



**SURTEX**  
INSTRUMENTS

*Crafted to Excellence*





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British Quality

#### ABOUT SURTEX INSTRUMENTS

Surtex Instruments is privately owned medical technology company specialising in the manufacturing of high quality surgical instruments. The company started as a specialist in the burn surgery instruments field and based on its success and innovative drive gradually expanded to cover a vast range of surgical instruments.

We now manufacture over 8,000 instruments using CNC controlled machines along with the manual skills of our experienced craftsmen. Our innovative solutions are available in general, trauma, gynecology, cardiovascular, neurosurgery, microsurgery, and dental surgery. All our products can be viewed online at [www.surtex-instruments.co.uk](http://www.surtex-instruments.co.uk) where you can download our catalogues or request a printed version.

At Surtex we are more than a premium quality instruments supplier and are able to manufacture prototype work and custom instruments.

At Surtex Instruments our success has been based on helping customers navigate successfully through the instrument procurement process by identifying real value for money through fair comparison. We believe that quality should be affordable and you should not pay too much for over priced brands and neither should you pay too much for a low quality instrument. Surtex fills the gap between overpriced priced brands and low quality instruments and we aim to remain the most competitive in the industry while maintaining our hard earned reputation for delivering highest quality products and value for money solutions.

#### SURTEX QUALITY

In European Union medical devices are subject to a series of uniform laws and the EC directive places rigid demands on surgical instruments. Surtex instruments is proud to claim that we have always surpassed the legal requirements to ensure that each instrument reaching the surgeons hand is indeed a testament to surgical craftsmanship.

#### WHY ARE WE DEDICATED TO EXCELLENCE IN INSTRUMENT CRAFTSMANSHIP?

Surgeons are highly talented and skilled individuals. They operate under significant time constraints and are required to make split second decisions while performing complex operations. At Surtex we understand that in such a scenario the surgeon requires tools that are not just fit for the purpose but are reliable, dependable and crafted by a company that has a track record for relentless pursuit for excellence in the making of surgical instruments.



#### SURTEX AFFORDABLE QUALITY PROMISE

Surgical instruments represent a significant proportion of hospitals total assets. Hospital and health centers are often required to minimize costs of surgical instruments without impacting quality or patient health. Decision makers tend to respond via group purchasing contracts & multiple quotes to shop around for the lowest price. However this approach has significant drawbacks as numerous instrument companies have focused towards competing on price alone with a disregard towards instrument quality while claiming their instruments to be guaranteed and free of defects. The outcome for the buyer being, a perceived notion of a quality instrument, which is actually little more than a knock-off and delivers only poor value for money.

We are **BS EN ISO 13485:2012/ISO 9001:2008 (SGS UK)** certified and **CE** approved to ensure compliance with the standards defined in line with medical devices directive **93/42/EEC**.

#### MISSION STATEMENT

To be the industry leading surgical instruments manufacturer in UK. We will realize this by setting the highest standards in quality, service, reliability, safety and cost containment in our industry sector.



#### LIFE TIME WARRANTY

We encourage customers to calculate lifetime costs prior to making purchase decisions and investing in surgical instruments.

Surtex Instruments are guaranteed for life\* against manufacturing defects of material and workmanship. This means we will repair or replace free of charge any surgical instruments that does not meet its functional requirements when used for intended purpose and maintained properly.



\*Conditions apply.





“  
**Cambridge University Hospitals**   
 NHS Foundation Trust

Performed flawlessly in the procedure undertaken and pleased to note that in terms of build quality, performance and precision product is on par with leading brand manufacturers.”

- Patrick H. Gillespie (Consultant Hand & Plastic Surgeon)
- James Henderson (Plastic Surgery Specialist Registrar)
- Reza Arya (Plastic Surgery CT2 Specialty Registrar)

**Chelsea and Westminster Hospital**   
 NHS Foundation Trust

The general consensus was that the set provided performed well within the expected parameters and certainly held its own when compared to other leading manufacturers.”

- Mr Jehan Butt (CT3 Trauma & Orthopaedics) ”

**DESIGN & DEVELOPMENT**

Any new instrument needs to go through a structured design and development phase. In this process we consult with surgeons, nurses, engineers and instruments craftsmen to identify and define the features and properties desired by the user and best route to manufacture. Our collaboration with surgeons may also result in their name being given to the instrument.

Once the requirements our established the design engineers would initiate developing the new instrument often collaborating with leading research institutes and testing facilities. A validation is carried our following completion against initial requirements and those stipulated by law prior to the product being released to production.



**OUR BRANDS**





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## MATERIALS

The vast majority of Surtex Instruments are manufactured using stainless steel, which is highly corrosion resistant, and rust resistant alloy. The choice of steel is determined according to desired flexibility, hardness, tensile strength and malleability and covered by international standards. Some types of steels can be hardened while others cannot depending on the carbon content of the steel. As most instruments require high mechanical strength for proper functioning we utilize hardened chromium steel with low to medium carbon composition. It is the quantity of chromium, which gives the steel its stainless properties and acts as a passive layer which protects against corrosion.

Surtex ensures that only the best materials are used in our manufacturing to ensure long life and years of service however proper care and maintenance is essential as lack of can result in instruments rusting and staining. Please refer to our guide for instruments care and handling at [www.surtex-instruments.co.uk](http://www.surtex-instruments.co.uk).



## BLANKS

The first step in every instrument manufacturing process is forging a blank. The quality of forging is essential as deficiencies can be corrected later. It is for this reason we only work with selected specialists who have demonstrated commitment to quality and aligned their quality control process with Surtex Instruments.

We utilize stainless steel of European origin and each batch delivered is documented along with a Mill Certificate for traceability if required by law.

## MANUFACTURE

A quality inspected blank undergoes the process of milling and turning. During milling excess stainless steel is removed to shape the instruments and special qualities (e.g. serrations, teeth, ratchets) are added. This is not a quick, one step process and is repeated many times to achieve the quality required by Surtex manufacturing specifications. Due to the considerable range of instruments in our portfolio manufacturing takes place in batches and instruments are hand crafted with inspections carried out at various steps and duly documented.

## HEAT TREATMENT

Instruments then undergo a controlled process called heat treatment, tempering or hardening. The process is used to alter the microstructure of stainless steel, which imparts properties such as strength, surface hardness, tenacity and corrosion resistance, which benefit the working life of the instrument.

The initial step in this process is “quenching” and in this step the instruments are heated to a temperature as high as 1550°F (815.6°C) then cooled under specific conditions to improve the chromium distribution to ensure they develop the ideal hardness and corrosion resistance.

The second step is “tempering” in which the instruments are kept at 482 °F (250 °C) for several hours so the metal can be equilibrated. This operation reduces the brittleness and makes the instruments more elastic.

Proper heat treatment results in the correct hardness measured in units called Rockwell Hardness (HRC). A typical hardness range for a needle holder without tungsten carbide inserts is HRC 40–48. For scissors, the hardness ranges between HRC 50–58.



## FITTING, FUNCTION & FINISH

After heat treatment the instruments craftsmen proceed to provide the instrument its final shape, mechanism and finish. Any sharp edges and burrs are removed which may cause glove puncture. The instrument is finely tuned entirely by hand to its intended function and the final result being an instrument that surgeons can depend on.

Polishing of the instrument has both an aesthetic and functional purpose. A finely polished instrument will result in a more homogenous surface and result in higher corrosion resistance properties. A mirror finish is highly polished and, therefore, resists spotting and discoloration best. However, during surgery, a mirror finish reflects light, which can strain the user's eyes. All Surtex instruments now receive a satin matt finish achieved either through glass beading or brushes depending on the instrument function. A specific finish can however be provided according to the surgeon's preference.



In the next step - passivation - physically changes the outer layer of metal to resist oxidation and protects instruments from corrosion. With normal use of the instruments, the chromium oxide layer improves and makes the instruments more resistant to corrosion.



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## FINAL INSPECTION & LASER MARKING

As an instrument passes through various stages of manufacture it is subject to various checks against established quality standards. The results are documented and any deviations are recorded and corrected. At the final inspection stage our quality control staff inspects each individual instrument against documented instrument inspection instructions and technical drawings. Only instruments that pass these rigorous tests are then laser marked with Surtex brand name and CE mark to provide manufacturer quality assurance that the product fully complies with the essential requirements in line with Medical Devices Directive 93/42/EEC.



## CURRENT REFERENCE STANDARDS FOR SURTEX PRODUCTS

Surtex Instruments are manufactured to conform to the following standards (where applicable)

- BS EN ISO 9001:2008
- BS EN ISO 13485:2003
- MDD 93/42/EEC, Annex II, Section 3.2
- MDD 93/42/EEC, Annex I
- BS EN ISO 7153-1:2001 (BS 5194:Part 1:1991)
- BS 5194:Part 2:1989
- BS 5194:Part 3:1985
- BS 5194:Part 4:1985
- ISO 7151:1988
- ISO 7740:2004
- ISO 7741:1986
- ISO 6508-1:2005 (DIN 50103-3:1995)
- BS EN ISO 14971:2012
- DIN 58298:2010-09
- DIN 58299:1964-01
- DIN 58300:1982-02
- HTM 2010
- AS/NZ 4187-2003

This information is available on the internet at: [www.surtex-instruments.co.uk](http://www.surtex-instruments.co.uk)

“  
More than **11,000** surgical instruments  
for all surgeries”

### General Surgical Instruments

- Scalpels, Knives
- Scissors
- Forceps
- Artery Forceps
- Sponge Forceps
- Probes, Cotton Applicators
- Trocars, Suction Tubes
- Suture Instruments
- Dressing Instruments

### Abdomin, Gynecology & Obstetrics

- Gynecology Instruments
- Obstetrical Instruments
- Stomach, Intestine & Rectum Instruments
- Liver, Gall Bladder, Kidney & Urology Instruments

### ENT, Tonsillectomy & Tracheotomy

- Oral & Maxillofacial Instruments
- Otolaryngology Instruments
- Rhinology Instruments
- Tonsillectomy & Laryngo-Bronchoscopy Instruments

### Trauma, Dermatology & Podiatry

- Orthopedic Instruments
- Skin Grafting Instruments
- Dermatology Instruments
- Podiatry Instruments

### Cardiovascular, Neuro & Ophthalmic Surgery

- Thorax & Cardiovascular Instruments
- Neurosurgery Instruments
- Ophthalmic Instruments

### Diagnostics & Anaesthesia

- Diagnostic Instruments
- Anaesthesia Instruments

### Dental Instruments

- Diagnostic Instruments
- Extraction Instruments
- Periodontal Instruments
- Endodontic Instruments
- Restorative Instruments
- Orthodontic Instruments

### Holloware & Sterilization

- Holloware
- Sterilization Instruments





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Health Tech **For Life**