



# DuraAir Aerial MicroDuct Solution

Highly efficient, cost-effective aerial FTTH deployments

## Recommended for rural environments and other areas where digging is challenging

DuraAir is a MicroDuct solution for aerial FTTH installations that provides a cost-effective, time-efficient alternative to direct-buried deployments, with no need for digging. It is completely metal-free (dielectric) and can be installed on existing telecom or power poles in rural environments, or other areas where digging is challenging. DuraAir is also a future-proof alternative to lashed or stranded cable deployments, with no need to splice fibre on the air and vacant pathways available for future upgrades.

## Key benefits:



- **Cost effective:** reduce the cost of an FTTH deployment by 20% versus direct-burial



- **Time-efficient:** reduce the duration of an FTTH deployment by 30% versus direct-burial



- **Future-proof:** install once and provision vacant pathways for future expansion

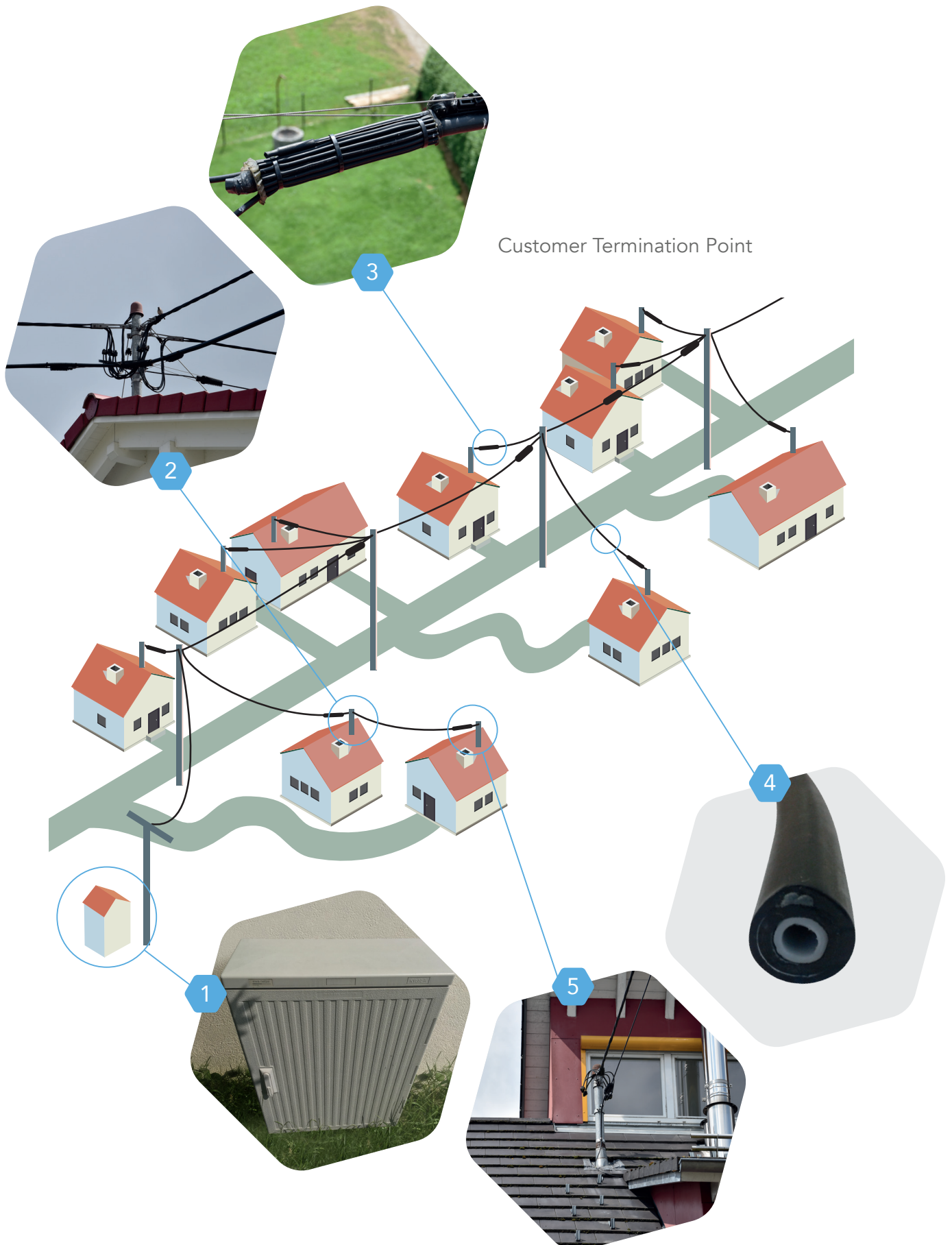


- **Robust:** protect fibre-optic cables against extreme weather conditions



- **Installer-friendly:** utilise same the network architectures, components, fibre-optic cables, installation crews, and tools as for underground deployments

# Example Architecture







## Key components of the solution:

- DuraAir Multi: MicroDuct bundles for fibre distribution
- DuraAir Drop: MicroDucts for the final connection to a premise
- Accessories: Including pole-fixing accessories and a branch-off duct closure for proper installation and routing of DuraAir

### 1 Distribution Point

The transition point between the underground feeder and the aerial distribution networks. The street cabinet/handhole should be placed as close to the first aerial pole as possible so that DuraAir MicroDucts can be led directly from the cabinet/handhole to the pole.

### 2 DuraAir Multi

Twelve 5/3.5 mm MicroDucts bundled around a single 14/10 mm MicroDuct. Each smaller MicroDuct accommodates a drop cable (typically 2-4 fibres) to connect individual premises, while the larger duct can accommodate a larger cable (typically 144 fibres) to feed subscribers or locations further away.

### 3 Branch-Off Point

The transition point between a bundled 5/3.5 mm MicroDuct and a single DuraAir Drop MicroDuct, for the final connection to a premise. A Branch-Off Duct Closure ensures a secure connection.

### 4 DuraAir Drop

A single 5/3.5 mm MicroDuct which accommodates a drop cable (typically 2-4 fibres) to connect individual subscriber premises. Operators may choose to leave DuraAir Drop empty until subscribers take service, to facilitate quick, cost-effective final connections at a later date.

### 5 Roof Entry Point

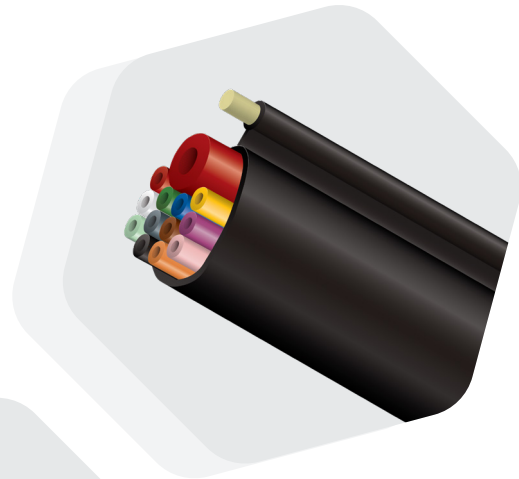
The transition point between the drop section of the network and the subscriber premise, via the property's roof. A House Roof Entry Kit uses a heat shrink to seal the entry point of the duct into the property.

## Installation Recommendations:

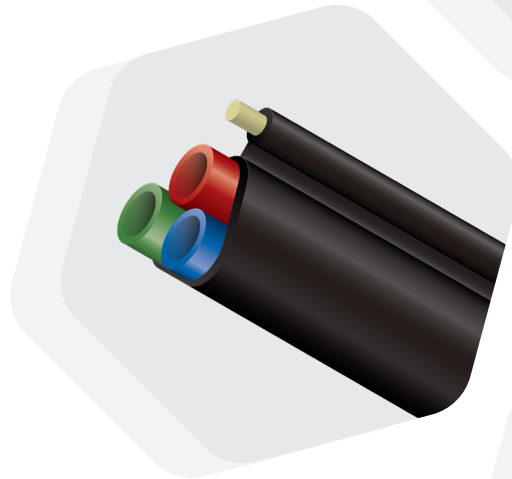
- Span length: 50 m maximum
- Sag: 1% of span at 15 or 20 °C.  
(e.g. for an average span of 50 m, the sag will be 0.5 m)
- Tension: for 50 m span & 0.5 m sag = 30 N

# Core Range

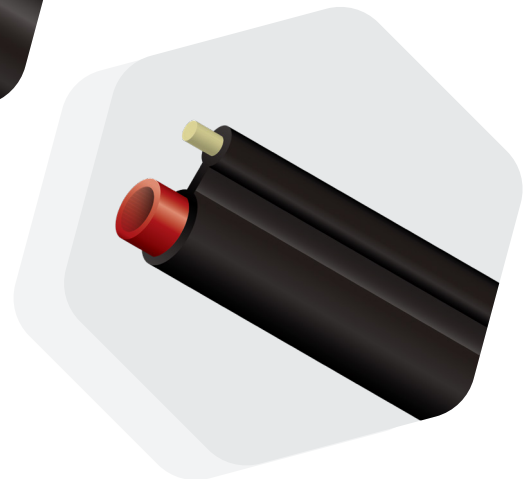
**DuraAir**  
**1x12/10 + 12x5/3,5 mm**  
 used for FTTH networks



**DuraAir**  
**3x12/10 mm**  
 used for backbone or  
 distribution networks



**DuraAir**  
**1x5/3.5 mm**  
 used for "last mile" connection  
 from the distribution bundle



Product name	Component	Number of elements in the bundle	Outside diameter	Inner diameter	Recommended cable sizes
DuraAir 1x12/10 + 12x5/3,5 mm	Feeder microduct	1	12	10	4.5-7 mm
	Drop microducts	12	5	3.5	1-2.3 mm
DuraAir 3x12/10 mm	Microduct	3	12	10	4.5-7 mm
DuraAir 1x5/3.5 mm	Microduct	1	5	3.5	1-2.3 mm

## Standard features:

- Meter markings
- Silicore® low-friction lining

## Optional features:

- Smooth wall or internal ribs
- Pulling rope
- Additional tests can be performed upon customer request, such as vibration or tension tests



## Key Benefits Overview

- Quick and simple to deploy
- No expensive digging
- Easy future capacity expansion
- Standard aerial components and installation methods
- Completely metal-free – no grounding necessary
- Can be installed alongside power lines
- Minimal/no aerial splicing required
- Protects cables against extreme weather (snow, wind, and ice) and UV light
- Meets EN 60794 requirements



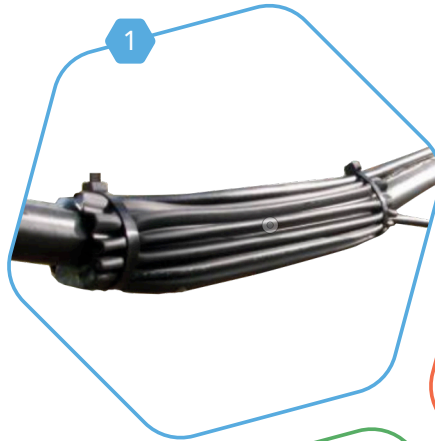
# Accessories Core Range

## Closures and Clamps

### 1 Branch-Off Duct Closure

Ensures a secure connection at the transition point between DuraAir Multi and DuraAir Drop MicroDucts.

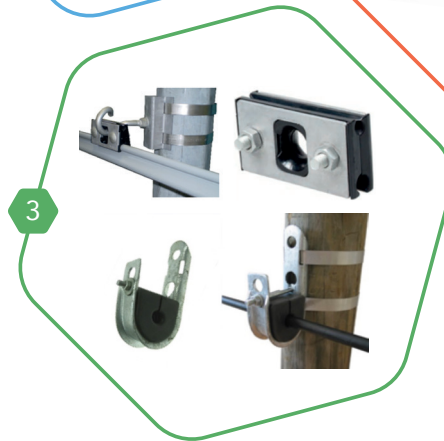
- Accommodates up to 3 branch-off connections
- Key parameters:
  - Operating temperature: -40 °C to 95 °C
  - Water-tight



### 2 Anchoring Clamp

Fixes Microducts to a pole at an end termination point (e.g. transition to underground network), or where a change in direction is required in the distribution network. Variations:

- DuraAir Multi Anchoring Clamp
- DuraAir Drop Anchoring Clamp



### 3 Suspension Clamp

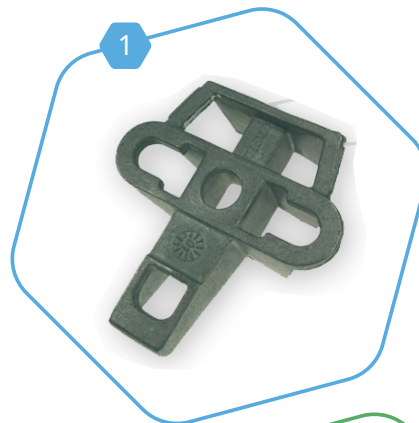
Fixes MicroDucts to a pole in a straight, mid-point section of the distribution network. Variations:

- DuraAir Multi Anchoring Clamp
- DuraAir Drop Anchoring Clamp

## Pole Fixing Accessories

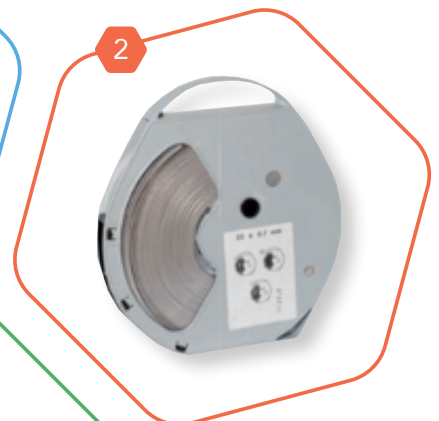
### 1 Universal UPB Bracket

Used to affix up to 3 anchoring or suspension clamps to a pole. Is itself attached to a pole using 20 x 0.4 mm Stainless Steel Tape.



### 2 Stainless Steel Tape

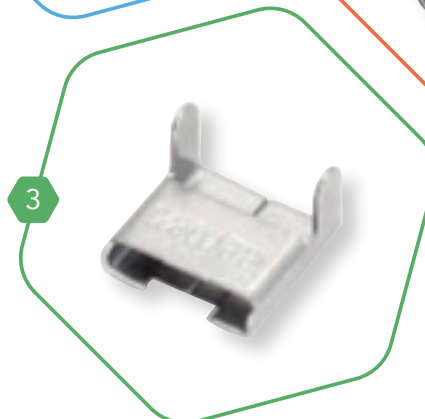
Used to affix Universal UPB Bracket to a pole. Measures 20 x 0.4 mm and comes in a 50 m roll, with a recyclable plastic dispenser, and rendered blunt edges for safe handling.



### 3 Buckle

Used to secure Stainless Steel Tape for Universal UPB Bracket.

- Quantity: 100 pcs. per bag



## Tools

### 1 DuraAir Multi Jacket Stripping Tool

Enables quick and simple removal of DuraAir Multi jacket to facilitate branching-off of individual MicroDucts.

### 2 Messenger Separator

Enables easy and clean separation of messenger from DuraAir Multi or DuraAir Drop jacket.

### 3 Longitudinal Cutter

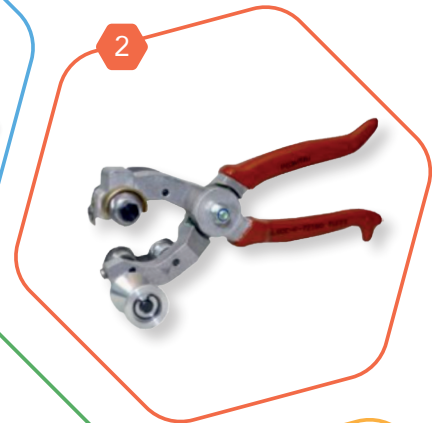
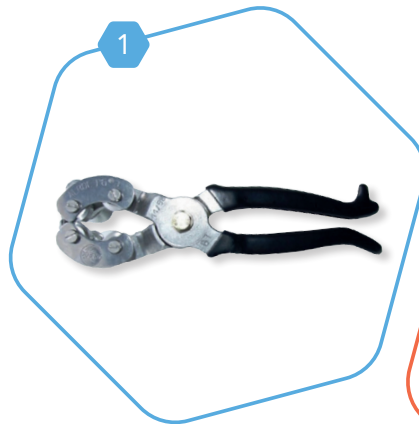
Facilitates a longitudinal "window" cut to enable branching-off of individual MicroDucts from DuraAir Multi.

### 4 MicroDuct Cutter

Provides sharp and precise cutting of MicroDucts to facilitate optimal MicroDuct connections.

### 5 Ratchet Tensioner Tool

Used to bend, tighten, and fix Stainless Steel Tape around a pole for proper installation of a Universal UPB Bracket.





Dura-Line is the leading global manufacturer of communication infrastructure products including conduit, MicroDucts and accessories. We have been making connections possible across telecom, CATV, wireless, and enterprise networks for more than 50 years. With our innovative product solutions, unparalleled customer insight, strong production capabilities and high-quality standards, Dura-Line is perfectly poised to support aerial MicroDuct solutions for efficient FTTH deployments.

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