



Cable-in-Conduit

Armored Duct

Air Pipe

TeleComm Duct

**Low Smoke Zero
Halogen (LSZH) Duct**

Hi-Tensile Duct

JETnet®

Ducted Systems



Ducted Systems by Draka – Avoid Trouble, Save Time and Money

Rugged, economical Tamaqua® duct and ducted cables (also called cable-in-conduit, or CIC) are designed to offer superior cable protection and flexibility in usage both for your immediate installation and for years to come.

Durable

Consider the inherent toughness of Tamaqua® duct. Over 25 years of successful installations have proven its stability, strength and longevity. It offers excellent resistance to impact, environment, abrasion, moisture, acids, alkalis, salts, detergents and chemicals.

Versatile

It can be installed aerially, direct buried or plowed or pulled into an existing underground system.

Performance Tested

Tamaqua® duct is guaranteed to meet or exceed performance tests in the latest edition of NEMA Standards Publication TC-7 and ASTM Standards D3485 or D2447, and UL 651A where applicable. The material complies with ASTM D3350.

Efficient

Tamaqua® duct has a low coefficient of friction, requiring less pulling tension and reducing the need for expensive pulling equipment. Special material formulations keep Tamaqua® duct from becoming brittle at low temperatures, allowing more opportunities for installation. While Tamaqua® duct is easy to splice and repair, it is also manufactured in long lengths so most installations can be done as one uninterrupted length of solid, smooth duct.

Protective

CIC multiplies the advantages of duct. When cable is pre-installed in duct, it is given extra protection during shipment. When installed, CIC experiences far fewer failures than direct buried cable. There is no cable damage during installation since pulling on site is eliminated.

Economical

CIC can save up to 40% in installation time when compared to other duct systems and/or direct burial methods requiring trenching. Installation costs can be further reduced when you plow-in CIC. Flexible HDPE conduit saves time and money by eliminating costly elbows and transition fittings, allowing exact lengths, reducing waste. No need for expensive pulling or blowing equipment. Buy only the cable you need and no more.

Adaptable

The cost of labor to upgrade a cable in CIC is approximately 1/3 that of replacing almost every type of direct buried cable. Where codes permit, Tamaqua® CIC also provides an economical route for joint service installation with other cable types.





Cable-in-Conduit (CIC)

Almost any type of cable can be pre-installed in duct (also called cable-in-conduit or CIC) including power, control and signal wire, coax, fiber optic and airport lighting.

CIC is made of high density polyethylene. Sizes range from 1/2 inch (13mm) to 3 inches (76mm) and are manufactured in accordance with NEMA Standards Publication #TC7 and ASTM D3485.

If a more rugged duct is required, Schedule 40 or Schedule 80 dimensions in ASTM D2447 are used. This material is tested in accordance with ASTM D3350. All duct constructions are available with extruded stripes or custom color, as well as low smoke zero halogen.

For NEC and non-NEC applications, our ducts have been subjected to requirements detailed in UL 1990, Non-Metallic Underground Conduit with conductors and subsequently UL listed for a range of products.



Low Smoke Zero Halogen (LSZH) Duct

LSZH duct was created per customer request for use in transit tunnels, passenger stations and any other locale where reduced smoke and the lack of halogen gases is desirable.

When Draka's engineers were designing LSZH duct, we started with the specifications outlined in NEMA TC7 and improved upon them. The result was a safe, smoothly installing duct ranging in size from 1/2 inch (13 mm) up to 3 inches (76 mm) in diameter.

LSZH duct is available in a variety of colors, with extruded colored identification stripes as an option. It is available empty, with installed pull lines or preinstalled with the cable of your choice.



Armored Duct

We offer armored duct for when exceptional mechanical protection (especially in the case of potential rodent attack or environments of high crush potential), is required. Metal-encased double-walled duct combines superior strength of steel armor with the low pulling friction and low dielectric constant (and lightning resistivity) of HDPE ductwork.

Our PEST duct places a longitudinally-applied 6 mil corrugated steel tape between HDPE inside duct and outer jacketing. Inner diameters range from 3/4 inch (19 mm) up to 2 inches (51 mm).

Our robust GILA duct uses a 25 mil interlocked steel armor to shield cable from severe physical forces and the threat of intrusion. Inside diameters range from 3/4 inch (19 mm) up to 3 inches (76 mm).



TeleComm & Hi-Tensile Duct

These are Draka's industry standards for underground and aerial installation of fiber optic telecommunications cable where extra mechanical protection is necessary. They feature thicker-than-normal walls reinforced with aramid fiber resulting in higher pulling tensions than traditional PE ducting so as to stand up to the rigors of plowing (this duct is not recommended for 'plow pull' installations).

Telecomm duct ranges in size from 1 inch (25 mm) up to 2 inches (51 mm). Hi-tensile duct ranges in size from 1 inch (25 mm) up to 1 1/4 inches (32 mm).



Air Pipe

Dry air is used to keep moisture from collecting on and attacking underground cables.

A steady supply of dry air is distributed through our air pipe beginning at the centralized source and maintained by manifolds throughout the system.

Our air pipe is offered in both 1/2 inch (13 mm) and 1 inch (25 mm) diameter constructions. Both offer an aluminum tape armor and an HDPE outer jacket.

Our air pipes meet all appropriate Telecordia standards.

Also available in an armored version.



Additional Cabling Capabilities

Draka is a specialty and custom manufacturer supplying 600V to 5KV single and multiconductor cables for industrial, utility, residential, and OEM markets. Because of our efficiency and customer orientation, we are particularly capable of designing and supplying cables to meet particular needs dictated by application, environment, installation considerations or system design. Combine any of the following components to make the cable you require:

Cable sizes:

Multiconductor cables (2 to 50 conductors) manufactured in-house from #18 AWG to 4 conductor 500 kcmil or 3 conductor 750 kcmil with grounds.

Conductors:

Broad range of bare and coated copper, solid to fine wire flexible stranding, #18 AWG through 1000 kcmil.

Insulations:

Standard and special polyvinylchlorides (PVCs), ethylenepropylene rubber (EPR), cross-linked polyethylene (XLPE), PE/PVC and PVC/nylon.

Shield types:

- Helically-applied aluminum/polyester, bare or coated copper, or coated aluminum.
- Longitudinally-applied corrugated aluminum or copper shields, which can be coated for tighter bonding to the outer jacket (such as ALBOND®). These offer better longitudinal strength and cut-through resistance, a superior moisture barrier and an excellent grounding path.
- Bronze, bare or coated copper braid.

Jackets:

Polyethylene (PE), polyvinylchloride (PVC), chlorinated polyethylene (CPE), chlorosulfinated polyethylene (CSPE), neoprene or low-smoke polyolefin

Armor:

Galvanized steel or aluminum interlocked armor applied with or without jackets.

Cable-in-Conduit:

Flexible high-density PE duct in a variety of wall thicknesses ranging from thinwall TC-7 to heavy walled Tele-Comm duct. The duct is composed of high-density polyethylene, meeting the requirements of ASTM D 3350. The sizes range from 1/2" (13 mm) to 3" (76mm) and up to 30,500 ft (9.3 km) in length. Any cable type (copper, aluminum, coax, fiber) can be installed in duct.

Flexible, economical and adaptable for future use, Draka systems are easily designed to fit your specific placing application and depending upon construction methods being used, Cable-in-Duct can provide a cost savings of between 25-40%.