



Flight Crew Equipment

Johnson Space Center (JSC) personnel design, build, and test tools and equipment to make work easier and safer in space. Expertise is available for research design, development, test, and operational support for Extravehicular Activity (EVA) and Intravehicular Activity (IVA) tools and equipment to support the International Space Station (ISS) and future spaceflight programs.

Services Provided

- EVA tools and equipment development for EVA operations
- EVA tools developed
 - Worksite aids and restraints
 - Helmet lights
 - Fluid line repair kit
 - Solar array recovery tools
- IVA tool development for ISS
 - IVA flight crew equipment and tool restraints
 - Mobility aids
 - Housekeeping equipment
 - Portable illumination
- Prototyping – fabricate multiple hardware concepts to address key functional requirements
- EVA/IVA Tools Testing
 - Reduced or zero-gravity testing
 - Human-rated thermal-vacuum testing
 - Pressurized glove box
 - Vacuum glove box



EVA/IVA Tools

The EVA/IVA Tools team is responsible for the research, design, development, and test of IVA and EVA tools and equipment to support the Space Station and Advanced programs. The team provides real-time mission support for on-orbit activities and offers sustaining engineering expertise for a wide array of IVA and EVA tools and equipment.



Contingency Operations LAPA Tool (COLT)

COLT – contingency tools specially designed to interface with the ISS Active Thermal Control System (ATCS) Ammonia Pump Module Integrated Assembly.

E-RAD – transmits torque from a 3/8-in. square male drive tool at 90° to various socket extensions with a 2:1 gear ratio. E-RAD replaced the existing right angle drive to provide additional capability and meet ISS requirements through the end of the program.

CETA Active Coupler – ISS coupler between the mobile transporter and the CETA cart. It resolved an interference that existed with the ISS Solar Alpha Rotary Joint (SARJ).



IVA



Enhanced Right Angle Drive (E-RAD)



Crew Equipment and Translation Aid (CETA) Active Coupler

We have developed customer-friendly agreements to streamline business relationships and are eager to share our unique facilities and expertise with new customers. We invite your inquiries regarding application or adaptation of our capabilities to satisfy your special requirements. Briefings on general or specific subjects of mutual interest can be arranged at JSC or at your business site.

Facility Testing Information

<http://jsceng.nasa.gov>

Point of Contact

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