

## Propulsion Integrated Test Stand (PITS)

The Propulsion Integrated Test Stand (PITS) is a high strength steel I-beam structure with a work area that is 33 ft. wide by 41 ft deep and extends 50 feet to the floor of the canyon below. The structure has a single rocket engine test position on the upper level of the test stand.

Originally designed for vertical firing, this sea-level test position is now configured for horizontal firing.



## Propulsion Integrated Test Stand

The thrust level rating of the test position is 70,000 pounds horizontally and 50,000 pounds vertically. The test position contains a thrust measuring system capable of measuring thrust up to 100,000 pounds.

The main reactants used for engine testing at PITS are hydrogen peroxide and hydrocarbon fuels (JP-10). The hydrogen peroxide tank has a working pressure of 2200 psia and a volume of 1000 gallons. The fuel tank has a working pressure of 3700 psi and a volume of 500 gallons. Gaseous nitrogen, gaseous helium, cooling water, and de-ionized water are also available at the test stand for pressurization, purging, cooling, dilution, and flushing.



Reactant	Pressure (psig)	Volume (gal)
H <sub>2</sub> O <sub>2</sub>	2000	1000
Hydro-Carbon Fuel	2200	500
LN <sub>2</sub>	35	13200
Helium	2200	1500
DI Water	Atm	902
Cooling H <sub>2</sub> O	75	8269