



COMPLETE FILTRATION RESOURCES

UNFILTERED



A NOTE FROM OUR PRESIDENT

It is with great enthusiasm and pride that we welcome you to our annual company newsletter, a testament to the remarkable journey of Complete Filtration. This year has been exceptional, filled with growth, innovation, and a profound commitment to our core purpose and values.

Our Purpose: Elevating employee, customer, and community experiences through sustainable technology and innovative processes, in a fun and engaging atmosphere.

Our Values: Tenacity, Agility, Integrity, Stakeholder-Centric, and Fun.

Our success story is intricately woven with the dedication of our incredible employees, the unwavering support of our valued customers, and the collaborative spirit of our trusted suppliers. Your contributions have propelled us forward, transforming challenges into opportunities, and driving us to new heights.

It is with great pleasure that we announce the well-deserved promotion of Josh Abel to the role of Director of Engineering. Over the course of nine years, Josh has been a shining example of dedication, demonstrating a profound commitment to our employees, customers, and suppliers. With his leadership, we are confident that our industry partners will continue to receive best-in-class technology and support, a standard that Complete Filtration is proud to uphold.

Our presence in North America remains

(cont. on page 2)

A HOLE IN ONE *For Charity and Community*



By Klay Swatloski,
Vice President of
Operations

In a world brimming with hope and kindness, this year brought us an extraordinary opportunity, one that our entire team eagerly embraced. It all began with a conversation between our company's CEO and myself, a vision to launch an industry-wide charity event that would make a lasting impression. With unwavering support from our leadership, we embarked on a journey to make a significant impact for our chosen charitable organizations.

THE RESULT?



COMPLETE FILTRATION RESOURCES PRESENTS TEE UP FOR A CAUSE

This event was born, and from the moment we started seeking sponsorships, our optimism knew no bounds. Little did we know that our industry's generosity would exceed all expectations. The outpouring of support was so immense that the event nearly sold out within a few short weeks. This overwhelming response had left us exhilarated about the potential impact we could make in the lives of those in need. We are profoundly humbled by the kindness and generosity of our industry, and we have infinite gratitude for our sponsors who have wholeheartedly supported our cause. The responsibility we felt was to ensure that "Tee Up for a Cause" leaves our supporters eager to return year after year. The event was completely sold out, and the enthusiasm



of the attendees in honoring important causes was truly heartwarming. Being a part of the dairy processing industry is a true honor, as we have the privilege of working alongside so many kind-hearted and generous individuals. "Tee Up for a Cause" has become a testament to the compassion and community spirit that defines our industry.

MAKING AN IMPACT

Fast forward to the incredible success of our inaugural golf outing at SentryWorld Golf Course, and we are left awe-inspired. "Tee Up for a Cause" shattered all expectations, **raising over \$66,000** for charity.

2023 HONORARY CHARITIES



GIVING BACK TO OUR COMMUNITY

But our team's dedication didn't stop after our successful "Tee Up for a Cause" event in July. By supporting one of our

OPENING REMARKS CONTINUED

cont. from page 1

robust with membrane supply and filtration equipment design markets remaining strong. South America continues to be a thriving market for us, we look forward to this region continuing its growth in the protein markets. We are experiencing accelerated growth in the wastewater treatment sector, particularly in the dairy industry, which is making a significant impact on the sustainability programs of our partner customers. This team has now grown in both numbers and strength, we are

extremely proud of what they have already accomplished and are excited for the future! A major milestone in our journey is the expansion of our European operations. Our existing strong presence through our team based in the Netherlands can not be understated and they continue to see new opportunities to bring our unique approach to project execution to the region. We are thrilled to welcome Complete Filtration Resources ApS in Denmark, a strategic acquisition that adds six highly experienced employees with

more exceptional customer experience. At Complete Filtration, our mission is not just about providing products and services but elevating the experiences of our employees, customers, and communities. Our core values guide us every day, ensuring that we remain tenacious in our pursuit of excellence, agile in adapting to changing landscapes, unwavering in our commitment to integrity, and always focused on our stakeholders and the pursuit of fun and engagement in everything we do.



an average of over 25 years in the membrane filtration industry. This expansion allows us to strengthen our presence in the Nordic and Baltic states, as well as to merge the world-class approaches to design, technology, and customer experience from all three groups (US, Netherlands, and Denmark). The result will be an even

We believe that our commitment to our purpose and values sets us apart in the industry. We look forward to another year of partnering with all of you to deliver unparalleled experiences and exceptional solutions. As we move forward, let's continue to innovate, grow, and achieve new heights together.

Thank you for being an integral part of the Complete Filtration family.

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honorary charities, Sleep in Heavenly Peace, we continued the mission. Partnering with the local chapter, we joyfully delivered beds to 7 deserving children. Thanks to your contributions, we're making sure no child sleeps on the floor in our town! Our donation will enable the construction and delivery of over 100 beds and we partnered with the organization again to host a family build day at our office where our team and their families gathered to prepare beds for the organization's next upcoming year.

support played a pivotal role in our success. Our supporting sponsors, including Custom Fabricating & Repair, Dahmes Stainless, Inc., Pentair Food & Beverage Processing, and Phoenix Stainless, also made a significant contribution. All of which have signed up to support next year at these levels or more. And we have new high contributing sponsors already eager to join.

THANK YOU TO OUR SPONSORS

We extend our gratitude to our ultimate sponsors, Advanced Process Technologies Inc. and Complete Control Solutions, whose unwavering



The IMPACT

Total Raised: \$66,263.00

Recipients: Access Ability Wisconsin (\$39,738) & Sleep in Heavenly Peace - Spencer-WI (\$25,525)

2023 Outing Stats

1st Place: SPX FLOW, Inc. (Mike Wagner, Michael Hayes, Tom Kaufman & Mark Regnier)

2nd Place: Excel Engineering, Inc. (Jeff Kamin, Shawn Owens, Donn Theuerkauf & Tim Tolley)

3rd Place: Snyder Filtration (Lucas Sinott, Shane Scepp, Dan Goodman & Walker Wuethrich)

We look forward to seeing everyone again in 2024 as we continue our journey of making a difference together.

MARK YOUR CALENDARS FOR JULY 16TH, 2024, AND STAY TUNED TO OUR WEBSITE FOR MORE INFORMATION.

WWW.TEEUP4CAUSE.COM



MAKING MOVES

By Josh Abel, Director of Process Engineering

In January of 2023, Complete Filtration underwent a series of strategic adjustments within its Engineering Team. The team is comprised of Project

Managers, Automation, Technical, and Mechanical Designers, in conjunction with our Netherlands Office. The objective of these adjustments was to appoint departmental leads to enhance project and service efficiency while facilitating the company's growth. Throughout the preceding year, our entire engineering team has diligently worked towards fostering collaboration across all facets of the organization and ensuring seamless project execution, all the while steadfastly pursuing the shared goal of maximizing customer satisfaction.

Within the Project Management team, we are pleased to announce the promotions of Ryan Bushman and John Semenchuk to the positions of Project Manager Leads. This dynamic duo brings a wealth of process knowledge and project management experience to their roles. Over the past year, they have dedicated their efforts to collaborating with their project management team in areas such as process engineering, component sizing, project execution, sales support, and knowledge transfer. In their capacity as team leaders, they concurrently manage projects.

Additionally, we are proud to announce the promotion of Chris Abel to the position of Automation Manager. Chris has demonstrated exceptional competence in managing our most significant automation projects, and he now leads his team in overseeing all aspects of electrical engineering, automation project execution, electrical design, programming, and sales support. He is also responsible for the management of automation projects while providing leadership to his team.

Mark Gibson has assumed the role of Technical Manager, a position he has successfully held for the past three years. His profound

expertise in membrane filtration technology and system operations has been instrumental in the accomplishments of Complete Filtration. The technical team, under Mark's guidance, is responsible for system designs, programming documents, program reviews, service visits/audits, as well as system commissioning.

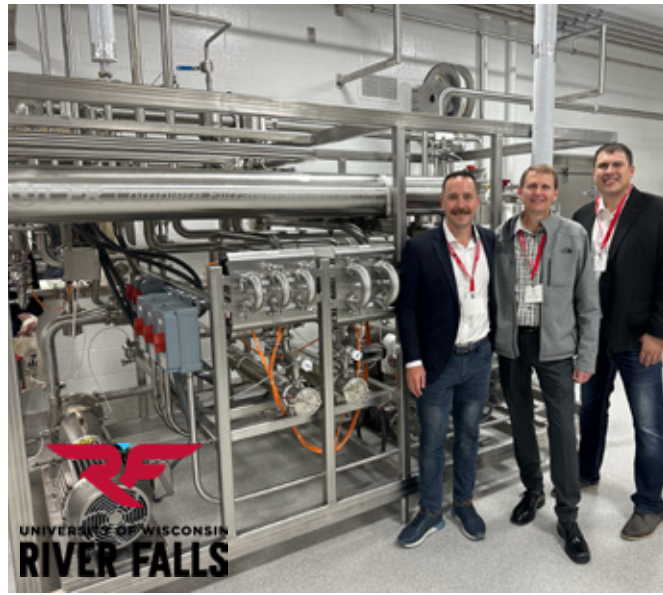
Heading the Mechanical Design team is Adam Aschenbrenner, who has led this group for two years. Adam possesses extensive knowledge of design software and a deep understanding of the fabrication process, which ensures the efficient progress of projects through the production facility. Together with his team, Adam has maintained a consistent design standard through collaborative efforts and continuous improvement initiatives. The Mechanical Design team plays a pivotal role in creating drawings for individual components, complete systems, and entire plants.

From our Netherlands office, we are fortunate to have Helene Versteeg as our Project Management Officer. Helene, who has been with Complete for six years, assumes responsibility for our Netherlands-based employees and serves as the primary point of contact between our Netherlands and US offices. Her invaluable contributions include actively engaging in sales and project initiatives in the Netherlands with support from our US office.

The strategic adaptations we have implemented over the past year have demonstrated their significance for our engineering team. The seamless transition can be largely attributed to the unwavering dedication and empowerment exhibited by our outstanding leaders and employees within the engineering department. I eagerly anticipate the continued growth and success of both our company and the Engineering Team in the future!

RECAP ON: 2023 MEMBRANE TECHNOLOGY FORUM

AFTER PARTY ROOFTOP DRINKS & HORS D'OEURVES



Congratulations to University of Wisconsin-River Falls on the splendid inauguration of the Wuethrich Family - Grassland Dairy Center of Excellence! We are honored to be a contributing partner in this visionary endeavor, eagerly anticipating the invaluable education it will provide to those aspiring to join our esteemed industry.



UNLOCKING INNOVATIVE SOLUTIONS

By Shane Wiercinski, Director of Wastewater Solutions

In this edition of the Complete Filtration Resources newsletter, we dive into one of the pressing issues facing the dairy industry: phosphorus levels in wastewater. Phosphorus, a vital nutrient for dairy operations, has become a major challenge when it comes to wastewater management. In this article, we explore the issues surrounding phosphorus in dairy wastewater and how Complete Filtration's cutting-edge solutions are revolutionizing the treatment process.

THE PHOSPHORUS CHALLENGE

Dairy wastewater has long been known to have significantly higher phosphorus levels compared to municipal wastewater. This excess phosphorus poses environmental challenges, especially when it is discharged into water bodies. In Wisconsin, where dairy farming is a cornerstone of the economy, the stakes are even higher due to the strict phosphorus discharge limits imposed by regulators. In many direct discharge applications, it's not uncommon to see phosphorus discharge limits of 0.075 mg/L or less. Exceeding these discharge limits can lead to detrimental consequences, most notably the formation of algae blooms in water bodies. Algae blooms are not only unsightly but can also deplete oxygen levels, harm aquatic life, and disrupt ecosystems. This highlights the urgency of finding effective solutions to manage phosphorus levels in dairy wastewater.

INNOVATIVE TREATMENT PROCESS

At Complete Filtration, we understand the importance of addressing the phosphorus challenge head-on. Our advanced phosphorus removal process uses a combination of chemical precipitation and membrane ultrafiltration. Depending on the concentration of phosphorus in the wastewater and the effluent discharge requirements, a blend of traditional treatment chemicals (alum, ferric chloride, PAC) and

rare earth chemicals (cerium, lanthanum) are used. This advanced treatment process is much more efficient than traditional separation processes where inefficient technologies such as DAFs and sand filters were previously used. Once the phosphorus is successfully precipitated, our advanced membrane ultrafiltration process separates the phosphorus from the treated effluent. These separated solids are then properly managed, ensuring minimal environmental impact.

ADAPTABILITY AND EFFICIENCY

What sets Complete Filtration's approach apart is our adaptability and efficiency. We utilize the same membranes used in our Aerobic and Anaerobic Membrane Bioreactors, allowing us to design loops that are redundant and versatile. This means that our solutions can be tailored to specific dairy operations, optimizing their wastewater treatment processes. Our advanced ultrafiltration membrane process enables us to achieve exceptionally high flux rates through the system, thanks to the low solids concentration in the treated effluent. This high efficiency not only ensures compliance with stringent discharge limits but also reduces operational costs and environmental impact.

Our phosphorus removal process is applied on the back end of the treatment process, effectively polishing the wastewater before discharge. This ensures that the treated effluent meets or even exceeds regulatory standards, contributing to a cleaner and more sustainable environment.

OUR COMMITMENT TO SUSTAINABILITY

At Complete Filtration, we are committed to tackling the phosphorus challenge head-on. As phosphorus discharge limits continue to be lowered, it's essential for dairy operations to adopt innovative wastewater solutions. Together, we can protect our environment, promote sustainable dairy practices, and ensure a brighter future for all.

MOST COLLEAGUES TALK ABOUT THE WEATHER



OUR EMPLOYEES TAKE TRIPS TOGETHER



"FIND A GROUP OF PEOPLE WHO CHALLENGE AND INSPIRE YOU, SPEND A LOT OF TIME WITH THEM AND IT WILL CHANGE YOUR LIFE FOREVER."

NETHERLANDS UPDATE



GREETINGS FROM ACROSS THE POND!
By Helene Versteeg, Project Management Officer

As we reflect upon the past year, it's been a truly remarkable journey for us. We've been diligently engaged in fulfilling a substantial engineering order for one of our esteemed

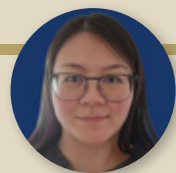
clients. It is with great satisfaction that we can now announce the successful completion of this order, leading to the opportunity to fabricate and install cutting-edge filtration equipment. In collaboration with our valued customer, we are poised to embark on the creation of a state-of-the-art WPI line, incorporating the latest advancements in CMF and MF technology.

Moreover, we are witnessing a noteworthy development in our industry, as major players are increasingly recognizing our presence in the European market. Our reputation in the field of filtration continues to grow, paralleled by the expansion of our dedicated team (more details on that to follow)!

In addition, the Dairy Industry is in the midst of strategic deliberations, aimed at combatting the prevailing misconceptions surrounding dairy's environmental impact. Some propose a shift away from traditional farming practices, advocating for a more sustainable approach by bypassing the animal-centric production process and transitioning directly from crops to dairy-like products. This paradigm shift has ignited passionate farmer protests and heated debates, leaving many businesses uncertain about their future prospects. With the upcoming elections on November 22nd, we anticipate that some clarity will emerge on these critical issues.

NETHERLANDS NEW EMPLOYEE

CHIN YIN LEO
Project Assistant



TEAM DENMARK



REGARDS FROM TEAM DENMARK
By Morten Andersen, Denmark Sales Director

The recently established Complete Filtration team in Denmark is thrilled to be part of the Complete Filtration Resources, Inc. family. Although our journey has just begun, we're already enveloped in a warm and supportive welcome. Team Denmark consists of six dedicated individuals, and our collective synergy has

been cultivated over the past ten to fifteen years. We initially collaborated at GE A Filtration and later at SiccaDania Filtration. Impressively, some of us share a professional history spanning more than a quarter of a century. Despite our modest numbers, our team is versatile and adept at handling every aspect, from sales and engineering to intricate drawings, application software, and commissioning. As we settle into our new office facilities, nestled in the heart of the "Danish Filtration Valley" just south of Aarhus, we look forward to furthering our contributions to the Complete Filtration family with enthusiasm and dedication. Until very recently, we believed that the hub of knowledge in dairy membrane filtration was centered in Denmark, but we have now happily revised this belief. One of our key strengths is our extensive expertise in processing various fresh fermented cheese

types like White Cheese (Feta), Cream Cheese, Greek Yogurt, and other quark varieties using UF technology— a relatively unique asset in Denmark. We are excited about expanding our collaborative efforts, sharing our knowledge, and engaging in in-depth discussions about membrane filtration technology across the Atlantic. With a united team, we are confident we can elevate crossflow membrane filtration to new heights. Our historical market coverage has primarily been in Denmark, the Nordic region, the Baltics, and Central-Eastern Europe, where we have successfully delivered hundreds of filtration plants over the years. Leveraging a high degree of system standardization, we've effectively competed, even against local, low-cost system builders, all while maintaining an impeccable reputation for our plant deliveries.

DENMARK NEW EMPLOYEES

KELD ANDREASEN
Senior Process Engineer



LAILA JAQUÉ
Project Director



JONAS LINDSTORFF
Mechanical Designer



ULRIK JOHANSEN
Senior Applications Engineer



HENRIK ANDERSEN
Automation Manager



OPTIMIZED MEMBRANE CLEANING: REDUCED CHEMICAL AND WATER USAGE



WITH OUR
TECHNICAL MANAGER:
MARK GIBSON

In this edition of our annual newsletter, we discuss an area of constant discussion and one of the most sought-after goals of plant audits; how to improve the filtration equipment cleaning (CIP). CIP is a daily occurrence for almost every dairy system and uses a considerable amount of water, heat, time, and chemicals. Yet good cleaning is essential to achieve the desired throughout, concentrations, and equipment runtime. Outlined below are some specific ways to help improve CIP.

requirements are being met. We offer stand-alone sanitize and soak (preservation) modes to prevent operator intervention and allow for those washes to be done on a as needed basis. We can also supply multiple long wash modes for the instances where certain washes are only needed once a week.

Examples we have seen are weekly acid washes on protein systems and weekly enzyme washes on permeate/sugar systems.

CUSTOMIZED SETPOINTS PER RINSE/WASH

One of the primary reasons we use so many setpoints is to allow the most flexibility. Changing the volume of water used on each individual rinse cycle compared to 1 setpoint used for every rinse will help save water, particularly in rinse 1 (removing trace solids). Rinse specific recirculation speeds and feed flowrates compared to wash cycles can also help save water by providing better control of where the rinse water is being sent.

STANDARDIZED WATER FLUX TRENDING

After a cleaning cycle, a water flux test is currently the standard for determining if the CIP was effective. Our approach of normalizing the temperature and pressure of the system, allows for an accurate comparison over time of flux results. In the most advanced systems, minimum and maximum limits can be applied off of an average acceptable water flux to flag a cleaning concern. On older systems, we offer a custom made excel sheet with annual and 15-day trending capabilities for water flux trending.

CIP REGIMENT OPTIMIZATION

At Complete Filtration Resources, we pride ourselves on working with all cleaning chemical suppliers to ensure customers CIP

Q&A SPOTLIGHT

VENDOR

MANN+HUMMEL

Q: How long has MANN+HUMMEL Water & Membrane Solutions been around?

A: MANN+HUMMEL Water & Membrane Solutions division was founded in 1966. With a legacy spanning over five decades, we have continuously evolved to meet the ever-growing demands of industries worldwide / With a dedicated team of 415 employees and operations spanning four locations, we are strategically positioned to make a difference on a global scale.

Q: What sets MANN+HUMMEL Water & Membrane Solutions apart from its competitors?

A: Innovation and an extensive product portfolio across all technologies are crucial elements at MANN+HUMMEL Water & Membrane Solutions. We offer a diverse range of membrane products, including TRISEP®, TURBOCLEAN®, BIO-CEL®, and more. These solutions cater to a wide range of water and process needs across industries.

Q: Could you share some insights into MANN+HUMMEL Water & Membrane Solutions' product offerings and their significance in the industry?

A: Our product portfolio encompasses a wide range of membrane solutions and technologies, including microfiltration, ultrafiltration, nanofiltration, and reverse osmosis in flat sheet, spiral-wound, and hollow-fiber configurations, as well as MBR technology for treatment of water and wastewater. These solutions play a pivotal role in addressing critical water and process needs across industries and are recognized for their reliability and effectiveness.

Q: What drives MANN+HUMMEL Water & Membrane Solutions' commitment to sustainability and its vision for the future?

A: Our mission extends beyond profit. We envision a sustainable future where water challenges are met with our innovative solutions. We are proud to be a part of this mission, working alongside our customers to address crucial environmental challenges.

INTERESTED? David Dickerson, Senior Account Manager, Main Office +1.919.349.1005 | d.dickerson@microdyn-nadir.com

WWW.MANN-HUMMEL.COM

NEW HOME OFFICE EMPLOYEES



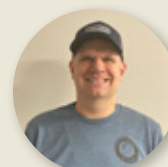
ANDREW WEISS
Mechanical Designer



MICHAEL GERTZ
Construction Project Manager

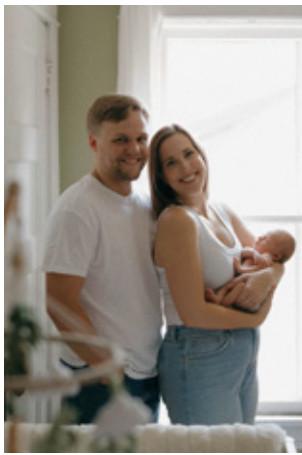


SHAWN CHADWICK
Project Engineer - Wastewater



JEFF KLEIN
Mechanical Designer

CELEBRATE!



AARON STEEG
Welcoming baby Emmett Steeg
Aaron (Senior Process Engineer)
Kelly Steeg.
Join us in congratulating them on
their new addition!

LEADERSHIP ANNOUNCEMENT



JOHN PARK - CEO



TRAVIS WHITE - PRESIDENT

Complete Filtration Resources, Inc Announces Leadership
Transition, Effective August 1st, 2023.

MILESTONE ANNIVERSARIES

15 YEARS
CHAD KURTZWEIL

5 YEARS
DEREK ANDERSON
MARK DEFOUW
AARON ANDERSON
COREY ECKES
LEA COSTA
LUKE SCHWANTES
SHANE WIERCINSKI
RYAN ROLSMA
ADAM ASCHENBRENNER

Complete Filtration Resources presents...

TEE UP FOR A CAUSE



Join us July 16th 2024 at
Sentry World, Stevens Point, WI

GROUP ACTIVITIES



SUMMER PARTY - LAKE DUBAY



FIRE IN THE HOLE - 3RD ANNUAL
CORNHOLE TOURNAMENT



SLEEP IN HEAVENLY PEACE -
BED BUILD DAY



SLEEP IN HEAVENLY PEACE -
BED DELIVERY DAY

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DENMARK OFFICE
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8362 HORNING