

[www.ureatac.co.kr](http://www.ureatac.co.kr)

## AERO SPACE PART

MGSE / AEROSPACE PART / TEST EQUIPMENT



# URE/Tac

We insist on having only  
highest technology and quality

## UREATac Co., LTD is super leading supplier for aero space program.

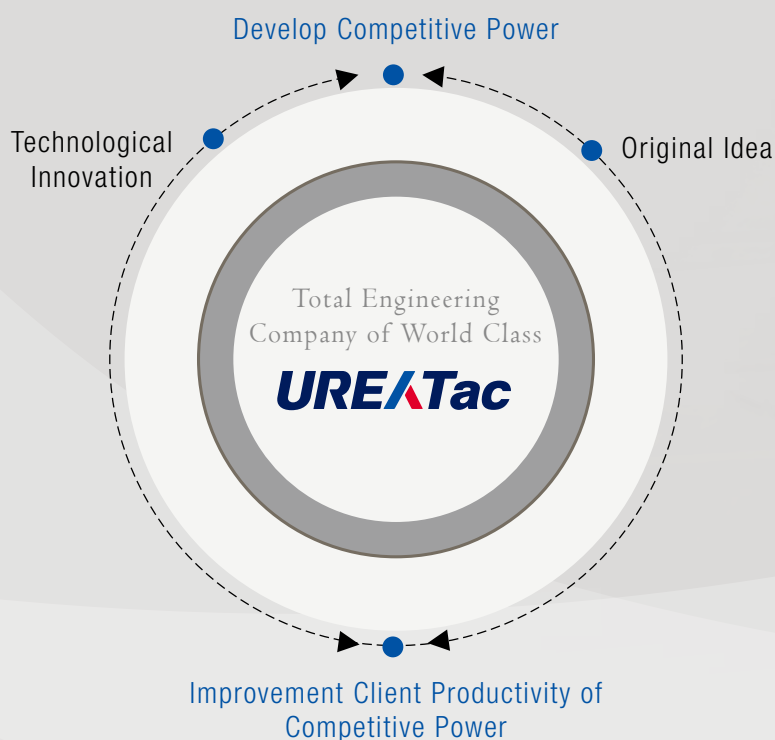
Since decades UREATac is occupied with the development of customer related solutions especially for Special test machine.

Since 7 years UREATac is also occupied with tailored solutions for space applications. (KOMPSAT-2, 3, 5, 3A)

UREATac has a team of 86 employees with a performant R&D department of 9 specialists providing services including Simulation (FEM, 3D models) and Testing.

This brochure gives you an overview of the viable solutions we have to offer for the aerospace program.

We would welcome the chance to meet you to discuss further details. Do not hesitate to call.







UREATac is a recognised supplier of Mechanical Ground Support Equipment. The outstanding experience gathered in these fields has contributed to the success on both the KARI and the commercial market.

Through its combination of mechanical design expertise and system engineering insight, UREATac can be invaluable in meeting the most demanding mechanical ground support equipment needs. UREATac has extensive experience in the design and development of a wide variety of ground support equipment.

UREATac has provided containers, trolleys, and various other MGSE elements to KARI and commercial programmers. The experience gathered in the support of satellite prime contractors is making UREATac a competitive partner for the provision of MGSE to space programs.





# Shipping Container



Based on a large series of available designs, UREATac delivers Spacecraft Containers tailored to customer requirements. Pressurized Transport and Storage Containers are used for road, sea and air transport and for long term storage of various satellites.

The Containers provide a controlled environment for the Spacecraft.

## Requirement Test

- Static Test (Load Test)
- Pressure Test
- Thermal Behavior Test
- Cleanliness Check
- Drop Test
- Dynamic Response
- Water Spray Test



Program : KOMPSAT-3, 3A, 5  
Dimension

W3000XD6000XH3300

Auto Thermal Control System.  
Damping System.  
N-2 Pressurization System.

Measurement System

- Temperature
- Humidity
- Cleanliness
- Acceleration
- Pressure



Program : KOMPSAT-2

Dimension : W2300XD5000XH3300

Thermal Control System.

Damping System.

N-2 Pressurization System.

Measurement System

- Temperature
- Humidity
- Cleanliness
- Acceleration
- Pressure

Program : Solar Array, Optical Lens

Dimension : W2000XD2200XH2600

Thermal Maintain System.

Damping System.

N-2 Pressurization System.

Measurement System

- Temperature
- Humidity
- Cleanliness
- Acceleration
- Pressure







# Multi Purpose Trolley



The Multi Purpose Trolley (MPT) supports the spacecraft or dedicated modules during horizontal or vertical integration and provides a table capable of tilting and rotating the spacecraft to any attitude between spin axis vertical and horizontal.

The MPT shows the ability to develop in time customer tailored solutions with high demands concerning reliability and safety.



**Program** - KOMPSAT-3, 3A, 5

**Function**

Tilting from Vertical to Horizontal

Rotation in each position around its axis

**Safety**

Automatic Operation / Manual operation

**Handling**

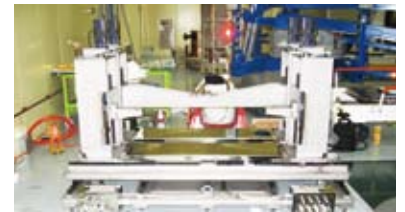
Excellent accessibility from each side

(also from the rear through the attachment ring)





# Fixture In a Thermal Vacuum Chamber



UREATac has got a rich experience of working with vacuum, designing and manufacturing vacuum-compatible devices, either it is motorized stages or optical mounts.

You will find some examples of our vacuum compatible products. Since almost every our designed and manufactured piece of equipment can be produced as vacuum compatible modification.



## Condition

Vacuum Level :  $10^{-6}$  Torr

Temperature Range :  $-173 \sim 120^{\circ}\text{C}$

Collimator Mount, Precise stage, L-Fixture, CME/CTE Table

## Function

Test Fixture for satellite

Precise Stage for optical equipment





## Other MGSE



All MGSE items needed during spacecraft Assembly, Integration and Test activities.

Through its combination of mechanical design expertise and system engineering insight, UREATac can be invaluable in meeting the most demanding mechanical ground support equipment needs. UREATac has extensive experience in the design and development of a wide variety of ground support equipment. This includes satellite test beds to aid in the development, integration and test of spacecraft payloads, installation trolley to install high-value, hazardous payloads, and payload test and handling fixtures.



Program - KOMPSAT- 2, 3, 3A, 5

Function - Assembly Fixture for spacecraft / I&T Fixture for spacecraft / Measurement Fixture



# Vertical Vibration Test System

UREATac has got a experience of Vertical Vibration Test System with KARI.

Test Object : Satellite and others (8 tons)

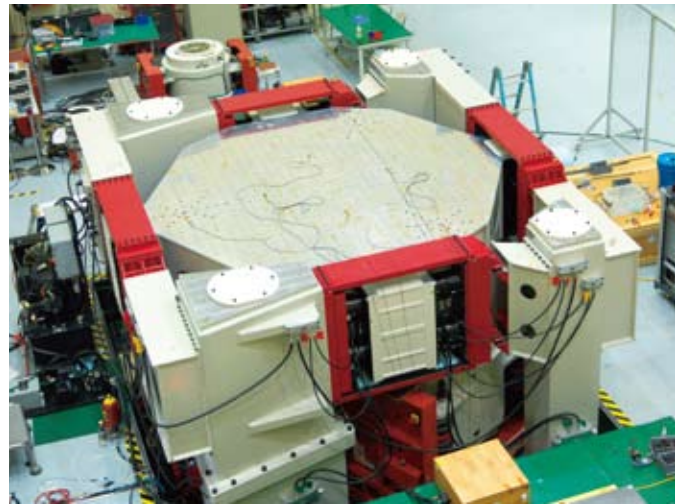
Max Displacement : 38 mm (P-to-P)

Working Area : 3X3m

First Resonance Frequency : 200 Hz

Low Frequency Capability : 25g @ 20HZ

Table Surface Flatness : 0,05 mm/m



## Other Test System

Since decades UREATac is occupied with the development of customer related solutions especially for Special test machine.

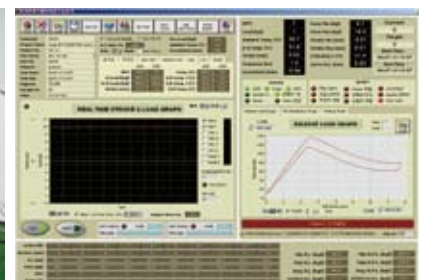
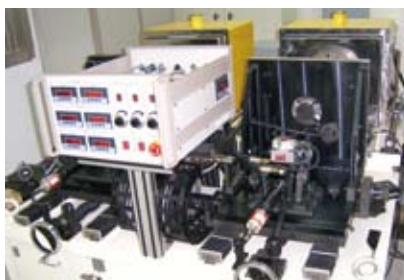
### Defense Part



Test Object : Transmission(1200HP), Servo Cylinder, Hydro Valve, HSU (K200 & K9)

Test Content : Durability Test & Performance test

### Civilian Part



Test Object : Clutch, Transmission & Car Equipment

Test Content : Durability Test & Performance test





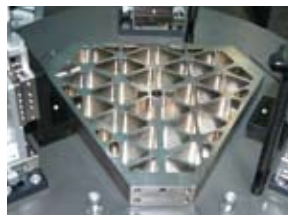
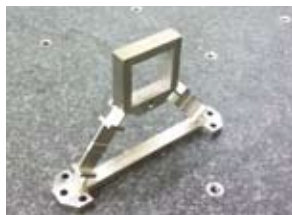
UREATac specializes in advanced manufacturing processes. Our facilities combine design and packaging expertise with state-of-the-art manufacturing capabilities. We produce spaceflight hardware along with a variety of other products for Government, Military, Universities and Engineering companies.

## Bracket For Satellite



**Material :** Invar36  
**Precision Surface Flatness & Roughness**  
**Finish :** Electro-less Nickel Plated

## Fixture For Optical Lens



**Material :** Invar36  
**Precision Machining**  
**Finish :** Electro-less Nickel Plated

## Large Scale process



**Material :** AL6061-T651  
**Welding & Precision Machining**  
**Finish :** Aluminum Chromium

## Ring For Satellite



**Material :** AL6061-T651  
**Precision Machining**  
**Finish :** Aluminum Chromium



# Total Solution Company For MGSE & Space Part

## Engineering

UREATac has an experienced team of specialists in the field of designing, drawing and constructing. UREATac combines proven solutions from a variety of industries like aerospace, test equipment, automatic system and machine tool industry for your project.

Our Engineering also offers services like the delivery of measuring reports, delivery of welding procedures, measuring dimensions at location in e.g. your plant, ability to pursue material (loading) tests and ability to check accurate dimensions, tolerances, fittings and surface roughness.

## Manufacturing

UREATac masters a broad spectrum of machining techniques. Almost all disciplines of mechanical engineering are available. This aspect makes UREATac an excellent partner for the co-development of your proto-type.

Our production consists of the divisions machining, fine-mechanics, sheet-metalwork, welding, coating and finishing. There is much experience in the machining of materials like stainless steel, aluminium, alloys, non-Ferro metals, plastics and special materials.

## Installation

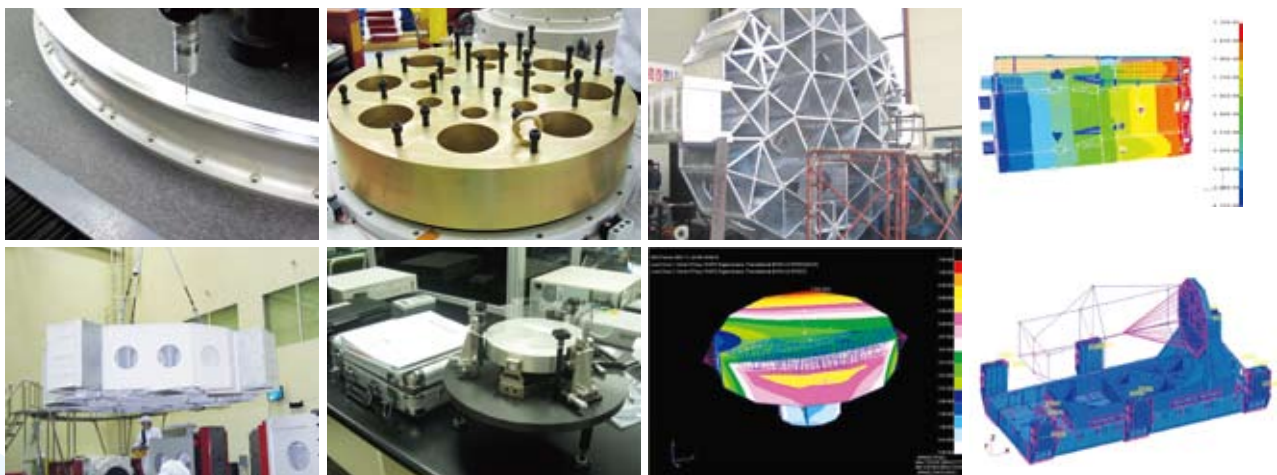
UREATac has a special service team with international experience in the aerospace, test equipment, automatic system and machine tool industry. Our team is trained to support you in mechanical, electronical, pneumatical and hydraulical challenges.

Apart from installing machines, our service team is also able to realise adaptations / modifications to your existing production facilities.

## Maintenance

UREATac happily supports you in keeping your machines and equipment in good working conditions.

West End can repair your installations, products and machines in our factory or if needed in your plant itself.



**POWER UP FOR TOMORROW !!**



A satellite with two large solar panel arrays is shown in space, positioned above a thick layer of white clouds that cover the Earth's surface. The background is a deep blue space filled with numerous small, bright stars. The solar panels are dark with a grid of small, lighter-colored cells and are connected by yellowish-gold structural elements.

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