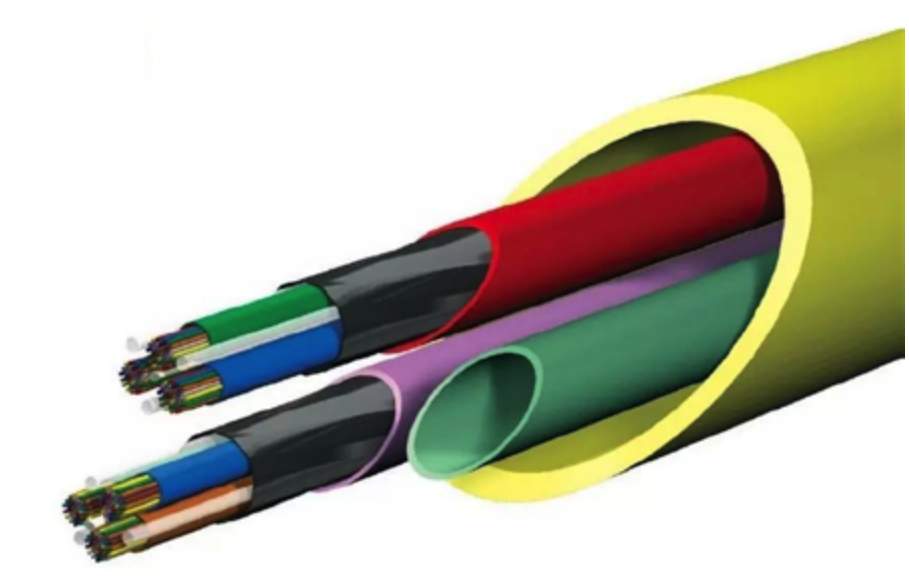
OM5 Multimode Fibre Standard



Air Blown Fibre Technology Development

Currently, the traditional installation of fiber networks presents the following problems:

- *◊ High investment costs with low utilization rate.*
- *◊ Not economically efficient, nor flexible enough to meet the market demand.*
- *◊ Large investment needed for fiber network installation plus long installation times.*
- *◊ Very difficult Pipeline expansion.*
- *◊ As the market demand is difficult to predict, if there is over installation early investment costs would be high, affecting the rate of return to the downside; on the contrary when the installed capacity falls short of the demand, there will be a need to expand, resulting in repeated high installation costs.*

In essence, the conventional network installation has high one-time installation costs; market demand for fiber optic resources are relatively low compared to the size of the infrastructure needed, this leads to high initial investment costs for major telecom operators during installation of fiber optic cable networks and thus resulting in a low Return on Investment. These issues will directly affect the telecom operators' competitiveness regarding installation overall investment.

Today, the requirements for Fiber Optic networks has grown at a rapid pace, especially for flexible network connectivity and upgraded capabilities. Hermesys has Introduced a new cable laying technology to replace the existing one. This new laying technology and equipment was technically developed from the conventional air blower and super air blower to the micro-tube and micro-cable blowing machines.

Introduction to Cable Air Blowning Technology

Air-blown cable technology refers to the process where the microtubes are first laid into the protective piping by an air blowing machine and then the data transmission lines (optical fiber) are laid into the microtubes with a micro-air blower.

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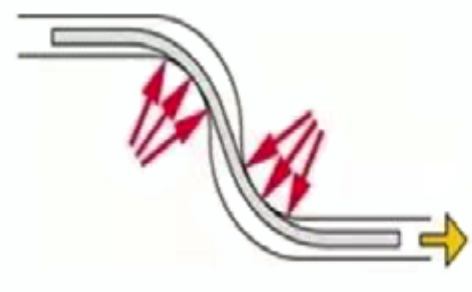
Finally, connecting the users (FTTH) and endpoints through these data lines. This technology has the following characteristics:

- *Is a natural extension of the conventional cable air blowing technology.*
- *All standard laying accessories, cables and tubes are reduced in size.*
- *It has been successfully applied for long distance networks and urban networks through Europe.*
- *High flexibility and low cost.*

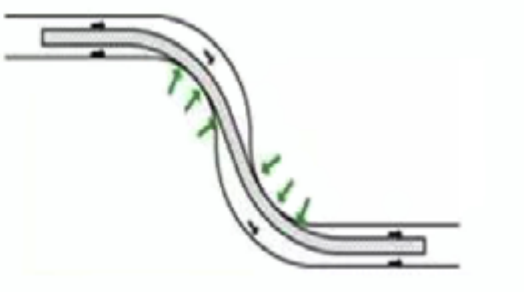
The Principle of Air Blown Cable Technology

Air blowing machines gives the fiber cable or electrical cable a slight mechanical thrust, at the same time, the air compressor delivers a powerful high-pressure air stream into the pipe through the gasket of the air blower.

The high-speed flow of air on the surface of the cable forms a drag force that pushes the cable forward, as there is no tension at the end of the cable, it will smoothly move forward through the pipeline along the ups and downs or changes in the direction in a smooth manner. Contrary to the conventional pulling methods, the cable is not stressed. After the cable is laid, it is stopped at the end of the pipe, helping to extend the service life of the wiring. Therefore, the air blowing method is not only the most secure but at the same time is the best method for the overall laying out of cabling systems.



Analysis of force by pulling



Analysis of force by air blowing