

[www.glass-solutions.com](http://www.glass-solutions.com)

Quality precision glassware for scientists, architects, designers and engineers

# about glass solutions

Glass Solutions is the world leader in the manufacture of high-quality precision custom glassware for scientists, architects, designers, instrument makers and engineers.

We offer design assistance, prototypes, small batches and full production, from 1 to 10,000 units.

- Glass tubes and rods
- Standard scientific glassware
- Custom made glassware
- Design services



# why choose glass solutions?

## Advanced glass blowing facilities

Glass Solutions has the largest and most advanced glassblowing facilities in the UK and a team of highly skilled glassblowers.

## Wide range of glass manufacture

Precision custom glassware, large scale glass blowing, standard laboratory glassware, microfabrication.

## Customer service

Customers are at the heart of our business. We take time to understand customers' applications and circumstances. This allows us to offer unparalleled levels of customer service via our global sales and support network.

## Design advice and support

We offer support on all aspects of design: ideas generation, CAD design and design refinement. We also advise on the best manufacturing processes and materials for your project.

## Quality products, competitive prices

We have a highly-skilled team of glassblowers, use a broad range of precision processes and techniques and use only the highest quality materials. All of this ensures your product will be made to the highest quality and in the most cost effective way.

## Reliable delivery times

Our large team of glassblowers, robust processes and extensive stock of materials enable us to manufacture and deliver glassware to short lead times and on time.

## Quality of materials

Glass Solutions uses the best incoming materials from companies such as SCHOTT, which we cut, blow, grind, polish, and sand blast to our customers' needs.

## Environmentally friendly manufacture

Glass Solutions' facilities have an energy recovery and air filtering system, creating the ideal environment for producing perfect glassware with the minimum CO<sub>2</sub> footprint.

# capabilities

**Our highly-skilled team of glassblowers, broad range of precision processes and techniques coupled with the most advanced glassblowing facilities in the UK enable production of a wide range of high quality glass products. In addition, we have an in-house team of design engineers for any design support requirements.**



## Equipment

Glass Solutions has a large variety of sophisticated equipment which enables production of a wide range of high quality complex glassware in virtually any shape and size.

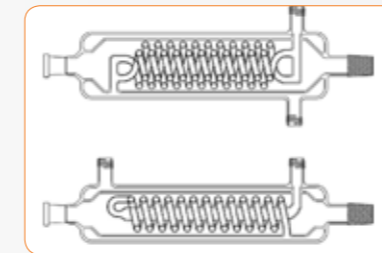


## Techniques

Refined techniques allow production of a diverse range of glassware and ensures that every piece of glassware is produced to the highest quality.

## Types of Glassware

We can manipulate the largest available glass material (420mm diameter) to produce in excess of 600mm diameter glass products as well as small and intricate glassware with parts down to 0.1mm bore. We also fabricate micro channels or structures in glass.



## Design Assistance

We can assist you in refining your design, working from a hand-drawn sketch or a 3D CAD model. We can also advise on the best manufacturing process and materials for your project. This ensures your project will be made to the highest quality and in the most cost-effective way.

# standard products

Glass Solutions offers a wide range of off-the-shelf glass tubes and rods, scientific glassware, laboratory equipment, glass microfluidic chips and accessories for a wide range of industries.

- Glass tubes and rods
- Laboratory glassware
- Laboratory equipment and accessories
- Microfluidic chips



# glass tubes and rods

**We supply borosilicate glass tubes and rods from our extensive stock which covers a range from 2mm up to 460mm in diameter. Standard 1500mm lengths are cut and finished to customer specifications.**

Borosilicate glass offers stability, high resistance to temperature change and superior chemical resistance. The tubes and rods can be fabricated in an endless variety of designs. Rods are available in many different profiles.

## Our glass tube and rod services include:

- » Cutting of tubes and rods
- » Grinding of tubes and rods
- » Joining of tubes and rods
- » Bending of tubes and rods
- » Reshaping of glass tubes and rods into a 'ready to use' glass component

## Application examples:

- » Sight glasses
- » Displays
- » Model making
- » Test rigs
- » Architectural features



# laboratory glassware

**Our extensive range of high-quality laboratory glassware includes heavy duty beakers and conical flasks, funnels, condensers, cold traps, reaction tubes, round bottomed flasks and much more. Customized glassware is also available.**

Our lab glassware range includes:

- » Jacketed reactor vessels
- » Round bottom flasks
- » Conical flasks, beakers
- » Vacuum cold traps
- » Condensers
- » Glass manifolds
- » Chromatography glassware
- » Dropping funnels
- » Evaporation glassware
- » Funnels
- » Glass bubblers
- » Tubes
- » Glass tube washers
- » Reaction tubes



# laboratory equipment and microfluidic chips

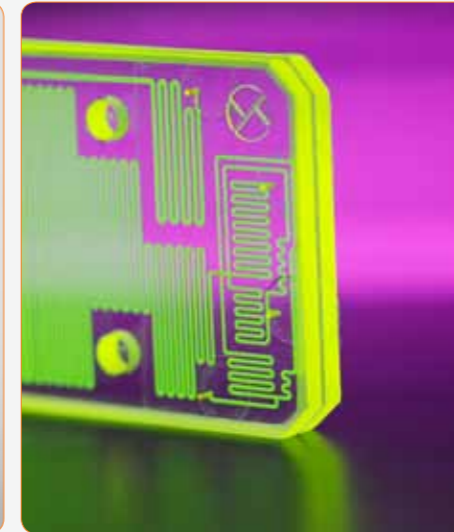
**We produce a range of specialized and robust laboratory equipment, ranging from inerting manifolds and vacuum regulators to full bench-top and floor-standing jacketed reactor systems. In addition, we specialize in the fabrication of glass microfluidic chips.**

Lab equipment

- » Jacketed reactor systems
- » Centinel lab safety timer
- » Dropping funnel extenders
- » Dry break connectors
- » Inerting manifolds
- » Buchner seals
- » Vacuum regulators, water manifolds

Microfluidic chips

Our sister brand, Dolomite Microfluidics, is the world leader in the production of high quality glass microfluidic chips. The range of chips we fabricate include droplet chips, mixer chips, T-junction chips, Y-junction chips, porous media chips, reactor chips, wellplate chips and membrane chips.



# custom products

Glass Solutions is the leading custom glassware manufacturer in the UK. We specialize in custom glassware for scientists, engineers, designers and architects.

- Scientific glassware
- OEM glassware
- Architectural glassware
- Prototypes
- Small batches to production

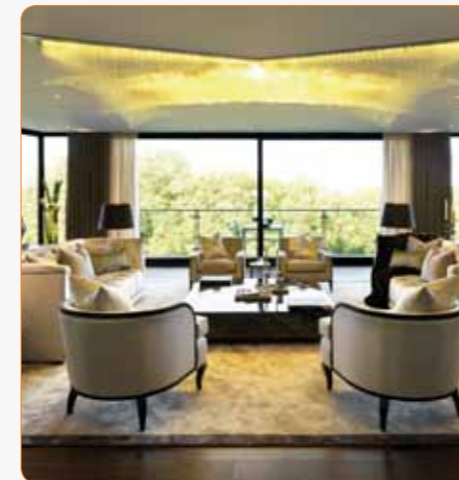


# architects and designers

**Glass Solutions produces unique hand-made quality glassware for restaurants, hotels, retail and museums. We also work in media and entertainment, producing glass products for props and sets used in Movies, TV and advertising.**

Hand-made precision glassware coupled with our science and engineering capabilities ensure every piece of glassware produced is of the highest precision and accuracy. We welcome any type of challenge, no matter how unusual or complex. Our delivery times are based on careful calculations - we deliver in time and on time. We use the highest quality materials and offer very competitive prices.

- » Large scale feature pieces to multi-thousand part installations
- » Sculptural glass and lighting
- » Display cabinets
- » Awards
- » Staircase balusters and spindles
- » Glass chimneys
- » Glass wall panels



# scientific custom glassware

**Glass Solutions specializes in the manufacture of bespoke scientific glassware. We have a thorough understanding of most laboratory practices and glassware requirements, and are able to design and manufacture virtually any type of scientific glassware.**

Our customers benefit from a large catalogue of previous designs which can be quickly customized and reproduced with added features or on a different scale. All we need is a description, photo or a simple line drawing.

- » Jacketed Reactors
- » Distillation equipment
- » Vacuum cold traps
- » Jacketed multi-neck flasks
- » Manifolds and Schlenk lines
- » Pressure equalizing funnels
- » Fermentation vessels
- » Baffled flasks
- » Nitrogen Bubblers
- » Vacuum cold traps
- » NMR tube cleaners



# custom products for engineers

**We regularly manufacture OEM products and work closely with engineers to provide custom glassware to meet exactly their requirements. We can make varied glassware ranging from prototypes to small batches or full production of up to 10,000 units.**

We manufacture precision glassware to the highest quality. We help with refinement of the design or offer full design services, advise on processes as well as materials, and make sure we discuss progress and any details throughout the project.

**Prototype glassware:** high-quality glass prototyping or one-off manufacturing service

**OEM glassware:** custom borosilicate glass components from a single prototype to several thousands, you can be assured of care and attention to detail in every piece



# glassware examples



# customer testimonials



“The craftsmanship involved in glass blowing, bonding different pieces of glass together and then creating the bespoke shape of the award, is incredible and cannot be mimicked by a computer or machine...turnaround times are equally important, and Glass Solutions delivered the awards to us in advance of the agreed deadline.” **Alan Robinies, Director at Atom Ltd., a production company.**

“We have a great relationship with Glass Solutions. The company worked well with us to perfect a high quality product meeting our design specifications and tolerances, adjusting its processes where necessary and providing technical advice.” **Matthew Smith, Managing Director at RocketScienceMods, a manufacturer of high-end electronic cigarette components.**



“We chose Glass Solutions because the company has the capability to reliably and consistently produce the large quantities of high quality custom-designed tubes that we need for our lighting sculptures, which comprise several thousand individual tubes of diverse lengths. Glass Solutions gives us a lead time and keeps to it... We have also occasionally asked the company to produce other unique pieces of glassware, which have been beautifully made.” **Mac Cox, Director of Haberdashery, design consultancy for high-end sculptural lighting.**



“It is important that the glass components of the spray dryers are made reproducibly, and we need to ensure that the tolerances are exactly the same every time. We have worked with Glass Solutions for many years, receiving great service.” **Simon Rowe, Sales, Purchasing and Export Manager, LabPlant UK.**





**Glass Solutions is the world leader in the manufacture of high-quality precision glassware for scientists, architects, designers, instrument makers and engineers. We are a one-stop-shop for precision glassware.**

- **Standard Products:** off-the-shelf glass tubes and rods, laboratory glassware, laboratory equipment and accessories and microfluidic chips for a wide range of industries.
- **Design, development and manufacture of scientific glassware, OEM glassware, prototypes and architectural glassware.**

Glass Solutions is part of the Blacktrace group of companies, a world leader in Productizing Science® and has a worldwide network of offices and distributors.

[www.glass-solutions.com](http://www.glass-solutions.com)



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