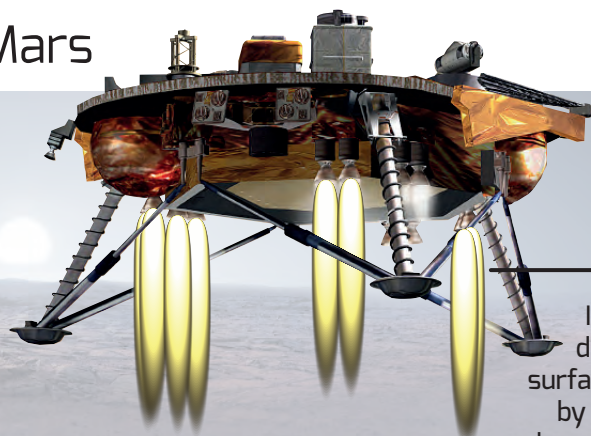


# Taking the 'pulse' of the planet Mars

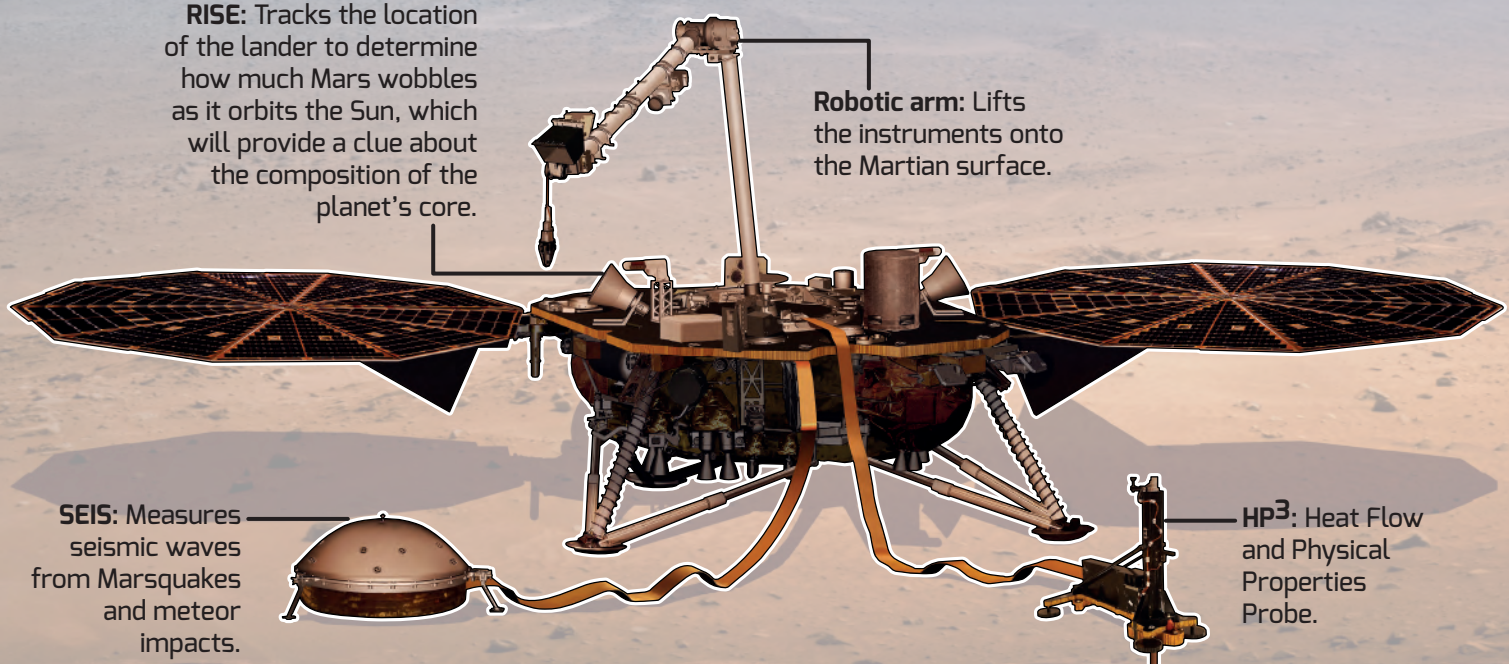
NASA's InSight Mars lander, will study the interior structure of the Red Planet. It is hoped that the information will answer questions about how the inner planets formed in the early Solar System.



InSight's final descent to the surface was made by pulsing its 12 descent thrusters.

**RISE:** Tracks the location of the lander to determine how much Mars wobbles as it orbits the Sun, which will provide a clue about the composition of the planet's core.

**Robotic arm:** Lifts the instruments onto the Martian surface.

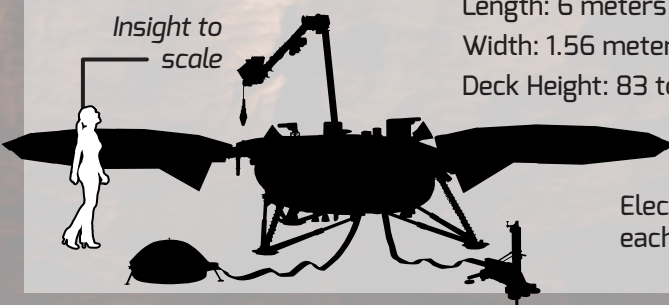


**SEIS:** Measures seismic waves from Marsquakes and meteor impacts.

**HP3:** Heat Flow and Physical Properties Probe.

**Heat probe:** Burrows down to a depth of five metres to take temperature readings.

*InSight to scale*



Length: 6 meters (with solar panels deployed)  
Width: 1.56 meters (lander deck diameter)  
Deck Height: 83 to 108cm

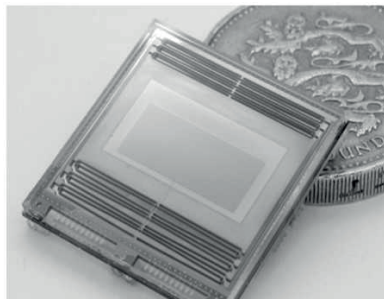
Robotic Arm: 1.8 meters  
Weight: 360 kg

Electrical Power: Two solar panels, each 2.2 meters in diameter

## SEIS-SP

SEIS-SP is a UK-built instrument – the result of a collaboration between Imperial College London and Oxford University supported by STFC RAL Space and investment from the UK Space Agency.

SEIS-SP is a seismometer that supplements and backs up InSight's SEIS instrument.



SEIS-SP is a miracle of miniaturisation – barely tipping the scales at just 1g and yet are capable of detecting vibrations in three spatial dimensions.

