RELIABILITY

SpaceX is based on the philosophy that through simplicity, reliability and low-cost can go hand-in-hand. By eliminating the traditional layers of management internally, and sub-contractors externally, we reduce our costs while streamlining decisions and delivery. Likewise, by keeping the vast majority of manufacturing in-house we reduce our costs, keep tighter control of quality, and ensure a closed feedback loop between the engineering and manufacturing teams.

The Falcon launch vehicles have been designed to eliminate the main causes of launch vehicle failures – separation events and engines. Our vehicles have only two stages for minimum staging events and make use of either one engine per stage for simplicity or multiple engines for propulsion redundancy. To ensure manufacturing reliability and system performance, we have a full quality assurance program, an exhaustive acceptance test program, and a hold-before-launch system to prevent a liftoff with an under performing first stage.

Falcon 1 and Falcon 9 launch vehicles are designed to serve a broad market that includes NASA and US Air Force missions with their stringent reliability requirements.

NASA's Choice to Resupply the Space Station

In December 2008, NASA announced the selection of SpaceX's Falcon 9 launch vehicle and Dragon Spacecraft to resupply the International Space Station (ISS) when the Space Shuttle retires in 2010. The $1.6 billion contract represents a minimum of 12 flights, with an option to order additional missions for a cumulative total contract value of up to $3.1 billion.

NASA cited SpaceX's significant strengths as follows:
- First stage engine-out capability
- Dual redundant avionics system
- Structural safety factor in excess of industry standards
- Enhanced schedule efficiencies
- Reduced overall technical risk to ISS cargo supply

Falcon Design Features that Enhance Reliability:

- Two stage design for minimum number of separation events
- Redundant stage and fairing separation systems
- Dual redundant avionics system
- Propulsion redundancy and simplicity
- First stage engine-out capability on Falcon 9
- Simplest possible turbopump design – one shaft drives both LOX and RP-1
- Robust structure with high margins
- Hold before liftoff system
- Limited number of independent subsystems:
  - High pressure kerosene tapped from turbopump to drive thrust vector control hydraulic system
  - Turbopump exhaust gas is used for roll control

PERFORMANCE

SpaceX is developing a family of launch vehicles and spacecraft that increase the reliability and reduce the cost of both manned and unmanned space transportation, ultimately by a factor of ten.

The performance of our Falcon line of launch vehicles, powered by SpaceX-developed Merlin engines, provides for light, medium and heavy lift capabilities to launch spacecraft into any altitude and inclination, from low-Earth orbit to geosynchronous to planetary missions.

As the first rockets developed in the 21st century, the Falcon series takes advantage of the latest technologies, as well as 50 years of "lessons learned" in the aerospace industry. By implementing an automated countdown, simplifying systems and delivering fully integrated rockets to the launch pad, our launch procedures require crews that are an order of magnitude smaller than standard.

Incorporating hundreds of innovations in technical design and launch operations, along with a low-overhead corporate environment, SpaceX is demonstrating that through simplicity, both reliability and low cost can be achieved in commercial spaceflight.

The chart below provides a few examples of payloads and orbits our vehicles can accommodate. Please contact us with your specific needs.

Vehicles, Orbits and Payloads

VEHICLE	ORBIT	FROM CAPE CANAVERAL	FROM KWAJALEIN
Falcon 1	Low Earth Orbit	--	420 kg (9.1°)
Falcon 1e	Low Earth Orbit	--	900 kg (9.1°)
Falcon 9	Low Earth Orbit	10,450 kg (28.5°)	8,560 kg (Polar)
"	Geosync. Transfer Orbit	4,540 kg (28.5°)	4,680 kg (9.1°)
Falcon 9 Heavy	Low Earth Orbit	29,610 kg (28.5°)	--
"	Geosync. Transfer Orbit	15,010 kg (28.5°)	--

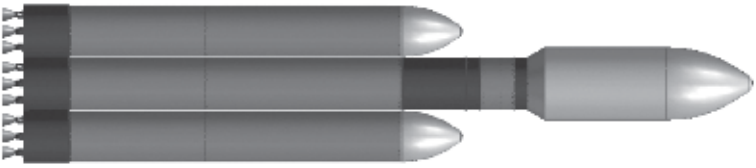
- Falcon 1 is the world's first privately developed liquid fuel rocket to achieve Earth orbit. It provides the lowest cost per flight to orbit of a production rocket.
- In addition to providing break-through improvements in reliability, Falcon 9 offers the lowest cost per pound / kilogram to orbit.
- A half bay flight of Falcon 9 is available to accommodate customers with payloads sized between Falcon 1 and Falcon 9.

Falcon 1

Falcon 1e (available 2010)

Dragon Spacecraft

Falcon 9



Falcon 9 Heavy (available 2010)

Falcon 1 is the world's first privately developed liquid fuel rocket to achieve Earth orbit. Designed from the ground up, the two stage, liquid oxygen and rocket grade kerosene (RP-1) powered vehicle provides reliable and cost efficient transport to low Earth orbit. The Falcon 1 first stage is designed for recovery and reuse.

Length:	21.3 m (70 ft)	Mass:	27,670 kg (61,000 lbs)
Width:	1.7 m (5.5 ft)	1st Stage Thrust (vacuum):	418 kN (94,000 lbf)

Beginning in 2010, the enhanced Falcon 1, or Falcon 1e, will provide increased performance capabilities, and will become SpaceX's standard small launch vehicle.

Length:	27.4 m (90 ft)	Mass:	44,985 kg (99,175 lbs)
Width:	1.7 m (5.5 ft)	1st Stage Thrust (vacuum):	569 kN (128,000 lbf)

First Stage

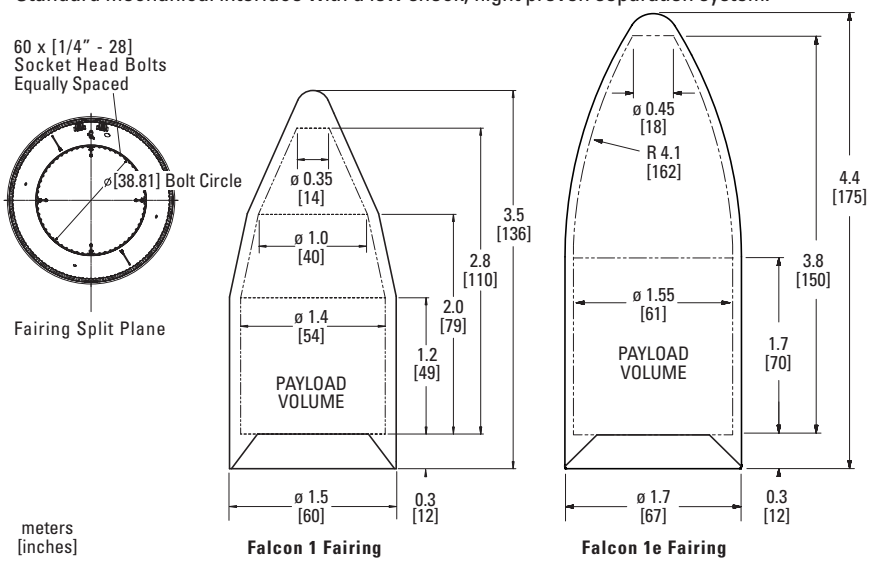
- Flight pressure stabilized architecture developed by SpaceX provides optimization between a fully pressure stabilized design, and a heavier isogrid design.
- Powered by a single SpaceX Merlin turbo-pump engine, the simplest possible design for a pump fed engine.
- Hold before lift off system enhances reliability. After engine start, Falcon 1 is held down until all vehicle systems are verified to be functioning normally before release for liftoff.
- Stage separation occurs via a pneumatic pusher system, released by dual initiated separation bolts, which have a zero failure track record in prior launch vehicles.

Second Stage

- Tanks are precision machined from aluminum plate with integral flanges, minimizing the number of welds necessary. Major circumferential welding is performed by an automated welding machine, reducing the potential for error and ensuring consistent quality.
- Powered by a single SpaceX Kestrel engine, featuring a simple pressure-fed system, and dual redundant igniters for added reliability of restart.

Payload Accommodation

- Benign flight environment.
- Large available volume for this payload class.
- Standard mechanical interface with a low shock, flight proven separation system.



Falcon 9, like Falcon 1, is a two stage, liquid oxygen and rocket grade kerosene (RP-1) powered launch vehicle. It is in the Evolved Expendable Launch Vehicle (EELV) class with a 5.2 m (17 ft) fairing. Falcon 9 can deliver large payloads to Low Earth Orbit (LEO), Geosynchronous Transfer Orbit (GTO), and destinations beyond.

Falcon 9 offers breakthrough reliability derived from the nine engine, single tank first stage configuration. Falcon 9 is the first American launch vehicle since the Saturn V to offer true engine out redundancy and reliability.

SpaceX offers a dual manifest capability for satellites in between the Falcon 1 and Falcon 9 payload classes.

Length:	54.9 m (180 ft)	Mass:	333,400 kg (735,000 lb)
Width:	3.6 m (12 ft)	1st Stage Thrust (vacuum):	4.94 MN (1,110,000 lbf)

Data reflects the Falcon 9 Block 2 design.

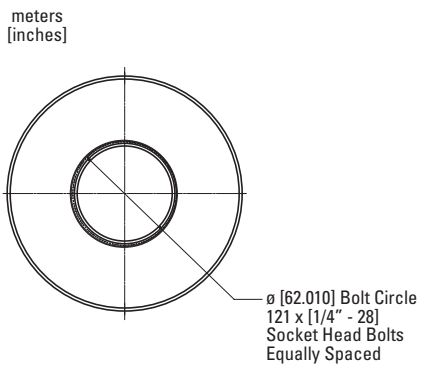
First Stage

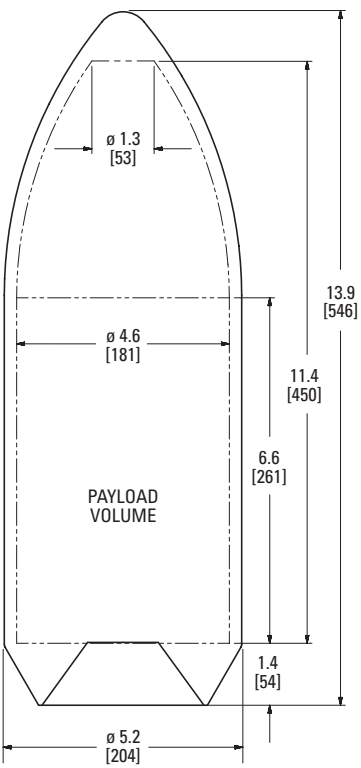
- Tank walls and domes are made from aluminum-lithium chosen for its superior performance and high strength to weight ratio.
- Tank is friction stir welded, the highest strength and most reliable welding technique available.
- Powered by nine SpaceX Merlin engines.
- Hold before lift off system enhances reliability. After engine start, Falcon is held down until all vehicle systems are verified to be functioning normally before release for liftoff.

Second Stage

- Tank is a shorter version of the first stage tank and uses most of the same tooling, material and manufacturing techniques – resulting in significant cost savings in vehicle production.
- A single Merlin engine, with a larger vacuum nozzle for efficiency, powers the Falcon 9 upper stage. For added reliability, the engine has dual redundant pyrophoric igniters and four injection ports to ensure engine ignition.

Payload Accommodation: 5.2 meter Fairing





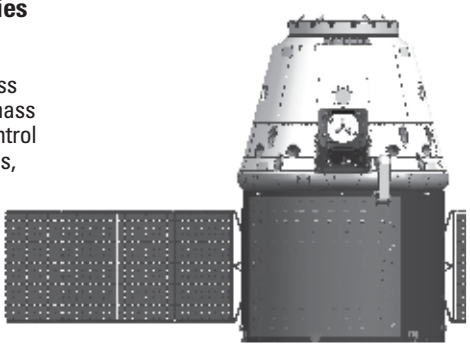
DRAGON

Dragon is a free-flying, reusable spacecraft being developed by SpaceX under NASA's Commercial Orbital Transportation Services (COTS) program. Subsystems include propulsion, power, thermal control, environmental control, avionics, communications, thermal protection, flight software, guidance, navigation & control, entry descent & landing, and recovery.

Though designed to address cargo and crew requirements for the International Space Station (ISS), as a free-flying spacecraft Dragon also provides an excellent platform for in-space technology demonstrations and scientific instrument testing. SpaceX is currently manifesting fully commercial, non-ISS Dragon flights under the name "DragonLab". DragonLab represents an emergent capability for in-space experimentation.

Dragon Spacecraft Payload Capabilities

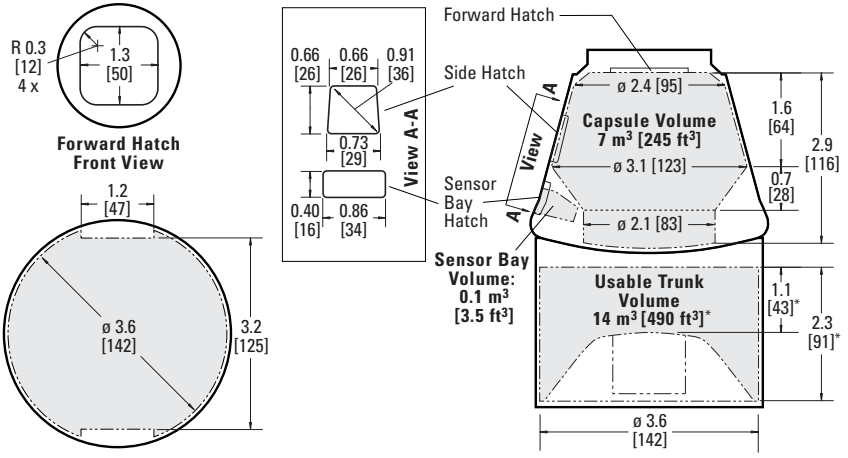
- Fully recoverable capsule
- 6,000 kg (13,228 lbs) total payload up-mass
- 3,000 kg (6,614 lbs) total payload down-mass
- Attitude: 0.004° determination; 0.012° control
- Communication: IP addressable payloads, up to 150 Mbps peak downlink
- Payload Power: 28 VDC & 120 VDC, up to 2,000 W average (4,000 W peak)
- Payload Volume:
  7 to 10 m^3 (245 ft^3) pressurized
  14 m^3 (490 ft^3) unpressurized*
  or 34 m^3 (1,200 ft^3) with extended trunk
- Payload Loading: as late as Launch -9 hours
- Payload Access: as early as Landing +6 hours
- Mission Duration: 1 week to 2 years



Overall Length:	6.1 m (20 ft)
Max Diameter:	3.7 m (12.1 ft)

Uses

- Highly Responsive payload hosting
- Sensors/apertures up to 3.5 m (138 in) dia.
- Instruments and sensor testing
- Spacecraft deployment
- Space physics and relativity experiments
- Space weather research
- Radiation effects research
- Microgravity research
- Life science and biotech studies
- Earth sciences and observations
- Materials & space environments research
- Robotic servicing



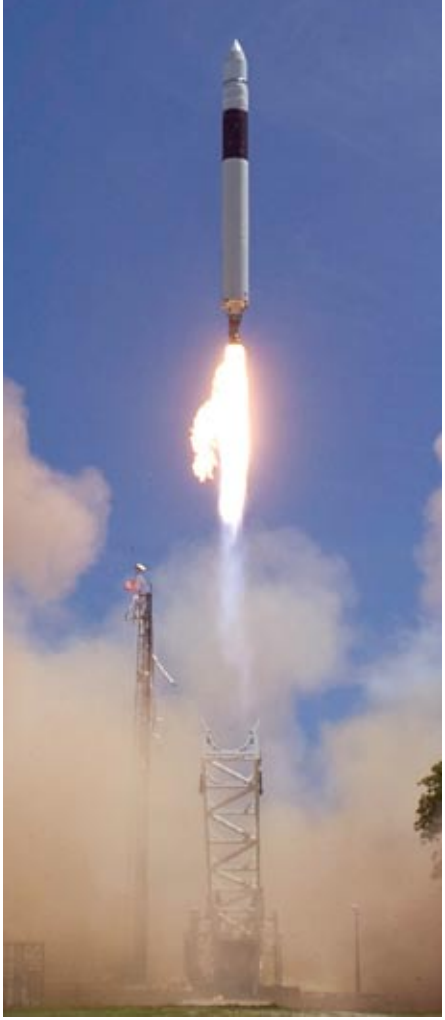
CUSTOMERS

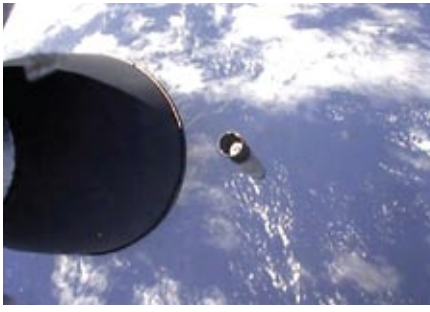
Customer	Date	Vehicle
DARPA Demo Flight 1	√ March 24, 2006	Falcon 1
DARPA Demo Flight 2	√ March 20, 2007	Falcon 1
DoD ORS Office, ATSB (Malaysia) & NASA	√ August 2, 2008	Falcon 1
Falcon 1 Flight 4	√ Sept. 28, 2008	Falcon 1
ATSB (Malaysia)	2009	Falcon 1
Falcon 9 Maiden Flight	2009	Falcon 9
NASA COTS - Demo 1	2009	Falcon 9 / Dragon
Avanti Communications (UK)	2009	Falcon 9
NASA COTS - Demo 2	2010	Falcon 9 / Dragon
MDA Corporation (Canada)	2010	Falcon 9
Falcon 1e Maiden Flight	2010	Falcon 1e
NASA COTS - Demo 3	2010	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 1	2010	Falcon 9 / Dragon
DragonLab Mission 1	2010	Falcon 9 / Dragon
Swedish Space Corporation (Sweden)	2011	Falcon 1e
Bigelow Aerospace	2011	Falcon 9
NASA Commercial Resupply to ISS - Flight 2	2011	Falcon 9 / Dragon
DragonLab Mission 2	2011	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 3	2012	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 4	2012	Falcon 9 / Dragon
CONAE (Argentina)	2012	Falcon 9
NASA Commercial Resupply to ISS - Flight 5	2013	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 6	2013	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 7	2013	Falcon 9 / Dragon
CONAE (Argentina)	2013	Falcon 9
NASA Commercial Resupply to ISS - Flight 8	2014	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 9	2014	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 10	2014	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 11	2015	Falcon 9 / Dragon
NASA Commercial Resupply to ISS - Flight 12	2015	Falcon 9 / Dragon

√ = Launched.

Check SpaceX.com for launch manifest updates.

TO ORBIT





On 28 September 2008 SpaceX Falcon 1 became the first privately developed liquid fuel rocket to achieve Earth orbit.

Falcon 1 leads the world market in providing the lowest cost to orbit of any launch system.

SPACEX