

# **Aero Skur Activities**



May 07th 2013

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In 2001, Irvin Aerospace and Sekur come to a merging and finally Aero Sekur SpA was founded as unique Company, to better face up the challenging of the new century

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Aero Sekur Headquarters are located in Aprilia (Latina), 40 km south of Rome.

The headquarters includes an area of 50000 m²
(of which 18000 are currently covered, with the possibility of future expansions).

The production buildings are separated and differentiated on production type basis.

More recently, an office has been opened in Caselle Torinese.

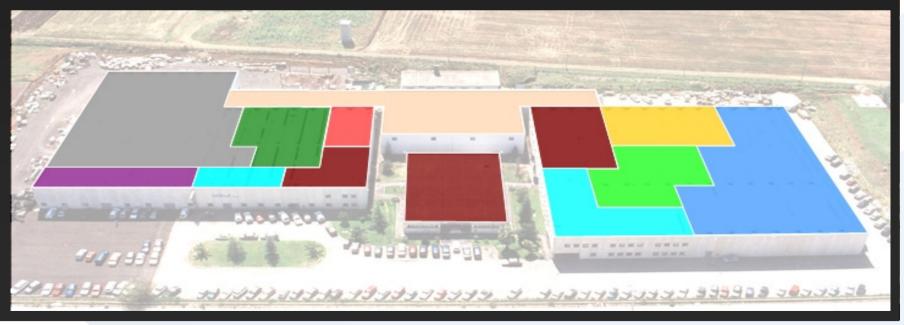
**FUEL TANKS AREA** 

- SALES, ADMINISTRATION, MARKETING
- FLOATS & RAFTS PRODUCTION PART 21

- ADDITIONAL WAREHOUSE
- NBC MANUFACTURING AREA

M.R.O. SERVICE AREA – PART 145

- TEXTILE/FABRIC AREA
- **ENGINEERING and R&D DEPARTMENT**
- WAREHOUSE PROTOTYPE AREA



TOTAL:

WORKFORCE

Aero Sekur Headquarters count on 143 persons as current workforce.

In addition there are also several young engineers in stage thanks to the cooperation in force with several Universities and Institutes. Caselle office workforce is made by 5 junior and 3 senior engineers.

71

143

CURRENT WORKFORCE (at December 2012 excluding Stage personnel)			
DEPARTMENT	EMPLOYEES	WORKERS	TOTAL
Management / Marketing / Business Units:	16		16
Administration & Finance:	14		14
Production / Operations / Logistics:	14	66	80
R&D / Engineering / Prototypes:	17	3	20
Purchasing / Supply Chain:	5		5
Quality Assurance:	3		3
IT Office & Services:	2		2
Maintenance / General Services:	1	2	3

**72** 





Our mission is to provide products and services to ensure safety and to support helicopters, aircraft and ground operations, by using the best and consolidated mechanical, software, textile technologies and innovative materials.

Aero Sekur is at the forefront of Space Exploration & Exploitation systems development with significant in-house expertise in the design, modeling, manufacturing and testing activities.



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### **COMPANY BUSINESS UNITS**

















#### **AIRBORNE SYSTEMS**

- Emergency Flotation Systems Supply
- S Fuel Tank Supply
- Lifejackets & Life-Raft Systems
- Non-Pyrotechnic Inflation System
- Aircraft Braking Parachutes
- Ejection Seat Parachutes
- Personnel Parachutes
- Cargo Parachutes & Aerial Delivery Sys.

#### **PERSONAL PROTECTION**

- Respirators/Masks
- **CBRN Suits**
- Combat Clothing
- Ballistic Jackets
- Camouflage Net
- Anti-Radar/IR Poncho

#### **SPACE**

- Descent & Landing Systems
- Habitat Modules
- Re-Entry Modules
- High Performance Inflatable Structures
- Space Agriculture
- Thermal Protection Mechanism

#### **MRO**

- Aircraft Emergency Escape Slides MRO
- Life-Rafts MRO
- Lifejackets MRO
- Aircraft Gassing Systems MRO
- Fuel Tank MRO
- Personnel Parachute Packing & MRO

#### **COLLECTIVE PROTECTION**

- Inflatable Field Tents
- Collective Protection Units
- Inflatable Line Maintenance Structure
- Field Modular Hospital
- NBC or EMI/RFI Inflatable Tents

# SPACE BUSINESS UNITS









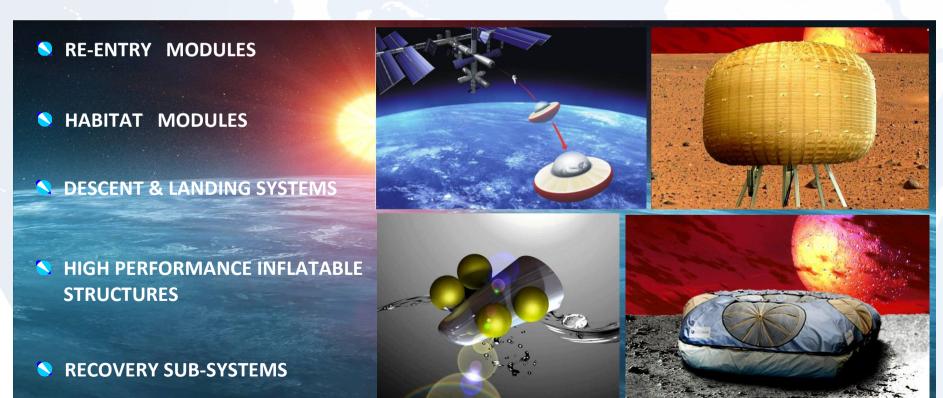








Aero Sekur is at the forefront of Space Exploration & Exploitation systems development. We have significant in-house expertise in the design, modeling, manufacture and testing and, since 1998, we are active in AeroSpace Industry with the following programs:





### SPACE BUSINESS UNITS







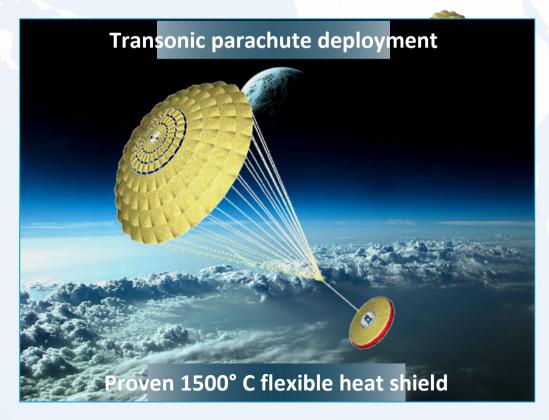




The SPEM TPS is fixed over an inflatable structure divided into 16 sectors. It provides the support to the TPS, in order to withstand the mechanical stresses induced by the dynamic pressure. A surrounding textile structure contains the inflatable parts and is made of sewn aramidic fabric.

The system is activated by a NPIS (Non Pyrotechnic Inflation System), designed, qualified and manufactured by Aero Sekur.

Such system found large applicability as alternative and very efficient activation system for Emergency Floating System for helicopters Aero Sekur is pioneering the **SPace Emergency Module** (**SPEM**) 'single man space lifeboat' program funded by Italian MOD. The key challenge is slowing down the reentry vehicle as it enters the Earth's atmosphere using parachutes and resisting the high temperatures generated on the leading surfaces.





# SPACE BUSINESS UNITS











Other on ground activities is started with MoD (SPEM-GSE).

A fully representative on-ground qualification test has been performed in the Scirocco Plasma Wind Tunnel of the CIRA in Capua (Italy).

The SPEM performed in the plasma jet for a longer time (108s) than scheduled (100s).

Maximum shield temperature reached: ca. 1250C°

Heat flux at stagnation point: 430 kW/m2 Total energy per unit surface: 45 MJ/m2

















ESA planned the **ExoMars mission** aimed to search for traces of past and present life on Mars, by deploying a mobile exobiology instrumentation package on the Martian surface and performing soil sample analyses. The other goal is to enhance the knowledge of the Mars environment and geophysics and to characterize possible hazards before landing of other spacecraft or humans



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