



**Fabrications Ltd**

# **Water & Utilities Product Guide**

**TEL: 01695 51933**

**[www.aquafab.co.uk](http://www.aquafab.co.uk)**

## Introduction to Aqua Fabrications...

Initially founded to provide specialist materials and manufacturing know how to the Rail Industry, Aqua have a proven track record, earned over the last 30 years, for innovation and outstanding customer service.

Using our teams of in-house specialist fabricators we are able to manufacture and supply bespoke solutions in High Density Polyethylene, Glass Reinforced Polymer (GRP) and Steel, combining where necessary to provide class leading products.

Using our own fleet of vehicles, including pick-ups, rigid and articulated wagons, we are able to deliver nationally, communicating directly with our customer to ensure deliveries are made on time, every time.

### AQUA in the Water Industry...

In 2012, we were approached by a well known water industry contractor with a question, could we apply our manufacturing know how and second to none customer service to a set of requirements for a Waste Water Treatment Plant Scheme? We have since worked on a number of schemes nationally, providing pre-fabricated chambers factory fitted with benching, valves and a host of other configurations to speed up the construction process on site.

In addition, AQUA have a range of products which may prove useful for WWTW, Pumping Stations and general Civil Engineering Projects...



# Contents

AQUA are able to offer a wide range of products for both wet and dry applications for a variety of projects including Waste Water Treatment Works, Reservoir Sites, Gas Pumping and Electrical Distribution sites. These products include:

- HDPE Valve Chambers Pg. 3
- HDPE Pumping Chambers Pg. 4
- Derby GRP Chambers Pg. 5
- HDPE Attenuation Tanks Pg. 6
- Hi-Pact DitchLinner Pg. 7
- Belvedere Composite Headwalls Pg. 8
- GRP Duct Boxes Pg. 9
- Derby GRP Cable Duct Chambers Pg. 10
- Thieel HDPE Cable Duct Chambers Pg. 11
- Mast Chambers Pg. 11
- Ducting & Heavy Duty Split Duct Pg. 12
- Composite Trough Pg. 13
- Composite Cable Trays & Covers Pg. 13
- Steel Fabrications Pg. 13
- TrenchBox & Handrail Pg. 14



# Sustainability

AQUA have a very dynamic approach to sustainability, involving the reduction of waste, forming supply chain agreements with our clients, and sourcing raw materials as locally as possible. 95% of our workforce reside within 25 miles or less from our manufacturing base in Skelmersdale.



## Valve Chambers

Manufactured in-house to site specific requirements, this prefabricated chamber is quick and easy to install.

- Available in a range of diameters from 400 – 3,000 + mm with depth to suit.
- Can be supplied with internal benching if required.
- Supplied complete with a lightweight yet durable grated GRP cover, suitable for walking on whilst maintaining visibility of the valve.
- Can be installed with free issue valve or we can procure the specified valve directly.

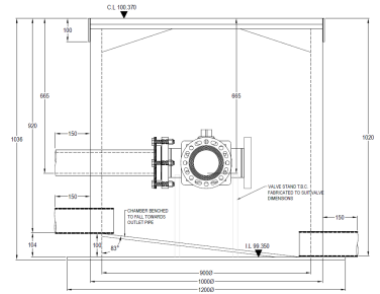
Typical Sizes:

Internal $\phi$	External $\phi$
400mm	454mm
450mm	506mm
500mm	560mm
600mm	675mm
750mm	838mm
900mm	1000mm
1050mm	1170mm
1200mm	1315mm

All chambers are supplied complete with:

- a welded base & fitted valve assembly.
- factory fitted pipe spigots, to suit on site requirements.
- Lifting points.

***Chambers available with solid or steel covers if preferred.***



# Pumping Chambers / Pre-benched Chambers

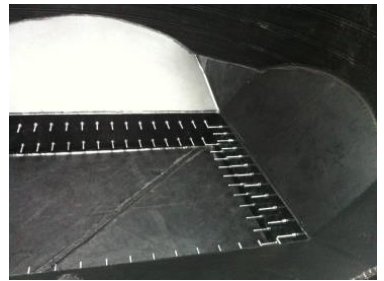
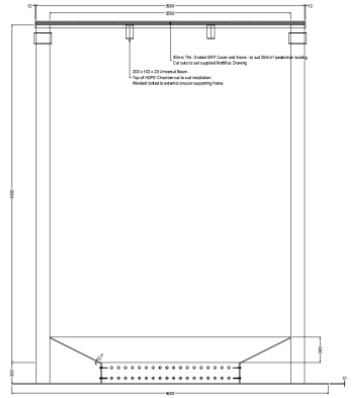
Manufactured in-house to site specific requirements, this prefabricated chamber is quick and easy to install potentially without the need for a concrete base or surround.

- Available in a range of diameters from 400 – 3000 + mm with depth to suit.
- Internal fabrication work is completed in the factory from robust, durable HDPE, reducing the need for fabrication of formwork on site.
- Suitable for, but not limited to:
  - Pumping Chambers
  - Filtrate Chambers
  - Sludge Chambers
  - Hydro-brake Chambers

Typical Sizes:

Internal $\phi$	External $\phi$
1200	1315mm
1350	1510mm
1500	1664mm
1650	1815mm
1800	1981mm
2000	2200mm
2200	2400mm
2400	2600mm

- Supplied with or without lid/ cover assemblies.
- Optional Anti-float skirt bases available if required.
- Suitable for use with PCC Cover Slabs & DI D400, E600 or F900 covers



## Derby GRP Chambers

Manufactured from our patented GRP (Glass Reinforced Polymer) extruded profile, Derby Chambers can be square or rectangular in form and are ideal for a number of different applications:

- Process Tie in Chamber
- Pump Chamber
- Valve Chamber

Profiles to manufacture chambers from are typically stocked in 5m lengths and two depths:

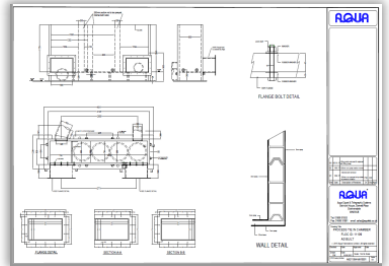
- 115mm
- 225mm

Chambers are fabricated in-house to suit site specific size requirements, up to 5m<sup>2</sup> with factory fitted bases, spigots, flanges, lifting points etc.

Chambers are supplied in a stackable form or with a 3-5mm thk. inner and/ or outer GRP skin for water-tightness.

### Lid/ Cover Options:

- Supplied without Lid/ Cover assemblies if preferred.
- Can be supplied c/w sealed and lockable Lid / Cover assemblies.



# HDPE Attenuation Tanks

Manufactured in-house to site specific requirements, this prefabricated chamber is quick and easy to install potentially without the need for a concrete base or surround.

- Available in a range of diameters from 400 – 3000 + mm with depth to suit.
- Internal fabrication work is completed in the factory from robust, durable HDPE, reducing the need for fabrication of formwork on site.



## Case Study

**Location:** Pudding Mill Lane, London

**Situation:** Design called for an Attenuation Tank but site access limitations precluded the use of traditional concrete materials.

**Solution:** AQUA created a fabricated set of constituent parts that could replicate the traditional PCC materials typically used at a fraction of the weight:

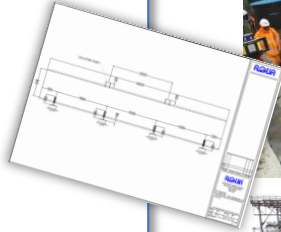
Manifold – 1,000Kg

Chamber Type 1 – 350Kg

Chamber Type 2 – 450Kg

6m Leg – ~300Kg

**Saving:** Our client advised that a saving of over £200,000 was achieved through the use of this system, not to mention the huge reduction in time taken to install!

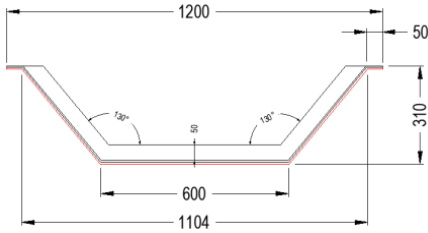


# Hi-Pact DitchLinner

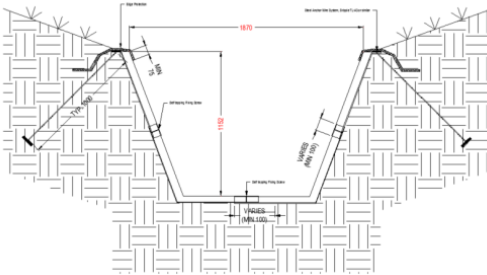
Manufactured from 5mm thick, high impact, High Density Polyethylene, Hi-Pact HDPE DitchLinner is the ideal product to remediate drainage ditches and flumes.

Manufactured as either a smooth or corrugated profile, each section is 2m long and supplied complete with fixings.

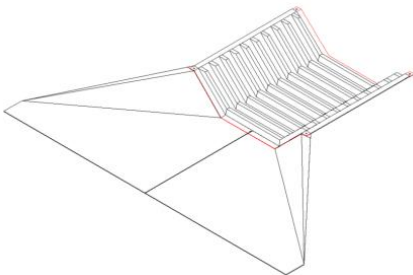
Typical Dimensions:



Wider and deeper sections available on request.



Available with pegs and/or ground anchors, edge protection, Swales, etc.





## Belvedere Composite Headwall

Lightweight composite alternative to traditional pre-cast concrete structures, ideal for inlets and outfalls in locations where the slope behind the headwall does not exceed 20°s for the first 600mm.

Available in three standard sizes:

Product Name	Pipe Size	L x W x H (mm)
Belvedere	<375mm ID	819 x 1244 x 800
Belvedere XL	<600mm ID	1232 x 1664 x 1000
Belvedere XXL	<1200mm ID	1612 x 2720 x 1500

However, the Belvedere Headwall can be manufactured to any site specific design requirements, e.g. larger footprint, higher back wall, increased side wall angle/ height.

Available with ground anchor screws, ground anchors, trash screens, hand rail.

Can be supplied with a factory cut inlet/ outlet, to suit pipe size and type as required by specific requirements.



Can also be supplied with a factory fitted spigot arrangement, for a more pleasing aesthetic/ ease of installation.

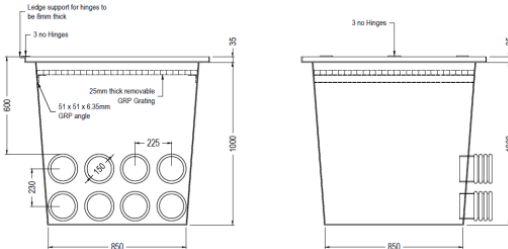


# GRP Duct Boxes

Manufactured from moulded 5-10mm thk. chopped strand glass reinforced polymer (GRP), these 1m x 1m x 1m (typ.) duct boxes are the ideal alternative to built-in-situ brick or cast in-situ concrete duct chambers.

This product...

- Is lightweight
- Is easily man-handleable
- Can be supplied with pre-cut inlets/outlets
- Can be supplied with a range of composite lid options.
- Can be buried for added security if preferred.



For increased depth requirements, 1m x 1m x 115mm or 225mm Derby Raising frames can be supplied to increase chamber depth.

In addition to the 1m x 1m x 1m Duct Box, bespoke sizes can be manufactured to order upon request either from moulded 5-10mm thk. chopped strand GRP or G-Plast composite.



## Derby Cable Chambers

Whilst circular chambers are inherently stronger than their square or rectangular counterparts, sometimes they just aren't the most suitable option, in these instances we offer a bespoke made to order chamber system using our patented GRP (Glass Reinforced Polymer) extruded profile, Derby Cable Chambers can be square or rectangular in form and sized to suit site specific requirements.

Each chamber is hand-built in the factory with all of the required duct entry/ exit points factory fitted prior to being coated in an external shell of GRP to enable a water-tight construction.

Additionally, the following options are also available:

- Internal cable containment
- Access steps or ladders
- Cable pulling eyes

All can be factory fitted for speed/ ease of installation on site.

Typically supplied with an anti-float skirt, this over-sized base enables the chambers single sized granulated backfill to prevent the upthrust of the unit from a high water-table, without the need for costly and time consuming concrete works.

Constructed from 115mm or 225mm deep sections, or combined if needs be, Derby Cable Chambers are available in a wide range of depth configurations.

Depending on backfill and loading requirements, Derby chambers can be supplied in up to 5m x 5m square (externally) configurations.

Suitable for use a range of duct types including:

- *Individual Duct*
- *Flexi-Duct*
- *Multi-Duct*

A range of lid/ cover assembly options are available to suit site specific requirements.



## Thieel Cable Pulling / Turning Chambers

Manufactured in-house to site specific requirements, this prefabricated chamber range is quick and easy to install, potentially without the need for a concrete base or surround.

- Available in a range of diameters from 400 – 3,000 + mm with a depth to suit.
- All duct entry and exit points are factory fitted at the correct invert level and orientation for ease of construction on site.
- Supplied with a choice of lid assembly including full diameter clear opening for pedestrian loading or D400, E600 or F900 DI cover and coverslab assembly for highways loading or above.
- Can be supplied with a full diameter clear opening composite lid assembly if preferred.



## Mast Chambers

Ideally suited for installation where a requirement for a vertical structure within a pedestrianised area exists.

Mast Chambers enable easy access to the structures foundation and/ or holding down bolts whilst providing a trip hazard free environment for operatives/ pedestrians.



Available as above or below ground structures, square, rectangular or circular in nature with a gritted anti-slip GRP cover.

Also available as a lid only assembly for installation on a block work structure.



## Ducting

We stock one of the largest ranges of ducting medium in the UK, with options available for a variety of applications and installation situations including:

- TDK – Reinforced wall duct
- TDE-H – Solid Wall Heavy Duty Duct
- TDE-E – Solid Wall Extreme Duty Duct
- TDE-U – Solid Wall Ultimate Duty Duct
- Flexi-duct – Flexible light-weight ducting

With a choice of over 45 different options, all available with couplings, bends and junctions to suit, contact our sales team to discuss your requirements.



## Heavy Duty Split Ducting

For applications whereby it is not possible to pull a cable, rather additional protection or containment is required for existing in-situ cables, we offer our Heavy Duty Split Ducting.

Manufactured to order, this systems enables the creation of a robust cable route which can be installed at ground level, buried or surrounded by concrete.

Using the flanged Heavy Duty Split Ducting System, duct routes can be sealed against water ingress using neoprene seals and/or flexible waterproof sealants.

Typically manufactured from TDE-E or TDE-U ducting the following sizes are available:

- 180mm OD
- 200mm OD
- 225mm OD
- 250mm OD

Larger sizes available on request.



## Composite Trough

With our extensive knowledge of hand-spraying, forming and pultruding GRP products, we are well placed to manufacture bespoke solutions for your troughing requirements.

A wide range of products are available for wet or dry applications, such as drainage or cable containment:

- Cable Tray's and Cowl's
- Segmented Cable Trough
- Drainage Troughing

These products can be manufactured in a range of width's and depth's to suit your requirements and are available with a variety of lid options.



## Steel Fabrications

Using our in-house manufacturing capabilities we are able to manufacture and supply a wide range of steel products including:

- Floor mounted pipe supports.
- Wall mounted pipe supports.
- Bracketry.
- Anti-trespass screens.
- Trough bridges.

All steel products are manufactured to site specific requirements, in a grade of steel suitable for the intended usage requirement.



# TrenchBox

Intended as a composite alternative to traditional steel products, TrenchBox is a simple robust structure intended to provide a safe place for operatives to work whilst in a trenched environment.

Manufactured from our lightweight yet durable GRP profile system TrenchBox can be supplied in a range of sizes and configurations to suit your specific requirements.

TrenchBox enables quick and easy ingress and egress of the trench to fix couplers, check and adjust pipe/ duct levels with operatives safe in the knowledge that should the trench wall fail they have a protective structure in place.

TrenchBox is:

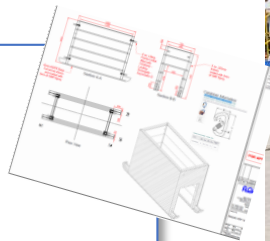
- Available in sizes to suit.
- Fixed width/ length means not having to put the system together on site, like with alternative GRP systems.
- Depth adjustable using removable extension sections with quick release fittings for speed of construction.



## Testing

Undertaken by a third party materials assurance company, TrenchBox surpassed all expectations:

**At 2m long x 800mm wide x 1.57m deep, TrenchBox showed it was capable of withstanding a 6,656kN/m<sup>2</sup> UDL on its longest side.**



## GRP Handrail

Wide range of GRP handrail products available from stock, in either kit form or factory fabricated into easily man-handleable and quicker to install panels.

Round tube and square box profile available to suit site specific requirements.

Typically supplied in hi-vis yellow with fittings to suit.

## Contacts

**Office:** 01695 51933

**Sales:** Andrew Breckenridge – 07747 193562  
Scotland, Ireland, Northern England

Roy Hannay – 07827 664458  
North & Mid Wales, East & West Midlands

David Langley – 07810 351075  
Southern England & Wales

**Internal Sales:** Stephen Armstrong  
Kyle Murray

**Technical Support:** Stuart Smith  
Michael Williams



AQUA FABRICATIONS LTD

BELMONT HOUSE, GARNETT PLACE,  
SKELMERSDALE, LANCA SHIRE,  
WN8 9UB

**Telephone:** 01695 51933  
**International:** +44 (0)1695 51933  
**Fax:** 01695 51891  
**Email:** [sales@aquafab.co.uk](mailto:sales@aquafab.co.uk)

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



All information contained herein is given in good faith without any guarantees or responsibility on the part of AQUA Fabrications Ltd. Final Determination of the suitability of any information or material for the use contemplated, of its manner of use, and whether the suggested use infringes any patents, is the sole responsibility of the user.  
All rights reserved. No parts of the document may be reproduced in any form or by any means without permission in writing from AQUA Fabrications Ltd.  
© Copyright AQUA 2019.