ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Blowpipe fiber optic cable



Overview

Fiber Optic Cable Blowing Procedure: Full Guide (2024)What Is The Fiber Optic Cable Blowing Procedure?

Maximizing Its PerformanceBlowing vs Pulling Cables.

Key Takeaways

Fiber optic cable blowpipe installation uses compressed air to propel lightweight fiber cables through pre-installed ducts, offering a flexible, fast, and low-damage deployment method.Overview of the Blowpipe Method

Fiber optic cable blowing, also known as air-blown fiber installation, involves installing a microduct or conduit system first, then using compressed air to push the fiber optic cable through the ducts at a later stage . This method is widely used in FTTH (Fiber-to-the-Home) rollouts, commercial buildings, data centers, and campus networks due to its scalability and minimal disruption during installation .

Key Components
• Blowing Equipment: Machines generate compressed air to propel the cable. Models range from portable units for small projects to large machines for extensive installations. Some machines, like the Tornado or Gulfstream series, can handle cables from 0.23 to 1.25 inches in diameter and ducts from 5mm to 63mm .

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• Fiber Optic Cables: Air-blown cables are lightweight, flexible, and low-friction, designed to navigate bends and turns in ducts. They can be single-mode or multi-mode and often use EPFU (Enhanced Performance Fiber Unit) for easy replacement and expansion .

• Ducts and Microducts: Typically made of HDPE or durable materials, ducts are pre-installed underground or overhead. Microduct systems allow future expansion by blowing additional fibers without replacing the infrastructure .

Installation Procedure

• A few hundred meters of cable are initially pushed into the duct using a pushing device or tractor mechanism.

• Compressed air is then injected at the duct inlet, creating a high-speed airflow that propels the cable through the conduit .

• A blowing head with seals grips the cable, ensuring smooth movement while minimizing friction.

• Lubricants may be applied to reduce friction further.

• Proper conduit sizing is critical: the duct should be slightly larger than the cable to reduce air pressure requirements and prevent damage .

• Temperature control is important; cold cables or air can make the cable brittle or cause condensation, risking damage .

Advantages

• Reduced risk of cable damage during installation.

• Flexible network expansion: additional fibers can be blown in later.

• Spare capacity in multi-duct systems.

• Minimal disruption in urban or live environments.

• Faster installation compared to traditional pulling methods .

Considerations

• Avoid excessive air pressure to prevent cable damage.

• Respect the minimum bend radius of the cable to prevent kinks.

• For very long conduits, air pressure may be insufficient, and pulling methods may be preferable .

• Indoor installations often use halogen-free flame-retardant cables for fire safety .

Fiber optic cable blowpipe systems are ideal for scalable, low-risk, and efficient fiber deployments, particularly in environments where future expansion or minimal disruption is required. Proper equipment selection, duct sizing, and adherence to installation best practices ensure a successful and durable fiber network.

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Article Content

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What Is The Fiber Optic Cable Blowing Procedure?Maximizing Its PerformanceBlowing vs Pulling Cables: Which Is Better?How Do You Bury Fiber Optic Cable in A Blowing Installation?How Do You Pull Fiber Optic Cable Through A Conduit?Essential Fiber Optic Cable Blowing Procedure EquipmentIts Benefits on Fiber Optical NetworksLearn More About The Fiber Optic Cable Blowing MethodIn a fiber optic installation, the cable is typically laid in an underground conduit to protect the cable jacket. The blowing head is inserted into the conduit, and the fiber optic cable is fed through it. The air pressure from the compressor pushes the fiber optic cable through the conduit and into place.See more on thenetworkinstallers americantechsupply

Fiber Cable Blowing Equipment - American Tech Supply

Air blowing fiber, also known as jetting fiber, is an efficient way to install fiber optic cable and facilitates future expansion of optical

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