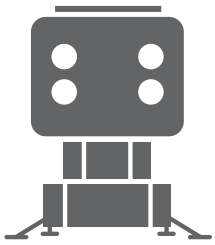
National Aeronautics and Space Administration

NASA

Marshall Space Flight Center

HABITATION SYSTEMS



Marshall Space Flight Center develops next generation habitation systems to make living and working in space and on planetary bodies possible.

HABITATION SYSTEMS

Marshall Space Flight Center develops next generation habitation systems to make living and working in space and on planetary bodies possible.

Advanced Manufacturing

Unique expertise in applying state-of-the-art advanced manufacturing methods to support development and production of advanced habitat systems

Integrated Environmental Control and Life Support Systems (ECLSS)

Industry leader in design, development, and testing of ECLSS, including advanced regenerative technologies

Experienced ECLSS system engineers and scientists provide ground-based troubleshooting capability for in-space systems

Structural Strength and Dynamics Analysis and Testing

Unique facilities and decades of personnel experience to provide proof, limit, failure, development, qualification, and flight acceptance testing for spacecraft structural components, inflatable soft goods structures, and other space systems, including design of custom test instrumentation

Hazardous, large-scale proof and burst testing capability not readily available elsewhere

Space Environmental Effects Testing

Environmental test facilities can simulate ascent launch profiles, deep space vacuum, external exposure conditions, and variable breathing air compositions to replicate internal deep space habitation systems operating environments

Comprehensive range of electromagnetic environmental effects testing services

Concept and Trade Studies

Rapid development and analysis of physics-based models to yield an end-to-end design capability for preliminary concepts

Decades of experience in both launch vehicle and space systems design

Avionics Design, Manufacturing, and Testing

Ability to simulate avionics hardware/software through all phases of mission from pre-launch through orbit insertion, and orbital operations, using subsystem models, component models, and input/output hardware to communicate with flight-like avionics

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