieves a cycle time that is 3% shorter, and thanks to the precision with which the piece is placed, the reject rate is also lower. All told, productivity has increased by 4%. Using robots is more ergonomic, and the fact that they are top-mounted provides great savings in terms of floor space.

But Alfonso doesn't measure the gains from the robots solely in such terms as increased productivity and reduced cycle times.

"It is all about quality," he says. "Greater automation means better products for less cost. So, our competitiveness increases, and the company can hold its own against manufacturers in low-cost countries. This also creates a company culture of being more demanding." Without its investments in automation, Alfonso concludes that "the company might simply go out of business."

DAU Componentes

- Founded: 1994
- Activities: Production of automotive components (including machining and subsequent treatments)
- Workforce: 100 people
- 100% production exported to customers' plants in: Europe, Mexico, Brazil, South Africa, Thailand and Japan

Grupo CROPU

Founded in 1975 by José María Basconillos, the CROPU group of companies has production centres in three locations in Spain: Burgos, Santander and Valladolid. Initially specializing in surface treatments for the automobile industry, the company expanded to offer similar treatments to other sectors. Today the group includes Cropusa, the group's "mother" plant that specializes in surface treatments and zamak injection; Componentes y Conjuntos (CyC), specializing in surface treatments, heat treatments and automobile parts; TEMS Cantabria, automation and special equipment engineering; Aleaciones Ligeras Aplicadas (ALA); and DAU Componentes.

Still a family-owned and run concern, Grupo CROPU employs about 500 people and is Europe's number one manufacturer of brake pistons in both aluminum and steel. Other activities include quality coating processes, zamak injection, precision machining, heat treatments, cold forging and aluminum casting.



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