

TOGETHER WE ARE MAKING THE WORLD SAFER, HEALTHIER AND MORE PRODUCTIVE

At the pulse of ice cream processing

Filtration Group ensures a colourful variety of ice

Filtration Group International

Central lubrication - Why and how to lubricate

This material has it all!

Filtration Group ensures purity in the production of nonwovens



Editorial

Dear readers,

I am pleased to be able to present our first newsletter of the year 2020 to you. Let me start with a brief introduction to myself and the uniqueness of our corporate culture.

In March 2019 I took over the CFO function for the industrial business of the Filtration Group. Since then, I've had the honor of working with a variety of colleagues around the world. Whether in our office in Öhringen, our location in Heerenveen (NL), with the production locations in Shanghai (CN), Iberaki (JP) or our headquarters in Chicago (USA). There is a common theme that I discovered everywhere. The entrepreneurial spirit and passion for our products and services to make the world safer, healthier and more productive. This was definitely one of the main reasons why I joined the Filtration Group.

In this newsletter we will inform about the largest dedusting device that was ever built in our history and that was successfully delivered in August 2019. We are also pleased to present the various areas of application in which we are operating as Filtration Group. In this month's issue there is a report about one of the largest and most modern ice cream production plants using some of our filtration systems. As for the warmer region of South Africa this season, we have an interesting report on the need for central lubrication and what are the best ways to build such a system.

At this point I would like to thank you all, our customers and partners for your trust, your loyalty and the pleasant cooperation. My special thanks also goes to all of our employees for the passion and commitment this year to always put our customers first! We wish you all good luck for the new year.

Enjoy reading our newsletter now.

I am already looking forward to many more exciting projects and topics in 2020.

kind regards



Gunnar Halden
CFO Filtration Group Industrial



Gunnar Halden
CFO - Filtration Group Industrial

@ Contact

Gunnar Halden

CFO - Filtration Group Industrial
gunnar.halden@filtrationgroup.com



Content

- On the pulse of ice cream processing -
Filtration Group creates colourful ice cream variations
- New Service Program
for maximum dust removal efficiency
- This material has it all! Filtration Group
ensures purity in the production of nonwovens
- Electricity for 330,000 households -
Hydroelectric power plants on the Neckar
- Central lubrication -
Why and how to lubricate
- Marketing News

4

5

6

8

9

10



Raffle

Read our new newsletter carefully, then the following questions will be very easy to answer:

- What material is nonwoven fabric made of?
- In which project has Filtration Group demonstrated its expertise in a lubrication system?
- Up to how many degrees Celcius is the ice mass heated during pasteurization?
- What services does Filtration Group add to its range of services?

Please send the answers to our questions by latest,
29th of February 2020 to:

Carmen Steiner
Marketing & Communication
carmen.steiner@filtrationgroup.com

Among all submitters who answer the questions correctly we're giving away a Filtration Group Powerbank!

Congratulations!

Mr. **Christian Klaghofer** of **Imex Filtertechnik Kft** on the winning of the FG Powerbank within the scope of the raffle in issue 3/2019 of the FG Newsletter!



On the pulse of ice cream manufacturing

FILTRATION GROUP PROVIDES A COLORFUL VARIETY OF ICE CREAM

More than 5000 years ago, people in ancient China blended snow, cinnamon, fruit and honey into ice cream. In ancient Greece, snow for god's food came from Olympus. Hippocrates, the most famous doctor of antiquity, thought the ice had a healing effect and recommended it for stomach aches.



HOW IS ICE CREAM ACTUALLY MANUFACTURED?

The industrial production takes place in closed systems to ensure a particularly high level of hygiene protection. The raw materials are balanced and pre-mixed according to a recipe prescribed for the individual types and flavors. This is how the so-called premix is created. The homogenizer breaks down the premix under high pressure into small, fine components as if through a sieve. This way the milk fat can be distributed evenly and the ice cream gets a smooth, creamy melt. The ice mass is then pasteurized. It is briefly heated to 75 °C and then cooled to 4 °C to prevent unwanted microorganisms from surviving in the ice cream mix or from being able to form again. The ice must then ripen in chilled containers to develop the full aroma. In the freezer, the ice finally gets its final character before it is filled as popsicles, cones, household packs, mugs or ice cream cakes.

CUSTOMER BENEFITS

- FG automatic metal edge filters help in the manufacturing process to get the best out of the raw materials and thereby reduce product loss
- Increase in production efficiency
- Reduction of downtimes: FG automatic metal edge filters keep the production cycle clean and removes particles that could block the dosing nozzles
- Reduction of cleaning efforts

WHAT DOES FILTRATION GROUP CONTRIBUTE?

Our customer is one of the largest and most modern factories producing shell ice cream, popsicles and waffle cones. A consistent, homogeneous amount of walnut pieces is required in the production and filling process of walnut ice cream. So far, a certain amount of waste has been created in the start-up process until the concentration has reached the desired level. The waste can no longer be used. In order to be able to use the ice cream and the pieces of walnut again, both products must be separated from each other so that they can be reused. Filtration Group selected an automatic metal edge filter of the type AF 4243 with a metal edge filter element made from stainless steel and radial scraper cleaning for this application. The filter housing is made of stainless steel and is equipped with a heating jacket. The used filter type makes it possible to separate the solid walnut components from the liquid ice cream mass. Mounting the filter on a mobile frame enables flexible, mobile use. Since the customer produces in batches, the filter can also be used, e.g. for chocolate, which is introduced into the ice cream cones in order to avoid softening during consumption.



@ Contact

Christian Scholz

Regional Sales Manager Germany (North)
christian.scholz@filtrationgroup.com

New service program for maximum dedusting efficiency

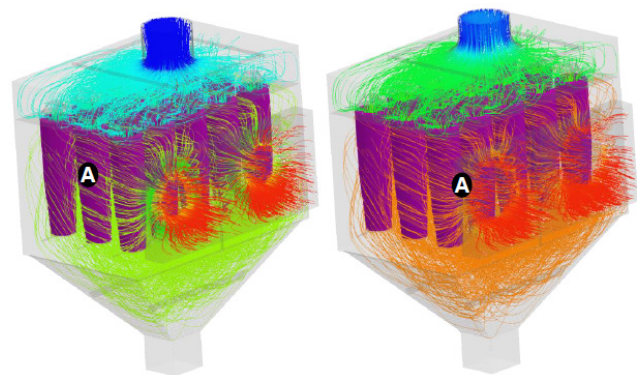
FILTRATION GROUP OFFERS CLEAN AIR THROUGH OPTIMALLY DESIGNED COMPLETE FILTER SYSTEMS

Every industrial application is associated with a specific dust level. Since innumerable system parameters have to be taken into account, the technically and economically optimal filter design is a complex task. Based on decades of experience as an innovative development partner of leading manufacturers, the engineering experts from Filtration Group offer you the decisive plus in competence and more performance for your filtration process when designing, selecting and integrating the appropriate filter system for air filtration and dedusting.

INCREASE THE FUNCTIONALITY AND PERFORMANCE OF YOUR DEDUSTING SYSTEM

If you develop a new dedusting device with us, you will receive an optimally designed product by simulating the flow conditions. The calculated values can be checked in our technical center on a real dedusting system.

Pressure losses are extremely important for energy efficiency and thus for the operating costs of a dedusting system. With the help of flow simulation at Filtration Group, the functionality and performance of your filter system can be increased. In contrast to the measurement, the flow simulation represents the overall situation and is not limited to a few measuring points. The simulation therefore provides a deeper insight into the physical processes than an experiment. In addition, time and costs can be significantly reduced in advance.



Flow simulation using the example of a SFR-14 prototype

OUR SERVICE FOR YOU

- Checking the calculated values of the simulation on the real dedusting system
- Examination of the system components from the supply air to the extract air duct
- Volume flow measurement up to 30,000 m³/h
- Measurement of pressure drops
- Energetic consideration of the dedusting system
- Identification of improvement and savings potential (weak point analysis)
- Plant optimization
- Documentation of all services and analyzes performed
- Recommendation for the design of your system



Setup of an in-house volume flow measurement

@ Contact

Reinhard Wierling

Head of Lab and Testing
reinhard.wierling@filtrationgroup.com

This material has it all!

FILTRATION GROUP ENSURES PURITY IN THE MANUFACTURE OF NONWOVENS

What if you had less to worry about? Like the weather that can affect your home and family time. Or that the hazardous substances you work with could pose a danger to you. Nonwovens have provided a protective barrier for many years, making people less worried. These robust and durable nonwovens made of polyethylene offer protection and security in a wide variety of areas and are used, for example, for building sleeves, protective equipment, medical packaging or even as advertising material.

FILTRATION GROUP DEDUSTING SYSTEM - FOR A BETTER WORLD

Thanks to their high material density, nonwovens made of polyethylene have taken protection and security to a new level in numerous industries. The use of these materials as facade membranes has revolutionized house construction, enabled new standards for personal protective equipment, and implemented advances in medical technology.



Polyethylene yarn for the production of nonwoven fabrics

HOW ARE NONWOVENS MADE?

Nonwovens made from polyethylene are produced using a special evaporative spunbond process. In this process, PE-HD is mixed with a solvent and heated to high temperatures in an autoclave under high pressure. The solution mixture is then passed through nozzles under extremely precise control and expanded in an explosive reaction. The solvent evaporates and a three-dimensional network of thin, fibrillated filaments in strand form is deposited by a special depositing device on a depositing belt, which also serves as a conveyor belt. An isotropic fiber arrangement is created, which has a positive effect on the tear resistance.

A minimum length of the fibrillated filaments of approx. 120 mm also contributes to increased strength values. The fiber layers are consolidated with different types of calenders by heat and pressure. This is followed by further treatments such as antistatic treatment or pre-treatment with corona radiation.



Medical packaging material made of nonwoven polyethylene

WHAT DOES FILTRATION GROUP CONTRIBUTE?

Our customer is a global innovation leader for technology-based materials, ingredients and solutions that change industry and everyday life. In the production of nonwovens made of polyethylene, dusts and fibers are produced which have to be separated from the existing gas atmosphere. The dusts that occur are very light and fine and have a fiber content, which results in high filtration requirements. Since the gas in question is extremely explosive in connection with oxygen, it must be ensured that no air is introduced into the system. Filtration Group choose a dedusting system of the type SFR-09 024 DN-240 S6.S1..KA. for this application. The system is a generously designed, round filter device that achieves a low filter surface load, so that the very light dust can sediment after cleaning and fall off the filter elements. 24 conical filter elements with a reduced filter surface and thus larger pleat spacing, in combination with the FG rotating wing are used and contribute to a perfect cleaning result.

This material has it all!

CUSTOMER BENEFITS

- Reliable separation of particles and fibers through the filter material equipped with PTFE membrane, which significantly reduces the contamination of downstream components. This reduces the number of plant downtimes due to the need for cleaning, which means that the production time and quantity can be extended
- Low-maintenance filter system ensures trouble-free continuous operation
- By using the FG Quick-Lock system, Filtration Group enables customers to change elements quickly and without tools in order to significantly shorten the downtime for maintenance. Insertable gratings enable the filter elements to be exchanged more conveniently

SPECIAL FEATURES OF THIS PROJECT

The painted filter housing with a diameter of 2.4 meters and a height of approx. 5 meters and a total weight of 6.2 tons is the largest dedusting device ever delivered by Filtration Group in its history. Due to the special application, the filter elements can only be cleaned with nitrogen.



The largest dedusting unit
in the history of Filtration Group

COMPETENCE AND SERVICE FROM A SINGLE SOURCE

After roughly two years of intensive planning and in-house testing, the largest dedusting device to date in the company's history was delivered to the customer in August 2019. Filtration Group represented an important part of competence within this project. Intensive trials in the technical center, accompanied by extensive analysis services in our own Filtration Group laboratory, were finally able to ensure the successful implementation of the project. Due to the extraordinary project scope, a very intensive cross-departmental collaboration between project management, purchasing, production, quality assurance and design department was required. Due to the oversize of the dedusting system, assembly, packaging and loading took place directly at the supplier.



FG dedusting unit during packing and loading

With this project, Filtration Group demonstrates its competence and willingness to perform - even under the most difficult conditions and over a long period of time. The first contact to the customer was made in 2015 at the Powtech fair in Nuremberg.

@ Contact

Marius Klotz

Product Manager Industrial Air
marius.klotz@filtrationgroup.com

Electricity for around 330,000 households

The Neckar stretches 367 kilometers from the Swabian Alb to the Rhine near Mannheim. As a federal waterway, it is one of the central shipping routes in Baden-Württemberg and also an important source of energy.

Biggest hydropower plants of the region



THE MEANING OF HYDROPOWER PLANTS

The hydropower plants on the Neckar use the outflow of the Neckar with the respective drop heights between the barrages to generate energy. In total, the Neckar overcomes a height difference of around 160 meters in the 200-kilometer section. In the power plants, 54 turbine sets with an installed capacity of around 93 megawatts are developing an average of approx. 530 million kilowatt hours of electricity a year. This can supply around 330,000 households with electricity. It also saves around 490,000 tons of CO2 emissions. Hydropower plants are built on rivers with sometimes low gradients but large flow rates. The electricity generated in the run-of-river power plant serves to cover part of the base load required in the power grid. The turbines and generators can run continuously, except in extreme drought or high water. Most hydropower plants are built according to the same model: a weir with several lockable barriers dams the river water. The aim is to keep the water level above the weir in the storage space as close as possible to the ideal level in order to achieve a constantly high level of energy expansion.

WHAT DOES FILTRATON GROUP CONTRIBUTE?

As the third largest German energy supply company, our customer focuses on the electricity sector. For electricity production, water from the storage space of the hydropower plants is conducted via turbines. These turbines drive the generators. Appropriate control devices in front of the impeller ensure that the optimal amount of water is directed to the blades of the impeller. A computer system in front of the water inlet protects the turbines from washed up twigs, branches and rubbish. Filtration Group supplies a wide variety of filter element packages for use in hydraulic units for lubricating, driving and controlling the turbines.



Hydroelectric power station on the Neckar

CUSTOMER BENEFITS

- Filtration Group guarantees high quality and performance competence from a single source
- Orders are placed using package numbers with customer-specific packaging for the respective power plant
- Reduction of storage costs through predictable replenishment lead times
- Cross-referencing of all competitor elements possible

@ Contact

Tobias Köhler

Sales Engineer, Filtration Group GmbH
tobias.koehler@filtrationgroup.com

Filtration Group International

CENTRAL LUBRICATION - WHY AND HOW IT SHOULD BE LUBRICATED

Due to friction-related increased energy costs or increased wear, many companies incur high costs every year, which are often not adequately recorded. These costs can usually be significantly reduced with the right lubrication. In addition to choosing the right lubricant, the right amount also plays a not negligible role. This can be optimized, for example, by using a central lubrication system.

AUTOMATIC CENTRAL LUBRICATION SYSTEMS FOR A CENTRAL SUPPLY

Automatic central lubrication systems ensure a central supply to the lubrication point. They reduce energy costs and maintenance costs and increase the service life of the machine. The Bearing Man Group Ltd. (BMG), based in Johannesburg, has been a long-term premium partner of the Filtration Group and offers a variety of different solutions specially tailored to the needs of customers in order to contribute to extended service intervals, maximum uptime and reduced investment costs with high-quality filtration systems.



Example of an automatic central lubrication system

@ Contact

Steven Louw

National Sales Manager Industrial Filtration
steven.louw@filtrationgroup.com



TOGETHER TO SUCCESS

Together with Bearing Man Group Ltd. Filtration Group was able to successfully implement a new project for a global productivity provider in the mining and cement industry. The aim was to demonstrate the skills for a lubrication system in a new bauxite grinder that is part of the Utkal aluminum project in Odisha, India. This lubrication system is similar to an earlier project that BMG had successfully installed in 2010.

The specific lubrication unit is designed for a hydrostatic lubrication system for the bearings and journals of the mill, with each mill having two lubrication points. The developed system from Bearing Man Group has an offline conditioning circuit with filtration. Installed group filters and maintenance indicators ensure that the required cleanliness classes are kept. The high-quality filtration systems from Filtration Group ensure an efficient service life of the filter elements. Maintenance indicators support regular servicing and maintenance of the components. The central lubrication system was equipped with high-pressure and low-pressure filters and air breathers from Filtration Group.

Filtration Group and Bearing Man Group - two specialists for excellent solutions that lead to the desired goal through excellent communication and collaboration.



Marketing News

FOUNDED KNOWLEDGE BEHIND HISTORIC WALLS

From 29. - 30.10.2019 a team of experts from Öhringen used the opportunity to pass on in-depth knowledge in close cooperation with their colleagues from the Crewe location to the 15 training participants from a wide range of areas and markets in England. The historic walls of Crewe Hall Cheshire in a breathtaking landscape with a multitude of mansions, halls and gardens, offered the guests and the team of speakers from Filtration Group a wonderful setting for a practical and intensive insight into the broad world of filtration.

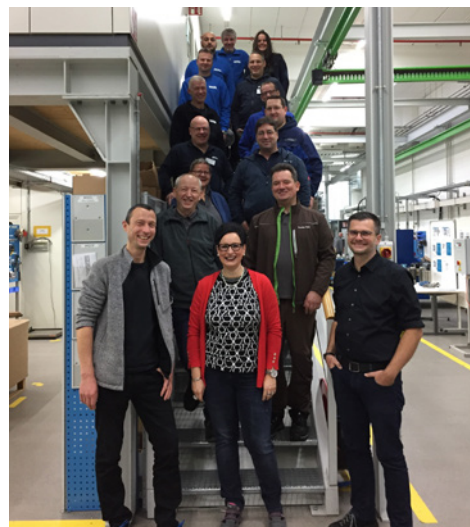
Extensive exchange, typical applications of the British market and specialist knowledge of the Filtration Group's product portfolio formed a good foundation stone for successful cooperation in the future. Well-known customers such as Fuchs Oil Europe, Specific Oil Solutions (SOS), HVDS, Eriks and others could be welcomed by Filtration Group at this two-day training event. A dinner together rounded off the training event and established a close relationship with our customers. With high-quality training content, Filtration Group also creates a high level of consulting quality on an international level and deepens trust in its products. Even in extraordinary places!



Participants of the training event in Crewe Hall Cheshire

FILTRATION GROUP PROVIDES TECHNICAL EXPERTISE FROM SERVICE PERSONNEL

From 19. - 20.11.2019 eleven participants were able to FG Service Training complete their expertise in service and application. An FG team of experts from the field of application and service gave the guests present an insight into the knowledge required for the efficient and effective operation and maintenance of FG filtration systems. The participants were given the opportunity to gain sufficient knowledge of the technologies in practice.



Participants of the 1st FG Service Training

FILTRATION GROUP IS HOST!

From 29. - 30.01.20 Filtration Group is hosting the PA session „Lubricants and Tribology“ of the analysis Association for Drive Technology eV of the VDMA. During these two days, employees of the FVA member companies and representatives from science will be our guests. Ideas for analysis projects, professional dialogue at the highest level and goal and benefit-oriented work are on the agenda.

@ Contact

Carmen Steiner

Marketing & Communication
carmen.steiner@filtrationgroup.com

Marketing News

EXHIBITION PREVIEW 2020

Visit us at the Maintenance in Dortmund

From 12. - 13.02.2020 the Maintenance will take place in Dortmund again this year. We will present our products in **Hall 4 at stand C21**.



On Thursday, 13.02.2020 our colleague **Denis Ruf** will give a lecture on the topic: **Maintenance-free filter systems**. Have a look at the Solution Center in Hall 4 and find out how you can save a lot of money by using the right filter systems for the right application.

You don't have a ticket yet?

Get a free ticket for the show here!

[Click here for your ticket!](#)

ALL EXHIBITION DATES AT A GLANCE

- **Maintenance Dortmund:** 12.02. – 13.02.20
Leading trade fair for industrial maintenance
- **Grindtec Augsburg:** 18.03. – 21.03.20
The world's leading trade fair for grinding technology
- **Paint Expo Karlsruhe:** 21.04. - 24.04.20
World's leading trade fair for industrial painting technology
- **SMM Hamburg:** 08.09. – 11.09.20
Leading International Trade Fair for the Maritime Industry
- **AMB Stuttgart:** 15.09. – 19.09.20
International Exhibition for Metal Working
- **WindEnergy Hamburg:** 22.09. – 25.09.20
International trade fair for the Wind Industry
- **Powtech Nuremberg:** 29.09. – 01.10.20
Fair for powder and bulk solids technology
- **PTC, Shanghai:** 03.11. – 06.11.20
International trade fair for drive and fluid technology

DATE PREVIEW 2020

In 2020, we will again offer our premium partners, dealers and customers from the original equipment sector an attractive training program:

Product training for Premium Partners & Distributors

10. - 12.03.2020 (German event)

06. - 08.10.2020 (English event)

Service training for Premium Partners

10. – 12.11.2020

Product trainings for customers from the original equipment sector can be arranged individually on request!

1st FG Expert Day „Hydraulics“

28. – 29.04.2020

2nd FG Expert Day „Powder & Bulk Solids“

07. – 08.07.2020

3rd FG Expert Day „Cooling Lubricants“

20.- 21.10.2020

Are you interested in our training events? Then please contact us. We will gladly send you our new training flyer, which will be available from February 2020.

Do you like our newsletter?

Do you have any wishes, suggestions or criticism? Are you missing any topics or did you particularly like an article in one of the last issues? Do you have colleagues who should definitely know about our newsletter?

Please get in touch with us.

Hendrik Borgmeier

Head of Marketing & Communication

Tel.: +49 7941 6466 366

Mail: hendrik.borgmeier@filtrationgroup.com

FURTHER INFORMATION

If you would like further information on the products described, follow the QR codes shown. In the PDF version of this newsletter, you can click the QR code to access the information. And you can contact us directly. Your contact person in sales or marketing will be happy to assist.

HOMEPAGE

Information and documentation for all product ranges as well as additional information about our market segments can be found on our homepage.



YOUTUBE CHANNEL

You will find the animated presentations of our products from different product segments on the FG YouTube channel.



FACEBOOK

Our Facebook page is the place to go if you are looking for the latest news, trade fair dates and info, pictures of local events and much more.



LINKEDIN

The official LinkedIn presence of Filtration Group GmbH.



INSTAGRAM

Take a look at our new Instagram channel.



ADDRESS

Filtration Group
Schleifbachweg 45
74613 Öhringen
Germany



CONTACT

Phone & Fax

Phone: + 49 7941 6466 - 0
Fax: + 49 7941 6466 - 429

Online

E-mail: industrial.marketing@filtrationgroup.com
Website: industrial.filtrationgroup.com