

A new generation of aircraft seat adjustments

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In the highly competitive market of air travel the seating not only needs to look welcoming, be comfortable and simple to operate, it needs to be safe, cost-effective and friendly to the environment. For the designer, therefore, the focus is not just on comfort and functionality, but also on weight, compactness, service life and quality.

Until now the adjustment of the back rests, seats and foot rests in aircraft seating has been done by three separate mechanisms. However, with Eichenberger's new adjustment system they are all controlled from a single central point, using three small, highly precise and robust Carry type ballscrews with matched ballscrew nuts.

A particular design challenge was posed by the need for ten highly accurate drill holes, of just 1.52 mm in diameter, on the ballscrew nuts. The problem is that metal expands and contracts during the hardening process, resulting in slight changes in position and size of the all-important holes. These changes are very difficult to predict, but, after successive cycles of measuring and vacuum hardening to 59-63 HRC, Eichenberger's developers succeeded in adjusting the drill holes to the required size and with an impressive tolerance of just ± 0.015 mm.

Thanks to Eichenberger's pioneering production processes and excellent working relationship with suppliers (such as the heat treatment plant used for the aircraft seating mechanism), the Swiss manufacturer can respond to customer requests at very short notice. Moreover, service life calculations can be performed immediately and modifications to the production process are always possible.



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