

Flight Telerobotic Servicer (FTS)

**MFG Cage Code: 67707 MFG Part #: E00102-00
PD000289-009 MANIPULATOR RIGHT HAND
CONTRACT # RH9-080903**

The technology was developed and built in 1989 by Western Space Marine in Santa Barbara, CA. Contracted by Martin Marietta\NASA for use in simulated training as a hydraulic slave arm replicating the electromechanical equivalent; this arm was intended for the docking bay of the space shuttle Columbia to aid astronauts inside the shuttle during assembly of the Space Program's ongoing Space Station project; the arm could be controlled remotely via master control with advanced operator/robot interface allowing the astronaut to actually feel the task at hand.

Fabricated using 7075 aluminum alloy, it was designed to be lightweight and compact with highly reliable components packaged to operate in extreme thermal ranges, and incorporating electromagnetic compatibility. Little effort would be required to restore this robot/manipulator to its original functionality. Features include: velocity limitation, excessive force limitation and fault-tolerance employed by two complete feedback loops. Hardware and software for control module and/or master arm are not available at this time. Several other prominent companies such as TAYCO, Schaeffer Magnetics, SMTEK, and Honeybee Robotics contributed in this historical effort. FTS originally maintained an outreach program with the intent to expand and share its robotic advancements with the commercial sector for use in hazardous environments, military, manufacturing, submarine, and agricultural applications. Many state of the art robotic technologies are incorporated:

- ♣ Force\Torque Feedback at each joint
- ♣ 3000 PSI closed loop hydraulic servo control system with Force Reflection
- ♣ Flat Conductor Cable Routed Internally
- ♣ Surface Mount Technology
- ♣ End Effector Changeout Mechanism (EECM)
- ♣ Internally ported rack-and-pinion actuators
- ♣ Unparalleled repeatability due to advanced design and engineering

Included with the unit is the original custom built fixed tripod stand constructed out of 8"x 8" I-beams 45" tall with legs that span 30" where they terminate into feet configured to be bolted to a larger base or work platform that would be necessary to counter balance the extents of the reach envelope. For more information please email Chris@RoperResources.com

Available for sale \$ 42,500.00

