



Simply Sterile

During a visit to the doctor, hospital or dentist, the chances are that we have enough concerns without wanting to consider the sterility of instruments which are about to be used! Thanks to the development work by ESTS (GB) Ltd. these concerns aren't necessary.

ESTS (GB) Ltd are a Northampton based manufacturer of Autoclaves and Sterilizers for the healthcare, biotechnology and pharmaceutical industries. ESTS manufacture not only a range of standard machines, but also custom build bespoke autoclaves ranging from 300 to 6000 liters capacity.

Sterile through pressure and heat

For those unfamiliar with this technology, an autoclave or sterilizer is a device typically used for the sterilization of materials and equipment in the healthcare, biotechnology and pharmaceutical sectors. Autoclaves commonly use pressurised steam at a temperature of 121°C. Solid instruments and utensils are effectively sterilized when held at this temperature for at least 15 minutes or for a minimum of 3 minutes above 134°C. For the sterilization of air entrained porous items such as linens, dressings, wrapped instruments and utensils, hollow instruments and instruments with lumens, it is essential that all air is effectively removed from the load before the actual sterilizing stage takes place. Similarly a period of vacuum drying must also follow to effectively render the load dry prior to final release.

Sterilizers intended for the processing of medical devices are categorized under the Medical Devices Directive 93/42/EEC. The manufacturer must ensure that the sterilizer meets a number of essential requirements for performance and safety and it must be CE marked accordingly.

A well designed, maintained and operated autoclave will consistently inactivate all fungi, bacteria, viruses and also bacterial spores, which can be quite resistant. Autoclaves are widely used in microbiology, medicine, veterinary science, dentistry and metallurgy. The large carbon-fiber composite parts for the Boeing 787, such as wing and fuselage parts, are also cured in large autoclaves.

Special demands

Benefiting from many years experience within the sterilization market, ESTS engineers developed a very specific "wish list" for the control of their next generation Autoclave. Typical "off the shelf" solutions offered by other controls companies did not offer the functionality and appearance which ESTS required, so it was with B&R that ESTS decided to work to develop their ideal solution.

B&R's ability to offer a customized controller was a key reason for the decision. The application demanded a very high quality graphical interface within compact dimensions; in addition ESTS looked to strengthen their company image with strong branding of their machines. The companies developed a specification for a B&R Power Panel with an 8.4 inch SVGA touch screen and customized branded mylar. The Power Panel benefits from the combined functionality of a high performance controller and high quality graphical display. The Power Panel offered the flexibility of working with different interface modules meaning that Autoclaves could be linked together, with third party devices and also connected over a network to supervisory systems.

Flexibility was also a prime reason why the X20 system was chosen to handle the numerous combinations of analog and digital I/O devices which could be accommodated. The X20 products are optimally designed to combine the exact components necessary depending upon the user's demands and individual application requirements. In addition the application demanded high



Autoclaves are often used in hospitals, to sterilize surgical instruments.


resolution analog input modules to deliver the required fine control.

Easy retrofitting

During the development of the application software the two companies worked closely to develop a highly flexible, and easy to

operate configuration system. This enables ESTS's customers to tailor the configuration to their individual requirements; it also enables simple retrofitting to existing autoclaves as part of refurbishment programs. The user friendly touch-screen provides real-time temperature, pressure and process status information.

The finished machine offers standard features such as vacuum assisted active air removal systems, exhaust filtration, alpha numeric data printers and independent cycle recording and archiving. Options include the ability to remotely monitor the pressures and temperatures within multiple autoclave systems via a dedicated modem link.

As all ESTS autoclaves are designed, manufactured and installed in accordance with the requirements of internationally recognized standards, and because the operators can now easily certify that the required temperatures and pressures have been reached and maintained appropriately; the end user patient can be assured that they will be treated and cared for using the cleanest and most sterile healthcare products. At a time when anxiety would be difficult to avoid - this must be a truly welcome feeling. 

www.autoclave.uk.com

Polish market expansion

By the end of 2000, B&R had already founded their first Polish subsidiary in the town of Posen. With the opening of the new regional office, under the supervision of Piotr Huryn, the third office has now been opened in Stettin.



Piotr Huryn
Regional Manager
B&R Poland

The regional office in Warsaw has been active since October 2005.

This has enabled B&R to be even closer to their customers in the most important Polish industrial regions. The high demand for integrated automation solutions is sup-

plied by local offices, a highly experienced sales team and expert engineers at all locations.

Together with the Kattowitz-based partner, CoNStel, who have been working with B&R since 1987, customers particularly in

the areas of plastics, packaging, metals, energy, transport and environmental technology receive comprehensive technical support. 