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Celebrating Milestones: The Gateway Magazine's 300th Issue

Founded over two decades ago, The Gateway started as a modest publication aimed at showcasing local manufacturing resources and small job shops. What began as a small collection of ads has blossomed into a comprehensive magazine that covers a wide array of topics and company showcases.

The journey to the 300th issue has not been without its challenges. The magazine has navigated shifts in the publishing landscape, adapting to the rise of digital media while maintaining its commitment to print.

Looking Ahead

While celebrating this milestone, The Gateway remains focused on the future. With plans for expanded digital content and more in-depth features with regional manufacturers, the magazine aims to continue evolving and engaging with its readership. The commitment to nurturing new companies and addressing contemporary issues will remain at the forefront of its mission.



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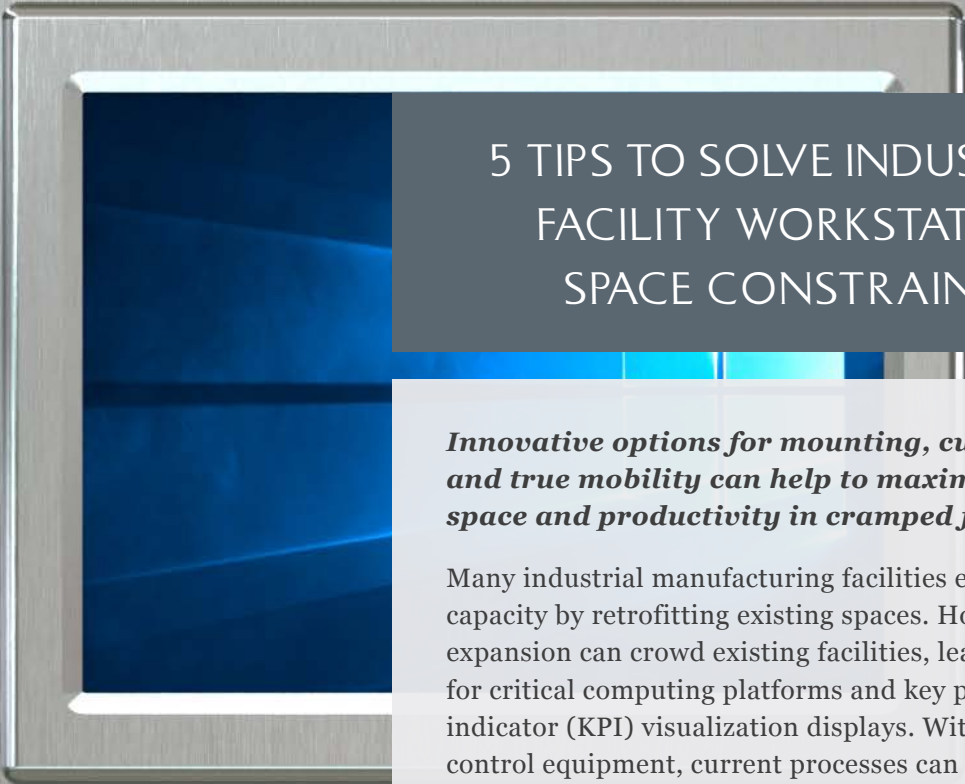
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5 TIPS TO SOLVE INDUSTRIAL FACILITY WORKSTATION SPACE CONSTRAINTS

Innovative options for mounting, customization, and true mobility can help to maximize usable space and productivity in cramped facilities.

Many industrial manufacturing facilities expand their capacity by retrofitting existing spaces. However, expansion can crowd existing facilities, leaving less room for critical computing platforms and key performance indicator (KPI) visualization displays. Without sufficient control equipment, current processes can be challenged to meet critical quality standards and productivity can lag.

Fortunately, a variety of innovative space-saving options are now available that can help industrial facilities make the most effective use of virtually every square inch of usable space for computing and data analytics platforms, including hallways, production areas, and cleanrooms.

Paul Shu of ARISTA Corporation, a leading provider of computing platforms and visualization display products for harsh industrial environments, offers five tips to manufacturers who need to maximize their use of space within constrained facilities.

The company's broad array of ruggedized products includes standard and custom solutions like thin clients, panel PCs, ruggedized touch displays, keyboard, video monitor, and mouse (KVM) solutions, as well as mobile and operator workstations.

Tip 1 – Increase flexibility with a pendant arm mount

When industrial operator workstations are required within tight confines, highly flexible stainless steel pendant arm designs can save a significant amount of space, according to Shu. With this option, the screen and connected keyboard are suspended by a pendant arm that is mounted to the wall. When needed, the user can extend, rotate, and swivel the workstation into the ideal position. When data entry is completed, the workstation can be pushed back against the wall, out of the way.

“Today, space efficient, pendant arm, 360° double-joint [single-screen] and triple-joint [dual-screen] designs make wall flush installation, folding, and workstation retraction easy tasks. The angle of the screen or keyboard in some models can be adjusted to accommodate operators’ various heights and specific requirements. This enables comfortable workstation operation over an extended period,” says Shu.

Tip 2 – Take advantage of wall-recessed workstations in hallways

When installing workstations in hallways or other space constrained areas, wall-recessed units are the perfect solution. According to Shu, 15, 17, 19, and 21.5-inch touchscreen displays can be fully recessed into a wall to allow greater clearance. There is even an option for a 55-inch large-format 4K display workstation with Quad View display so operators can visualize KPIs and take full control of the production data.

“Recessed workstation mounts should be utilized when hallways are employed for operational control while allowing maximum walking space,” says Shu.

The pendant arm can be utilized for a keyboard in hallways.

For use in tighter spaces, the company offers a wall-mount option, in which a hinged keyboard support stand with a sliding brace release from the wall. It folds back virtually level with the wall when not in use. A lockable utility tray that extends from the keyboard stand also enables the use of a full-size computer mouse and pad (viewable at <https://www.youtube.com/watch?v=ZPBaC7AcUjw&t=16s>).

Shu advises that a fanless cooling design should be implemented in wall-recessed models to ensure that the workstations operate stably and reliably. The compact design does not utilize bulky fans yet lowers the system’s operating temperature.





Tip 3 – Install wall, pedestal, or ceiling mounts to suit specific space requirements

Depending on the available space, wall, pedestal, and ceiling mounts can all play a role in better utilizing certain manufacturing facility configurations. Shu notes that wall mounts come in several types and configurations, including fixed and adjustable height.

Computing systems can be mounted to walls using a VESA Mounting Interface. With a floor-mounted pedestal mount, the workstation is situated on a compact platform supported by a stainless-steel column that occupies very little space. Ceiling mounts, as the name suggests, support the workstation and monitor from above, leaving the floor fully open for storage, production, or other uses.



Tip 4 – Take advantage of mobile workstations in any available space

Mobile workstations are increasingly popular in industrial manufacturing environments since the units can be used where needed and then moved out of the way. In addition, mobile workstations enable rapid and easy reorganization of the work environment and process flow for more flexible management.

“One mobile workstation can replace multiple fixed workstations, and there are no installation costs. Wireless connections allow for direct communication with manufacturing execution systems, electronic batch records (EBR), SOP, ERP, and other back-end systems,” says Shu.

To be truly mobile, ARISTA designed a wireless, portable system that operates on a heavy-duty lithium battery that allows the workstation to function seamlessly and uninterrupted while in motion. The battery can last for several shifts before requiring a recharge, enabling full non-stop mobile operation over a 24-hour period.

Wi-Fi capability is built into the workstations to allow for uninterrupted wireless communication in all corners of the factory or laboratory. In addition, most advanced industrial manufacturing facilities today have Wi-Fi-based system backbones connected to legacy subsystems, meaning the workstation can communicate directly with the facility’s server.

“With no cables to be disconnected, managed, and reconnected, and with no break in any live or critical

connections to re-establish, manufacturers can save time and significantly increase productivity,” says Shu.

The portable systems are completely enclosed and therefore fully compliant from a regulatory standpoint, which is essential for sensitive production environments. Eliminating the wires means removing integrity compromises and contamination caused by connecting and reconnecting systems to move the workstation. Each unit can do everything a stationary system can do while remaining mobile, which reduces both infrastructure cost and deployment complexity over a desk-based system.

Tip 5 – Custom solutions when all else fails

When standard catalogue options are insufficient, custom solutions can be required to fit into tight spaces or hallways. To do this, the equipment must often be customized as to the size, inputs, communication connections, mounting, battery types, and other factors.

Although the leading process automation equipment providers offer computing solutions, the options are limited. In addition, they are not typically flexible enough to provide custom computing system component solutions since this is not their core competency.

“Most providers offer basic monitors and workstations, but if there are specific space constraints or other design changes, they are not able to create new solutions or make minor changes to existing products,” says Shu.

In contrast, ARISTA has serviced industrial manufacturers for more than ten years and developed a broad range of products during this time. The company has a strong track record and capability to customize products to meet necessary process specifications.

“If there are unique requirements due to space constraints, we meet with the manufacturer to fully understand the situation and design a solution,” says Shu. “In six to eight months, we can deliver the first articles for approval, and begin production of the equipment.”

For more information, contact ARISTA Corporation at (510) 226-1800, e-mail sales@goarista.com, or write to 48460 Lakeview Blvd., Fremont, CA 94538.

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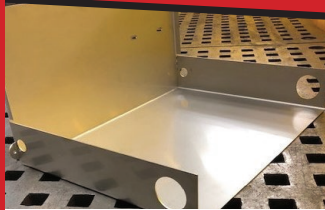




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UNDERSTANDING THE DIFFERENCES BETWEEN AS9100 AND ISO 9001 CERTIFICATIONS FOR MANUFACTURERS

For manufacturers, obtaining quality certifications is essential to ensure that their products meet industry standards and customer requirements. Two of the most widely recognized certifications are AS9100 and ISO 9001. While both certifications focus on quality management systems, they have different requirements and are intended for different industries. In this article, we will explore the key differences between AS9100 and ISO 9001 certifications and help you determine which one is right for your manufacturing business.



AS9100 Certification

AS9100 is a quality management system standard designed specifically for the aerospace industry. It was developed by the International Aerospace Quality Group (IAQG) to establish a common set of requirements for quality management systems in the aerospace sector.

The purpose of AS9100 certification is to ensure that aerospace companies meet or exceed customer and regulatory requirements for safety, reliability, and performance. This certification demonstrates that a company has implemented a robust quality management system that covers all aspects of its operations, from design and development to production, installation, and servicing.

To become certified to AS9100, companies must undergo an audit by an accredited third-party certification body. The audit assesses the company's quality management system against the requirements of the standard. If the company meets all the requirements, it is awarded AS9100 certification.

AS9100 certification provides several benefits to aerospace companies. It helps them improve their processes and reduce waste, leading to increased efficiency and cost savings. It also enhances their reputation with customers and stakeholders by demonstrating its commitment to quality and safety.

The AS9100 certification is essential for any company operating in the aerospace industry. It ensures that they are meeting or exceeding customer expectations while maintaining high levels of safety and reliability in their products and services.

Benefits of obtaining AS9100 certification for manufacturers

There are several benefits to obtaining AS9100 certification for manufacturers. Firstly, it demonstrates that an organization has a robust quality management system (QMS) in place that meets the rigorous requirements of the aerospace industry. This can help increase customer confidence and lead to new business opportunities. Additionally, AS9100 certification can improve operational efficiency by identifying areas for improvement and implementing best practices for quality management. It can also help reduce costs associated with rework and waste, as well as minimize the risk of product recalls or safety incidents. Finally, AS9100 certification is often a requirement for doing business in the aerospace industry, so obtaining certification can open up new markets and opportunities for manufacturers.

Overall, AS9100 certification helps organizations meet the highest standards for quality and safety in their products and operations while also providing a competitive advantage in the marketplace.



ISO 9001 Certification

The ISO 9001 certification is a globally recognized standard for quality management systems (QMS). It outlines a set of requirements that organizations must meet to demonstrate their ability to consistently provide products and services that meet customer and regulatory requirements.

ISO 9001 certification serves several important purposes. Firstly, it provides a framework for organizations to establish and maintain a robust QMS that meets the needs of their customers and stakeholders. This can help improve operational efficiency, reduce costs associated with rework or waste, and increase customer satisfaction.

Secondly, ISO 9001 certification is often required by customers or regulatory bodies as a condition of doing business. Obtaining certification can open up new markets and opportunities for organizations while also providing assurance to customers that they are working with a reputable and reliable supplier.

Finally, ISO 9001 certification helps promote continuous improvement by requiring organizations to regularly monitor and evaluate their QMS performance. By identifying areas for improvement and implementing best practices for quality management, organizations can continually enhance their operations and better meet the needs of their customers.

Benefits of obtaining ISO 9001 certification for manufacturers

Obtaining ISO 9001 certification can provide several benefits for manufacturers, including:

1. **Improved quality:** Implementing ISO 9001 standards can help manufacturers improve their overall quality management system, leading to better products and services.
2. **Increased customer satisfaction:** By focusing on meeting customer needs and requirements, ISO 9001 certification can help manufacturers increase customer satisfaction and loyalty.

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3. **Improved efficiency:** Implementing ISO 9001 standards can help manufacturers streamline their processes and procedures, reducing waste and improving efficiency.
4. **Better decision-making:** With a clear understanding of their processes and procedures, manufacturers with ISO 9001 certification can make better-informed decisions about how to improve their operations.
5. **Competitive advantage:** Having ISO 9001 certification can give manufacturers a competitive advantage in the marketplace by demonstrating their commitment to quality management and customer satisfaction.

Overall, obtaining ISO 9001 certification can help manufacturers improve their operations, increase customer satisfaction, and gain a competitive edge in the marketplace.

Key differences between AS9100 and ISO 9001:

There are a few key differences between AS9100 and ISO 9001. First, AS9100 is specifically for the aerospace industry, while ISO 9001 can be applied to any industry. Second, AS9100 has additional requirements for quality management and risk management. Finally, AS9100 is based on the international standard ISO 9001, but adds specific requirements for the aerospace industry.

The additional requirements the AS9100 has for quality management and risk management compared to ISO 9001 include a focus on product safety and reliability, as well as requirements for configuration management, design control, and verification of purchased products. Additionally, AS9100 requires specific processes for managing nonconforming products and corrective actions. In terms of risk management, AS9100 requires organizations to identify and manage risks associated with their products and processes, including those related to critical parts or suppliers. Overall, these additional requirements help ensure that aerospace organizations are meeting the highest standards for quality and safety in their products and operations.

With regard to documentation requirements, the AS9100 has more rigorous rules in place compared to ISO 9001. This is because the aerospace industry has unique safety and regulatory considerations that require a higher level of documentation. Specifically, AS9100 requires organizations to document their quality management system (QMS) in detail, including policies, procedures, and work instructions for all processes.

Additionally, AS9100 requires organizations to maintain records of their QMS activities, such as internal audits and corrective actions. This documentation must be reviewed regularly to ensure it remains up-to-date and effective. By requiring more rigorous documentation, AS9100 helps ensure that aerospace organizations are meeting the highest standards for quality and safety in their products and operations.

In a nutshell, the main differences between the two certifications include:

1. **Focus:** AS9100 is specifically designed for the aerospace industry, while ISO 9001 is a general QMS standard that can be applied to any industry.
2. **Requirements:** AS9100 includes additional requirements beyond those in ISO 9001 that are specific to the aerospace industry, such as product safety, configuration management, and risk management.
3. **Emphasis on documentation:** AS9100 places greater emphasis on documentation than ISO 9001, requiring more detailed records of processes and procedures.
4. **Customer focus:** While both standards require organizations to focus on meeting customer needs and requirements, AS9100 places a stronger emphasis on understanding and meeting the needs of aerospace customers specifically.
5. **Certification process:** The certification process for AS9100 typically involves more rigorous audits and assessments compared to ISO 9001 due to the higher level of scrutiny required by the aerospace industry.

The importance of understanding which certification is appropriate for your specific industry needs

Understanding which certification is appropriate for your specific industry needs is crucial because different industries have different requirements and standards. While ISO 9001 is a general quality management system (QMS) standard that can be applied to any industry, there are other certifications that may be more appropriate for certain industries.

For example, the aerospace industry has its own specific certification standard, AS9100, which, as we've mentioned, includes additional requirements beyond those in ISO 9001 that are specific to the aerospace industry. Similarly, the automotive industry has its own certification standard, IATF 16949, which includes additional requirements beyond those in ISO 9001 that are specific to the automotive industry.

By understanding which certification is appropriate for your specific industry needs, you're ensuring your company is meeting all necessary requirements and standards. This can help improve operations and increase customer satisfaction by demonstrating a commitment to quality management and meeting customer needs.

Additionally, obtaining the appropriate certification can give manufacturers a competitive advantage in their respective industries by demonstrating their expertise and dedication to quality management. Overall, understanding which certification is appropriate for a the specific industry you're serving is essential for ensuring compliance with industry standards and improving overall business performance.

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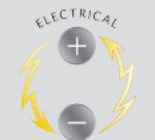


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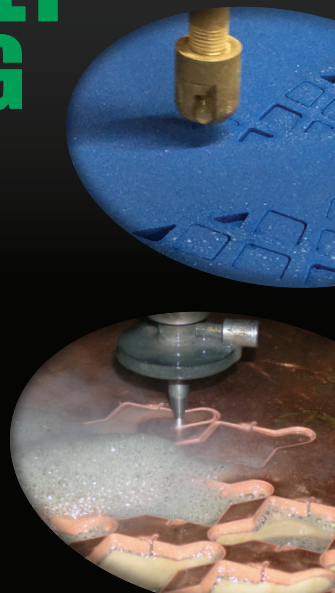
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GET STARTED

Female-led Swiss Deep Tech start-up Apheros secures \$1.85M to cool down data centers, using high performance cooling systems

Apheros specializes in thermal management and is developing innovative cooling solutions for data centers and the high-power computing industry. Its high-performance metal foams maximize heat dissipation, optimize fluid flow, and reduce energy consumption, addressing the most crucial cooling challenges faced by industry.

Zurich, Switzerland – August 19, 2024: Data centers are the backbone of the digital age, with unprecedented demand for digital infrastructure driven by the surge in the use of AI, machine learning, and supercomputing. However, their energy consumption is skyrocketing. By 2030, an estimated six percent of global energy consumption will be used specifically for cooling data centers. A shift from traditional cooling methods to more cost- and energy efficient liquid-based solutions is inevitable. Enabling this transition, deep tech startup Apheros is today announcing a \$1.85m funding round seizing this critical moment to introduce its innovative metal foam technology, offering a superior solution to this pressing industry challenge.

The pre-seed funding round, led by venture capital firm Founderful, will accelerate development and deployment of Apheros' revolutionary metal foam-based cooling solutions.

The Apheros patented manufacturing process creates unique foam structures with completely open porosity and unparalleled surface area, surpassing traditional solutions by a factor of thousand, which translates into exceptional heat transfer and flow properties. Ideal for high performance cooling applications, Apheros' metal foams are easily integrated within its customers' existing cooling systems. They address customers' urgent needs of reduced energy consumption and cooling costs.

Apheros AG, founded in August 2023, was developed as an ETH Zurich spin-off to tackle cooling challenges in a wide range of applications including high-performance computing and mobile devices. Apheros is led by a team with a proven track record in innovation, business development and tech transfer. Apheros' co-founder and CEO Julia Carpenter was recently named one of Switzerland's Top 10 "Founders to Watch" for her invention of Apheros novel metal foam manufacturing process. Co-founder and CTO Gaëlle Andreatta, has over 16 years of experience in R&D, Tech Transfer, and start-up development.

Julia Carpenter, co-founder and CEO of Apheros commented: "Our technology has the potential to set new industry standards and significantly reduce the environmental impact

of cooling solutions worldwide. This funding round will allow us to advance our mission of helping our customers achieve superior thermal performance, increase energy efficiency, and contribute to a greener future. Immediately, we will expand production, increase research and development efforts, and bring state-of-the-art solutions to a broader market."

Apheros currently targets the thermal management market with a focus on liquid cooling, a segment expanding at a fast pace due to the needs created by the growing demand for High Performance Computing, Artificial Intelligence and Data Centers. More efficient cooling systems are needed to overcome current energy shortages and to reach ambitious climate protection goals. There is a pressing need to introduce higher performing cooling solutions to the market.

Gaëlle Andreatta, co-founder and CTO of Apheros added: "There is a dire need for more efficient cooling solutions. AI development is driving exponential growth in data center energy consumption and inefficient cooling is the main culprit. Our unique metal foams have superior heat exchange and fluid transport properties, especially for liquid and two-phase cooling. With our customers, we are redefining thermal management. "

Apheros' vision is to catalyze the transition to a more sustainable future through materials innovation. Apheros will redefine sustainable, high-performance liquid cooling and establish its products as the gold standard for sustainable, high-performance liquid cooling.

Lukas Weder, founding partner at Founderful commented: "We are excited to support Apheros' mission to revolutionize cooling technology. Apheros' groundbreaking approach has the potential to significantly reduce energy consumption and set new industry standards. We are confident in the team's vision and capabilities and look forward to seeing the positive impact they will make on both the industry and the environment "

About Apheros

Headquartered in Zurich, Switzerland, Apheros AG was founded in 2023 to produce innovative metal foams for cooling applications. Its patented, scalable manufacturing processes create metal foams with unprecedented properties due to their extremely high surface area and low density. To learn more, please visit www.apheros.ch

About Founderful

Founderful is Switzerland's leading pre-seed fund, backing founder teams building tech companies with the potential to become global market leaders. Founderful has a track record of supporting exceptional founders in creating breakthrough companies and has the passionate conviction that the Swiss startup ecosystem is just starting to write its best success stories.



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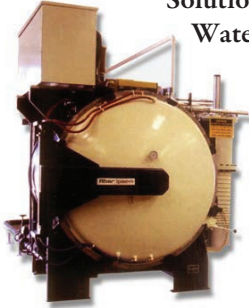
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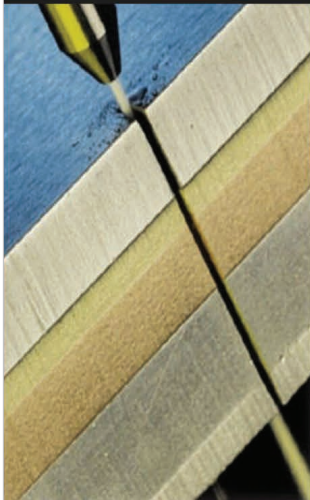
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