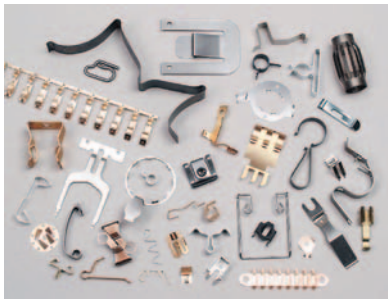


Criteria for Making the Move to Fourslide

The fourslide part-making process offers several benefits versus the traditional power press. Here's how to decide if and when to take advantage of it.

The fourslide process offers several benefits over the traditional power press when it comes to making parts. Among its advantages: the cost-effective manufacturing of complicated forms, reduced production expenses, and speedier product delivery. When seeking to keep project costs in containment, obtaining parts from a source that employs the fourslide process makes sense. The means by which so much money can be saved is best illustrated from a cursory understanding of the process itself.

Fourslide manufacturing begins with the raw material in flat strip form off a coil, which is stamped or blanked in the



progressive die section of the fourslide machine. The strip is then fed into the forming section, where four tool-carrying slides approach the part from the four cardinal compass points, forming the material around a central tool or mandrel. The set-up of the machine cams determines the sequence, timing and number of tool strikes. Visit www.fourslide.com/fourslide-reference.htm for an animated demonstration of how this process works. Tooling for power presses can cost tens of thousands of dollars, while fourslide tooling typically runs just a fraction of that, making the fourslide tool more easily justified.

“Given the current economy there is a little bit of uncertainty within the manufacturing community,” says Anthony Viggiano, co-owner of Autotether, Inc. of Rocky Hill, Connecticut. “The fourslide process, the cost of the tool isn’t that great, so your capital investment isn’t high.” “To me, that’s what it’s all about, getting good parts at the lowest cost,” says Don Schmidt, a manufacturing engineer with Lexington, Kentucky-based Kaba Mas — a leading manufacturer and supplier of high-security electronic locking solutions. “We have had situations where we’ve quoted a metal part with some forms, both from conventional stamping houses and from fourslide houses, and have always done better with fourslide in terms of cost.” “I always look at the complexity of the part, and for complicated forms and spring-type parts it makes sense to utilize



a fourslide operation,” says Schmidt. Because of its unique integration of compound forming operations, the fourslide process can execute multiple bends, bends beyond 90 degrees, twists, cylindrical forms, and tapped holes before the part is ultimately ejected. This capability yields precision metal stampings, flat springs, wire forms, contacts and other complex forms for a wide range of medical, electrical, automotive, aerospace, military, consumer and industrial applications. The simplicity in machining fourslide tools, versus the time — consuming complexity of power press tools, translates into a significant reduction of lead times approaching 50% or more. “With a progressive die or conventional stamping tool, you have only one cycle at the press, so all of your tooling has to be timed within the die in that one stroke — a change might require re-timing the entire tool,” notes Don Schmidt. “Whereas, with four separate ‘slides,’ you can easily adjust each station individually. This gives you a lot more flexibility in controlling the different operations to effect any necessary changes.” Capable of production rates of 15,000 pieces per hour - depending on part size and complexity - the fourslide process has been successfully employed to produce part runs numbering the tens of millions. While the “economies of scale” enabled by a power press and a die cannot be denied, the steep investment in the creation of the die must be taken into consideration. It can take millions of pieces, and years, to recoup the cost. Only the largest of manufacturers can suffer such long amortization periods. “Below the million mark, where many of us manufacturers reside, fourslide holds the advantage because of the very low cost of the tooling,” points out Autotether’s Viggiano. As a general rule of thumb, any material less than 2” wide, less than 0.075” thick, and within 15” in blank length, can utilize the fourslide process. Blanking demands, as well as the hardness of the material, exert some influence on these figures. Of course, when it comes to heavy-duty jobs exceeding 25 tons overall, the advantage tilts back to the mightier power press. For more information contact: Fourslide Spring and Stamping Inc. 87 Cross Street Bristol, CT 06011 Ph: 800-832-6405 · Fax: 860-584-5960 www.fourslide.com · email: info@fourslide.com

While the fourslide part making process was previously used mostly for complex work such as that with involved forming, multiple bends, or elements beyond 90-degree, savvy manufacturers are now choosing the process over power press to slash part cost, speed product deliver, and streamline quality assurance.

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A sample of parts that can be most economically produced by the Fourslide process.

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