

## Pneumatic Comfort System: Pilot Seat for Solar Impulse 2 Lantal's PCS contributes to several world records



© Solar Impulse, PCS

**After a flight lasting nearly 118 hours, Solar Impulse 2 (Si2) arrived in Hawaii on July 3, 2015. The eighth leg of the flight around the world with a solar-powered aircraft was successfully mastered by pilot André Borschberg. Several world records were set up by the aviator and Solar Impulse during this leg to Hawaii. Lantal's PCS has contributed significantly to the convincing outcome of the project so far. Since mid-April 2016, Si2 has been on its way from Hawaii to Abu Dhabi to complete the flight around the world without fuel.**

### The ultimate in comfort thanks to Lantal's PCS

For weight reasons, the cockpit of the Solar Impulse 2 is designed for only one person. The two pilots take turns on the flight deck during the around-the-world journey. Since it is not possible to stand up and walk around the cramped cockpit, the seat plays a crucial role, especially during multi-day flight segments. This was confirmed by André Borschberg during the eighth leg, when he had a brief satellite-link conversation with Roland von Ballmoos, the co-founder of the PCS project: *"The comfort of the seat is a very crucial element."* The convertibility of the seat from the sitting to the sleeping position is a key factor here. It allows the pilots – during short 20-minute breaks every 2 to 3 hours – to indulge in relaxation. André

Borschberg added: *"This night was good. I could lie down on the seat and the seat is really very ergonomic and comfortable."*

The firmness adjustability and the massage functions allow the pilots to maintain a high level of attention and concentration even during long airborne phases.



© Solar Impulse

In particular, the massage function plays an important role in assuring the physical well-being of the pilots. André Borschberg shares this view. *"I did not start the massage yet but I will certainly do this very soon. (...) As the days pass it would be good to work on the body."* He also mentioned another advantage of Lantal's PCS: *"You don't sweat, the contact with the seat and the body is good, which is not always the case."* This is a further factor that enhances seating comfort.



© Solar Impulse

### Several world records for single-pilot and solar flight

The eighth leg of the flight around the world, from Japan to Hawaii, lasted 5 days and nights. The team of Solar Impulse 2 established several world distance and duration records in solar aviation as well as a new record for the longest-ever non-stop flight (117 hours and 52 minutes over a distance of about 7200 kilometers). This would not have been possible without an absolutely comfortable and reliable seat. The firmness of the air cushions is individually adjustable in the sitting and sleeping positions.



© Solar Impulse

### The future of the PCS

The deployment of the Pneumatic Comfort System in Solar Impulse 2 demonstrated that the PCS can handle even extraordinary situations.

Thus, the cushions and the pump and valve block in Solar Impulse 2 must be able to cope with extreme temperatures and pressure differences. Even under these adverse conditions, the commercial Lantal Pneumatic Comfort System confirmed the entire spectrum of its advantages. This successful mission will allow Lantal to make a

stronger impact with the PCS in civil aviation while broadening its scope of applications, for instance in pilot seats and Economy Class seats. At the same time, the unusual project offers opportunities to generate added know-how and further levels of optimization.



© Solar Impulse

### Further information

More detailed information about the Pneumatic Comfort System is available in the Reference Project "The Ultimate Laboratory – Lantal's Contribution to Solar Impulse" (<http://www.lantal.com/europe/en/aircraft/produkte/sitz/pneumatisches-komfortsystem/>) or in an NZZ article dated November 13, 2015 (<http://www.lantal.com/europe/de/lantal/das-unternehmen/medien/>).

### If you have any questions, please contact

Harald Riner

Director Sales Pneumatic Comfort System  
+41 62 916 71 70, [harald.riner@lantal.ch](mailto:harald.riner@lantal.ch)