Transportation
Fashion

Press Release

Solar Impulse – Lantal's contribution to the successful flight around the world

Lantal developed the revolutionary Pneumatic Comfort System (PCS): It is based on firmness-adjustable, air-filled cushions that assure the ultimate in comfort in the sitting and relaxation positions – even in very special cockpits. Lantal is an "official supplier and pilot comfort expert" for the circumnavigation project with the Solar Impulse 2 (Si2) airplane, which was successfully completed last week with the last-leg landing in Abu Dhabi on July 26, 2016.

During their flight around the globe, the two pilots faced unprecedented technical, physiological, and operational challenges. The Si2 was airborne for a total of 558 hours and flew an aggregate distance of 43,041 kilometers. To help make this achievement possible, Lantal developed a pneumatic seat cushion explicitly tailored to the needs of the ambitious project. It not only perceptibly reduced the weight of the aircraft but also offered the pilots an unprecedented level of comfort. It assures total relaxation during the twenty-minute rest periods so that the pilot can devote his full attention to the continuation of the flight.

The individually adjustable firmness of the seat prevents the occurrence of annoying pressure points and maintains seating comfort even during flight legs that last two to five days. The air-filled cushion is dimensionally stable, giving the pilots firm posture support no matter how long the flight leg is. This is guaranteed by ingenious circuitry and software, even at below-freezing temperatures and the lack of cabin pressurization. With these features, Lantal's PCS delivers the ultimate in well-being for the pilots.

Lantal Textiles Ltd
Langenthal, Switzerland
www.lantal.com

guido.gander@lantal.ch
direct +41 62 916 72 45

Feedback

On all legs during the entire flight around the world, the air-filled cushions provided excellent comfort. This applies even to the longest leg across the Pacific Ocean from Japan to Hawaii, which lasted five days and nights. André Borschberg: “This night was good. I could lie down on the seat and the seat is really very ergonomic and comfortable. You don’t sweat, the contact with the seat and the body is good.” After the flight from Hawaii to San Francisco, Bertrand Piccard would have liked to remain seated: “It's so comfortable, I could just keep flying for days.” On arrival in Abu Dhabi, Bertrand Piccard also reconfirmed the reliability and versatility of the PCS cushion: “Lantal's PCS cushion is simply perfect.

Application

For the same reasons, Lantal's PCS has become more and more popular in commercial aviation. Here, too, the PCS helps boost passenger comfort while reducing fuel costs due to its lower overall weight. In flight, it adapts to each passenger's anatomy, offering the ultimate in travel comfort thanks individually adjustable cushions and a built-in massage function. Meanwhile, more than 15 internationally active airlines have opted for the innovative PCS, which is now integrated in over 10,000 First and Business Class seats. For the special Solar Impulse 2 project, Lantal used the same materials and parts that are also installed in PCS applications designed for regular commercial aircraft. Accordingly, the Si2 served as the ultimate “test lab” for Lantal, giving the company many opportunities to analyze the PCS under extreme conditions and to assess improvements to the regular product.

Outlook

Lantal's PCS has traveled far since it was installed in the Si2 in February 2015. The pneumatic seat cushion was never replaced and not a single component needed to be exchanged. And even after the landing in Abu Dhabi, there is no reason to replace the PCS. What will happen to the Si2 now? This is not yet clear. However, the Si2 was designed to log a total of 2000 flight hours, so its potential is far from exhausted. Both pilots – Piccard and Borschberg – are very optimistic about the future: “This is not the end, it is the beginning of something new and bigger.”

For further information about Lantal's Si2 contribution and about the PCS, log on to our website.

Lantal Textiles Ltd
Langenthal, Switzerland
www.lantal.com
guido.gander@lantal.ch
direct +41 62 916 72 45