# POLYPIPE BUILDING SERVICES

Open the door to more





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commercial buildings

At Polypipe Building Services, we harness our ingenuity and creativity to deliver class-leading solutions and product sustainability, with optimised whole-life costs, unrivalled technical support and on-the-ground assistance.

We do all of this to bring you more.

More Innovation. More Expertise. More Support. More Polypipe.

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### Your specialist construction partner

### From high-rise residential and commercial office projects to healthcare and leisure facilities, our continuous investment allows us to develop systems that support you in creating safe and sustainable

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## Challenging traditional materials

## Perfect for the conveyance of water, air or gas, plastic pipes offer a number of benefits over rigid materials.

They comply with European Product Standards for hygiene, safety, heat resistance and chemical resistance, giving a high level of performance over a long lifetime.

Through careful engineering, plastic can be enhanced to include antimicrobial coatings for infection control, high-mass particles to improve sound attenuating properties or fibres for the improvement of strength.

It's also lighter in weight than rigid materials, enabling us to design systems and engineer products that are manageable, adaptable, and which are safer and easier to fabricate and install.

Through these innovations and responsible processes, we can facilitate the products and systems you need for a more sustainable and manageable project.



1. Teppfa. The European Plastic Pipes and Fittings association. http://www.teppfa.eu/why-use-plastic-pipe-systems/

### Polypipe Advantage

Created to streamline our clients' projects from the outset, with Polypipe Advantage we have the expertise and resources required to help you overcome key issues including labour shortages, restrictive deadlines and limited on-site storage.

As soon as your enquiry is received, it will be appraised by our dedicated Technical Team, who will assess your project's unique requirements and create a draft proposal and CAD designs for your approval.

Once the proposal is agreed upon and the order placed, our fabrication and testing facility will create your system under factory-controlled conditions, offering impeccable quality and peace of mind for first-fix testing.

Finally, the system will be dispatched to site in accordance with your project timelines, removing the need for on-site storage thanks to 'just in time' delivery.

#### More than an alternative to traditional installation

Representing a culmination of experience and development, Polypipe Advantage doesn't just provide solutions to unique design challenges and complex projects. It's a service which allows you to focus on the job at hand – supporting you with technical and logistical advice, and help with scheduling and delivery.

Once delivered, our fabricated systems provide simple on-site connections, helping to reduce installation times and health and safety risks due to the smaller workforce required on-site, while also reducing on-site waste thanks to the systems' 'plug and play' nature.



## Drainage products

Whatever your commercial project's requirements, there's a drainage product to provide a solution. Setting industry benchmarks for quality, ease of installation and flexibility, they offer unrivalled product innovation.

From the extensive Terrain PVC Soil & Waste range and the Terrain dB12 acoustic system, to our chemical-resistant Terrain FUZE system and Terrain Firetrap products, our systems are manufactured using high quality, engineered materials – setting new standards while meeting your project requirements.

#### Terrain PVC Soil & Waste

Pioneered over 50 years ago, Terrain PVC soil and waste pipe systems continue to be at the forefront of the development of drainage systems today. UK-manufactured and fully accredited, the range of solvent-weld and push-fit solutions offer unrivalled installation options to match any project, are light in weight and easy to handle, and are fully adaptable with the Terrain FUZE drainage system for maximum flexibility.

#### Terrain dB12

Engineered to meet the increasing demand for acoustic systems, the Terrain dB12 acoustic soil and waste pipe system features a triple layer construction, utilising specially developed co-polymer polypropylene layers and acoustically engineered fittings to effectively dampen both airborne noise and sound transmitted through the building structure. In addition, Terrain dB12 is highly resistant to impact, even at low temperatures and demonstrates excellent corrosion resistance, for maximum durability.

#### Terrain P.A.P.A. & Pleura Vent System

Eliminating the need for a traditional piped secondary vent system, the Terrain P.A.P.A.® (Positive Air Pressure Attenuator) and Pleura Vent System removes the need for vent penetrations in the slab, drastically reducing the requirement for vent penetrations through a building's roof. The result is easier installation and an increased usable floor area, helping to maximise a project's profitability.







#### **Terrain FUZE**

A high performance, modern drainage system, Terrain FUZE is manufactured from high density polyethylene (HDPE) for strong abrasion, chemical and temperature resistance. Terrain FUZE is installed via electro or butt fusion welded joints, utilising the host material of the pipe for maximum joint integrity. And, due to its inherent material characteristics, Terrain FUZE is suited to fabrication, offering a light-in-weight, easy to install drainage solution.



#### Siphonic Drainage Systems

Using naturally induced siphonic principles, the Terrain Siphonic Drainage System 'sucks' high volumes of rainwater from large roof areas into small diameter pipes, creating a flow capacity up to ten times greater than that of an equivalent gravity-fed system – making it ideal for applications ranging from stadia and factory buildings to hospitals and shipping centres.

The Terrain Siphonic Drainage System also offers full compliance with BS 8490:2007 using Terrain FUZE BBA certified pipes and fittings, which can be installed horizontally without a slope – giving you the freedom to decide the downpipe locations.

#### **Terrain Firetraps**

The Terrain Firetrap range of unique passive fire protection products is compatible with Terrain PVC Soil & Waste, Terrain FUZE and Terrain dB12 systems. Offering up to four hours' fire compartmentalisation for drainage soil stacks, they're ideal for use in concrete, masonry, cross laminated timber construction (CLT) or plasterboard partitions, as well as concrete floor constructions – not just meeting, but exceeding Building Regulation requirements.



#### Terrain Underground Drainage

Using the latest plastics manufacturing technology to satisfy the requirements of today's installers, our Terrain underground drainage range includes both rigid and foam core pipes, plus a comprehensive selection of fittings to suit all applications. Easy to lay and adaptable for connection to existing drainage systems, all of our below ground systems are manufactured to the Underground Drainage (EN 1401:1998) and Plastic Inspection Chambers for Drains and Sewers (EN 7158:2001) standards.

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### **MecFlow.** The future of water supply.

### Innovation in action

#### MecFlow is a simple, reliable alternative to traditional water supply systems.

It's multi-layer construction has been designed for strength, durability and achieves a fire classification rating of B-s1, d0\*; making it ideal for multioccupancy and tall building projects.

But MecFlow isn't like usual plastic water supply systems. It features 'CLICKWELD' technology, combining all the benefits of an electrofusion weld, with clip connections, removing the need for clamping and allowing pre-assembly installation before final welding. It makes for a faster, more homogenous weld; and a fast, clean installation.

Because ofit's multi-layer construction, MecFlow also provides benefits that some other systems can't. Such as anti-microbial protection, reduced thermal expansion and increased mechanical resistance. It's also UV-resistant, abrasion-resistant and has a high resistance to rigorous disinfection processes.

#### MecFlow Product Offering





Lownoise transmission



Anti-microbial protection







Less on-site storage

U.

Chemical

resistance



UV resistance

Abrasion

resistance

\*Fire classification rating according to EN13501, installed according to building regulations. We recommend MecFlow be installed with our Firetrap sleeves

MECFLOW // CLICKWELD // B-s1



#### Installation



<u>^</u>

The unique CLICKWELD technology means no clamps are required for welding, the clips ensure a consistent weld and allow for preassembly before electrofusion welding for a secure, long-lasting

CLICKWELD technology

#### Maximised water quality

join.

The system's smooth bore and excellent chemical resistance allow the quality of the water it delivers to be maintained throughout its lifecycle, without risk of degradation or contamination

#### Less on-site waste

Through the Polypipe Advantage service, MecFlow is delivered in Kits so you get exactly what you need, reducing packing and on-site waste. What's more, Polypipe will recycle any offcuts or end caps at the end for your project.

#### **MecFlow applications**

- Chilled Water (CHWS)

\* Not suitable for recirc applications



#### Increased mechanical strength

Due to the addition of micro- fibres to the material formulation, the MecFlow system has improved temperature and pressure characteristics giving it excellent mechanical strength over a range of fluid temperatures.

#### **Fast installation**

With both the CLICKWELD Technology and the MecFlow system being delivered in Kits, faster installation is achieved vs traditional installation.

#### Lower labour costs

With the system's fast installation method and less labour required for installation, projects benefit from a reduction in labour costs.

- Boosted Cold Water (BCWS)
- Low Temperature Hot Water (LTHW)
- Domestic Hot Water (DHW)\*
- In a range of joint fittings; Tee piece, Elbow piece, Straight piece and Manifold, to configure the perfect system



# products

#### Taking your project further

Looking beyond water conveyance, the Polypipe group offers sustainable engineered water and climate management systems, which are carefully engineered to maximise the comfort and efficiency of commercial buildings, whether they require consistent warmth, ventilation, heat recovery or cooling.

To discover the full range of complementary Polypipe systems, visit polypipe.com

### **Polypipe Underfloor Heating Systems**

Underfloor heating systems are increasingly popular and are rapidly becoming the heat source of choice for commercial and multi-occupancy residential developments.

Ideal for managing the atmosphere of a space by providing a consistent ambient temperature, our range of water-based solutions offer efficient performance at reduced flow temperatures compared to traditional wall radiators, reducing heating costs.

And, for projects where the transfer of sound through the building's structure is a concern, the Polypipe Acoustic Floor Heating System offers guaranteed acoustic properties, providing regulatory compliance and occupant comfort together in one system.

For more information on our range of Underfloor Heating Systems, controls and manifolds visit: www.polypipeUFH.com

#### **Nuaire Ventilation Systems**

Our Nuaire brand has been at the forefront of packaged Air Handling Units (AHUs) for over 20 years, designing and manufacturing market leading ranges - from the revolutionary Boxer Packaged Solution which provides maximum performance and energy efficiency, to the Nuaire IAQ-VALVE.

The first of its kind, the IAQ-VALVE combines a carbon filter and air supply valve in one, using unique technology to remove up to 91%

of nitrogen dioxide (NO2) and Volatile Organic.

Explore the full range of Nuaire ventilation systems at www.nuaire.co.uk

#### Permavoid

Suitable for virtually any project, the Polypipe Permavoid Geocellular System meets the demands of current legislation whilst providing developers with an unmatched water management and treatment solution.

Comprised of high-strength modular cells which can be used in place of a traditional aggregate sub-base, the system provides a void ratio of up to 95%, retaining, attenuating, infiltrating and treating water at shallower depths, making it ideal for managing stormwater at source.

And Permavoid's geocellular design makes it extremely strong. Made from recycled polypropylene, it's perfect for vehicular hardstanding applications, while its shallow profile avoids the need for deeper excavation, as well as the risks of chemical contamination, high water tables and hard rock areas.

Learn more about the Permavoid Geocellular System at: www.polypipe.com/civils-and-infrastructure/infragreen







### **Project case studies**

Demonstrating the advantages our innovative systems and services can bring, the following case studies detail real-world examples of clients working with Polypipe Building Services to help create efficient and sustainable commercial buildings, while minimising whole-life costs and offering superior occupant comfort.

#### POLYPIPE HAS A BALL ON O2 PROJECT

Europe's largest pillar free ballroom can now welcome dancers from around the globe thanks to the installation of an innovative drainage system.

The 4,800 metre2 ballroom, situated in the InterContinental London O2 Hotel, is located close to its iconic namesake, the O2 Arena. The hotel also boasts several restaurants, a spa and a panoramic Sky Bar, offering views of Canary Wharf and the River Thames.

Standing at 19 storeys high and containing 453 bedrooms and suites, it was of paramount importance that the drainage system installed could be trusted not to leak, and so M&E Contractor, H.E. Simm & Son Ltd., approached Polypipe to manufacture a suitable solution.

### At 19 storeys tall, the luxury hotel needed intelligently designed drainage.

As experts in providing intelligently designed solutions for the movement of water and air around tall buildings, Polypipe provided an appropriate system using Terrain FUZE. Made of high-density polyethylene, Terrain FUZE is lighter in weight than cast iron equivalent systems and is available in longer lengths, meaning less jointing is required.

This in turn, provides less opportunities for the system to leak, making it ideal for the project. As the system is jointed using electro-fusion welding, where the weld area is as strong as the host material, system integrity is increased and consequently the risk of leaks in the development is further reduced.



"The drainage system installed at the O2 Hotel needed to be considered and intelligently designed. The innovation displayed by Polypipe's system, including Terrain FUZE made best use of the available space"

Martin Thompson, Senior Project Manager at H.E. Simm & Son Ltd.

#### **Polypipe Building Services**

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