



A CRH COMPANY

MULTIduct™ Installation and Assembly Guide

CABLEprotect

MULTIduct™

Introduction

This guide addresses the acceptable methods and details for the installation of CABLEprotect ducting.

The purpose is to serve as a guideline and the customer shall comply with all laws, regulations, codes and orders of any authority having jurisdiction over the customer and which relate to the customer's installation, maintenance and use of the products.

If the customer's installation or use of any products contravenes any such laws, regulations, codes or orders of such authorities, the customer shall be responsible for the violation thereof and shall bear costs, expense and damage attributable to its failure to comply with the provisions of such laws, ordinances, rules, regulations, codes and orders.

Reproduction of the material herein is not permitted without the written permission of Cubis Systems.

Contents

Introduction	02
MULTIduct™ Installation	04
Connecting MULTIduct™	06-09
Disconnecting MULTIduct™	10
Connecting MULTIduct™ Accessories	12-19
MULTIduct™ Split Repair Kit	20



Installation Guidelines

Buried Usage

- 1** Dig trench depth based on MULTIduct™ size used. As a guide, create the trench 75mm wider than the MULTIduct™ unit on each side

The depth required will vary depending on the size of the MULTIduct™ system and the loading requirements specified .

- 2** As a minimum, MULTIduct™ should be installed onto a level and well compacted base

It is recommended that for better results, a free flowing granular material is used for the base.

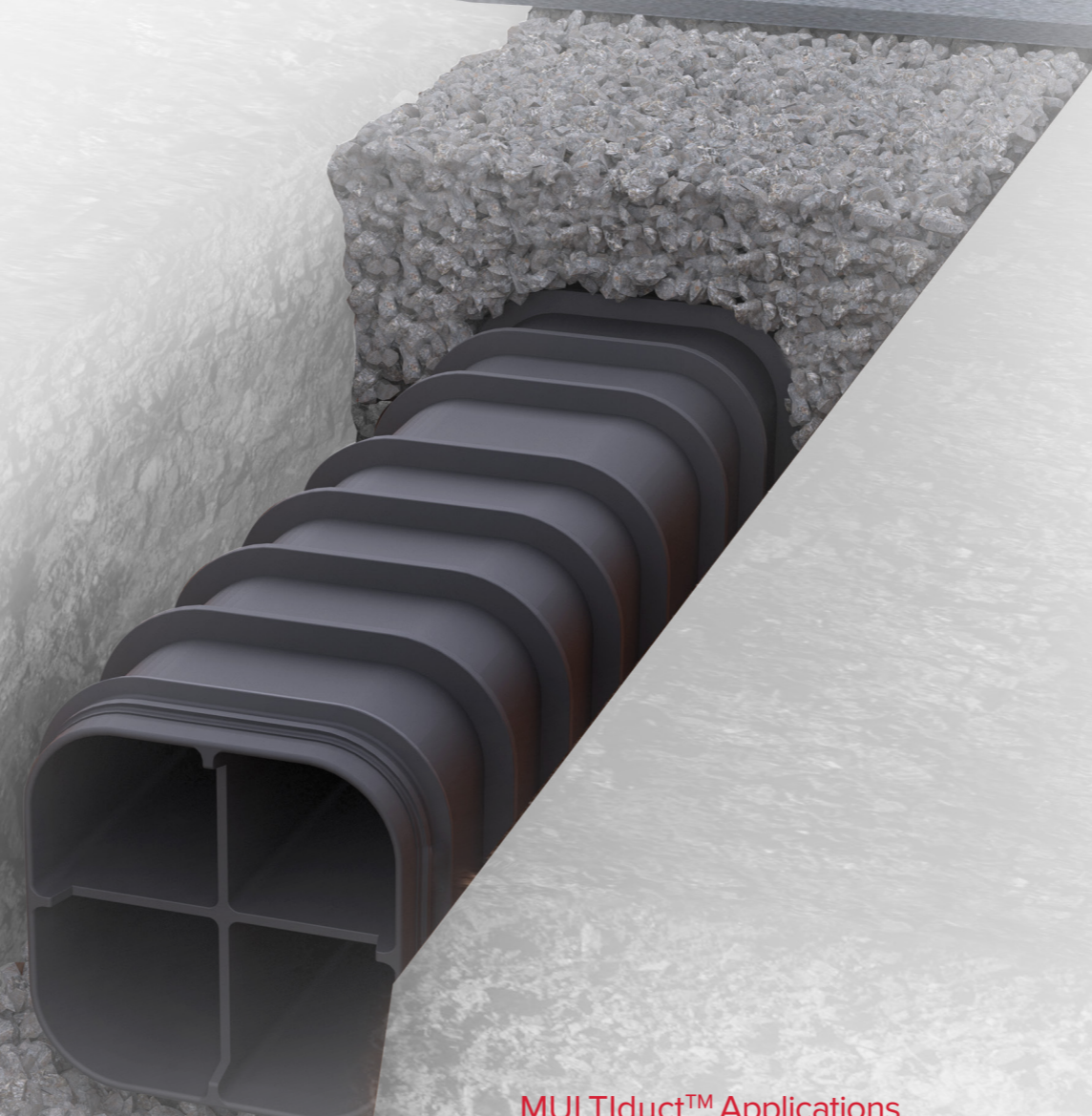
- 3** In hard clay or rock installations, a 50mm layer of MOT Type 1 should be used to ensure full support of the MULTIduct™ units is achieved

- 4** MULTIduct™ can be assembled either inside or outside of the trench placed in four (4) metre long sections and then placed into the trench

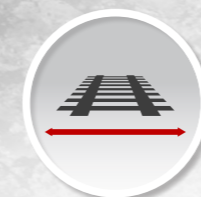
- 5** Upon completion of the MULTIduct™ assembly, backfilling can now take place

If the as-dug material meets the specified requirements, this can be used for backfilling. Otherwise, MOT Type 1 or a similar material should be used in its place.

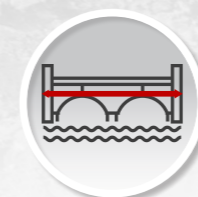
- 6** If multiple runs of MULTIduct™ are to be used either side by side or on top of each other (multi-bank), Cubis recommends that a 50mm gap is present to ensure the backfill can flow between each unit



MULTIduct™ Applications



Under Track Crossings



Bridge Crossing



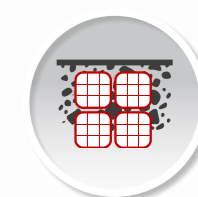
Under Road Crossings



Tunnels



Buried Cable Routes



Multi-bank

If you are installing MULTIduct™ in any of the above applications, please contact a member of the Cubis support team for further guidance.

Connecting MULTIduct™

Identify the male and female end of the MULTIduct™ run. If the duct run leads with the male end, follow the Lift & Connect installation method. Alternatively if the duct run leads with the female end, follow the Slide installation method.



Lift & Connect Method (Male)

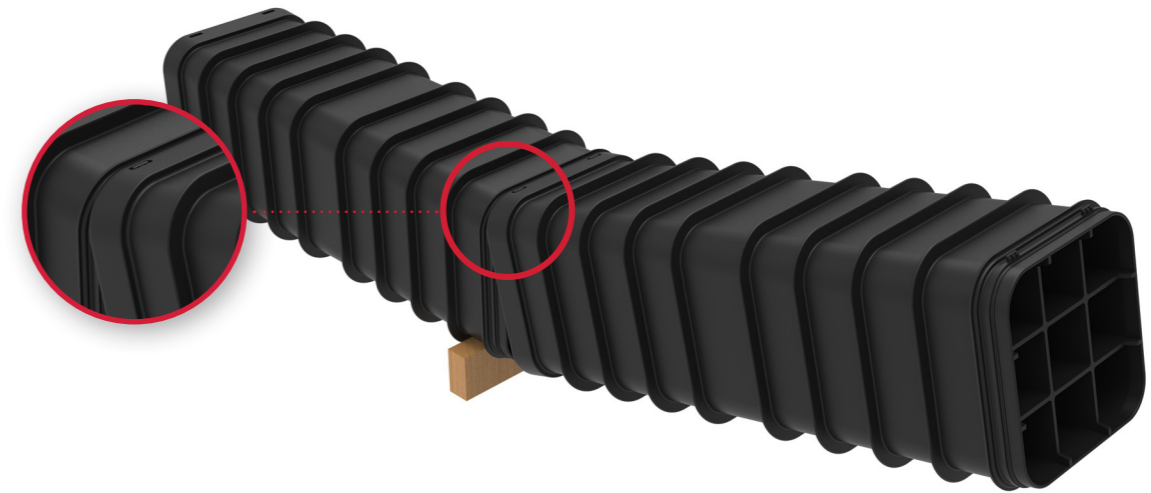
Step 1

Raise the end of the duct off the ground by 100mm, then place a piece of timber between the first and second ribs.



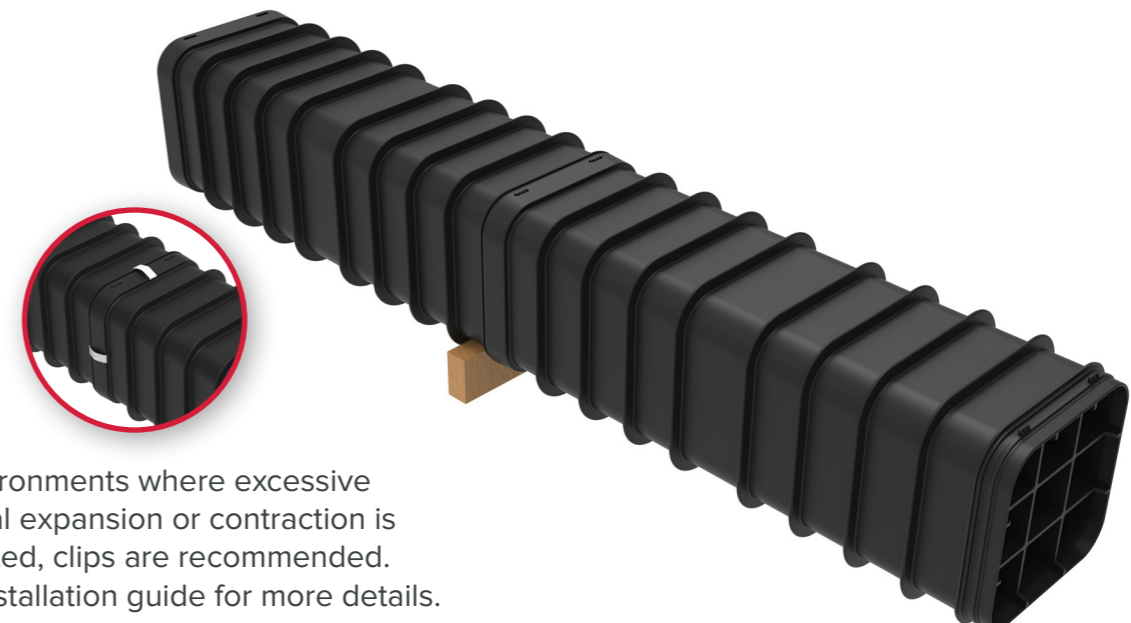
Step 2

Align the receiving eyelets of the female end with the tabs on the male end.



Step 3

Firmly (but not excessively) press down on the loose duct to connect the bottom tabs. A connecting click can be heard. Remove the timber support once complete.



In environments where excessive thermal expansion or contraction is expected, clips are recommended. See installation guide for more details.

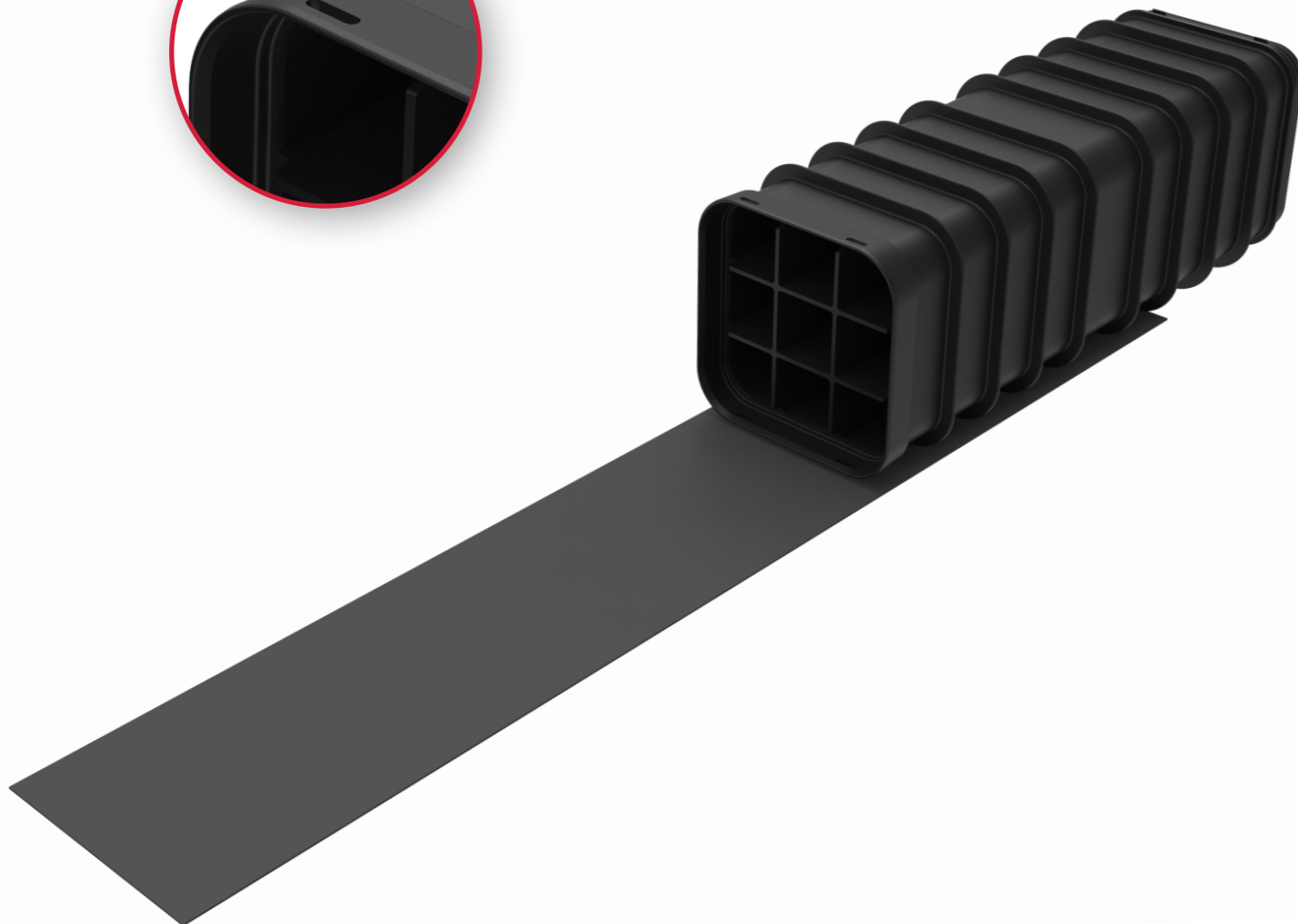
Connecting MULTIduct™

Slide Method (Female)

Step 1

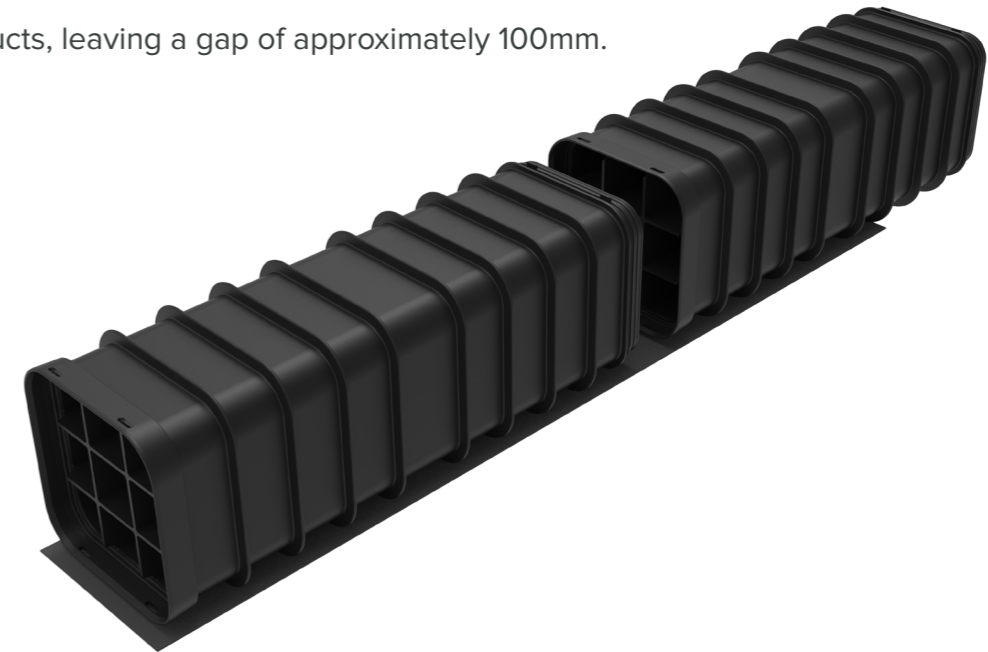
Place a low friction sheet under the end of the duct run, a glossy plastic works best.

Female end



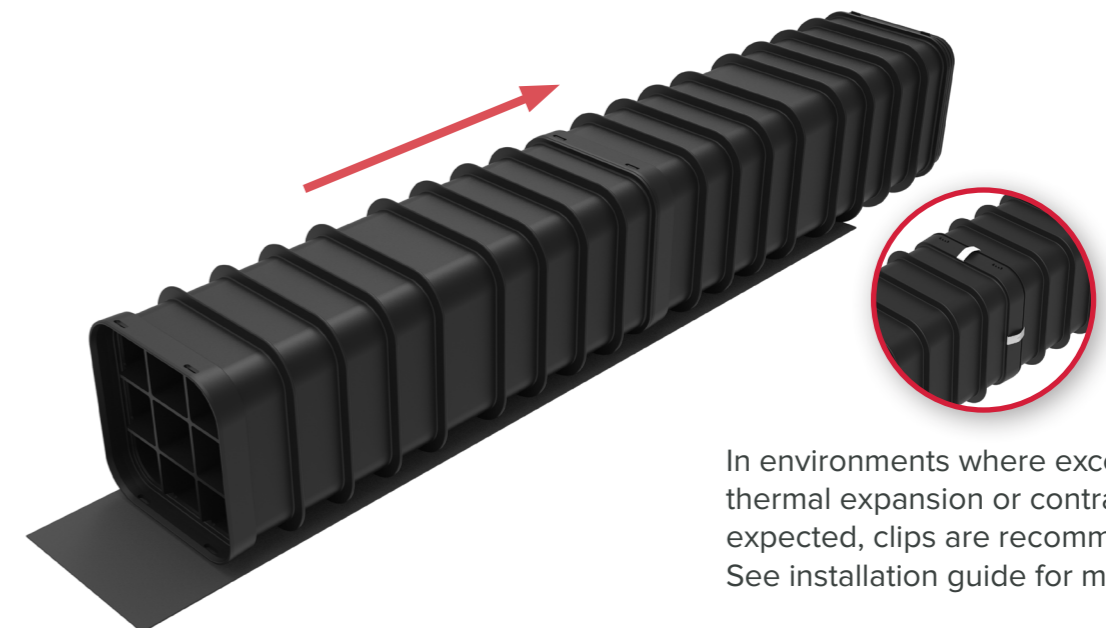
Step 2

Align the ducts, leaving a gap of approximately 100mm.



Step 3

Firmly slide the duct into the end of the run until all tabs lock together. A connecting click can be heard. Repeat this step as necessary and remove the low friction sheet once complete.

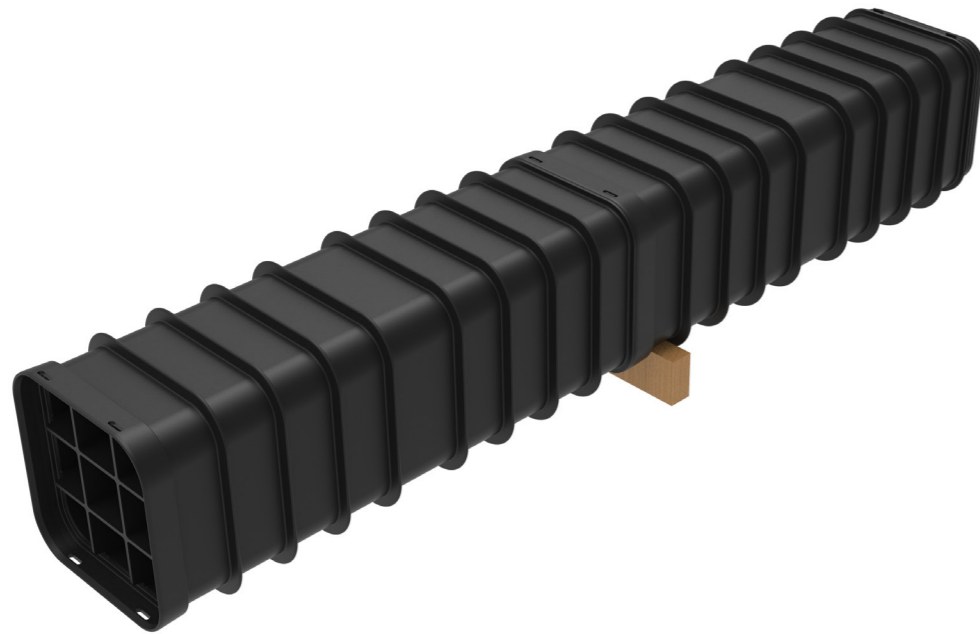


In environments where excessive thermal expansion or contraction is expected, clips are recommended. See installation guide for more details.

Disconnecting MULTIduct™

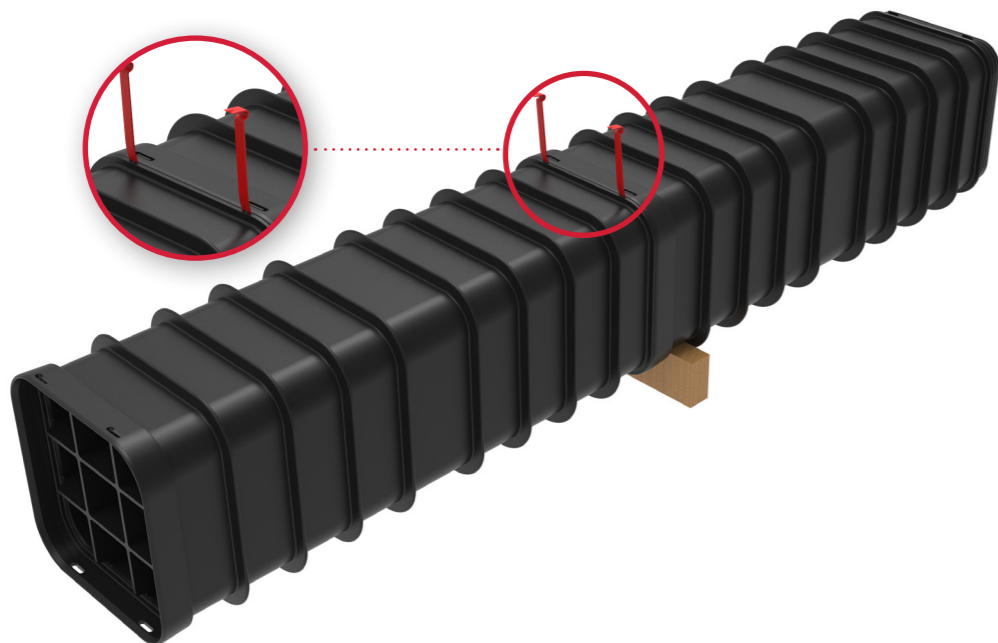
Step 1

Raise the duct run at the connection point by 100mm, then place a piece of timber between the first and second ribs of the male end.



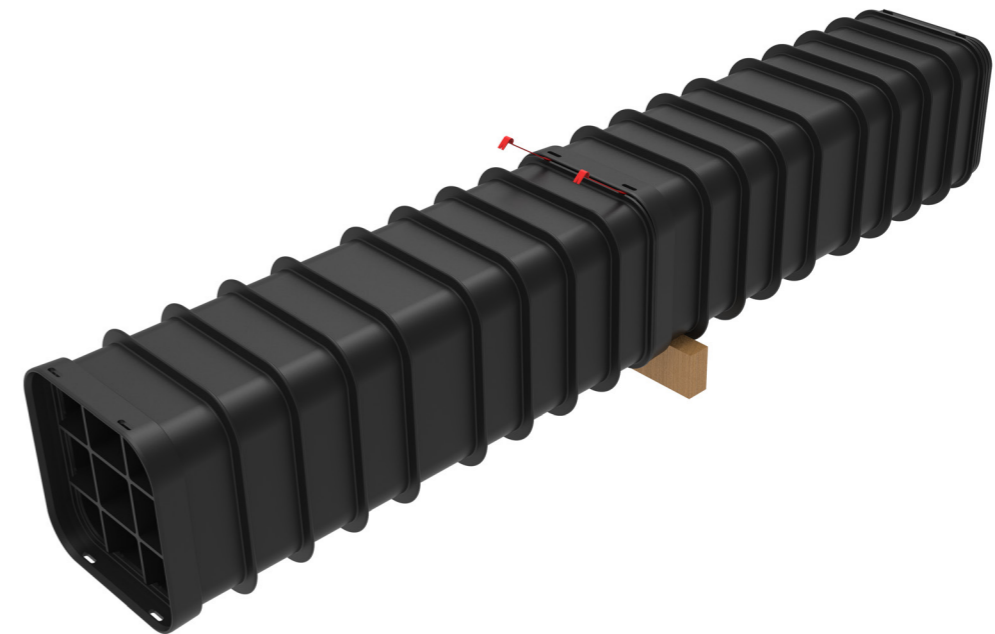
Step 2

Position disassembly tools in alignment with the connection tabs.



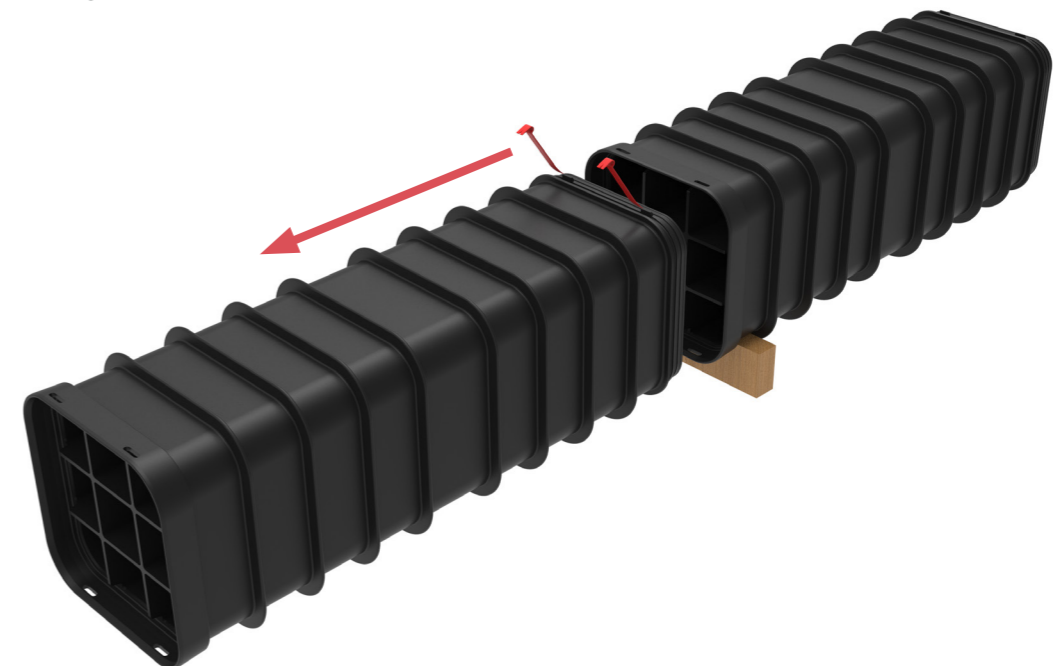
Step 3

Gently push the disassembly tools underneath the joint and slowly prise apart the ducts until the top tabs unlock.



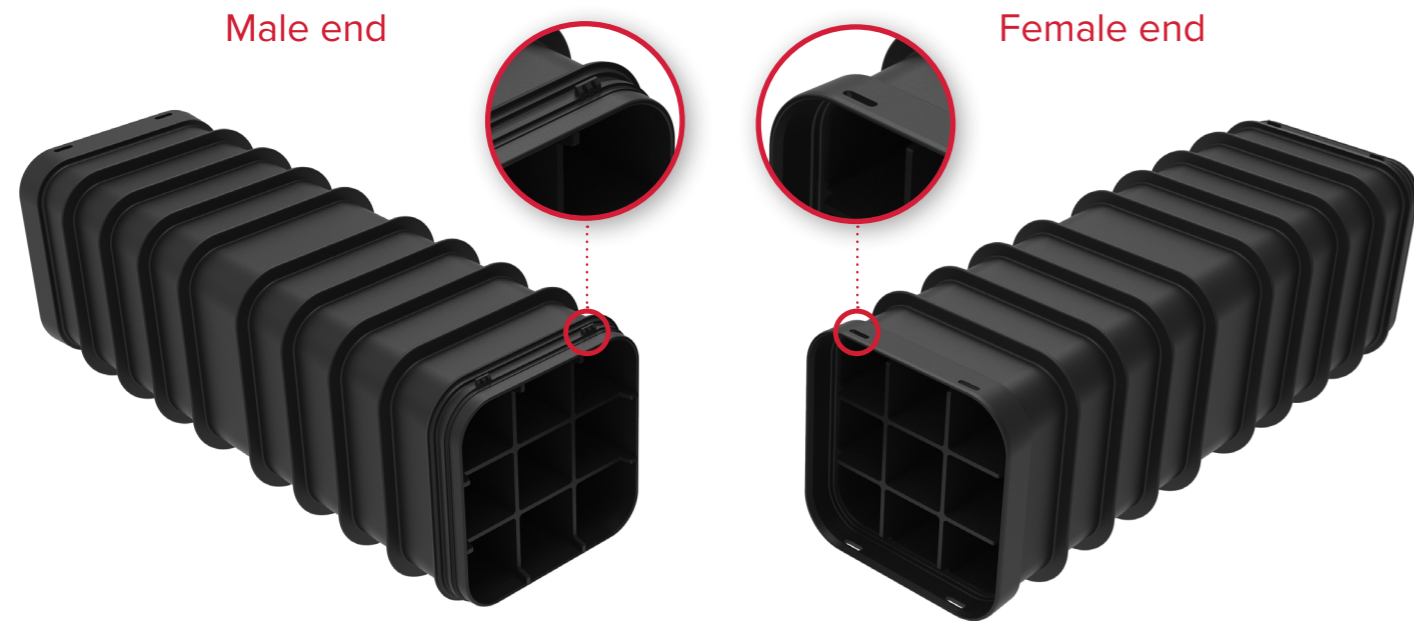
Step 4

Remove the disassembly tools, then lift and maneuver the ducts until they slide apart and the bottom locking tabs unlock.



Connecting Accessories

Identify the male and female end of the MULTIduct™ run. If the duct run leads with the male end, an adapter is required for attaching additional accessories. If the duct run leads with the female end, the accessory can be directly attached.



Push Fit Accessories (Male)

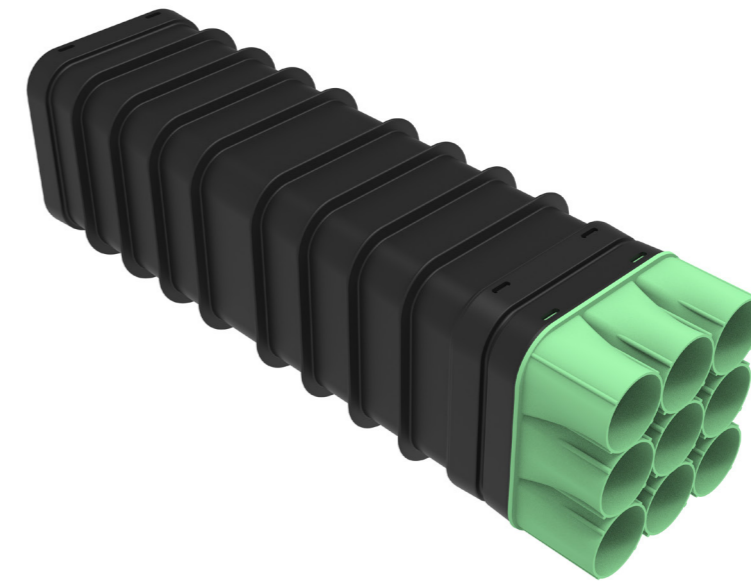
Step 1

Align the accessory and a double socket (female to female adaptor) to the end of the duct run.



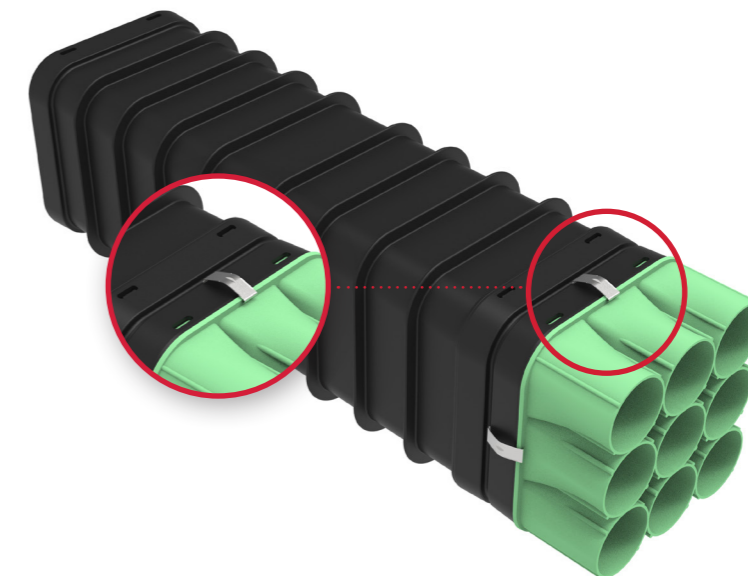
Step 2

Connect the female to female adaptor using the Lift & Connect method as previously described, the accessory can then be slid into position.



Step 3

Fix the accessory to the duct run by using the supplied clips, at least one on each side of the connection.



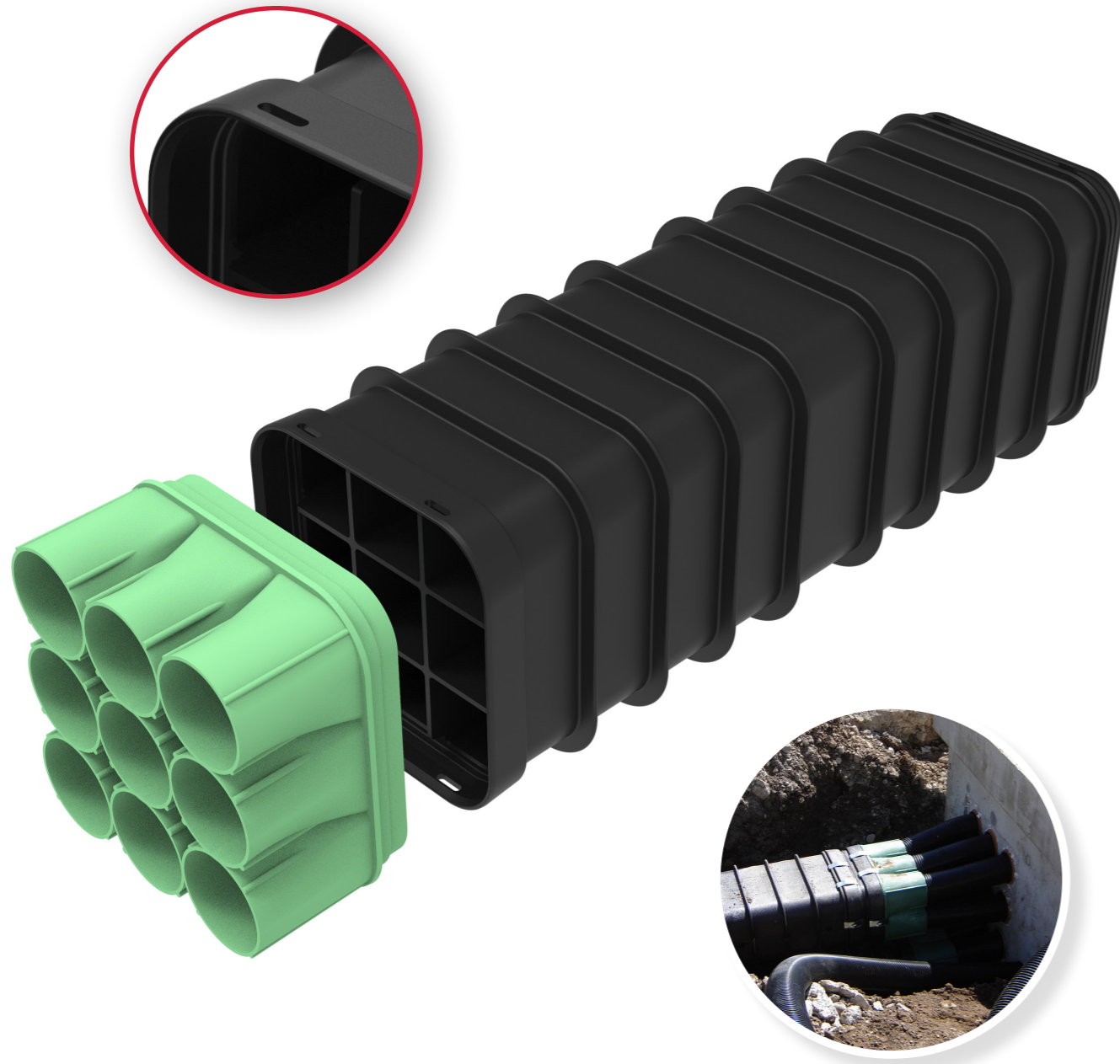
Connecting Accessories

Push Fit Accessories (Female)

Step 1

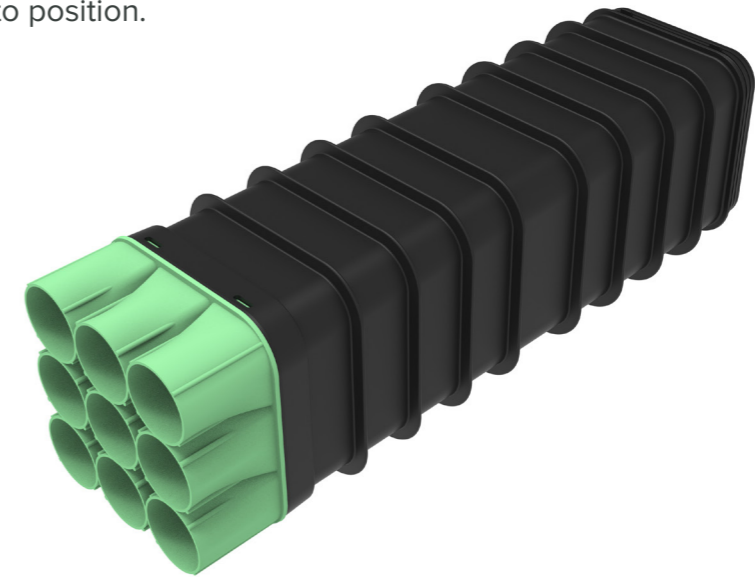
Align the accessory to the end of the duct run.

Female end



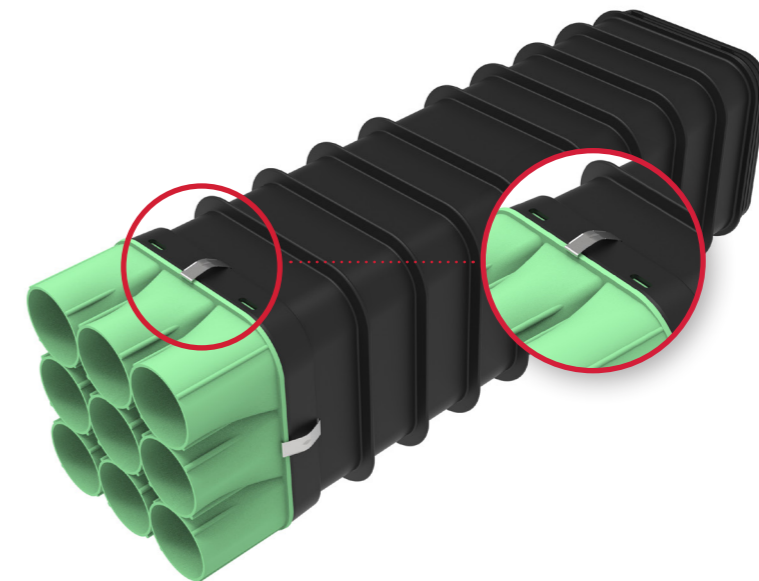
Step 2

Slide the accessory into position.



Step 3

Fix the accessory to the duct run by using the supplied clips, at least one on each side of the connection.



Connecting Accessories

Push Fit End Caps (Male)

Step 1

Align the accessory to the end of the duct run.



Step 2

Using the Lift & Connect method as described previously, lock the end cap into place.



Push Fit End Caps (Female)

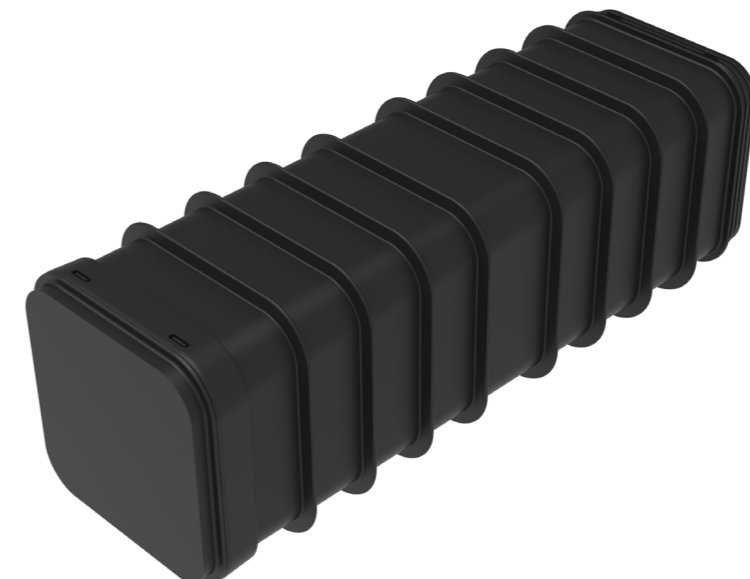
Step 1

Align the accessory to the end of the duct run



Step 2

Using the Lift & Connect method as described previously, lock the end cap into place



Connecting Accessories

Y-lateral

Step 1

Cut a 261mm x 100mm opening into any non-corner duct in a MULTIduct™ length, any intersecting ribs must be cut back further at least 10mm.



Step 2

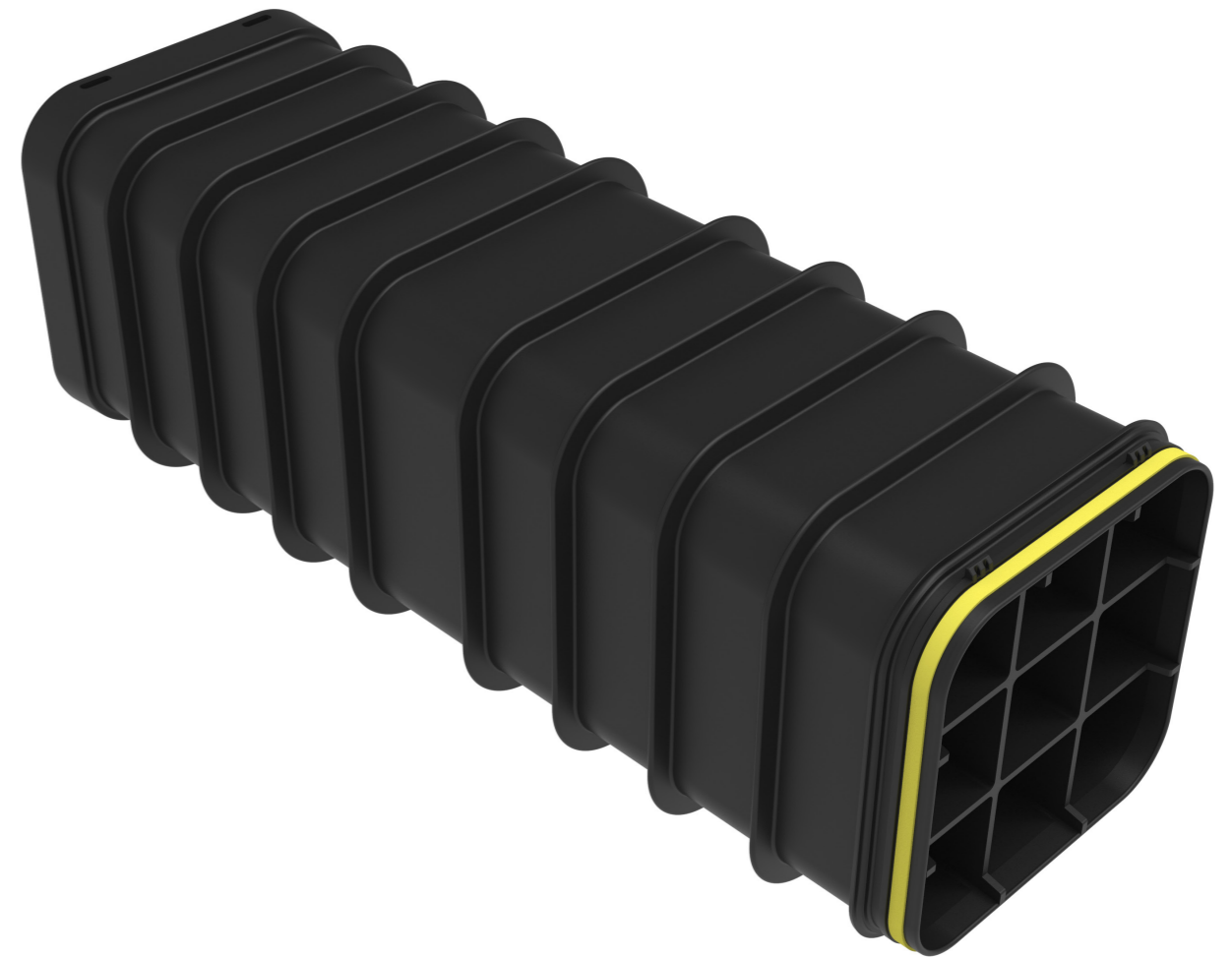
Place the Y-lateral accessory over the opening and fix using the supplied bolts.



Gaskets

Gaskets are available to purchase from Cubis Systems to prevent ingress of dust. They can be fitted to the male end of a MULTIduct™ run (using lubricant if required) before connecting ducts to each other using the Lift & Connect or Slide methods.

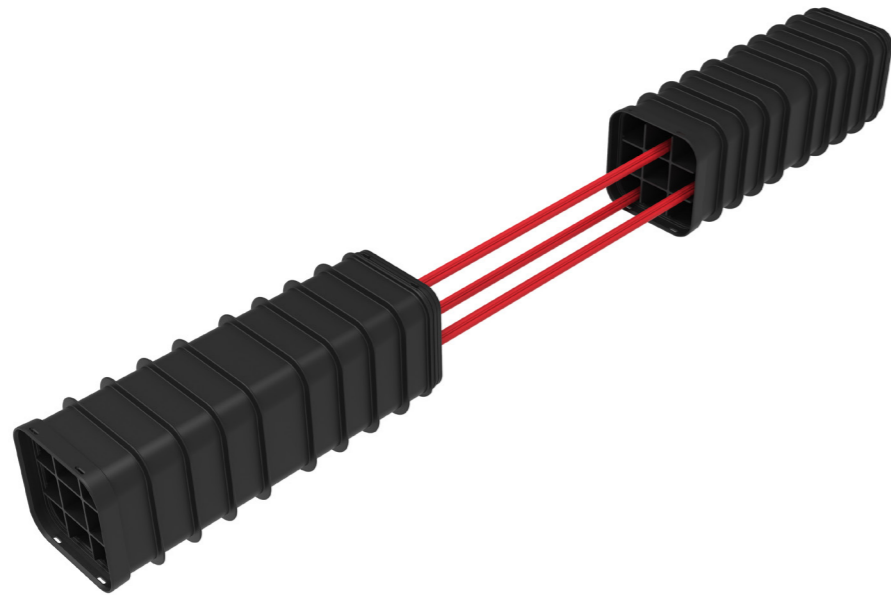
Take care when connecting each duct not to move the gasket, if it does, loosen the ducts and reposition the gasket before reattempting.



Split Repair Kit

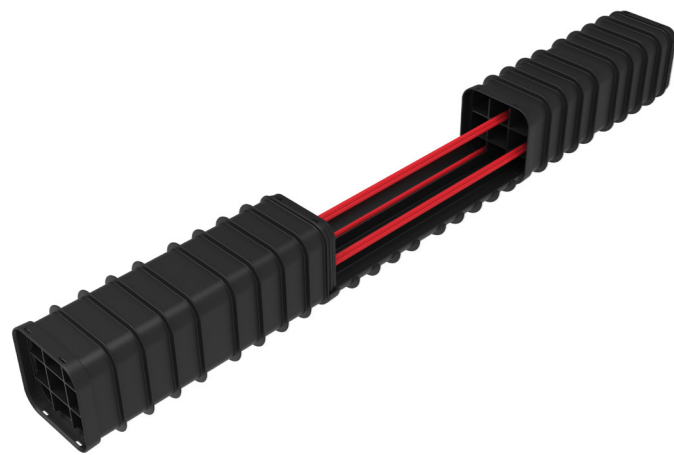
Step 1

Remove existing MULTIduct™ and conduct repairs on internal components as necessary.



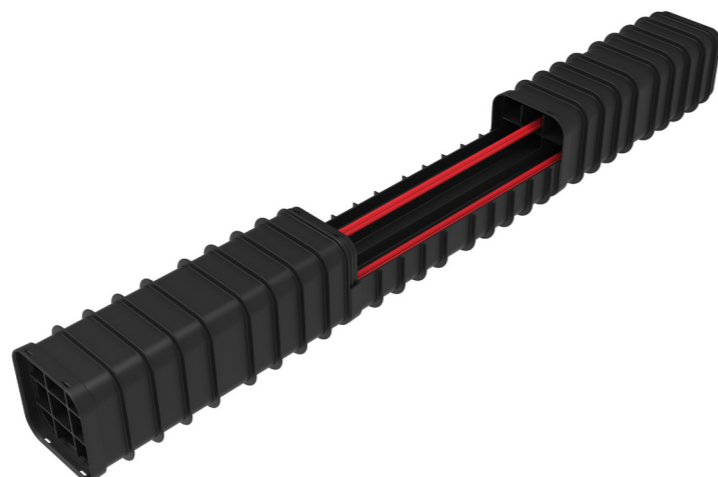
Step 2

Slide and connect base piece into position ensuring the internal cables fit neatly between the internal ribs.



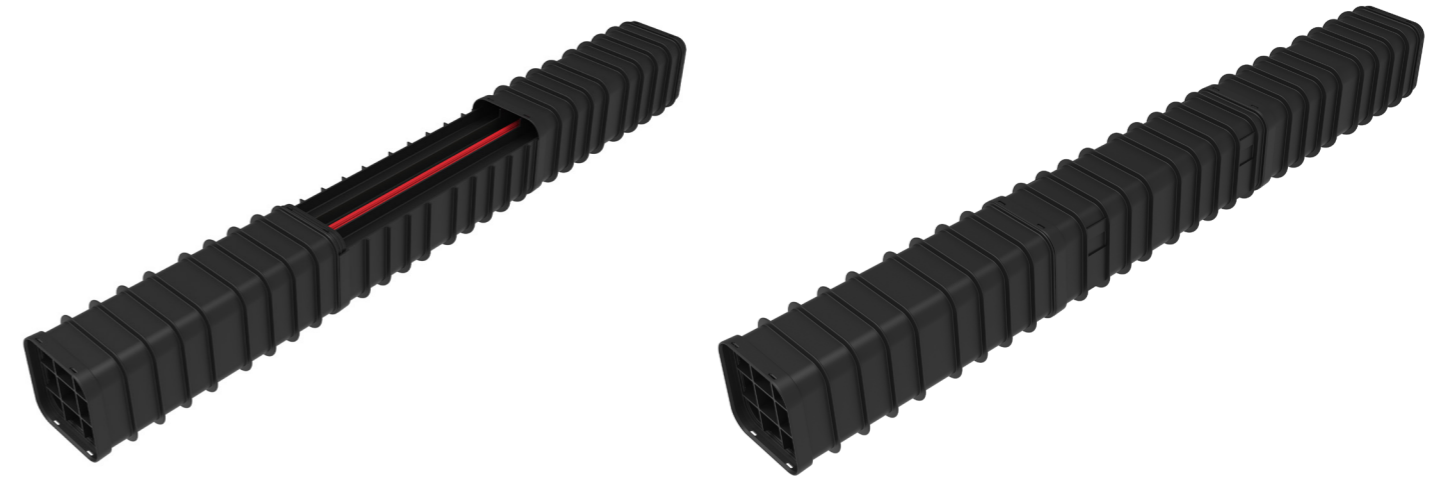
Step 3

Continuing building the duct by sliding each duct section into position, use caution to ensure cables are not being pinched.



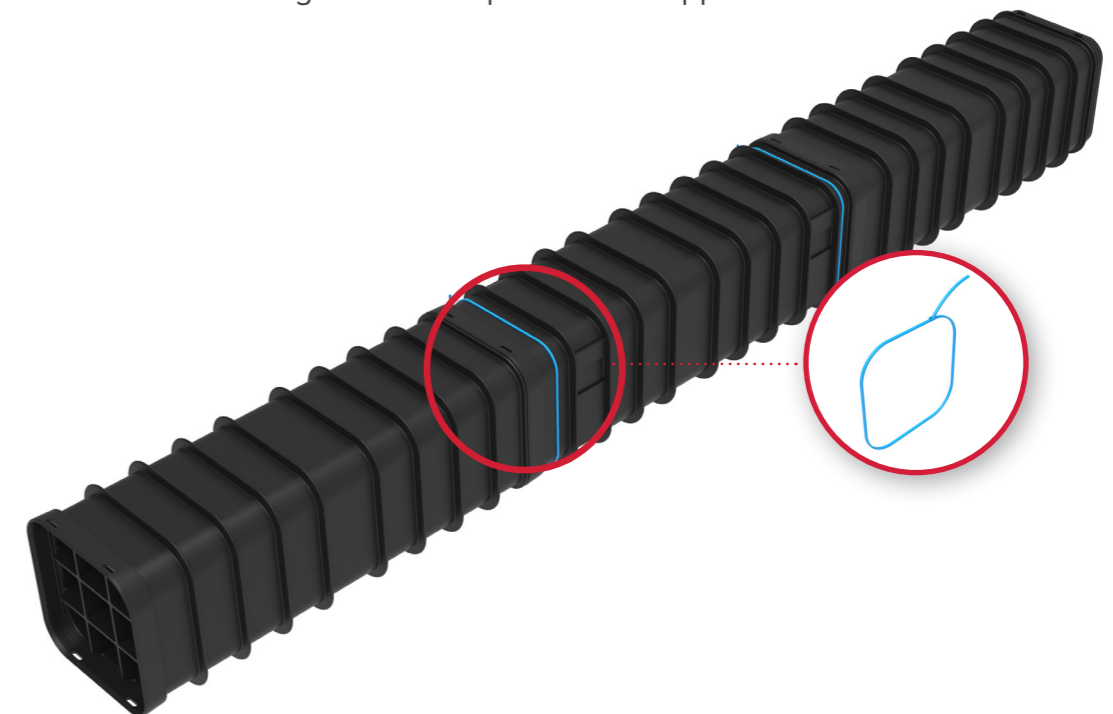
Step 4

Place the top duct section into position and lock in tabs.



Step 5

Secure the duct between using the welded panels and supplied cable ties.



Contact us:

Head Office:
4 Silverwood Industrial Estate,
Lurgan, Co. Armagh,
BT66 6LN,
Northern Ireland

Telephone: +44 (0)28 38 313 100
Email: info@cubis-systems.com

www.cubis-systems.com



Driven by Innovation

Innovation is the engine that has driven Cubis Systems to its position as global leader in the design and manufacture of access chambers and cable ducting systems.

Inspired by innovation, we have developed quality products that replace traditional construction materials like bricks and concrete. Our lightweight plastics, incorporating intelligent design features, are used in the construction of infrastructure networks for the rail, telecoms, water, construction and power markets worldwide. Cubis products can be installed much faster than traditional methods and therefore save our customers both time and money.

Cubis manufactures the preformed STAKKAbox™ network access chamber systems, the AX-S™ access covers range, a MULTIduct™ multiple duct system and the PROtrough cable troughing system at sites throughout the UK and Ireland. These innovative products are exported to more than 25 countries throughout the world.

At Cubis we are committed to ongoing innovation and dedicated to delivering absolute product quality, detailed technical customer support and the highest levels of customer satisfaction.