BELL 525 TO BECOME WORLD'S FIRST FLY-BY-WIRE HELICOPTER

News / Manufacturer

The **Bell 525** Relentless is ready to revolutionize the helicopter industry as the world's first fly-by-wire (FBW) commercial **helicopter**.

Thanks to years of experience developing fly-by-wire systems, Bell Helicopter has channeled this expertise into creating a new standard for pilot controls. FBW technology replaces the traditional manual flight controls with a digital interface that provides a level of control previously unseen in a commercial helicopter.

"When we started designing the Bell 525, our customer advisory panel really stressed the need for a flying experience that's safer, easier and more repeatable," said Matt Hasik, senior vice president of commercial programs at Bell Helicopter. "We can design a product with class-leading

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speed, range, and a host of product features, but the real focus of the Bell 525 was to make a step-function improvement in capability for the pilot, enabling him/her to manage every aspect of flight in the cockpit with a new level of awareness and control."

The Bell 525 Relentless leverages a triply-redundant flight control system to maximize safety and control. Pilot inputs are electronically transmitted and processed by the flight control computers. With three flight control computers and triplex electro-hydraulic actuators, the digital FBW control system provides full-authority stability, control and guidance, offering reduced pilot workload in pitch, roll, yaw and lateral and vertical motion.

Fly-by-wire also makes the overall flying experience easier for operators. The open, clutter-free cockpit features two tower-mounted cyclic and collective side sticks and unique trim pedals that greatly improve control throughout the flight envelope. The flight control system and flight director interface can automatically fly the helicopter in a variety of modes. The flight director can also be coupled to an autopilot system to provide hands-off navigation. However, if preferred, the pilot can also choose to decouple the flight director from autopilot and manually fly the Bell 525.

"Having developed a highly capable systems integration lab, it's exciting to see the progression of hardware-in-the-loop testing," said Larry Hutson, RASIL Integrated Product Team lead on the Bell 525. "With fly-by-wire, we're able to give customers a product with greater handling capability, increased control and improved responsiveness," Altogether, the Bell 525 Relentless has the ability to revolutionize the commercial helicopter industry by allowing pilots the freedom to do more quicker and safer than ever before."

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