SOLAR PANEL
QUALIFICATION WITH PTS

Testing. Verification. Ready for Deployment.

CUSTOMIZED & TAILOR-MADE TEST BENCH DEVELOPMENT

COMBINED TESTING

EVERYTHING DONE BY A SINGLE SOURCE

The Challenge

Solar panels are the primary power source for nearly every space mission. During rocket launch, they must withstand intense vibration and shock loads, while in orbit, they are exposed to extreme temperature fluctuations and vacuum conditions. Even minor damage or performance degradation can compromise power generation and jeopardize mission success.

PTS delivers the solution

We offer a wide range of customized qualification services for solar panels, solar array booms, and deployable structures, among others. From simulation and environmental testing to functional validation.



Thermal Vacuum

Functional and performance testing under representative vacuum and thermal conditions.

- Thermal Cycling
- Temperature Gradients
- Performance Monitoring

Vibration & Shock

Verification of mechanical loads during launch or separation.

Deployment Testing

Verification of reliable deployment in orbit.

- Deployment Cycles
- Mechanical Validation
- Locking Mechanism Testing

Mechanical Durability

Long-term durability of moving components.

- Hinge Testing
- Actuator Testing
- Life Cycle Testing

Electrical Performance

Verification of power generation.

- I-V Curve Measurements
- Power Output Validation
- Degradation Testing

Engineering & Simulation

Virtual verification in the early stages of development.

- Structural Analysis (FEM)
- Thermal Analysis
- Load Case Assessment

STANDARDS & TEST REFERENCES

ECSS-E-ST-10-03C | MIL-STD-810H | NASA GSFC-STD-7000 (GEVS)

PTS-ADVANTAGE

- ✓Validation Throughout Development
- ✓Combination of Simulation and Testing
- ✓Custom Test Systems for Deployables
- ✓Reduced Development Times and Qualification Costs

CONTACT

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LET'S DISCUSS YOUR MISSION