# **WORKHOLDING SUCCESS STORY:** Aerospace



### NO MOVEMENT. NO CHATTER. NO WASTE.

John Robinette of United Machine was annoyed. United Machine manufactures numerous parts for the aerospace industry, where quality and consistency are paramount. Yet, Robinette's existing workholding system kept failing him. The jaws and other components kept breaking, and there were other recurring issues. For example, the jaws kept splaying, which created part lift and reduced holding force. Perishable costs increased. Frustrated, he began searching for other workholding options

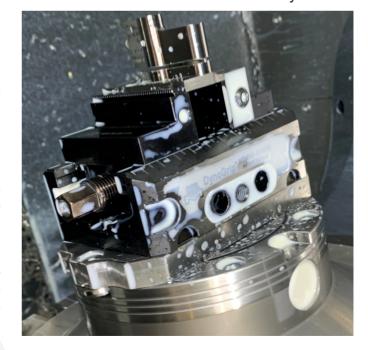
Looking through his emails, Robinette saw an email header referencing Mate's 52/96 workholding system. Mate was a new brand to him, but the more he researched Mate's products, the more he liked them. What got his attention were the quick-change jaws, the use of tool steels, and accuracy and repeatability. Intrigued, he decided to try Mate and purchased a small DynoGrip $^{TM}$  vise to test.

#### **OPERATIONS AND TIME SAVER**

Upon receiving the vise, Robinette wanted to see what it could do. He set the Mate DynoGrip up in his Haas UMC-500 5-axis machine to make a stainless steel aircraft galley cabinet latch. To say that he was amazed would be an understatement. Robinette says that

he pushed the vise as hard as he could, and it just "ate it all day." Further, he noticed that he did not have to use dovetails. Today, Robinette only uses dovetails when trying to machine the underside (sixth side) of the part. The holding force and serrated teeth of the Mate jaws prevent part ejection in all other applications.

Robinette can run parts much more aggressively with Mate vises than with any competitor vise. He has not experienced chatter or vibration when machining a four-inch-tall workpiece with 25% engagement on a one-inch diameter endmill. What's more, he says he has been able to use the same endmill for multiple jobs instead of changing it after every job.



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**RESPECT • SUPPORT • INSPIRE** 

Using Mate DynoGrip vises, United Machine reduced the number of operations required to machine a part. Says Robinette, "I'm routinely able to complete manufacturing of workpieces in one operation that previously required two or three operations with competitor vises." He also found that the guick-change jaws, which don't require tools, are a huge time saver.

#### THE GO-TO VISE



Being a consistent, reliable performer, Mate DynoGrip quickly became the "go-to" vise for producing over 300 stainless steel levers each month. Robinette says it's "critical to United Machine's success to have reliable workholding because it reduces the complexity of the operator's job," which also helps recruit and retain machinists.

Nothing breaks in Mate's DynoGrip™ vise. The jaws hold up and the jaw teeth remain intact. The part doesn't move and United's piece part quality also improved.

"Before Mate, I wasn't sure what would happen after starting the machine tool. I'd lose three or four parts per job. With Mate DynoGrip, I'm no longer concerned when I press the "GO" button," said Robinette, adding that "Mate's vise makes the part correctly the first time with minimal waste."

United Machine has since added other Mate DynoGrip vises to its operation. Robinette says, "You can't tear the Mate vises up. I run everything twice as fast and twice as hard as you probably should, but the Mate vises remain rock solid. They don't back chatter. They don't move. You can do things with Mate vises that you can't do with anyone else. I haven't found Mate's limit yet."