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## To Shrink a U.S. Car, Chrysler Goes to Poland

By [NELSON D. SCHWARTZ](#)

TYCHY, Poland — For decades, automakers looking for the secret to small-car success would journey to Toyota City in Japan. These days, they are coming to Tychy.

Since [Fiat](#) effectively took over [Chrysler](#) this year, engineers from Detroit have been making monthly pilgrimages here to see something they can only envy: an auto plant that is hiring workers and earning a profit.

The mammoth Fiat plant here, which churned out nearly half a million cars last year, may hold some of the answers for Chrysler (as well as [Ford Motor](#) and [General Motors](#)), as it struggles to regain its footing after its bankruptcy and reduce its dependence on muscle-bound trucks and sport utility vehicles.

For those who remember Fiat before its ignominious retreat from the American market — the name was said to stand for “Fix It Again, Tony” — the Italian automaker may seem an unlikely role model. It left the United States in the early 1980s after widespread quality problems.

But Fiat itself has undergone a revolution under [Sergio Marchionne](#), who became its chief executive in 2004, raising standards for quality and reliability at plants like Tychy and mastering the art of building smaller cars with high efficiency. Chrysler hopes he can do the same thing for it now that he has assumed control of the American company.

“We are lucky there is a crisis,” said the director of the Tychy plant, Zdzislaw Arlet, unable to resist a gibe at the bigger cars and trucks that have traditionally stolen the industry spotlight. “Everybody wants to build [small cars](#) now.”

At Tychy (pronounced TICK-ee), one secret is flexibility: The latest robotic technology is balanced by workers

who can quickly shift models to match demand. That is one reason Tychy is operating around the clock, six days a week, while most other auto plants in Europe and the United States are running at a fraction of capacity, increasing costly nonproductive downtime.

Indeed, for visiting Chrysler engineers, going to Tychy is akin to an aging heavyweight boxer stepping into a gym where more agile bantamweight fighters train.

Chrysler's smallest car, the [Dodge Caliber](#) compact, is one-third heavier (about 1,000 pounds) than the fast-selling Fiat 500, which is made exclusively at Tychy.

Fiat executives say their goal is not only to produce subcompact European models at Chrysler's North American plants — but also for Chrysler managers to learn how to speed the introduction of smaller cars in the United States that Americans will want to buy, like a new version of the Sebring, while increasing efficiency the way Fiat has at Tychy.

Chrysler's offerings, unlike those from Fiat, have long been dominated by Jeeps and S.U.V.'s and big trucks like the Dodge Ram, with cars making up just 30 percent of Chrysler's worldwide sales last year. As bigger vehicles fell out of favor because of high gasoline prices and the [recession](#), Chrysler's overall sales dived, falling 44 percent in the first half of 2009 compared with the period a year earlier.

“It's very difficult to go from big to small, but they are here to compare and learn,” Mr. Arlet said as he walked amid the sparks thrown off by robots along his production lines. “This plant was designed to produce small cars.”

The ideal combination of automated robots and individual workers has been critical to Tychy's success, said Ron Harbour, an American industry consultant with Oliver Wyman, a consulting firm. Success is not as simple as the more robots, the better.

“With people, you can change the mix in one day or one week,” Mr. Harbour said, referring to the models a production line churns out. “You can't do that with robots.”

The Tychy plant employs about 5,000 people, including about 1,700 hired last year to make more Fiats, as well

as the [Ford Ka](#).

Tychy's huge scale — it covers more than 4.3 million square feet — also works to its advantage.

Although exact benchmarks are difficult, Mr. Harbour mentions Chrysler's plant in Belvidere, Ill., as a comparable site, since it produces smaller cars. But its annual production capacity of 265,000 is just over half of the plant at Tychy.

Mr. Arlet is also constantly on the lookout for time- and money-saving improvements, adding that he himself looks to [Toyota](#)'s famous Kaizen system for inspiration: Instead of filling up cars at different production points with brake fluid, gasoline, water and other liquids, one machine on each of Tychy's three lines fills each vehicle.

"A car comes off the assembly line every 55 seconds," Mr. Arlet said. "In 1996, it took twice as long."

Along with the new technology came a new focus on quality. About three years ago, workers were assigned an individual identification number that is stamped on whatever sections of the car they assemble so any problems at the end of the line can be traced to the source.

As a result, Mr. Arlet said, the number of cars coming off the line with defects has fallen from 20 percent in 1996 to just 4 percent now — a figure Mr. Harbour said compared favorably to factories in the United States or Western Europe.

"At the moment, Tychy is the best of Fiat as far as quality is concerned," said Giuseppe Volpato, a professor of economics at the University of Venice who has long studied the company. "I think Poland is becoming the reference point for the whole organization, even in Italy."

For Mr. Marchionne, turning around Chrysler will probably be harder than getting Fiat back on track. Chrysler not only relies on trucks and S.U.V.'s, it derives 75 percent of its sales from the now-moribund American market.

At the same time, Chrysler is facing increased pressure from Ford, as well as G.M., which emerged from bankruptcy last week. And of course, the original high-quality, small-car brands, like Toyota and [Honda](#),

remain fierce competitors, even if Toyota is suffering great losses of its own.

Partly because of the need to move quickly, the pace of cultural exchanges like the visits to Tychy has quickened since Chrysler emerged from bankruptcy on June 10. Fiat took a 20 percent stake in return for technology and know-how that the Italian automaker says is worth \$10 billion in lieu of any cash.

Not only engineers and line managers are heading to Europe for the grand tour — so is the top brass.

Late last month, the executives responsible for Chrysler's three brands, along with the heads of manufacturing, engineering and styling, traveled to a proving ground halfway between Milan and Turin for a weekend of meetings and motoring with their Italian counterparts.

Back in Tychy, Mr. Arlet seemed amazed at the tectonic shift under way in the global auto industry, with Americans coming to Poland in search of the secrets of carmaking, rather than the other way around.

With a confident smile, he declared, "I am looking forward to when the Fiat 500 is made in the U.S.A. and also made here, and we can compare."

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