

Assessing the real cost of a tool build

Upfront costs for a tool aren't the only expense a buyer incurs. One moldmaker breaks down the actual costs to educate his clientele.

Nearly 30 years ago in Berlin, while studying engineering at night and working at a mold and die shop during the day, Helmut Mueller got his first glimpse of the American dream from an unlikely source: the Sears catalog. "I looked at [the catalog] and saw how much money you can earn and what you can buy," Mueller explains. The catalog, its wares, and the promise of a high standard of living lured Mueller to the United States and Chicago where he once again found work in the tool and die trade. He eventually opened his own shop—Helm Tool Co. Inc. (Elk Grove Village, IL), which celebrated its 25th anniversary

in September.

Over the last 25 years, times have changed, Mueller says. Sears no longer prints its direct-mail catalog, and if it did, the bulk of goods featured on its pages would be made overseas from start to finish, with many of the plastic components molded in foreign-made tools. Mueller has seen these changes firsthand in his own business and in that of other domestic moldmakers. As former

president of the Chicago Chapter of the American Mold Builders Assn. (AMBA), he has attended meetings where toolmakers discuss their struggles to find an answer to the question of foreign competition. He watched as 68 mold shops went out of business in the Chicago area last year alone.

But rather than bemoan the state of domestic moldmaking while waiting for the U.S. government to possibly act on behalf of the industry, Mueller has taken proactive steps and altered his sales pitch to directly challenge what is widely perceived as foreign shops' greatest advantage over their ailing American competition: cost.

LOOKING AT THE WHOLE PICTURE

After performing costly repairs on a number of foreign-made tools brought in

by customers who were sold on low price, Mueller decided to add up the entire cost of a mold throughout its life—not just the initial sticker price. He calls this figure the total cost of ownership, and feels that in many cases it shows that foreign tools can have hidden costs, which make their actual price comparable to, if not greater than, U.S. molds (see Table 1). Mueller says many OEMs and molders have experienced the scenario laid out in his hypothetical mold purchase, but few have taken the time to break it down dollar-for-dollar.

"A lot of people know some of those things that I've written down," Mueller explains, "but no one has really spelled it out because many who order [molds] don't have this in-depth knowledge, and they need to be better informed. If ►

Table 1.
Hypothetical one-year comparison of domestic vs. overseas tool

	SHOP A DOMESTIC		SHOP B OVERSEAS		Difference	Total cost of ownership
TOOL COST		Cost \$100,000*		Cost \$70,000	(\$30,000)	Subtotal \$70,000
STARTUP COST	No tests or modifications required, test performed by domestic tool shop	Cost \$0	Two tests (\$800 each) and two mold modifications (\$2500 each) required to get the mold to run	Cost \$6600	\$6600	Subtotal \$76,600
LOST PRODUCTION	Production starts on scheduled date	Lost gross margin \$0	Production starts one month late Sales = \$400,000/year \$33,000/month Gross margin = 25%	Lost gross margin \$8300	\$8300	Subtotal \$84,900
PRODUCTIVITY**	10-second cycle time Sales = \$500,000 Gross margin = 25% Full capacity can be used and sold	Realized gross margin \$125,000	12-second cycle time (20% less output) Sales = \$400,000 Gross margin = 25% Not all orders can be filled	Realized gross margin \$100,000	\$25,000	Subtotal \$109,900
MAINTENANCE	Not required beyond regular maintenance	Cost \$0	Two times troubleshooting (\$2000 each)	Cost \$4000	\$4000	Subtotal \$113,900
TOTAL COST DIFFERENCE (first year)					\$13,900	
TOTAL COST		\$100,000				\$113,900

*Overseas moldmakers often require paying of the full sum in an escrow account before project start, while payments in the U.S. occur during the building process, reducing the cash flow burden.

**Productivity differences will continue over the life of the tool, increasing the advantage of the U.S. tool even further.

they buy something, they need to understand what costs occur over the life of the tool, on top of the cheap, upfront price.”

Total cost of ownership addresses five areas: tool price, startup cost, lost

extended startup. Productivity relates to how the tool’s overall quality and design affect cycle times and production. Maintenance costs address adjustments due to poor design or inadequate steel or hardness.

Foreign tools can have **HIDDEN COSTS**, making their actual price comparable to U.S. molds.

production, productivity, and maintenance. Based on his experience, he generated the hypothetical scenario represented by Table 1, which compares the total cost to produce and run a domestic-made tool to a foreign-made tool.

Tool price is the upfront cost paid to a moldmaker, which, in the case of many foreign shops, can be significantly lower than a domestic price. Startup costs include any modifications that need to be made to a tool before production runs. Lost production accounts for sales missed during an


domestic shops can offer, but he says U.S. molds can still be a tough sell.

KNOW WHAT YOU’RE BUYING

With new customers, Mueller relies on one pitch. “[Total cost of ownership] is the only way I can get work from new customers, if they understand what they are buying or not buying. When they jeopardize production by saving on the tool, they end up paying a much higher price.”

Still, given their labor costs and a general lack of environmental or

worker safety standards, Mueller admits that it’s sometimes impossible to compete with foreign shops on the basis of cost.

In spite of this, Mueller hopes that taking a broader look at all the costs involved in a tool might help American toolmakers undermine a growing perception about price. “I think the biggest challenge is in the attitude of the companies and the people,” Mueller explains. “In many cases they don’t see that you get what you pay for. Years of experience and well-trained workers allow us to build tools that compensate for the higher upfront cost through better reliability and productivity.”—*Tony Deligio* 

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