

Airside equipment protection

optimized all-weather housings for navigation, radar & airport applications



INTERTEC™ produces specialized environmental protection enclosures and shelters for housing electronics and electrical equipment required at airports - including frangible shelters for navigational systems, and enclosures, cabinets and shelters for radar systems, and runway lighting/electrical equipment. In addition to meeting special requirements such as frangibility for passive safety, Intertec enclosures offer airport infrastructure designers advanced protection performance and lifecycle attributes thanks to construction from a unique composite material. The composite is a 'sandwich' of high-performance GRP (glass fiber reinforced polyester) sheets enclosing internal insulation, plus gel-coat surface protection. It is particularly advantageous wherever there are extreme climates such as in the Middle East and Asia Pacific.

Composite-GRP outperforms. Intertec's composite 'sandwich' construction material has proven to be highly superior for protecting outdoor equipment. Intertec has designed and shipped over a million enclosures to protect equipment operating in the most demanding environments - from Polar regions to deserts.

Metal is commonly used for enclosures. Intertec's composite is almost as strong as stainless steel yet is some 75% lighter. Its low mass makes it ideal for protecting equipment in ways that meet ICAO guidelines. In addition, it offers exceptional resistance to 'corrosion' - it does not rust or degrade in any meaningful way, allowing maintenance-free lifecycles of 30 years. A benefit of Intertec's unique approach is an advanced surface 'gel-coat' which is much thicker than the paint sprayed on metal. It protects against extreme levels of UV, and is also highly effective against abrasion - offering outstanding resistance to dust/sand storms for instance.

Another attribute - compared to metal - is very high thermal resistance. An internal insulation layer greatly reduces the energy required to heat or cool equipment. Intertec's composite also makes it easy to build enclosures that have no 'thermal short cuts' - conductive links between interior and exterior - avoiding cold-spots (or hot spots) that lead to condensation.

Custom specifications? Intertec offers standard housings, but also a unique custom manufacturing service that allows designers to optimize heights or profiles. Intertec will also tailor characteristics of the composite material to suit applications. Options include:

- Fire safety (up to 120 minutes)
- Heat resistance (to 160C)
- Proof against wind, blast, quake
- Explosion proof, antistatic
- UV and corrosion resistance
- Extreme insulation (Arctic grade)
- Up to IP68 ingress protection
- Active, passive or hybrid cooling
- Wireless friendly, or EMC shielded

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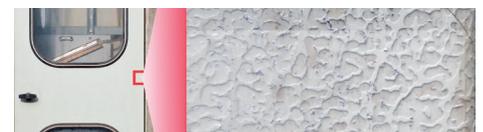
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Ultra-long life anywhere! This Intertec cabinet's gel-coat survived 40 years in an atmosphere containing sulphuric acid; the surface (right) is still intact with only minor thinning.

Advanced performance, maintenance-free longevity

Frangible construction

Fire retardant



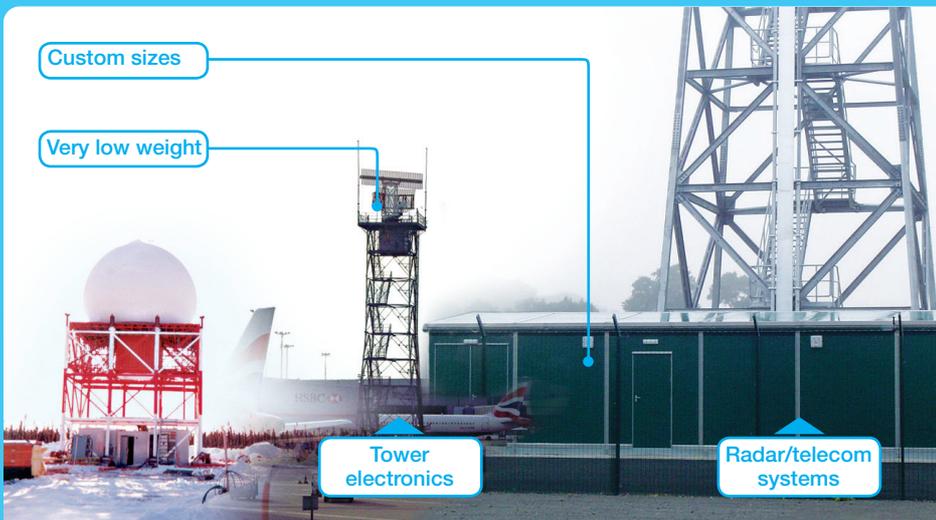
Runway ILS

Frangible shelters

The composite material's low mass and light weight makes it ideal for equipment protection applications close to runways - meeting ICAO's passive safety frangibility design guidelines. It folds easily in the event of an impact, collapsing and disintegrating without generating sparks, and is also naturally fire retardant with so-called 'self extinguishing' properties that limit flame spread. The composite material can be constructed with embedded EMC shielding if required. Applications include ILS systems, marker beacon stations, DME, VOR/DVOR, TACAN...

Custom sizes

Very low weight



Tower electronics

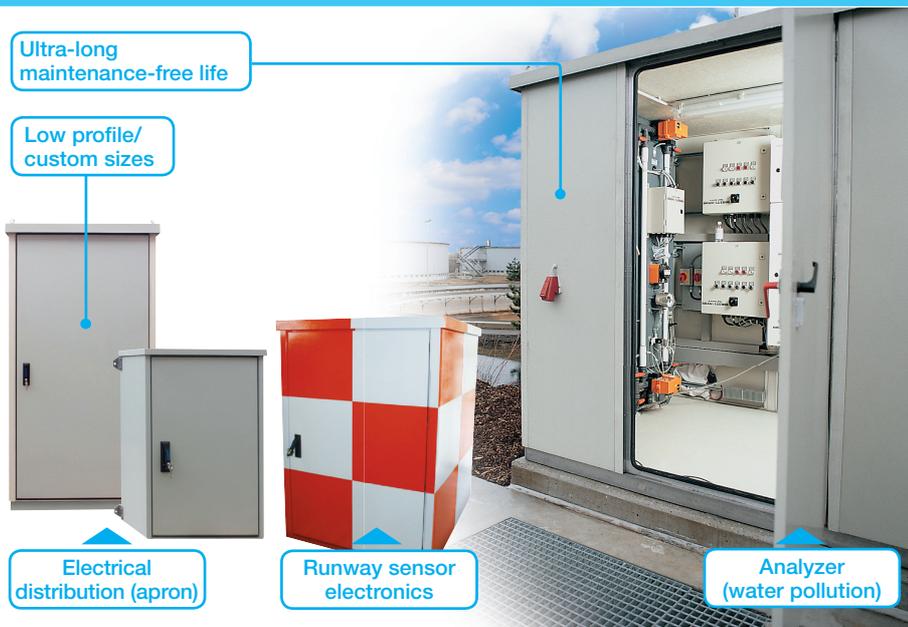
Radar/telecom systems

Radar shelters and cabinets

Intertec offers all the housing styles required for protecting electronics equipment used in airport radar installations for traffic control, surveillance etc. These include walk-in shelters for the main radar electronics, cabinets for power/UPS systems, and enclosures for drives and other equipment located in the tower - close to the antenna. The light weight of composite GRP makes it particularly suitable for protecting any delicate equipment mounted on towers. Intertec is also able to manufacture ground-based shelters and cabinets to virtually any size and shape - helping to minimize the footprint of stations sited in sensitive locations close to taxiways, aprons, etc.

Ultra-long maintenance-free life

Low profile/
custom sizes



Electrical distribution (apron)

Runway sensor electronics

Analyzer (water pollution)

Electrical/electronics cabinets

The exceptional durability of protection enclosures fabricated from Intertec's composite GRP provides a major advantage for airports, especially for sensitive safety-related applications close to runways, taxiways and aprons such as cabinets for lighting switchgear. The material ensures that cabinets combine environmental protection with highly extended and maintenance free lifecycles. And inside the enclosures, the exceptional degree of insulation and dry temperature stability delivers an optimal operating environment - minimising the possibility of disruptive and expensive maintenance visits. Intertec's custom manufacturing service also gives infrastructure designers new possibilities. It allows passive safety capability to be complemented with shape and size optimization - to further reduce the risks of an impact.

Total design flexibility: size, doors, windows, mounting, heating/cooling, painting...