

# Goodrich Corporation:

*Providing Best Value to the Helicopter Market*

**G**oodrich Corporation, a global supplier of systems and services to the aerospace, defense and homeland security markets, has a long and successful history of providing mission-critical solutions to helicopter operators and manufacturers around the world. For more than 50 years, we have used our leading-edge technology to propel the helicopter industry to new heights—from industry-changing rescue hoist systems to advanced vehicle health management systems, Goodrich products are on almost every helicopter in operation. Whether flying Agusta Westland, Bell, Boeing, Eurocopter or Sikorsky, we understand the unique challenges helicopter operators face and the critical nature of their missions. By seeing these challenges as opportunities, we continue to position ourselves as an industry leader within the helicopter community.

## Introducing new product lines

In 2008, Goodrich continued to expand and diversify its portfolio of helicopter products through the acquisition of TEAC Aerospace Technologies, a leading manufacturer of mission data recorders and data debrief stations.

## Increasing rescue safety

In response to the rescue community's need for a safer, more reliable rescue hoist capable of heavy usage, operating in high fleet angles and performing effectively in restricted areas and extreme environments, Goodrich developed a hoist that uses a translating drum cable management system. We are the only provider in the world of the translating drum hoist which is used around the world for critical rescue missions by the U.S. and international coast guards, U.S. Army, foreign and domestic armed forces, and paramilitary forces, such as police, firefighters, medical evacuation crews, and other local municipality operators.

## Reducing maintenance costs

Goodrich Vehicle Health Management Systems (VHMS) help maintain helicopters more efficiently and cost-effectively. Our systems monitor the entire aircraft including the engine, all mechanical components of the drive train as well as avionics equipment to detect problems before flight operations are impacted and costly repairs are required. The U.S. Army predicts our system will provide a \$45 million savings on its UH-60 Black Hawk fleet. Our systems are proven on helicopters of all sizes and are standard equipment on commercial helicopters such as the Sikorsky S-76D and S-92.



## Pioneering FADECs for helicopters

Enhanced helicopter safety provided by full authority digital control (FADEC) systems was not only pioneered by Goodrich, but we continue to lead the way in system integration. These latest FADEC systems will integrate with our market-leading VHMS to provide the ultimate in adaptive engine control technology.

## Revolutionizing flight control systems

NH Industries selected Goodrich to provide the main rotor actuators for its NH90, the first industrial rotorcraft to be equipped with a fly-by-wire flight control system. These advanced actuators feature a dual tandem approach with quadruplex electrical control via four direct drive motors thus ensuring high levels of availability for this safety-critical application.

## Decreasing helicopter weight

Goodrich offers an economic alternative to traditional air data systems. Now in its third generation, the SmartProbe™ Air Data System offers a simpler architecture—it reduces the number of individual components, eliminates pneumatic tubing and connections, and is smaller, lighter and uses less power. The SmartProbe™ Air Data System has demonstrated success reducing maintenance costs and improving operational readiness and system reliability.

## Improving reliability in all-weather operations

Goodrich provides some of the most advanced ice detection and protection systems for all-weather operation of today's high performance helicopters. Goodrich offers complete systems, including ice detection, system control and heating. Electro-thermal

ice protection is provided for rotors and engine inlets using our patent-pending Dura-Therm™ etched heating element. Goodrich provides more ice protection options than any other provider in the world, and our systems have the high reliability and redundancy demanded by this application.

## Decreasing time between overhauls

Goodrich knows that operating cost and availability are critical ingredients in today's environment. We have responded to these needs with Diamond Range™ long-life starter-generator brushes. These brushes have been fully tested to OEM standards and are uniquely formulated to exceed 1,000 hours between overhaul. This can be as much as three times the life of competing brushes. Helicopter operators around the world prefer the performance of Diamond Range brushes and benefit from their guaranteed life of 1,000 hours.

## Comprehensive Lifecycle Solutions

Our extensive experience, innovative advances and continually evolving product lines have positioned us as a forerunner in the development of mission-critical helicopter technology. But, our commitment to the helicopter community does not stop at product development—we are dedicated to providing comprehensive lifecycle support and repair of our products. ■

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