sptlabtech

Expert Q&A: Automated biobanking reimagined!

arktic XC - meeting your current and future biostorage needs

We spent time with Paul Lomax, Product Manager, who takes us through where the concept for the arktic XC came from, how it differs from our original arktic units, and the positive impact this affordable, reliable and truly scalable product will have on our customers' workflows, outputs and budget.

01 Where did the idea for arktic XC come from and what was the process for bringing it to life?

We have been moving samples around with pneumatics for almost 20 years in our comPOUND and lab2lab products. Customers like the scalability and flexibility of these solutions which can be adapted over time to meet their evolving needs. In biobanking time is a critical factor and the transport of samples is often a weak link so, when arktic was originally conceived, the ability to provide interconnectivity and remote access to biobanks via pneumatics was identified as a potential future requirement. As our install base has grown, we have interacted closely with our customers to understand their ongoing pain points and, as a result, our portfolio development has focussed on maintaining sample quality with greater levels of access for more efficient workflow.

02 Who did you think would benefit the most from arktic XC?

Now that's an interesting question. In the short term, it's the scientist. The main purpose of arktic and arktic XC is two-fold. Firstly, to free scientists from the burden of sample management by providing easy access to samples, enabling them to focus on their work and avoid spending large quantities of time looking for samples in freezers! Secondly, these products are designed to protect the integrity of samples. Poor storage conditions can result in poor samples that generate poor and unreproducible data that could take researchers down the wrong path of investigation. Achieving quality, actionable data that, at the end of the day, could benefit the quality of our lives, is the end goal.

03 What makes arktic XC different to the original arktic units?

arktic XC is the collective name for integrated arktic units with remote access options. What's different is that from one location, users can remotely access samples that are spread across several integrated arktic units that may reside in different locations. Remote access points can be used for both storage (i.e. sending samples direct from the sample processing lab) and retrieval (within a biobank suite, or even an analytical laboratory). This approach not only protects sample quality by providing a rapid route to storage, it also enables much greater convenience. Additionally, customers only need to scale up when they are ready, adding additional arktic modules as and when required.

04 Does this version have any new elements compared to previous model variants and will those be available across the range?

The new options available in the arktic XC range are fully compatible with all predecessors, so a customer that has a single arktic can easily expand their storage capacity by adding additional arktic units and/ or remote access.



Paul Lomax Product Manager



What evidence is there that arktic XC is 05

A: fit for purpose?

Since its launch in Summer 2019 there has been much interest from customers looking for scalable solutions or from those interested to fully automate their workflows by providing samples directly to downstream automation. The first of these projects is now in the process of being installed and we expect to see growth in this area as more and more customers discover the benefits of end to end automation.

B: better than existing industry options?

No other company offers a modular approach whereby multiple modules can be integrated, and samples accessed remotely through pneumatic transport. Most biobank solutions systems require the customer to look through a crystal ball, estimating their storage capacity needs years into the future. This can result in additional up-front purchase costs plus high operational and maintenance costs in order to support a large system that will take several years to reach capacity. Conversely, the arktic XC's modular approach means that customers can scale up as they need to and since these compact units fit neatly into existing laboratory space, they also avoid the need for costly infrastructure changes.

C: ready to become THE solution of choice for sample storage and access?

Usually the implementation of sample storage automation is just one of several changes being made within an organisation, which can become overwhelming. Many customers appreciate the opportunity to stagger change over time which enables new processes and workflows to naturally evolve based on experience. For example, by implementing a single arktic unit a semi-automated workflow is introduced that enables customers to gain valuable experience before committing to enhanced levels of automation or increased capacity, all of which can be added later as, when and if required.

06 Is the instrument an intuitive one or does it require lengthy onboarding / implementation?

Installation is typically completed with systems ready to use within a week. The user interface is so easy to use that training sessions are completed in just 2-3 hours.

07 What are the biggest impacts that you see for new customers using this for the first time in their facilities / labs?

The biggest and most immediate impact to customers is time saving. With an arktic unit in place, manual sample picking becomes a bad memory. Users become free to get on with more important work while arktic takes care of the picking. In the longer-term, the anticipated outcome is that customers should expect to benefit from better data. More secure storage and stable temperature control should lead to improved sample quality. By using remote access to connect sample processing labs to the biobank directly and/or deliver samples from the biobank to an analytical lab, logistics workflows can become better controlled, and documented.

80 When is it launching, where can I see one and when can I place an order?

The arktic launched over 5 years ago and arktic XC launched in May 2019, so the full suite of sample storage, interconnectivity and remote access is available to order now.

09 What are the future plans for the instrument in terms of investment, enhancements and future proofing?

The next phase for this product range will be to grow the 'library' of integrations with other systems, such as LIMS and automated workcells, in order to offer fully automated systems that provide seamless processing from sample selection to downstream processing and analysis. Many of these projects are under way through collaboration with customers and other automation vendors. It will be exciting to see the range of applications that develop.

As the product manager for this product what are 10 you excited/proud about in relation to the new version?

The flexibility, scalability and integration capabilities of arktic XC have been part of our long-term road map since arktic was first launched. To be able to offer greater levels of automation or expand the capacity of customer's biobanks and see their excitement is great. It is also exciting to play a part in cutting edge research, such as the fields of translational medicine and synthetic biology. It makes me genuinely proud that our technologies are helping researchers to advance human knowledge and drive innovation to improve life.

Click here for more information about arktic XC



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