

# connexions

[spiraxsarco.com/uk](http://spiraxsarco.com/uk)



## PAGE 2

**Be your own hero**  
Discover what to look for  
in a modern control valve



## PAGE 4-5

**Steam systems  
all go for cancer  
research facility**



## PAGE 6

**Avoiding headaches**  
Find peace of mind for  
your plant steam system



## PAGE 7

**By the numbers**  
8 reasons for adopting a  
clean steam process

# Be your own hero – invest wisely in the right control valve

The chances are that you will already know that accurate temperature and pressure control maintains process efficiency, which makes control valves an invaluable part of any installation. Darren Silverthorn, National Controls and Metering Specialist at Spirax Sarco, explores what to look for in a modern control valve:

### 1. Specification

The majority of control valve issues experienced in industry stem from incorrectly specified control valves. Having the right process conditions and an understanding of the process itself makes correct specification a reliable procedure.

Incorrectly specifying a control valve can lead to product quality issues and production shutdown. With these challenges comes the possibility of safety risks.

### 2. Total Cost of Ownership

When selecting a control valve it's important to consider the total cost of ownership (TCO) and not just the initial purchase price. Correct control valve specification will have an important part to play in a control valve's TCO. Matching a control valve to the process can bring efficiency gains including costs, emissions and productivity.

Control valve design has an impact on TCO, two areas to consider include:

- **Modularity** – Modular control valves are more adaptable and adjustable to mistakes made in the specification stage or changes in production requirements.



- **Maintainability** – Even the best specified control valves will require maintenance over their lifetime to ensure optimum performance. Control valve design has an impact on the ability to maintain a control valve and the cost associated with this.

### 3. Maintenance strategy

The design of a control valve will influence your strategy and budget. To stay one step-ahead of unexpected maintenance challenges, consider the following:

- **Materials** – Ask yourself whether the materials have been chosen with the process conditions in mind. For example, what grade of stainless steel has been chosen for the control valve internals, and will this stand up to the potential for corrosion?
- **Can it be maintained?** – On the surface, a control valve may be advertised as maintainable; in reality this may not be the case. For instance, control valves with screwed in seats are difficult to maintain. Leaving you no option but to live with an under-performing control valve or take the unenviable route of buying a new one.
- **Ease of maintenance** – This key point can significantly impact process downtime and the quality of the control valve after it has been maintained. You may also take the decision to carry out maintenance in-house or use a third party, dependent on the ease of maintenance.
- **Lead times for replacements** – When considering replacing your control valves you want to ensure that you can get your system back into service rapidly. With delivery within 48 hours on a large selection of control valves, you can be back up and running in no time. The valves leave the factory already pre-commissioned for applications.

The considered selection of a control valve, coupled with a strong maintenance strategy, can make a real difference to product delivery, process uptime, compliance and efficiency.

### FIND OUT MORE

For more information, please visit: [sxsc.com.uk/controlvalves](https://sxsc.com.uk/controlvalves)



# Safe isolation: Options and opportunity

When unplanned downtime of critical plant equipment rears its head, it can bring with it the nightmare scenario that multiple essential processes are put out of action when you need them most. Angelo Giambone, Business Development Manager at Spirax Sarco highlights the importance of safe and efficient plant isolation for planned or unplanned maintenance.

Providing effective isolation exactly where and when you want it should be a given, allowing you to focus on the task in hand. It's important to understand the options available to help you choose the solution that offers safe and effective plant isolation each and every time.

### Staying single

Some facilities in the UK continue to make use of a single valve, without a bleed, as the means of isolation. This brings with it several challenges and poses a risk to the safety of the facility, with potential financial consequences as well.

Single isolation for the modern steam plant does not always provide a leak-tight seal – even a minor leak could make the maintenance task unsafe and pose a risk to you and your colleagues. You may find that you're unable to carry-out timed routine maintenance or an emergency system shutdown, resulting in the closure of entire sections of the facility.

### Doubling-up

The double block and bleed (DBB) isolation method offers an alternative to the risky use of single isolation. Traditionally this was achieved using separate valves, two in a line and one as a bleed, but the installation of all these valves could lead to you spending more than you need in upfront investment of both time and money.

Using separate valves for DBB means you'll need to find more space to fit them. In a new installation, a larger plant room may have to be considered during the design process.

### The alternative

The alternative is simple but effective – two bellows sealed isolation valves in the space of one valve body – the Spirax Sarco SafeBloc™. The technology is faster to install than a traditional DBB assembly, because it can be installed into the space left by an existing single isolation valve.



The amalgamation of two valves into one body means that there are less flanged connections in the overall installation, thus lowering the risk of flange leaks.

A simple-to-install solution, the SafeBloc™ has been designed to meet the increased demands of health and safety requirements where traditional single isolation of plant is inadequate. Offering further protection for those safety-conscious maintenance engineers, the SafeBloc™ helps you to meet the DBB standards of the HSE.

The safety and efficiency delivered with the installation of a DBB bellows sealed isolation valve such as SafeBloc™ can bring you peace of mind while protecting the integrity of your steam system.

### FIND OUT MORE

Why not find out more about how SafeBloc™ can help you?

Visit: [sxsc.com.uk/SafeBloc](https://sxsc.com.uk/SafeBloc)



# Steam systems all go at cancer research facility



**Being held responsible for a facility where vital cancer research is conducted is no mean task for any facilities team. So having confidence that all specialist mechanical services are working at their optimum level is paramount. By streamlining maintenance of its steam systems, the Beatson Institute for Cancer Research has mitigated outstanding risk and freed up in-house resource to focus on what they do best.**

Based in Glasgow, The Beatson Institute for Cancer Research is a biological research facility that conducts studies into the basic biology of cancer. It is a world-class facility that operates at pace, delivering a number of significant studies over the years. Fortunately, funding has enabled the facility to develop into what is described as a “magnificent research building”, home to a number of state-of-the-art technologies. Crucial to many of the processes carried out here is the role of steam.

## The risk of failure

Primarily, steam is critical for humidification at this research site, in ensuring the conditions in the facility are optimum and suffer from minimal fluctuation. However, failure of the boiler or steam system would have a knock-on effect to the whole site and every minute lost would further jeopardise key research being carried out.

## No day is the same

Alistair Wilson is the Facilities Manager at the Beatson Institute and is responsible for all aspects related to the upkeep and smooth operation of the building. This includes security, cleaning, catering, mechanical and electrical services, alterations and refurbishment, and health and safety legislation relating to premises. In addition, the team perform a building liaison role in new build projects and major refurbishments associated with the Institute.

For a team working at capacity, having to liaise with multiple suppliers on maintenance contracts was becoming unwieldy. “Typically, when we’re looking at boiler maintenance we have one specialist firm to carry out work on the boilers, a second specialist firm to carry out works on the controls and a third specialist to carry out works on the burners,” explains Alistair.

## EXECUTIVE SUMMARY

**Company name:** The Beatson Institute for Cancer Research

**Location:** Glasgow

**Objective:** Streamline maintenance of its steam systems to ensure mechanical services are working at their optimum level.

**Solution:** Integrated service contract including on-site service engineer services, boiler strip down, steam trap survey, labour for replacing valves and traps, valve refurbishment, feedwater and blowdown vessel service, Electric CRU service.

**Results:** Improved reliability and maintenance of the system as well as having one integrated contract for the whole system and a single point of contact.

“That’s a lot of coordination for a busy client, and scope to “blame” the problem on one of the other sub-contractors. This is a nightmare for many building managers who simply want to ensure that the equipment is maintained in good working order and in line with statutory regulation.”

Through ongoing correspondence between Alistair and the local Spirax Sarco Service Specialist, discussions ensued as to what was the most suitable process in consolidating the supply chain, while enrolling the expertise of a team specialising in these systems every day. He wanted to feel reassured there is a reliable preventative maintenance process in place to help ensure smooth and efficient plant operation by reducing the risk of breakdown and costly downtime.

## Serviced back to peak performance

During their first visit, the Spirax Sarco Service Engineers conducted a full boiler strip down to carry out crucial inspections on the internal components and essentially assess its performance. This included a full service of the feedwater and blowdown vessels and the electric condensate recovery unit.

The service contract also included an annual trap survey to ensure the steam traps are working efficiently. In order to run a steam system safely and at peak operational efficiency, this is essential. It means Spirax Sarco were able to report back on detailed operating conditions for each individual trap, the total cost of steam losses and the return on investment for complete rectification work. Ultimately, it is another string in the Beatson Institute’s bow to minimise downtime of the facility.

During the audit it became evident the boiler controls had not been maintained correctly and also some of the steam distribution control applications had not been refurbished for around nine years. Leaks were also apparent and there was unstable steam supply at the humidifiers.



In order to get the system back to its optimum operating level, Spirax Sarco replaced a number of traps and valves, and provided a valve refurbishment and reconditioning service to extend the life of some of the worn components.

Overall Alistair and his team have improved reliability and maintenance of the system as well as having one integrated contract for the whole system - Spirax Sarco even coordinates with the local engineering insurance inspector so Alistair doesn’t have to.

“The positive thing for me is that I have a single contract and point of contact to cover a very critical asset for our organisation,” concludes Alistair. “Not only that, I have trusted industry experts on hand to deal with any situation and assist with longer term improvement of our system. I can have confidence that I have put the best possible maintenance solution in place for critical equipment and I can free up time to manage other responsibilities.”

## FIND OUT MORE

For more information on Spirax Sarco’s service contracts, visit: [xscom.uk/ServiceContracts](https://xscom.uk/ServiceContracts)



# Take the headache out of plant management with a steam trap survey

Rising energy bills, energy-efficiency targets and potentially limited in-house expertise are enough to give anyone a headache. When you're tasked with the management of a steam system, finding peace of mind is vital for the smooth-running of your plant.

In an industry where the demands expected of you in your role are increasing, it can be a challenge to stay one-step-ahead to keep your plant continuously running at peak operational efficiency. One way to take a proactive approach to monitoring the health and performance of your steam system is a steam trap survey. A steam trap survey is another tool that can be held in your arsenal to help you to identify improvements that can be made in the system's operational efficiency – keeping you one step-ahead.

## Introducing steam trap surveys

To run a steam system safely, and at peak operational efficiency, it is essential all steam lines are cleared of condensate properly. The steam trap performs one of the most important functions in steam system operations by releasing condensate and closing when steam is present.

Whether you do have a regular maintenance schedule or you find that you're overstretched, a steam trap survey can help you to take back control of your time – letting you focus on boosting plant productivity and efficiency.

## An eye into the unknown

Concealed in the eaves of a factory or submerged underground with limited access, it's easy for steam traps to go unnoticed. A steam trap survey is the perfect way to both identify where all of your steam trap population is whilst also regularly ensuring that your steam trap population is working as efficiently as the day they were first installed. After all, if you've experienced a change in the production demands of your facility, then now could be an opportune moment to review the health of your steam trap population.

## Rest-assured

Following the detailed inspection of your steam trap population, the findings are reported back to you via a thorough report – similar to a car M.O.T. – areas of focus are brought to the fore. This includes a comprehensive payback assessment and recommendations on where you can be

increasing efficiencies in your steam system. Your steam trap population may have been installed and commissioned perfectly first-time round, but changes in the production demand of your facility may have begun to take their toll on their performance. A steam trap survey will provide peace of mind by identifying steam traps that require immediate attention and highlighting the savings and efficiencies that can be made if rectification work is carried out.

Put simply, there are a wealth of insights you can uncover through a steam trap survey.

## If you remember one thing...

The cost of a steam trap survey is typically far less than the cost of the average energy loss caused by not maintaining your steam trap population regularly. When you put it like that, it's a no-brainer, isn't it?



## FIND OUT MORE

For complete peace of mind that you are maximising your operational efficiency when it comes to your steam trap population, go to: [sxsc.com.uk/TrapSurveys](http://sxsc.com.uk/TrapSurveys)



# 8 Advantages of adopting a clean steam process

If you're one of the many food manufacturers using culinary / filtered steam, you could be set to reap huge benefits by adopting the use of clean steam in direct contact with your process. We look at how you could benefit from adopting a clean steam process.

The quality and purity of steam has been fundamental to the healthcare and pharmaceutical industries for many years, yet food and drink are often manufactured, treated or processed with little or no analysis of the grades of steam available for use. Making the switch to clean steam could benefit your plant in a number of ways.

## 1. Quality Control

You might have come to know 'clean' as being synonymous with being 'sterile', but clean steam's benefits extend much further. Clean steam mitigates against contaminants, but also ensures quality control of attributes such as dryness and the production of non-condensable gases.

## 2. HACCP

Working in a food manufacturing plant, you're likely already aware of HACCP. Clean steam systems fully comply with regulatory requirements, providing you with the peace of mind that your food is safe.

## 3. Product Consistency

Adopting a clean steam process and removing the risk of contaminants such as particulate matter, means that you can rest easy knowing that you are safely delivering consistent quality of your final product, time after time.

## 4. Customer and consumer confidence

Clean steam isn't just a powerful ingredient inside the factory. It can help your customers to feel confident in the product that you are delivering. Unlike filtered / culinary steam, clean steam is free of boiler water treatment chemical taints, and so it doesn't impact on the colour and taste of your products.

## 5. Reduced waste and downtime

Clean steam has quickly become the preferred factory choice for transferring large quantities of energy over a long distance, as it's an economical source of energy. While the reliance that you may have had on chemicals to clean your water can be reduced, resulting in minimised waste. This can significantly help you to lower your operating costs.

## 6. Greater diversity

Imagine one tool in your toolbox providing you with near-limitless potential. That's exactly what you gain with clean steam, it can be used for processes such as vulcanising, cooking or preserving foods and heating water, making it your most diverse operational tool.

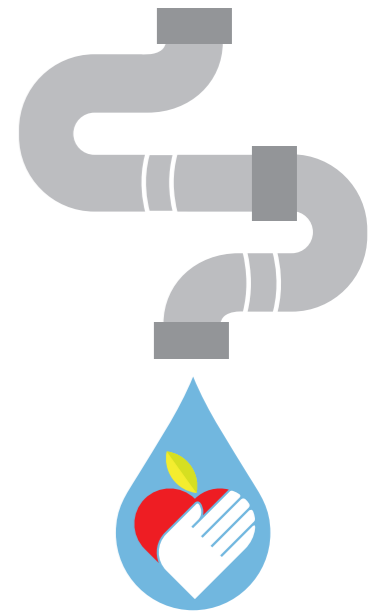
## 7. Reduced risk

With major retailers putting food safety under increasing scrutiny and looking for proof that every possible measure has been put in place to ensure consistent safety and quality, adopting a clean steam process can help you to demonstrate an adherence to good food hygiene practices.

## 8. Flawless reputation

Your reputation is the foundation on which your business is built, so ensuring that you have done all you can to maintain a rigid food safety regime can ensure the protection of your brand's reputation and keeping consumer trust intact. Introducing clean steam can bolster your existing safety practices and defend your reputation from the risk of a product recall.

**So, what are you waiting for? Adopting clean steam can help you to deliver consistency, quality and maximise product safety.**



## FIND OUT MORE

For more information go to [sxsc.com.uk/Clean\\_Steam](http://sxsc.com.uk/Clean_Steam)



## NEWS



### Fundraising a success for helicopter heroes

We're pleased to announce that the total figure raised for Midlands Air Ambulance during 2018 was £9,600.

That equates to three lives saved along with lifesaving equipment such as response bags, flight suits, helmets and boots for aircrew. We held multiple charity days throughout the year to help support the charity in funding future lifesaving air ambulance missions.

For more information on Midlands Air Ambulance, visit <http://www.midlandsairambulance.com/>

### Spirax-Sarco Engineering plc enters the FTSE100

Following the FTSE UK Index Series quarterly review, it was announced that Spirax-Sarco Engineering plc would enter the FTSE 100 Index from the start of trading on 24th December 2018.

## TRAINING

### Team welcomes new trainer

We are pleased to welcome a new trainer to our fabulous team – Tom Suwart.

A Chartered Engineer, with over 10 years of experience at Spirax Sarco, Tom originally started within Product Development in the Controls & Actuators team, as well as the Test Facilities centre and more recently was responsible for the Graduate and Apprenticeship programmes. Tom has a passion for helping people learn and is looking forward to meeting you all over a delicious lunch in our Summerhouse Bistro!



### Upcoming course dates

Steam Boiler Plant Fundamentals:  
3-4 July 2019



BOAS Renewal:  
19-21 June 2019



Boiler House Risk Assessment:  
19 June 2019

