



TOP NINE

ELECTRICAL CONDUIT PROJECT PLANNING CONSIDERATIONS FOR DATA CENTERS

As reliance on the Internet of Things (IoT) surges, activities are increasingly dependent on data centers behind the scenes as they handle mission-critical data and processes for business, government and organizations. As a result, data center construction is growing.

Fiberglass conduit elbows are key components of a successful data center build. They offer next-level protection for these hubs of technology that are extremely cable heavy. As data center design maximizes server space, fiberglass conduit elbows must support an increasing amount of heavy cable while minimizing burn-through as they carry subterranean wire and cable to surface and upper levels of data centers.



Discover key considerations
for data center projects.



TOP NINE CONSIDERATIONS WHEN PLANNING A DATA CENTER PROJECT

1. Burn-through

Burn-through can be a detriment to data center projects due to the amount of cable and wiring involved in the project. How will you address burn-through?

When beginning a project, consider specifying a product like fiberglass conduit elbows that do not burn-through like PVC conduit, thus preventing costly repairs. Durable fiberglass conduit that is not susceptible to burn-through protects cable and minimizes repairs.



2. Cable Fault

How will the conduit in your data center project stand up against cable fault? Cable replacement is easy in data centers with fault-resistant conduit.

When comparing PVC, galvanized rigid steel, PVC-coated steel and aluminum, fiberglass conduit is the only conduit that does not melt or weld the wire to the inside of the conduit, allowing cables to be easily pulled-through for replacement and repairs. Fiberglass conduit ensures long-term protection for data centers.



3. Conductivity

Considering the amount of wire and cable in data center projects, electrical conductivity deserves special consideration. Unlike galvanized rigid steel and PVC-coated steel, fiberglass conduit acts as an excellent insulator keeping installers safe from electrical injuries.



4. Coefficient of Friction

Fiberglass conduit elbows possess one of the lowest coefficients of friction of any conduit system - .38 compared to .55 for PVC-coated steel and galvanized rigid steel and .90 for SCH 40 and SCH 80 PVC. Fiberglass conduit's low coefficient of friction allows for longer conduit runs with fewer pull boxes. This enables a faster, smoother pull with less labor time, cost and risk. Additionally, cable-pulling lubricants have no detrimental effects on fiberglass conduit.



5. Installation

Are there any special installation concerns in your data center project? Will the conduit be direct buried, encased buried or installed above ground?

Fiberglass conduit boasts the lightest weight out of PVC, galvanized rigid steel, PVC-coated steel and aluminum. This makes for not only a smooth installation, but also easy transportation to the site and portability in the field. Additionally, ease of cutting and integral bell means faster installation. In most size categories, fiberglass conduit installs faster than PVC, galvanized rigid steel, PVC-coated steel and aluminum, per the NECA Manual of Labor Units.

6. Elbows in many radii

Got a complex project, requiring various sizes of radii?

Conduit elbows play a key role in bringing underground wire and cable to surface and upper levels of data centers with stub-ups. For problem-free specifying, look for a provider offering the flexibility of a **variety of radii**. Some conduit providers even offer expedited shipping for elbows so they are ready **in 48 hours**.



7. Cost

Would you like to stay within budget and save money on your project? Because of its light weight, easy installation, and lower upfront costs, fiberglass conduit typically translates into significant cost savings.

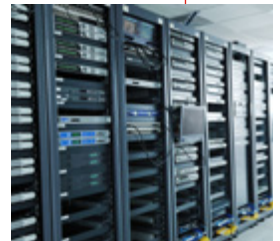


Fewer materials required translates into cost savings.



8. Protect High-tech

In-the-know engineers, project owners and contractors depend on fiberglass elbows' ability to withstand cable burn-through, tolerate electrical faults and guard against underground corrosion. Data center designers appreciate the cost efficiency of the product and its installation. For data centers, fiberglass elbows offer a durable, cost-efficient product companies can trust to safeguard assets.



9. See it in action

Get the numbers on how **Champion Fiberglass elbows saved one data center customer over \$470K.**

