Quinshield
GRP industrial housings & composite constructions

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ACOUSTICS

The Acoustic Range
The specifications of our Acoustic Range provide extensive scope for the supply of purpose built kiosks, designed to meet customer requirements suitable for a variety of applications with particular emphasis on the acoustic properties of the enclosure.

Acoustic Construction
Moulded in Glass Reinforced Polyester (GRP) composite construction, totally encapsulating a rigid core. GRP laminate is made from fire retardant structural polyester resin reinforced with chopped strand matt glassfibre.

The noise reduction is achieved by providing absorption over a percentage area of the enclosure. In the remaining area the sound is reflected around the enclosure until it is absorbed. Combinations of plywood, cement board, glass fibre absorption material, insulating foam and a suitable retaining mesh are used in the general construction. Large panel areas are suitably reinforced to maintain structural stability. Designed to comply with CP 3: Chapter 5 / BS 6399, 1984 wind, snow and seismic loadings and all other relevant British Standards.

Standard fixing is through reinforced internal GRP flanges by expanding bolt system onto prepared bases. To achieve maximum noise attenuation a rebated, stepped base should be used. External flanges can be provided.

Life expectancy is in excess of 30 years.

Finishes
External: Satin, Traditional Brick, Stone and other Textured Finishes. Choice of any colour from the BS 4800 or RAL range. A coloured isophthalic resin (Gelcoat) forms the external barrier giving an excellent weather and chemical resistance in the harshest of environments.

Standard internal finish is a white fire retardant resin. The absorption material is normally retained with a galvanised steel perforated sheet. Other internal finishes can be provided.

Doors
An extensive range of door sizes is available. Located in width or depth walls, central or offset. Stainless steel (316) hinges are fitted to all doors. Hinges are fitted with stainless steel security fasteners in such a manner that they cannot be removed from outside the kiosk.

The doors are fitted with a clamping/seal mechanism and T section surround to ensure the acoustic performance of the enclosure is not compromised.

Door Locking
Standard locking is by cylinder nightlatch lock or stainless steel (Grade 316) hasp and staple. Alternatively: Locking to suit customer specification.

Environmental Protection
Dust, weather and splash-proof to a minimum of IP 54 protection rating. Higher degrees of protection can be provided to IP 55 and IP 65.

Insulation
Standard acoustic construction provides 'U' value of 0.6 W/m²/C°. Higher levels of insulation can be offered to meet building regulations or specifications.

Fire Rating
Panel construction complies with BS 476 Part 22, half hour fire resistance (Retention of stability integrity and insulation).

Fire retardant resin is used to provide self extinguishing laminates to BS 476 part 7 Class 2 (Surface spread of flame). Other fire ratings can be provided.

Sound Attenuation
Acoustic tests show noise reductions from 24dB(A) to 5OdB(A) over octave band centre frequency range of 31.5Hz to 8KHz can be achieved. Testing can be carried out (if required) using precision grade sound level meters which comply with BS 5969, (Type 1) and an octave band filter set which complies with IEC 225, used strictly in accordance with the manufacturer's instructions and good practice.

Ventilation
Acoustically treated vents can be provided to give natural ventilation. These vents have integral ducts to provide absorption using glass fibre within the duct. The type of absorption material and length of the duct are directly proportional to the insertion loss of the vent. The vents are fitted with GRP weatherproof external cowls with bird and vermin screens as standard. Forced ventilation can also be provided using acoustically treated fans.

Electrics
All electrical installations are in accordance with the IEE regulations current editions, encompassing domestic to Zone 1 as required.

Floors/Bases
Several options are available ranging from integral composite construction floors to steel channel baseframes complete with steel plate decking.

Quality
All manufacture and customer service is controlled by an effective quality assurance system, in line with the recommendations of BS 5750 & ISO 9000.

Other products
A comprehensive range of other products are also available.

Due to our policy of maintaining a continuous review of product performance and materials of construction we reserve the right to amend the design and dimensions of the products illustrated in this publication at any time and without prior notice.

Acknowledgement: Kvaerner photograph published with thanks.

GRP Products

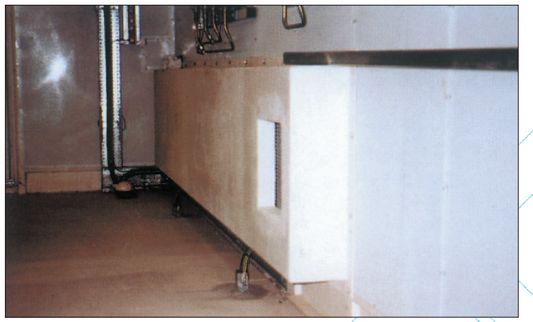
ACOUSTICS

TECHNICAL SPECIFICATION

The Product

The Acoustic Range of GRP kiosks and buildings are specially designed to cater for situations where noise reduction is of primary importance.

The many advantages of GRP composite construction are ideally combined both acoustically and aesthetically to blend with the surrounding environment and local architecture.



Design

Our acoustic experts can advise on any problems that you may have. We can supply full acoustic appraisals to ensure you receive the right product at the right price.

Each application is looked at independently and thoroughly to provide the optimum solution to any given environmental issue.

ALL PURPOSE ACOUSTIC ENCLOSURES

CHOICE OF STANDARD SMOOTH, TEXTURED, TRADITIONAL, BRICK EFFECT OR STONE FINISH

OVERALL SOUND ATTENUATIONS OF UP TO 5OdB(A)

UVALUES OF O.6W/m²/C⁰ OR BETTER

SUPPLIED READY BUILT OR IN PANEL FORM

TESTING TO RELEVANT BRITISH STANDARDS

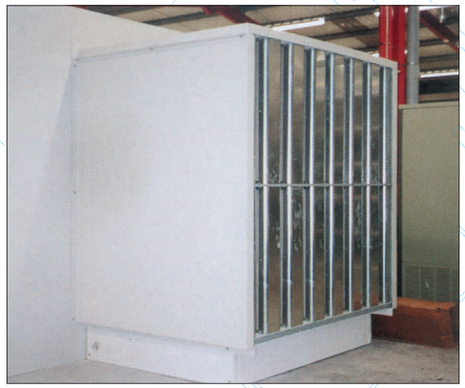
INFINITE RANGE OF SIZES AND OPTIONS

COMPLETE PURPOSE DESIGNED PACKAGE

Advantages

Our GRP kiosks and buildings are designed and manufactured to provide the most effective and economic solution to customer requirements.

- Durability and long life maintenance free service
- Superior quality at competitive prices
- Weather and corrosion resistance
- Purpose built features
- Versatility to suit project needs and different locations
- Speed of delivery and installation by a specialist supplier



Applications

Quinshield's acoustic GRP kiosks and buildings are supplied throughout the UK and overseas, servicing a wide range of client applications and conditions.

Typical installations include:

- Gas regulator holder stations
- Compressors
- Generators
- Centrifuge systems
- Turbines

Quinshield®