

Solar-powered plane to fly around the world

Two Swiss pilots are to attempt to fly around the world in a plane powered solely by the sun, seeking to prove that such a flight is possible without using fossil fuel

Structure: Carbon fibre, three times lighter than paper

Wings: 17,000 solar cells – 135 microns thick – supply four electric motors with renewable energy

Antenna

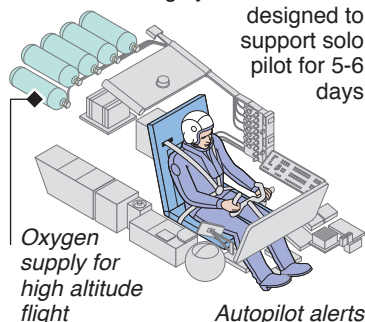
Cockpit: 3.8 cubic metres. Unpressurized, unheated, but highly insulated cabin designed to support solo pilot for 5-6 days

Propulsion: Four wing pods each contain 17.5hp electric motor and lithium polymer battery
Solar cells recharge batteries – total mass 633kg – to allow plane to fly at night

SOLAR IMPULSE 2

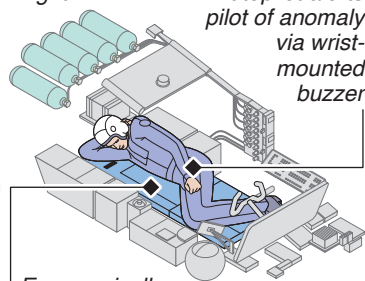
Wingspan: 72 metres – wider than Boeing 747
Weight: 2,300kg – same as family car

FLIGHT: 35,000km journey will span 25 flight days spread over five months at average speed of 70km/h, with stops at 12 locations

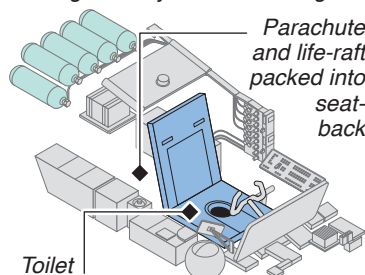


Oxygen supply for high altitude flight

Autopilot alerts pilot of anomaly via wrist-mounted buzzer



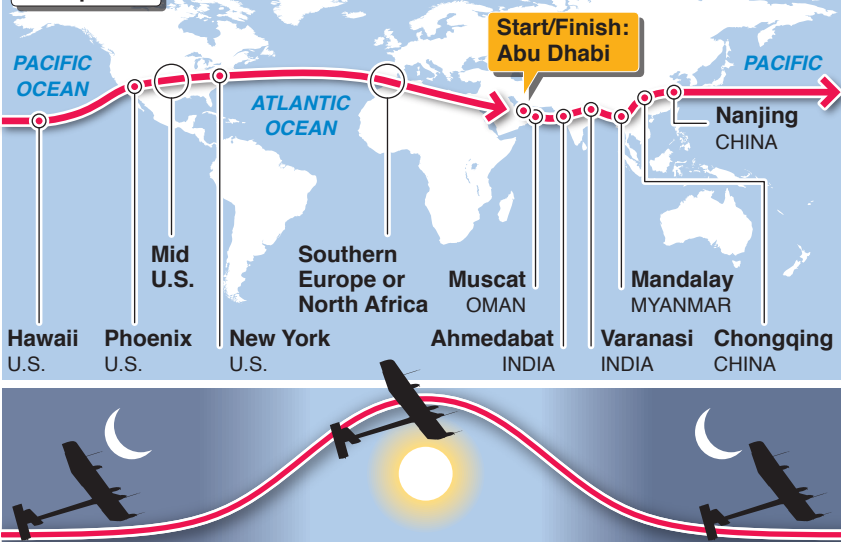
Ergonomically designed seat allows room for exercise and 20-minute catnaps during five-day ocean crossings



Parachute and life-raft packed into seat-back

Toilet

Stopovers



Take off and landing: Scheduled at night to avoid turbulence. Take-off speed: **35km/h**

During day: Aircraft climbs to 8,500m as it stores solar energy. Top speed: **140km/h**

During night: Descends to 1,500m and slows to conserve power and reduce pilot stress

Solar Impulse 2 piloted by project founders **Bertrand Piccard** and **André Borschberg**