

Smart City

Outdoor Shelters and Enclosures



Many different utility cabinets have accumulated along roadsides, which is detrimental to the appearance of any city; especially when they show obvious signs of corrosion. And with the implementation of the Smart City concept, many more networks on IOT basis will be added to the existing infrastructure. INTERTEC provides the groundwork for this trend with modular all-in-one cabinet solutions.

- Many functions and segments in one cabinet
- Expandable, modular cabinets at central positions replace many individual enclosures
- Reduction of excavation work due to a common cable base
- Rigid construction of corrosion-resistant GRP compound material provides sustainability through long service life
- Application-specific options like HVAC or anti-graffiti coating





Applications

Since the advent of the Internet of Things and applications of Industry 4.0 in the public sector, an increasing number of highly sensitive electronics are being installed outdoors, distributed throughout cities and across the countryside:

- Traffic monitoring control
- Car-to-X communication
- Mobile communication networks: 5G, Wi-Fi
- Video surveillance
- Energy supply, smart grids
- Energy storage systems, battery storage
- Street lighting control units
- Railway, subway
- Tunnel monitoring and control systems
- Airport electronics
- Water and sewage management
- Floodgate control electronics and hydraulics

INTERTEC offers tailor-made enclosures, cabinets or shelters with reliable protective properties for any application. All enclosures and shelters are available in a variety of custom shapes, sizes and colors.

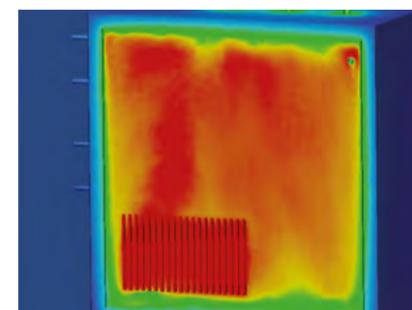
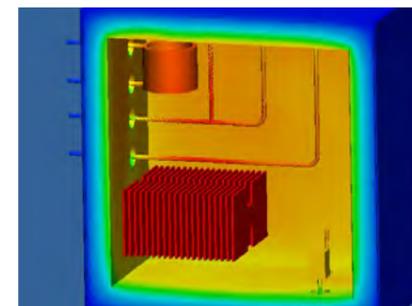
An experienced team of engineers and CAD designers works in close collaboration with the client to match the enclosures to the equipment and fit them in the available space.



To create uniform conditions inside an enclosure, INTERTEC makes sure that they are properly thermally insulated, heated and/or cooled, just like a building. Thermal bridges are particularly harmful, as temperature gradients and condensation in these areas endanger the function of installed electronics.



These Computational Fluid Dynamics diagrams illustrate the temperature differences between a composite GRP enclosure and a steel one:



The inside of the bonded GRP enclosure (top) retains a uniform temperature whereas the inside of a metal cabinet (bottom) with the same thickness of insulation has an uneven temperature distribution due to the high thermal conductivity of the metal walls and screw connections.

Why GRP?

INTERTEC was founded in 1965 with the idea of using high-tech long fibre reinforced composites for protective cabinets and enclosures. GRP is a rigid, yet lightweight glass-fiber reinforced polyester with many inherent benefits for outdoor applications.

- Same strength as steel with less than half the weight
- Exceptional thermal insulation
- Condensation proof
- Leakage proof
- Electromagnetically “transparent” for wireless applications
- Corrosion resistant
- UV-resistant

Thanks to its stability and resistance, GRP enclosures enjoy a comparatively long service life of over 30 years with little to no maintenance required.

The properties and designs of our solutions can be tailored to every application. Options include:

- Protection class up to IP68
- HVAC
- Antistatic coating
- Anti-graffiti coating
- Protection against storms (up to 240 km/h), shock waves or earthquakes
- Frangible construction (for airports)

INTERTEC offers more than you can see.

- Thermally insulated cabinets, enclosures, covers and shelters
- Enclosed instrument hook-ups
- Analyzer houses
- Fire protection boxes
- Heating, ventilation, cooling

- Quality engineering
- Proven designs
- CAD
- Calculations
- Easy integration
- Reliable and long-lasting operation of electronics
- Fire protection
- Explosion protection
- Comprehensive documentation
- Relevant certification
- Procurement & logistics
- Low total cost of ownership

Since its founding over 50 years ago, INTERTEC has grown to a worldwide engineering and sales organization with locations in Germany, Canada, Russia and the United States. To provide technical solutions for grassroots projects and existing MRO markets, INTERTEC has a sales partner network spanning 31 countries around the globe.

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