Quality is more than a word

ESPEC

Test Chambers for the Aircraft Industry

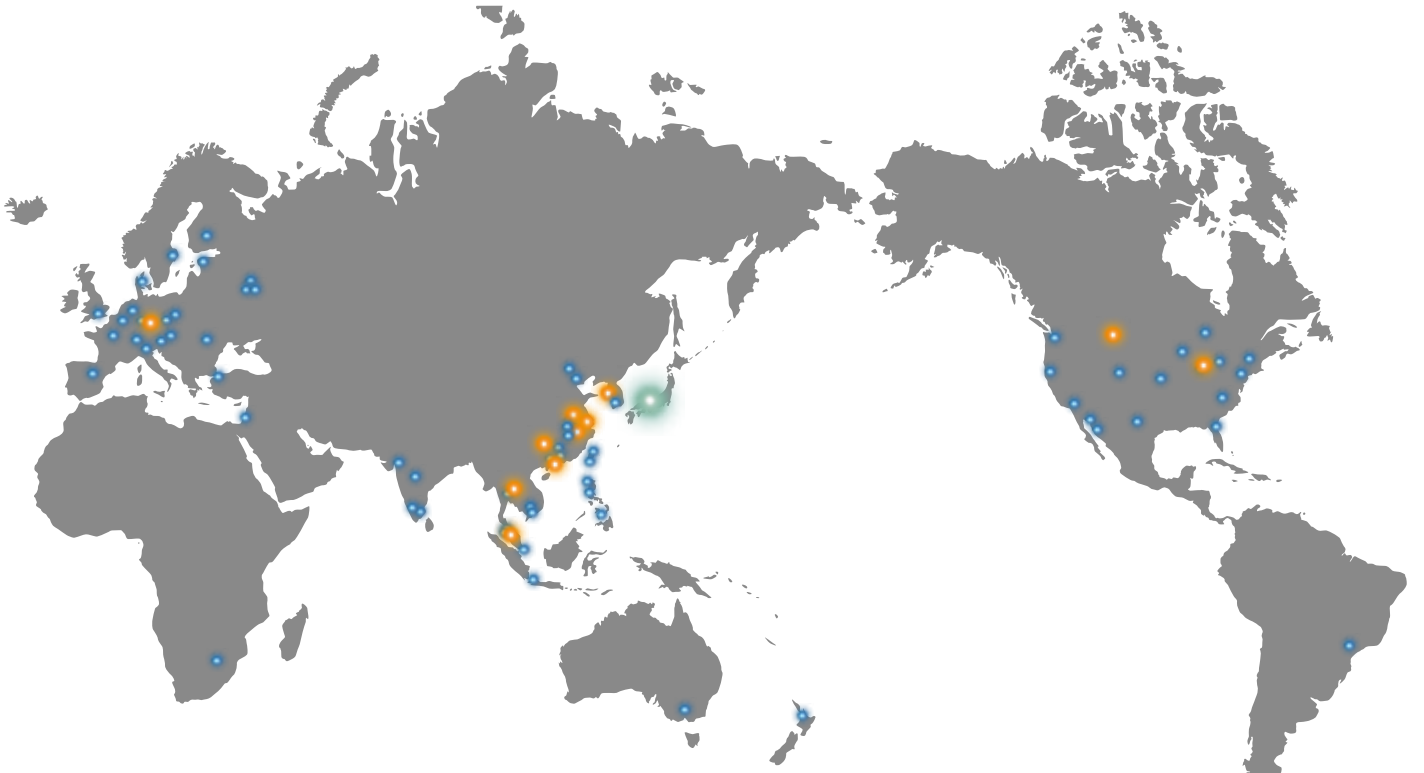
ESPEC's Environmental Creation Technology Providing Safety and Peace of Mind to the Aircraft Industry

We at ESPEC exploit the environmental creation technology that we have built up over the years to reproduce various earth environments. This technology enables us to run tests on reliability and safety in a wide range of environments, including the effects of impact, vibrations, and heat in the air. Ensuring safe flights for aircraft and prosperous lifestyles for people.

The ESPEC product line-up already exceeds 1,000 units for standard chambers alone, and we produce a large number of products customized to customer's requests.

Fukuchiyama Plant (Opened in 1974)
1-7 Osadano-cho, Fukuchiyama, Kyoto. [Total area: 54,822 m^2 / Factory floor: 18,039 m^2]

Global Network



Domestic

Offices & Facilities ESPEC Group Agents and Distributors

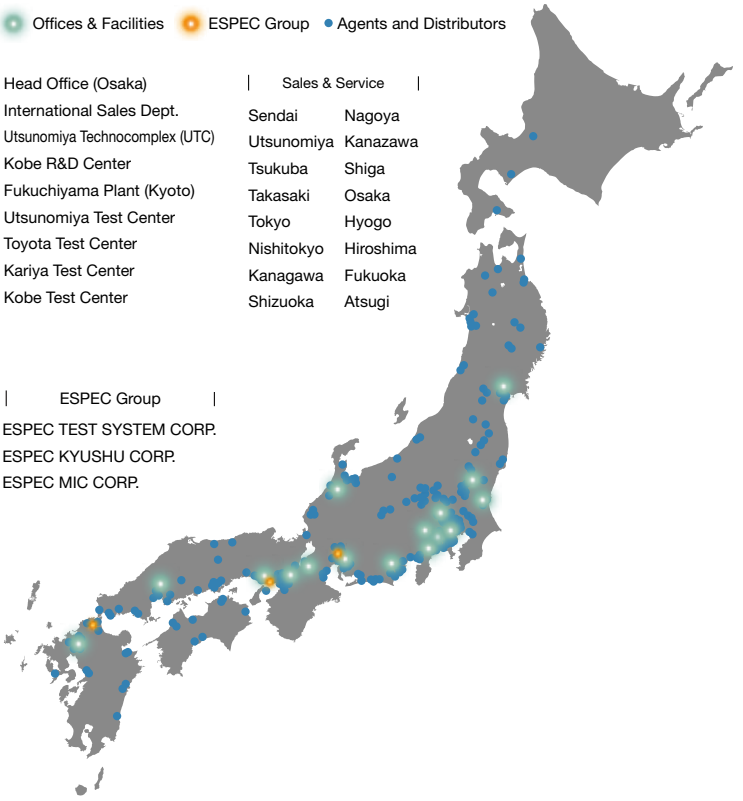
Head Office (Osaka)
International Sales Dept.
Utsunomiya Technocomplex (UTC)
Kobe R&D Center
Fukuchiyama Plant (Kyoto)
Utsunomiya Test Center
Toyota Test Center
Kariya Test Center
Kobe Test Center

Sales & Service

Sendai	Nagoya
Utsunomiya	Kanazawa
Tsukuba	Shiga
Takasaki	Osaka
Tokyo	Hyogo
Nishitokyo	Hiroshima
Kanagawa	Fukuoka
Shizuoka	Atsugi

ESPEC Group

ESPEC TEST SYSTEM CORP.
ESPEC KYUSHU CORP.
ESPEC MIC CORP.



Overseas

ESPEC Group Agents and Distributors

U.S.A.

ESPEC NORTH AMERICA, INC.
QUALMARK CORPORATION

China (Shanghai, Guandong)

SHANGHAI ESPEC ENVIRONMENTAL EQUIPMENT CORP.

ESPEC ENVIRONMENTAL EQUIPMENT (SHANGHAI) CO., LTD.

ESPEC TEST TECHNOLOGY (SHANGHAI) CO., LTD.

ESPEC TEST EQUIPMENT (GUANDONG) CO., LTD.

ESPEC (CHINA) LIMITED

Korea

ESPEC KOREA CORP.

South East Asia

ESPEC SOUTH EAST ASIA SDN.BHD.
ESPEC ENGINEERING (THAILAND) CO., LTD.

Europe

ESPEC EUROPE GmbH

PRODUCTS

* Product photographs are for illustrative purposes only.

ESPEC operates a full line-up of chambers for carrying out tests that conform to **MIL-STD-781**, **MIL-STD-810**, **ASTM** standards, and so on.

Extra-Large-Capacity Environmental Chamber

A large-capacity test chamber capable of carrying out tests on large-scale specimens as is.

Temperature Range: –70°C to +100°C

Humidity Range: 30% to 85% rh

Inside Dimensions: W2×H2×D5m

High Altitude Chamber

A test chamber capable of recreating atmospheric pressure and temperature changes inherent when flying at high altitude.

Altitude: Up to 100,000 Feet

Temperature Range: –70°C to +180°C

Humidity Range: 20% to 95% rh

Inside Dimensions: W1.5×H1.5×D1.5m

Rapid-Rate Thermal Cycle Chamber

The chamber is able to perform rapid temperature change tests at both atmospheric temperatures and specimen temperatures.

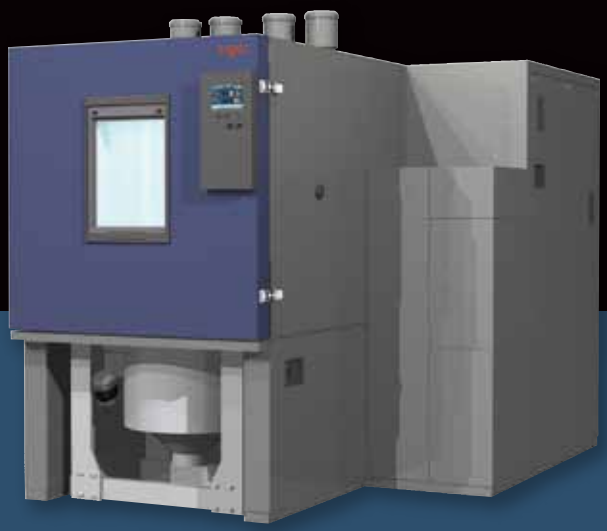
Temperature Range: –70°C to +180°C

Temperature Change Rates: 18°C/min at +155°C → –45°C

Inside Dimensions: W0.8×H0.5×D0.4m

AGREE Chamber

Carries out AGREE tests not only with temperature changes, but with vibrations at the same time.



Temperature Range: –70°C to +180°C

Humidity Range: 20% to 95% rh

Temperature Change Rates: 5 to 10°C/min at –54°C ↔ +125°C

Force: 20kN

Frequency: 20 Hz to 2000 Hz

Inside Dimensions: W1×H1×D0.8m

Combined Decompression and Vibration Test Chamber

Enables complex environmental tests to be carried in combinations of the three conditions of pressure + vibration + temperature change.

Altitude: Up to 100,000 Feet

Temperature Range: –70°C to +180°C

Humidity Range: 20% to 95% rh

Force: 30kN

Frequency: 5 Hz to 3000 Hz

Inside Dimensions: W1.5×H1.2×D1.2m

Mini Sub-Zero
Compact Ultra Low Temperature Chamber

An easy-to-use and compact chamber enabling tests to be carried out within a wide range of temperatures.

Temperature Range: –85°C to +180°C

Temperature Change Rates:
Heat-up: 5.5°C/min
Pull-down: 2.2°C/min at –58.5°C ↔ +153.5°C

Inside Dimensions: W0.4×H0.4×D0.4m

Temperature-Controlled
Air Supply System

A system that provides a wide range of freedom in testing by supporting temperature and humidity tests on specimens of all shapes and sizes, such as tests on localized areas and tests on extra-large specimens.
* ESPEC can also arrange test chambers.

* Test chamber (Example)

Temperature Range:
–70°C to +150°C

Humidity Range: 30% to 95% rh

Vacuum Oven

This easy-to-use oven is equipped with leading-edge functions, such as programmed operation for automatic control over a combination of pressures and temperatures.

Temperature Range: +40°C to +200°C

Pressure Range: 933×10^{2}Pa to 1×10^{2}Pa

Inside Dimensions: W0.8×H0.8×D0.8m

Quality

Providing reliable precision products
based on our many years of experience.

Technology

High-accuracy temperature &
humidity control technology,
high-accuracy low-pressure &
temperature control technology, etc.

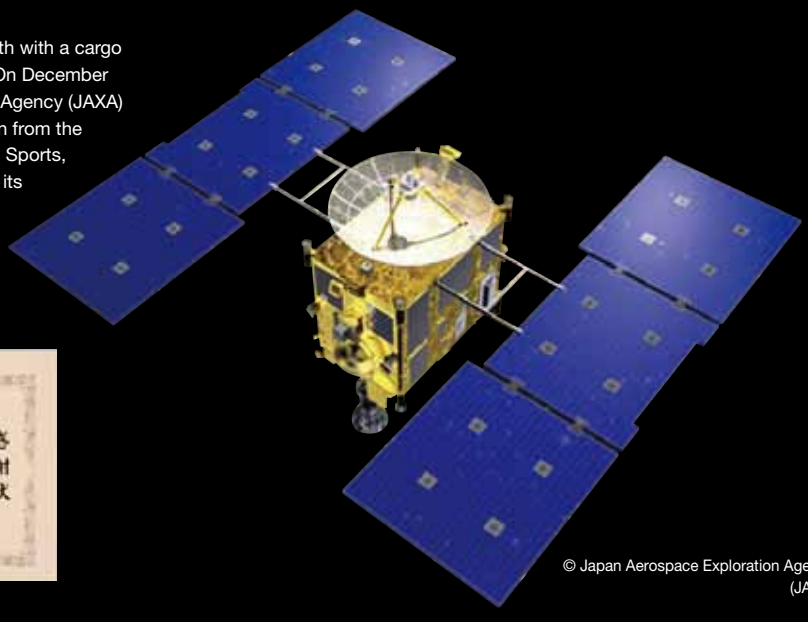
Product Creation

Unbeatable production technology
conceived through
our accumulated knowhow.

The role that ESPEC plays on behalf of society is not a conspicuous one.
However, it is of vital importance for society.
ESPEC will continue to maintain its glittering presence
for people to live safely.

Contributing reliability test support for electronic parts used in Hayabusa, the world's first asteroid probe.

After a seven-year journey in space, the Hayabusa probe returned to earth with a cargo of samples from an asteroid for the first time in the history of the world. On December 2, 2010, the Hayabusa project team in the Japan Aerospace Exploration Agency (JAXA) and the 118 companies and organizations received letters of appreciation from the Minister of State for Space Policy and the Minister of Education, Culture, Sports, Science and Technology. ESPEC was also awarded a commendation for its distinguished service in the Hayabusa project.
ESPEC has continued to provide support for the development and reliability of leading-edge technology. We fully intend to continue supporting the development of state-of-the-art technology for a prosperous future.



ESPEC CORP. http://www.espec.co.jp/english

Head Office
3-5-6, Tenjinbashi, Kita-ku, Osaka 530-8550, Japan
Tel : 81-6-6358-4741 Fax : 81-6-6358-5500

ESPEC NORTH AMERICA, INC.
Tel : 1-616-896-6100 Fax : 1-616-896-6150

ESPEC EUROPE GmbH
Tel : 49-89-1893-9630 Fax : 49-89-1893-96379

ESPEC ENVIRONMENTAL EQUIPMENT (SHANGHAI) CO., LTD.
Head Office
Tel : 86-21-51036677 Fax : 86-21-63372237
BEIJING Branch
Tel : 86-10-64627025 Fax : 86-10-64627036
TIANJIN Branch
Tel : 86-22-26210366 Fax : 86-22-26282186
GUANGZHOU Branch
Tel : 86-20-83317826 Fax : 86-20-83317825
SHENZHEN Branch
Tel : 86-755-83674422 Fax : 86-755-83674228
SUZHOU Branch
Tel : 86-512-68028890 Fax : 86-512-68028860

ESPEC TEST TECHNOLOGY (SHANGHAI) CO., LTD.
Tel : 86-21-68798008 Fax : 86-21-68798088

ESPEC SOUTH EAST ASIA SDN. BHD.
Tel : 60-3-8945-1377 Fax : 60-3-8945-1287

ESPEC ENGINEERING (THAILAND) CO., LTD.
Tel : 66-0-3-810-9353 Fax : 66-0-3-810-9356

WF10B28C01 (Details listed herein are correct as of September 2016) CAT.NO.E14012-X1609