

# Fiberglass Reinforced Polyester vs. Carbon Steel Enclosures

## FRP Enclosures Can Provide a Savings

Fiberglass reinforced polyester enclosures have a proven history of providing a more economical choice for outdoor control panels when considering the application lifecycle. Even though there may be a slightly higher initial product cost with FRP than carbon steel, FRP has lower installation costs, less modification costs and longer product life...all adding up to a **"lower overall lifecycle cost"**.

## FRP and Carbon Steel Applications



## Comparing the materials

### Fiberglass Reinforced Polyester

- Resists a broad range of chemicals, unaffected by moisture and provides resistance to UV rays.
- Lighter weight, lower shipping costs and easier to install in wall or pole mounted applications.
- Nonconductive and is an insulator, provides a safe barrier and protection for the general public.
- Provides sufficient impact resistance and will maintain a sealed closure for electrical equipment.
- Molded in color, no painting or coating required.
- Lower installation cost and longer product life (~10 times).
- Transparent to radio waves and EMI/RFI transmissions, used for radar and antennae enclosures.
- Easier to modify; for required holes or electrical service entry, easier to punch, drill or saw with lower associated costs. Also easier/safer to modify or repair without need for arc welding in hazardous areas.
- Material has no residual scrap value, enclosure control panels are less susceptible to vandalism.

### Carbon or Mild Steel

- Subject to oxidation and corrosion. Requires painting or coating for outdoor applications.
- More susceptible to rust when scratched or abraded.
- Sharp edges on steel boxes can be injury points.
- Over 4 times the weight as compared to FRP, much more difficult for one person to lift and install a wall mount enclosure.
- Conducts electricity. Grounding potential.
- Can permanently deform and lose seal under impact
- Must be painted to provide resistance to moisture and other corrosive environments. Maintenance is required.
- Can interfere with EMI/RFI transmissions.
- Lower initial cost but only will last 1-2 years before maintenance is required or replacement.
- Material has residual scrap value, more susceptible to vandalism.