Space Propulsion Systems

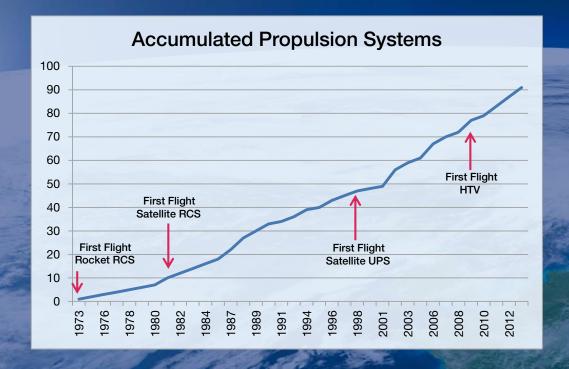
IHI Aerospace (IA) is one of the largest manufacturers of propulsion systems in Japan and has developed a large number of rocket reaction control systems (RCS) since 1964. Our space propulsion product line includes thrusters, tanks, valves and propulsion system integrations that satisfy customers' needs in spacecraft design, development, manufacturing, and operation.



H-II Transfer Vehicle (HTV) approaching the International Space Station (ISS)



Unified Propulsion System (SELENE)



History

- 1964 The start of rocket RCS development
- 1973 The first flight of IHI Aerospace's rocket RCS
- 1981 The first flight of IHI Aerospace's satellite RCS
- 1998 The first flight of IHI Aerospace's satellite unified propulsion systems (UPS)
- 2009 The first flight of HTV



Design capabilities

- Flight analysis
- Flow analysis
- Transient analysis
- Structural analysis and design
- Thermal analysis and design
- Chemical analysis
- Combustion analysis
- EMC evaluation and design

Manufacturing capabilities

- Manufacturing of propulsion systems, tanks, thrusters and valves
- Demagnetizing equipment and control
- Thermal hardware integration and electrical hardware integration

Support capabilities

- Concept design support and further design support
- Customers' review and end-users' review
- Post-delivery support (test support and propellant loading support)

Facilities

- Large clean rooms (1420m², 845m²)
- Firing test facility (thrusters, propulsion systems, rocket engines)
- Vibration test facilities
- Shock test facilities
- Thermal vacuum test facility
- Precision cleaning

Certifications

- Quality assurance: JIS Q 9100, JIS Q 9001
- Configuration control: ISO 9000 and MIL-STD-480 / 483
- Information security: ISO/IEC 27001:2005
- Environmental management: ISO 14001



Unified Propulsion System (WINDS)



Monopropellant Propulsion System (ALOS)

IHI AEROSPACE Co., Ltd.