

Super smart helicopter load hook knows everything

An innovative design of helicopter load hook marries GPS (global positioning system) with load sensing and a host of other intelligent functions to automatically optimise complex operations such as spraying and multiple random load billing. Incredibly the hook, HeliNav LoadMaster, is completely autonomous with its own on-board sensors, computers and batteries. This makes it independent of the host helicopter's systems and therefore exempt from the need for CAA or other approval. It also means it can be swapped from one craft to another in seconds, allowing HeliNav LoadMaster to be shared around a fleet of aircraft.

"This is a major step forward for commercial helicopter operators, who can now maximise the profitability of their flying hours," says Bryan Launestone inventor of the HeliNav LoadMaster and Managing Director of its manufacturing company Sensor Technology in Banbury. "Looking at a simple example, lifting rubble from a quarry to a hillside to lay as a path, currently it is difficult to know the exact weight of each load and the total distance flown during the day. HeliNav LoadMaster keeps exact records, accurate to the kilogramme and metre, so you just download the data and invoice the customer."

Other examples include crop spraying and water bombing. With multiple flights needed, HeliNav LoadMaster can ensure that the second drop starts

exactly where the first finished. This guarantees even coverage and efficient use of sprays, etc. Significantly, as the bucket empties flow will naturally slow; HeliNav LoadMaster can compensate for this by gradually opening the release valve in proportion to the weight of remaining spray. In addition the GPS can also be used to avoid houses, streams, lakes and roads.

HeliNav LoadMaster performs all of its calculations within itself, and communicates its information to the helicopter pilot via a radio link working on an unrestricted waveband. A full colour touch screen is mounted in the cockpit allowing the pilot to monitor, interrogate and activate the hook's computer with ease. With both Windows and LabView software embedded in the unit, operation is not only simple, it is also so familiar to modern pilots that training is not needed.

"Put simply, HeliNav LoadMaster takes the guesswork out of commercial operations," says Bryan. "You get an accurate record, against which you can charge exactly."

There are other ways in which HeliNav LoadMaster can be helpful. For instance, a handheld remote monitor can be used by ground crew to check and double check loads, to ensure returning buckets empty. Of course, it can tell the pilot the underslung weight he is carrying for safety purposes. And because the unit is simply slung under the aircraft, it is possible to have a single one in use with a fleet of three, four or more



operational helicopters. "I think we are on the cusp of a step change in the way in which helicopter based businesses operate," says Bryan. "Billing can now be absolutely accurate, with digital records produced instantly and emailed off to the customer. There will be no room to quibble and now chance to delay payment, so relationships can be conducted on a thoroughly professional basis."

www.sensors.co.uk



Alarm and signalling devices for Zone 0, 1 & 2, 21 & 22



- Xenon beacons up to 21J / 485cd and multi function LED beacon
- Sound outputs up to 123 dB(A)
- Audio-visual combination units
- Ex d and Ex de versions
- Ingress protection: IP66/IP67
- 32 alarm tones, 3 alarm stages
- Manufactured from corrosion proof, marine grade copper free LM6 aluminium and high impact, fire retardant ABS



Electronic Sounders • Status Lamps • Loudspeakers • Beacons • Voice Alarms • Manual Call Points

E2S • Impress House • Mansell Road • London • W3 7QH • UK
T: +44 (0) 208 743 8880 • F: +44 (0) 208 740 4200 • sales@e2s.com • www.e2s.com