Knet Product Introduction Series

THE KNET MICRODUCT SERIES #2!

Maximize What You Already Have: Fiber Upgrades with KNET Microducts.

Direct Installation & Subducting Solutions with KNET Microducts Optimize Existing Infrastructure for Rapid Fiber Expansion.

INTRODUCTION

As demand for high-speed broadband continues to grow, service providers face the challenge of expanding fiber networks efficiently and cost-effectively. Subducting and Direct Installation—the process of installing microducts within existing duct pathways—offer a scalable solution for fiber deployment without the need for costly and disruptive new construction.

By leveraging existing infrastructure, these methods enable seamless fiber expansion with minimal environmental impact and reduced deployment time.

Why Choose Microducts for Existing Pathway?

- **Maximized Duct Utilization** – Installing multiple microducts within a single conduit significantly increases fiber capacity, optimizes existing pathways, and reduces the need for new ducts.
- **Effortless Fiber Expansion** – Operators can incrementally deploy fiber, scaling networks as demand increases without additional excavation
- **Cost-Effective Deployment** – Utilizing existing duct space reduces civil engineering costs and shortens installation time, making fiber expansion more economical.
- **Optimized for Jetting Performance** – Advanced low-friction microducts ensure smooth, efficient fiber installation via air-blown jetting, reducing labor costs and improving installation efficiency.
- **Reliable & Durable Design** – High-quality, flexible materials provide superior protection against environmental and mechanical stresses.

Use Cases & Applications

- **Telecommunication Providers & ISPs** – Expand fiber networks efficiently in dense urban environments.
- **Municipalities & Smart Cities** – Optimize underground infrastructure for broadband connectivity.
- **Enterprise & Data Centers** – Enable high-density fiber installations with minimal disruption.
- **Rural Broadband Deployment** – Leverage existing pathways for cost-effective rural fiber expansion.

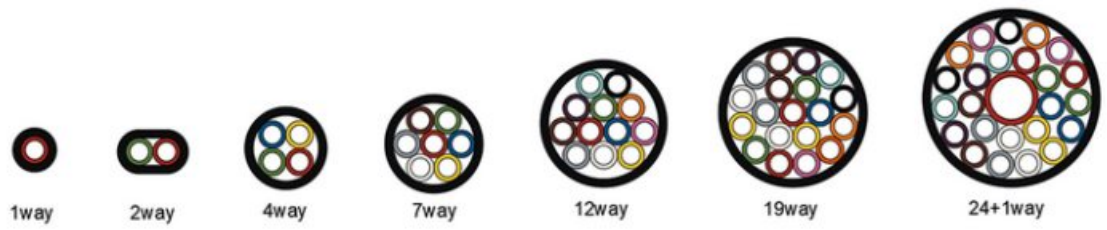
SUBDUCTING SINGLE TUBE

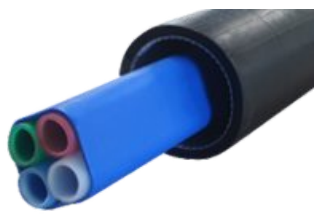
Subducting - **Jetting** Microduct into existing pipe

KNET’s single-tube microducts are engineered for jetting directly into existing conduits or pipes, offering a versatile solution for both active upgrades and future-ready fiber expansion. Available in a range of diameters, wall thicknesses, and colors, these microducts support a wide variety of subducting applications while ensuring scalable, high-performance network growth.

DIRECT INSTALLED DUCT

This product will be installed into existing infrastructure with high resistance. The thin wall of the inner duct can make it easier to bend or fix inside the cabinet or closure. Its durability withstands lightning and electrical surges."





INSTALLATION

Case Study: State Fiber Expansion Project

A state-sponsored fiber project in the USA hosted a field demonstration of using KNET's microducts and jetting equipment. The goal was to test the efficiency of subducting multiple microducts into existing conduit systems.

During the demo, four 14/12mm KNET microducts were successfully installed into a 2-inch conduit. The jetting process covered 1,900 feet (580 meters) in under 20 minutes, showcasing the impressive performance and reliability of the equipment and ducting solution. This efficient installation highlighted the real-world benefits of subducting for rapid network deployment with minimal disruption.

Key Results:

- **Jetting Distance**: 1,900 feet / 580 meters
- **Completion Time**: 20 minutes
- **Microduct Specs**: Four 14/12mm KNET microducts in 2-inch conduit.
  While the demo successfully used four 14/12mm KNET microducts, for more rugged applications or longer subducting runs, the use of 14/10mm thick-walled microducts is recommended.

This demonstration underscores KNET's role in enabling fast, scalable fiber expansion through innovative subducting solutions.