

Sealing specialist opens up for airshow

Simrit, the global specialist in seals and vibration controls, is aiming to make an impact at Farnborough with its new Fas-n-Seal range of fastener seals and EPDM material, designed for use in hydraulic systems that utilise phosphate ester fluids.

"Simrit is committed to ensuring its customers have the latest innovations to fit their needs," said Joel Johnson, vice-president of technology for Simrit (Hall 1, C11).

"With our specialised product focus, global capability and unmatched sealing expertise, Simrit will continue to offer our customers cutting-edge sealing solutions."

The company's new Nitrile fluid sealing compound has also obtained qualified products list approval from the PRI.

Its manufacturing spans the world at sites including Leicestershire in the UK, while its affiliates NOK and Freudenberg-NOK giving access to Asia and the Americas respectively.

MicroPilot launches new UAV packages

Canada's MicroPilot (Hall 1, B16) has developed two new unmanned aerial vehicle (UAV) packages, featuring the world's smallest autopilot.

Weighing in at 28gm, the MP2028 autopilot established a new benchmark for lightweight UAV autopilots including all sensors and a GPS receiver.

It is included in the MP2028 integrated communications extension (ICE) and MP2028 long-range communication (LRC) packages, avionics suites designed to dramatically enhance reliability and integration for UAV operators.

Response

The ICE and LRC packages have multiple control modes, improved emergency response and ultimate communication and control range.

ICE, with its enhanced long-range communication link, features a standard radio-controlled transmitter modified with an internal amplifier to provide increase manual control range.



MicroPilot's Lisa Shaw with the MP2028 autopilot.

LRC products feature a ground unit using standard, off-the-shelf radio modems. RC control information rides on both the existing GCS datalink and a second redundant

datalink to reduce possible failure modes.

Both the ICE and LRC feature trusted MicroPilot components including Horizon MP ground control software, advanced servo

technology, versatile navigation capabilities and a powerful control system.

The MP2128 LRC is also available featuring MicroPilot's larger MP2128 G autopilot.

HCL exhibits software solutions

Global IT services provider HCL Technologies is exhibiting at Farnborough for the first time, looking to expand its growing list of aerospace clients.

With experience of working with 25 fixed wing and rotor aircraft manufacturers, HCL was the first Indian service provider to be awarded AS 9100 certification.

It currently has engagements with Airbus and is a software development partner for the Boeing 787 Dreamliner project.

HCL (Hall 4, G15) provides fully compliant solutions across the value chain, from hardware to software and skills solutions.

Martin Hunt, director of HCL's engineering division, says: "Farnborough is the perfect platform to show the aerospace industry exactly what we can offer."

The company leverages an extensive offshore infrastructure and has global network of 26 offices in 15 countries to deliver solutions across numerous industries.



Emhart's HeliCoils are holding together aircraft all over the world.

Emhart shrugs off best-known unknown tag

Their products are on virtually every aircraft or space craft built, but Emhart Technologies' name is almost unknown in the UK.

The company has decided that will change and senior executives are visiting Farnborough to get out the message: "We are here, we have the technology and it can work for you."

Emhart is part of Black and Decker and is a global leader in the design

and creation of unique assembly technologies. Its best-known aviation-brand is HeliCoil, a wire insert system.

A Boeing 747 or the Space Shuttle will contain a quarter of a million inserts as original equipment. "Wherever there is a need for strong threaded assemblies, HeliCoil inserts can be found," says global product manager Paul Morris.

There are scores of HeliCoil applications throughout mechanical systems

including landing gear, fuel valves, flight controls, seating products, propeller systems, environmental controls and cargo containers. They are also used in avionics and electrical equipment.

"Unfortunately a lot of customers have not been made aware of the different technologies or design service that we offer," says Morris. "That is changing."

Cosworth on grid with UAV engine

An all-new high-performance engine for UAVs is powering the aerospace aspirations of F1 racing legend Cosworth at Farnborough.

UK-based Cosworth is displaying its prototype AE engine at the MAA stand (Hall 1, C11) in a bid to capture a slice of what it sees as an important but underdeveloped market.

Compared with low-tech propulsion units traditionally found on UAVs, the Cosworth AE looks set to turn heads. The company describes it as an advanced single cylinder 100cc direct injection compression-ignition all-aluminium-alloy, port and reed-valve induction motor. It is designed to run on a range of fuels including JP5, JP8, DF1 and DF2 specification.

Growth

Managing director Tim Routsis

says Cosworth has been working with a growing aerospace client base for the last two years, but the AE prototype signals the company's first "true step" into the sector.

He said the AE is a "robust, compact, heavy fuel engine, designed to deliver excellent fuel efficiency at high altitude where reduced temperature makes optimum engine performance extremely challenging."



Cosworth looks to the skies with its prototype UAV engine.



The Star Safire QWIP is a long-wave thermal energy.

Zero visibility no bar to long-wave thermal imager

FLIR Systems (Hall 2, B14) is plugging a newly introduced long-wave variant of its high-definition multisensor thermal imaging system.

Based on FLIR's quantum well infrared photodetector (QWIP) technology, the Star Safire QWIP provides high-definition thermal imaging capability on a device sensitive to long-wave thermal energy.

It provides high-definition 1280x720 resolution from all of its imaging sensors: infrared, daylight TV and low-light

image intensifier. The QWIP's thermal imager provides crisp, fully digital SMPTE-292M imagery through total darkness, smoke, dust and many other battlefield obscuring.

Earl Lewis, chief executive of FLIR Systems, says the Star Safire QWIP "is an example of how FLIR can take its revolutionary high-definition infrared imager and create a variant for those operators who require long-wave thermal imaging capability."

HALL HIGHLIGHTS



Goodrich's innovative two-story pavilion located is outside OES.

Two prong approach to tea and business in new double-deck Goodrich pavilion

Goodrich is taking a lead in the showmanship stakes with an innovative two-storey pavilion to house a combined stand and chalet.

Located outside OES, the pavilion – literally at the centre of the show site – combines a ground floor for business and an upper floor for entertaining in a private dining space with a viewing platform for watching the flying display.

Goodrich's innovative products and services are on display to visitors in an interactive environment. Featured are the latest landing gear, wheels and brakes and sensors for new and existing platforms.

In addition, the company's contribution to defence and homeland security will be on

display, with innovations such as sensor technologies for laser detection; surveillance and reconnaissance systems for fighters and UAVs and laser systems for perimeter awareness and obstacle avoidance.

Experts

Experts from Goodrich's aftermarket division are on hand to answer questions.

Goodrich's Lisa Bottle says: "Our new pavilion concept is a literal interpretation of our 'one face to the customer' approach to doing business. With this new concept we're able to conserve time and energy while creating a truly memorable experience for our guests and the Goodrich team."

Absac springs an innovative surprise

Farnborough debutant Absac is at the show touting machined springs that it claims are more reliable than traditional wire wound springs in demanding cycle applications.

The UK-based company (Hall 4, F5) believes it is the only supplier in the world to offer an innovative way of improving performance by use of a machined spring.

While wire wound springs have numerous applications, Absac claims the method of manufacture can limit their reliability in high duty cycle applications.

Since machined springs are made from a solid piece of metal, virtually all-residual stresses are eliminated to provide precise, linear deflection rates.

As a result, there are no internal stresses to overcome before deflection occurs, which can be the case in the wire wound spring.

All types of spring format such as compression, extension, torsion, lateral translation and lateral bending springs are available in the machined format. Absac can offer single, double or multiple start spring coil configurations.

Multiple start spring elements offer the advantage of not only providing redundant elastic elements should a failure occur, but a failed element will be physically trapped by the remaining one and in many cases will allow the spring design to continue operating at reduced function. With the machined spring, Absac can guarantee perpendicularity, parallelism, lateral bending, axial and torsional rates.

DME lights the way in safety

One company from south Florida has its exhibits on display at Farnborough but hopes many will never need to be used.

The company is DME – represented at the show by its distributor Aaxico – and the products are a range of safety equipment that only come into their own when disaster strikes.

But although the products are a 'distress' purchase for the airlines, DME has been doing its bit to help redesign the product line to help reduce weight and bulk.

"A classic example is our new LED flashlight and first aid kit programme for the Boeing 787," says

marketing director Frank Cassandra. The new flashlight is both smaller and lighter than its predecessor which is being used in airlines all over the world.

"The new flashlight is high intensity LED just 8in (20mm) long and a third the weight of the standard lights," says Cassandra. "The battery lasts three years and is on the C-Check programme rather than a pre-flight check. A push button on the bracket lets crew test it is operable. In the event of an emergency, the flashlight works for 10h rather than 50min."

DME has designed the new flashlight so as it can be

retrofitted using the same holes for mountings at the EF1. Although manufactured out of lightweight plastics, the lamp is flame retardant.

Another product that DME is keen to talk about is its child restraint system, the CRS-3000 planeseat.

"A lot of people use a car seat for infant air travel, but 80-90% failed FAA testing," says company president Luis Mola. "Our own research has shown that the American public would be happy to pay extra for a child seat but we need regulations before the airlines move."

"Interestingly, Middle Eastern carriers are taking the idea of infant safety



Lighting the way: Luis Mola (left) and Frank Cassandra.

more seriously and are ordering the restraints."

Planeseat is designed for infants up to 9kg (20lb) and is constructed using aircraft grade aluminium and leather cover. It folds for storage in overhead bins.

"Safety of our children is important. You can't safely strap a child on your lap during severe turbulence. With forces of 6G a 20lb child becomes 120lb. Parents should expect the same level of safety that they get in their automobiles," he said.



DME offers child safety with Planeseat.



Play 'Hardide': Chief executive Jim Murray-Smith.

Hardide plays hard for 'first' with Typhoon

One newcomer to Farnborough is ready to play hard – that's its business.

Hardide Coatings (Hall 4, B5) comes to the show having just secured approved supplier status from BAE Systems for the use of its ultra-hard tungsten carbide, chemical vapour deposition (CVD) coating on components for the Eurofighter Typhoon.

This is the first aerospace sector approval for Oxfordshire, UK-based Hardide. The company has developed a patented tungsten carbide surface engineering technology which combines resistance to abrasion, erosion, friction and

chemicals in one coating. The coating is now approved for use in the production of the Typhoon canopy.

Chief executive Jim Murray-Smith says "The aerospace industry is a natural fit with our technology as it requires high precision components to perform in extreme conditions where optimal performance is critical.

"Hardide's anti-galling and wear resistance properties can solve abrasion, erosion and corrosion issues while offering cost savings due to extended component life and the reduced need for part replacement and costly downtime."