

► BY BILL KENNEDY, CONTRIBUTING EDITOR

Surviving the Cost Crunch

Tool manufacturers respond to automakers' cost-reduction demands.

Global competition, excess manufacturing capacity and flat demand have plunged automakers into a fierce battle for market share. Incentive "givebacks" negate any price increases, and profit margins are practically nil.

As a result, automakers are examining every aspect of their businesses, looking for ways to cut costs. In many cases, the buck stops with their suppliers.

Price Pressure

One approach to cost containment is to simply force tooling suppliers to lower their prices.

"Price is king" throughout the industry, said Rick Ahaus, president of equipment maker Ahaus Tool & Engineering Inc., Richmond, Ind. (See sidebar, page 35.) "There is no place where we submit a price that we aren't asked to reduce it."

Makers of special cutters aren't immune to cost-reduction demands, either. One such company is Cougar Cutting Tools Inc., which makes special carbide rotary tools. Products include endmills, reamers and step drills. Among the more complex specials Cougar produces is a 2¼"-dia., 8-flute, through-coolant tool.

Larry Cooper, purchasing manager at Cougar, Clinton Township, Mich., said customers' cost-reduction requests can be blunt. "Some will say, 'You've been making this tool for us for 2 years, we want 10 percent off.'" Cougar often cannot lower its price. As a result, it may only get 30 to 40 percent of the



Just a few years ago, delivery time for a special tool ranged from 8 to 12 weeks. The norm today is 4 weeks. Shown is a special bore and chamfer tool from McQuade Industries.

business it quotes.

It's a fact of life, Cooper said, "because we run low margins and make a very high-quality tool. That's our niche."

Cost control affects delivery times as well as prices, as automakers follow just-in-time strategies to minimize their tooling inventories.

Dinos Karagounis, vice president of specialty-tool maker McQuade Industries Inc., Clinton Township, Mich., said that during the 25 years McQuade has been in business, lead times have fallen dramatically. Prior to 2000, 8 to 12 weeks for tool delivery was common. Today, automakers "don't order anything until they absolutely need it," he said.

Typically, the process involves a quote in 24 to 72 hours, drawings in 2 weeks and delivery in 4 weeks. McQuade—together with its insert-products affiliate, Continental Carbide Ltd.—produces custom indexable insert tools used on transmission and engine lines.

According to Karagounis, order quantities are down. "Automakers are not running with the spares they used to have. They don't have the luxury of having a spare \$80,000 feedout head for generating surfaces on a transmission-case line. Sometimes, we've got the only spare on *our* floor."

Not surprisingly, lot sizes conform to order quantities. Cooper said Cougar's production runs are from one to 300 tools, with a dozen being the average. "Right now, I'm making a two-piece order of a \$700 tool."

He added that fast delivery has become a matter of course. "On some tools, we have taken a purchase order in the morning and dropped off the tools that evening." Lead times of 5 days to 2 weeks are more common.

Smaller special-tooling suppliers can provide that kind of rapid service, Cooper said, while larger suppliers may require 8 to 12 weeks or more.



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Cougar Cutting Tools manufactured these specials: a coolant-fed step reamer for aluminum (left) and a drill/counter-bore for cast iron.

Managing the Managers

Another outgrowth of cost-containment efforts is automakers' reliance on commodity managers and integrated suppliers. In these relationships, an automaker contracts with a company to purchase supplies and meet specific cost-reduction targets. The idea is to reduce paperwork and purchase supplies at the lowest possible prices. The commodity manager may handle one group of products, such as consumable tools, or manage all of the MRO supplies for a facility or group of facilities.

Sometimes, focusing on price alone is counterproductive, said Jim Brady, senior vice president at U.S. Tool Inc., a precision manufacturer of special tools in Farmington Hills, Mich. "Some of the commodity managers have no clue what they are buying," he said. "You ask them if they want an insert with a negative or positive rake and 2° of clearance or 2½°, and they have no clue. Then they say they can get the same tool so much cheaper" from another source.

He recalled how one commodity manager replaced a tool with a cheaper substitute, but "their [customer's] engineers showed them all their scrap and screamed bloody murder."

Brady said he tries to explain the situation to end users, but "not too much, because it sounds like we are whining and don't want to do business with the integrated supplier."

He added that his company is happy to deal with more sophisticated commodity managers, who "ask us to deal

It's good to be king

Automakers are achieving increasingly tough cost-containment goals with the help of their suppliers, "whether the suppliers want to or not," said Ahaus Tool's Rick Ahaus.

Ahaus Tool designs and builds equipment for assembling automotive heat-exchanger components and makes hydraulic workholding fixtures for machining centers.

Ahaus is disappointed and frustrated by some automakers' approach to cost containment. To remain a preferred supplier for one large customer, he said, every 6 months his company must rebate 3 percent of purchase orders submitted. "My opinion is that there are better ways to achieve savings without creating such an enormous amount of animosity with your suppliers," he said.

It would be better if the customer set a goal of 10 percent savings and offered to work with its suppliers to reach it, he said. It can be done by carefully evaluating machine specifications and the customer's true needs.

In this environment, more than ever, the customer is king. Ahaus said, "You certainly want to continue good relationships with your customers. But

when they do things like demanding rebates, it's awful hard."

Ahaus' business reflects the global nature of automaking. The company recently completed a project in the United Kingdom for a Japanese customer building radiators for Land Rover and Audi. "Happens all the time," Ahaus said.

Over the last 7 years, Ahaus has increased its presence in the automotive market and also diversified into the military, medical and construction equipment areas with its hydraulic workholders for horizontal machining centers.

Ahaus said customers buying workholding equipment are looking to reduce manufacturing costs by machining faster, and it's an ongoing challenge to design and manufacture equipment to hold parts that are subject to extremely high cutting forces. He added that users don't simply want the equipment, "they want a solution, tooled up and ready to go."

As a result, Ahaus often works with machine tool builders and distributors to provide turnkey packages.

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A special undercut tool with triangle-shaped inserts from McQuade Industries.

directly with their [customers'] engineers. They understand that special tools can save their customers a lot of money and are willing to pay a premium for them."

Howard Algeo, of supply manager Hagemeyer North America, Charleston, S.C., is someone who evaluates both performance and price. As Hagemeyer's cutting tool specialist at the Cummins Diesel facility in Rocky Mount, N.C., he said Cummins won't replace any tool simply because of price. "We look at the price, but a potential replacement tool has to be tested to make sure it performs as well, or better, than what we already have in place."

He said that when testing a new tool,

he often brings several Hagemeyer-franchised tooling suppliers in to test tools as well. "This levels the playing field and gives all the suppliers a chance," he said.

When testing, Algeo said, Hagemeyer pays special attention to problem and high-usage areas. For a tool used throughout the facility, for example, an alternative tool will be tested at the point in the machining process where tool life is shortest. "If it works there, it will most likely work everywhere that the tool is used," he said.

Brady said toolmakers can also help commodity managers with the paperwork side of the job. His company, for example, simplifies ordering by marking each of its tools with a unique eight-digit number. The first four digits designate the customer and the second four define the tool.

"The supply manager doesn't have to provide the customer's part number," Brady said. "He can give us the eight-digit number and we can tell him not only the customer's part number, but also the whole history of the design and usage of that tool."

Saving Through Innovation

RTS Cutting Tools Inc. is uniquely qualified to comment on the relationship between a tool manufacturer and commodity manager. The Clinton Township, Mich., company produces special solid-carbide and HSS tools, and it offers commodity-management services.

"Cost-containment pressure, somewhere along the line, always ends up on the cutting tool supplier, whether it

comes directly or through the commodity manager," said RTS President Mike Disser.

Because margins are already small, savings often can't be found in the price of the tool. But, savings can result from longer tool life. To reap such savings, though, the entire operation has to be considered.

For example, Disser said, it would add little value to increase drill life to 2,000 holes if the operator were constrained by a tap that threads 600 pieces per tool before needing replacement. "He's going to [have to] change the entire tooling package at that point."

Re-engineering tooling is another way to reduce costs. As an example, McQuade's Karagounis cited a case where a change in tool design both increased tool life and reduced setup time. The operator was spending an excessive amount of time gaging a tool on the machine each time its inserts were changed.

"We designed a new tool with an extra insert that cut the chip load in half, thinned out the chip and extended tool life," Karagounis said. "Then we came up with a quick-change system that allowed the operator to replace the tool with one that had already been set up offline."

Industry trends must be considered, too, when trying to contain costs. Coolant extends tool life, for instance, but it's expensive and becoming environmentally unacceptable. Automakers are more willing to pay for tools that can be run dry or semidry.

Disser said RTS is exploring new technology that will allow tools to operate at higher temperatures, thereby increasing wear life, without requiring coolant.

"New tooling is coming out on a regular basis," he said. "It's a matter of who has the initiative to apply it."

Karagounis said his company and others that supply tools to the automotive industry "have to work harder than we ever did just to keep the business we already have." He emphasized the willingness of specialty toolmakers to work around the clock and provide innovative solutions to keep that business.

He added that supplying the auto industry with specials is never dull. There's "always something new."

The following companies contributed to this report:

Ahaus Tool & Engineering Inc.
(800) 962-3571
www.ahaus.com

Continental Carbide Ltd.
(586) 463-9577
www.continental-carbide.com

Cougar Cutting Tools Inc.
(586) 469-1310

Hagemeyer North America
(843) 745-2400
www.hagemeyerna.com

McQuade Industries Inc.
(586) 463-3610
www.mcquade-industries.com

RTS Cutting Tools Inc.
(586) 954-1900
www.rtscut.com

U.S. Tool Inc.
(800) 989-7745
www.ustool.us