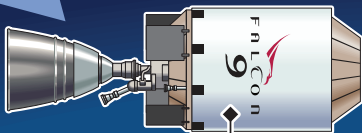


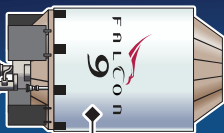
# NASA's private-sector rocket to lift off

The Falcon 9 rocket, built by SpaceX under a \$1.6bn contract with NASA, is set for its maiden test flight. Designed to launch commercial spacecraft on cargo trips to the International Space Station, SpaceX says the Falcon 9 and its Dragon capsule can be modified to deliver astronauts to space by 2013

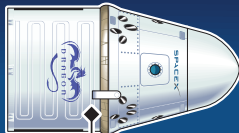


**First stage:** Nine Merlin engines powered by RP1 (refined kerosene) and liquid oxygen

*Test flight will place mock version of Dragon spacecraft in circular orbit about 250km above Earth*



**Second stage:** Powered by single Merlin engine

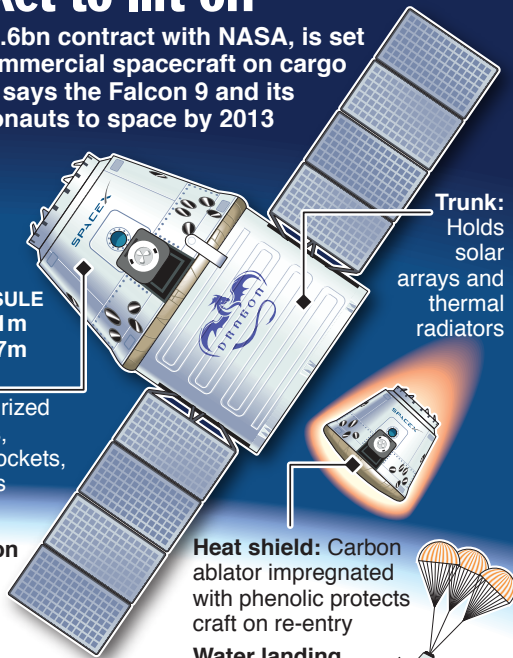


**DRAGON CAPSULE**  
Length: 6.1m  
Diameter: 3.7m

**Spacecraft:** Houses pressurized cargo, avionics, manoeuvring rockets, and parachutes

**Crewed version could carry up to seven astronauts**

Source: SpaceX  
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**Trunk:** Holds solar arrays and thermal radiators

**Heat shield:** Carbon ablator impregnated with phenolic protects craft on re-entry

**Water landing with parachute**

## FALCON 9

Length: 55m Width: 3.6m

Lift-off weight: 333,400kg

**Payload** Cost per launch: \$51.5m

To low Earth orbit: 10,450kg

To geostationary transfer orbit: 4,540kg