

Fiber Optic Cable Blowing and Laying Applications



Article Overview

Fiber optic cables can be efficiently installed using blowing (air-assisted) or traditional pulling methods, with blowing preferred for long distances and complex duct routes due to reduced friction and mechanical stress.

Blowing Method

Cable blowing, also known as jetting, involves installing fiber optic cables into pre-installed ducts using high-speed airflow combined with mechanical pushing. Initially, several hundred meters of cable are pushed into the duct using a pushing device or tractor mechanism. Compressed air is then injected at the duct inlet, creating a floating effect that reduces friction between the cable and duct walls, allowing longer installation distances with minimal mechanical stress. Key considerations for blowing include:

- **Duct Fill Ratio (DFR):** The ratio of cable diameter to duct inner diameter should be optimized (typically 30–80% depending on cable type) to prevent buckling and maximize blowing distance.
- **Cable Selection:** Low-friction jackets (HDPE or Polyimide) perform better than LSZH or LDPE in air-assisted installations.
- **Equipment:** Blowing heads, air compressors, and traction rollers are used. A piston or bullet may be attached to the cable front to assist movement.
- **Environmental Factors:** Temperature affects cable flexibility and air density; cold conditions can make the cable brittle or cause condensation issues

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Installation of Optical Fiber Cable by Blowing/Jetting

Abstract This application note discusses fiber optic cable installation by blowing technique, the factors effecting blowing performance

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Cable blowing machine

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Air-Assisted Installation Considerations

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Cable jetting

Cable jetting is a technique to install cables in ducts. It is commonly used to install cables with optical fibers in underground

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Fibre Optic Cable Blowing & Splicing Guide

This document provides a method statement for fibre optic cable blowing by jetting method and splicing/testing. It discusses the

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Fibre Optic Cable Blowing

The cable blowing machine, comprising an air box and cable pusher, has been designed to provide an effective and safe method of

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