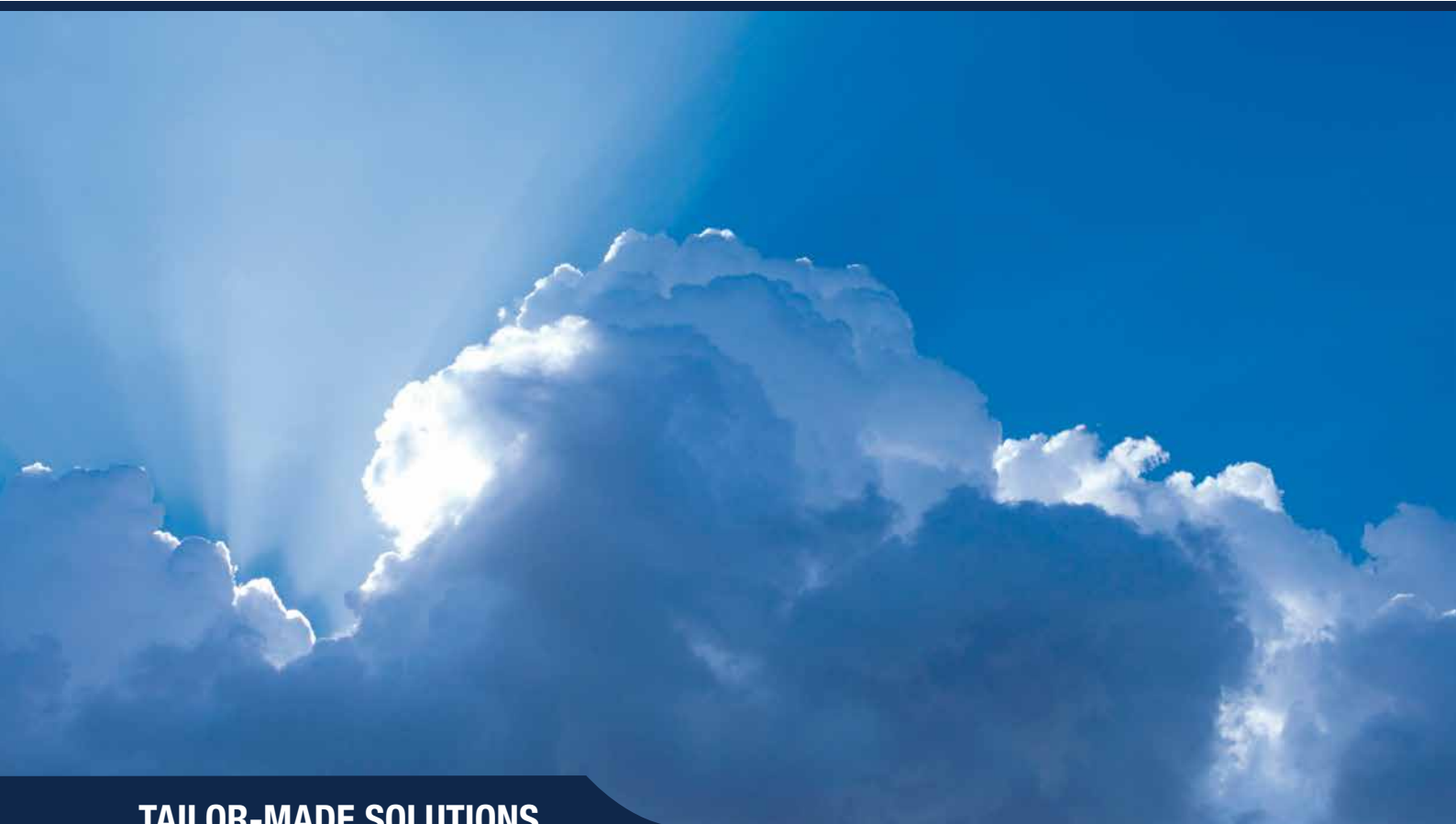




**Sitec Aerospace GmbH**



**TAILOR-MADE SOLUTIONS**

**SITEC AEROSPACE  
A WORLDWIDE SYNERGY**





Harro Harms, CEO

## Sitec Aerospace GmbH, a worldwide synergy.

Sitec Aerospace GmbH founded 1974 as Sitec-Präzisionstechnik GmbH by Franz Sichert, steadily grown over the last 40+ years, becoming member of the Westland Helicopters Group in 1978 and being acquired by Singapore Aerospace Manufacturing (SAM) in 2001 has always offered a maximum on stability, quality and flexibility to its global business partners.

Still acting as a medium sized company within an international environment, we continuously balance the interests of the customer, our suppliers, owners and employees successfully on a day to day basis. Facing new challenges of a demanding future in an automated and digitalized world we rely on a solid foundation and having set course, we look forward to future decades of success.

The products from Sitec Aerospace fly more or less on the most demanding aircraft programs of the world. We are proud to name the most well-known and successful aircraft and system manufacturers among our customers.

### Milestones of Success

Sitec Aerospace serves the global aerospace market with indigenous actuators and valves.

Manufacturing a wide variety of equipment from landing gear to mechanical flight controls, the company is now present on all new major aircraft platforms.

### Quality Management

To achieve the uncompromising quality of our products and services, we remain close to our customers from the first contact through design, manufacturing, assembly, and acceptance test.

Our goal is to continue supplying superior quality products.



Headquarters in Bad Tölz, Germany

## Company Heritage

<b>2019</b>	Corporate Identity of SAM introduced to Sitec Aerospace GmbH
<b>2017</b>	Sitec linear actuation systems and full automatic overhead BIN actuation product line are born.
<b>2015</b>	Opening of Logistic Centre Bad Tölz.
<b>2014</b>	Sitec Aerospace acquired Burkhard GmbH, Mühlendorf a. Inn to extend manufacturing capacity.
<b>2008</b>	Company moves into new purposely built headquarters in Bad Tölz, Germany.
<b>2006</b>	All major new medium to large civil aircraft programmes now complement the company's portfolio.
<b>2001</b>	Company acquired by Singapore Aerospace Manufacturing, renamed Sitec Aerospace GmbH.
<b>1997</b>	Company relocated to Waakirchen in order to absorb the industry growth requirements.
<b>1994</b>	GKN acquires Westland Helicopters, name changed to GKN Westland Sitec GmbH.
<b>1991</b>	Rotary Actuator product group created.
<b>1988</b>	Repair and overhaul capabilities created in the United States of America and an AOG base in Singapore.
<b>1985</b>	Design and development of electrically operated fuel, hydraulic and water valves for civil aircraft.
<b>1981</b>	Renamed Westland Sitec GmbH. Manufacture of throttle quadrants and dampers for helicopters.
<b>1978</b>	Sitec Präzisionstechnik GmbH acquired by Westland Helicopters Ltd.
<b>1974</b>	Sitec Präzisionstechnik GmbH founded. Manufacture of components for aerospace.

# ACTUATORS

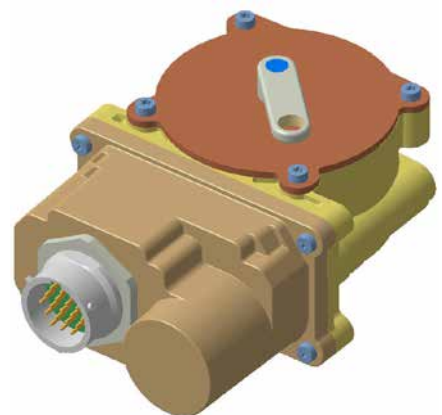


Boeing 787

## Original Equipment Manufacturer

As a designer and manufacturer, Sitec Aerospace is partner of the leading aircraft manufacturers and system suppliers. Sitec Aerospace has developed a wide range of double and single motorised actuators for aircraft applications.

Working closely together with our customers we are able to meet their individual requirements.



Modular Electrical Actuator



### Modulating Actuators



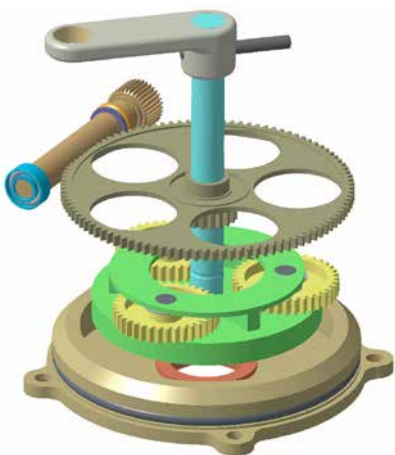
### Single Motorised Actuators



### Double Motorised Actuators



Sitec Aerospace actuators are of modular construction giving maximum adaptability with a minimum of design effort.



Main Gear Train

Actuators supplied by Sitec Aerospace control temperature, oxygen and air, fuel and water flow.

Single motorised actuators are used for standard applications such as Water Drain Valves.

Double motorised actuators are designed for maximum redundancy required for example for fuel and fire Shut Off Valves.

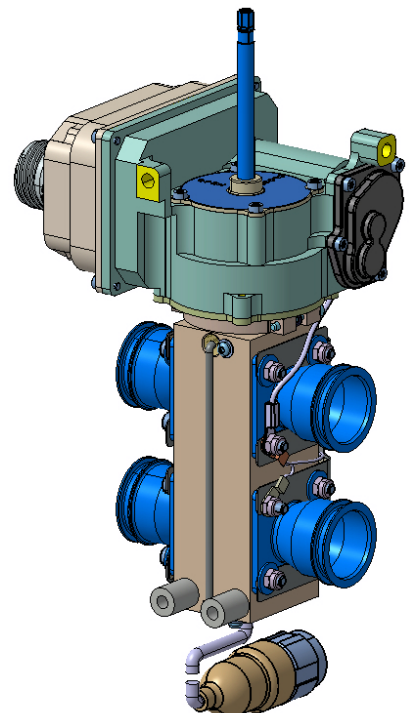
Modulating actuators are used to control temperature and air flow.



Airbus A350

Sitec Aerospace valves cover a wide variety of applications in fixed and rotary wing aircraft for the civil and military market.

The individual requirements of customers have challenged Sitec Aerospace to adapt existing designs and develop new valve variants.



Potable Water Fill/Drain Valve

**Oxygen System Valve**



**Humidification System Valve**



**Hydraulics System Valve**



## Fluid Control

For Oxygen Systems, valves have been created to meet the special demands of a grease-free environment.

A Humidification System Valve has been designed and supplied by Sitec Aerospace. This valve is part of a system which humidifies the air in the passenger cabin.

Ball Valves of up to 1.5" have been developed to shut off hydraulic fluids such as Skydrol or MIL-H-5606.

For applications in connection with fuel, fast reacting ball valves with a thermal relief feature have been designed and manufactured for various aircraft programmes.



# HYDRAULIC APPLICATIONS



Pilatus PC 12

The company manufactures build-to-print equipment for various customers such as the landing gear for the Pilatus PC12 and PC24 aircraft.



Nose Wheel Landing Gear



### Cargo Door Actuator



### Rotor Head Damper



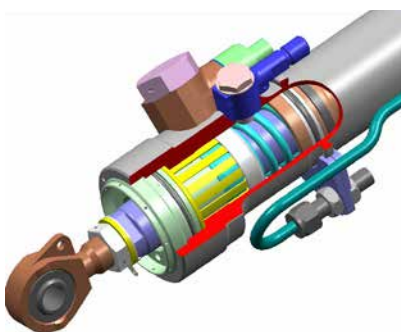
### Auto. Stabilization Equipment ASE-Pack



## Motion Control

Sitec Aerospace has proven to be a reliable and efficient partner in the hydraulics sector.

Sitec Aerospace has developed and supplies the Cargo Door Actuator which opens and closes the cargo doors of the Airbus Single Aisle Family.



Cargo Door Actuator

The Rotor Head Dampers for the Advanced Light Helicopter and Tiger program are manufactured by Sitec Aerospace as well as the Lag Plane Damper for the Lynx helicopter.

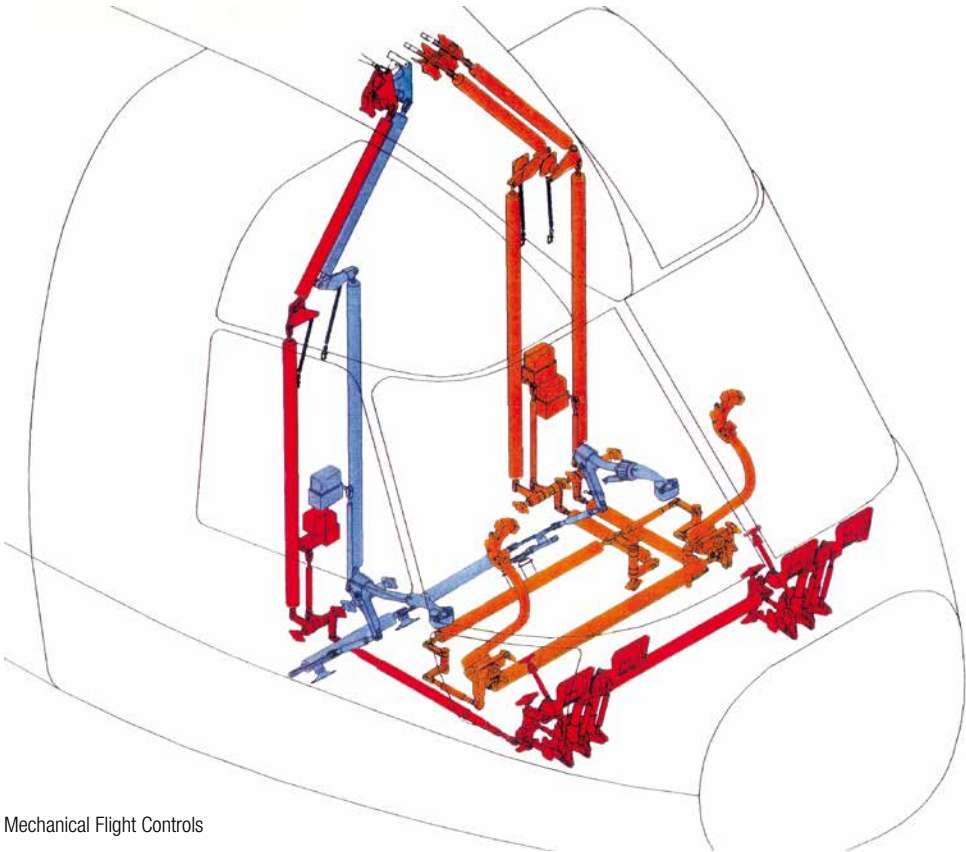
Sitec Aerospace is supplier of the Automatic Stabilization Equipment (ASE) of the Sea King helicopter.

The Auxiliary Servo-Cylinder Assembly provides hydraulic assistance to the aircraft flight controls.

# FLIGHT AND THROTTLE CONTROLS



Leonardo AW101



Mechanical Flight Controls

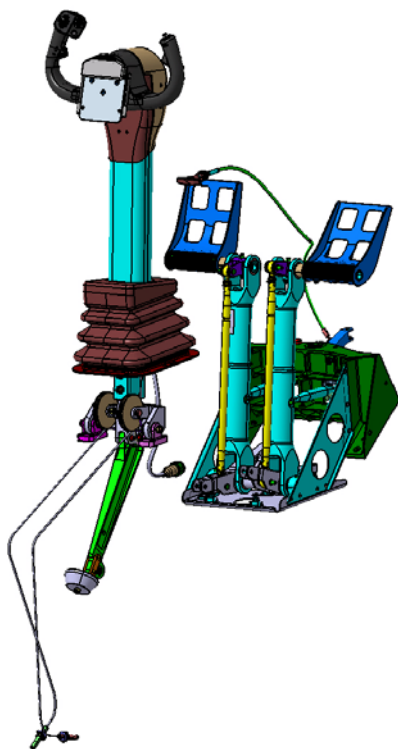
**Rudder Pedals**



**Control Column**



**Throttle Quadrant**



Flight Controls

## **Kinematics**

The Leonardo AW101 helicopter is a bilateral programme involving Italy and the United Kingdom. Sitec Aerospace manufactures the mechanical flight control system consisting of 1.600 individual items.

The company has designed and manufactures the Rudder Pedals as well as the Control Column for the flight control system of the Comac ARJ21 aircraft.

The Throttle Quadrants for the Leonardo AW101 and Lynx helicopters as well as the advanced design for the Fairchild Dornier Do328 family are manufactured and assembled by Sitec Aerospace.

# SPECIAL APPLICATIONS



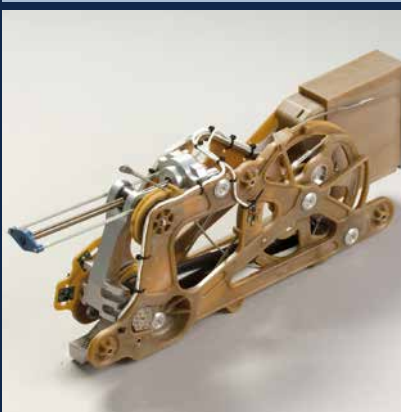
Airbus A380



Full automatic stowage BIN actuation with lock / unlock and flight attendant feedback



### Force Support Actuation System



### Pressure Control Actuator



### Heated Valves



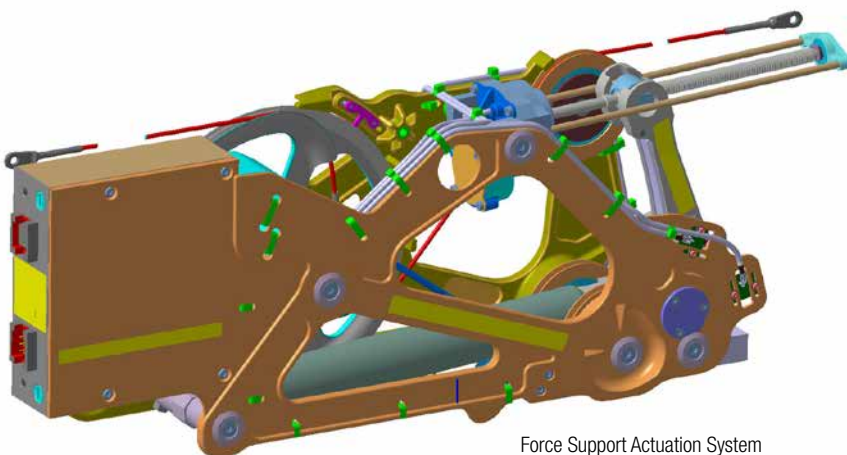
## Individual Systems for special Demands

Based on its experience in mechanical and electromechanical assemblies, Sitec Aerospace designs, develops and qualifies components to meet specific customer requirements.

An example of this is the Electrical Handforce Control System for the Airbus A380. This unit reduces the force required by the passenger to close the Overhead Bin at all load conditions.

Modulating Actuators have been designed to operate with the cabin pressure control module to ensure that the optimised pressure is maintained at all altitudes.

For the potable water system used in aircraft, heated Fill/Drain Valves made from composite material have been added to our portfolio to meet new aircraft requirements. These valves are operated by an actuator communicating with the CAN Bus System of the aircraft. Providing health monitoring and valve assessment.



Force Support Actuation System



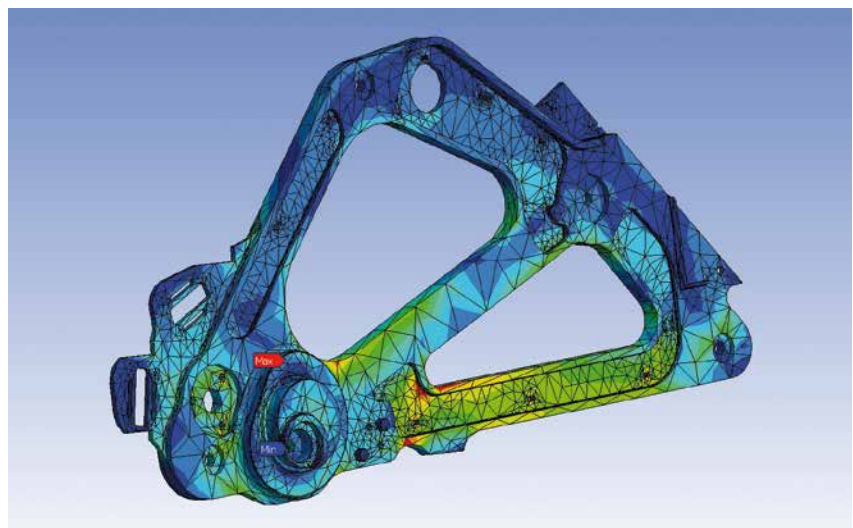
© Eurofighter - Geoffrey Lee, Planefocus Ltd.

Eurofighter Typhoon

## Engineering Competence for Tailor-made Solutions

Today's aircraft require individual and highly adapted technical solutions for mechanical, hydraulic or electrical

equipment. This is the right challenge for the Sitec Aerospace Engineering Team located in Southern Germany.



Finite Element Calculation

## Experience in Development



The design and development carried out in Bad Tölz considers not only technical and environmental requirements as conditions but also the manufacturing process.

Sitec Aerospace designs are produced on the most current CATIA platform interfacing directly with the airframe or system manufacturer.

In the Engineering Group Test Laboratories, Sitec Aerospace designs are tested to the extreme requirements of the aircraft environment to ensure operation in accordance with the specified requirements of the customer.



Fire Resistance Test



# PRODUCTION

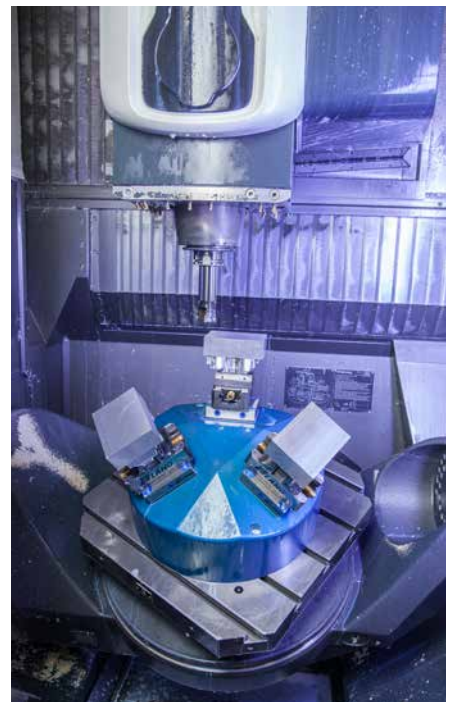


Manufacturing Facilities, Bad Tölz

## Flexible Manufacturing

State-of-the-art manufacturing facility opened in 2008, universal machining centres, fully synchronised 5-axis milling machines and twin spindle turning centres keep Sitec Aerospace in the foreground of manufacturing efficiency.

Skilled personnel flexible production facilities and workstations guarantee constant production flow.



Complex 5-axis milling of hydraulic parts

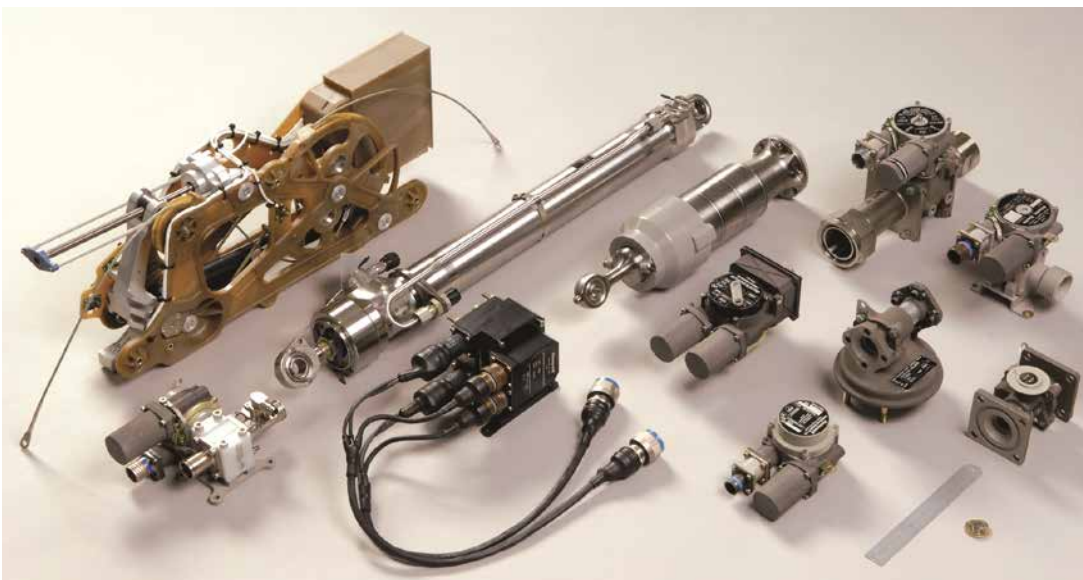


## Assembly Expertise



Sitec Aerospace customers appreciate our dedication and experience in assembling a wide range of complex

equipment which are installed and operate in all areas of the aircraft from nose to tail.



# QUALITY MANAGEMENT

## Functional Check and Tolerance Measurement



## Permanent Quality Assurance

Modern inspection facilities are equipped with automatic test centres which are operated by skilled personnel. This ensures the highest standards are achieved as expected within the industry that we operate.



All business processes are in compliance with the current revision of the requirements of AS/EN 9100 and certified by an approved Certification / Registration Body (CRB).

As an OEM and R&O facility Sitec Aerospace is, of course, also certified in accordance with EASA Part 21G, Part 145 and NADCAP, FAA and TCCA.



# GLOBAL SUPPORT SERVICES

## Apprenticeships / Training



Our apprentices are trained under the guidelines of the Chamber of Industry and Commerce together with higher education establishments, for both technical and commercial skills.

Sitec Aerospace global product support supplies spares and AOG support from bases in New York, Singapore, Copenhagen and Munich ensuring maximum assistance worldwide 24 hours / 7 days a week.

### Europe / Middle East

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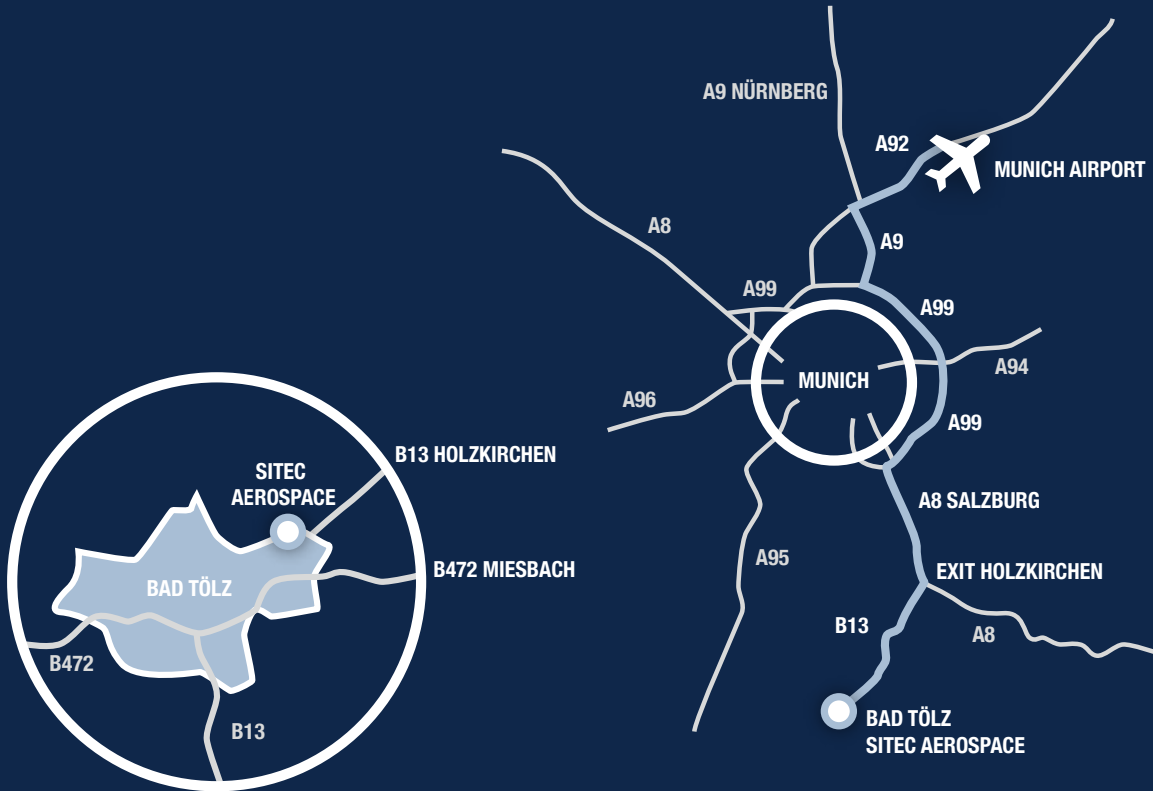
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## TAILOR-MADE SOLUTIONS

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