



SURVITEC JSF F-35 AGILE PILOT FLIGHT EQUIPMENT

**PROTECTING YOUR
MOST VALUABLE
ASSET**

- Made in the USA
- BERRY Compliant
- Fully integrated, modular solution designed to maximize protection and optimize pilot performance
- Significant performance improvements made over current Legacy PFE leveraging over 90 years experience
- Unrivalled commitment to PFE sustainment program reducing maintenance burden
- Fully compatible with US Legacy platforms





AT THE FOREFRONT OF SURVIVAL TECHNOLOGY

The Survitec Group is the world's premier survival technology company. We protect your defence investment, every minute of every mission, providing unparalleled protection and life support, enhancing performance in the most extreme circumstances. With over 90 years experience and expertise supplying leading defence and aerospace companies and military end users, our mission is to deliver the best value safety and survival solutions from concept through to certification.

The Survitec Group has an unrivalled reputation for innovation and product quality with a market leading position in the provision of survival equipment in the defence and aerospace sectors.

Through an extensive product range including Pilot Flight Equipment (PFE), Life Rafts, Lifejackets, Inflatable Boats, Air Beam Shelters and Submarine Escape Systems, the Survitec Group's ethos of continually pioneering new technologies into the market place ensures we remain at the forefront of safety and survival technology.

Original Pioneers of PFE and still the best...

RFD Beaufort, part of the Survitec Group is the world leading design authority of Pilot Flight Equipment. Over our 90 years experience we have developed an unrivalled, flexible supply network for the provision of through-life capability for Aircrew Protection and Survival equipment. Our effective resource infrastructure has ensured we fulfil demand on a global basis, supplying leading programs such as the Eurofighter Typhoon and the F-35 Joint Strike Fighter (JSF).

As pioneers of many of the technologies employed today in modern Pilot Flight Equipment, RFD Beaufort continues to provide robust and cost effective PFE through a combination of product advancements, efficient supplier network management and unparalleled in-service support.

Our extensive research and development facilities offer multi-disciplined design capability to meet every demand from initial concept to testing, qualification, manufacture, delivery and support. RFD Beaufort's unsurpassed experience in PFE has produced a unique fully modular, integrated design which implements pilot/aircraft dynamic to maximize protection and optimize performance.

The Survitec AGILE PFE surpasses all current levels of PFE solutions with advancements such as unmatched UV solar protection, maximum burst pressure, optimized cockpit integration and stringent laundering tolerance.

Our unique modular approach enables garments to be integrated to provide multi mission capability from a common ensemble. Each garment has been designed using the latest anthropometric data available. These have been used to develop a sizing methodology applied to all processes. Our technologists are constantly exploring the very latest developments in materials, process technology and product design to meet and surpass the stringent demands of our customers.

100% BERRY Compliant

We employ over 1,300 individuals worldwide dedicated to delivering safety and survival solutions. In 2009 we completed a multi-million dollar investment transferring the manufacture of F35 PFE to our US manufacturing site in Sharon Centre, Ohio.



Our state-of-the-art manufacturing facilities ensure customer specific design, development and certification services are achieved each and every time. Maintaining the highest quality standards, RFD Beaufort is approved to numerous global standards including ISO9001 approval and QPL listed to name a few.



Protecting your most valuable asset...

Garments	Summer	Summer Chemical & Biological	Winter	Winter Chemical & Biological	Benefits
Underwear Upper, Lower	X	X	X	X	High wicking capabilities, hard wearing, very comfortable.
Cooling Garment	Optional	Optional	Optional	Optional	Reduced fluid loss, less fatigue, reduced thermal burden. High laundering tolerance – 300+ cycles.
Thermal Protection Layer		X	X		Lightweight and comfortable 4-way stretch material. Retains thermal protection post laundering.
Lightweight Coverall c/w AREL	X				Arm restraint system, restrains arm on ejection. Over 2000lbs maximum load achieved post 150 washing cycles.
Cold Water Immersion Garment		X	X		Lightweight, moisture vapor permeable (Fully integrated with the CB liquid cooling system) optimized for Fast Jet applications.
Flight Use Protective Layer	X		X		Lightweight hermetically sealed, optimized for Fast Jet applications.
Lower G Garment (Skeletal/Full Coverage)	X	X	X	X	Higher burst pressure than current PFE after stringent combination qualification tests. Skeletal 75,355 cycles, burst pressure over 26 psig, Full Coverage 107,650 cycles, burst pressure over 24 psig.
Sleeved & Sleeveless Flight Jacket/LPU/ARS	Optional	X	X	X	Low maintenance, economical lightweight. Automatic Inflation Unit negates the need for a JSAM carrier waistcoat. Integrates with JSAM and all pilot mounted hardware.
Breathing Gas Hose Assembly	X	X	X	X	Flexible and adjustable.
Boots	X	X	X	X	High impact toe protection variant on customer request. Dual density soles to improve durability and provide shock attenuation.
Summer Gloves	X	X	X	X	Highly durable and comfortable.
Winter/Sea Gloves*			X	X	Highly durable and comfortable.
Pilot Cooling Unit	X	X	X	X	Extends mission duration. Portable, first of its kind for fast jet applications.
HMD Transit bag	X	X	X	X	Protects HMD and visor against damage and moisture.
*Stowed in the SSK and donned post ejection					



Summer



Summer Chemical & Biological



Winter



Winter Chemical & Biological

Survitec AGILE Pilot Flight Equipment

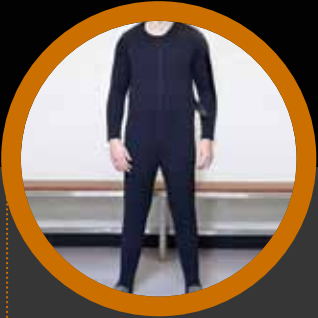
Alternative to
underwear



**COOLING
GARMENT**



**UNDERWEAR,
UPPER AND LOWER**



**THERMAL
PROTECTION LAYER**



**FLIGHT JACKET,
SLEEVED/SLEEVELESS**



**BREATHING GAS
HOSE ASSEMBLY**



ARM RESTRAINT



**SKELETAL
ANTI-G TROUSERS**



**FULL COVERAGE
ANTI-G GARMENT**



HMD TRANSIT BAG



PILOT COOLING UNIT



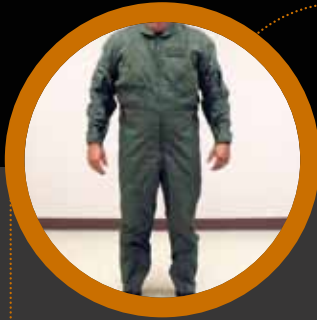
**BOOTS,
STEEL/NON-STEEL TOE**



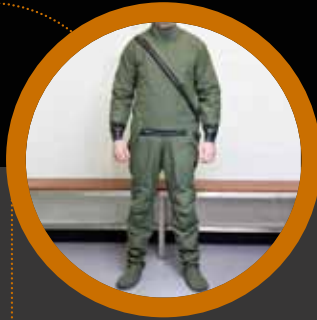


NOTE:
Helmet shown
for reference
purpose
only

Alternative for
winter requirement



**LIGHTWEIGHT
COVERALL**



**COLD WATER
IMMERSION GARMENT**



**COLD WATER
IMMERSION COOLING
GARMENT BREAKOUT**



SUMMER GLOVES



WINTER GLOVES



**BREATHING GAS HOSE
ASSEMBLY, CHEMICAL
& BIOLOGICAL**



**CHEMICAL & BIOLOGICAL
PROTECTIVE LAYER**



**CHEMICAL & BIOLOGICAL
PROTECTIVE LAYER
(TRANSIT USE, OPTIONAL)**

...Modular, fully integrated and interchangeable for maximum mission readiness and effectiveness



Unparalleled Technical Expertise

RFD Beaufort has specialised for over 90 years in the innovative design, integration, qualification and servicing of Pilot Flight Equipment. We employ a market leading qualification program which surpasses the current levels of testing conducted on PFE. We are the only company to employ simultaneous combination testing, resulting in a new standard of product integrity. Testing PFE for the F-35 has included over 70 ejection tests, UV Exposure of up to 896 MJ/m², ozone testing of 50±5 pphm at 104°F for 8 hours, rapid and explosive decompression testing to an altitude of 50,000ft and temperature testing with equipment functioning at temperatures ranging from -40 ± 3.6°F to +130 ± 3.6°F

In-House Testing Facilities include:

- Stratospheric Chamber
- Thermal Chamber
- Environmental Test Chamber
- Explosive Decompression Chamber
- Low Pressure Pneumatics Lab
- Simulated Breathing Facility
- Centrifuge Rate up to 25g
- Harness Test Rigs – up to 60g
- Materials Testing Facilities Lab
- Extensive Anthropometric Databases

AGILE PFE has been tested and qualified to the highest standards including:

- PFE Cleaning
- Ozone Testing
- LGG Endurance
- Pocket Packing Trials
- BGHA Gas Leakage
- LPU Allowable Leakage
- CG Operating Pressure/Proof Burst/Fluid Migration
- Storage Temperature Conditions
- Surrounding Air Pressure and Temperature Altitude
- Transient Temperatures
- Solar Radiation and Sand & Dust
- Humidity and Moisture
- Sulphur & Nitrogen and Salt Sea
- Fungus Testing
- Vibration / Random / Gunfire
- Fragility/Transit Shock
- Fluids Contamination
- Limit Loads
- Ejection Testing
- Cockpit Integration: CB, Ground / Flight Operation, Comfort and Mobility, Aircraft Ingress / Egress and Emergency Egress
- Man Rating
- In Water Performance
- Thermal Protection and Thermal Burden
- Parachute Suspension Trials
- Land and Sea Dragging
- Winching Trials
- Cyclic Endurance DON / DOFF
- Crash Loads

Innovation and design leveraging over 90 years...



Developed to be compatible with all US Fast Jet platforms....



Joint Strike Fighter (JSF)

The Joint Strike Fighter (JSF) Program, formerly the Joint Advanced Strike Technology (JAST) Program was established to create the next generation warfighter, compatible for a number of military applications including the Navy, Air Force and Marines.

Leveraging experience gained on other multi national aircraft programs, RFD Beaufort have ensured customer specific requirements are exceeded. This approach has been specifically developed to produce highly effective equipment for JSF that can potentially be adopted on other in-service platforms.

With its origins in several programs from the 1980s and early 1990s, the experience gained has made JSF the world's foremost multi-role fighter. AGILE PFE has been designed specifically for the JSF aircraft to fully optimize pilot comfort and performance.

From its inception, the AGILE PFE has implemented the Pilot/Aircraft interface into the entire design philosophy.





Low maintenance burden
by design...

Asset Readiness Assured

Asset readiness is fully assured as a result of our design philosophy which from the outset drives reduced through-life cost and reduced cost of ownership

Survitec Asset Management System (SAMS)

Specifically developed to support the AGILE Pilot Flight Equipment, the Survitec Asset Management System (SAMS) is a web based secure data environment to facilitate selection, management and logistical support. In order to ensure low costs and flight readiness, the Agile Communication Environment provides instant seamless logistical support Worldwide.

Designed to integrate with the F35 Joint Strike Fighter program data management tool, SAMS provides worldwide online management via secure web connections.

SAMS enables users to record pilot bio-measurements, automatically select sized equipment, track usage and schedule maintenance throughout its full life cycle.

- No distributed software, totally web driven.
- Pilot anthropometric data is captured securely
- Predicts sizing of individual items
- Tracks orders in maintenance process by location
- Automatic notification of required maintenance/certification
- Online manuals and maintenance schedules

Eglin Pilot FIT facility

Leveraging over 50 years experience in the US Air Force Aircrew Life Support career field, our specialist at the Pilot FIT facility uses numerous anthropometric measurements to ensure the pilot gains maximum comfort and highest level of protection.

Each pilot is fully fitted into every schedule including measuring/marketing of the Oxygen Gas Breathing and Anti G-Suit hoses as well as the fitting of the Arm Restraint Extension lines. All schedules and configurations are then tested in the dedicated F-35 Ejection Seat at the facility.



SURVITEC GROUP THE GLOBAL BUSINESS

WITH OVER 90 YEARS EXPERIENCE AND EXPERTISE, WE ARE
THE WORLD'S PREMIER SURVIVAL TECHNOLOGY COMPANY,
PROTECTING YOUR DEFENCE INVESTMENT, EVERY
MINUTE OF EVERY MISSION...



Survitec Group sites

RFD Beaufort Ltd (Dunmurry, UK)

RFD Beaufort Ltd (Birkenhead, UK)

Survival One (UK)

Deutsche Schlauchboot (DSB) GmbH (Germany)

Eurovinil (EV) Spa (Italy)

RFD France Sas (France)

RFD Beaufort Inc (USA)

RFD Japan Ltd (Japan)

RFD New Zealand Ltd (New Zealand)

RFD Australia Pty Ltd (Australia)

WH Brennan & Co Pty Ltd (Singapore, China, South Korea)

Seaweather Marine and Aviation Services (UK)



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