



# Competence in producing and processing glass

An almost infinite variety of shapes and compositions can be achieved today with glass. SCHOTT Spezialglas processes a wide range of different types of glass in thicknesses of 0.5 to 19 mm. The various types of glass can be processed and refined using a wide variety of techniques, such as grinding, polishing, drilling, sandblasting, molding and toughening. This allows for even the most challenging customer demands to be met.

SCHOTT Spezialglas shapes glass in thicknesses of up to 19 mm.



**B270 Superwite**  
High transparency, low iron glass for technical applications. High transmittance, even with greater thicknesses. Also available as profile rod.



**KG1 glass**  
Cold light or thermal protection glass with radiation absorption in the infrared range.



**OPALIKA® white flashed opal glass**  
Machine drawn two layer glass with virtually ideal light diffusion in visible range of the spectrum.



**Float glass**  
Glass manufactured using the float process. Available in various colors.



**Reflective glass**  
Reflective glass with chrome and interference coating.



**UVILEX® 390 Z**  
UV-barrier filter glass that reduces ultraviolet radiation from artificial light sources.



**Borofloat®**  
Glass with high chemical resistance, low thermal expansion and high temperature resistance.



**CONTURAN®**  
Dip coated glass with interference filter layer available with various degrees of transmission. Eliminates most irritating reflections.



**Colored glass**  
Machine drawn colored glass with smooth (IMERA®) and structured (ARTISTA®) surfaces in a wide range of colors.



**B 270 Superwite**  
Highly transparent, low iron glass. Cylindrical in form with silkscreen or inside laser structure for use in technical lighting applications.



**Filter glass**  
Blue-violet tinted filter glasses with variously specified UV transmittance and high absorption in the visible and infrared range, as well as clear filters with graded UV-transmittances. All filter glasses feature treated edges and are thermally toughened.

# High precision cutting

SCHOTT Spezialglas can cut any type of glass in any different shape and size in thicknesses of 0.5 to 19 mm. Exciting and original high precision shapes result from secondary cutting of bent and curved glass. The cutting precision we achieve with flat and shaped glasses is particularly appreciated by our customers. Using a laser, special cuts can be done on flat, rectangular formats in thicknesses of 0.5 – 5 mm. the resulting edges are so smooth and precise that no additional processing is necessary.



*From the cutting of flat glass ...*



*... to cut-outs of pre-shaped glass blanks ...*



*... to unique formats produced using a laser.*

# The ideal partner for shaping glass

SCHOTT Spezialglas is able to produce any shape the customer requires using any type of flat glass commercially available. This calls for flat glass to be heated in a furnace to above its transformation temperature. Various techniques are then used to create the required shape.



*Cylindrical bending with flat edges*



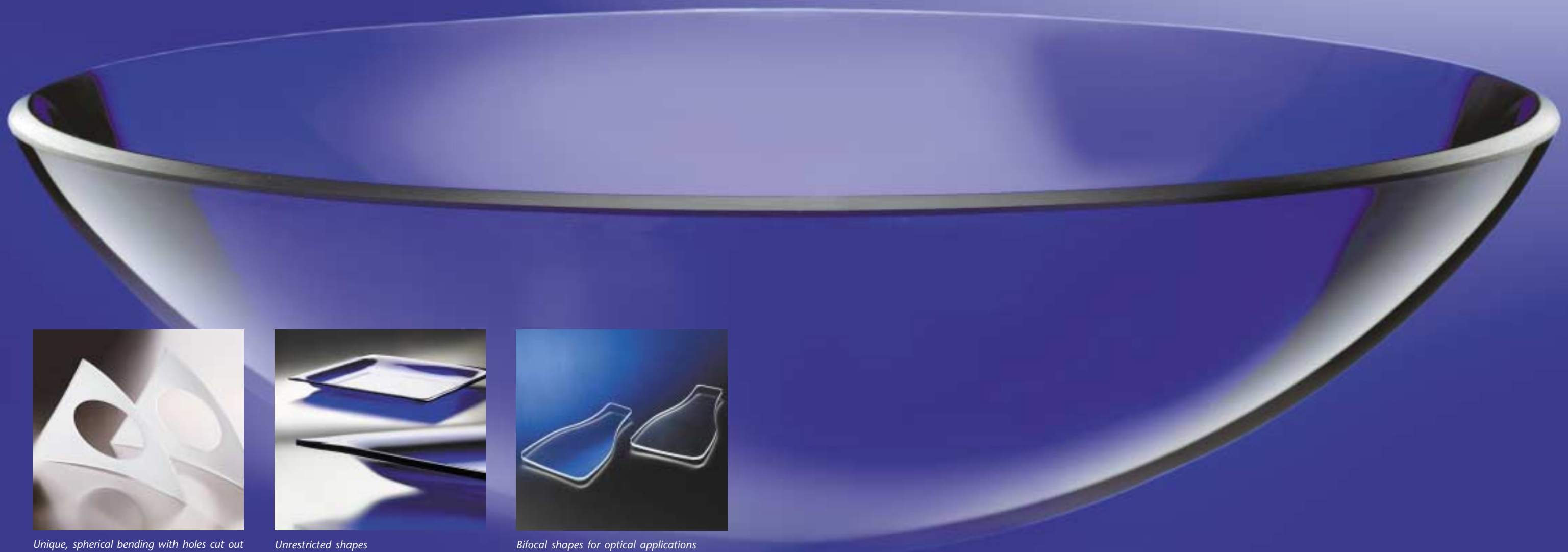
*45° bending*



*Combination of bending and flatness*



*Precision bending*



*Unique, spherical bending with holes cut out*



*Unrestricted shapes*



*Bifocal shapes for optical applications*

# Complete range of glass processing

SCHOTT Spezialglas masters a wide range of processing methods:

## Edge processing

Edging, grinding and polishing (C-shaped edges, beveled edges, corner and internal cut-outs), fire polishing.

## Drilling

Round, oval and customized, as well as micro drilling with ultrasound waves

## Toughening

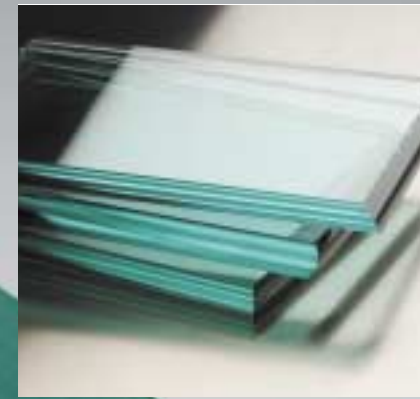
Thermal and chemical.

## Surface finishing

Reflective coating, anti-reflective coating, sandblasting, dirt and water resistant coating "PearlFinish" and screen-printing.

## Bonding

Lasting, water resistant and customized



Various edge processing options



Hole drilling, beveled corners, ground edges



Edge cut-outs, reduced thickness in edge region



Beveling and polishing



Bonding



Ultrasonic lapping

# Applications of glass

Cutting, shaping and finishing glass is not an end in itself. The question of how the customer intends to use the product is always the first consideration. These two pages contain a small selection of various uses and applications, but obviously, there are many more. Just take a look for yourself.



Source: WMF

Luxurious coffee machine with cylindrically formed glass lighting



Source: EPAS CmbH

Parabolic mirror for driving Stirling motors



Source: EPAS CmbH

Test chart for a parabolic mirror section ( $\phi$  of the focal point 40 mm)



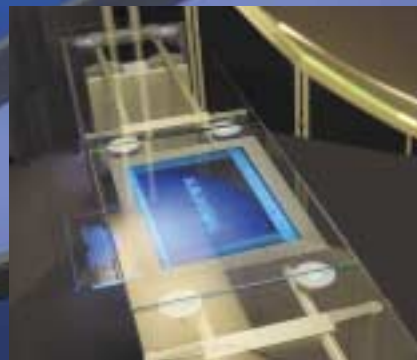
Source: VW Phaeton

Dashboard cover made of anti-reflective CONTURAN®



Source: SCHOTT Spezialglas GmbH

KARINA wash basin made of one piece of glass with an oval shaped drop



Source: Compact Promotion/SCHOTT

Presentation table with complete computer and lighting technology



Source: Lampas a/s

OPALIKA® frosted as used in designer light fixtures



Source: Schulz

Lamp shade made of OPALIKA® White flashed opal glass



Source: Naveen Mehling Design

Light fixture glasses, bent to form cylinders



Source: Berchtold

Heat resistant glass for use in operating rooms



Source: SCHOTT Spezialglas GmbH

FRANZISCA wash basin made of glass, with the sink mounted underneath the surface area. Both parts thermally toughened.