ABOUT US

Based in Liège, Belgium, Techspace Aero has approximately 1,350 employees on an integrated 65,000 m² site. It also has a test facility (4 test cells in Lièr, Belgium) and two US subsidiaries: Cenco Inc (Minnesota) and ACI (Florida).

A Safran Company (F- 67% of capital), Techspace Aero’s other shareholders are the Walloon Region of Belgium (B- 31 %) and the SFPI (B-2%) (Société Fédérale de Participations et d’Investissements - Federal Holding and Investment Company).

OUR PRODUCTS

Techspace Aero is at the leading edge of innovation. It plays a key role in aerospace propulsion evolution and is a world leader in its areas of excellence:

LOW PRESSURE COMPRESSORS
Design, development and manufacture of low pressure compressors and front bearing supports for turbo reactors, in partnership with Snecma, General Electric and Pratt & Whitney.

LUBRICATION EQUIPMENT
Design, development, production and maintenance of aircraft engine lubrication and cooling equipment.

SPACE EQUIPMENT
Design, development and manufacture of valves and flow regulation equipment for space launcher liquid propulsion equipment.

TEST FACILITIES AND EQUIPMENT
Design, construction, upgrade and maintenance of test facilities marketed under the Cenco International® brand name (Techspace Aero and its subsidiary Cenco Inc.).

Design and manufacture of test engine-specific components (bellmouths, cowlings, boattails, etc.) marketed under the EoLines® brand name.

“As a technology partner, the company is a world renowned product leader”
An offshoot of the Fabrique Nationale de Herstal, Techspace Aero began to acquire expertise in aerospace propulsion in 1949, manufacturing Rolls Royce and General Electric engines under license. The company achieved international acclaim for its F100 Pratt & Whitney engine fitted in F15 and F16 fighters. It manufactured most of the components and was responsible for assembly and testing of over 600 engines of this type. The 1980s marked a turning point for the future development of Techspace Aero as it took part in major commercial aviation programs. The company’s initial experiments in the aviation industry also led to its inclusion from the very outset in the first European space programs.

TECHNOLOGICAL MATURITY

In order to consolidate its position in the global market, the company gradually extended its R&D to offer clients end-to-end solutions from design to product manufacture.

Techspace Aero signs partnership agreements for most of its major engine programs. It contributes to the financing of a new engine alongside an engine manufacturer and takes full responsibility for a module and/or equipment, which could represent as much as a 10% share of the whole engine.

Techspace Aero invests heavily in upstream research to develop new engine architectures, working closely with its clients, universities and world renowned research centers.

SAFRAN, A LEADING INTERNATIONAL HIGH-TECHNOLOGY GROUP

Safran is a leading international high-technology group and Tier-1 supplier of systems and equipment for aerospace, defense and security. Through our global presence Safran not only enhances competitiveness, but also builds industrial and commercial relations with the world’s leading prime contractors and operators, while providing fast, local service to customers around the world. Working alone or in partnership, Safran holds world or European leadership positions in its core markets.

AEROSPACE

Safran develops, produces and markets engines and propulsion systems for civil and military airplanes and helicopters, ballistic missiles, launch vehicles and satellites. It also provides a wide range of systems and equipment for civil and military airplanes and helicopters.

DEFENSE

Operating in the optronic, inertial guidance, electronics and safety-critical software markets, Safran offers today’s armed forces a complete range of optronic, navigation and optical systems and equipment for use in the air, on land and at sea.

SECURITY

Safran offers state-of-the-art solutions to meet the evolving security requirements of individuals, businesses and governments, based on multibiometric technologies, smart cards and secure identification and travel documents.
DEVELOPING MORE ENVIRONMENTALLY FRIENDLY ENGINES

Techspace Aero subscribes to the ambitious targets set by the European Union for air traffic in terms of energy savings and aircraft noise and emissions reduction.

Research teams are working on next-generation low pressure compressors for entry in service in 2025. These ultra-efficient, more compact and lightweight compressors will achieve optimized aerodynamic performance and contain a proportion of composite components. Company researchers are also working on breakthrough engine architectures using high-speed low pressure compressors.

OVER 20 PATENTS FILED PER YEAR

The company stays one step ahead in the technology market through its ongoing program of skills enhancement in aerodynamics, materials and processes. Techspace Aero’s technological maturity and broad skill set enable it to market technologies which have been validated and tested on demonstrators and which are ready for engine integration. The company files about 20 patents per year to protect these innovations.

“Because tomorrow begins today, Techspace Aero invests approximately 20% of its revenue in Research, Technologies and Development”
Techspace Aero is aware of its obligations towards its clients, neighbors, local authorities and staff. This is reflected in commitments at a number of levels: the highest quality standards in the aviation industry, technological contribution to the development of more environmentally friendly aircraft engines, Health, Safety and Environment policy, ethical awareness and involvement in the local community.

QUALITY
Techspace Aero has earned worldwide recognition for its design and manufacturing expertise and meets the highest quality certifications currently in force in the aerospace industry (AS/EN/JISQ9100:2009, PART21 Subpart G, EASA PART145 including TCAC, 14CFR PART145, NADCAP).

HEALTH, SAFETY AND THE ENVIRONMENT
Techspace Aero is committed to ensuring the health and safety of people on and around its sites, the safety of its facilities and respect for the environment and neighboring communities, as well as incorporating Health, Safety and Environment regulations into its design, development, manufacturing, and product and service distribution processes. Techspace Aero holds ISO14001 certification.

ETHICS
Techspace Aero observes the values in the Safran ethical guidelines which are based on high standards of honesty, integrity and professional excellence. By upholding these values Techspace Aero will remain worthy of the trust placed in it by its customers, personnel, shareholders, suppliers and all of its partners.

COMMUNITY INVOLVEMENT
Techspace Aero is aware of its social role; it strives to promote local economic activity and is a driving force within the Skywin Wallonie aerospace competitiveness cluster. The company also supports social and cultural projects and is involved in programs to promote careers in technology for young people.

DRIVING PROGRESS
Techspace Aero is working with Safran to implement a continuous professional development approach to provide a framework for improvement initiatives and meet client expectations of excellence. This approach is based on recognized tools and methods including Lean Sigma, GROW, TPM, Visual Factory, 6S, SMED, etc.
In partnership with the world’s largest engine manufacturers, Techspace Aero has been associated with most major aerospace programs in recent decades. It offers clients innovative and integrated solutions to provide continuously evolving performance enhancement.

Techspace Aero’s technological maturity, Research & Development expertise and end-to-end process capability mean that it can now make a major contribution to the development of the architecture of the engines of tomorrow.

**LOW PRESSURE COMPRESSOR**

Techspace Aero is a world authority in the design, development, manufacture and assembly of low pressure compressors and front bearing supports for turbo reactors.

Under partnership agreements with Snecma, General Electric and Pratt & Whitney, Techspace Aero designs and produces low pressure compressors and front bearing supports for most commercial engines across the whole thrust range.

Techspace Aero offers a wide range of solutions ranging from design to delivery of complete modules ready for engine integration. These include financing, statement of requirements, design, development, instrumentation, testing, qualification, supply chain, manufacturing and assembly.
LOW PRESSURE COMPRESSOR

Low pressure compressors from Techspace Aero can be found on most commercial aircraft engines in all thrust ranges: from the largest engines for long-haul aircraft to the medium-sized and small engines used in regional aviation and most recently in business aviation.

Under risk and revenue sharing partnership agreements, Techspace Aero shares with engine manufacturers the responsibilities and the risks involved in engine programs which can span several decades. Techspace Aero low pressure compressors are manufactured on an integrated site comprising engineering and manufacturing teams. The company has an ongoing program of investment to adapt its workshops to its technology partnership strategy and to have the most innovative manufacturing tools.

Over 500 engineers and technicians
20% of revenue dedicated to Research, Technologies and Development
65 years’ propulsion experience

ENGINES CURRENTLY IN SERVICE

NEXT-GENERATION ENGINES

Looking beyond industrial capabilities, engine integrators require companies which can provide them with unique technologies to give their future engines a competitive edge. Techspace Aero meets their needs by developing technological solutions to pave the way for next-generation engines.

The main focus of innovations included in engine manufacturers’ research plans are compact high-load low pressure compressors, the introduction of composite materials, and bladed disks and drums. Techspace Aero is also currently involved in several next-generation engine programs which are predicting 15% energy savings.

HIGH-TECH MANUFACTURING

With over 50 years of experience, Techspace Aero has advanced technology production facilities for the manufacture of complex high value-added components such as fan disks, drums, welded stators for low pressure compressors, as well as diffuser cases, high pressure compressor cases, turbine disks, etc.

The company has invested in several highly automated production lines to meet the growing demand in the industry for quality and repeatability.
Techspace Aero offers complete solutions for lubrication and cooling equipment for aircraft engines ranging from product design to manufacture, maintenance and in-service support.

Techspace Aero is a world leader in this field with a 75% market share for oil pumps for single-aisle aircraft. Techspace Aero also supplies oil system equipment for helicopters.

Since entering this market in 1974, Techspace Aero teams have worked continuously to improve products by participating in major engine programs at the highest level, providing ongoing research and technology input.

- 40 years’ aircraft lubrication systems experience
- 30,000 operational lubrication units
- 700 million lubrication equipment flying hours logged

Techspace Aero is the leading European supplier of flow regulation valves for launcher engines and stages (shut-off valves, check valves, proportional control valves, pressure reducers and complete pressurization systems). Its engineering know-how covers all propulsion system liquids, ranging from cryogenics to combustion gases (nitrogen, helium, hydrogen, oxygen, hydrazine, nitrogen peroxide, kerosene, skydrol, etc.).

In addition to its design and manufacturing services, Techspace Aero also offers customers systems optimization support.

A very significant proportion of the company’s research activity is geared towards maintaining its competitive technological edge, especially in the fields of tribology and sealing, new materials, functional modeling, electrical control or shape memory alloys, as well as low thrust propulsion units for satellite platforms. Techspace Aero is establishing a presence as a partner with prime contractors in future launcher programs.

- 12,000 space propulsion units used with a 100% reliability record
As world leaders in the aerospace engine test cell field, the Cenco Europe division of Techspace Aero, and its Minneapolis-based subsidiary Cenco US, offers complete projects and test facility refurbishment and upgrades to new engine types. Cenco International™ creates test facilities for the full range of aero engines, from commercial turbo reactors to engines for helicopters or regional aircraft, as well as military engines and auxiliary power units. With a client list including the most demanding engine manufacturers, leading maintenance companies, airline companies and a large number of air forces, Cenco International™ has a strong track record of projects in all types of test cell.

Techspace Aero, under the Eolines™ brand name, markets a wide range of engine-specific equipment used in outdoor and indoor test facilities. This equipment is connected to an aero engine in a test cell and directs air flow to recreate conditions similar to those experienced by an engine in flight. This involves bellmouths, cowlings, pylons, boattail and turbulence control equipment, as well as other air flow control devices. Eolines™ offers design and manufacturing services for new equipment using composite and metallic materials, as well as maintenance and upgrade of equipment already in service.

Eolines™ products and services are aimed at test cell integrators, engine manufacturers and maintenance facilities in both the military and commercial arenas.

Safran’s and Techspace Aero’s expertise in engines and engine nacelles is a major asset, guaranteeing innovative technology and the highest levels of reliability and safety.
OUR CLIENTS

KEY MISSIONS, KEY TECHNOLOGIES, KEY TALENTS