



SYSPAL
UNITED KINGDOM

CLEAN PROCESS

The company serves food processing, animal welfare and medical markets and also offers subcontracting under its brands - Syspal, Technik, Technik Medical, Hydro Physio and Manifab.

Staying ahead in a competitive global market, SYSPAL is embracing the fourth industrial revolution with the best possible production equipment and paperless production process.

As Managing Director Chris Truman explains, Industry 4.0 keeps SYSPAL flexible. "Customers want products in relatively small quantities and they want them quickly. With hundreds if not thousands of products and stocking raw materials, we need to process orders and manufacture quickly, efficiently, accurately and cost-effectively."

SYSPAL, a leading manufacturer of stainless-steel equipment for hygiene-conscious industries, has built its reputation on a rigorous approach to design and manufacture for industries where cleanliness and quality are key.

Early adopter

Since its inception in 1975, SYSPAL has been quick to adopt the most efficient technology and was the first in the UK to install a 220-ton/4-meter *ToolCell* with integrated automated tool changer in 2014, replacing two manual press brakes. Truman had seen the *ToolCell* at its EuroBLECH debut, tested the machine and CADMAN®-B software with a particularly challenging part, and then did some homework.

"We worked out in a given day how many times we changed tools and the percentage of time the presses were actually forming metal. It was staggering. We only had about 20 to 25% production time out of an entire shift, the rest of the time was spent changing tools, programming, getting organised and making corrections."

The *ToolCell* proved more than twice as efficient as the two press brakes it replaced bending parts (80% of which



are up to 3 mm thick) around the clock. "If you're changing tools 10 times a day and it takes you 20 minutes to change the tools, that's 200 minutes, or more than three hours. With *ToolCell*, the tools are changed in five minutes, so you've got 50 minutes to change the tools, which is a quarter of the time. You've freed up 150 minutes for forming and doubled your output."

2 beats 4

In 2018, SYSPAL replaced another two press brakes with a second *ToolCell*, a 220 Plus, 3-meter machine. The Plus model features extra open height to accept taller tools, giving SYSPAL more flexibility for the many components it forms. The machine is specified to form up to 6 mm thick material, 3 meters long.

"The *ToolCells* are a game changer for our business. They are super accurate and consistent, resulting in exceptional fit up and more accurate fabrications. We save time welding and finishing."

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CADMAN-B
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Gone paperless

SYSPAL has 28 CAD designers all working in 3D. In the past, the design process involved trial and error blank development and printed drawings issued to production. Today, *CADMAN* software seamlessly links to the CAD system in a fully digital process that ensures first part, good part results.

"We produce 3D models in our design department and the job is issued to production in the form of a drawing. The model is the key to the digital process, from it we generate the bill of materials and from there program everything including simulations to validate the process before cutting metal.

"We use an MRP system to manage workload to the machines in the order jobs have to be produced. We have screens all around the shop floor and anyone on the floor can call up the solid models and view them and view the forming simulation before forming the actual part."

SYSPAL also equipped each *ToolCell* with a barcode reader. "The operator just scans the barcode and the machine sets itself up. It's just awesome to watch."

A new pre-production department employs four people to handle programming.

"When you invest in sophisticated machinery you don't want to be programming at the machine, ever. You want the machine running all the time. Pre-production is one of our most important developments because

we can simulate everything before we cut metal.

"This is Industry 4.0 in action. It's linking everything together digitally and removing as much manual intervention as possible. We don't print drawings anymore. If you have 28 designers and they are spending 10% of their time printing and folding drawings, that's a massive undertaking. Now it's as if we have an extra three designers."

All digital

These days SYSPAL is breaking ground on a 50% expansion of its facility to extend its manufacturing space to more than 14,864 m².

As Chris Truman and his staff look to future equipment, digital technology is key. "Your production environment is a jigsaw and trying to piece it together is a challenge - how to quickly and easily get to the finished part is what it's all about. LVD and CADMAN-B are a big piece of the jigsaw. We can flat pattern the part, cut and form the sheet metal without taking a single dimension."

**Watch the SYSPAL
testimonial:**

YouTube

