CUBIS SYSTEMS
A CRH COMPANY

Network Access Chamber Systems

STAKKAbox™ | Fortress

STAKKAbox™ Fortress

The STAKKAbox™ Fortress range of network access chamber systems are strong yet lightweight, structural, scalable and suitable for the use within multiple sector applications. The Fortress chamber system has been designed to significantly reduce the costs of network access chamber installations.

Due to its twinwall design, individual sections are lightweight meaning they can be manually lifted and stacked on top of each other to reach the specified height required. The Fortress access chamber possesses vertical and horizontal ribs, resulting in a product that is both strong vertically and on its sidewall. The STAKKAbox™ Fortress chamber system also comes with a wide range of X-TRAS™ chamber accessories and AX-S™ access covers to provide a complete network access system.

Contents

How it Works

STAKKAbox™ Fortress is manufactured in 150mm deep sections that stack on top of each other to reach the desired depth. Each ring section is castellated to positively interlock with the unit above and below.

Fortress Product Benefits

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Variability in Size

STAKKAbox™ Fortress offers a wide range of chamber dimensions as a result of numerous standard sidewall sections. See page 10 for all standard Fortress chamber sizes available.

Lightweight

Due to the sectional, twinwall design all Fortress 150mm sections are under 25kg in weight, making it suitable for a single person lift under manual handling regulations.

Material

STAKKAbox™ Fortress is manufactured in nitrogen-foamed High-Density Polyethylene (HDPE), of which up to 70% is recycled material. HDPE possesses excellent strength to weight properties.

Fast and Easy to Install

STAKKAbox™ Fortress chambers are significantly faster to install than conventional alternatives, with complete installations typically taking up to one hour. With the added flexibility of creating duct entries on-site, in-situ with a standard hole saw or drill. Fortress also has the added flexibility of being able to cut sections for building over existing network.
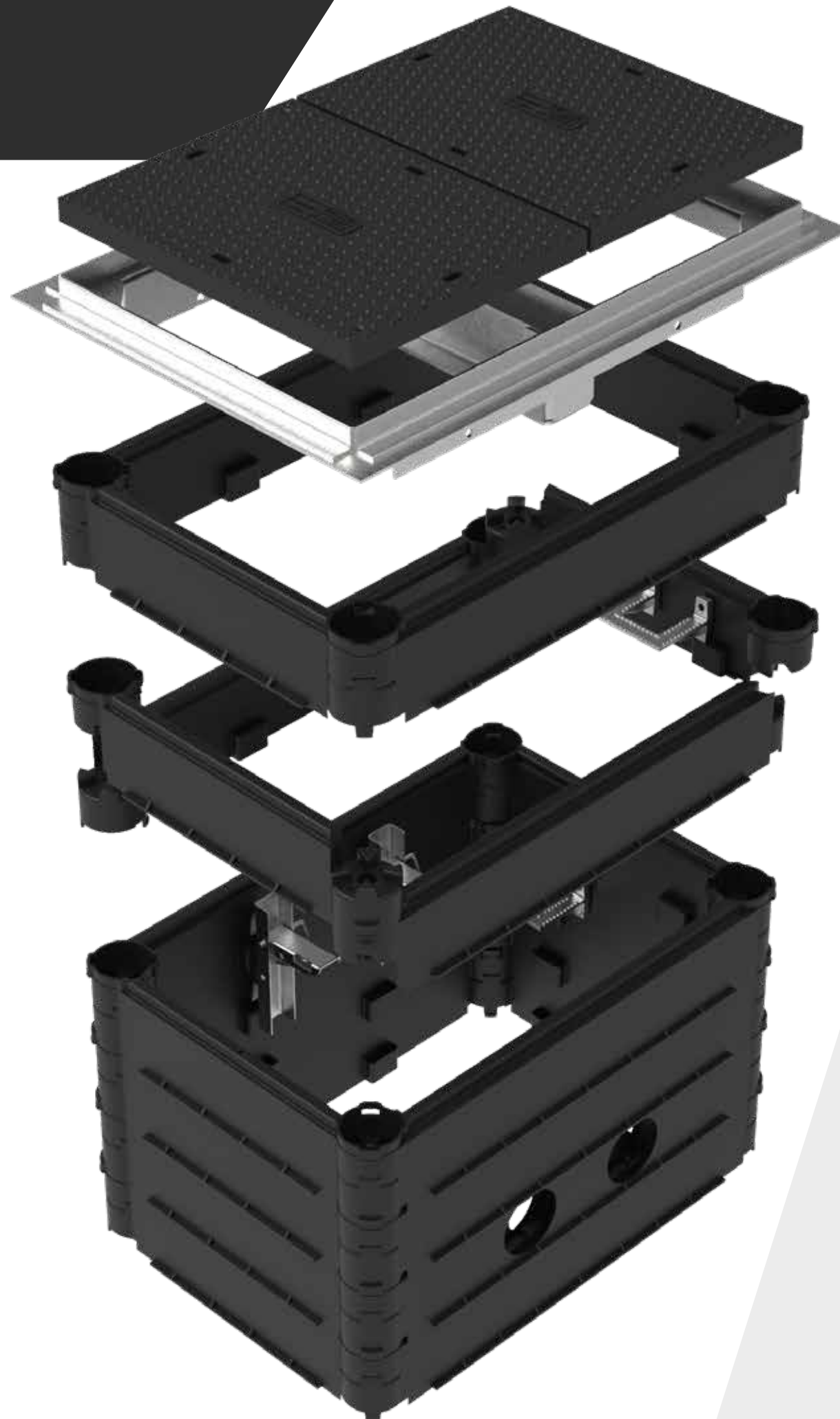
Strength

Fortress has been extensively tested to ensure that it meets the loading requirements up to D400 in a variety of installation environments. The loadings match the vertical loading categories recognised by EN124 gully tops and access tops for vehicular and pedestrian users.

Chemical Resistance

HDPE outperforms traditional construction methods for chemical resistance during its buried life, resulting in a product that offers a longer install life.

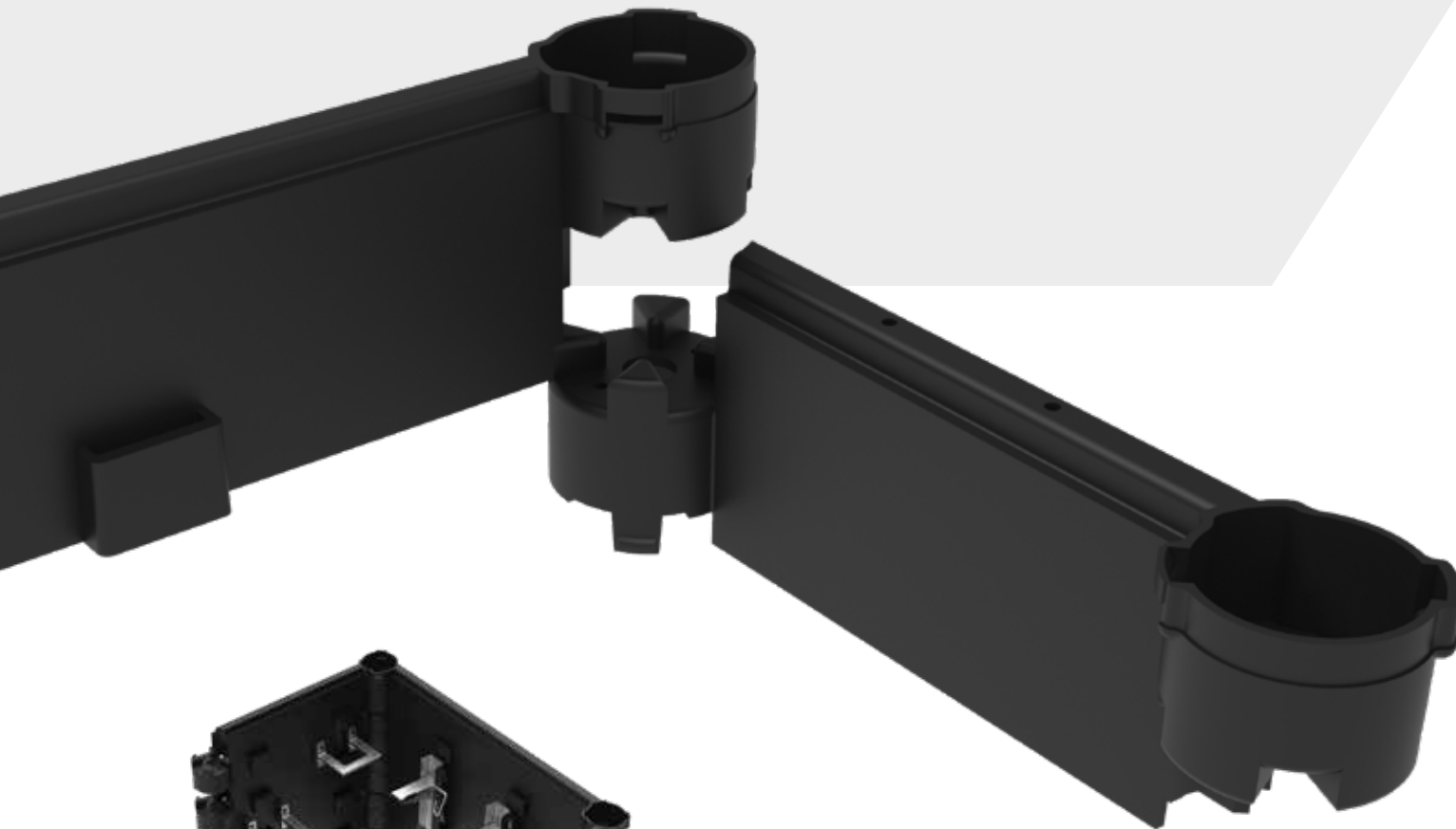### Smooth Outer Wall with Lip to 'Key In'

Gaps in the outer wall will negatively impact the effectiveness of compaction around the chamber. STAKKAbox™ chambers have smooth outer walls and an outer lip which keys into the backfill.

Manufactured from HDPE Material for excellent strength to weight properties
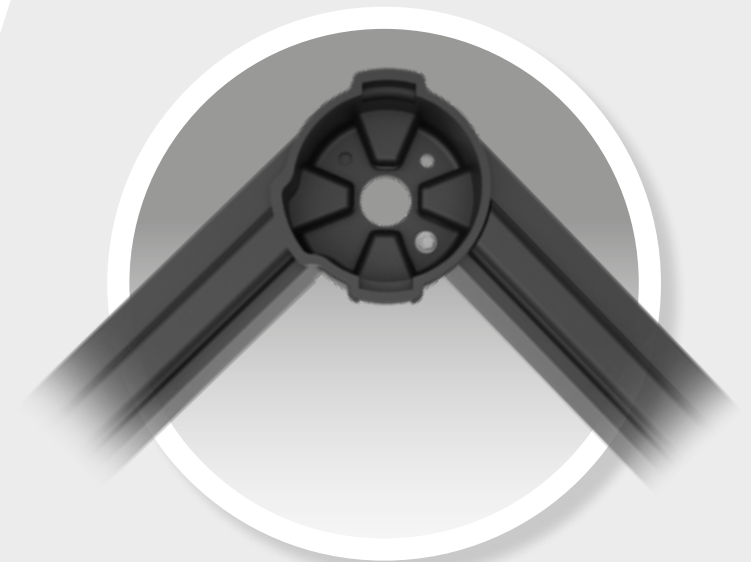
How it's Built

STAKKAbox™ Fortress chambers are formed by combining four interlocking sidewall pieces to form a chamber ring section. These ring sections are then stacked on top of each other to reach the specified height required.

Drop-in cable management accessories are easily fitted to the Fortress internal sidewall for keeping cables tidy within the chamber.

Built by stacking ring sections to the required depth, each Fortress part weighs under 25kg, making it suitable for a single person lift under manual handling regulations. X-TRAS™ cable management, MULTIduct™ Spigot and duct entries provide a complete chamber system solution for a range of sector applications.

Rapid and Easy Installation

Step 1:

Arrange the wall sections to match the chamber clear opening dimensions. Ensure that the lip is on the outside of the chamber, the corner turrets will only be able to interlock in this formation.

Step 2:

Press each wall section firmly into the next to create the first ring section, ensure a tight fit for a rigid ring section.
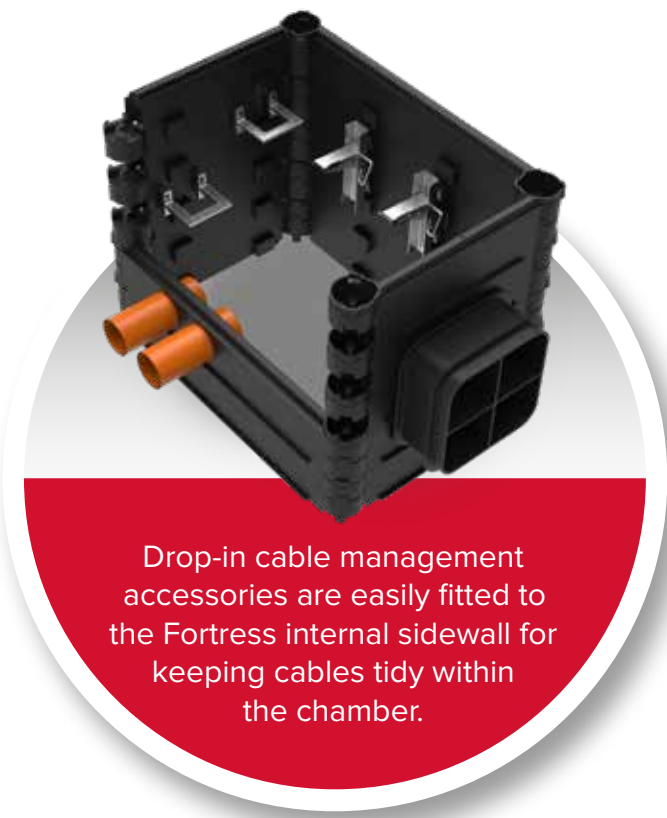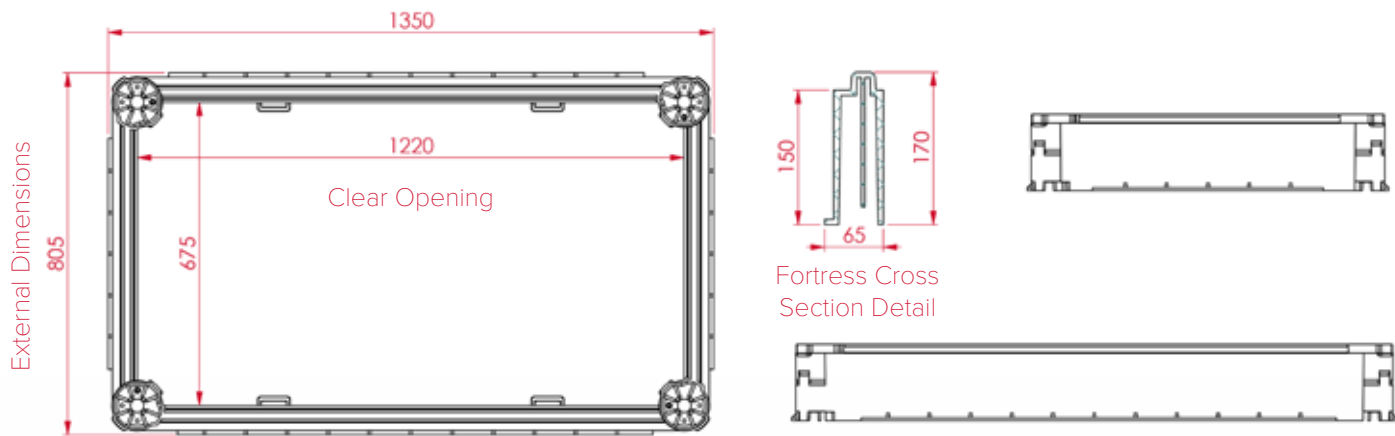

Step 3:

Although not essential, if desired screws can be used to fix each wall section to its interconnecting component using screws, ensuring a tight fit and a rigid ring section.

Step 4:

Continue building each ring section. Interlocking them on top of each other by pressing a ring section firmly onto another until the turret locking tabs lock into place.

Measuring a Chamber

Network access chamber sections are measured by the measurement taking from inside of the chamber. Attention should also be paid to the external dimensions when deciding whether the network access chamber will fit into the area required.

1350

1220

Clear Opening

675

805

External Dimensions

150

170

65

Fortress Cross Section Detail

Clear Opening

External Dimensions

External Dimensions

Modular and Scalable
Below lists all component sizes currently available in the Fortress range.

445mm

610mm

675mm

750mm

850mm

915mm

1220mm

1310mm
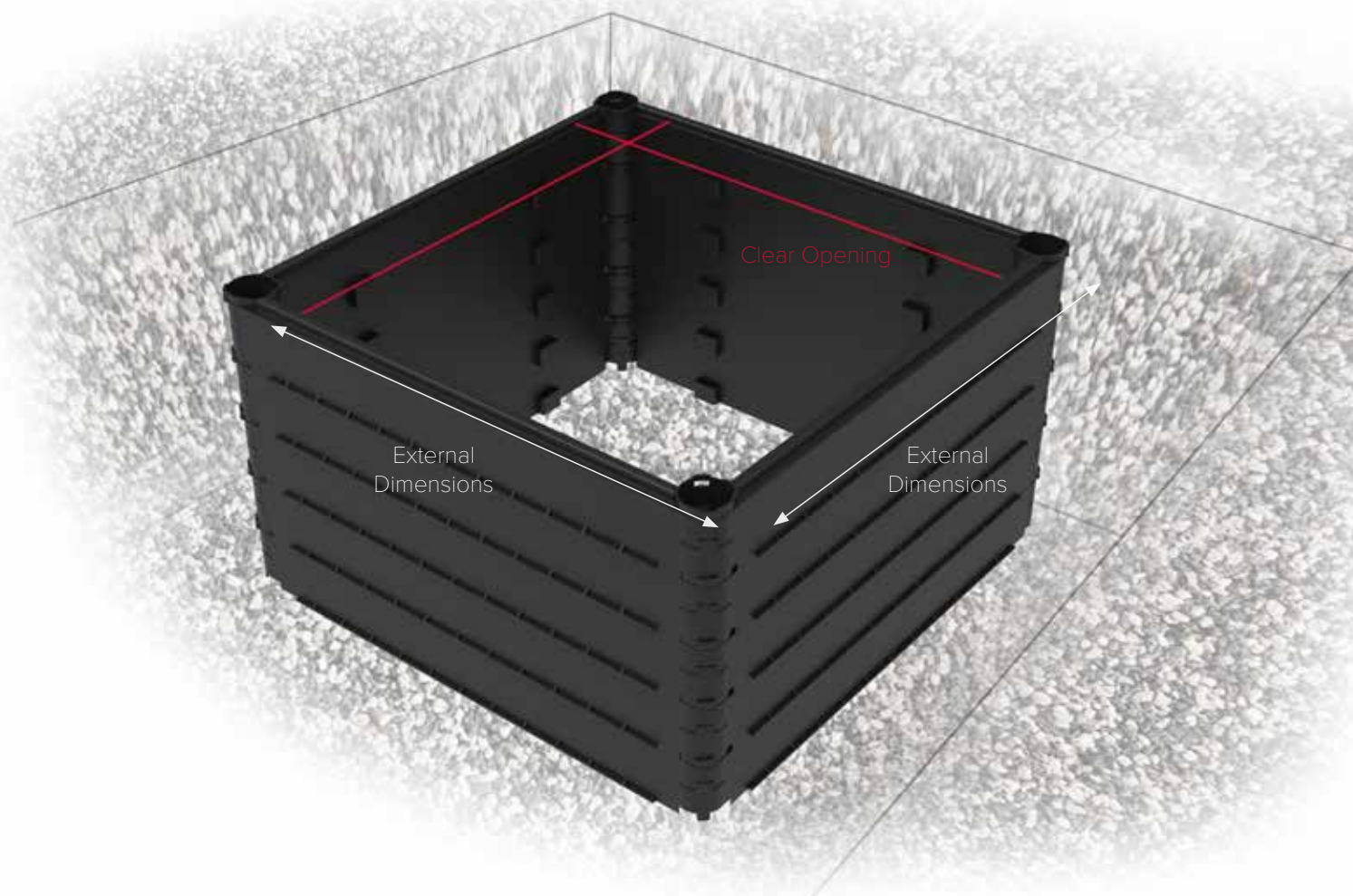
Type A Chamber

Type B Chamber

Chamber Sizes

Clear Opening		Depth per Section (mm)	Externals Dimensions		Vertical Loading
Length (mm)	Width (mm)		Length (mm)	Width (mm)	
445	445	150	557	557	C250
610	445	150	722	557	D400
610	610	150	722	722	D400
675	445	150	787	575	D400
675	610	150	787	740	D400
675	675	150	805	805	D400
750	445	150	862	575	D400
750	610	150	862	740	D400
750	675	150	880	805	D400
750	750	150	880	880	D400
850	445	150	962	575	D400
850	610	150	962	740	D400
850	675	150	980	805	D400
850	750	150	980	880	D400
850	850	150	980	980	D400
915	445	150	1027	575	D400
915	610	150	1027	740	D400
915	675	150	1045	805	D400
915	750	150	1045	880	D400
915	850	150	1045	980	D400
915	915	150	1045	1045	D400
1220	445	150	1332	575	D400
1220	610	150	1332	740	D400
1220	675	150	1350	805	D400
1220	750	150	1350	880	D400
1220	850	150	1350	980	D400
1220	915	150	1350	1045	D400
1220	1220	150	1350	1350	D400
1310	445	150	1422	575	D400
1310	610	150	1422	740	D400
1310	675	150	1440	805	D400
1310	750	150	1440	880	D400
1310	850	150	1440	980	D400
1310	915	150	1440	1045	D400
1310	1220	150	1440	1350	D400
1310	1310	150	1440	1440	D400

Please contact a Cubis sales representative to discuss cover dimensions and loading options for the various chamber sizes.

Chamber Accessories

Using Cubis access chamber system accessories can help save even more time. Our chamber options & accessories range allows installers to simply place, connect up tubes or ducts, backfill and walk away.

1. X-TRAS™ Access

Chambers deeper than 600mm will usually require steps or ladders for access. We supply high quality bolt-on steps to suit customer requirements.

2. X-TRAS™ MULTIduct™ Spigot

MULTIduct™ spigots can be built into assembled chambers so that interface can be completed faster on site. These can be located anywhere to match customers' needs.

3. X-TRAS™ Cable Management

Based upon BT and France Telecom accredited galvanised steel cable and joint management and our own high-strength plastic fittings, these accessories will keep cables dressed perfectly within the chamber.

4. X-TRAS™ Bases

These are securely fitted to a ring section or bottom of a chamber to provide a clean finish that prevents vegetation and silt from entering the base of the chamber.

Bases are available with an anti-slip finish, grated drainage holes with silt block, sumps to provide a low point for removal of water and built in cable pulling eyes.
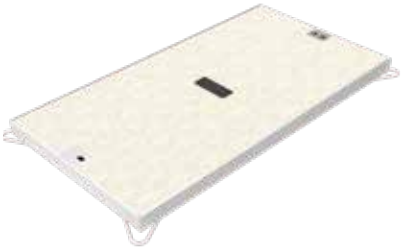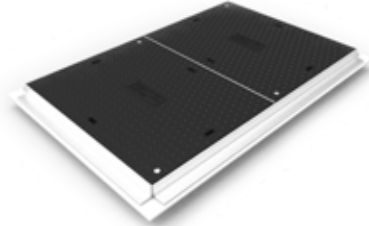
5. X-TRAS™ Duct Entry

Ducts, tubes and pipes come in many size and wall configurations and we have developed fittings which provide for the simple transit of these into our chambers. Whilst duct entries can always be made very easily on site, our pre-fit service gives consistent spacing and internal wall finish every time.

The addition of cable glands means they will also stop sand, silt and if required, water ingress at the point of entry.
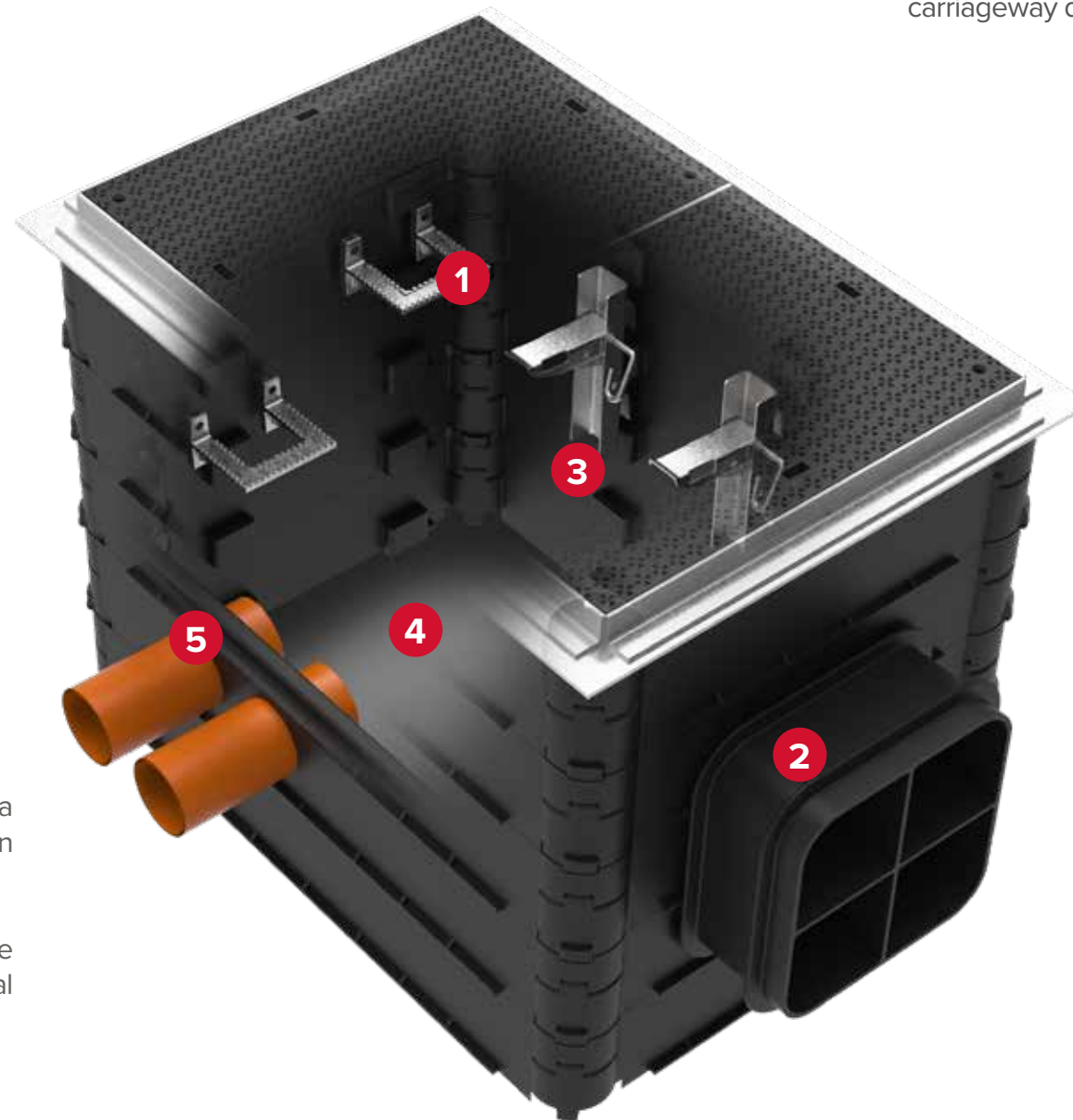
The Cubis AX-S™ range of access covers provide customers with a complete underground network access system as they are designed and manufactured from a range of materials to complement our chamber ranges.

The AX-S™ range can be tailored to meet specified loading requirements from pedestrian up to carriageway duty and are available in a wide range of clear opening dimensions and depths.

AX-S™ Concrete Infill	AX-S™ Recessed

AX-S™ Composite	AX-S™ Steel Fabricated

AX-S™ Ductile	Options

Options

- Bespoke customer badging
- Various frame depths and types
- Security options
- Large range of sizes available

Industry Experts

Cubis Systems products are innovative, lightweight and significantly reduce costs of in-situ construction through time savings. The Cubis integrated systems approach offers clients a complete range of access chambers, access cover and cable protection systems. These products have been installed worldwide in Telecoms, Highways, Rail/Light Rail, Water and Power & Energy applications. Cubis' products are used within many different applications within each sector from buried cable routes to network access solutions.

Access Chamber System:

Cubis' STAKKAbox™ access chamber systems are adaptable to the unique requirements of each site. This means ordinary site tools can be used to retrofit chamber systems around existing networks by drilling duct entries or cutting the chamber sections horizontally. The seamless integration across the Cubis product range enables the construction of bespoke systems that significantly reduce costs of access chamber construction through time savings. Cubis' chamber options & accessories range allows installers the ability to simply place, connect ducts, backfill and walk away.

Cable Protection:

Cubis' cable protection systems MULTIduct™, PROtrough, RAILduct™ and MM RAILduct™ offer innovative, lightweight, secure cable protection systems that have been used worldwide in a range of sectors and applications. Cubis' cable protection systems comprise of 1 metre long units that connect together allowing for rotation in the units to deal with tight turns, elevations, natural curvature and other obstacles. Due to their light weight properties Cubis' cable protection systems offer significant health and safety advantages over traditional systems.

AX-S™ Access Covers:

The Cubis AX-S™ range of access covers provide customers with a complete underground network system, designed and manufactured from a range of materials to complement our access chamber systems. The AX-S™ range can be tailored to meet specified loading requirements from pedestrian up to carriageway duty and are available in a wide range of clear opening dimensions, depths, security features, frame types and bespoke badging. The Cubis AX-S™ range consists of concrete infill, recessed, composite and steel fabricated.

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.

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