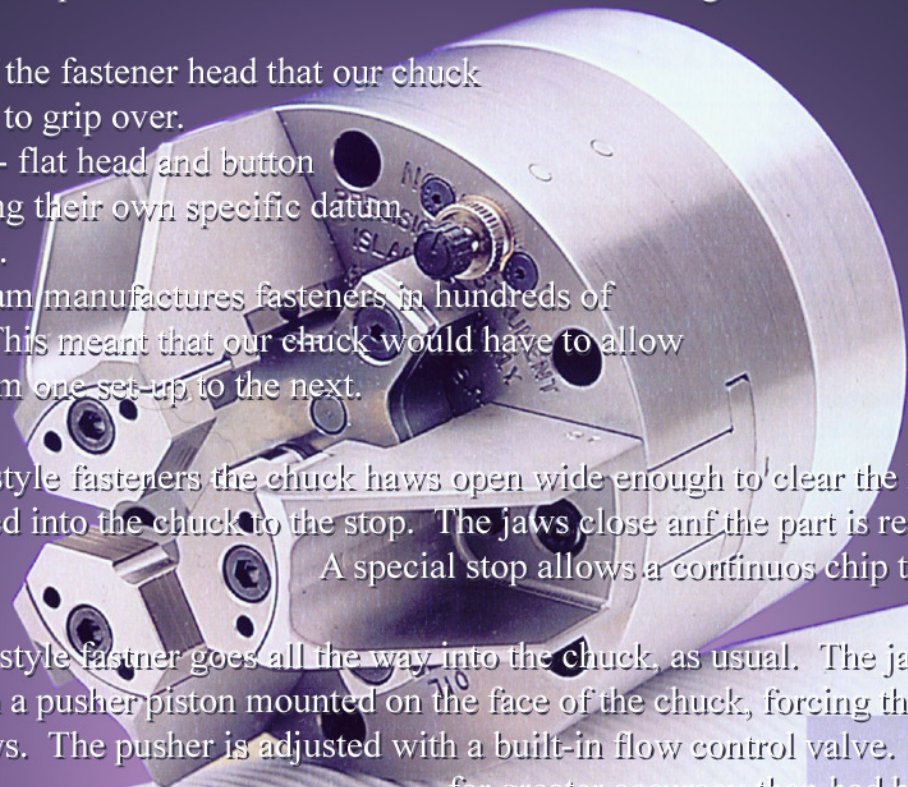


Monogram Aerospace manufactures highly sophisticated fasteners. If you have ever flown in a commercial airliner, you have probably seen Monogram fasteners dotting the wings of the plane. Monogram asked Northfield to develop a chuck to hold these fasteners during machining (hard turning and tapping). To accomplish this we had to address several challenges:

- 1 - The large size of the fastener head that our chuck jaws would have to grip over.
- 2 - Two head styles - flat head and button head - each having their own specific datum for axial banking.
- 3 - Finally, Monogram manufactures fasteners in hundreds of different sizes. This meant that our chuck would have to allow quick change from one set-up to the next.

For the flat-head style fasteners the chuck jaws open wide enough to clear the head of the fastener. The part is pushed into the chuck to the stop. The jaws close and the part is ready to be machined. A special stop allows a continuous chip to exit from the side.

The button head style fastener goes all the way into the chuck, as usual. The jaws begin to close in sequence with a pusher piston mounted on the face of the chuck, forcing the part up against the back of the jaws. The pusher is adjusted with a built-in flow control valve. This method allows for greater accuracy than had been possible before.



NORTHFIELD
MODEL 425 WITH SPECIAL FLOW CONTROL,
SUB-JAWS AND INSERTS