



Durapipe UK is a proud member  
of the British Plastics Federation (BPF)  
Plastics Pipes Group (PPG)



The BPF Plastic Pipes Group (PPG) is the leading trade association representing manufacturers and material suppliers of plastic piping systems in the United Kingdom.

Established in 1962, the PPG is dedicated to promoting the development, acceptance and usage of manufactured plastic piping systems at all levels in the building, construction, civil and utilities industries.

**PPG member responsibility and compliance to Standards, Approvals and product quality**

PPG member companies have a responsibility to the industry to ensure products manufactured meet the needs of the application they are intended for and therefore invest in stringent testing and compliance with standards and approvals.

The BPF pipes group fully support compliance with standards so installers and end users can assume BPF membership is a sign of quality assurance and compliance with these standards.

All BPF members sign up to a charter to ensure integrity, adherence to standards and commitment to quality.

***When you choose products from a Plastic Pipe Group member you are automatically choosing products of quality.***

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# Benefits of Plastics

Durapipe UK has been at the forefront of thermoplastic pipework technology for over half a century. Our pipes, fittings and valves for pressure and drainage applications are specifically designed to fulfil the requirements of different industrial environments.

Our range of market-leading plastic pipework products are a perfect solution for a range of different applications. Whether it be for chilled water or aggressive acids, specialist drainage requirements, or even for the safe conveyance of fuel, our pipework systems can easily overcome some of the problems associated with more traditional materials.

Furthermore Durapipe pipework systems are corrosion and limescale free with many systems enjoying a 50-year design life with long term savings on maintenance.

## Standards & Approvals

Durapipe high performance plastic pipework systems are lightweight and easy to install whilst having excellent resistance to corrosion and buildup of materials within the pipework.

Durapipe UK products are manufactured to the highest level and meet with the requirements of many international standards and approvals.

Both our Durapipe ABS & PVC-U pipework systems are WRAS approved and are 'Approved for use within public water supplies, and by the Secretary of State.

Durapipe ABS & PVC-U are listed in the "List of Approved Products" published by the DWI.

Furthermore, our products are manufactured in an environment that complies with the requirements of BS EN ISO 9001 and BS EN ISO 14001.



\* For full details of standards & approvals please consult individual technical literature

# Benefits of Plastics



## Corrosion & Limescale Resistant

- Smooth bore of plastic prohibits limescale build-up
- Consistent flow rates & lower maintenance costs
- Plastics are corrosion resistant.



## No Scrap Value

- No additional security costs
- No remedial repair work due to theft.



## Pump Efficiencies

- Plastic pipes have a smoother bore than metal alternatives
- Smooth bore can provide less friction & lower head loss
- Lower pump duty & long term energy savings.



## Modular Solutions

- Plastic systems work well on modular projects
- Plastics are easy to pre-fabricate & connect-up on-site.



## Impact Resistant

- Some plastic materials have exceptional impact strength
- SuperFLO ABS remains ductile at temperatures as low as -40°C.



## Standards & Approvals

- Independently tested & approved
- Rigorous testing to universally recognised standards.



## Lightweight & Easy to Install

- Easier manual handling on site
- No special tools or hot works are required.



## Stable Pricing

- Plastic prices are more stable than metal pipe systems
- Allowing more accurate cost projections for contractors.



## Water Quality

- Smooth bore of plastic pipe results in reduced bacteria (Biofilm)
- Only treatments (chemical or thermal) will prevent/control Biofilm
- C-PVC is the most compatible material for these treatments.

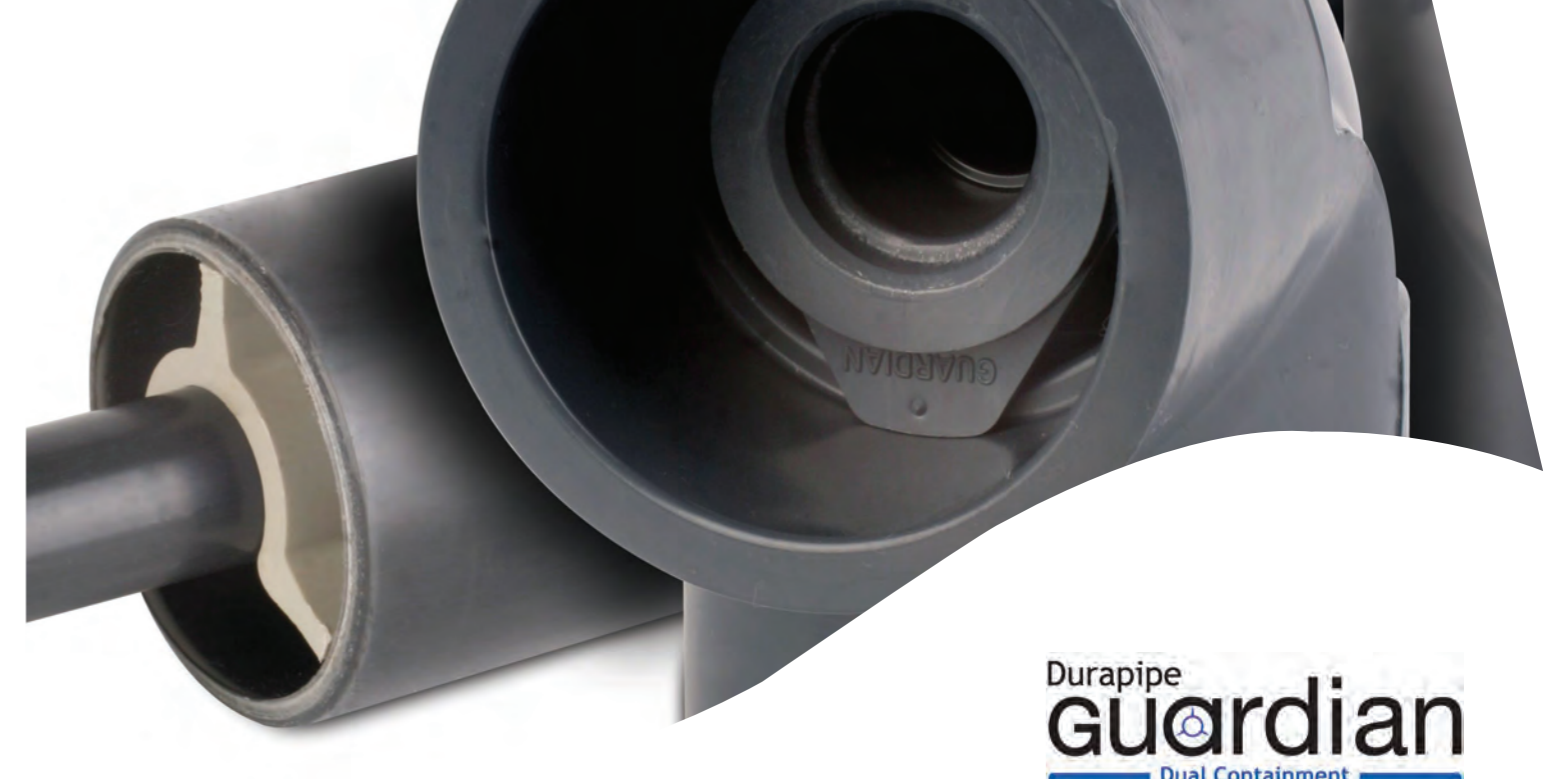


## Time & Cost Savings

- Ease & speed of installation can provide value engineering solutions
- Significant installed cost savings can be realised vs metal alternatives
- Providing installers with a compressed schedule.



**Durapipe FIP**  
First In PVC



**Durapipe Guardian**  
Dual Containment

## Process chemicals & industrial fluids

Our **PVC-U** pipe and fittings provide excellent chemical resistance making it an ideal system for a wide variety of industrial applications.

PVC-U allows the safe transportation of many acids, alkalis and chemical concentrates without fear of corrosion and environmental pollution.

Durapipe FIP PVC-U is a solvent welded, fully matched pipework system incorporating pipe, fittings and valves, available in both imperial and metric sizes.

PVC-U is lightweight and is extremely easy to install which can save both time and money on any given project when compared to other, more traditional pipework materials.

Furthermore, Durapipe FIP PVC-U is fully WRAS approved, while our PVC-U Premium pipe is also listed in the "List of Approved Products" as published in Regulation 31 by the DWI.



### Typical Applications

- Acids & alkalis
- Effluents
- Potable water
- Chemical processing
- Effluent treatment

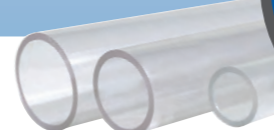
### Key Product Information

- Size range - 16mm to 315mm (Metric)/ 1/2" to 12" (Imperial)
- Pressure rating - (Metric) PN16 20mm to 125mm pipe & 16mm to 160mm fittings, PN10 20mm to 315mm
- Pressure rating - (Imperial) 1/2" to 6" pipe & fittings Class E, 8" to 12" pipe & fittings Class C
- Temperature rating: +5°C to +60°C

### Key Product Features

- Lightweight
- Easy to install
- Corrosion resistant

Clear PVC-U pipe is also available in sizes 1/2" - 8"



## Specialist dual contained pipework

Durapipe Guardian is a **Dual Contained** pipework system made from **PVC-U** material.

Guardian is a unique system that incorporates a patented Centra-Lok™ design, which provides a solid fixed fitting, which together with considerably fewer joints, offers a true point of difference from other dual contained systems on the market.

Manufactured in PVC-U material, Durapipe Guardian is ideal for water and waste treatment applications as it allows the safe transportation of different fluids and some chemical concentrates without fear of corrosion and environmental pollution.



### Typical Applications

- Water & waste treatment
- Chemical process
- Pharmaceutical
- Industrial process
- Potable water

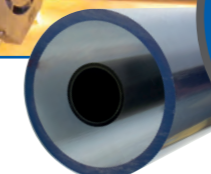
### Key Product Information

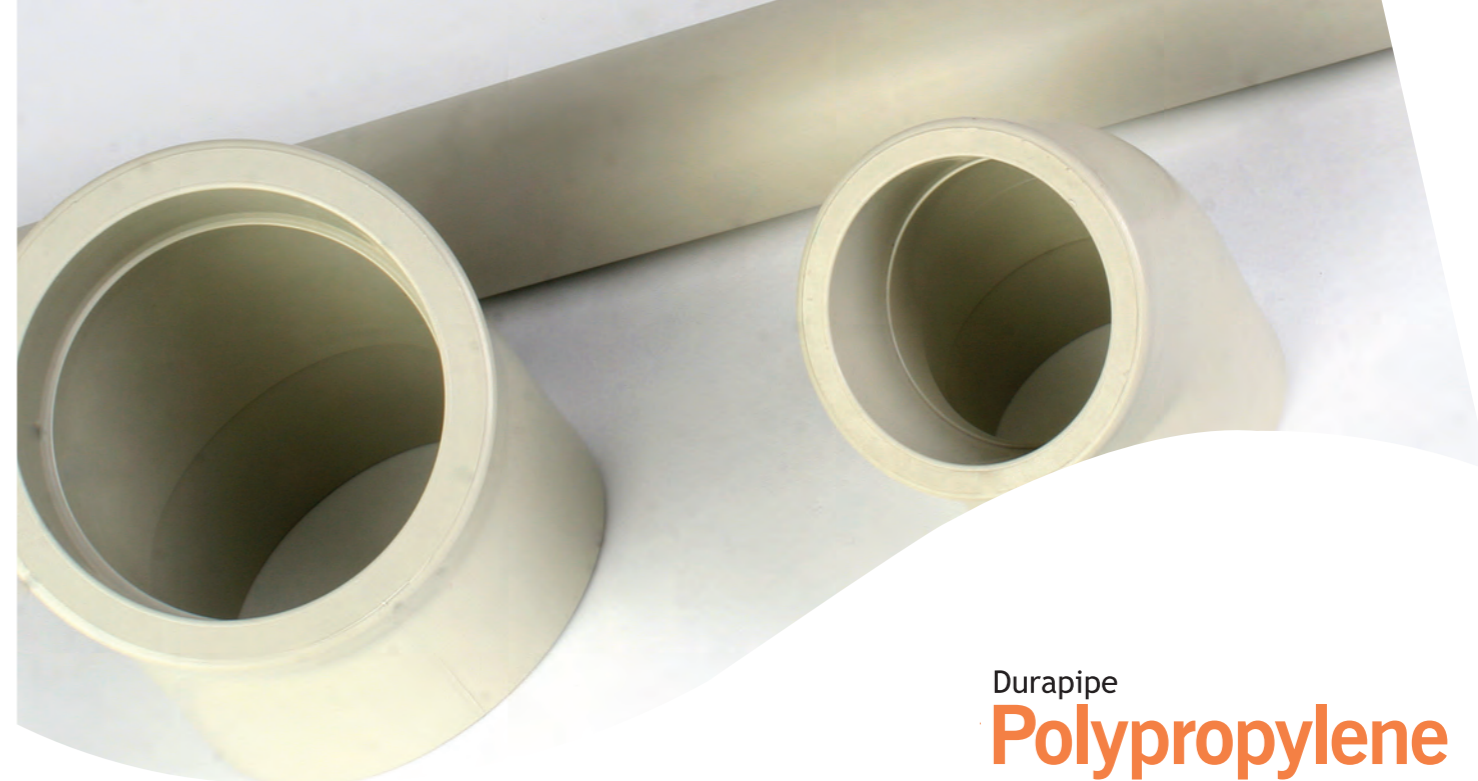
- Size range: 1/2" #2" up to 8" #12"
- Pressure rating: Class E 15 bar
- Temperature rating: +5 to +60°C

### Key Product Features

- Patented Centra-Lok™ system holds fitting in the correct place prior to installation
- Extremely easy to install - Solvent Weld jointing for both inner and outer pipe
- Visual or automated leak detection system available
- Also available in PVC-C material upon request

Guardian with clear outer PVC-U pipe is also available in sizes 1/2" #2" - 4" #8"





## Low temperature fluid transportation

Durapipe SuperFLO **ABS** combines corrosion resistance, toughness and economic benefits to provide tremendous advantages for low temperature fluid transportation.

SuperFLO ABS is a solvent welded, fully matched pipework system incorporating pipe, fittings and valves that is available in both imperial and metric sizes.

SuperFLO ABS provides a wide temperature range and the system remains extremely ductile even at temperatures as low as -40°C.

Furthermore, SuperFLO ABS is extremely lightweight and is much easier to handle on-site than traditional materials, especially during installation which can significantly reduce both time and cost.

Durapipe SuperFLO ABS is manufactured to the highest standard and is fully WRAS approved, it is also listed in the "List of Approved Products" as published in Regulation 31 by the DWI.



### Typical Applications

- Chilled water
- Boosted cold water
- Potable water
- Low temperature cooling
- De-mineralised water

### Key Product Information

- Metric size range - 16mm to 315mm
- Metric size pressure rating - PN10 - 16 to 250mm, PN8 to 315mm
- Imperial size range - 3/8" to 8" pipe
- Imperial size pressure rating - Up to 4" Class E, up to 6" Class D, up to 8" Class C
- Temperature rating - minus 40°C to +70°C

### Key Product Features

- Lightweight
- Easy to install
- Wide temperature range
- Tough and durable
- Corrosion resistant

## For the industrial processing industry

Durapipe **PP-H** is specially designed to convey hazardous chemicals safely and efficiently at elevated temperatures.

Polypropylene pipe has excellent chemical and abrasion resistance properties making it ideal for a range of industrial pipe supply purposes. It's characteristics are perfectly suited to process applications including pharmaceutical and chemical processing.

It is also the product of choice in water dosing applications, including prefabricated skids, and is often specified by water companies.

Durapipe Polypropylene is jointed by either socket fusion, butt fusion or electro-fusion jointing methods and is a fully matched pipework system incorporating pipe, fittings and valves that are available in metric sizes up to 400mm.



### Typical Applications

- Acids & alkalis
- Chemical processing
- Industrial waste treatment
- Pharmaceuticals
- Effluents

### Key Product Information

- Size range - 20mm to 110mm (socket) and 20mm to 400mm (butt/electrofusion)
- Pressure rating - PN10 or PN6 (Metric)
- Temperature rating - 0° to 100°C

### Key Product Features

- Lightweight
- Excellent chemical resistance
- Multiple jointing options
  - socket fusion
  - butt fusion including IR welding
  - electro fusion



## For hot corrosive fluids

Durapipe Corzan is a **PVC-C** plastic pipework system suitable for handling hot, corrosive fluids in a wide range of industrial applications.

Corzan offers excellent performance levels in highly aggressive industrial conditions. The fully-matched plastic pipe system has the ability to convey hot acids and alkalis under pressure at elevated temperatures.

The smooth surface of Corzan is corrosion resistant which makes it superior to metal pipework alternatives which can become prone to corrosion resulting in process leaks, flow restrictions and ultimately premature system failure.

A reliable PVC-C plastic pipework system can be the ideal choice in a demanding industrial environment for the distribution of aggressive chemicals, soaps, paper and pulps & effluents. Corzan is also utilised in industrial pickling and metal cleaning processes.



### Typical Applications

- Acids & alkalis
- Demineralised water
- Industrial waste treatment
- Chemical processing
- Soaps, paper & pulps
- Effluents
- Industrial pickling
- Metal cleaning and processing

### Key Product Information

- Size range - 16mm to 160mm
- Pressure rating - PN16 (16mm to 110mm), PN10 (160mm)
- Temperature rating - +5° to +95°C

### Key Product Features

- Excellent chemical resistance
- Lightweight
- Wide temperature range
- Easy to install
- High temperature acids & alkalis

## Compressed air distribution

Durapipe Air-Line Xtra is the ideal solution for ensuring that **Compressed air** is kept clean and uncontaminated for use in process and manufacturing industries.

A lightweight, non-corrodible compressed air distribution system, Durapipe Air-Line Xtra is manufactured from a specially formulated blend of ABS and is suitable for continuous operation at 12.5 bar at 20°C.

Boasting a 30 year design life, Durapipe Air-Line Xtra is specifically designed for the conveyance of compressed air, Air-Line Xtra also meets the requirements of the UK Pressure Systems and Transportable Container Regulations.

Air-line Xtra is a solvent-weld jointed system making the system extremely easy to install and there are many examples of where the product has been used within a factory environment particularly with pneumatic machinery.



### Typical Applications

- Compressed air systems
- Pneumatic machinery

### Key Product Information

- Size range - 16mm to 110mm
- Pressure rating - PN12.5

### Key Product Features

- Lightweight
- Easy to install
- Ultra smooth internal bore
- Corrosion resistant



Durapipe  
**PLX**  
Safe Pipework for Fuel

## For safe fuel transfer

Durapipe **PLX** is a complete range of dedicated electro-fusion-welded pipework systems for the safe transfer of fuels. Suitable for use with diesel, bio-diesel and fuel oils.

Durapipe PLX is an above and below ground product range specifically designed for the safe transfer of liquid fuels.

Durapipe PLX is used in buildings such as hospitals, data centres, prisons and banks where there is a need for uninterrupted power supply (UPS) and/or emergency power.

The PLX range is a composite pipe system manufactured from high density polyethylene which makes the system strong and robust. A smooth internal protective barrier layer offers the highest in environmental protection against fuel permeation ensuring that no harmful emissions can be leaked into the environment.



### Typical Applications

- Uninterrupted Power Supply (UPS)
- Emergency power supply
- Oil-fired equipment
- Commercial and public transport refuelling

### Key Product Information

- 10 bar pressure rating at 20°C
- Secondary containment system
- 30 year design life
- Size range: 32mm to 315mm
- Electrofusion system

### Key Product Features

- Suitable for pressure and vacuum applications
- Resists fuel permeation
- Corrosion resistant
- Protects the environment
- Easy to install

**PLX Blue**  
specialist pipe system  
available for  
Diesel Exhaust Fluid/  
AdBlue



**Vulcathene**  
Safe chemical drainage

## Safe chemical drainage

Vulcathene is a purpose-designed chemical resistant plumbing system that has been specified and installed in the laboratories of schools, universities, hospitals and research facilities worldwide for over 60 years.

Tried, tested and proven, Vulcathene is the only chemical drainage system to have **withstood the test of time** in the most demanding of laboratory applications.

Two easy jointing methods, Mechanical for demountable joints and Enfuson (electrofusion) for welded joints, provide total versatility for designers and installers of chemical waste systems.

Vulcathene is proven to work with various chemical combinations including acids, alkalis, solvents, detergents, blood samples and radioactive wastes.

The system includes various accessory products such as sinks, drip cups and anti-siphon traps.



### Typical Applications

Laboratories in:

- Schools
- Universities & colleges
- Hospitals & clinics
- Pharmaceutical companies
- Research organisations

### Key Product Information

- Size range - 38mm to 152mm
- Temperature rating -20°C to 100°C (Only intermittent at 100°C)

### Key Product Features

- Purpose designed for chemical drainage
- Mechanical or electrofusion jointing methods
- Fully BBA Approved



**Durapipe**  
Industrial Pipework Systems



**Durapipe FIP**  
Manual & Actuated Valves

## Manual Valves

Durapipe offer a comprehensive range of manual valves, providing solutions for a wide range of industrial processes and applications. The Durapipe FIP valve offering includes the market leading VKD ball valve, alongside metering, butterfly, diaphragm, ball check and air release valves.

Valves are integral to any pipework system and it is important to consider the valve requirements of the system in order to provide the best possible control for the process or application.

Our ball valve range is one of the most innovative and technically advanced on the market, with patented features such as DualBlock®, SeatStop®, EasyFit® & PowerQuick®.

### Valve Options

- Ball valves
- Butterfly valves
- Metering ball valves
- Diaphragm valves
- Air release valves
- Sediment strainers
- Pressure relief valves
- Ball check valves

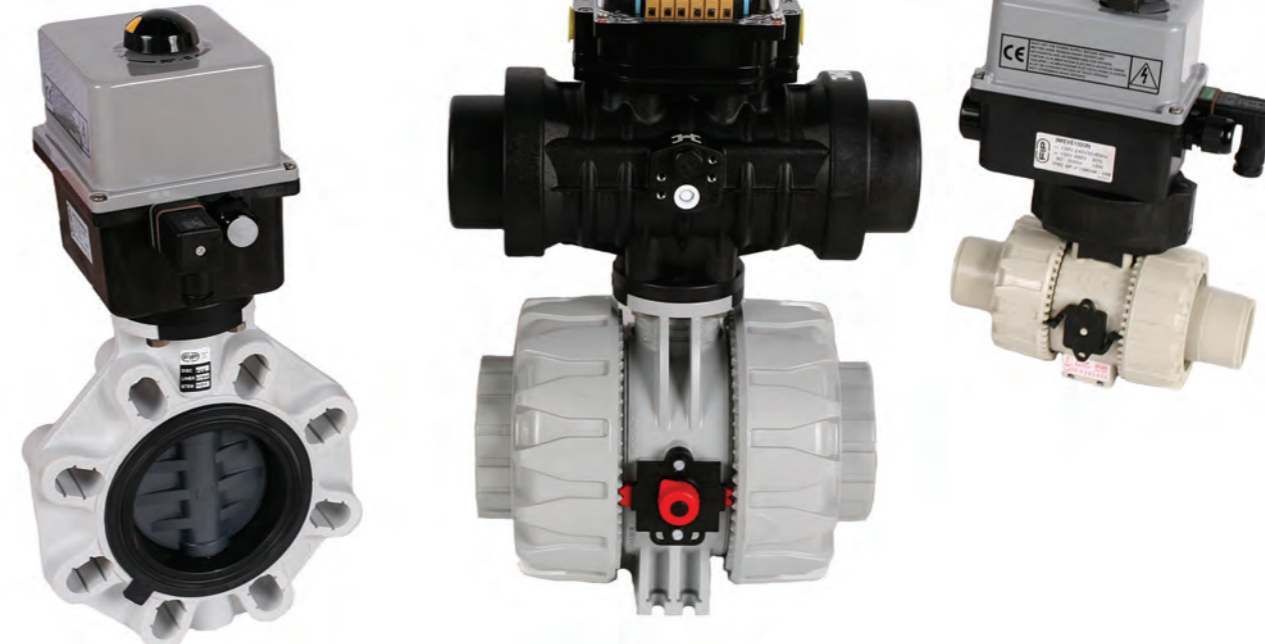
### Key Product Features

- Lightweight
- Easy to install
- Robust
- Complete system matching
- Pneumatic & electric actuation
- Most valves are available from stock within 48 hours of ordering

The ball valve is the most effective product for pure isolation requirements, however there are alternative valve types that can cater for more complex processes, including diaphragm, butterfly, and other ancillary valves.

In addition to our extensive range of valves we also offer our VKR Metering Ball Valve, designed for specific flow regulation in a range of industrial applications, the VKR offers VKD ball valve reliability combined with a patented fin shaped ball designed to ensure that the flow through the valve is linear throughout the full operation and guarantees minimal pressure loss, highly suited to chemical dosing applications.

All of our valves are manufactured to the highest standard by our sister company FIP. Based in Italy, FIP is the centre of excellence for valves and flow control products manufactured within the Aliaxis group.



## Actuated Valves

In addition to our extensive range of manual valves, we also offer a wide range of actuated valve solutions, that can be either electrically or pneumatically operated.

### Actuated Valves

Actuated valves provide the user with the ability to operate a process or a series of actions remotely, removing the need for manual operation; the user can manage a network of valves via various methods of electronic signal controls

At Durapipe we offer a wide variety of actuated valve solutions across our range of sizes, by combining our leading manual valve offering with electric or pneumatic powered actuators.

The choice of electric or pneumatic actuation depends on the process involved and the availability of a reliable power source or compressed air. Many of our valves can be actuated using either method.



### Actuated Valve Options

- VKD DualBlock® Ball Valve
- TKD DualBlock® 3 Way Ball Valve
- VKR Metering Ball Valve
- FK Butterfly Valve
- VM Diaphragm Valve
- CM Compact Diaphragm Valve



### Actuator Options

#### Electric Actuation

- 100 to 240v AC
- 24v AC/DC

#### Options

- Standard(On/Off)
- Fail Safe Open
- Fail Safe Closed
- 4 to 20mA Positioning

#### Pneumatic Actuation

- Compressed Air

#### Options

- Fail Safe Open
- Fail Safe Closed
- Double Acting
- Positioning Options

At Durapipe UK, our dedicated Valve & Actuation Team can offer technical advice and assemble complex valve packages, which can usually be delivered to site within 48 hours. For further information please contact 01543 471681



## Flow Control – Durapipe FLS

Durapipe offer an extensive range of technically advanced flow control equipment, providing solutions in industrial applications for flow monitoring, conductivity measurement and flow control.

The accuracy of flow control and measurement systems is crucial and it is important that adequate consideration is given to the type of flow control required within a specific industrial application

The **Durapipe FlowX3** range consists of state of the art technology designed to provide accurate readings, utilising a 4" wide graphic display screen complete with multicolour backlight enabling readings to be taken from a distance. The range also offers on board walkthrough guides designed to aid collaboration and installation.

### Flow Measurement

The Durapipe FLS range offers various flow measurement options from **variable area flowmeters**, designed to operate on the variable area principle, with a float suspended within a upward flowing tube designed for manual reading using indicators on a graduated scale. We also offer a more advanced method of measurement in the form of the M902 flow monitor which provides the user with an automated reading designed for accuracy, transferring the frequency generated from the paddlewheel flow sensors into a readable format on the 4" wide graphic display screen



### Flow Control

Flow control is essential in ensuring that pumping systems operate efficiently, protecting the pump from running dry when pumping against closed valves or when there is minimal flow.

The F3.0 Flow Switch is equipped with a SPST contact which activates a visual status indicator when flow velocity falls below the factory pre-set of 0.15 ft/s providing a fast accurate indication which can improve pump efficiency over time. The Flow Switch offers a quick, effective and maintenance free installation into a variety of pipe materials while offering robust chemical resistance properties.

### Flow Monitoring

Monitoring flow can be crucial within certain industrial applications, particularly where a chemical dosing process is being operated. The M9.50 batch controller is specifically designed to provide complete control and accuracy during the batching and blending of liquids. The batch controller can be programmed to measure and control the flow of liquids while providing clear accurate status updates. The system also incorporates a programmable alarm indicator.



### Advanced Flow Control

Paddlewheel flow sensors may not be suitable for all industrial applications and in particular processes that contain suspended solids or abrasive liquids. We offer the F6.60 Magmeter as a solution which is capable of measuring flow without using any moving parts in liquids that are conductive and homogeneous. The Magmeter is maintenance free and utilises two electronic sensors that are designed to record two readings, outputting an accurate average pulse which can be transmitted to a central PLC or flow monitor display screen.

# YOUR COMPLETE SOLUTION TO PIPE AND FITTINGS

**GPS**  
PE PIPE SYSTEMS

PRODUCING POLYETHYLENE  
PIPE FOR MORE THAN  
60 YEARS

**Philmac**

The connection you can trust.

SUPPLYING CONNECTION  
SOLUTIONS FOR  
35 YEARS



Customer  
Services



Specification/  
Design Service



Technical  
Support



Fast and Easy  
Installation



Quality  
Manufacturing



Complete  
Security

[www.gpsuk.com](http://www.gpsuk.com)

an *OAliaxis* company

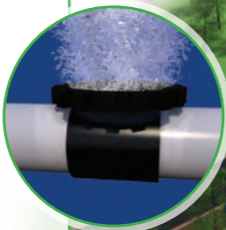
[www.philmac.co.uk](http://www.philmac.co.uk)

# Plastic Pipework Systems for Water & Waste Treatment

The pipework requirements of the water and waste treatment industry can be complex and diverse, whether it be for the transfer of potable water, waste water, reverse osmosis systems, slurries, ultra pure water or effluent treatment, our wide range of products are ideally suited to fulfil these needs.

## Aeration Beds

Our highly engineered products are widely used within aeration facilities across the world, including **Durapipe Air-line Xtra**, which is our specialist system for air distribution and for use with certain compressor oils.



## Chemical Storage

The piping requirements to transport chemical combinations can be quite complex within a water treatment plant. We have various systems, manufactured from different types of plastic such as **PVC-U, Polypropylene & PVC-C** that are ideal for these aggressive and often corrosive chemicals.



## Chemical Distribution

Where a concoction of different chemical combinations need to be transported across a gantry or overhead, it is important to consider a dual contained pipework system. **Durapipe Guardian** is a specialist dual contained **PVC-U** system that is purpose designed to carry such fluids.



## Emergency Fuel Supply

**Durapipe PLX** is a market leading specialist pipework system for the conveyance of fuel. **PLX** can be used to safely transport fuel from storage tanks to generators for emergency or uninterrupted (UPS) power supply applications. The pipe system ensures a continuous flow of fuel to the back-up generator which is imperative to the pumping station process within a water and waste water treatment plant.



## Flow Control

Durapipe UK offer a full range of **manual and actuated valve** options across a suite of different valve types such as ball, butterfly and diaphragm that are fully approved and tested for various flow control solutions. Furthermore, our range of technically advanced **flow meters** and **flow measurement and monitoring** products have been widely used where accuracy is of upmost importance.



## Odour Control

## Pumping Station

## Screening

## Aeration Beds

## Final Settlement

## Water Discharge

## Reed Bed

## Pumping Station

## Chemical Storage

## Water Inlet

## Potable Water

Our Durapipe **PVC-U & ABS** ranges meet the criteria set out as part of Regulation 31 and are listed in the 'List of Approved Products' published by the DWI. This is the minimum requirement for carrying drinking water. Furthermore, both ranges are WRAS approved.



## Treated/Waste Water

Our products meet the highest level of international standards and approvals including the appropriate drinking water standards. In particular, **SuperFLO ABS** is the commonly used system for the mass movement of contaminated water and sewage. **SuperFLO ABS** is available with a full range of pipes, fittings and valves up to a large diameter of 315mm/12".



Case Studies

## Dual contained piping for Chemical Dosing

To protect the pump station dosing system from any potential chemical leakage, our Guardian dual contained pipework system was installed.



## Effluent Treatment

SuperFLO ABS pipework was specified for the plant's 10 distribution pipes, which are used to continually spray effluent over the biological filter beds to treat the sewage to within consent levels before discharging to the watercourse.



## Aeration Beds

Durapipe Air-line Xtra pipework was installed to transport the compressed air, which is forced up through the diffusers to generate the bubbles as part of the biological aerated filter process to treat sewage effluent.



## Back-up power for pumping station

PLX pipework was installed for transporting fuel from a main fuel tank to back-up generators to deliver power in the event of power failure.



Case Studies

# Plastic Pipework Systems for the Marine Industry

The pipework requirements of the marine and ship building industry can be complex and diverse, with the prevention of corrosion a high priority. Our wide range of products are ideally suited to fulfill these needs.

Our high quality, fully matched plastic systems of pipes, fittings and valves, are the perfect pipework choice for the different water systems on any floating vessel.



**Swimming Pool**  
Perfect for swimming pools and spa baths. Durapipe UK products are hygienic and limescale free, perfect for dosing, analysis and circulation water.



**Chilled Water for Air Conditioning**  
Designed to operate at temperatures as low as -40°C and highly impact resistant, **SuperFLO ABS** is ideal for chilled water/air conditioning applications.



**Ballast Water**  
**SuperFLO ABS** is available with a full range of pipes, fittings and valves up to a large diameter of 315mm/12". Ideal for both fresh and salt water, ABS is perfect for a ship's ballast system.



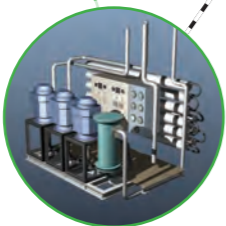
**Marina Refuelling**  
**Durapipe PLX** Secondary Contained pipework provides a secure environment for bulk transfer of marine fuels to storage tanks, during vessel refuelling, bunkering and bilge water pumping operations.



**Offshore**  
Plastic systems are the perfect and reliable choice for the prefabricated pipework requirements of accommodation modules. These modules would be used on offshore platforms for the supply of drinking water as well as hot and cold water services.

**Propulsion Cooling**  
The low temperature and corrosion resistant properties, coupled with a 10-bar pressure rating, make **SuperFLO ABS** the ideal pipework material for the mechanical cooling of propulsion pods.

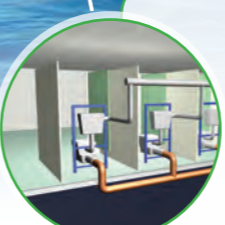
**Drinking Water via Reverse Osmosis**  
Products perfect for the production of drinking water while out at sea including pipework, valves and flow monitoring, all of which meet the highest standards and approvals.



**Hot & Cold water**  
Lightweight and easy to install, Durapipe UK has a number of **PVC-C** based pipework systems that are purposely designed for both hot and cold water distribution.



**Drainage**  
**Vulcathene** drainage, is a fully welded electrofusion jointed pipework system that is perfect for the secure collection and containment of all types of drainage/waste. **SuperFLO ABS** can be used for drainage under vacuum.



**Ice Making / Chilled Hold**  
**SuperFLO ABS** has a wide temperature range & can operate at temperatures as low as -40°C and is ideal for ice making or chilled storage applications.



Case Studies

**Offshore**  
Durapipe pipework fittings & valves form the basis of a reverse osmosis desalination plant installed on an oil platform in the North Sea. The system uses reverse osmosis technology to convert seawater into potable water.



**Cruise Ship**  
**SuperFLO ABS** was extensively used for multiple pipework applications on the Norwegian Pearl cruise ship. The system was used in sizes up to 315mm for both ballast water & for the supply feeds for the pools & spas on board.



**Luxury Yacht**  
ABS hositails in sizes 20mm – 40mm were used to transport the chilled water for the air conditioning system on board the luxury pleasure boat. The flexible hositails were specifically chosen due to their limescale and corrosion resistant properties.



**Marina**  
The Durapipe PLX system was used to transfer fuel from the main storage tanks at high level, along the wall of the marina and down to the filling station pontoon on the luxury papagayo marina in Costa Rica.



Case Studies

# Plastic Pipework Systems for Factory Services

It is an important requirement within any modern factory or manufacturing facility that a reliable pipework system is installed for the various requirements across the plant.

Whether it be a compressed air transportation network, fluid handling or industrial cooling for machinery, it's vital that a dependable pipework system is installed that can convey the required media on a consistent basis.

## Air Conditioning

**SuperFLO ABS** is ideal for chilled water/air conditioning applications. ABS has been used in many comfort cooling applications such as in offices where climate control is an important factor.



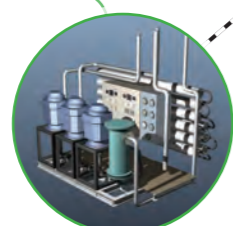
## Flow Control

We offer a full range of manual and actuated valve options across a suite of different valve types such as **ball, butterfly and diaphragm** that are fully approved and tested for various flow control solutions. Furthermore, our range of technically advanced flow meters and flow measurement and monitoring products have been widely used where accuracy is of upmost importance such as a water supply to specialist machinery.



## On-site Water Treatment

Where a factory has an on-site water treatment facility, our pipework systems are ideal for this application as they carry the highest levels of approvals. They are the perfect choice for all aspects of water treatment due to their excellent chemical resistance and low maintenance requirements.



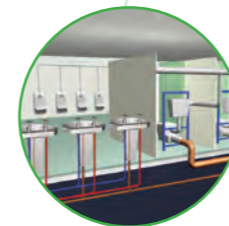
## Chemical Drainage

**Vulcathene** specialist chemical drainage has been specified and installed in the laboratories of research buildings for over 50 years. Available in two easy jointing options, **Vulcathene** is fully BBA approved and is the market leading product for the safe drainage of dangerous chemical combinations from laboratories.



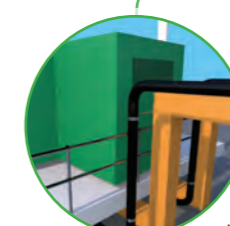
## Hot & Cold Water

**PVC-C** pipework systems are ideal for both hot and cold water distribution. Being lightweight and easy to install, **PVC-C** is perfect for the hot & cold water services throughout a manufacturing plant.



## Back-Up Fuel Supply

**Durapipe PLX** is a market leading specialist pipework system for the conveyance of fuel. **PLX** can be used to safely transport fuel from storage tanks to generators for emergency power supply applications. The pipe system ensures a continuous flow of fuel to the back-up generator which is imperative to a building such as factory.



## Chemical Storage

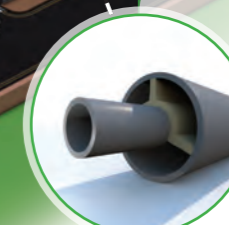
The piping requirements to transport chemical combinations can be quite complex within a factory particularly for chemical dosing applications. We have various systems, manufactured from different types of plastic such as **PVC-U, Polypropylene & PVC-C** that are ideal for these chemicals.



## Chemical Storage

## Chemical Distribution

Where a concoction of different chemical combinations need to be transported across a gantry or overhead, it is important to consider a dual contained pipework system. **Durapipe Guardian** is a specialist dual contained **PVC-U** system that is purpose designed to carry such fluids across a public area.



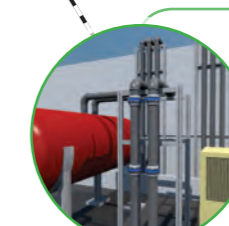
## Compressed Air

**Durapipe Air-line Xtra** is a purpose-designed pipework system for the distribution of compressed air. The system ensures that the air is kept clean and uncontaminated for use in process and manufacturing industries and is suitable for continuous operation at 12.5bar at 20°C.



## Cooling Water Supply

**SuperFLO ABS** is ideal for transporting large volumes of boosted cold water which makes it an ideal choice for a cooling water supply to specialised machinery.



Case Studies

## Printing Solutions

**SuperFLO ABS** pipework up to 125mm was used to carry chilled water from an external chiller system 90 metres away from the building. The water is then transported into the pumping room and then onto the air conditioning system in the clean room to cool the room.



## Battery Manufacturing Plant

**Durapipe PVC-U** pipework complete with valves & fittings, was specified for the manufacture and distribution of lead oxide slurry. Pipework carries the slurry to a holding tank where it is mixed with other substances to create a desired specification.



## Packaging Plant

**Durapipe Air-line Xtra** in sizes 50mm – 100mm to transport compressed air from the new air dryer to the pneumatic machinery within the production lines as part of a new compressed air distribution ring main system within the factory.



## Automotive division of an engineering company

**Durapipe PLX** secondary contained pipe-in-pipe was specified to transport diesel, gasoline, bio-fuel and other fuel blends from the main on-site fuel farm, through the site, and onto the test centre to activate the combustion engines.



Case Studies

# Plastic Pipework Systems for Chemical Processing

Whenever there is a requirement for the processing of chemicals or hazardous substances, it is imperative that a reliable pipework system is used and installed.

By their very nature, industrial chemical processing plants place big demands on the pipework systems that are used and installers need to be assured that corrosion will not become a problem.

## Water Treatment Plant

Where a plant has an on-site water treatment facility, our pipework systems are ideal for this application as they carry the highest levels of approvals. They are the perfect choice for all aspects of water treatment due to their excellent chemical resistance and low maintenance requirements.



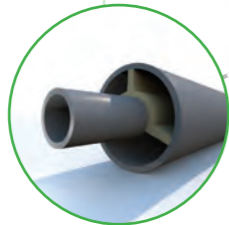
## Building Services

Durapipe plastic systems are perfectly suited for the pipework requirements of a busy office environment. Whether it be for air conditioning or for the transfer of hot & cold water our **ABS or PVC-C** products are ideal for this application.



## Chemical Transfer

Where hazardous or corrosive chemicals need to be transported across a gantry or overhead, it is important to consider a dual contained pipework system. **Durapipe Guardian** is a specialist dual contained **PVC-U** system that is purpose designed to carry such fluids across a road or a public space.



## Chemical Processing

Plastic piping materials such as **Polypropylene or PVC-C** are ideally suited for the conveyance of combinations of aggressive chemicals at elevated temperatures of up to 100°C. Making these specialist systems perfect for a variety of applications within a chemical plant.



## Chemical Distribution

We offer a full range of **manual and actuated valve** options across a suite of different valve types such as ball, butterfly and diaphragm. Our range of actuated valves and flow control solutions allow any volume of chemical fluids to be accurately dosed whether it be into large volume tankers or smaller storage drums.



## Water Treatment Plant

## Processing Plant

## Chemical Store (Finished Goods)

## Distribution Hub

## Offices

## Chemical Store (Raw Materials)

## Chemical Storage

The piping requirements to transport chemical combinations can be quite complex within a factory particularly for chemical dosing applications. We have various systems, manufactured from different types of plastic such as **PVC-U, Polypropylene & PVC-C** that are ideal for these chemicals.



Case Studies

## Galvanising

SuperFLO ABS pipework transports water and wastewater around the plant. Special sensors are fitted in the pipework system to measure the acidity of the contaminated water and add the appropriate amount of weak alkaline solution, before it is pumped back in to the tanks, ready to use again.



## Nuclear Submarines

PVC-U pipework and valves alongside top of the range flow monitoring products have been utilised within a new Sodium Hypochlorite dosing system for a Royal Navy nuclear submarine. The system is required to dose Sodium Hypochlorite into the sea water intake.



## Gas-to-Liquid (GTL) plant

Durapipe Corzan PVC-C pipework & actuated ball valves were installed in the electro chlorination plant for the world's largest GTL plant. The pipework converts artificial seawater into Sodium Hypochlorite, to sterilise the system and prevent biological growth in the array of water systems within the plant.



## Drinking water for Offshore Rig

Durapipe pipework fittings & valves form the basis of a reverse osmosis desalination plant installed on an oil platform in the North Sea. The system uses reverse osmosis technology to convert seawater into potable water.



Case Studies

# Plastic Pipework Systems for Food & Beverage Process

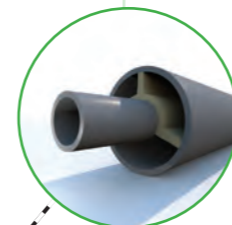
The pipework aspects of a food and beverage processing plant must be given high consideration as it is critical that an appropriate piping material is selected.

For example, a fully approved pipe system should always be installed when conveying drinking water or other foodstuffs.

A further key consideration for the Food & Beverage industry is the measurement and accurate control of substances and our range of flow control and measurement products are ideally suited for this requirement.

Durapipe PVC and ABS products carry FDA certification.

Please contact us for further details.



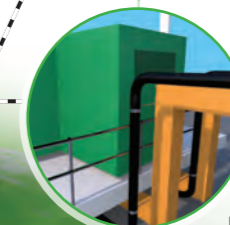
## Chemical Distribution

Where a concoction of different chemical combinations need to be transported across a gantry or overhead, it is important to consider a dual contained pipework system. **Durapipe Guardian** is a specialist dual contained **PVC-U** system that is purpose designed to carry such fluids across a road or a walkway.



## Building Services

Durapipe plastic systems are perfectly suited for the pipework requirements of a busy office environment. Whether it be for air conditioning or for the transfer of hot & cold water our **ABS** or **PVC-C** products are ideal for this application.



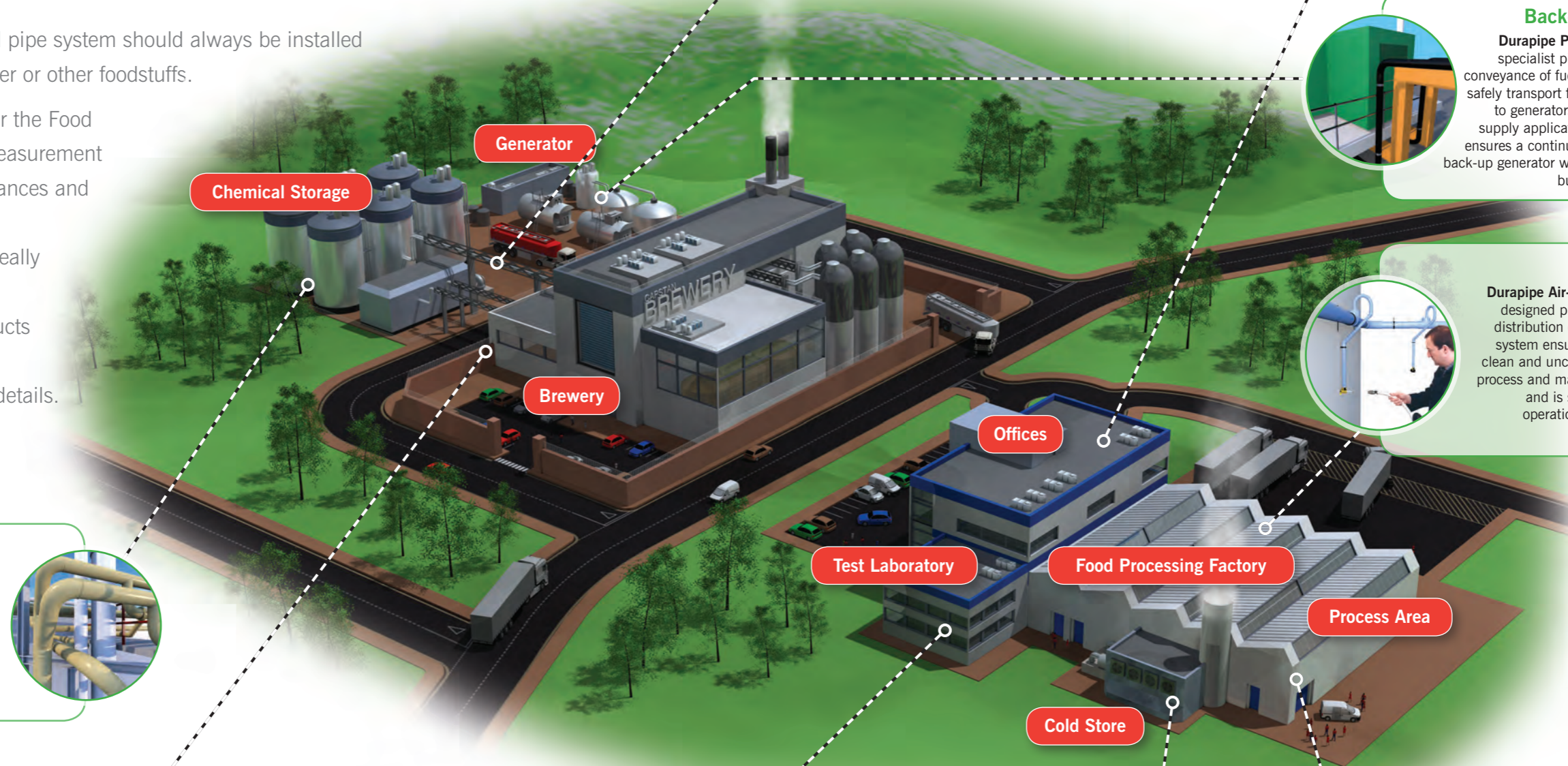
## Back-Up Fuel Supply

**Durapipe PLX** is a market leading specialist pipework system for the conveyance of fuel. **PLX** can be used to safely transport fuel from storage tanks to generators for emergency power supply applications. The pipe system ensures a continuous flow of fuel to the back-up generator which is imperative to a building such as factory.



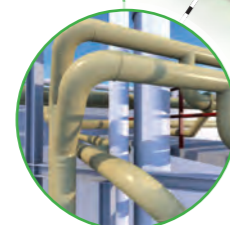
## Compressed Air

**Durapipe Air-line Xtra** is a purpose-designed pipework system for the distribution of compressed air. The system ensures that the air is kept clean and uncontaminated for use in process and manufacturing industries and is suitable for continuous operation at 12.5bar at 20°C.



## Chemical Storage

The piping requirements to transport chemical combinations can be quite complex within a factory particularly for chemical dosing applications. We have various systems, manufactured from different types of plastic such as **PVC-U**, **Polypropylene** & **PVC-C** that are ideal for these chemicals.



## Process Water

**SuperFLO ABS** is fully approved to the highest international standards including WRAS and is ideal for potable water and an efficient cold water supply around a brewery.



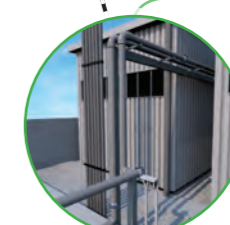
## Chemical Drainage

**Vulcathene** specialist chemical drainage has been specified and installed in laboratories for over 50 years. Available in two easy jointing options, **Vulcathene** is fully BBA approved and is the market leading product for the safe drainage of dangerous chemical combinations from laboratories.



## Chilled Storage

**SuperFLO ABS** has a wide temperature range & can operate at temperatures as low as -40C. These capabilities make the system ideal for extreme conditions such a large-scale freezers, cold stores or secondary refrigeration.



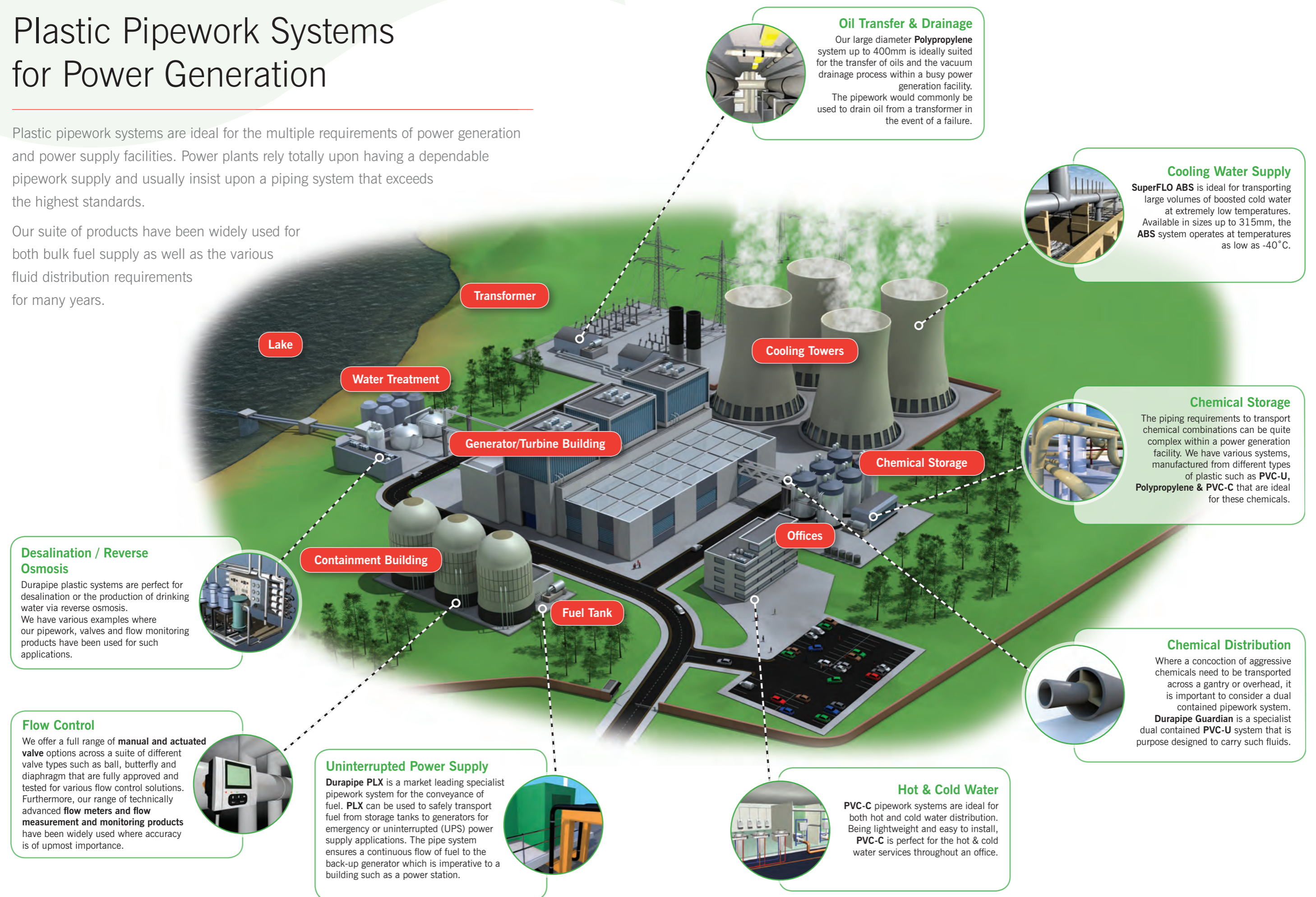
## Vacuum Drainage

Part of the food production process will usually involve some form of waste removal from the production line, there are many examples of where **SuperFLO ABS** has been successfully used for drainage under vacuum.

# Plastic Pipework Systems for Power Generation

Plastic pipework systems are ideal for the multiple requirements of power generation and power supply facilities. Power plants rely totally upon having a dependable pipework supply and usually insist upon a piping system that exceeds the highest standards.

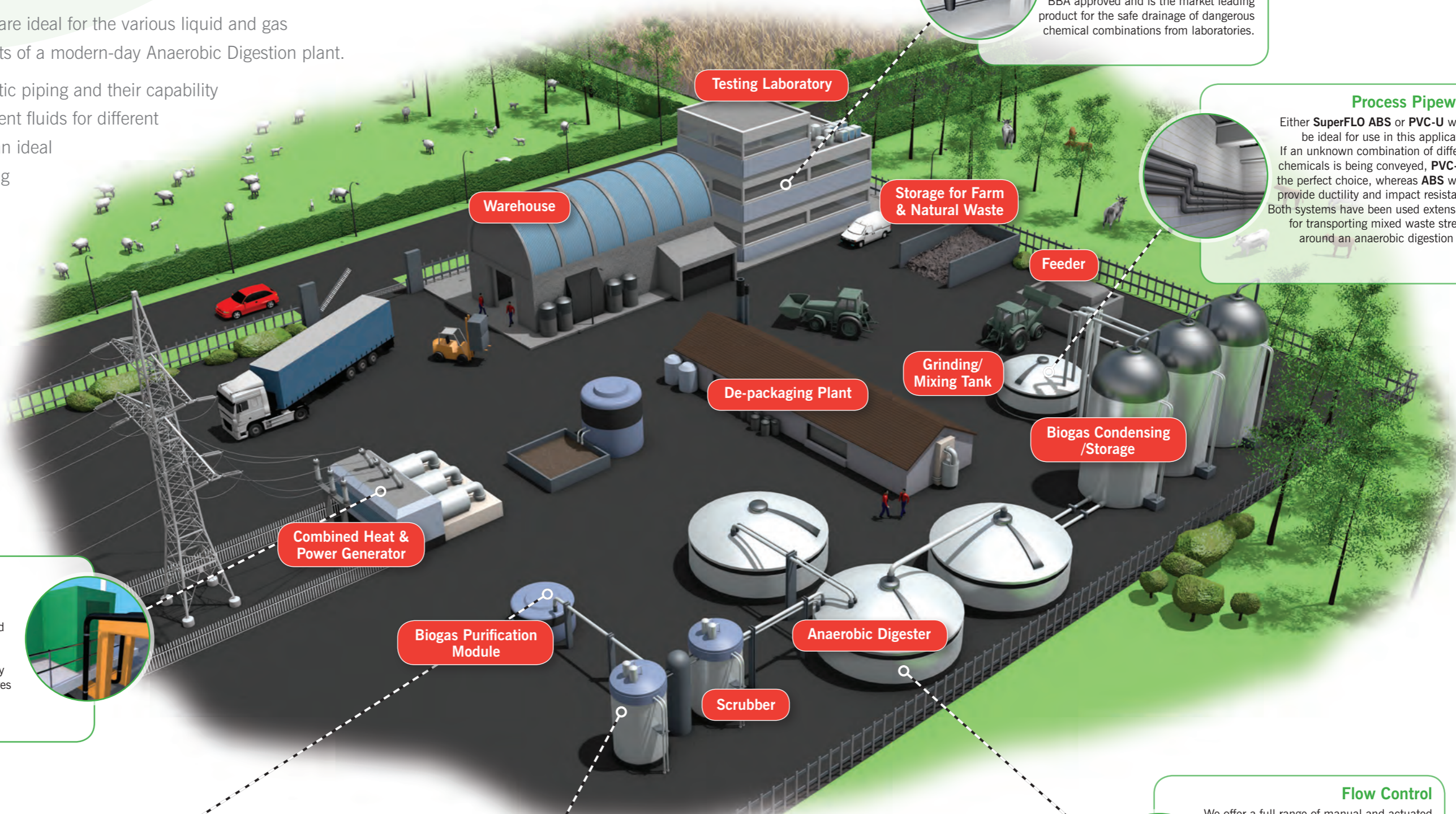
Our suite of products have been widely used for both bulk fuel supply as well as the various fluid distribution requirements for many years.



# Plastic Pipework Systems for Anaerobic Digestion

Plastic pipework systems are ideal for the various liquid and gas transportation requirements of a modern-day Anaerobic Digestion plant.

The diverse nature of plastic piping and their capability to be able to convey different fluids for different applications makes them an ideal choice for anyone installing pipework systems for a processing anaerobic digestion facility.



## Chemical Drainage

**Vulcathene** specialist chemical drainage has been specified and installed in the laboratories of research buildings for over 50 years. Available in two easy joining options, **Vulcathene** is fully BBA approved and is the market leading product for the safe drainage of dangerous chemical combinations from laboratories.

## Process Pipework

Either **SuperFLO ABS** or **PVC-U** would be ideal for use in this application. If an unknown combination of different chemicals is being conveyed, **PVC-U** is the perfect choice, whereas **ABS** would provide ductility and impact resistance. Both systems have been used extensively for transporting mixed waste streams around an anaerobic digestion site.

## Emergency Fuel Supply

**Durapipe PLX** is a market leading specialist pipework system for the conveyance of fuel. **PLX** can be used to safely transport fuel from storage tanks to generators for emergency or uninterrupted (UPS) power supply applications. The pipe system ensures a continuous flow of fuel to the back-up generator.

## Chemical Storage

The piping requirements to transport chemical combinations can be quite complex particularly for chemical dosing applications. We have various systems, manufactured from different types of plastic such as **PVC-U**, **Polypropylene** & **PVC-C** that are ideal for these chemicals.

## Containment Removal

**Durapipe PVC-U** is perfectly suited for use within a scrubber system. Due to its excellent general chemical resistance properties it can easily transport either acids or alkalis under pressure to remove impurities from the methane gas that has been generated by the digester. The methane can then be processed more effectively within the next stage of the process.

## Flow Control

We offer a full range of manual and actuated valve options across a suite of different valve types such as **ball**, **butterfly** and **diaphragm** that are fully approved and tested for various flow control solutions. Furthermore, our range of technically advanced flow meters and flow measurement and monitoring products have been widely used where accuracy is of upmost importance such as a water supply to specialist machinery.



## Chemical suitability

There are many different chemicals that can be used in the industrial sector, ranging from hypochlorites for disinfection to 98% sulphuric acid, and selecting the wrong pipework material that does not cater for the particular substance being used can have far reaching consequences for any industrial plant.

### Company Chemist

Our internal company chemist, an experienced Member of the Royal Institute of Chemistry, is at your disposal. If you have concerns regarding the chemical combination that a pipework system needs to convey, we can evaluate suitability of the chemical and advise on the best available Durapipe material to use for the system.

Our main aims are to enhance customer's confidence in using our products in a chemical environment, reduce the risk of chemical attack compromising product performance and identify the cause of problems that may arise.

Recommendations are typically made on:

- Application knowledge / previous experience
- Laboratory based exposure testing
- Analytical investigations

**USE OUR ONLINE  
Chemical Resistance Guide  
to check the suitability of  
chemicals with different plastic  
systems**

**The guide can be found at:  
[www.durapipe.co.uk/resources/  
chemical-resistance/](http://www.durapipe.co.uk/resources/chemical-resistance/)**

#### Lab methods include:

- Sample preparation (extraction, distillation, centrifugation, drying, ashing etc)
- Pipe-sample sectioning
- Optical microscopy
- FTIR spectroscopy
- FTIR microscopy
- Compatibility testing (inc ESCR)
- Use of specialised external laboratory services where necessary.



## Added Value Services

### Technical Support

We offer an unrivalled level of technical support where our experienced team can provide product training and installation advice on any given project. They also provide material estimate advice from specifiers' drawings.



### Global Distribution Network

All of our products are available from an extensive network of distributors and stockists. Please contact us on 0844 800 5509 for details of your nearest outlet.



### Quality Manufacturing

As part of the global Aliaxis group, quality is central to our manufacturing operation with BS EN ISO9001 certification. Furthermore, our environmental management system operates in accordance with the requirements of ISO 14001.

### Customer Service

We pride ourselves on being able to offer the highest level of customer service possible. Our customer services support team cover all of our brands as well as stock planning and availability, all designed to provide you, our customer with an improved level of service.

### Installation Advice

One of the many benefits of using plastic pipework systems instead of traditional materials is the simplicity of the joining process. We offer FREE practical product selection & joining advice on any of our products including joining demonstrations, installation advice and even material selection.



### Education

We believe we have a duty to encourage and support the training efforts of those who are looking to develop a career in pipework installation or system specification.

Therefore, we offer all UK colleges and universities FREE training packs which outline the many features and benefits that plastic systems can offer to a typical pipework project.



## Sustainability

### Introduction

Plastic piping systems are a sustainable and environmentally responsible choice that will serve generations to come. They are energy efficient during manufacturing and provide peak performance during service. Strong, durable, lightweight and flexible, plastic piping systems require significantly less energy to manufacture, transport and install than metal alternatives, and supply a long service life.

The cumulative energy requirements to manufacture, install and transport plastic pipework is estimated to be substantially less than most non-plastic systems.

Plastic saves energy – besides the technical advantages of plastics (eg. corrosion resistance) there are inherent benefits that contribute to energy efficiency and energy sustainability. The chain of activity outlined on the opposite page highlights where plastic has a positive impact compared to copper and steel which have a higher energy demand.



### Durapipe & Aliaxis

The continuous mission of Durapipe and the Aliaxis group is to ensure our product offering is as sustainable as possible and considers the impacts on the environment whilst maintaining the highest quality and performance.

- Comply with all relevant environmental legislation, codes of practice and standards relating to quality and the environment.
- Continually improve the company's environmental performance, minimising any pollution risk and adopting best practice.
- Increase usage of recycled materials where appropriate.
- Take positive action to reduce waste by promoting energy conservation and recycling.
- Optimising production processes.
- Consolidating transportation routes across group companies.

#### Durapipe Environmental Management System

Durapipe UK operates an environmental management system that has been successfully assessed against the BS EN ISO 14001 environmental management system.



## FREE CPD Seminar

Continuing Professional Development (CPD) is the term used to describe the learning activities that professionals undertake in order to develop and enhance their abilities. CPD activity allows professional individuals to continually up-skill or re-skill themselves. Durapipe UK offer a CPD seminar that has been developed to offer training on the benefits of plastic piping systems. Each seminar lasts approximately 45 minutes and can be delivered at your premises or at your convenience.

### Topics covered:

Specialist & reliable plastic piping systems for industrial applications. **Accredited by the CPD Certification Service.**

- **Chemical resistance of plastic materials**
- **Standards & approvals**
- **Dual contained pipe systems**
- **Fuelling applications**
- **Actuation & system control**
- **Valves & flow control**

Please contact us via email at

**[enquiries@durapipe.co.uk](mailto:enquiries@durapipe.co.uk)**

to request further information or to make a CPD appointment.

Durapipe UK reserves the right to modify the details in this publication as products and specifications are updated and improved.

The content of this publication is for general information only and it is the user's responsibility to determine the suitability of any product for the purpose intended.

For further information on all Durapipe UK products and services contact our Customer Services Department as detailed below.

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Durapipe UK is a trading name of  
Glynwed Pipe Systems Ltd.  
Company Number 1698059.