

# Concept Aircraft Leak Testing System



- NATO codified NSN 4920 99 260 8728
- Rapidly locates leaks in aircraft fuselages
- Allows "ranking" of leaks
- Non contaminating
- Non toxic
- Can utilise aircraft's own 115v 400-450 Hz supply

## Specification : Concept ALTS

Size (cm)- Generator only In Flightcase	42 x 18 x 35 54 x 54 x 60
Weight (kg)-Generator only In Flightcase comp.	13 49
Heat Exchanger (w)	1100w
Power Supply	110VAC, 50-450Hz
Warm up time from cold (min)	4
Duration at max output before refill (minutes)	40
Smoke output (m <sup>3</sup> /min @ 1m visibility)	0-150
Smoke Reservoir capacity (nominal ml)	1300
Smoke Particle dia (micron, mass median dia)	0.2 with a GSD circa 1.35
Optimum / Max gas pressure (bar)	6.9 / 8.2
Remote operation	Included with every model

The ALTS was developed by Concept for the Royal Air Force to enable the fast and accurate leak testing of its wide-bodied aircraft.

The ALTS produces a sub-micron, non-contaminating, artificial smoke (entrained in inert carrier gas) in the aircraft fuselage, utilising the aircraft's own 115v 400-450 Hz supply. The unit will also operate on 50 Hz.

The unit uses the same chemical smoke type that has been used for over 30 years in the aircraft simulator environment.

Once the fuselage is filled with smoke to a dense concentration (typically a visibility through the smoke of 0.5m), a process that takes only a few minutes, the aircraft is pressurised.

An examination of the exterior of the aircraft rapidly reveals not only the areas of leakage, but allows the "ranking" of leaks (the bigger the leak, the greater the amount of smoke being visibly emitted).



### The ALTS system is supplied with:

- ALTS smoke system 110v 50/450hz
- CO2 cylinder 2kg
- CO2 regulator
- 5 litre Smoke Oil 135
- Low Voltage Remote Control System
- Flight case

### The RAF concluded in their assessment of the Concept ALTS:

"Use of smoke as a means by which to detect cabin pressurisation leaks has been shown to be extremely effective and is unquestionably superior to any alternative detection method used to date"

## Concept Engineering Limited

7 Woodlands Business Park, Woodlands Park Avenue,  
Maidenhead, Berkshire, SL6 3UA, UK

(t) +44 (0)1628 825555 (f) +44 (0)1628 826261

(e) info@conceptsmoke.com

[www.conceptsmoke.com](http://www.conceptsmoke.com)

