

ENGLISH

# S4 Technology

Innovation | Design | Technology

COMPANY PROFILE

# 2\*

## COMPANY IDENTITY

**S4Technology** entered the rigid polyurethane moulding industry at the beginning of 2000. Within a brief period, it had achieved an important position as one of the industry's main companies in Italy. The structure has developed over the years to meet the needs of manufacturers whose requirements have continued to become more demanding in terms of productivity, service and management. To guarantee the maximum results on a constant level, **S4Technology** has the following facilities:

- **Top-level systems for technology and productivity;**
- **Sleek, flexible organization;**
- **Over a decade's experience in polyurethane processing;**
- **Digitalized information systems for various customer requirements;**
- **Quality control systems;**
- **Carefully managed logistics.**

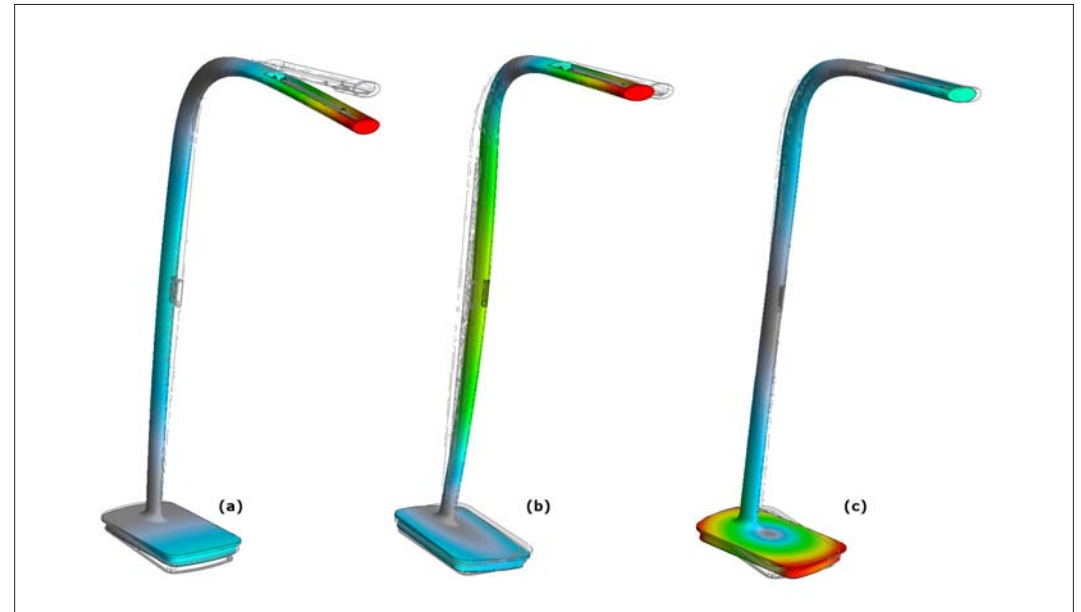
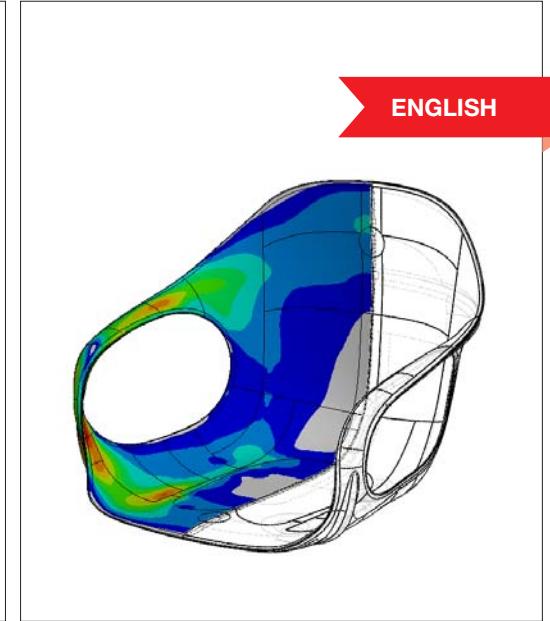
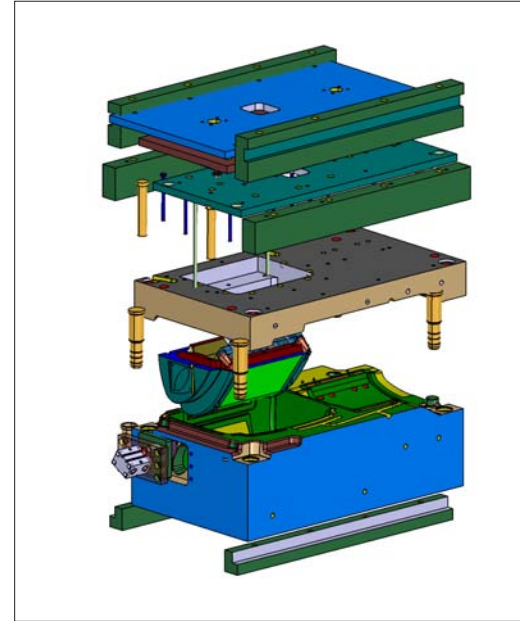


# 3\* COMPANY STRUCTURE

**S4Technology** is sleek, flexible and able to manage every aspect of a project with its many different services, including:

- a). Consultancy for concept, design, feasibility, product and processing stages.
- b). Design, with studies for the identification of technological solutions.
- c). Planning and management of the whole design process.
- d). Structural analysis for better use of polyurethane resin to limit raw material costs and finished product weights without affecting mechanical function, comfort and/or aesthetics.
- e). Management of equipment, prototypes, engineering, item manufacture.
- f). Paintwork and printing.
- g). Post-moulding assembly of the accessories provided.
- h). S4Technology has created an established network of partner businesses to guarantee completion activities such as finishing pieces, painting, printing and assembly.

**S4Technology** is also able to provide mass-coloured manufactured items, painted in the mould, and in mould coating, a technology with excellent advantages in terms of management and finished price.



# 4\*

## PRODUCTION CAPACITY

Polyurethane moulding with RIM technology is fully managed within **S4Technology** by PLC systems that guarantee the use of hydraulic presses and aluminium alloy moulds for industrial-scale production that is both constant and reliable over time. **S4Technology** has foaming lines and mould presses that can make moulded items with a weight range from 200 grams through to as much as 25 kg.

### SYSTEMS:

- . 3 high-pressure electronically controlled foaming machines with sophisticated air nucleation equipment - a fundamental part of the polyurethane transformation process.
  - . 1 low-pressure foaming machine to make prototypes and small pre-production lots to preview series production moulds in aluminium.
  - . 7 presses of different sizes, including two vertical presses for high-level productivity and as a result, shorter lead and delivery times.
- Polyurethane processing also needs highly-qualified and specialist staff to guarantee a correct transformation, according to the technical data sheet of the raw material manufacturer.



# 5\*

## POLYURETHANE

### RAW

### MATERIAL

The material used for moulding is known as Baydur®, a thermosetting polymer made and sold by Bayer Material Science.

#### **Baydur®60**

Baydur® 60, a medium-density, rigid structural polyurethane with a sandwich construction - outer skin with cellular nucleus - can be used in many design possibilities. This polyurethane system is particularly suited to large sizes moulded pieces. Moulded parts can be made in thicknesses from 4 to 20 mm, in densities ranging from 500 - 700 kg/m<sup>3</sup>.

#### **Baydur®110**

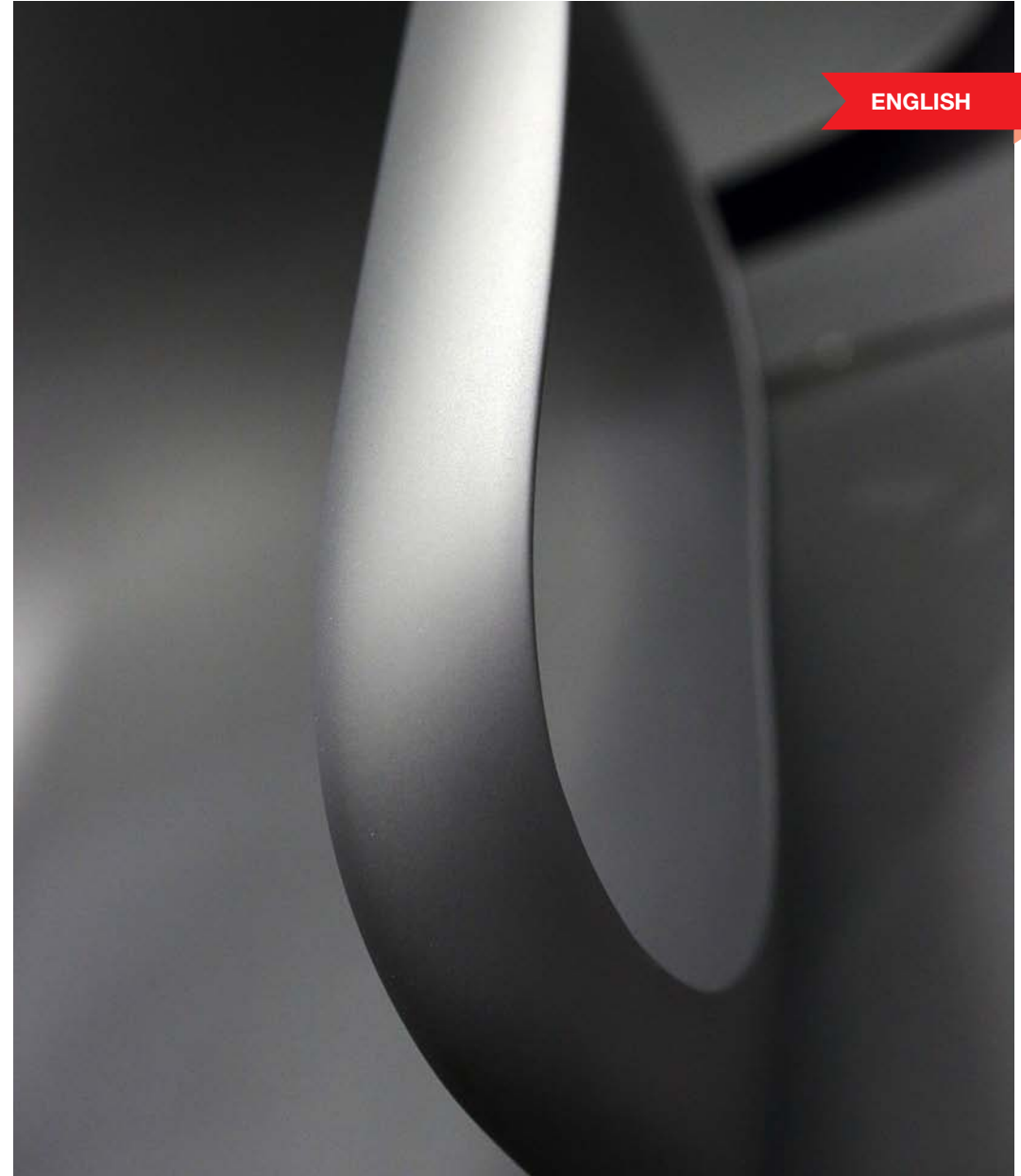
Baydur® 110 is a compact microcellular technopolymer for reaction injection moulding (RIM) at a density from 1050 - 1150 kg/m<sup>3</sup>, and it stands out for the highly cost-effective machining process. Thanks to brief extraction cycles, it is possible to make items with thicknesses ranging from 4 to 6 mm, with high rigidity and a high level of mechanical resistance, at competitive prices. The use of aluminium equipment means competitive pricing when it comes to equipment and the production process also conforms to environmental requirements.



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## THE CHARACTERISTICS OF POLYURETHANE

- Excellent resistance to mechanical stress.
- Good surface hardness.
- High resistance to flames, if treated with halogen-free flame retardants.
- Notable tolerance to harsh climates.
  
- Free from suck-back and deformation, even in the presence of ribbing and reinforcements, for excellent aesthetic results.
  
- Guaranteed chemical inertia when in contact with a host of different organic and inorganic substances (including the most common acids).
- Excellent electrical and thermal characteristics.
- Offers a perfectly paintable surface using any type of coverage, even with conductive finish.
  
- Can be coloured in mass.
  
- Can be used to sink metal and non-metal inserts inside manufactured items during moulding for the purpose of fastening and reinforcing.
  
- Can be disposed of as non-hazardous, inert waste.



# 7\*

## ADVANTAGES OF POLYURETHANE

- Possibility to make variable wall thicknesses.
- Highly complex shapes that enhance the design of the moulded product.
- Exceptional fidelity when it comes to reproducing series of parts in small, medium and large sizes.
- Highly durable, lightweight product.
- High-quality surfaces for refined painted finishes.
- Possibility to sink inserts into the manufactured item.
- Use of aluminium moulds, which are more cost-effective than those in other injection moulds.
- Brief forming times.
- Self-extinguishing class V-0 certified UL [www.ul.com](http://www.ul.com).



# 8\*

## PRODUCTION SECTORS

**S4Technology** collaborates with important companies and/or design firms working in different industrial areas:

- **Renewable and solar power** 4%
- **Vending and coffee machines** 9%
- **Medical** 25%
- **Banking** 5%
- **Beauty/Cosmetic** 16%
- **Lighting** 4%
- **Automotive** 2%
- **Woodworking machinery** 1%
- **Gaming** 2%
- **Shipbuilding** 2%
- **Furnishing** 30%

**S4Technology**, is very attentive to industry developments, which are constantly changing and evolving, seeking new technologies to make a difference in terms of design, performance, and easy economic and production management. Our business policy is based on working with designers, architects, draughtsmen and all those companies with a good deal of awareness when it comes to “innovation and design”.





# 9\* INTERNATIONAL MARKETS

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# 10\* PRODUCT GALLERY

Some of the items made by **S4Technology**.



Products > **Lighting**



Products > **Furnishing**



Products > **Medical**



Products > **Refrigeration**



Products > **Furnishing**



Products > **Medical**



Products > **Automotive**



Products > **Furnishing**

# 11\*

## QUALITY ECOLOGY

**S4Technology** is aware that a business' competitiveness on the market also depends on the quality of its processes. Today it is no longer possible to ignore innovation, uniqueness and the ability to improve on a continuous basis in order to make a product or service that is able to deal with market changes and client demand.

Meeting client requests and expectations in terms of characteristics, reliability, respect for delivery terms, constant monitoring of the entire production process in line with the **UNI EN ISO 9001** standard and company procedures.

With this strategy we have achieved:

**Quality System Certification** in conformity with the requirements of the **UNI EN ISO 9001: 2008** standard for the industrialisation and moulding of polyurethane products (RIM system) according to client specifications; management of the design and manufacture of moulds and equipment for polyurethane.



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## TEAM

## CONTACT

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