

survitec

# MK42/43M LIFE PRESERVER

A STEP CHANGE IN AIRCREW SAFETY



The Mk42/43M Life Preserver is the latest evolution in fast jet AEA, harnessing Survitec expertise and pedigree across major international fast jet programmes. Qualified and tested in partnership with UK MoD, the Mk42/43M introduces a new benchmark in pilot protection.

The Mk42/43M design ethos focussed on capturing existing equipment standards whilst advancing current performance parameters.

The result was a stepped improvement in safety, including increased in-water survivability, improved user comfort and mobility, and lower thermal burden. Each attribute has been strongly evidenced through a rigorous qualification program that has employed a component/system testing regime including self-righting & freeboard, liferaft boarding, parachute entry and drag, air blast, ejection seat tower test, flame test, full anthropometric range/multiple subjects and aircraft integration.

- ▶ **World leading in-water performance**  
Best-in-class offering 69° flotation angle, 64° face plan angle, 159mm freeboard, 1.3 seconds self righting
- ▶ **Complete inflation reliability**  
225+ inflation tests, 100% success (450+ activations)
- ▶ **Extremely robust construction**  
Fully functional after flame, air blast, ejection, rapid decompression and acceleration/crash deceleration testing
- ▶ **Extensive test & qualification program**  
Qualified to the highest UK MoD standard with over 28+ rigorous tests conducted on component level and full AEA system



The Mk42M (sleeveless) and Mk43M (sleeved) are constructed from 3 major components, the stole, pouch and waistcoat assemblies.

## FULLY MODULAR WAISTCOAT

Lightweight design that facilitates a large number of additional survival equipment



Fully flame resistant tested to 84kW/m<sup>2</sup> for 4 seconds



Greater MTP coverage than previous designs

Arm restraint lines for the protection of the wearer's arms and shoulders in the event of an ejection (Sleeved Mk43M only)

Increased anthropometric range to reduce the amount of special measures

Lightweight fabric to ensure maximum comfort, reduced mass and lower thermal burden

Stole attachment points lowered to improve stole performance

Shorter to eliminate mass of pockets on thighs

Fitted Lanyards

Improved PEC hose retention

Patented Modular Attachment Carrier System (MACS) enables customisation of modular pocketary to suit individual's requirements



## ROBUST POUCH ASSEMBLY

Incredibly durable and constructed to protect stole operation



Quick burst zipper for ease of packing



SARBE 7 Mic-Tel cable stowage

Abrasion resistance on front. Wind blast test to 600 knots equivalent airspeed (690mph)

Increased volume for stole redundancy

MDC Spatter protection on front

Abrasion/wear resistant FR Cordura panels, reduce the amount of in-service repairs



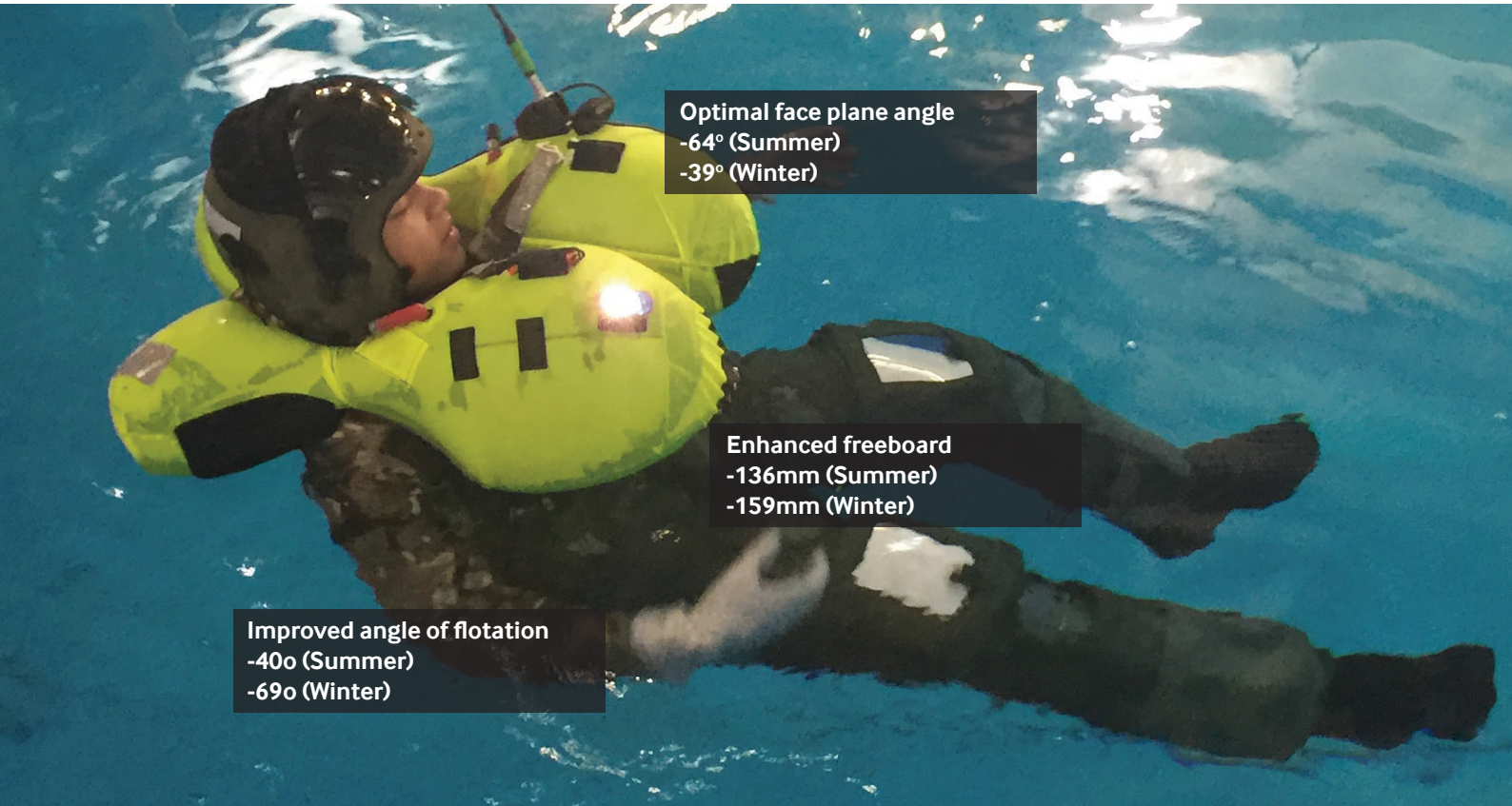
## UNIQUE STOLE PROFILE

Lobe shape optimised for maximum in water performance

Minimal buoyancy to front of shoulders maintains clearance between parachute risers and inflated stoles

Multi-role restrainer accommodates SARBE 7 and G2R PLB antennas and will accept EPLB

CO2 cylinders mounted inside bladders for protection and rapid inflation



Optimal face plane angle  
-64° (Summer)  
-39° (Winter)

Enhanced freeboard  
-136mm (Summer)  
-159mm (Winter)

Improved angle of flotation  
-40° (Summer)  
-69° (Winter)

Tested with 4.2kg of pocket content and full AEA ensemble (total buoyancy 350N)

Dual redundancy stole with 2 independent stoles. 1 stole still offers wearer up to 70% buoyancy

Stoles housed inside restrainer allows greater flexibility for in-service modifications

## UNIQUE LOBE SHAPE/PROFILE



Lobe size optimised for self righting performance  
1.3 seconds (summer)  
2.2 seconds (winter)



Stretch panel adapts to individuals upper body structure to offer greater support around neck/helmet.



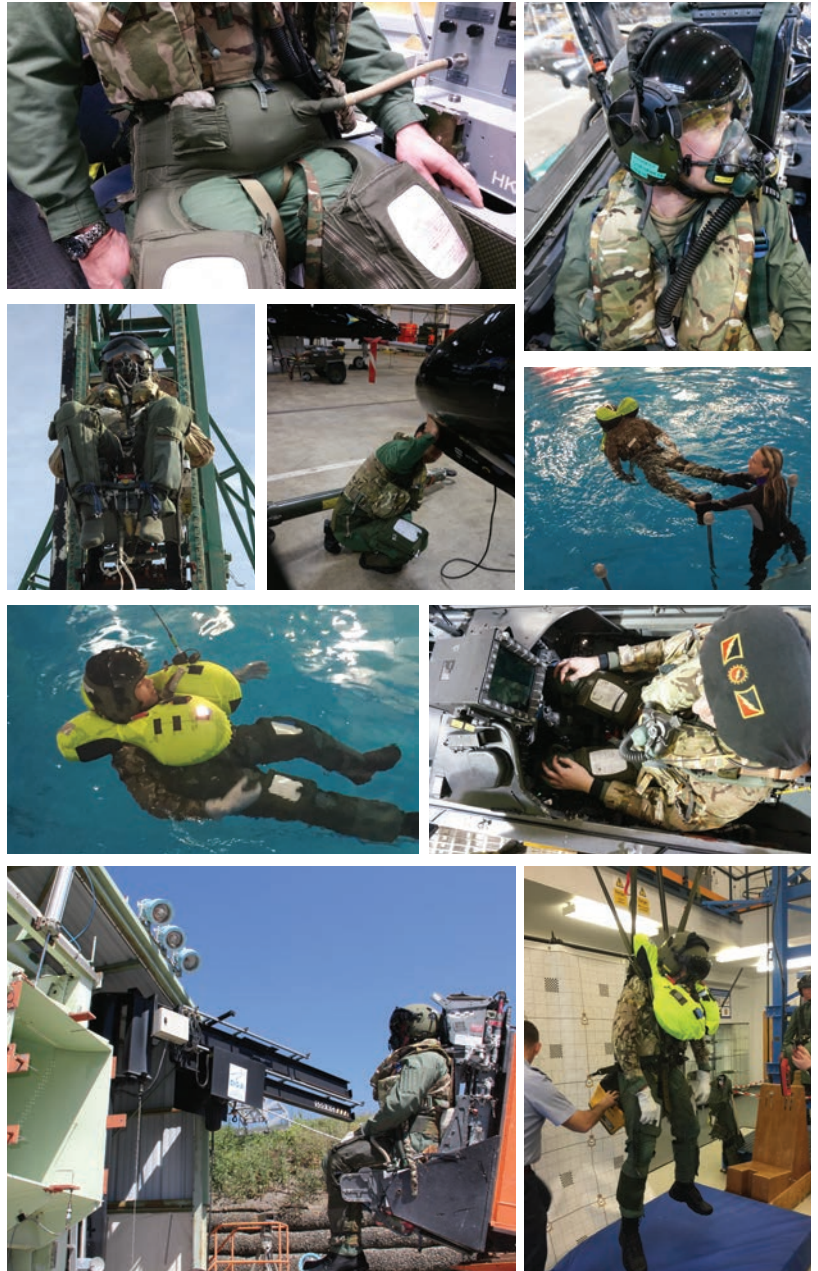
Reduced buoyancy/volume to rear of neck to improve head mobility when worn with a helmet

# WORLD LEADING TEST & QUALIFICATION PROGRAM

50% OF TESTS CONDUCTED IN-HOUSE, UTILISING SURVITEC'S UNIQUE LIFE SUPPORT TEST FACILITIES

## RAPID RESPONSE, COMPREHENSIVE TESTING, TIMELY COMPLETION

- Fluids Contamination
- Total Buoyancy
- Fungus Resistance
- Lifting Becket
- PSP Lanyard Load
- Salt Water Immersion Test
- Cold Temperature
- Aircraft Integration
- Life (Buddy) Line Load
- Thermal Resistance
- Lifting Becket/Immersion Test
- Water Survival
- Chromaticity Coordinates
- Electric Static Discharge
- Colour Fastness
- Pocket Packing/Scaling
- Manual Inflation Operation
- Parachute Suspension, Inversion and Man-seat Separation



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## LIFE PRESERVER TESTED AND **FULLY FUNCTIONAL** AFTER THE FOLLOWING TESTS WERE CONDUCTED

- Flame Test – Flame Resistance
- Temperature/Humidity/Altitude
- Rapid Decompression
- Wind Blown Sand and Dust
- Salt Spray Test
- Air Blast Resistance
- Storage
- Tower Test
- Acceleration/Crash Deceleration
- Centrifuge

# FULLY QUALIFIED FOR FAST JET AIRCRAFT

## MK42M

DESIGNED FOR USE  
ON THE HAWK T1 &  
TUCANO



## MK43M

DESIGNED FOR USE ON THE  
TORNADO GR4 AND HAWK T2  
AIRCRAFT.

MK42B Rotary and Large Fixed wing variant coming soon



## GET IN TOUCH

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